Drug Recognition Expert Course (DRE) 7-Day School

R5/13 Edition

Participant Manual

INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE
POLICE
SINCE 1893

NHTSA
www.nhtsa.gov

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R5/13 Curriculum

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Acknowledgements

The International Association of Chiefs of Police (IACP) and the National Highway Traffic Safety Administration (NHTSA) would like to thank the following individuals for their contributions in updating and revising the 2013 DRE curricula.

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Preface

The Drug Recognition Expert course is a series of three training phases that, collectively, prepare police officers and other qualified persons to serve as drug recognition experts (DRE). Throughout this manual, the terms “drug recognition expert” and “DRE” are used to designate an individual who is specially trained and has continued training to conduct examinations of drug-impaired drivers. This training, developed as part of the Drug Evaluation and Classification Program (DECP) under the auspices and direction of the International Association of Chiefs of Police (IACP) and the National Highway Traffic Safety Administration (NHTSA) has experienced remarkable success since its inception in the 1980s.

As in any educational training program, an instruction manual is considered a “living document” that is subject to updates and changes based on advances in technology and science. A thorough review is made of information by the DECP Technical Advisory Panel (TAP) of the Highway Safety Committee of the IACP with contributions from many sources in health care science, toxicology, jurisprudence, and law enforcement. Based on this information, any appropriate revisions and modifications in background theory, facts, examination and decision making methods are made to improve the quality of the instruction as well as the standardization of guidelines for the implementation of the Drug Recognition Expert Training Curriculum. The reorganized manuals are then prepared and disseminated, both domestically and internationally, to the DECP state coordinators.

Changes will take effect 90 days after approval by the TAP, unless otherwise specified or when so designated by a state coordinator.

Participant Manual DRE 7-Day Session 1 – Introduction and Overview

Session 1 - Introduction

Drug Recognition Expert

7-Day School

Drug Recognition Expert Course

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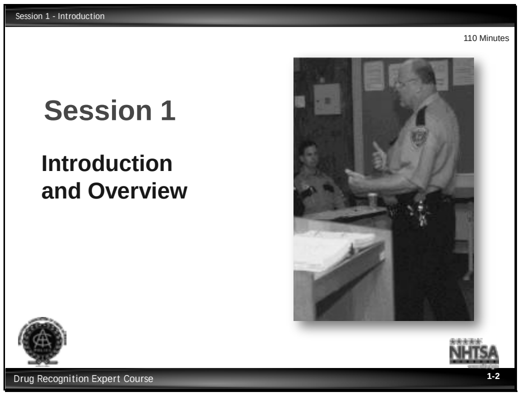


Session 1 - Introduction

110 Minutes

Session 1

Introduction
and Overview

Drug Recognition Expert Course

1-2

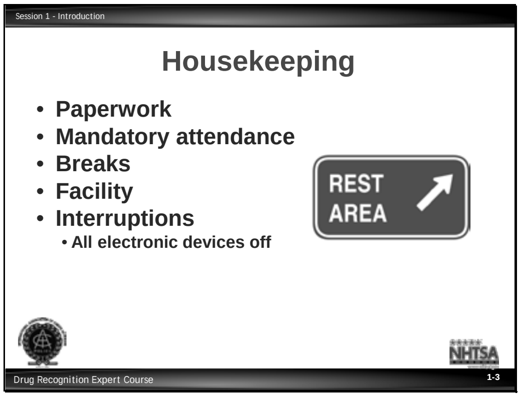
Notes:____

A. Welcoming Remarks and Goals

Welcoming Remarks

Introductions - Representatives of Host Agencies and Other Dignitaries

Faculty Introductions



Session 1 - Introduction

Housekeeping

- Paperwork
- Mandatory attendance
- Breaks
- Facility
- Interruptions
  - All electronic devices off

Drug Recognition Expert Course

1-3

Notes:____

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B. Housekeeping

Paperwork

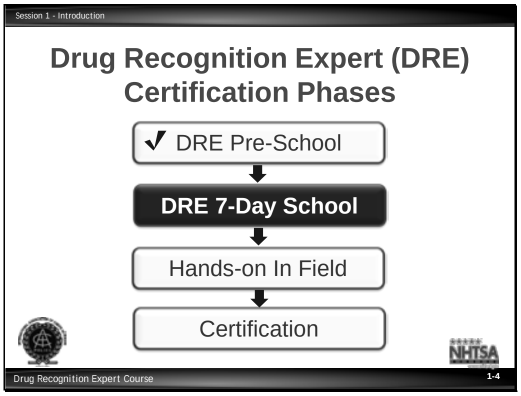
Attendance

Attendance is mandatory at all sessions of this school.

Breaks

Facility

Interruptions



Session 1 - Introduction

Drug Recognition Expert (DRE) Certification Phases

✓ DRE Pre-School

DRE 7-Day School

Hands-on In Field

Certification

Drug Recognition Expert Course

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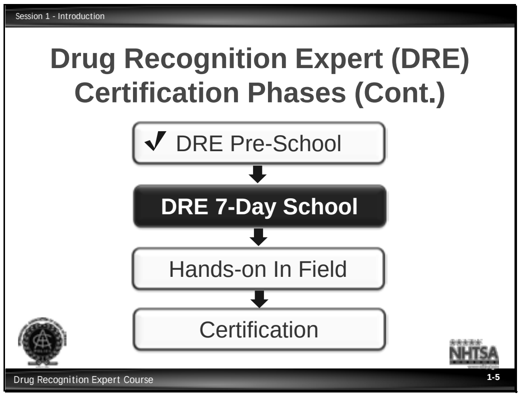
DRE Certification Phases

You have all completed the DRE Pre-School and we look forward to working with you to successfully complete phase two of the certification process. Upon completion of this course, you will be fully proficient in checking vital signs, conducting careful examinations of the eyes, administering divided attention tests and, in general, carrying out the procedural steps of the DRE's job.



Session 1 - Introduction

Drug Recognition Expert (DRE) Certification Phases (Cont.)

✓ DRE Pre-School

DRE 7-Day School

Hands-on In Field

Certification

Drug Recognition Expert Course

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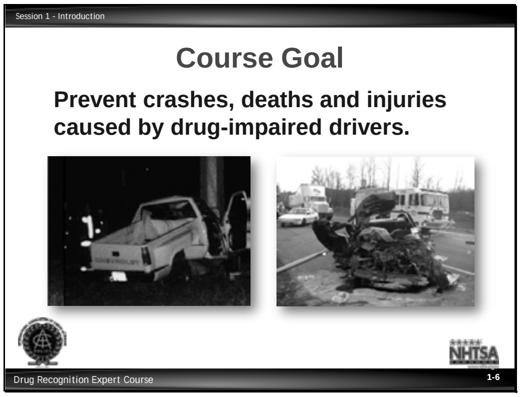
There is one essential learning experience that this classroom training cannot provide – the opportunity to practice examining subjects who are under the influence of drugs other than alcohol. For this reason, this classroom training only constitutes Phase II in the process of developing DRE skills. Phase III of the training (which commences upon the successful completion of this course) involves hands-on practice in an actual enforcement context, i.e. examining persons who are under the influence of drugs.

Although this DRE School will not conclude with the participant's immediate certification as a DRE, successful completion of this classroom training is highly important. No one can advance to Certification Training until they demonstrate a mastery of basic knowledge of drug categories and their effects on the human mind and body, and of the basic skills in administering and interpreting the examinations in the Drug Evaluation and Classification process.



Session 1 - Introduction

Course Goal

Prevent crashes, deaths and injuries caused by drug-impaired drivers.

Drug Recognition Expert Course

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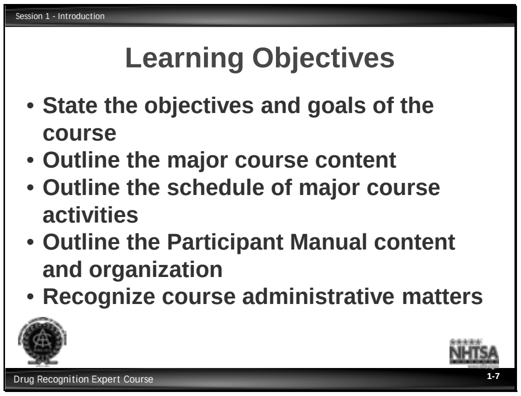
The ultimate goal of the Drug Evaluation and Classification (DEC) program, and of this course of instruction, is to "help you prevent crashes, deaths and injuries caused by drug-impaired drivers".

No one knows precisely how many people operate motor vehicles while under the influence of drugs, or how many crashes, deaths and injuries these people cause. But even the most conservative estimates suggest that America's drug-impaired drivers kill thousands of people each year, and seriously injure tens of thousands of others. There are numerous studies that illustrate these facts.



Session 1 - Introduction

Learning Objectives

- State the objectives and goals of the course
- Outline the major course content
- Outline the schedule of major course activities
- Outline the Participant Manual content and organization
- Recognize course administrative matters

Drug Recognition Expert Course

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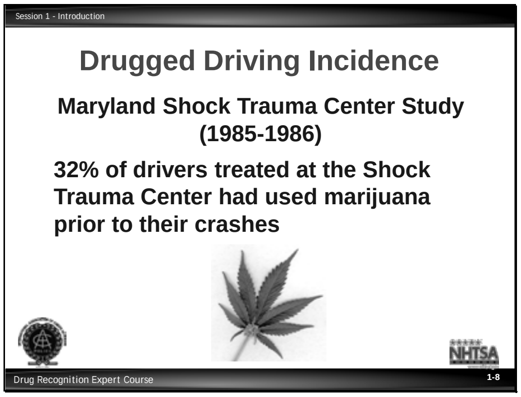
Notes:

Upon successfully completing this session participants will be able to:

- State the objectives and goals of the course.
- Outline the major course content.
- Outline the schedule of major course activities.
- Outline the Participant Manual content and organization.
- Recognize course administrative matters

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Welcoming Remarks and Goals	Instructor Led Presentations
B. Housekeeping	Participant Led Presentations
C. Participant Introductions	Knowledge Examination
D. Training Goals	Reading Assignments
E. Training Objectives	
F. Overview of Content and Schedule	
G. Course Activities	
H. Overview of Participant Manual	
I. Glossary of Terms	
J. Course Pre-Test Administration	



Session 1 - Introduction

Drugged Driving Incidence

Maryland Shock Trauma Center Study (1985-1986)

32% of drivers treated at the Shock Trauma Center had used marijuana prior to their crashes

Drug Recognition Expert Course

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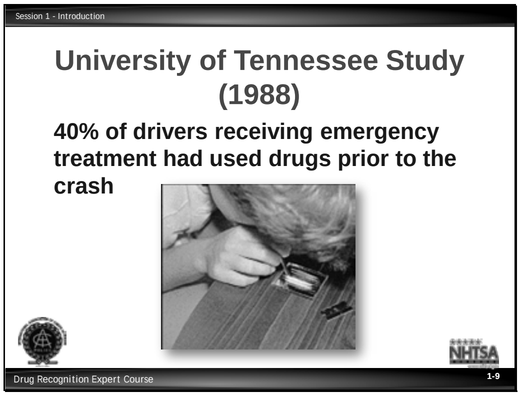
Maryland Shock Trauma Center study (1985 – 1986)

- 32% of drivers treated at the Shock Trauma Center had used marijuana prior to their crashes.



Session 1 - Introduction

University of Tennessee Study (1988)

40% of drivers receiving emergency treatment had used drugs prior to the crash

Drug Recognition Expert Course

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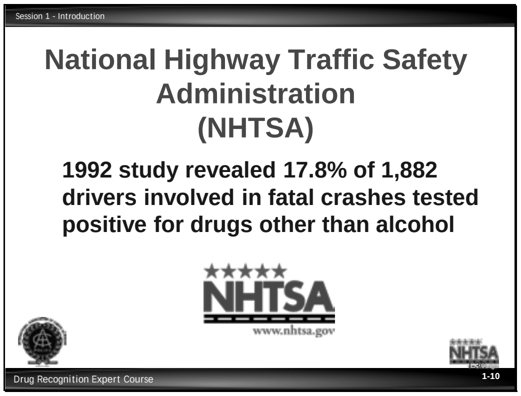
University of Tennessee study (1988)

- 40% of drivers treated at Trauma Center for crash injuries had drugs other than alcohol in them.



National Highway Traffic Safety Administration (NHTSA)

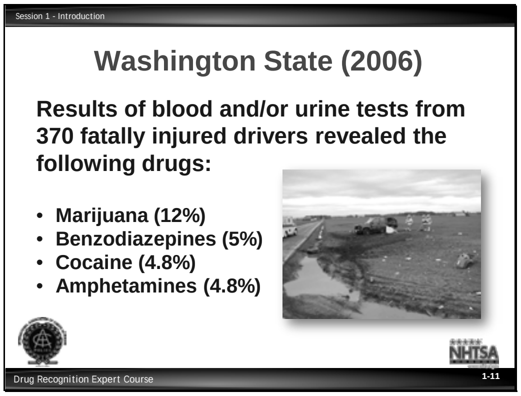
1992 study revealed 17.8% of 1,882 drivers involved in fatal crashes tested positive for drugs other than alcohol

www.nhtsa.gov

Notes:

NHTSA (Terhune, Ippolito, Hendricks et al.,1992)

- 1,882 operators involved in fatal crashes from 13 locations from eight states were tested for alcohol and 43 other drugs.
- Alcohol was the most prevalent drug detected in 51.5 % of the crashes, while other drugs were involved in 17.8 % of the crashes.



Washington State (2006)

Results of blood and/or urine tests from 370 fatally injured drivers revealed the following drugs:

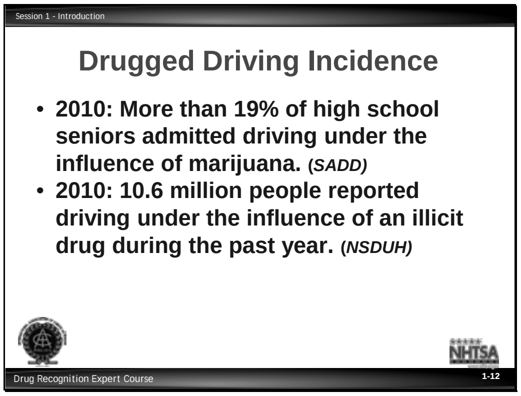
- **Marijuana (12%)**
- **Benzodiazepines (5%)**
- **Cocaine (4.8%)**
- **Amphetamines (4.8%)**

Notes:

Washington State (Schwilke, et al., 2006)

The results of tests of blood and/or urine from 370 fatally injured drivers revealed that:

- Marijuana was the most encountered drug (12 %), followed by;
- Benzodiazepines (5 %)
- Cocaine (4.8 %)
- Amphetamines (4.8 %)



Session 1 - Introduction

Drugged Driving Incidence

- **2010: More than 19% of high school seniors admitted driving under the influence of marijuana.** (*SADD)*
- **2010: 10.6 million people reported driving under the influence of an illicit drug during the past year.** (*NSDUH)*

Drug Recognition Expert Course

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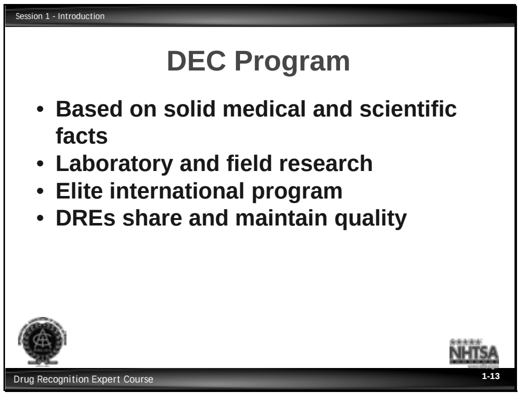
Notes:____

- In 2010, more than 19 % of high school seniors admitted driving under the influence of marijuana. *Source: Liberty Mutual Insurance and Students Against Destructive Decisions (Liberty Mutual Insurance and SADD) Study, 2012.*

- In 2010, 10.6 million people reported driving under the influence of an illicit drug during the past year.

We can do something to remove drugged drivers from our roads.



Session 1 - Introduction

DEC Program

- Based on solid medical and scientific facts
- Laboratory and field research
- Elite international program
- DREs share and maintain quality

Drug Recognition Expert Course 1-13

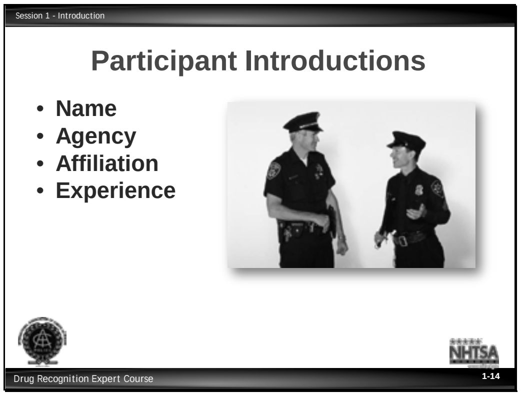
Notes:

The Drug Evaluation and Classification (DEC) Program is based on solid medical and scientific facts.

The validity of the Drug Evaluation and Classification (DEC) Program has been tested in carefully controlled research in both the laboratory and the field.

By enrolling in Drug Recognition Expert (DRE) training, you have become part of an elite international program. DREs form one of the tightest knit fraternities in law enforcement.

DREs from many agencies and from many parts of the country work closely together to share information and other resources, and to maintain the highest standards of quality.



Session 1 - Introduction

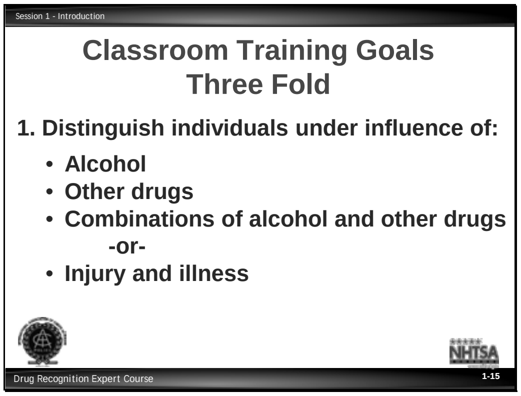
Participant Introductions

- Name
- Agency
- Affiliation
- Experience

Drug Recognition Expert Course 1-14

Notes:

C. Participant Introductions



Session 1 - Introduction

Classroom Training Goals
Three Fold

1. Distinguish individuals under influence of:

- **Alcohol**
- **Other drugs**
- **Combinations of alcohol and other drugs**

  -or-
- **Injury and illness**

Drug Recognition Expert Course 1-15

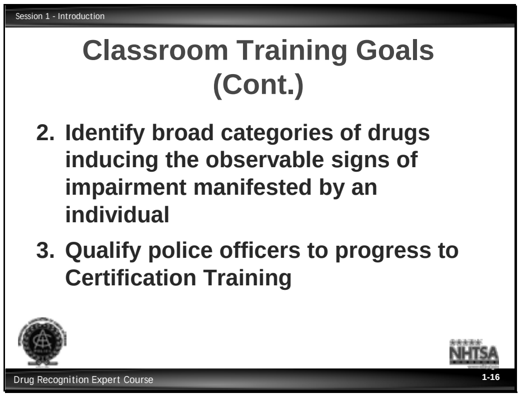
Notes:____

D. Training Goals

The goals of the classroom training, from the viewpoint of the law enforcement agencies participating in it, are three fold:

1. To help police officers acquire the knowledge and skills needed to distinguish individuals under the influence of
   - Alcohol
   - Other drugs
   - Combinations of alcohol and other drugs

     -or-
   - Those who are suffering from an injury or illness.



Session 1 - Introduction

Classroom Training Goals
(Cont.)

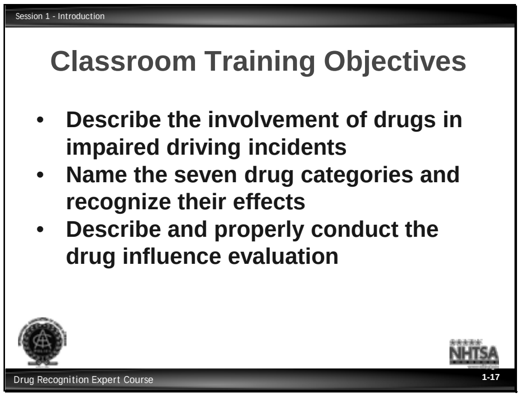
2. **Identify broad categories of drugs inducing the observable signs of impairment manifested by an individual**
3. **Qualify police officers to progress to Certification Training**

Drug Recognition Expert Course 1-16

Notes:____

2. To enable police officers to identify the broad category or categories of drugs inducing the observable signs of impairment manifested by an individual.

3. To qualify police officers to progress to Certification Training.



Session 1 - Introduction

Classroom Training Objectives

- **Describe the involvement of drugs in impaired driving incidents**
- **Name the seven drug categories and recognize their effects**
- **Describe and properly conduct the drug influence evaluation**

Drug Recognition Expert Course

1-17

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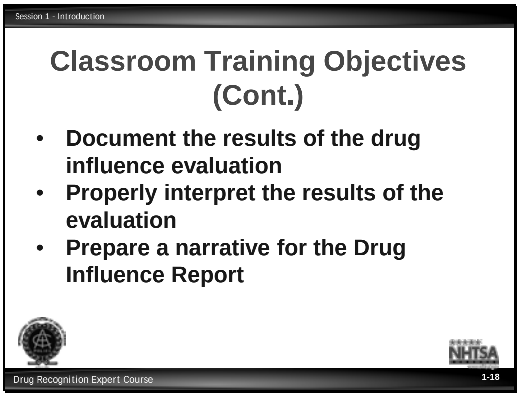
E. Training Objectives

When you successfully complete this school, you will be able to:

- Describe the involvement of drugs in impaired driving incidents
- Name the seven categories of drugs and recognize their effects
- Describe and properly conduct the drug influence evaluation



Session 1 - Introduction

Classroom Training Objectives (Cont.)

- **Document the results of the drug influence evaluation**
- **Properly interpret the results of the evaluation**
- **Prepare a narrative for the Drug Influence Report**

Drug Recognition Expert Course

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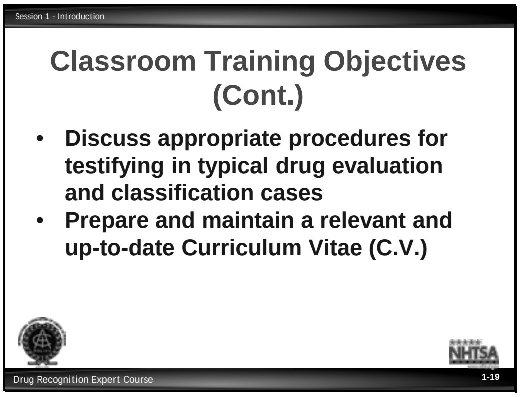
- Document the results of the drug influence evaluation
- Properly interpret the results of the evaluation
- Prepare a narrative for the Drug Influence Report



Session 1 - Introduction

Classroom Training Objectives (Cont.)

- Discuss appropriate procedures for testifying in typical drug evaluation and classification cases
- Prepare and maintain a relevant and up-to-date Curriculum Vitae (C.V.)

Drug Recognition Expert Course

1-19

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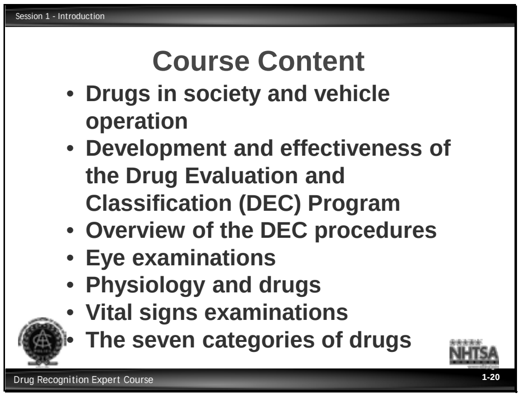
- Discuss appropriate procedures for testifying in typical drug evaluation and classification cases
- Prepare and maintain a relevant and up-to-date Curriculum Vitae (C.V.)

Before you can be certified as a DRE, you will have to demonstrate that you can do each of these things.



Session 1 - Introduction

Course Content

- Drugs in society and vehicle operation
- Development and effectiveness of the Drug Evaluation and Classification (DEC) Program
- Overview of the DEC procedures
- Eye examinations
- Physiology and drugs
- Vital signs examinations
- The seven categories of drugs

Drug Recognition Expert Course

1-20

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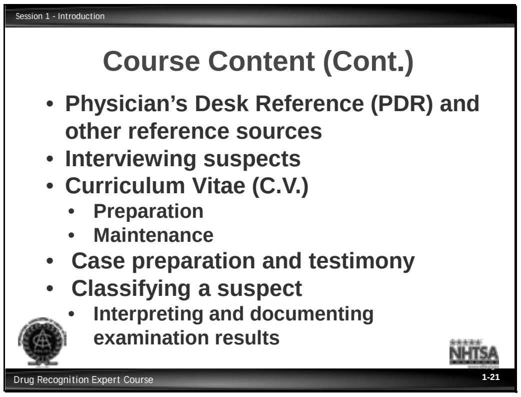
F. Overview of Course Content and Schedule

The course will cover the following topics:

- Drugs in society and in vehicle operation
- Development and effectiveness of the Drug Evaluation and Classification (DEC) Program
- Overview of the DEC Procedures
- Eye Examinations (a major component of the DEC procedures)
- Physiology and Drugs
- Vital signs examinations (a major component of the DEC procedures)
- The seven categories of drugs



Session 1 - Introduction

Course Content (Cont.)

- Physician’s Desk Reference (PDR) and other reference sources
- Interviewing suspects
- Curriculum Vitae (C.V.)
  - Preparation
  - Maintenance
- Case preparation and testimony
- Classifying a suspect
  - Interpreting and documenting examination results

Drug Recognition Expert Course

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- The Physician’s Desk Reference (PDR) and other reference sources
- Interviewing suspects (a major component of the DEC procedures)
- Curriculum Vitae (C.V.) preparation and maintenance
- Case preparation and testimony
- Classifying a suspect (interpreting and documenting the results of an examination)

Session 1 - Introduction

Course Activities

- Eye examinations
- Alcohol workshop
- Interpretation of examination results
- Vital signs examinations

Drug Recognition Expert Course 1-22

Notes:

G. Course Activities

Hands-on practice is the principal learning activity of the course.

Eye Examinations Practice:

- *Nystagmus, Lack of Convergence, Pupil Size, and Reaction to Light*

Alcohol Workshop:

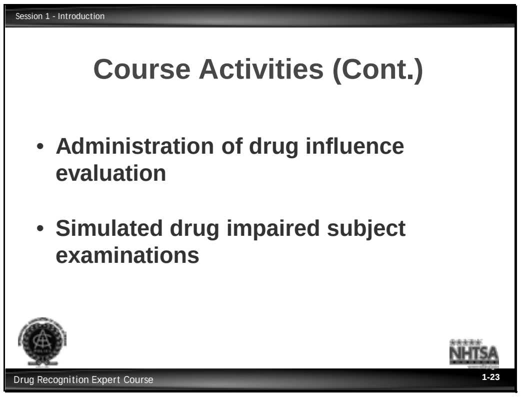
- *Psychophysical testing practice*
- *Volunteer drinkers from outside the class will be recruited for this session.*

Practicing interpretation of the examination results:

- *Several sessions will be devoted to this allowing the participants to review drug evaluation reports and identify the probable drug category or combinations of categories.*

Vital signs examinations:

- *Pulse, Blood Pressure, Body Temperature*



Session 1 - Introduction

Course Activities (Cont.)

- Administration of drug influence evaluation
- Simulated drug impaired subject examinations

Drug Recognition Expert Course 1-23

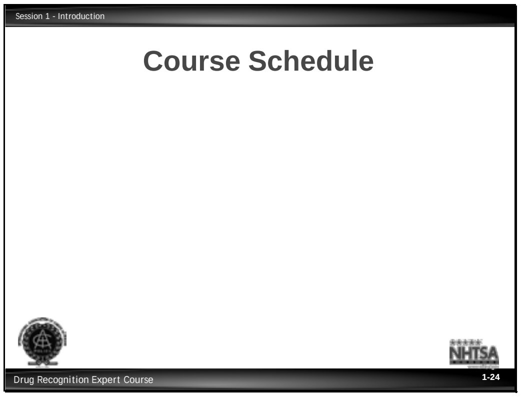
Notes:

Practicing administration of the drug influence evaluation:

- Several sessions will be devoted to this. In each, participants will practice administering the drug influence examinations to each other. No hands-on practice with actual drugged subjects is included in the classroom portion of DRE training.

Simulated drug impaired subject examinations:

- Participants will work in teams to conduct and document examinations of instructors who will be simulating the indicators of drug-impaired subjects.



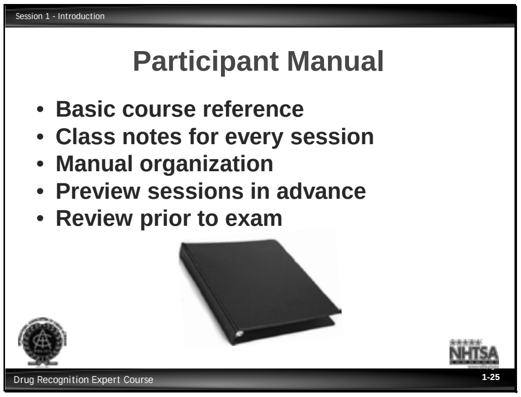
Session 1 - Introduction

Course Schedule

Drug Recognition Expert Course 1-24

Notes:

Schedule



Session 1 - Introduction

Participant Manual

- Basic course reference
- Class notes for every session
- Manual organization
- Preview sessions in advance
- Review prior to exam

Drug Recognition Expert Course

1-25

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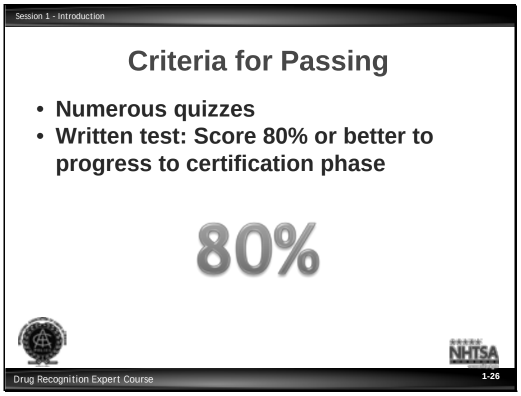
H. Overview of Participant Manual

- The Participant manual is the basic reference document for this course.
- The manual contains thumbnails of each instructor presentation per session that includes key messages for each frame.
- Read each session prior to each day's classes.
- Use the manual to review the material prior to taking the final exam.



Session 1 - Introduction

Criteria for Passing

- Numerous quizzes
- Written test: Score 80% or better to progress to certification phase

80%

Drug Recognition Expert Course

1-26

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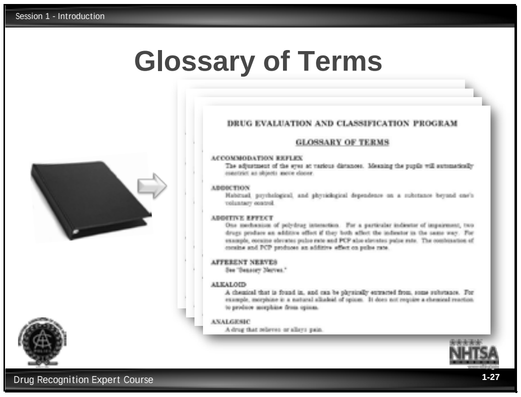
By taking good notes, and by studying the manual carefully, participants should have no trouble in passing the course.

- There will be numerous quizzes during the class.



Session 1 - Introduction

Glossary of Terms

DRUG EVALUATION AND CLASSIFICATION PROGRAM

GLOSSARY OF TERMS

ACCOMMODATION REFLEX
The adjustment of the eyes at various distances. Meaning the pupils will automatically constrict as objects move closer.

ADDICTION
Habitual, psychological, and physiological dependence on a substance beyond one's voluntary control.

ADDITIVE EFFECT
One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce an additive effect if they both affect the indicator in the same way. For example, cocaine elevates pulse rate and PCP also elevates pulse rate. The combination of cocaine and PCP produces an additive effect on pulse rate.

AFFERENT NERVES
See "Sensory Nerves."

ALKALOID
A chemical that is found in, and can be physically extracted from, some substance. For example, morphine is a natural alkaloid of opium. It does not require a chemical reaction to produce morphine from opium.

ANALGESIC
A drug that relieves or allays pain.

Drug Recognition Expert Course 1-27

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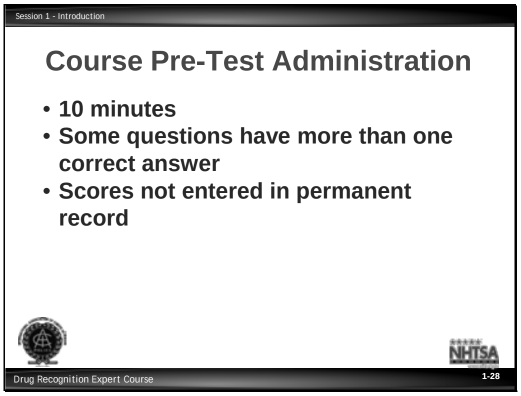
I. Glossary of Terms

The Glossary of Terms used in the course is located at the end of this manual.



Session 1 - Introduction

Course Pre-Test Administration

- 10 minutes
- Some questions have more than one correct answer
- Scores not entered in permanent record

Drug Recognition Expert Course 1-28

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J. Course Pre-Test Administration

Session 1 - Introduction

QUESTIONS?

Drug Recognition Expert Course 1-29

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DRUG EVALUATION AND CLASSIFICATION PROGRAM

GLOSSARY OF TERMS

ACCOMMODATION REFLEX

The adjustment of the eyes for viewing at various distances. Meaning the pupils will automatically constrict as objects move closer and dilate as objects move further away.

ADDICTION

Habitual, psychological, and physiological dependence on a substance beyond one's voluntary control.

ADDITIVE EFFECT

One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce an additive effect if they both affect the indicator in the same way. For example, cocaine elevates pulse rate and PCP also elevates pulse rate. The combination of cocaine and PCP produces an additive effect on pulse rate.

AFFERENT NERVES

See: "Sensory Nerves."

ALKALOID

A chemical that is found in, and can be physically extracted from, some substance. For example, morphine is a natural alkaloid of opium. It does not require a chemical reaction to produce morphine from opium.

ANALGESIC

A drug that relieves or allays pain.

ANALOG (of a drug)

An analog of a drug is a chemical that is very similar to the drug, both in terms of molecular structure and in terms of psychoactive effects. For example, the drug Ketamine is an analog of PCP.

ANESTHETIC

A drug that produces a general or local insensibility to pain and other sensation.

ANTAGONISTIC EFFECT

One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce an antagonistic effect if they affect the indicator in opposite ways. For example, heroin constricts pupils while cocaine dilates pupils. The combination of heroin and cocaine produces an antagonistic effect on pupil size. Depending on how much of each drug was taken, and on when they were taken, the suspect's pupils could be constricted, or dilated, or within the DRE Average range of pupil size.

ARRHYTHMIA

An abnormal heart rhythm.

ARTERY

The strong, elastic blood vessels that carry blood away the heart.

ATAXIA

A blocked ability to coordinate movements. A staggering walk and poor balance may be caused by damage to the brain or spinal cord. This can be the result of trauma, birth defect, infection, tumor, or drug use.

AUTONOMIC NERVE

A motor nerve that carries messages to the muscles and organs that we do not consciously control. There are two kinds of autonomic nerves, the sympathetic nerves and parasympathetic nerves.

AXON

The part of a neuron (nerve cell) that sends out a neurotransmitter.

BAC

(Blood Alcohol Concentration) - The percentage of alcohol in a person's blood.

BrAC

(Breath Alcohol Concentration) - The percentage of alcohol in a person's blood as measured by a breath testing device.

BLOOD PRESSURE

The force exerted by blood on the walls of the arteries. Blood pressure changes continuously, as the heart cycles between contraction and expansion.

BRADYCARDIA

Abnormally slow heart rate.

BRADYPNEA

Abnormally slow rate of breathing.

BRUXISM

Grinding the teeth. This behavior is often seen in person who are under the influence of cocaine or other CNS Stimulants.

CANNABIS

This is the drug category that includes marijuana. Marijuana comes primarily from the leaves of certain species of Cannabis plants that grow readily all over the temperate zones of the earth. Hashish is another drug in this category, and consists of the compressed leaves from female Cannabis plants. The active ingredient in both Marijuana and Hashish is a chemical called delta-9 tetrahydrocannabinol, usually abbreviated THC.

CARBOXY THC

A metabolite of THC (tetrahydrocannabinol).

CHEYNE- STOKES RESPIRATION

Abnormal pattern of breathing. Marked by breathlessness and deep, fast breathing.

CNS (Central Nervous System)

A system within the body consisting of the brain, the brain stem, and the spinal cord.

CNS DEPRESSANTS

One of the seven drug categories. CNS Depressants include alcohol, barbiturates, anti-anxiety tranquilizers, and numerous other drugs.

CNS STIMULANTS

One of the seven drug categories. CNS Stimulants include Cocaine, the Amphetamines, Ritalin, Desoxyn, and numerous other drugs.

CONJUNCTIVITIS

An inflammation of the mucous membrane that lines the inner surface of the eyelids caused by infection, allergy, or outside factors. May be bacterial or viral. Persons suffering from conjunctivitis may show symptoms in one eye only. This condition is commonly referred to as "pink eye", a condition that could be mistaken for the bloodshot eyes produced by alcohol or Cannabis.

CONVERGENCE

The "crossing" of the eyes that occurs when a person is able to focus on a stimulus as it is pushed slowly toward the bridge of their nose. (See, also, "Lack of Convergence".)

CRACK/ROCK

Cocaine base, appears as a hard chunk form resembling pebbles or small rocks. It produces a very intense, but relatively short duration "high".

CURRICULUM VITAE

A written summary of a person's education, training, experience, noteworthy achievements and other relevant information about a particular topic.

CYCLIC BEHAVIOR

A manifestation of impairment due to certain drugs, in which the suspect alternates between periods (or cycles) of intense agitation and relative calm. Cyclic behavior, for example, sometimes will be observed in persons under the influence of PCP.

DELIRIUM

A brief state characterized by incoherent excitement, confused speech, restlessness, and possible hallucinations.

DENDRITE

The part of a neuron (nerve cell) that receives a neurotransmitter.

DIACETYL MORPHINE

The chemical name for Heroin.

DIASTOLIC

The lowest value of blood pressure. The blood pressure reaches its diastolic value when the heart is fully expanded, or relaxed (Diastole).

DIPLOPIA

Double vision.

DISSOCIATIVE ANESTHETICS

One of the seven drug categories. Includes drugs that inhibits pain by cutting off or disassociating the brain's perception of pain. PCP and its analogs are considered Dissociative Anesthetics.

DIVIDED ATTENTION

Concentrating on more than one thing at a time. The four psychophysical tests used by DREs require the suspect to divide attention.

DOWNSIDE EFFECT

An effect that may occur when the body reacts to the presence of a drug by producing hormones or neurotransmitters to counteract the effects of the drug consumed.

DRUG

Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely.

DYSARTHIA

Slurred speech. Difficult, poorly articulated speech.

DYSPNEA

Shortness of breath.

DYSMETRIA

An abnormal condition that prevents the affected person from properly estimating distances linked to muscular movements.

DYSPHORIA

A disorder of mood. Feelings of depression and anguish.

EFFERENT NERVES

See: "Motor Nerves".

ENDOCRINE SYSTEM

The network of glands that do not have ducts and other structures. They secrete hormones into the blood stream to affect a number of functions in the body.

EXPERT WITNESS

A person skilled in some art, trade, science or profession, having knowledge of matters not within knowledge of persons of average education, learning and experience, may assist a jury in arriving at a verdict by expressing an opinion on a state of facts shown by the evidence and based upon his or her special knowledge. (NOTE: Only the court can determine whether a witness is qualified to testify as an expert.)

FLASHBACK

A vivid recollection of a portion of an hallucinogenic experience. Essentially, it is a very intense daydream. There are three types: (1) emotional -- feelings of panic, fear, etc.; (2) somatic -- altered body sensations, tremors, dizziness, etc.; and (3) perceptual -- distortions of vision, hearing, smell, etc.

GARRULITY
Chatter, rambling or pointless speech. Talkative.

GENERAL INDICATOR
Behavior or observations of the subject that are observed and not specifically tested for. (Observational and Behavioral Indicators)

HALLUCINATION
A sensory experience of something that does not exist outside the mind, e.g., seeing, hearing, smelling, or feeling something that isn't really there. Also, having a distorted sensory perception, so that things appear differently than they are.

HALLUCINOGENS
One of the seven drug categories. Hallucinogens include LSD, MDMA, Peyote, Psilocybin, and numerous other drugs.

HASHISH
A form of cannabis made from the dried and pressed resin of a marijuana plant.

HASH OIL
Sometimes referred to as “marijuana oil” it is a highly concentrated syrup-like oil extracted from marijuana. It is normally produced by soaking marijuana in a container of solvent, such as acetone or alcohol for several hours and after the solvent has evaporated, a thick syrup-like oil is produced with a high THC content.

HEROIN
A powerful and widely-abused narcotic analgesic that is chemically derived from morphine. The chemical, or generic name of heroin is "diacetyl morphine".

HIPPUS
A rhythmic change in the pupil size of the eyes, as they dilate and constrict when observed in darkness independent of changes in light intensity, accommodation (focusing), or other forms of sensory stimulation. Normally only observed with specialized equipment.

HOMEOSTASIS
The dynamic balance, or steady state, involving levels of salts, water, sugars, and other materials in the body's fluids.

HORIZONTAL GAZE NYSTAGMUS (HGN)
Involuntary jerking of the eyes occurring as the eyes gaze to the side.

HORMONES
Chemicals produced by the body's endocrine system that are carried through the blood stream to the target organ. They exert great influence on the growth and development of the individual, and that aid in the regulation of numerous body processes.

HYDROXY THC
A metabolite of THC (tetrahydrocannabinol).

HYPERFLEXIA

Exaggerated or over extended motions.

HYPERGLYCEMIA

Excess sugar in the blood.

HYPERPNEA

A deep, rapid or labored breathing.

HYPERPYREXIA

Extremely high body temperature.

HYPERREFLEXIA

A neurological condition marked by increased reflex reactions.

HYPERTENSION

Abnormally high blood pressure. Do not confuse this with hypotension.

HYPOGLYCEMIA

An abnormal decrease of blood sugar levels.

HYPOPNEA

Shallow or slow breathing.

HYPOTENSION

Abnormally low blood pressure. Do not confuse this with hypertension.

HYPOTHERMIA

Decreased body temperature.

ICE

A crystalline form of methamphetamine that produces a very intense and fairly long-lasting "high".

INHALANTS

One of the seven drug categories. The inhalants include volatile solvents (such as glue and gasoline), aerosols (such as hair spray and insecticides) and anesthetic gases (such as nitrous oxide).

INSUFFLATION

See "snorting".

INTEGUMENTARY SYSTEM

The skin and accessory structures, hair and nails. Functions include protection, maintenance of body temperature, excretion of waste, and sensory perceptions.

INTRAOCULAR

"Within the eyeball".

KOROTKOFF SOUNDS

A series of distinct sounds produced by blood passing through an artery, as the external pressure on the artery drops from the systolic value to the diastolic value.

LACK OF CONVERGENCE

The inability of a person's eyes to converge, or "cross" as the person attempts to focus on a stimulus as it is pushed slowly toward the bridge of his or her nose.

MAJOR INDICATORS

Physiological signs that are specifically assessed and are, for the most part, involuntary reflecting the status of the central nervous system (CNS) homeostasis (Physiological Indicators)

MARIJUANA

Common term for the Cannabis Sativa plant. Usually refers to the dried leaves of the plant. This is the most common form of the cannabis category.

MARINOL

A drug containing a synthetic form of THC (tetrahydrocannabinol). Marinol belongs to the cannabis category of drugs, but marinol is not produced from any species of cannabis plant.

MEDICAL RULEOUT

A determination made by a DRE that the condition of a suspected impaired driver is more likely related to a medical issue that effected the person’s ability to operate a vehicle safely.

METABOLISM

The sum of all chemical processes that take place in the body as they relate to the movements of nutrients in the blood after digestion, resulting in growth, energy, release of wastes, and other body functions. The process by which the body, using oxygen, enzymes and other internal chemicals, breaks down ingested substances such as food and drugs so they may be consumed and eliminated. Metabolism takes place in two phases. The first step is the constructive phase (anabolism) where smaller molecules are converted to larger molecules. The second steps is the destructive phase (catabolism) where large molecules are broken down into smaller molecules.

METABOLITE

A chemical product, formed by the reaction of a drug with oxygen and/or other substances in the body.

MIOSIS

Abnormally small (constricted) pupils.

MOTOR NERVES

Nerves that carry messages away from the brain, to be body's muscles, tissues, and organs. Motor nerves are also known as efferent nerves.

MUSCULAR HYPERTONICITY

Rigid muscle tone.

MYDRIASIS

Abnormally large (dilated) pupils.

NARCOTIC ANALGESICS

One of the seven drug categories. Narcotic analgesics include opium, the natural alkaloids of opium (such as morphine, codeine and thebaine), the derivatives of opium (such as heroin, dilaudid, oxycodone and percodan), and the synthetic narcotics.

NERVE

A cord-like fiber that carries messages either to or from the brain. For drug evaluation and classification purposes, a nerve can be pictured as a series of "wire-like" segments, with small spaces or gaps between the segments.

NEURON

A nerve cell. The basic functional unit of a nerve. It contains a nucleus within a cell body with one or more axons and dendrites.

NEUROTRANSMITTER

Chemicals that pass from the axon of one nerve cell to the dendrite of the next cell, and that carry messages across the gap between the two nerve cells.

NULL EFFECT

One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce a null effect if neither of them affects that indicator. For example, PCP does not affect pupil size, and alcohol does not affect pupil size. The combination of PCP and alcohol produces a null effect on pupil size.

NYSTAGMUS

An involuntary jerking of the eyes.

"ON THE NOD"

A semi-conscious state of deep relaxation. Typically induced by impairment due to Heroin or other narcotic analgesics. The suspect's eyelids droop, and chin rests on the chest. Suspect may appear to be asleep, but can be easily aroused and will respond to questions.

OVERLAPPING EFFECT

One mechanism of polydrug interaction. For a particular indicator of impairment, two drugs produce an overlapping effect if one of them affects the indicator but the other doesn't. For example, cocaine dilates pupils while alcohol doesn't affect pupil size. The combination of cocaine and alcohol produces an overlapping effect on pupil size: the combination will cause the pupils to dilate.

PALLOR

An abnormal paleness or lack of color in the skin.

PARANOIA

Mental disorder characterized delusions and the projection of personal conflicts, that are ascribed to the supposed hostility of others.

PARAPHERNALIA

Drug paraphernalia are the various kinds of tools and other equipment used to store, transport or ingest a drug. Hypodermic needles, small pipes, bent spoons, etc., are examples of drug paraphernalia. The singular form of the word is "paraphernalium". For example, one hypodermic needle would be called a "drug paraphernalium".

PARASYMPATHETIC NERVE

An autonomic nerve that commands the body to relax and to carry out tranquil activities. The brain uses parasympathetic nerves to send "at ease" commands to the muscles, tissues, and organs.

PARASYMPATHOMIMETIC DRUGS

Drugs that mimic neurotransmitter associated with the parasympathetic nerves. These drugs artificially cause the transmission of messages that produce lower blood pressure, drowsiness, etc.

PDR (Physician's Desk Reference)

A basic reference source for drug recognition experts. The PDR provides detailed information on the physical appearance and psychoactive effects of licitly-manufactured drugs.

PHENCYCLIDINE

A contraction of PHENYL CYCLOHEXYL PIPERIDINE, or PCP. Formerly used as a surgical anesthetic, however, it has no current legitimate medical use in humans.

PHENYL CYCLOHEXYL PIPERIDINE (PCP)

Often called "phencyclidine" or “PCP”, it is a specific drug belonging to the Dissociative Anesthetics category.

PHYSIOLOGY

Physiology is the branch of biology dealing with the functions and activities of life or living matter and the physical and chemical phenomena involved.

PILOERECTION

Literally, "hair standing up", or goose bumps. This condition of the skin is often observed in persons who are under the influence of LSD.

POLYDRUG USE

Ingesting drugs from two or more drug categories.

PSYCHEDELIC

A mental state characterized by a profound sense of intensified or altered sensory perception sometimes accompanied by hallucinations.

PSYCHOPHYSICAL TESTS

Methods of investigating the mental (psycho-) and physical characteristics of a person suspected of alcohol or drug impairment. Most psychophysical tests employ the concept of divided attention to assess a suspect's impairment.

PSYCHOTOGENIC

Literally, "creating psychosis" or "giving birth to insanity". A drug is considered to be psychotogenic if persons who are under the influence of the drug become insane, and remain so after the drug wears off.

PSYCHOTOMIMETIC

Literally, "mimicking psychosis" or "impersonating insanity". A drug is considered to be psychotomimetic if persons who are under the influence of the drug look and act insane while they are under the influence.

PTOSIS

Droopy eyelids.

PULSE

The expansion and contraction of the walls of an artery, generated by the pumping action of blood.

PULSE RATE

The number of expansions of an artery per minute.

PUPILLARY LIGHT REFLEX

The pupils of the eyes will constrict and dilate depending on changes in lighting.

PUPILLARY UNREST

The continuous, irregular change in the size of the pupils that may be observed under room or steady light conditions.

REBOUND DILATION

A period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size.

RESTING NYSTAGMUS

Jerking of the eyes as they look straight ahead.

SCLERA

A dense white fibrous membrane that, with the cornea, forms the external covering of the eyeball (i.e., the white part of the eye).

SENSORY NERVES

Nerves that carry messages to the brain, from the various parts of the body, including notably the sense organs(eyes, ears, etc.). Sensory nerves are also known as afferent nerves.

SINSEMILLA

The unpollenated female cannabis plant, having a relatively high concentration of THC.

SFST

Standardized Field Sobriety Testing. There are three SFSTs, namely Horizontal Gaze Nystagmus (HGN), Walk and Turn, and One Leg Stand. Based on a series of controlled laboratory studies, scientifically validated clues of alcohol impairment have been identified for each of these three tests. They are the only Standardized Field Sobriety Tests for which validated clues have been identified.

SNORTING

One method of ingesting certain drugs. Snorting requires that the drug be in powdered form. The user rapidly draws the drug up into the nostril, usually via a paper or glass tube. Snorting is also known as insufflation.

SPHYGMOMANOMETER

A medical device used to measure blood pressure. It consists of an arm or leg cuff with an air bag attached to a tube and a bulb for pumping air into the bag, and a gauge for showing the amount of air pressure being pressed against the artery.

STETHOSCOPE

A medical instrument used, for drug evaluation and classification purposes, to listen to the sounds produced by blood passing through an artery.

SYMPATHETIC NERVE

An autonomic nerve that commands the body to react in response to excitement, stress, fear, etc. The brain uses sympathetic nerves to send "wake up calls" and "fire alarms" to the muscles, tissues and organs.

SYMPATHOMIMETIC DRUGS

Drugs that mimic the neurotransmitter associated with the sympathetic nerves. These drugs artificially cause the transmission of messages that produce elevated blood pressure, dilated pupils, etc.

SYNAPSE (or Synaptic Gap)

The gap or space between two neurons (nerve cells).

SYNESTHESIA

A sensory perception disorder, in which an input via one sense is perceived by the brain as an input via another sense. An example of this would be a person “hearing” a phone ring and “seeing” the sound as a flash of light. Synesthesia sometimes occurs with persons under the influence of hallucinogens.

SYSTOLIC

The highest value of blood pressure. The blood pressure reaches its systolic value when the heart is fully contracted (systole), and blood is sent surging into the arteries.

TACHYCARDIA

Abnormally rapid heart rate.

TACHYPNEA

Abnormally rapid rate of breathing.

THC (Tetrahydrocannabinol)

The principal psychoactive ingredient in drugs belonging to the cannabis category.

TOLERANCE

An adjustment of the drug user's body and brain to the repeated presence of the drug. As tolerance develops, the user will experience diminishing psychoactive effects from the same dose of the drug. As a result, the user typically will steadily increase the dose he or she takes, in an effort to achieve the same psychoactive effect.

TRACKS

Scar tissue usually produced by repeated injection of drugs, via hypodermic needle, along a segment of a vein.

VERTICAL GAZE NYSTAGMUS

An involuntary jerking of the eyes (up-and-down) which occurs as the eyes are held at maximum elevation. The jerking should be distinct and sustained.

VOIR DIRE

A French expression literally meaning “to see, to say.” Loosely, this would be rendered in English as “To seek the truth,” or “to call it as you see it.” In a law or court context, one application of voir dire is to question a witness to assess his or her qualifications to be considered an expert in some matter pending before the court.

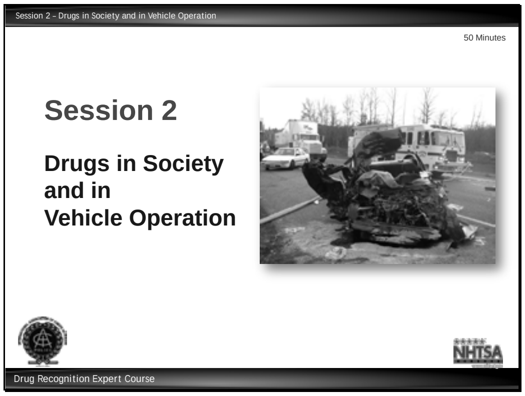
VOLUNTARY NERVE

A motor nerve that carries messages to a muscle that we consciously control.

WITHDRAWAL

This occurs in someone who is physically addicted to a drug when he or she is deprived of the drug. If the craving is sufficiently intense, the person may become extremely agitated, and even physically ill.

Participant Manual DRE 7-Day Session 2 – Drugs in Society and in Vehicle Operation



Session 2 – Drugs in Society and in Vehicle Operation

50 Minutes

Session 2

Drugs in Society and in Vehicle Operation

Drug Recognition Expert Course

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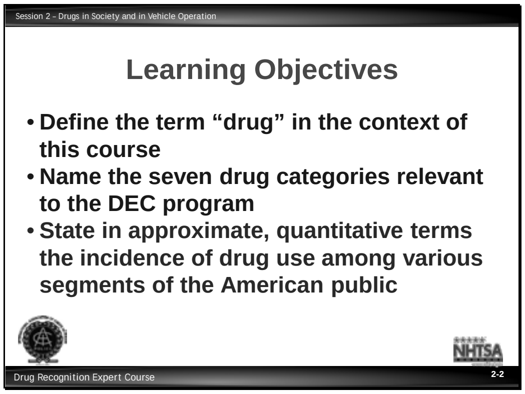


Session 2 – Drugs in Society and in Vehicle Operation

Learning Objectives

- **Define the term "drug" in the context of this course**
- **Name the seven drug categories relevant to the DEC program**
- **State in approximate, quantitative terms the incidence of drug use among various segments of the American public**

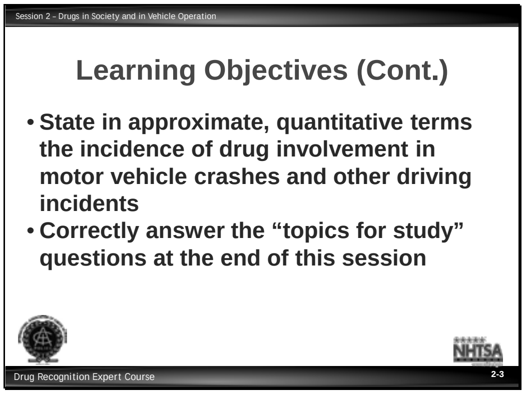
Drug Recognition Expert Course 2-2

Notes:

Upon completion of this session, participants will be able to:

- Define the term "drug" in the context of this course.
- Name the seven drug categories relevant to the Drug Evaluation and Classification program.
- State in approximate, quantitative terms the incidence of drug use among various segments of the American public.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Definition and Categories of Drugs	Instructor Led Presentations
B. Incidence and Characteristics of Drug Use in America	Reading Assignments
C. Incidence of Drug Impaired Driving	



Session 2 – Drugs in Society and in Vehicle Operation

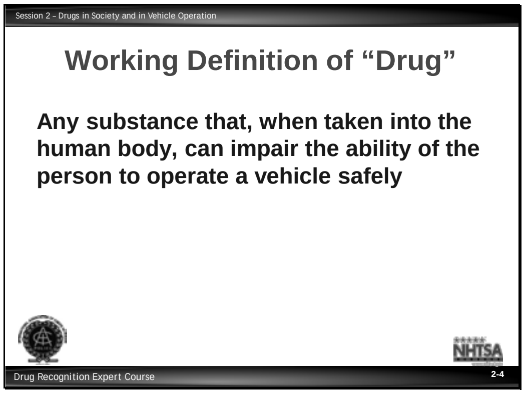
Learning Objectives (Cont.)

- **State in approximate, quantitative terms the incidence of drug involvement in motor vehicle crashes and other driving incidents**
- **Correctly answer the “topics for study” questions at the end of this session**

Drug Recognition Expert Course 2-3

Notes:

- State in approximate, quantitative terms the incidence of drug involvement in motor vehicle crashes and other driving incidents.
- Correctly answer the “topics for study” questions at the end of this session.



Session 2 – Drugs in Society and in Vehicle Operation

Working Definition of “Drug”

Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely

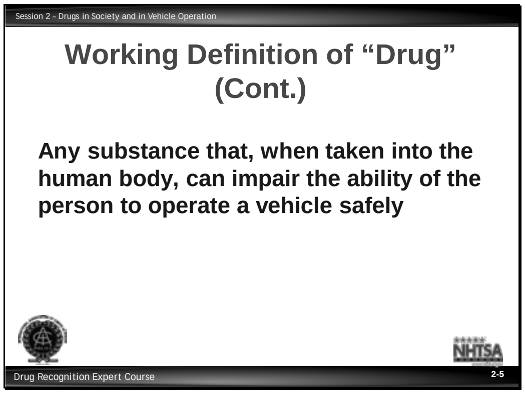
Drug Recognition Expert Course 2-4

Notes:

A. Definition and Categories of Drugs

- *Medicines? Are all drugs medicines? Are all medicines drugs?*
- *Narcotics? Are all drugs Narcotics?*
- *Habit forming substances? Are all drugs habit forming? Are all habit forming substances drugs?*
- A simple, law enforcement oriented definition.
- This definition is derived from the California Vehicle Code.

“Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely.”



Session 2 – Drugs in Society and in Vehicle Operation

Working Definition of "Drug" (Cont.)

Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely

Drug Recognition Expert Course

2-5

Notes:____

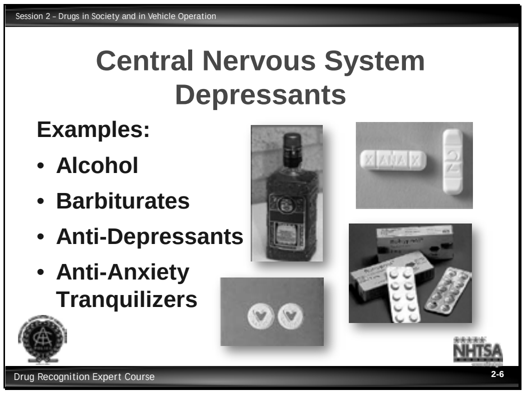
- Within this simple, law enforcement oriented definition; there are seven categories of drugs.

- Each category consists of substances that impair a person's ability to drive.

- The categories differ from one another in terms of how they impair driving ability and in terms of the kinds of impairment they cause.

- Because the categories produce different types of impairment, they generate different signs and symptoms.

- With training and practice, you will be able to recognize the different signs of drug influence and determine which category is causing the impairment you observe in a subject.


Session 2 – Drugs in Society and in Vehicle Operation

Central Nervous System Depressants

Examples:
- Alcohol
- Barbiturates
- Anti-Depressants
- Anti-Anxiety Tranquilizers

Drug Recognition Expert Course

2-6

Notes:

Central Nervous System Depressants

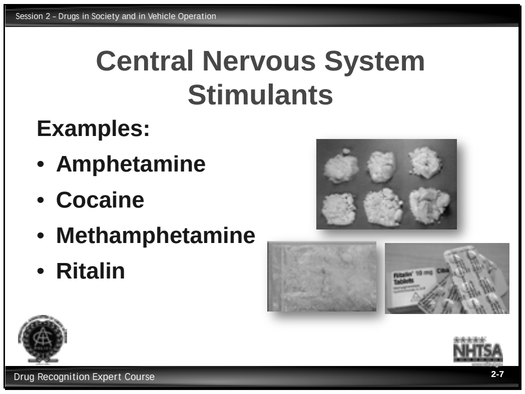
The category of CNS Depressants includes some of the most commonly abused drugs.

Alcohol remains the most familiar drug. In 2011, 51.8 % of the population aged 12 and older were current drinkers of alcohol.

Source: National Survey on Drug Use and Health (NSDUH) 2011.

CNS Depressants:

- Slow down the operation of the Central Nervous System (i.e., the brain, brain stem and spinal cord).
- Cause the user to react more slowly.
- Cause the user to process information more slowly.
- Relieve anxiety and tension.
- Induce sedation, drowsiness and sleep.
- In high doses, CNS Depressants will produce general anesthesia. i.e., depress the brain's ability to sense pain.
- In very high doses, induce coma and death.



Session 2 – Drugs in Society and in Vehicle Operation

Central Nervous System Stimulants

Examples:

- **Amphetamine**
- **Cocaine**
- **Methamphetamine**
- **Ritalin**

Drug Recognition Expert Course 2-7

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Central Nervous System Stimulants

CNS Stimulants constitute another widely abused category of drugs.

There appears to be approximately 1.4 million Cocaine users in the U.S.

Source: NSDUH Survey, 2011.

Cocaine is one of the most frequently reported drugs in overdose cases treated at hospital emergency rooms.

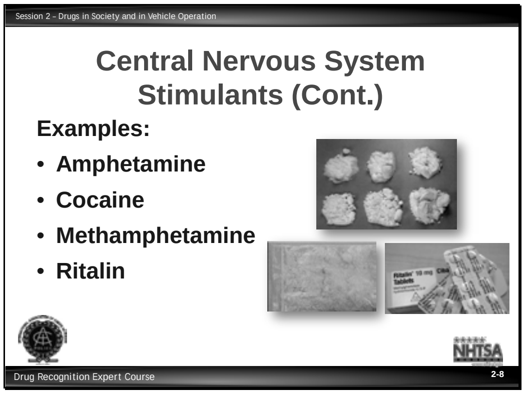
Estimates of drug use vary widely, especially for illicit drugs such as Cocaine, Methamphetamines, etc.

- In 2011, 6.1 million Americans aged 12 or older admitted using psychotherapeutic drugs non-medically at least once in their lifetime.

  Source: NSDUH Survey, 2011.

- In 2010, 1.1 million persons aged 12 or older reported they had used methamphetamines at least once in their lifetime.

  Source: 2010 National Survey on Drug Use and Health.



Session 2 – Drugs in Society and in Vehicle Operation

Central Nervous System Stimulants (Cont.)

Examples:

- **Amphetamine**
- **Cocaine**
- **Methamphetamine**
- **Ritalin**

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Notes:____

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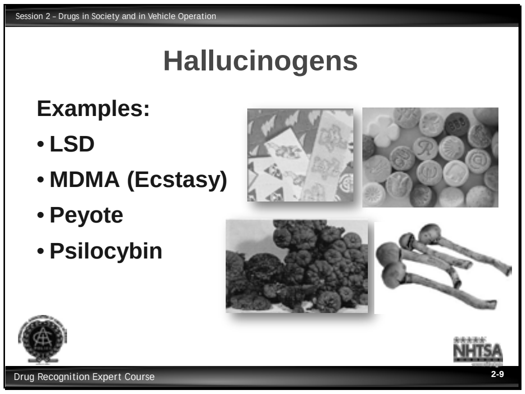
CNS Stimulants:

- Speed up the operation of the Central Nervous System, and of the various bodily functions controlled by the Central Nervous System
- Cause the user to become hyperactive, extremely talkative
- Speech may become rapid and repetitive
- Heart rate increases
- Blood pressure increases
- Body temperature rises, user may become excessively sweaty
- Induce emotional excitement, restlessness, irritability
- Can induce cardiac arrhythmia (abnormal beating of the heart), cardiac seizures and death



Hallucinogens

Examples:

- **LSD**
- **MDMA (Ecstasy)**
- **Peyote**
- **Psilocybin**

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Hallucinogens

Hallucinogens are also widely abused.

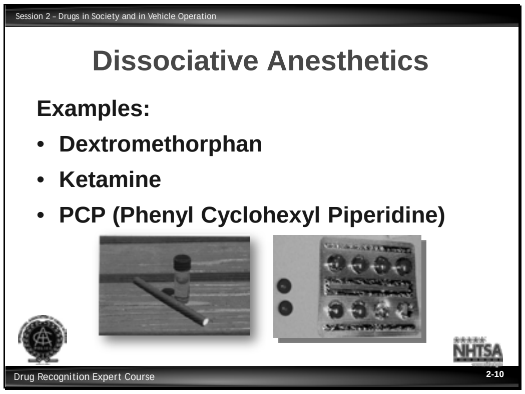
LSD and Peyote are only two examples of Hallucinogens. There are many other Hallucinogens.

In recent years, significant increases in the abuse of both LSD and “Ecstasy” (MDMA) have been reported.

Hallucinogens:

- Create perceptions that differ from reality. These perceptions are often much distorted, so that the user sees, hears, and smells things in a way quite different from how they really look, sound, and smell.
- Hallucinogens cause the nervous system to send strange or false signals to the brain.
- Clarification: Hallucinogens confuse the Central Nervous System (as well as speeding it up, like CNS Stimulants).
- Produce sights, sounds, odors, feelings and tastes that aren’t real.
- Induce a temporary condition very much like psychosis or insanity.
- Can create a “mixing” of sensory modalities, so that the user “hears colors,” “sees music.”

This mixing of the senses is called Synesthesia. With all of these false and distorted perceptions, a person under the influence of hallucinogens would be a very unsafe driver.



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Dissociative Anesthetics

Examples:

- **Dextromethorphan**
- **Ketamine**
- **PCP (Phenyl Cyclohexyl Piperidine)**

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Notes:

Dissociative Anesthetics

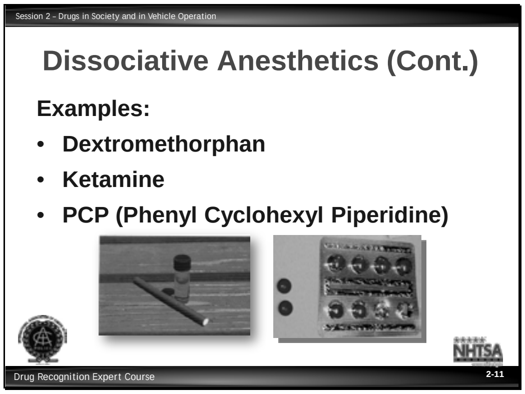
PCP, its analogs and Dextromethorphan are examples of Dissociative Anesthetics. PCP is considered by the medical community to be a Hallucinogen. However, because of the symptomatology it presents, it is in a separate category.

- Phencyclidine is a short form of the chemical name Phenyl Cyclohexyl Piperdine, from which we get the abbreviation "PCP."

PCP is a synthetic drug, i.e., it does not occur naturally but must be produced in a laboratory-like setting.

PCP has many analogs, or "chemical cousins" that are very similar to PCP in chemical structure, and that produce essentially the same effects.

- Analogs of PCP include Ketamine, Ketalar and Ketajet.
- PCP is also a very powerful pain killer, or anesthetic.



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Dissociative Anesthetics (Cont.)

Examples:

- **Dextromethorphan**
- **Ketamine**
- **PCP (Phenyl Cyclohexyl Piperidine)**

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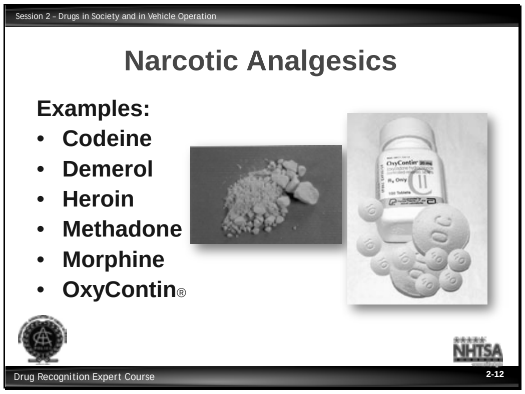
Notes:

Dextromethorphan (DXM) is found in many over-the-counter anti-tussive cold medications such as Robitussin, Coricidin Cough and Cold, and Dimetapp. DXM is typically abused by school age children, teenagers or young adults to achieve impairment.

- DXM is normally used in liquid or pill form.
- In high doses, DXM impairment is similar to the effects of PCP or Hallucinogens.



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Narcotic Analgesics

Examples:

- **Codeine**
- **Demerol**
- **Heroin**
- **Methadone**
- **Morphine**
- **OxyContin®**

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Notes:

Narcotic Analgesics

There are two subcategories of Narcotic Analgesics:

1. Natural Opiates: are derivatives of Opium.
2. Synthetics: are produced chemically in the laboratory. The synthetics are not derived in any way from Opium, but produce similar effects.

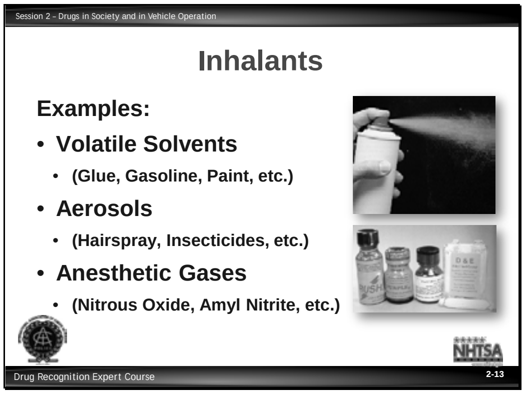
The word “Analgesic” means pain reliever. All of the drugs in this category reduce the person’s reaction to pain.

- Heroin is one of the most commonly abused of the Narcotic Analgesics.
- Heroin is highly addictive.

Many addicts support their habit by stealing property and converting it to cash.

In addition to reducing pain, Narcotic Analgesics produce euphoria, drowsiness, apathy, lessened physical activity and sometimes impaired vision.

Persons under the influence of Narcotic Analgesics often pass into a semi-conscious type of sleep or near-sleep. This condition is often called being “on the nod.” They often are sufficiently alert to respond to questions effectively. Higher doses of Narcotic Analgesics can induce coma, respiratory failure and death.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Inhalants

Examples:
- **Volatile Solvents**
  - **(Glue, Gasoline, Paint, etc.)**
- **Aerosols**
  - **(Hairspray, Insecticides, etc.)**
- **Anesthetic Gases**
  - **(Nitrous Oxide, Amyl Nitrite, etc.)**

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Notes:____

Inhalants

Inhalants are the fumes of certain substances. Inhalant abuse is on the rise.

These substances are found in many common products:

- Gasoline
- Oil-based paints
- Glue
- Aerosol cans
- Varnish remover
- Cleaning fluids
- Etc.

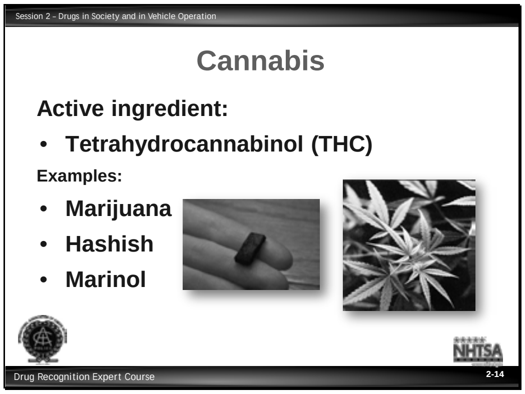
Examples:

- Volatile Solvents (Glue, Gasoline, Paint, etc.)
- Aerosols (Hairspray, Insecticides, etc.)
- Anesthetic Gases (Nitrous Oxide, Amyl Nitrite, etc.)

Different Inhalants produce different effects.

- Many produce effects similar to those of CNS Depressants.
- A few produce stimulant-like effects.
- Some produce hallucinogenic effects.

The Inhalant abuser’s attitude and demeanor can vary from inattentive, stuporous and passive to irritable, violent and dangerous. The abuser’s speech will often be slow, thick and slurred.



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Cannabis

Active ingredient:

- **Tetrahydrocannabinol (THC)**

Examples:

- **Marijuana**
- **Hashish**
- **Marinol**

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Cannabis

The category “Cannabis” includes the various forms and products of the Cannabis Sativa plant and other species of Cannabis plants.

The primary active ingredient in Cannabis products is the substance known as “Delta-9 Tetrahydrocannabinol,” or “THC.”

Apart from alcohol, marijuana is the most commonly abused drug in this country.

In a household survey from 2011, marijuana was listed as the most common illicit drug used in the U.S. There were 18.1 million Americans over the age of 12 reporting use in the past month.

Source: National Household Drug Use and Health Survey, 2011.

Cannabis appears to interfere with the attention process. Drivers under the influence of Marijuana often do not pay attention to their driving.

Cannabis also produces a distortion of the user’s perception of time, an increased heart rate (often over 100 beats per minute) and reddening of the eyes.

Session 2 – Drugs in Society and in Vehicle Operation

Drug Combinations

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Drug Combinations

Many drug users appear to be “chemical gluttons.” They often ingest drugs from two or more drug categories.

The term for this is “polydrug use.”

Some very common examples of polydrug use include:

- Alcohol with virtually any other drug
- Marijuana and PCP - A common way to ingest PCP is to sprinkle it on a Marijuana “joint” and smoke it.
- Cocaine and Heroin, sometimes called a “speedball.”
- Heroin and Amphetamine, sometimes called a “poor man’s speedball.”
- Heroin and PCP, sometimes called a “fireball.”
- “Crack” Cocaine and PCP, sometimes called a “space base.”
- “Crack” Cocaine and Marijuana, sometimes called a “primo.”
- “Crack” and Methamphetamine, sometimes called “croak.”

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Drug Combinations (Cont.)

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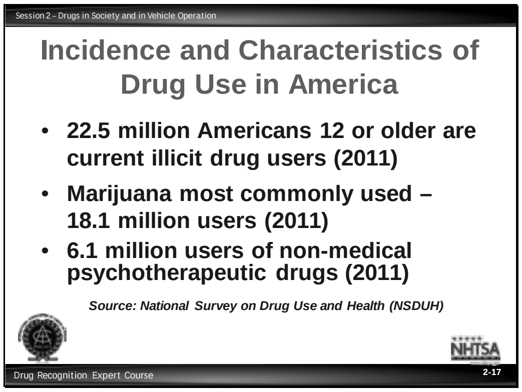
Sometimes, people take two different drugs (such as Heroin and Cocaine) that produce some opposite effects.

Example: Heroin tends to lower blood pressure. Cocaine tends to elevate blood pressure.

Different drug combinations may produce unique, interactive effects.

When a person has ingested multiple drugs, that person will experience multiple drug effects.

Under proper medical supervision, specific drugs often are used to reverse overdose conditions. However, it is important to bear in mind that, in a polydrug situation, some of the signs of a particular drug may not be evident even though the person is under the influence of that drug.



Session 2 – Drugs in Society and in Vehicle Operation

Incidence and Characteristics of Drug Use in America

- **22.5 million Americans 12 or older are current illicit drug users (2011)**
- **Marijuana most commonly used – 18.1 million users (2011)**
- **6.1 million users of non-medical psychotherapeutic drugs (2011)**

Source: National Survey on Drug Use and Health (NSDUH)

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Notes:

B. Incidence and Characteristics of Drug Use in America

- In 2011, 22.5 million Americans (8.0 % of the population) aged 12 years or older were current illicit drug users.

  Source: 2011 National Survey on Drug Use and Health.

- Marijuana was the most commonly used illicit drug in 2011, with 18.1 million users reporting use.

  Source: 2011 National Survey on Drug Use and Health.

- In 2011, 6.1 million people were users of prescription type psychotherapeutic drugs taken non-medically.

  Source: 2011 National Survey on Drug Use and Health.

- In 2011, there were an estimated 1.4 million Cocaine users in the U.S.

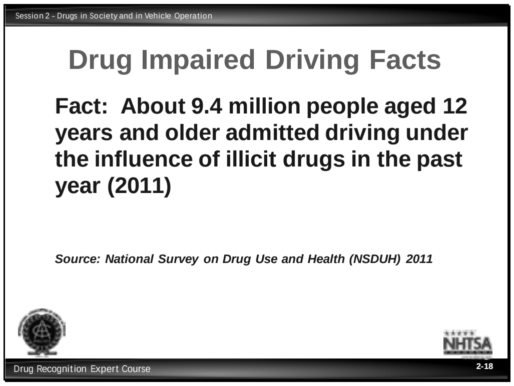
  Source: 2011 National Survey on Drug Use and Health.

- In 2008, there were an estimated 1.5 million users of Heroin.

  Source: 2008 National Survey on Drug Use and Health.

- Data from the 2008 NSDUH report shows that there were 2.2 million new users of pain relievers in 2008, with an average age of first use of 21.2 years.

  Source: NSDUH, 2008.



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Drug Impaired Driving Facts

Fact: About 9.4 million people aged 12 years and older admitted driving under the influence of illicit drugs in the past year (2011)

Source: National Survey on Drug Use and Health (NSDUH) 2011

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Notes:____

C. Incidence of Drug Impaired Driving

Accurate data on the frequency with which people drive while under the influence of drugs is somewhat limited.

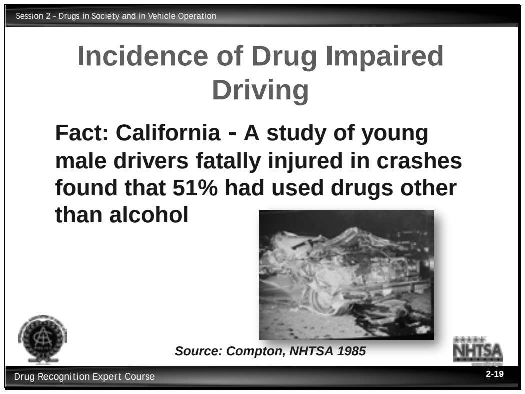
This is due to the various reasons that include:

- Many impaired drivers are never detected.
- Many drug users also consume alcohol, when they are stopped for impaired driving they may be arrested (and tabulated in statistics) as alcohol impaired drivers only.

Fact: About 9.4 million people aged 12 years and older admitted driving under the influence of illicit drugs in the past year (2010).

Source: SAMHSA, Results from the 2011 National Survey on Drug Use and Health.

When they are involved in crashes, they may not be tested for drugs.



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Incidence of Drug Impaired Driving

Fact: California - A study of young male drivers fatally injured in crashes found that 51% had used drugs other than alcohol

Source: Compton, NHTSA 1985

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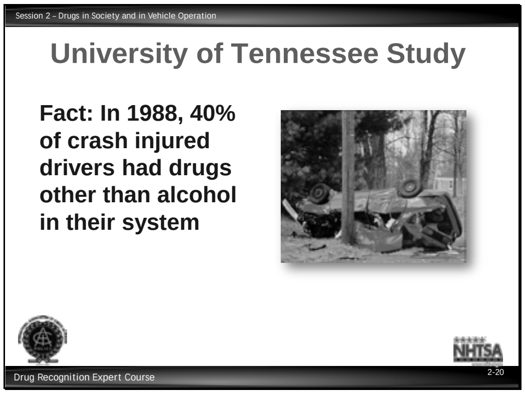
Fact: A study in California of young male (15-34 years old) drivers killed in crashes in the early 1980’s revealed that more than half (51%) tested positive for drugs other than alcohol. The most prevalent drug (other than alcohol) was Cannabis at 37%. 30% of all cases had both alcohol and Cannabis.

Source: Compton, R. and Anderson, T., The Incidence of Driving Under the Influence of Drugs: 1985. National Highway Traffic Safety Administration, 1985.



Session 2 – Drugs in Society and in Vehicle Operation

University of Tennessee Study

Fact: In 1988, 40% of crash injured drivers had drugs other than alcohol in their system

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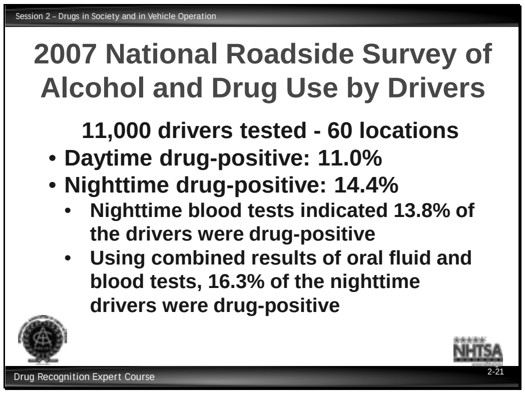
Fact: University of Tennessee (1988) found 40 % of crash injured drivers had drugs other than alcohol in them.

Fact: A NHTSA study of various locations in seven states revealed that alcohol was present in more than 50% of the drivers. Drugs other than alcohol were present in 18 % of the drivers.

Source: NHTSA: 1993 Traffic Tech.



Session 2 – Drugs in Society and in Vehicle Operation

2007 National Roadside Survey of Alcohol and Drug Use by Drivers

11,000 drivers tested - 60 locations

- **Daytime drug-positive: 11.0%**
- **Nighttime drug-positive: 14.4%**
  - **Nighttime blood tests indicated 13.8% of the drivers were drug-positive**
  - **Using combined results of oral fluid and blood tests, 16.3% of the nighttime drivers were drug-positive**

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Notes:____

NHTSA undertook a comprehensive study of the prevalence of potentially-impairing drug use by drivers in 2007.

Report: The 2007 National Roadside Survey of Alcohol and Drug Use by Drivers.

Approximately 11,000 drivers were asked to provide an oral fluid and blood sample. Samples were tested for legal prescription, illegal and OTC products.

Fact: Based on the oral fluid results, more nighttime drivers (14.4%) were drug positive than daytime drivers (11.0%).

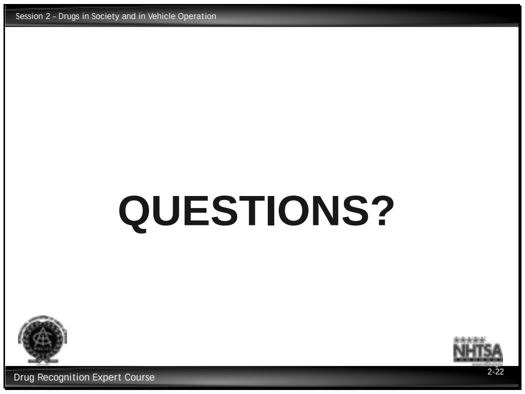
Fact: Based on the blood test results administered only at nighttime, 13.8% of the drivers were drug-positive.

Fact: Using the combined results, 16.3% of the nighttime drivers were drug-positive.

Source: NHTSA Traffic Safety Facts, DOT HS 811 175, July 2009.

The facts are unmistakable: Drug use is common among many Americans. So is drug impaired driving.

Consult national and local resources for updated data on drugs and driving.



Session 2 – Drugs in Society and in Vehicle Operation

QUESTIONS?

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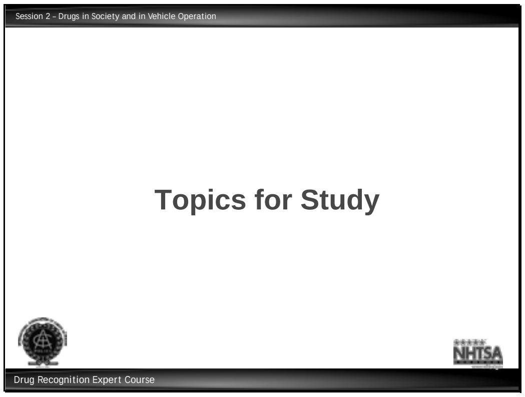

Session 2 – Drugs in Society and in Vehicle Operation

Topics for Study

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Topics for Study Questions

1. What does the term “drug” mean, as it is used in this course?

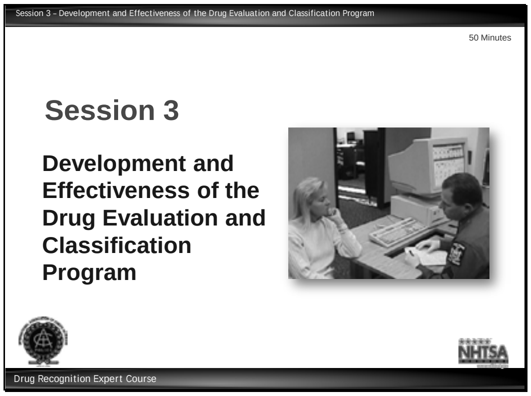
2. What are the seven categories of drugs? To which category does alcohol belong? To which category does Cocaine belong?

3. What does “polydrug use” mean?

4. What is a “Speedball”? What is a “Space Base”?

5. In the 2007 National Roadside Survey of Alcohol and Drug Use by Drivers, what percentage of nighttime drivers, using both blood tests and oral fluids, tested positive for drugs?

Participant Manual DRE 7-Day Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program



50 Minutes

Session 3

Development and Effectiveness of the Drug Evaluation and Classification Program

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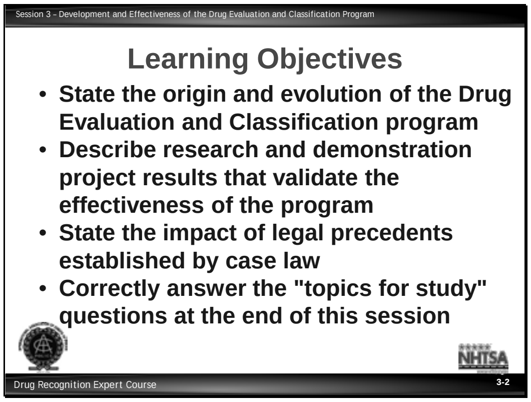


Learning Objectives

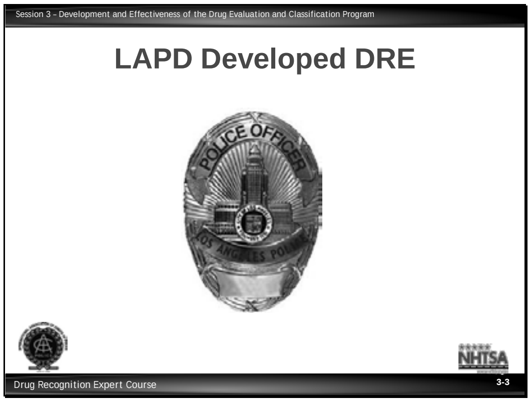
- **State the origin and evolution of the Drug Evaluation and Classification program**
- **Describe research and demonstration project results that validate the effectiveness of the program**
- **State the impact of legal precedents established by case law**
- **Correctly answer the "topics for study" questions at the end of this session**

Notes:

Upon successfully completing this session the participant will be able to:

- State the origin and evolution of the Drug Evaluation and Classification Program.
- Describe research and demonstration project results that validate the effectiveness of the program.
- State the impact of legal precedents established by case law.
- Correctly answer the “topics for study” questions at the end of this session.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Origin and Evolution of Drug Evaluation & Classification Program	Instructor Led Presentations
B. Evidence of Program Effectiveness	Reading Assignments
C. Case Law Review	



Session 3 - Development and Effectiveness of the Drug Evaluation and Classification Program

LAPD Developed DRE

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Notes:

The DEC program was developed by personnel of the Los Angeles Police Department.

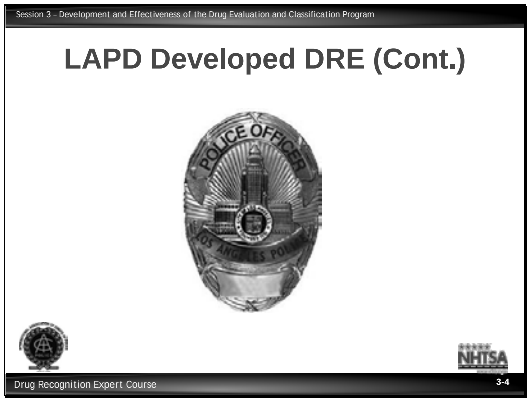
Development of the DEC program began in the early 1970's, in response to a growing awareness that many people apprehended for impaired driving were under the influence of drugs rather than alcohol.

Dick Studdard (Traffic Officer):

- Sergeant Studdard retired from the LAPD in June, 1990.
- Sgt. Studdard and his fellow officers often encountered many impaired drivers whose BACs were zero or very low.

They occasionally succeeded in having physicians examine some of these low BAC subjects, resulting in diagnosis of drug influence.

- Note: examining physicians subsequently would be subpoenaed to testify in contested cases.
- For various reasons, physicians were often reluctant or unwilling to conduct these examinations and offer opinions.



Session 3 - Development and Effectiveness of the Drug Evaluation and Classification Program

LAPD Developed DRE (Cont.)

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Notes:____

Some reasons why doctors may be reluctant:

- They typically receive little training in the recognition of specific signs of drug impairment, particularly at street level doses.
- They may not see the subject until hours after the drugs were used, by which time the signs and symptoms often have changed.

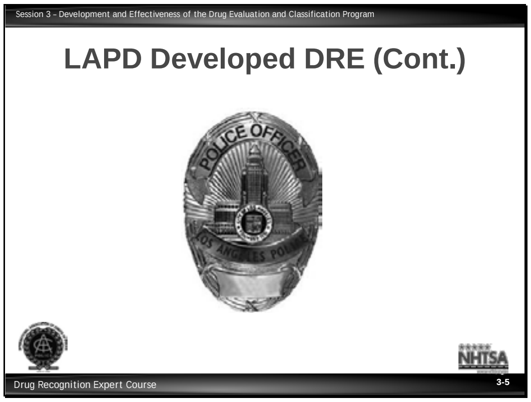
As a result, some drivers whom Studdard and other officers were certain were impaired were not prosecuted or convicted for DWI.

Studdard concluded that it was essential to develop appropriate procedures that officers could use when confronted with persons suspected of drugs.

Len Leeds (Narcotics Officer) and deceased in 1995:

- Was approached by Studdard and asked to collaborate in the development of a program to help identify drug-impaired subjects.
- Initiated some independent research by consulting with physicians, enrolling in relevant classes, studying text books, technical articles, etc.
- Secured management level support within the department to continue research and program development.

As time went on, many other key persons both within and outside LAPD contributed to the development and refinement of the program.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

LAPD Developed DRE (Cont.)

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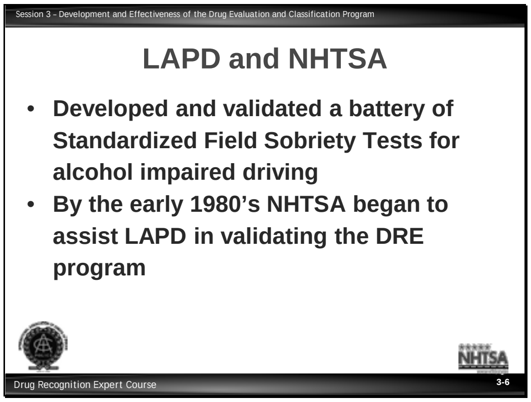
Notes:____

In 1979, the program was officially recognized by LAPD.

Note: The LAPD program was referred to as the Drug Recognition Expert (DRE) program.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

LAPD and NHTSA

- **Developed and validated a battery of Standardized Field Sobriety Tests for alcohol impaired driving**
- **By the early 1980's NHTSA began to assist LAPD in validating the DRE program**

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Notes:____

B. Evidence of Program Effectiveness

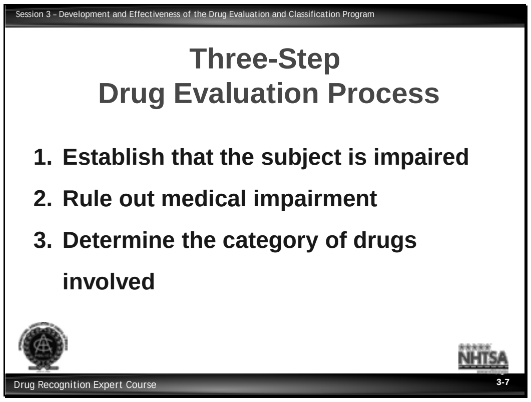
LAPD began to work with the National Highway Traffic Safety Administration (NHTSA) on issues relating to this program in the early 1970's.

The first step was to develop and validate a battery of standardized field sobriety tests for investigating alcohol impaired driving.

LAPD personnel played a major role in the research that led to the wide spread use of Horizontal Gaze Nystagmus, the Walk and Turn test, and the One Leg Stand test.

By the early 1980's, NHTSA completed its validation of the standardized tests for DWI enforcement.

At this time, NHTSA began to assist LAPD in validating the Drug Recognition Expert program.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Three-Step Drug Evaluation Process

1. Establish that the subject is impaired
2. Rule out medical impairment
3. Determine the category of drugs involved

Drug Recognition Expert Course 3-7

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The DEC program evolved into what is essentially a three-step process.

- First, establish that the subject is impaired and verify that his or her alcohol level is not consistent with the degree of impairment that is evident.

Clarification: the first portion of the drug influence evaluation is devoted principally to Standardized Field Sobriety Testing of the subject, and to the administration of a breath test.

Inconsistency between the observed impairment and the BAC suggests the presence of some other drug(s), or some other complicating factor such as an illness or injury.

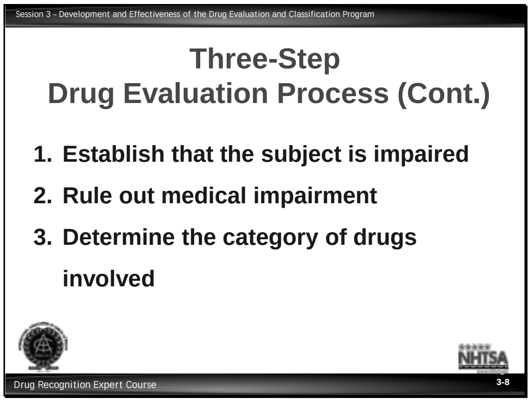
- Second, use some simple evaluation procedures to determine whether the impairment may stem from illness or injury, requiring medical attention.

- Third, use evaluation procedures to determine what category (or categories) of drugs are the likely cause of the impairment.

Key Point

The entire evaluation process is standardized.

- Administered the same way to all subjects.
- Administered the same way by all officers.



Session 3 - Development and Effectiveness of the Drug Evaluation and Classification Program

Three-Step Drug Evaluation Process (Cont.)

1. **Establish that the subject is impaired**
2. **Rule out medical impairment**
3. **Determine the category of drugs involved**

Drug Recognition Expert Course

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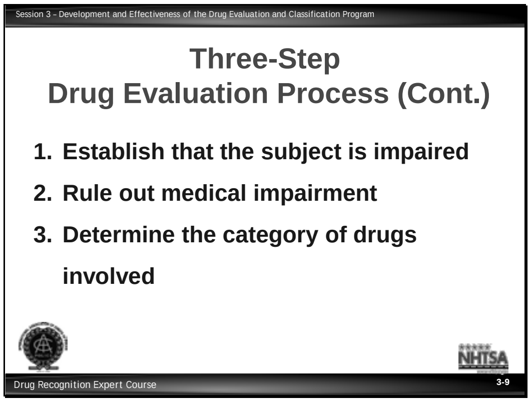
The Need for Reliable Standardized Assessment Procedure

- One reason for needing a reliable standardized assessment procedure is that we may be called upon to submit evidence of an articulable suspicion of drug influence to support our request for a chemical test of the subject.
- Some courts or motor vehicle hearings officers may find that a low BAC result, by itself, does not provide adequate basis for requesting the subject to submit to a 2nd chemical test.
- Another reason is that the subject may refuse to submit to the chemical test, denying us of scientific evidence of drug influence. In that case, conviction or acquittal may hinge on the officer's observations and expertise as a DRE.
- A third reason is that chemical tests usually disclose only that the subject has used a particular drug recently. The chemical test usually does not indicate whether the drug is psychoactive at the present time.
- Thus, the DRE procedures are needed to establish that the subject not only has used the drug, but also that he or she is under the influence.



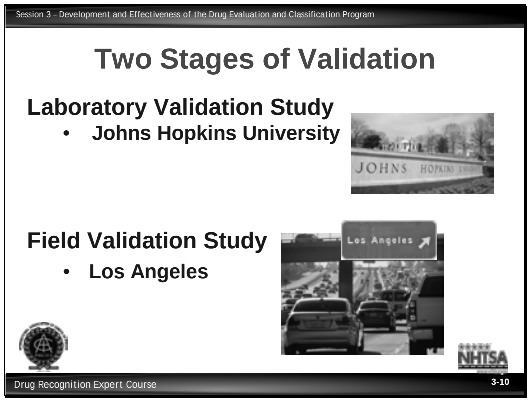
Three-Step Drug Evaluation Process (Cont.)

1. **Establish that the subject is impaired**
2. **Rule out medical impairment**
3. **Determine the category of drugs involved**

Notes:

- A fourth reason is that it can be expensive and require a large sample of blood or urine to perform a broad analysis for any or all drugs. Practical constraints require that we be able to point the laboratory technician toward those types of drugs most likely to be found in the sample.

It is always possible that a person suspected of drug impairment is actually suffering from some medical problem. If a sample is collected, and the subject is not examined by someone who is qualified, evidence of medical problems may not come to light until it is too late.


JOHNS HOPKINS
Los Angeles
NHTSA

Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Two Stages of Validation

Laboratory Validation Study

- **Johns Hopkins University**

Field Validation Study

- **Los Angeles**

Drug Recognition Expert Course

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Notes:

Two Stages of Validation

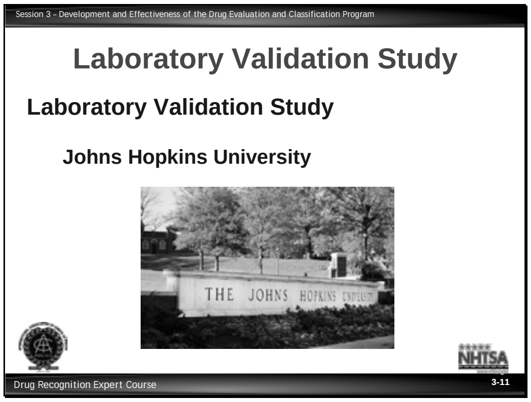
NHTSA assisted LAPD in a two-phase validation study.

- Laboratory validation, using volunteers who ingested selected drugs.

  The Johns Hopkins validation was conducted in 1984.

- Field validation, using persons actually arrested in Los Angeles on suspicion of drug influence.

  The LAPD Field Validation Study was conducted in 1985.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Laboratory Validation Study

Laboratory Validation Study

Johns Hopkins University

Drug Recognition Expert Course

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Notes:____

1. Laboratory Validation Study

The Laboratory Validation took place at Johns Hopkins University in Maryland.

The drug examiners were senior DREs from LAPD. The LAPD participants:

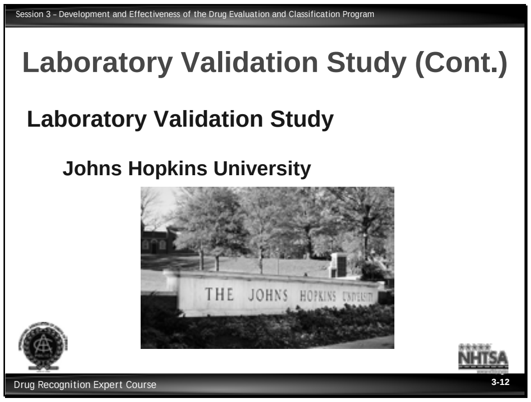
Dick Studdard; Jerry Powell; Pat Russell; and Doug Laird.

The laboratory experiments were planned and conducted by researchers from Johns Hopkins.

Volunteers each took a “pill” and smoked a “cigarette.”

The “pill” contained either no drug (placebo) or one of the following drugs:

- Secobarbital (CNS Depressant)
- Valium (i.e., Diazepam – CNS Depressant)
- d-amphetamine (CNS Stimulant).



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Laboratory Validation Study (Cont.)

Laboratory Validation Study

Johns Hopkins University

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Note: Secobarbital, diazepam and d-amphetamine were the pharmaceuticals used in the study. All were administered in identical gelatin capsules and were not brand name drugs.

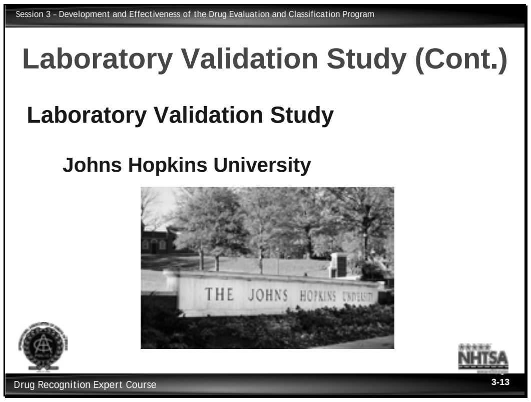
A common brand name for secobarbital is Seconal; a common brand name for diazepam is Valium and a common brand name for d-amphetamine is Dexedrine.

The "cigarette" contained either THC or no drug (placebo). Neither the volunteers nor the LAPD officers knew what the volunteers had taken.

Note: this condition is known as a "double blind" experiment. The people being tested and the people doing the testing are kept uninformed of the test condition.

Two different dose levels of Marijuana, Diazepam and d-amphetamine were used.

Clarification: some of the Diazepam and d-amphetamine pills were "weak," some were "strong." Similarly, some of the Marijuana cigarettes were "weak," some "strong." All of the Secobarbital pills were "strong."



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Laboratory Validation Study (Cont.)

Laboratory Validation Study

Johns Hopkins University

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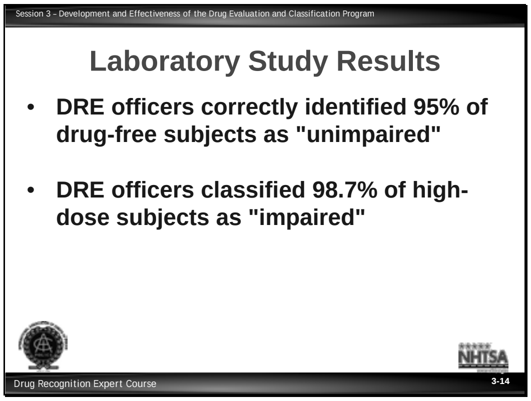
Notes:____

Normal daily dose for therapeutic purposes:

- Secobarbital: approx. 100 mg.
- Diazepam: 4-40 mg.
- d-amphetamine: 15 mg.

Doses administered for this study:

- Secobarbital: 300 mg.
- Diazepam: weak – 15mg, strong – 30mg.
- d-amphetamine: weak – 15 mg, strong – 30 mg.
- Marijuana: weak – 12 puffs or 1.3% THC cigarettes, strong – 12 puffs of 2.8% THC cigarettes.



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Laboratory Study Results

- **DRE officers correctly identified 95% of drug-free subjects as "unimpaired"**
- **DRE officers classified 98.7% of high-dose subjects as "impaired"**

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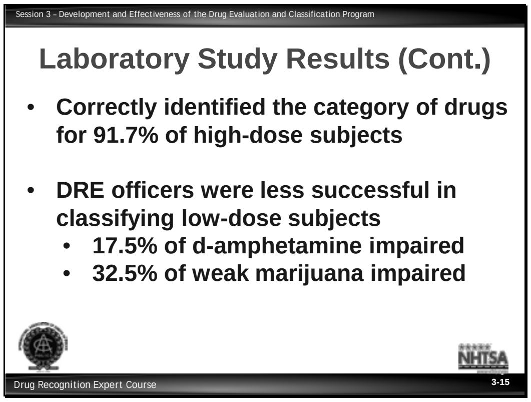
Notes:____

Results

- The DREs were excellent in identifying subjects who received only placebo doses: they classified 95% of the drug free subjects as “not impaired.
- Similarly, they were excellent in identifying the high dose subjects.
- They classified as “impaired” 98.7% of the subjects who received Secobarbital or strong doses of Marijuana, Diazepam or d-amphetamine.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Laboratory Study Results (Cont.)

- **Correctly identified the category of drugs for 91.7% of high-dose subjects**
- **DRE officers were less successful in classifying low-dose subjects**
  - **17.5% of d-amphetamine impaired**
  - **32.5% of weak marijuana impaired**

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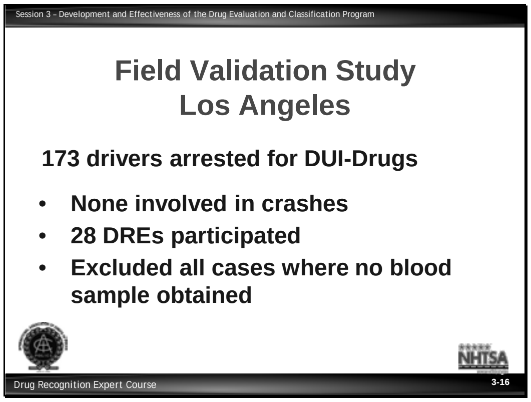
Notes:

- They correctly identified the category of drug for 91.7% of those strong dose subjects.
- The DREs were less successful in identifying the weak dose subjects.
- Only 17.5% of the subjects who received the weak dose of d-amphetamine were classified as “impaired.”
- Only 32.5% of the subjects who smoked the “weak” Marijuana cigarettes were classified as “impaired.”
- The results of the laboratory validation study were considered to be extremely positive.
- The DRE procedures correctly identified the category of drugs in more than 90% of the subjects who were impaired.
- The procedures only rarely indicated that unimpaired subjects were under the influence of drugs.
- Laboratory studies can only allow certain dose levels of drugs, which are much lower than those seen at street levels. Therefore, participants in laboratory studies may not show many of the signs of impairment that are seen with subjects ingesting street level doses of drugs.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Field Validation Study
Los Angeles

173 drivers arrested for DUI-Drugs

- **None involved in crashes**
- **28 DREs participated**
- **Excluded all cases where no blood sample obtained**

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2. Field Validation Study

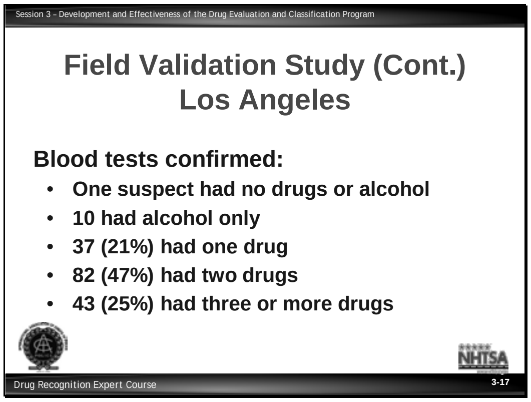
The field validation study was based on one hundred seventy-three people actually arrested on suspicion of driving under the influence of drugs.

Point out that during the study period, many other drugged driving arrests were made by LAPD officers.

None of the 173 cases involved a crash. In all of the cases, the arrested subjects agreed to submit to a blood test.

Twenty-eight different DREs from LAPD and the L.A. area participated in the examinations of these one hundred seventy-three subjects.

The researchers excluded all cases where the subjects refused to give blood, since it would have been impossible to check the DREs accuracy in those cases. Similarly, they excluded all cases that involved crashes, since the subjects' injuries could have confounded the drug examination. Also excluded were subjects who were found in possession of drugs or had any charges other than the drugged driving charge.



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Field Validation Study (Cont.)
Los Angeles

Blood tests confirmed:

- **One suspect had no drugs or alcohol**
- **10 had alcohol only**
- **37 (21%) had one drug**
- **82 (47%) had two drugs**
- **43 (25%) had three or more drugs**

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Results of the Field Study

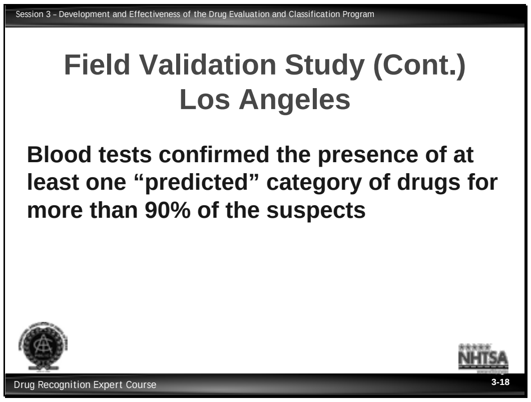
Based on the independent blood tests, only one of the one hundred seventy-three subjects was found to have no alcohol or other drugs. Another ten subjects were found to have only alcohol in them.

Thirty-seven (21%) of the subjects were found to have only one drug other than alcohol.

Eighty-two had two drugs other than alcohol (47%) and forty-three (25%) had three or more drugs other than alcohol.

This means that one hundred twenty-five of the one hundred seventy-three subjects had ingested two or more drugs other than alcohol: that is more than 72% of the subjects.

PCP was the drug most often found among these one hundred seventy-three subjects: more than half of them (56%) had used PCP.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Field Validation Study (Cont.) Los Angeles

Blood tests confirmed the presence of at least one "predicted" category of drugs for more than 90% of the suspects

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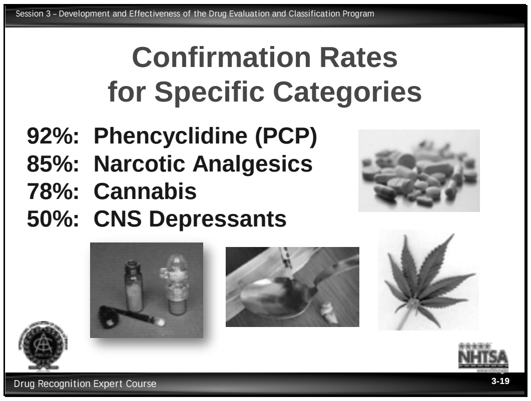
Notes:____

The key finding of this study was the following:

- For more than nine out of ten of the subjects (92.5%), the blood test confirmed the presence of at least one drug category "predicted" by the DREs.



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Confirmation Rates for Specific Categories

92%: Phencyclidine (PCP)
85%: Narcotic Analgesics
78%: Cannabis
50%: CNS Depressants

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Notes:____

The confirmation rates for specific categories:

PCP: blood tests confirmed DREs' predictions in 92% of the cases.

Narcotic Analgesics: blood tests confirmed 85% of the DREs' predictions.

Cannabis: blood tests confirmed 78% of DREs' predictions.

CNS Depressants: blood tests confirmed 50% of DREs' predictions.

Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Confirmation Rates for Specific Categories (Cont.)

33%: CNS Stimulants

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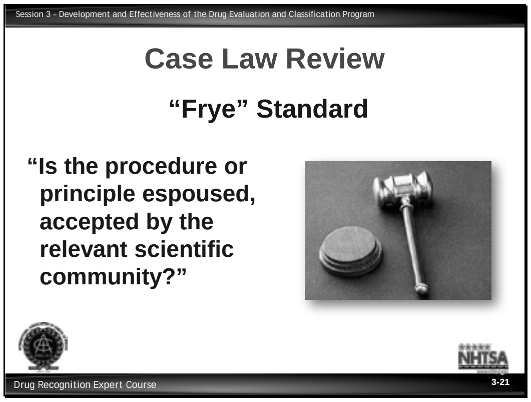
CNS Stimulants: blood tests confirmed 33% of DREs' predictions.

Numerous states have conducted comparisons of laboratory analysis and DRE opinions. The correlation rates exceeded 80% in those studies.

A Study conducted in 1990 by the Arizona Department of Public Safety Central Regional Crime Laboratory compiled records of the toxicological analysis corresponding to Arizona DREs were analyzed showing that a laboratory confirmation rate of 86.5% had been achieved.

The overall conclusion of the laboratory and field studies is that the DEC Program is an effective tool for law enforcement.



Session 3 - Development and Effectiveness of the Drug Evaluation and Classification Program

Case Law Review

“Frye” Standard

“Is the procedure or principle espoused, accepted by the relevant scientific community?”

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Notes:

D. Case Law Review

Court Rulings

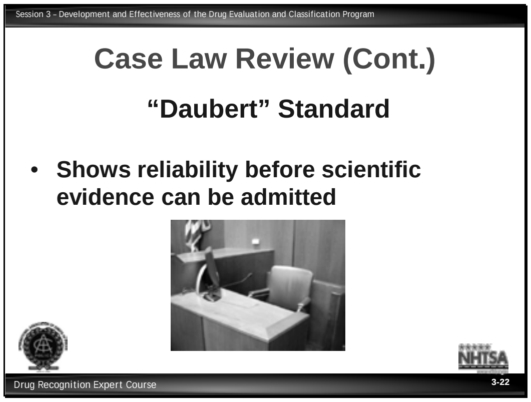
Favorable Court Rulings on DEC Procedures.

Courts in various states have ruled favorably on the DEC Program. American courts employ either the Frye or Daubert Standard for determining the admissibility of scientific evidence.

The Frye standard is the traditional test for admissibility of “new” scientific evidence.

The Frye standard: “Is the procedure or principle espoused, accepted by the relevant scientific community?”

Frye standard was set by the US Supreme Court in 1923.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Case Law Review (Cont.)

“Daubert” Standard

- **Shows reliability before scientific evidence can be admitted**

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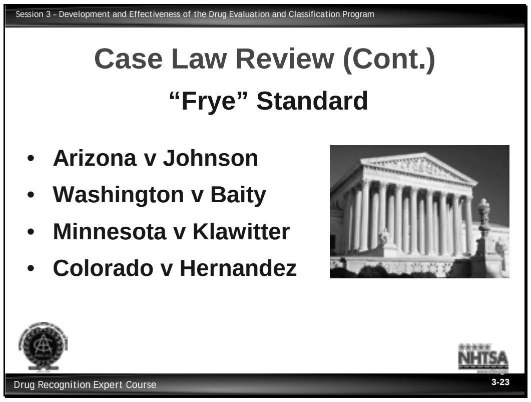
Notes:

In Daubert, courts serve as a gatekeeper for all scientific evidence.

Daubert standard requires a showing of reliability before scientific evidence can be admitted.

Courts assess evidence by considering four factors:

- Opinions are testable.
- Methods/principles have been subject to peer review.
- Known error rate can be identified.
- Opinions rest on methodology that is generally accepted within the relevant scientific/technical community.



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Case Law Review (Cont.)

“Frye” Standard

- **Arizona v Johnson**
- **Washington v Baity**
- **Minnesota v Klawitter**
- **Colorado v Hernandez**

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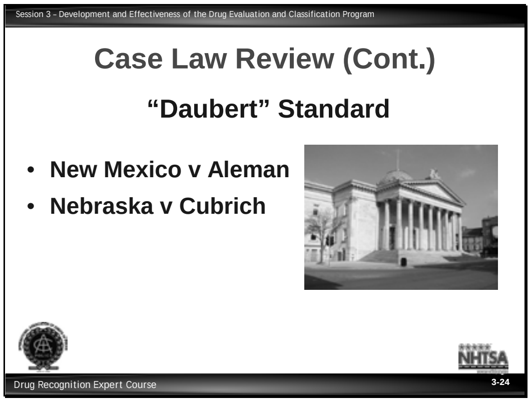
Notes:

- *State of Arizona v. Dayton Johnson and Samuel Rodriguez, et al, NOS 90056865 and 90035883, (1990).* An Arizona court (Tucson Municipal Court) ruled that the Frye Standard was met. However, upon appeal, the Arizona State Supreme Court ruled that the Frye Standard did not apply to the DEC Program.

- *Washington v. Baity, 991P.2d, 1151, 140 Wn. 2d 1 (2000).* A Washington Supreme Court ruled that the DRE protocols are the application of traditional techniques.

- *State of Minnesota, City of Minneapolis v. Larry Michael Klawitter, 518 N.W.2d 577, (1993).* A Minnesota Court (City of Minneapolis) ruled that outside of nystagmus, the DEC Program is not subject to the Frye Standard.

- *State of Colorado v. Daniel Hernandez, 92M 181, (1992).* The Colorado Supreme Court determined that the Frye Standard applies to the protocol because the process has “scientific elements.” A Colorado Court (Boulder County Court) ruled that the procedures used by DREs are not new or novel and the Frye Standard did not apply.



Session 3 - Development and Effectiveness of the Drug Evaluation and Classification Program

Case Law Review (Cont.)

“Daubert” Standard

- **New Mexico v Aleman**
- **Nebraska v Cubrich**

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Notes:

- *New Mexico v. Mariam Aleman, Dona Ana County, 3rd District (2003).* A New Mexico Court ruled the DRE’s opinion was correct and that the DRE protocol is admissible.

- *Nebraska v. Cubrich, Case No. CR03-8203 Sarpy County Court (2004).*

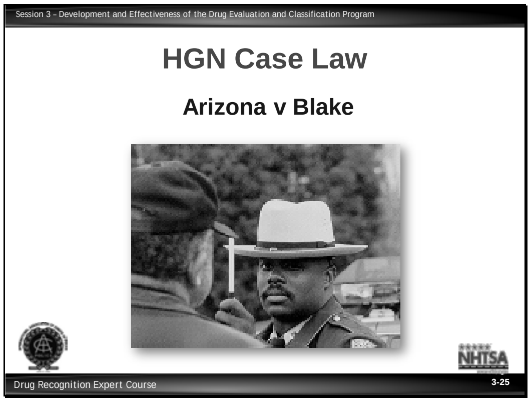
  In this case, the court used the Daubert Standard. In many jurisdictions, it will not be necessary to have expert scientific testimony to secure admissibility of a DRE’s examination of a subject.

The DEC Program is gaining acceptance in many courts.

In fact, testimony based on DRE investigation has been accepted by courts for years.

Expert testimony regarding drug influence has long been accepted by numerous courts. The components of DRE evaluation are generally accepted in the scientific community.

The DEC Program simply combined those components into a systematic and standardized procedure. Thus, many prosecutors believe that FRYE standards do not apply to DRE evaluations and testimony.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

HGN Case Law

Arizona v Blake

Drug Recognition Expert Course 3-25

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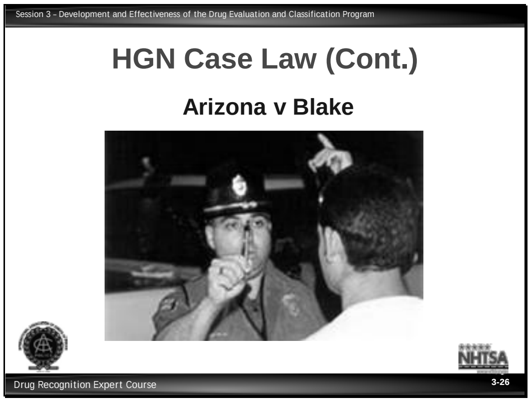
HGN Case Law

One key element of DEC – namely, Horizontal Gaze Nystagmus – has been recognized as meeting the Frye standard by several State Supreme Courts. First to do so was Arizona, in the case known as State vs. Blake.

Point out that additional court rulings on HGN are summarized in the participant's Manual.



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HGN Case Law (Cont.)

Arizona v Blake

Drug Recognition Expert Course 3-26

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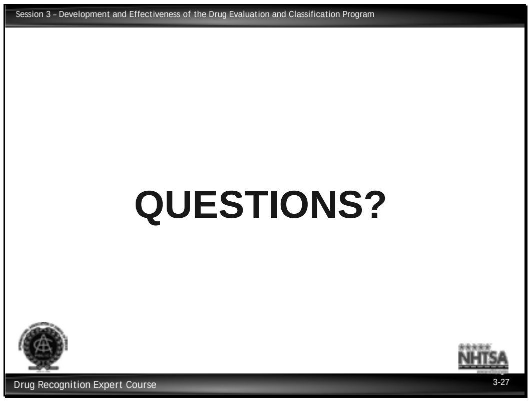
Summary of HGN Case Law

The prevailing trend is for courts to admit HGN as evidence of impairment, with the proper scientific foundation.

But courts consistently reject all attempts to introduce HGN as evidence of a quantitative BAC.

The court ruled that in cases where there is no chemical test to determine a BAC level, HGN test results can be admitted the same as of Standardized Field Sobriety Tests to show a "neurological dysfunction," one cause of which could be the ingestion of alcohol.



Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

QUESTIONS?

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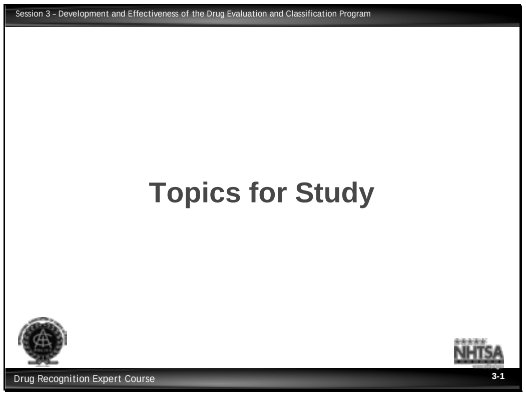

Session 3 – Development and Effectiveness of the Drug Evaluation and Classification Program

Topics for Study

Drug Recognition Expert Course

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Topics for Study Questions

1. State four reasons why it is important not to rely simply on a chemical test to establish a subject’s drug impairment.

2. What categories of drugs were included in the Johns Hopkins Laboratory Study?

3. In what percentage of cases in the Los Angeles Field Validation Study did blood tests confirm the DREs’ opinion that PCP was present?

4. What percentage of subjects were found to be polydrug users in the LAPD Field Validation Study?

5. What was the landmark State Supreme Court case that upheld the use of HGN as evidence of impairment?

6. What do we call the standards for admissibility of scientific evidence, set by the U.S. Supreme Court?

7. Which State first found the Drug Evaluation and Classification procedures met the standards of scientific evidence?

“Frye” Decisions Regarding Admissibility of Drug Recognition Expert Testimony

“Frye” refers to a United States Federal Court opinion dealing with the admissibility of scientific evidence. The court established that new or novel scientific evidence, or the novel application of scientific principles, must be shown to have met with general acceptance in the relevant scientific community before it can be admitted.

1990
State of Arizona v. Dayton Johnson and Samuel Rodriguez, et al. Defendants Nos 90056865 & 90035883 (Unpublished Opinion).
The Municipal Court of the City of Tucson, County of Pima, State of Arizona

“Virtually all the witnesses agreed that the scientific procedures utilized by trained drug recognition experts are reliable and are generally accepted in the scientific community. The methodology in place, used by trained law enforcement personnel in the field, has been shown to produce reasonably reliable and uniform results that will contribute materially to the ascertainment of the truth.”

On May 7, 1992, the Arizona Supreme Court heard oral arguments in a special proceeding regarding this case. The Justices uniformly rejected the application of “Frye” to the DRE procedures. The Chief Justice observed that the component examination procedures had been established for fifty years.

The prosecutors in this case were Tom Rankin (Tucson) and Cliff Vanell (Phoenix).

Expert witnesses for the prosecution included: Sgt. Richard Studdard, LAPD, Marcelline Burns, Ph.D., Sgt. Thomas Page, LAPD, Zenon Zuk, M.D., and Eugene Adler, toxicologist.

1992
County Court, Boulder, Colorado
Case No. 92M181 (Unpublished Opinion)
People of the State of Colorado v. Daniel Hernandez

“The DRE methods are accepted within the scientific community because they have found to be reliable.”

“The Court finds that the expert does have sufficient specialized knowledge to assist the jurors in better deciding whether the defendant drove his car when under the influence of a specific drug. The DRE testimony can be used at trial provided a sufficient foundation is laid.” Overall, this court ruled that the procedures used by DRE’s are not new or novel scientific techniques that must meet the “Frye” standard.

The prosecutor in this case was David Archeluta (Boulder County). Expert witnesses for the prosecution include: Sergeant Thomas Page, LAPD, Zenon Zuk, M.D., Marcelline Burns, Ph.D., Rick Abbott, M.D., and Laurel Farrell (chemist).

1993
State of Minnesota in Supreme Court, C6-93-2092, filed June 30, 1994. (Unpublished Opinion)
State of Minnesota, City of Minneapolis vs. Larry Michael Klawitter, 518 N.W.2d 577 (1994)

“Given proper foundation and subject to other qualifications, opinion testimony by experienced police officers trained in use of so-called drug recognition protocol is generally admissible in evidence in a trial of a defendant for driving while under the influence of a controlled substance.”

The Court determined that the gaze nystagmus test satisfies the requirements of “Frye”.

“We agree with the trial court that the officer should be allowed to give an opinion based on the officer’s training and experience and his or her observations following the 12-step drug recognition protocol, as long as (a) there is sufficient foundation for the specific opinion expressed, (b) the state does not attempt to exaggerate the officer’s credentials by referring to the officer as a “Drug Recognition Expert” or to unfairly suggest that the officer’s opinion is entitled to greater weight than it deserves, and...” “We add only that it should be obvious that the mere fact that such opinion testimony by itself will be sufficient to support a guilty verdict.”

The court also determined that, outside of nystagmus, the components of a DRE examination are not scientifically new and are not subject to the “Frye” test.

The trial court stated, “...there is nothing scientifically new, novel, or controversial about any component of the DRE protocol itself. The symptomatology matrix used by DRE’s to reach their conclusions is not new and is generally accepted in the medical community as an accurate compilation of signs and symptoms or impairment by the various drug categories.”

The prosecutor in this case was Karen Herland (City of Minneapolis). Expert witnesses for the prosecution included: Sergeant Thomas Page, LAPD, Dr. Marcelline Burns (psychologist), Dr. David Peed (optometrist), Dr. Zenon Zuk (medical doctor), Eugene Adler (criminalist), Dr. S.J. Jejurikar (Minnesota Bureau of Criminal Apprehension), and Robert Meyer (toxicologist).

1994
11th Judicial Circuit in and for Dade County, Florida
Case No. 256998,9-I (Unpublished Opinion)
State of Florida v. Frederick Williams
Judge Maxine Cohen Lando
Original filed January 19, 1995

“Given proper foundation and subject to other qualifications, opinion testimony by an experienced police officer trained in the use of the drug recognition protocol is generally admissible in evidence in a trial of a defendant charged with driving under the influence of a controlled or chemical substance. Furthermore, Horizontal Gaze Nystagmus

(HGN) test results are generally admissible to establish (1) that the defendant was impaired; and/or (2) that the defendant was over the legal limit; and/or (3) the defendant's specific breath or blood alcohol level at the time he performed the test."

This court found that the "Frye" standard is inapplicable to the DRE Protocol because neither the protocol nor any of its subsets (including HGN, VGN, and Lack of Convergence) are "scientific".

Further, these tests are neither new nor novel. The Court also state that "Frye" is inapplicable to HGN, VGN, and LOC because none of them are new or novel. "None of these tests or the theories and procedures they encompass, are new, novel, or emerging scientific techniques. The medical and psychological professions have acknowledged the tests' underlying theories and procedures for decades."

The Court concluded:

"Drug recognition training is not designed to qualify police officers as scientists, but to train them as observers. The training is intended to refine and enhance the skill of acute observation...and to focus that power...in a particular situation."

This court followed the Klawitter (Minnesota) decision, that it requires the state to "lay a proper predicate before referring to a DRE as anything other than a DRE or Drug Recognition Evaluator or Examiner."

"The real issue is not the admissibility of the evidence, but the weight it should receive. That is a matter for the jury to decide."

The prosecutor in this case was Steve Talpins (Dade County). Expert witnesses for the prosecution in this case included: Marcelline Burns, Ph.D., Zenon Zuk, M.D., Robert Dobie, M.D., Sergeant Thomas Page, LAPD, and others.

2000
Case No. 66876-1
State of Washington vs. Michael Baity
Judge J. Talmadge, WA Supreme Court
Original filed 2000

In this case, the court was asked to determine if a drug recognition protocol, used by trained drug recognition officers to determine if a suspect's driving is impaired by a drug other than alcohol, meets the requirements of Frye v. United States, 293 F. 1013,34 A.L.R. 145 (1923), for novel scientific evidence.

The issue brought before the court was; Is a drug recognition program novel scientific evidence generally accepted in the scientific community, thus satisfying the Frye test for admissibility?

The facts in this case were:

The state charged Baity with one count of DUI, in violation of RCW 46.61.502 (l) (b) (c), and one count of driving while license suspended in the third degree, in violation of RCW 46.20.342(l)(c), after he failed roadside SFST's and showed signs of drug impairments.

In a pretrial motion in Baity's case, the State sought to qualify the DREs as experts and to obtain a ruling on the admissibility of DRE evidence with respect to the defendant's drug impairment and the evaluation process used to determine that impairment. Specifically, the State sought to admit testimony that Baity's impairment was consistent with the symptoms associated with one of seven categories of drugs. Additionally, the state moved to admit testimony regarding the use of the horizontal gaze nystagmus (HGN) test, both for the detection of alcohol and for the detection of drugs. Baity moved to suppress all DRE evidence, including the HGN test, on the basis that the DRE program and protocol constitute novel scientific evidence subject to the Frye test for admissibility.

On May 19, 1998, the Pierce County District Court judges issued their opinion titled, "Opinion Regarding Admissibility of HGN and DRE." In that opinion, they denied the defendants' motions to suppress the field sobriety tests (SFSTs) as to their alcohol impairment, holding those tests are "reasonably understandable to the ordinary person" and therefore not subject to Frye. Clerk's Papers at 56. The court also noted some features of the DRE protocol were either not of a scientific nature or were scientific, but not novel.

The court ruled that after analyzing the DRE protocol and the approach of other courts to its admissibility, that the DRE protocol and the chart used to classify the behavioral patterns associated with seven categories of drugs have scientific elements meriting evaluation under Frye. They also found that the protocol to be accepted in the relevant scientific communities. However, the court ruled that there is confined situations where all 12-steps of the protocol have been undertaken. Moreover, an officer may not testify in a fashion that casts an aura of scientific certainty to the testimony. The officer also may not predict the specific level of drugs present in a suspect. The DRE officer, properly qualified, may express an opinion that a suspect's behavior and physical attributes are or are not consistent with the behavioral and physical signs associated with certain categories of drugs.

The court also held that the protocol meets the mandate of Frye. An officer may testify concerning such drug impairment, subject to the limitations set forth in this opinion, upon meeting the requirements of ER 702 and 703 for the admission of expert opinion testimony. The court reversed the suppression orders of the Pierce County District Court and remanded the cases for further proceedings consistent with this opinion.

2003
Case No. CR-2003-00025
State of New Mexico vs. Miriam Aleman
State of New Mexico, County of Dona Ana
Third Judicial District
Judge Silvia E. Cano-Garica

Defendant made a motion In Limme to exclude the testimony of the DRE officer. They heard the testimony of various witnesses and reviewed the State's Brief in support of the DRE testing. Testimony and other applicable documents found that:

The DRE officer was recognized as an expert of DRE testing based upon his specialized knowledge and experience, the DRE evaluation method is generally accepted in the particular scientific field of forensic toxicology, the DRE evaluation provides critical information which assists the toxicologist in forming an opinion as to whether the driver was impaired by the use of drugs at or near the time the driver was driving the motor vehicle.

The DRE protocols are the application or incorporation of traditional techniques in the biology, physiology, anatomy, chemistry, pharmacology and toxicology fields, and the ultimate decision as to the driver's alleged impairment, based on all of the testimony received, rests with the jury.

2004
Case No. CR 03-8203
State of Nebraska vs. Timothy J. Cubrich
Judge Todd J. Hutton, Sarpy Co. Court

The court was asked to determine the admissibility of the law enforcement officer's opinion that the defendant was under the influence of a drug, other than alcohol, to the extent that his abilities to safely operate the vehicle were appreciable impaired.

To this end the court applied the standards set forth in Schafersman v. Agland Coop, 262 Neb. 215, 631 N.W. 2d 862 (2001), having adopted Daubert v. Merrel Dow Pharmaceuticals, Inc., 509 U.S.579 (1993), as the controlling authority in determining the admissibility of expert opinion testimony.

The court concluded: Since Daubert, the court now serves in the "gatekeeping" role in which it is called upon to determine the reliability and relevance of expert testimony. There is no Case Law in Nebraska which has specifically addressed the issue of expert testimony relating to impaired drivers suspected of using drugs. Nor is there a statutory procedure by which Drug Recognition Examinations or the opinions derived there from have been codified.

Application of the Daubert standard provided a number of considerations the court used in determining the admissibility of evidence through the testimony of an expert, which included:

The 12-step protocol which relies on determining if a person is drug impaired has been recognized in the scientific community, including physicians, ophthalmologists, and forensic toxicologists, as a dependable methodology by which an officer, properly trained, can identify impairment and the category of drug(s) which are impairing the suspect's cognitive and physical capabilities.

The methodology is reliable because it is dependent on a fixed set of assessments which are verified by a toxicology test. The evaluation process includes HGN testing which has been found to meet the Frye standard of admissibility. Additionally, the HGN and VGN tests have been subject to peer review and publication. The remaining tests serve to screen the suspect's mental and physical condition documenting clues explaining why the person may or may not be impaired and if so the source(s) involved.

The drug recognition assessment is a tool by which a specially trained officer can conclude “based on the totality of results” whether or not a person is impaired by a drug other than alcohol.

The court found that the DREs opinion was correct in that the Defendant showed signs of impairment from a drug, other than alcohol, which caused him to seek a toxicological examination. The category of drug is admissible for the limited purpose of establishing foundation for drug screen conducted by the toxicologists.

American Prosecutors Research Institute
National Traffic Law Center

HORIZONTAL GAZE NYSTAGMUS
STATE CASE LAW SUMMARY

INTRODUCTION

The following state case law summary contains the seminal cases for each state, the District of Columbia and the Federal courts on the admissibility of HGN. Three main issues regarding the admissibility of the HGN test are set out under each state: evidentiary admissibility, police officer testimony, and purpose and limits of the HGN test results. The case or cases that address each issue are then briefly summarized and cited.

Alabama

I. Evidentiary Admissibility

HGN is a scientific test that must satisfy the Frye standard of admissibility. The Supreme Court of Alabama found that the State had not presented "sufficient evidence regarding the HGN test's reliability or its acceptance by the scientific community to determine if the Court of Criminal Appeals correctly determined that the test meets the Frye standards."
Malone v. City of Silverhill, 575 So.2d 106 (Ala. 1990).

II. Police Officer Testimony Needed to Admit HGN Test Result

The Court did not address this issue.

III. Purpose and Limits of HGN

The Court did not address this issue.

Alaska

I. Evidentiary Admissibility

HGN is a scientific test. It is generally accepted within the relevant scientific community.
Ballard v. Alaska, 955 P.2d 931, 939 (Alaska Ct. App. 1998).

II. Police Officer Testimony Needed to Admit HGN Test Result

A police officer may testify to the results of HGN testing as long as the government establishes a foundation that the officer has been adequately trained in the test.

Ballard, 955 P.2d at 941.

III. Purpose and Limits of HGN

HGN testing is “a reliable indicator of a person’s alcohol consumption and, to that extent, HGN results are relevant.” The court cautioned that the HGN test could not be used to correlate the results with any particular blood-alcohol level, range of blood-alcohol levels, or level of impairment. Ballard, 955 P.2d at 940.

Arizona

I. Evidentiary Admissibility

HGN is a scientific test that needs to satisfy the Frye standard of admissibility. State has shown that HGN satisfies the Frye standard. State v. Superior Court (Blake), 718 P.2d 171, 181 (Ariz. 1986) (seminal case on the admissibility of HGN).

II. Police Officer Testimony Needed to Admit HGN Test Result

“The proper foundation for [admitting HGN test results] . . . includes a description of the officer's training, education, and experience in administering the test and showing that proper procedures were followed.”
Arizona ex. rel. Hamilton v. City Court of Mesa, 799 P.2d 855, 860 (Ariz. 1990).
See also Arizona ex. Rel. McDougall v. Ricke, 778 P.2d 1358, 1361 (Ariz. Ct. App. 1989).

III. Purpose and Limits of HGN

HGN test results are admissible to establish probable cause to arrest in a criminal hearing.
State v. Superior Court (Blake), 718 P.2d at 182.

“Where a chemical analysis has been conducted, the parties may introduce HGN test results in the form of estimates of BAC over .10% to challenge or corroborate that chemical analysis.” Ricke, 778 P.2d at 1361.

When no chemical analysis is conducted, the use of HGN test results “is to be limited to showing a symptom or clue of impairment.” Hamilton, 799 P.2d at 858.

Arkansas

I. Evidentiary Admissibility

Novel scientific evidence must meet the Prater (relevancy) standard for admissibility. Because law enforcement has used HGN for over thirty-five years, a Prater inquiry is not necessary as the test is not “novel” scientific evidence. Whitson v. Arkansas, 863 S.W.2d 794, 798 (Ark. 1993).

II. Police Officer Testimony Needed to Admit HGN Test Result

The Court did not address this issue.

III. Purpose and Limits of HGN

HGN may be admitted as evidence of impairment, but is not admissible to prove a specific BAC. Whitson, 863 S.W.2d at 798.

California

I. Evidentiary Admissibility

HGN is a scientific test and the Kelly/Frye “general acceptance” standard must be applied.
California v. Leahy, 882 P.2d 321 (Cal. 1994). California v. Joehnk, 35 Cal. App. 4th 1488, 1493, 42 Cal. Rptr. 2d 6, 8 (Cal. Ct. App. 1995).

“A consensus drawn from a typical cross-section of the relevant, qualified scientific community accepts the HGN testing procedures.”
Joehnk, 35 Cal. App. 4th at 1507, 42 Cal. Rptr. 2d at 17.

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer testimony is insufficient to establish “general acceptance in the relevant scientific community.” Leahy, 882 P2d. at 609. Also see People v. Williams, 3 Cal. App. 4th 1326 (Cal. Ct. App. 1992).

Police officer can give opinion, based on HGN and other test results, that defendant was intoxicated. Furthermore, police officer must testify as to the administration and result of the test. Joehnk, 35 Cal. App. 4th at 1508, 42 Cal. Rptr. 2d at 18.

III. Purpose and Limits of HGN

HGN may be used, along with other scientific tests, as some evidence that defendant was impaired. Joehnk, 35 Cal. App. 4th at 1508, 42 Cal. Rptr. 2d at 17.

HGN test results may not be used to quantify the BAC level of the defendant. California v. Loomis, 156 Cal. App. 3d Supp. 1, 5-6, 203 Cal. Rptr. 767, 769-70 (1984).

Connecticut

I. Evidentiary Admissibility

Proper foundation must be established in accordance with Daubert prior to the introduction of HGN test results. State v. Russo, 773 A. 2d 965 (Conn. App. Ct. 2001).

Also see, Connecticut v. Merritt, 647 A.2d 1021, 1028 (Conn. App. Ct. 1994). HGN must meet the Frye test of admissibility. In this case, the state presented no evidence to meet its burden under the Frye test.

HGN satisfies the Porter standards and is admissible. (In State v. Porter, 698 A.2d 739 (1997), the Connecticut Supreme Court held the Daubert approach should govern the admissibility of scientific evidence and expressed factors to be considered in assessing evidence.) Connecticut v. Carlson, 720 A.2d 886 (Conn. Super. Ct. 1998).

II. Police Officer Testimony Needed to Admit HGN Test Result

Must lay a proper foundation with a showing that the officer administering the test had the necessary qualifications and followed proper procedures. Connecticut v. Merritt, 647 A.2d 1021, 1028 (Conn. App. Ct. 1994).

III. Purpose and Limits of HGN

HGN test results can be used to establish probable cause to arrest in a criminal hearing. Connecticut v. Royce, 616 A.2d 284, 287 (Conn. App. Ct. 1992).

Delaware

I. Evidentiary Admissibility

HGN evidence is scientific and must satisfy the Delaware Rules of Evidence standard. Delaware v. Ruthardt, 680 A.2d 349, 356 (Del. Super. Ct. 1996).

HGN evidence is acceptable scientific testimony under the Delaware Rules of Evidence. Ruthardt, 680 A.2d at 362.

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer may be qualified as an expert to testify about the underlying scientific principles that correlate HGN and alcohol. Delaware police receiving three-day (twenty-four hour) instruction on HGN test administration are not qualified to do this.
Ruthardt, 680 A.2d at 361-62.

Police officer testimony about training and experience alone, without expert testimony, is not enough foundation to admit HGN test results.
Zimmerman v. Delaware, 693 A.2d 311, 314 (Del. 1997).

III. Purpose and Limits of HGN

HGN test results admissible to show probable cause in a criminal hearing.
Ruthardt, 680 A.2d at 355.

HGN test results admissible to show probable cause in a civil hearing.
Cantrell v. Division of Motor Vehicles, 1996 Del. Super. LEXIS 265 (Del. Super. Ct. Apr. 9, 1996).

HGN test results cannot be used to quantify the defendant's BAC. However, they can be used as substantive evidence that the defendant was "under the influence of intoxicating liquor." Ruthardt, 680 A.2d at 361-62.

District of Columbia

I. Evidentiary Admissibility

The Court does not address this issue.

II. Police Officer Testimony Needed to Admit HGN Test Result

The Court used the case law of other jurisdictions to come to the conclusion that the Officer in the case could testify as an expert on the administration and the results of the HGN test. Therefore, in this case, the evidence was properly admitted using the Officer as the expert. See Karamychev v. District of Columbia, 772 A. 2d 806 (D.C. App. 2001).

III. Purpose and Limits of HGN

The Court has not yet addressed this issue.

Florida

I. Evidentiary Admissibility

The 3rd District Court found HGN to be a “quasi-scientific” test. Its application is dependent on a scientific proposition and requires a particular expertise outside the realm of common knowledge of the average person. It does not have to meet the Frye standard because HGN has been established and generally accepted in the relevant scientific community, and has been Frye tested in the legal community. The court took judicial notice that HGN is reliable based on supportive case law from other jurisdictions, numerous testifying witnesses and studies submitted. It is “no longer ‘new or novel’ and there is simply no need to reapply a Frye analysis.” Williams v. Florida, 710 So. 2d 24 (Fla. Dist. Ct. App. 1998).

The 4th District Court found HGN to be a scientific test. However, because it is not novel, the Frye standard is not applicable. However, “[e]ven if not involving a new scientific technique, evidence of scientific tests is admissible only after demonstration of the traditional predicates for scientific evidence including the test's general reliability, the qualifications of test administrators and technicians, and the meaning of the results.” Without this predicate, “the danger of unfair prejudice, confusion of issues or misleading the jury from admitting HGN test results outweighs any probative value.” The state did not establish the appropriate foundation for the admissibility of HGN test results. Florida v. Meador, 674 So. 2d 826, 835 (Fla. Dist. Ct. App. 1996), review denied, 686 So. 2d 580 (Fla. 1996).

II. Police Officer Testimony Needed to Admit HGN Test Result

“We take judicial notice that HGN test results are generally accepted as reliable and thus are admissible into evidence once a proper foundation has been laid that the test was correctly administered by a qualified DRE [Drug Recognition Expert].”
Williams, 710 So. 2d at 32.

Also see Bown v. Florida, 745 So. 2d 1108 (Fl. Dist. Ct. App. 1999) which expands Williams. Allows trooper to explain HGN, but district requires confirmatory blood, breath or urine test before admitting HGN into evidence.

No evidence presented as to the police officer’s qualifications nor administration of the HGN test in this case. Meador, 674 So. 2d at 835.

III. Purpose and Limits of HGN

The HGN test results alone, in the absence of a chemical analysis of blood, breath, or urine, are inadmissible to trigger the presumption provided by the DUI statute, and may not be used to establish a BAC of .08 percent or more. Williams, 710 So. 2d at 36.

Georgia

I. Evidentiary Admissibility

The HGN test is admissible as a “scientifically reliable field sobriety evaluation” under the Harper “verifiable certainty” standard. Manley v. Georgia, 424 S.E.2d 818, 819-20 (Ga. Ct. App. 1992).

HGN testing is judicially noticed as a scientifically reliable test and therefore expert testimony is no longer required before the test results can be admitted.
Hawkins v. Georgia, 476 S.E.2d 803, 808-09 (Ga. Ct. App. 1996).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer, who received specialized training in DUI detection and worked with a DUI task force for two years, was permitted to testify that, in his opinion, defendant was under the influence. Sieveking v. Georgia, 469 S.E.2d 235, 219-20 (Ga. Ct. App. 1996).

A police officer who testifies to the results, administration, and procedure of HGN may be cross-examined about those areas even if the state only offers him as a POST-certified officer. This is because the analysis and expertise needed for HGN go far beyond those needed by a lay person who observes the walk and turn or one leg stance tests. James v. State, 2003 WL 1540235 (Ga. App.).

III. Purpose and Limits of HGN

HGN test can be admitted to show that the defendant “was under the influence of alcohol to the extent that it was less safe for him to drive.” Sieveking, 469 S.E.2d at 219.

Hawaii

I. Evidentiary Admissibility

HGN is a scientific test. The HGN test is reliable under the Hawaii Rules of Evidence and admissible as “evidence that police had probable cause to believe that a defendant was DUI.” Judicial notice of the “validity of the principles underlying HGN testing and the reliability of HGN test results” is appropriate. HGN test results can be admitted into evidence if the officer administering the test was duly qualified to conduct the test and the test was performed properly. Hawaii v. Ito, 978 P.2d 191 (Haw. Ct. App. 1999).

II. Police Officer Testimony Needed to Admit HGN Test Result

Before HGN test results can be admitted into evidence in a particular case, however, it must be shown that (1) the officer administering the test was duly qualified to conduct and grade the test; and (2) the test was performed properly in the instant case. Hawaii v. Ito, 978 P.2d 191 (Haw. Ct. App. 1999), See also Hawaii v. Toyomura, 904 P.2d 893, 911 (Haw. 1992) and Hawaii v. Montalbo, 828 P2d. 1274, 1281 (Haw. 1992).

III. Purpose and Limits of HGN

HGN test can be admitted as “evidence that police had probable cause to believe that a defendant was DUI.” Hawaii v. Ito, 978 P.2d 191 (Haw. Ct. App. 1999).

Idaho

I. Evidentiary Admissibility

HGN test results admitted under the Idaho Rules of Evidence. Rule 702 is the correct test in determining the admissibility of HGN. State v. Gleason, 844 P.2d 691, 694 (Idaho 1992).

II. Police Officer Testimony Needed to Admit HGN Test Result

Officer may testify as to administration of HGN test, but not correlation of HGN and BAC.
State v. Garrett, 811 P.2d 488, 493 (Idaho 1991).

III. Purpose and Limits of HGN

“HGN test results may not be used at trial to establish the defendant's blood alcohol level. Although we note that in conjunction with other field sobriety tests, a positive HGN test result does supply probable cause for arrest, standing alone that result does not provide proof positive of DUI□” Garrett, 811 P.2d at 493.

HGN may be “admitted for the same purpose as other field sobriety test evidence -- a physical act on the part of [defendant] observed by the officer contributing to the cumulative portrait of [defendant] intimating intoxication in the officer's opinion.” Gleason, 844 P.2d at 695.

Illinois

I. Evidentiary Admissibility

HGN meets Frye standard of admissibility.
People v. Buening, 592 N.E.2d 1222, 1227 (Ill. App. Ct. 1992).
Despite the ruling of the Buening appellate court, the Fourth District Court of Appeals declined to recognize HGN’s general acceptance without a Frye hearing. The court criticized the Buening court for taking judicial notice of HGN’s reliability based on the

decisions of other jurisdictions. People v. Kirk, 681 N.E.2d 1073, 1077 (Ill. App. Ct. 1997).

The state supreme court held that the state was no longer required to show than an HGN test satisfied the Frye standard before introducing the results of the test into evidence. Absent proof by the defense that the HGN test was unsound, the State only had to show that the officer who gave the test was trained in the procedure and that the test was properly administered. The People of the State of Illinois v. Linda Basler, 740 N.E.2d 1 (Ill. 2000), 2000 Ill. LEXIS 1698 (Ill. 2000). (Plurality Opinion) According to Fourth Circuit, a Frye hearing must be held for HGN to be admitted. People v. Herring, 762 N.E.2d 1186.

II. Police Officer Testimony Needed to Admit HGN Test Result

“A proper foundation should consist of describing the officer's education and experience in administering the test and showing that the procedure was properly administered.” Buening, 592 N.E.2d at 1227.

III. Purpose and Limits of HGN

HGN test results may be used to establish probable cause in a criminal hearing.
People v. Furness, 526 N.E.2d 947, 949 (Ill. App. Ct. 1988).

HGN test results admissible to show probable cause in a civil hearing.
People v. Hood, 638 N.E.2d 264, 274 (Ill. App. Ct. 1994).

HGN test results may be used “to prove that the defendant is under the influence of alcohol.” Buening, 592 N.E.2d at 1228.

Indiana

I. Evidentiary Admissibility

Results of properly administered HGN test are admissible to show impairment which may be caused by alcohol and, when accompanied by other evidence, will be sufficient to establish probable cause to believe a person may be intoxicated. Cooper v. Indiana, 751 N.E.2d 900, 903 (Ind. Ct. App. Feb. 2002)

II. Police Officer Testimony Needed to Admit HGN Test Result

The proper foundation for admitting HGN evidence should consist of describing the officer’s education and experience in administering the test and showing that the procedure was properly administered. Cooper, 751 N.E.2d at 903.

The question of whether a trained officer might express an opinion that defendant was intoxicated based upon the results of field sobriety tests was not before the court, and thus, the court expressed no opinion concerning the admissibility of such testimony. Cooper, 751 N.E. 2d at 902, n. 1.

III. Purpose and Limits of HGN

HGN test results, when accompanied by other evidence, will be sufficient to establish probable cause that the person may be intoxicated. Cooper, 751 N.E.2d at 903.

Iowa

I. Evidentiary Admissibility

HGN admissible as a field test under the Iowa Rules of Evidence. "[T]estimony by a properly trained police officer with respect to the administration and results of the horizontal gaze nystagmus test are admissible without need for further scientific evidence."
State v. Murphy, 451 N.W.2d 154, 158 (Iowa 1990).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer may testify about HGN test results under Rule 702 if the officer is properly trained to administer the test and objectively records the results.
Murphy, 451 N.W.2d at 158.

III. Purpose and Limits of HGN

HGN test results may be used as an indicator of intoxication. Murphy, 451 N.W.2d at 158.

Kansas

I. Evidentiary Admissibility

HGN must meet Frye standard of admissibility and a Frye hearing is required at the trial level. There was no Frye hearing conducted and the appellate court refused to make a determination based on the record it had. State v. Witte, 836 P.2d 1110, 1121 (Kan. 1992).

HGN test has not achieved general acceptance within the relevant scientific community and its exclusion was appropriate. State v. Chastain, 960 P.2d 756 (Kan. 1998).

II. Police Officer Testimony Needed to Admit HGN Test Result

The Court did not address this issue.

III. Purpose and Limits of HGN

The Court did not address this issue.

Kentucky

I. Evidentiary Admissibility

HGN test results admitted due to defendant's failure to object.
Commonwealth v. Rhodes, 949 S.W.2d 621, 623 (Ky. Ct. App. 1996).

II. Police Officer Testimony Needed to Admit HGN Test Result

The Court did not address this issue.

III. Purpose and Limits of HGN

The Court did not address this issue.

Louisiana

I. Evidentiary Admissibility

HGN meets Frye standard of admissibility and with proper foundation my be admitted as
evidence of intoxication.

State v. Breitung, 623 So. 2d 23, 25-6 (La. Ct. App. 1993).
State v. Regan, 601 So. 2d 5, 8 (La. Ct. App. 1992).
State v. Armstrong, 561 So. 2d 883, 887 (La. Ct. App. 1990).

The standard of admissibility for scientific evidence is currently the Louisiana Rules of Evidence. State v. Foret, 628 So. 2d 1116 (La. 1993).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer may testify as to training in HGN procedure, certification in the administration of HGN test and that the HGN test was properly administered. Armstrong, 561 So. 2d at 887.

III. Purpose and Limits of HGN

The HGN test may be used by the officer “to determine whether or not he [needs] to ‘go any further’ and proceed with other field tests.” Breitung, 623 So. 2d at 25.
HGN test results may be admitted as evidence of intoxication.
Armstrong, 561 So. 2d at 887.

Maine

I. Evidentiary Admissibility

Because the HGN test relies on greater scientific principles than other field sobriety tests, the reliability of the test must first be established. Either Daubert or Frye standard must be met. State v. Taylor, 694 A.2d 907, 912 (Me. 1997).

The Maine Supreme Court took judicial notice of the reliability of the HGN test to detect impaired drivers. Taylor, 694 A.2d at 910.

II. Police Officer Testimony Needed to Admit HGN Test Result

“A proper foundation shall consist of evidence that the officer or administrator of the HGN test is trained in the procedure and the [HGN] test was properly administered.” Taylor, 694 A.2d at 912.

III. Purpose and Limits of HGN

HGN test results may only be used as “evidence of probable cause to arrest without a warrant or as circumstantial evidence of intoxication. The HGN test may not be used by an officer to quantify a particular blood alcohol level in an individual case.”
Taylor, 694 A.2d at 912.

Maryland

I. Evidentiary Admissibility

HGN is scientific and must satisfy the Frye/Reed standard of admissibility. The Court of Appeals took judicial notice of HGN's reliability and its acceptance in the relevant scientific communities. Schultz v. State, 664 A.2d 60, 74 (Md. Ct. Spec. App. 1995).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer must be properly trained or certified to administer the HGN test. [NOTE: In Schultz, the police officer failed to articulate the training he received in HGN testing and the evidence was excluded.] Schultz, 664 A.2d at 77.

III. Purpose and Limits of HGN

HGN testing may not be used to establish a specific blood alcohol level.
Wilson v. State, 723 A.2d 494 (Md. Ct. Spec. App. 1999).

Massachusetts

I. Evidentiary Admissibility

HGN is scientific and is admissible on a showing of either general acceptance in the scientific community or reliability of the scientific theory. See Commonwealth v. Lanigan, 641 N.E.2d 1342 (Mass. 1994). HGN test results are inadmissible until the Commonwealth introduces expert testimony to establish that the HGN test satisfies one of these two standards. Commonwealth v. Sands, 675 N.E.2d 370, 373 (Mass. 1997).

II. Police Officer Testimony Needed to Admit HGN Test Result

“There must be a determination as to the qualification of the individual administering the HGN test and the appropriate procedure to be followed.” In this case there was no testimony as to these facts, thus denying the defendant the opportunity to challenge the officer’s qualifications and administration of the test. Sands, 675 N.E.2d at 373.

III. Purpose and Limits of HGN

The Court did not address this issue.

Michigan

I. Evidentiary Admissibility

Court found that HGN test is scientific evidence and is admissible under the Frye standard of admissibility. State v. Berger, 551 N.W.2d 421, 424 (Mich. Ct. App. 1996).

II. Police Officer Testimony Needed to Admit HGN Test Result

Only foundation necessary for the introduction of HGN test results is evidence that the police officer properly performed the test and that the officer administering the test was qualified to perform it. Berger, 551 N.W.2d at 424.

III. Purpose and Limits of HGN

HGN test results are admissible to indicate the presence of alcohol.
Berger, 551 N.W.2d at 424 n.1.

Minnesota

I. Evidentiary Admissibility

Court found that HGN meets the Frye standard of admissibility.
State v. Klawitter, 518 N.W.2d 577, 585 (Minn. 1994).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officers must testify about their training in and experience with the HGN test.
See generally Klawitter, 518 N.W.2d at 585-86.

III. Purpose and Limits of HGN

HGN admissible as evidence of impairment as part of a Drug Evaluation Examination in the prosecution of a person charged with driving while under the influence of drugs.
See generally Klawitter, 518 N.W.2d at 585.

Mississippi

I. Evidentiary Admissibility

HGN is a scientific test. However, it is not generally accepted within the relevant scientific community and is inadmissible at trial in the State of Mississippi.
Young v. City of Brookhaven, 693 So.2d 1355, 1360-61 (Miss. 1997).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officers cannot testify about the correlation between the HGN test and precise blood alcohol content. Young, 693 So.2d at 1361.

III. Purpose and Limits of HGN

HGN test results are admissible only to prove probable cause to arrest.
Young, 693 So.2d at 1361.

HGN test results cannot be used as scientific evidence to prove intoxication or as a mere showing of impairment. Young, 693 So.2d at 1361.

Missouri

I. Evidentiary Admissibility

Court found that HGN test meets the Frye standard of admissibility. State v. Hill, 865 S.W.2d 702, 704 (Mo. Ct. App. 1993), rev'd on other grounds, State v. Carson, 941 S.W.2d 518, 520 (Mo. 1997).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer must be adequately trained and able to properly administer the test.
Hill, 865 S.W.2d at 704.

See also, Duffy v. Director of Revenue, 966 S.W. 2d 372 (Mo. Ct. App. 1998). HGN not admitted at trial because the administering officer was not aware of hot to properly score the test and interpret its results.

III. Purpose and Limits of HGN

HGN can be admitted as evidence of intoxication. Hill, 865 S.W.2d at 704.

Montana

I. Evidentiary Admissibility

Court found that HGN is neither new nor novel; thus, Daubert does not apply. Court still finds that HGN must meet the state's rules of evidence that are identical to the Federal Rules of Evidence. Hulse v. DOJ, Motor Vehicle Div., 961 P.2d 75, 88 (Mont. 1998).

II. Police Officer Testimony Needed to Admit HGN Test Result

The court held that before an arresting officer may testify as to HGN results, a proper foundation must show that the officer was properly trained to administer the HGN test and that he administered the test in accordance with this training. Before the officer can testify as to the correlation between alcohol and nystagmus, a foundation must be established that the officer has special training in the underlying scientific basis of the HGN test.
Hulse, 961 P.2d 75 (Mont. 1998).

See Also, State v. Crawford, 315 Mont. 480, 68 P.3d 848 (2003), in which the court ruled that the officer's credentials were sufficient to establish his expertise, along with evidence that he was previously qualified as an expert. They relied on Russette (2002 MT 200), stating that to establish an expert's qualifications, the proponent of the testimony must show that the expert has special training or education and adequate knowledge on which to base an opinion.

III. Purpose and Limits of HGN

HGN test results admissible as evidence of impairment.
State v. Clark, 762 P.2d 853, 856 (Mont. 1988).

Nebraska

I. Evidentiary Admissibility

HGN meets the Frye standard for acceptance in the relevant scientific communities, and when the test is given in conjunction with other field sobriety tests, the results are admissible for the limited purpose of establishing impairment that may be caused by alcohol. State v. Baue, 607 N.W.2d 191 (Neb. 2000)

II. Police Officer Testimony Needed to Admit HGN Test Result

A police officer may testify to the results of HGN testing if it is shown that the officer has been adequately trained in the administration and assessment of the HGN test and has conducted the testing and assessment in accordance with that training.
State v. Baue, 607 N.W.2d 191 (Neb. 2000)

III. Purpose and Limits of HGN

"Testimony concerning HGN is admissible on the issue of impairment, provided that the prosecution claims no greater reliability or weight for the HGN evidence than it does for evidence of the defendant's performance on any of the other standard field sobriety tests, and provided further that the prosecution makes no attempt to correlate the HGN test result with any particular blood-alcohol level, range of blood-alcohol levels, or level of impairment." State v. Baue, 607 N.W.2d 191 (Neb. 2000) (quoting Ballard v. State, 955 P.2d 931, 940 (Alaska App. 1998))

New Hampshire

I. Evidentiary Admissibility

In State v. Dahoo (Dec. 20, 2002), the N.H. Supreme Court ruled that the HGN test is admissible under N.H. Rule of Evidence 702 and Daubert for the limited purpose of providing circumstantial evidence of intoxication. HGN test is a scientifically reliable and valid test.

N.H. Supreme Court ruled their findings binding in Dahoo and that courts "will not be required to establish the scientific reliability of the HGN."

II. Police Officer Testimony Needed to Admit HGN Test Result

“Since we have already determined that the scientific principles underlying the HGN test are reliable, a properly trained and qualified police officer may introduce the HGN test results at trial.” State v. Dahoo, 2002 N.H. LEXIS 179.

III. Purpose and Limits of HGN

“HGN results cannot be introduced at trial for the purpose of establishing a defendant’s BAC level□.[T]he results are not sufficient alone to establish intoxication.”
State v. Dahoo, Id.

New Jersey

I. Evidentiary Admissibility

In New Jersey, the party offering the results of a scientific procedure into evidence must comply with Frye and show that the procedure is generally accepted in the relevant scientific communities. A party may prove this general acceptance via “(1) testimony of knowledgeable experts[,] (2) authoritative scientific literature[, or] (3) [p]ersuasive judicial decision.” Based on the testimony of Dr. Marcelline Burns and Dr. Jack Richman, the Court found the HGN test to be generally accepted and the results thus admissible. The Court also noted the “significant number” of jurisdictions that have accepted the HGN test as admissible scientific evidence. State v. Maida, 2000 N.J. Super. LEXIS 276 (N.J. Super. Ct. Law Div. 2000).

*But See, State v. Doriguzzi, 760 A.2d 336 (N.J. Super. 2000), which held that HGN is scientific evidence that must meet Frye Standard. However, in each trial, sufficient foundation evidence must be laid by expert testimony to assure defendants that a conviction for DUI, when based in part on HGN testing, is grounded in reliable scientific data. In this case, the appellate court reversed defendant’s conviction because at trial no such foundation was presented. The court found that because HGN testing has not achieved general acceptance in the community, it is not a matter of which a court can take judicial notice.

II. Police Officer Testimony Needed to Admit HGN Test Result

The Court did not address this issue.

III. Purpose and Limits of HGN

The Court found the HGN test admissible “as a reliable scientific indicator of likely intoxication.”

New Mexico

I. Evidentiary Admissibility

HGN is a scientific test. New Mexico follows the Daubert standard, which requires a showing of reliability before scientific evidence can be admitted. The court held that a scientific expert must testify to the underlying scientific reliability of HGN and that a police officer cannot qualify as a scientific expert. Because the State failed to present sufficient evidence regarding the HGN test's reliability, the court remanded the case stating it would be appropriate for the trial court, on remand, to make the initial determination of whether HGN testing satisfies Daubert. In addition, the court found HGN to be "beyond common and general knowledge" and declined to take judicial notice of HGN reliability.
State v. Torres, 976 P.2d 20 (N.M. 1999).

State v. Lasworth, 42 P.3d 844 (Ct. App. N.M. 2001), cert. denied (2002). Results of HGN test were inadmissible at trial (State v. Torres, 976 P.2d 20 (N.M. 1999). The State needed to prove that HGN was both valid and reliable.

State called Dr. Marceline Burns as a witness (reliability) but did not call an expert in a discipline such as biology or medicine to explain how the amount of alcohol a person consumes correlates with HGN (validity).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officers can qualify as non-scientific experts based on their training and experience. Non-scientific experts may testify about the administration of the test and specific results of the test provided another scientific expert first establishes the reliability of the scientific principles underlying the test. In order to establish the "technical or specialized knowledge" required to qualify as an expert in the administration of the HGN test, "there must be a showing: (1) that the expert has the ability and training to administer the HGN test properly, and (2) that the expert did, in fact, administer the HGN test properly at the time and upon the person in question."
State v. Torres, 976 P.2d 20 (N.M. 1999).

State v. Lasworth, 42 P.3d 844 (Ct. App. N.M. 2001), cert. denied (2002). Court believed that state had to show that presence of HGN (BAC above .08) correlates with diminishment of driver's mental or physical driving skills (which it failed to do) & a correlation between presence of HGN and BAC above or below .08 (which it did through testimony of Dr. Burns). Court did not preclude use of results of HGN to establish probable cause for arrest or to establish grounds for administering a chemical BAC test.

III. Purpose and Limits of HGN

The Court did not address this issue.

New York

I. Evidentiary Admissibility

Prue holds that HGN test results are admissible under Frye standard of “general acceptance.” People v. Prue, Indictment No. I-5-2001, Franklin County Court (November 2001).

In Gallup, the court said that it was only necessary to conduct a foundational inquiry into the techniques and the tester’s qualifications for admissibility.
People v. Gallup, Memorandum and order #13094, 302 A.D.2d 681 (3rd Dept)(2003).

The Court allowed the introduction of HGN and the results because it was properly administered and the burden of establishing that HGN is a reliable indicator of intoxication is generally accepted in the relevant scientific community was satisfied. People v. William Miley, NYLJ 12/6/02 p.30 col. 6 (Nassau Co. Ct 2002).

II. Police Officer Testimony Needed to Admit HGN Test Result

The People must lay a proper evidentiary foundation in order for HGN results to be admissible at trial.

III. Purpose and Limits of HGN

The Court held that HGN is generally accepted in the relevant scientific community as a reliable indicator of intoxication.

North Carolina

I. Evidentiary Admissibility

HGN is a scientific test. It “does not measure behavior a lay person would commonly associate with intoxication but rather represents specialized knowledge that must be presented to the jury by a qualified expert.” As a result, “until there is sufficient scientifically reliable evidence as to the correlation between intoxication and nystagmus, it is improper to permit a lay person to testify as to the meaning of HGN test results.” State v. Helms, 504 S.E.2d 293 (N.C. 1998).

II. Police Officer Testimony Needed to Admit HGN Test Result

Testimony of one police officer, whose training consisted of a “forty hour training class dealing with the HGN test”, was inadequate foundation for admission of HGN test results.
Helms, 504 S.E.2d 293 (N.C. 1998).

III. Purpose and Limits of HGN

HGN test results are evidence of impairment. Helms, 504 S.E.2d 293 (N.C. 1998).

North Dakota

I. Evidentiary Admissibility

Court found that HGN test is admissible as a standard field sobriety test.
City of Fargo v. McLaughin, 512 N.W.2d 700, 706 (N.D. 1994).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer must testify as to training and experience and that the test was properly administered. City of Fargo, 512 N.W.2d at 708.

III. Purpose and Limits of HGN

" . . . HGN test results admissible only as circumstantial evidence of intoxication, and the officer may not attempt to quantify a specific BAC based upon the HGN test."
City of Fargo, 512 N.W.2d at 708.

Ohio

I. Evidentiary Admissibility

HGN test is objective in nature and does not require an expert interpretation.
State v. Nagel, 506 N.E.2d 285, 286 (Ohio Ct. App. 1986).

Court determined that HGN was a reliable indicator of intoxication without specifically ruling on whether HGN meets Frye or some other standard of admissibility.
State v. Bresson, 554 N.E.2d 1330, 1334 (Ohio 1990).

Court held that SFSTs, including HGN, must be administered in strict compliance with NHTSA's directives in order for the test results to be admissible.
State v. Homan, 732 N.E.2d 952 (Ohio 2000).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer need only testify to training in HGN procedure, knowledge of the test and ability to interpret results. Bresson, 554 N.E.2d at 1336.

III. Purpose and Limits of HGN

HGN can be used to establish probable cause to arrest and as substantive evidence of a defendant's guilt or innocence in a trial for DUI, but not to determine defendant's BAC. Bresson, 554 N.E.2d at 1336.

Oklahoma

I. Evidentiary Admissibility

HGN test results excluded because state failed to lay adequate foundation regarding HGN's scientific admissibility under the Frye standard of admissibility. Police officer's testimony alone was insufficient. Yell v. State, 856 P.2d 996, 996-97 (Okla. Crim. App. 1993).

The Daubert rationale replaces the Frye standard as the admissibility standard for scientific evidence. Taylor v. State, 889 P.2d 319, 328-29 (Okla. Crim. App. 1995).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer testified to training on how to administer HGN test and how the test was administered in this case. Officer also testified as to his training in analyzing HGN test results. Yell, 856 P.2d at 997.

III. Purpose and Limits of HGN

If HGN testing was found to satisfy the Frye standard of admissibility, HGN test results would be considered in the same manner as other field sobriety test results. HGN test results are inadmissible as scientific evidence creating a presumption of intoxication. Yell, 856 P.2d at 997.

Oregon

I. Evidentiary Admissibility

HGN test results are admissible under the Oregon Rules of Evidence. HGN test results are scientific in nature, are relevant in a DUI trial, and are not unfairly prejudicial to the defendant. State v. O'Key, 899 P.2d 663, 687 (Or. 1995).

II. Police Officer Testimony Needed to Admit HGN Test Result

“Admissibility is subject to a foundational showing that the officer who administered the test was properly qualified, that the test was administered properly, and that the test results were recorded accurately.” O'Key, 899 P.2d at 670.

III. Purpose and Limits of HGN

“HGN test results are admissible to establish that a person was under the influence of intoxicating liquor, but is not admissible to establish a person's BAC.”
O'Key, 899 P.2d at 689-90.

Officer may not testify that, based on HGN test results, the defendant’s BAC was over .10.
State v. Fisken, 909 P.2d 206, 207 (Or. Ct. App. 1996).

Pennsylvania

I. Evidentiary Admissibility

The state laid an inadequate foundation for the admissibility of HGN under the Frye/Topa standard.
Commonwealth v. Moore, 635 A.2d 625, 629 (Pa. Super. Ct. 1993).
Commonwealth v. Apollo, 603 A.2d 1023, 1028 (Pa. Super. Ct. 1992).
Commonwealth v. Miller, 532 A.2d 1186, 1189-90 (Pa. Super. Ct. 1987).

Testimony of police officer is insufficient to establish scientific reliability of HGN test.
Moore, 635 A.2d at 692.
Miller, 532 A.2d at 1189-90.

Testimony of behavioral optometrist did not establish general acceptance of HGN test.
Apollo, 603 A.2d at 1027-28.

II. Police Officer Testimony Needed to Admit HGN Test Result

County detective certified as HGN instructor. Court did not comment on whether this would be enough foundation to allow the detective to testify about HGN test results.
Moore, 635 A.2d 629.

Police officer had one-day course on HGN. Court did not comment on whether this would be enough foundation to allow the officer to testify about HGN test results.
Miller, 603 A.2d at 1189.

III. Purpose and Limits of HGN

Not addressed by court.

South Carolina

I. Evidentiary Admissibility

HGN admissible in conjunction with other field sobriety tests. By implication, HGN is not regarded as a scientific test. State v. Sullivan, 426 S.E.2d 766, 769 (S.C. 1993).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer given twenty hours of HGN training. Sullivan, 426 S.E.2d at 769.

III. Purpose and Limits of HGN

HGN test results admissible “to elicit objective manifestations of soberness or insobriety . . . Evidence from HGN tests is not conclusive proof of DUI. A positive HGN test result is to be regarded as merely circumstantial evidence of DUI. Furthermore, HGN test shall not constitute evidence to establish a specific degree of blood alcohol content.” Sullivan, 426 S.E.2d at 769.

South Dakota

I. Evidentiary Admissibility

If it can be shown that a horizontal gaze nystagmus test was properly administered by a trained officer, such evidence should be admitted for a jury to consider at trial along with evidence of the other accepted field sobriety tests administered in South Dakota. STATE v. HULLINGER, 2002 SD 83; 649 N.W.2d 253 (S.D.S.Ct. 2002); 2002 S.D. LEXIS 99

II. Police Officer Testimony Needed to Admit HGN Test Result

Officer may testify if properly trained and test properly administered. At the pretrial hearing, the State presented three witnesses: 1) Monte Farnsworth, training director for the Office of Highway Safety at the Division of Criminal Investigation Law Enforcement Training Academy; 2) Deputy Ludwig; and 3) Dr. Larry Menning, optometrist and expert witness. South Dakota follows a Daubert standard in use of expert witnesses.

III. Purpose and Limits of HGN

The Court did not address this issue.

Tennessee

I. Evidentiary Admissibility

HGN is a scientific test. To be admissible at trial, such evidence must satisfy the requirements of Tenn. Rules of Evidence 702 and 703. State provided an inadequate amount of evidence to allow the court to conclude that HGN evidence meets this standard.
State v. Murphy, 953 S.W.2d 200 (Tenn. 1997).

II. Police Officer Testimony Needed to Admit HGN Test Result

HGN must be offered through an expert witness. To qualify as an expert, a police officer must establish that he is qualified by his "knowledge, skill, experience, training or education" to provide expert testimony to "substantially assist the trier of fact to understand the evidence or determine a fact in issue." Although the court did not rule out the possibility that the officer can be considered an expert, the court set a high level of proof. In this case, the court felt that although the officer had attended law enforcement training in DUI offender apprehension and the HGN test, this training was not enough to establish him as an expert. State v. Grindstaff, 1998 Tenn. Crim. App. Lexis 339 (March 23, 1998).

III. Purpose and Limits of HGN

The Court did not address this issue.

Texas

I. Evidentiary Admissibility

HGN admissible under the Texas Rules of Evidence.
Emerson v. State, 880 S.W.2d 759, 769 (Tex. Crim. App. 1994).

II. Police Officer Testimony Needed to Admit HGN Test Result

A police officer must qualify as an expert on the HGN test, specifically concerning its administration and technique, before testifying about a defendant's performance on the test. Proof that the police officer is certified in the administration of the HGN test by the Texas Commission on Law Enforcement Officer Standards and Education satisfies this requirement. Emerson, 880 S.W.2d at 769.

III. Purpose and Limits of HGN

HGN admissible to prove intoxication, but not accurate enough to prove precise BAC.
Emerson, 880 S.W.2d at 769.

Utah

I. Evidentiary Admissibility

HGN test admissible as other field sobriety test. Court reserved judgment as to the scientific reliability of HGN. Salt Lake City v. Garcia, 912 P.2d 997, 1001 (Utah Ct. App. 1996).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer need only testify as to training, experience and observations when HGN admitted as a field test. Garcia, 912 P.2d at 1001.

III. Purpose and Limits of HGN

Admissible as any other field sobriety test. Garcia, 912 P.2d at 1000-01.

Washington

I. Evidentiary Admissibility

It is “undisputed” in the relevant scientific communities that “an intoxicated person will exhibit nystagmus”. HGN testing is not novel and has been used as a field sobriety test for “decades” and is administered the same whether investigating alcohol impairment or drug impairment. Thus, the use of HGN in drug and alcohol impaired driving cases is acceptable.
State v. Baity, 140 Wn.2d 1, 991 P.2d 1151 (Wash. 2000).

“[T]he Frye standard applies to the admission of evidence based on HGN testing, unless . . . the State is able to prove that it rests on scientific principles and uses techniques which are not ‘novel’ and are readily understandable by ordinary persons.” The state failed to present any evidence to this fact and the court declined to take judicial notice of HGN.
State v. Cissne, 865 P.2d 564, 569 (Wash. Ct. App. 1994).

II. Police Officer Testimony Needed to Admit HGN Test Result

The Court did not address this issue.

III. Purpose and Limits of HGN

The Court did not address this issue.

West Virginia

I. Evidentiary Admissibility

The state did not present evidence for the court to reach "the question of whether the HGN test is sufficiently reliable to be admissible." However, the court did conclude "that even if the reliability of the HGN test is demonstrated, an expert's testimony as to a driver's performance on the test is admissible only as evidence that the driver was under the influence. Estimates of blood alcohol content based on the HGN test are inadmissible." State v. Barker, 366 S.E.2d 642, 646 (W. Va. 1988).

The West Virginia Supreme Court modified State v. Barker to the extent that the Daubert analysis of FRE 702 is applicable to the question of admissibility of expert testimony under the West Virginia Rules of Evidence Rule 702.
Wilt v. Buracker, 443 S.E. 2d 196 (W.Va. 1993).

II. Police Officer Testimony Needed to Admit HGN Test Result

Police officer's training consisted of a one-day, eight-hour training session conducted by the state police. Officer testified to giving the HGN test about 100 times. Court did not reach question of whether this would be enough to allow the officer to testify about the HGN test results. Barker, 366 S.E.2d at 644.

III. Purpose and Limits of HGN

HGN test results admissible to show probable cause in a civil hearing.
Muscatell v. Cline, 474 S.E.2d 518, 525 (W. Va. 1996).
Boley v. Cline, 456 S.E.2d 38, 41 (W. Va. 1995).

"If the reliability of the HGN test is demonstrated, an expert's testimony as to a driver's performance on the test is admissible only as evidence that the driver was under the influence," the same as other field sobriety tests. Barker, 366 S.E.2d at 646.

Wisconsin

I. Evidentiary Admissibility

The court held that the HGN test results are admissible in this case because the test results were not the only evidence. The results were accompanied by the expert testimony of the officer. State v. Zivcic, 598 N.W.2d 565 (Wisc. Ct. App. 1999).
See also, State v. Maxon, 633 N.W. 2d 278 (Wisc. Ct. App. 2001)

II. Police Officer Testimony Needed to Admit HGN Test Result

A police officer who is properly trained to administer and evaluate the HGN test can testify to the test results. A second expert witness is not needed. State v. Zivcic, 598 N.W.2d 565 (Wisc. Ct. App. 1999).

III. Purpose and Limits of HGN

The Court did not address this issue.

Wyoming

I. Evidentiary Admissibility

SFSTs, including HGN, are admissible to establish probable cause when administered in substantial compliance with NHTSA guidelines. Strict compliance is not necessary. The court took judicial notice of the number of states that allow HGN evidence on the basis of the “officer’s training, experience and ability to administer the test”. Smith v. Wyoming, 2000 Wyo. LEXIS 202 (Wyo. October 4, 2000).

II. Police Officer Testimony Needed to Admit HGN Test Result

A police officer that is properly trained to administer and evaluate the HGN test can testify to HGN results. Smith v. Wyoming, 2000 Wyo. LEXIS 202 (Wyo. October 4, 2000).

III. Purpose and Limits of HGN

HGN test results are admissible to show probable cause.
Smith v. Wyoming, 2000 Wyo. LEXIS 202 (Wyo. October 4, 2000).

United States

I. Evidentiary Admissibility

U.S. V. Eric D. Horn, 185 F. Supp. 2d 530 (D. Maryland 2002) In this case, U.S. District Court in Maryland made the first application of the newly revised FRE 702 to the HGN and other SFSTs.

Results of properly administered WAT, OLS and HGN, SFSTs may be admitted into evidence in a DWI/DUI case only as circumstantial evidence of intoxication or impairment but not as direct evidence of specific BAC.

Officer must first establish his qualifications to administer the test - training and experience, not opinion about accuracy rate of test or causal connection between alcohol consumption and exaggerated HGN.

Government may prove causal connection by: judicial notice, expert testimony, or learned treatise. Horn may prove other causes by: judicial notice, cross-examination of state's expert, defense expert, or learned treatise.

U.S. V. Daras, 1998 WL 726748 (4th Cir. 1998)(Unpublished opinion). WAT and OLS were not scientific so no expert needed. Court would have applied Daubert to HGN test, but there was no need to because breathalyzer, WAT and OLS were sufficient.

HGN test was admitted as part of series of field tests. Its admission was not challenged on appeal. U.S. v. Van Griffin, 874 F.2d 634 (9th Cir. 1989).

II. Police Officer Testimony Needed to Admit HGN Test Result

Foundation for HGN must address validity & reliability under FRE 702. In Horn, prosecution had a medical doctor and a police officer, but defense used behavioral psychologist to attack HGN literature of Dr. Marceline Burns and others.

III. Purpose and Limits of HGN

SFSTs may be admitted into evidence in a DWI/DUI case only as circumstantial evidence of intoxication or impairment but not as direct evidence of specific BAC. Horn.

Properly qualified, Officer may give opinion of intoxication or impairment by alcohol. Horn.

Note: The following states were not listed above due to a lack of case law discussion on HGN:
Colorado
Nevada
Rhode Island
Vermont(HGN was mentioned in the context of a refusal being admissible as evidence of probative guilt. State v. Blouin, 168 Vt. 119 (Vt. 1998)
Virginia

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SCIENTIFIC PUBLICATIONS AND RESEARCH REPORTS ADDRESSING NYSTAGMUS

1. Anderson, Schweitz & Snyder, Field Evaluation of Behavioral Test Battery for DWI, U.S. Dept. of Transportation Rep. No. DOT HS 806 475 (1983) (field evaluation of the Standardized Field Sobriety Test battery (HGN, one leg stand, and walk and turn) conducted by police officers from four jurisdictions indicated that the battery was approximately 80% effective in determining BAC above and below .10 percent).

2. Aschan, Different Types of Alcohol Nystagmus, 140 ACTA OTOLARYNGOL SUPP. 69 (Sweden 1958) ("From a medico legal viewpoint, simultaneous recording of AGN (Alcohol Gaze Nystagmus) and PAN (positional alcoholic nystagmus) should be of value, since it will show in which phase the patient's blood alcohol curve is...").

3. Aschan & Bergstedt, Positional Alcoholic Nystagmus in Man Following Repeated Alcohol Doses, 80 ACTA OTOLARYNGOL SUPP. 330 (Sweden 1975) (abstract available on DIALOG, file 173: Embase 1975 79) (degree of intoxication influences both PAN I and PAN II).

4. Aschan, Bergstedt, Goldberg & Laurell, Positional Nystagmus in Man During and After Alcohol Intoxication, 17 Q.J. OF STUD. ON ALCOHOL, Sept. 1956, at 381. Study distinguishing two types of alcohol induced nystagmus, PAN (positional alcoholic nystagmus) I and PAN II, found intensity of PAN I, with onset about one half hour after alcohol ingestion, was proportional to amount of alcohol taken.

5. Baloh, Sharma, Moskowitz & Griffith, Effect of Alcohol and Marijuana on Eye Movements, 50 AVIAT. SPACE ENVIRON. MED., Jan 1979, at 18 (abstract available on DIALOG, file 153: Medline 1979 79) (smooth pursuit eye movement effects of alcohol overshadowed those of marijuana).

6. Barnes, The Effects of Ethyl Alcohol on Visual Pursuit and Suppression of the Vestibulo Ocular Reflex, 406 ACTA OTOLARYNGOL SUPP. 161 (Sweden 1984) (ethyl alcohol disrupted visual pursuit eye movement by increasing number of nystagmic "catch up saccades").

7. Burns & Moskowitz, Psychophysical Tests for DWI Arrest, U.S. Dept. of Transportation Rep. No. DOT HS 802 424 (1977) (recommended the three test battery developed by SCRI (one leg stand, walk and turn, and HGN) to aid officers in discriminating BAC level).

8. Burns, The Robustness of the Horizontal Gaze Nystagmus (HGN) Test, U.S. Dept. of Transportation 2004. Concludes that HGN as used by law enforcement is a robust procedure and the data obtained in this report does not support changes or revisions to the current testing or procedure

9. Church & Williams, Dose and Time Dependent Effects of Ethanol, 54 ELECTROENCEPHALOGRAPHY & CLIN. NEUROPHYSIOL., Aug. 1982, at 161 (abstract available on DIALOG, file 11: Psychinfo 1967 85 or file 72: Embase 1982 85) (positional alcohol nystagmus increased with dose levels of ethanol).

10. Citek, Ball and Rutledge, Nystagmus Testing in Intoxicated Individuals, Vol. 74, No. 11, Nov. 2003, Optometry, established that the HGN test administered in the standing, seated, and supine postures is able to discriminate impairment at criterion BAC's of 0.08% and 0.10%.

11. Compton, Use of the Gaze Nystagmus Test to Screen Drivers at DWI Sobriety Checkpoints, U.S. Dept. of Transportation (1984) (field evaluation of HGN test administered to drivers through car window in approximately 40 seconds: "the nystagmus test scored identified 95% of the impaired drivers" at 2; 15% false positive for sober drivers, id.).

12. Fregly, Bergstedt & Graybiel, Relationships Between Blood Alcohol, Positional Alcohol Nystagmus and Postural Equilibrium, 28 Q.J. OF STUD. ON ALCOHOL, March 1967, at 11, 17 (declines from baseline performance levels correlated with peak PAN I responses and peak blood alcohol levels).

13. Goldberg, Effects and After Effects of Alcohol, Tranquilizers and Fatigue on Ocular Phenomena, ALCOHOL AND ROAD TRAFFIC 123 (1963) (of different types of nystagmus, alcohol gaze nystagmus is the most easily observed).

14. Helzer, Detection DUIs Through the Use of Nystagmus, LAW AND ORDER, Oct. 1984, at 93 (nystagmus is "a powerful tool for officers to use at roadside to determine BAC of stopped drivers...(O)fficers can learn to estimate BACs to within an average of 0.02 percent of chemical test readings." Id. at 94).

15. L.R. Erwin, DEFENSE OF DRUNK DRIVING CASES (3d ed. 1985) ("A strong correlation exists between the BAC and the angle of onset of (gaze) nystagmus." Id. at 8.15A(3).

16. Lehti, The Effect of Blood Alcohol Concentration on the Onset of Gaze Nystagmus, 136 BLUTALKOHOL 414 (West Germany 1976) (abstract available on DIALOG, file 173: Embase 1975 79) (noted a statistically highly significant correlation between BAC and the angle of onset of nystagmus with respect to the midpoint of the field of vision).

17. Misoi, Hishida & Maeba, Diagnosis of Alcohol Intoxication by the Optokinetic Test, 30 Q.J. OF STUD. ON ALCOHOL 1 (March June 1969) (optokinetic nystagmus, ocular adaptation to movement of object before eyes, can also be used to detect central nervous system impairment caused by alcohol. Optokinetic nystagmus is inhibited at BAC of only .051 percent and can be detected by optokinetic nystagmus

test. Before dosage subjects could follow a speed of 90 degrees per second; after, less than 70 degrees per second).

18. Murphree, Price & Greenberg, Effect of Congeners in Alcohol Beverages on the Incidence of Nystagmus, 27 Q.J. OF STUD. ON ALCOHOL, June 1966, at 201 (positional nystagmus is a consistent, sensitive indicator of alcohol intoxication).

19. Nathan, Zare, Ferneau & Lowenstein, Effects of Congener Differences in Alcohol Beverages on the Behavior of Alcoholics, 5 Q.J. OF STUD. ON ALCOHOL SUPP., may 1970, at 87 (abstract available on DIALOG, file 11: Psychinfo 1967 85) (incidence of nystagmus and other nystagmoid movements increased with duration of drinking).

20. Norris, The Correlation of Angle of Onset of Nystagmus With Blood Alcohol Level: Report of a Field Trial, CALIF. ASS'N CRIMINALISTICS NEWSLETTER, June 1985, at 21 (The relationship between the ingestion of alcohol and the inset of various kinds of nystagmus "appears to be well documented." Id. "While nystagmus appears to be useful as a roadside sobriety test, at this time, its use to predict a person's blood alcohol level does not appear to be warranted." Id. at 22).

21. Nuotto, Palva & Seppala, Naloxone Ethanol Interaction in Experimental and Clinical Situations, 54 ACTA PHARMACOL. TOXICOL. 278 (1984) (abstract available on DIALOG, file 5: Biosis Previews 1981 86) (ethanol alone dose dependently induced nystagmus).
22.
23. Oosterveld, Meineri & Paolucci, Quantitative Effect of Linear Acceleration on Positional Alcohol Nystagmus, 45 AEROSPACE MEDICINE, July 1974, at 695 (G-loading brings about PAN even when subject has not ingested alcohol; however when subjects ingested alcohol, no PAN was found when subjects were in supine position, even with G force at 3).

24. Penttila, Lehti & Lonnqvist, Nystagmus and Disturbances in Psychomotor Functions Induced by Psychotropic Drug Therapy, 1974 PSYCHIAT. FENN. 315 (abstract available on DIALOG, file 173: Embase 1975 79) (psychotropic drugs induce nystagmus).

25. Rashbass, The Relationship Between Saccadic and Smooth Tracking Eye Movements, 159 J. PHYSIOL. 326 (1961) (barbiturate drugs interfere with smooth tracking eye movement).

26. Richman, McAndrew, Decker and Mullaney, An Evaluation of Pupil Size Standards Used By Police Officers for Detecting Drug Impairment, Vol. 75, No. 3, March 2004, Opportunity, determined normative values and potential ranges for pupillary responses using the specific DEC program protocols for pupil testing in non-impaired persons.

27. Savolainen, Riihimaki, Vaheri & Linnoila, Effects of Xylene and Alcohol on Vestibular and Visual Functions in Man, SCAND. J. WORK ENVIRON. HEALTH 94 (Sweden 1980) (abstract available on DIALOG, file 172: Embase 1980 81 on file 5: Biosis Previews 1981 86) (the effects of alcohol on vestibular functions (e.g., positional nystagmus) were dose dependent).

28. Seelmeyer, Nystagmus, A Valid DUI Test, LAW AND ORDER, July 1985, at 29 (Horizontal Gaze Nystagmus test is used in "at least one law enforcement agency in each of the 50 states" and is "a legitimate method of establishing probable cause." Id.).

29. Smith, Hayes, Yolton, Rutledge and Citek, Drug Recognition Expert Evaluations Made Using Limited Data, Forensic Science International 130 (2002), p. 167-173, demonstrated that DRE officers can make a correct positive identification of drug intoxication with limited information.

30. Tharp, Burns & Moskowitz, Circadian Effects on Alcohol Gaze Nystagmus (paper presented at 20th annual meeting of Society for Psychophysiological Research), abstract in 18 PSYCHOPHYSIOLOGY, March 1981 (highly significant correlation between angle of onset of AGN and BAC).

31. Tharp, Burns & Moskowitz, Development and Field Test of Psychophysical Tests for DWI Arrests, U.S. Dept. of Transportation Rep. No. DOT HS 805 864 (1981) (standardized procedures for administering and scoring the SCRI three test battery; participating officers able to classify 81% of volunteers above or below .10).

32. Umeda & Sakata, Alcohol and the Oculomotor System, 87 ANNALS OF OTOLOGY, RHINOLOGY & LARYNGOLOGY, May June 1978, at 392 (in volunteers whose "caloric eye tracking pattern" (CETP) was normal before alcohol intake, influence of alcohol on oculomotor system appeared consistently in the following order: (1) abnormality of CETP, (2) positional alcohol nystagmus, (3) abnormality of eye tracking pattern, (4) alcohol gaze nystagmus).

33. Wilkinson, Kime & Purnell, Alcohol and Human Eye Movement, 97 BRAIN 785 (1974) (oral dose of ethyl alcohol impaired smooth pursuit eye movement of all human subjects).

34. Zyo, Medico legal and Psychiatric Studies on the Alcohol Intoxicated Offender, 30 JAPANESE J. OF LEGAL MED., No. 3, 1976, at 169 (abstract available on DIALOG, file 21: National Criminal Justice Reference Service 1972 85) (recommends use of nystagmus test to determine somatic and mental symptoms of alcohol intoxication as well as BAC).

Session 4 – Overview of Drug Recognition Expert Procedures

150 Minutes

Session 4

Overview of Drug Recognition Expert Procedures

Drug Recognition Expert Course

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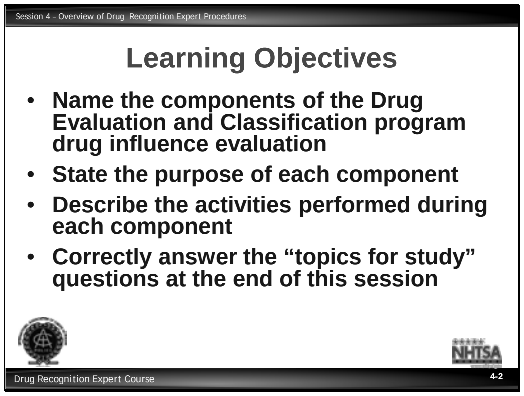

Session 4 – Overview of Drug Recognition Expert Procedures

Learning Objectives

- **Name the components of the Drug Evaluation and Classification program drug influence evaluation**
- **State the purpose of each component**
- **Describe the activities performed during each component**
- **Correctly answer the “topics for study” questions at the end of this session**

Drug Recognition Expert Course 4-2

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Upon successfully completing this session the participant will be able to:

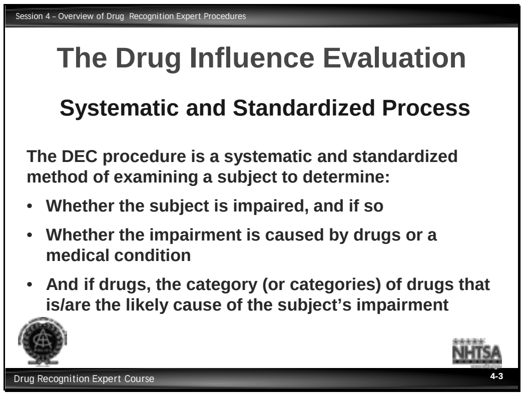
- Name the components of the Drug Evaluation and Classification program drug influence evaluation.
- State the purpose of each component.
- Describe the activities performed during each component.
- Correctly answer the “topics for study” questions at the end of this session.

CONTENT SEGMENTS

A. Components of the Drug Evaluation and Classification Procedure
B. Interview of the Arresting Officer
C. The Preliminary Examination
D. Examinations of the Eyes
E. Divided Attention Psychological Tests
F. Examinations of Vital Signs
G. Dark Room Checks of Pupil Size
H. Examination of Muscle Tone
I. Examination for Injection Sites
J. Toxicological Examination
K. Video Demonstration

LEARNING ACTIVITIES

Instructor Led Presentations
Instructor Led Demonstrations
Video Presentations
Reading Assignments



Session 4 – Overview of Drug Recognition Expert Procedures

The Drug Influence Evaluation

Systematic and Standardized Process

The DEC procedure is a systematic and standardized method of examining a subject to determine:

- Whether the subject is impaired, and if so
- Whether the impairment is caused by drugs or a medical condition
- And if drugs, the category (or categories) of drugs that is/are the likely cause of the subject's impairment

Drug Recognition Expert Course 4-3

Notes:

A. Components of the Drug Evaluation and Classification Procedure

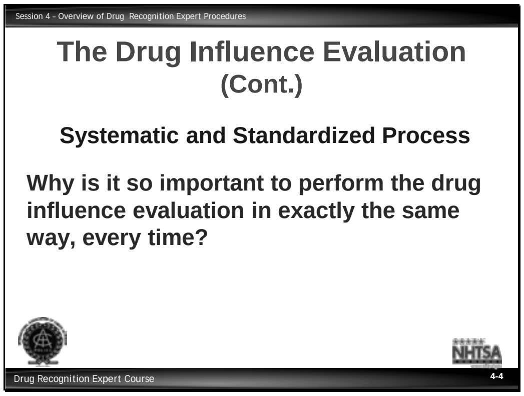
The Drug Influence Evaluation

The DEC procedure is a systematic and standardized method of examining a subject to determine:

- Whether the subject is impaired, and if so,
- Whether the impairment is caused by drugs or a medical condition.
- And if drugs, the category (or categories) of drugs that is/are the likely cause of the subject's impairment.

The process is systematic in that it is based on a careful assessment of a variety of observable signs and symptoms that are known to be reliable indicators of drug impairment.

- Some of these observable signs and symptoms relate to the subject's appearance.
- Some of these observable signs and symptoms relate to the subject's behavior.
- Some relate to the subject's performance of carefully administered psychophysical tests.



Session 4 – Overview of Drug Recognition Expert Procedures

The Drug Influence Evaluation (Cont.)

Systematic and Standardized Process

Why is it so important to perform the drug influence evaluation in exactly the same way, every time?

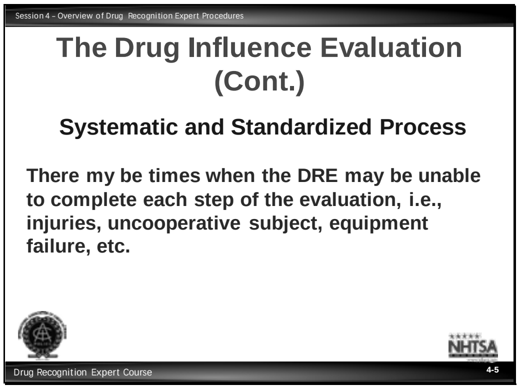
Drug Recognition Expert Course 4-4

Notes:

Drugs impair the subject's ability to control his or her mind and body.

- Psychophysical tests can disclose that the subject's ability to control mind and body is impaired.
- The specific manner in which the subject performs the psychophysical tests may help indicate the category or categories of drugs causing the impairment.
- Some of the observable signs and symptoms relate to the subject's automatic responses to the specific drugs that are present.
- All of these reliable indicators are examined and carefully considered before a judgment is made concerning what categories of drugs are affecting the subject.

The evaluation is standardized in that it is administered the same way, every time.



Session 4 – Overview of Drug Recognition Expert Procedures

The Drug Influence Evaluation (Cont.)

Systematic and Standardized Process

There my be times when the DRE may be unable to complete each step of the evaluation, i.e., injuries, uncooperative subject, equipment failure, etc.

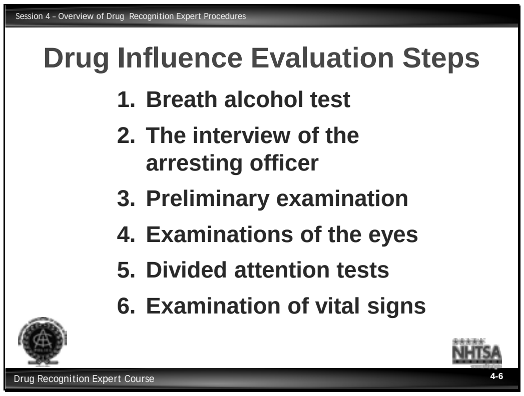
Drug Recognition Expert Course

4-5

Notes:

- Standardization helps to ensure that no mistakes are made.
- No examinations are left out.
- No extraneous or unreliable “indicators” are included.
- Standardization helps to promote professionalism among drug recognition experts.
- Standardization helps to secure acceptance in court.

In such cases, the DRE may still be able to form an opinion based upon the evidence obtained. State v. Cammack, 1997 WL 104913 (Minnesota Ct. Appeals, 1997) ruled that a DRE need not complete the entire 12-step evaluation for an opinion to be admissible so long as there is sufficient admissible evidence.



Session 4 – Overview of Drug Recognition Expert Procedures

Drug Influence Evaluation Steps

1. **Breath alcohol test**
2. **The interview of the arresting officer**
3. **Preliminary examination**
4. **Examinations of the eyes**
5. **Divided attention tests**
6. **Examination of vital signs**

Drug Recognition Expert Course 4-6

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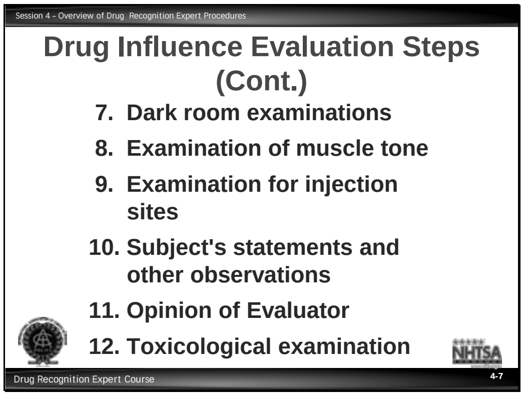
Drug Influence Evaluation Steps

The Drug Evaluation and Classification drug influence evaluation has twelve components or steps.



Session 4 – Overview of Drug Recognition Expert Procedures

Drug Influence Evaluation Steps (Cont.)

7. **Dark room examinations**
8. **Examination of muscle tone**
9. **Examination for injection sites**
10. **Subject's statements and other observations**
11. **Opinion of Evaluator**
12. **Toxicological examination**

Drug Recognition Expert Course 4-7

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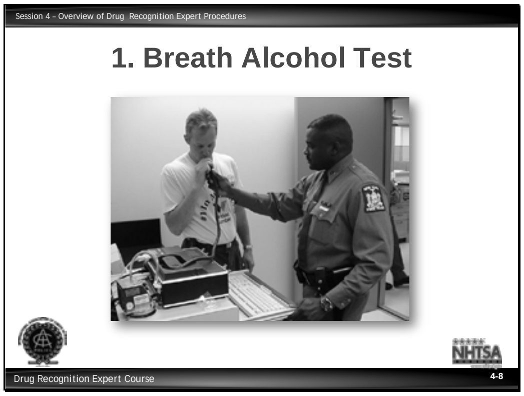


Session 4 – Overview of Drug Recognition Expert Procedures

1. Breath Alcohol Test

Drug Recognition Expert Course

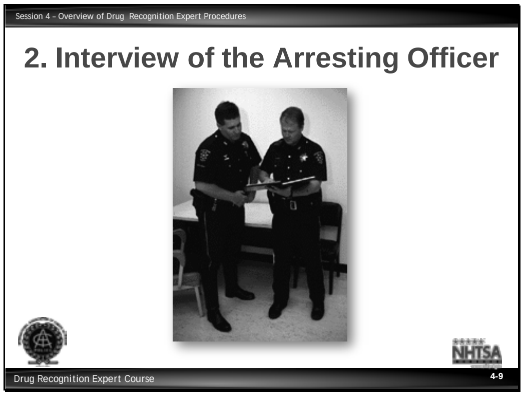
Notes:

Breath Alcohol Test

The Breath Alcohol Test is needed to determine Blood Alcohol Concentration (BAC).

The purpose of the breath test is to determine whether the specific drug, alcohol, may be contributing to the impairment observed in the subject.

Obtaining an accurate measurement of BAC enables the DRE to assess whether alcohol may be the sole cause of the observable impairment, or whether it is likely that some other drug or drugs, or other complicating factors are contributing to the impairment.



Session 4 - Overview of Drug Recognition Expert Procedures

2. Interview of the Arresting Officer

Drug Recognition Expert Course

4-9

Notes:

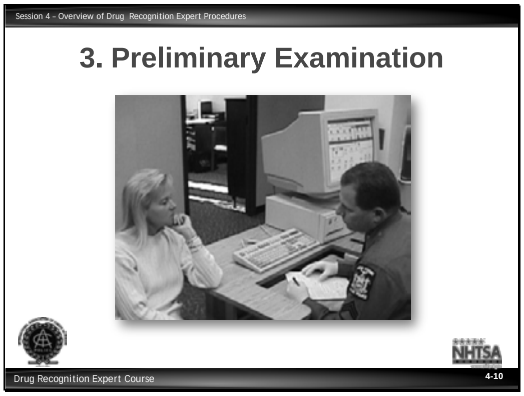
The Interview of the Arresting Officer

In most cases, the subjects you will examine will not be people that you arrested.

The arresting officer may have seen or heard things that would be valuable indicators of the kinds of drugs the subject has ingested.

The arresting officer, in searching the subject, may have uncovered drug related paraphernalia, or even drugs themselves.

The arresting officer also may be able to alert you to important information about the subject's behavior that could be very valuable for your own safety.



Session 4 – Overview of Drug Recognition Expert Procedures

3. Preliminary Examination

Drug Recognition Expert Course

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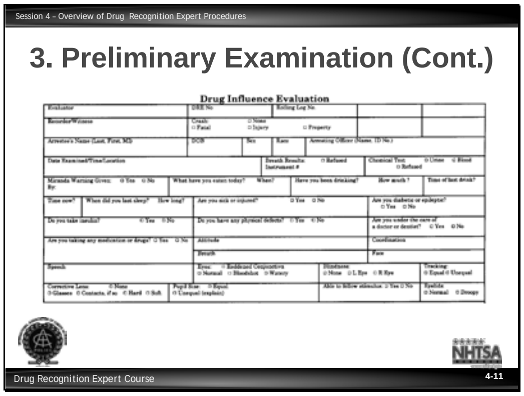
The Preliminary Examination

- The preliminary examination is your first opportunity to observe the subject closely and directly.

- A major purpose of the preliminary examination is to determine if the subject may be suffering from an injury or some other medical condition not necessarily related to drugs.

- **Analogy: The preliminary examination is a “fork in the road.” It can help you decide whether to continue with the drug influence evaluation, to pursue a possible medical complication, or to proceed with a DWI (alcohol) case.**

- Another major purpose of the preliminary examination is to begin systematically assessing the subject’s appearance, behavior and automatic bodily responses for signs of drug induced impairment.



Session 4 - Overview of Drug Recognition Expert Procedures

3. Preliminary Examination (Cont.)

Drug Influence Evaluation

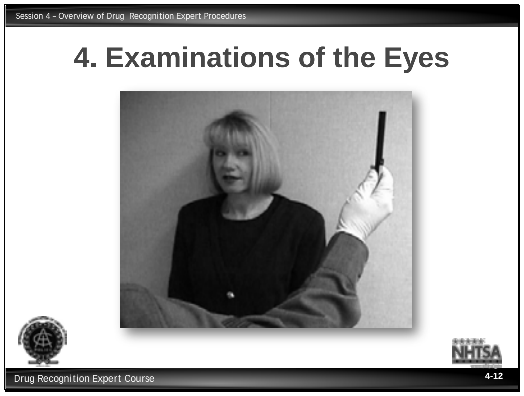
Drug Recognition Expert Course

4-11

Notes:

The preliminary examination consists of a series of questions dealing with possible injuries or medical problems; observations of the subject's face, speech and breath; pupil size and tracking ability; initial checks of the subject's eyes; and, an initial examination of the subject's pulse.

While you are assessing the subject's tracking ability, you can also perform a preliminary assessment of whether Horizontal Gaze Nystagmus is present in the subject's eyes. In particular, if the Nystagmus or "jerking" is observed, an initial estimation of the angle of onset can be made. The approximate angle of onset may help to determine whether the subject has consumed some drug other than alcohol.



Session 4 - Overview of Drug Recognition Expert Procedures

4. Examinations of the Eyes

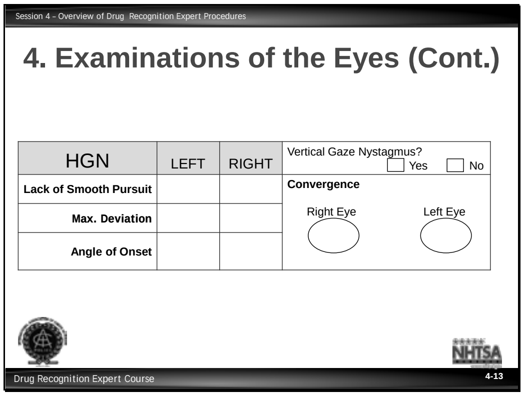
Drug Recognition Expert Course

4-12

Notes:

Examinations of the Eyes

Certain drugs produce very easily observable effects on the eyes.



Session 4 - Overview of Drug Recognition Expert Procedures

4. Examinations of the Eyes (Cont.)

HGN	LEFT	RIGHT	Vertical Gaze Nystagmus? ☐ Yes ☐ No
Lack of Smooth Pursuit			**Convergence**
Max. Deviation			Right Eye Left Eye
Angle of Onset			

Drug Recognition Expert Course

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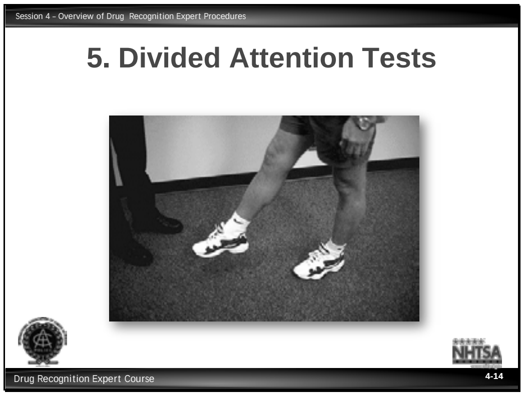
Notes:____

One of the most dramatic of these effects is Nystagmus, which means an involuntary jerking of the eyes.

Persons under the influence of alcohol usually will exhibit Horizontal Gaze Nystagmus, which is an involuntary jerking of the eyes occurring as the eyes gaze to the side.

Alcohol is not the only drug that causes Nystagmus.

Horizontal Gaze Nystagmus is not the only observable effect on the eyes that will be caused by various drugs.



Session 4 – Overview of Drug Recognition Expert Procedures

5. Divided Attention Tests

Drug Recognition Expert Course

4-14

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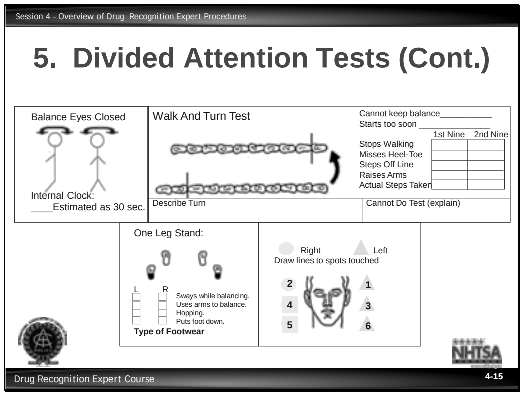
Divided Attention Psychophysical Tests

All drugs that impair driving ability will also impair the subject’s ability to perform certain carefully designed divided attention tests.

These tests are familiar to you in the context of examining alcohol impaired subjects.



Session 4 – Overview of Drug Recognition Expert Procedures

5. Divided Attention Tests (Cont.)

Balance Eyes Closed

Internal Clock:
____Estimated as 30 sec.

Walk And Turn Test

Cannot keep balance___________
Starts too soon ______________

	1st Nine	2nd Nine
Stops Walking		
Misses Heel-Toe		
Steps Off Line		
Raises Arms		
Actual Steps Taken		

Describe Turn

Cannot Do Test (explain)

One Leg Stand:

L	R	
☐	☐	Sways while balancing.
☐	☐	Uses arms to balance.
☐	☐	Hopping.
☐	☐	Puts foot down.

Type of Footwear

● Right ▲ Left
Draw lines to spots touched

2 4 5 1 3 6

Drug Recognition Expert Course

4-15

Notes:____

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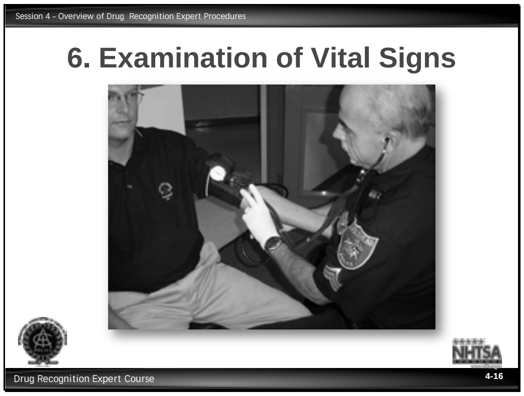
The same tests are very valuable for disclosing evidence of impairment due to drugs other than alcohol.

The divided attention tests used in the DRE examination include:

- The Modified Romberg Balance,
- The Walk and Turn,
- One Leg Stand,
- And, the Finger to Nose.



Session 4 – Overview of Drug Recognition Expert Procedures

6. Examination of Vital Signs

Drug Recognition Expert Course

4-16

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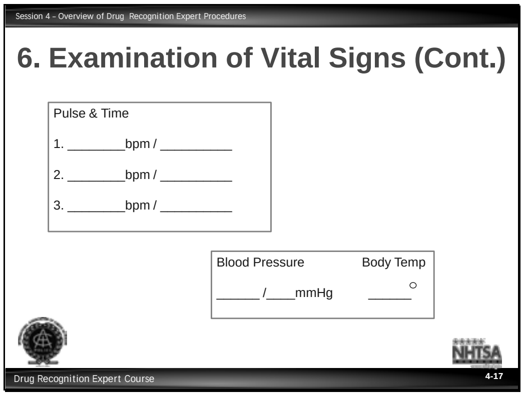
Examination of Vital Signs

Many categories of drugs affect the operation of the heart, lungs and other major organs of the body.



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6. Examination of Vital Signs (Cont.)

Pulse & Time

1. ________bpm / __________
2. ________bpm / __________
3. ________bpm / __________

Blood Pressure Body Temp

______/____mmHg ______°

Drug Recognition Expert Course

4-17

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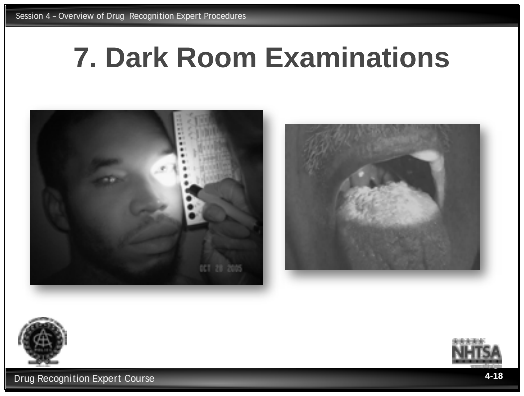
These effects show up during examination of the subject’s vital signs.

The vital signs that are reliable indicators of drug influence include blood pressure, pulse, and temperature.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7. Dark Room Examinations

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Drug Recognition Expert Course

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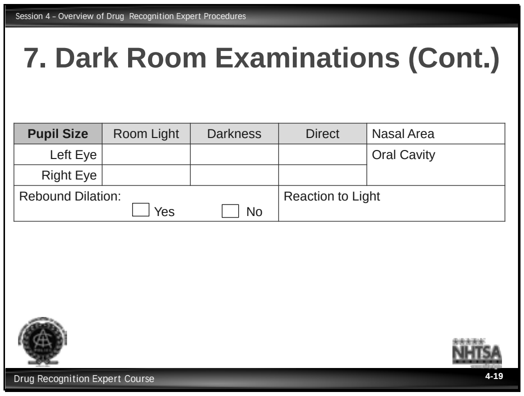
Dark Room Examinations

Many categories of drugs affect how the pupils will appear, and how they respond to light.



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7. Dark Room Examinations (Cont.)

Pupil Size	Room Light	Darkness	Direct	Nasal Area
Left Eye				Oral Cavity
Right Eye				
Rebound Dilation: ☐ Yes ☐ No			Reaction to Light	

Drug Recognition Expert Course

4-19

Notes:____

Certain kinds of drugs will cause the pupils to widen dramatically, or dilate.

Some other drugs cause the pupils to narrow, or constrict.

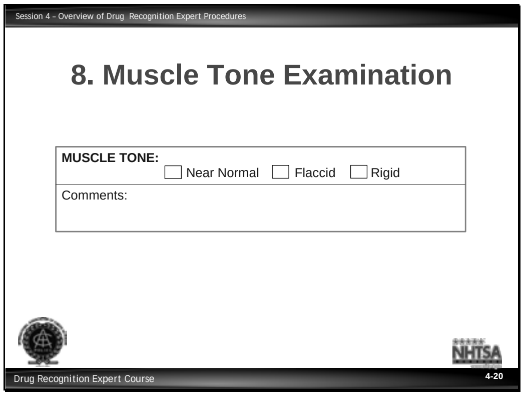
By systematically changing the amount of light entering the subject's eyes, we can observe the pupils' appearance and reaction under controlled conditions.

We carry out these examinations in a dark room, using a penlight to control the amount of illumination entering the subject's eyes.

We use a device called a pupillometer to estimate the size of the subject's pupils.

By lining the circles up alongside the subject's pupil, the pupil's size can be determined.

Other examinations are also conducted in the darkroom, using the penlight: i.e., examination of the nasal area and mouth for signs of drug use and for concealed contraband.



Session 4 – Overview of Drug Recognition Expert Procedures

8. Muscle Tone Examination

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☐ Rigid

Comments:

Drug Recognition Expert Course

4-20

Notes:____

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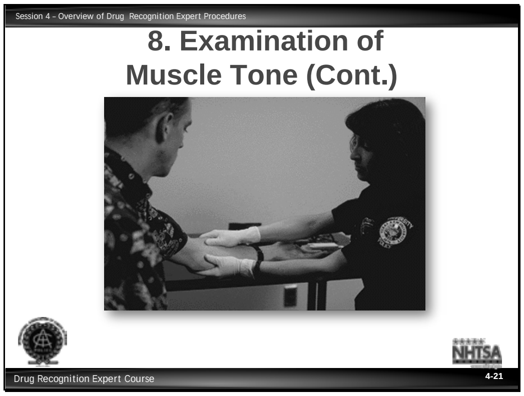
Certain categories of drugs can cause the user's muscles to become markedly tense, and rigid. Others may cause flaccidity, or "rubbery-like" muscle tone.

Evidence of this muscle tone may come to light when the subject attempts to perform the divided attention tests.



Session 4 – Overview of Drug Recognition Expert Procedures

8. Examination of Muscle Tone (Cont.)

Drug Recognition Expert Course

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Notes:____

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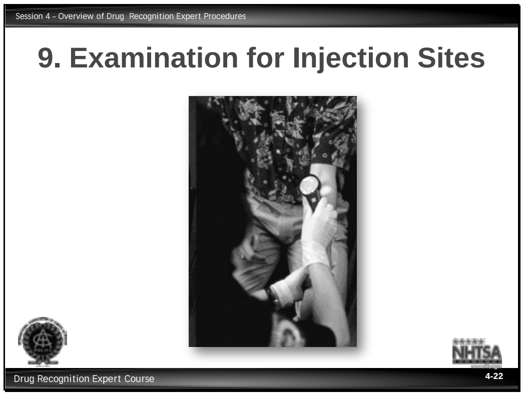
Examination of Muscle Tone

Evidence of muscle tone can also be observed when taking the subject's pulse, blood pressure or while examining for injection sites.



Session 4 – Overview of Drug Recognition Expert Procedures

9. Examination for Injection Sites

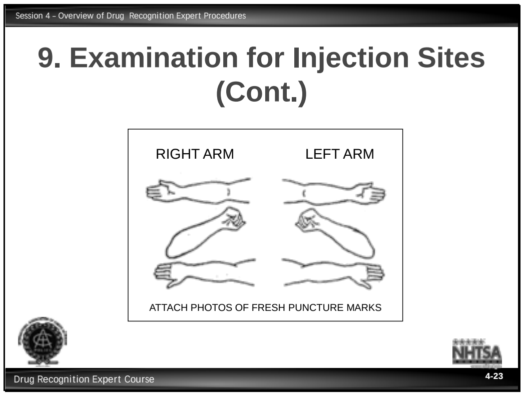
Drug Recognition Expert Course

4-22

Notes:

Examination for Injection Sites

Certain drugs are commonly injected by their users, via hypodermic needles.



Session 4 – Overview of Drug Recognition Expert Procedures

9. Examination for Injection Sites (Cont.)

RIGHT ARM LEFT ARM

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

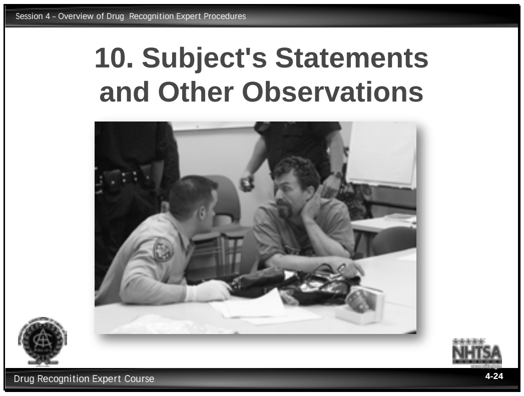
Drug Recognition Expert Course

4-23

Notes:

Heroin is probably most commonly associated with injection, but several other types of drugs also are injected by many users.

Uncovering an injection sites on a subject provides evidence of possible drug use.



Session 4 - Overview of Drug Recognition Expert Procedures

10. Subject's Statements and Other Observations

Drug Recognition Expert Course

4-24

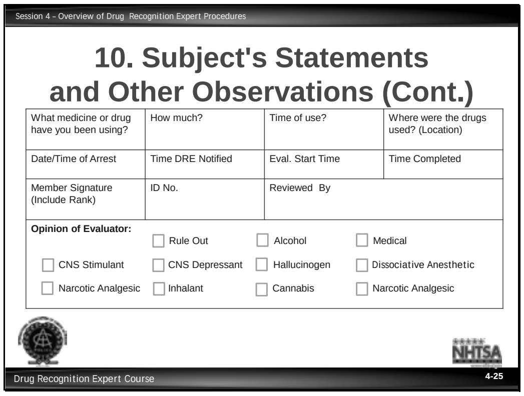
Notes:____

Subject's Statements and Other Observations

At this point in the examination, the trained DRE should have reasonable grounds to believe that the subject is under the influence of a drug or drugs.

The DRE should also have at least an articulable suspicion as to the category or categories of drugs causing the impairment.

The DRE should proceed to interview the subject to confirm their opinion concerning the drug category or categories involved.



Session 4 - Overview of Drug Recognition Expert Procedures

10. Subject's Statements and Other Observations (Cont.)

What medicine or drug have you been using?	How much?	Time of use?	Where were the drugs used? (Location)
Date/Time of Arrest	Time DRE Notified	Eval. Start Time	Time Completed
Member Signature (Include Rank)	ID No.	Reviewed By	
Opinion of Evaluator:	☐ Rule Out	☐ Alcohol	☐ Medical
☐ CNS Stimulant	☐ CNS Depressant	☐ Hallucinogen	☐ Dissociative Anesthetic
☐ Narcotic Analgesic	☐ Inhalant	☐ Cannabis	☐ Narcotic Analgesic

Drug Recognition Expert Course

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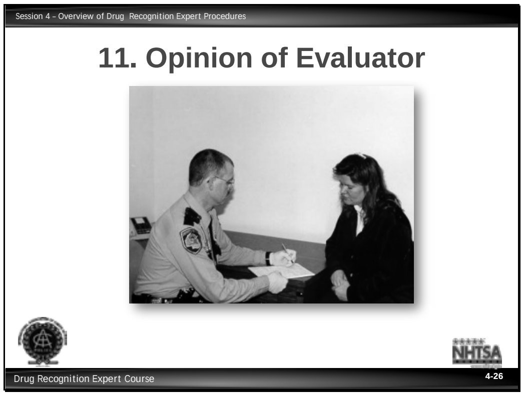
Notes:____

The DRE must carefully record the subject's statements, and any other observations that may constitute relevant evidence of drug induced impairment.



Session 4 – Overview of Drug Recognition Expert Procedures

11. Opinion of Evaluator

Drug Recognition Expert Course 4-26

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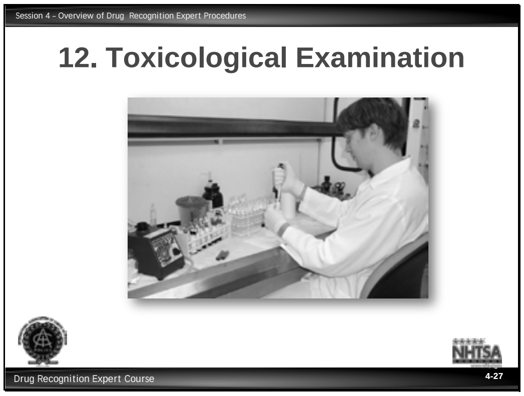
Opinion of Evaluator

Based on all of the evidence and observations gleaned from the preceding ten steps, the DRE should be able to reach an informed conclusion as to:

- Whether the subject is under the influence of a drug or drugs, and if so,
- The probable category or categories of drugs causing impairment.

The DRE must record a narrative summary of the facts forming the basis for their conclusion.



Session 4 – Overview of Drug Recognition Expert Procedures

12. Toxicological Examination

Drug Recognition Expert Course 4-27

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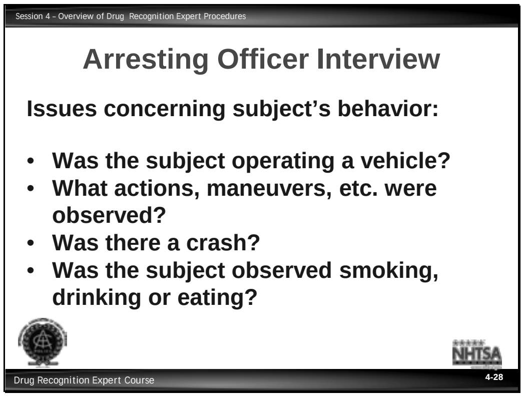
Toxicological Examination

The toxicological examination is a chemical test or tests designed to obtain scientific, admissible evidence to substantiate the DRE's opinion.

Departmental policy and procedures must be followed in requesting, obtaining and handling the toxicological sample.



Session 4 – Overview of Drug Recognition Expert Procedures

Arresting Officer Interview

Issues concerning subject's behavior:

- **Was the subject operating a vehicle?**
- **What actions, maneuvers, etc. were observed?**
- **Was there a crash?**
- **Was the subject observed smoking, drinking or eating?**

Drug Recognition Expert Course 4-28

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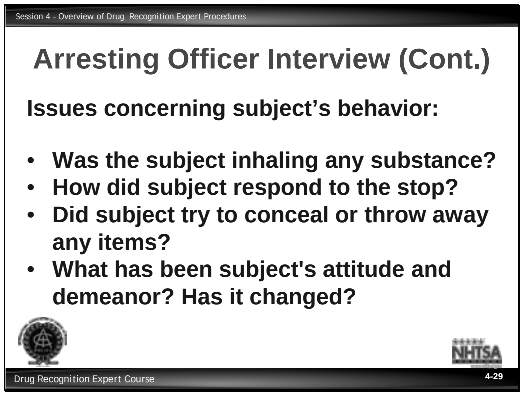
B. Interview of the Arresting Officer

The purpose of the interview of the arresting officer is to obtain a summary of the subject's actions, behaviors, etc. that led to the arrest and the suspicion that drugs other than alcohol may be involved.

Interview Behavior

Issues concerning the subject's behavior:

- Was the subject operating a vehicle?
- What actions, maneuvers, etc. were observed?
- Was there a crash? If yes, was the subject injured?
- Was the subject observed smoking, drinking or eating?



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Arresting Officer Interview (Cont.)

Issues concerning subject's behavior:

- **Was the subject inhaling any substance?**
- **How did subject respond to the stop?**
- **Did subject try to conceal or throw away any items?**
- **What has been subject's attitude and demeanor? Has it changed?**

Drug Recognition Expert Course 4-29

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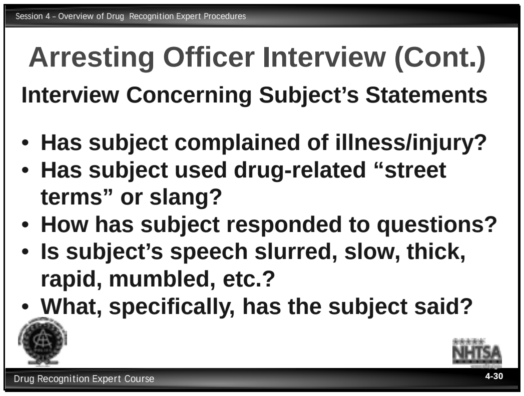
- Was the subject apparently inhaling any substance?
- How did the subject respond to the arresting officer's stop?
- Did the subject attempt to conceal or throw away any items or materials?
- What has been the subject's attitude and demeanor during contact with the arresting officer and have there been any changes?



Arresting Officer Interview (Cont.)

Interview Concerning Subject’s Statements

- **Has subject complained of illness/injury?**
- **Has subject used drug-related “street terms” or slang?**
- **How has subject responded to questions?**
- **Is subject’s speech slurred, slow, thick, rapid, mumbled, etc.?**
- **What, specifically, has the subject said?**

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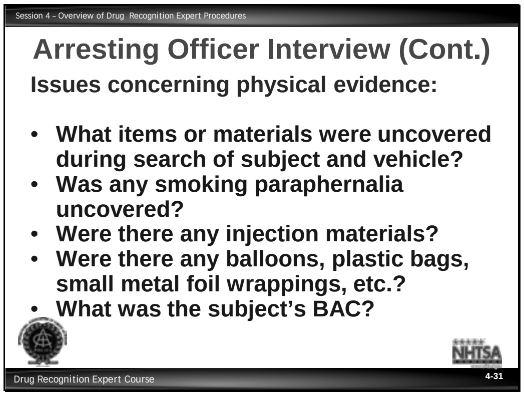
Interview Concerning Subject’s Statements

- Has the subject complained of an illness or injury?
- Has the subject used any “street terms” or slang associated with drugs or drug paraphernalia?
- How has the subject responded to the arresting officer’s questions?
- Was the subject’s speech slurred, slow, rapid, thick, mumbled, etc.?
- What, specifically, has the subject said to the arresting officer?



Arresting Officer Interview (Cont.)

Issues concerning physical evidence:

- **What items or materials were uncovered during search of subject and vehicle?**
- **Was any smoking paraphernalia uncovered?**
- **Were there any injection materials?**
- **Were there any balloons, plastic bags, small metal foil wrappings, etc.?**
- **What was the subject’s BAC?**

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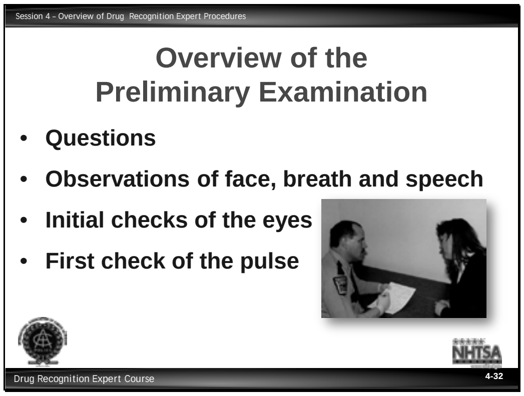
Interview: Physical Evidence

Issues concerning physical evidence:

- What items or materials were uncovered during the search of the subject or vehicle?
- Were any smoking paraphernalia uncovered?
- Were any injection materials, i.e., needles, syringes, leather straps, rubber tubes, spoons, bottle caps, etc. found?
- Were there any balloons, plastic bags, small metal foil wrappings, etc. found?
- What was the subject’s blood alcohol concentration?



Session 4 - Overview of Drug Recognition Expert Procedures

Overview of the
Preliminary Examination

- Questions
- Observations of face, breath and speech
- Initial checks of the eyes
- First check of the pulse

Drug Recognition Expert Course

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Notes:

C. The Preliminary Examination Overview

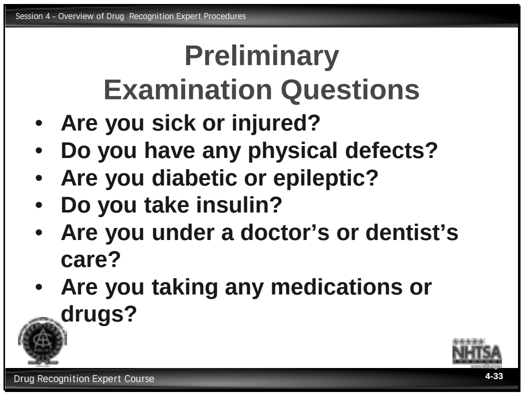
The preliminary examination consists of:

- Questions.

- Observations of face, breath, and speech.

- Initial checks of the eyes.

- The initial check of the subject's pulse.



Session 4 – Overview of Drug Recognition Expert Procedures

Preliminary Examination Questions

- **Are you sick or injured?**
- **Do you have any physical defects?**
- **Are you diabetic or epileptic?**
- **Do you take insulin?**
- **Are you under a doctor's or dentist's care?**
- **Are you taking any medications or drugs?**

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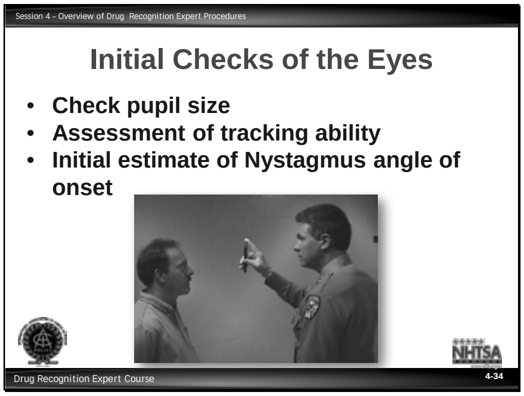
Preliminary Examination Questions

The questions deal with injuries or medical problems the subject may have. They include:

***Briefly discuss the relevance of each questio*n.**

- Are you sick or injured?
- Do you have any physical defects?
- Are you diabetic or epileptic?
- Do you take insulin?
- Are you under a doctor or dentist's care?
- Are you taking any medications or drugs?



Session 4 – Overview of Drug Recognition Expert Procedures

Initial Checks of the Eyes

- Check pupil size
- Assessment of tracking ability
- Initial estimate of Nystagmus angle of onset

Drug Recognition Expert Course

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Notes:

Initial Checks of the Eyes

The initial checks of the subject’s eyes include several particularly important items.

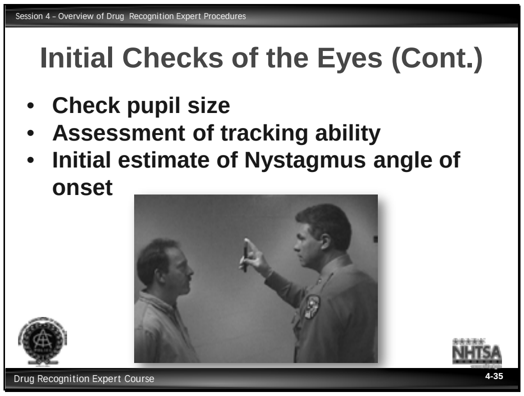
Check of the size of each pupil.

Assessment of the ability of the eyes to track a moving object.

The presence of Nystagmus indicates the possible presence of certain categories of drugs.

Initial estimation of the angle of onset of Horizontal Gaze Nystagmus.

The approximate angle of onset may indicate the presence of some drug other than alcohol.



Session 4 - Overview of Drug Recognition Expert Procedures

Initial Checks of the Eyes (Cont.)

- Check pupil size
- Assessment of tracking ability
- Initial estimate of Nystagmus angle of onset

Drug Recognition Expert Course

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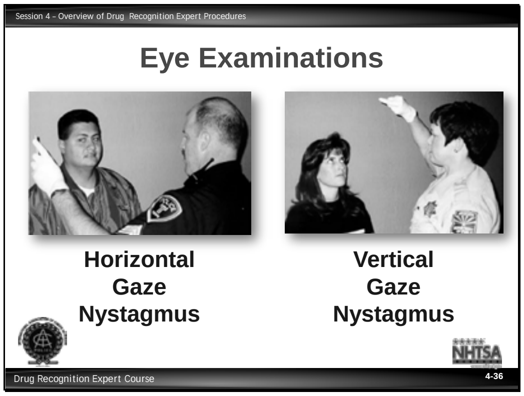
Notes:

If the subject has also ingested some other drug that also causes Nystagmus, the angle of onset may occur even earlier than the Blood Alcohol Concentration would indicate.

Example: Suppose you are examining a subject who has an angle of onset at 45 degrees.

Based on that alone, you would expect the person's BAC to be in the .05 - .08 percent range. But if that subject has also ingested a Dissociative Anesthetic, the onset could occur much earlier, perhaps as soon as the eyes start to move to the side.

For example: Cannabis, Narcotic Analgesics, CNS Stimulants and Hallucinogens do not cause Nystagmus, and will not affect the angle of onset.



Session 4 – Overview of Drug Recognition Expert Procedures

Eye Examinations

Horizontal Gaze Nystagmus

Vertical Gaze Nystagmus

Drug Recognition Expert Course

Notes:____

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D. Examinations of the Eyes

Eye Examinations

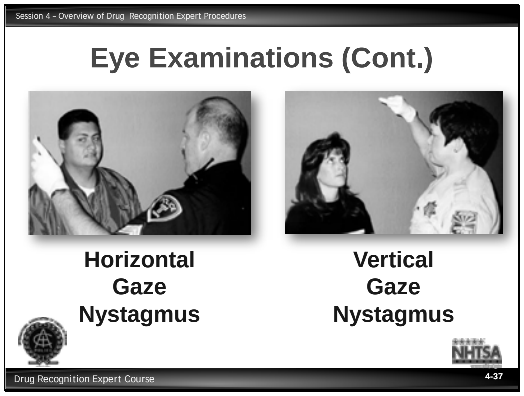
The Examinations of the Eyes consist of three tests:

Horizontal Gaze Nystagmus (HGN)

Clue #1 – Lack of smooth pursuit.

Clue #2 – Distinct and sustained Nystagmus at maximum deviation.

Clue #3 – Angle of Onset



Session 4 – Overview of Drug Recognition Expert Procedures

Eye Examinations (Cont.)

Horizontal Gaze Nystagmus

Vertical Gaze Nystagmus

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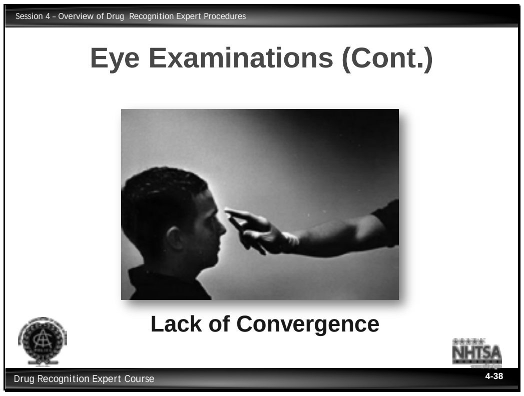
Vertical Gaze Nystagmus



Session 4 - Overview of Drug Recognition Expert Procedures

Eye Examinations (Cont.)

Lack of Convergence

Drug Recognition Expert Course

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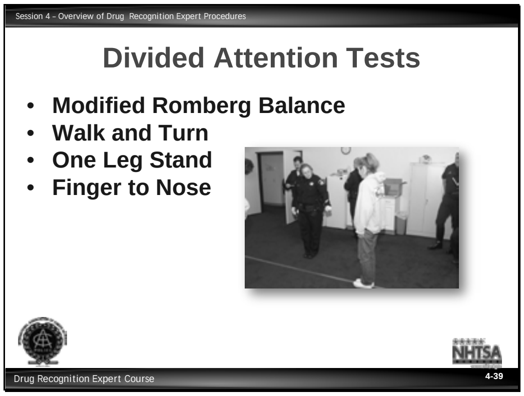
Notes:

Lack of Convergence

Lack of Convergence is checked by first getting the subject to focus on and track the stimulus as it slowly moves in a circle in front of the subject's face.

Then, the stimulus is slowly pushed in toward the bridge of the subject's nose and held for approximately one (1) second.

Under the influence of certain types of drugs, the eyes may not be able to converge.



Session 4 – Overview of Drug Recognition Expert Procedures

Divided Attention Tests

- **Modified Romberg Balance**
- **Walk and Turn**
- **One Leg Stand**
- **Finger to Nose**

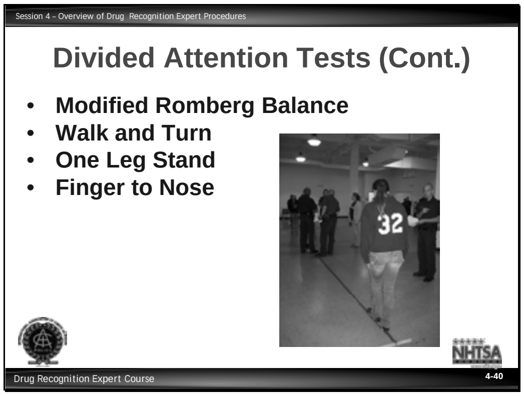
Drug Recognition Expert Course 4-39

Notes:

E. Divided Attention Psychophysical Tests

Several Divided Attention tests used for drug examinations are the same familiar tests used for examining alcohol impaired subjects.

- Modified Romberg Balance Test
- Walk and Turn
- One Leg Stand
- Finger to Nose



Session 4 – Overview of Drug Recognition Expert Procedures

Divided Attention Tests (Cont.)

- **Modified Romberg Balance**
- **Walk and Turn**
- **One Leg Stand**
- **Finger to Nose**

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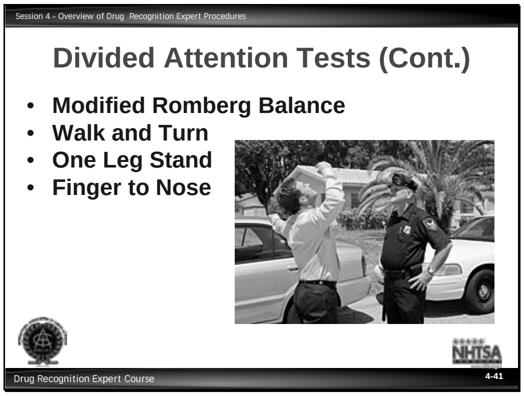
Notes:

Walk and Turn Demonstration

Instructions stage

One-Leg Stand Test Demonstration

Instructions stage



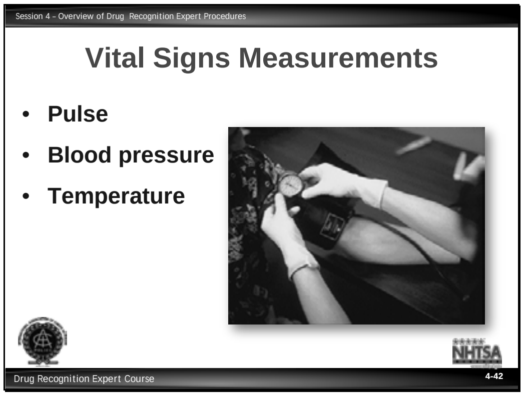
Divided Attention Tests (Cont.)

- **Modified Romberg Balance**
- **Walk and Turn**
- **One Leg Stand**
- **Finger to Nose**

Notes:

Finger to Nose Demonstration

Instructions stage



Vital Signs Measurements

- **Pulse**
- **Blood pressure**
- **Temperature**

Notes:

F. Examinations of Vital Signs

The Vital Signs consist of three things routinely measured in basic physical examinations.

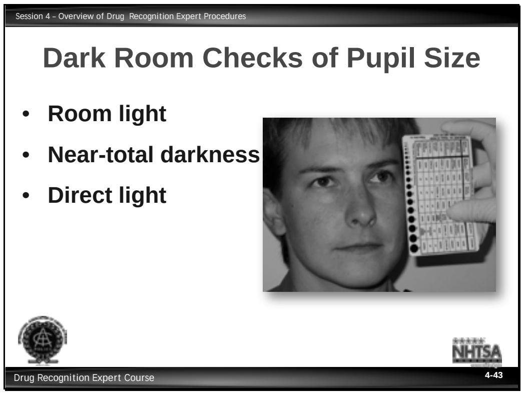
- Pulse
- Blood Pressure
- Temperature

These measurements require some familiar instruments.

- ***Stethoscope***
- ***Blood pressure cuff and gauge (sphygmomanometer)***
- ***Thermometer***

NOTE: An oral thermometer with disposable mouthpieces is recommended.

A time piece capable of measuring in seconds is also required.



Session 4 - Overview of Drug Recognition Expert Procedures

Dark Room Checks of Pupil Size

- **Room light**
- **Near-total darkness**
- **Direct light**

Drug Recognition Expert Course

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Notes:____

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G. Dark Room Checks of Pupil Size

Dark Room Checks for Pupil Size

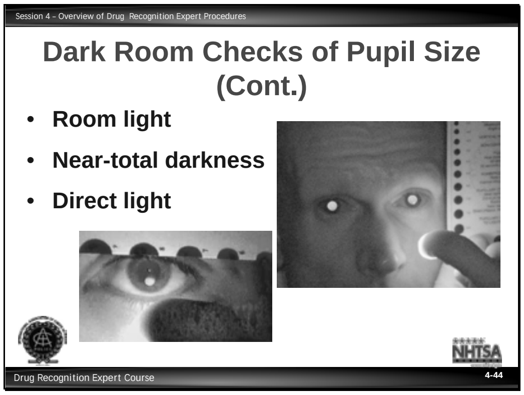
The principal activity that takes place during the dark room examinations is the estimation of pupil size under three lighting conditions.

- Room light.
- Near total darkness.
- Direct light.

Room Light

Before turning off the lights, you will estimate the size of the subject's pupils under room light.

You must always first estimate the left pupil, then the right.



Session 4 - Overview of Drug Recognition Expert Procedures

Dark Room Checks of Pupil Size (Cont.)

- **Room light**
- **Near-total darkness**
- **Direct light**

Drug Recognition Expert Course

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Notes:

You must position the pupillometer alongside the eye to ensure an accurate estimation.

After you have completed the room light estimations, turn off the lights and wait approximately 90 seconds to allow your eyes and the subject’s eyes to adapt to the darkness.

Near Total Darkness

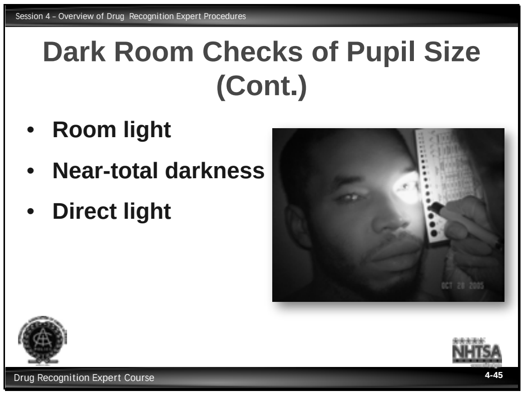
The next check will be of pupil size under near total darkness.

You will need the bare minimum amount of light necessary to see the subject’s pupils and the pupillometer.

You can create the necessary light by covering the tip of the penlight with your finger or thumb.

The light is then moved near the subjects left eye just until it is possible to distinguish the colored portion of the eye (Iris).

Hold the pupillometer alongside the eye and locate the circle or semi-circle closest in size to the pupil.



Session 4 - Overview of Drug Recognition Expert Procedures

Dark Room Checks of Pupil Size (Cont.)

- **Room light**
- **Near-total darkness**
- **Direct light**

Drug Recognition Expert Course

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Notes:

Direct Light

The third and final check will be of the pupil size under direct light.

You will shine the full strength of the penlight directly into the subject's eye for 15 seconds.

Do this by bringing the light in from the side of the subject's face.

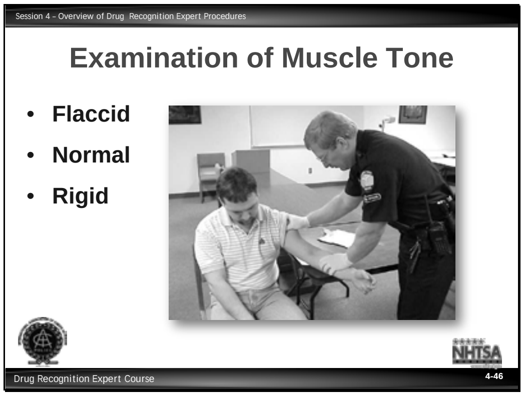
The penlight should be held close enough to the subject's eye so that its beam fills the eye socket.

When the light is initially shown into the eye, you will check for the pupil's reaction to light. Then immediately estimate the pupil size under direct light.

Other Activities

Two other activities are conducted while in the darkroom.

- Examination of the nasal area.
- Examination of the oral cavity.



Session 4 - Overview of Drug Recognition Expert Procedures

Examination of Muscle Tone

- Flaccid
- Normal
- Rigid

Drug Recognition Expert Course

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Notes:____

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H. Examination of Muscle Tone

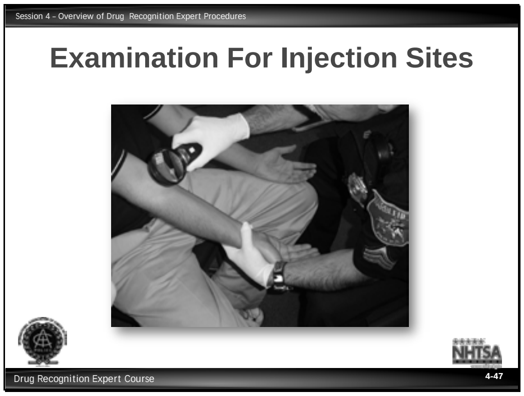
Muscle Tone

Starting with the subject's left arm, examine the arm muscles.

Firmly grasp the upper arm and slowly move down to determine muscle tone.

The muscles should appear flaccid, normal or rigid to the touch.

Examine the right arm in the same fashion.



Session 4 - Overview of Drug Recognition Expert Procedures

Examination For Injection Sites

Drug Recognition Expert Course

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Notes:____

I. Examination for Injection Sites

Some injection sites may be relatively easy to notice.

Persons who frequently inject certain drugs develop lengthy scars, commonly referred to as “tracks,” from repeated injections in the same veins.

Injection of certain drugs may result in severe caustic action against the skin and flesh, producing easily observable sores.

Often, a fresh injection site may not be readily observable.

Frequently, a DRE will locate the injection site initially by touch, running the fingers along such commonly used locations as the neck, forearms, wrists, back of hand, etc.

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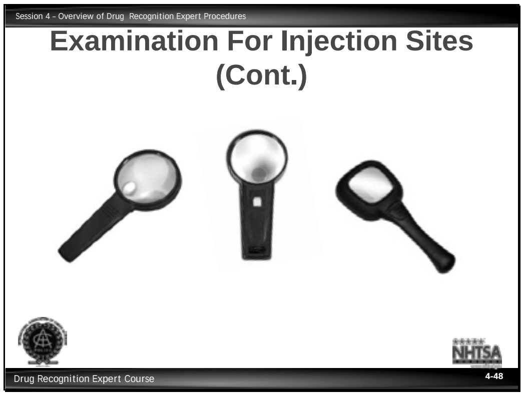

Session 4 – Overview of Drug Recognition Expert Procedures

Examination For Injection Sites (Cont.)

Drug Recognition Expert Course

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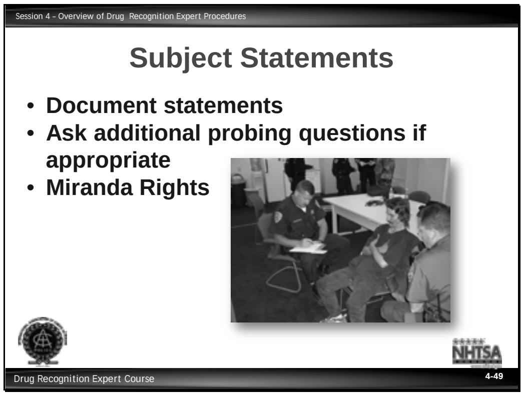
Notes:

When the DRE locates a possible injection site, a light magnifying lens, commonly known as a “ski light” is used to provide a magnified visual examination.

“Ski” – short for schematic

During this step, the third pulse is taken.



Session 4 – Overview of Drug Recognition Expert Procedures

Subject Statements

- Document statements
- Ask additional probing questions if appropriate
- Miranda Rights

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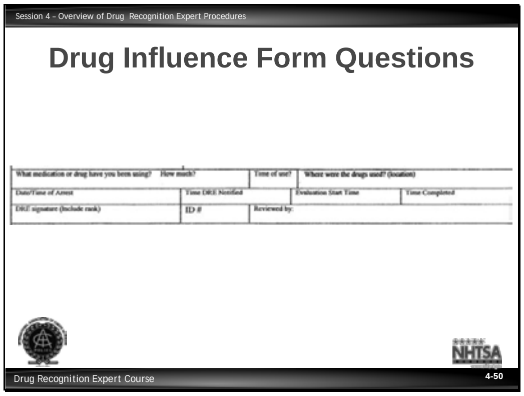
Notes:

J. Subject Statements



Session 4 – Overview of Drug Recognition Expert Procedures

Drug Influence Form Questions

What medication or drug have you been using? How much?
Time of use?
Where were the drugs used? (location)
Date/Time of Arrest
Time DRE Notified
Evaluation Start Time
Time Completed
DRE signature (Include rank)
ID #
Reviewed by:

Drug Recognition Expert Course 4-50

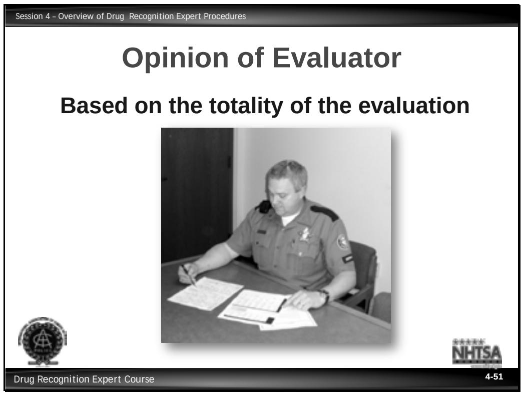
Notes:____

Drug Influence Form Questions:

- What medication or drug have you been using? How much?
- Time of use?
- Where were the drugs used? (location)

Be Sure to Record:

- Date/Time of Arrest
- Time DRE Notified
- Evaluation Start Time
- Time Completed
- DRE signature (Include rank)
- ID #
- Reviewed by:



Session 4 – Overview of Drug Recognition Expert Procedures

Opinion of Evaluator

Based on the totality of the evaluation

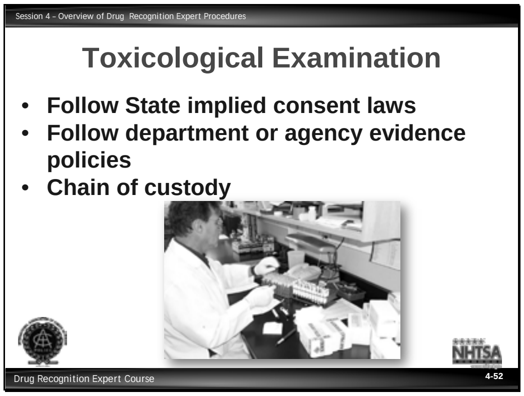
Drug Recognition Expert Course 4-51

Notes:____

K. Opinion of Evaluator

By this point in the evaluation, the DRE should have formed an opinion of the category or categories of drugs responsible for any observed impairment.

This opinion is based on the totality of the evaluation.



Session 4 - Overview of Drug Recognition Expert Procedures

Toxicological Examination

- **Follow State implied consent laws**
- **Follow department or agency evidence policies**
- **Chain of custody**

Drug Recognition Expert Course

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Notes:

L. Toxicological Examination

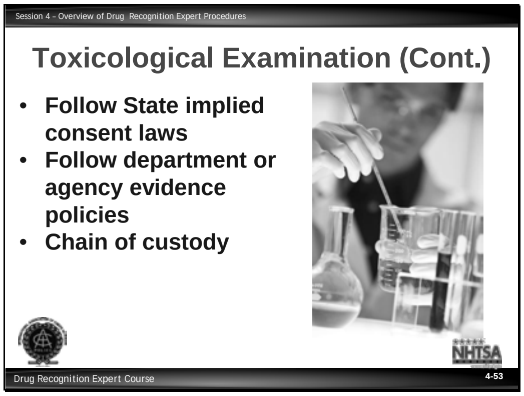
Toxicology Samples

Your State's implied consent statues will dictate the type of sample you can obtain; urine, blood, breath, or saliva.

Specimen Containers

The type of container for collecting the sample will be dictated by the type of sample taken and the laboratory requirements where it will be tested.

Containers should be sterile and have a lid that will seal tightly. Make sure the seal is tight to prevent leaks.



Session 4 - Overview of Drug Recognition Expert Procedures

Toxicological Examination (Cont.)

- **Follow State implied consent laws**
- **Follow department or agency evidence policies**
- **Chain of custody**

Drug Recognition Expert Course 4-53

Notes:

Obtaining a Sample

- Urine – normally the officer must witness the collection of the sample.
- Blood – should be drawn by a qualified technician and witnessed by the officer.
- The sample must include a preservative. This is often pre-packaged in the container intended for this use.

Samples should be refrigerated or frozen as soon as possible to minimize degeneration during storage.

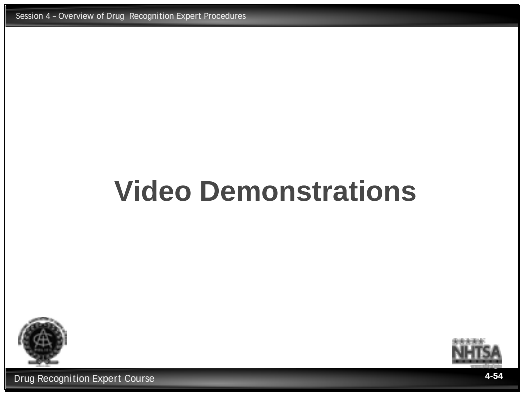
Chain of Custody

Establish a policy dictating the chain of custody, if one does not already exist.

Establish a policy for your Department on:

- The sealing of evidence to include officer identification markings; (i.e., initials, labels, tags and packaging).
- Paperwork for the chain of custody and laboratory analysis of your sample.
- Transportation of the sample to the laboratory.
- Return reporting of the laboratory analysis.

NOTE: These are issues that must be addressed with the individual agencies to insure proper and standardized procedures. Participants should follow-up with the appropriate representatives from their agencies to coordinate this activity.



Session 4 – Overview of Drug Recognition Expert Procedures

Video Demonstrations

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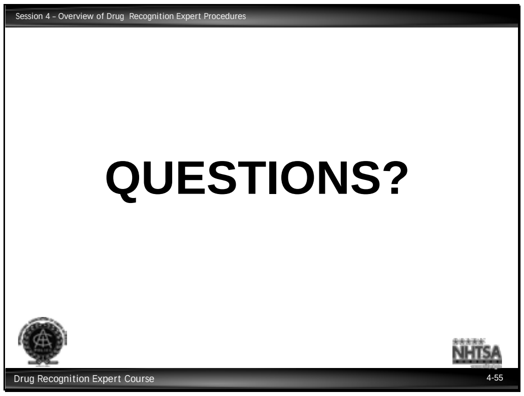
M. Video Demonstrations (Optional)



Session 4 – Overview of Drug Recognition Expert Procedures

QUESTIONS?

Drug Recognition Expert Course 4-55

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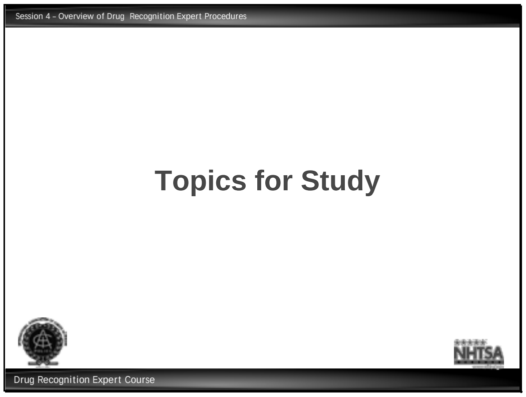


Session 4 - Overview of Drug Recognition Expert Procedures

Topics for Study

Drug Recognition Expert Course

Notes:

Topics for Study Questions

1. Give three important reasons for conducting drug evaluation and classification evaluations in a standardized fashion.

2. What are the twelve components of the drug evaluation process?

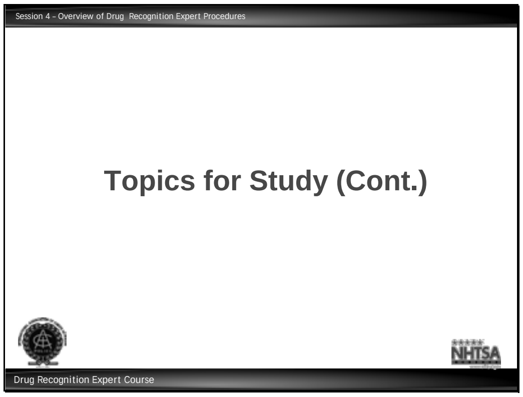
3. How many times is pulse rate measured during the drug influence evaluation?

4. Are the diameters of a pupillometer's circles/semi-circles indicated in centimeters, millimeters or micrometers?

5. What formula expresses the approximate statistical relationship between blood alcohol concentration and nystagmus onset angle?

6. Which of the seven categories of drugs ordinarily do not cause nystagmus?

7. How many heel-to-toe steps is the subject instructed to take, in each direction, on the Walk and Turn test?



Session 4 - Overview of Drug Recognition Expert Procedures

Topics for Study (Cont.)

Drug Recognition Expert Course

Notes:

8. What period of time is the subject required to estimate during the Modified Romberg Balance test?

9. What is systolic pressure?

10. What is the name of the instrument used to measure blood pressure?

11. Name the four validated clues of the One Leg Stand test.

12. Name the eight validated clues of the Walk and Turn test.

13. Suppose you have two hypodermic needles, one is 14 gauge, the other is 20 gauge. Which needle has the smaller inside diameter?

DRUG INFLUENCE EVALUATION

Evaluator | DRE # | Rolling Log #

Recorder/Witness | Crash: ☐ None ☐ Fatal ☐ Injury ☐ Property | Case #

Arrestee's Name (Last, First, Middle) | Date of Birth | Sex | Race | Arresting Officer (Name, ID#)

Date Examined / Time /Location | Breath Results: Results: | Test Refused ☐ Instrument #: | Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No Given By: | What have you eaten today? When? | What have you been drinking? How much? | Time of last drink?

Time now/ Actual | When did you last sleep? How long | Are you sick or injured? ☐ Yes ☐ No | Are you diabetic or epileptic? ☐ Yes ☐ No

Do you take insulin? ☐ Yes ☐ No | Do you have any physical defects? ☐ Yes ☐ No | Are you under the care of a doctor or dentist? ☐ Yes ☐ No

Are you taking any medication or drugs? ☐ Yes ☐ No | Attitude: | Coordination:

Speech: | Breath Odor: | Face:

Corrective Lenses: ☐ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft | Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery | Blindness: ☐ None ☐ Left ☐ Right | Tracking: ☐ Equal ☐ Unequal

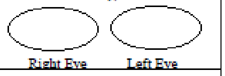
Pupil Size: ☐ Equal ☐ Unequal (explain) | Vertical Nystagmus ☐ Yes ☐ No | Able to follow stimulus ☐ Yes ☐ No | Eyelids ☐ Normal ☐ Droopy

Pulse and time

1. ______ / ______
2. ______ / ______
3. ______ / ______

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit		
Maximum Deviation		
Angle of Onset		

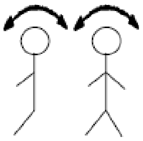
Convergence



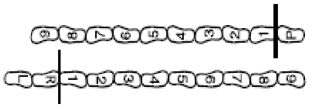
ONE LEG STAND

L	R	
☐	☐	Sways while balancing
☐	☐	Uses arms to balance
☐	☐	Hopping
☐	☐	Puts foot down

Modified Romberg Balance



Walk and Turn Test



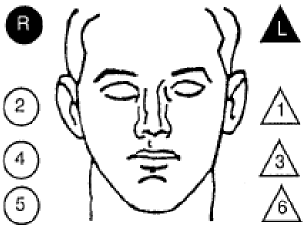
Cannot keep balance ______

Starts too soon ______

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken		

Internal clock ______ estimated as 30 seconds | Describe turn | Cannot do test (explain) | Type of footwear:

Draw lines to spots touched



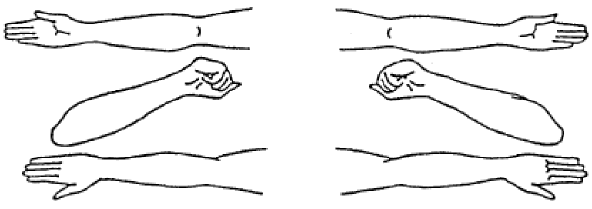
PUPIL SIZE	Room Light (2.5 – 5.0)	Darkness (5.0 – 8.5)	Direct (2.0 – 4.5)
Left Eye			
Right Eye			

Nasal area:

Oral cavity:

Rebound Dilation: ☐ Yes ☐ No | Reaction to Light:

RIGHT ARM | LEFT ARM



Blood pressure | Temperature

Muscle tone: ☐ Normal ☐ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using? | How much? | Time of use? | Where were the drugs used? (Location)

Date / Time of arrest: | Time DRE was notified: | Evaluation start time: | Evaluation completion time: | Precinct/Station:

Officer's Signature: | DRE # | Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

Drug Influence Evaluation Checklist

_____ 1. Breath Alcohol Test

_____ 2. Interview of Arresting Officer
(NOTE: Gloves must be worn from this point on)

_____ 3. Preliminary Examination
-first pulse, initial estimation of angle of onset, and initial estimation of pupil size

_____ 4. Eye Examination

_____ 5. Divided Attention Tests:

  _____ *Romberg Balance*

  _____ *Walk and Turn*

  _____ *One Leg Stand*

  _____ *Finger to Nose*

_____ 6. Vital signs and Second Pulse

_____ 7. Dark Room Check of Pupil Size and Ingestion Exam

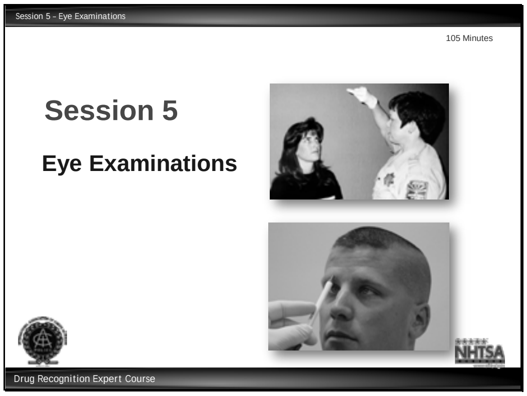
_____ 8. Check of Muscle Tone

_____ 9. Check for Injection Sites and Third Pulse

_____ 10. Interrogation, Statements, and Other Observations

_____ 11. Opinion of Evaluator

_____ 12. Toxicological Examination

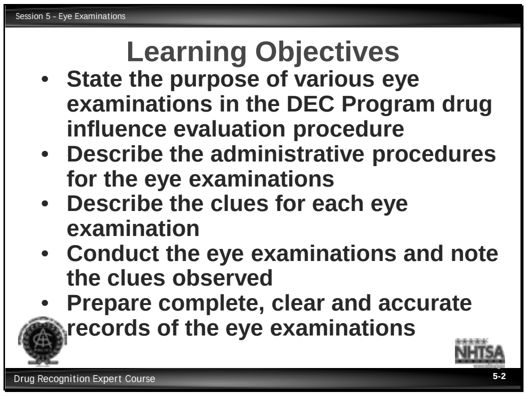


105 Minutes

Session 5

Eye Examinations

Notes:____



Learning Objectives

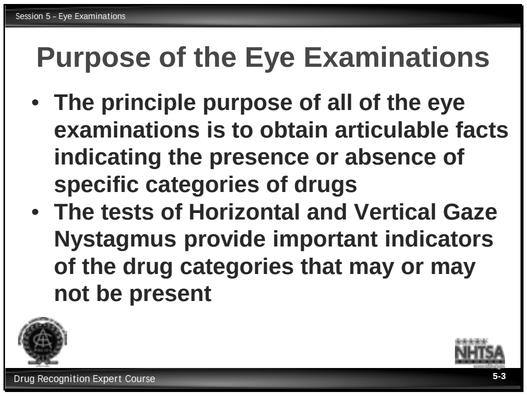
- **State the purpose of various eye examinations in the DEC Program drug influence evaluation procedure**
- **Describe the administrative procedures for the eye examinations**
- **Describe the clues for each eye examination**
- **Conduct the eye examinations and note the clues observed**
- **Prepare complete, clear and accurate records of the eye examinations**

Notes:____

Upon successfully completing this session the student will be able to:

- State the purpose of various eye examinations in the DEC Program drug influence evaluation procedure.
- Describe the administrative procedures for the eye examinations.
- Describe the clues for each eye examination.
- Conduct the eye examinations and note the clues observed.
- Prepare complete, clear and accurate records of the eye examinations.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Purpose of the Examinations	Instructor Led Presentations
B. Procedures and Clues	Instructor Led Demonstrations
C. Demonstrations	Student Led Demonstrations
D. Document Procedures	Students’ Hands On Practice
E. Practice	Reading Assignments



Session 5 – Eye Examinations

Purpose of the Eye Examinations

- The principle purpose of all of the eye examinations is to obtain articulable facts indicating the presence or absence of specific categories of drugs
- The tests of Horizontal and Vertical Gaze Nystagmus provide important indicators of the drug categories that may or may not be present

Drug Recognition Expert Course

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Notes:____

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A. Purposes of the Eye Examinations

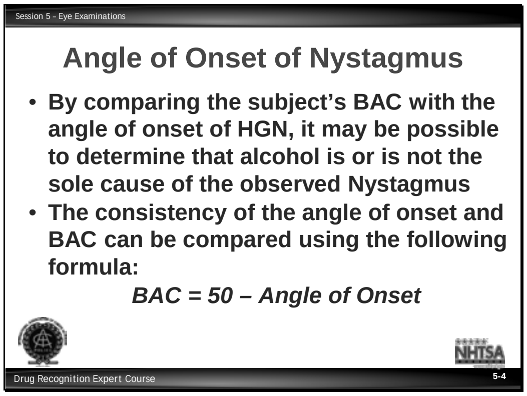
- The principle purpose of all of the eye examinations is to obtain articulable facts indicating the presence or absence of specific categories of drugs.

- Certain drug categories usually cause the eyes to react in specific ways. Other drug categories usually do not cause those reactions.

- The tests of Horizontal and Vertical Gaze Nystagmus provide important indicators of the drug categories that may or may not be present.

- If HGN is observed, it is likely that the subject may have ingested alcohol or another CNS Depressant, an Inhalant, a Dissociative Anesthetic, or a combination of those.

- If Vertical Gaze Nystagmus is observed, the implication may be that the subject ingested a large dose of alcohol for that individual, a Dissociative Anesthetic, such as PCP, or high doses of other Depressants or Inhalants.



Session 5 – Eye Examinations

Angle of Onset of Nystagmus

- By comparing the subject's BAC with the angle of onset of HGN, it may be possible to determine that alcohol is or is not the sole cause of the observed Nystagmus
- The consistency of the angle of onset and BAC can be compared using the following formula:

BAC = 50 – Angle of Onset

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Notes:____

By comparing the subject's blood alcohol concentration with the angle of onset of Horizontal Gaze Nystagmus, it may be possible to determine that alcohol is or is not the sole cause of the observed Nystagmus.

Clarification: If the angle of onset is significantly inconsistent with the BAC, the implication may be that the subject has also taken a Dissociative Anesthetic, such as PCP, an inhalant, or some CNS Depressant other than alcohol.

The consistency of the angle of onset and BAC can be compared using the following formula:

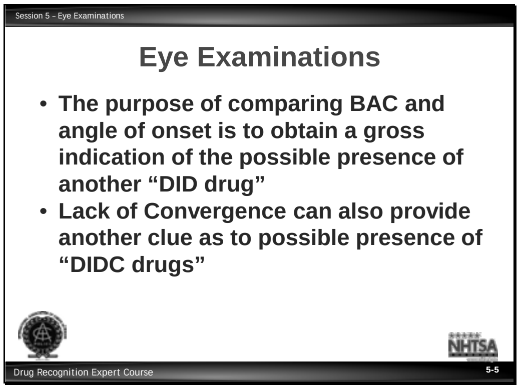
BAC = 50 – Angle of Onset

Note: Emphasize that this is not an absolute mathematical formula.

The corresponding blood alcohol concentration would be approximately 0.15.

Keep in mind that this formula is only a statistical approximation. It is not an exact relationship for all subjects at all times.

The purpose of comparing BAC and angle of onset is to obtain a gross indication of the possible presence of another CNS Depressant, a Dissociative Anesthetic, or an Inhalant.



Session 5 – Eye Examinations

Eye Examinations

- **The purpose of comparing BAC and angle of onset is to obtain a gross indication of the possible presence of another “DID drug”**
- **Lack of Convergence can also provide another clue as to possible presence of “DIDC drugs”**

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Notes:____

The check for Lack of Convergence can provide another clue as to the possible presence of Depressants, Dissociative Anesthetics, or Inhalants.

Lack of Convergence is also an indicator of the possible presence of Cannabis.

- The checks of pupil size and reaction to light provide useful indicators of the possible presence of many drug categories.

- CNS Depressants, CNS Stimulants, and Inhalants will normally cause the pupils to react slowly. There will generally be little movement with Narcotic Analgesics.

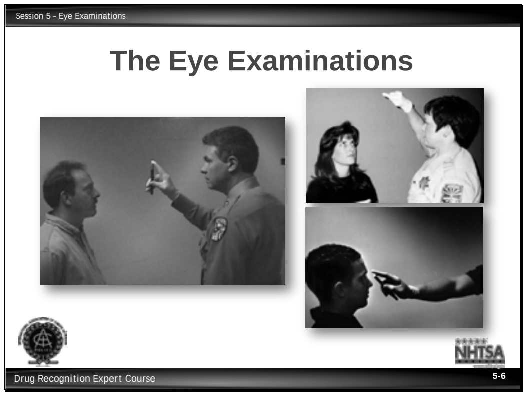
- CNS Stimulants and Hallucinogens normally will cause the pupils to dilate.

- Cannabis normally causes dilation of the pupils, although this isn’t always observed.

Some specific Inhalants may cause pupil dilation.

Narcotic Analgesics will normally cause observable constriction of the pupils.

During the eye examinations you will also check for rebound dilation.



Session 5 – Eye Examinations

The Eye Examinations

Drug Recognition Expert Course

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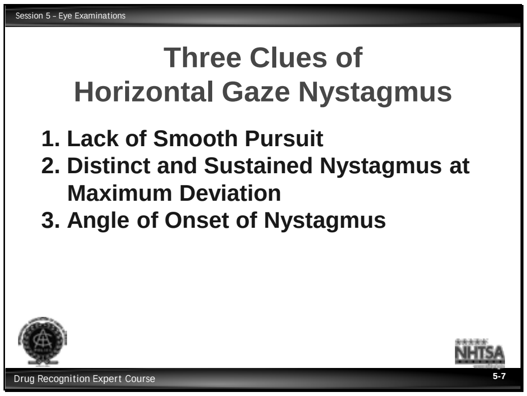
Notes:____



Session 5 – Eye Examinations

Three Clues of Horizontal Gaze Nystagmus

1. **Lack of Smooth Pursuit**
2. **Distinct and Sustained Nystagmus at Maximum Deviation**
3. **Angle of Onset of Nystagmus**

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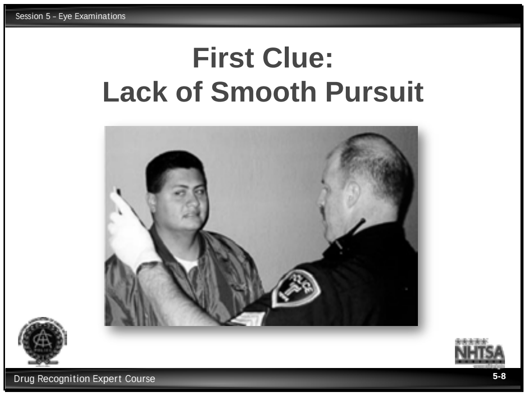
Notes:____

B. Procedures and Clues

Three Clues of Horizontal Gaze Nystagmus

- Lack of smooth pursuit
- Distinct and sustained nystagmus at maximum deviation
- Angle of onset of nystagmus

Horizontal Gaze Nystagmus test consists of three separate checks, administered independently to each eye.



Session 5 - Eye Examinations

First Clue:
Lack of Smooth Pursuit

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Notes:

First Clue: Lack of Smooth Pursuit

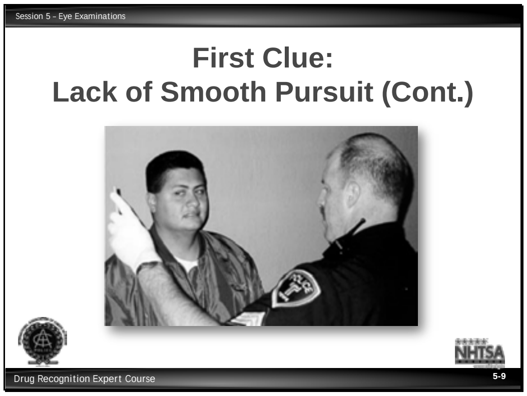
If the subject is wearing contact lenses, note that fact on the report, but don’t have the subject remove them.

If the subject is wearing eyeglasses, have him or her remove them.

- Position the stimulus approximately 12 – 15 inches in front of the subject’s nose.
- Hold the tip of the stimulus slightly above the level of the subject’s eye. Point out that this procedure ensures that the subject’s eyes will be wide open and easy to observe.
- Instruct the subject to hold the head still and follow the stimulus with their eyes.

The first check is for “lack of smooth pursuit.”

- Move the stimulus smoothly, all the way to the subject’s left side and back all the way to the right side.
- Make at least two complete passes of the stimulus: to the left side, to the right side, back to the left side, and finally back to the right side.



Session 5 - Eye Examinations

First Clue: Lack of Smooth Pursuit (Cont.)

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Notes:

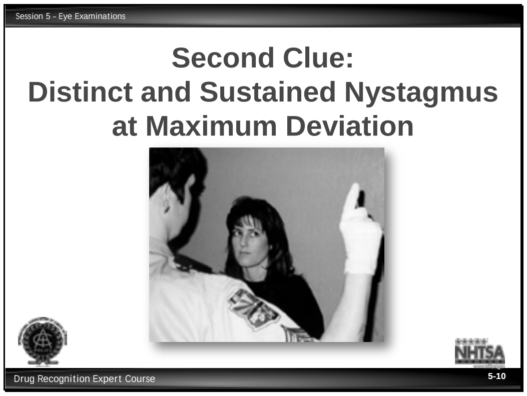
- When doing this, don’t pause at the center of the subject’s face; move all the way to the left, then all the way to the right, then again all the way to the left and back all the way to the right, in a smooth, continuous motion.

- While the eye is moving, examine it for evidence of a lack of smooth pursuit.

- Use the following analogy:

  A smoothly pursing eye will move without friction, much the way that a windshield wiper glides across the windshield when it is raining steadily. An eye showing lack of smooth pursuit will move in a fashion similar to a wiper across a dry windshield.

- Also, check to be sure that both eyes are tracking in the same way: if one eye is moving smoothly but the other moves hesitantly or not at all, an illness or injury may be present.



Session 5 - Eye Examinations

Second Clue:
Distinct and Sustained Nystagmus
at Maximum Deviation

Drug Recognition Expert Course

5-10

Notes:____

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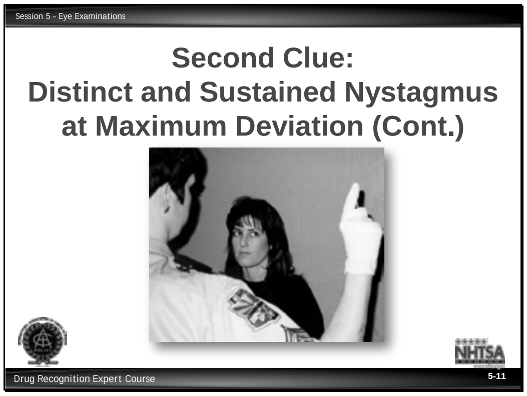
Second Clue: Distinct and Sustained Nystagmus

The second check is for “distinct and sustained nystagmus at maximum deviation.”

- Again position the stimulus as before.
- Move the stimulus all the way to the subject’s left side and hold it there so that the subject’s eye is turned as far to the side as possible.
- Hold the eye at that position for a minimum of 4 seconds, to check carefully for jerking that may be present, and that is distinct.

When you have completed this check for the left eye, repeat the process for the right eye. Then, do it once again for the left eye, and again for the right, to verify that distinct and sustained nystagmus is or is not present.

With this cue, the examiner looks for a very distinct, unmistakable jerking.



Session 5 – Eye Examinations

Second Clue:
Distinct and Sustained Nystagmus
at Maximum Deviation (Cont.)

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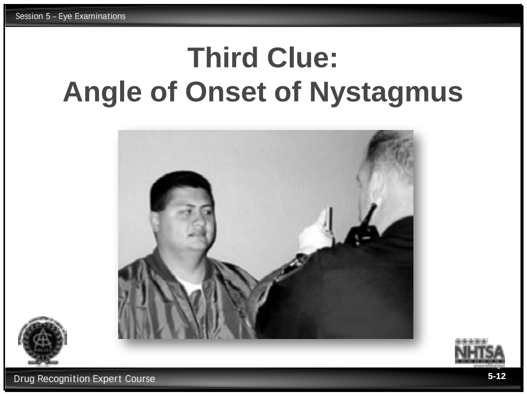
Notes:

A slight or barely visible tremor is not sufficient to consider this clue present.

A definite, sustained jerking must be seen.



Session 5 – Eye Examinations

Third Clue:
Angle of Onset of Nystagmus

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Notes:

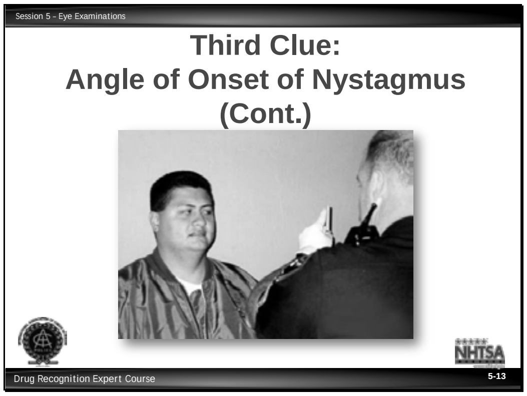
Third Clue: Angle of Onset

The final check is for the “angle of onset.”

- Position the stimulus as before.
- Slowly move the stimulus to the subject’s left side, carefully watching the eye for the first sign of jerking.

Note: Stimulus should be moved at a speed that requires approximately four seconds to travel from center to approximately 45 degrees.

- When you think that you see the eye jerk, stop moving the stimulus and hold it still.
- Verify that the eye is, in fact, jerking.
- Once you have established that you have located the point of onset, estimate the angle.
- Then, repeat the process for the right eye.
- Then, again check onset for the left eye, and again for the right.



Session 5 – Eye Examinations

Third Clue: Angle of Onset of Nystagmus (Cont.)

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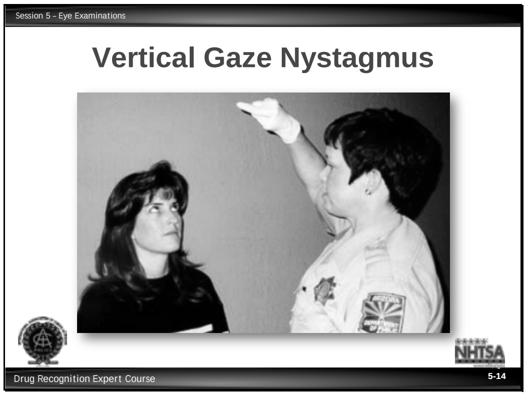
Notes:____

Participants' Initial Practice of Angle Estimation

- 30 degrees
- 35 degrees
- 40 degrees

Participants will check their accuracy using a template (if available).



Session 5 – Eye Examinations

Vertical Gaze Nystagmus

Drug Recognition Expert Course

Notes:____

Vertical Gaze Nystagmus

The Vertical Gaze Nystagmus test is very simple check of the eyes.

- Position the stimulus horizontally, approximately 12 – 15 inches in front of the subject's nose.
- Instruct the subject to hold the head still and follow the stimulus with the eyes only.
- Raise the stimulus until the subject's eyes are elevated as far as possible.
- Watch closely for evidence of jerking.

Session 5 - Eye Examinations

Lack of Convergence

Drug Recognition Expert Course

5-15

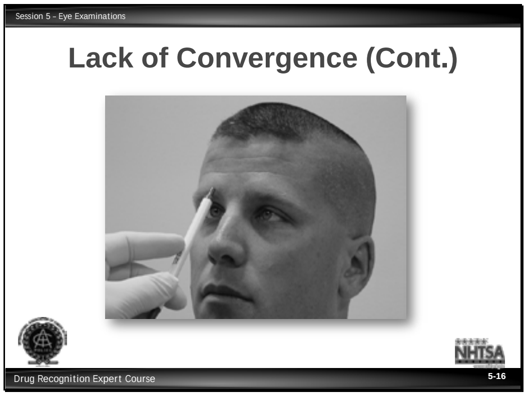
Notes:

Lack of Convergence

The test for Lack of Convergence (LOC) is also very simple. But it should be noted that this test is the least reliable of any of the eye tests due to the fact that a significant portion of the population may have an inability to cross their eyes.

- Lack of Convergence means an inability to cross the eyes.
- Prior to conducting the check for Lack of Convergence the DRE should determine if the subject to be tested routinely wears eyeglasses during reading and near visual tasks and if so, are they readily available for the test.
- If the subject wears glasses during reading and near visual tasks and they are readily available, ensure that the eyeglasses are worn for the check for Lack of Convergence.

Note: In testing for Lack of Convergence (LOC), the role of clear vision and focusing can have significant effect on the convergence of the eyes. In the clinical setting, the LOC check is routinely conducted with the eyeglasses on if normally worn by the subject during reading and near visual tasks. If the subject’s eyeglasses are not readily available, the DRE should still conduct the test.



Session 5 – Eye Examinations

Lack of Convergence (Cont.)

Drug Recognition Expert Course

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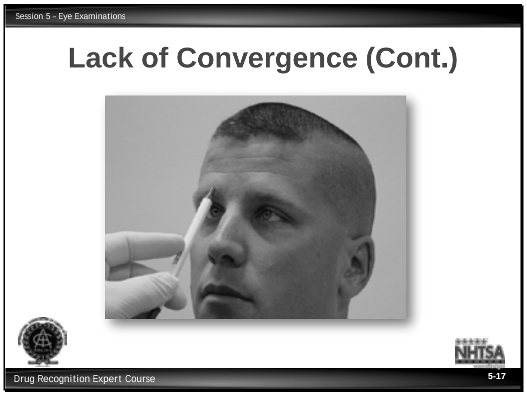
Notes:

Note: Citations for clinical use of testing with subject wearing eyeglasses for LOC:

"Clinical Procedures for Ocular Examination": Kurtz and Carlson; McGraw-Hill Medical, 3rd edition, Sept. 26, 2003.

"A Recognized Clinical Trial of Treatments for Convergence Insufficiency in Children": Scheiman, Cotter, Cooper, etc.; Arch Ophthalmol, Jan 2005.

- Position the stimulus approximately 12-15 inches in front of the subject's face.
- Instruct the person to hold their head still and follow the stimulus with the eyes only.
- Keep the object 12-15 inches away from the person's nose, and start to move the stimulus slowly in a circle, approximately the same size as the subject's face.
- Once you have verified that the subject is tracking the stimulus, move it slowly and steadily toward the bridge of the nose.
- Hold the stimulus near the bridge of the nose for approximately one (1) second. The stimulus should not come any closer than approximately two (2) inches from the bridge of the nose.
- Carefully observe the subject's eyes to determine whether both eyes converge.



Session 5 – Eye Examinations

Lack of Convergence (Cont.)

Drug Recognition Expert Course

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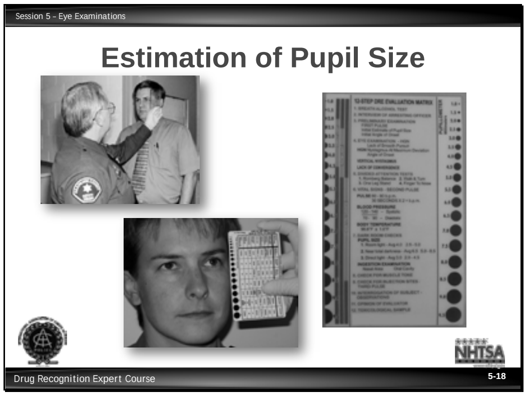
Notes:____

Participants' Initial Practice of the Check for the Lack of Convergence



Session 5 – Eye Examinations

Estimation of Pupil Size

Drug Recognition Expert Course

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Notes:____

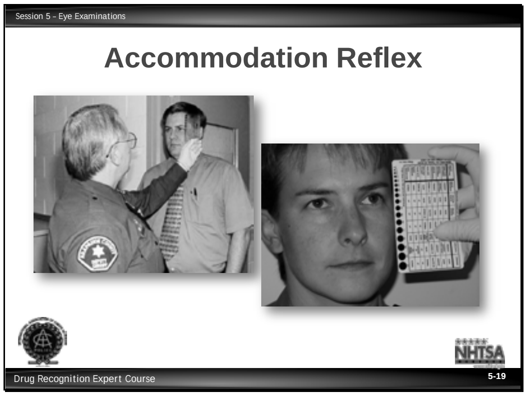
Estimating Pupil Size

The pupils of our eyes continually adjust in size to accommodate different lighting conditions.

The pupillometer is held alongside the subject's eye, moved up and down until the circle or semi-circle closest in size to the pupil is located.

We use a device called a pupillometer to estimate the size of the subject's pupils.

Pupil size estimations are recorded as the numeric value that corresponds to the diameter of the circle or semi-circle that is closest in size to the subject's pupil in each lighting condition.


Session 5 – Eye Examinations

Accommodation Reflex

Drug Recognition Expert Course

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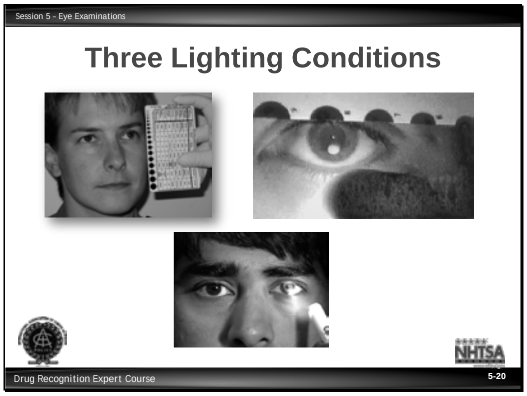
Notes:

This should not be confused with pupillary unrest, the continuous, irregular change in the size of the pupils that may be observed under room or steady light conditions or with pupillary light reflex, which is the pupil’s normal reaction to the changes in light.


Session 5 – Eye Examinations

Three Lighting Conditions

Drug Recognition Expert Course

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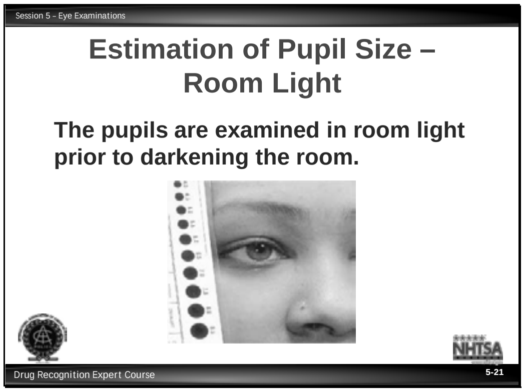
Notes:

The Three Lighting Conditions

Pupil sizes are estimated under three different lighting conditions:

- Room Light
- Near Total Darkness
- Direct Light



Session 5 – Eye Examinations

Estimation of Pupil Size – Room Light

The pupils are examined in room light prior to darkening the room.

Drug Recognition Expert Course

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Notes:____

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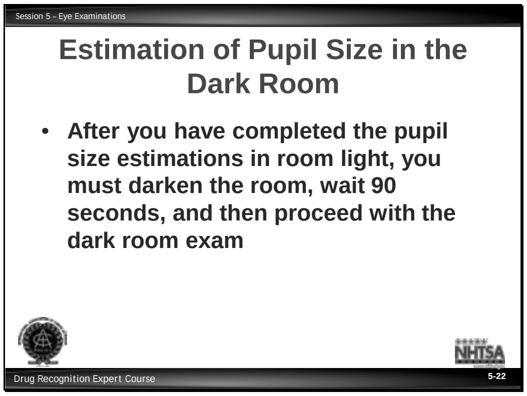
Estimation of Pupil Size under Room Light

- The pupils are examined in room light prior to darkening the room.

Participant's Initial Practice of Pupil Size Estimation — Room Light



Session 5 – Eye Examinations

Estimation of Pupil Size in the Dark Room

- **After you have completed the pupil size estimations in room light, you must darken the room, wait 90 seconds, and then proceed with the dark room exam**

Drug Recognition Expert Course

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Notes:____

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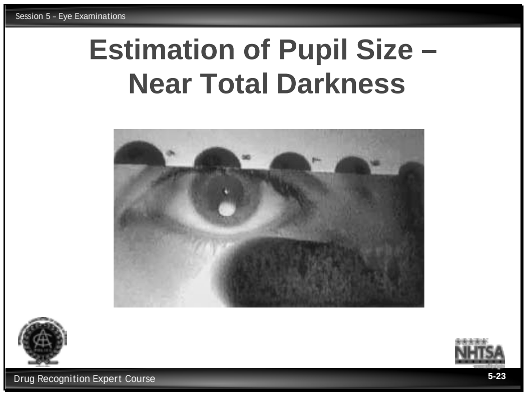
Participant's Initial Practice of Pupil Size Estimation — Dark Room

- After you have completed the pupil size estimations in room light, you must darken the room, wait approximately 90 seconds (for the officers eyes to adjust to the light), and then proceed with the dark room exam.



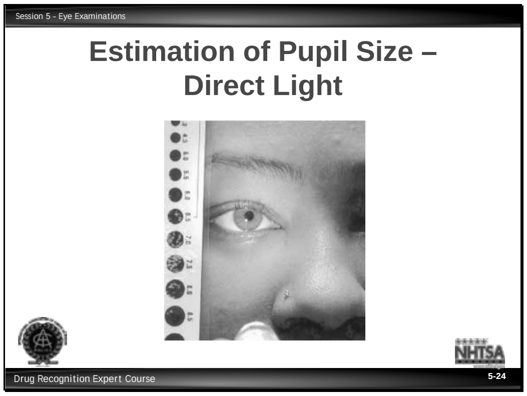
Session 5 - Eye Examinations

Estimation of Pupil Size – Near Total Darkness

Notes:

Estimation of Pupil Size under Near Total Darkness

- For the check under near total darkness completely cover the tip of the penlight with your finger or thumb, so that only a reddish glow and no white light emerges.
- Bring the glowing tip up toward the subject’s left eye until you can just distinguish the pupil from the colored portion of the eye (iris).
- Continue to hold the glowing red tip in that position and bring the pupillometer up alongside the subject’s left eye and locate the circle or semi-circle that is closest in size to the pupil.
- Repeat this procedure for the subject’s right eye.



Session 5 - Eye Examinations

Estimation of Pupil Size – Direct Light

Drug Recognition Expert Course

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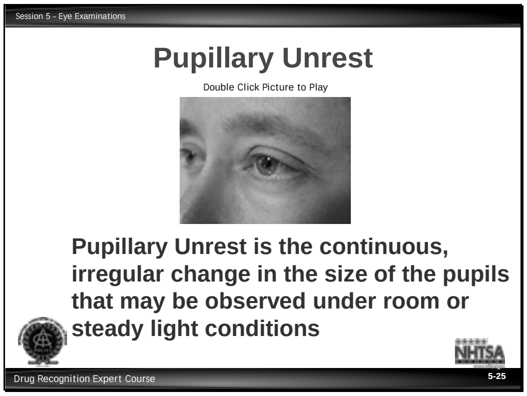
Estimation of Pupil Size under Direct Light

- Bring the penlight from the side of the subject’s face and shine it directly into their left eye.
- Position the penlight so that it illuminates and approximately fills the subject’s eye socket.
- Hold the penlight in that position for 15 seconds, and bring the pupillometer up alongside the left eye.
- Find the circle or semi-circle that is closest in size to the pupil.
- Repeat this procedure for the subject’s right eye.



Session 5 - Eye Examinations

Pupillary Unrest

Double Click Picture to Play

Pupillary Unrest is the continuous, irregular change in the size of the pupils that may be observed under room or steady light conditions

Drug Recognition Expert Course

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Notes:____

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Pupillary Unrest

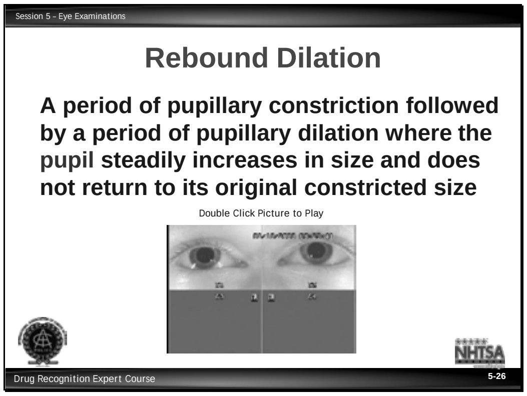
Another eye sign that may be observed by the DRE is Pupillary Unrest.

Pupillary Unrest is defined as the continuous, irregular change in the size of the pupils that may be observed under room or steady light conditions.

The unique indicators of Pupillary Unrest are the unevenness and fluctuations in the rate and size of the pupils under lighted conditions and its disappearance in darkness.

Pupillary Unrest may be similar to “Hippus” which is defined as a rhythmic change in the pupil size of the eyes, as they dilate and constrict when observed in darkness independent of changes in light intensity, accommodation (focusing), or other forms of sensory stimulation.

Note: Research has shown that Hippus is primarily observed in total darkness conditions and is therefore difficult to detect under the current DRE protocol.


Session 5 – Eye Examinations

Rebound Dilation

A period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size

Double Click Picture to Play

Drug Recognition Expert Course

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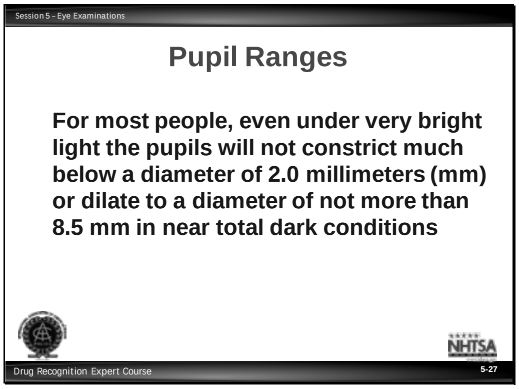
Notes:

Rebound Dilation

Rebound dilation is defined as a period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size.

Example: The pupil is estimated at 8.5mm in near total darkness. Once the penlight is shined into the pupil it constricts to 4.0 mm then steadily dilates to 6.0 mm and remains that diameter while the direct light is shined into the eye.

Rebound dilation has been reported with persons impaired by drugs that cause pupillary dilation. Cannabis is most common.


Session 5 – Eye Examinations

Pupil Ranges

For most people, even under very bright light the pupils will not constrict much below a diameter of 2.0 millimeters (mm) or dilate to a diameter of not more than 8.5 mm in near total dark conditions

Drug Recognition Expert Course

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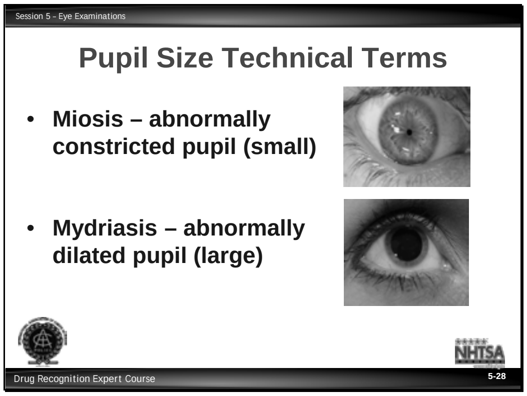
Notes:

Pupil Ranges

For most people, even under very bright light the pupils will not constrict much below a diameter of 2.0 millimeters (mm) or dilate to a diameter of not more than 8.5 mm in near total dark conditions.

Consequently, the use of three distinct pupil size ranges for each of the different testing conditions may be considered more useful in the evaluation to determine impairment vs. non-impairment.



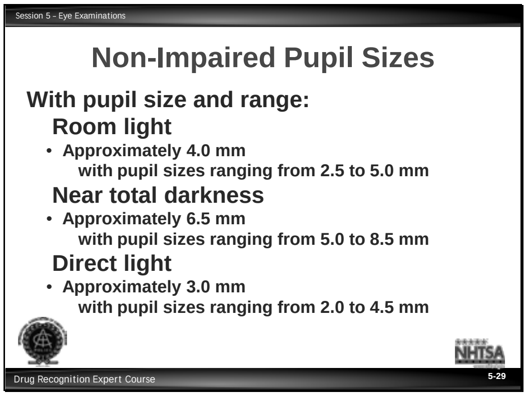
Pupil Size Technical Terms

- **Miosis – abnormally constricted pupil (small)**
- **Mydriasis – abnormally dilated pupil (large)**

Notes:

Pupil Size Technical Terms

Two key technical terms regarding pupil sizes are: Miosis – abnormally small pupil, i.e., constricted, and Mydriasis – an abnormally large pupil, i.e., dilated.



Non-Impaired Pupil Sizes

With pupil size and range:

Room light
- **Approximately 4.0 mm with pupil sizes ranging from 2.5 to 5.0 mm**

Near total darkness
- **Approximately 6.5 mm with pupil sizes ranging from 5.0 to 8.5 mm**

Direct light
- **Approximately 3.0 mm with pupil sizes ranging from 2.0 to 4.5 mm**

Notes:

Non-Impaired Pupil Sizes

Room Light

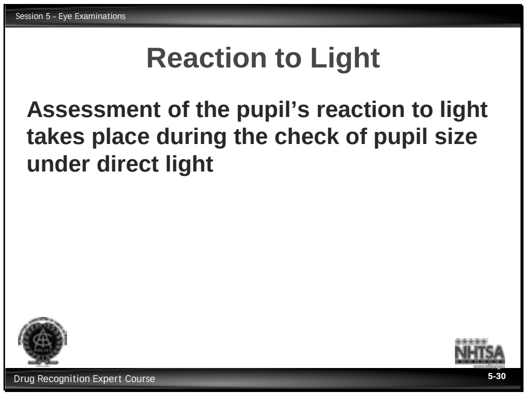
- For a non-impaired person, the average pupil size and range for room light is approximately 4.0 mm, with pupil sizes ranging from 2.5 to 5.0 mm.

Near Total Darkness

- For a non-impaired person, the average pupil size and range for near total darkness is approximately 6.5 mm with pupil sizes ranging from 5.0 to 8.5 mm.

Direct Light

- For a non-impaired person, the average pupil size and range for direct light is approximately 3.0 mm with pupil sizes ranging from 2.0 to 4.5 mm.



Session 5 - Eye Examinations

Reaction to Light

Assessment of the pupil's reaction to light takes place during the check of pupil size under direct light

Drug Recognition Expert Course

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Notes:____

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Reaction to Light

Assessment of the pupil's reaction to light takes place during the check of pupil size under direct light when the uncovered light is brought from the side of the subject's face and the light beam is moved directly into his or her left eye.

- As you bring the beam of light directly into the subject's eye, note how the pupil reacts.
- Under ordinary conditions, the pupil should react very quickly, and constrict noticeably when the light beam strikes the eye.
- Under the influence of certain categories of drugs, the pupil's reaction may be slow, or there may be no visible reaction at all.
- Hold the direct light on the subject's eye for 15 seconds to assess pupil reaction.
- Also check for Rebound Dilation during this 15 second period.
- Caution should be used by the officer so as not to move the light beam or allow the bulb to change in light intensity.
- When you have completed this process for the left eye, repeat it for the right eye.

Session 5 – Eye Examinations

Demonstrations

Drug Recognition Expert Course

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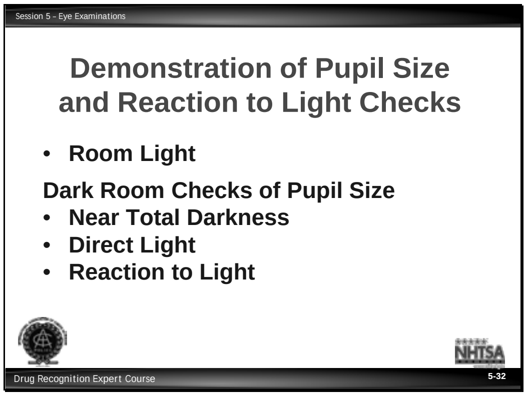
Notes:____

C. **Demonstrations**

- Check for Lack of Smooth Pursuit
- Check for Distinct and Sustained Nystagmus at Maximum Deviation
- Check for an Onset of Nystagmus prior to 45 degrees

Estimation of Angle of Onset

Demonstration of Vertical Gaze Nystagmus and Lack of Convergence



Session 5 – Eye Examinations

Demonstration of Pupil Size and Reaction to Light Checks

- Room Light

Dark Room Checks of Pupil Size

- Near Total Darkness
- Direct Light
- Reaction to Light

Drug Recognition Expert Course

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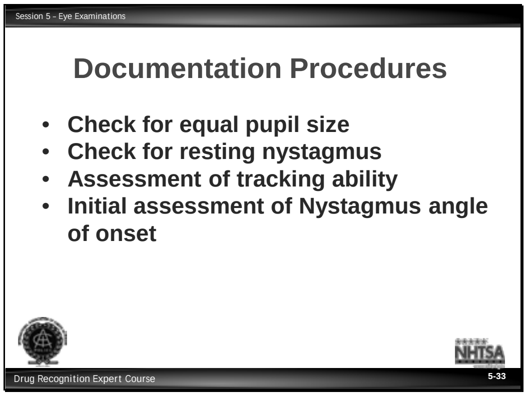
Notes:____

Demonstration of Pupil Size and Reaction to Light Checks

- Room Light
- Dark room checks of pupil size
- Near total darkness
- Direct light
- Reaction to light



Session 5 – Eye Examinations

Documentation Procedures

- Check for equal pupil size
- Check for resting nystagmus
- Assessment of tracking ability
- Initial assessment of Nystagmus angle of onset

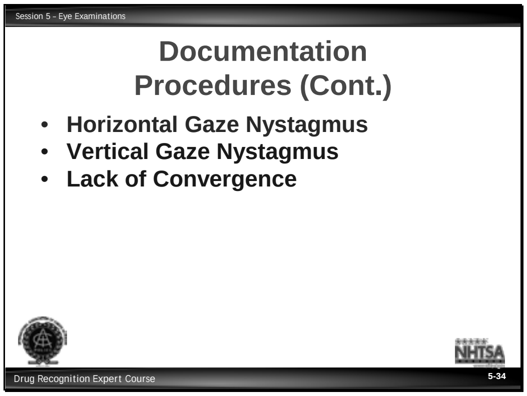
Drug Recognition Expert Course 5-33

Notes:

D. Documentation Procedures

A brief examination of the eyes is made during the Preliminary Examination.

- Check for equal pupil size.
- Check for resting nystagmus.
- Assessment of tracking ability.
- Initial assessment of Nystagmus angle of onset.



Session 5 – Eye Examinations

Documentation Procedures (Cont.)

- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence

Drug Recognition Expert Course 5-34

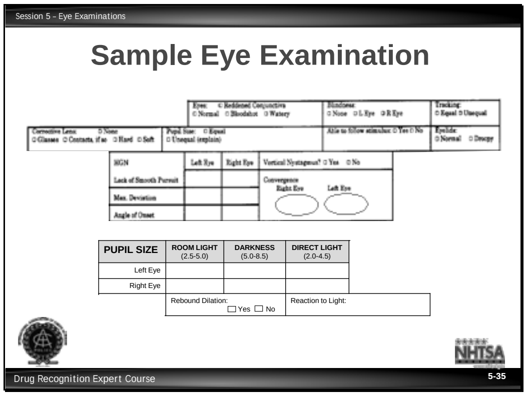
Notes:

Horizontal Gaze Nystagmus

Vertical Gaze Nystagmus

Lack of Convergence

The dark room eye examinations are documented in a subsequent section of the form.



Session 5 – Eye Examinations

Sample Eye Examination

Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery
Blindness: ☐ None ☐ L Eye ☐ R Eye
Tracking: ☐ Equal ☐ Unequal
Corrective Lens: ☐ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Pupil Size: ☐ Equal ☐ Unequal (explain)
Able to follow stimulus: ☐ Yes ☐ No
Eyelids: ☐ Normal ☐ Droopy

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit		
Max. Deviation		
Angle of Onset		

Vertical Nystagmus? ☐ Yes ☐ No
Convergence
Right Eye Left Eye

PUPIL SIZE	ROOM LIGHT (2.5-5.0)	DARKNESS (5.0-8.5)	DIRECT LIGHT (2.0-4.5)
Left Eye			
Right Eye			
	Rebound Dilation: ☐ Yes ☐ No	Reaction to Light:	

Drug Recognition Expert Course 5-35

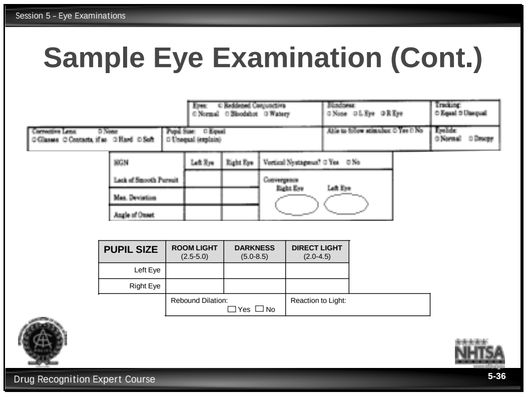
Notes:

Sample Eye Examination

A brief examination of the eyes is made during the Preliminary Examination.

- Check for equal pupil size.
- Check for resting nystagmus.
- Assessment of tracking ability.
- Initial assessment of Nystagmus angle of onset.

Horizontal Gaze Nystagmus



Session 5 – Eye Examinations

Sample Eye Examination (Cont.)

Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery
Blindness: ☐ None ☐ L Eye ☐ R Eye
Tracking: ☐ Equal ☐ Unequal
Corrective Lens: ☐ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Pupil Size: ☐ Equal ☐ Unequal (explain)
Able to follow stimulus: ☐ Yes ☐ No
Eyelids: ☐ Normal ☐ Droopy

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit		
Max. Deviation		
Angle of Onset		

Vertical Nystagmus? ☐ Yes ☐ No
Convergence
Right Eye Left Eye

PUPIL SIZE	ROOM LIGHT (2.5-5.0)	DARKNESS (5.0-8.5)	DIRECT LIGHT (2.0-4.5)
Left Eye			
Right Eye			
	Rebound Dilation: ☐ Yes ☐ No	Reaction to Light:	

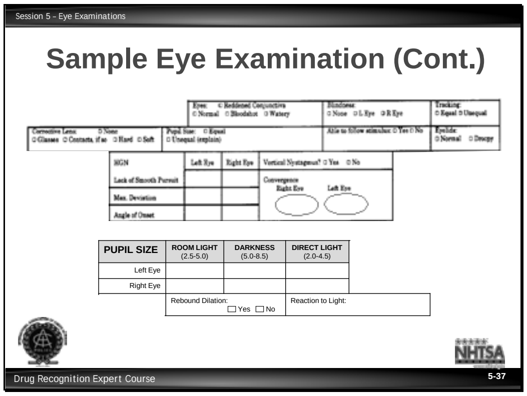
Drug Recognition Expert Course 5-36

Notes:

Vertical Gaze Nystagmus

Lack of Convergence

The dark room eye examinations are documented in a subsequent section of the form.



Session 5 – Eye Examinations

Sample Eye Examination (Cont.)

Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery

Blindness: ☐ None ☐ L Eye ☐ R Eye

Tracking: ☐ Equal ☐ Unequal

Corrective Lens: ☐ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Pupil Size: ☐ Equal ☐ Unequal (explain)

Able to follow stimulus: ☐ Yes ☐ No

Eyelids: ☐ Normal ☐ Droopy

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit		
Max. Deviation		
Angle of Onset		

Vertical Nystagmus? ☐ Yes ☐ No

Convergence
Right Eye Left Eye

PUPIL SIZE	ROOM LIGHT (2.5-5.0)	DARKNESS (5.0-8.5)	DIRECT LIGHT (2.0-4.5)
Left Eye			
Right Eye			

Rebound Dilation: ☐ Yes ☐ No

Reaction to Light:

Drug Recognition Expert Course

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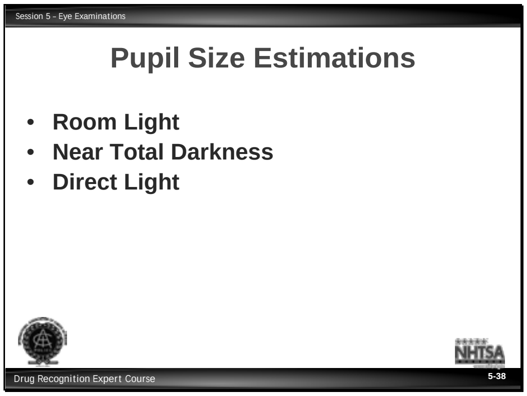
Notes:____

Preliminary Eye Exams

- Check for equal pupil size.
- Check for resting nystagmus.
- Assessment of tracking ability.
- Initial estimation of nystagmus angle of onset.

Eye Exams



Session 5 – Eye Examinations

Pupil Size Estimations

- Room Light
- Near Total Darkness
- Direct Light

Drug Recognition Expert Course

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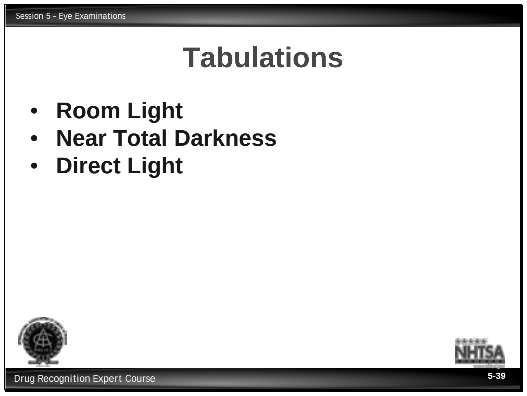
Notes:____

Pupil Size Estimations

- Room Light
- Near Total Darkness
- Direct Light

Reporting out of Pupil Size Estimations



Session 5 – Eye Examinations

Tabulations

- Room Light
- Near Total Darkness
- Direct Light

Drug Recognition Expert Course 5-39

Notes:____

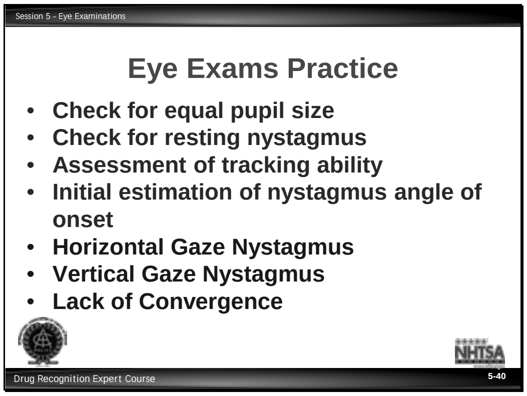
Tabulations:

Room Light

Repeat this process for each of the other two lighting conditions.

Near Total Darkness Tabulation:

Direct Light Tabulation:



Session 5 – Eye Examinations

Eye Exams Practice

- Check for equal pupil size
- Check for resting nystagmus
- Assessment of tracking ability
- Initial estimation of nystagmus angle of onset
- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence

Drug Recognition Expert Course 5-40

Notes:____

E. Practice

Preliminary Eye Exams

- Check for equal pupil size.
- Check for resting nystagmus.
- Assessment of tracking ability.
- Initial estimation of nystagmus angle of onset.

Eye Exams

- Horizontal Gaze Nystagmus.
- Vertical Gaze Nystagmus.
- Lack of Convergence.

Session 5 - Eye Examinations

QUESTIONS?

Drug Recognition Expert Course

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Notes:____

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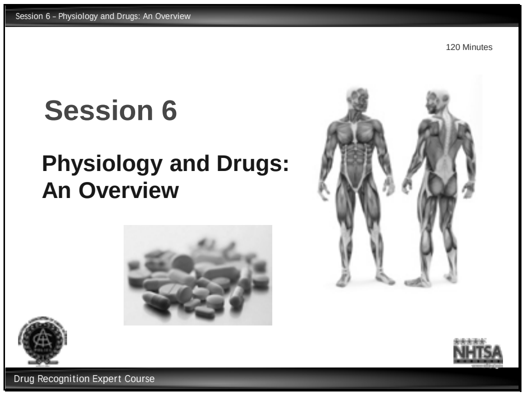
Pupil Size Chart

Pupil Size	Room Light	Near Total Darkness	Direct Light
2.0 mm			
2.5 mm			
3.0 mm			
3.5 mm			
4.0 mm			
4.5 mm			
5.0 mm			
5.5 mm			
6.0 mm			
6.5 mm			
7.0 mm			
7.5 mm			
8.0 mm and above			

Participant Manual DRE 7-Day Session 6 – Physiology and Drugs: An Overview



Session 6 – Physiology and Drugs: An Overview

120 Minutes

Session 6

Physiology and Drugs: An Overview

Drug Recognition Expert Course

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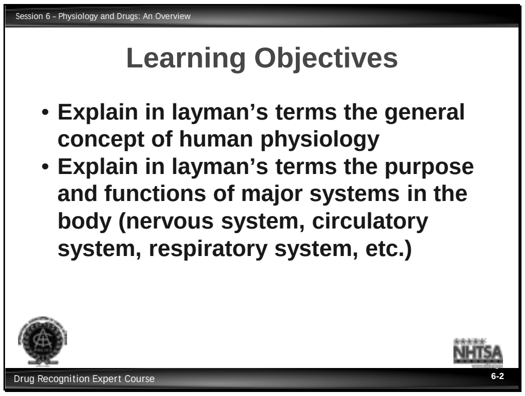

Session 6 – Physiology and Drugs: An Overview

Learning Objectives

- Explain in layman's terms the general concept of human physiology
- Explain in layman's terms the purpose and functions of major systems in the body (nervous system, circulatory system, respiratory system, etc.)

Drug Recognition Expert Course

6-2

Notes:____

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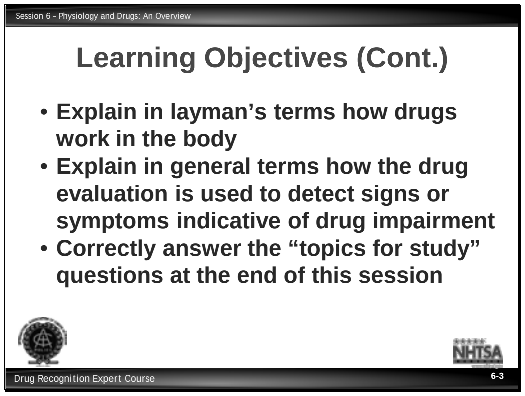
A. Physiology and Drugs: An Overview

Upon successfully completing this session the participant will be able to:

- Explain in layman's terms the general concept of human physiology.
- Explain in layman's terms the purpose and functions of major systems in the body (nervous system, circulatory system, respiratory system, etc.)

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Physiology and Drugs: An Overview	Instructor-Led Presentations
B. Body Systems	Reading Assignments
C. The Concept of Homeostasis	
D. A Simple View of the Heart and Circulatory System	
E. A Simplified Concept of the Nervous System	
F. How Drugs Work	
G. Medical Conditions Which Sometimes Mimic Drug Impairment	



Session 6 – Physiology and Drugs: An Overview

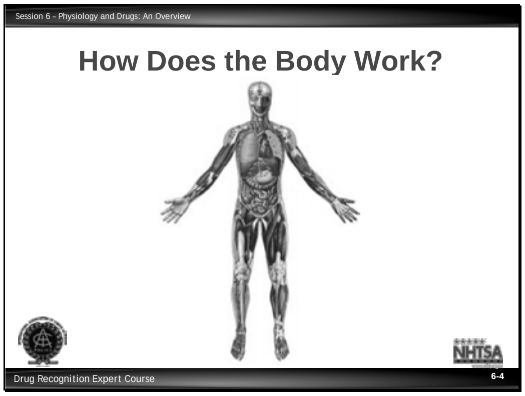
Learning Objectives (Cont.)

- **Explain in layman's terms how drugs work in the body**
- **Explain in general terms how the drug evaluation is used to detect signs or symptoms indicative of drug impairment**
- **Correctly answer the "topics for study" questions at the end of this session**

Drug Recognition Expert Course 6-3

Notes:

- Explain in layman's terms how drugs work in the body.
- Explain in general terms how the drug evaluation is used to detect signs or symptoms indicative of drug impairment.
- Correctly answer the "topics for study" questions at the end of this session.



Session 6 – Physiology and Drugs: An Overview

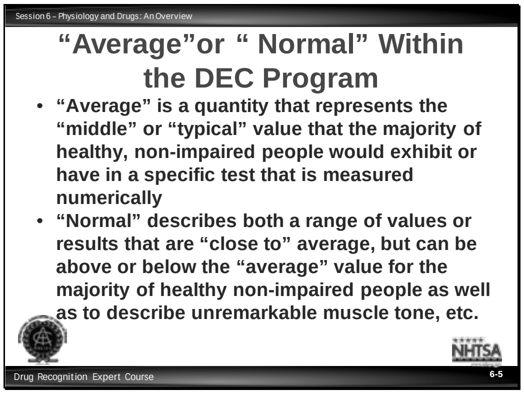
How Does the Body Work?

Drug Recognition Expert Course 6-4

Notes:

Before we can understand how drugs work, we must have a basic understanding of how the body works.

We will review general concepts of how the body functions in a "normal" or "standard" human.



Session 6 - Physiology and Drugs: An Overview

“Average”or “ Normal” Within the DEC Program

- **“Average” is a quantity that represents the “middle” or “typical” value that the majority of healthy, non-impaired people would exhibit or have in a specific test that is measured numerically**
- **“Normal” describes both a range of values or results that are “close to” average, but can be above or below the “average” value for the majority of healthy non-impaired people as well as to describe unremarkable muscle tone, etc.**

Drug Recognition Expert Course

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Notes:

“Normal” or DRE Averages

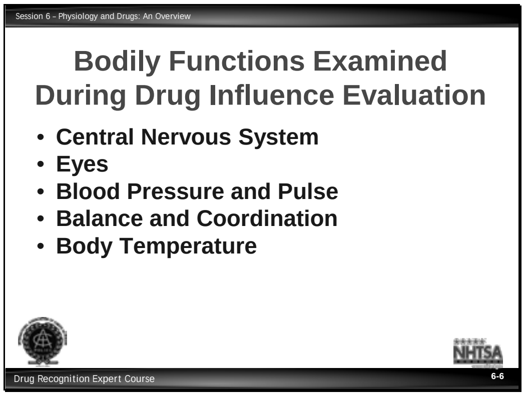
In the DEC Program we use the terms “Normal”, “Average”, “Average Ranges” or “DRE Average Range”.

• **“Average”** is a quantity that represents the “middle” or “typical” value that the majority of healthy, non-impaired people would exhibit or have in a specific test that is measured numerically.

• **“Normal”** describes both a range of values or results that are “close to” average, but can be above or below the “average” value for the majority of healthy non-impaired people. “Normal” can also be used to describe unremarkable conditions on tests that are not measured numerically such as muscle tone, etc.

Within the DEC Program, “normal” means the same thing as “healthy” or “non-impaired” or within the “DRE average ranges.”

For example, the “Average”, or typical value, for pupil size in near total darkness is 6.5 mm. This means that when **ALL** the sizes were measured **using the DRE test protocol,** in a large number of pupils in healthy, non-impaired adults, the average pupil size for those was approximately 6.5 mm while the average range, or for normal pupil size was 5.0-8.5 mm.



Session 6 – Physiology and Drugs: An Overview

Bodily Functions Examined During Drug Influence Evaluation

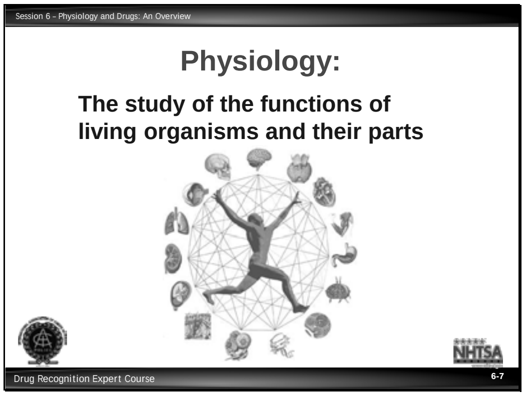
- **Central Nervous System**
- **Eyes**
- **Blood Pressure and Pulse**
- **Balance and Coordination**
- **Body Temperature**

Drug Recognition Expert Course 6-6

Notes:

Primary focus will be on the systems or component parts of those systems that are examined during the drug influence evaluation.

- Central Nervous System
- Eyes
- Blood Pressure and Pulse
- Balance and Coordination
- Body Temperature



Session 6 – Physiology and Drugs: An Overview

Physiology:

The study of the functions of living organisms and their parts

Drug Recognition Expert Course 6-7

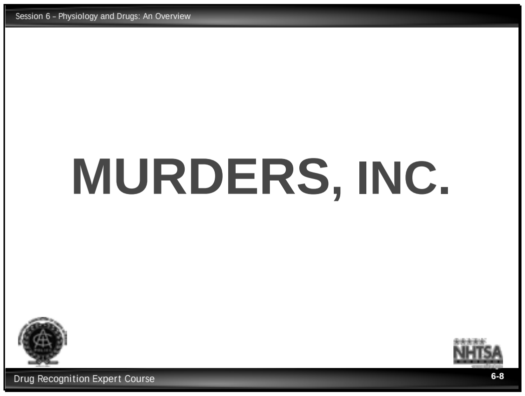
Notes:

B. Body Systems

Physiology is the branch of biology that deals with the functions and activities of life or living matter and the physical and chemical phenomena involved.

For the purposes of this course, physiology is the study of the functions of living organisms and their parts.

Source: Merriam-Webster's Medical Dictionary (2008).



Session 6 – Physiology and Drugs: An Overview

MURDERS, INC.

Drug Recognition Expert Course

6-8

Notes:____

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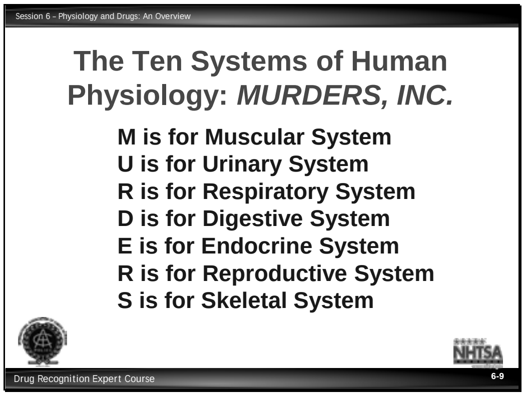
A convenient way of discussing human physiology is to list the ten major systems of the body.

The phrase “MURDERS INC” helps us remember the names of the ten systems.

Each letter stands for the name of one system.



Session 6 – Physiology and Drugs: An Overview

The Ten Systems of Human Physiology: *MURDERS, INC.*

M is for Muscular System
U is for Urinary System
R is for Respiratory System
D is for Digestive System
E is for Endocrine System
R is for Reproductive System
S is for Skeletal System

Drug Recognition Expert Course 6-9

Notes:

Muscular System

M stands for the MUSCULAR SYSTEM

The body has three different kinds of muscles.

- The heart or cardiac muscle.
- Smooth muscles, which control the body's involuntary operations.
- Striated muscles, which carry out our voluntary movements.

Examples: Smooth muscles control breathing, the operation of the pyloric valve (a muscle located at the base of the stomach), dilation and constriction of pupils, and all other things that we do not consciously control.

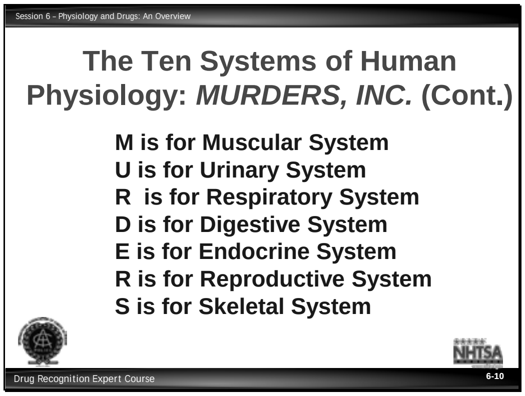
All three types of muscles are examined at various stages of the drug influence evaluation.

Urinary System

U is for the URINARY SYSTEM.

The system consists of two kidneys, the bladder, ureters connecting the kidneys to the bladder, and the urethra, which transports the urine out of the body.

Kidneys filter waste or harmful products, such as drugs and their metabolites, from the blood, and dump these waste products into the bladder.



Session 6 – Physiology and Drugs: An Overview

The Ten Systems of Human Physiology: *MURDERS, INC.* (Cont.)

- **M is for Muscular System**
- **U is for Urinary System**
- **R is for Respiratory System**
- **D is for Digestive System**
- **E is for Endocrine System**
- **R is for Reproductive System**
- **S is for Skeletal System**

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Notes:____

Respiratory System

The first R in “MURDERS INC” stands for the RESPIRATORY SYSTEM.

The major parts of the Respiratory System are the lungs and the diaphragm.

The diaphragm is a smooth muscle that draws the air into the lungs and forces it out.

Lungs take in oxygen and transfer it to the blood, and remove carbon dioxide and some other waste products from the blood, and expel them into the outside air.

Digestive System

D stands for the DIGESTIVE SYSTEM.

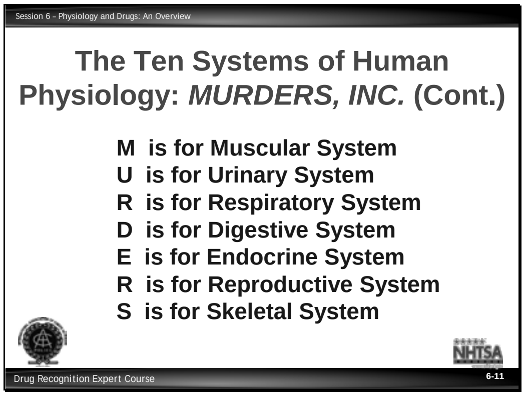
Major components of this system are the tongue, teeth, esophagus, stomach, intestines, liver, and pancreas.

The Digestive System breaks down large particles of food, until they are of a size and chemical composition that can be absorbed in the blood.

Endocrine System

E is for the ENDOCRINE SYSTEM.

The Endocrine System is made up of a number of different glands that secrete hormones.



Session 6 – Physiology and Drugs: An Overview

The Ten Systems of Human Physiology: *MURDERS, INC.* (Cont.)

M is for Muscular System
U is for Urinary System
R is for Respiratory System
D is for Digestive System
E is for Endocrine System
R is for Reproductive System
S is for Skeletal System

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Hormones are complex chemicals that travel through the blood stream and that control or regulate certain body processes.

Some drugs can mimic the effects of certain hormones, or can react with the hormones in ways that alter the hormones’ effects.

Reproductive System

The second R in “MURDERS INC” stands for the REPRODUCTIVE SYSTEM.

The functions of the reproductive system fall into two categories:

- self-producing (cytogenic), and
- hormone producing (endocrinic).

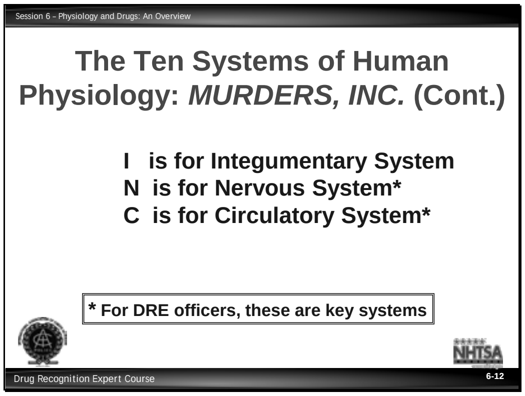
We are primarily concerned with hormone production since the hormones produced by the reproductive system aid the nervous system in its regulatory role.

Skeletal System

S is for the SKELETAL SYSTEM.

Consists of bones, cartilage and ligaments.

The Skeletal System provides support to the body, permits movement, and forms blood cells.



Session 6 – Physiology and Drugs: An Overview

The Ten Systems of Human Physiology: *MURDERS, INC.* (Cont.)

I is for Integumentary System
N is for Nervous System*
C is for Circulatory System*

*** For DRE officers, these are key systems**

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Integumentary System

The I in “INC” stands for the INTEGUMENTARY SYSTEM.

Consists of the skin, hair, fingernails and toe nails, and accessory structures.

The chief functions of the Integumentary System include protection of the body, control of the body temperature, excretion of wastes (i.e. through sweat) and sensory perception.

Nervous System

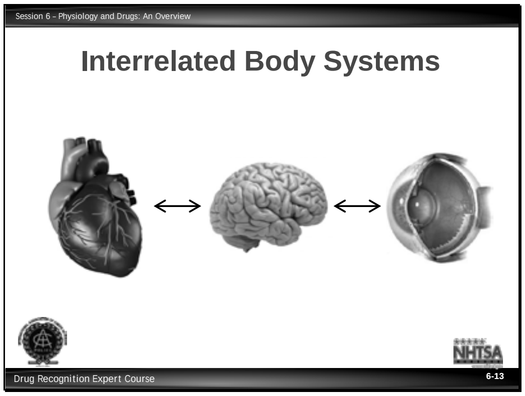
N is for the NERVOUS SYSTEM.

This system consists of the brain, the brain stem, the spinal cord and the nerves.

Nerves keep the brain informed of changes in the body’s external and internal environments.

Nerves also carry messages from the brain to the body’s muscles, tissues and organs.

The nervous system controls, coordinates and integrates all physiological processes, so that normal body functions can be maintained.



Session 6 – Physiology and Drugs: An Overview

Interrelated Body Systems

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Notes:

Circulatory System

C is for the CIRCULATORY SYSTEM.

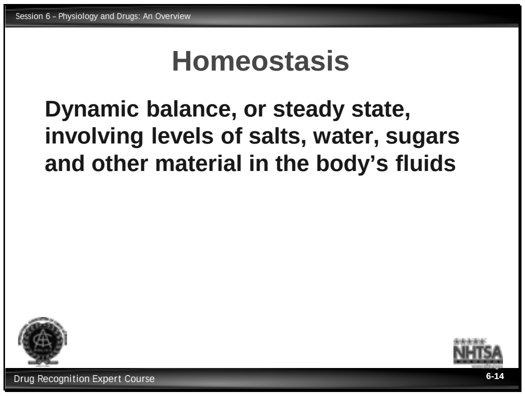
For our purposes, the most important parts of the Circulatory System are the heart, the blood vessels (e.g., arteries, veins, capillaries, etc.) and the blood.

Blood is the body’s primary transport mechanism: it carries food, water, oxygen, hormones, antibodies, etc. to the body’s tissues and organs.

Blood is also primarily responsible for carrying heat throughout the body.

Blood is the main transport mechanism for bringing drugs to the brain.

The heart, of course, pumps the blood and causes it to circulate throughout the body.



Session 6 – Physiology and Drugs: An Overview

Homeostasis

Dynamic balance, or steady state, involving levels of salts, water, sugars and other material in the body's fluids

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C. The Concept of Homeostasis

Homeostasis is the dynamic balance, or steady state, involving levels of salts, water, sugars and other materials in the body's fluids.

Human body is exposed to a constantly changing external environment.

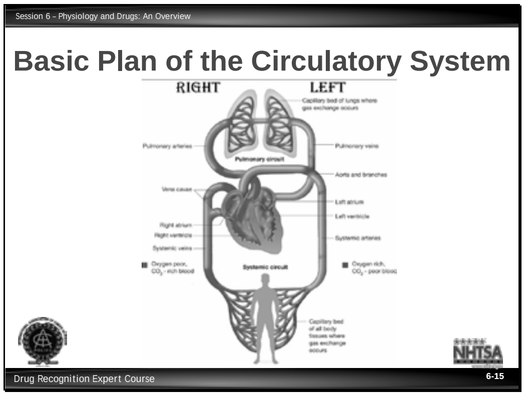
Changes are neutralized by the internal environment – the blood.

Oxygen, foods, water and other substances are constantly leaving bodily fluids to enter cells, while carbon dioxide and other wastes are leaving the cells to enter these fluids.

Yet, the chemical composition of these fluids remains within very narrow limits.

This phenomenon is called homeostasis.

Drugs interfere with the homeostatic mechanisms and produce signs and symptoms that can be recognized by a trained DRE.



Session 6 – Physiology and Drugs: An Overview

Basic Plan of the Circulatory System

RIGHT
LEFT
Capillary bed of lungs where gas exchange occurs
Pulmonary arteries
Pulmonary veins
Pulmonary circuit
Aorta and branches
Vena cavae
Left atrium
Left ventricle
Right atrium
Right ventricle
Systemic arteries
Systemic veins
Oxygen poor, CO2 - rich blood
Systemic circuit
Oxygen rich, CO2 - poor blood
Capillary bed of all body tissues where gas exchange occurs
NHTSA

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Notes:

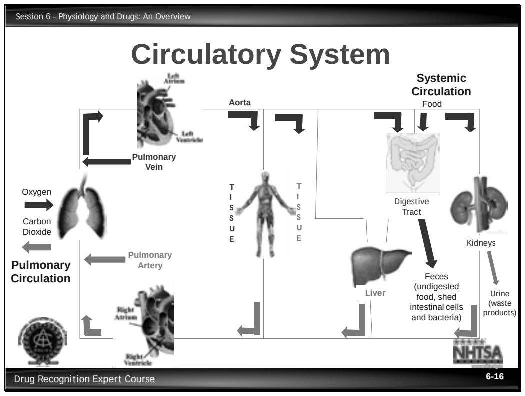
D. A Simple View of the Heart and Circulatory System

Heart and Circulatory System

Circulation is a closed system, where blood is propelled by contractions of the heart.

Blood is driven into arteries, arteries divide into smaller and smaller branches and finally into meshwork of fine capillaries which pervade body tissues.

Meshwork joins up again to form small veins which become larger trunks as they travel centrally towards the heart.



Session 6 – Physiology and Drugs: An Overview

Circulatory System

Left Atrium
Left Ventricle
Aorta
Systemic Circulation
Food
Pulmonary Vein
Oxygen
Carbon Dioxide
TISSUE
TISSUE
Digestive Tract
Kidneys
Pulmonary Artery
Pulmonary Circulation
Liver
Feces (undigested food, shed intestinal cells and bacteria)
Urine (waste products)
Right Atrium
Right Ventricle
NHTSA

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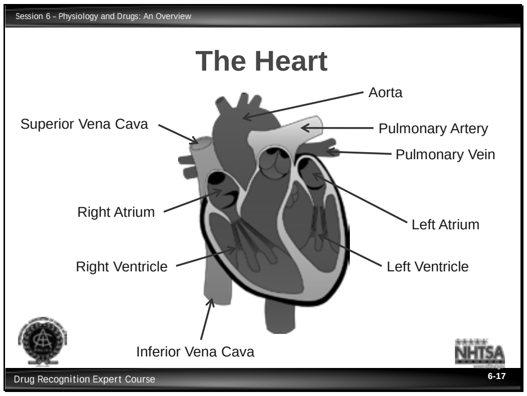
Notes:

There are two separate circulation systems:

Systemic system involves the whole body and is driven by the left side of the heart.

Pulmonary system deals with the passage of blood through the lungs and is driven by the right side of the heart.



Session 6 - Physiology and Drugs: An Overview

The Heart

Aorta
Superior Vena Cava
Pulmonary Artery
Pulmonary Vein
Right Atrium
Left Atrium
Right Ventricle
Left Ventricle
Inferior Vena Cava
NHTSA

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The heart is the pump and has two sides:

Consists of the left atrium and ventricle. The upper chamber (atrium) receives blood from the great veins, the lower chamber discharges blood into the great arteries.

Left side pumps blood through the aorta and the arteries to the tissues.

Blood, after passing through the tissues, returns via the veins to the right side.

Right side pumps blood through the pulmonary artery to the lungs and returns it to the left side of the heart again via the four pulmonary veins.

Consists of the right atrium and ventricle.

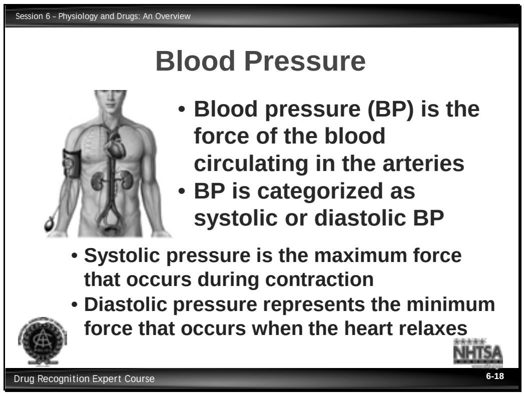
NOTE: The pulmonary artery is the only artery that carries de-oxygenated blood; all other arteries carry blood that has received fresh oxygen from the lungs. Likewise, the pulmonary vein is the only vein that carries blood rich in oxygen; all other veins carry blood depleted of oxygen back to the heart.

The normal heart continues to beat regularly and continuously, with a rest interval never longer than a fraction of a second.

Heart rate is the number of beats per minute.

Pulse rate is the number of pulsations per minute.

For DRE purposes, the average range for the pulse rate is 60-90 pulsation beats per minute.



Session 6 – Physiology and Drugs: An Overview

Blood Pressure

- Blood pressure (BP) is the force of the blood circulating in the arteries
- BP is categorized as systolic or diastolic BP
- Systolic pressure is the maximum force that occurs during contraction
- Diastolic pressure represents the minimum force that occurs when the heart relaxes

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Blood pressure (BP) is the force of the blood circulating in the arteries.

BP is categorized as systolic or diastolic BP.

Systolic pressure is the maximum force that occurs during contraction.

Diastolic pressure represents the minimum force that occurs when the heart relaxes.

The DRE average range for systolic blood pressure is 120 to 140. The DRE average range for diastolic blood pressure is 70 to 90.

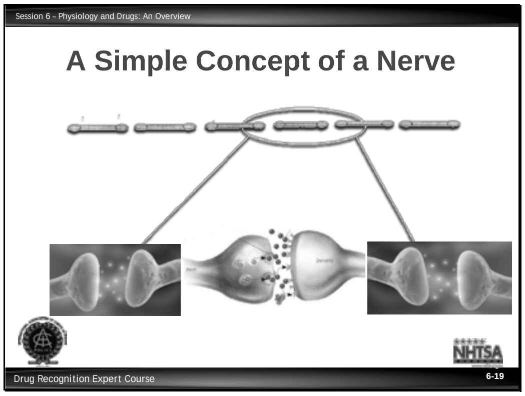
Control Systems

The functions of the organs of the body are controlled in two ways:

This is a function of the endocrine system.

One, by sending “chemical messengers” known as hormones via the blood stream from an endocrine gland where they are produced.

Second, system of control is by means of the nervous system.



Session 6 – Physiology and Drugs: An Overview

A Simple Concept of a Nerve

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E. The Nervous System

Clarification: Nerves are often pictured as telephone or telegraph wires.

The nerves that carry messages to and from the brain often are pictured as “wires” that carry electrical signals.

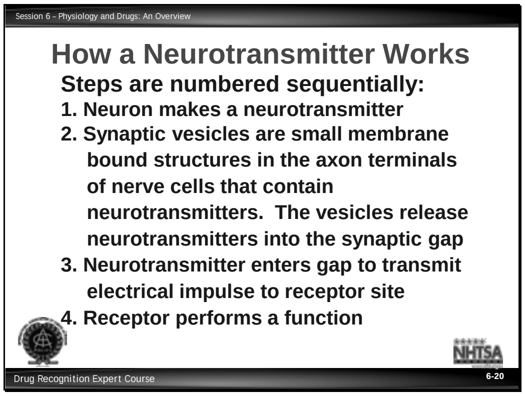
A more accurate, but still simplified concept would envision a nerve as a series of broken wire segments, with the segments separated by short spaces, or gaps.

We can imagine messages running along the “wire segments” in much the same manner that electrical impulses run along telephone wires.

When the message reaches the end of the “wire segment,” it triggers the release of chemicals that flow across the gap, and contact the next “wire segment.”

When the chemical contacts the next wire segment, it generates an electrical impulse which runs along the wire until it reaches the next gap.

At that gap, the message again triggers the release of chemicals that flow across to the next “wire segment,” and the process continues.



Session 6 – Physiology and Drugs: An Overview

How a Neurotransmitter Works

Steps are numbered sequentially:

1. Neuron makes a neurotransmitter
2. Synaptic vesicles are small membrane bound structures in the axon terminals of nerve cells that contain neurotransmitters. The vesicles release neurotransmitters into the synaptic gap
3. Neurotransmitter enters gap to transmit electrical impulse to receptor site
4. Receptor performs a function

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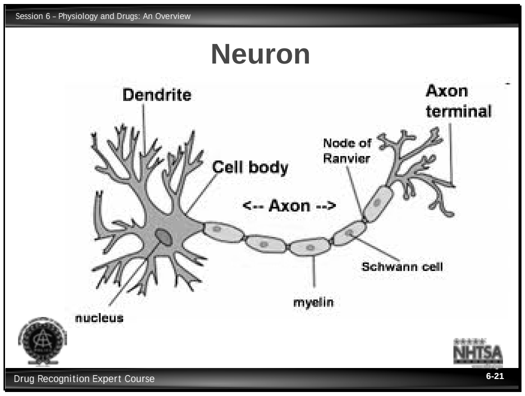
In our simple model of nerves, each “wire segment” corresponds to a nerve cell, called a neuron.

The chemical that flows across the gaps separating neurons is called a neurotransmitter.

The body has a number of different neurotransmitters; each carries a different chemical message.

The sequence of how a neurotransmitter works:

1. The neuron makes a neurotransmitter.
2. Synaptic vesicles are small membrane bound structures in the axon terminals of nerve cells that contain neurotransmitters. These vesicles release neurotransmitters into the synaptic gap.
3. The neurotransmitter enters the synaptic gap to transmit electrical impulse to the receptor site.
4. The receptor performs a function



Session 6 - Physiology and Drugs: An Overview

Neuron

Dendrite
Axon terminal
Node of Ranvier
Cell body
<-- Axon -->
Schwann cell
myelin
nucleus

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Notes:____

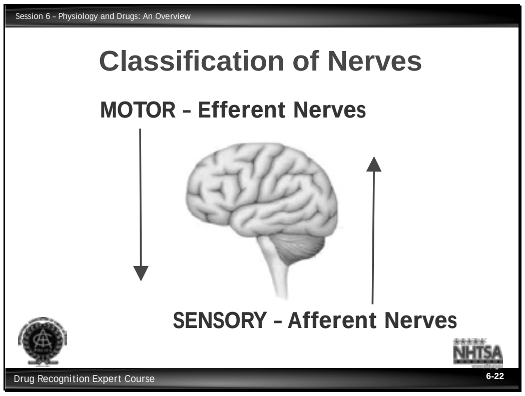
Each neuron, or “wire segment” has three main parts:

- the cell body
- the axon
- the dendrite

The axon is the part of the neuron that sends out the neurotransmitter, or chemical messenger.

The dendrite is the part that receives the neurotransmitter.

The gap between two neurons is called a synapse, or synaptic gap.



Session 6 – Physiology and Drugs: An Overview

Classification of Nerves

MOTOR – Efferent Nerves

SENSORY – Afferent Nerves

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Notes:

Classification of Nerves

Some nerves carry messages away from the brain, to the body's muscles and organs.

These are called motor, or efferent nerves.

The brain uses motor nerves to send commands to the heart to beat, the lungs to breathe, the muscles to contract or expand, and so forth.

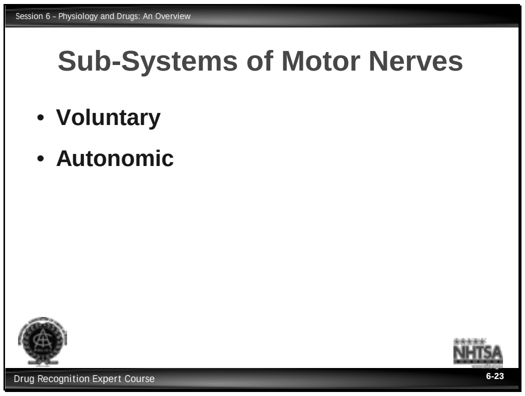
Other nerves carry messages to the brain, i.e. from the eyes, ears and other senses, from the muscles, etc.

These are called Sensory, or Afferent nerves.

The brain decodes the messages that come along the sensory nerves to monitor the condition of the body and of the outside world.

A fundamental notion: if something interferes with the messages the brain sends along the motor nerves, the brain's control over the heart, the lungs, the muscles and other organs will be distorted.

Another fundamental notion: if something interferes with the messages the brain receives from the sensory nerves, the brain's perception of the outside world and of the body's status will be distorted.



Session 6 – Physiology and Drugs: An Overview

Sub-Systems of Motor Nerves

- **Voluntary**
- **Autonomic**

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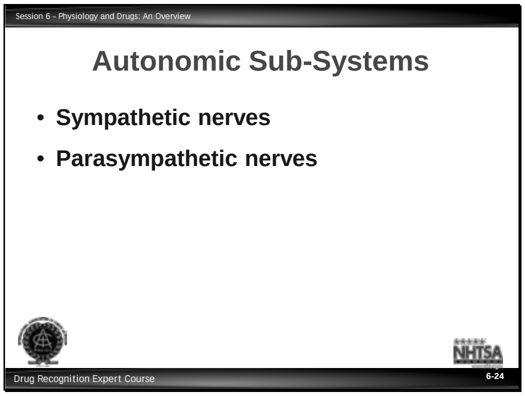
There are two sub-systems of motor nerves:

- The voluntary nerves send messages to the striated muscles that we consciously control.
- The autonomic nerves send messages to the muscles and organs that we do not consciously control, i.e. smooth muscle and cardiac muscle.
- The Autonomic sub-system is divided into two groups.
- The Sympathetic nerves command the body to react in response to fear, stress, excitement, etc.

CLARIFICATION: Sympathetic nerves control the body’s “fight or flight” responses.

EXAMPLES: Sympathetic nerves carry the messages that cause: blood pressure to elevate, pupils to dilate, sweat glands to activate, hair to stand on end, heartbeat to increase and strengthen, blood vessels of the skin to constrict, the walls of the hollow viscera to relax (inhibiting digestion).

- Parasympathetic nerves carry messages that produce relaxed and tranquil activities.



Session 6 – Physiology and Drugs: An Overview

Autonomic Sub-Systems

- Sympathetic nerves
- Parasympathetic nerves

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Notes:

EXAMPLES: Parasympathetic nerves carry messages that cause: pupils to constrict, heartbeat to slow, peripheral blood vessels to dilate, blood pressure to decrease.

Certain neurotransmitters (i.e. chemical messengers) aid in the transmission of messages along sympathetic and parasympathetic nerves.

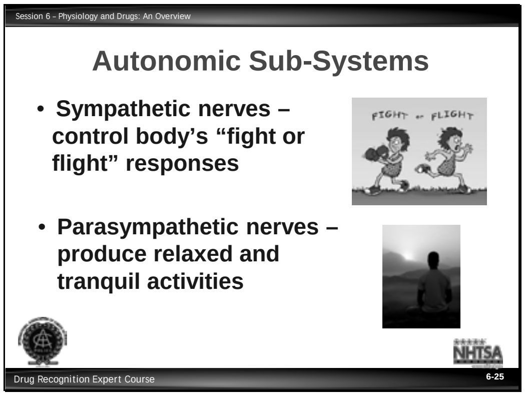
Some drugs mimic the action of these neurotransmitters: when taken into the body, these drugs artificially cause the transmission of messages along sympathetic or parasympathetic nerves.

Drugs that mimic the neurotransmitter associated with sympathetic nerves are called sympathomimetic drugs.

Sympathomimetic drugs artificially cause the transmission of messages that produce elevated blood pressure, dilated pupils, etc.

Examples: CNS Stimulants, Hallucinogens, and to some extent Dissociative Anesthetics and Cannabis.

Drugs that mimic neurotransmitters associated with parasympathetic nerves are called parasympathomimetic drugs.


FIGHT or FLIGHT

Session 6 – Physiology and Drugs: An Overview

Autonomic Sub-Systems

- Sympathetic nerves – control body's "fight or flight" responses
- Parasympathetic nerves – produce relaxed and tranquil activities

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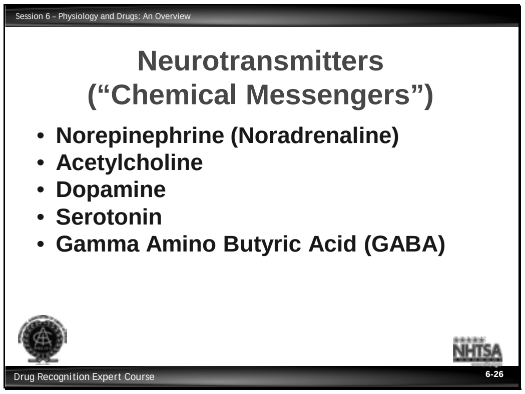
Notes:

Parasympathomimetic drugs artificially cause the transmission of messages that produce lowered blood pressure, drowsiness, etc.

Examples: Narcotic Analgesics and CNS Depressants.



Session 6 – Physiology and Drugs: An Overview

Neurotransmitters (“Chemical Messengers”)

- **Norepinephrine (Noradrenaline)**
- **Acetylcholine**
- **Dopamine**
- **Serotonin**
- **Gamma Amino Butyric Acid (GABA)**

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Neurotransmitters

Although there are more than 100 chemicals in the brain, only about two dozen probably are true neurotransmitters.

Among the primary neurotransmitters that have been identified are:

- Norepinephrine (also called Noradrenaline)
- Acetylcholine

  Acetylcholine plays a role in muscle control, and affects neuromuscular or myoneural junctions.

- Dopamine

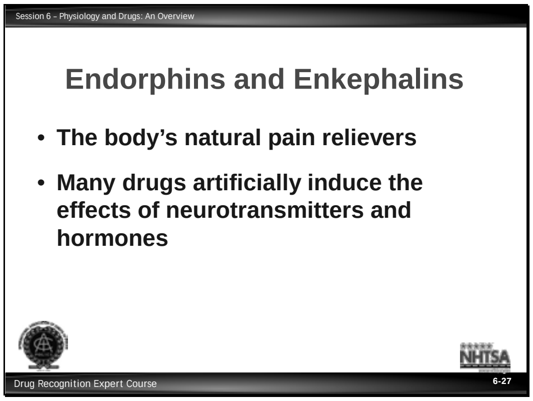
  Dopamine plays a role in mood control and is used in treating Parkinson’s Disease.

- Serotonin

  Serotonin is a vasoconstrictor, thought to be involved in sleep, wakefulness, and sensory perception. Tryptophan is a precursor to serotonin, and has been used to treat insomnia.

- Gamma Amino Butyric Acid (Abbreviated GABA)

  GABA inhibits various neurotransmitters and also causes a release of growth hormones.


Session 6 – Physiology and Drugs: An Overview

Endorphins and Enkephalins

- The body's natural pain relievers
- Many drugs artificially induce the effects of neurotransmitters and hormones

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NHTSA
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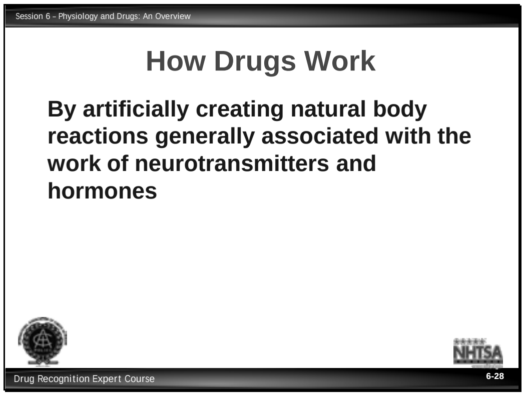
Notes:____

Endorphins and Enkephalins

These are the body's natural pain relievers.

There are many drugs that artificially induce the effects of neurotransmitter and hormones.



Session 6 – Physiology and Drugs: An Overview

How Drugs Work

By artificially creating natural body reactions generally associated with the work of neurotransmitters and hormones

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Notes:

F. How Drugs Work

In very simple terms, drugs work by artificially creating natural body reactions generally associated with the work of neurotransmitters and hormones.

Therapeutic doses of legitimate prescription and over the counter drugs are designed to produce mild and carefully controlled simulations of the natural action of neurotransmitters and hormones.

Large, abusive doses of drugs may produce greatly exaggerated simulations of the natural action of hormones and neurotransmitters, sometimes with disastrous results.

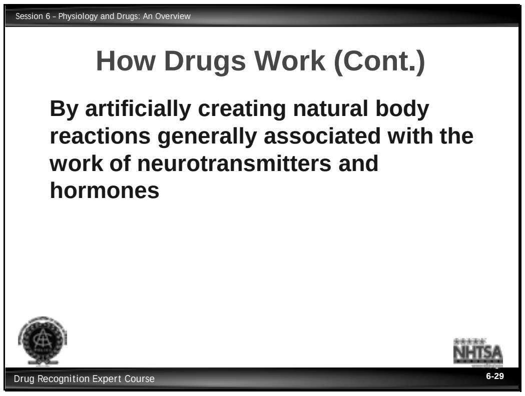
Example: Cocaine (a sympathomimetic drug) may artificially create a message commanding the heart to beat so rapidly that cardiac arrest results.

When a person ingests a drug and artificially simulates the natural action of hormones and neurotransmitters, the body's dynamic balance is disrupted.

The body automatically responds to the presence of the drug by producing other hormones and chemicals that can oppose the drug's effects, and bring the body back into balance.

Example Number One

If a person ingests a stimulant drug that mimics neurotransmitters associated with the sympathetic nerves, the body may react by excreting hormones that depress the bodily functions that the drug is exciting.



Session 6 – Physiology and Drugs: An Overview

How Drugs Work (Cont.)

By artificially creating natural body reactions generally associated with the work of neurotransmitters and hormones

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Notes:

If a person ingested Cocaine, for example, the Cocaine would artificially stimulate the body functions. The body would then produce hormones and neurotransmitters to slow down the body functions to try to maintain homeostasis.

Example Number Two

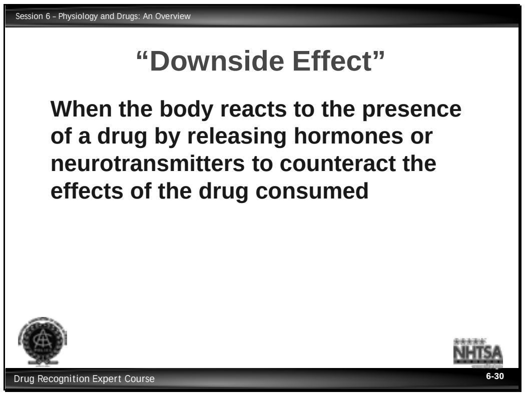
If a person ingests a drug that depresses some bodily function, the body may pour out one of its natural chemicals that stimulate that same function.

An interesting situation can occur when the drug is no longer psychoactive.

The chemicals produced by the body in an effort to counteract the drug may still be active.

These natural chemicals have exactly the opposite effect on the body that the drug had: after all, that is precisely why the body produced those chemicals.

As a result, the person may feel, appear and act in a manner exactly opposite to the way he or she would feel, appear and act when under the influence of the drug.



Session 6 – Physiology and Drugs: An Overview

“Downside Effect”

When the body reacts to the presence of a drug by releasing hormones or neurotransmitters to counteract the effects of the drug consumed

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Downside

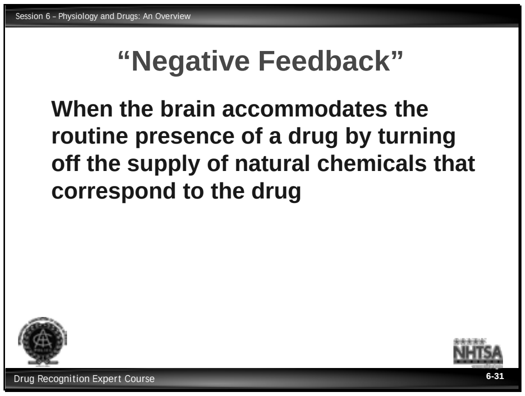
It is not uncommon for a DRE to encounter someone on the “downside.”

We call this situation being on the “downside” of the drug.

Example: with cocaine (a drug that is metabolized, or broken down by the body fairly quickly) the user may be exhibiting drowsiness and general depression by the time the DRE is called to the scene.

The concept of “downside” will be especially important to us when we discuss the effects of CNS Stimulants and drug combinations.

Then the body attempts to “counteract” the stimulant effects. When the effects of the drug diminish, the results may mimic a CNS Depressant or a Narcotic Analgesic.



Session 6 – Physiology and Drugs: An Overview

“Negative Feedback”

When the brain accommodates the routine presence of a drug by turning off the supply of natural chemicals that correspond to the drug

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Negative Feedback

Another interesting effect that drugs can produce is called Negative Feedback.

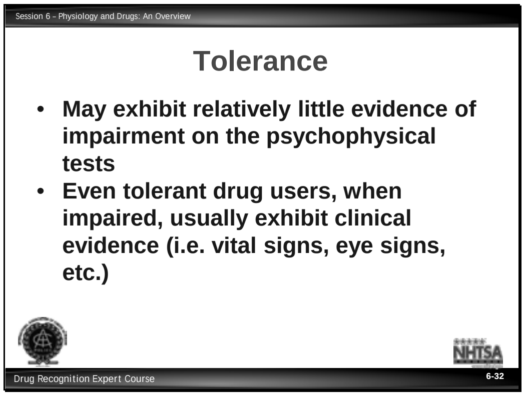
By taking the drug, the person artificially simulates the action of certain hormones and / or neurotransmitters.

If the person continues to take the drug, the body may simply cease producing the natural chemicals that the drug simulates.

In effect, the body comes to rely on the drug to supply itself with those chemicals.

Example of Negative Feedback: when people regularly use heroin, cocaine, or marijuana, their bodies may cease producing the neurotransmitters and hormones known to be crucial for proper pain relief, stress reduction, mental stability and motivation.

One result of this may be increased tolerance to the drug: since the body isn’t producing its own natural chemicals, it can more easily stand the drug.



Session 6 – Physiology and Drugs: An Overview

Tolerance

- **May exhibit relatively little evidence of impairment on the psychophysical tests**
- **Even tolerant drug users, when impaired, usually exhibit clinical evidence (i.e. vital signs, eye signs, etc.)**

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Even tolerant drug users, when impaired, usually exhibit clinical evidence (i.e., in the vital signs and eye signs – such as HGN).

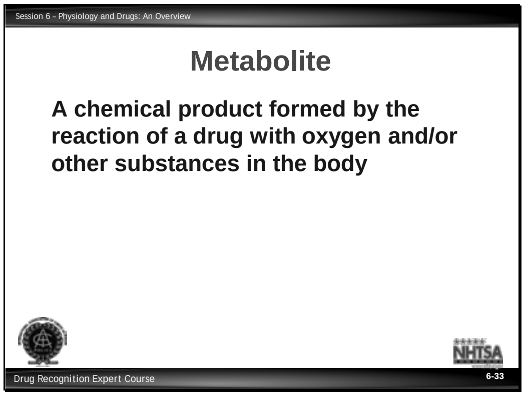
Physical Dependence

Another result may be physical dependence, or addiction.

In simplest terms, people take drugs because they like the feelings the drugs produce.

The artificial simulation of the natural action of hormones and neurotransmitters appears to permit the user to create any feeling or mood he or she desires.

As time goes on, and negative feedback develops, the user finds that he or she can only achieve those feelings and moods if the drug is taken.



Session 6 - Physiology and Drugs: An Overview

Metabolite

A chemical product formed by the reaction of a drug with oxygen and/or other substances in the body

Drug Recognition Expert Course

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Notes:____

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Metabolite

One final concept is important for an understanding of how drugs work.

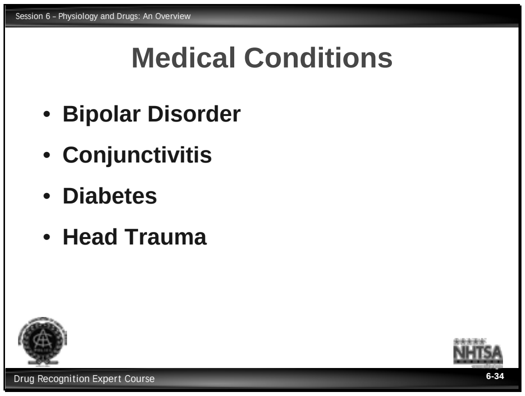
A Metabolite is a product of metabolism which is the chemical changes that take place when the drug reacts with enzymes and other substances in the body.

The body uses chemical reactions to break down the drug, and ultimately to eliminate it.

Example: when we drink alcohol, we initiate a series of chemical reactions that ultimately transform the alcohol into harmless carbon dioxide and water.

Sometimes, metabolites of the original drug are themselves drugs, and cause impairment.

For example, the body quickly metabolizes heroin into morphine, and it is the morphine that actually produces the effects the heroin user experiences.


Session 6 – Physiology and Drugs: An Overview

Medical Conditions

- **Bipolar Disorder**
- **Conjunctivitis**
- **Diabetes**
- **Head Trauma**

Drug Recognition Expert Course 6-34

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G. Medical Conditions Which Sometimes Mimic Drug Impairment

Certain medical conditions or injuries may cause signs and symptoms similar to those of drug impairment.

- Bipolar Disorder (Manic Depression) – a condition characterized by the alteration of manic and depressive states.
- Conjunctivitis – inflammation of the conjunctiva.

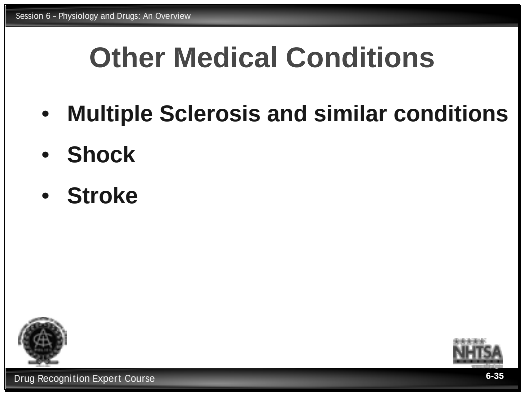
  Conjunctivitis is a condition caused by infection, allergy, or irritation of the mucous membrane lining of the eyes, resulting in a “pink eye” appearance. A casual observer might mistake this for the bloodshot conditions associated with Cannabis or alcohol.

- Diabetes – a condition that can result in insulin shock (taking too much insulin) which may produce tremors, increased blood pressure, rapid respiration, lack of coordination, headache, confusion, and seizures.

  The most common problem with diabetics arises when they take too much insulin, so that their blood sugar levels become extremely low. They may be very confused, sweat profusely, and exhibit increased pulse rate and increased blood pressure.

- Head Trauma – normally due to a severe blow or bump to the head.

  Head trauma may injure the brain and create disorientation, confusion, lack of coordination, slowed responses and speech impairment.



Session 6 – Physiology and Drugs: An Overview

Other Medical Conditions

- Multiple Sclerosis and similar conditions
- Shock
- Stroke

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Notes:

- Multiple Sclerosis (MS) – a degenerative muscular disorder.

  MS is a progressive disease in which the nerve fibers of the brain and spinal cord lose their myelin cover. Some signs and symptoms are abnormal sensations in the face or extremities, weakness, double vision, etc.

- Shock – a sudden or violent disturbance in the mental or emotional faculties.

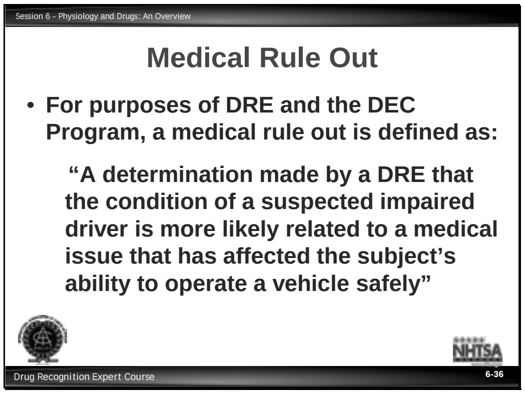
  A shock victim may be dazed, uncoordinated, non-responsive.

  Other indicators include: extremely low blood pressure, fast but weak pulse, dizziness, moist clammy skin, profuse sweating, rapid shallow breathing, blue lips and fingernails.

- Stroke – a medical condition caused by a rupture or obstruction (as if by clot) of an artery of the brain.

Others – Carbon Monoxide poisoning, Seizures, Endocrine disorders, Neurological conditions, Psychiatric conditions and infections.

Normal conditions can affect vital signs: Exercise, Excitement, Fear, Anxiety, Depression, Other



Session 6 – Physiology and Drugs: An Overview

Medical Rule Out

- For purposes of DRE and the DEC Program, a medical rule out is defined as:

  "A determination made by a DRE that the condition of a suspected impaired driver is more likely related to a medical issue that has affected the subject's ability to operate a vehicle safely"

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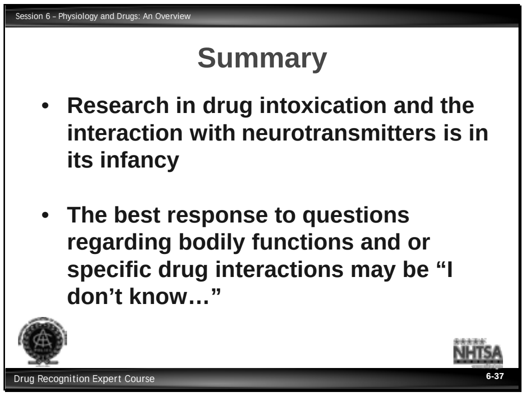
DRE Medical Rule Out Definition

There are times when a DRE may encounter situations where a subject arrested for drugged driving may be suffering from a medical condition that has affected the subject's ability to operate a vehicle safely. Once the DRE makes this determination the evaluation is considered a "medical rule out." In other words, the DRE through his or her evaluation has ruled out impairing substances and while doing so, identified signs and symptoms that are consistent with a medical issue. Once the DRE makes the determination, the DRE should consider taking appropriate steps to ensure the subject is referred to the proper medical personnel.

In such cases, the DRE should prepare the DRE drug evaluation report documenting his or her findings that support an opinion of a DRE medical rule out.

For purposes of DRE and the DEC Program, a medical rule out is defined as, **"A determination made by a DRE that the condition of a suspected impaired driver is more likely related to a medical issue that has affected the subject's ability to operate a vehicle safely."**

The suggested way to document this type of opinion in Step 11 of the DRE report would be: "It is my opinion that (Subject's name) is a medical rule out and is unable to operate a vehicle safely."



Session 6 – Physiology and Drugs: An Overview

Summary

- Research in drug intoxication and the interaction with neurotransmitters is in its infancy
- The best response to questions regarding bodily functions and or specific drug interactions may be “I don’t know…”

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Notes:

H. Summary

Basic understanding of how the body works is necessary to:

Understand why the drug evaluation is conducted in a systematic manner.

Understand why the results, when viewed in their totality, provide reliable indicators of impairment within broad categories of drugs.

This limited overview will not qualify participants as medical specialists.

The knowledge gained during this session must be supplemented by additional reading and/or instruction.

The body of knowledge in this area is being constantly expanded.

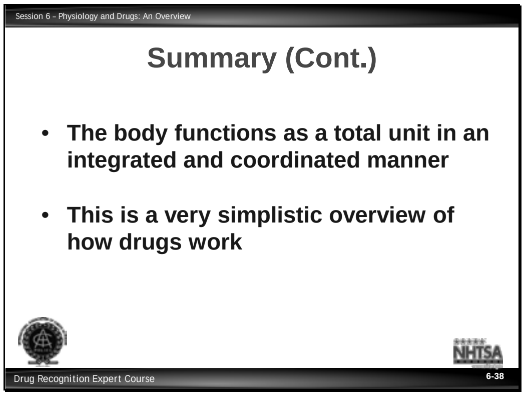
The body maintains homeostasis (equilibrium) by constantly adjusting to changes in the external and internal environment:

When drugs are introduced into the body this process comes into play.

When drugs interact in the body they tend to:

speed things up, or slow things down, or confuse signals, or block signals, or

some combination of the above.



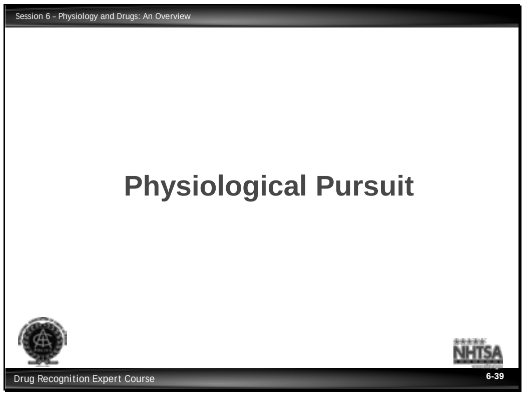
Summary (Cont.)

- **The body functions as a total unit in an integrated and coordinated manner**
- **This is a very simplistic overview of how drugs work**

Notes:

The effects of drugs can be detected and / or observed in the drug evaluation.

Drug Evaluations

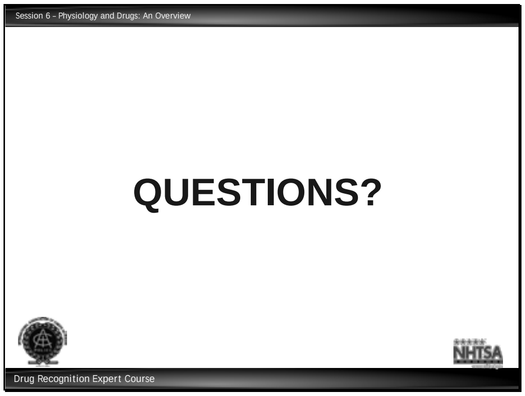


Physiological Pursuit

Notes:

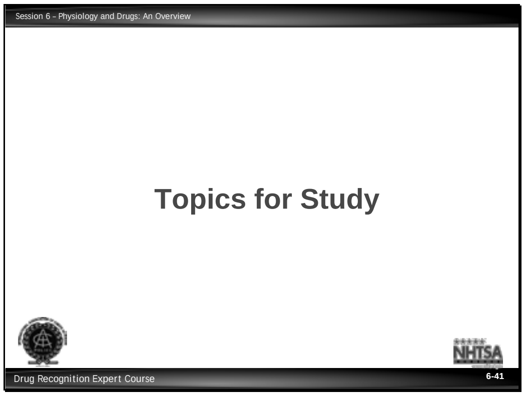
Physiological Pursuit

For review of the Physiology and Drugs session, questions can be asked of the participants as if it were a game of Trivial Pursuit. See attachment.



QUESTIONS?

Notes:



Session 6 – Physiology and Drugs: An Overview

Topics for Study

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TOPICS FOR STUDY

1. What is a neurotransmitter? What is a hormone?

2. What is a dendrite? What is an axon? What is a synapse?

3. Do arteries carry blood toward the heart or away from the heart?

4. What is unique about the Pulmonary Artery?

5. What are the two types of nerves that make up the Autonomic Nervous Sub-System?

6. Cocaine sympathomimetic or parasympathomimetic? What about Heroin?

7. Explain the concept of the “downside effect.” Explain the concept of “Negative Feedback.”

8. What do we call the nerves that carry messages away from the brain? What do we call the nerves that carry messages toward the brain?

QUESTIONS FOR PHYSIOLOGICAL PURSUIT

1. Name the major body systems.

2. What vein carries oxygenated blood?

3. What is the function of the endocrine system?

4. Explain the “downside” effect of a drug.

5. Define homeostasis.

6. Hair and nails are part of what system?

7. Name the two circulatory systems.

8. The functions of the organs of the body are controlled by what two systems?

9. Define synapse, axon, and dendrite.

10. Define neurotransmitter and hormone.

11. _______ nerves carry messages AWAY from the brain to the body’s muscles and organs.

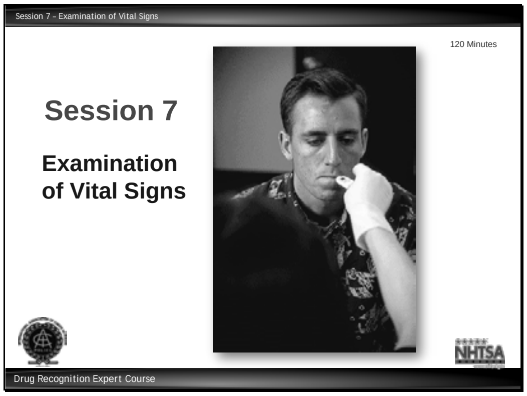
12. The ______ nervous system commands the body to react to stress, fear, and excitement.

13. Explain “negative feedback.”

14. What two types of nerves make up the autonomic nervous subsystem?

15. Define metabolite.

Participant Manual DRE 7-Day Session 7 – Examination of Vital Signs



Session 7 – Examination of Vital Signs

120 Minutes

Session 7

Examination of Vital Signs

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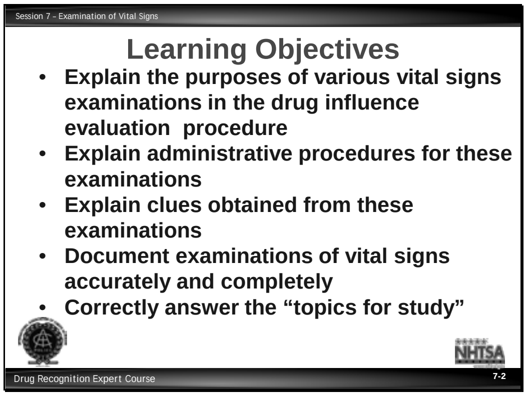

Session 7 – Examination of Vital Signs

Learning Objectives

- Explain the purposes of various vital signs examinations in the drug influence evaluation procedure
- Explain administrative procedures for these examinations
- Explain clues obtained from these examinations
- Document examinations of vital signs accurately and completely
- Correctly answer the "topics for study"

Drug Recognition Expert Course

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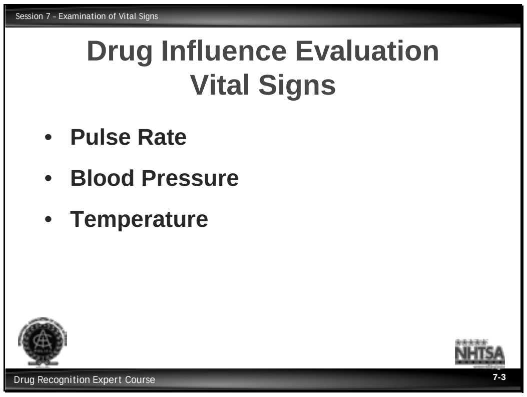
Notes:____

Upon successfully completing this session the participant will be able to:

- Explain the purposes of the various vital signs examinations in the drug influence evaluation procedure.
- Explain the administrative procedures for these examinations.
- Explain the clues obtained from these examinations.
- Document the examinations of vital signs accurately and completely.
- Correctly answer the "topics for study" at the end of this session.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Purpose of the Examinations	Instructor-Led Presentations
B. Procedures and Clues	Instructor-Led Demonstrations
C. Demonstrations	Audio Tape Presentation
D. Documentation Procedures	Participant-Led Demonstrations
E. Practice	Participants' Hands On Practice
	Reading Assignments



Session 7 – Examination of Vital Signs

Drug Influence Evaluation Vital Signs

- **Pulse Rate**
- **Blood Pressure**
- **Temperature**

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Notes:

A. Purposes of the Examinations

The vital signs that are relevant to the drug influence evaluation include:

- Pulse Rate
- Blood Pressure
- Temperature

Different types of drugs affect these vital signs in different ways.

Certain drugs tend to “speed up” the body and elevate these vital signs.

Clarification:

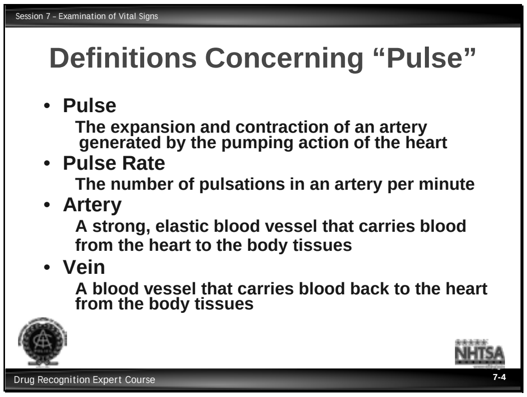
- Pulse may quicken
- Blood pressure may rise
- Temperature may rise

Other drugs tend to “slow down” the body and lower these vital signs.

Clarification:

- Pulse may slow
- Blood pressure may drop

Systematic examination of the vital signs gives us much useful information concerning the possible presence or absence of various categories of drugs.



Session 7 - Examination of Vital Signs

Definitions Concerning "Pulse"

- **Pulse**
  The expansion and contraction of an artery generated by the pumping action of the heart
- **Pulse Rate**
  The number of pulsations in an artery per minute
- **Artery**
  A strong, elastic blood vessel that carries blood from the heart to the body tissues
- **Vein**
  A blood vessel that carries blood back to the heart from the body tissues

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B. Procedures and Clues

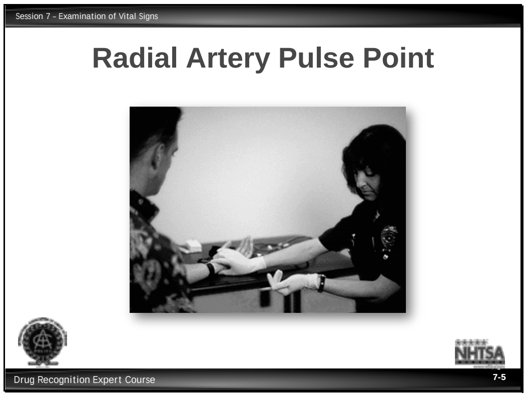
Measurement of Pulse Rate

Pulse is the expansion and contraction of an artery generated by the pumping action of the heart. Pulse Rate is the number of pulsations in an artery per minute.

- An artery is a strong, elastic blood vessel that carries blood from the heart to the body tissues.
- A vein is a blood vessel that carries blood back to the heart from the body tissues.
- When the heart contracts, it squeezes blood out of its chambers into the arteries.
- The surging blood causes the arteries to expand.
- By placing your fingers on the skin next to an artery and pressing down, you can feel the artery expand as the blood surges through.

By keeping your fingers on the artery and counting the number of pulses that occur in one minute, you will measure the pulse rate.

Pulse is easy to measure, once you locate an artery close to the surface of the skin.



Session 7 - Examination of Vital Signs

Radial Artery Pulse Point

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Notes:

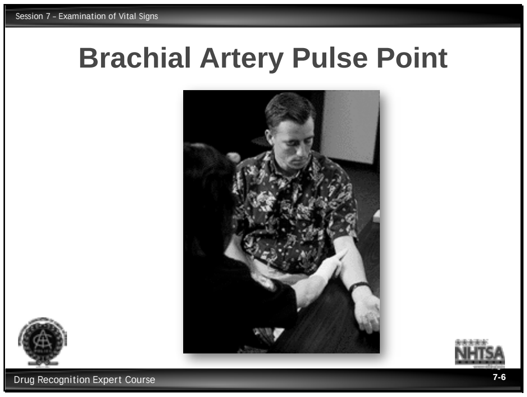
Radial Artery Pulse Point

One convenient pulse point involves the radial artery.

The radial artery can be located in or near the natural crease of the wrist, on the side of the wrist next to the thumb.

- Point to the radial artery pulse point on your own wrist.
- Hold your left hand out, with the palm up.
- Place the tips of your right hand’s index finger and middle finger into the crease of your wrist, and exert a slight pressure.

You should be able to feel the pulse in your radial artery.



Session 7 - Examination of Vital Signs

Brachial Artery Pulse Point

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Notes:____

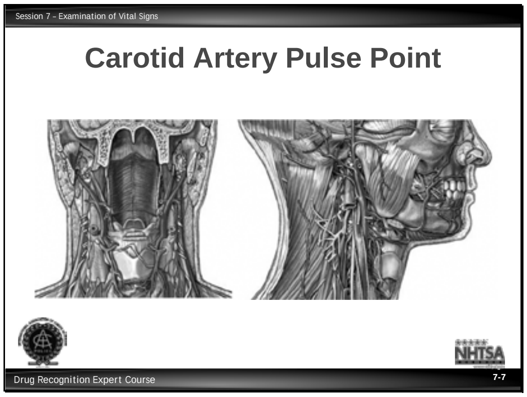
Brachial Artery Pulse Point

Another pulse point involves the brachial artery.

The brachial artery can be located in the crook of the arm, halfway between the center of the arm and the side of the arm closest to the body.

- Point to the brachial artery pulse point in your own arm.
- Instruct participants to roll up their sleeves, if necessary, to expose their brachial artery pulse points.
- Hold your left hand out, with the palm up.
- Place the tips of your right hand’s index and middle fingers into the crook of your left arm, close to the body, and exert a slight pressure.

You should be able to feel the pulse in your brachial artery.



Session 7 – Examination of Vital Signs

Carotid Artery Pulse Point

Drug Recognition Expert Course

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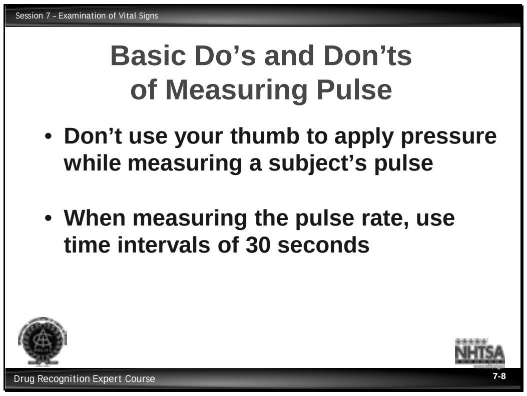
Carotid Artery Pulse Point

Another pulse point involves the carotid artery.

The carotid artery can be located in the neck, on either side of the Adam's apple.

- Point out the carotid artery pulse point on your own neck.
- Place the tips of your right hand's index and middle fingers alongside the right side of your Adam's apple.

You should be able to feel the pulse in your carotid artery.



Session 7 – Examination of Vital Signs

Basic Do's and Don'ts of Measuring Pulse

- **Don't use your thumb to apply pressure while measuring a subject's pulse**
- **When measuring the pulse rate, use time intervals of 30 seconds**

Drug Recognition Expert Course

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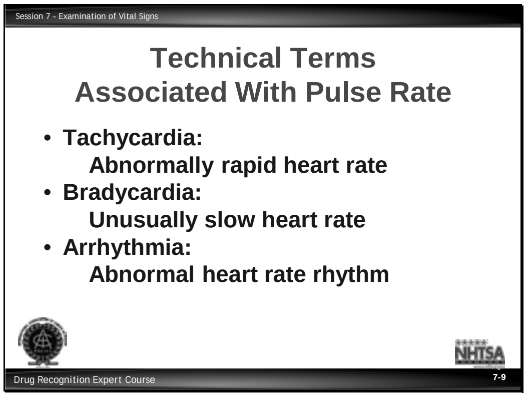
Notes:____

Basic Do's and Don'ts of Measuring Pulse

- Don't use your thumb to apply pressure while measuring a subject's pulse
- Point out that there is an artery located in the thumb close to the surface of the skin. If you apply pressure with the thumb, you may wind up measuring your own pulse when you think you are measuring the subject's.
- If you use the carotid artery pulse point, don't apply pressure to both sides of the Adam's apple: this can cut off the supply of blood to the brain
- When measuring the pulse rate, use time intervals of 30 seconds



Session 7 – Examination of Vital Signs

Technical Terms Associated With Pulse Rate

- **Tachycardia:**
  Abnormally rapid heart rate
- **Bradycardia:**
  Unusually slow heart rate
- **Arrhythmia:**
  Abnormal heart rate rhythm

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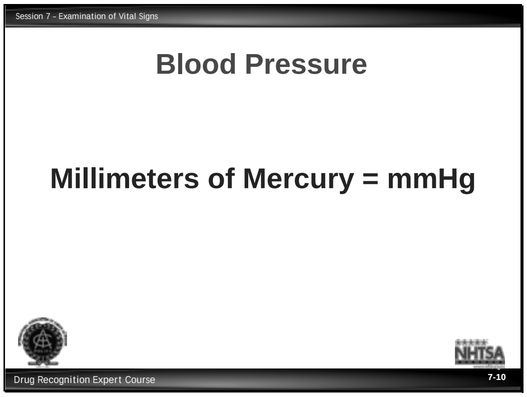
Notes:____

Some Technical Terms Associated with Pulse Rate

- Tachycardia: abnormally rapid heart rate
- Bradycardia: unusually slow heart rate
- Arrhythmia: abnormal heart rhythm

50 or less____
52 – 54____
56 – 58____
60 – 62 ____
64 – 66____
68 – 70____
72 – 74____
76 – 78____
80 – 82____
84 – 86____
88 – 90____
92 – 94____
96 – 98____
100 or more___


Session 7 – Examination of Vital Signs

Blood Pressure

Millimeters of Mercury = mmHg

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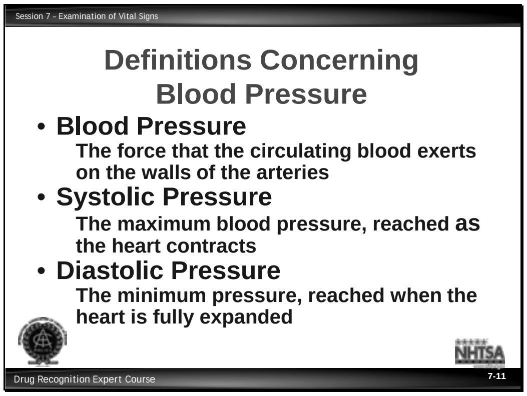
Example: a blood pressure of 120 means that the blood is pressing on the walls of the artery with enough force to push liquid mercury 120 millimeters up a glass tube.

Point out that 120 millimeters is approximately four and three-quarter inches.

We commonly abbreviate “millimeters of mercury” as mmHg.


Session 7 – Examination of Vital Signs

Definitions Concerning Blood Pressure

- **Blood Pressure**
  The force that the circulating blood exerts on the walls of the arteries
- **Systolic Pressure**
  The maximum blood pressure, reached as the heart contracts
- **Diastolic Pressure**
  The minimum pressure, reached when the heart is fully expanded

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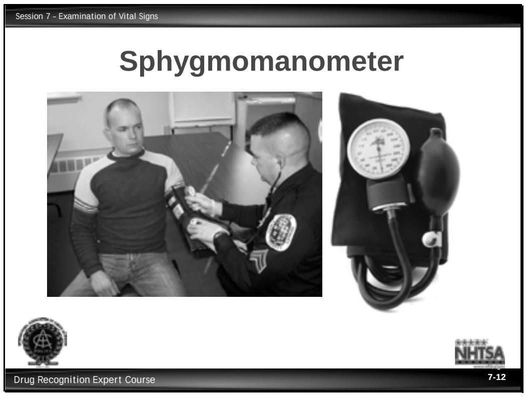
Measurement of Blood Pressure

- Blood Pressure is the force that the circulating blood exerts on the walls of the arteries.
- Blood pressure is measured in millimeters of mercury.
- Blood Pressure changes constantly as the heart contracts and relaxes.
- Blood Pressure reaches its maximum as the heart contracts and sends the blood surging through the arteries. This is called the systolic pressure.
- Blood Pressure reaches its minimum when the heart is fully expanded. This is called the diastolic pressure.
- It is always necessary to measure and record both the systolic and diastolic blood pressure.



Session 7 – Examination of Vital Signs

Sphygmomanometer

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Sphygmomanometer

The device used for measuring blood pressure is called a sphygmomanometer.

The sphygmomanometer has a special cuff that can be wrapped around the subject's arm and inflated with air pressure.

As the pressure in the cuff increases, the cuff squeezes tightly on the arm.

Wrap the cuff around the participant volunteer's arm and inflate it.

When the pressure gets high enough, it will squeeze the artery completely shut.

Blood will cease flowing through the brachial artery. And, since the brachial artery "feeds" the radial artery, blood will also cease flowing through the radial artery.

Session 7 – Examination of Vital Signs

Sphygmomanometer (Cont.)

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If we slowly release the air in the cuff, the pressure on the arm and on the artery will start to drop.

Release the pressure in the cuff on the participant volunteer’s arm.

Eventually, the pressure will drop enough so that blood will once again start to flow through the artery.

Blood will start flowing in the artery once the pressure inside the artery equals the pressure outside the artery.

The two pressures will become equal when the air pressure in the cuff drops down to the systolic pressure.

When that happens, blood will spurt through the artery each time the heart contracts.

Session 7 – Examination of Vital Signs

Sphygmomanometer (Cont.)

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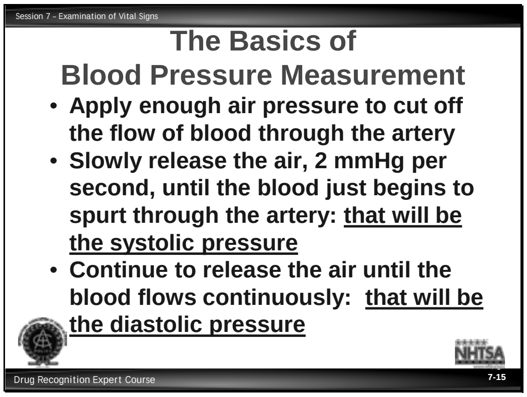
Once the air pressure in the cuff drops down to the diastolic level, the blood will flow continuously through the artery.



Session 7 – Examination of Vital Signs

The Basics of Blood Pressure Measurement

- **Apply enough air pressure to cut off the flow of blood through the artery**
- **Slowly release the air, 2 mmHg per second, until the blood just begins to spurt through the artery: that will be the systolic pressure**
- **Continue to release the air until the blood flows continuously: that will be the diastolic pressure**

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Overview of Procedures for Measuring Blood Pressure

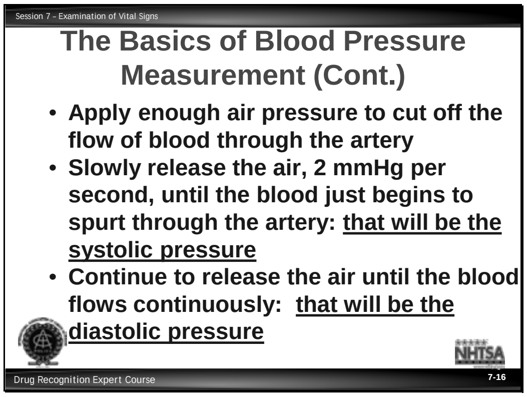
- Apply enough air pressure to the cuff to cut off the flow of blood through the artery.
- Slowly release the air pressure until the blood just begins to spurt through the artery: that level will be the systolic pressure.
- Slowly release the pressure in the cuff.
- Continue to release the air pressure until the blood flows continuously through the artery: that level will be the diastolic pressure.
- Apply the stethoscope to the skin directly above the artery.
- Apply pressure to the cuff, enough to cut off the flow of blood.

When no blood is flowing through the artery, we hear nothing through the stethoscope.

- Inflate the cuff on the participant volunteer’s arm.
- Slowly release the air from the cuff, letting the pressure start to drop.
- Release the air in the cuff.

When we drop to the systolic pressure, we start to hear a spurting sound.

Note: this begins as a clear, tapping sound.



Session 7 – Examination of Vital Signs

The Basics of Blood Pressure Measurement (Cont.)

- **Apply enough air pressure to cut off the flow of blood through the artery**
- **Slowly release the air, 2 mmHg per second, until the blood just begins to spurt through the artery: that will be the systolic pressure**
- **Continue to release the air until the blood flows continuously: that will be the diastolic pressure**

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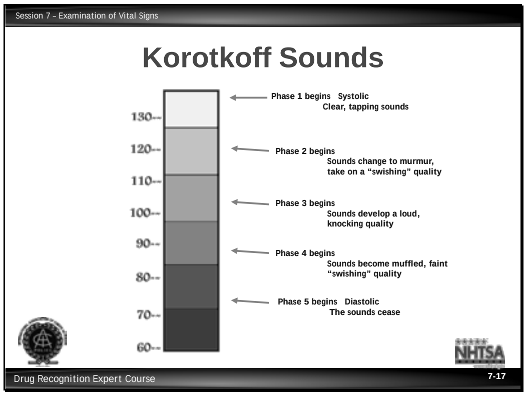
Notes:____

As we continue to allow the air pressure to drop, the surges of blood become steadily longer.

Note: the sounds take on a swishing quality, and become fainter.

When we drop to the diastolic pressure, the blood flows steadily and all sounds cease.



Session 7 – Examination of Vital Signs

Korotkoff Sounds

Phase 1 begins Systolic
Clear, tapping sounds

Phase 2 begins
Sounds change to murmur, take on a “swishing” quality

Phase 3 begins
Sounds develop a loud, knocking quality

Phase 4 begins
Sounds become muffled, faint “swishing” quality

Phase 5 begins Diastolic
The sounds cease

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Notes:____

Korotkoff Sounds

The sounds that we listen to are called Korotkoff Sounds. They are divided into 5 phases:

- Phase 1 – the first appearance of clear, tapping sounds that gradually increase in intensity.
- Phase 2 – the sounds change to a murmur and take on a swishing quality.
- Phase 3 – the sounds develop a loud, knocking quality (not quite as clear as the Phase 1 sounds).
- Phase 4 – the sounds become muffled and again have a faint swishing quality.
- Phase 5 – the sounds cease.

Session 7 - Examination of Vital Signs

Korotkoff Sounds

Double Click Icon to Play

Drug Recognition Expert Course

7-18

Notes:____

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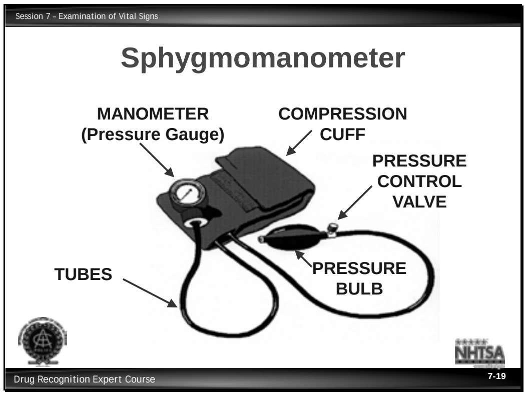

Session 7 - Examination of Vital Signs

Sphygmomanometer

Drug Recognition Expert Course

7-19

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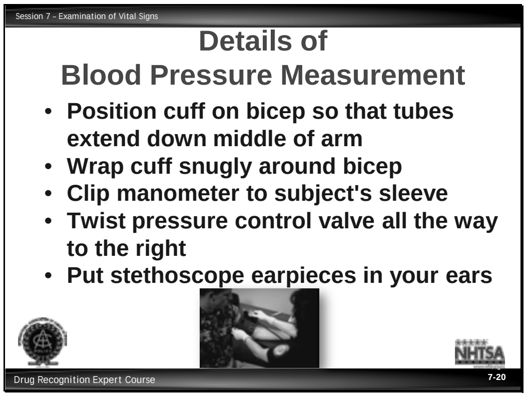
Familiarization with the Sphygmomanometer

- The compression cuff contains an inflatable rubber bladder.
- A tube connects the bladder to the manometer, or pressure gauge.

Clarification: the manometer displays the air pressure inside the bladder. In the DEC program, we use an aneroid (without fluid) pressure gauge.

- Another tube connects the bladder to the pressure bulb, which can be squeezed to inflate the bladder.
- The pressure control valve permits inflation of the bladder and regulates the rate at which the bladder is deflated.
- To inflate the bladder, the pressure control valve must be twisted all the way to the right.
- When the valve is twisted all the way to the right, air can be pumped into the bladder, but no air can escape from the bladder.
- To deflate the bladder, twist the valve to the left.
- The more the valve is twisted to the left, the faster the bladder will deflate.



Details of Blood Pressure Measurement

- Position cuff on bicep so that tubes extend down middle of arm
- Wrap cuff snugly around bicep
- Clip manometer to subject's sleeve
- Twist pressure control valve all the way to the right
- Put stethoscope earpieces in your ears

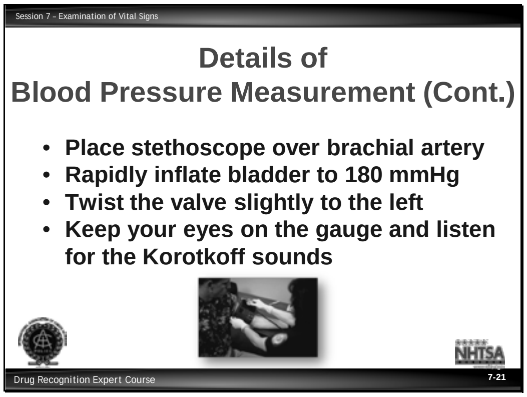
Notes:

Details of Blood Pressure Measurement

If it proves difficult to hear the Korotkoff sounds, simply have the subject elevate the arm and squeeze the fist several times, to drain the arm: the Korotkoff sounds louder.

The manometer (pressure gauge) may be clipped on the subject’s sleeve, so that it is readily viewable.

Twist the pressure control valve all the way to the right.



Session 7 – Examination of Vital Signs

Details of Blood Pressure Measurement (Cont.)

- **Place stethoscope over brachial artery**
- **Rapidly inflate bladder to 180 mmHg**
- **Twist the valve slightly to the left**
- **Keep your eyes on the gauge and listen for the Korotkoff sounds**

Drug Recognition Expert Course

7-21

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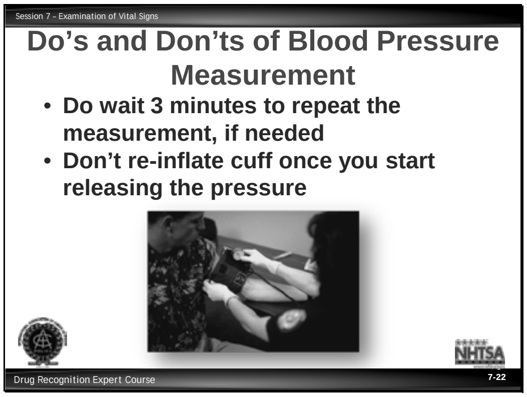
- Put the stethoscope earpieces in your ears.
- Make sure the earpieces are turned forward, i.e. toward the nose.
- Place the diaphragm or bell of the stethoscope over the brachial artery.
- Rapidly inflate the bladder to a pressure of at least 180.
- Twist the pressure control valve slightly to the left to release the pressure slowly.
- The pressure should be released at a speed that takes one full second for the needle to move a single gradation (i.e. 2 millimeters of mercury) on the gauge.
- Keep your eyes on the gauge and listen for the Korotkoff sounds.

Note, however, that people can have significantly different blood pressures: there is wide variation in human blood pressure.



Session 7 – Examination of Vital Signs

Do's and Don'ts of Blood Pressure Measurement

- **Do wait 3 minutes to repeat the measurement, if needed**
- **Don't re-inflate cuff once you start releasing the pressure**

Drug Recognition Expert Course

7-22

Notes:____

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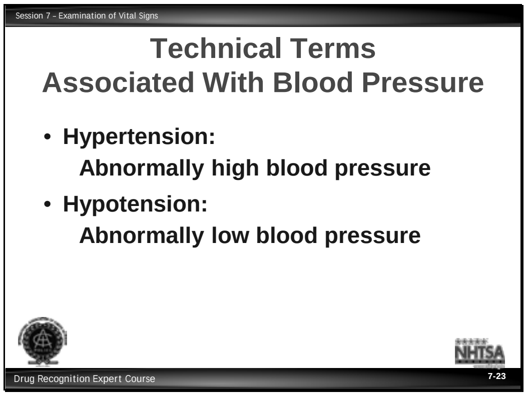
Do's and Don'ts of Blood Pressure Measurement

If you inflate the bladder and then need to repeat the measurement, wait at least three minutes to allow the subject's artery's to return to normal.

- Do wait 3 minutes to repeat the measurement if a second measurement is needed.
- Don't re-inflate cuff once you start releasing the pressure.



Session 7 – Examination of Vital Signs

Technical Terms Associated With Blood Pressure

- **Hypertension:**
  Abnormally high blood pressure
- **Hypotension:**
  Abnormally low blood pressure

Drug Recognition Expert Course

7-23

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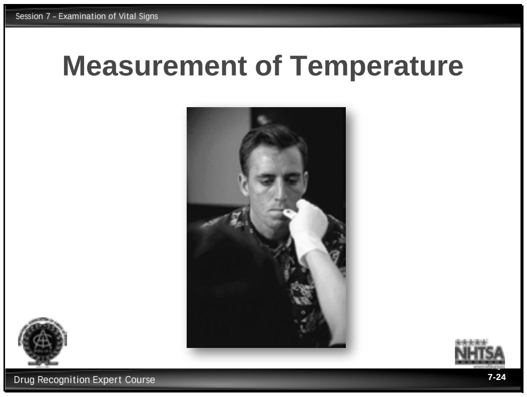
Some Technical Terms Associated with Blood Pressure

- Hypertension: abnormally high blood pressure.
- Hypotension: abnormally low blood pressure.



Session 7 – Examination of Vital Signs

Measurement of Temperature

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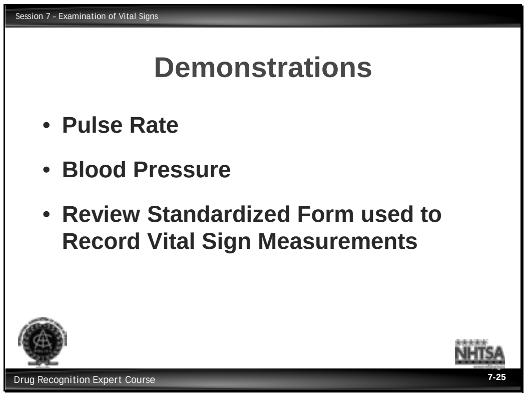
7-24

Notes:

Measurement of Temperature

Body temperature is measured using a oral digital thermometer.

Note: a digital thermometer with plastic sleeves is recommended.



Session 7 – Examination of Vital Signs

Demonstrations

- **Pulse Rate**
- **Blood Pressure**
- **Review Standardized Form used to Record Vital Sign Measurements**

Drug Recognition Expert Course

7-25

Notes:

C. Demonstrations

Pulse Rate Measurement

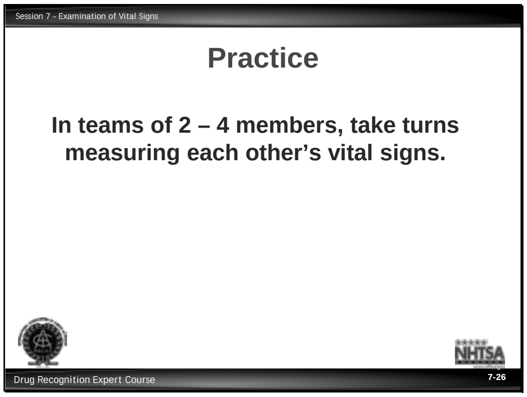
- Radial artery pulse point:
- Carotid artery pulse point:

Blood Pressure Measurement

Instruct the first participant to measure the second participant’s blood pressure.

Have the participants reverse roles.

D. Documentation Procedures



Session 7 – Examination of Vital Signs

Practice

In teams of 2 – 4 members, take turns measuring each other's vital signs.

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Notes:____

E. Practice

Session 7 – Examination of Vital Signs

QUESTIONS?

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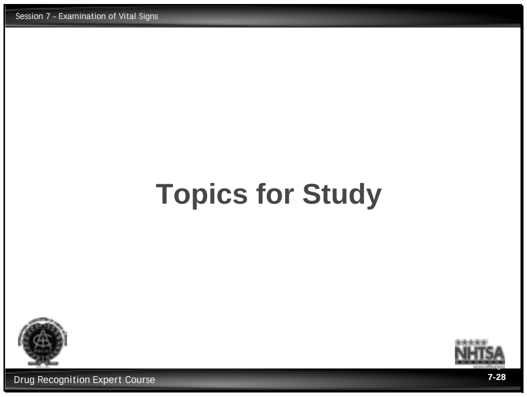
Notes:____



Session 7 - Examination of Vital Signs

Topics for Study

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7-28

Notes:____

TOPICS FOR STUDY

1. Where is the Radial Artery pulse point?

2. Why should you never attempt to feel a subject’s pulse with your thumb?

3. Does an artery carry blood to the heart or from the heart?

4. What does the symbol “Hg” represent?

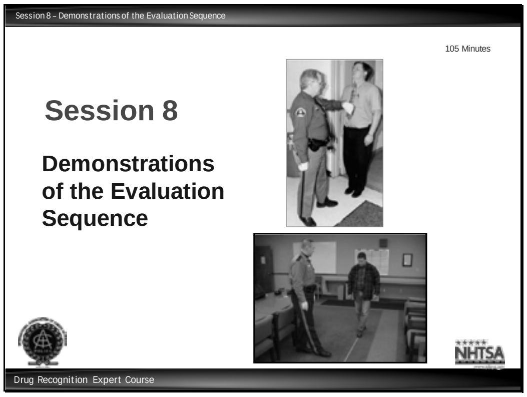
5. What is Diastolic pressure?

6. When do the Korotkoff Sounds begin?

7. Name and describe the major components of a Sphygmomanometer.

8. Which of the seven categories of drugs generally will cause blood pressure to be elevated?

Participant Manual DRE 7-Day Session 8 – Demonstrations of the Evaluation Sequence



Session 8 – Demonstrations of the Evaluation Sequence

105 Minutes

Session 8

Demonstrations of the Evaluation Sequence

Drug Recognition Expert Course

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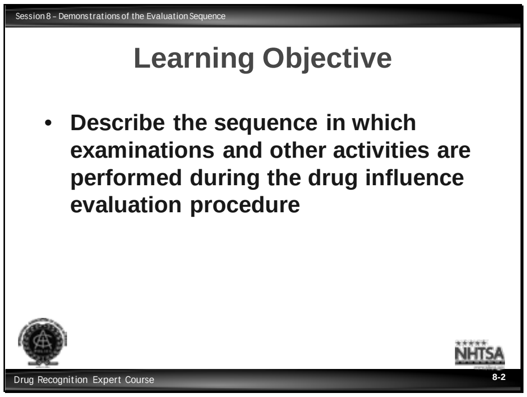

Session 8 – Demonstrations of the Evaluation Sequence

Learning Objective

- **Describe the sequence in which examinations and other activities are performed during the drug influence evaluation procedure**

Drug Recognition Expert Course

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Notes:____

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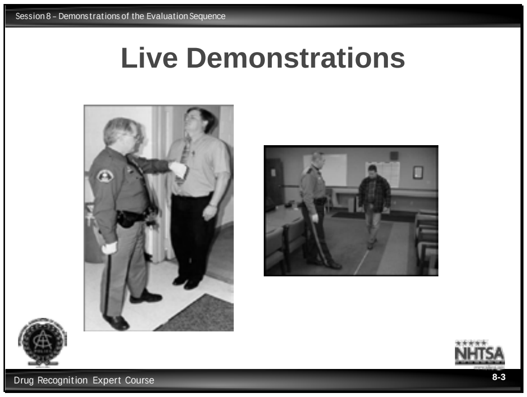
Upon successfully completing this session the student will be able to:

- Describe the sequence in which examinations and other activities are performed during the drug influence evaluation procedure.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Live Demonstrations	Instructor Led Presentations
B. Video Demonstrations	Instructor Led Demonstrations
	Video Presentations
	Reading Assignments



Session 8 - Demonstrations of the Evaluation Sequence

Live Demonstrations

Drug Recognition Expert Course

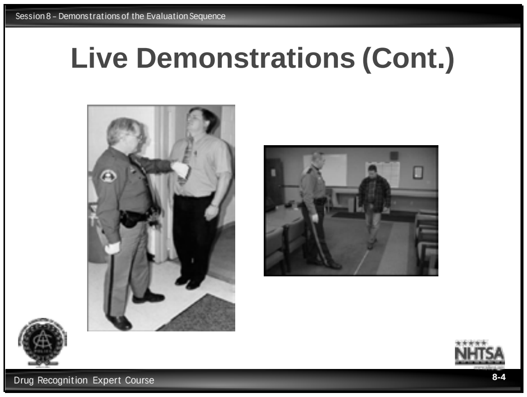
Notes:

A. Live Demonstrations

For these live demonstrations, participants must be grouped into teams of not more than 12 members. Each team must be taken to a separate classroom. At least two instructors must work with each team. This is to ensure that all participants have the opportunity for a close and detailed observation of the demonstrations.

Preliminary eye checks:

- equal tracking
- equal pupil size
- resting nystagmus
- blindness
- eyelids



Session 8 - Demonstrations of the Evaluation Sequence

Live Demonstrations (Cont.)

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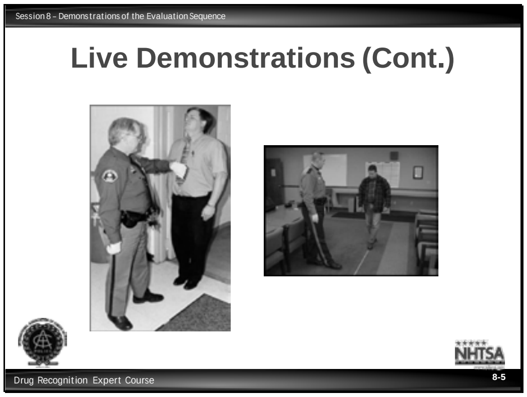
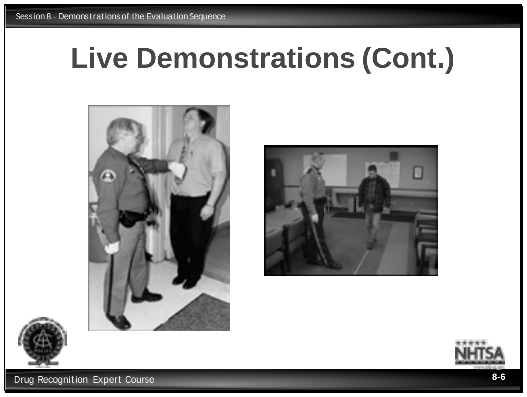
Notes:



Live Demonstrations (Cont.)

Notes:____

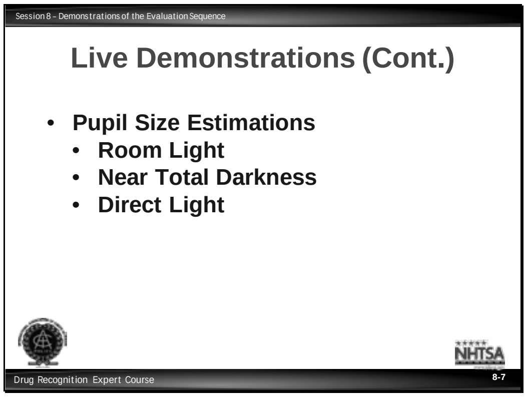


Live Demonstrations (Cont.)

Notes:____

Vital Signs Examinations

- Blood Pressure
- Temperature
- Second Check of Pulse



Live Demonstrations (Cont.)

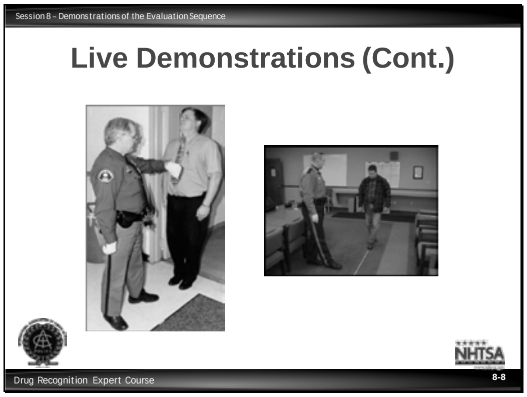
- **Pupil Size Estimations**
  - **Room Light**
  - **Near Total Darkness**
  - **Direct Light**

Notes:____

Dark Room Examinations

Pupil Size Estimations:

- Room light
- Near Total Darkness
- Direct light



Session 8 – Demonstrations of the Evaluation Sequence

Live Demonstrations (Cont.)

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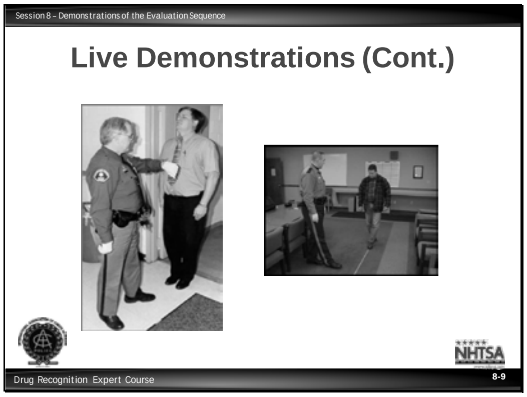
8-8

Notes:

Reaction to Light

Check of Nasal Area

Check of Oral Cavity



Session 8 – Demonstrations of the Evaluation Sequence

Live Demonstrations (Cont.)

Drug Recognition Expert Course

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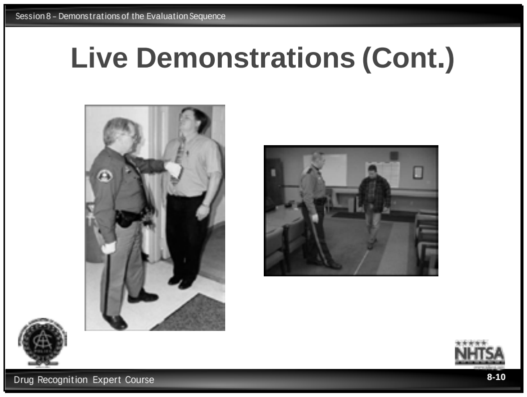
Notes:



Session 8 – Demonstrations of the Evaluation Sequence

Live Demonstrations (Cont.)

Drug Recognition Expert Course

8-10

Notes:

Statements made by subject

Behavior during entire evaluation

Session 8 - Demonstrations of the Evaluation Sequence

QUESTIONS?

Drug Recognition Expert Course

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Notes:____

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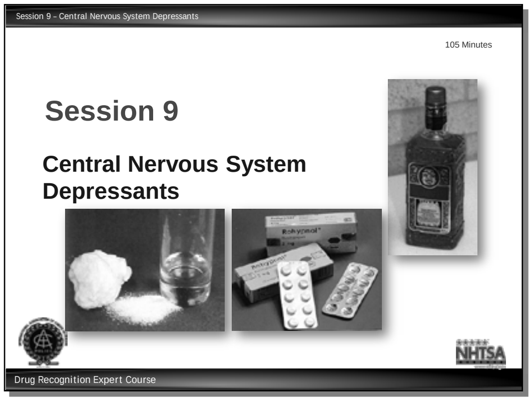
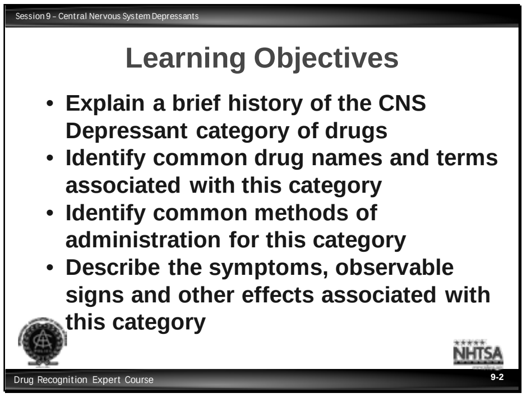


105 Minutes

Session 9

Central Nervous System Depressants

Notes:



Learning Objectives

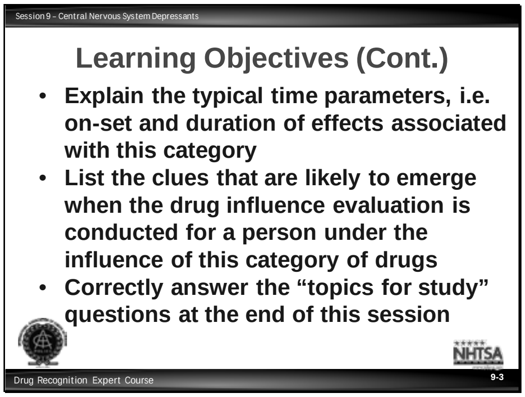
- **Explain a brief history of the CNS Depressant category of drugs**
- **Identify common drug names and terms associated with this category**
- **Identify common methods of administration for this category**
- **Describe the symptoms, observable signs and other effects associated with this category**

Notes:

Upon successfully completing this session the participant will be able to:

- Explain a brief history of the CNS Depressant category of drugs.
- Identify common drug names and terms associated with this category.
- Identify common methods of administration for this category.
- Describe the symptoms, observable signs and other effects associated with this category.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Overview of the Category	Instructor-Led Presentations
B. Possible Effects	Instructor Led Demonstrations
C. Onset and Duration of Effects	Reading Assignments
D. Overdose Signs and Symptoms	Video Presentations
E. Expected Results of the Evaluation	Slide Presentations
F. Classification Exemplar	



Session 9 – Central Nervous System Depressants

Learning Objectives (Cont.)

- **Explain the typical time parameters, i.e. on-set and duration of effects associated with this category**
- **List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs**
- **Correctly answer the “topics for study” questions at the end of this session**

Drug Recognition Expert Course

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Notes:____

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- Explain the typical time parameters, i.e. onset and duration of effects, associated with this category.
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs.
- Correctly answer the “topics for study” questions at the end of this session.

Session 9 - Central Nervous System Depressants

Alcohol - The Most Familiar CNS Depressant

Drug Recognition Expert Course

9-4

Notes:

A. Overview of the Category

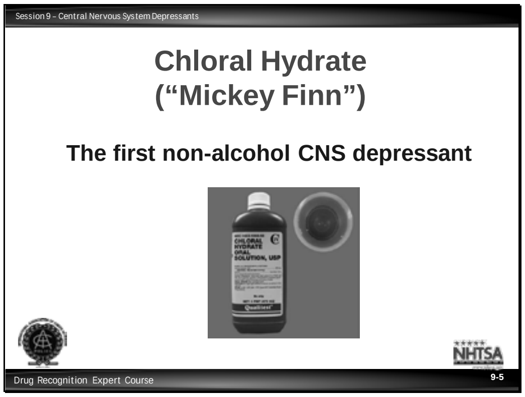
CNS Depressants

Central Nervous System Depressants slow down the operations of the brain.

- Depressants first affect those areas of the brain that control a person’s conscious, voluntary actions.
- Judgment, inhibitions and reaction time are some of the things that CNS Depressants affect first.
- As the dose is increased, depressants begin to affect the parts of the brain that control the body’s automatic processes, heartbeat, respiration, etc.

The CNS Depressant category includes the single most commonly abused drug in America.

- Alcohol has been used and abused since prehistoric times.
- Alcohol and its effects are familiar to most people.
- Alcohol is a model for the CNS Depressant category: with some exceptions, all depressants produce effects that are quite similar to the effects of alcohol.



Session 9 – Central Nervous System Depressants

Chloral Hydrate
(“Mickey Finn”)

The first non-alcohol CNS depressant

Drug Recognition Expert Course

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Notes:____

Chloral Hydrate

Non-alcohol CNS Depressants have been around for more than 150 years.

The first non-alcohol CNS Depressant was Chloral Hydrate.

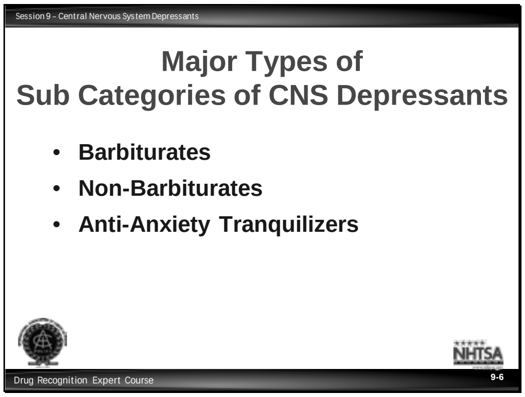
It was developed in 1832 and utilized clinically in 1869.

Chloral Hydrate was derived from alcohol.

It is commonly referred to as “Mickey Finn” or “Knockout drops” because of its fast acting effects.

Chloral Hydrate is still produced and prescribed today. It is a sedative used in the short term treatment of insomnia and to relieve anxiety and induce sleep before surgery.

“Noctec” is a registered brand name of Chloral Hydrate.



Session 9 – Central Nervous System Depressants

Major Types of Sub Categories of CNS Depressants

- **Barbiturates**
- **Non-Barbiturates**
- **Anti-Anxiety Tranquilizers**

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Notes:

Sub Categories of CNS Depressants

There are six major subcategories of CNS Depressants other than alcohol.

Barbiturates

More than 250 different barbiturates have been produced; of these, about 50 have been accepted for medical use.

- Derivatives of Barbituric Acid
- First produced in 1864
- Very common in use and abuse today

Non-Barbiturates

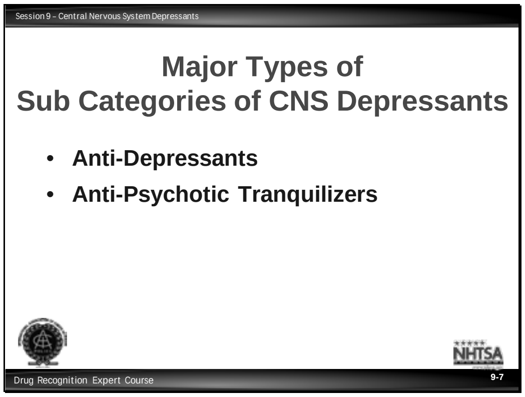
Note: Chloral Hydrate belongs to the non-barbiturate subcategory.

- Synthetic compounds with a variety of chemical structures
- Prescribed to help with some of the unintended side effects of barbiturates including sleepiness or drowsiness
- Still produce physical and psychological dependence

Anti-Anxiety Tranquilizers

The Anti-Anxiety Tranquilizers are also known as the “minor tranquilizers.” They include the group of drugs known as the “Benzodiazepines” examples of which are Valium, Xanax, and Librium.

- First produced in 1950
- In very wide spread use
- Frequently abused



Session 9 – Central Nervous System Depressants

Major Types of Sub Categories of CNS Depressants

- **Anti-Depressants**
- **Anti-Psychotic Tranquilizers**

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9-7

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Anti-Depressants

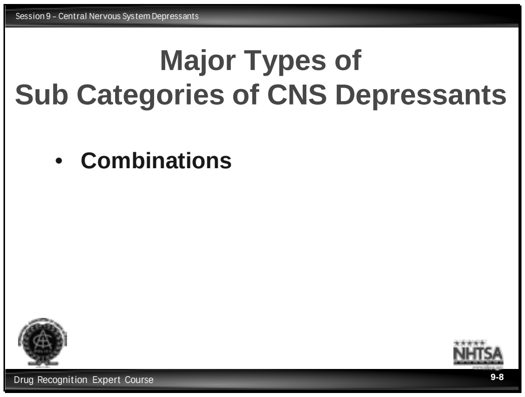
Sometimes called the “mood elevators.”

Anti-Psychotic Tranquilizers

Sometimes called the “major tranquilizers.”

Anti-psychotic tranquilizers were first introduced in the early 1950’s. They provide a way to manage schizophrenia and other mental disorders, and allow psychiatric patients to be released from hospitals and to lead fairly normal lives.

The most familiar Anti-Psychotic Tranquilizer is “Thorazine.”



Session 9 – Central Nervous System Depressants

Major Types of Sub Categories of CNS Depressants

- **Combinations**

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9-8

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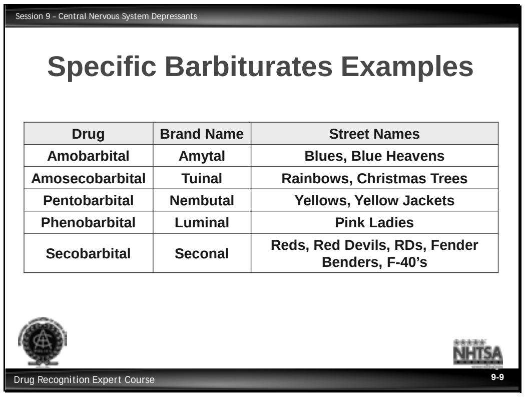
Combinations

This subcategory includes a small class of depressants involving various combinations of the other five subcategories.



Session 9 – Central Nervous System Depressants

Specific Barbiturates Examples

Drug	Brand Name	Street Names
Amobarbital	Amytal	Blues, Blue Heavens
Amosecobarbital	Tuinal	Rainbows, Christmas Trees
Pentobarbital	Nembutal	Yellows, Yellow Jackets
Phenobarbital	Luminal	Pink Ladies
Secobarbital	Seconal	Reds, Red Devils, RDs, Fender Benders, F-40's

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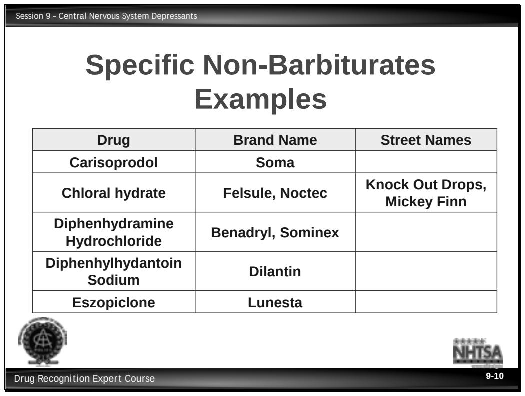
Notes:

The Barbiturates

- Amobarbital (Trade name "Amytal") Street names "blues"; "blue heavens"
- Amosecobarbital (Trade name "Tuinal") Street names "rainbows"; "Christmas Trees"
- Pentobarbital (Trade name "Nembutal") Street names "yellows"; "yellow jackets"
- Phenobarbital (Includes Luminal and other trade names) Street name "pink ladies".
- Secobarbital (Trade name "Seconal") Street names "reds"; "red devils"; "RDs"; fender benders"; F-40s"



Session 9 – Central Nervous System Depressants

Specific Non-Barbiturates Examples

Drug	Brand Name	Street Names
Carisoprodol	Soma	
Chloral hydrate	Felsule, Noctec	Knock Out Drops, Mickey Finn
Diphenhydramine Hydrochloride	Benadryl, Sominex	
Diphenhylhydantoin Sodium	Dilantin	
Eszopiclone	Lunesta	

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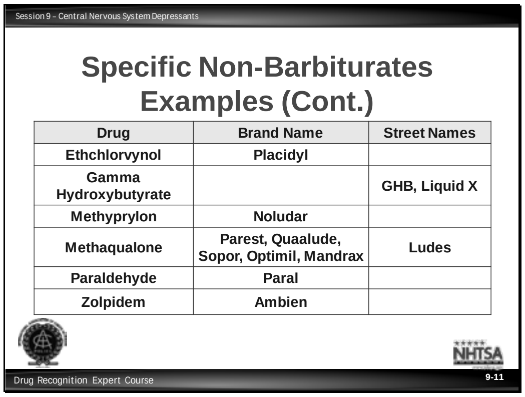
Notes:

The Non-Barbiturates

Note: The absence of street names implies only that illicitly manufactured versions of these drugs are not common. The legally manufactured versions are abused, however.

- Carisoprodol (Trade name "Soma")
- Chloral Hydrate (Trade names "Noctec", "Somnos") (Street names "Knockout drops"; "Mickey Finn")
- Diphenhydramine Hydrochloride (Trade names "Benadryl"; "Sominex"; "Dramamine" and "nytol")
- Diphenylhydantoin Sodium (Trade name "Dilantin")
- Eszopiclone (Trade names "eszopiclone", "Estorra" and "Lunesta")



Session 9 – Central Nervous System Depressants

Specific Non-Barbiturates Examples (Cont.)

Drug	Brand Name	Street Names
Ethchlorvynol	Placidyl	
Gamma Hydroxybutyrate		GHB, Liquid X
Methyprylon	Noludar	
Methaqualone	Parest, Quaalude, Sopor, Optimil, Mandrax	Ludes
Paraldehyde	Paral	
Zolpidem	Ambien	

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Notes:____

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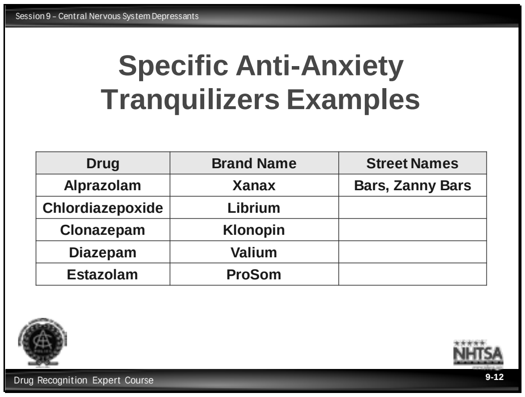
- Ethchlorvynol (Trade name “Placidyl”)
- Gamma Hydroxybutyrate (Street name “GHB”; “GBL”; “Liquid X”; “1,4-butanediol”)
- Methaqualone (Trade names “Parest”; “Quaalude”; “Sopor”; “Optimil”; “Mandrax”) (Street name “ludes”)
- Paraldehyde (Trade name “Paral”)
- Zolpidem (Trade names “Ambien”, “Edluar” and “Stilncot”)



Session 9 – Central Nervous System Depressants

Specific Anti-Anxiety Tranquilizers Examples

Drug	Brand Name	Street Names
Alprazolam	Xanax	Bars, Zanny Bars
Chlordiazepoxide	Librium	
Clonazepam	Klonopin	
Diazepam	Valium	
Estazolam	ProSom	

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Notes:____

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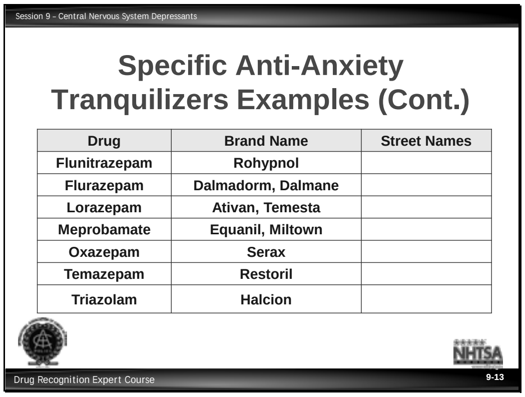
The Anti-Anxiety Tranquilizers

- Alprazolam (Trade names “Xanax”, “Niravam”) (Street name “Bars”; “Zannys”; “Blues”)
- Chlordiazepoxide (Trade name “Librium”)
- Clonazepam (Trade name “Klonopin”)
- Diazepam (Trade name “Valium”)
- Estazolam (Trade name “ProSom”)



Session 9 – Central Nervous System Depressants

Specific Anti-Anxiety Tranquilizers Examples (Cont.)

Drug	Brand Name	Street Names
Flunitrazepam	Rohypnol	
Flurazepam	Dalmadorm, Dalmane	
Lorazepam	Ativan, Temesta	
Meprobamate	Equanil, Miltown	
Oxazepam	Serax	
Temazepam	Restoril	
Triazolam	Halcion	

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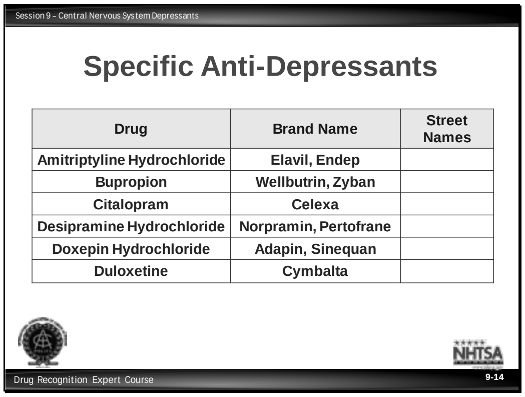
Notes:

- Flunitrazepam (Trade name “Rohypnol”) (Street name “Roofies”; “Roches”)
- Flurazepam (Trade names Dalmadorm”, “Dalmane”)
- Lorazepam (Trade names “Ativan” and “Temesta”)
- Meprobamate (Trade names “Equanil”, “Miltown”)
- Oxazepam (Trade name “Serax”)
- Temazepam (Trade name “Restoril”)
- Triazolam (Trade name “Halcion”)



Session 9 – Central Nervous System Depressants

Specific Anti-Depressants

Drug	Brand Name	Street Names
Amitriptyline Hydrochloride	Elavil, Endep	
Bupropion	Wellbutrin, Zyban	
Citalopram	Celexa	
Desipramine Hydrochloride	Norpramin, Pertofrane	
Doxepin Hydrochloride	Adapin, Sinequan	
Duloxetine	Cymbalta	

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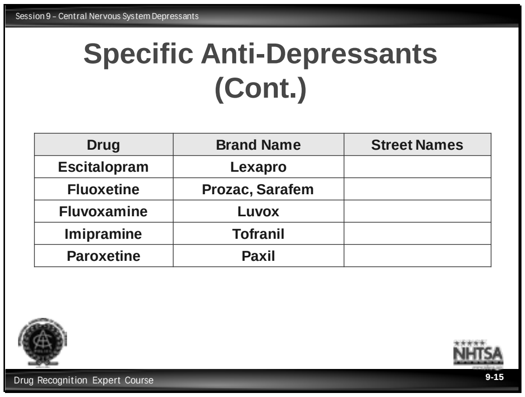
Notes:

The Anti-Depressants

- Amitriptyline Hydrochloride (Trade names “Elavil”; “Endep”)
- Bupropion (Trade name “Wellbutrin”)
- Citalopram (Trade name “Celexa”)
- Desipramine Hydrocholoride (Trade names “Norpramin”; “Pertofrane”)
- Doxepin Hydrochloride (Trade names “Adapin”; “Sinequan”)
- Duloxetine (Trade name “Cymbalta”)



Session 9 – Central Nervous System Depressants

Specific Anti-Depressants (Cont.)

Drug	Brand Name	Street Names
Escitalopram	Lexapro	
Fluoxetine	Prozac, Sarafem	
Fluvoxamine	Luvox	
Imipramine	Tofranil	
Paroxetine	Paxil	

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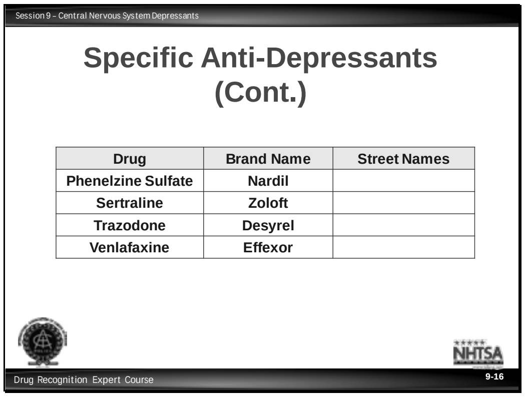
Notes:____

- Escitalopram (Trade name “Lexapro”)
- Fluoxetine (Trade names “Prozac”; “Sarafem”)
- Fluvoxamine (Trade name “Luvox”)
- Imipramine (Trade name “Tofranil”)
- Paroxetine (Trade name “Paxil”)



Session 9 – Central Nervous System Depressants

Specific Anti-Depressants (Cont.)

Drug	Brand Name	Street Names
Phenelzine Sulfate	Nardil	
Sertraline	Zoloft	
Trazodone	Desyrel	
Venlafaxine	Effexor	

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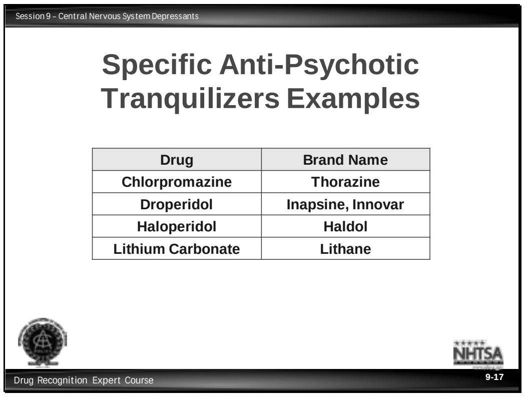
Notes:____

- Phenelzine Sulfate (Trade name “Nardil”)
- Sertraline (Trade name “Zoloft”)
- Trazodone (Trade name “Desyrel”)
- Venlafaxine (Trade name “Effexor”)

Anti-Depressants Exceptions

Anti-Depressants may cause dry mouth, sore throat, blurred vision, urinary retention, muscle twitching, restlessness, and increased anxiety.



Specific Anti-Psychotic Tranquilizers Examples

Drug	Brand Name
Chlorpromazine	Thorazine
Droperidol	Inapsine, Innovar
Haloperidol	Haldol
Lithium Carbonate	Lithane

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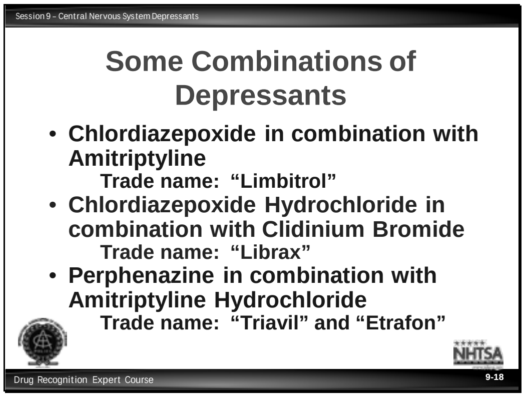
The Anti-Psychotic Tranquilizers

- Chlorpromazine (Trade name “Thorazine”)
- Droperidol (Trade name “Inapsine”)
- Haloperidol (Trade name “Haldol”)
- Lithium Carbonate (Trade name “Lithane”)



Some Combinations of Depressants

- **Chlordiazepoxide in combination with Amitriptyline**
  Trade name: “Limbitrol”
- **Chlordiazepoxide Hydrochloride in combination with Clidinium Bromide**
  Trade name: “Librax”
- **Perphenazine in combination with Amitriptyline Hydrochloride**
  Trade name: “Triavil” and “Etrafon”

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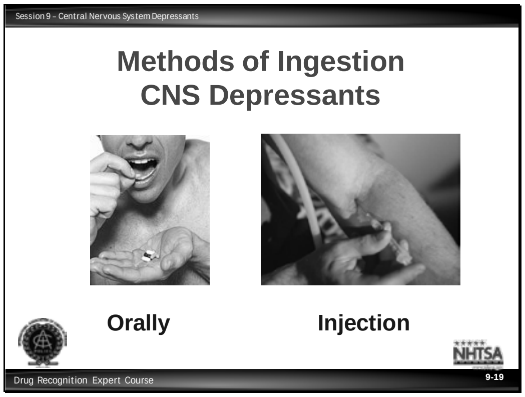
The Combinations

- Chlordiazepoxide in combination with Amitriptyline (trade name “Limbitrol”)
- Chlordiazepoxide Hydrochloride in combination with Clidinium Bromide (Trade name “Librax”
- Perphenazine in combination with Amitriptyline Hydrochloride (Trade name “Triavil” and “Etrafon”)



Session 9 - Central Nervous System Depressants

Methods of Ingestion
CNS Depressants

Orally

Injection

Drug Recognition Expert Course

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Notes:____

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Methods of ingestion of CNS Depressants

- Most common and easiest method is orally
- Some abusers prefer to use intravenous injection for Barbiturates
- Some abusers experience a “flash” or “rush” from intravenous injection of Barbiturates, that they do not experience from oral ingestion

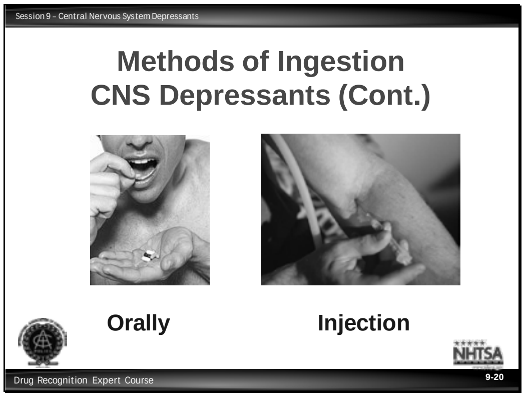
The injection paraphernalia used for Barbiturates are very similar to those used for Heroin.

Examples:

- Spoon, for heating and dissolving the barbiturate
- Cotton, for filtering the solution when drawing it into the needle
- Hypodermic syringe
- Tourniquet

However, the Barbiturate abuser will use a larger hypodermic needle because the barbiturate solution is thicker than the heroin solution.

The injection sites on the skin of a Barbiturate abuser appear quite different from those of a Heroin addict.



Session 9 - Central Nervous System Depressants

Methods of Ingestion
CNS Depressants (Cont.)

Orally

Injection

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Notes:____

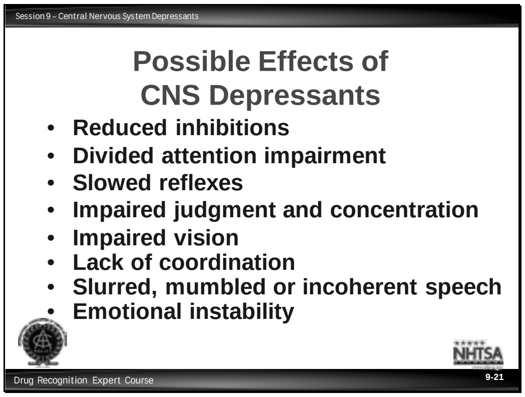
A large swelling, about the size of a quarter or fifty cent piece frequently will appear at the Barbiturate injection site.

Necrosis may occur: i.e. a decaying of the body’s tissue at the injection site.

The dead tissue may begin to separate from the living tissue, producing ulcerations.

The Barbiturate user who injects the drug usually will not display the same type of track marks as the heroin addict who uses repeated injections along the same vein.

Barbiturate abusers often will inject in parts of the body other than the forearm, and will commonly exhibit the characteristic swellings at random locations on the extremities.



Session 9 – Central Nervous System Depressants

Possible Effects of CNS Depressants

- Reduced inhibitions
- Divided attention impairment
- Slowed reflexes
- Impaired judgment and concentration
- Impaired vision
- Lack of coordination
- Slurred, mumbled or incoherent speech
- Emotional instability

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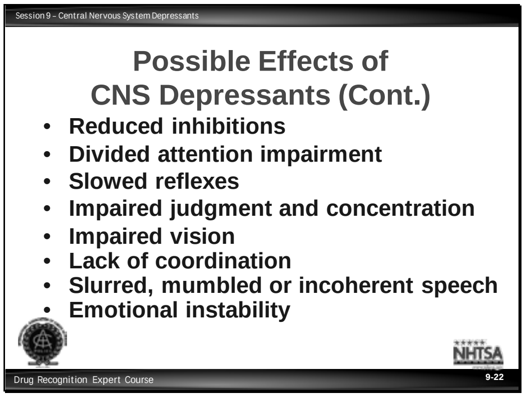
Notes:____

B. Possible Effects

CNS Depressants produce impairments of the human mind and body that essentially mirror alcohol impairment.

- Reduced social inhibitions
- Divided attention impairment
    - Clarification: impede the person's ability to concentrate on more than one thing at a time.
- Slowed reflexes
- Impaired judgment and concentration
- Impaired vision
    - Elaboration: ability to focus eyes may be impaired; "double vision" may develop.
- Lack of coordination
- Slurred, mumbled, or incoherent speech
- Produce a variety of emotional effects, such as euphoria, depression, suicidal tendencies, laughing or crying without provocation, etc.



Session 9 – Central Nervous System Depressants

Possible Effects of CNS Depressants (Cont.)

- Reduced inhibitions
- Divided attention impairment
- Slowed reflexes
- Impaired judgment and concentration
- Impaired vision
- Lack of coordination
- Slurred, mumbled or incoherent speech
- Emotional instability

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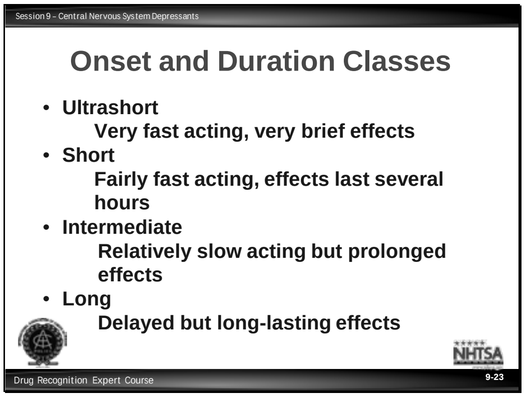
Notes:____

Generally speaking, a person under the influence of CNS Depressants will look and act drunk.



Session 9 – Central Nervous System Depressants

Onset and Duration Classes

- **Ultrashort**
  Very fast acting, very brief effects
- **Short**
  Fairly fast acting, effects last several hours
- **Intermediate**
  Relatively slow acting but prolonged effects
- **Long**
  Delayed but long-lasting effects

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Notes:

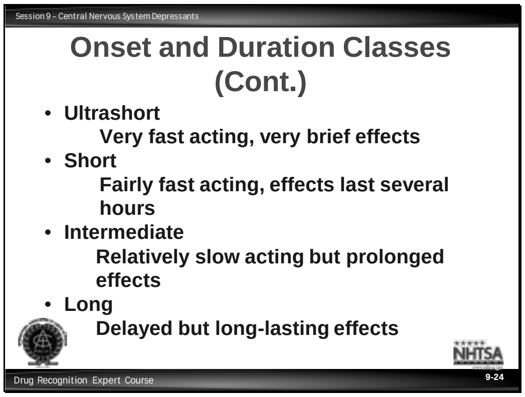
C. Onset and Duration Effects

Depressant drugs can be grouped loosely into four classes based on how quickly they take effect and how long their effects last.

Ultrashort:

- Very fast acting, very brief effects
- Take effect in a matter of seconds
- Effects last only a few minutes
- Very rarely are the “drugs of choice” for drug abusers

Ultrashort depressants are sometimes used at the beginning of a surgical operation, in conjunction with an inhaled anesthetic.



Session 9 – Central Nervous System Depressants

Onset and Duration Classes (Cont.)

- **Ultrashort**
  Very fast acting, very brief effects
- **Short**
  Fairly fast acting, effects last several hours
- **Intermediate**
  Relatively slow acting but prolonged effects
- **Long**
  Delayed but long-lasting effects

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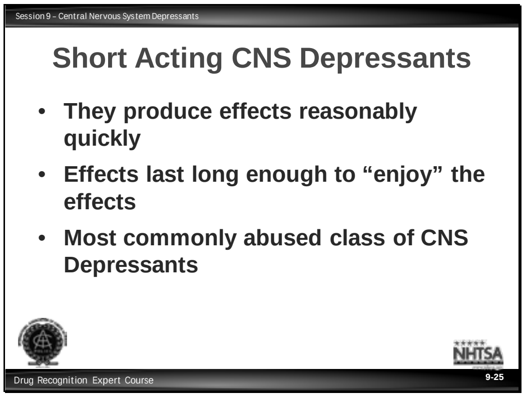
Notes:

Clarification: to provide a momentary sedation to ease the patient’s anxiety and allow for the proper administration of the anesthetic.

Psychiatrists sometimes use ultrashort depressants at the beginning of a session, to reduce the client’s inhibitions and foster a free and open communication.

An example of an ultrashort depressant is Brevital Sodium which is a rapid, injectable barbiturate anesthetic mainly used in hospital settings.



Session 9 – Central Nervous System Depressants

Short Acting CNS Depressants

- They produce effects reasonably quickly
- Effects last long enough to "enjoy" the effects
- Most commonly abused class of CNS Depressants

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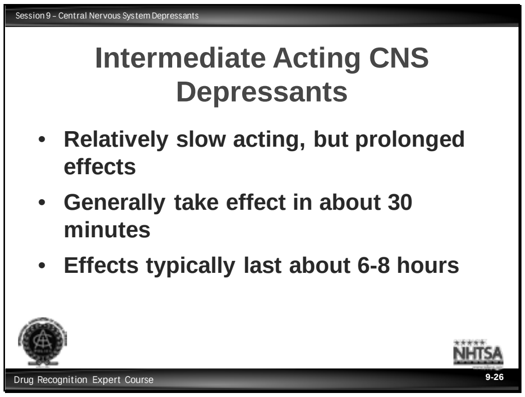
Short Acting

Short: fairly fast acting, effects last for approximately 4-5 hours.

- They produce effects reasonably quickly
- The effects last long enough to "enjoy" the effects
- The effects can take up to 40 minutes to be activated
- Effects last for approximately 5 hours
- This is the most commonly abused class of CNS Depressants

Short Acting Depressants frequently are prescribed as a treatment for insomnia. They also may be used as a pre-anesthetic medication to calm a patient prior to surgery.

A common example of a short acting Depressant, Secobarbital, Brand name "Seconal"



Session 9 – Central Nervous System Depressants

Intermediate Acting CNS Depressants

- Relatively slow acting, but prolonged effects
- Generally take effect in about 30 minutes
- Effects typically last about 6-8 hours

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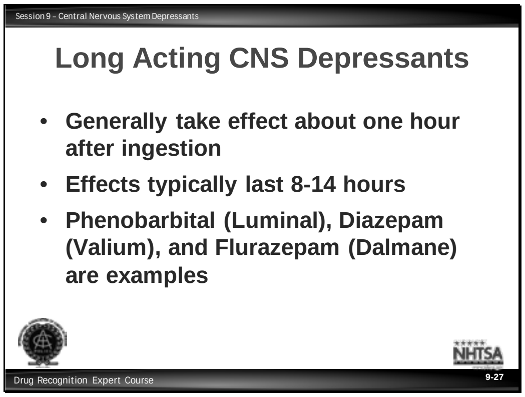
Intermediate Acting

Intermediate: relatively slow acting, but prolonged effects.

- Generally take effect in about 30 minutes
- Effects typically last about 6 – 8 hours
- Fairly often abused, especially by users who desire a longer lasting state of intoxication. Medical use of this class of drugs is similar to that of short acting Depressants (i.e. treat insomnia, etc.) Common example of an intermediate Depressant: Amobarbital, brand name "Amytal".



Session 9 – Central Nervous System Depressants

Long Acting CNS Depressants

- Generally take effect about one hour after ingestion
- Effects typically last 8-14 hours
- Phenobarbital (Luminal), Diazepam (Valium), and Flurazepam (Dalmane) are examples

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Notes:

Long Acting: delayed but long lasting effects.

- Generally take effect about one hour after ingestion
- Effects typically last 8 – 14 hours.
- Generally not the “drugs of choice” for abusers, however, some people will abuse the long acting Depressants if the more popular short and intermediate types are not readily available.

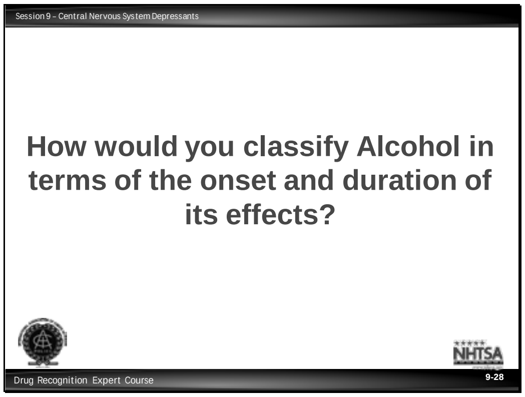
Long acting Depressants are used medically in the control of epilepsy and of other conditions that can cause convulsions.

They can also be used to provide continuing sedation to patients suffering from extreme anxiety.

A common example of a long acting depressant is Phenobarbital (Luminal) used primarily as a daytime sedative and anticonvulsant.

Other long acting depressants include:

- Diazepam (Valium) and
- Flurazepam (Dalmane).



Session 9 – Central Nervous System Depressants

How would you classify Alcohol in terms of the onset and duration of its effects?

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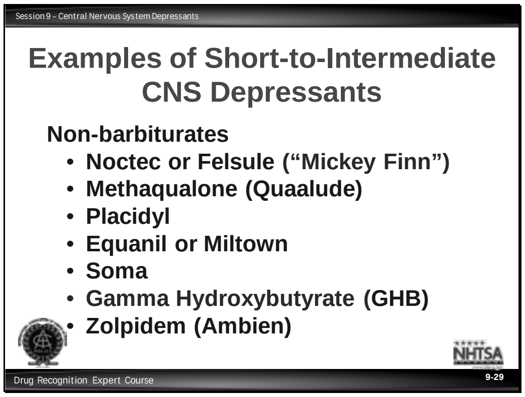
Notes:

Alcohol as a Specific Example



Session 9 – Central Nervous System Depressants

Examples of Short-to-Intermediate CNS Depressants

Non-barbiturates
- **Noctec or Felsule (“Mickey Finn”)**
- **Methaqualone (Quaalude)**
- **Placidyl**
- **Equanil or Miltown**
- **Soma**
- **Gamma Hydroxybutyrate (GHB)**
- **Zolpidem (Ambien)**

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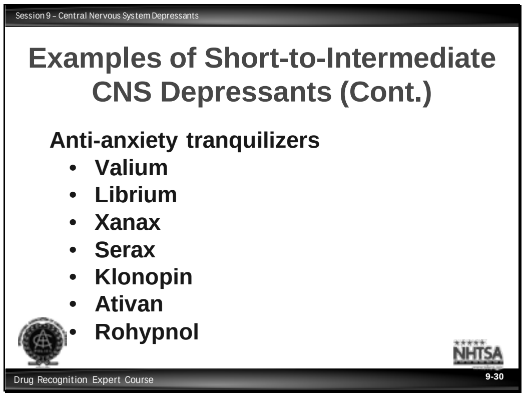
Notes:____

Non-Barbiturates

- Noctec or Felsule (“Mickey Finn”)
- Methaqualone (Quaalude) (“Ludes”) – removed from U.S. market in 1984. Mainly produced illicitly.
- Ethchlorvynol (Placidyl)
- Meprobamate (Equanil or Miltown)
- Carisoprodol (Soma)
- Gamma Hydroxybutyrate (GHB)
- Zolpidem (Ambien)



Session 9 – Central Nervous System Depressants

Examples of Short-to-Intermediate CNS Depressants (Cont.)

Anti-anxiety tranquilizers
- **Valium**
- **Librium**
- **Xanax**
- **Serax**
- **Klonopin**
- **Ativan**
- **Rohypnol**

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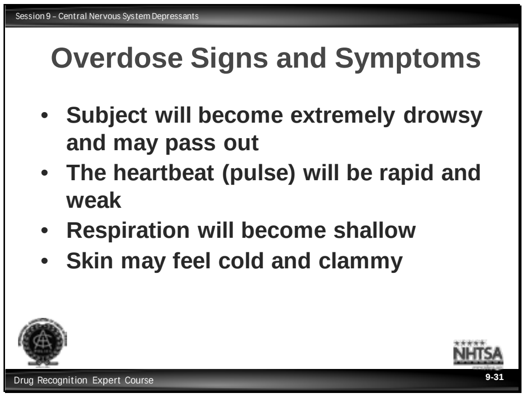
Notes:____

Anti-Anxiety Tranquilizers

- Diazepam (Valium)
- Chlordiazepoxide (Librium)
- Alprazolam (Xanax)
- Oxazepam (Serax)
- Clonazepam (Klonopin)
- Lorazepam (Ativan)
- Flunitrazepam (Rohypnol)



Session 9 – Central Nervous System Depressants

Overdose Signs and Symptoms

- Subject will become extremely drowsy and may pass out
- The heartbeat (pulse) will be rapid and weak
- Respiration will become shallow
- Skin may feel cold and clammy

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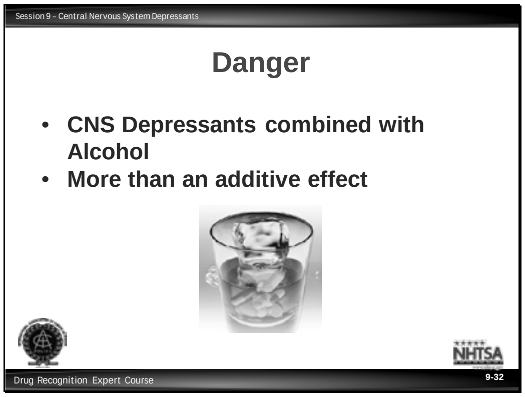
Notes:

D. Overdose Signs and Symptoms

Overdoses of the Central Nervous System Depressants produce symptoms essentially identical to those of alcohol overdoses.

- Subject will become extremely drowsy and may pass out
- The heartbeat (pulse) will be rapid and weak
- Respiration will become shallow
- Skin may feel cold and clammy
- One major danger with CNS Depressant overdoses is death from respiratory failure
- A sufficiently high dose of CNS Depressant will suppress the portions of the brain that control respiration

This situation only rarely occurs from alcohol intoxication: usually, a drinker will pass out before he or she consumes enough alcohol to suppress respiration completely. With other depressants, it is relatively easy to take a fatal overdose.



Danger

- **CNS Depressants combined with Alcohol**
- **More than an additive effect**

Notes:____

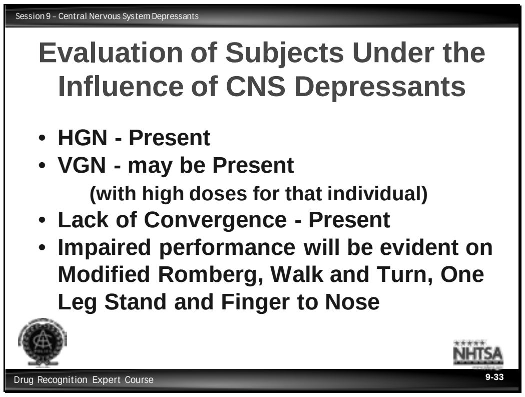
Another major danger with CNS Depressants occurs when they are combined with alcohol.

Clarification: the combination of alcohol and certain other CNS Depressants may produce an effect greater than the sum of the effects of the two drugs independently. There is at least an additive effect when alcohol and another depressant are taken together.

With many CNS Depressants, there may be more than an additive effect. Coroners have reported a number of cases in which neither the alcohol level nor the depressant level independently would have been close to a fatal dose.

It is not possible to predict how great an effect will occur when alcohol is mixed with another depressant.

However, it is clear that the combination is always risky.



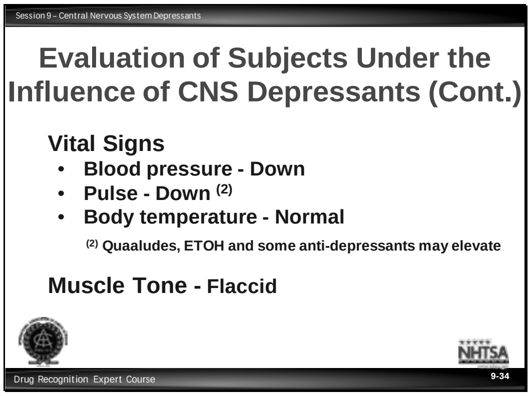
Evaluation of Subjects Under the Influence of CNS Depressants

- **HGN - Present**
- **VGN - may be Present**
  (with high doses for that individual)
- **Lack of Convergence - Present**
- **Impaired performance will be evident on Modified Romberg, Walk and Turn, One Leg Stand and Finger to Nose**

Notes:____

E. Expected Results of the Evaluation

Observable Evidence of Impairment
Horizontal Gaze Nystagmus will be present with subjects under the influence of CNS Depressants.
Vertical Gaze Nystagmus may be present, with high doses, of depressants for that individual.
Performance on Modified Romberg Balance, Walk and Turn, One Leg Stand, and Finger to Nose tests will be similar to that of subjects impaired by alcohol.



Session 9 – Central Nervous System Depressants

Evaluation of Subjects Under the Influence of CNS Depressants (Cont.)

Vital Signs

- **Blood pressure - Down**
- **Pulse - Down (2)**
- **Body temperature - Normal**

(2) Quaaludes, ETOH and some anti-depressants may elevate

Muscle Tone - Flaccid

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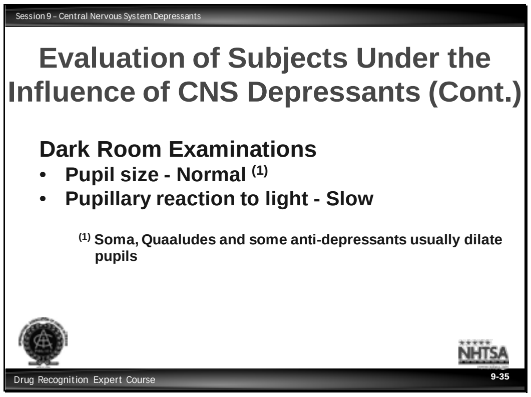
Notes:____

Vital Signs

- Blood pressure will be Down
- Pulse will be Down (2)
- (2) Quaaludes, ETOH and possibly some anti-depressants may elevate.
- Body temperature generally will be in the Normal Range (98.6 plus or minus one degree)

Muscle Tone

- Muscle tone will be Flaccid



Session 9 – Central Nervous System Depressants

Evaluation of Subjects Under the Influence of CNS Depressants (Cont.)

Dark Room Examinations

- **Pupil size - Normal (1)**
- **Pupillary reaction to light - Slow**

(1) Soma, Quaaludes and some anti-depressants usually dilate pupils

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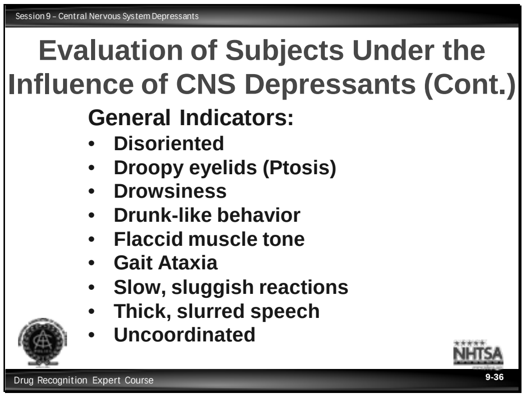
Notes:____

Dark Room Examinations

- Pupil sizes will generally be Normal
    - (1) Soma, Quaaludes and possibly some anti-depressants usually dilate pupils.
- Pupillary reaction to light will be Slowed



Session 9 - Central Nervous System Depressants

Evaluation of Subjects Under the Influence of CNS Depressants (Cont.)

General Indicators:

- **Disoriented**
- **Droopy eyelids (Ptosis)**
- **Drowsiness**
- **Drunk-like behavior**
- **Flaccid muscle tone**
- **Gait Ataxia**
- **Slow, sluggish reactions**
- **Thick, slurred speech**
- **Uncoordinated**

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Notes:____

General Indicators

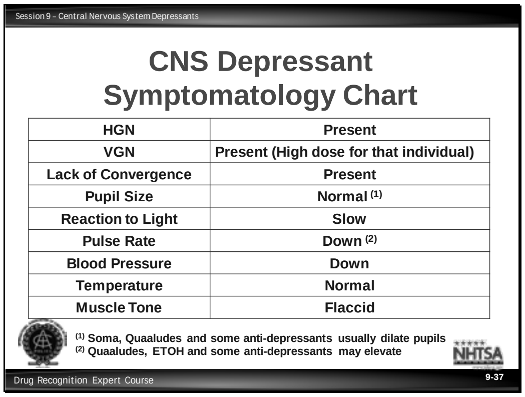
- Disoriented
- Droopy eyes (ptosis)
- Drowsiness
- Drunk-like behavior
- Flaccid muscle tone
- Gait ataxia
- Slow, sluggish reactions
- Thick, slurred speech
- Uncoordinated

NOTE:

- With Methaqualone, pulse will be elevated and body tremors will be evident.
- Alcohol, Quaaludes and possibly some anti-depressants elevate the pulse.
- Soma, Quaaludes and possibly some anti-depressants usually dilate pupils.

Anti-Depressant Exceptions:

- As a reminder, some Anti-Depressants may cause elevated pulse rate and pupil dilation.
- Anti-Depressants may cause dry, sore throat, dry mouth, blurred vision, urinary retention, muscle twitching, restlessness, and increased anxiety.


Session 9 – Central Nervous System Depressants

CNS Depressant Symptomatology Chart

HGN	Present
VGN	Present (High dose for that individual)
Lack of Convergence	Present
Pupil Size	Normal (1)
Reaction to Light	Slow
Pulse Rate	Down (2)
Blood Pressure	Down
Temperature	Normal
Muscle Tone	Flaccid

(1) Soma, Quaaludes and some anti-depressants usually dilate pupils
(2) Quaaludes, ETOH and some anti-depressants may elevate

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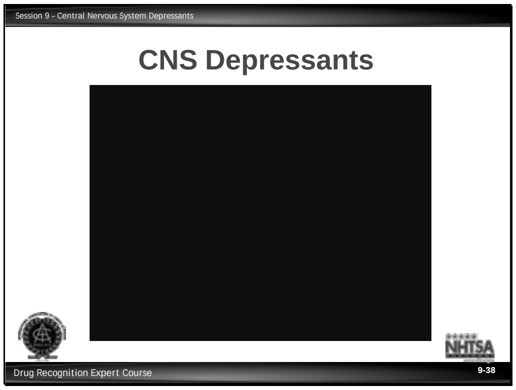
Session 9 – Central Nervous System Depressants

CNS Depressants

Drug Recognition Expert Course 9-38

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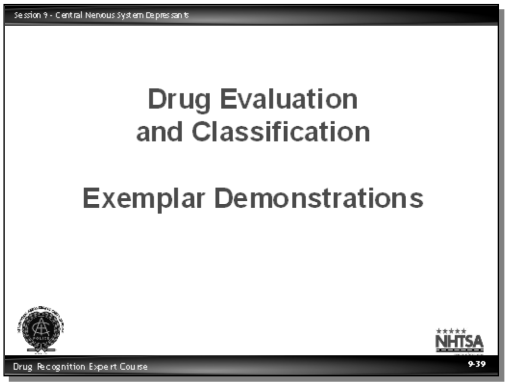
Session 9 - Central Nervous System Depressants

Drug Evaluation and Classification

Exemplar Demonstrations

Drug Recognition Expert Course 9-39

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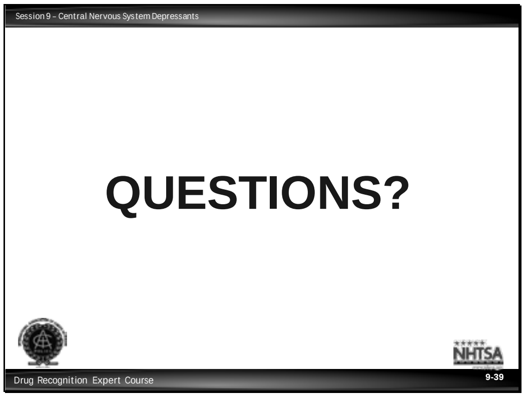
F. Classification Exemplar


Session 9 – Central Nervous System Depressants

QUESTIONS?

Drug Recognition Expert Course

9-39

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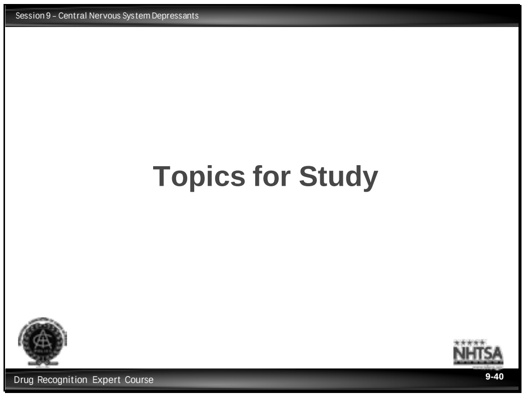

Session 9 – Central Nervous System Depressants

Topics for Study

Drug Recognition Expert Course

9-40

TOPICS FOR STUDY

1. Name the six major subcategories of CNS Depressants.

2. Name the four groups of Depressants based on onset and duration time factors.

3. To which subcategory of Depressants does Thorazine belong? To which subcategory does Chloral Hydrate belong? To which subcategory does Xanax belong?

4. Name a CNS Depressant that usually causes the pupils to dilate.

5. What is the generic name for the drug that has the trade name “Prozac”?

6. What is a trade name for the generic drug "Alprazolam"?

7. What is the name of the subcategory of CNS Depressants that is also known as the "Minor Tranquilizers"?

DRUG INFLUENCE EVALUATION

Evaluator: Leo Hegarty, PA State Police
DRE #: 11947
Rolling Log #: 12-08-155
Session IX #1

Recorder/Witness: George Geisler, Old Lycoming PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-445788

Arrestee's Name (Last, First, Middle): Cramer, Carolyn L.
Date of Birth: 4/21/64
Sex: F
Race: W
Arresting Officer (Name, ID#): Trooper Frank Cichra, PA SP #13886

Date Examined / Time /Location: 08-06-12, 0145, Harrisburg SP Barracks
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 100324
Chemical Test: Urine ☒ Blood ☐
Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Tpr. Cichra
What have you eaten today? Chicken Soup
When? 8 pm
What have you been drinking? Nothing
How much? N/A
Time of last drink? N/A

Time now/ Actual: "Midnight" / 0145
When did you last sleep? How long: Last night/ 6 hours
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☐ No "None of your business"
Attitude: Sullen, With-drawn, non-responsive at times
Coordination: Poor, Stumbling, Staggering

Speech: Slurred at times
Breath Odor: Normal
Face: Normal

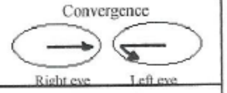
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

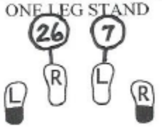
Pulse and time
1. 60 / 0222
2. 58 / 0230
3. 58 / 0244

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	35	35

Convergence

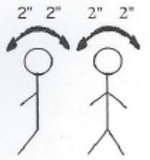


26 ONE LEG STAND 28



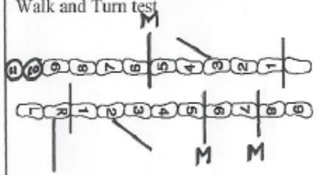
L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☑ ☑ Hopping
☑ ☑ Puts foot down

Modified Romberg Balance



Internal clock
46 estimated as 30 seconds

Walk and Turn test



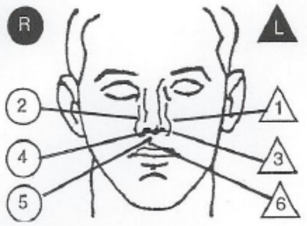
Took two extra steps at end

Cannot keep balance ✓
Starts too soon ✓

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓✓	✓
Steps off line	✓	✓
Raises arms	✓✓	✓
Actual steps taken	9	11

Describe Turn: Lost balance
Cannot do test (explain): N/A
Type of footwear: Loafers

Draw lines to spots touched

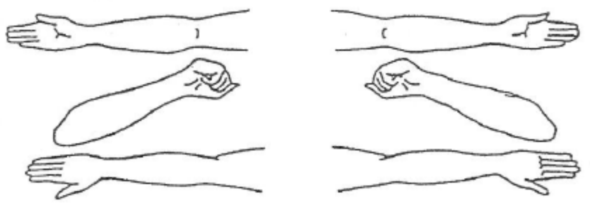


PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.0	6.0	3.5
Right Eye	4.0	6.0	3.5

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM LEFT ARM



Blood pressure: 110/70
Temperature: 98.2

Nothing observed

Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "I told you, it's none of your business"
How much? No response
Time of use? No response
Where were the drugs used? (Location) No response

Date / Time of arrest: 08/06/12 0115
Time DRE was notified: 0130
Evaluation start time: 0145
Evaluation completion time: 0300
Precinct/Station: Harrisburg

Officer's Signature:
DRE # 13886
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ■ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect: Cramer, Carolyn

1. **LOCATION:** The evaluation was conducted at Harrisburg State Police Barracks.

2. **WITNESSES:** George Geisler of the Old Lycoming PD recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Cramer’s breath test was 0.00%

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was notified that Trooper Cichra had arrested a subject for DUI and was requesting a drug evaluation. Writer contacted Trooper Cichra at the Harrisburg SP Barracks where it was determined that the suspect had been observed driving at 30 MPH on I-283. When contacted, the suspect appeared dazed and disoriented. She was unable to perform the roadside SFST's as directed and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the Interview Room. She was quiet, withdrawn and slow to respond to questions. When she would try to walk, she would stumble and several times nearly fell.

6. **MEDICAL PROBLEMS AND TREATMENT:** None observed or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: The suspect exhibited a 2" front to back and side to side sway. She estimated 30 seconds in 46 seconds. Walk and Turn: The suspect lost her balance during the instructions, started too soon, stepped off the line twice, missed heel to toe, raised her arms for balance, staggered to the right while turning and took two extra steps returning back down the line. One Leg Stand: The suspect swayed, raised her arms for balance, hopped and put her foot down. Finger to Nose: Suspect missed the tip of her nose on five of the six attempts.

8. **CLINICAL INDICATORS:** The suspect exhibited six clues of HGN and a Lack of Convergence. Two of her pulse ratess were below the DRE average range and her Systolic blood pressure was also below the DRE average range.

9. **SIGNS OF INGESTION:** None were evident.

10. **SUSPECT’S STATEMENTS:** The suspect admitted taking "some medicine" her brother gave her. She also stated she did not know what the medicine was.

11. **DRE’S OPINION:** In my opinion Cramer is under the influence of a **CNS Depressant** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample for analysis.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator Sgt. Helena Williams, California H.P.	DRE # 5249	Rolling Log # 12-09-32	**Session IX #2**
Recorder/Witness Officer Travis Herbert, CHP	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-889775

Arrestee's Name (Last, First, Middle) Henry, Michael James	Date of Birth 3/11/70	Sex M	Race W	Arresting Officer (Name, ID#) Officer Cindy Morgan, CHP #5881

Date Examined / Time /Location: 09-06-12, 2110 W. Sacramento

Breath Results: Results: 0.00 Test Refused ☐ Instrument #: 200548

Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No Given By: Ofc. Morgan

What have you eaten today? When? Cheeseburger 10

What have you been drinking? Nothing

How much? N/A

Time of last drink? N/A

Time now/ Actual: 10 pm / 2115

When did you last sleep? How long: Last night / 8 hours

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical defects? ☐ Yes ☒ No

Are you under the care of a doctor or dentist? ☒ Yes ☐ No Doctor for Stress

Are you taking any medication or drugs? ☒ Yes ☐ No "Just Xanax"

Attitude: Withdrawn, Cooperative

Coordination: Poor, Slow, Sluggish

Speech: Slurred, thick at times

Breath Odor: Normal

Face: Normal

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ Left ☐ Right

Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)

Vertical Nystagmus ☐ Yes ☒ No

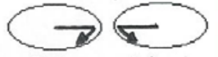
Able to follow stimulus ☒ Yes ☐ No

Eyelids ☐ Normal ☒ Droopy

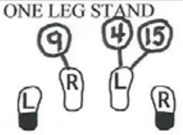
Pulse and time
1. 62 / 2130
2. 62 / 2142
3. 58 / 2200

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	40	40

Convergence

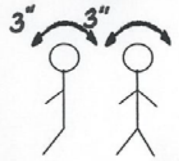


29 ONE LEG STAND 27

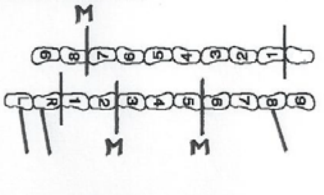


L	R	
☑✓	☑✓	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑	☑✓	Puts foot down

Modified Romberg Balance



Walk and turn test



Slow, rubber legged walk

Cannot keep balance ✓✓

Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓✓	✓
Steps off line	✓	
Raises arms	✓✓✓	✓✓✓✓
Actual steps taken	9	9

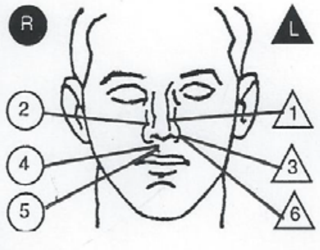
Internal clock: 50 estimated as 30 seconds

Describe Turn: Lost balance

Cannot do test (explain): N/A

Type of footwear: Lace up boots

Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.5	6.5	3.5
Right Eye	4.5	6.5	3.5

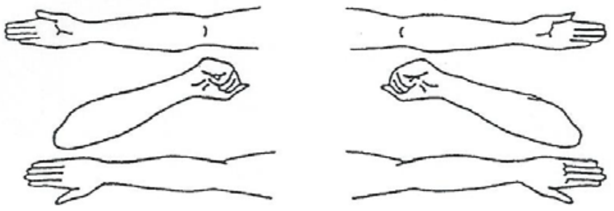
Nasal area: Clear

Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: Slow

RIGHT ARM LEFT ARM



Nothing observed

Blood pressure: 106/66

Temperature: 98.6

Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using? Xanax

How much? A couple

Time of use? 6 pm

Where were the drugs used? (Location) McDonald's

Date / Time of arrest: 09/06/12 2015

Time DRE was notified: 2040

Evaluation start time: 2110

Evaluation completion time: 2220

Precinct/Station: West Sac

Officer's Signature:

DRE # 5249

Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ■ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect: Henry, Michael J.

1. LOCATION: The evaluation took place at the West Sacramento CHP office.

2. WITNESSES: Officer Travis Herbert of the CHP recorded the evaluation.

3. BREATH ALCOHOL TEST: Henry's breath test was a 0.00%

4. NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER: I was requested to conduct a drug evaluation for Officer Morgan at the West Sacramento CHP office. Officer Morgan advised that she had located the suspect slumped over in the driver's seat of a vehicle stopped in the S/B traffic lane of S.R. 49. Officer Morgan further advised that the suspect appeared to be impaired and performed poorly on the SFST's.

5. INITIAL OBSERVATION OF SUSPECT: I first observed the suspect in a slumped position in a chair next to the interview room desk. The suspect was mumbling, had thick, slurred speech and was slow to respond to questions.

6. MEDICAL PROBLEMS AND TREATMENT: The suspect stated he was under the care of a doctor for stress and was not in need of any medical assistance.

7. PSYCHOPHYSICAL TESTS: Modified Romberg Balance: The suspect swayed approximately 3" front to back and estimated 30 seconds in 50 seconds. Walk and Turn: The suspect lost his balance twice during the instructions, stepped off the line, missed heel to toe three times, raised his arms for balance and lost his balance while turning. One Leg Stand: Suspect swayed, raised his arms for balance and put his foot down once while standing on the left foot and twice while standing on the right foot. Finger to Nose: The suspect missed the tip of his nose on each of the six attempts.

8. CLINICAL INDICATORS: Henry exhibited six clues of HGN and a Lack of Convergence. One of his pulse rates was below the DRE average range and his blood pressure was also below the DRE average ranges.

9. SIGNS OF INGESTION: None observed.

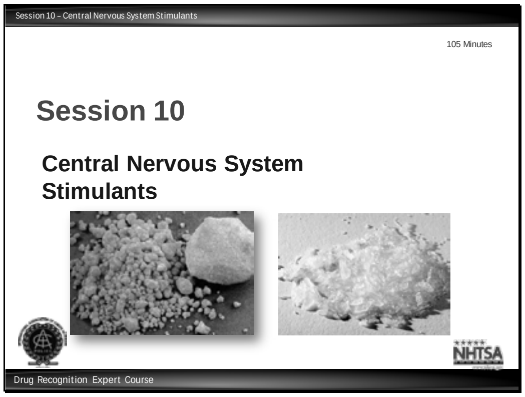
10. SUSPECT'S STATEMENTS: The suspect admitted taking Xanax. He stated he normally takes the Xanax three times a day for stress and may have taken more today.

11. DRE'S OPINION: In my opinion Henry is under the influence of a **CNS Depressant** and was unable to operate a vehicle safely.

12. TOXICOLOGICAL SAMPLE: The suspect provided a urine sample.

13. MISCELLANEOUS: The suspect voluntarily produced a pill bottle containing Xanax pills. A prescription for 30 pills had been filled two days earlier and there were 12 pills in the bottle.

Participant Manual DRE 7-Day Session 10 – Practice: Test Interpretation



Session 10 – Central Nervous System Stimulants

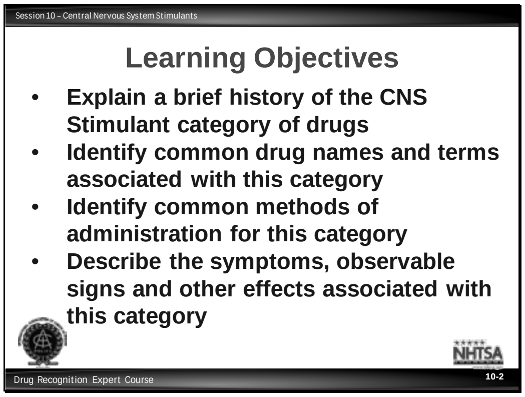
105 Minutes

Session 10

Central Nervous System Stimulants

Drug Recognition Expert Course

Notes:



Session 10 – Central Nervous System Stimulants

Learning Objectives

- Explain a brief history of the CNS Stimulant category of drugs
- Identify common drug names and terms associated with this category
- Identify common methods of administration for this category
- Describe the symptoms, observable signs and other effects associated with this category

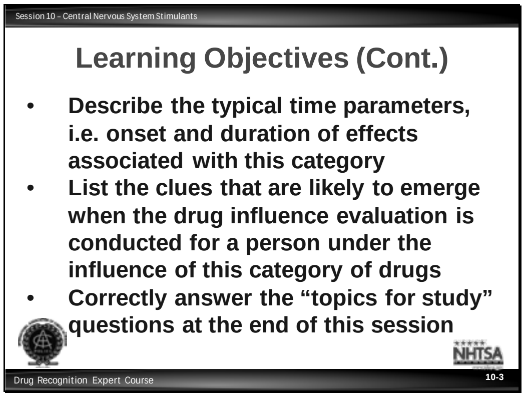
Drug Recognition Expert Course

10-2

Notes:

Upon successfully completing this session the participant will be able to:

- Explain a brief history of the CNS Stimulant category of drugs.
- Identify common drug names and terms associated with this category.
- Identify common methods of administration for this category.
- Describe the symptoms, observable signs and other effects associated with this category.



Session 10 – Central Nervous System Stimulants

Learning Objectives (Cont.)

- Describe the typical time parameters, i.e. onset and duration of effects associated with this category
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs
- Correctly answer the “topics for study” questions at the end of this session

Drug Recognition Expert Course

10-3

Notes:____
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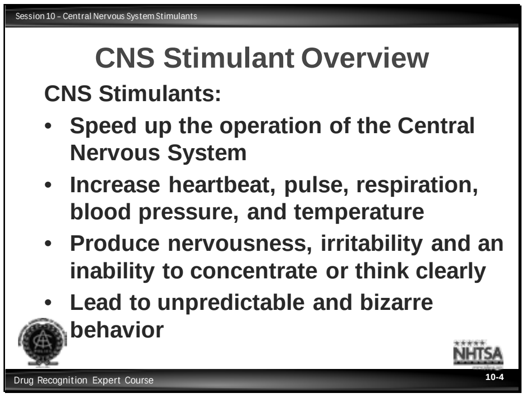
- Describe typical time parameters, i.e. onset and duration of effects, associated with this category.
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs.
- Correctly answer the “topics for study” questions at the end of this session.

CONTENT SEGMENTS

A. Overview of the Category
B. Possible Effects
C. Onset and Duration Effects
D. Overdose Signs and Symptoms
E. Expected Results of the Evaluation
F. Classification Exemplar

LEARNING ACTIVITIES

Instructor Led Presentations
Review of the Drug Evaluation and Classification Exemplars
Reading Assignments
Video Presentations
Slide Presentations



Session 10 – Central Nervous System Stimulants

CNS Stimulant Overview

CNS Stimulants:

- **Speed up the operation of the Central Nervous System**
- **Increase heartbeat, pulse, respiration, blood pressure, and temperature**
- **Produce nervousness, irritability and an inability to concentrate or think clearly**
- **Lead to unpredictable and bizarre behavior**

Drug Recognition Expert Course

10-4

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A. Overview of the Category

CNS Stimulants speed up the operation of the Central Nervous System.

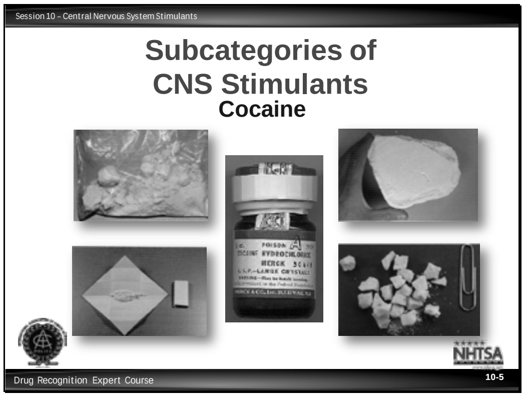
- “Speed Up” does not mean “improve.”
- Emphasize that abuse of CNS Stimulants does not make the brain work “better” or “smarter.” Rather, they induce the brain to cause many of the body’s organs to work harder, but not better.
- The “speeding up” results in increased heartbeat, pulse, respiration, blood pressure, and temperature.

All of these effects can lead to physical harm to the stimulant user.

- However, Robert Louis Stevenson wrote “The Strange Case of Dr. Jekyll and Mr. Hyde” while under the influence of Cocaine. He wrote sixty thousand words in six days.

The “speeding up” also produces nervousness, irritability and an inability to concentrate or think clearly.

These psychological effects can lead to unpredictable and bizarre behavior by the stimulant user.



Session 10 – Central Nervous System Stimulants

Subcategories of CNS Stimulants

Cocaine

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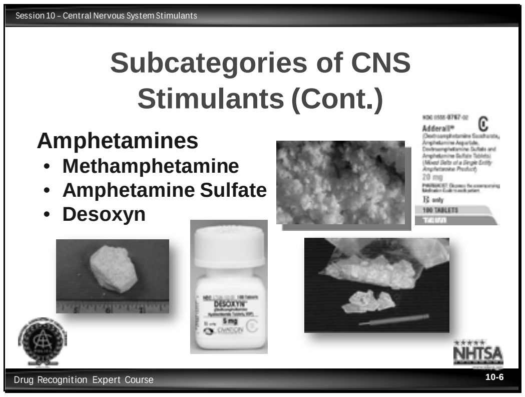
10-5

Notes:____

Subcategories of CNS Stimulants

There are three major subcategories of Central Nervous System Stimulants.

Cocaine



Session 10 – Central Nervous System Stimulants

Subcategories of CNS Stimulants (Cont.)

Amphetamines
- Methamphetamine
- Amphetamine Sulfate
- Desoxyn

Drug Recognition Expert Course

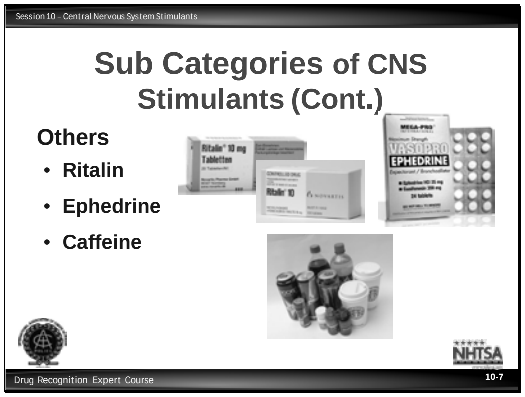
10-6

Notes:____

The Amphetamines

Examples:

- Methamphetamine
- Amphetamine Sulfate
- Desoxyn
  - Also includes (d-methamphetamine) (d-desoxyephedrine) and Methedrine.
  - Desoxyn was first developed in 1919 and has been used clinically since 1930. Mainly used for the treatment of obesity, narcolepsy and attention disorder.



Session 10 – Central Nervous System Stimulants

Sub Categories of CNS Stimulants (Cont.)

Others

- **Ritalin**
- **Ephedrine**
- **Caffeine**

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10-7

Ritalin® 10 mg Tabletten
Ritalin® 10
MEGA-PRO
VASOPRO
EPHEDRINE
NHTSA

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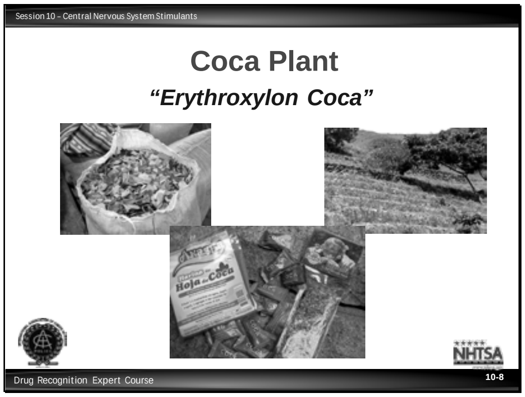
Others

There are many "other" CNS Stimulants (i.e., non-Cocaine and non-Amphetamines); the ones listed on the visual are only a few of those.

- Ritalin (methylphenidate hydrochloride)
    - Also brand names of Concerta, Daytrana. Used in the treatment of depression, narcolepsy and ADD (Attention Deficit Disorder)
- Ephedrine –(Primatene, Quadrinal)
    - Can be found in some naturally-occurring plants such as the Chinese herb ma huang. Used as a nasal decongestant and bronchodilator. Contained in numerous OTC supplements and energy products
- Caffeine
    - Contained in coffee and numerous energy drinks. Some "Monster drinks" contain as much as 240 milligrams of caffeine. Can be fatal at about 10 grams.



Session 10 – Central Nervous System Stimulants

Coca Plant

“Erythroxylon Coca”

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10-8

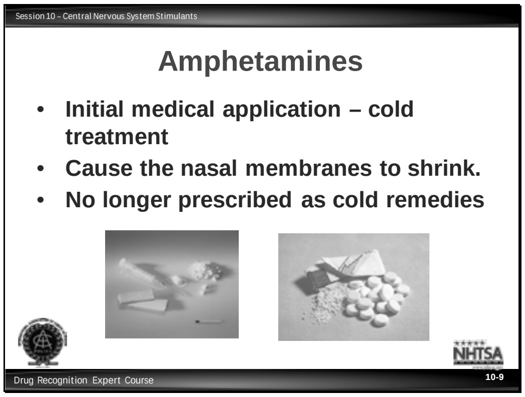
Notes:______________________________

Cocaine

Coca plant: Scientific name “Erythroxylon Coca.”

Cocaine derives from the coca plant.

- The plant is native to South America.
- Cocaine is made from the leaves of the coca plant.
- Archaeological evidence indicates that natives of Peru chewed coca leaves 5,000 years ago.
- Sigmund Freud personally experimented with Cocaine for approximately 3 years.
- Small quantities of Cocaine originally were included in the formula of Coca Cola.
- Use of Cocaine in products as Coca Cola was outlawed by the Pure Food and Drug Law of 1906.



Session 10 – Central Nervous System Stimulants

Amphetamines

- Initial medical application – cold treatment
- Cause the nasal membranes to shrink.
- No longer prescribed as cold remedies

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Notes:____

Amphetamines

Amphetamines were first synthesized near the end of the 19th Century.

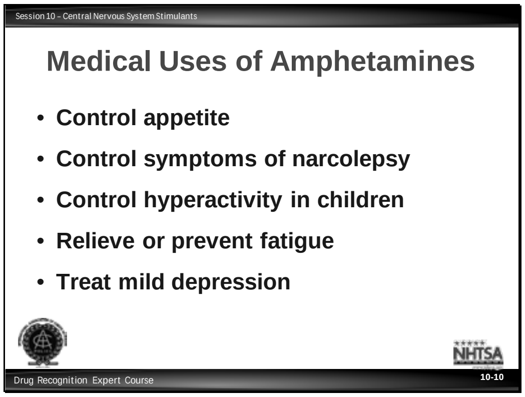
The first use of Amphetamines for medical purposes began in the 1920's.

Initial medical application was to treat colds.

- Amphetamines cause the nasal membranes to shrink.
- This gives temporary relief from stuffy nasal passages.

Amphetamines were prescribed for the treatment of narcolepsy and ADHD (attention deficit hyperactivity disorder).

Amphetamine use grew rapidly when amphetamines were distributed to soldiers during World War II.



Session 10 – Central Nervous System Stimulants

Medical Uses of Amphetamines

- Control appetite
- Control symptoms of narcolepsy
- Control hyperactivity in children
- Relieve or prevent fatigue
- Treat mild depression

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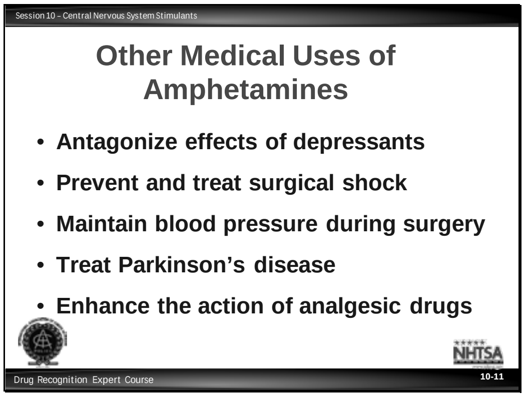
Notes:

Present day medical purposes for amphetamines include:

- Control appetite. Many over the counter appetite control products contain CNS Stimulants as their active ingredient.
- Control symptoms of narcolepsy. Narcolepsy is an extremely rare disorder that causes the individual to fall asleep compulsively, often several hundred times per day.
- Control certain hyperactive behavioral disorders. Example: Ritalin is commonly prescribed for children diagnosed with ADD or similar disorders.
- Relieve or prevent fatigue to allow persons to perform essential tasks of long duration. The U.S. Air Force previously gave pilots amphetamines to keep them alert on long flights. Amphetamines have also had other short term military applications.
- Treat mild depression.



Session 10 – Central Nervous System Stimulants

Other Medical Uses of Amphetamines

- Antagonize effects of depressants
- Prevent and treat surgical shock
- Maintain blood pressure during surgery
- Treat Parkinson's disease
- Enhance the action of analgesic drugs

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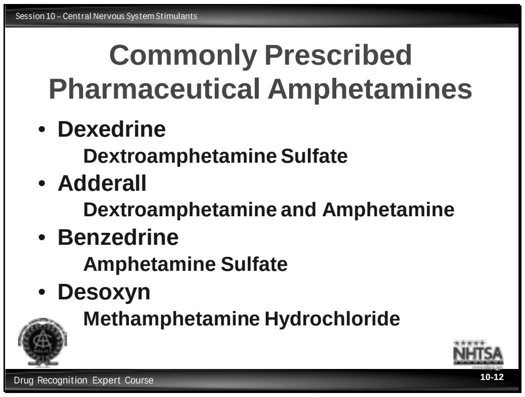
Notes:

- Antagonize the effects of depressant drugs.
- Prevent and treat surgical shock.
- Maintain blood pressure during surgery.
- Treat Parkinson's Disease.
- Enhance the action of certain analgesic (pain killer) drugs.

Numerous pharmaceutical companies manufacture Amphetamines for these purposes.



Session 10 – Central Nervous System Stimulants

Commonly Prescribed Pharmaceutical Amphetamines

- **Dexedrine**
  - **Dextroamphetamine Sulfate**
- **Adderall**
  - **Dextroamphetamine and Amphetamine**
- **Benzedrine**
  - **Amphetamine Sulfate**
- **Desoxyn**
  - **Methamphetamine Hydrochloride**

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Notes:

Examples of common pharmaceutical Amphetamines:

- Dexedrine (dextroamphetamine sulfate) used to treat narcolepsy and hyperkinetic behavior, and for weight control. (Street names “Dexies”; “Hearts”)
- Adderall (Combination of Dextroamphetamine and Amphetamine Sulfate) It is used for the treatment of attention deficit hyperactivity disorder (ADHD) and narcolepsy.
- Benzedrine (Amphetamine Sulfate) used to treat narcolepsy, hyperkinetic behavior and weight problems. (Street names “Bennies”; “Whites”; “Cartwheels”)
- Desoxyn (Methamphetamine Hydrochloride, also known as Desoxyephedrine) used in weight reduction.

Session 10 – Central Nervous System Stimulants

Commonly Abused Illicit Amphetamines

Methamphetamine

Drug Recognition Expert Course

10-13

Notes:____

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Large quantities of Amphetamines are also illegally manufactured in this country.

The most commonly abused illicit Amphetamine is Methamphetamine. Methamphetamine Hydrochloride is a white to light brown crystalline powder, or clear chunky crystals resembling ice. Methamphetamine base is a liquid.

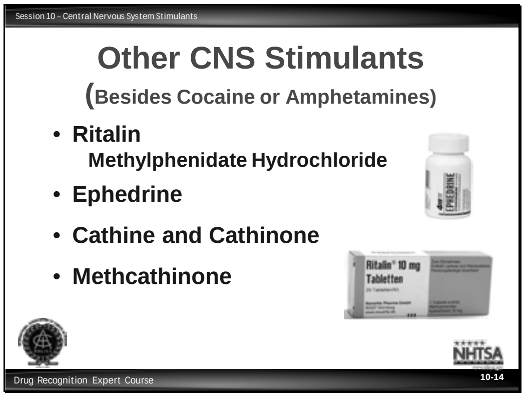
The majority of street Methamphetamine is produced in Clandestine laboratories.

Medicinally, forms of Methamphetamine can be used in the treatment of:

- Narcolepsy
- Attention Deficit Disorder (ADD)
- Attention Deficit Hyperactivity Disorder (ADHD)

Methamphetamine is also known as Methedrine or Methamphetamine Hydrochloride

Its' more common street names are “speed”; “crank”; “ice”; “crystal”; “meth”; and “water.”



Session 10 – Central Nervous System Stimulants

Other CNS Stimulants

(Besides Cocaine or Amphetamines)

- **Ritalin**
  Methylphenidate Hydrochloride
- **Ephedrine**
- **Cathine and Cathinone**
- **Methcathinone**

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Notes:

Other CNS Stimulants

There are some other CNS Stimulants, apart from Cocaine or the Amphetamines.

Ritalin

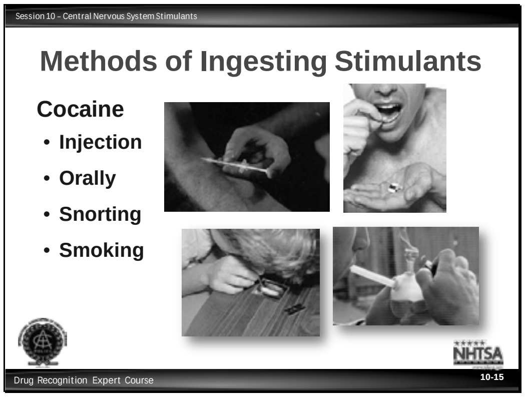
Ritalin is a manufactured, non-Amphetamine CNS Stimulant:

- Generic name Methylphenidate Hydrochloride
- Used to treat mild depression, hyperkinetic behavior, narcolepsy and drug induced lethargy produced by CNS Depressants.
- Has many of the basic clinical effects of Amphetamine.

Ephedrine is a licitly manufactured stimulant used in diet aides and body building supplements. It can also be found in herbal preparations and numerous over-the-counter (OTC) substances.

Cathine and Cathinone are the two psychoactive chemicals derived from the Khat plant. It originates from the sub-Sahara regions of Africa. Also known as “cat.”

Methcathinone is illicitly manufactured from common household chemicals. Effects are very similar to Methamphetamine.



Session 10 – Central Nervous System Stimulants

Methods of Ingesting Stimulants

Cocaine

- **Injection**
- **Orally**
- **Snorting**
- **Smoking**

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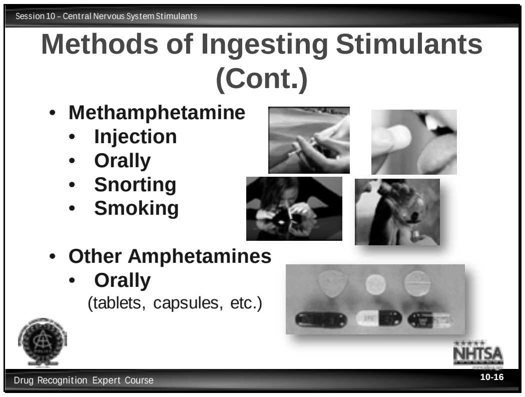
Methods of Ingestion of CNS Stimulants

There are a variety of ways in which the different CNS Stimulants may be ingested.

Cocaine is commonly insufflated (snorted), smoked, injected and taken orally.

In order to be smoked, a pure form of Cocaine is required.

- Much of the Cocaine sold in this country is mixed with other materials, or chemically bonded to other elements.
- Various chemical processes can be used to “free” the Cocaine from other elements and impurities.
- One such process produces pure Cocaine in the form of small chunks.
- These chunks are known as “Crack” or “Rock Cocaine.”
- Licitly manufactured Amphetamines are taken orally, in the form of tablets, capsules and liquid elixirs.



Session 10 – Central Nervous System Stimulants

Methods of Ingesting Stimulants (Cont.)

- **Methamphetamine**
  - **Injection**
  - **Orally**
  - **Snorting**
  - **Smoking**
- **Other Amphetamines**
  - **Orally**
    (tablets, capsules, etc.)

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Notes:____

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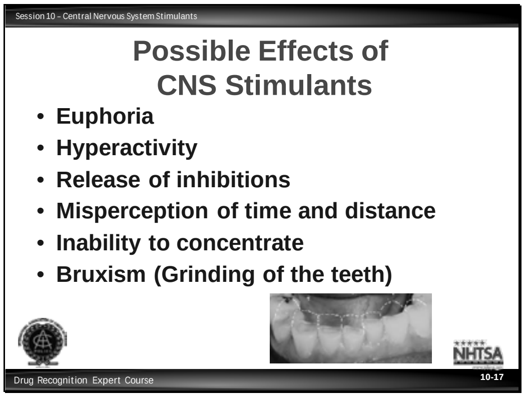
- Illicitly manufactured Methamphetamine most commonly is injected or smoked but sometimes may be snorted or taken orally.
- The smokable forms of Methamphetamine are known as “Crystal Meth” or “Ice.” They contain the same active chemical compound as powdered Methamphetamine, but undergo a re-crystallization process in which some impurities are removed.
- Amphetamine Sulfate usually is produced in tablet form (called “mini bennies”) and is taken orally.



Session 10 – Central Nervous System Stimulants

Possible Effects of CNS Stimulants

- Euphoria
- Hyperactivity
- Release of inhibitions
- Misperception of time and distance
- Inability to concentrate
- Bruxism (Grinding of the teeth)

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Notes:

B. Possible Effects

Cocaine, Amphetamines and most stimulants produce euphoria, a feeling that there are no problems.

- A feeling of super strength and absolute self-confidence may also be present.
- With Cocaine, but not with Amphetamines, there is an anesthetic effect, and the dulling of pain may contribute to the euphoria.

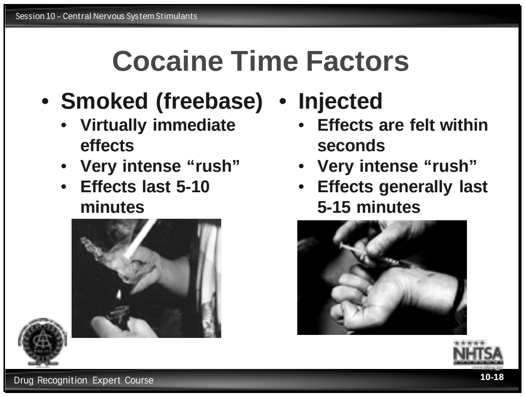
CNS Stimulant users tend to become hyperactive, indicated by nervousness, extreme talkativeness, an inability to sit still, and users may grind their teeth (which is called Bruxism).

CNS Stimulants tend to release inhibitions, allowing users to commit acts that they normally would avoid.

CNS Stimulant users misperceive time and distance.

> Example: to the subject, time seems to be speeded up, so that 2 hours may seem like two minutes.

Persons under the influence of CNS Stimulants become easily confused, and lose the ability to concentrate or to think clearly for any length of time.



Session 10 – Central Nervous System Stimulants

Cocaine Time Factors

- **Smoked (freebase)**
  - **Virtually immediate effects**
  - **Very intense "rush"**
  - **Effects last 5-10 minutes**
- **Injected**
  - **Effects are felt within seconds**
  - **Very intense "rush"**
  - **Effects generally last 5-15 minutes**

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Notes:____

C. Onset and Duration of Effects

The onset and duration of effects are quite different for Cocaine as compared to Amphetamines.

- Generally speaking, Cocaine's effects are much briefer than are Amphetamine's.
- The time parameters of Cocaine vary with the method of ingestion.

Cocaine: Smoked

When Cocaine is smoked, or "freebased," the drug goes immediately to the lungs, and is absorbed into the blood stream very rapidly.

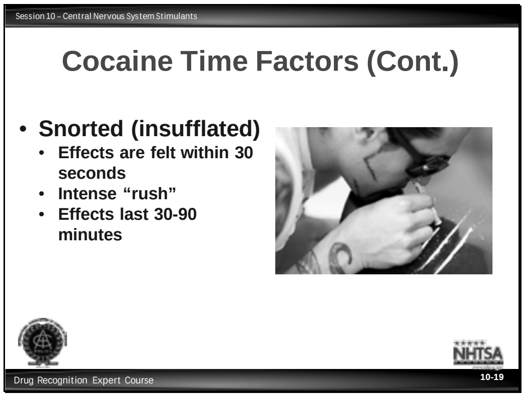
- The smoker begins to feel the effects of the Cocaine virtually immediately.
- Note: Injection sites will be discussed in Session 17 (Narcotic Analgesics).
- The "rush" or euphoria is reported to be very intense.
- However, the euphoric effect only last 5 – 10 minutes after the Cocaine is smoked.

Cocaine: Injected

When Cocaine is injected, the drug is passed directly to the blood stream, where it is carried swiftly to the brain.

- The effects are felt within seconds.
- The onset of effects is very intense.
- Note: Injection sites will be discussed in Narcotic Analgesics
- The effects generally last 5 - 15 minutes.

Source: "Disposition of Toxic Drugs and Chemicals in Man", 9th Edition, R. Baselt



Session 10 – Central Nervous System Stimulants

Cocaine Time Factors (Cont.)

- **Snorted (insufflated)**
  - **Effects are felt within 30 seconds**
  - **Intense "rush"**
  - **Effects last 30-90 minutes**

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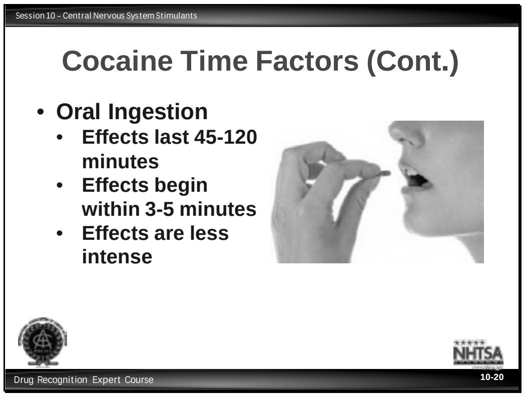
Notes:

Cocaine: Snorted

When Cocaine is snorted (insufflated), the onset of effects is not quite as rapid as with smoking or injecting.

- The user typically feels the onset of effects within 30 seconds after snorting the drug.
- Although the "rush" occurs, it is not quite as intense as it is when the Cocaine is smoked or injected.
- The effects from snorting usually last from 30 – 90 minutes.



Session 10 – Central Nervous System Stimulants

Cocaine Time Factors (Cont.)

- **Oral Ingestion**
  - **Effects last 45-120 minutes**
  - **Effects begin within 3-5 minutes**
  - **Effects are less intense**

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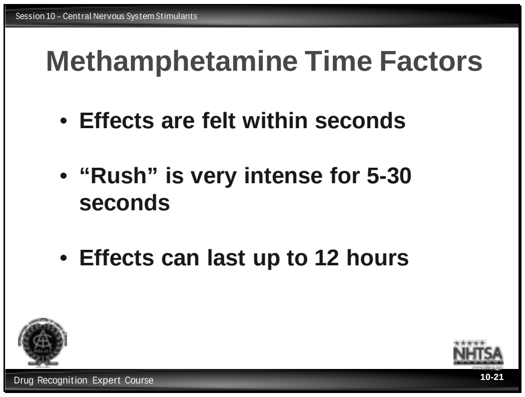
Notes:

Cocaine: Oral Ingestion

- Oral ingestion of Cocaine usually is the least preferred method.
- The effects of Cocaine taken orally may last from 45 – 120 minutes.
- The user generally does not begin to feel the effects for 3 – 5 minutes.
- The effects are not as intense as they are with other methods of ingestion.
- However, the effects may last 15 – 30 minutes longer than with other methods.

With all methods of ingestion, the duration of Cocaine's effects tend to be briefer than the effects of most other drugs.

- As the effects wear off, it becomes very difficult to observe evidence of impairment.
- If the subject is not evaluated by a DRE fairly soon after the subject has been apprehended, the DRE may not uncover evidence of the CNS Stimulant.



Session 10 – Central Nervous System Stimulants

Methamphetamine Time Factors

- **Effects are felt within seconds**
- **"Rush" is very intense for 5-30 seconds**
- **Effects can last up to 12 hours**

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Methamphetamine: Injected

When Methamphetamine is injected, the initial effects are very similar to the injection of Cocaine.

- The user begins to feel the effects within a few seconds.
- The "rush" is very intense, and lasts at a high level of intensity for 5 – 30 seconds.
- Unlike Cocaine, Methamphetamine's effects are longer and may last up to 12 hours after injection.

Methamphetamine: Smoked

When Methamphetamine is smoked, the rush is very intense, and the effects are long lasting.

The user stays "high" for 4 – 8 hours with residual effects lasting up to 12 hours.

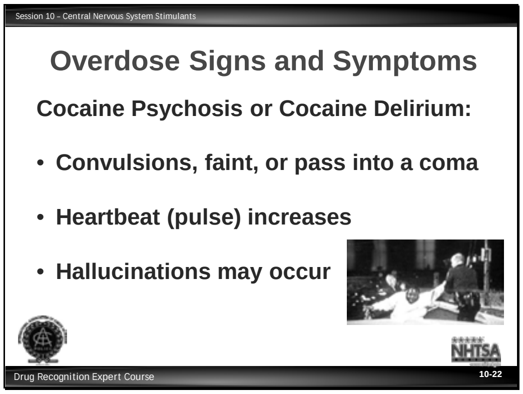
Source: Drugs and Human Performance Fact Sheets, NHTSA (2004).

Methamphetamine: Snorted

When Methamphetamine is snorted or taken orally, the onset takes longer, the rush is much less intense, and the effects are much briefer.

Methamphetamine: Orally

When taken orally the onset of effects is delayed, the rush is much less intense and the effects last longer.



Session 10 – Central Nervous System Stimulants

Overdose Signs and Symptoms

Cocaine Psychosis or Cocaine Delirium:

- **Convulsions, faint, or pass into a coma**
- **Heartbeat (pulse) increases**
- **Hallucinations may occur**

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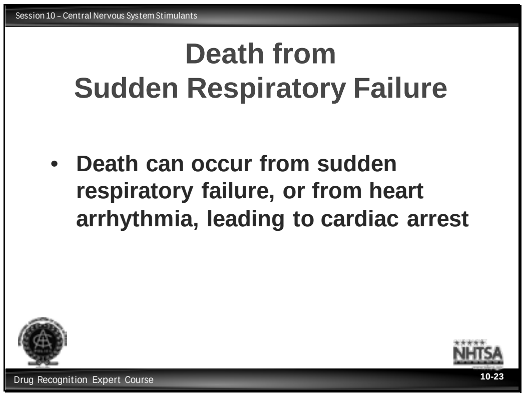
Notes:

D. Overdose Signs and Symptoms

Overdose of Cocaine or Amphetamines can cause the pleasurable effects to turn into panic and often violent behavior. If the overdose is caused by Cocaine, it is commonly referred to as Cocaine Psychosis or Cocaine Delirium.

- Subject may suffer convulsions and faint or pass into a coma.
- Heartbeat (pulse) will increase, possibly dramatically.
- Hallucinations may occur.

  Example: The feeling that bugs are crawling under the skin is also known as “Coke Bugs.” The medical term for this condition is formication.



Session 10 – Central Nervous System Stimulants

Death from Sudden Respiratory Failure

- **Death can occur from sudden respiratory failure, or from heart arrhythmia, leading to cardiac arrest**

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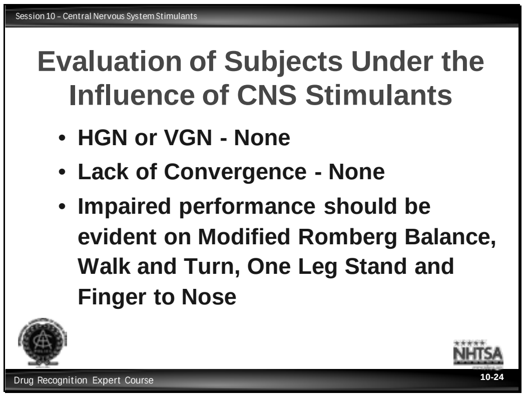
Notes:

- Death can occur from sudden respiratory failure, or from heart arrhythmia, leading to cardiac arrest.
- Another danger is that subjects may attempt to treat CNS Stimulant overdoses with Barbiturates, possibly leading to overdose of CNS Depressants.



Session 10 – Central Nervous System Stimulants

Evaluation of Subjects Under the Influence of CNS Stimulants

- **HGN or VGN - None**
- **Lack of Convergence - None**
- **Impaired performance should be evident on Modified Romberg Balance, Walk and Turn, One Leg Stand and Finger to Nose**

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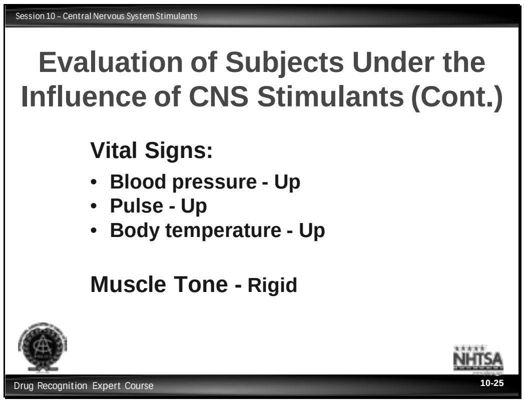
Notes:

E. Expected Results of the Evaluation

Observable Evidence of Impairment

- Horizontal Gaze Nystagmus will not be present with subjects under the influence of CNS Stimulants.
- Vertical Gaze Nystagmus will not be present.
- Lack of Convergence will not be evident.
- Performance on Modified Romberg Balance should be impaired.
- Performance on Walk and Turn may be impaired due to the subject's hyperactivity and inability to concentrate. Example: subject may start too soon on the Walk and Turn, and may tend to walk fast, thus losing balance or missing heel-to-toe.
- Performance on the One Leg Stand may be impaired due to the subject's hyperactivity. Example: subject may also count very rapidly on the One Leg Stand test.
- Performance on the Finger to Nose test should be impaired. His or her finger movements may be abrupt, jerky and inaccurate.



Session 10 – Central Nervous System Stimulants

Evaluation of Subjects Under the Influence of CNS Stimulants (Cont.)

Vital Signs:

- **Blood pressure - Up**
- **Pulse - Up**
- **Body temperature - Up**

Muscle Tone - Rigid

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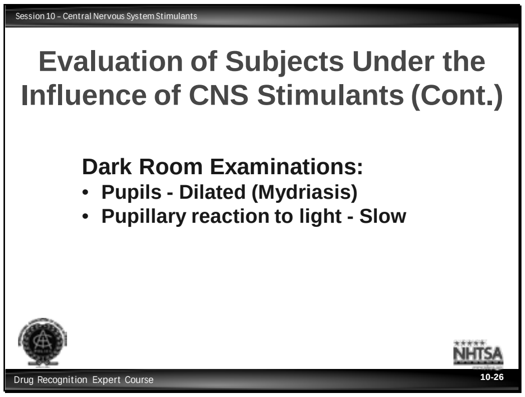
Vital Signs

- Blood pressure will generally be elevated.
- Pulse generally will be increased.
- Body temperature generally will be elevated.

Muscle Tone

- Muscle tone will be Rigid



Session 10 – Central Nervous System Stimulants

Evaluation of Subjects Under the Influence of CNS Stimulants (Cont.)

Dark Room Examinations:

- **Pupils - Dilated (Mydriasis)**
- **Pupillary reaction to light - Slow**

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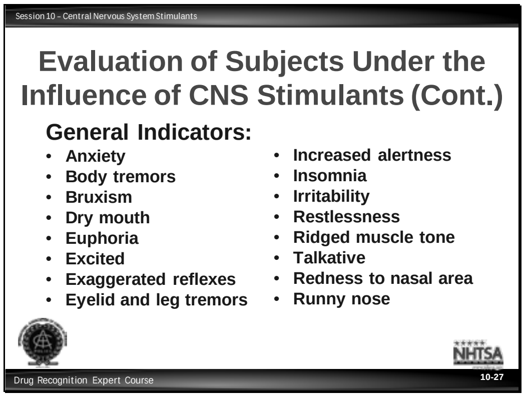
Dark Room Examinations

- Pupils generally will be dilated.
- The technical term for “dilated pupils” is Mydriasis.
- Pupil reaction to light generally will be slow.



Session 10 – Central Nervous System Stimulants

Evaluation of Subjects Under the Influence of CNS Stimulants (Cont.)

General Indicators:

- Anxiety
- Body tremors
- Bruxism
- Dry mouth
- Euphoria
- Excited
- Exaggerated reflexes
- Eyelid and leg tremors
- Increased alertness
- Insomnia
- Irritability
- Restlessness
- Ridged muscle tone
- Talkative
- Redness to nasal area
- Runny nose

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Notes:____

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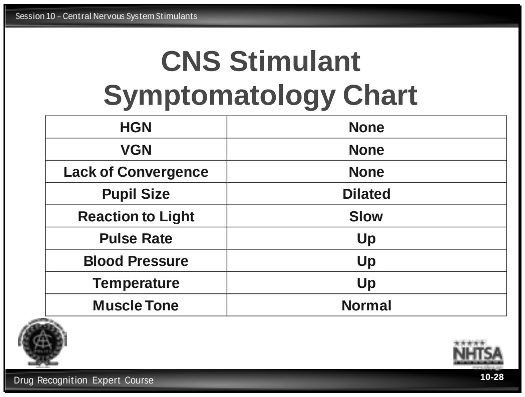
General Indicators

- Anxiety
- Body tremors
- Bruxism (grinding teeth)
- Dry mouth
- Euphoria
- Excited
- Exaggerated reflexes
- Eyelid and leg tremors
- Increased alertness
- Insomnia
- Irritability
- Restlessness
- Rigid muscle tone
- Talkative
- Redness to nasal area
- Runny nose



Session 10 – Central Nervous System Stimulants

CNS Stimulant Symptomatology Chart

HGN	None
VGN	None
Lack of Convergence	None
Pupil Size	Dilated
Reaction to Light	Slow
Pulse Rate	Up
Blood Pressure	Up
Temperature	Up
Muscle Tone	Normal

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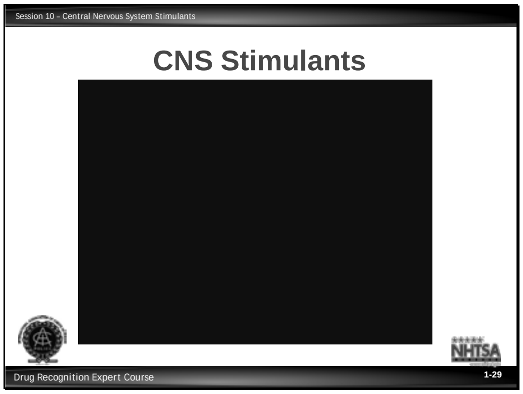
Notes:____



Session 10 – Central Nervous System Stimulants

CNS Stimulants

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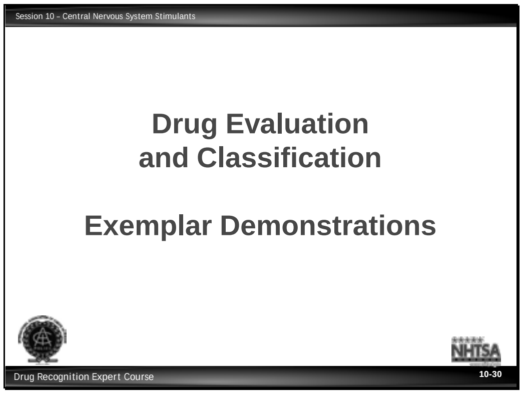
Notes:____



Session 10 – Central Nervous System Stimulants

Drug Evaluation
and Classification

Exemplar Demonstrations

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Notes:____

F. Drug Evaluation and Classification Exemplar Demonstrations

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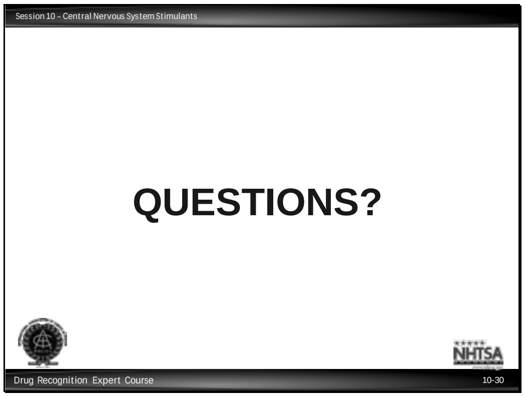

Session 10 – Central Nervous System Stimulants

QUESTIONS?

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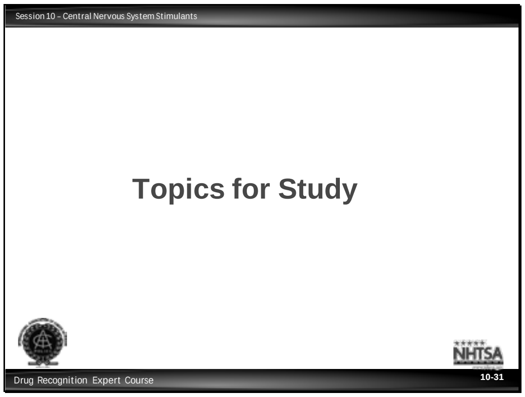

Session 10 – Central Nervous System Stimulants

Topics for Study

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10-31

Notes:

TOPICS FOR STUDY

1. Why is it sometimes difficult for a DRE to obtain evidence of CNS Stimulant influence when examining a cocaine user?

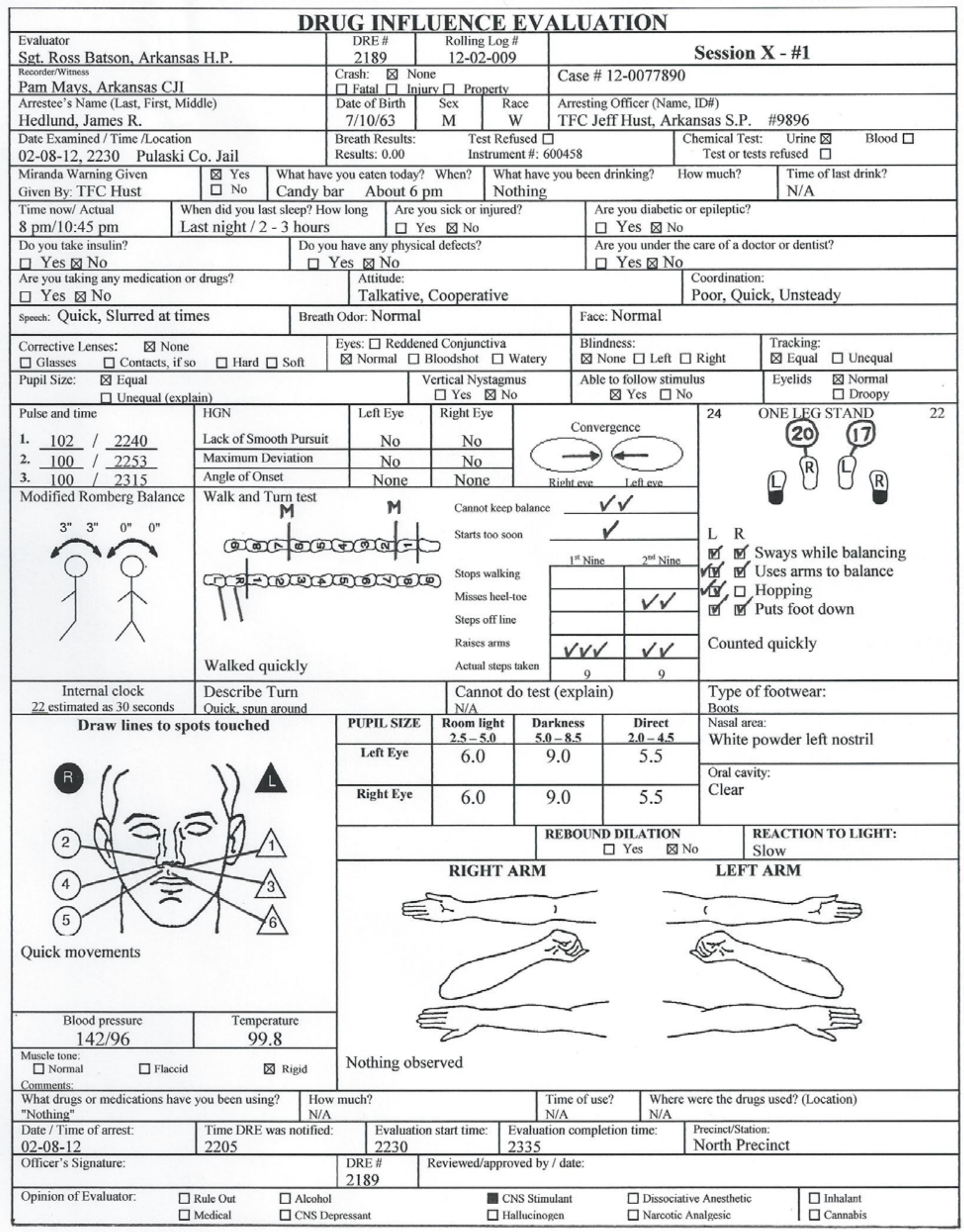
2. What kinds of illicitly manufactured Amphetamines are most commonly abused?

3. Name two CNS Stimulants other than Cocaine or the Amphetamine compounds.

4. How do CNS Stimulants usually affect the blood pressure and pulse rate?

5. True or False: A person under the influence of a CNS Stimulant alone usually will not exhibit Horizontal Gaze Nystagmus?

6. What is “bruxism”?



DRUG INFLUENCE EVALUATION

Evaluator Sgt. Ross Batson, Arkansas H.P.	DRE # 2189	Rolling Log # 12-02-009	**Session X - #1**
Recorder/Witness Pam Mays, Arkansas CJI	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-0077890

Arrestee's Name (Last, First, Middle): Hedlund, James R.
Date of Birth: 7/10/63
Sex: M
Race: W
Arresting Officer (Name, ID#): TFC Jeff Hust, Arkansas S.P. #9896

Date Examined / Time /Location: 02-08-12, 2230 Pulaski Co. Jail
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 600458
Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: TFC Hust
What have you eaten today? When? Candy bar About 6 pm
What have you been drinking? How much? Nothing
Time of last drink? N/A

Time now/ Actual: 8 pm/10:45 pm
When did you last sleep? How long: Last night / 2 - 3 hours
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Talkative, Cooperative
Coordination: Poor, Quick, Unsteady

Speech: Quick, Slurred at times
Breath Odor: Normal
Face: Normal

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time
1. 102 / 2240
2. 100 / 2253
3. 100 / 2315

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence
Right eye Left eye

24 ONE LEG STAND 22
20 17
L R L R

L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☑	☐	Hopping
☑	☑	Puts foot down

Counted quickly

Modified Romberg Balance
3" 3" 0" 0"

Walk and Turn test
M M
9 8 7 6 5 4 3 2 1
L R 1 2 3 4 5 6 7 8 9

Walked quickly

Cannot keep balance ✓✓
Starts too soon ✓

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		✓✓
Steps off line		
Raises arms	✓✓✓	✓✓
Actual steps taken	9	9

Internal clock: 22 estimated as 30 seconds
Describe Turn: Quick, spun around
Cannot do test (explain): N/A
Type of footwear: Boots

Draw lines to spots touched
R L
2 1 4 3 5 6

Quick movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.0	9.0	5.5
Right Eye	6.0	9.0	5.5

Nasal area: White powder left nostril
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM **LEFT ARM**

Nothing observed

Blood pressure: 142/96
Temperature: 99.8
Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid
Comments:

What drugs or medications have you been using? "Nothing"
How much? N/A
Time of use? N/A
Where were the drugs used? (Location) N/A

Date / Time of arrest: 02-08-12
Time DRE was notified: 2205
Evaluation start time: 2230
Evaluation completion time: 2335
Precinct/Station: North Precinct

Officer's Signature:
DRE # 2189
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ■ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Hedlund, James R.

1. **LOCATION:** The evaluation of James Hedlund was conducted at the Pulaski County Jail.

2. **WITNESSES:** Arresting Officer, TPC Jeff Hust, Arkansas State Police and Pam Mays of the Arkansas Criminal Justice Institute.

3. **BREATH ALCOHOL TEST:** Hedlund's breath test was a 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was contacted by Trooper Hust requesting a drug evaluation. Writer contacted Trooper Hust at the County Jail where it was determined that he had stopped the suspect for driving 100 mph and for driving without headlights on I-30 East. The suspect was excited, talkative and very restless. He performed poorly on the roadside SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room with Trooper Hust. The suspect was rocking back in forth in his chair and could not remain still. His speech was fast and his reflexes were quick and exaggerated.

6. **MEDICAL PROBLEMS AND TREATMENT:** None observed and none stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" front to back and estimated 30 seconds in 22 seconds. Walk and Turn: Suspect started too soon, lost his balance twice during the instructions, raised his arms for balance, made an abrupt quick turn, and missed heel to toe twice on the second nine steps. One Leg Stand: Suspect swayed, raised his arms, hopped and put his foot down once standing on the left foot and once while standing on the right foot. Finger to Nose: Suspect missed the tip of his nose on four of the six attempts.

8. **CLINICAL INDICATORS:** The suspect's pulse, blood pressure and temperature were elevated and above the DRE average ranges. His pupils were dilated in all three lighting levels and they reacted slowly to light.

9. **SIGNS OF INGESTION:** White powder residue was located in the suspect's left nostril.

10. **SUSPECT'S STATEMENTS:** The suspect denied using any drugs.

11. **DRE'S OPINION:** In my opinion Hedlund is under the influence of a **CNS Stimulant** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator: Sgt. Frank Barnes, Oklahoma City P.D.
DRE #: 1894
Rolling Log #: 12-08-022
Session X - #2

Recorder/Witness: Officer Lance Arnold, Norman P.D.
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-775345

Arrestee's Name (Last, First, Middle): Kohlhepp, Kim J.
Date of Birth: 8/24/73
Sex: F
Race: W
Arresting Officer (Name, ID#): Officer K. Dowell, OKC PD #12269

Date Examined / Time /Location: 08/02/12 2315 Oklahoma Co. Jail
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 150024
Chemical Test: Urine ☐ Blood ☒
Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Dowell 2240
What have you eaten today? When? Hot dog 1pm
What have you been drinking? How much? "Nothing"
Time of last drink? N/A

Time now/ Actual: Midnight/2322
When did you last sleep? How long: Yesterday 4 hours
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No "I don't do drugs"
Attitude: Cooperative, restless
Coordination: Poor, jittery, stumbling

Speech: Very talkative, rapid
Breath Odor: Normal
Face: Normal

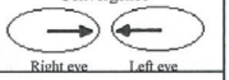
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

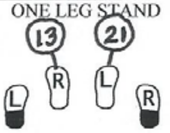
Pulse and time
1. 100 / 2328
2. 108 / 2341
3. 104 / 2355

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

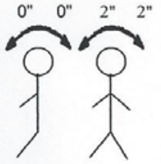


34 ONE LEG STAND 35

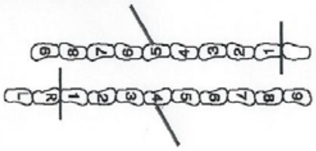


L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☑ ☐ Hopping
☑ ☑ Puts foot down

Modified Romberg Balance



Walk and Turn test

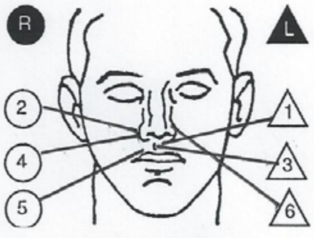


Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line	✓	✓
Raises arms	✓✓	✓
Actual steps taken	9	9

Internal clock: 20 estimated as 30 seconds
Describe Turn: Spinning turn, quick movement
Cannot do test (explain): N/A
Type of footwear: Heels (removed)

Draw lines to spots touched



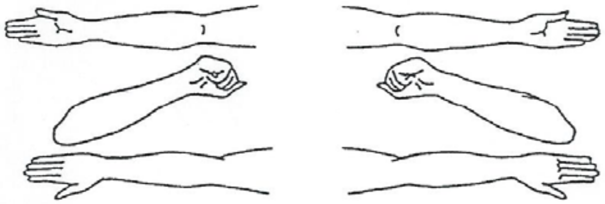
Eyelid tremors

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.5	9.0	6.0
Right Eye	6.5	9.0	6.0

Nasal area: Red, ulcerated
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM **LEFT ARM**



Blood pressure: 144/104
Temperature: 99.8
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:
Nothing observed

What drugs or medications have you been using? "I don't use drugs anymore."
How much?
Time of use? Refused
Where were the drugs used? (Location) Refused

Date / Time of arrest: 08/02/12 2240
Time DRE was notified: 2305
Evaluation start time: 2315
Evaluation completion time: 08/03/12 0035
Precinct/Station:

Officer's Signature:
DRE # 1894
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ■ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Kohlhepp, Kim J.

1. **LOCATION:** The evaluation was conducted at the Oklahoma County Jail.

2. **WITNESSES:** The evaluation was witnessed by the arresting officer; Officer Kirk Dowell of the OKC PD and by DRE instructor Officer Lance Arnold of the Norman P.D.

3. **BREATH ALCOHOL TEST:** Kohlhepp's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** The writer was contacted by Officer Dowell requesting a drug evaluation. After arriving at the County Jail, Officer Dowell reported that he had stopped the suspect for driving 65 mph in a 30 mph zone and for failing to stop at a traffic signal. The suspect was very talkative and restless. She was unable to perform the SFST's as directed and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room standing next to Officer Dowell. She was very fidgety and could not stand still. When told to sit down she would sit for a few seconds and then quickly get back up.

6. **MEDICAL PROBLEMS AND TREATMENT:** None observed and none stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 2" side to side and estimated 30 seconds in 20 seconds. Walk & Turn: Suspect stepped off the line twice, raised her arms for balance and turned using an abrupt swivel-like movement. One Leg Stand: Suspect swayed, raised her arms, hopped once when standing on the left foot, and put her foot down one time while standing on each foot. Finger to Nose: Suspect missed the tip of her nose on each attempt and had eyelid tremors.

8. **CLINICAL INDICATORS:** The suspect's pulse, blood pressure and temperature were above the DRE average ranges. Her pupils were dilated in all three lighting conditions.

9. **SIGNS OF INGESTION:** The suspect's nostrils were red and ulcerated.

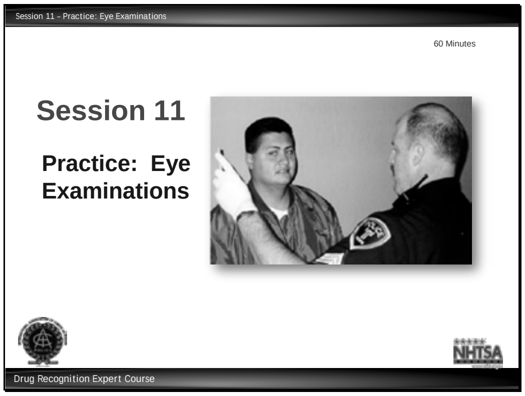
10. **SUSPECT'S STATEMENTS:** She denied using drugs, stating "I don't use anymore."

11. **DRE'S OPINION:** In my opinion Kohlhepp is under the influence of a **CNS Stimulant** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** There was an outstanding warrant for the suspect for failure to appear on a charge of possession of methamphetamine.

Participant Manual DRE 7-Day Session 11 – Practice: Eye Examinations



Session 11 – Practice: Eye Examinations

60 Minutes

Session 11

Practice: Eye Examinations

Drug Recognition Expert Course

Notes:____

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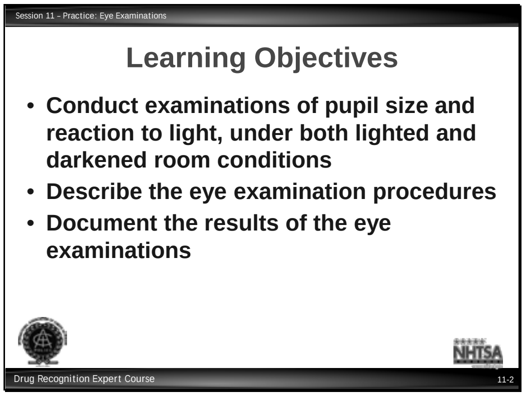

Session 11 – Practice: Eye Examinations

Learning Objectives

- **Conduct examinations of pupil size and reaction to light, under both lighted and darkened room conditions**
- **Describe the eye examination procedures**
- **Document the results of the eye examinations**

Drug Recognition Expert Course 11-2

Notes:____

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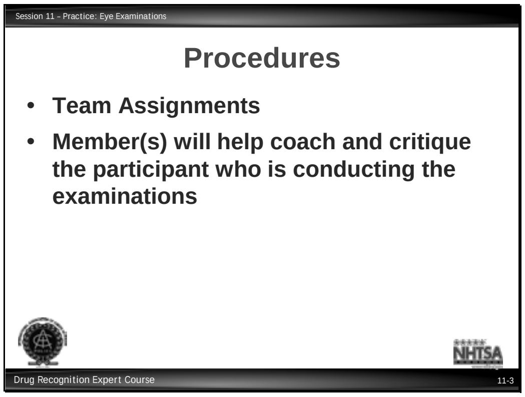
Upon successfully completing this session the participant will be able to:

- Conduct examinations of pupil size and reaction to light under both lighted and darkened room conditions.
- Describe the eye examination procedures.
- Document the results of the eye examinations.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Procedures for this Session	Instructor Led Presentations
B. Room Light Examinations	Participants' Hands-On Practice
C. Dark Room Examinations	Instructor Led Coaching
D. Session Wrap-Up	Participant Led Coaching



Session 11 – Practice: Eye Examinations

Procedures

- Team Assignments
- Member(s) will help coach and critique the participant who is conducting the examinations

Drug Recognition Expert Course

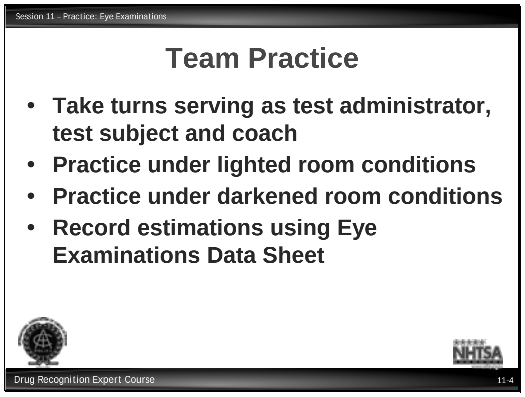
11-3

Notes:

A. Procedures for this Session

Team Assignments

- Participants will work in three or four member teams.
- Make team assignments.
- At any given time, one member of the team will be engaged in conducting and recording eye examinations of another member.
- The remaining member(s) will help coach and critique the participant who is conducting the examinations.



Session 11 – Practice: Eye Examinations

Team Practice

- Take turns serving as test administrator, test subject and coach
- Practice under lighted room conditions
- Practice under darkened room conditions
- Record estimations using Eye Examinations Data Sheet

Drug Recognition Expert Course 11-4

Notes:____
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Team Practice

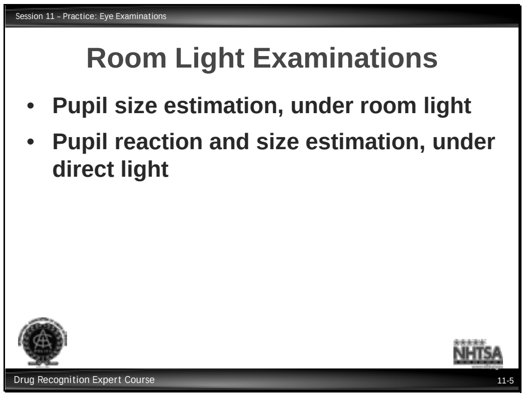
Participants will take turns serving as test administrator, test subject and coach.

Teams initially will practice under lighted room conditions.

- Check pupil size under normal room light.
- Check reaction to light and pupil size using a penlight in a lighted room.

Teams subsequently will practice under darkened room conditions.

- Check pupil size in near total darkness.
- Check reaction to light and pupil size under direct light.
- Participants will record their estimations using Eye Examinations Data Sheet. There are copies of the Eye Examination Data Sheet in the Participant’s Manual.



Session 11 – Practice: Eye Examinations

Room Light Examinations

- Pupil size estimation, under room light
- Pupil reaction and size estimation, under direct light

Drug Recognition Expert Course

11-5

Notes:

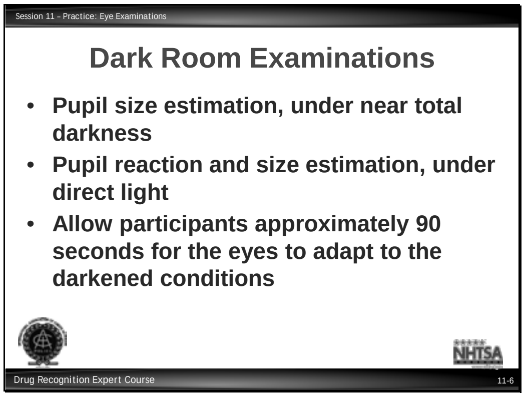
B. Room Light Examinations

Pupil Size Estimation

- Pupil size estimation, under room light.
- Pupil reaction and size estimation, under direct light.

Sequence of roles should be as follows:

- Test Administrator
- Test Subject
- Coach
- Test Administrator (continue cycle)



Dark Room Examinations

- **Pupil size estimation, under near total darkness**
- **Pupil reaction and size estimation, under direct light**
- **Allow participants approximately 90 seconds for the eyes to adapt to the darkened conditions**

Notes:

C. Dark Room Examinations

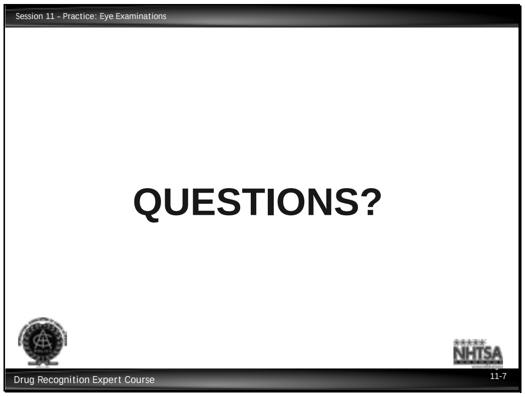
Pupil Size Estimation

- Pupil size estimation, under near total darkness.
- Pupil reaction and size estimation, under direct light.

Allow participants approximately 90 seconds for the eyes to adapt to the darkened conditions.

Sequence of roles should be as follows:

- Test Administrator
- Test Subject
- Coach
- Test Administrator (continue cycle)



Session 11 – Practice: Eye Examinations

QUESTIONS?

Drug Recognition Expert Course

11-7

Notes:____

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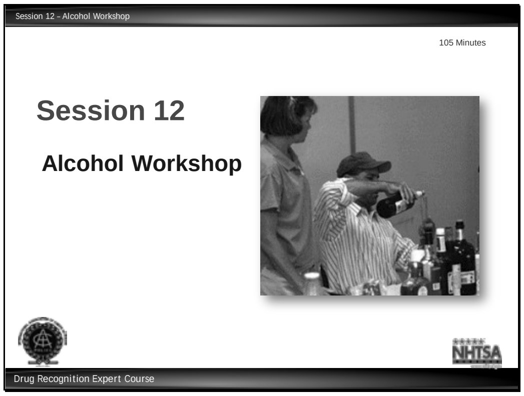
D. Session Wrap-Up

Participant Manual DRE 7-Day Session 12 – Alcohol Workshop



Session 12 – Alcohol Workshop

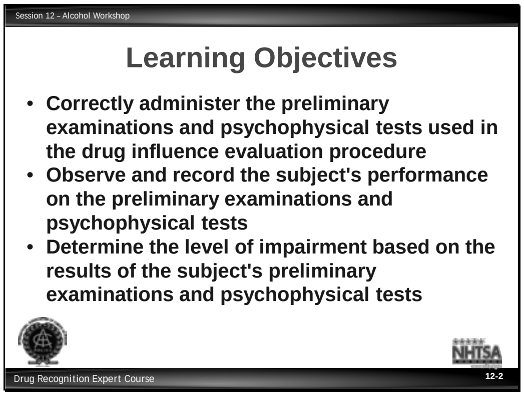
105 Minutes

Session 12

Alcohol Workshop

Drug Recognition Expert Course

Notes:



Session 12 – Alcohol Workshop

Learning Objectives

- **Correctly administer the preliminary examinations and psychophysical tests used in the drug influence evaluation procedure**
- **Observe and record the subject's performance on the preliminary examinations and psychophysical tests**
- **Determine the level of impairment based on the results of the subject's preliminary examinations and psychophysical tests**

Drug Recognition Expert Course

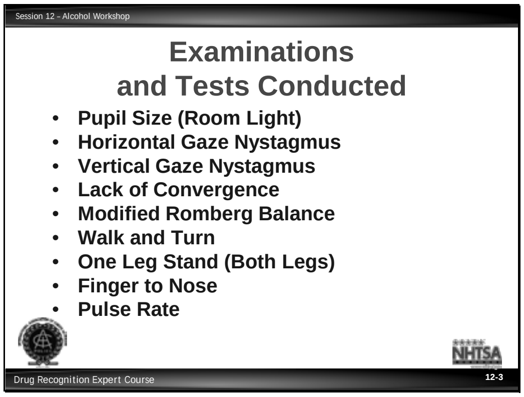
12-2

Notes:

Upon successfully completing this session the participant will be able to:

- Correctly administer the preliminary examinations and psychophysical tests used in the drug influence evaluation procedure.
- Observe and record the subject’s performance on the preliminary examinations and psychophysical tests.
- Determine the level of impairment based on the results of the subject’s preliminary examinations and psychophysical tests.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Procedures	Instructor Led Presentations
B. Hands-On Practice	Participant Led Practice
C. Session Wrap-Up	Instructor Discussion



Session 12 – Alcohol Workshop

Examinations and Tests Conducted

- Pupil Size (Room Light)
- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence
- Modified Romberg Balance
- Walk and Turn
- One Leg Stand (Both Legs)
- Finger to Nose
- Pulse Rate

Drug Recognition Expert Course 12-3

Notes:____

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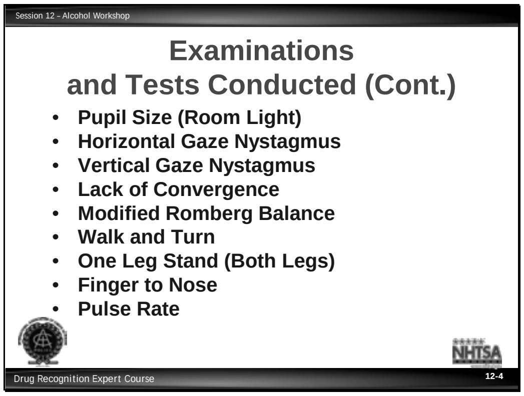
A. Procedures

The preliminary examinations and psychophysical tests include:

- Pupil Size Estimation (Room Light)
- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence
- Modified Romberg Balance
- Walk and Turn
- One Leg Stand (both legs)
- Finger to Nose
- Pulse Rate



Session 12 – Alcohol Workshop

Examinations and Tests Conducted (Cont.)

- Pupil Size (Room Light)
- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence
- Modified Romberg Balance
- Walk and Turn
- One Leg Stand (Both Legs)
- Finger to Nose
- Pulse Rate

Drug Recognition Expert Course 12-4

Notes:____

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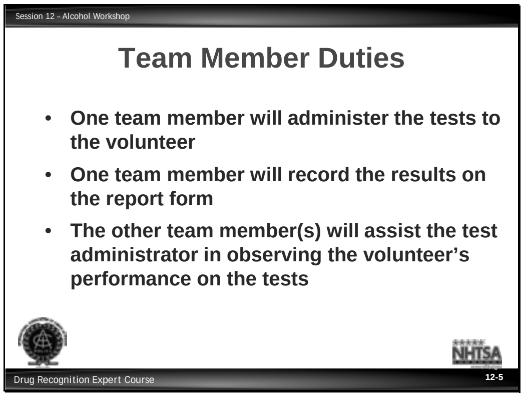


Session 12 – Alcohol Workshop

Team Member Duties

- One team member will administer the tests to the volunteer
- One team member will record the results on the report form
- The other team member(s) will assist the test administrator in observing the volunteer's performance on the tests

Drug Recognition Expert Course 12-5

Notes:____

Some volunteers will have BACs above 0.10, others will have lower BACs.

The following safety precautions will be strictly enforced:

- No weapons will be present.
- Volunteers will not be left unattended at any time.

Session 12 – Alcohol Workshop

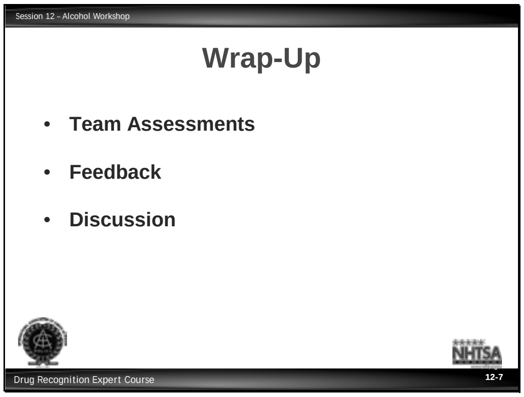
Hands-On Practice

Drug Recognition Expert Course 12-6

Notes:____

B. Hands-On Practice

Test Administration



Session 12 – Alcohol Workshop

Wrap-Up

- **Team Assessments**
- **Feedback**
- **Discussion**

Drug Recognition Expert Course

12-7

Notes:____

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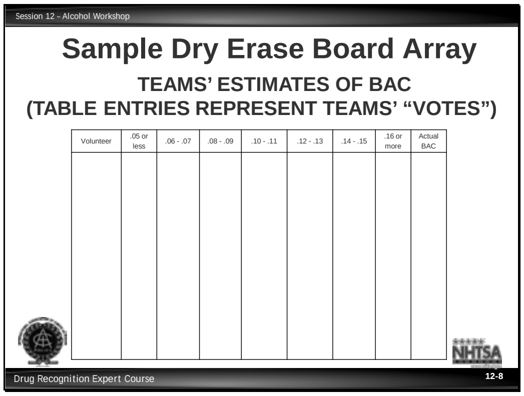
C. Session Wrap-Up

Feedback of teams’ assessments:

Ask each team briefly to describe the evidence that led the members to their conclusions about a particular volunteer’s BAC.

Feedback of volunteer’s BACs:

Discussion



Session 12 – Alcohol Workshop

Sample Dry Erase Board Array

TEAMS’ ESTIMATES OF BAC
(TABLE ENTRIES REPRESENT TEAMS’ “VOTES”)

Volunteer	.05 or less	.06 - .07	.08 - .09	.10 - .11	.12 - .13	.14 - .15	.16 or more	Actual BAC

Drug Recognition Expert Course

12-8

Notes:____

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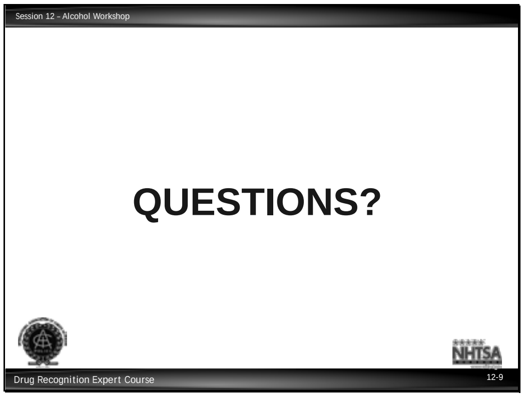

Session 12 – Alcohol Workshop

QUESTIONS?

Drug Recognition Expert Course

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Notes:____

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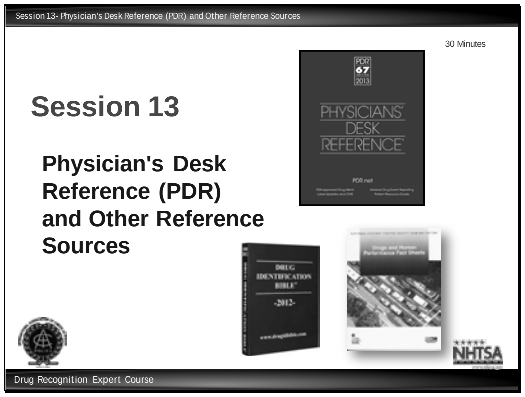
Participant Manual DRE 7-Day Session 13 – Practice: Test Interpretation



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

30 Minutes

Session 13

Physician's Desk Reference (PDR) and Other Reference Sources

Drug Recognition Expert Course

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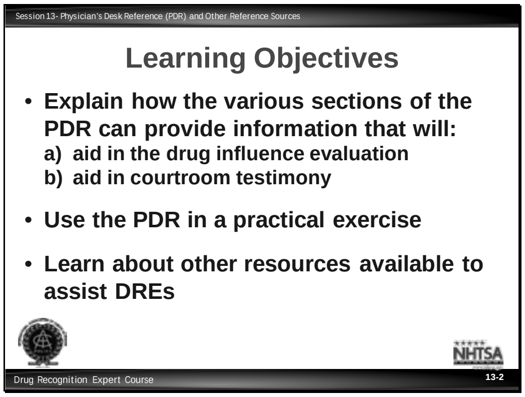

Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Learning Objectives

- Explain how the various sections of the PDR can provide information that will:
  a) aid in the drug influence evaluation
  b) aid in courtroom testimony
- Use the PDR in a practical exercise
- Learn about other resources available to assist DREs

Drug Recognition Expert Course

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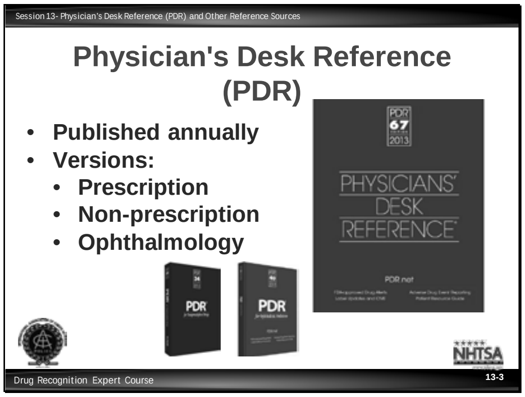
Notes:

Upon successfully completing the session, the participant will be able to:

- Explain how the various sections of the PDR can provide information that will:
  a) aid in the drug influence evaluation
  b) aid in courtroom testimony
- Use the PDR in a practical exercise.
- Learn about other resources available to assist DREs.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Procedures	Instructor-led Presentation
B. Practical Exercises	
C. Other Resources Available	



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Physician's Desk Reference (PDR)

- **Published annually**
- **Versions:**
  - **Prescription**
  - **Non-prescription**
  - **Ophthalmology**

Drug Recognition Expert Course

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Notes:____

A. Procedures

PDR: Physician's Desk Reference

PDR is published annually.

Many versions are published:

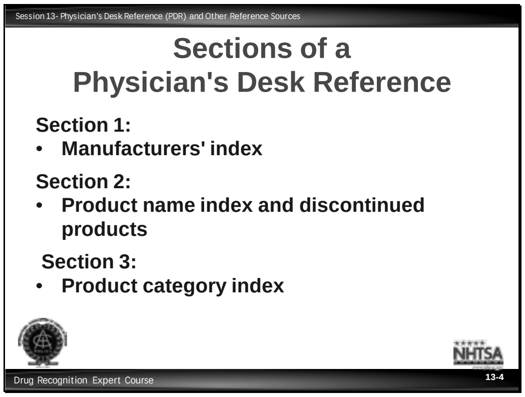
- PDR for prescription drugs
- PDR for non-prescription drugs
- PDR for ophthalmology
- PDR Consumer Guide to Prescription Drug
- PDR for Herbal Medicines
- PDR for Nutritional Supplement
- PDR Nurse's Drug Handbook

PDR supplements are published periodically as new products are introduced during the year.

Function of the publisher is compilation, organization and distribution of information.

Product descriptions are prepared by the manufacturer, and edited and approved by their respective medical directors.

Additional information on the various drugs can be obtained from the manufacturer.



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Sections of a Physician's Desk Reference

Section 1:
- **Manufacturers' index**

Section 2:
- **Product name index and discontinued products**

Section 3:
- **Product category index**

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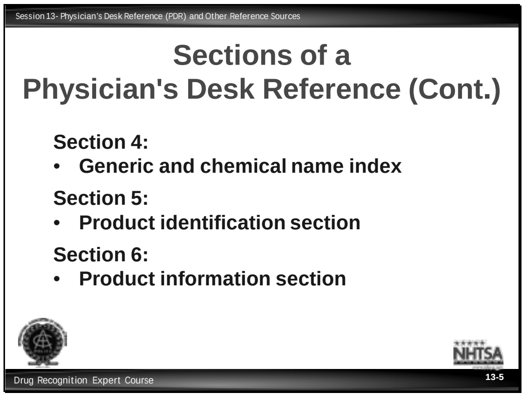
Sections of a PDR

- Section 1
  - Manufacturers Index

    List of manufacturers (with phone numbers) who have provided prescribing information.
- Section 2
  - Product Name Index and Discontinued Products

    Alphabetical listing of products available and a listing of discontinued products. Newer editions of the PDR will have a merging of Sections 2 and 4.
- Section 3
  - Product Category Index

    Products listed according to appropriate category.



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Sections of a Physician's Desk Reference (Cont.)

Section 4:
- **Generic and chemical name index**

Section 5:
- **Product identification section**

Section 6:
- **Product information section**

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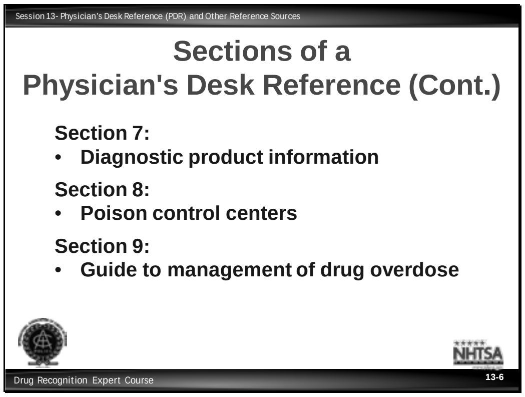
Notes:____

- Section 4
  - Generic and Chemical Name Index

    Products listed under generic and chemical name headings according to the principal ingredient(s).
- Section 5
  - Product Identification Section
- Section 6
  - Product Information Section

    It also includes common names, generic compositions, or chemical names.



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Sections of a Physician's Desk Reference (Cont.)

Section 7:
- **Diagnostic product information**

Section 8:
- **Poison control centers**

Section 9:
- **Guide to management of drug overdose**

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Notes:____

- Section 7
    - Diagnostic Product Information

      Diagnostic product descriptions.
- Section 8
    - Poison Control Centers

      List of centers and emergency telephone numbers.
- Section 9
    - Guide to Management of Drug Overdose

      Information concerning drug over dosage.

Use of the PDR in DEC Program

To identify prescription drugs.

This information is contained in the product identification section.

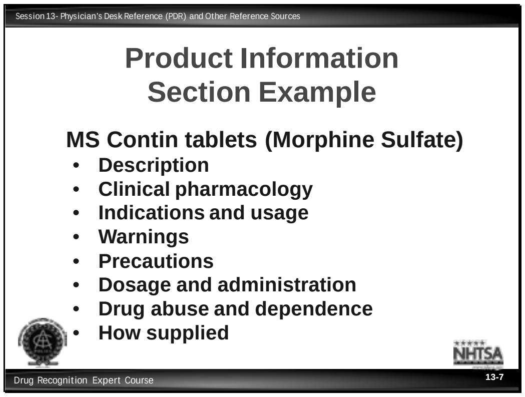
To identify the effects of prescription drugs for comparison with observed effects.

This information is contained in the product information section.

How to use the PDR

Identification of an unknown product.

Identification of drug pharmacology.



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Product Information Section Example

MS Contin tablets (Morphine Sulfate)
- Description
- Clinical pharmacology
- Indications and usage
- Warnings
- Precautions
- Dosage and administration
- Drug abuse and dependence
- How supplied

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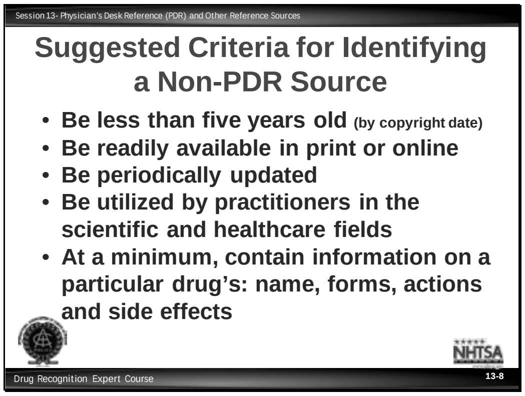
Example: MS Contin tablets (Morphine Sulfate).

Location and acquisition of agency's PDR(s)

B. Practical Exercise



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Suggested Criteria for Identifying a Non-PDR Source

- Be less than five years old (by copyright date)
- Be readily available in print or online
- Be periodically updated
- Be utilized by practitioners in the scientific and healthcare fields
- At a minimum, contain information on a particular drug's: name, forms, actions and side effects

Drug Recognition Expert Course

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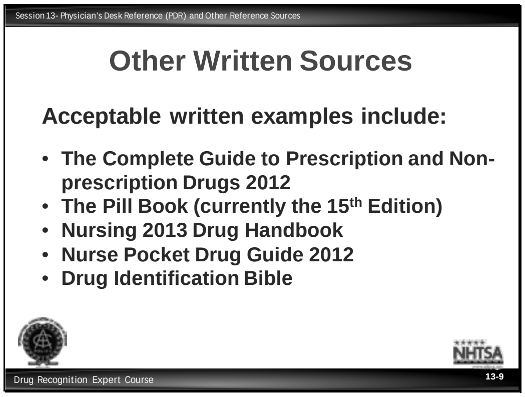
C. Other Resources

Suggested criteria to identify a non-PDR drug reference

When selecting an acceptable drug reference, DRE's should consult references that meet the below criteria:

- Be less than five years old (by copyright date).
- Be readily available in print or online.
- Be periodically updated.
- Be utilized by practitioners in the scientific and healthcare fields.
- At a minimum, contain information on a particular drug's:
    - Trade (brand), generic, and alternate common names.
    - Available forms (liquid, pill, injectable, etc.).
    - Pharmacologic / therapeutic actions (as used clinically, both "on" and "off" label).
    - Adverse reactions and side effects.

The reason for this is to keep from consulting references that have become outdated and inaccurate.



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Other Written Sources

Acceptable written examples include:

- **The Complete Guide to Prescription and Non-prescription Drugs 2012**
- **The Pill Book (currently the 15th Edition)**
- **Nursing 2013 Drug Handbook**
- **Nurse Pocket Drug Guide 2012**
- **Drug Identification Bible**

Drug Recognition Expert Course

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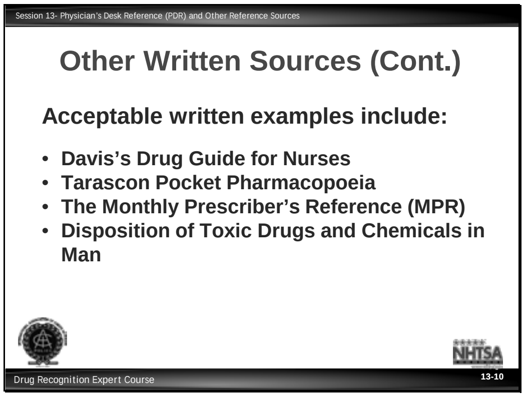
Notes:

Acceptable resources may be in-print, electronic, or a combination. Non-representative, non-ranked.

Acceptable written examples include:

- The Complete Guide to Prescription and Non-prescription Drugs 2012
- The Pill Book (currently the 15th Edition)
- Nursing 2013 Drug Handbook
- Nurse Pocket Drug Guide 2012
- Drug Identification Bible (available at: www.drugbible.com)



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Other Written Sources (Cont.)

Acceptable written examples include:

- **Davis's Drug Guide for Nurses**
- **Tarascon Pocket Pharmacopoeia**
- **The Monthly Prescriber's Reference (MPR)**
- **Disposition of Toxic Drugs and Chemicals in Man**

Drug Recognition Expert Course

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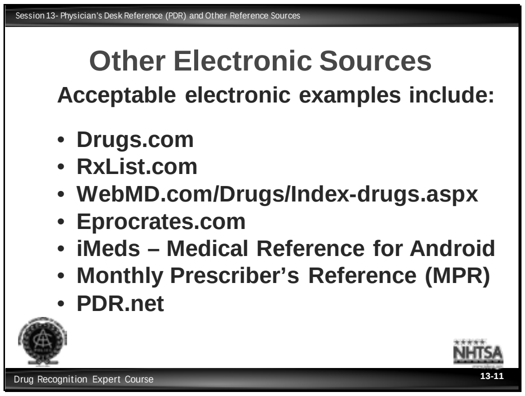
Notes:

Acceptable written examples include (Cont):

- Davis's Drug Guide for Nurses
- Tarascon Pocket Pharmacopoeia (for those with some pharmacology education)
- The Monthly Prescriber's Reference (MPR)
- Disposition of Toxic Drugs and Chemicals in Man, *(Source: Randall C. Baselt. Biomedical Publications)*



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Other Electronic Sources

Acceptable electronic examples include:

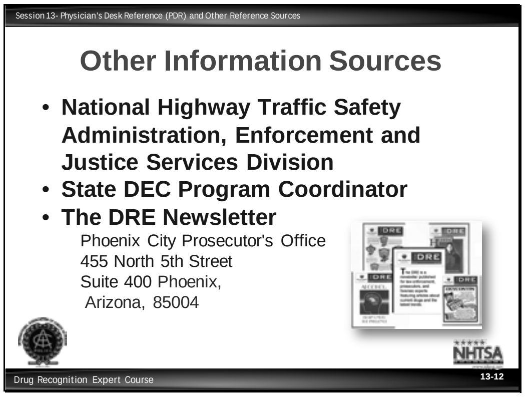
- **Drugs.com**
- **RxList.com**
- **WebMD.com/Drugs/Index-drugs.aspx**
- **Eprocrates.com**
- **iMeds – Medical Reference for Android**
- **Monthly Prescriber's Reference (MPR)**
- **PDR.net**

Drug Recognition Expert Course 13-11

Notes:____

Acceptable electronic examples include:

- Drugs.com
- RxList.com
- WebMD.com/Drugs/Index-drugs.aspx
- Eprocrates.com
- iMeds – Medical Reference for Android
- Monthly Prescriber's Reference (MPR)
- PDR.net



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Other Information Sources

- **National Highway Traffic Safety Administration, Enforcement and Justice Services Division**
- **State DEC Program Coordinator**
- **The DRE Newsletter**
  Phoenix City Prosecutor's Office
  455 North 5th Street
  Suite 400 Phoenix,
  Arizona, 85004

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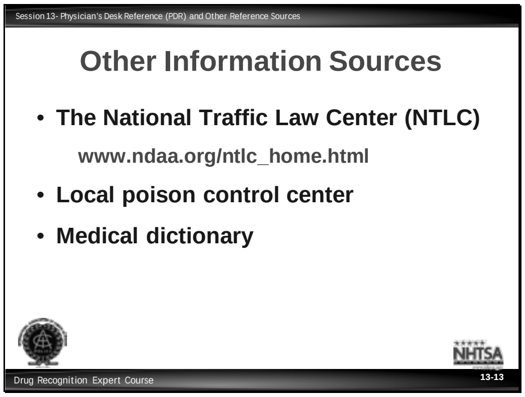
Notes:____

Other Information Sources

- National Highway Safety Administration, Enforcement and Justice Services Division.
- State Drug Evaluation and Classification (DEC) Program Coordinator.
- The DRE Newsletter. Published by the Phoenix City Prosecutor's Office, Phoenix, Arizona.
  - Website: http://phoenix.gov/AGENCY/PHXPROS/dre.html
  - This resource also includes past editions that are a very valuable resource for information



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Other Information Sources

- **The National Traffic Law Center (NTLC)**

  www.ndaa.org/ntlc_home.html
- **Local poison control center**
- **Medical dictionary**

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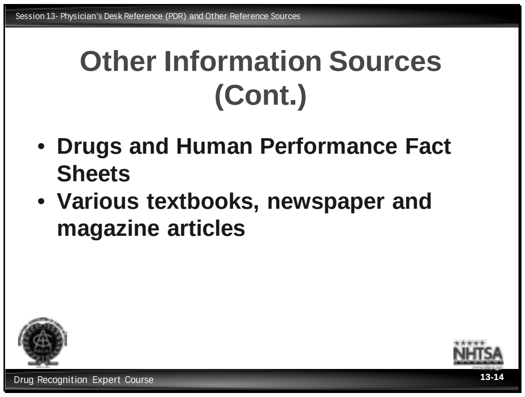
Notes:

- The National Traffic Law Center (NTLC).

  NTLC is part of the American Prosecutors Research Institute (APRI).
- Local Poison Control Center.
- Medical Dictionaries.



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

Other Information Sources (Cont.)

- **Drugs and Human Performance Fact Sheets**
- **Various textbooks, newspaper and magazine articles**

Drug Recognition Expert Course

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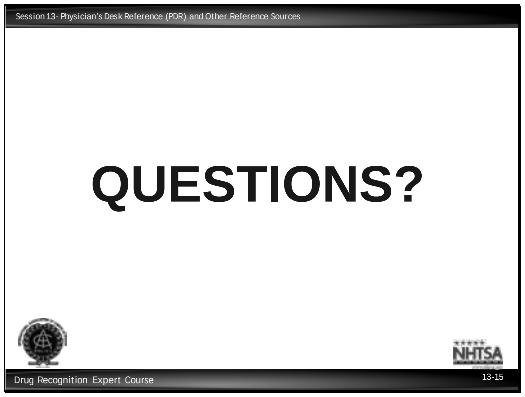
Notes:

- Drugs and Human Performance Fact Sheets

  Produced by U.S. DOT-NHTSA, Report No. DOT 809 725, March 2004.
- Newspaper and magazine articles on drugs and drug impaired driving, including counter-culture magazines such as “High Times.”
- Software programs such as Pharmacists, Body Works, Mosby’s Medical Dictionary and other programs are available on disks and CDs. Various resources are available through online services and the Internet.



Session 13- Physician's Desk Reference (PDR) and Other Reference Sources

QUESTIONS?

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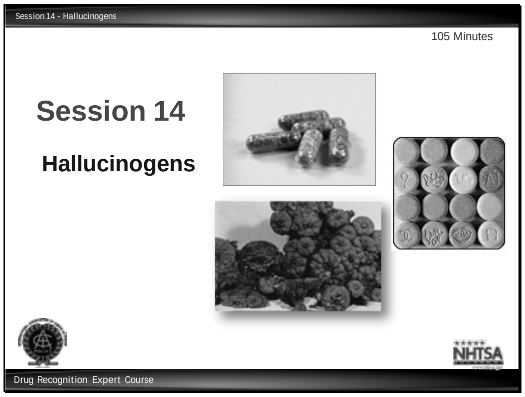
Notes:

Participant Manual DRE 7-Day Session 14 - Hallucinogens



Session 14 - Hallucinogens

105 Minutes

Session 14

Hallucinogens

Drug Recognition Expert Course

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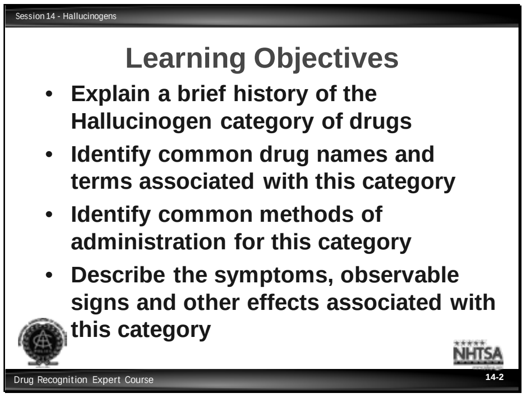

Session 14 - Hallucinogens

Learning Objectives

- Explain a brief history of the Hallucinogen category of drugs
- Identify common drug names and terms associated with this category
- Identify common methods of administration for this category
- Describe the symptoms, observable signs and other effects associated with this category

Drug Recognition Expert Course

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Notes:____

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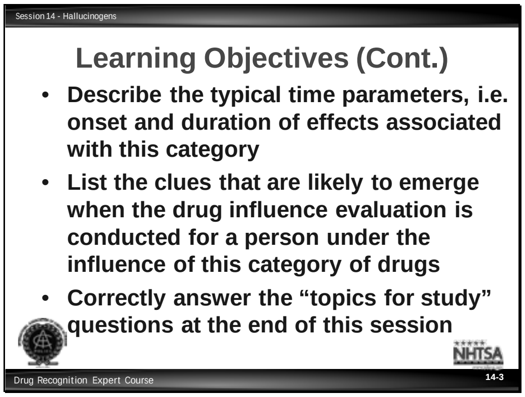
Upon successfully completing this session the participant will be able to:

- Explain a brief history of the Hallucinogen category of drugs
- Identify common drug names and terms associated with this category
- Identify common methods of administration for this category
- Describe the symptoms, observable signs and other effects associated with this category



Session 14 - Hallucinogens

Learning Objectives (Cont.)

- **Describe the typical time parameters, i.e. onset and duration of effects associated with this category**
- **List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs**
- **Correctly answer the “topics for study” questions at the end of this session**

Drug Recognition Expert Course 14-3

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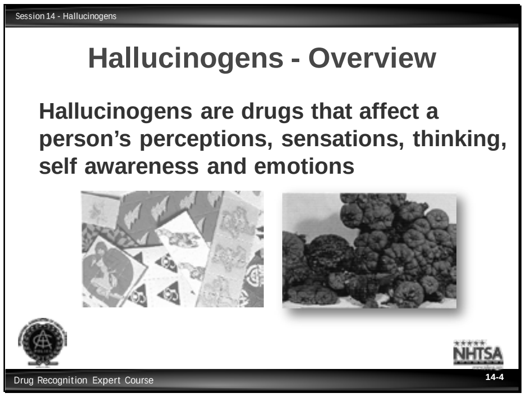
- Describe typical time parameters, i.e. onset and duration of effects, associated with this category
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs
- Correctly answer the “topics for study” questions at the end of this session

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Overview of the Category	Instructor-Led Presentations
B. Possible Effects	Review of Drug Evaluation and Classification Exemplars
C. Onset and Duration Effects	Reading Assignments
D. Overdose Signs and Symptoms	Video Presentations
E. Expected Results of the Evaluation	Slide Presentations
F. Classification Exemplars	



Session 14 - Hallucinogens

Hallucinogens - Overview

Hallucinogens are drugs that affect a person’s perceptions, sensations, thinking, self awareness and emotions

Drug Recognition Expert Course

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Notes:____

A. Overview of the Category

Hallucinogens are drugs that affect a person’s perceptions, sensations, thinking, self-awareness and emotions.

The word “Hallucinogen” means something that causes hallucinations.

Definition from The Random House College Dictionary (Revised Edition, 1980)

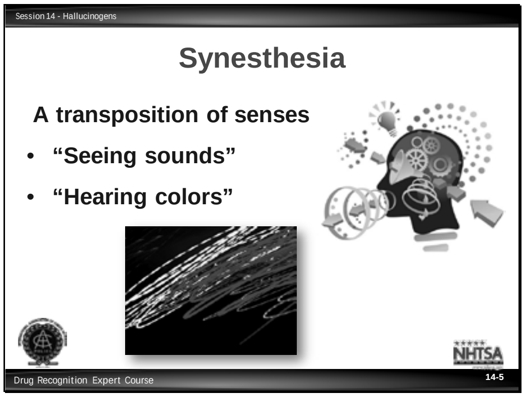
A hallucination is a sensory experience of something that does not exist outside the mind.

Seeing, hearing, smelling, tasting or feeling something that isn’t really there.

Having distorted sensory perceptions, so that things look, sound, smell, etc. differently than they really are.

Hallucinogenic drugs usually produce what are called pseudo-hallucinations: i.e. the user typically is aware that what he or she is seeing, hearing, smelling, etc. isn’t real, but is a product of the drug.

But emphasize that the fact that the user knows the hallucinations aren’t real doesn’t make those hallucinations any less dangerous if they occur while driving.



Session 14 - Hallucinogens

Synesthesia

A transposition of senses

- **"Seeing sounds"**
- **"Hearing colors"**

Drug Recognition Expert Course

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Notes:____

Synesthesia

One common type of hallucination produced by these drugs is called Synesthesia, which is a sensory perception disorder, in which an input via one sense is perceived by the brain as an input via another sense. In its simplest terms, it is a transposition of senses.

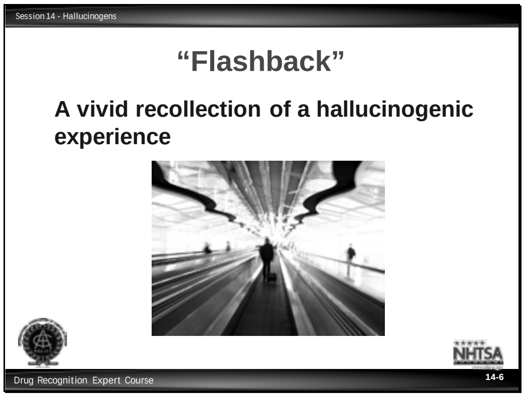
Note: Synesthesia can occur naturally in a small percentage of the population, and can differ from drug induced synesthesia.

Examples: The user may "see a flash of color, or some other sight, when the telephone rings."

- Sounds for example, may be transposed into sights.
- Sights may be transposed into odors.
- The user may "smell" a particular fragrance when he or she looks at something painted yellow.
- The illusions and distorted perceptions produced by hallucinogenic drugs may be very alarming, even terrifying.
- They may produce panic and uncontrolled excitement.

The user may be unable to cope with the terror, and may attempt to flee wildly.

A user who is emotionally or mentally unstable may become psychotic in response to this frightening experience.



Session 14 - Hallucinogens

"Flashback"

A vivid recollection of a hallucinogenic experience

Drug Recognition Expert Course

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Notes:____

Flashback

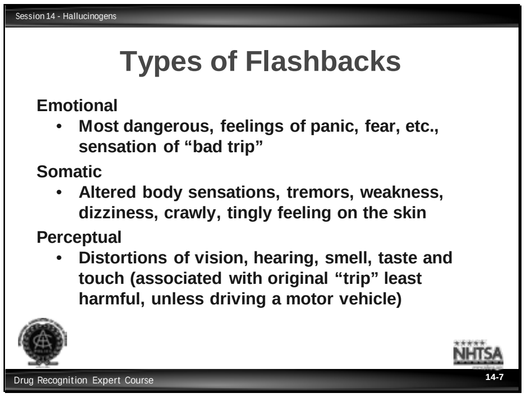
A terrifying “bad trip” sometimes may be re-experienced as a flashback.

In simple terms, a flashback is a vivid recollection of a portion of a hallucinogenic experience.

A flashback does not occur because of a residual quantity of drug in the user’s body.

Instead, a flashback essentially is a very intense daydream.

But point out that subsequent use of the drug may precipitate a flashback, by causing the user to re-experience the frightening illusions of the previous “bad trip.”



Session 14 - Hallucinogens

Types of Flashbacks

Emotional
- **Most dangerous, feelings of panic, fear, etc., sensation of “bad trip”**

Somatic
- **Altered body sensations, tremors, weakness, dizziness, crawly, tingly feeling on the skin**

Perceptual
- **Distortions of vision, hearing, smell, taste and touch (associated with original “trip” least harmful, unless driving a motor vehicle)**

Drug Recognition Expert Course

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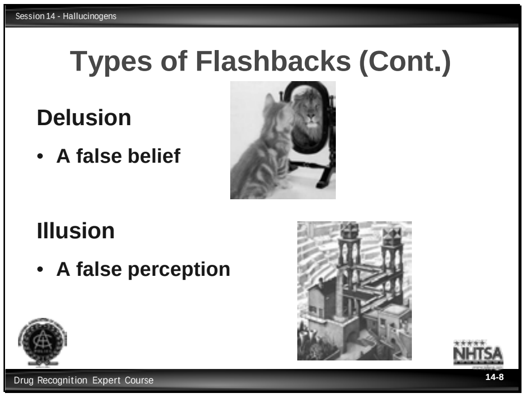
Notes:____

Types of Flashback

There are **three types** of flashback:

- Emotional: feelings of panic, fear, etc; the sensations of a “bad trip.”
- Somatic: Altered body sensations, tremors, weakness, dizziness, crawly, tingly feelings on the skin.
- Perceptual: Distortions of vision, hearing, smell and/or other senses. These distortions are “re-runs” of the original “trip.”



Session 14 - Hallucinogens

Types of Flashbacks (Cont.)

Delusion

- **A false belief**

Illusion

- **A false perception**

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Delusion and Illusion

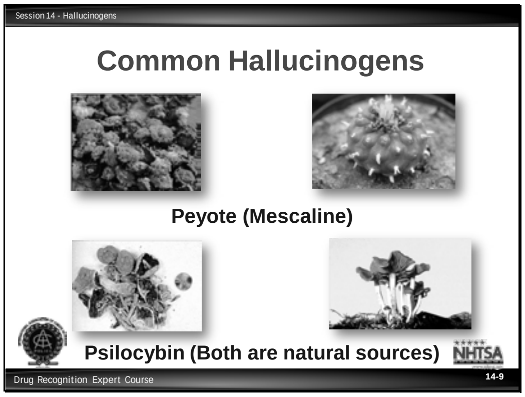
Remember that hallucinogens produce delusions, illusions, or both.

- A delusion is a false belief.

Example of a delusion: “I am an Elephant.”

- An illusion is a false perception, i.e. a misrepresentation of what the senses are receiving.

Example of an illusion: “I see an Elephant.”



Session 14 - Hallucinogens

Common Hallucinogens

Peyote (Mescaline)

Psilocybin (Both are natural sources)

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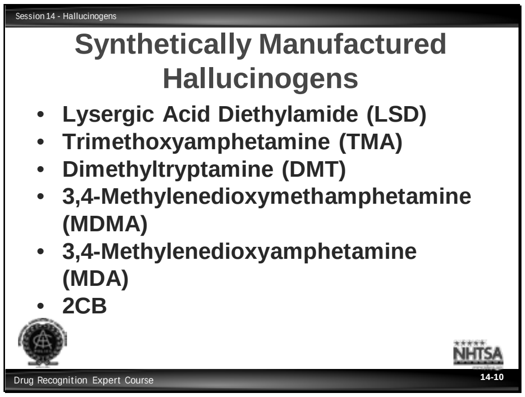
Because they often make the user appear to be insane, Hallucinogens sometimes are called psychotomimetic drugs.

“Psychotomimetic” means “something that mimics psychosis.” A psychosis is a major mental disorder. It implies a loss of touch with reality.

Some Hallucinogens come from natural sources, while others are synthetically manufactured.

Note: Some regional or local Hallucinogens may be discussed in more detail.

Peyote, Psilocybin and Salvia Divinorum are examples of naturally occurring Hallucinogens.



Session 14 - Hallucinogens

Synthetically Manufactured Hallucinogens

- **Lysergic Acid Diethylamide (LSD)**
- **Trimethoxyamphetamine (TMA)**
- **Dimethyltryptamine (DMT)**
- **3,4-Methylenedioxymethamphetamine (MDMA)**
- **3,4-Methylenedioxyamphetamine (MDA)**
- **2CB**

Drug Recognition Expert Course

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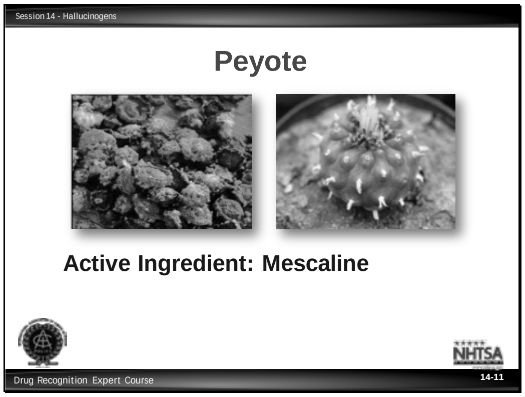
LSD, TMA, DMT, MDMA, MDA, and 2CB are examples of synthetically manufactured Hallucinogens.

- LSD: Lysergic Acid Diethylamide.
- TMA: Trimethoxyamphetamine
- DMT: Dimethyltryptamine
- MDMA is an abbreviation for 3,4-Methylenedioxymethamphetamine and is commonly referred to as “Ecstasy.” It is a hallucinogen that also acts as a stimulant. It produces an energizing effect, as well as distortions in time and perception and enhances enjoyment from tactile experiences.
- MDA is an abbreviation for 3,4-Methylenedioxyamphetamine. It is normally produced as a clear liquid, or as a white powder in capsule or tablet form.
- 2CB (4-Bromo-2, 5-Dimethoxyphenethylamine) is a white powder usually found in pressed tablets or gel caps. It is considered a synthetic psychedelic amphetamine. (DEA, Feb. 2011)



Session 14 - Hallucinogens

Peyote

Active Ingredient: Mescaline

Drug Recognition Expert Course

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Notes:____

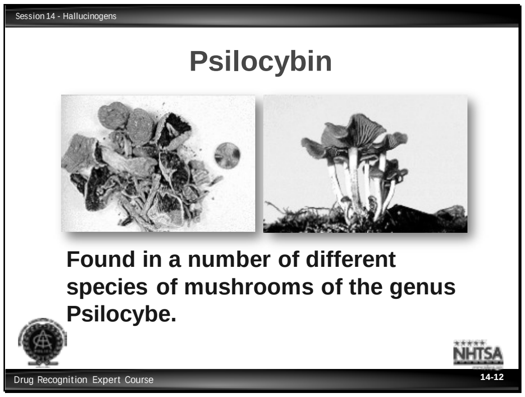
Peyote is a small, spineless cactus.

The active, hallucinogenic ingredient in peyote is Mescaline.

Mescaline is a chemical relative of adrenaline. Effects may be similar to those that would result from a massive rush of adrenalin.

Mescaline was first isolated from Peyote in 1856. It was named after the Mescalero Apaches.

Peyote is used legally in religious ceremonies of the Native American Church.



Session 14 - Hallucinogens

Psilocybin

Found in a number of different species of mushrooms of the genus Psilocybe.

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14-12

Notes:____

Psilocybin is a drug found in a number of different species of mushrooms of the genus Psilocybe.

There are over 185 known species of mushrooms that contain psilocybin and psilocin.

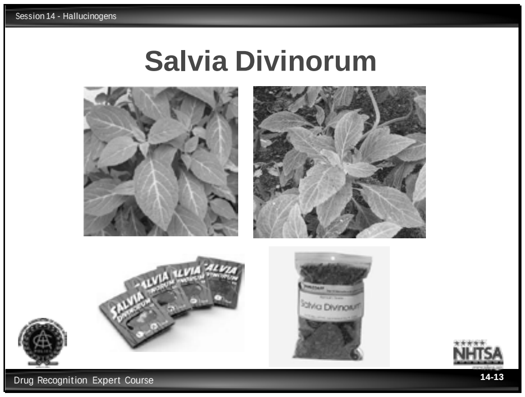
Source: Drug Identification Bible, 2012 Edition.

These mushrooms also have been used in Native American religious ceremonies for thousands of years.

An unstable derivative of Psilocybin, called Psilocin, is also found in these mushrooms and also has hallucinogenic properties.

Psilocybin is chemically very similar to serotonin, a neurotransmitter that is found in the brain.

The effects of psilocybin may be similar to what would happen if the brain were suddenly flooded with Serotonin.



Session 14 - Hallucinogens

Salvia Divinorum

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14-13

Notes:____

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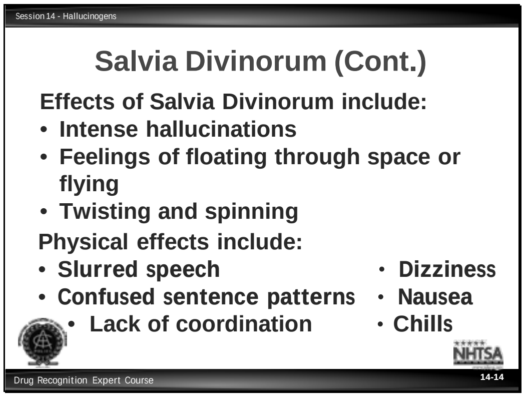
Salvia Divinorum, also known as S. divinorum or Salvia, is a naturally occurring Hallucinogen.

Salvia divinorum is a perennial herb in the mint family native to certain areas of Mexico. The plant, which can grow to over three feet in height, has large green leaves, hollow square stems and white flowers with purple calyces, can also be grown successfully outside of this region.

Salvia divinorum has been used by the Mazatec Indians for its ritual divination and healing. The active constituent of Salvia divinorum has been identified as Salvinorin A.

It was not until August 2002 that researchers discovered that Salvia divinorum acts at the kappa opiate receptor (KOR) site, where much of human reception is regulated.

According to a National Survey on Drug Use and Health Report published by SAMHSA in February 2008, it is estimated that 1.8 million persons aged 12 or older used Salvia divinorum in their lifetime.



Session 14 - Hallucinogens

Salvia Divinorum (Cont.)

Effects of Salvia Divinorum include:

- **Intense hallucinations**
- **Feelings of floating through space or flying**
- **Twisting and spinning**

Physical effects include:

- **Slurred speech**
- **Confused sentence patterns**
- **Lack of coordination**
- **Dizziness**
- **Nausea**
- **Chills**

Drug Recognition Expert Course

14-14

Notes:____

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There are several methods of ingesting Salvia with varying durations of hallucinogenic effects:

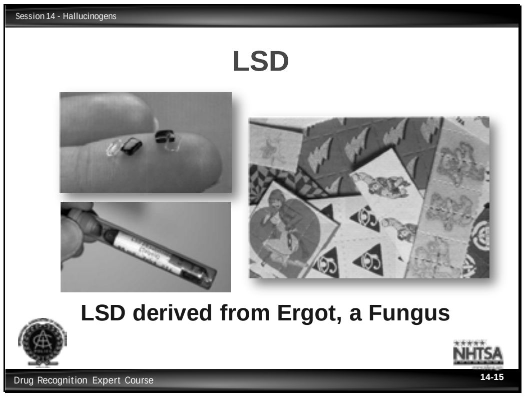
- Dried leaves of Salvia can be smoked like marijuana, in a bong, pipe or as a joint, with the effects lasting up to 15-30 minutes.
- Fresh leaves can be chewed as a quid. The leaves of Salvia produce extractions of Salvinorin A before the leaves are removed from the mouth. Effects from chewing Salvia can last up to one hour.
- Salvinorin A can also be vaporized and inhaled by heating the leaves in a pipe of tin foil and the vapors inhaled through a glass pipe.

Effects of Salvia Divinorum include: intense hallucinations; feelings of floating through space or flying; twisting and spinning. Physical effects include dizziness; nausea; lack of coordination; slurred speech, confused sentence patterns; and chills.

Some common street names for Salvia Divinorum include: Salvia, Sally D, Magic Mint, Maria Pastora, and Diviner’s Sage.

Salvia is not listed under the Controlled Substance Act (CSA) or approved for medical use.

Source: DEA Office of National Control Policy Bulletin, November 2008.



Session 14 - Hallucinogens

LSD

LSD derived from Ergot, a Fungus

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14-15

Notes:____

LSD is perhaps the most famous of the synthetically manufactured Hallucinogens.

- “LSD” is an abbreviation of Lysergic Acid Diethylamide.

It was first produced in 1938, although its hallucinogenic properties were not discovered until 1943.

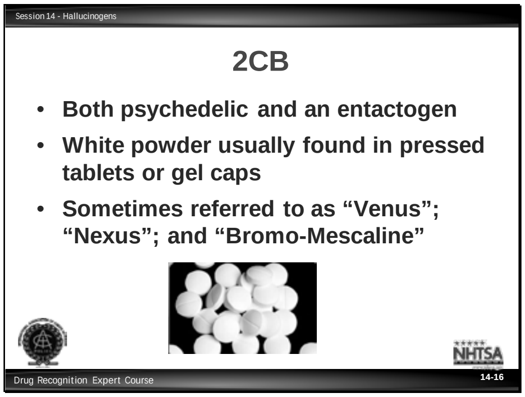
- LSD was used in psychotherapy during the 1940’s and early 1950’s.

Example: it was occasionally used in the treatment of alcoholism.

Although LSD is a synthetic drug, it was first derived from Ergot, a fungus that grows on rye and other grains.

In the Middle Ages, when people accidentally ate this fungus, their resulting bizarre behavior was thought to stem from possession by the Devil.

- Ergot is still used medically to treat migraine headaches. Sandoz Laboratories markets a combination of caffeine and Ergot called Cafergot.



Session 14 - Hallucinogens

2CB

- Both psychedelic and an entactogen
- White powder usually found in pressed tablets or gel caps
- Sometimes referred to as “Venus”; “Nexus”; and “Bromo-Mescaline”

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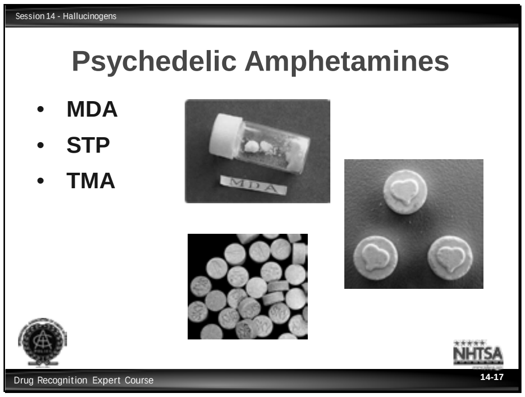
Notes:

- 2CB (4-Bromo-2, 5-Dimethoxyphenethylamine) is a popular drug first synthesized in 1974.
- 2CB is considered both a psychedelic and an entactogen.
- Note: “Entactogen” is a term used by psychiatrists to classify Ecstasy (MDMA). It literally means “touching within.”
- 2CB is a white powder usually found in pressed tablets or gel caps.
- 2CB is sometimes referred to as “Venus”; “Nexus”; and “Bromo-Mescaline.”



Session 14 - Hallucinogens

Psychedelic Amphetamines

- **MDA**
- **STP**
- **TMA**

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Notes:____

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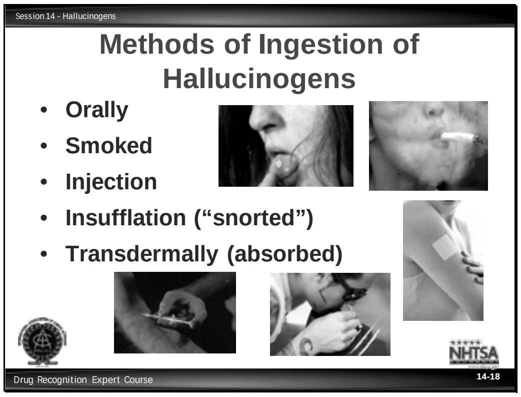
MDA, STP, and TMA are synthetically manufactured hallucinogens that sometimes are called “Psychedelic Amphetamines.”

- MDA is an abbreviation for 3, 4-Methylenedioxyamphetamine.
- STP is an abbreviation for 2,5-Dimethoxy-4-methylamphetamine
- TMA is an abbreviation for 3, 4, 5-Trimethoxyamphetamine.
- Chemically related to Amphetamines and produce many effects similar to those of CNS Stimulants.
- Chemically related to Mescaline.

Among users, MDA sometimes is referred to as the “Mellow Drug of America.”

An important fact about Hallucinogens is that they are not addictive, in the sense that cessation of use does not produce withdrawal signs or symptoms; however, regular users do develop tolerance to these drugs.



Session 14 - Hallucinogens

Methods of Ingestion of Hallucinogens

- **Orally**
- **Smoked**
- **Injection**
- **Insufflation (“snorted”)**
- **Transdermally (absorbed)**

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Notes:____

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Methods of Ingestion of Hallucinogens

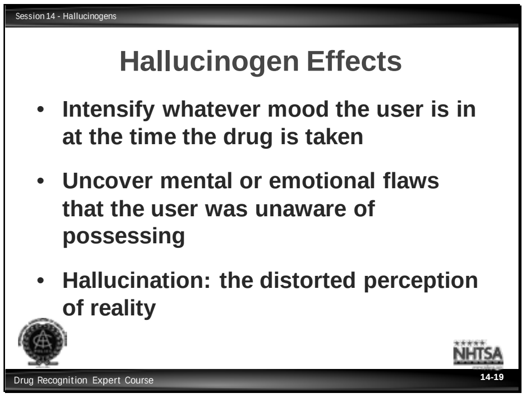
The most common method of ingesting Hallucinogens is orally.

Some Hallucinogens can also be smoked. However, LSD cannot be ingested by smoking.

LSD is usually ingested orally, which produces rapid effects. It can also be absorbed by placing drops in the eye.

Some Hallucinogens can be ingested and absorbed through the skin.

MDA can also be insufflated, or “snorted.”



Session 14 - Hallucinogens

Hallucinogen Effects

- **Intensify whatever mood the user is in at the time the drug is taken**
- **Uncover mental or emotional flaws that the user was unaware of possessing**
- **Hallucination: the distorted perception of reality**

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Notes:____

B. Possible Effects

The effects of Hallucinogens vary widely, and are affected by the user’s personality, mood and expectations, and by the surroundings in which the drug is taken.

The most common effect of the Hallucinogen is hallucination: the distorted perception of reality, often with a mixing of senses that makes it virtually impossible for the drug influenced user to function in the real world.

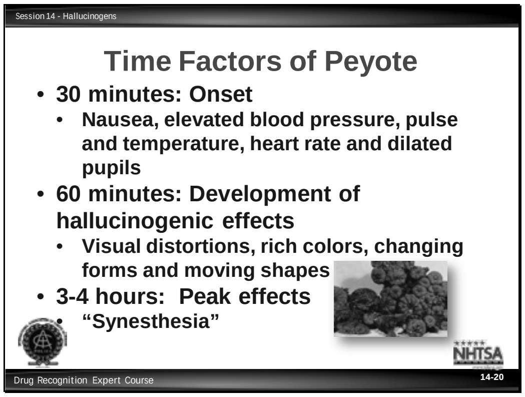
Generally, Hallucinogens intensify whatever mood the user is in at the time the drug is taken.

- If the user is depressed, the drug will deepen the depression.
- If the user is feeling pleasant, the drug will heighten that feeling.

If the user expects that the drug will help him or her achieve new insights or an expanded consciousness, the “trip” will seem to have that effect.

However, Hallucinogens also often uncover mental or emotional flaws that the user was unaware of possessing.

Therefore, many users who expect a positive experience with the drug will encounter instead the panic of a “bad trip.”



Session 14 - Hallucinogens

Time Factors of Peyote

- **30 minutes: Onset**
  - **Nausea, elevated blood pressure, pulse and temperature, heart rate and dilated pupils**
- **60 minutes: Development of hallucinogenic effects**
  - **Visual distortions, rich colors, changing forms and moving shapes**
- **3-4 hours: Peak effects**
  - **"Synesthesia"**

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Notes:

C. Onset and Duration Effects

Time Factors of Peyote

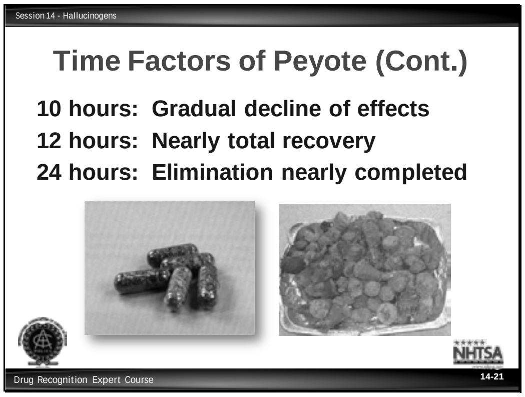
The time parameters associated with Hallucinogens vary from drug to drug.

The effects of Peyote (Mescaline) begin to be felt within approximately one-half hour after eating the cactus "buttons."

30 minutes: nausea, possibly leading to vomiting; mild rise in blood pressure, pulse, temperature and heart rate; pupils dilate.

One hour: sensory changes begin; visual distortions accompanied by rich colors; objects take on new forms and begin to move; shapes "come alive."

3 – 4 hours: sensory changes reach their peak; synesthesia (transposition of senses) commonly occurs.



Session 14 - Hallucinogens

Time Factors of Peyote (Cont.)

10 hours: Gradual decline of effects
12 hours: Nearly total recovery
24 hours: Elimination nearly completed

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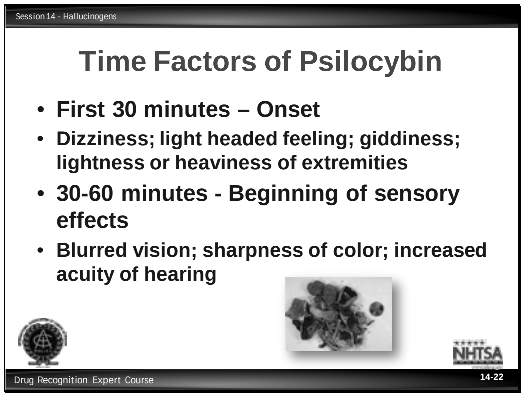
Notes:

10 hours: gradual decline in effects.

12 hours: nearly total recovery from effects.

24 hours: the majority of the Mescaline has been excreted from the body.



Session 14 - Hallucinogens

Time Factors of Psilocybin

- **First 30 minutes – Onset**
- **Dizziness; light headed feeling; giddiness; lightness or heaviness of extremities**
- **30-60 minutes - Beginning of sensory effects**
- **Blurred vision; sharpness of color; increased acuity of hearing**

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Notes:____

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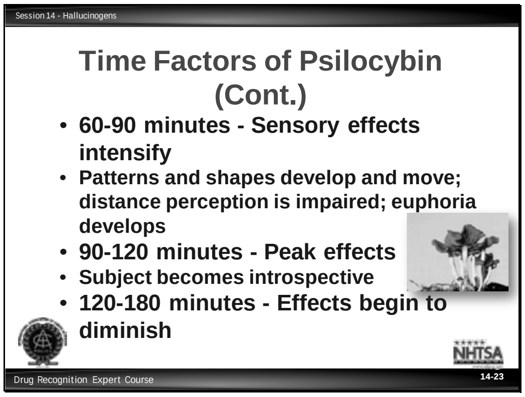
Time Factors of Psilocybin

Psilocybin also begins to exert its effects within one-half hour.

First 30 minutes: dizziness, light headed feeling, giddiness; the extremities (hands, feet, etc.) may feel very light or very heavy.

30 – 60 minutes: vision blurs; colors become brighter, leave longer lasting after images; objects take on sharp visual definition; hearing becomes more acute.



Session 14 - Hallucinogens

Time Factors of Psilocybin (Cont.)

- **60-90 minutes - Sensory effects intensify**
- **Patterns and shapes develop and move; distance perception is impaired; euphoria develops**
- **90-120 minutes - Peak effects**
- **Subject becomes introspective**
- **120-180 minutes - Effects begin to diminish**

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Notes:____

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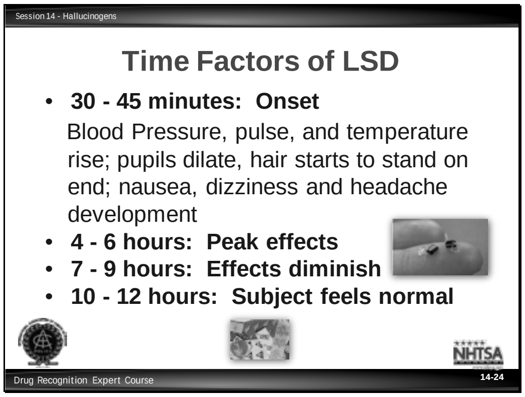
60 – 90 minutes: color patterns and shapes start to develop; the surfaces of objects appear to develop waves and wave-like patterns; distance perception becomes impaired; feelings of euphoria develop.

90 – 120 minutes: body sensations increase, along with mental perceptions; user commonly becomes introspective, with increased bodily sensations and mental perceptions.

120 – 180 minutes: effects start to diminish.

180 – 300 minutes: Nearly complete resolution of drug-induced effects.

Source: Drug Identification Bible, 2012



Session 14 - Hallucinogens

Time Factors of LSD

- **30 - 45 minutes: Onset**
  Blood Pressure, pulse, and temperature rise; pupils dilate, hair starts to stand on end; nausea, dizziness and headache development
- **4 - 6 hours: Peak effects**
- **7 - 9 hours: Effects diminish**
- **10 - 12 hours: Subject feels normal**

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Notes:____

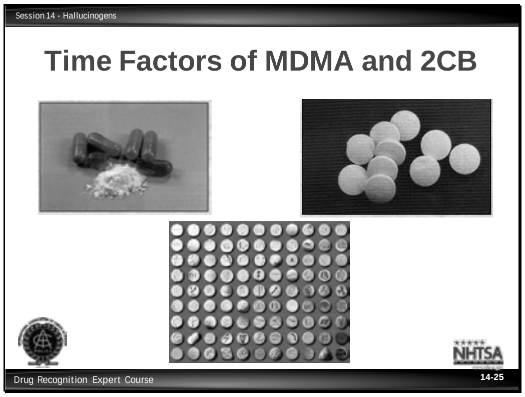
LSD’s effects begin to be felt within 30 – 45 minutes.

30 – 45 minutes: blood pressure, pulse and temperature rise; pupils dilate; hair starts to stand on end (Piloerection); nausea, dizziness and headache development.

4 – 6 hours: effects reach their peak.

7 – 9 hours: effects diminish.

10 – 12 hours: user feels normal.



Session 14 - Hallucinogens

Time Factors of MDMA and 2CB

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Notes:____

MDMA’s effects usually begin within several minutes to a half hour if taken orally.

Psychological effects include confusion, depression, anxiety and paranoia.

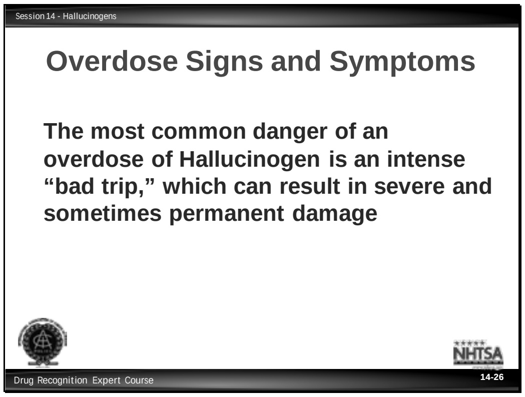
The duration effects can last from 1 – 12 hours depending on dosage.

2CB’s effects are dose related.

Lower doses (5-15mg) produce enhanced sensual sensations and feelings of being “in one’s body.”

At higher doses (15-30mg) it produces intense visual effects that include moving objects with “trails” behind them and colors appearing from nowhere.

Onset and duration of effects of other Hallucinogens vary widely from about two hours to about 24 hours.



Session 14 - Hallucinogens

Overdose Signs and Symptoms

The most common danger of an overdose of Hallucinogen is an intense "bad trip," which can result in severe and sometimes permanent damage

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Notes:

D. Overdose Signs and Symptoms

The most common danger of an overdose of Hallucinogen is an intense "bad trip," which can result in severe and sometimes permanent damage.

It is unlikely that other Hallucinogens would directly result in death from overdoses.

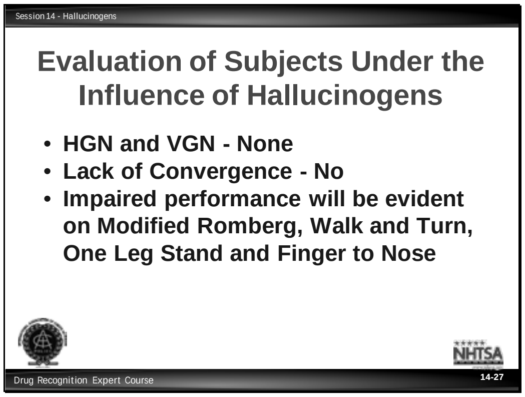
However, an overdose can be extremely dangerous and indirectly result in death.

The extreme panic and agitation of a "bad trip" have been known to result in suicide or in accidental death as the user attempts to flee the hallucinations.

Sometimes Hallucinogens induce a perception of invulnerability in the user, leading to bizarre and very dangerous behavior, and death.

Example: at least one LSD user was killed when he attempted to stop a train. Others have died from jumping off buildings believing they can fly.

Some evidence suggests that prolonged use of LSD may produce organic brain damage, leading to impaired memory, reduced attention span, mental confusion and impaired ability to deal with abstract concepts.



Session 14 - Hallucinogens

Evaluation of Subjects Under the Influence of Hallucinogens

- **HGN and VGN - None**
- **Lack of Convergence - No**
- **Impaired performance will be evident on Modified Romberg, Walk and Turn, One Leg Stand and Finger to Nose**

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Notes:

E. Expected Results of the Evaluation

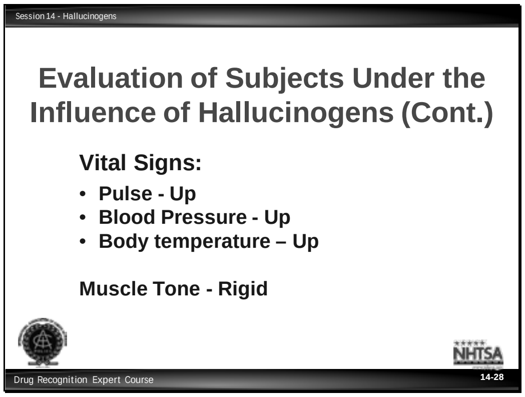
Observable Evidence of Impairment

Eye Exams:

- Neither Horizontal Gaze nor Vertical Gaze Nystagmus will be present.
- Lack of Convergence will not be evident.

Psychophysical Tests:

- Performance on the Modified Romberg balance test will be impaired, particularly in the subject’s estimation of the passage of 30 seconds.
- Performance on the Walk and Turn, One Leg Stand, and Finger to Nose tests will be markedly impaired due to the subject’s severe visual distortion, impaired perception of distance and decreased muscle coordination.



Session 14 - Hallucinogens

Evaluation of Subjects Under the Influence of Hallucinogens (Cont.)

Vital Signs:

- **Pulse - Up**
- **Blood Pressure - Up**
- **Body temperature – Up**

Muscle Tone - Rigid

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14-28

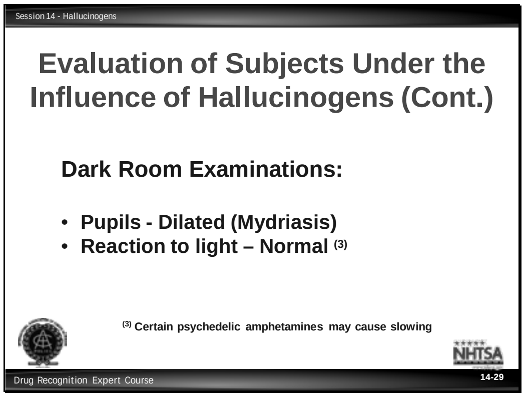
Notes:

Vital Signs

Pulse will generally be elevated

Blood pressure generally will be elevated

Body temperature generally will be elevated


Session 14 - Hallucinogens

Evaluation of Subjects Under the Influence of Hallucinogens (Cont.)

Dark Room Examinations:

- **Pupils - Dilated (Mydriasis)**
- **Reaction to light – Normal (3)**

(3) Certain psychedelic amphetamines may cause slowing

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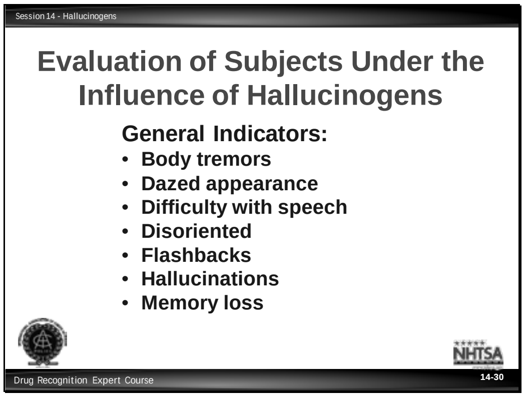
Notes:

Dark Room

Pupils generally will be dilated

Reaction to light will usually be normal. Certain Psychedelic Amphetamines may cause slowing of the pupil’s reaction to light.


Session 14 - Hallucinogens

Evaluation of Subjects Under the Influence of Hallucinogens

General Indicators:

- **Body tremors**
- **Dazed appearance**
- **Difficulty with speech**
- **Disoriented**
- **Flashbacks**
- **Hallucinations**
- **Memory loss**

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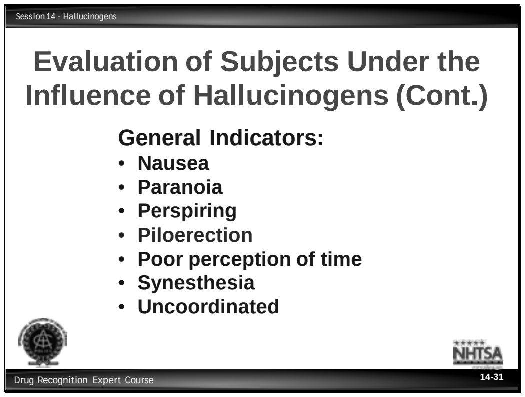
Notes:

General Indicators

- Body tremors
- Dazed appearance
- Difficulty with speech
- Disoriented
- Flashbacks
- Hallucinations
- Memory loss



Session 14 - Hallucinogens

Evaluation of Subjects Under the Influence of Hallucinogens (Cont.)

General Indicators:

- **Nausea**
- **Paranoia**
- **Perspiring**
- **Piloerection**
- **Poor perception of time**
- **Synesthesia**
- **Uncoordinated**

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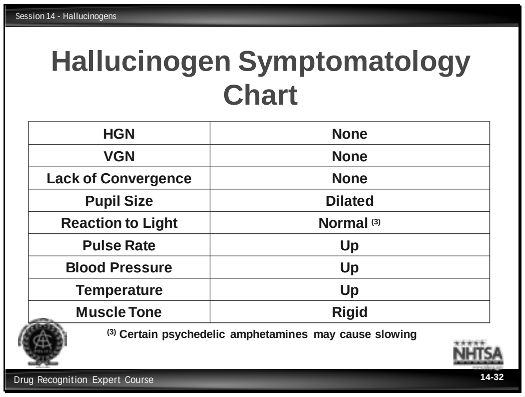
Notes:

General Indicators (Cont.)

- Nausea
- Paranoia
- Perspiring
- Piloerection (LSD)
- Poor perception of time and distance
- Synesthesia
- Uncoordinated



Session 14 - Hallucinogens

Hallucinogen Symptomatology Chart

HGN	None
VGN	None
Lack of Convergence	None
Pupil Size	Dilated
Reaction to Light	Normal (3)
Pulse Rate	Up
Blood Pressure	Up
Temperature	Up
Muscle Tone	Rigid

(3) Certain psychedelic amphetamines may cause slowing

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Notes:

Symptomatology Chart

Session 14 - Hallucinogens

Hallucinogens

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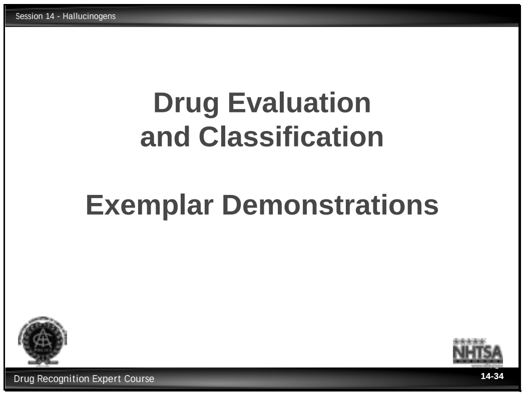
Notes:____



Session 14 - Hallucinogens

Drug Evaluation
and Classification

Exemplar Demonstrations

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Notes:____

F. Classification Exemplar

Session 14 - Hallucinogens

QUESTIONS?

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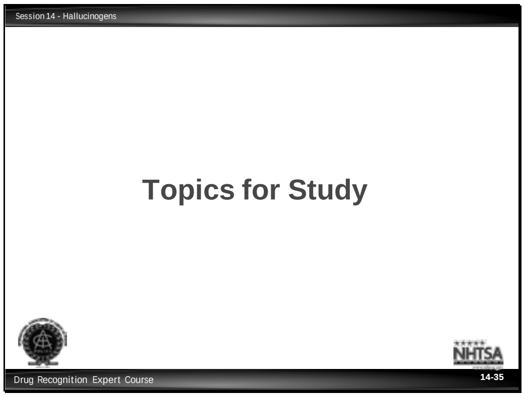

Session 14 - Hallucinogens

Topics for Study

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14-35

TOPICS FOR STUDY

1. What does “synesthesia” mean?

2. What is a “flashback”? What are the three types of “flashback”?

3. Name two naturally occurring Hallucinogens.

4. What is a “bad trip”?

5. What does “psychotomimetic” mean?

6. What is an “illusion”? What is a “delusion”?

7. What is the difference between “hallucinations” and “pseudo-hallucinations”?

8. What is “piloerection”?

DRUG INFLUENCE EVALUATION

Evaluator Ofc. Chris Thurman, Louisville Metro PD	DRE # 16444	Rolling Log # 12-07-14	**Session XIV #1**
Recorder/Witness Ofc. Dean Kisling, Louisville Metro PD	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-07-1145
Arrestee's Name (Last, First, Middle) Hoeckle, Rebecca S.	Date of Birth 9/23/62	Sex F / Race I	Arresting Officer (Name, ID#) Ofc. Kevin Belcher, KY Vehicle Enforcement #12849
Date Examined / Time /Location 07/29/12 2030 Jefferson Co. Jail	Breath Results: Results: 0.00	Test Refused ☐ Instrument #: 13340	Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Officer Belcher 1935

What have you eaten today? When? "Nothing, I'm fasting"

What have you been drinking? "I don't drink" How much?

Time of last drink? N/A

Time now/ Actual: 7 pm / 2040

When did you last sleep? How long: Last night 6-7 hours

Are you sick or injured? ☒ Yes ☐ No Upset stomach

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical defects? ☐ Yes ☒ No

Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

Attitude: Withdrawn, distracted

Coordination: Very poor, difficulty standing

Speech: Rapid, stuttering

Breath Odor: Sour, rancid

Face: Flushed

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ Left ☐ Right

Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)

Vertical Nystagmus ☐ Yes ☒ No

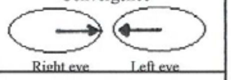
Able to follow stimulus ☒ Yes ☐ No

Eyelids ☒ Normal ☐ Droopy

Pulse and time
1. 104 / 2040
2. 112 / 2057
3. 104 / 2112

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

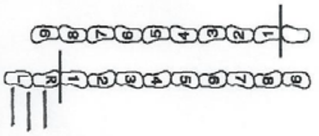


ONE LEG STAND

Modified Romberg Balance

Unable to stand

Walk and Turn test



Test stopped

Cannot keep balance ✓✓✓

Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken		

L R
- ☐ ☐ Sways while balancing
- ☐ ☐ Uses arms to balance
- ☐ ☐ Hopping
- ☐ ☐ Puts foot down

Test stopped for safety reasons

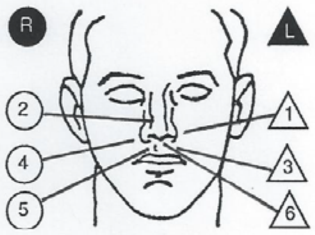
Internal clock: N/A estimated as 30 seconds

Describe Turn: N/A

Cannot do test (explain): Test stopped for safety reasons

Type of footwear: Sandals

Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	7.0	8.5	6.5
Right Eye	7.0	8.5	6.5

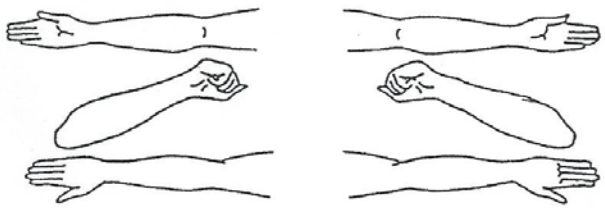
Nasal area: Clear

Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: Normal

RIGHT ARM LEFT ARM



Nothing observed

Blood pressure: 148/104

Temperature: 100.0

Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid

Comments: Rigidity in arms

What drugs or medications have you been using? "My company does not permit drugs"

How much? N/A

Time of use? N/A

Where were the drugs used? (Location) N/A

Date / Time of arrest: 07/29/12 1930

Time DRE was notified: 2010

Evaluation start time: 2030

Evaluation completion time: 2135

Precinct/Station:

Officer's Signature:

DRE # 16444

Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ■ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect: Hoeckle, Rebecca S.

1. LOCATION: The evaluation took place at the Jefferson County Jail.

2. WITNESSES: The arresting officer, Kevin Belcher observed the evaluation and DRE Instructor Dean Kisling of the Louisville Metro PD recorded the evaluation.

3. BREATH ALCOHOL TEST: Hoeckle's breath test was a 0.00%.

4. NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER: I was contacted by Officer Belcher and requested to conduct a drug evaluation on Hoeckle. I contacted Officer Belcher at the jail where he advised that he had found the suspect stopped partially in the travel portion of I-65. When contacted, the suspect appeared dazed and disoriented. She pointed to some bright lights near the Interstate and told Officer Belcher that "They told me to stop, so I stopped." She was unable to perform SFST's and was subsequently arrested for DUI.

5. INITIAL OBSERVATION OF SUSPECT: The suspect was seated next to the Intoxilyzer and was staring straight ahead. She slowly turned and asked "Are you God?" Writer replied by giving her my name and asking for consent to conduct a drug evaluation. She replied, "They sent you, so you must be good." Her speech was rapid, she stuttered at times and she was perspiring.

6. MEDICAL PROBLEMS AND TREATMENT: The suspect indicated that she had an upset stomach and was not feeling good, but she did not require medical assistance.

7. PSYCHOPHYSICAL TESTS: The suspect was unable to stand without assistance. It was necessary to terminate the Modified Romberg Balance, Walk and Turn and One Leg Stand tests for her safety. The Finger to Nose test was conducted while she was seated. She missed the tip of her nose on all six attempts.

8. CLINICAL INDICATORS: The suspect's pupils were dilated in two of the lighting levels. Her pulse, blood pressure and temperature were elevated and above the DRE average ranges.

9. SIGNS OF INGESTION: The suspect's breath was sour smelling and was rancid.

10. SUSPECT'S STATEMENTS: The suspect stated she was fasting for religious reasons and that her trucking company forbids the use of alcohol and illegal drugs. The suspect stated she got hungry so she purchased some "organic mushrooms" at a truck stop near Lexington.

11. DRE'S OPINION: In my opinion Hoeckle is under the influence of a **Hallucinogen** and unable to operate a vehicle safely.

12. TOXICOLOGICAL SAMPLE: The suspect provided a urine sample.

13. MISCELLANEOUS:

DRUG INFLUENCE EVALUATION

Evaluator Sergeant Allan Kolak, Cape Coral PD	DRE # 8191	Rolling Log # 12-05-209	**Session XIV #2**
Recorder/Witness Kyle Clark, IPTM	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-100978

Arrestee's Name (Last, First, Middle) Warburton, Cindy T.	Date of Birth 7/18/82	Sex F	Race W	Arresting Officer (Name, ID#) Deputy Darrel Kehne, Collier Co. S.O. #9077

Date Examined / Time /Location 05/07/12, 2310 Collier Co. Jail	Breath Results: Results: 0.00 Test Refused ☐ Instrument #: 13465	Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

Miranda Warning Given Given By: Dpty. Kehne	☒ Yes ☐ No	What have you eaten today? Spaghetti	When? lunch	What have you been drinking? Nothing	How much?	Time of last drink? N/A

Time now/ Actual 7:00 PM/2315	When did you last sleep? How long Yesterday 6 hrs.	Are you sick or injured? ☐ Yes ☒ No "I feel hot."	Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No	Do you have any physical defects? ☐ Yes ☒ No		Are you under the care of a doctor or dentist? ☐ Yes ☒ No

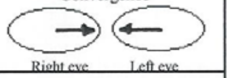
Are you taking any medication or drugs? ☐ Yes ☒ No	Attitude: Distracted, paranoid	Coordination: Poor, staggering
Speech: Rambling, incoherent at times	Breath Odor: Normal	Face: Perspiring

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft	Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery	Blindness: ☒ None ☐ Left ☐ Right	Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)	Vertical Nystagmus ☐ Yes ☒ No	Able to follow stimulus ☒ Yes ☐ No	Eyelids ☒ Normal ☐ Droopy

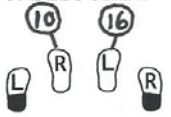
Pulse and time
1. 112 / 2319
2. 116 / 2325
3. 116 / 2340

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence



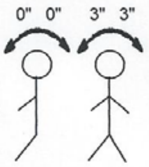
18 ONE LEG STAND 31



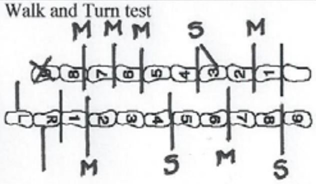
L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑	☑	Puts foot down

Leg tremors

Modified Romberg Balance



Walk and Turn test

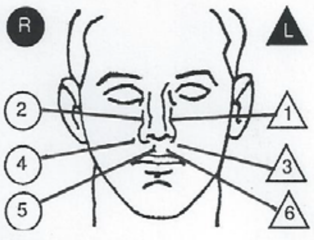


Leg tremors

Cannot keep balance	✓✓	
Starts too soon	✓	
	1st Nine	2nd Nine
Stops walking	✓✓	✓
Misses heel-toe	✓✓	✓✓✓✓
Steps off line		✓
Raises arms	Constant	Constant
Actual steps taken	9	8

Internal clock 10 estimated as 30 seconds	Describe Turn Lost balance, stumbled, nearly fell	Cannot do test (explain) N/A	Type of footwear: Sandals

Draw lines to spots touched



Opened her eyes.

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.0	8.5	5.5
Right Eye	6.0	8.5	5.5

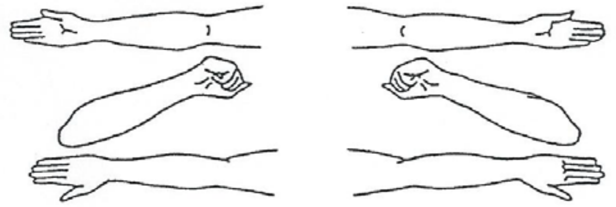
Nasal area:
Clear

Oral cavity:
Clear

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: Normal

RIGHT ARM **LEFT ARM**



Nothing observed

Blood pressure 150/102	Temperature 99.8

Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid

Comments:

What drugs or medications have you been using? Nothing	How much? N/A	Time of use? N/A	Where were the drugs used? (Location) No answer

Date / Time of arrest: 05/07/12 2215	Time DRE was notified: 2240	Evaluation start time: 2310	Evaluation completion time: 2355	Precinct/Station: Traffic

Officer's Signature:	DRE # 8191	Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☒ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Warburton, Cindy T.

1. **LOCATION:** The evaluation was conducted at the Collier County Jail.

2. **WITNESSES:** DRE State Coordinator, Kyle Clark witnessed and recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Warburton's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was on-duty when informed by Dispatch that Deputy Kehne was requesting a drug evaluation. I contacted Deputy Kehne at the Intake Center where he advised the suspect had been arrested after driving along the gravel shoulder of Beach Road trying to pass some stopped vehicles. According to Deputy Kehne, the suspect pointed to his baton and shouted "Look out, there's a big snake hanging from your belt!" She was very paranoid acting and also claimed that the overhead lights on the patrol car were burning her eyes and skin.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect sitting in the interview room and she appeared to be disoriented. She was at times talking to herself and at one point she pointed to the clock on the wall and began talking to it.

6. **MEDICAL PROBLEMS AND TREATMENT:** None observed and none stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" side to side and estimated 30 seconds in 10 seconds. Walk & Turn: Suspect started walking too soon, lost her balance twice during the instructions, missed heel to toe, stopped walking, stepped off the line, raised her arms, staggered while turning and only took eight steps on the return. One Leg Stand: Suspect swayed, raised her arms, and put her foot down. Finger to Nose: Suspect missed the tip of her nose on each attempt. She also opened her eyes and shouted, "I can't feel my face!" "My face is gone!"

8. **CLINICAL INDICATORS:** The suspect's pulse, blood pressure and temperature were all elevated and above the DRE average ranges. The suspect's pupils were dilated in two of the lighting levels.

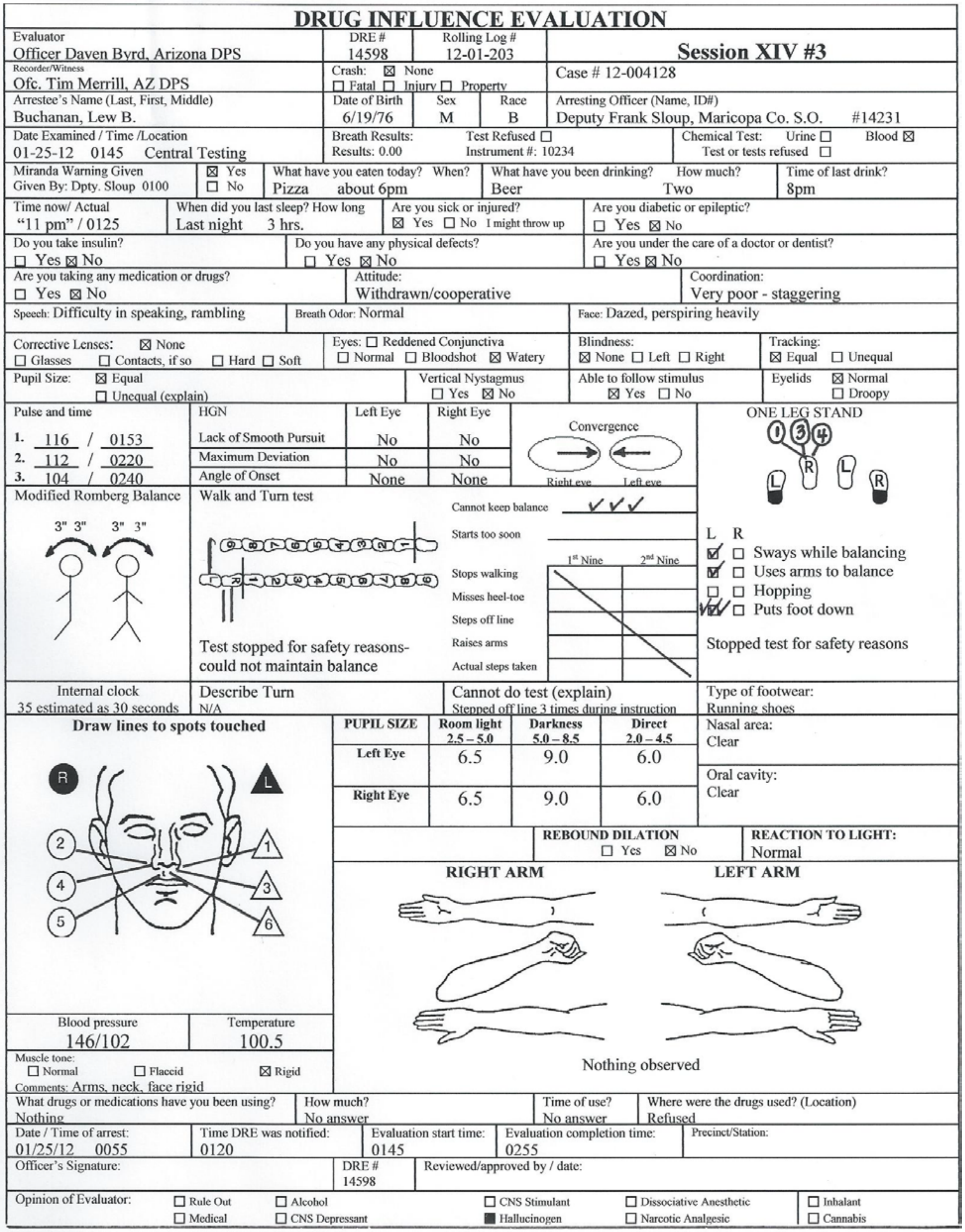
9. **SIGNS OF INGESTION:** None observed.

10. **SUSPECT'S STATEMENTS:** The suspect stated that she felt hot and denied drug use.

11. **DRE'S OPINION:** In my opinion Warburton is under the influence of a Hallucinogen and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** The suspect was wearing an "XTC" tee-shirt.



DRUG INFLUENCE EVALUATION

Evaluator: Officer Daven Byrd, Arizona DPS
DRE #: 14598
Rolling Log #: 12-01-203
Session XIV #3
Recorder/Witness: Ofc. Tim Merrill, AZ DPS
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-004128
Arrestee's Name (Last, First, Middle): Buchanan, Lew B.
Date of Birth: 6/19/76
Sex: M
Race: B
Arresting Officer (Name, ID#): Deputy Frank Sloup, Maricopa Co. S.O. #14231
Date Examined / Time /Location: 01-25-12 0145 Central Testing
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 10234
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No Given By: Dpty. Sloup 0100
What have you eaten today? Pizza When? about 6pm
What have you been drinking? Beer How much? Two
Time of last drink? 8pm
Time now/ Actual: "11 pm" / 0125
When did you last sleep? Last night How long 3 hrs.
Are you sick or injured? ☒ Yes ☐ No I might throw up
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Withdrawn/cooperative
Coordination: Very poor - staggering
Speech: Difficulty in speaking, rambling
Breath Odor: Normal
Face: Dazed, perspiring heavily
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time
1. 116 / 0153
2. 112 / 0220
3. 104 / 0240

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence
Right eye Left eye

Modified Romberg Balance
3" 3" 3" 3"

Walk and Turn test
Test stopped for safety reasons- could not maintain balance
Cannot keep balance ✓✓✓
Starts too soon
1st Nine 2nd Nine
Stops walking
Misses heel-toe
Steps off line
Raises arms
Actual steps taken

ONE LEG STAND
① ③ ④
L R
☑ ☐ Sways while balancing
☑ ☐ Uses arms to balance
☐ ☐ Hopping
✓☑✓ ☐ Puts foot down
Stopped test for safety reasons

Internal clock: 35 estimated as 30 seconds
Describe Turn: N/A
Cannot do test (explain): Stepped off line 3 times during instruction
Type of footwear: Running shoes

Draw lines to spots touched

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.5	9.0	6.0
Right Eye	6.5	9.0	6.0

Nasal area: Clear
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

RIGHT ARM
LEFT ARM
Nothing observed

Blood pressure: 146/102
Temperature: 100.5
Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid
Comments: Arms, neck, face rigid
What drugs or medications have you been using? Nothing
How much? No answer
Time of use? No answer
Where were the drugs used? (Location) Refused
Date / Time of arrest: 01/25/12 0055
Time DRE was notified: 0120
Evaluation start time: 0145
Evaluation completion time: 0255
Precinct/Station:
Officer's Signature:
DRE # 14598
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ■ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Buchanan, Lew B.

1. **LOCATION:** The evaluation was conducted at the Maricopa County Jail.

2. **WITNESSES:** The evaluation was recorded by Officer Tim Merrill of the AZ DPS.

3. **BREATH ALCOHOL TEST:** Buchanan’s breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was dispatched to the MCSO Jail to conduct a drug evaluation for Deputy Sloup. Deputy Sloup stated that he had observed the suspect driving 20 miles under the posted speed limit on Thomas Road. He also observed the suspect’s vehicle drifting from lane to lane. The suspect performed poorly on the SFST’s and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the breath testing room. He was swaying as he stood and appeared dazed and disoriented. He responded slowly to my greeting, but was cooperative and responsive to my questions. He was perspiring heavily and had rambling speech.

6. **MEDICAL PROBLEMS AND TREATMENT:** Suspect stated he felt nauseous.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3” in a circular motion and estimated 30 seconds in 35 seconds. Walk & Turn and One Leg Stand: Suspect was unable to perform the tests. Both were terminated for safety reasons. Finger to Nose: Suspect missed the tip of his nose on each attempt.

8. **CLINICAL INDICATORS:** The suspect’s pupils were dilated in all three lighting conditions. The suspect’s pulse, blood pressure and body temperature were elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** None were observed.

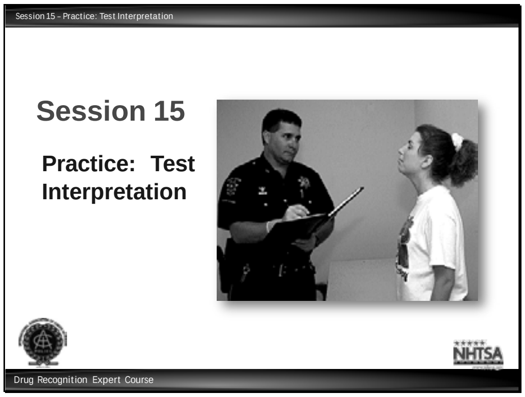
10. **SUSPECT’S STATEMENTS:** The suspect admitted to drinking a beer about 2-3 hours prior to driving and denied any drug use.

11. **DRE'S OPINION:** In my opinion Buchanan is under the influence of a **Hallucinogen** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** A small baggy of dried mushrooms were located in the suspect’s coat pocket. He denied ownership and said he didn’t know what they were.

Participant Manual DRE 7-Day Session 15 – Practice: Test Interpretation



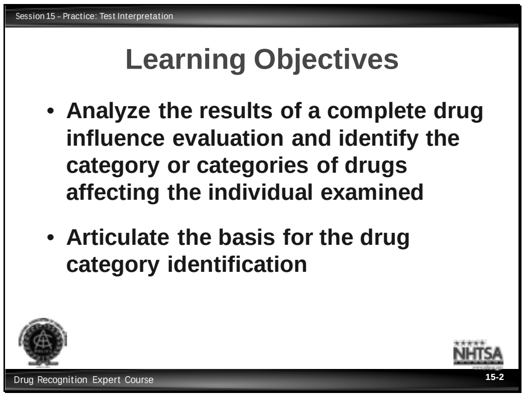
Session 15 – Practice: Test Interpretation

Session 15

Practice: Test Interpretation

Drug Recognition Expert Course

Notes:



Session 15 – Practice: Test Interpretation

Learning Objectives

- Analyze the results of a complete drug influence evaluation and identify the category or categories of drugs affecting the individual examined
- Articulate the basis for the drug category identification

Drug Recognition Expert Course

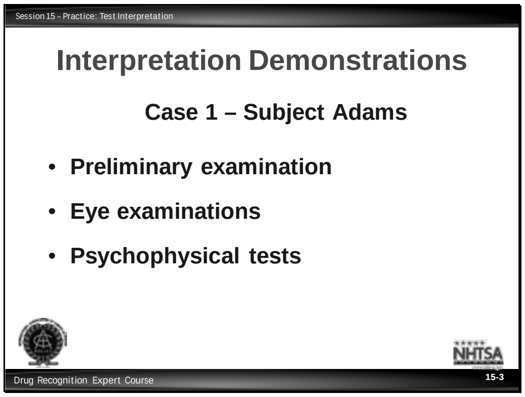
15-2

Notes:

Upon successfully completing this session the participant will be able to:

- Analyze the results of a complete drug influence evaluation and identify the category or categories of drugs affecting the individual examined.
- Articulate the basis for the drug category identification.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Interpretation Demonstration	Instructor Led Demonstrations
B. Interpretation Practice	Small Group Practice
C. Session Wrap-Up	Participant Led Presentations



Session 15 – Practice: Test Interpretation

Interpretation Demonstrations

Case 1 – Subject Adams

- Preliminary examination
- Eye examinations
- Psychophysical tests

Drug Recognition Expert Course

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Notes:____

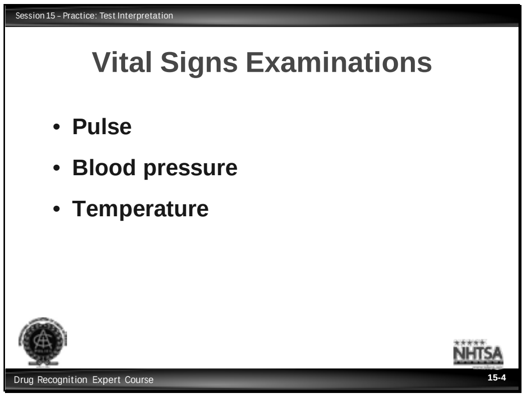
A. Interpretation Demonstrations

Case One: Subject Adams

Preliminary examination

Eye examinations

Psychophysical tests



Session 15 – Practice: Test Interpretation

Vital Signs Examinations

- Pulse
- Blood pressure
- Temperature

Drug Recognition Expert Course

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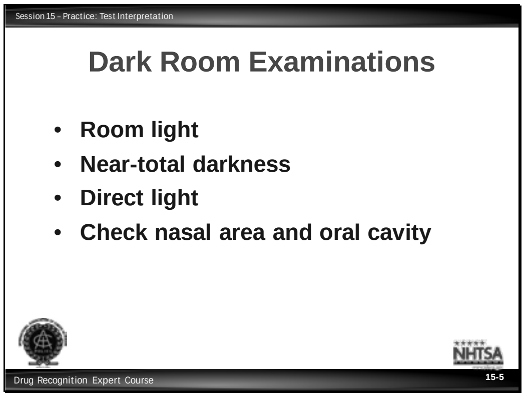
Notes:____

Vital Signs examinations:



Session 15 – Practice: Test Interpretation

Dark Room Examinations

- **Room light**
- **Near-total darkness**
- **Direct light**
- **Check nasal area and oral cavity**

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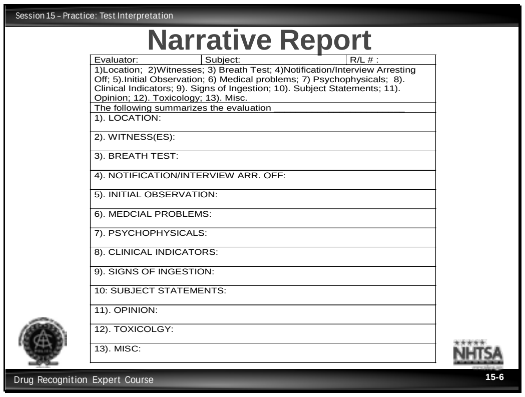
Notes:____

Dark Room examinations



Session 15 – Practice: Test Interpretation

Narrative Report

Evaluator:	Subject:	R/L # :
1)Location; 2)Witnesses; 3) Breath Test; 4)Notification/Interview Arresting Off; 5).Initial Observation; 6) Medical problems; 7) Psychophysicals; 8). Clinical Indicators; 9). Signs of Ingestion; 10). Subject Statements; 11). Opinion; 12). Toxicology; 13). Misc.		
The following summarizes the evaluation ______________________		
1). LOCATION:		
2). WITNESS(ES):		
3). BREATH TEST:		
4). NOTIFICATION/INTERVIEW ARR. OFF:		
5). INITIAL OBSERVATION:		
6). MEDCIAL PROBLEMS:		
7). PSYCHOPHYSICALS:		
8). CLINICAL INDICATORS:		
9). SIGNS OF INGESTION:		
10: SUBJECT STATEMENTS:		
11). OPINION:		
12). TOXICOLGY:		
13). MISC:		

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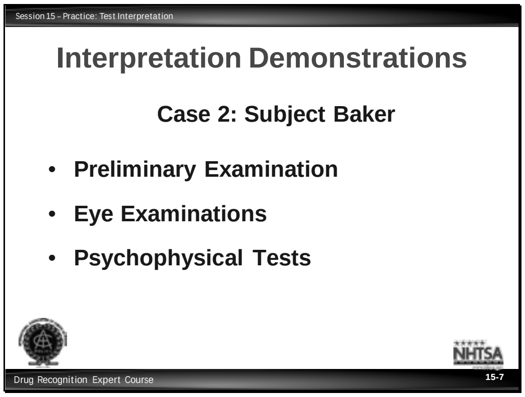
Notes:____

Narrative report



Session 15 – Practice: Test Interpretation

Interpretation Demonstrations

Case 2: Subject Baker

- **Preliminary Examination**
- **Eye Examinations**
- **Psychophysical Tests**

Drug Recognition Expert Course

15-7

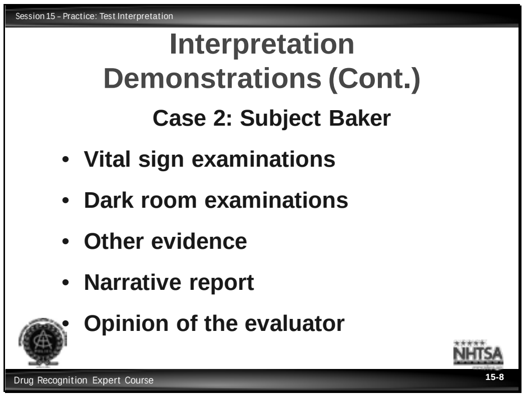
Notes:____

Case Two: Subject Baker

Preliminary examination

Eye examination

Psychophysical tests



Session 15 – Practice: Test Interpretation

Interpretation Demonstrations (Cont.)

Case 2: Subject Baker

- Vital sign examinations
- Dark room examinations
- Other evidence
- Narrative report
- Opinion of the evaluator

Drug Recognition Expert Course

15-8

Notes:____

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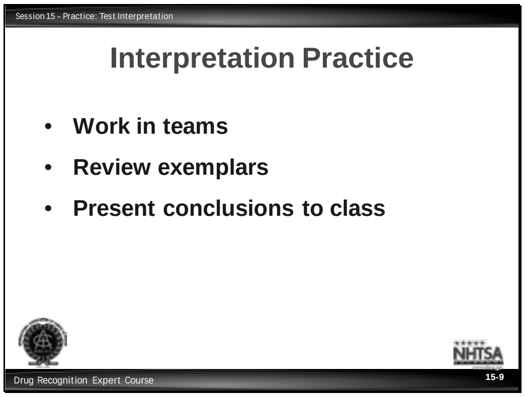
Vital Signs examinations

Dark Room examinations

Other evidence and additional observations

Narrative Report

Opinion of the evaluator



Session 15 – Practice: Test Interpretation

Interpretation Practice

- Work in teams
- Review exemplars
- Present conclusions to class

Drug Recognition Expert Course

15-9

Notes:____

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B. Interpretation Practice

Team Practice

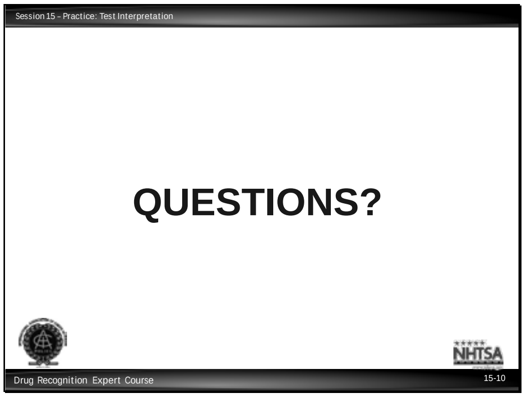
Teams will present their conclusions to the entire class.

Allow teams approximately 15 minutes to review the three exemplars and reach their conclusions.

Subject Charles

Subject Dodge

Subject Edwards



Session 15 – Practice: Test Interpretation

QUESTIONS?

Drug Recognition Expert Course

15-10

Notes:

C. Session Wrap-Up

DRUG INFLUENCE EVALUATION

Evaluator: Officer Mark Ashby, Thornton PD
DRE #: 5696
Rolling Log #: 12-10-235

Session XV #1

Recorder/Witness: Deputy Mark George, Boulder Co. S.O.
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-97302

Arrestee's Name (Last, First, Middle): Adams, Frances A.
Date of Birth: 1/1/65
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer John Blea, Denver PD

Date Examined / Time /Location: 10/06/12 10:30 pm Intake Center
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 1235
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Officer Blea
What have you eaten today? Hamburger When? Noon
What have you been drinking? Water How much?
Time of last drink? N/A

Time now/ Actual: 10:30 pm/ 10:40 pm
When did you last sleep? Last night How long 5 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Cooperative
Coordination: Poor, stumbling, staggering

Speech: Slow, slurred, thick
Breath Odor: Normal
Face: Normal

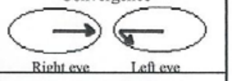
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

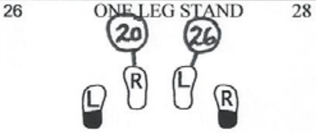
Pulse and time
4 58 / 2235
2. 56 / 2252
3. 58 / 2305

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	35	35

Convergence

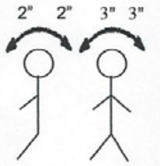


ONE LEG STAND

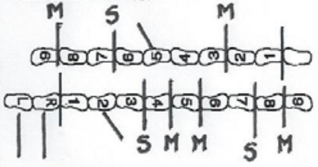


L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☐ Hopping
☑ ☑ Puts foot down

Modified Romberg Balance



Walk and Turn test

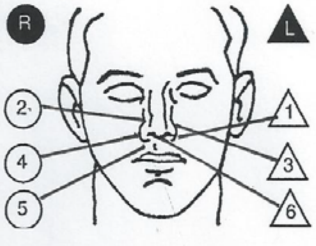


Cannot keep balance ✓✓
Starts too soon

	1st Nine	2nd Nine
Stops walking	✓✓	✓
Misses heel-toe	✓✓✓	✓✓
Steps off line	✓	✓
Raises arms	✓✓✓	✓✓
Actual steps taken	9	9

Internal clock: 42 estimated as 30 seconds
Describe Turn: Turned backwards
Cannot do test (explain): N/A
Type of footwear: Work boots

Draw lines to spots touched



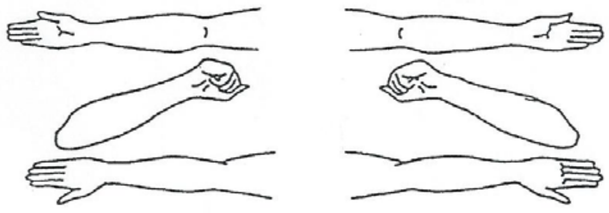
Slow hand movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.0	6.0	3.0
Right Eye	4.0	6.0	3.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM LEFT ARM



No marks visible

Blood pressure: 104/64
Temperature: 97.6
Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments: Very relaxed

What drugs or medications have you been using? "None"
How much? Refused
Time of use? Refused
Where were the drugs used? (Location) Refused

Date / Time of arrest: 10/06/12 9:50 pm
Time DRE was notified: 10:15 pm
Evaluation start time: 10:30 pm
Evaluation completion time: 11:40 pm
Precinct/Station:

Officer's Signature:
DRE # 5696
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Adams, Frances A.

1. **LOCATION:** The evaluation was conducted at the Boulder County Jail Intake Center.

2. **WITNESSES:** The evaluation was witnessed and recorded by Deputy Mark George of the Boulder County S.O.

3. **BREATH ALCOHOL TEST:** Adams' breath test was a 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was contacted by radio and advised to contact Officer John Blea at the Boulder Co. Jail for a drug evaluation. Officer Blea advised that he arrested Adams for DUI after observing him commit numerous traffic violations and performing poorly on the SFST's.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the jail. His head was tilted forward, his eyes were closed and his breathing was deep and slow. He responded slowly to questions and his speech was slow, slurred and thick.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** The suspect had difficultly performing the psychophysical tests. Modified Romberg Balance: Suspect had an approximate 3" side to side sway and a 2" front to back sway. He estimated 30 seconds in 42 seconds. Walk & Turn: Suspect lost his balance twice during the instructions, missed heel to toe five times, stopped while walking three times, turned improperly, stepped off the line twice and used his arms for balance. One Leg Stand: Suspect swayed while balancing, used his arms for balance and put his foot down. Finger to Nose: Suspect missed the tip of his nose on five of the six attempts.

8. **CLINICAL INDICATORS:** Suspect had six clues of HGN with a 35 degree angle of onset with a Lack of Convergence. His pulse and blood pressure were below the DRE average ranges.

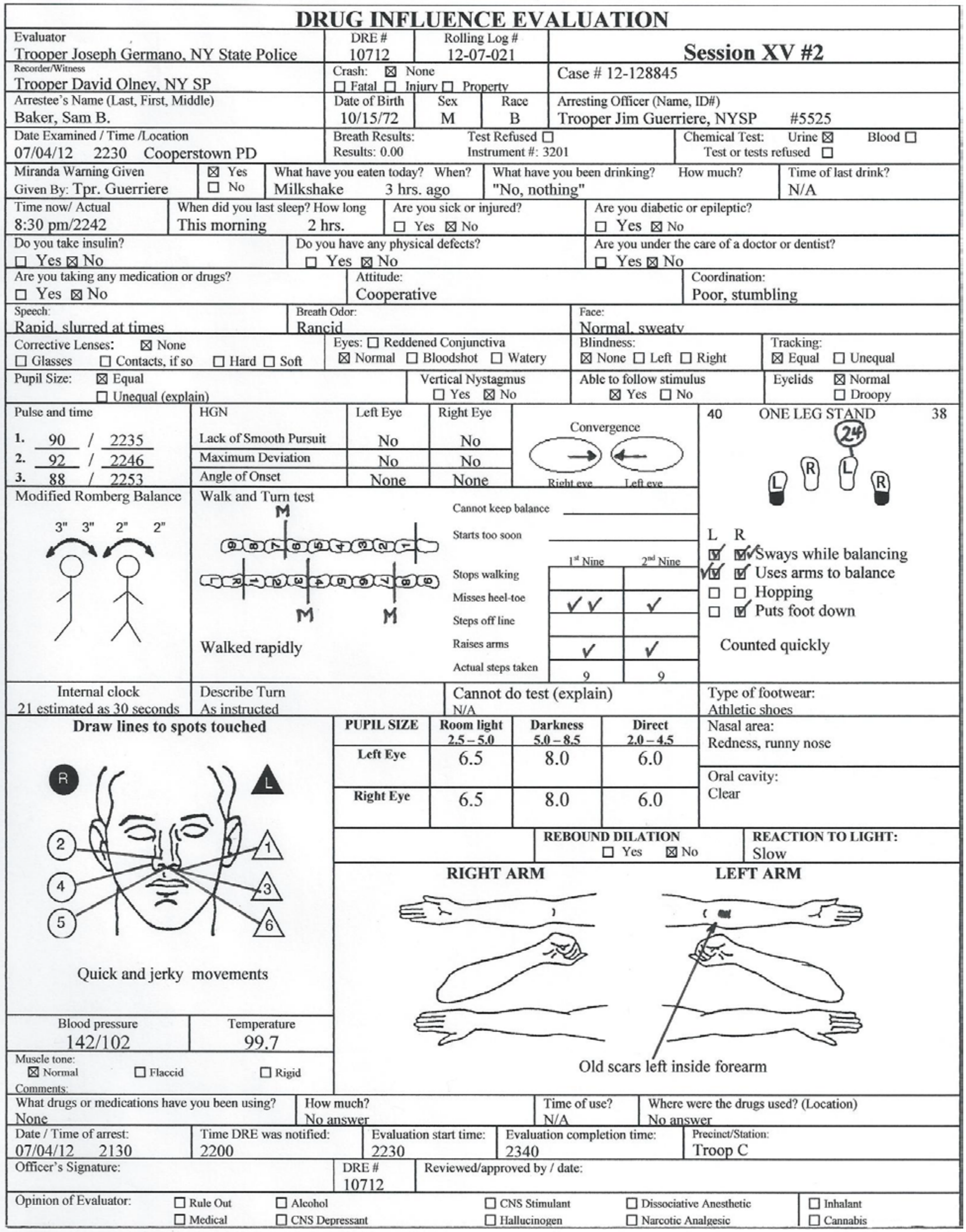
9. **SIGNS OF INGESTION:** Nothing observed.

10. **SUSPECT'S STATEMENTS:** Suspect stated he was very sleepy and denied using drugs.

11. **DRE'S OPINION:** In my opinion Adams is under the influence of a ______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**



DRUG INFLUENCE EVALUATION

Evaluator Trooper Joseph Germano, NY State Police	DRE # 10712	Rolling Log # 12-07-021	**Session XV #2**
Recorder/Witness Trooper David Olney, NY SP	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-128845
Arrestee's Name (Last, First, Middle) Baker, Sam B.	Date of Birth 10/15/72	Sex M	Race B

Arresting Officer (Name, ID#): Trooper Jim Guerriere, NYSP #5525

Date Examined / Time /Location: 07/04/12 2230 Cooperstown PD

Breath Results: Results: 0.00 Test Refused ☐ Instrument #: 3201

Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No Given By: Tpr. Guerriere

What have you eaten today? When? Milkshake 3 hrs. ago

What have you been drinking? How much? "No, nothing"

Time of last drink? N/A

Time now/ Actual: 8:30 pm/2242

When did you last sleep? How long: This morning 2 hrs.

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical defects? ☐ Yes ☒ No

Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

Attitude: Cooperative

Coordination: Poor, stumbling

Speech: Rapid, slurred at times

Breath Odor: Rancid

Face: Normal, sweaty

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ Left ☐ Right

Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)

Vertical Nystagmus ☐ Yes ☒ No

Able to follow stimulus ☒ Yes ☐ No

Eyelids ☒ Normal ☐ Droopy

Pulse and time

1. 90 / 2235
2. 92 / 2246
3. 88 / 2253

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

Right eye Left eye

40 ONE LEG STAND 38

24

L R L R

L R

☑ ☑✓ Sways while balancing

✓☑ ☑ Uses arms to balance

☐ ☐ Hopping

☐ ☑ Puts foot down

Counted quickly

Modified Romberg Balance

3" 3" 2" 2"

Walk and Turn test

M

9 8 7 6 5 4 3 2 1

L R 1 2 3 4 5 6 7 8 9

M M

Walked rapidly

Cannot keep balance

Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓ ✓	✓
Steps off line		
Raises arms	✓	✓
Actual steps taken	9	9

Internal clock: 21 estimated as 30 seconds

Describe Turn: As instructed

Cannot do test (explain): N/A

Type of footwear: Athletic shoes

Draw lines to spots touched

R L 1 2 3 4 5 6

Quick and jerky movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.5	8.0	6.0
Right Eye	6.5	8.0	6.0

Nasal area: Redness, runny nose

Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: Slow

RIGHT ARM **LEFT ARM**

Old scars left inside forearm

Blood pressure: 142/102

Temperature: 99.7

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using? None

How much? No answer

Time of use? N/A

Where were the drugs used? (Location) No answer

Date / Time of arrest: 07/04/12 2130	Time DRE was notified: 2200	Evaluation start time: 2230	Evaluation completion time: 2340	Precinct/Station: Troop C

Officer's Signature:

DRE # 10712

Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Baker, Sam B.

1. **LOCATION:** The evaluation was conducted at the Cooperstown Police Department.

2. **WITNESSES:** The evaluation was witnessed and recorded by Trooper David Olney of the New York State Police.

3. **BREATH ALCOHOL TEST:** Baker's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was contacted and advised to meet Trooper Guerriere at the Cooperstown Police Department for a drug evaluation. It was determined that Trooper Guerriere arrested Baker for DUI after his vehicle crossed the center line and nearly struck Trooper Guerriere's patrol vehicle.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect standing in the breath testing room with Trooper Guerriere. The suspect was repeatedly shifting his weight from foot to foot. He was scratching his head and was perspiring heavily. He appeared nervous, anxious and was very restless. His speech was fast and slurred at times.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** The suspect had difficultly performing the psychophysical tests. Modified Romberg Balance: Suspect had an approximate 3" front to back and a 2" side to side sway and estimated 30 seconds in 21 seconds. Walk & Turn: Suspect performed the test very quickly, used his arms for balance and missed heel to toe three times. One Leg Stand: Suspect swayed while balancing, used his arms for balance and put his foot down once. He also counted fast during the test. Finger to Nose: Suspect missed the tip of his nose on three of the six attempts and had quick jerky movements.

8. **CLINICAL INDICATORS:** Suspect's pulse, blood pressure and temperature were elevated and above the DRE average ranges. His pupils were dilated in room light and in direct light.

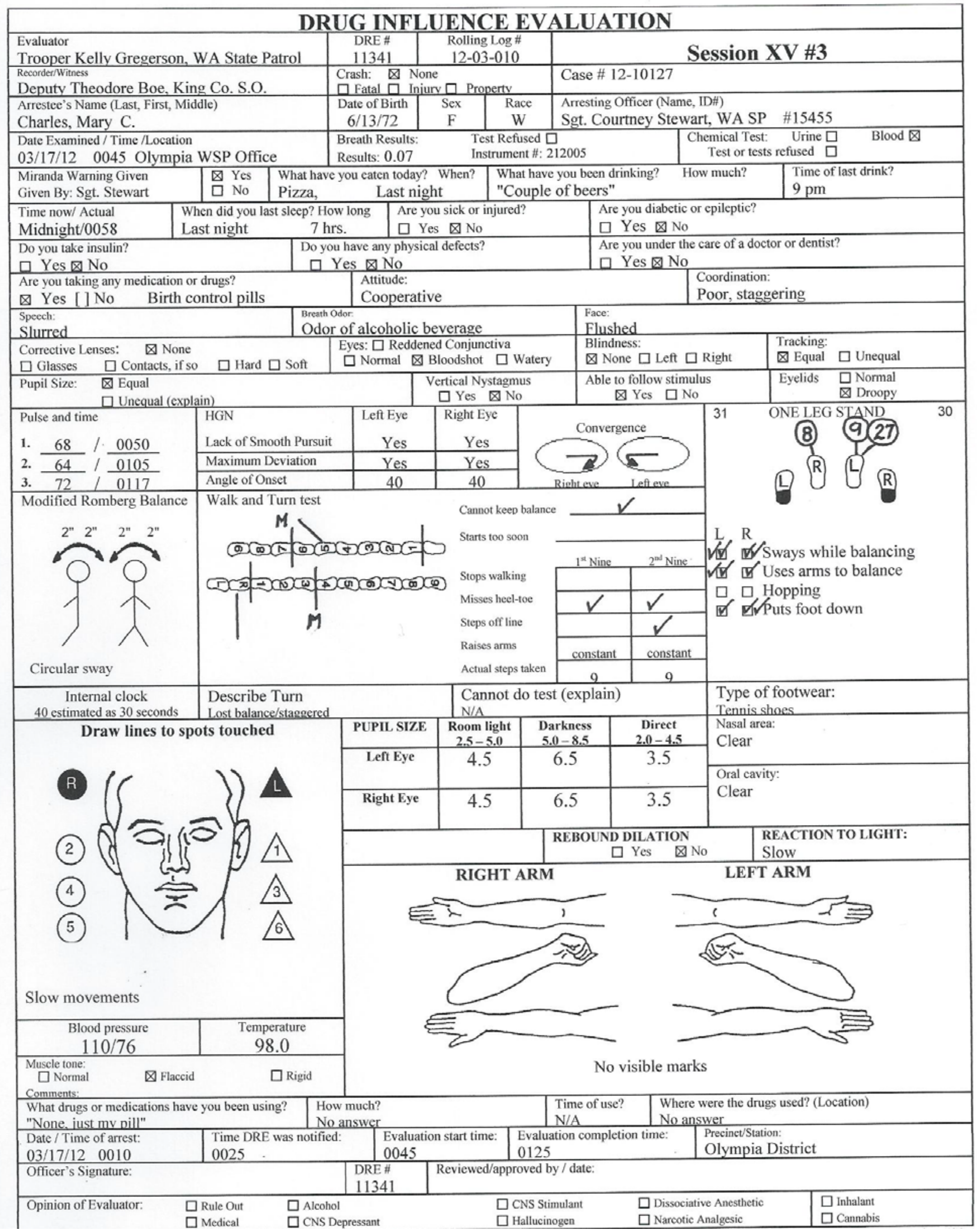
9. **SIGNS OF INGESTION:** The suspect had a reddened nasal area and his nose was runny.

10. **SUSPECT'S STATEMENTS:** Suspect denied using any drugs.

11. **DRE'S OPINION:** In my opinion Baker is under the influence of a ________________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**



DRUG INFLUENCE EVALUATION

Session XV #3

Evaluator: Trooper Kelly Gregerson, WA State Patrol
DRE #: 11341
Rolling Log #: 12-03-010
Recorder/Witness: Deputy Theodore Boe, King Co. S.O.
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-10127
Arrestee's Name (Last, First, Middle): Charles, Mary C.
Date of Birth: 6/13/72
Sex: F
Race: W
Arresting Officer (Name, ID#): Sgt. Courtney Stewart, WA SP #15455
Date Examined / Time /Location: 03/17/12 0045 Olympia WSP Office
Breath Results: Results: 0.07
Test Refused ☐
Instrument #: 212005
Chemical Test: Urine ☐ Blood ☒
Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Sgt. Stewart
What have you eaten today? Pizza,
When? Last night
What have you been drinking? "Couple of beers"
How much?
Time of last drink? 9 pm
Time now/ Actual: Midnight/0058
When did you last sleep? Last night
How long: 7 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☒ Yes [ ] No Birth control pills
Attitude: Cooperative
Coordination: Poor, staggering
Speech: Slurred
Breath Odor: Odor of alcoholic beverage
Face: Flushed
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

Pulse and time
1. 68 / 0050
2. 64 / 0105
3. 72 / 0117

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	40	40

Convergence
Right eye Left eye

ONE LEG STAND
31 30
8 9 27
L R L R

L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑	☑	Puts foot down

Modified Romberg Balance
2" 2" 2" 2"
Circular sway

Walk and Turn test
M
M

Cannot keep balance ✓
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓	✓
Steps off line		✓
Raises arms	constant	constant
Actual steps taken	9	9

Internal clock: 40 estimated as 30 seconds
Describe Turn: Lost balance/staggered
Cannot do test (explain): N/A
Type of footwear: Tennis shoes

Draw lines to spots touched
R L 2 1 4 3 5 6
Slow movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.5	6.5	3.5
Right Eye	4.5	6.5	3.5

Nasal area: Clear
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM LEFT ARM
No visible marks

Blood pressure: 110/76
Temperature: 98.0
Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "None, just my pill"
How much? No answer
Time of use? N/A
Where were the drugs used? (Location) No answer
Date / Time of arrest: 03/17/12 0010
Time DRE was notified: 0025
Evaluation start time: 0045
Evaluation completion time: 0125
Precinct/Station: Olympia District
Officer's Signature:
DRE #: 11341
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Charles, Mary C.

1. **LOCATION:** The evaluation was conducted at the WSP Office in Olympia.

2. **WITNESSES:** The evaluation was recorded and witnessed by Deputy Theodore Boe of the King County S.O.

3. **BREATH ALCOHOL TEST:** Charles' breath test was a 0.07%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Sergeant Stewart contacted the writer at the Olympia Patrol Office requesting a drug evaluation on suspect Charles. Sergeant Stewart advised that the suspect had been reported by several motorists as a possible DUI driver. She located the suspect traveling SB on I-5. The suspect was unable to maintain a single lane of travel and had traffic backed up behind her. When contacted, the suspect had slow, sluggish reactions and slurred speech. She performed poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room with Sergeant Stewart. The suspect was swaying as she stood and was very unstable on her feet. Her speech was slow, thick and slurred.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect had an approximate 2" circular sway and estimated 30 seconds in 40 seconds. Walk & Turn: Suspect lost her balance during the instructions, missed heel to toe twice, stepped off the line and used her arms for balance. One Leg Stand: Suspect swayed while balancing, used her arms for balance and put her foot down once while standing on her left foot and twice while standing on the right foot. Finger to Nose: Suspect missed the tip of her nose on 3 of the 6 attempts.

8. **CLINICAL INDICATORS:** The suspect exhibited six clues of HGN and a Lack of Convergence.

9. **SIGNS OF INGESTION:** The suspect had an odor of an alcoholic beverage on her breath.

10. **SUSPECT'S STATEMENTS:** Suspect admitted drinking a "couple of beers" earlier in the evening and admitted smoking some marijuana 3 or 4 days ago.

11. **DRE'S OPINION:** In my opinion Charles is under the influence of ________________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator: Sgt. Joseph Milos, Bellevue PD
DRE #: 4477
Rolling Log #: 12-02-008
Session XV #4

Recorder/Witness: Sgt. Martin Denton, Nebraska SP
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-12050

Arrestee's Name (Last, First, Middle): Dodge, Fred D.
Date of Birth: 10/13/75
Sex: M
Race: W
Arresting Officer (Name, ID#): Sgt. Dale Hilderbrand, Grand Island P.D. #6047

Date Examined / Time /Location: 02/22/12 2215 Grand Island PD
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 43121
Chemical Test: Urine ☐ Blood ☒
Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Sgt. Hilderbrand
What have you eaten today? When? 2 tacos 2 hrs. ago
What have you been drinking? How much? Nothing
Time of last drink? N/A

Time now/ Actual: 11:00 pm / 2220
When did you last sleep? How long: Yesterday 4-5 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Excited, Cooperative
Coordination: Poor, jittery, stumbling

Speech: Rapid
Breath Odor: Normal
Face: Normal

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time

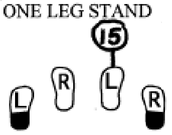
1.	100	2228
2.	104	2235
3.	100	2242

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

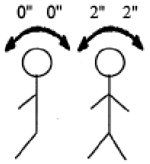
Right eye
Left eye

ONE LEG STAND

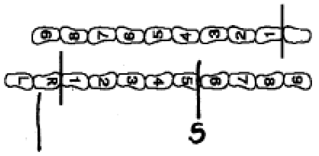


L R
☑ ☑ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☑ Puts foot down

Modified Romberg Balance



Walk and Turn test



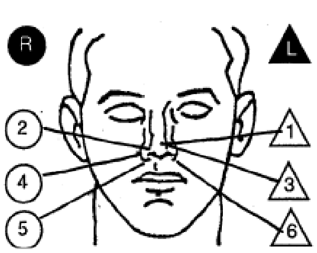
Walked rapidly

Cannot keep balance ✓
Starts too soon ✓✓

	1st Nine	2nd Nine
Stops walking	✓	
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	9	9

Internal clock: 22 estimated as 30 seconds
Describe Turn: As instructed
Cannot do test (explain): N/A
Type of footwear: Boots

Draw lines to spots touched

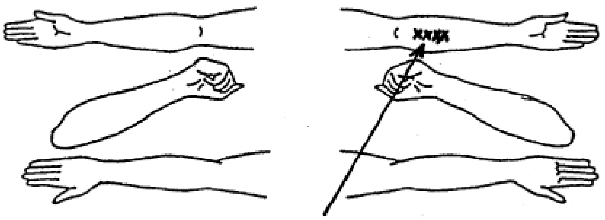


PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.0	8.5	5.0
Right Eye	6.0	8.5	5.0

Nasal area: Redness
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM **LEFT ARM**



Four puncture wounds with red dots

Blood pressure: 142/96
Temperature: 99.5
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:

What drugs or medications have you been using? "I'm not answering that man"
How much? No answer
Time of use? No answer
Where were the drugs used? (Location) No answer

Date / Time of arrest: 02/22/12 2135
Time DRE was notified: 2200
Evaluation start time: 2215
Evaluation completion time: 2355
Precinct/Station:

Officer's Signature:
DRE # 4477
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Dodge, Fred D.

1. **LOCATION:** The evaluation was conducted at the Grand Island Police Department.

2. **WITNESSES:** The evaluation was recorded by the arresting officer, Sergeant Dale Hilderbrand of the Grand Island Police Department and witnessed by Sgt. Martin Denton.

3. **BREATH ALCOHOL TEST:** Dodge's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Sgt. Hilderbrand contacted Dispatch and requested a drug evaluation on suspect Dodge. I contacted Sgt. Hilderbrand at the P.D. where it was determined the suspect had been involved in an attempted elude and was apprehended at E. Bismark Road and S. Oak. The suspect was very restless, animated and unable to stand still. He was also very talkative and his speech was rapid. He performed poorly on SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the P.D. His speech was rapid and loud. He seemed unconcerned about being under arrest. He had quick movements and was unable to stand still.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect had an approximate 2" side to side sway and estimated 30 seconds in 22 seconds. Walk & Turn: Suspect twice started the test too soon, lost his balance once during the instructions, stopped walking on his fifth step, raised his arms for balance and performed the test quickly. One Leg Stand: Suspect swayed while balancing and put his foot down once while standing on his right foot. Finger to Nose: Suspect missed the tip of his nose on all six attempts.

8. **CLINICAL INDICATORS:** The suspect's pulse and blood pressure were elevated and above the DRE average ranges. His pupils were dilated and had a slow reaction to light.

9. **SIGNS OF INGESTION:** The suspect had four fresh puncture marks on the inside of his left forearm.

10. **SUSPECT'S STATEMENTS:** Suspect denied any drug use.

11. **DRE'S OPINION:** In my opinion Dodge is under the influence of a ________________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator: Sgt. Jim Roy, Colchester P.D.
DRE #: 12574
Rolling Log #: 12-08-018
Session XV #5

Recorder/Witness: Lt. John Flannigan, VT State Police
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-001701

Arrestee's Name (Last, First, Middle): Edwards, Joan E.
Date of Birth: 1/16/84
Sex: F
Race: W
Arresting Officer (Name, ID#): Officer Ron Hoague, St. Albans PD #13224

Date Examined / Time /Location: 08/04/12 2300 Colchester PD
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 41478
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Officer Hoague
What have you eaten today? Nothing
When? N/A
What have you been drinking? Nothing
How much?
Time of last drink? N/A

Time now/ Actual: "Don't know"
When did you last sleep? How long: "I don't remember"
Are you sick or injured? ☒ Yes ☐ No Sick to stomach
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Disoriented, cooperative
Coordination: Poor, unsteady

Speech: Rambling, slurred
Breath Odor: Normal
Face: Sweaty, dazed appearance

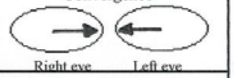
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

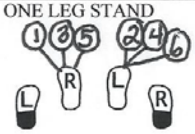
Pulse and time
1. 100 / 2310
2. 108 / 2325
3. 104 / 2337

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

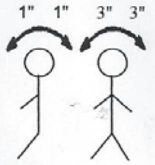
Convergence



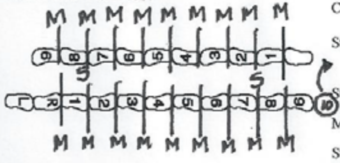
ONE LEG STAND



Modified Romberg Balance



Walk and Turn test



Missed heel to toe on all steps

Cannot keep balance
Starts too soon

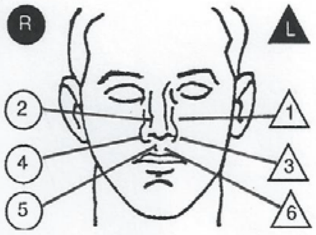
	1st Nine	2nd Nine
Stops walking	✓	✓
Misses heel-toe	all steps	all steps
Steps off line	all steps	all steps
Raises arms	✓	✓
Actual steps taken	10	9

L	R	
☐	☐	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑ ✓✓	☑ ✓✓	Puts foot down

Test stopped

Internal clock: 90 estimated as 30 seconds
Describe Turn: Wrong direction
Cannot do test (explain): Kept stopping
Type of footwear: Flip-flops

Draw lines to spots touched

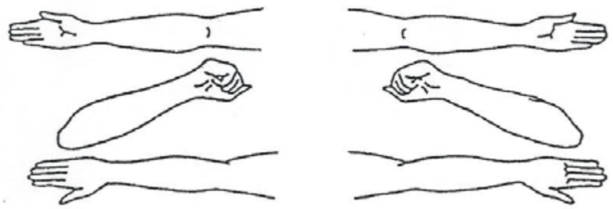


PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.5	9.0	8.0
Right Eye	6.5	9.0	8.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM **LEFT ARM**



Nothing observed

Blood pressure: 148/110
Temperature: 100.0
Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid
Comments: Very rigid arms

What drugs or medications have you been using? "Nothing"
How much? No answer
Time of use? No answer
Where were the drugs used? (Location) No answer

Date / Time of arrest: 08/04/12 2215
Time DRE was notified: 2245
Evaluation start time: 2300
Evaluation completion time: 2355
Precinct/Station:

Officer's Signature:
DRE # 12574
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Edwards, Joan E.

1. **LOCATION:** The evaluation was conducted at the Colchester Police Department.

2. **WITNESSES:** Lt. John Flannigan from the VT State Police recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Edwards' breath test was a 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was advised to contact Officer Hoague at the Colchester PD for a drug evaluation. It was determined that Officer Hoague had found the suspect sitting on the hood of her vehicle along I-89-S. She was waving her arms and screaming at cars as they passed by. It was determined that she had driven her vehicle to that location after attending a concert in Canada earlier that day. She was administered SFST's which she had great difficulty completing and was subsequently arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at CPD. She appeared dazed, disoriented and had difficultly standing.

6. **MEDICAL PROBLEMS AND TREATMENT:** Suspect stated she felt sick to her stomach and felt like "throwing-up" but did not require medical assistance.

7. **PSYCHOPHYSICAL TESTS:** The suspect performed very poorly on the psychophysical tests. Modified Romberg Balance: Suspect had an approximate 3" side to side sway and estimated 30 seconds in 90 seconds. Walk & Turn: Suspect missed heel to toe on each step, stopped walking twice, used her arms for balance, took an extra step on the first nine steps and made an improper turn. One Leg Stand: The suspect put her foot down three times on each foot and the test was stopped for safety reasons. Finger to Nose: Suspect missed the tip of her nose on all six attempts.

8. **CLINICAL INDICATORS:** The suspect's pulse, blood pressure and temperature were elevated and above the DRE average ranges. Her pupils were dilated.

9. **SIGNS OF INGESTION:** None were evident.

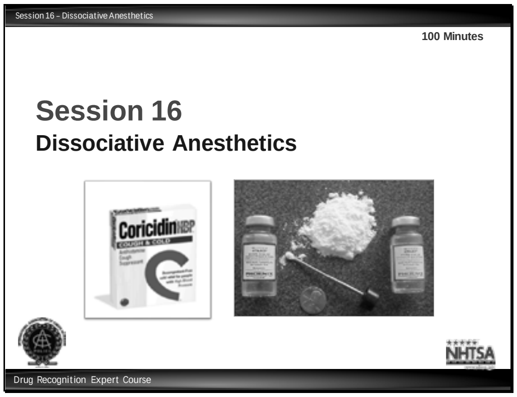
10. **SUSPECT'S STATEMENTS:** Suspect denied any medicine or drug use.

11. **DRE'S OPINION:** In my opinion Edwards is under the influence of a ______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** After completing the evaluation the suspect was transported to the local hospital for monitoring and a medical evaluation.

Participant Manual DRE 7-Day Session 16 – Dissociative Anesthetics



Session 16 – Dissociative Anesthetics

100 Minutes

Session 16

Dissociative Anesthetics

Coricidin HBP
COUGH & COLD

Drug Recognition Expert Course

Notes:____

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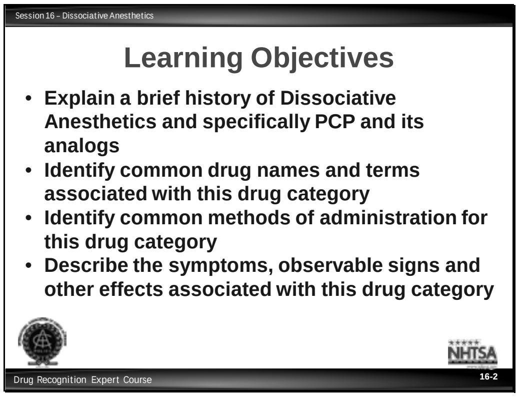

Session 16 – Dissociative Anesthetics

Learning Objectives

- Explain a brief history of Dissociative Anesthetics and specifically PCP and its analogs
- Identify common drug names and terms associated with this drug category
- Identify common methods of administration for this drug category
- Describe the symptoms, observable signs and other effects associated with this drug category

Drug Recognition Expert Course

16-2

Notes:____

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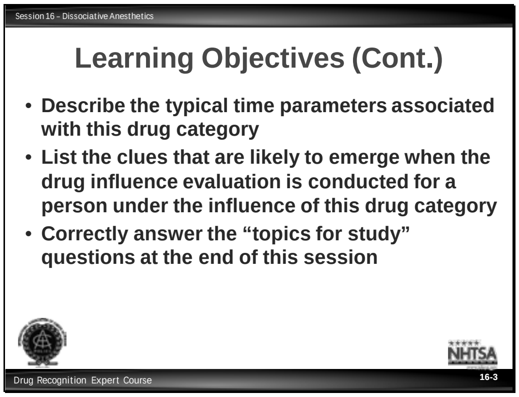
Upon successfully completing this session the participant will be able to:

- Explain a brief history of Dissociative Anesthetics and specifically PCP and its analogs.
- Identify common drug names and terms associated with this drug category.
- Identify common methods of administration for this drug category.
- Describe the symptoms, observable signs and other effects associated with this drug category.



Session 16 – Dissociative Anesthetics

Learning Objectives (Cont.)

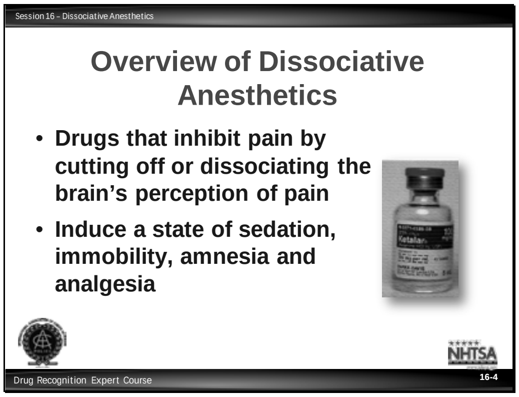
- Describe the typical time parameters associated with this drug category
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category
- Correctly answer the “topics for study” questions at the end of this session

Drug Recognition Expert Course

Notes:

- Describe the typical time parameters associated with this drug category
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category
- Correctly answer the “topics for study” questions at the end of this session

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Overview of Dissociative Anesthetics	Instructor-Led Presentations
B. Possible Effects of Dissociative Anesthetics	Review of DEC Exemplars
C. Onset and Duration of Effects	Reading Assignments
D. Signs and Symptoms of Dissociative Anesthetics Overdose	Video Presentations
E. Expected Results of the Evaluation	Slide Presentations
F. Classification Exemplars	



Session 16 – Dissociative Anesthetics

Overview of Dissociative Anesthetics

- Drugs that inhibit pain by cutting off or dissociating the brain’s perception of pain
- Induce a state of sedation, immobility, amnesia and analgesia

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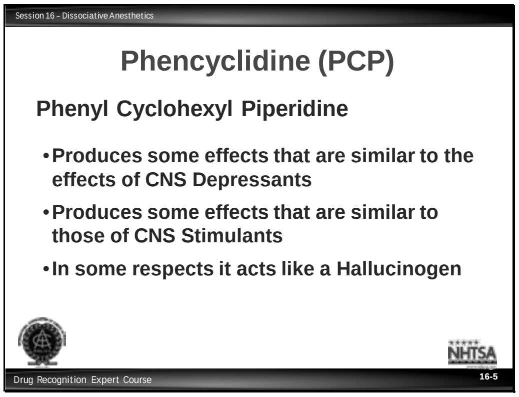
Notes:

A. Overview of Dissociative Anesthetics

Dissociative Anesthetics include drugs that inhibit pain by cutting off or disassociating the brain’s perception of pain. The drugs within this category normally will induce a state of sedation, immobility, amnesia and marked analgesia.



Phencyclidine (PCP)

Phenyl Cyclohexyl Piperidine

- **Produces some effects that are similar to the effects of CNS Depressants**
- **Produces some effects that are similar to those of CNS Stimulants**
- **In some respects it acts like a Hallucinogen**

Notes:____

Phencyclidine (PCP)

Phencyclidine or PCP, is a drug that, along with its analogs, are examples of this distinct drug category.

The chemical for PCP is Phenyl Cyclohexyl Piperidine.

PCP shares some characteristics with each of the three categories of drugs.

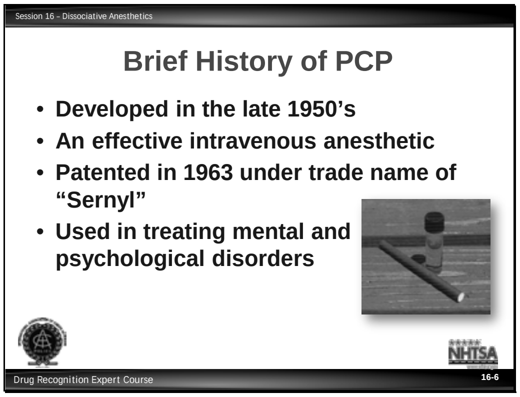
It produces some effects that are similar to the effects of CNS Depressants.

- Examples of effects PCP shares with Depressants: Nystagmus, slurred speech, slowed responses.

It produces some effects that are similar to those of CNS Stimulants.

- Examples of effects PCP shares with CNS Stimulants: elevated vital signs and restlessness.

In some respects it acts like a Hallucinogen.



Session 16 – Dissociative Anesthetics

Brief History of PCP

- Developed in the late 1950’s
- An effective intravenous anesthetic
- Patented in 1963 under trade name of “Sernyl”
- Used in treating mental and psychological disorders

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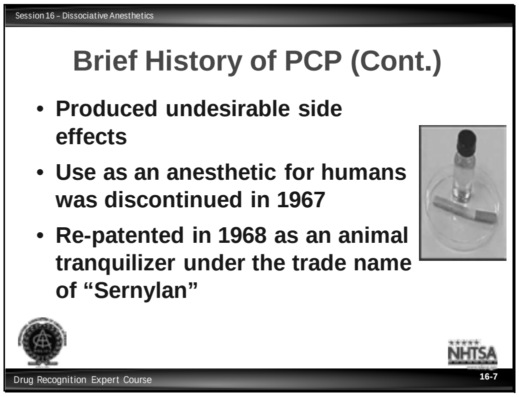
Notes:

Phencyclidine was first developed in the late 1950’s. It was developed by Parke-Davis and Company, a leading pharmaceutical firm.

- The developers were searching for a drug that would serve as an efficient intravenous anesthetic.
- PCP proved to be a very effective anesthetic.

An anesthetic is an agent that reduces or abolishes pain sensitivity.

- It was patented and marketed in 1963 under the trade name Sernyl.
- It was used in the treatment of mental and psychological disorders, including schizophrenia.



Session 16 – Dissociative Anesthetics

Brief History of PCP (Cont.)

- Produced undesirable side effects
- Use as an anesthetic for humans was discontinued in 1967
- Re-patented in 1968 as an animal tranquilizer under the trade name of “Sernylan”

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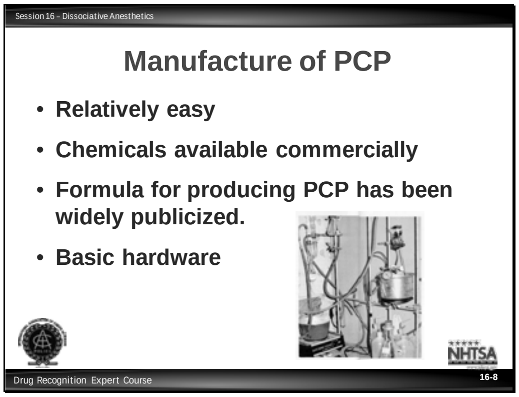
Notes:

- Many adverse side effects were experienced by persons who had been treated with PCP.
- In 1967, use of Phencyclidine as an anesthetic for humans was discontinued.
- In 1968, Parke-Davis re-patented PCP under the trade name Sernylan, which was restricted to use as a veterinary anesthetic.
- Sernyl for animals = Sernylan.
- However, Sernylan was often illicitly diverted to “street” use, so most legitimate manufacturing of PCP was stopped in 1978.



Session 16 – Dissociative Anesthetics

Manufacture of PCP

- Relatively easy
- Chemicals available commercially
- Formula for producing PCP has been widely publicized.
- Basic hardware

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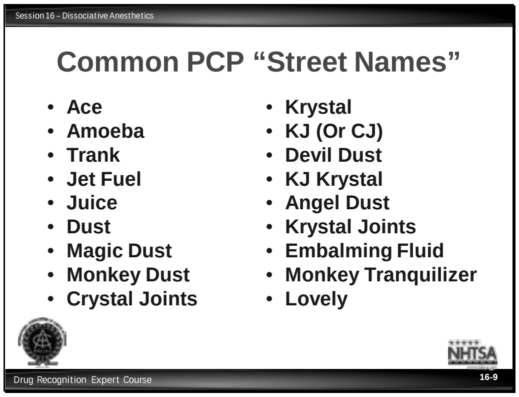
Notes:

PCP is relatively easy to manufacture.

- The chemicals required to produce it are readily available commercially.
- The formula for producing PCP has been widely publicized.
- The hardware needed to combine the chemicals is very basic.



Session 16 – Dissociative Anesthetics

Common PCP "Street Names"

- Ace
- Amoeba
- Trank
- Jet Fuel
- Juice
- Dust
- Magic Dust
- Monkey Dust
- Crystal Joints
- Krystal
- KJ (Or CJ)
- Devil Dust
- KJ Krystal
- Angel Dust
- Krystal Joints
- Embalming Fluid
- Monkey Tranquilizer
- Lovely

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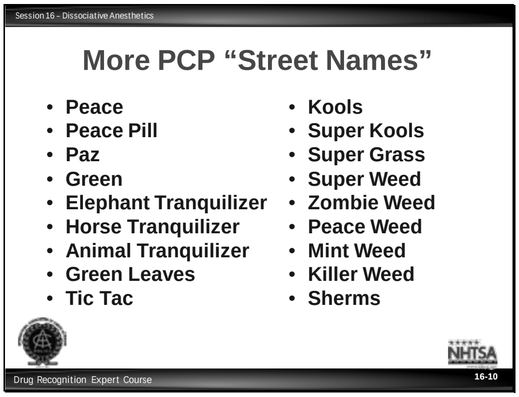
Notes:

Street names for PCP – "angel dust," "crystal," "sherms," "elephant tranquilizer," and "water".



Session 16 – Dissociative Anesthetics

More PCP "Street Names"

- Peace
- Peace Pill
- Paz
- Green
- Elephant Tranquilizer
- Horse Tranquilizer
- Animal Tranquilizer
- Green Leaves
- Tic Tac
- Kools
- Super Kools
- Super Grass
- Super Weed
- Zombie Weed
- Peace Weed
- Mint Weed
- Killer Weed
- Sherms

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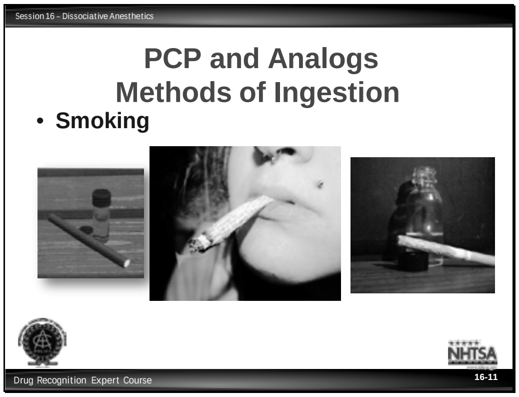
Notes:



Session 16 – Dissociative Anesthetics

PCP and Analogs
Methods of Ingestion

- Smoking

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Notes:____

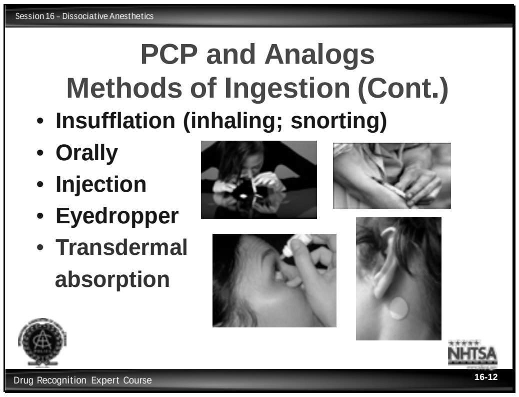
Methods of Ingestion: PCP

- Many users ingest PCP by smoking.
- PCP can be applied in either powder or liquid form to a variety of vegetable or leafy substances, which can then be smoked in a pipe or homemade cigarette.
- Popular substances include mint leaves, parsley, oregano, tobacco, or marijuana.
- Commercially prepared cigarettes can also be dipped in liquid PCP, allowed to dry and then smoked.

Note: PCP adulterated cigarettes usually will be wrapped in metal foil to be preserved.

- Some users prefer to dip a string in liquid PCP, and then insert the string into a tobacco cigarette.

Note: White cigarette paper will be stained brown if adulterated with PCP. Brown cigarette paper will show white crystals, when adulterated.



PCP and Analogs Methods of Ingestion (Cont.)

- **Insufflation (inhaling; snorting)**
- **Orally**
- **Injection**
- **Eyedropper**
- **Transdermal absorption**

Notes:____

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PCP can also be insufflated or “snorted.”

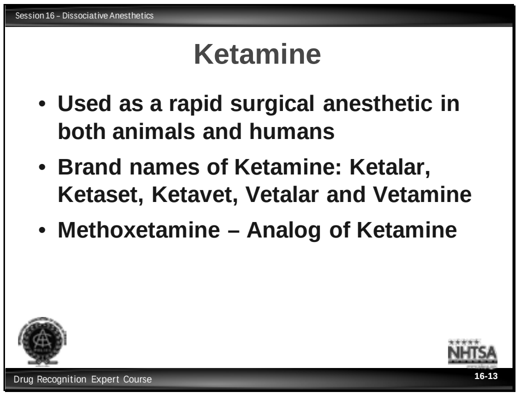
It can also be taken orally, in capsule or tablet form.

Some users inject liquid PCP, either directly into a vein, under the skin or into a muscle.

Some users have administered PCP to themselves by dripping liquid PCP onto their eyes, using an eyedropper.

Transdermal absorption of PCP has also been reported (i.e. when applied to the skin, especially as a liquid, PCP can penetrate directly into the body and bloodstream).

Note: Liquid PCP is especially dangerous because it can be absorbed through the skin. Hence, it could be used as a weapon.



Session 16 – Dissociative Anesthetics

Ketamine

- **Used as a rapid surgical anesthetic in both animals and humans**
- **Brand names of Ketamine: Ketalar, Ketaset, Ketavet, Vetalar and Vetamine**
- **Methoxetamine – Analog of Ketamine**

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16-13

Notes:

Ketamine

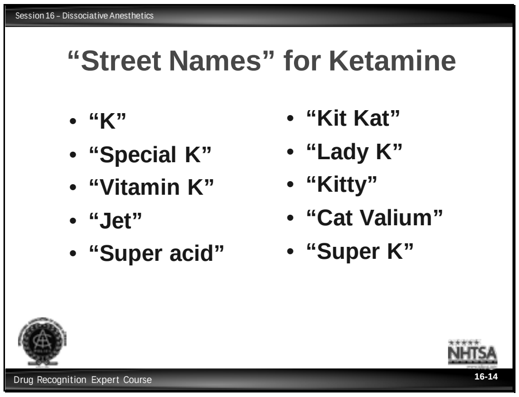
Another drug in this category is called Ketamine. It continues to be manufactured and sold legitimately.

Ketamine is a white, crystalline powder or clear liquid.

Ketamine is used as a rapid surgical anesthetic, both for animals and humans, especially children.

- Some brand names of Ketamine: Ketalar (human use), Ketaset, Ketavet, Vetalar and Vetamine (veterinary use).
- Ketamine is being studied as a possible treatment of depression.
- Methoxetamine – a research chemical not currently approved for human or veterinary use. Methoxetamine has a similar abuse profile to Ketamine, and can cause pain suppression, tachycardia, hypertension, and altered perception and memory. Signs and symptoms include dissociated and catatonic state, nausea, vomiting, and visual hallucinations.

Source: "Society of Forensic Toxicologists Newsletter", Volume 36, Issue 4 (2012)



Session 16 – Dissociative Anesthetics

"Street Names" for Ketamine

- **"K"**
- **"Special K"**
- **"Vitamin K"**
- **"Jet"**
- **"Super acid"**
- **"Kit Kat"**
- **"Lady K"**
- **"Kitty"**
- **"Cat Valium"**
- **"Super K"**

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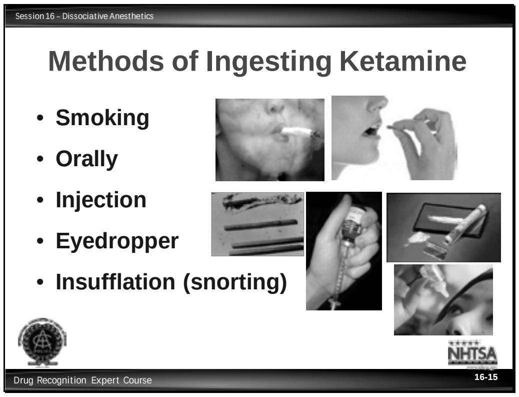
16-14

Notes:

Ketamine street names include "K," "Special K," "Vitamin K," "Jet" and "Super acid."



Session 16 – Dissociative Anesthetics

Methods of Ingesting Ketamine

- **Smoking**
- **Orally**
- **Injection**
- **Eyedropper**
- **Insufflation (snorting)**

Drug Recognition Expert Course

16-15

Notes:____

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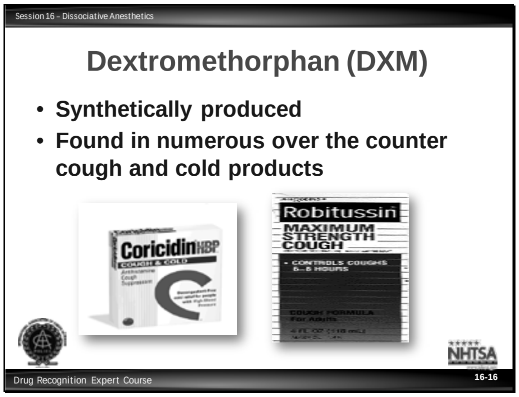
Methods of Ingestion

Ketamine can be applied in either powder or liquid form to a variety of vegetable or leafy substances, which can then be smoked in a pipe or homemade cigarettes.

Popular substances include mint leaves, parsley, oregano, tobacco, or marijuana.

Commercially prepared cigarettes can also be dipped in liquid Ketamine, allowed to dry and then smoked.

Some users prefer to dip a string in liquid Ketamine, and then insert the string into a tobacco cigarette.



Session 16 – Dissociative Anesthetics

Dextromethorphan (DXM)

- **Synthetically produced**
- **Found in numerous over the counter cough and cold products**

Coricidin HBP
COUGH & COLD
Robitussin
MAXIMUM STRENGTH COUGH
• CONTROLS COUGHS 6–8 HOURS
COUGH FORMULA For Adults
NHTSA
Drug Recognition Expert Course
16-16

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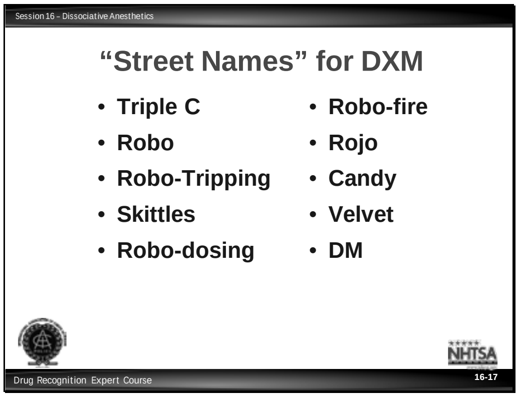
Dextromethorphan (DXM)

Another drug in this category is Dextromethorphan. It is sometimes referred to as “DXM” and is an ingredient found in numerous over-the-counter cough and cold remedies.

- Point out that DREs frequently encounter persons abusing DXM due to it’s availability in so many over-the-counter products.
- Point out in some respects, DXM’s effects can be similar to a CNS Depressant, CNS Stimulant, and Hallucinogen. It has been classified as a CNS Depressant in some medical texts and scientific/ research reports.
- Point out that DXM is often in other over-the-counter substances containing Acetaminophen, Chlorpheniramine, and Guaifenesin.
- DXM is a synthetically produced substance that is chemically related to Codeine, although it is not an opiate.
- When ingested in recommended dosage levels, DXM generally is a safe and highly effective cough suppressant; however, when ingested in large amounts, it produces negative physiological effects.
- DXM abusers normally ingest the drug orally, although some snort
- Some abusers ingest 250 to 1,500 milligrams in a single dosage.



Session 16 – Dissociative Anesthetics

“Street Names” for DXM

- Triple C
- Robo
- Robo-Tripping
- Skittles
- Robo-dosing
- Robo-fire
- Rojo
- Candy
- Velvet
- DM

Drug Recognition Expert Course

16-17

Notes:____

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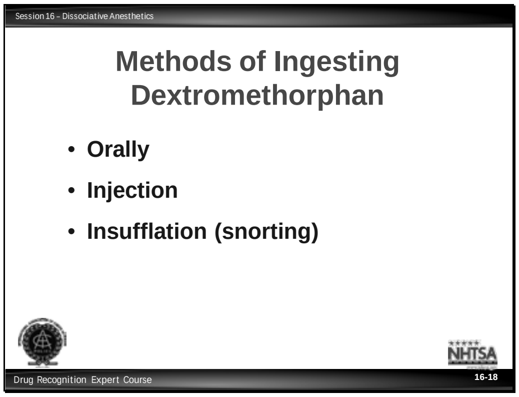
Street names for Dextromethorphan include:

- Triple C
- Robo
- Robo-Tripping
- Skittles
- Robo-dosing
- Robo-fire
- Rojo
- Candy
- Velvet
- DM



Session 16 – Dissociative Anesthetics

Methods of Ingesting Dextromethorphan

- Orally
- Injection
- Insufflation (snorting)

Drug Recognition Expert Course

16-18

Notes:____

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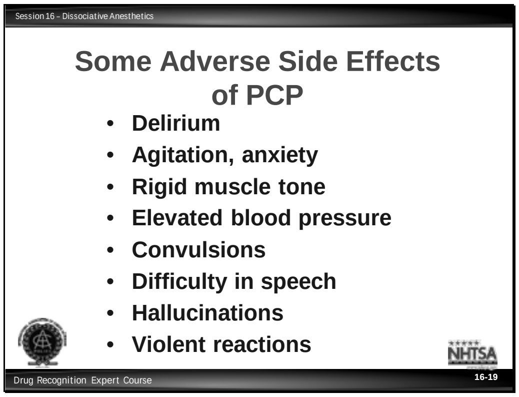
Methods of ingesting Dextromethorphan include:

- Orally
- Injection
- Insufflation (snorting)



Session 16 – Dissociative Anesthetics

Some Adverse Side Effects of PCP

- Delirium
- Agitation, anxiety
- Rigid muscle tone
- Elevated blood pressure
- Convulsions
- Difficulty in speech
- Hallucinations
- Violent reactions

Drug Recognition Expert Course

16-19

Notes:

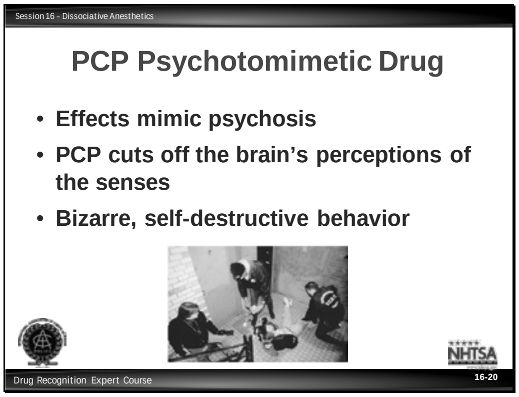
B. Possible Effects of Dissociative Anesthetics

Continuing research has demonstrated that PCP and other Dissociative Anesthetics consistently produced the following adverse side effects:

- Delirium: confusion, incoherent speech, excitement, illusions, hallucinations, and disorientation.
- Agitation, anxiety
- Rigid muscle tone
- Elevated blood pressure
- Convulsions: involuntary contortion of the muscles, producing contortion of the body and limbs.
- Difficulty in speech
- Hallucinations
- Violent reactions

Some lingering and long term effects were also noted.

- Some patients complained of dizziness for several hours after their attention and consciousness appeared to be cleared of PCP’s effects.
- Some patients report memory disorders and other psychological disorders resembling schizophrenia for several months and even years afterwards.



Session 16 – Dissociative Anesthetics

PCP Psychotomimetic Drug

- **Effects mimic psychosis**
- **PCP cuts off the brain’s perceptions of the senses**
- **Bizarre, self-destructive behavior**

Drug Recognition Expert Course

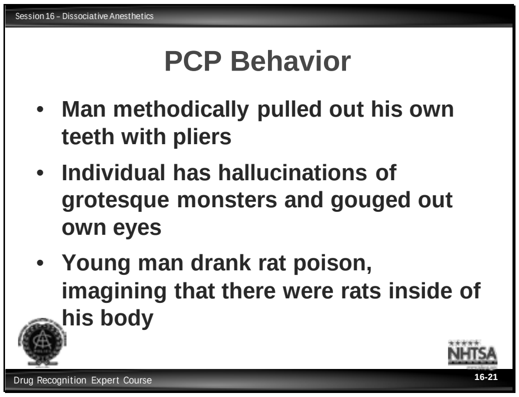
16-20

Notes:

PCP has sometimes been called a psychotomimetic drug; i.e. it produces effects that mimic psychosis, or “craziness.” When the craziness remains long after the drug has dissipated, we say that its effects were psychotogenic, i.e. it didn’t simply mimic craziness, it caused craziness.

PCP is classified as a Dissociative Anesthetic, because it cuts off the brain’s perceptions of the senses.

- PCP users often feel that their heads are physically separated from their bodies.
- They sometimes report feeling they are dead, and that their heads are floating away.



Session 16 – Dissociative Anesthetics

PCP Behavior

- Man methodically pulled out his own teeth with pliers
- Individual has hallucinations of grotesque monsters and gouged out own eyes
- Young man drank rat poison, imagining that there were rats inside of his body

Drug Recognition Expert Course

16-21

Notes:____

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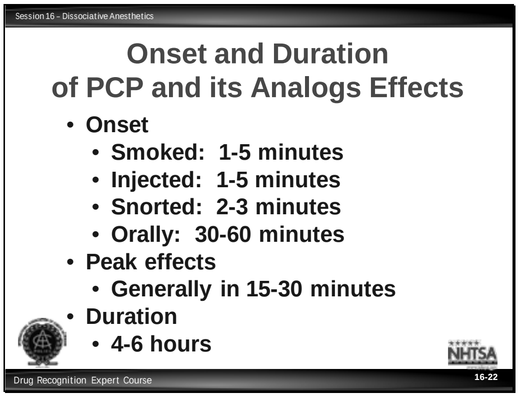
Cases of terribly bizarre, self-destructive behavior have been reported with persons under the influence of PCP.

- One young man methodically pulled his own teeth out, using a pair of pliers.
- Point out that PCP can render the user impervious to pain. It anesthetizes the central nervous system to the extent that surgery could be performed on the user while he or she is wide awake.
- Another individual suffered hallucinations of unbelievably grotesque monsters, and gouged out his own eyes to avoid seeing the monsters.
- Another young man drank rat poison, attempting to kill rats that he imagined were inhabiting his body.
- A nude woman plunged a butcher knife into her own eye, chest, groin and abdomen. She then threatened a police officer with the knife and was shot to death.

  Source: Washington Post, March 7, 1988.



Session 16 – Dissociative Anesthetics

Onset and Duration of PCP and its Analogs Effects

- **Onset**
  - **Smoked: 1-5 minutes**
  - **Injected: 1-5 minutes**
  - **Snorted: 2-3 minutes**
  - **Orally: 30-60 minutes**
- **Peak effects**
  - **Generally in 15-30 minutes**
- **Duration**
  - **4-6 hours**

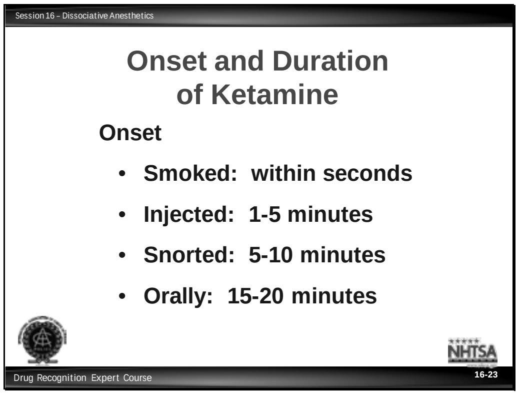
Drug Recognition Expert Course

Notes:

C. Onset and Duration of Effects

PCP

- When PCP is smoked or injected, onset occurs within 1 – 5 minutes.
- When inhaled (“snorted”) onset occurs in 2 – 3 minutes.
- Onset is considerably slower when PCP is taken orally: 30 – 60 minutes.
- The effects reach their peak in about 15 – 30 minutes, assuming the PCP was smoked, injected or snorted.
- The effects generally last 4 – 6 hours, but they can go somewhat longer.
- The user usually, but not always returns to normal within 24 – 48 hours.



Session 16 – Dissociative Anesthetics

Onset and Duration of Ketamine

Onset

- **Smoked: within seconds**
- **Injected: 1-5 minutes**
- **Snorted: 5-10 minutes**
- **Orally: 15-20 minutes**

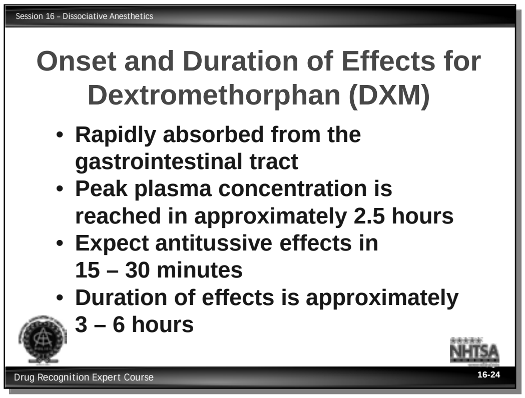
Drug Recognition Expert Course

Notes:

Onset and Duration of Effects

Ketamine

- Within seconds if smoked; duration varies.
- 1 – 5 minutes if injected; lasting 30 – 45 minutes.
- 5 – 10 minutes if snorted; lasting 45 – 60 minutes.
- 15 – 20 minutes if orally; lasting 1 – 2 hours.


Session 16 – Dissociative Anesthetics

Onset and Duration of Effects for Dextromethorphan (DXM)

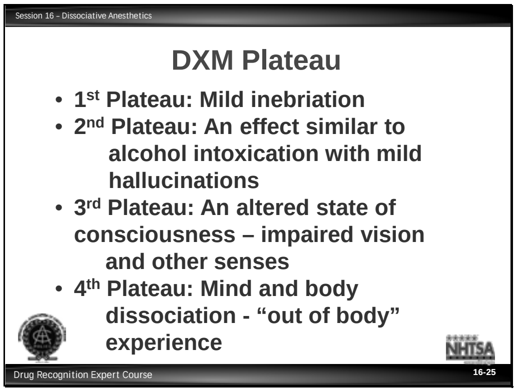
- Rapidly absorbed from the gastrointestinal tract
- Peak plasma concentration is reached in approximately 2.5 hours
- Expect antitussive effects in 15 – 30 minutes
- Duration of effects is approximately 3 – 6 hours

Drug Recognition Expert Course 16-24

Notes:

Dextromethorphan

- Rapidly absorbed from the gastrointestinal tract and peak plasma concentrations are reached in approximately 2.5 hours.
- DXM is widely distributed and is rapidly and extensively metabolized by the liver.
- DXM exerts its antitussive effects within 15 – 30 minutes of oral administration. The duration of action is approximately 3 – 6 hours with conventional dosage forms.


Session 16 – Dissociative Anesthetics

DXM Plateau

- 1st Plateau: Mild inebriation
- 2nd Plateau: An effect similar to alcohol intoxication with mild hallucinations
- 3rd Plateau: An altered state of consciousness – impaired vision and other senses
- 4th Plateau: Mind and body dissociation - “out of body” experience

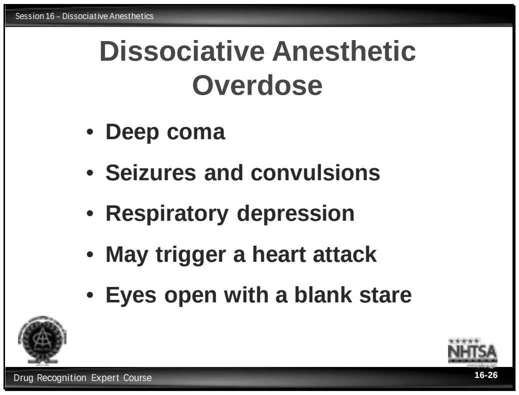
Drug Recognition Expert Course 16-25

Notes:

DXM Plateau (or effect)

Abusers will also ingest various amounts of DXM depending on their body weight and the effect or “plateau” that they are attempting to achieve. Plateau’s include:

1st Plateau: Mild inebriation.
2nd Plateau: An effect similar to alcohol intoxication with mild hallucinations.
3rd Plateau: An altered state of consciousness where the abuser’s senses, particularly vision, can become impaired.
4th Plateau: Mind and body dissociation or an “out of body” experience.
Other effects include: blurred vision, body itching, rash, sweating, fever, hypertension, shallow respiration, diarrhea, toxic psychosis, and an increased heart rate, blood pressure and body temperature
Acute dose between 250 – 1500 mg.



Dissociative Anesthetic Overdose

- Deep coma
- Seizures and convulsions
- Respiratory depression
- May trigger a heart attack
- Eyes open with a blank stare

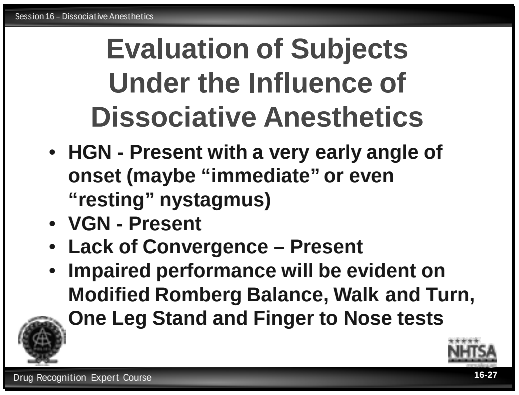
Notes:____

D. Signs and Symptoms of Dissociative Anesthetic Overdose

In addition to the bizarre, violent and self-destructive behavior discussed previously, persons severely intoxicated by Dissociative Anesthetics may exhibit definite and extreme symptoms signifying a medically dangerous condition.

- A deep coma, lasting up to 12 hours.
- Seizures and convulsions.
- A danger associated with severe Dissociative Anesthetics intoxication is that the person may die due to respiratory depression.
- There is also some evidence that Dissociative Anesthetics may trigger a heart attack, if the user had some pre-existing condition disposing him or her to possible cardiac problems.
- Eyes generally open with a blank stare.

There is also some evidence that prolonged use of Dissociative Anesthetics can lead to psychosis, which can be permanent.



Session 16 – Dissociative Anesthetics

Evaluation of Subjects Under the Influence of Dissociative Anesthetics

- **HGN - Present with a very early angle of onset (maybe “immediate” or even “resting” nystagmus)**
- **VGN - Present**
- **Lack of Convergence – Present**
- **Impaired performance will be evident on Modified Romberg Balance, Walk and Turn, One Leg Stand and Finger to Nose tests**

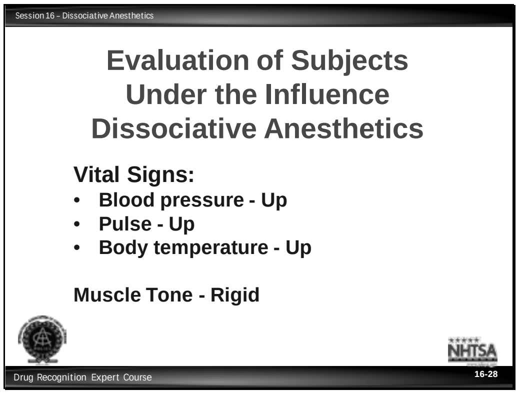
Drug Recognition Expert Course 16-27

Notes:

E. Expected Results of the Evaluation

- Horizontal Gaze Nystagmus generally will be present with a very early angle of onset.
- Vertical Gaze Nystagmus usually will be present.
- Lack of convergence will generally be present.
- Performance on Modified Romberg Balance will be impaired: internal clock may be slowed.
- Performance on Walk and Turn, One Leg Stand, and Finger to Nose will be impaired: muscle tone will usually be rigid.

With PCP, the subject may exhibit a “high gait ataxia” or “moon walking,” i.e. taking abnormally high and slow steps, as though he or she were trying to step over obstacles in his or her path.



Session 16 – Dissociative Anesthetics

Evaluation of Subjects Under the Influence Dissociative Anesthetics

Vital Signs:
- **Blood pressure - Up**
- **Pulse - Up**
- **Body temperature - Up**

Muscle Tone - Rigid

Drug Recognition Expert Course 16-28

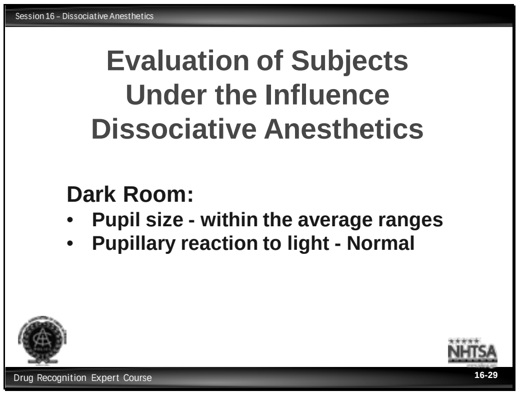
Notes:

Vital Signs

- Blood pressure will generally be elevated.
- Body temperature will generally be up.

Dark Room

- Pupil size will be within the average ranges.
- Reaction to light will be normal.



Session 16 – Dissociative Anesthetics

Evaluation of Subjects Under the Influence Dissociative Anesthetics

Dark Room:

- **Pupil size - within the average ranges**
- **Pupillary reaction to light - Normal**

Drug Recognition Expert Course

16-29

Notes:____

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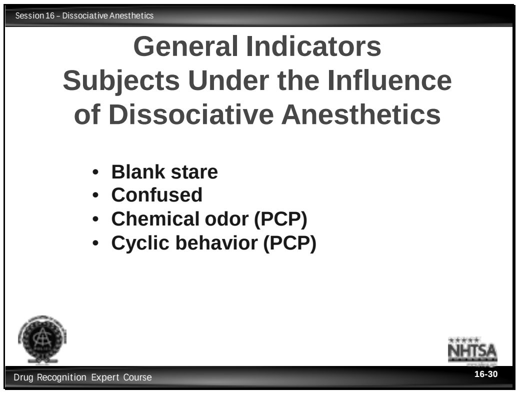
Dark Room

- Pupil size will be within the average ranges.
- Reaction to light will be normal.



Session 16 – Dissociative Anesthetics

General Indicators Subjects Under the Influence of Dissociative Anesthetics

- **Blank stare**
- **Confused**
- **Chemical odor (PCP)**
- **Cyclic behavior (PCP)**

Drug Recognition Expert Course

16-30

Notes:____

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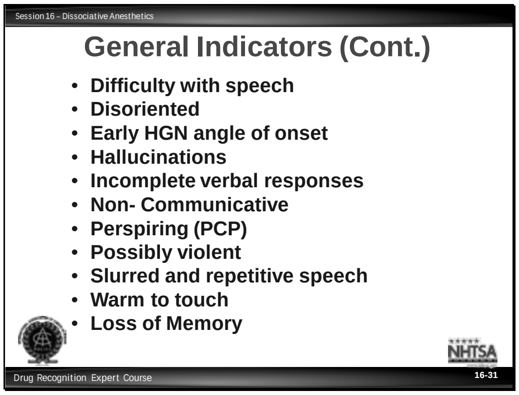
General Indicators

- Blank stare
- Confused
- Chemical odor (PCP)
- Cyclic behavior (PCP)



Session 16 – Dissociative Anesthetics

General Indicators (Cont.)

- Difficulty with speech
- Disoriented
- Early HGN angle of onset
- Hallucinations
- Incomplete verbal responses
- Non- Communicative
- Perspiring (PCP)
- Possibly violent
- Slurred and repetitive speech
- Warm to touch
- Loss of Memory

Drug Recognition Expert Course

16-31

Notes:____

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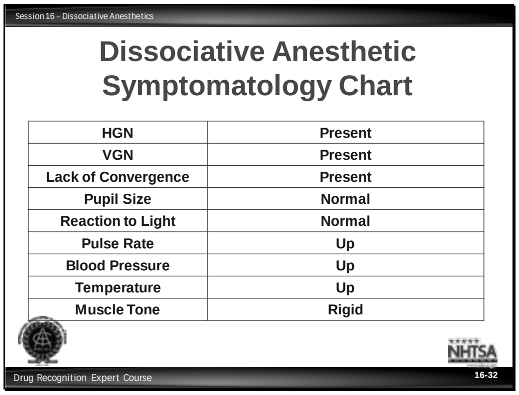
- Difficulty with speech
- Disoriented
- Early HGN angle of onset
- Hallucinations
- Incomplete verbal responses
- Non-communicative
- Perspiring (PCP)
- Sensory distortions
- Possibly violent
- Slurred and repetitive speech
- Warm to touch (PCP)
- Loss of Memory



Session 16 – Dissociative Anesthetics

Dissociative Anesthetic Symptomatology Chart

HGN	Present
VGN	Present
Lack of Convergence	Present
Pupil Size	Normal
Reaction to Light	Normal
Pulse Rate	Up
Blood Pressure	Up
Temperature	Up
Muscle Tone	Rigid

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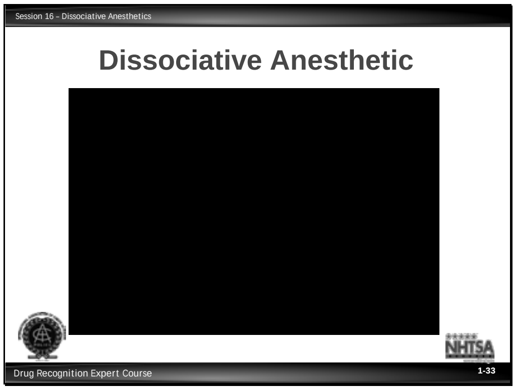
Notes:

Summary

- Expected Results of the Evaluation. Note: “Normal” for pupil sizes refers to within the DRE average ranges.
- Point out that as with other drug categories, DREs should not specify the exact drug such as PCP, Ketamine or DXM.
- When a DRE concludes that a subject is impaired by a Dissociative Anesthetic, such as PCP or DXM, the report should state that “the subject is under the influence of a Dissociative Anesthetic.”

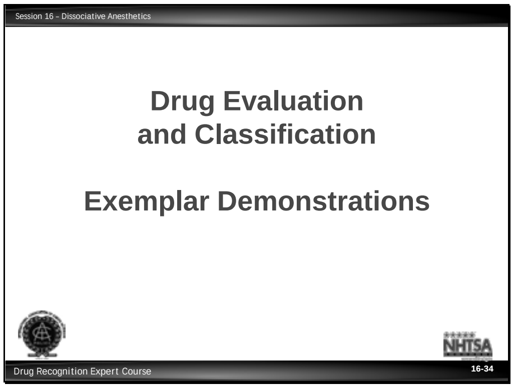


Session 16 – Dissociative Anesthetics

Dissociative Anesthetic

Drug Recognition Expert Course 1-33

Notes:



Session 16 – Dissociative Anesthetics

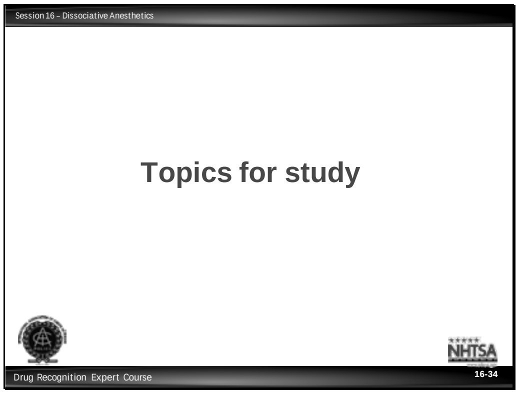
Drug Evaluation and Classification

Exemplar Demonstrations

Drug Recognition Expert Course 16-34

Notes:

F. Classification Exemplar



Session 16 – Dissociative Anesthetics

Topics for study

Drug Recognition Expert Course

16-34

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TOPICS FOR STUDY

1. What was the original purpose for which PCP was first patented and marketed?

2. Why do many PCP smokers prefer to adulterate mentholated cigarettes with PCP?

3. What is Ketamine?

4. What does the term “dissociative anesthetic” mean?

5. “Phencyclidine” is a contraction of what three words?

Session 16 – Dissociative Anesthetics

QUESTIONS?

Drug Recognition Expert Course

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DRUG INFLUENCE EVALUATION

Evaluator: Officer Steve Dunn, Anchorage P.D.
DRE #: 11281
Rolling Log #: 12-04-33

Session XVI #2

Recorder/Witness: Officer Chris Ritala, A.P.D.
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-788798

Arrestee's Name (Last, First, Middle): Albright, Jeremy J.
Date of Birth: 4/10/86
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer David Pollock, A.P.D. #1374

Date Examined / Time /Location: 04/07/12 1420 4th Ave. Substation
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 75470
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Pollock
What have you eaten today? When? Cheeseburger & fries 11AM
What have you been drinking? Water
How much? N/A
Time of last drink? N/A

Time now/ Actual: "1:30PM" (1427)
When did you last sleep? How long: "Night before last" 1-2 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☒ Yes ☐No "Just some cold medicine"
Attitude: Cooperative
Coordination: Slow and deliberate

Speech: Slurred
Breath Odor: Normal
Face: Flushed

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: [ ] Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

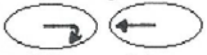
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☒ Yes ☐ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time

1.	110	1430
2.	112	1446
3.	110	1501

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	Immediate	Immediate

Convergence

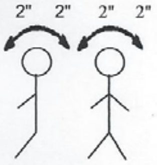


34 ONE LEG STAND 36

L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☐	☐	Puts foot down

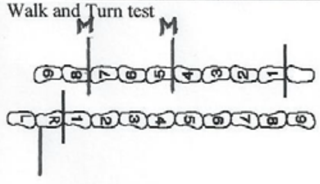
Leg tremors

Modified Romberg Balance



Internal clock: 28 estimated as 30 seconds

Walk and Turn test



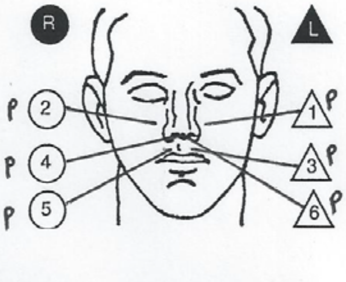
Walked slowly

Cannot keep balance ✓
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		✓✓
Steps off line		
Raises arms		
Actual steps taken	9	9

Describe Turn: Shuffled feet
Cannot do test (explain): N/A
Type of footwear: Lace-up boots

Draw lines to spots touched



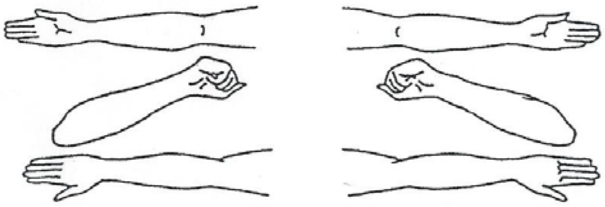
Used the first pad of each finger

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	5.0	8.0	4.0
Right Eye	5.0	8.0	4.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

RIGHT ARM **LEFT ARM**



Nothing observed

Blood pressure: 152/102
Temperature: 99.7
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:

What drugs or medications have you been using? Coricidin
How much? 24 pills
Time of use? Last night
Where were the drugs used? (Location) Friend's house

Date / Time of arrest: 04/07/12 1300
Time DRE was notified: 1350
Evaluation start time: 1420
Evaluation completion time: 1540
Precinct/Station:

Officer's Signature:
DRE #: 11281
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ■ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Albright, Jeremy J.

1. **LOCATION:** The evaluation was conducted at the APD 4th Avenue Substation.

2. **WITNESSES:** Officer Chris Ritala of APD recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Albright's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was contacted and requested to contact Officer Pollock regarding a drug evaluation. Officer Pollock advised he had stopped the suspect for speeding on Minnesota Ave. The suspect had bloodshot eyes and slurred speech. He appeared impaired, however, there was no odor of alcoholic beverage on his breath. He had six clues of HGN and performed poorly on the SFST's. He admitted taking some cold medicine.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the substation. His face was flushed and his speech slurred. His movements were slow and deliberate. He seemed disoriented and confused.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 2" side to side and approximately 2" front to back. Walk & Turn: Suspect lost his balance during the instructions, turned by shuffling his feet and missed heel to toe twice on the second nine steps. One Leg Stand: Suspect had leg tremors, swayed while balancing and used his arms for balance. Finger to Nose: Suspect missed the tip of his nose on four of the six attempts. He used the pad of his finger on each attempt.

8. **CLINICAL INDICATORS:** HGN was present with an immediate onset. Vertical Gaze Nystagmus and Lack of Convergence were also present. His pulse, blood pressure and temperature were all elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** None were evident.

10. **SUSPECT'S STATEMENTS:** Suspect admitted taking about 24 Coricidin pills.

11. **DRE'S OPINION:** In my opinion Albright is under the influence of a **Dissociative Anesthetic** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** The suspect stated he had been transported to the hospital several months ago when he overdosed by taking 32 Coricidin pills.

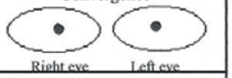
DRUG INFLUENCE EVALUATION

Evaluator: Officer Michael Boylls, LAPD
DRE #: 13542
Rolling Log #: 12-05-56
Session XVI #3
Recorder/Witness: Officer Helen Pallares, LAPD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-335989
Arrestee's Name (Last, First, Middle): George, Debra A.
Date of Birth: 8/24/84
Sex: F
Race: W
Arresting Officer (Name, ID#): Officer Helen Pallares, LAPD #10175
Date Examined / Time /Location: 05/02/12 2315 Parker Center
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 74080
Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No Given By: Officer Pallares
What have you eaten today? Pizza When? 6 PM
What have you been drinking? Nothing
How much? N/A
Time of last drink? N/A
Time now/ Actual: 11 PM/11:15 PM
When did you last sleep? Last night How long 6-7 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Passive, non-responsive
Coordination: Poor, slow, staggering
Speech: Slow, confused, thick
Breath Odor: Normal
Face: Sweaty, flushed
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☒ Yes ☐ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time
1. 106 / 2325
2. 104 / 2336
3. 104 / 2345

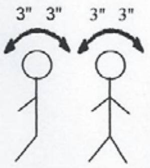
HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	Immediate	Immediate

Convergence

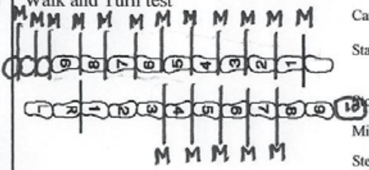


ONE LEG STAND

Modified Romberg Balance



Walk and Turn test



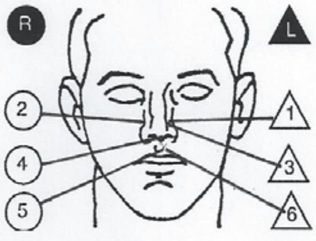
	1st Nine	2nd Nine
Cannot keep balance		
Starts too soon		
Stops walking		
Misses heel-toe	✓✓✓✓✓	all steps
Steps off line		
Raises arms	constant	constant
Actual steps taken	10	12

L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
✓☑	☑	Puts foot down

Test stopped for safety reasons

Internal clock: 42 estimated as 30 seconds
Describe Turn: Stopped, slow
Cannot do test (explain): N/A
Type of footwear: Sandals

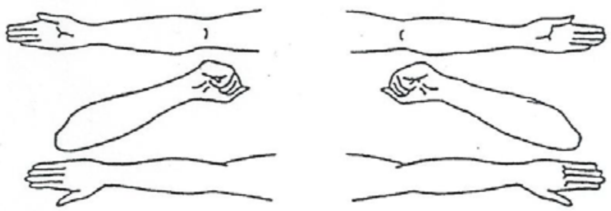
Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.0	6.5	3.5
Right Eye	4.0	6.5	3.5

Nasal area: Clear
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

RIGHT ARM
LEFT ARM



Nothing observed

Blood pressure: 158/104
Temperature: 100.4
Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid
Comments:
What drugs or medications have you been using? No response
How much? N/A
Time of use? No response
Where were the drugs used? (Location) No response
Date / Time of arrest: 05/02/12 2210
Time DRE was notified: 2300
Evaluation start time: 2315
Evaluation completion time: 2358
Precinct/Station: Central
Officer's Signature:
DRE # 13542
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☒ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** George, Debra A.

1. **LOCATION:** The evaluation was conducted at the Parker Center Intake Center.

2. **WITNESSES:** Arresting officer; Helen Pallares, LAPD recorded the evaluation.

3. **BREATH ALCOHOL TEST:** George's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was contacted and requested to contact Officer Pallares at Parker Center for a drug evaluation. Officer Pallares advised she stopped the suspect after observing her nearly hit several parked cars on Broadway near 4th Street. Her speech was slow, thick and slurred. She was very confused and not sure of her surroundings. Her coordination was very poor and she nearly fell attempting the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the Processing Room at Parker Center. She appeared dazed and disoriented. She had a fixed stare and was responding slowly to questions. She was unstable on her feet and several times used the wall to steady herself. Her movements were slow and deliberate.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" in a circular motion and estimated 30 seconds in 42 seconds. Walk & Turn: Suspect missed heel to toe numerous times and nearly fell twice. She repeatedly used her arms for balance and took a wrong number of steps. One Leg Stand: Suspect lost her balance using the wall to steady herself and the test had to be stopped. Finger to Nose: Suspect missed the tip of her nose on five of the six attempts.

8. **CLINICAL INDICATORS:** Suspect had six clues of HGN with an immediate angle of onset. She had VGN and was unable to convergence her eyes and looked straight ahead. Her pulse, blood pressure and temperature were all elevated and above the DRE average ranges.

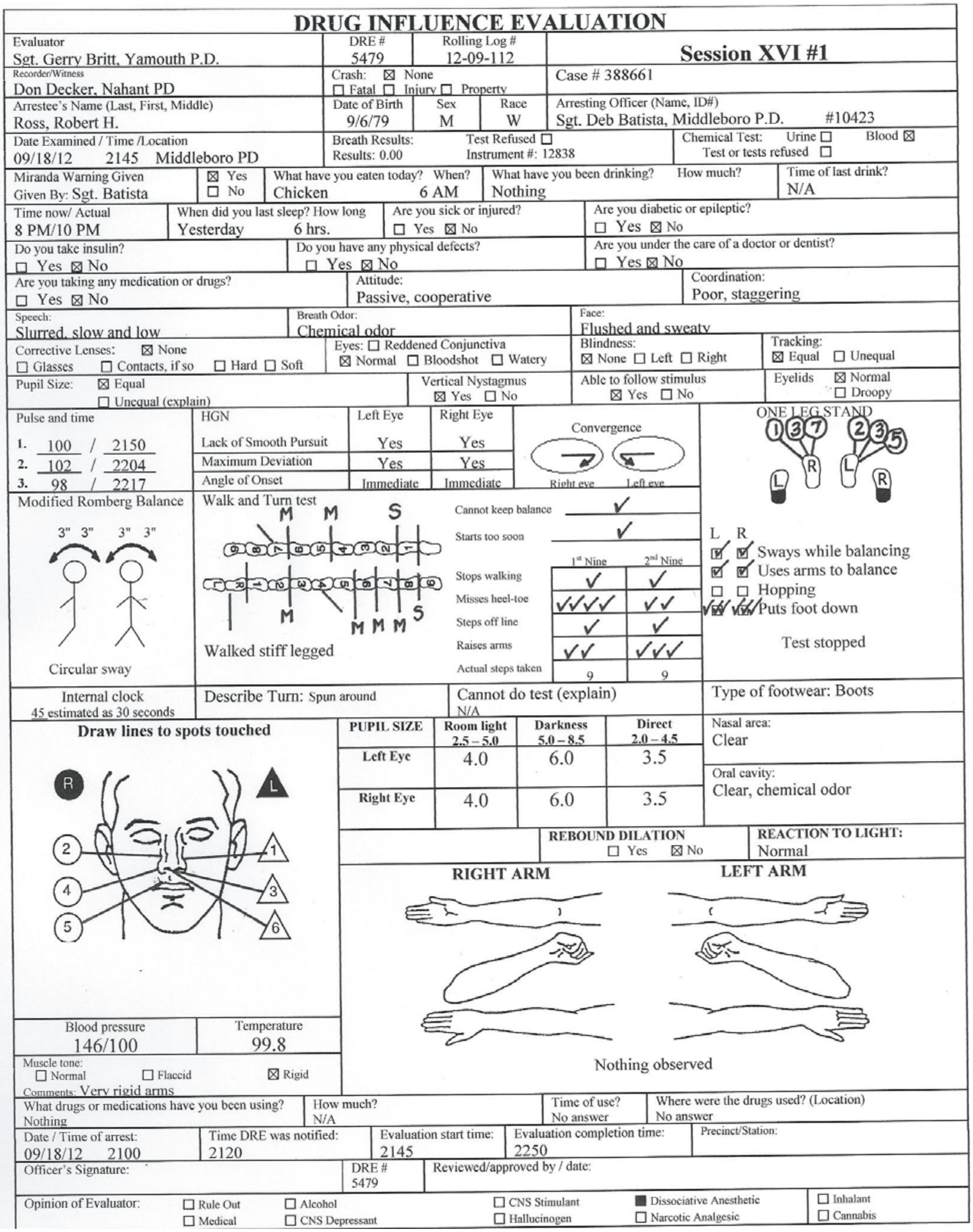
9. **SIGNS OF INGESTION:** None were evident.

10. **SUSPECT'S STATEMENTS:** The suspect did not respond when questioned about drug use but did make several "K-Hole" references.

11. **DRE'S OPINION:** In my opinion George is under the influence of a **Dissociative Anesthetic** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**



DRUG INFLUENCE EVALUATION

Evaluator: Sgt. Gerry Britt, Yamouth P.D.
DRE #: 5479
Rolling Log #: 12-09-112
Session XVI #1
Recorder/Witness: Don Decker, Nahant PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 388661
Arrestee's Name (Last, First, Middle): Ross, Robert H.
Date of Birth: 9/6/79
Sex: M
Race: W
Arresting Officer (Name, ID#): Sgt. Deb Batista, Middleboro P.D. #10423
Date Examined / Time /Location: 09/18/12 2145 Middleboro PD
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 12838
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Sgt. Batista
What have you eaten today? Chicken When? 6 AM
What have you been drinking? Nothing How much?
Time of last drink? N/A
Time now/ Actual: 8 PM/10 PM
When did you last sleep? Yesterday How long 6 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Passive, cooperative
Coordination: Poor, staggering
Speech: Slurred, slow and low
Breath Odor: Chemical odor
Face: Flushed and sweaty
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☒ Yes ☐ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time

1. 100 / 2150
2. 102 / 2204
3. 98 / 2217

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	Immediate	Immediate

Convergence

ONE LEG STAND

Modified Romberg Balance

Circular sway

Walk and Turn test

Walked stiff legged

Cannot keep balance ✓
Starts too soon ✓

	1st Nine	2nd Nine
Stops walking	✓	✓
Misses heel-toe	✓✓✓✓	✓✓
Steps off line	✓	✓
Raises arms	✓✓	✓✓✓
Actual steps taken	9	9

L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☐ Hopping
✓✓☑ ✓✓☑ Puts foot down

Test stopped

Internal clock: 45 estimated as 30 seconds
Describe Turn: Spun around
Cannot do test (explain): N/A
Type of footwear: Boots

Draw lines to spots touched

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.0	6.0	3.5
Right Eye	4.0	6.0	3.5

Nasal area: Clear
Oral cavity: Clear, chemical odor
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

RIGHT ARM
LEFT ARM

Nothing observed

Blood pressure: 146/100
Temperature: 99.8
Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid
Comments: Very rigid arms
What drugs or medications have you been using? Nothing
How much? N/A
Time of use? No answer
Where were the drugs used? (Location) No answer
Date / Time of arrest: 09/18/12 2100
Time DRE was notified: 2120
Evaluation start time: 2145
Evaluation completion time: 2250
Precinct/Station:
Officer's Signature:
DRE # 5479
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ■ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Ross, Robert H.

1. **LOCATION:** The evaluation was conducted at the Middleboro Police Department.

2. **WITNESSES:** Arresting officer Sgt. Deb Batista of the Middleboro PD witnessed the evaluation and Don Decker of Nahant PD recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Ross' breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was contacted and advised to contact Sergeant Batista at the Middleboro Police Department for a drug evaluation. Sergeant Batista advised that she had observed the suspect driving on N. Main Street at approximately 10 mph drifting within his lane and nearly hitting parked vehicles. When stopped, the suspect appeared dazed and did not know where he was or where he was going. He had a blank stare and appeared very confused. He was arrested for DUI after performing poorly on the SFST's.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at M.P.D. He appeared dazed and disoriented, had a fixed stare and responded very slowly to questions. He was perspiring heavily and had rambling speech.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" in a circular motion and estimated 30 seconds in 45 seconds. Walk & Turn: Suspect started walking immediately and lost his balance during the instructions, stepped off the line twice, stopped walking twice, used his arms for balance and missed heel to toe 6 times during the test. One Leg Stand: Suspect was unable to complete the test on either foot and the test was stopped for safety reasons. Finger to Nose: Suspect missed the tip of his nose on four of the six attempts. His arm movements were very rigid.

8. **CLINICAL INDICATORS:** Suspect exhibited an immediate onset of HGN. Vertical Gaze Nystagmus and Lack of Convergence were also present. The suspect's pulse, blood pressure and temperature were all elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** There was a strong chemical-type odor on the suspect's breath.

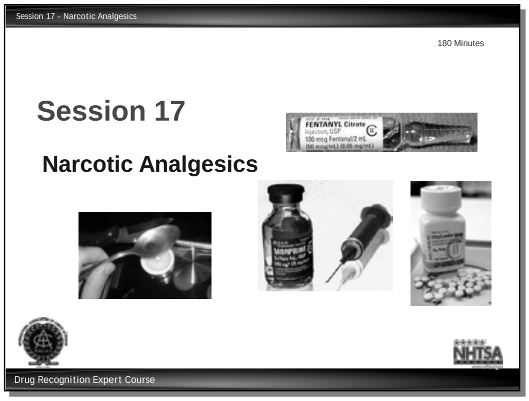
10. **SUSPECT'S STATEMENTS:** The suspect stated that he did not use any drugs.

11. **DRE'S OPINION:** In my opinion Ross is under the influence of a **Dissociative Anesthetic** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**

Participant Manual DRE 7-Day Session 17 – Narcotic Analgesics



Session 17 – Narcotic Analgesics

180 Minutes

Session 17

Narcotic Analgesics

FENTANYL Citrate
Injection, USP
100 mcg Fentanyl/2 mL
(50 mcg/mL) (0.05 mg/mL)
NHTSA

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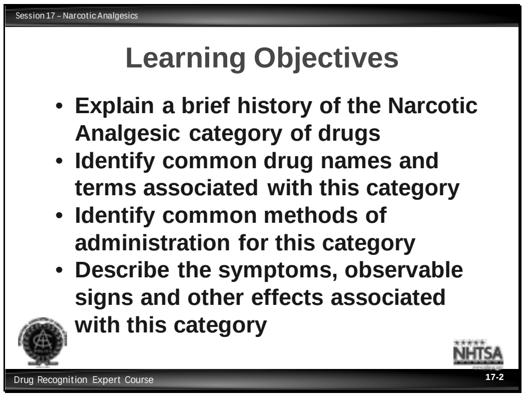
Notes:



Session 17 – Narcotic Analgesics

Learning Objectives

- Explain a brief history of the Narcotic Analgesic category of drugs
- Identify common drug names and terms associated with this category
- Identify common methods of administration for this category
- Describe the symptoms, observable signs and other effects associated with this category

Drug Recognition Expert Course

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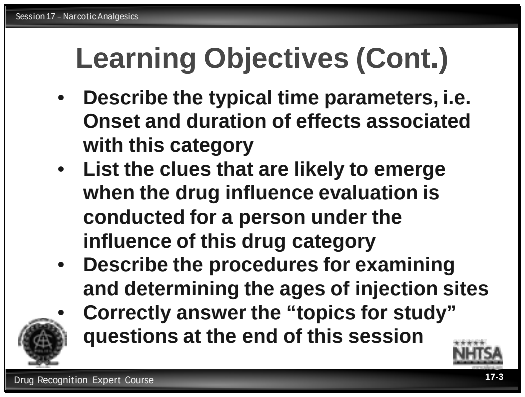
Notes:

Upon successfully completing this session the participant will be able to:

- Explain a brief history of the Narcotic Analgesic category of drugs.
- Identify common drug names and terms associated with this category.
- Identify common methods of administration for this category.
- Describe the symptoms, observable signs and other effects associated with this category.



Session 17 – Narcotic Analgesics

Learning Objectives (Cont.)

- **Describe the typical time parameters, i.e. Onset and duration of effects associated with this category**
- **List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category**
- **Describe the procedures for examining and determining the ages of injection sites**
- **Correctly answer the "topics for study" questions at the end of this session**

Drug Recognition Expert Course

17-3

Notes:____

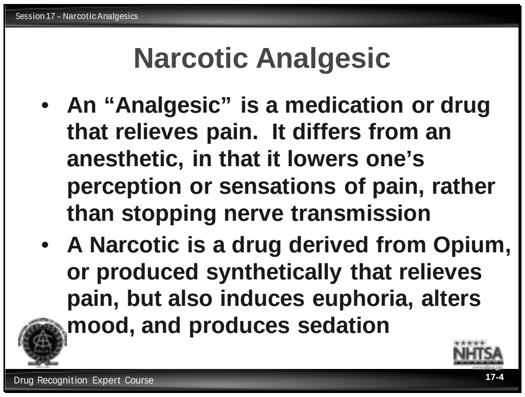
- Describe typical time parameters, i.e. onset and duration of effects, associated with this category.
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs.
- Describe the procedures for examining and determining the ages of injection sites.
- Correctly answer the "topics for study" questions at the end of this session.

CONTENT SEGMENTS

A. Overview of the Category
B. Possible Effects
C. Onset and Duration
D. Overdose Signs and Symptoms
E. Expected Results of the Evaluation
F. Injection Site Examination
G. Expected Location of Injection Marks
H. Conclusion
I. Classification Exemplar

LEARNING ACTIVITIES

Instructor-Led Presentations
Review of Drug Evaluation; Classification Exemplars
Reading Assignments
Video Presentations
Slide Presentations



Session 17 – Narcotic Analgesics

Narcotic Analgesic

- **An "Analgesic" is a medication or drug that relieves pain. It differs from an anesthetic, in that it lowers one's perception or sensations of pain, rather than stopping nerve transmission**
- **A Narcotic is a drug derived from Opium, or produced synthetically that relieves pain, but also induces euphoria, alters mood, and produces sedation**

Drug Recognition Expert Course 17-4

Notes:____

A. Overview of the Category

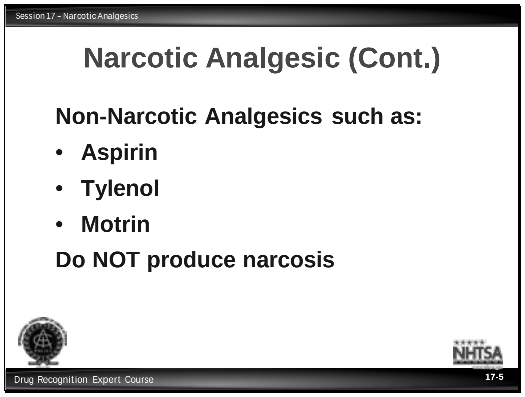
Narcotic Analgesics

The term "Opioid," however, most correctly refers to the synthetic subcategory of Narcotic Analgesics.

Narcotic Analgesic Defined

A medical term, not a legal or police term.

An "Analgesic" is a medication or drug that relieves pain. It differs from an anesthetic, in that it lowers one's perception or sensations of pain, rather than stopping nerve transmission.



Session 17 – Narcotic Analgesics

Narcotic Analgesic (Cont.)

Non-Narcotic Analgesics such as:

- **Aspirin**
- **Tylenol**
- **Motrin**

Do NOT produce narcosis

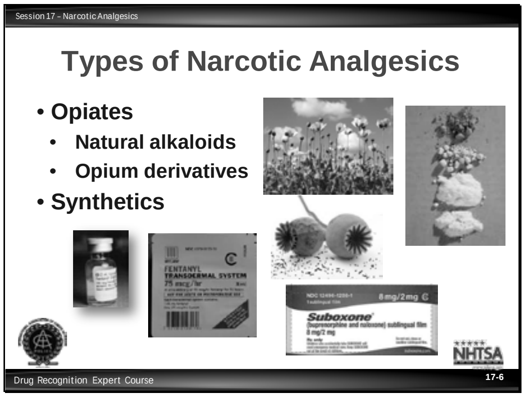
Drug Recognition Expert Course 17-5

Notes:____

Non-Narcotic Analgesics, such as Aspirin, Tylenol, and Motrin, relieve pain, but do NOT produce narcosis, which means numbness or sedation.

Clarification: non-Narcotic Analgesics relieve pain, but do not alter mood. Therefore, they, in small amounts, are not psychoactive and are not abused for their mind or mood altering actions.

A Narcotic is a drug derived from Opium, or produced synthetically that relieves pain, but also induces euphoria, alters mood, and produces sedation.



Session 17 – Narcotic Analgesics

Types of Narcotic Analgesics

- **Opiates**
  - **Natural alkaloids**
  - **Opium derivatives**
- **Synthetics**

Drug Recognition Expert Course

17-6

Notes:____

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There are two subcategories of Narcotic Analgesics:

- Opiates
- Synthetics

Opiates: drugs that either contain or are derived from Opium.

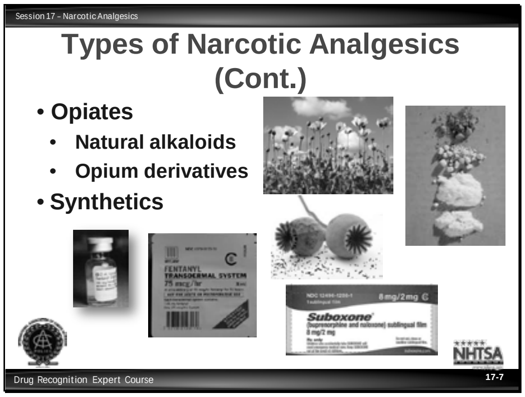
Natural alkaloids of Opium.

The term “main ingredient” can be used as a synonym for “alkaloid.”

The Natural Alkaloids

Alkaloids and the Opium derivatives all come from Opium, which is sap from the seed pods of a particular type of poppy.

Note: the Opium poppy is also called “papaver somniferum” (somniferum in Latin means “carrier of sleep”)



Session 17 – Narcotic Analgesics

Types of Narcotic Analgesics (Cont.)

- **Opiates**
  - **Natural alkaloids**
  - **Opium derivatives**
- **Synthetics**

Drug Recognition Expert Course

17-7

Notes:____

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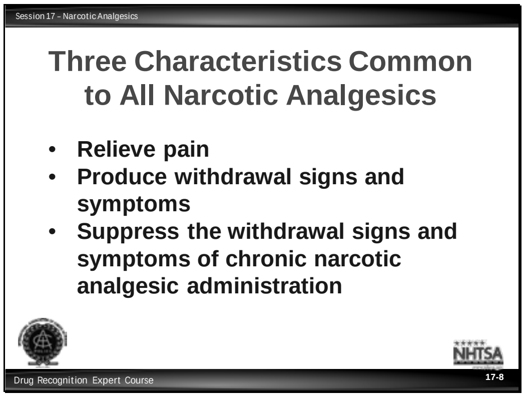
Opium Derivatives

Opium derivatives are obtained by chemically treating the Opium alkaloid. Opium derivatives are therefore derived from Opium.

Synthetics

Synthetics, which do not derive from Opium at all, have similar or identical effects as Opium alkaloids and derivatives.



Session 17 – Narcotic Analgesics

Three Characteristics Common to All Narcotic Analgesics

- **Relieve pain**
- **Produce withdrawal signs and symptoms**
- **Suppress the withdrawal signs and symptoms of chronic narcotic analgesic administration**

Drug Recognition Expert Course

17-8

Notes:

Narcotic Analgesics all share three characteristics:

- They all relieve pain.

Clarification: They produce analgesia.

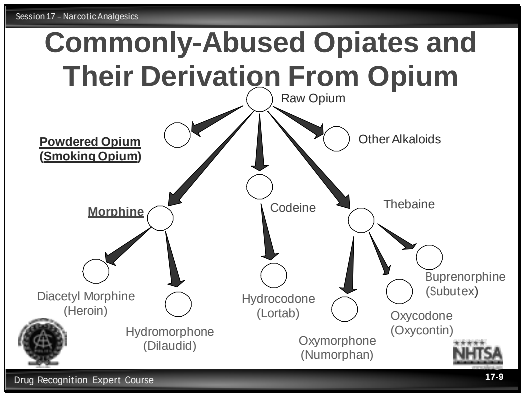
- They will produce withdrawal signs and symptoms when the user is physically dependent, and drug use is stopped.

Clarification: Physical dependence results from "chronic administration." This means that the drug has been taken at fairly regular intervals for a period of time.

- They will suppress the withdrawal signs and symptoms of chronic narcotic analgesic administration.

Clarification: This means that the various Narcotic Analgesics can be substituted for each other to relieve withdrawal symptoms.

Morphine is typically used as the standard for comparison with other Narcotic Analgesics.



Session 17 – Narcotic Analgesics

Commonly-Abused Opiates and Their Derivation From Opium

Raw Opium

Powdered Opium (Smoking Opium)

Other Alkaloids

Codeine

Thebaine

Morphine

Buprenorphine (Subutex)

Diacetyl Morphine (Heroin)

Hydrocodone (Lortab)

Oxycodone (Oxycontin)

Hydromorphone (Dilaudid)

Oxymorphone (Numorphan)

Drug Recognition Expert Course

17-9

Notes:

Some Commonly Abused Opiates

Powdered Opium

Powdered Opium (also known as smoking Opium).

A simple refinement of raw Opium.

Used medically to treat diarrhea (administered orally).

The development of more effective opiates and synthetics has virtually eliminated its use medically. In recent years, there has been little street use of Opium. It is important to realize, however, that drug use trends can and do change.

Remains popular as a drug of abuse (smoked) among some Asian-American communities.

Morphine

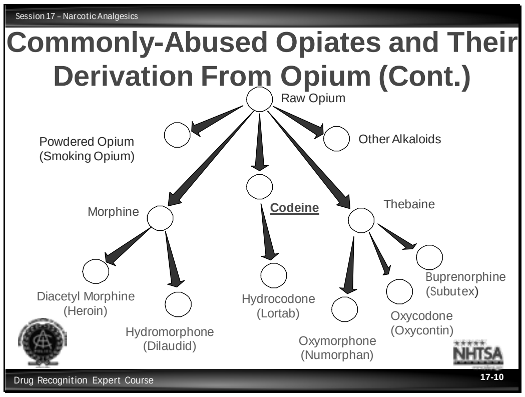
Morphine, the principal natural alkaloid of Opium.

Morphine was first isolated from Opium in 1805.

Used medically to suppress severe pain (e.g., with terminal cancer patients).

Highly addictive.

Morphine was widely used during the Civil War. Morphine addiction was termed “Soldier’s disease.”



Session 17 – Narcotic Analgesics

Commonly-Abused Opiates and Their Derivation From Opium (Cont.)

Raw Opium

Powdered Opium (Smoking Opium)

Other Alkaloids

Morphine

Codeine

Thebaine

Diacetyl Morphine (Heroin)

Hydromorphone (Dilaudid)

Hydrocodone (Lortab)

Oxymorphone (Numorphan)

Oxycodone (Oxycontin)

Buprenorphine (Subutex)

Drug Recognition Expert Course

17-10

Notes:

At one time, Morphine was the most commonly abused Narcotic Analgesic.

Codeine

Codeine is another natural alkaloid of Opium.

Its technical name is Methylmorphine.

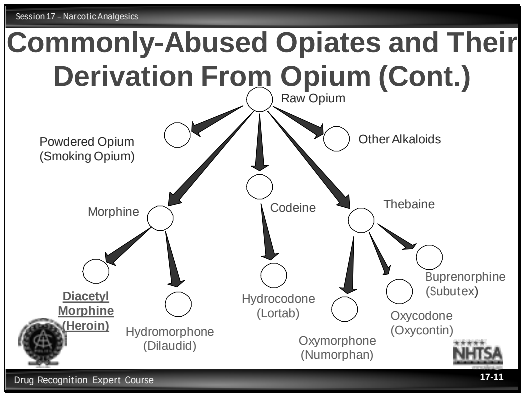
First isolated in 1832.

Codeine’s pain killing ability is much weaker than Morphine’s.

Used medically to suppress coughing or minor pain.

Clarification: Narcotic Analgesic addicts often turn to Codeine when they cannot get more popular drugs.

Codeine is definitely an addictive drug.



Session 17 – Narcotic Analgesics

Commonly-Abused Opiates and Their Derivation From Opium (Cont.)

Raw Opium

Powdered Opium (Smoking Opium)

Other Alkaloids

Morphine

Codeine

Thebaine

Diacetyl Morphine (Heroin)

Hydromorphone (Dilaudid)

Hydrocodone (Lortab)

Oxymorphone (Numorphan)

Oxycodone (Oxycontin)

Buprenorphine (Subutex)

Drug Recognition Expert Course

17-11

Notes:

Heroin

Heroin is the most commonly abused illicit Narcotic Analgesic.

Derived from Morphine in 1874.

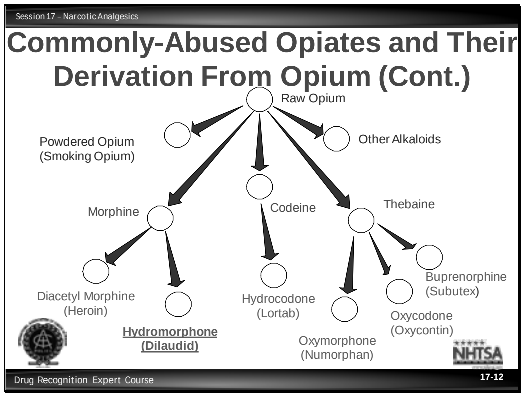
Heroin was first thought to be a non-addictive substitute for Morphine.

It was approved for general use by the American Medical Association in 1906.

By the 1920's it was evident that Heroin was much more addictive than Morphine.

Importation and manufacture of Heroin have been illegal in this country since 1925.

Heroin is a Schedule I drug, which means it has no legitimate medical uses in the United States.



Session 17 – Narcotic Analgesics

Commonly-Abused Opiates and Their Derivation From Opium (Cont.)

Raw Opium

Powdered Opium (Smoking Opium)

Other Alkaloids

Morphine

Codeine

Thebaine

Diacetyl Morphine (Heroin)

Hydromorphone (Dilaudid)

Hydrocodone (Lortab)

Oxymorphone (Numorphan)

Oxycodone (Oxycontin)

Buprenorphine (Subutex)

Drug Recognition Expert Course

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Notes:____

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Dilaudid

Dilaudid is another derivative from Morphine.

Technical Name: Hydromorphone Hydrochloride.

First produced in 1923.

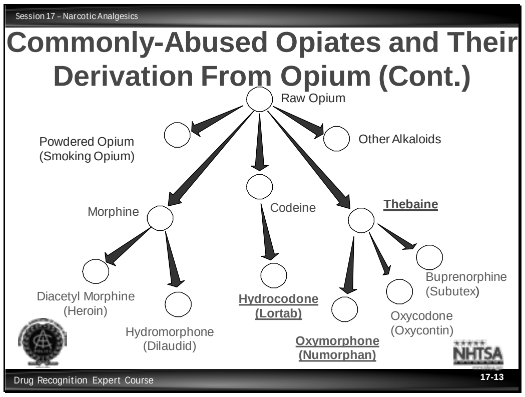
Sometimes called “drug store Heroin,” since it is commercially available from medical and pharmaceutical sources.

Dilaudid has the same addictive liabilities as does Heroin or Morphine.

Used medically for short term relief of moderate to severe pain, and to suppress severe, persistent coughs.

Can be ingested via injection, orally or in suppositories.

Sometimes abused by addicts who are unable to obtain Morphine or Heroin.



Session 17 – Narcotic Analgesics

Commonly-Abused Opiates and Their Derivation From Opium (Cont.)

Raw Opium

Powdered Opium (Smoking Opium)

Other Alkaloids

Morphine

Codeine

Thebaine

Diacetyl Morphine (Heroin)

Hydromorphone (Dilaudid)

Hydrocodone (Lortab)

Oxymorphone (Numorphan)

Oxycodone (Oxycontin)

Buprenorphine (Subutex)

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Notes:____

Hydrocodone

Hydrocodone is derived from Codeine but is more closely related to Morphine in its pharmacological profile.

Examples include:

- Hycodan
- Vicodin (Note: Vicodin is a commonly prescribed pain reliever containing Hydrocodone and Acetaminophen.)
- Lortab

Thebaine

An opiate alkaloid derived from opium.

Not used therapeutically.

Converted into several drugs including oxycodone and oxymorphone.

Numorphan

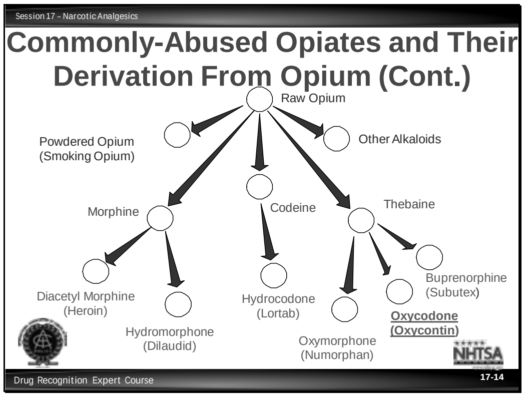
Technical Name: Oxymorphone.

Used medically for the relief of chronic pain.

Sold in ampules (injection) and in suppositories.

Previously (pre-1972) it was sold in tablets, and was a favorite substitute for Heroin among addicts; addicts now generally prefer Dilaudid as a Heroin substitute.

A derivative of Thebaine (source: "Disposition of Toxic Drugs and Chemicals in Man" 9th edition, R. Baselt)



Session 17 – Narcotic Analgesics

Commonly-Abused Opiates and Their Derivation From Opium (Cont.)

Raw Opium
Powdered Opium (Smoking Opium)
Other Alkaloids
Morphine
Codeine
Thebaine
Diacetyl Morphine (Heroin)
Hydromorphone (Dilaudid)
Hydrocodone (Lortab)
Oxymorphone (Numorphan)
Buprenorphine (Subutex)
Oxycodone (Oxycontin)
NHTSA

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Notes:

Oxycodone

Oxycodone is a semi-synthetic narcotic produced by chemically treating Thebaine. It is somewhat less addictive than Morphine, but more than Codeine.

Two examples are:

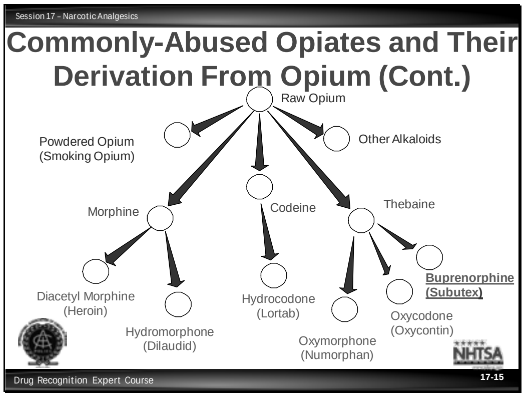
Brand Name: OxyContin.

Percodan is one of the most commonly prescribed Narcotic Analgesics.

It is also produced under the brand name of “Percocet”, which is Percodan combined with Acetaminophen, such as Tylenol.

OxyContin is a controlled release tablet that contains large amounts of Oxycodone (10-160mg). Abusers learn to circumvent the slow release mechanism.

Street names: “Oxy”; “OC”; “Killer.”



Session 17 – Narcotic Analgesics

Commonly-Abused Opiates and Their Derivation From Opium (Cont.)

Raw Opium

Powdered Opium (Smoking Opium)

Other Alkaloids

Morphine

Codeine

Thebaine

Diacetyl Morphine (Heroin)

Hydromorphone (Dilaudid)

Hydrocodone (Lortab)

Oxymorphone (Numorphan)

Oxycodone (Oxycontin)

Buprenorphine (Subutex)

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Notes:

Buprenorphine

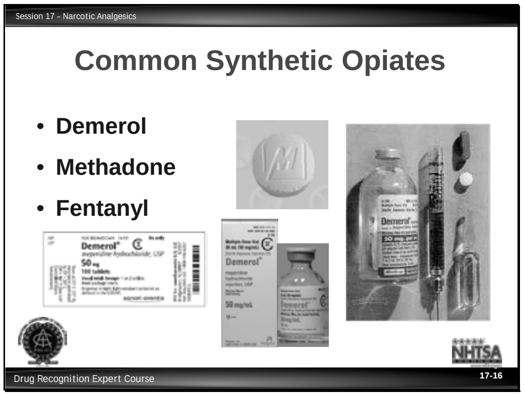
Buprenorphine is a Thebaine derivative with powerful analgesia approximately twenty five or forty times as potent as morphine and its analgesic effect is due to partical agonist activity at u-opioid receptors.

It is an ingredient of the drug Suboxone.

As an analgesic it is about 25 to 40 times more potent than morphine (Source: “Disposition of Toxic Drugs and Chemicals in Man” 9th Edition, R. Baselt.)

Depending on the application form, buprenorphine is normally prescribed for the treatment of moderate to severe chronic pain (pain that has outlived its use to prevent injury and after three months.

Buprenorphine hydrochloride is normally administered by intramuscular injection, intravenous infusion, via a transdermal patch, or as a sublingual (under the tongue) tablet.



Session 17 – Narcotic Analgesics

Common Synthetic Opiates

- Demerol
- Methadone
- Fentanyl

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Demerol
50 mg
NHTSA

Notes:

Some Common Synthetic Opiates

Demerol

Demerol was first produced in 1939.

Technical Name: Meperidine.

Demerol is one of the most widely used Synthetic Opiates for relief of pain and for sedation.

It is also one of the Narcotic Analgesic that is most frequently abused by medical personnel.

Demerol is widely used as an analgesic in childbirth.

One medical advantage of Demerol is that it produces less respiratory depression than do other Narcotic Analgesics; thus, a fatal overdose is less likely with Demerol.

Medical literature sometimes indicates that Demerol does not cause pupillary constriction. Enforcement experience indicates to the contrary.

Session 17 – Narcotic Analgesics

Common Synthetic Opiates (Cont.)

- Demerol
- Methadone
- Fentanyl

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Notes:____

Methadone

Methadone was developed in Germany during World War II and first marketed in America in 1947.

Methadone was developed in Germany because of wartime shortages of Morphine.

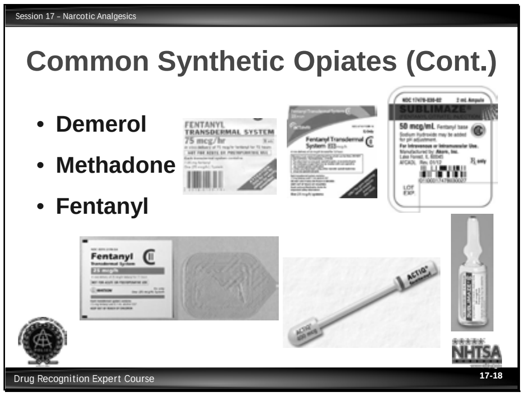
Methadone’s effects are similar to Morphine’s, although they develop more slowly and last longer than do Morphine’s effects.

Methadone’s withdrawal symptoms are slower and milder than are Morphine’s.

Used extensively in “maintenance programs” as a substitute for Heroin for addicts undergoing therapy and treatment.

In theory, the daily dose of Methadone given to a Heroin addict allows the addict to function normally with no physical need for up to 24 hours. Methadone’s has a much longer duration of effects than Heroin and is not designed to be injected.

Methadone is also used medically to relieve moderate to severe pain, and to suppress coughing.



Session 17 – Narcotic Analgesics

Common Synthetic Opiates (Cont.)

- **Demerol**
- **Methadone**
- **Fentanyl**

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Notes:

Fentanyl

A synthetic narcotic analgesic of high potency and short duration of action.

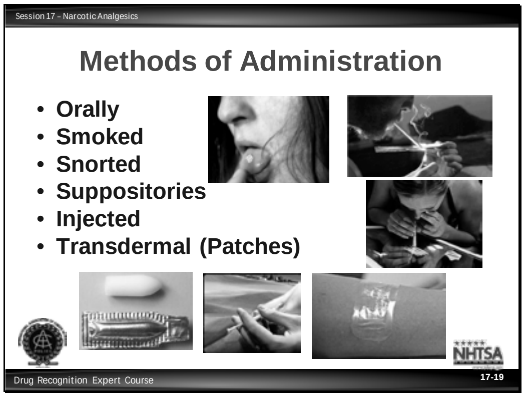
“Sublimaze” is one of numerous brand names for Fentanyl. It is a Schedule II drug. It is frequently found in overdose situations. For example, “Tango and Cash” and “Goodfellas,” which contained Fentanyl, were sold in New York City in 1990 as Heroin.

Many fatal overdoses occurred as a result.

First developed in 1963 as an intravenous anesthetic.

Legally produced as a pain killer and available in an injectable solution or transdermal patches.

Principal abused analog is “Three-Methyl Fentanyl.”



Session 17 – Narcotic Analgesics

Methods of Administration

- Orally
- Smoked
- Snorted
- Suppositories
- Injected
- Transdermal (Patches)

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Notes:____

Methods of Administration

Methods of administration of Narcotic Analgesics vary from one drug to another.

Some are commonly taken orally.

Some are smoked.

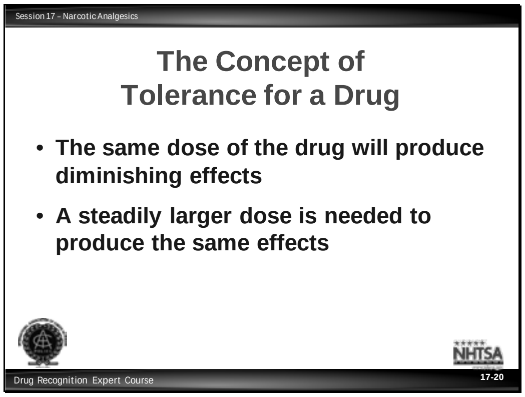
Some are snorted (taken intra-nasally).

Users have stated that the fear of contracting diseases, such as AIDS, from shared needles, has prompted them to either snort or smoke Heroin.

Some are often administered in suppositories. Medically, some Narcotic Analgesics may be administered transdermally or through the skin.

Fentanyl patches are often used for chronic pain.

Heroin and some others are usually taken by injection.



Session 17 – Narcotic Analgesics

The Concept of
Tolerance for a Drug

- The same dose of the drug will produce diminishing effects
- A steadily larger dose is needed to produce the same effects

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Notes:____

B. Possible Effects

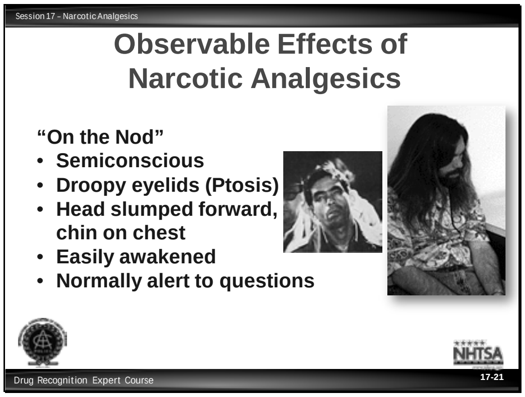
As with nearly all drugs of abuse, the effects produced by Heroin or other Narcotic Analgesics depend on the tolerance that the user has developed for the drug.

People develop tolerance for Narcotic Analgesics fairly rapidly.

“Tolerance” means that the same dose of the drug will produce diminishing effects or conversely that a steadily larger dose is needed to produce the same effects.

A Narcotic Analgesic user who has developed tolerance and who is using his or her “normal” dose of the drug may exhibit little or no evidence of intellectual or physical impairment.

Impairment is more evident with new users, and with tolerant users who exceed their “normal” doses.



Session 17 – Narcotic Analgesics

Observable Effects of Narcotic Analgesics

“On the Nod”
- **Semiconscious**
- **Droopy eyelids (Ptosis)**
- **Head slumped forward, chin on chest**
- **Easily awakened**
- **Normally alert to questions**

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Notes:____

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Observable Effects

Observable effects of Heroin and other Narcotic Analgesics.

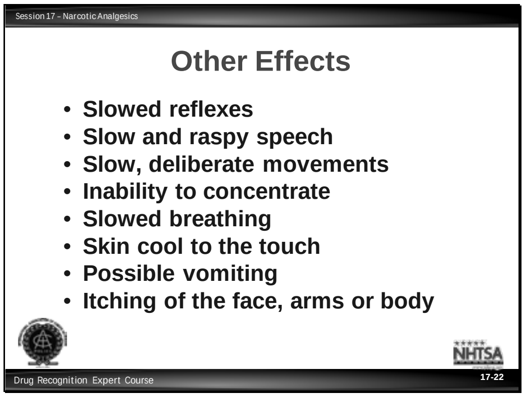
Sedation – “On the Nod.”

The condition known as “on the nod” is a semiconscious state of deep relaxation.

The user’s eyelids become very droopy.

Their head will slump forward until the chin rests on the chest.

In this condition, the user usually can be aroused easily and will be sufficiently alert to respond to questions.



Session 17 – Narcotic Analgesics

Other Effects

- Slowed reflexes
- Slow and raspy speech
- Slow, deliberate movements
- Inability to concentrate
- Slowed breathing
- Skin cool to the touch
- Possible vomiting
- Itching of the face, arms or body

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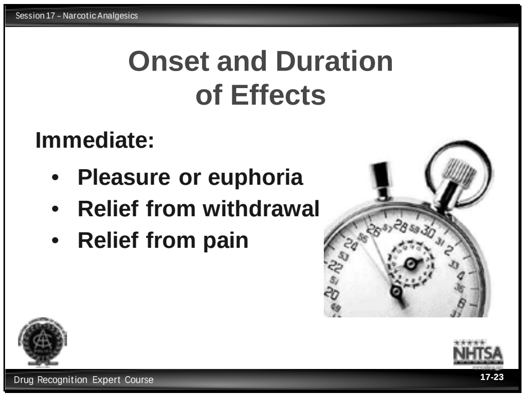
Notes:

Other Effects

Note: these effects may be dose-related, and most often occur with non-tolerant users.

- slowed reflexes
- slow and raspy speech
- slow, deliberate movements
- inability to concentrate
- slowed breathing
- skin cool to the touch
- possible vomiting
- itching of the face, arms or body



Session 17 – Narcotic Analgesics

Onset and Duration of Effects

Immediate:

- Pleasure or euphoria
- Relief from withdrawal
- Relief from pain

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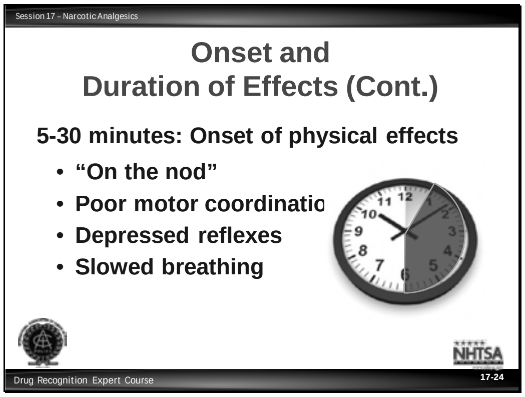
Notes:

C. Onset and Duration of Effects

Psychological Effects

The psychological effects of Heroin begin immediately after the injection.

- A feeling of pleasure or euphoria.
- Relief from the symptoms of withdrawal.
- Relief from pain.



Session 17 – Narcotic Analgesics

Onset and Duration of Effects (Cont.)

5-30 minutes: Onset of physical effects

- **“On the nod”**
- **Poor motor coordinatio**
- **Depressed reflexes**
- **Slowed breathing**

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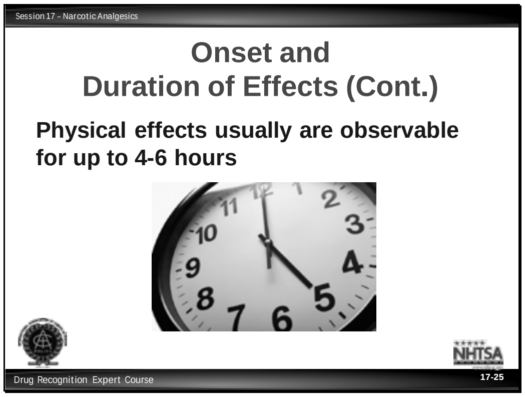
Notes:____

Observable Signs

The observable signs will usually become evident within 5 – 30 minutes after the user has injected.

- User may nod head and move in and out of consciences
- User may display poor motor coordination, depressed reflexes, and slowed breathing



Session 17 – Narcotic Analgesics

Onset and Duration of Effects (Cont.)

Physical effects usually are observable for up to 4-6 hours

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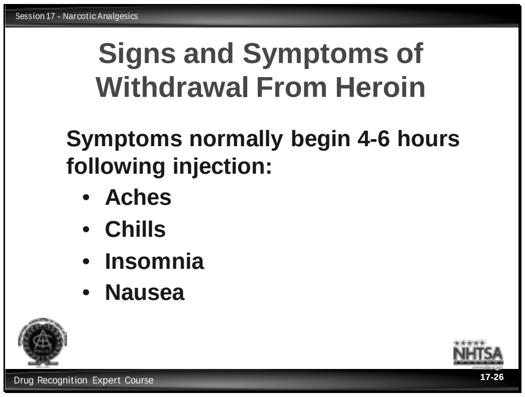
Notes:____

The effects will usually be observable for up to 4 – 6 hours.

As the drug wears off, withdrawal signs and symptoms start to develop until the addict user injects again.



Session 17 – Narcotic Analgesics

Signs and Symptoms of Withdrawal From Heroin

Symptoms normally begin 4-6 hours following injection:

- **Aches**
- **Chills**
- **Insomnia**
- **Nausea**

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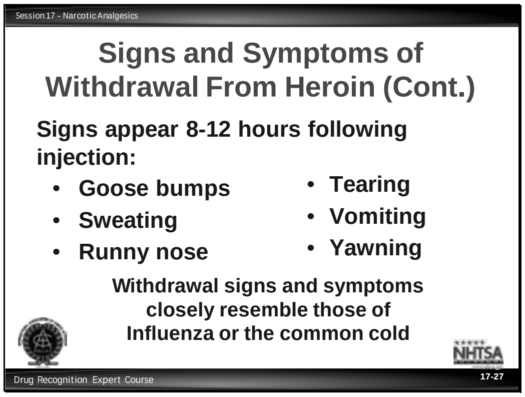
Notes:

As the effects of Heroin diminish, withdrawal symptoms begin.

- Aches
- Chills
- Insomnia
- Nausea

As with nearly all drugs, the withdrawal signs and symptoms are essentially the opposite of the “high” or intoxicated state.



Session 17 – Narcotic Analgesics

Signs and Symptoms of Withdrawal From Heroin (Cont.)

Signs appear 8-12 hours following injection:

- **Goose bumps**
- **Sweating**
- **Runny nose**
- **Tearing**
- **Vomiting**
- **Yawning**

Withdrawal signs and symptoms closely resemble those of Influenza or the common cold

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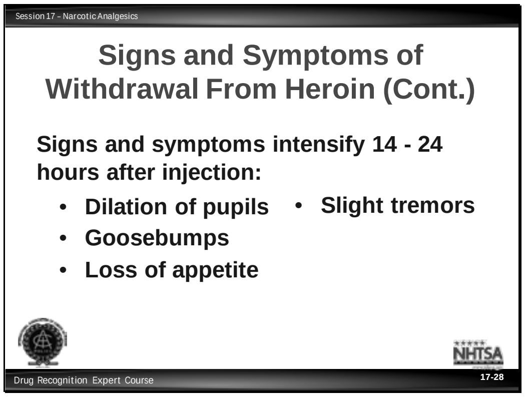
Notes:

Withdrawal signs start to become observable 8 – 12 hours following injection.

- Goose bumps (piloerection) on the skin
- Sweating
- Runny nose
- Tearing
- Vomiting
- Yawning

Withdrawal signs and symptoms closely resemble those of Influenza or the common cold.



Session 17 – Narcotic Analgesics

Signs and Symptoms of Withdrawal From Heroin (Cont.)

Signs and symptoms intensify 14 - 24 hours after injection:

- **Dilation of pupils**
- **Goosebumps**
- **Loss of appetite**
- **Slight tremors**

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Notes:____

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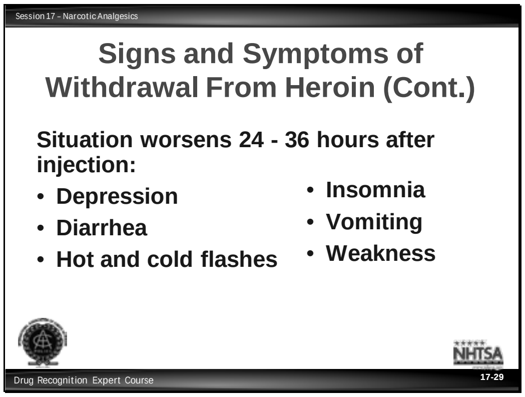
These symptoms begin to intensify fron

accompanied by goose bumps (piloerection), slight tremors, loss of appetite and dilation of the pupils.



Session 17 – Narcotic Analgesics

Signs and Symptoms of Withdrawal From Heroin (Cont.)

Situation worsens 24 - 36 hours after injection:

- **Depression**
- **Diarrhea**
- **Hot and cold flashes**
- **Insomnia**
- **Vomiting**
- **Weakness**

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Notes:____

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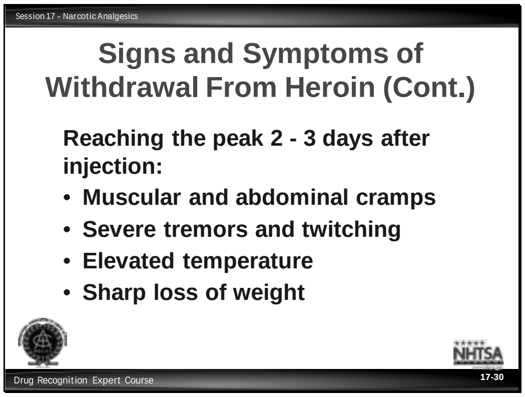
Approximately 24 - 36 hours after injection, the addicted user experiences insomnia, vomiting, diarrhea, weakness, depression and hot and cold flashes.



Session 17 – Narcotic Analgesics

Signs and Symptoms of Withdrawal From Heroin (Cont.)

Reaching the peak 2 - 3 days after injection:

- **Muscular and abdominal cramps**
- **Severe tremors and twitching**
- **Elevated temperature**
- **Sharp loss of weight**

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Notes:

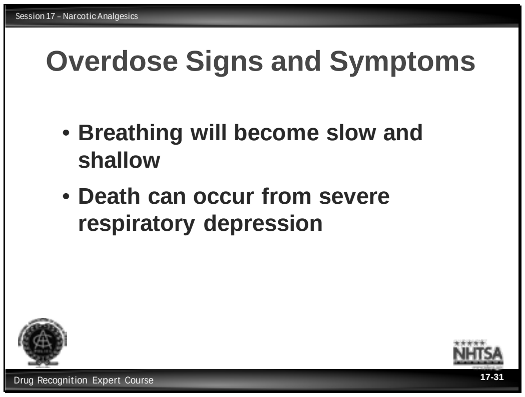
Withdrawal symptoms and signs generally reach their peak 2 – 3 days after injection:

- Muscular and abdominal cramps
- Severe tremors and twitching
- Elevated temperature
- Sharp loss of weight

The addicted user at this point is nauseated, gags, vomits and may lose 10 – 15 pounds within 24 hours.

The withdrawal syndrome continues to decrease in intensity over time, and is usually greatly reduced by the fifth day, disappearing in one week to 10 days.

A common misconception regarding withdrawal from Narcotic Analgesics is that they may be fatal. In reality, however, although Narcotic withdrawal is extremely uncomfortable, it rarely, if ever proves fatal.



Overdose Signs and Symptoms

- Breathing will become slow and shallow
- Death can occur from severe respiratory depression

Notes:____

D. Overdose Signs and Symptoms

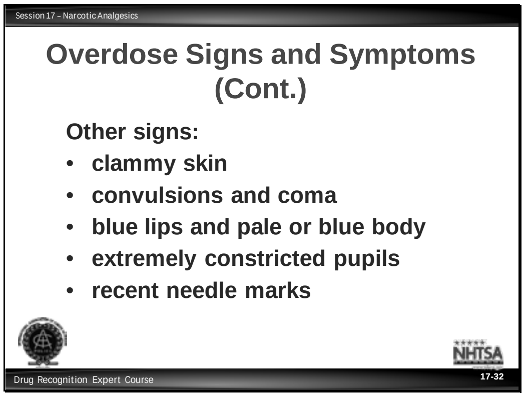
Narcotic Analgesics depress respiration.

In overdoses, the user’s breathing will become slow and shallow.

Death can occur from severe respiratory depression.

The danger of death is heightened by the fact that the addicted user may not know the strength of the drug he or she is taking.

Clarification: the percentage of pure Heroin in the sample the addict uses may be much higher than what the addict expects and is used to.



Overdose Signs and Symptoms (Cont.)

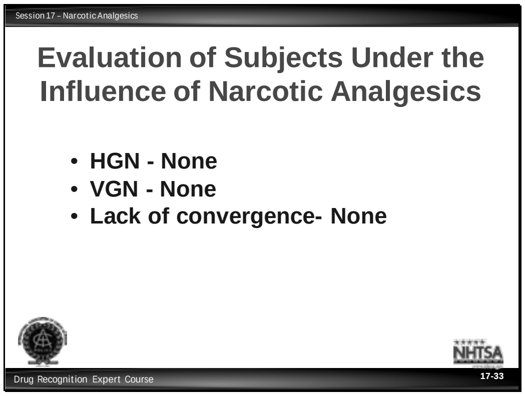
Other signs:

- clammy skin
- convulsions and coma
- blue lips and pale or blue body
- extremely constricted pupils
- recent needle marks

Notes:____

Other signs and symptoms of an overdose of a Narcotic Analgesic include clammy skin, convulsions and coma, blue lips and pale or blue body, extremely constricted pupils (unless there is brain damage, in which pupils may be dilated), recent needle marks, or perhaps a needle still in the user’s arm.

Narcotic Analgesic overdoses are sometimes treated by the administration of a Narcotic antagonist such as Narcan. A Narcotic antagonist works at neuron receptor sites, blocking or counteracting the effects of Narcotic Analgesics. In effect, these substances precipitate withdrawal. The short duration of effects produced by Narcotic antagonists, however, require continued medical monitoring of the user.



Session 17 – Narcotic Analgesics

Evaluation of Subjects Under the Influence of Narcotic Analgesics

- **HGN - None**
- **VGN - None**
- **Lack of convergence- None**

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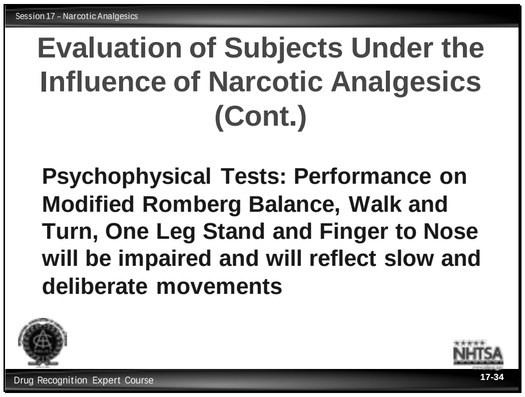
Notes:

E. Expected Results of the Evaluation

Observable Evidence of Impairment

Neither Horizontal Gaze Nystagmus nor Vertical Gaze Nystagmus will be present.

Eyes will not exhibit Lack of Convergence.



Session 17 – Narcotic Analgesics

Evaluation of Subjects Under the Influence of Narcotic Analgesics (Cont.)

Psychophysical Tests: Performance on Modified Romberg Balance, Walk and Turn, One Leg Stand and Finger to Nose will be impaired and will reflect slow and deliberate movements

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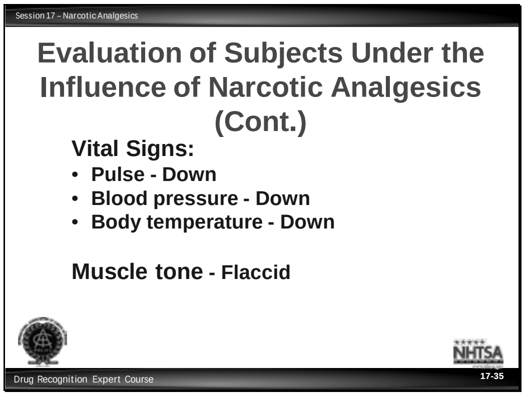
Notes:

Psychophysical Tests

Performance on the Modified Romberg Balance Test will be impaired. Generally, the subject will appear drowsy, and will have a slow internal clock.

Performance on the Walk and Turn and One Leg Stand will be impaired, and will reflect the slow and deliberate movements caused by this category of drugs.

Performance on Finger to Nose will also be impaired. Generally, the subject will appear drowsy, possibly “on the nod,” and exhibit slow and deliberate movements.



Session 17 – Narcotic Analgesics

Evaluation of Subjects Under the Influence of Narcotic Analgesics (Cont.)

Vital Signs:

- **Pulse - Down**
- **Blood pressure - Down**
- **Body temperature - Down**

Muscle tone - Flaccid

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Notes:____

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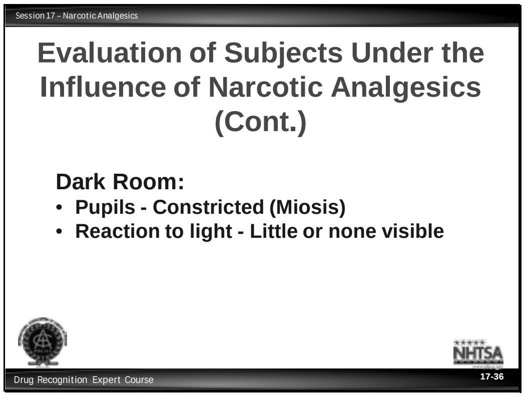
Vital Signs

Pulse will be down.

Blood pressure will be down.

Body temperature will be down.

Muscle tone will be flaccid.



Session 17 – Narcotic Analgesics

Evaluation of Subjects Under the Influence of Narcotic Analgesics (Cont.)

Dark Room:

- **Pupils - Constricted (Miosis)**
- **Reaction to light - Little or none visible**

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Notes:____

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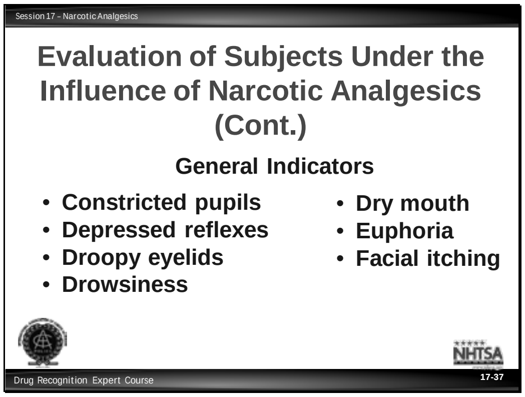
Dark Room

Pupil size generally will be constricted (below 3.0 mm in diameter).

Pupil reaction to light will be little or none visible.



Session 17 – Narcotic Analgesics

Evaluation of Subjects Under the Influence of Narcotic Analgesics (Cont.)

General Indicators

- **Constricted pupils**
- **Depressed reflexes**
- **Droopy eyelids**
- **Drowsiness**
- **Dry mouth**
- **Euphoria**
- **Facial itching**

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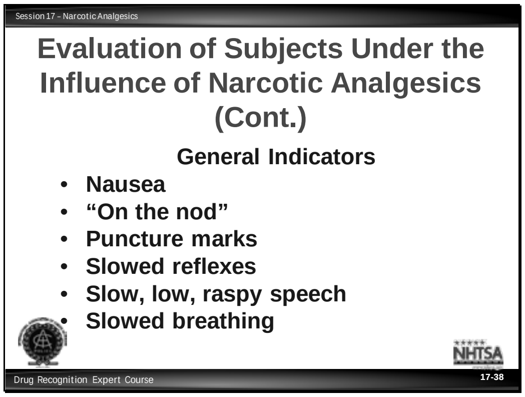
Notes:

General Indicators

- Constricted pupils (Miosis)
- Depressed reflexes
- Droopy eyelids (Ptosis)
- Drowsiness
- Dry mouth
- Euphoria
- Facial itching

Itching – caused by the release of Histamines



Session 17 – Narcotic Analgesics

Evaluation of Subjects Under the Influence of Narcotic Analgesics (Cont.)

General Indicators

- **Nausea**
- **“On the nod”**
- **Puncture marks**
- **Slowed reflexes**
- **Slow, low, raspy speech**
- **Slowed breathing**

Drug Recognition Expert Course

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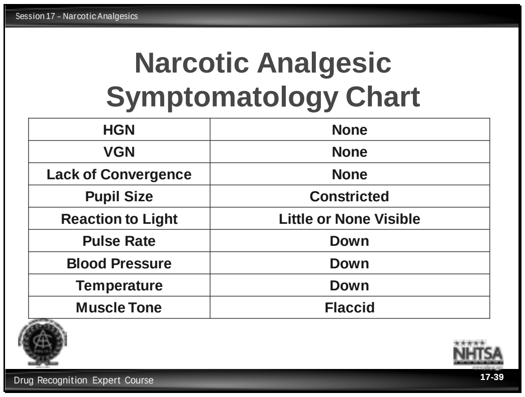
Notes:

- Nausea
- “On the nod”
- Puncture marks
- Slowed reflexes
- Slow, low, raspy speech
- Slowed breathing



Session 17 – Narcotic Analgesics

Narcotic Analgesic Symptomatology Chart

HGN	None
VGN	None
Lack of Convergence	None
Pupil Size	Constricted
Reaction to Light	Little or None Visible
Pulse Rate	Down
Blood Pressure	Down
Temperature	Down
Muscle Tone	Flaccid

Drug Recognition Expert Course

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Notes:____

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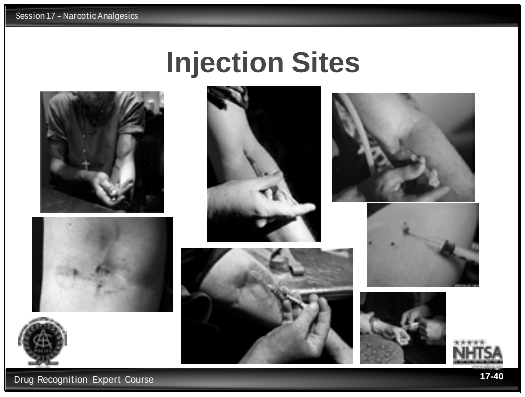
Symptomatology Chart



Session 17 – Narcotic Analgesics

Injection Sites

Drug Recognition Expert Course

17-40

Notes:____

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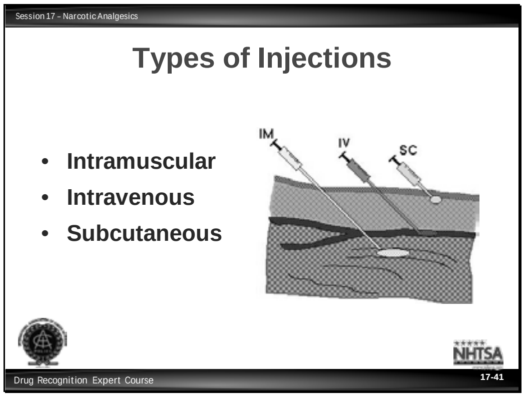
F. Injection Site Examination

Examination of subject's injection sites can give many clues to their drug habits.

- The slang term for an injection site is a "mark."
- Many drugs can be injected.
- The presence of injection sites doesn't ensure the subject is under the influence of drugs. Examination of injection sites is just one of the twelve steps in the evaluation.
- Injection sites are a sign of drug abuse which may or may not be present.
- May be evidence of habitual use.
- The trauma to the skin, muscles and the blood is the basic concept of injection sites.



Session 17 – Narcotic Analgesics

Types of Injections

- **Intramuscular**
- **Intravenous**
- **Subcutaneous**

IM
IV
SC
NHTSA

Drug Recognition Expert Course

17-41

Notes:____

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Drugs and medication are injected into the body in three ways:

Intramuscular

Legal injections are usually Intramuscular.

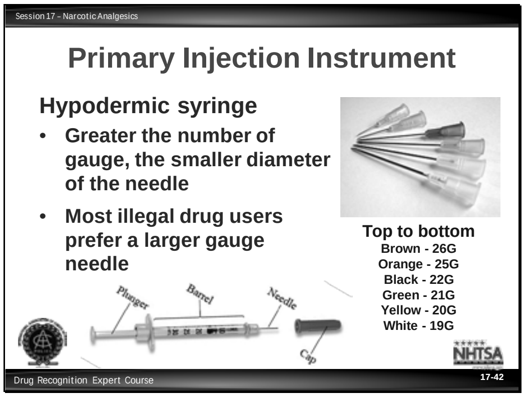
- Abbreviated as I/M
- "Intramuscular" is defined as administering by entering a muscle.

Intravenous

- For medically drawing of blood or emergency medical procedures, the injection is made into a blood vessel (Intravenous). Veins are usually used. Arteries are deep, thus not lending themselves to injection.
- Abbreviated as I/V
- "Intravenous" defined as entering a vein.

Subcutaneous

- Subcutaneous means just under the skin.
- Commonly referred to as "skin popping."



Session 17 – Narcotic Analgesics

Primary Injection Instrument

Hypodermic syringe

- Greater the number of gauge, the smaller diameter of the needle
- Most illegal drug users prefer a larger gauge needle

Top to bottom
Brown - 26G
Orange - 25G
Black - 22G
Green - 21G
Yellow - 20G
White - 19G

Plunger
Barrel
Needle
Cap

Drug Recognition Expert Course

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Notes:____
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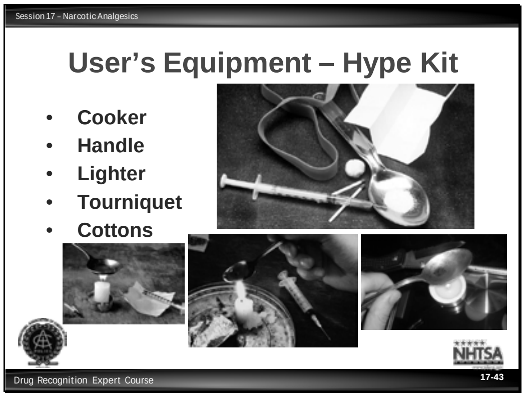
The primary instrument for injection is the hypodermic syringe.

- It consists of a hollow needle, a Barrel (tube) and a plunger.
- Needles vary in size, with the primary variance being the inside diameter of the needle or the gauge.
- A 26 gauge needle is used by a diabetic.
- The greater the number the larger the gauge, the smaller the inside diameter of the needle.
- Most illegal drug users prefer a larger gauge needle.
- The hypodermic marks are smaller and are therefore, less noticeable making it more difficult for the DRE to see them.



Session 17 – Narcotic Analgesics

User’s Equipment – Hype Kit

- **Cooker**
- **Handle**
- **Lighter**
- **Tourniquet**
- **Cottons**

Drug Recognition Expert Course

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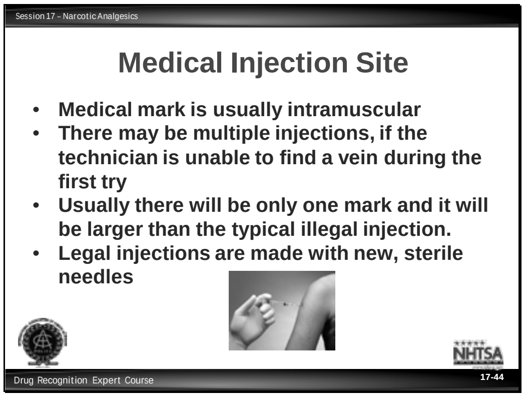
Notes:

The user’s equipment is commonly referred to as a “hype kit” or “works.”

- The kit contains a “cooker” which is any device such as a bottle cap, a metal spoon, etc., that is used to heat the drug with water to form an injectable solution. Other parts of the “kit” include:
- A handle to hold the “cooker” over the flames.
- Matches, lighters (primarily disposable, adjustable flame types) used to heat the substance in the “cooker.”
- A tourniquet, which can be a rubber tubing, a tie, belt, etc. It is tied around the arm, above the injection site, to cause the vein to bulge or rise, thus making it easier to inject.
- “Cottons” are the cotton balls or cigarette filters used to “purify” the drug. The user places the “cottons” into their cooker and draws the drug up through the cottons.
- The cottons are saved for later use since they contain some of the drug.



Session 17 – Narcotic Analgesics

Medical Injection Site

- Medical mark is usually intramuscular
- There may be multiple injections, if the technician is unable to find a vein during the first try
- Usually there will be only one mark and it will be larger than the typical illegal injection.
- Legal injections are made with new, sterile needles

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Notes:

As a DRE, you may be asked in court to describe the difference between a medical and non-medical injection site.

A medical injection is usually intramuscular.

Some exceptions would be in a blood donation, an emergency, or a lab test.

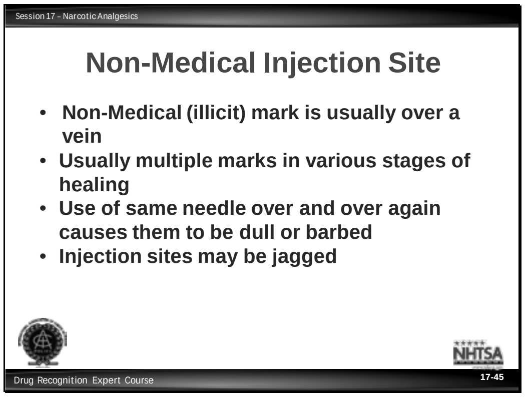
There may be multiple injections, if the technician is unable to find a vein during the first try. There may also be bruising near the site.

The injection mark for medical purposes can be described as:

- Clean
- No scarring or scabbing

Most intramuscular medical injections will not be evident during a DRE evaluation.

- Usually there will be only one mark and it will be larger than the typical non-medical injection.
- Medical injections are made with new, sterile needles.



Session 17 – Narcotic Analgesics

Non-Medical Injection Site

- Non-Medical (illicit) mark is usually over a vein
- Usually multiple marks in various stages of healing
- Use of same needle over and over again causes them to be dull or barbed
- Injection sites may be jagged

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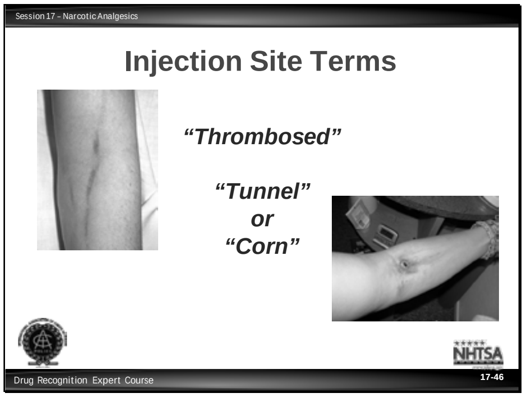
17-45

Notes:

The non-medical (illicit) mark is usually over a vein.

- There will usually be multiple marks in various stages of healing. It takes approximately two weeks for a “mark” to totally heal.
- For example, the Heroin addict will inject approximately four to six times each day (every four to six hours). Therefore, they will inject approximately 2,000 times in one year.
- Users frequently use the same needle over and over again. Thus making it become dull or barbed.
- Frequently the needles are carried in pockets or socks and the rubbing against clothing causes them to be dull or barbed.
- Since the used needles make it more difficult to pierce the skin and vein, the injection sites may be jagged.
- A barbed needle may tear the skin on the way in and on the way out.
- Use of old, dirty and shared needles cause the spread of infections and diseases such as AIDS.



Session 17 – Narcotic Analgesics

Injection Site Terms

"Thrombosed"

"Tunnel"
or
"Corn"

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Notes:

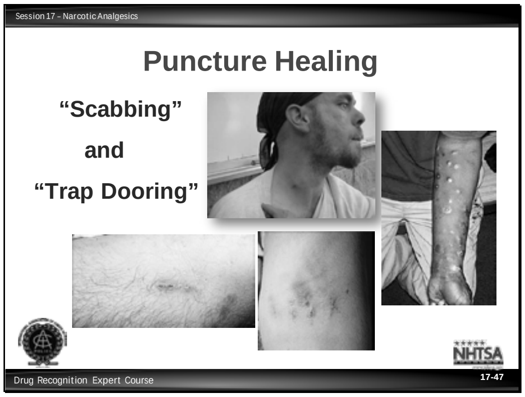
Users may frequently use the same spot to inject, as an attempt to reduce their likelihood of detection.

The veins may become hard and thick from continuous injections and makes them difficult to find. This is an obstruction by a clot of coagulated blood shutting off the passage of blood.

- The technical term is "Thrombosed."

After about 10 to 20 injections, a large sore forms causing the site to enlarge and bruise. Upon close examination, the site reveals there are numerous puncture wounds in the same area, overlapping each other.

- This is referred to as "tunnel" or "corn."



Session 17 – Narcotic Analgesics

Puncture Healing

“Scabbing”

and

“Trap Dooring”

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Notes:____

Basic Principles of Puncture Healing

The healing is greatly retarded.

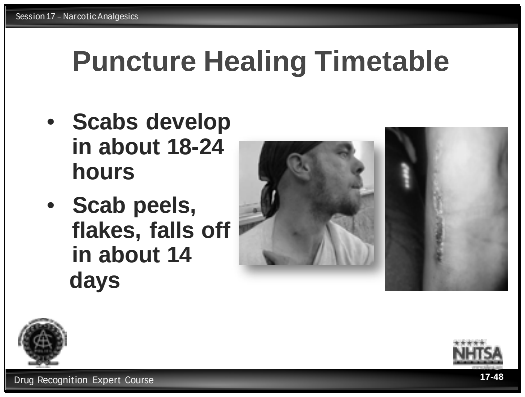
Any needle that punctures the skin leaves a scab. A scab is simply a crust formed by the drying of the discharge from the puncture.

Scab is the dried remains of blood, plasma (a cellular, colorless fluid part of the blood), lymph fluid (a thin fluid that bathes all the tissues of the body) and puss (a thick yellowish/greenish fluid that forms at an injection(s) site).

These dried remains fill the gap caused by the puncture of the skin. As the fluids dry they harden (clot and gel).

Users will sometimes peal a corner of a healing scab up and inject into that area then cover the injection site with the scab.

This injecting under a scab to hide multiple puncture wounds is referred to as “Trap Dooring.”



Session 17 – Narcotic Analgesics

Puncture Healing Timetable

- Scabs develop in about 18-24 hours
- Scab peels, flakes, falls off in about 14 days

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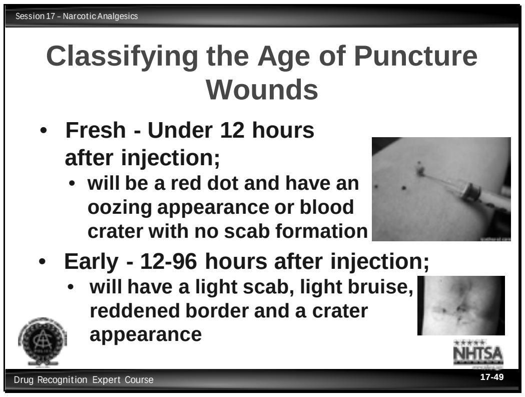
Notes:

Puncture Healing Timetable

There are no exact timetables for wounds to heal, but there are some general guidelines.

- Chronic disease, poor nutrition and etc. retard the puncture healing process.
- Scabs develop within about 18 – 24 hours after a puncture.
- A general rule: when the scab first forms, it is bright red. With age, the color gets darker and darker.

After about 14 days a scab usually starts to peel or flake and then falls off. The skin under the scab is shriveled and is lighter in color than the surrounding tissue.



Session 17 – Narcotic Analgesics

Classifying the Age of Puncture Wounds

- Fresh - Under 12 hours after injection;
  - will be a red dot and have an oozing appearance or blood crater with no scab formation
- Early - 12-96 hours after injection;
  - will have a light scab, light bruise, reddened border and a crater appearance

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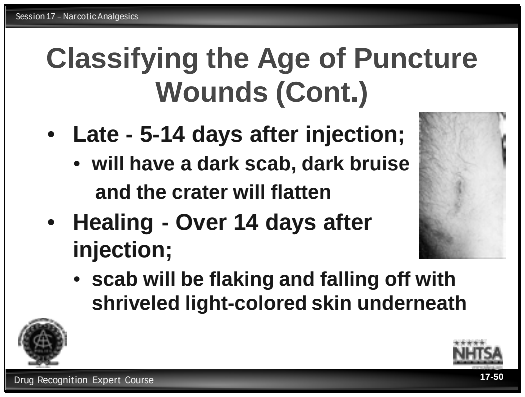
Notes:

There is no exact science to classifying the age of puncture wounds. Some general guidelines are:

- Fresh puncture wounds are defined as under 12 hours after injection and will be a red dot and have an oozing appearance or blood crater with no scab formation.
- Early puncture wound is 12 – 96 hours (half day to 4 days) after injection. It will have a light scab, light bruise, reddened border and a crater appearance.



Session 17 – Narcotic Analgesics

Classifying the Age of Puncture Wounds (Cont.)

- **Late - 5-14 days after injection;**
  - **will have a dark scab, dark bruise and the crater will flatten**
- **Healing - Over 14 days after injection;**
  - **scab will be flaking and falling off with shriveled light-colored skin underneath**

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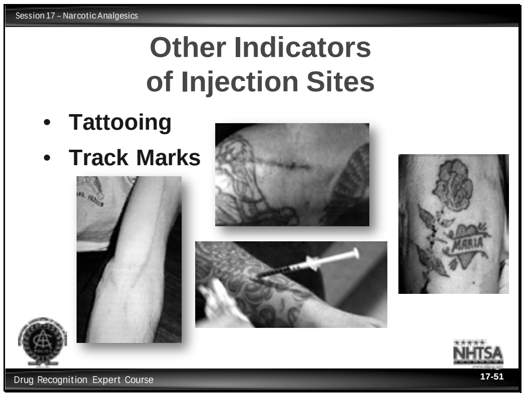
Notes:____

- Late puncture wound is 5 – 14 days old and will have a dark scab, dark bruise and the crater will flatten.
- Healing puncture wound is over 14 days. The scab will be flaking and falling off with shriveled light colored skin underneath.



Session 17 – Narcotic Analgesics

Other Indicators of Injection Sites

- **Tattooing**
- **Track Marks**

Drug Recognition Expert Course 17-51

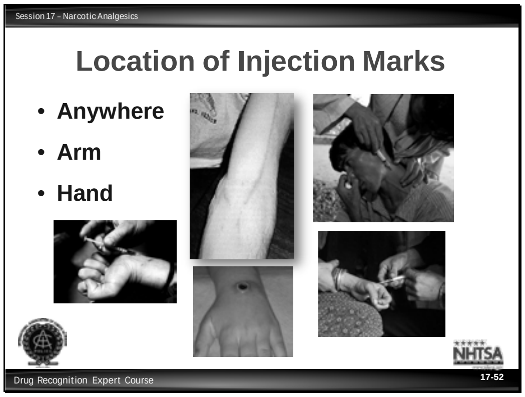
Notes:____

Other Indicators of Injection Sites

In an attempt to hide puncture wounds, users may inject into tattoos.

Tattoos that are designed to hide puncture wounds are frequently colored and found on the inner arms.

- Tattooing also refers to dark carbon deposits that result from using a flame to “sterilize” a needle. Carbon deposits on the needle are then injected into the skin, causing a tattoo effect.
- A “track” is a hardened part of a vein where numerous injections have been administered. The entire vein becomes scarred and hardened and with time may no longer be able to inject into. The area becomes silvery-blue in color and raised. This is referred to as “silver streaks.”
- AS A GENERAL RULE: one inch of tracks indicates that approximately 50 – 100 separate injections have been administered in this area.



Session 17 – Narcotic Analgesics

Location of Injection Marks

- Anywhere
- Arm
- Hand

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17-52

Notes:____

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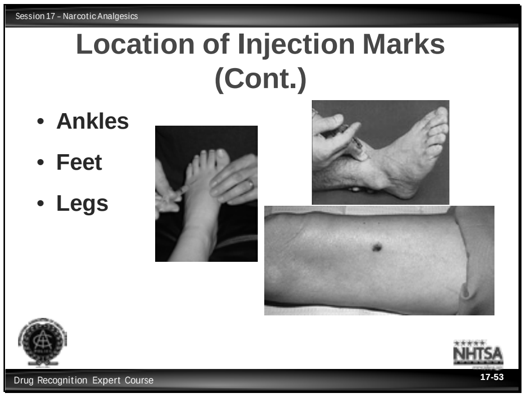
G. Expected Location of Injection Marks

Prior to conducting the injection site examination, always remember to wear gloves.

Injection sites may be located anywhere on the subject's body.

Conduct a thorough, slow, methodical examination of the subject's arms beginning with the left.

- Using a magnifying light or "ski light" examine the inner arm as it is extended with the palm facing you.
- Beginning at the bicep, slowly examine the arm. Document the findings of your examination.
- Ask the subject to contract the arm, grasping their shoulder. Starting at the wrist, slowly examine the arm to the elbow documenting the results.
- This forces the individual's veins to protrude.
- Next examine the outer arm as it is extended palm facing downward. Start the examination at the shoulder moving to the wrist.
- Subject should extend and spread his/her fingers when examining the hands. Examine both sides of the hands, with particular attention to the areas between the fingers, under watch bands and rings.
- Conduct the entire procedure for the right side.



Session 17 – Narcotic Analgesics

Location of Injection Marks (Cont.)

- Ankles
- Feet
- Legs

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17-53

Notes:____

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Ankles are a common injection area.

- Subject should be instructed to remove their shoes and socks to allow the DRE to examine them for puncture wounds.
- The most common area is on the foot or the ankle.

Subject's sometimes hide hypodermic needles in their socks, shoes and the heel compartments of their shoes.

On a case by case basis, the DRE may need to examine other parts of the body for marks. Another such area may be the legs.

Session 17 – Narcotic Analgesics

Conclusion

Drug Recognition Expert Course

17-54

Notes:____

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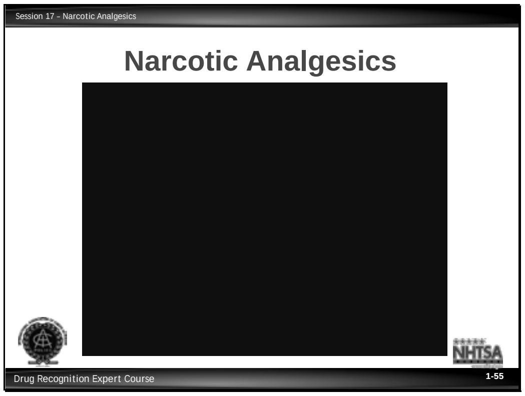
H. Conclusion

The injection site examination may reveal evidence of recent use.

The presence of marks, however, doesn't mean drug influence or impairment at the time of the evaluation.

Conducting an injection site examination is a skill.

As with all skills, such as taking blood pressure, competency improves with practice.


Session 17 – Narcotic Analgesics

Narcotic Analgesics

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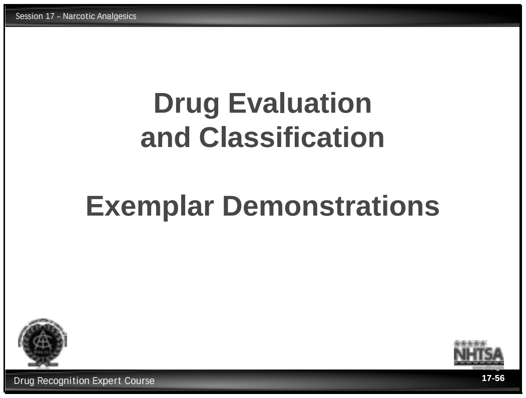
1-55

Notes: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Drug Evaluation
and Classification

Exemplar Demonstrations

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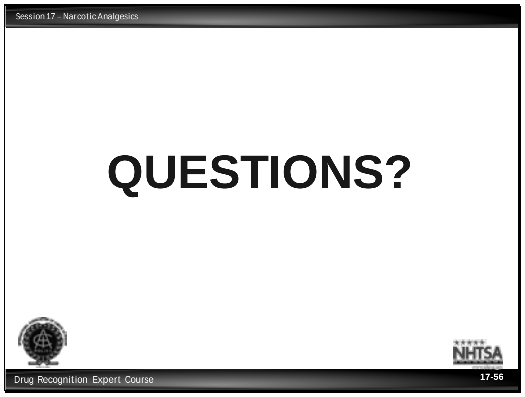
17-56

Notes:

I. Classification Exemplar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QUESTIONS?

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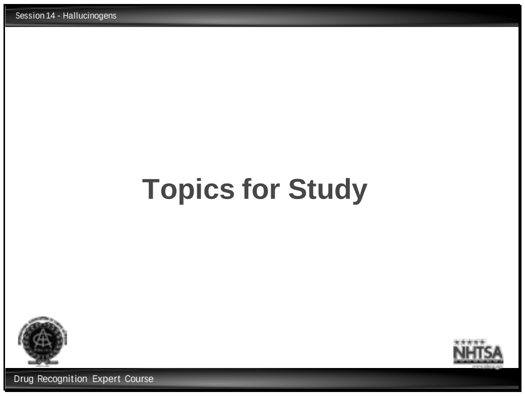
Notes:



Session 14 - Hallucinogens

Topics for Study

Drug Recognition Expert Course

TOPICS FOR STUDY

1. What are the two subcategories of Narcotic Analgesics?

2. What three distinguishing characteristics do all Narcotic Analgesics share?

3. Consider this situation: A heroin addict injects what is, for him, a "normal" dose of the drug. One hour later a DRE examines the addict and finds that he is not impaired. What is the most likely explanation for this?

4. What is another, more common, name for the drug called Diacetyl Morphine?

5. What is Methadone?

6. An analgesic is a drug that ______?

7. What is Oxycodone?

DRUG INFLUENCE EVALUATION

Evaluator: Officer Karl Nieberlein, Sparks PD
DRE #: 7266
Rolling Log #: 12-08-014
Session XVII #1

Recorder/Witness: Officer Charles Sheffield, Reno PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-44745

Arrestee's Name (Last, First, Middle): Vaughn, Gerald T.
Date of Birth: 5/14/80
Sex: M
Race: B
Arresting Officer (Name, ID#): Deputy William Ames, Washoe Co SO #8428

Date Examined / Time /Location: 08/24/12 1805 Washoe Co. Jail
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 15344
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Deputy Ames
What have you eaten today? Nothing When? N/A
What have you been drinking? Dr. Pepper How much? N/A
Time of last drink? N/A

Time now/ Actual: 7:00 PM/1810
When did you last sleep? Last night How long 4 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☒ Yes ☐ No "Methadone"
Attitude: Cooperative, passive
Coordination: Relaxed, slow, unstable

Speech: Low, raspy
Breath Odor: Normal
Face: Normal

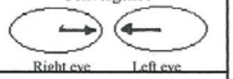
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

Pulse and time
1. 56 / 1817
2. 58 / 1825
3. 58 / 1832

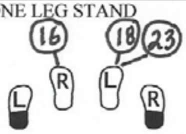
HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence



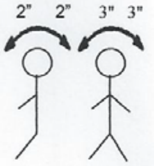
ONE LEG STAND

36 35

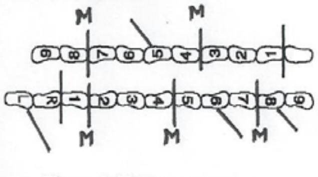


L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑	☑	Puts foot down

Modified Romberg Balance



Walk and Turn test



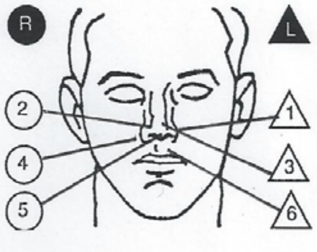
Slow, deliberate steps

Cannot keep balance ✓
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓✓✓	✓✓
Steps off line	✓✓	✓
Raises arms	✓✓	✓
Actual steps taken	9	9

Internal clock: 44 estimated as 30 seconds
Describe Turn: Slow, deliberate
Cannot do test (explain): N/A
Type of footwear: Lace-up boots

Draw lines to spots touched



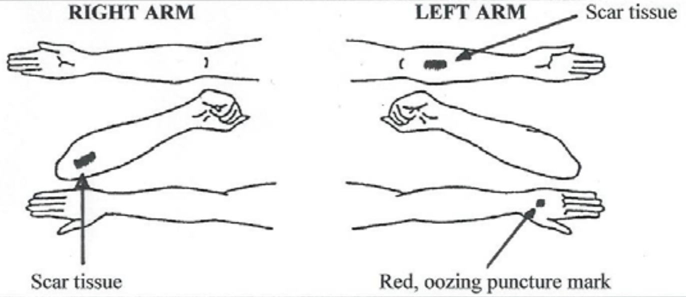
Slow movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	2.0	2.0	2.0
Right Eye	2.0	2.0	2.0

Nasal area: Clear

Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: None



Blood pressure: 110/64
Temperature: 98.0
Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments:

What drugs or medications have you been using? "Just methadone, man"
How much? "The normal"
Time of use? 3PM
Where were the drugs used? (Location) "The clinic

Date / Time of arrest: 08/24/12 1720
Time DRE was notified: 1745
Evaluation start time: 1805
Evaluation completion time: 1920
Precinct/Station:

Officer's Signature:
DRE # 7266
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ■ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Vaughn, Gerald T.

1. **LOCATION:** The evaluation was conducted at the Washoe County Jail.

2. **WITNESSES:** Officer Charles Sheffield of the Reno P.D recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Vaughn's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was contacted and requested to contact Deputy Ames at the Washoe County Jail for a drug evaluation. Deputy Ames advised the suspect was operating a vehicle reported stolen earlier in the day by Reno PD. After stopping the suspect, Deputy Ames noted that suspect's speech was slow, slurred and raspy. His coordination was poor and he was licking his lips repeatedly. His pupils were constricted and he performed poorly on the SFST's.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the Washoe County Jail. He appeared to be "on the nod." His eyes were closed, his head kept nodding forward and his breathing was slow. The suspect responded to questions and became more alert as time passed. His voice was raspy and his pupils appeared constricted. He was licking his lips and his movements were slow and deliberate.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 2" front to back and 3" side to side. He estimated 30 seconds in 44 seconds. Walk & Turn: Suspect lost his balance during the instructions, missed heel to toe three times on the first nine steps and twice on the return. He stepped off the line three times and used his arms for balance. One Leg Stand: He counted slowly, swayed and used his arms for balance. He put his foot down once while standing on the left foot and twice when standing on the right. Finger to Nose: Suspect missed the tip of his nose with 5 of the 6 attempts.

8. **CLINICAL INDICATORS:** Suspect's pulse and blood pressure were below the DRE average ranges. His pupils were constricted in all lighting levels with no visible reaction to light. His eyelids were droopy.

9. **SIGNS OF INGESTION:** Subject had scar tissue on both his left and right forearms and a fresh oozing puncture wound on the back his left hand. (Photographed).

10. **SUSPECT'S STATEMENTS:** Suspect admitted using Methadone earlier in the day.

11. **DRE'S OPINION:** In my opinion Vaughn is under the influence of a **Narcotic Analgesic** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.
13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator: Trooper Evan Sether, Oregon State Police
DRE #: 15569
Rolling Log #: 12-06-17
Session XVII #2

Recorder/Witness: Sgt. Mike Iwai, Oregon State Police
Crash: ☐ None ☐ Fatal ☒ Injury ☐ Property
Case # 12-25250

Arrestee's Name (Last, First, Middle): Bursten, David L
Date of Birth: 4/20/80
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer Darke Hull, Portland Police Bureau #12581

Date Examined / Time /Location: 06/01/12 8:40 pm Central Precinct
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 21250
Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Hull
What have you eaten today? Nothing When? N/A
What have you been drinking? Nothing How much? N/A
Time of last drink? N/A

Time now/ Actual: Don't know
When did you last sleep? Last night How long "a few hours"
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Cooperative
Coordination: Poor, sluggish, stumbling

Speech: Slow and deliberate
Breath Odor: Normal
Face: Normal

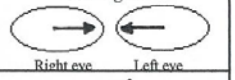
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

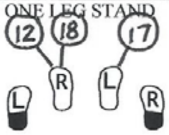
Pulse and time
1. 58 / 8:50
2. 56 / 9:05
3. 54 / 9:20

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence



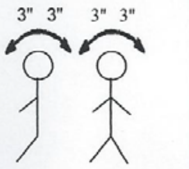
20 ONE LEG STAND 22



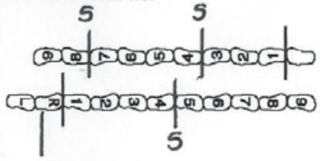
L	R	
☑ ✓	☑ ✓	Sways while balancing
☑	☑ ✓	Uses arms to balance
☐	☐	Hopping
☑ ✓	☑	Puts foot down

Counted slowly

Modified Romberg Balance



Walk and Turn test



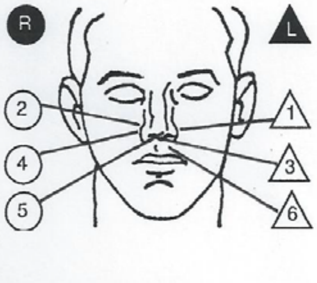
Walked slowly

Cannot keep balance ✓
Starts too soon

	1st Nine	2nd Nine
Stops walking	✓	✓✓
Misses heel-toe		
Steps off line		
Raises arms	✓✓	✓✓✓
Actual steps taken	9	9

Internal clock: 58 estimated as 30 seconds
Describe Turn: Lost balance, staggered to the left
Cannot do test (explain): N/A
Type of footwear: Loafers

Draw lines to spots touched



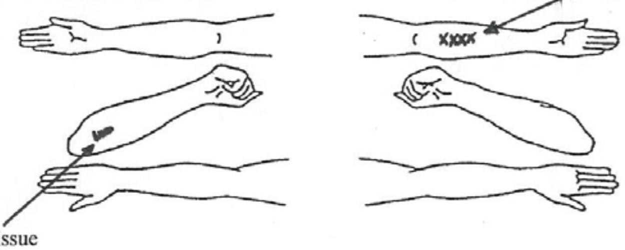
Slow movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	2.5	3.0	2.0
Right Eye	2.5	3.0	2.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: None visible

RIGHT ARM LEFT ARM 4 puncture wounds



Scar tissue

Blood pressure: 108/60
Temperature: 97.0
Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments: Arms and neck very relaxed

What drugs or medications have you been using? None
How much? Refused
Time of use? Refused
Where were the drugs used? (Location) Refused

Date / Time of arrest: 06/01/12 8:05 pm
Time DRE was notified: 8:20 pm
Evaluation start time: 8:40 pm
Evaluation completion time: 9:50 pm
Precinct/Station: Central

Officer's Signature:
DRE # 15569
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ■ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Bursten, David L.

1. **LOCATION:** The evaluation was conducted at the PPB Central Traffic Precinct.

2. **WITNESSES:** Sgt Mike Iwai of the Oregon State Police recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Bursten's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was contacted and advised to contact Sgt. Iwai and Officer Darke Hull for a drug evaluation. Officer Hull advised the suspect had failed to stop at a red light on N.E. Burnside and struck a pedestrian in a crosswalk. Officer Hull noted that the suspect had slow and deliberate movements and his speech was slow, slurred and raspy. He was unable to perform the SFST's as directed and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the Central Precinct. He was repeatedly scratching his face and neck. His head kept nodding forward and he appeared to be "on the nod." His voice was raspy, his pupils appeared to be constricted and his eyelids were droopy.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" in a circular motion and he estimated 30 seconds in 58 seconds. Walk & Turn: Suspect lost his balance during the instructions, stopped while walking once on the first nine steps and twice on the return. He walked very slowly and used his arms for balance. One Leg Stand: Suspect counted slowly, swayed, used his arms for balance and put his foot down twice while standing on his left foot and once while standing on his right foot. Finger to Nose: Suspect missed the tip of his nose on four of the six attempts.

8. **CLINICAL INDICATORS:** Suspect's pulse, blood pressure and body temperature were below the DRE average ranges. His pupils were constricted in all three lighting conditions.

9. **SIGNS OF INGESTION:** Suspect had scars on his right forearm and fresh puncture wounds on the inside of his left arm. The puncture wounds were photographed.

10. **SUSPECT'S STATEMENTS:** The suspect refused to answer questions about drug use.

11. **DRE'S OPINION:** In my opinion Bursten is under the influence of a **Narcotic Analgesic** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

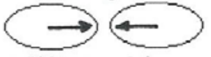
DRUG INFLUENCE EVALUATION

Evaluator: Officer Peter Manukas, Raleigh PD
DRE #: 14031
Rolling Log #: 12-03-031
Session XVII #3
Recorder/Witness: Lt. Tim Tomczak, Raleigh PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-35125
Arrestee's Name (Last, First, Middle): Sheehan, Thomas
Date of Birth: 5/16/76
Sex: M
Race: W
Arresting Officer (Name, ID#): Sgt. Brandon Craft, North Carolina H.P. #10334
Date Examined / Time /Location: 03/17/12 2000 Raleigh PD Intake
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 4200
Chemical Test: Urine ☒ Blood ☐
Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Sgt. Craft
What have you eaten today? "Nothing"
When? "Don't know"
What have you been drinking? "I don't drink"
How much?
Time of last drink? N/A
Time now/ Actual: 8 PM/2215 hours
When did you last sleep? This morning
How long: 4 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No "I don't take drugs"
Attitude: Sarcastic
Coordination: Slow, stumbling, staggering
Speech: Slow, raspy
Breath Odor: Normal
Face: Pale
Corrective Lenses: ☐ None (removed glasses) ☒ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

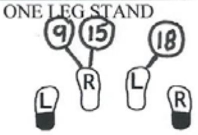
Pulse and time
1. 60 / 2020
2. 58 / 2035
3. 58 / 2055

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

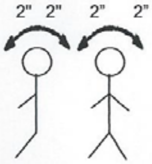
Convergence



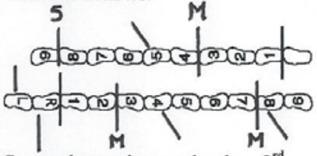
24 ONE LEG STAND 26



Modified Romberg Balance



Walk and Turn test



Stopped counting out loud on 3rd step

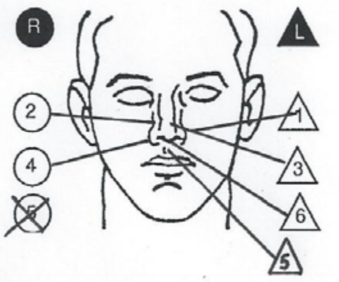
Cannot keep balance ✓✓
Starts too soon

	1st Nine	2nd Nine
Stops walking		✓
Misses heel-toe	✓✓	✓
Steps off line	✓✓	✓
Raises arms	✓	✓✓✓
Actual steps taken	9	9

L	R	
☑✓	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑✓	☑	Puts foot down

Internal clock: 55 estimated as 30 seconds
Describe Turn: As instructed, slow
Cannot do test (explain): N/A
Type of footwear: Dress shoes

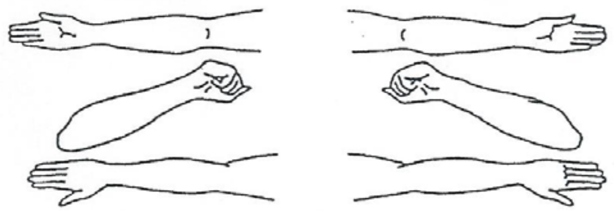
Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	2.5	3.0	1.5
Right Eye	2.5	3.0	1.5

Nasal area: Clear
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Little to none visible

RIGHT ARM LEFT ARM



None observed

Blood pressure: 112/64
Temperature: 97.7
Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "Nothing"
How much? "I don't do drugs"
Time of use? "I didn't"
Where were the drugs used? (Location) No answer
Date / Time of arrest: 03/17/12 1905
Time DRE was notified: 1920
Evaluation start time: 2000
Evaluation completion time: 2115
Precinct/Station:
Officer's Signature:
DRE # 14031
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ■ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Sheehan, Thomas

1. **LOCATION:** The evaluation was conducted at the Raleigh Police Department.

2. **WITNESSES:** Lt. Tim Tomczak of Raleigh PD recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Sheehan had a 0.00% breath test result.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was requested to contact Sergeant Craft for a drug evaluation. Sergeant Craft advised the suspect was observed drifting in and out of his traffic lane and driving 20 mph under the posted speed on Highway 64. Sergeant Craft noted the suspect had poor coordination and had slow and deliberate movements. His speech was slow and slurred. His pupils were constricted. He performed poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the Raleigh Police Department. He was sitting at the interview table scratching his face and appeared to be "on the nod." His voice was low, slow and raspy. His pupils were constricted and his eyelids were droopy. He stated he was cold.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 2" front to back and side to side and estimated 30 seconds in 55 seconds. Walk & Turn: Suspect lost his balance twice during the instructions, missed heel to toe three times, stopped walking and used his arms for balance. One Leg Stand: Suspect counted slowly, swayed, used his arms for balance and put his foot down. Finger to Nose: Suspect missed the tip of his nose on five of the six attempts and did not touch as his nose as directed.

8. **CLINICAL INDICATORS:** Two of the suspect's three pulse rates and his blood pressure were below the DRE average ranges. His pupils were constricted and they had little to no visible reaction to light.

9. **SIGNS OF INGESTION:** None evident.

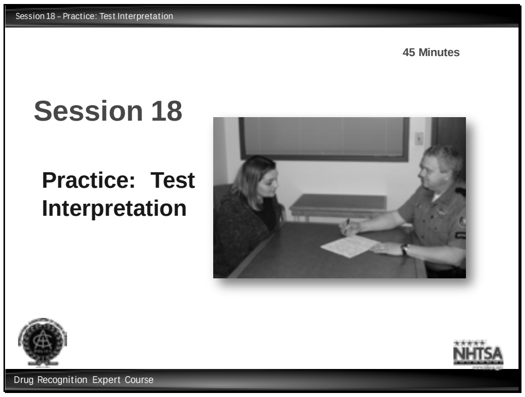
10. **SUSPECT'S STATEMENTS:** The suspect denied drug use.

11. **DRE'S OPINION:** In my opinion Sheehan is under the influence of a **Narcotic Analgesic** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:** An empty bottle of Vicodin was located in the suspect's vehicle.

Participant Manual DRE 7-Day Session 18 – Practice: Test Interpretation



Session 18 – Practice: Test Interpretation

45 Minutes

Session 18

Practice: Test Interpretation

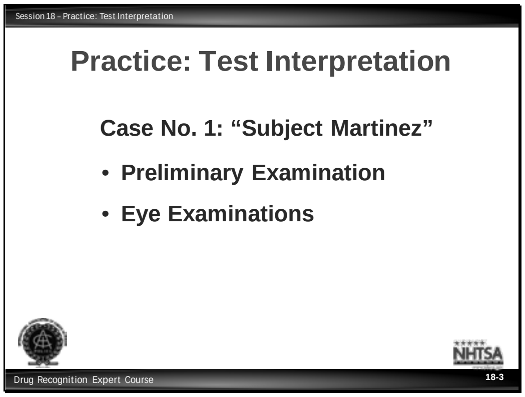
Drug Recognition Expert Course

Notes:

Upon successfully completing this session the participant will be able to:

- Analyze the results of a complete drug influence evaluation and identify the category or categories of drugs affecting the individual examined.
- Articulate the bases for the drug category identification.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Interpretation Demonstrations	Instructor Led Demonstrations
B. Interpretation Practice	Small Group Practice
	Participant Led Presentations



Session 18 – Practice: Test Interpretation

Practice: Test Interpretation

Case No. 1: “Subject Martinez”

- **Preliminary Examination**
- **Eye Examinations**

Drug Recognition Expert Course

18-3

Notes:

A. Interpretation Demonstrations

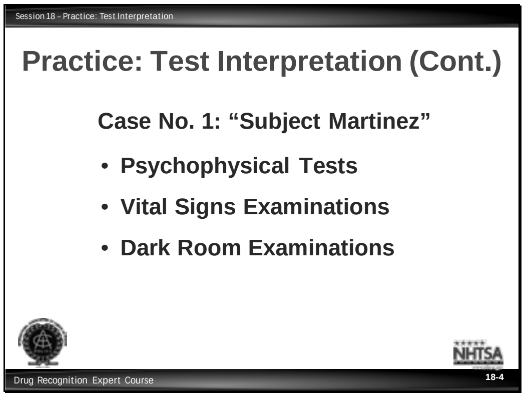
Case No.1: “Subject Martinez”

Preliminary Examination

- Review the results of the preliminary examination of Subject Martinez.

Eye Examinations

- Review the results of the eye examination of Subject Martinez.



Session 18 – Practice: Test Interpretation

Practice: Test Interpretation (Cont.)

Case No. 1: “Subject Martinez”

- **Psychophysical Tests**
- **Vital Signs Examinations**
- **Dark Room Examinations**

NHTSA

Drug Recognition Expert Course 18-4

Notes:____

Psychophysical Tests

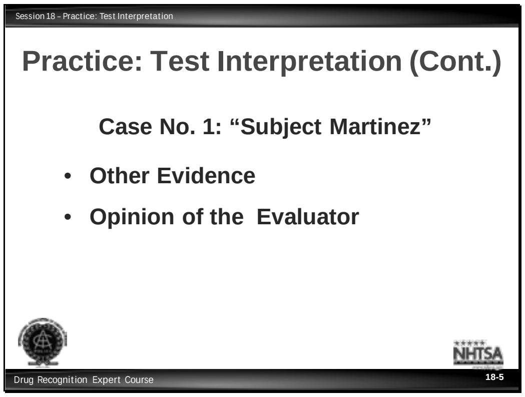
- Review the results of the psychophysical tests of Subject Martinez.

Vital Signs Examinations

- Review the results of the vital signs examinations of Subject Martinez.

Dark Room Examinations

- Review the results of the dark room examinations of Subject Martinez.



Session 18 – Practice: Test Interpretation

Practice: Test Interpretation (Cont.)

Case No. 1: “Subject Martinez”

- **Other Evidence**
- **Opinion of the Evaluator**

NHTSA

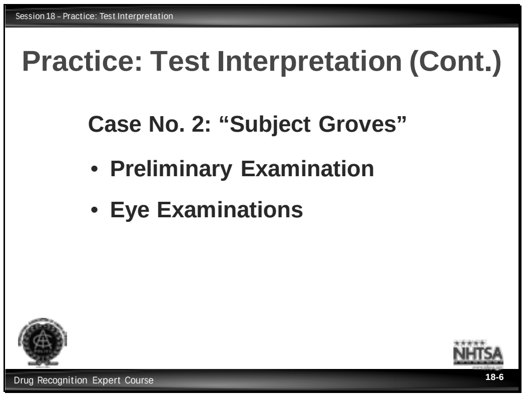
Drug Recognition Expert Course 18-5

Notes:____

Other Evidence

- Review the results of the examinations for injection sites and muscle rigidity, and of the final interview of Subject Martinez.

Opinion of the Evaluator



Session 18 – Practice: Test Interpretation

Practice: Test Interpretation (Cont.)

Case No. 2: “Subject Groves”

- **Preliminary Examination**
- **Eye Examinations**

Drug Recognition Expert Course

18-6

Notes:____

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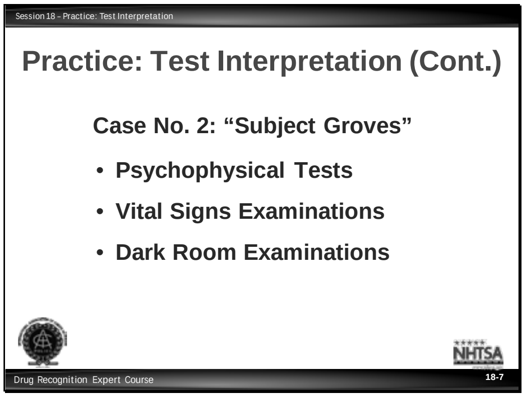
Case No.2: “Subject Groves”

Preliminary Examination

- Review the results of the preliminary examination of Subject Groves.

Eye Examination

- Review the results of the eye examinations of Subject Groves.



Session 18 – Practice: Test Interpretation

Practice: Test Interpretation (Cont.)

Case No. 2: “Subject Groves”

- **Psychophysical Tests**
- **Vital Signs Examinations**
- **Dark Room Examinations**

Drug Recognition Expert Course

18-7

Notes:____

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Psychophysical Tests

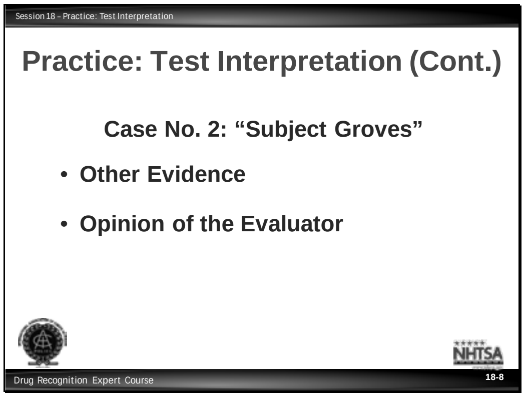
- Review the results of the psychophysical tests of Subject Groves.

Vital Signs Examinations

- Review the results of the vital signs examinations of Subject Groves.

Dark Room Examinations

- Review the results of the dark room examinations of Subject Groves.



Practice: Test Interpretation (Cont.)

Case No. 2: “Subject Groves”

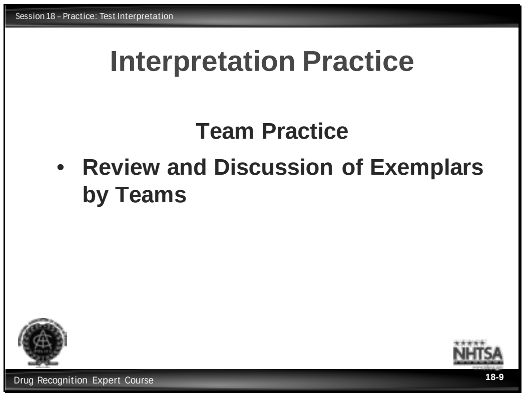
- **Other Evidence**
- **Opinion of the Evaluator**

Notes:

Other Evidence

- Review the results of the examinations for injection sites and muscle rigidity, and of the final interview of Subject Groves.

Opinion of the Evaluator



Interpretation Practice

Team Practice

- **Review and Discussion of Exemplars by Teams**

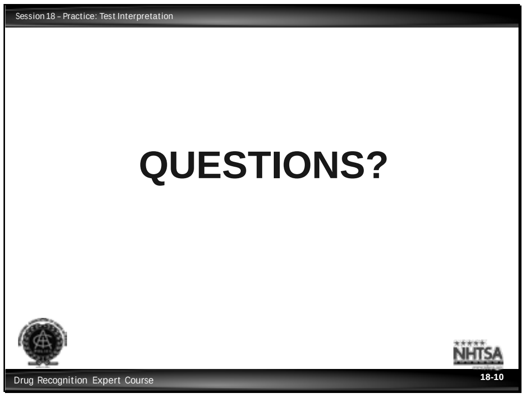
Notes:

B. Interpretation Practice

Team Practice

Review and Discussion of Exemplars by Teams

Feedback of Results



QUESTIONS?

Notes:

DRUG INFLUENCE EVALUATION

Evaluator: Officer Troy Bartell, Laramie PD
DRE #: 16843
Rolling Log #: 12-02-012

Session XVIII - #1

Recorder/Witness: Lt. Jonlee Anderle, Laramie PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-20014

Arrestee's Name (Last, First, Middle): Martinez, Juan M.
Date of Birth: 5/20/80
Sex: M
Race: H
Arresting Officer (Name, ID#): Trooper Scott Keane, Wyoming HP #14677

Date Examined / Time /Location: 02/22/12 2330 County Jail Intake
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 3669
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Tpr. Keane
What have you eaten today? "Nothing" When? N/A
What have you been drinking? "Nothing" How much? N/A
Time of last drink? N/A

Time now/ Actual: No answer
When did you last sleep? No answer How long: N/A
Are you sick or injured? ☐ Yes ☐ No "Not sick"
Are you diabetic or epileptic? ☐ Yes ☐ No "Not sick"

Do you take insulin? ☐ Yes ☐ No "Not sick"
Do you have any physical defects? ☐ Yes ☐ No "Not sick"
Are you under the care of a doctor or dentist? ☐ Yes ☐ No No answer

Are you taking any medication or drugs? ☐ Yes ☐ No "Not sick"
Attitude: Non-responsive, passive
Coordination: Unsteady, staggering

Speech: Slow, slurred
Breath Odor: Chemical-like odor
Face: Blank stare

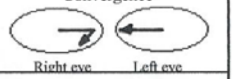
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☒ Yes ☐ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time
1. 104 / 2340
2. 108 / 2356
3. 104 / 0010

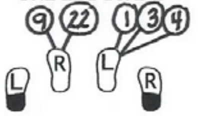
HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	30	30

Convergence

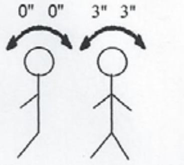


33

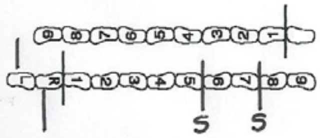
ONE LEG STAND



Modified Romberg Balance



Walk and Turn test



"Moonwalking", Rigid legs and arms

Cannot keep balance ✓✓
Starts too soon

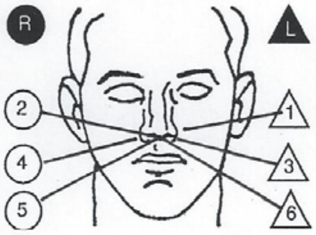
	1st Nine	2nd Nine
Stops walking	✓✓	
Misses heel-toe		
Steps off line		
Raises arms	✓✓✓	✓✓✓✓
Actual steps taken	9	9

L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☐ Hopping
☑ ☑ Puts foot down

Test stopped for safety reasons

Internal clock: 33 estimated as 30 seconds
Describe Turn: Turned backwards
Cannot do test (explain): N/A
Type of footwear: Boots

Draw lines to spots touched



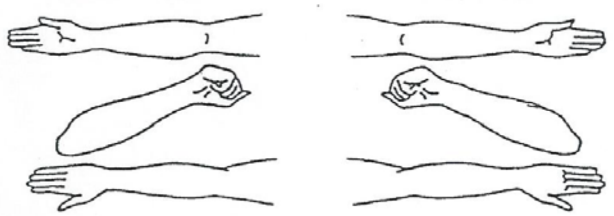
Rigid movements

PUPIL SIZE	**Room light 2.5 – 5.0**	**Darkness 5.0 – 8.5**	**Direct 2.0 – 4.5**
Left Eye	5.0	6.0	4.0
Right Eye	5.0	6.0	4.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

RIGHT ARM **LEFT ARM**



Nothing observed

Blood pressure: 156/98
Temperature: 99.4
Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid
Comments: Arms and legs

What drugs or medications have you been using? No answer
How much? N/A
Time of use? No answer
Where were the drugs used? (Location) No answer

Date / Time of arrest: 2/22/12 2245
Time DRE was notified: 2315
Evaluation start time: 2330
Evaluation completion time: 0020 2/23/12
Precinct/Station:

Officer's Signature:
DRE # 16843
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Martinez, Juan M.

1. **LOCATION:** The evaluation was conducted at Albany County Jail.

2. **WITNESSES:** Lt. Jonlee Anderle of L.P.D recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Martinez had a breath test of 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was contacted and requested to contact Trooper Keane at the County Jail Intake Center for a drug evaluation. Trooper Keane advised he had observed the suspect on Hwy 287 drifting over the lane divider line nearly hitting other vehicles. When stopped, the suspect appeared dazed and confused. He had a blank stare and was non-responsive at times. He did poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the Intake Center. He appeared dazed and disoriented. He had a fixed, blank stare and responded very slowly to questions. His speech was slow, slurred and confused.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" side to side and estimated 30 seconds in 33 seconds. Walk & Turn: Suspect lost his balance twice during the instructions, stopped walking twice and used his arms for balance. One Leg Stand: Suspect put his foot down twice while standing on his left foot and nearly fell while attempting to stand on his right and the test was stopped. Finger to Nose: Suspect missed the tip of his nose on three of the six attempts and his arm movements were very rigid.

8. **CLINICAL INDICATORS:** Suspect had six clues of HGN and exhibited an early onset of Nystagmus. Vertical Gaze Nystagmus and Lack of Convergence were also present. The suspect's pulse and blood pressure were elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** There was a chemical-like odor on the suspect's breath.

10. **SUSPECT'S STATEMENTS:** The suspect did not respond to questions about drug use.

11. **DRE'S OPINION:** In my opinion Martinez is under the influence of a _______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** A glass vial with an unknown liquid was found on the suspect.

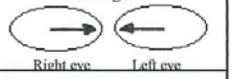
DRUG INFLUENCE EVALUATION

Evaluator: Trooper Sam Ketchum, Idaho State Police
DRE #: 9323
Rolling Log #: 12-04-56
Session XVIII #2
Recorder/Witness: Sgt. Dean Matlock, Idaho State Police
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-55575
Arrestee's Name (Last, First, Middle): Groves, Robert G.
Date of Birth: 8/10/77
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer Casey Hancuff, Boise PD #9335
Date Examined / Time /Location: 4/15/12 1430 Ada County Jail
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 4410
Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Officer Hancuff
What have you eaten today? When? Burger & Fries About noon
What have you been drinking? Nothing
How much? N/A
Time of last drink? N/A
Time now/ Actual: 1:00 PM/1434
When did you last sleep? How long: Last night 4 hours
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☒ Yes ☐ No
Are you taking any medication or drugs? ☒ Yes ☐ No "Pain pills for my back"
Attitude: Cooperative
Coordination: Poor, wobbly, stumbling
Speech: Slow, mumbling
Breath Odor: Normal, slow, shallow
Face: Normal
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

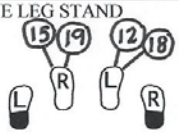
Pulse and time		
1.	60	1445
2.	60	1500
3.	60	1520

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

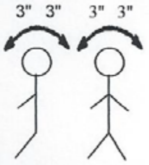
Convergence



22 ONE LEG STAND 24

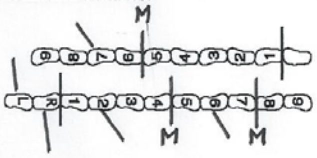


Modified Romberg Balance



Circular sway

Walk and Turn test



Cannot keep balance ✓✓
Starts too soon

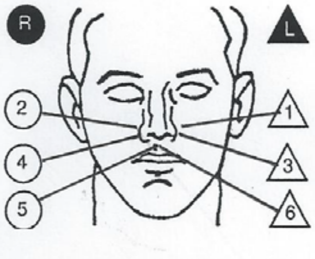
	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓✓	✓
Steps off line	✓✓	✓
Raises arms	✓✓✓	✓✓✓
Actual steps taken	9	9

L	R	
☑	☑	Sways while balancing
✓☑	☑✓	Uses arms to balance
☐	☐	Hopping
✓☑	☑✓	Puts foot down

Counted slowly

Internal clock: 53 estimated as 30 seconds
Describe Turn: Lost balance, staggered to right
Cannot do test (explain): N/A
Type of footwear: Lace-up boots

Draw lines to spots touched

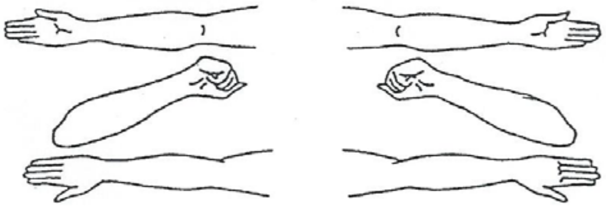


Slow movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	2.0	2.5	2.0
Right Eye	2.0	2.5	2.0

Nasal area: Clear
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: None

RIGHT ARM **LEFT ARM**



No visible marks

Blood pressure: 106/64
Temperature: 97.8
Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "A couple of pills for my back"
How much? "Just a couple is all"
Time of use? "About noon"
Where were the drugs used? (Location) McDonald's
Date / Time of arrest: 4/15/12 1335
Time DRE was notified: 1400
Evaluation start time: 1430
Evaluation completion time: 1545
Precinct/Station: Boise ISP
Officer's Signature:
DRE # 9323
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Groves, Robert G.

1. **LOCATION:** The evaluation was conducted at the Ada County Jail Intake Center.

2. **WITNESSES:** Sergeant Dean Matlock of the Idaho State Police recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Groves' breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was contacted by ISP Dispatch and requested to contact Officer Hancuff at the Intake Center for a drug evaluation. Officer Hancuff advised that he had observed the suspect's vehicle drifting over the center line and traveling 15 mph under the posted speed zone on W. Overland Road. When stopped, the suspect had slow and slurred speech. His balance and coordination was poor and he did poorly on the SFST's and was arrested for DUI. He admitted to taking a "couple pain pills" for his back.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the Intake Center. He appeared sleepy and his head was nodding forward. His speech was slow and slurred. When he stood, his balance was poor and he staggered when he walked.

6. **MEDICAL PROBLEMS AND TREATMENT:** The suspect stated he was taking pain medicine for a back injury he suffered about five years ago.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" in a circular sway and estimated 30 seconds in 53 seconds. Walk & Turn: Suspect lost his balance twice during the instructions, missed heel to toe three times, stepped off the line three times and used his arms for balance. One Leg Stand: Suspect put his foot down twice while standing on each foot and counted slowly. Finger to Nose: Suspect missed the tip of his nose on all six attempts and had slow arm movements.

8. **CLINICAL INDICATORS:** The suspect's pulse rates were all at the low end of the DRE average ranges. His blood pressure was below the DRE average ranges. His pupils were constricted in two of the lighting levels and had little to no reaction to light.

9. **SIGNS OF INGESTION:** None were evident.

10. **SUSPECT'S STATEMENTS:** Suspect admitted taking a "couple pain pills" with lunch.

11. **DRE'S OPINION:** In my opinion Groves is under the influence of a _______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

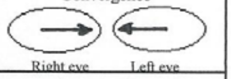
Evaluator: Deputy Susan Cotter, Harris County SO
DRE #: 8063
Rolling Log #: 12-01-104
Session XVIII #3
Recorder/Witness: Officer Joshua Bruegger, Pasadena PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12041105
Arrestee's Name (Last, First, Middle): Hatos, Carlos
Date of Birth: 7/13/79
Sex: M
Race: H
Arresting Officer (Name, ID#): Deputy P. Lillibridge, Harris Co SO #10331
Date Examined / Time /Location: 01/22/12 2210 Harris Co. Jail
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 12835
Chemical Test: Urine ☒ Blood ☐
Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Dpty. Lillibridge
What have you eaten today? Steak dinner When? 7 PM
What have you been drinking? "Nothing" How much?
Time of last drink? 8 PM
Time now/ Actual: 11 PM/2215
When did you last sleep? Last night How long 8 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Cooperative, nervous
Coordination: Poor, jerky, stumbling
Speech: Talkative and Rapid
Breath Odor: Normal
Face: Normal
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

Pulse and time

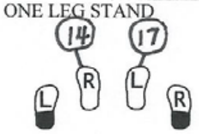
	100	2222
2.	100	2235
3.	98	2255

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

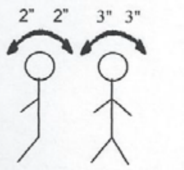


35 ONE LEG STAND 37



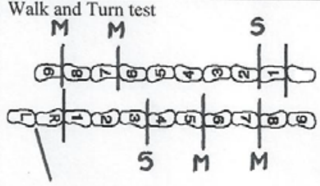
L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☐ Hopping
☑ ☑ Puts foot down

Modified Romberg Balance



Eyelid tremors

Walk and Turn test

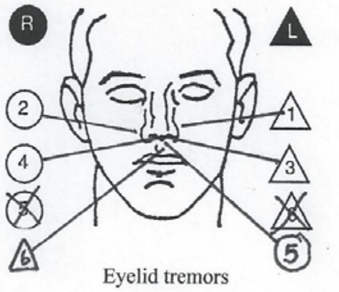


Cannot keep balance ✓
Starts too soon

	1st Nine	2nd Nine
Stops walking	✓	✓
Misses heel-toe	✓✓	✓✓
Steps off line		
Raises arms	✓✓	✓✓
Actual steps taken	9	9

Internal clock: 26 estimated as 30 seconds
Describe Turn: As instructed
Cannot do test (explain): N/A
Type of footwear: Lace-up boots

Draw lines to spots touched

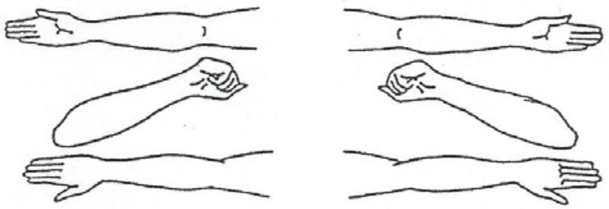


Eyelid tremors

PUPIL SIZE	**Room light** 2.5 – 5.0	**Darkness** 5.0 – 8.5	**Direct** 2.0 – 4.5
Left Eye	6.5	8.0	5.5
Right Eye	6.5	8.0	5.5

Nasal area: Red, bloody left nostril
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM **LEFT ARM**



Nothing observed

Blood pressure: 146/92
Temperature: 99.2
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "I don't do drugs anymore"
How much? N/A
Time of use? N/A
Where were the drugs used? (Location) N/A
Date / Time of arrest: 01/22/12 2105
Time DRE was notified: 2145
Evaluation start time: 2210
Evaluation completion time: 2315
Precinct/Station: Central
Officer's Signature:
DRE #: 8063
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Hatos, Carlos

1. **LOCATION:** The evaluation was conducted in the booking area of the Harris County Jail.

2. **WITNESSES:** DRE Joshua Bruegger of the Pasadena PD recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Hatos had a breath test of 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** At approximately 2145 hours I was requested to meet Deputy Lillibridge at Harris Co. Jail for a drug evaluation. Deputy Lillibridge advised he had observed the suspect's vehicle traveling at a high rate of speed on Red Bluff Road. When stopped, the suspect appeared nervous and was very talkative. The suspect did poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the booking area at the County Jail. The suspect was very talkative, repeatedly shifted his weight from foot to foot and was making abrupt, quick hand movements. When not speaking, he appeared to be grinding his teeth.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted and none stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" side to side and approximately 2" front to back. He estimated 30 seconds in 26 seconds. Walk & Turn: Suspect lost his balance during the instructions, stopped twice while walking, missed heel-to-toe four times and raised his arms for balance four times. One Leg Stand: Suspect put his foot down once while standing on each foot, swayed while balancing and used his arms for balance. Finger to Nose: Suspect missed the tip of his nose on three of the six attempts and performed attempt #5 and #6 with the wrong hand.

8. **CLINICAL INDICATORS:** The suspect's pulse and blood pressure were elevated and above the DRE average ranges. His pupils were dilated in two lighting levels and he had a slow reaction to light.

9. **SIGNS OF INGESTION:** None were evident.

10. **SUSPECT'S STATEMENTS:** Suspect admitted drinking "two beers" earlier in the day and denied using any other drugs.

11. **DRE'S OPINION:** In my opinion Hatos is under the influence of a **________________** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator Officer Virgil Miller, Wichita PD	DRE # 10828	Rolling Log # 12-03-035	**Session XVIII #4**
Recorder/Witness Det. Karrina Brasser, Sedgwick Co. S.O.	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-99115

Arrestee's Name (Last, First, Middle) Jackson, Scott M.	Date of Birth 7/15/75	Sex M	Race W

Arresting Officer (Name, ID#): Trooper Mark Crump, Kansas H.P. #7949

Date Examined / Time /Location: 03/18/12 2030 Sedgwick Co. Jail

Breath Results: Results: 0.00 — Test Refused ☐ — Instrument #: 88075

Chemical Test: Urine ☐ Blood ☒ — Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No — Given By: Tpr. Crump

What have you eaten today? When? Eggs and toast 9AM

What have you been drinking? How much? Coffee 2 cups

Time of last drink? N/A

Time now/ Actual: Midnight/2042

When did you last sleep? How long: Last night 7 hrs.

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical defects? ☐ Yes ☒ No

Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No

Attitude: Passive, cooperative

Coordination: Poor, unsteady

Speech: Slow, thick, slurred

Breath Odor: Halitosis

Face: Flushed, blank stare

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery

Blindness: ☒ None ☐ Left ☐ Right

Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)

Vertical Nystagmus ☐ Yes ☒ No

Able to follow stimulus ☒ Yes ☐ No

Eyelids ☐ Normal ☒ Droopy

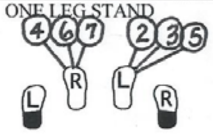
Pulse and time
1. 54 / 2040
2. 56 / 2055
3. 58 / 2118

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

Right eye
Left eye

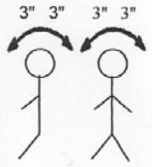
ONE LEG STAND



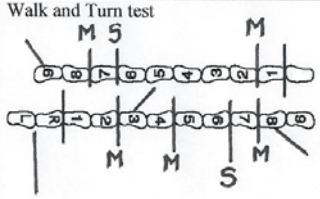
L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☐ Hopping
☑ ☑ Puts foot down

Both stopped for safety reasons

Modified Romberg Balance



Walk and Turn test



Cannot keep balance ✓

Starts too soon

	1st Nine	2nd Nine
Stops walking	✓	✓
Misses heel-toe	✓✓✓	✓✓
Steps off line	✓✓	✓
Raises arms	✓✓	✓✓✓
Actual steps taken	9	9

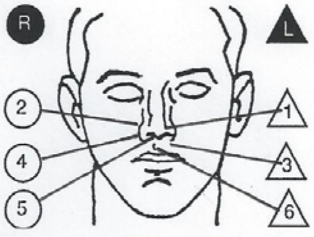
Internal clock: 42 estimated as 30 seconds

Describe Turn: Abrupt spin

Cannot do test (explain): N/A

Type of footwear: Lace-up shoes

Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	2.0	3.0	2.0
Right Eye	2.0	3.0	2.0

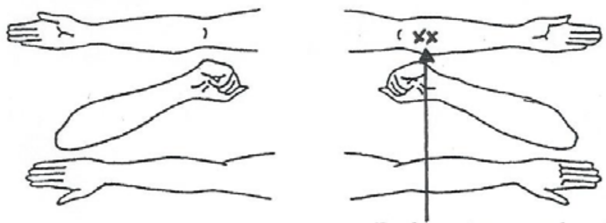
Nasal area: Clear

Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: None visible

RIGHT ARM — LEFT ARM



Fresh puncture wounds, red, oozing

Blood pressure: 122/68

Temperature: 98.0

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using? "I didn't use anything today"

How much? N/A

Time of use? N/A

Where were the drugs used? (Location) N/A

Date / Time of arrest: 03/18/12 1910	Time DRE was notified: 1950	Evaluation start time: 2030	Evaluation completion time: 2145	Precinct/Station:

Officer's Signature:

DRE # 10828

Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Jackson, Scott M.

1. **LOCATION:** The evaluation was conducted at the Sedgwick County Jail.

2. **WITNESSES:** Detective Karrina Brasser witnessed and recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Jackson's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was contacted and requested to contact Trooper Crump at the Sedgwick County Jail for a drug evaluation. Trooper Crump advised he located the suspect's vehicle traveling E/B on Highway 54 near the Garden Plain exit. The suspect was traveling at approximately 45 mph and drifting in and out of his lane. When Trooper Crump tried to stop the suspect, he continued without stopping for over a mile. The suspect had a blank stare and his speech was thick and slow. The suspect did poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the jail. He was cooperative and had slow, thick, slurred speech. He was slow to respond to questions and was unstable on his feet.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 3" side to side and front to back. He estimated 30 seconds in 42 seconds. Walk & Turn: Suspect lost his balance during the instructions, stepped off the line twice on the first nine steps and once on the second nine steps. He also missed heel-to-toe five times, stopped while walking twice and raised his arms for balance. He also made an improper turn. One Leg Stand: Both tests were stopped for safety reasons after he put his down numerous times and nearly fell. Finger to Nose: Suspect missed the tip of his nose on five of the six attempts.

8. **CLINICAL INDICATORS:** The suspect's pulse and blood pressure were below the DRE average ranges. His pupils were constricted in two of the three lighting levels.

9. **SIGNS OF INGESTION:** The suspect had two fresh puncture marks on his left forearm.

10. **SUSPECT'S STATEMENTS:** Suspect denied using drugs.

11. **DRE'S OPINION:** In my opinion Jackson is under the influence of a _______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator: Trooper Scott Singleton, Utah HP
DRE #: 4740
Rolling Log #: 12-01-121

Session XVIII #5

Recorder/Witness: Tpr. Jason Marshall, Utah Highway Patrol
Crash: ☐ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-004345

Arrestee's Name (Last, First, Middle): Stevens, William A.
Date of Birth: 4/14/84
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer Jody Whitaker, Salt Lake City P.D. #7614

Date Examined / Time /Location: 01/17/12 2200 Salt Lake City PD
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 47745
Chemical Test: Urine ☐ Blood ☒
Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Whitaker
What have you eaten today? "Burger"
When? Noon
What have you been drinking? "Just water"
How much? N/A
Time of last drink? N/A

Time now/ Actual: 9 PM/10:05 PM
When did you last sleep? Last night
How long: 2 hrs.
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☒ Yes ☐ No Dr. Frank at the Clinic

Are you taking any medication or drugs? ☒ Yes ☐ No Valium - 2 each day
Attitude: Cooperative
Coordination: Poor, staggering

Speech: Thick, slow, slurred
Breath Odor: Normal
Face: Normal, dazed look

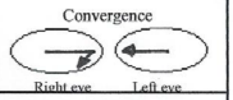
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☒ Yes ☐ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

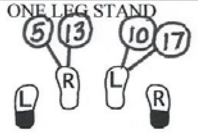
Pulse and time
1. 60 / 2214
2. 58 / 2225
3. 56 / 2243

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	30	30

Convergence



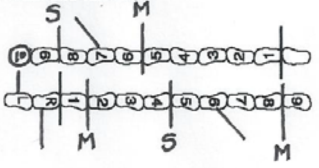
34 ONE LEG STAND 35



L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑	☑	Puts foot down

Modified Romberg Balance

Walk and turn test



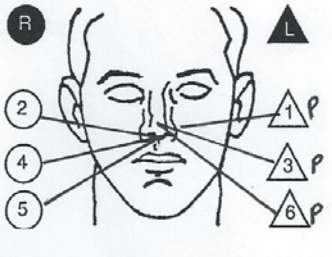
Had to repeat instructions

Cannot keep balance ✓✓
Starts too soon

	1st Nine	2nd Nine
Stops walking	✓	✓
Misses heel-toe	✓✓	✓
Steps off line	✓	✓
Raises arms	✓✓	✓✓✓
Actual steps taken	9	10

Internal clock: 38 estimated as 30 seconds
Describe Turn: Lost balance
Cannot do test (explain): N/A
Type of footwear: Boots

Draw lines to spots touched



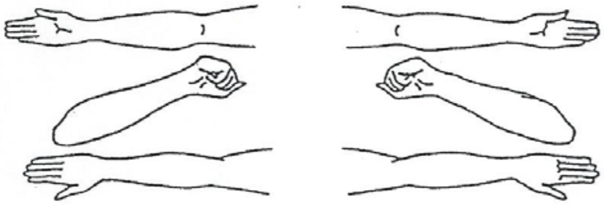
Slow movements

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	5.5	6.5	4.0
Right Eye	5.5	6.5	4.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM **LEFT ARM**



Nothing observed

Blood pressure: 112/68
Temperature: 98.0

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:

What drugs or medications have you been using? "Just my pills"
How much? 2 a day
Time of use? 10AM
Where were the drugs used? (Location) At home

Date / Time of arrest: 01/17/12 2100
Time DRE was notified: 2140
Evaluation start time: 2200
Evaluation completion time: 2315
Precinct/Station:

Officer's Signature:
DRE # 4740
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Stevens, William A.

1. **LOCATION:** The evaluation was conducted at the Salt Lake City Police Department.

2. **WITNESSES:** Trooper Jason Marshall of the Utah H.P. witnessed the evaluation.

3. **BREATH ALCOHOL TEST:** Stevens had a breath test of 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was requested to contact Officer Whitaker at the Salt Lake City Police Department for a drug evaluation. Officer Whitaker advised she had located the suspect's vehicle stopped in the intersection at California and S. 900th. She contacted the suspect who was sitting in the driver's seat. He had a dazed appearance and his speech was thick, slurred and slow. He had six clues of HGN, did poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the P.D. The suspect was cooperative and had slow, thick, slurred speech. He was slow to respond to questions. His balance was poor and he staggered when walking.

6. **MEDICAL PROBLEMS AND TREATMENT:** The suspect stated he was seeing Dr. Frank at the Clinic who had prescribed him Valium for anxiety problems.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 2" in a circular motion and he estimated 30 seconds in 38 seconds. Walk & Turn: Suspect lost his balance twice during the instructions, stepped off the line twice, missed heel to toe three times, stopped twice, used his arms for balance and also took one extra step on the second nine steps. He also lost his balance when he turned. One Leg Stand: Suspect put his foot down twice on each attempt, swayed while balancing and used his arms for balance. Finger to Nose: Suspect missed the tip of his nose on three of the six attempts and used the pads of his fingers on attempts #1, #3 and #6.

8. **CLINICAL INDICATORS:** Suspect had 6 clues of HGN with a 30 degree angle of onset. He also had VGN and a Lack of Convergence. His pulse was below the DRE average range on two of the three checks and his blood pressure was also below the DRE average range.

9. **SIGNS OF INGESTION:** Nothing observed or detected.

10. **SUSPECT'S STATEMENTS:** Suspect admitted taking two Valium earlier in the day.

11. **DRE'S OPINION:** In my opinion Stevens is under the influence of a ______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator Officer Aaron Rohner, California H.P.	DRE # 10803	Rolling Log # 12-06-25	**Session XVIII #6**
Recorder/Witness Officer Kevin Craig, CHP	Crash: ☐ None ☐ Fatal ☐ Injury ☒ Property		Case # 127418

Arrestee's Name (Last, First, Middle) Sholly, Cameron H.	Date of Birth 10/3/78	Sex M	Race W	Arresting Officer (Name, ID#) Officer Tom Flahaven, CHP #88744

Date Examined / Time /Location: 06/10/12 1445 Sacramento Co. Jail

Breath Results: Results: 0.00 — Test Refused ☐ — Instrument #: 015233A

Chemical Test: Urine ☐ Blood ☒ — Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No — Given By: Ofc. Flahaven

What have you eaten today? Nothing — When? N/A

What have you been drinking? "I didn't drink anything" — How much? — Time of last drink? N/A

Time now/ Actual: "Don't know"

When did you last sleep? How long: "About 2 days ago"

Are you sick or injured? ☐ Yes ☒ No

Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No

Do you have any physical defects? ☐ Yes ☒ No

Are you under the care of a doctor or dentist? ☐ Yes ☒ No "I don't go to the doctor"

Are you taking any medication or drugs? ☒ Yes ☐ No "Took Tylenol this morning"

Attitude: Cooperative

Coordination: Slow, sluggish

Speech: Slow — Breath Odor: Normal — Face: Normal

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery

Blindness: ☒ None ☐ Left ☐ Right

Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☐ Equal ☒ Unequal (explain) Left pupil larger than right

Vertical Nystagmus ☐ Yes ☒ No

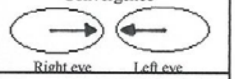
Able to follow stimulus ☒ Yes ☐ No

Eyelids ☒ Normal ☐ Droopy

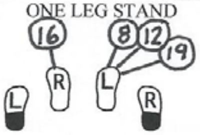
Pulse and time
1. 92 / 1505
2. 92 / 1518
3. 90 / 1530

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

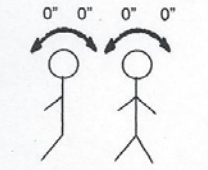


30 ONE LEG STAND 29

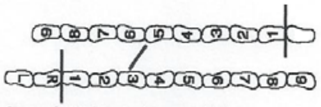


L R
- ☑ ☑ Sways while balancing
- ☑ ☑ Uses arms to balance
- ☐ ☐ Hopping
- ☑ ☑ Puts foot down

Modified Romberg Balance



Walk and Turn test



Stated, "This is impossible." Stepped off line and would not continue.

	1st Nine	2nd Nine
Cannot keep balance		
Starts too soon	✓✓	
Stops walking		
Misses heel-toe		
Steps off line	✓	
Raises arms	✓	
Actual steps taken		

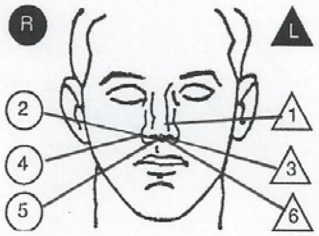
Internal clock: 28 estimated as 30 seconds

Describe Turn: N/A

Cannot do test (explain): Refused to complete

Type of footwear: Work boots

Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.0	8.5	5.0
Right Eye	4.5	7.0	3.5

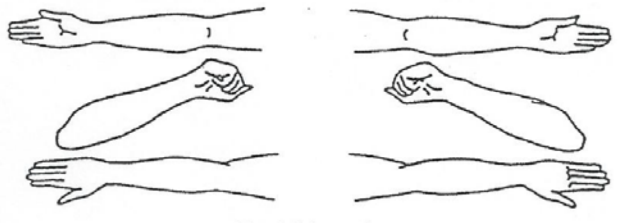
Nasal area: Clear

Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: Normal

RIGHT ARM **LEFT ARM**



No visible marks

Blood pressure: 146/88

Temperature: 98.8

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using? "Just two Tylenol"

How much? "Two"

Time of use? This morning

Where were the drugs used? (Location) Home

Date / Time of arrest: 06/10/12 1400

Time DRE was notified: 1420

Evaluation start time: 1445

Evaluation completion time: 1555

Precinct/Station:

Officer's Signature:

DRE # 10803

Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Sholly, Cameron H.

1. **LOCATION:** The evaluation was conducted at the Sacramento County Jail.

2. **WITNESSES:** Officer Kevin Craig of the CHP witnessed and recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Sholly had a breath test of 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was requested to meet Officers Flahaven and Craig at the Sacramento County Jail for a drug evaluation. According to Officer Flahaven, Sholly was a driver involved in a crash on I-5 north of Sacramento. His vehicle rear-ended a stopped vehicle at a construction site. Sholly was not injured but was sluggish acting at the scene and was slow to respond to questions. His speech was slow and slurred at times and at times was unstable on his feet.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed Sholly in the interview room at the jail. He was cooperative but was slow to respond to questions and he slurred his speech at times. He seemed confused and anxious.

6. **MEDICAL PROBLEMS AND TREATMENT:** Sholly was slow to respond when asked about medical problems and/or medical treatment. He eventually stated, “I don’t go to the doctor. They don’t know what they’re doing.”

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Sholly exhibited no sway and he estimated 30 seconds in 28 seconds. Walk & Turn: Sholly started too soon twice, took two steps, stepped off the line and said, “This is impossible!” and refused to continue. One Leg Stand: Sholly put his foot down one time while standing on the left foot and three times while standing on his right foot and swayed while balancing on both attempts. Finger to Nose: Sholly missed the tip of his nose on two of the six attempts.

8. **CLINICAL INDICATORS:** Sholly’s pulse and systolic blood pressure were elevated and above the DRE average ranges. His pupils were unequal in all three lighting levels.

9. **SIGNS OF INGESTION:** None were evident or stated.

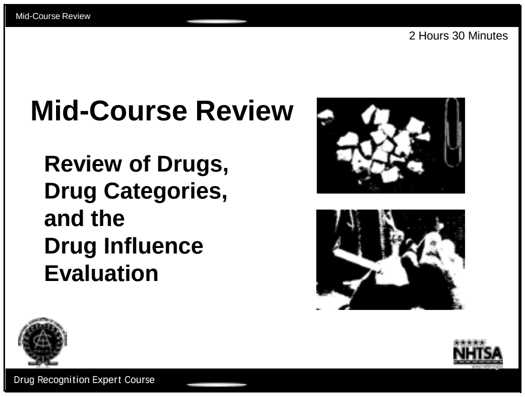
10. **SUSPECT’S STATEMENTS:** Sholly admitted taking Tylenol only.

11. **DRE'S OPINION:** In my opinion Sholly is under the influence of a _______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** Sholly provided a blood sample.

13. **MISCELLANEOUS:**

Participant Manual DRE 7-Day Mid-Course Review



Mid-Course Review

2 Hours 30 Minutes

Mid-Course Review

**Review of Drugs,
Drug Categories,
and the
Drug Influence
Evaluation**

Drug Recognition Expert Course

Notes:____

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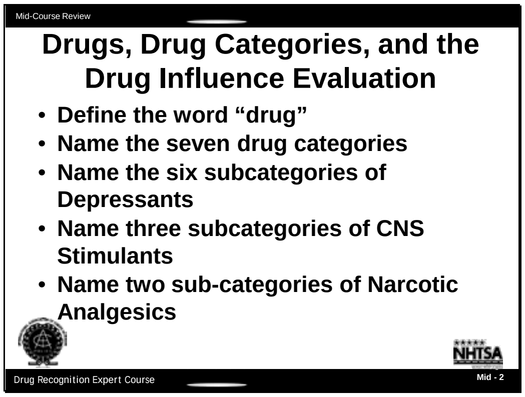
MID-COURSE REVIEW

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Drugs, Drug Categories and the Drug Influence Evaluation	Instructor / Participant Dialogues
B. Eyes and Vital Signs	Participant-Led Demonstrations
C. Physiology	
D. Questions and Answers	



Mid-Course Review

Drugs, Drug Categories, and the Drug Influence Evaluation

- **Define the word "drug"**
- **Name the seven drug categories**
- **Name the six subcategories of Depressants**
- **Name three subcategories of CNS Stimulants**
- **Name two sub-categories of Narcotic Analgesics**

Drug Recognition Expert Course

Mid - 2

Notes:____
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A. Drugs, Drug Categories, and the Drug Influence Evaluation

Define the word "drug."

- Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely.

Name the seven drug categories.

- CNS Depressants, CNS Stimulants, Hallucinogens, Dissociative Anesthetics, Narcotic Analgesics, Inhalants, and Cannabis

Name the six subcategories of Depressants.

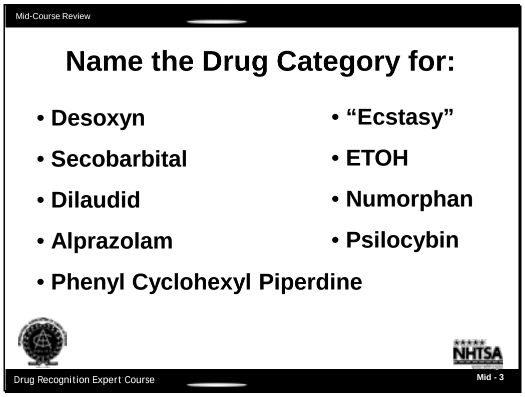
- Barbiturates, Non-Barbiturates, Anti-Anxiety Tranquilizers, Anti-Depressants, Anti-Psychotic Tranquilizers, and Combinations of the first five

Name three subcategories of CNS Stimulants.

- Cocaine, the Amphetamines, and "Others."

Name two sub-categories of Narcotic Analgesics.

- Opiates and Synthetics



Mid-Course Review

Name the Drug Category for:

- Desoxyn
- Secobarbital
- Dilaudid
- Alprazolam
- Phenyl Cyclohexyl Piperdine
- "Ecstasy"
- ETOH
- Numorphan
- Psilocybin

Drug Recognition Expert Course

Mid - 3

Notes:____

Identify the category for each of the listed drugs:

Desoxyn

- CNS Stimulant

Secobarbital (Seconal)

- CNS Depressant (Barbiturate)

Dilaudid

- Narcotic Analgesic

Alprazolam (Xanax)

- CNS Depressant (Anti-Anxiety)

Phenyl Cyclohexyl Peperdine

- Dissociative Anesthetics

"Ecstasy" (MDMA)

- Hallucinogen

ETOH

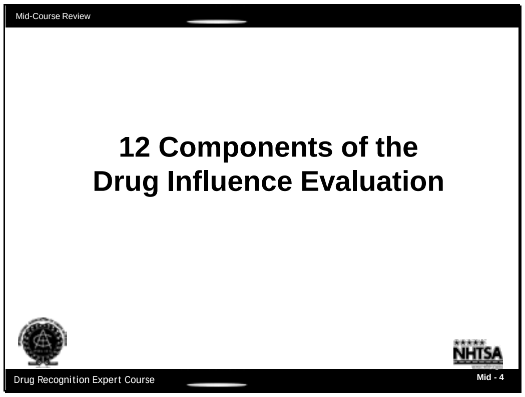
- CNS Depressant

Numorphan

- Narcotic Analgesic

Psilocybin

- Hallucinogen



Mid-Course Review

12 Components of the Drug Influence Evaluation

Drug Recognition Expert Course

Mid - 4

Notes:____

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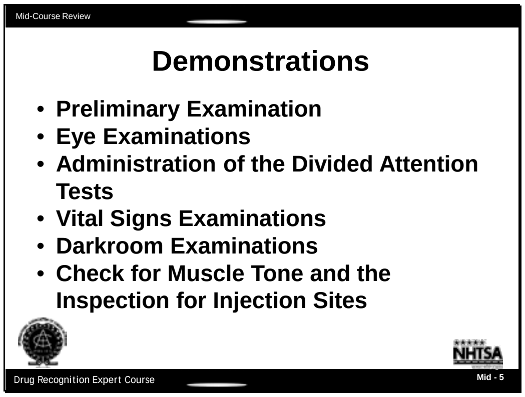
List the twelve components of the Drug Influence Evaluation in the proper sequence.

- Breath Alcohol Test
- Interview of Arresting Officer
- Preliminary Examination
- Eye Examinations
- Divided Attention Tests
- Vital Signs Examinations
- Darkroom Examinations
- Check for Muscle Tone
- Injection Sites Inspection
- Statement of Suspect
- Evaluator’s Opinion
- Toxicological Examination

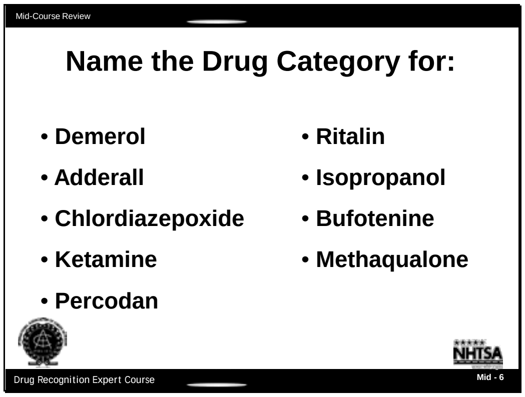


Demonstrations

- Preliminary Examination
- Eye Examinations
- Administration of the Divided Attention Tests
- Vital Signs Examinations
- Darkroom Examinations
- Check for Muscle Tone and the Inspection for Injection Sites

Notes:

- Demonstrate the Preliminary Examination.
- Demonstrate the Eye Examinations.
- Demonstrate the Administration of the Divided Attention Tests.
- Demonstrate the Vital Signs Examinations.
- Demonstrate the Darkroom Examinations.
- Demonstrate the Check for Muscle Tone and the inspection for Injection Sites.



Mid-Course Review

Name the Drug Category for:

- **Demerol**
- **Adderall**
- **Chlordiazepoxide**
- **Ketamine**
- **Percodan**
- **Ritalin**
- **Isopropanol**
- **Bufotenine**
- **Methaqualone**

Drug Recognition Expert Course

Mid - 6

Notes:____

Identify the category for each of the listed drugs:

Demerol

- Narcotic Analgesic

Adderall

- CNS Stimulant

Chlordiazepoxide

- CNS Depressant

Ketamine

- Dissociative Anesthetics

Percodan

- Narcotic Analgesic

Ritalin

- CNS Stimulant

Isopropanol

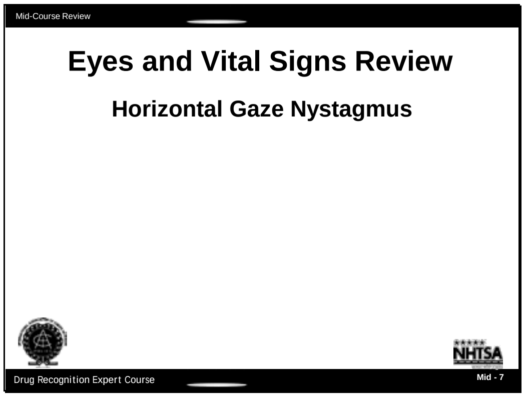
- CNS Depressant

Bufotenine

- Hallucinogen

Methaqualone

- CNS Depressant



Mid-Course Review

Eyes and Vital Signs Review

Horizontal Gaze Nystagmus

Drug Recognition Expert Course

Mid - 7

Notes:____

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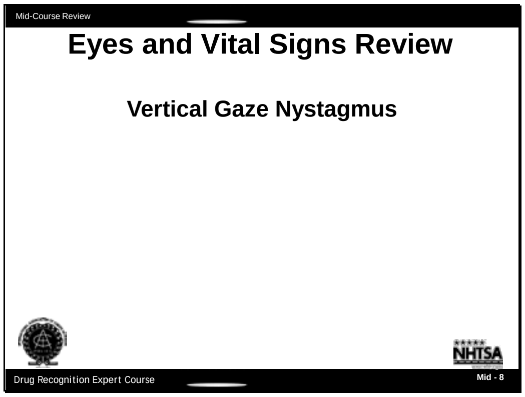
B. Eyes and Vital Signs

Name the three clues of Horizontal Gaze Nystagmus

Lack of smooth pursuit, distinct and sustained nystagmus at maximum deviation, angle of onset

Name the categories of drugs that will cause Horizontal Gaze Nystagmus.

CNS Depressants, Dissociative Anesthetics, Inhalants


Mid-Course Review

Eyes and Vital Signs Review

Vertical Gaze Nystagmus

Drug Recognition Expert Course

Mid - 8

Notes:

Name the categories that will cause Vertical Gaze Nystagmus.

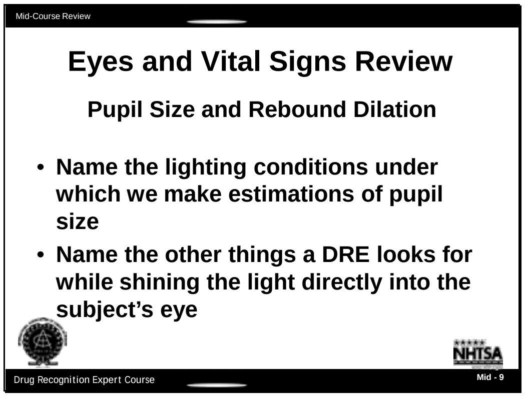
- CNS Depressants, Dissociative Anesthetics, Inhalants

Name the test that is always administered immediately after Vertical Gaze Nystagmus.

- Lack of Convergence

Name the categories of drugs that usually will cause Lack of Convergence.

- CNS Depressants, Dissociative Anesthetics, Inhalants, Cannabis


Mid-Course Review

Eyes and Vital Signs Review

Pupil Size and Rebound Dilation

- **Name the lighting conditions under which we make estimations of pupil size**
- **Name the other things a DRE looks for while shining the light directly into the subject's eye**

Drug Recognition Expert Course

Mid - 9

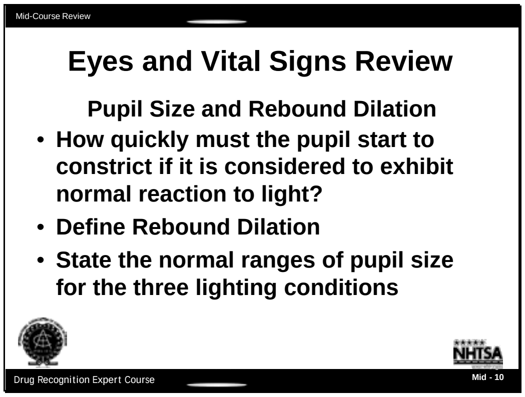
Notes:

Name the lighting conditions under which we make estimations of pupil size.

- Room light, near-total darkness, direct light

Name the other things a DRE looks for while shining the light directly into the subject's eye.

- Pupil reaction to light and rebound dilation



Mid-Course Review

Eyes and Vital Signs Review

Pupil Size and Rebound Dilation

- **How quickly must the pupil start to constrict if it is considered to exhibit normal reaction to light?**
- **Define Rebound Dilation**
- **State the normal ranges of pupil size for the three lighting conditions**

Drug Recognition Expert Course

Mid - 10

Notes:____

How quickly must the pupil start to constrict if it is considered to exhibit normal reaction to light?

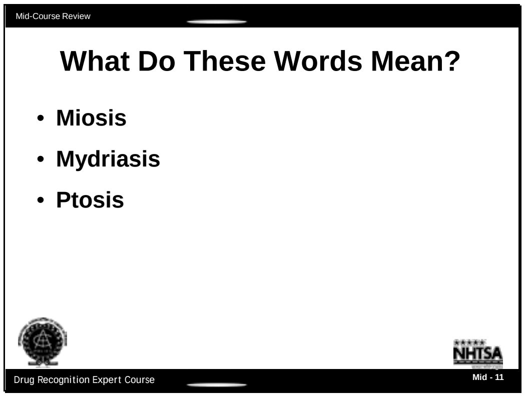
- Within one second

Define Rebound Dilation.

- A period of papillary constriction followed by a period of papillary dilation where the pupil steadily increases in size and does not return to its original constricted size.

State the normal ranges of pupil size for the three lighting conditions.

- Room light: 2.5 – 5.0 mm.
- Near Total Darkness: 5.0 – 8.5 mm.
- Direct Light: 2.0 – 4.5 mm.



Mid-Course Review

What Do These Words Mean?

- Miosis
- Mydriasis
- Ptosis

Drug Recognition Expert Course

Mid - 11

Notes:____

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Define each of the listed terms:

- Miosis

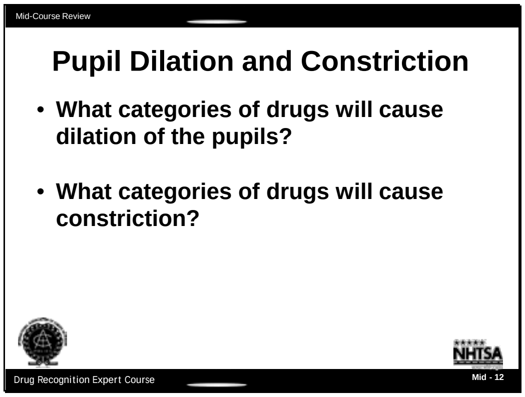
Abnormally constricted pupils

- Mydriasis

Abnormally dilated pupils

- Ptosis

Droopy eyelids



Mid-Course Review

Pupil Dilation and Constriction

- What categories of drugs will cause dilation of the pupils?
- What categories of drugs will cause constriction?

Drug Recognition Expert Course

Mid - 12

Notes:____

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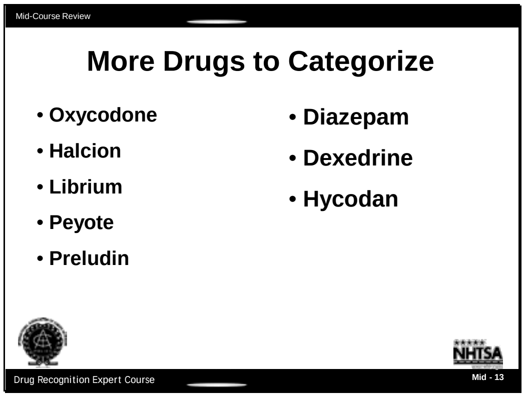
What categories of drugs will cause dilation of the pupils?

- CNS Stimulants, Hallucinogens, Cannabis (although sometimes only slight dilation, if any)

What categories of drugs will cause constriction?

- Narcotic Analgesics



Mid-Course Review

More Drugs to Categorize

- Oxycodone
- Halcion
- Librium
- Peyote
- Preludin
- Diazepam
- Dexedrine
- Hycodan

Drug Recognition Expert Course

Mid - 13

Notes:____

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Identify the category for each of the listed drugs:

Oxycodone

- Narcotic Analgesic

Halcion

- CNS Depressant

Librium

- CNS Depressant

Peyote

- Hallucinogen

Preludin

- CNS Stimulant

Diazepam

- CNS Depressant

Dexedrine

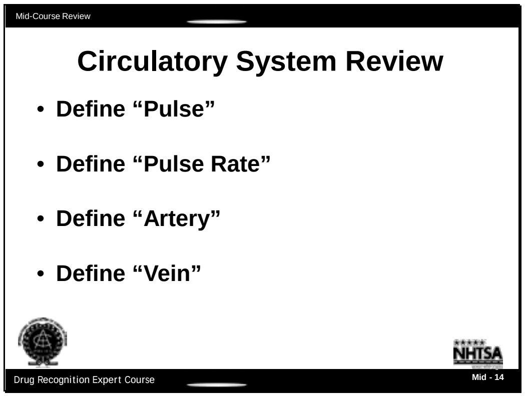
- CNS Stimulant

Hycodan

- Narcotic Analgesic

Klonopin

- CNS Depressant



Mid-Course Review

Circulatory System Review

- Define “Pulse”
- Define “Pulse Rate”
- Define “Artery”
- Define “Vein”

Drug Recognition Expert Course

Mid - 14

Notes:

Define “Pulse.”

- The expansion and relaxation of an artery, generated by the pumping action of the heart.

(Also acceptable: the expansion and relaxation of an artery, caused by the surging flow of blood)

Define “Pulse Rate.”

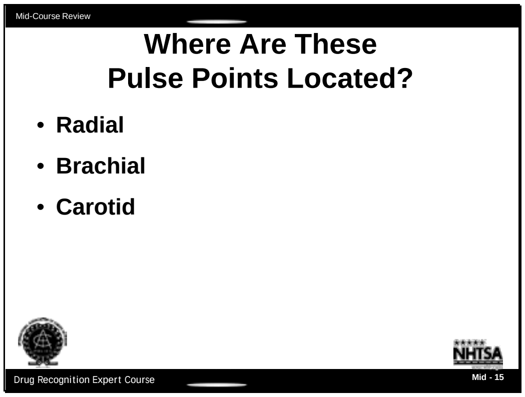
- The number of pulsations in an artery per minute

Define “Artery.”

- A strong, elastic blood vessel that carries blood from the heart to the body tissues.

Define “Vein.”

- A blood vessel that carries blood back to the heart from the body tissues.



Mid-Course Review

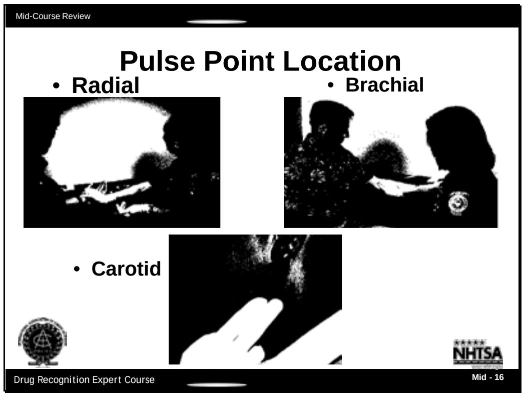
Where Are These Pulse Points Located?

- Radial
- Brachial
- Carotid

Drug Recognition Expert Course

Mid - 15

Notes:



Mid-Course Review

Pulse Point Location

- **Radial**
- **Brachial**
- **Carotid**

Drug Recognition Expert Course

Mid - 16

Notes:

Identify the location of each listed pulse point:

Radial

- In the wrist, at the base of the thumb

Brachial

- In the crook of the arm

Carotid

- In the neck, on either side of the Adam’s Apple

State the normal range of adult human pulse rate.

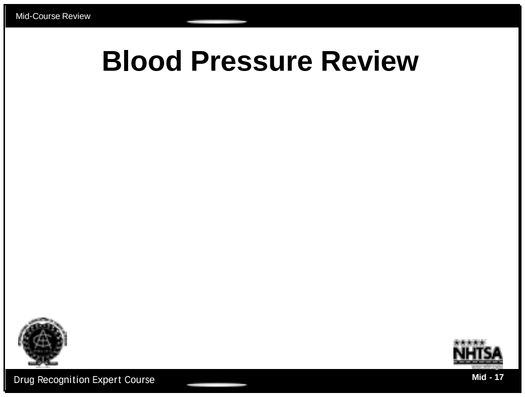
- 60 – 90 beats per minute

Name the drug categories that usually cause elevated pulse rate.

- CNS Stimulants, Hallucinogens, Dissociative Anesthetics, Inhalants, Cannabis

Name the drug categories that usually cause lowered pulse rate.

- CNS Depressants, Narcotic Analgesics



Mid-Course Review

Blood Pressure Review

Drug Recognition Expert Course

Mid - 17

Notes:

Define “Blood Pressure.”

- The force exerted by blood on the walls of the arteries

How often does a person’s blood pressure change?

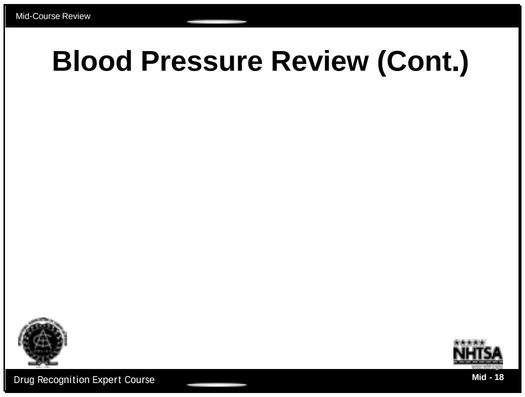
- It is always changing, from instant to instant.

When does the blood pressure reach its highest value?

- When the heart is fully contracted, and blood is sent rushing into the arteries.

When does the blood pressure reach its lowest value?

- When the heart is fully expanded, just before it starts to contract for the next “pumping” action.



Mid-Course Review

Blood Pressure Review (Cont.)

Drug Recognition Expert Course

Mid - 18

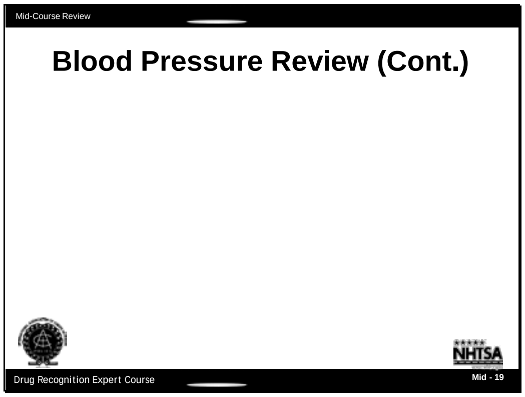
Notes:

Name the two medical instruments that are used to measure blood pressure.

- SPHYGMANOMETER and STETHOSCOPE

Name the sounds that we hear through the stethoscope when we make a blood pressure measurement.

- KOROTKOFF SOUNDS



Mid-Course Review

Blood Pressure Review (Cont.)

Drug Recognition Expert Course

Mid - 19

Notes:

What does this “Hg” mean?

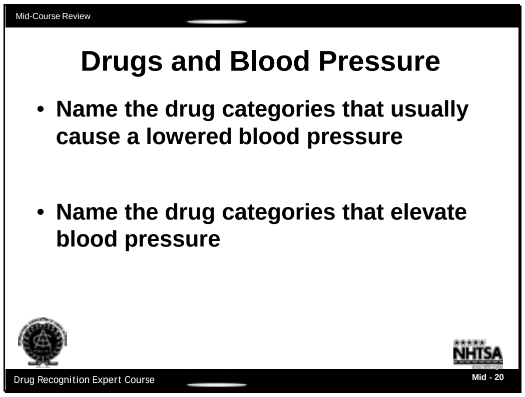
- Chemical symbol for the element Mercury; abbreviation for the Latin word Hydrargyrum, meaning “Mercury.”

In what units is blood pressure measured?

- Millimeters of Mercury

Suppose that, at some particular instant, a person has a blood pressure of 120 mmHg. What does that “120 mmHg” mean?

- It means the pressure would be strong enough to push a column of liquid Mercury up a glass tube to a height of 120 millimeters.



Mid-Course Review

Drugs and Blood Pressure

- Name the drug categories that usually cause a lowered blood pressure
- Name the drug categories that elevate blood pressure

Drug Recognition Expert Course

Mid - 20

Notes:____

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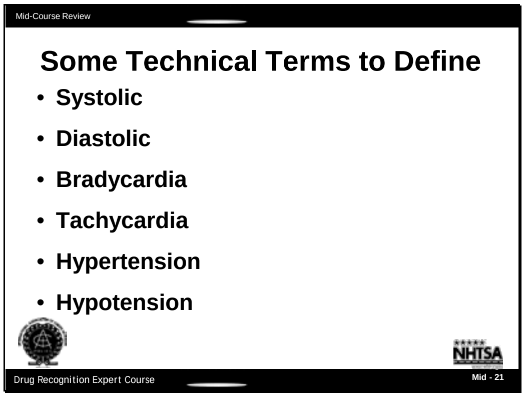
Name the drug categories that usually cause a lowered blood pressure.

- CNS Depressants, Narcotic Analgesics, and the Anesthetic Gases subcategory of Inhalants

Name the drug categories that elevate blood pressure.

- CNS Stimulants, Hallucinogens, Dissociative Anesthetics, Cannabis, and the other two subcategories (Volatile Solvents and Aerosols) of Inhalants



Mid-Course Review

Some Technical Terms to Define

- Systolic
- Diastolic
- Bradycardia
- Tachycardia
- Hypertension
- Hypotension

Drug Recognition Expert Course

Mid - 21

Notes:____

State the meaning of each of the listed terms:

Systolic

- The highest value of blood pressure

Diastolic

- The lowest value of blood pressure

Bradycardia

- Abnormally slow heart rate, pulse rate below the normal range

Tachycardia

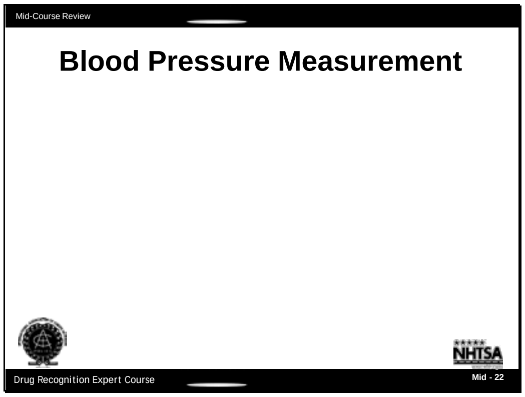
- Abnormally rapid heart rate, pulse rate above the normal range

Hypertension

- Abnormally high blood pressure

Hypotension

- Abnormally low blood pressure



Mid-Course Review

Blood Pressure Measurement

Drug Recognition Expert Course

Mid - 22

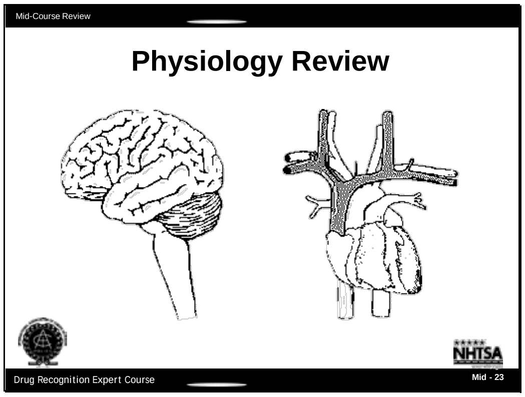
Notes:____

State the normal range of systolic blood pressure.

- 120 – 140 mmHg

State the normal range of diastolic blood pressure.

- 70 – 90 mmHg



Mid-Course Review

Physiology Review

Drug Recognition Expert Course

Mid - 23

Notes:____

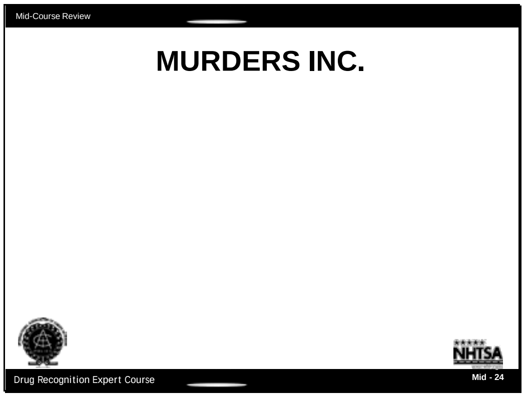
C. Physiology

Define “Physiology.”

- Physiology is the branch of biology dealing with the functions and activities of life or living matter and the physical and chemical phenomena involved.

What is the expression we use to remember the names of the ten major body systems?

- MURDERS INC



Mid-Course Review

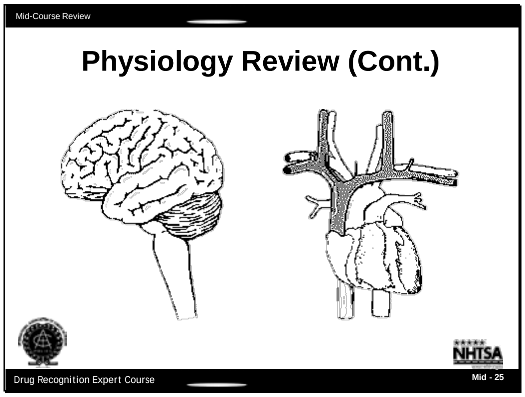
MURDERS INC.

Drug Recognition Expert Course

Mid - 24

Notes:____

- Muscular (have a student print out each name)
- Urinary
- Respiratory (or, reproductive)
- Digestive
- Endocrine
- Reproductive (or, respiratory)
- Skeletal
- Integumentary
- Nervous
- Circulatory



Mid-Course Review

Physiology Review (Cont.)

Drug Recognition Expert Course

Mid - 25

Notes:

State the word that means “dynamic balance involving levels of salts, water, sugars and other materials in the body’s fluids.”

- Homeostasis

Which artery carries blood from the heart to the lungs?

- Pulmonary

What is unique about the Pulmonary artery, compared to all other arteries?

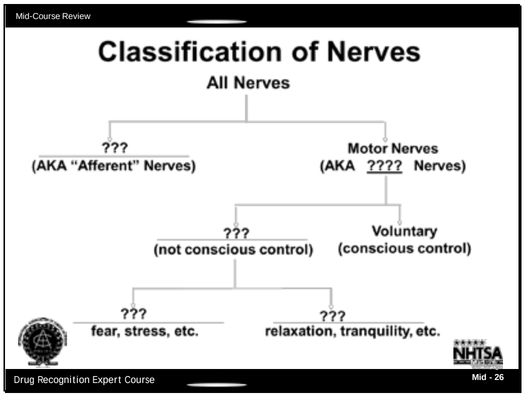
- It is the only artery that takes blood from the right side of the heart
- It is the only artery that carries deoxygenated blood (i.e., blood that is depleted of oxygen)

What are the Pulmonary veins?

- The veins that carry blood back to the heart from the lungs

What is unique about the Pulmonary veins?

- They are the only veins that bring blood to the left side of the heart
- They are the only veins that carry oxygenated blood



Mid-Course Review

Classification of Nerves

All Nerves

???
(AKA “Afferent” Nerves)

Motor Nerves
(AKA ???? Nerves)

???
(not conscious control)

Voluntary
(conscious control)

???
fear, stress, etc.

???
relaxation, tranquility, etc.

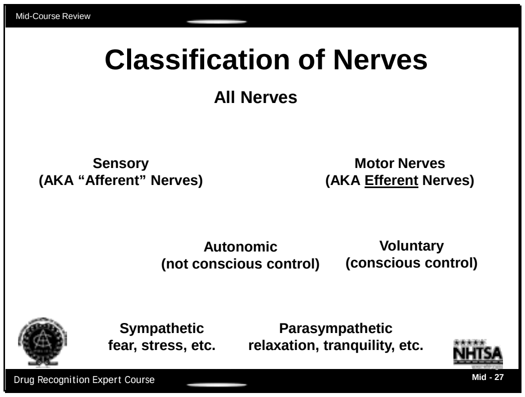
Drug Recognition Expert Course

Mid - 26

Notes:____

Name the various types of nerves.

- Sensory nerves, carry messages to the brain. Also known as Afferent Nerves
- Motor nerves, carry messages from the brain. Also known as Efferent Nerves
- Voluntary nerves are motor nerves that carry messages to the muscles that we consciously control.
- Autonomic nerves are motor nerves that carry messages to the muscles and organs we do not consciously control.
- Sympathetic nerves are autonomic nerves that carry messages commanding the body to react to fear, stress, excitement, etc. Clarification: Sympathetic nerves carry the brain’s “fire alarms” and “wake up calls”.
- Parasympathetic nerves are autonomic nerves that carry messages to produce relaxed and tranquil activities. Clarification: Parasympathetic nerves carry the brain’s “all clear” and “at ease” messages.



Mid-Course Review

Classification of Nerves

All Nerves

Sensory
(AKA "Afferent" Nerves)

Motor Nerves
(AKA Efferent Nerves)

Autonomic
(not conscious control)

Voluntary
(conscious control)

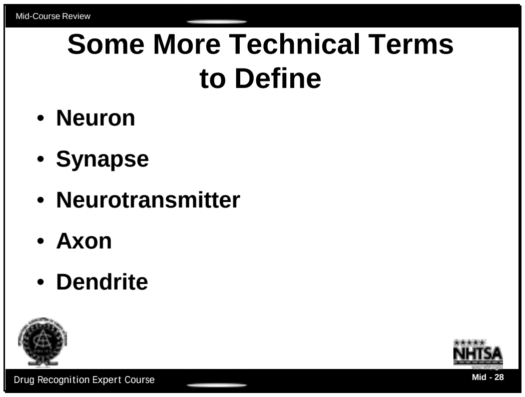
Sympathetic
fear, stress, etc.

Parasympathetic
relaxation, tranquility, etc.

Drug Recognition Expert Course

Mid - 27

Notes:



Mid-Course Review

Some More Technical Terms to Define

- **Neuron**
- **Synapse**
- **Neurotransmitter**
- **Axon**
- **Dendrite**

Drug Recognition Expert Course

Mid - 28

Notes:

Define each of the listed terms:

Neuron

- A nerve cell, the basic "building block" of a nerve

Synapse

- The gap or space between two nerve cells

Neurotransmitter

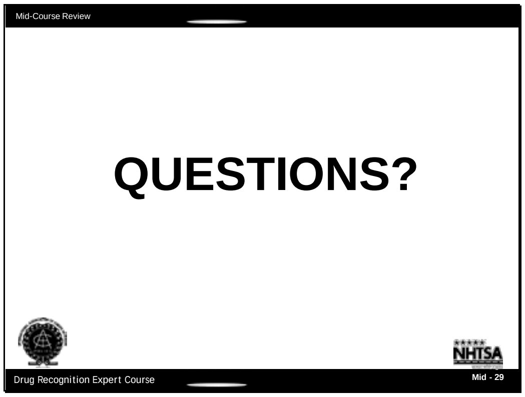
- A chemical that flows across the synapse, to carry a message from one neuron to the next

Axon

- The end of a neuron that sends out the neurotransmitter

Dendrite

- The end of a neuron that receives the neurotransmitter



Mid-Course Review

QUESTIONS?

Drug Recognition Expert Course

Mid - 29

Notes:____

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D. Questions and Answers

Participant Manual DRE 7-Day Session 19 – Inhalants

Session 19 - Inhalants

Session 19

Inhalants

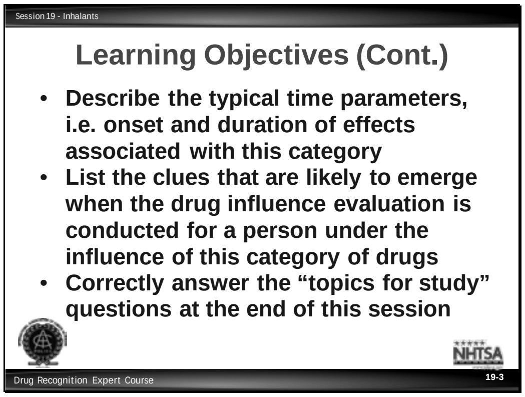
Drug Recognition Expert Course

Notes:

Upon successfully completing this session the participant will be able to:

- Explain a brief history of the Inhalant category of drugs.
- Identify common drug names and terms associated with this category.
- Identify common methods of administration for this category.
- Describe the symptoms, observable signs and other effects associated with this category.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Overview of the Category	Instructor Led Presentations
B. Possible Effects	Review of the Drug Evaluation and Classification Exemplars
C. Onset and Duration of Effects	Reading Assignments
D. Overdose Signs and Symptoms	Video Presentations
E. Expected Results of the Evaluation	Slide Presentations
F. Classification Exemplar	



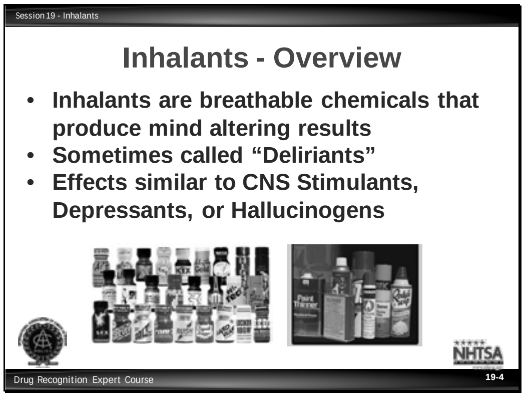
Session 19 - Inhalants

Learning Objectives (Cont.)

- **Describe the typical time parameters, i.e. onset and duration of effects associated with this category**
- **List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this category of drugs**
- **Correctly answer the “topics for study” questions at the end of this session**

Notes:

- Describe the typical time parameters, i.e. onset and duration of effects associated with this category.
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category.
- Correctly answer the “topics for study” questions at the end of this session.



Session 19 - Inhalants

Inhalants - Overview

- **Inhalants are breathable chemicals that produce mind altering results**
- **Sometimes called “Deliriants”**
- **Effects similar to CNS Stimulants, Depressants, or Hallucinogens**

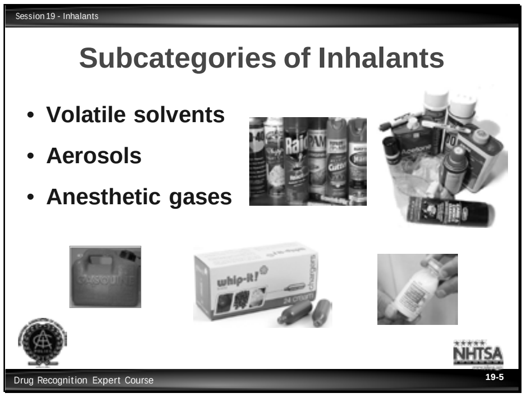
Notes:

A. Overview of the Category

Inhalants are breathable chemicals that produce mind altering results.

Inhalants vary widely in terms of the chemical involved and the specific effects produced.

Depending on the nature of the particular Inhalant, the effects produced may be similar to those of CNS Stimulants, Depressants or Hallucinogens.



Session 19 - Inhalants

Subcategories of Inhalants

- **Volatile solvents**
- **Aerosols**
- **Anesthetic gases**

Drug Recognition Expert Course

19-5

Notes:____

There are three major subcategories of Inhalants:

- Volatile Solvents
- Aerosols
- Anesthetic Gases

Volatile Solvents

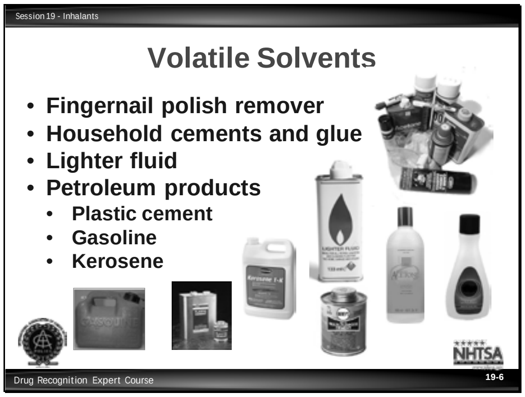
The Volatile Solvents include a large number of readily available substances, none of which are intended by their manufacturers to be used as drugs.

Volatile” means that they evaporate easily to produce fumes.

One widely abused Volatile Solvent is plastic cement, or “model airplane glue.”

Plastic cement includes the following volatile chemicals:

- Toluene
- Acetone
- Naphtha
- Aliphatic Acetates (straight-chained hydrocarbons)
- Hexane
- Cyclohexane
- Benzene



Session 19 - Inhalants

Volatile Solvents

- Fingernail polish remover
- Household cements and glue
- Lighter fluid
- Petroleum products
  - Plastic cement
  - Gasoline
  - Kerosene

Drug Recognition Expert Course

19-6

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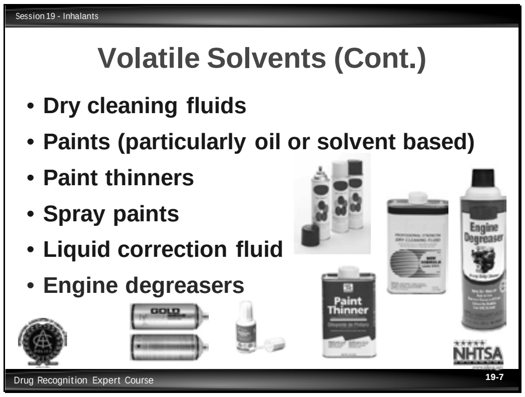
Other frequently abused Volatile Solvents include:

- Fingernail polish remover (contains Acetone)
- Household cements and glues (rubber cements contain Benzene)
- Lighter fluid (contains Naphtha)

Petroleum products:

- Plastic Cement (Model airplane Glue)
- Gasoline
- Kerosene



Session 19 - Inhalants

Volatile Solvents (Cont.)

- Dry cleaning fluids
- Paints (particularly oil or solvent based)
- Paint thinners
- Spray paints
- Liquid correction fluid
- Engine degreasers

Drug Recognition Expert Course

19-7

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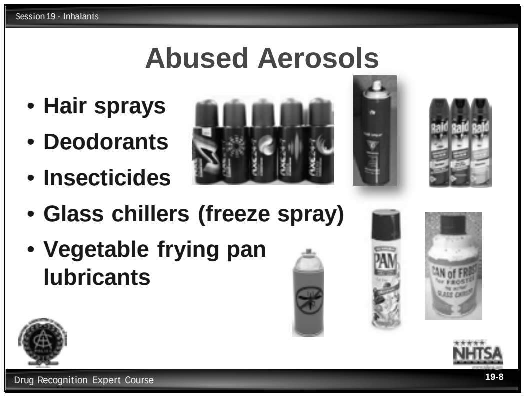
- Dry cleaning fluids
- Paints (particularly oil or solvent based)
- Paint thinners
- Spray paints
- Liquid correction fluid
- Engine degreasers



Abused Aerosols

- Hair sprays
- Deodorants
- Insecticides
- Glass chillers (freeze spray)
- Vegetable frying pan lubricants

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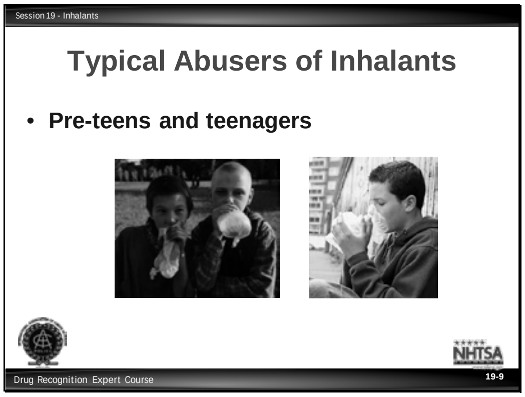
Aerosols

Aerosols are chemicals discharged from a pressurized container by the propellant force of a compressed gas.

Commonly abused Aerosols include hair sprays, deodorants, insecticides, glass chillers (freeze spray), and vegetable frying pan lubricants.

e.g., Freon, which is now available primarily in many medical Aerosols.

All of these abused Aerosols contain various hydrocarbon gases that produce drug effects.



Typical Abusers of Inhalants

- Pre-teens and teenagers

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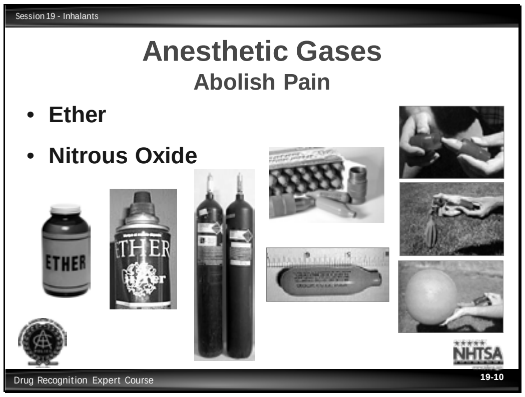
The overwhelming majority of abusers of Volatile Solvents and Aerosols are pre-teens and teenagers.

Some reasons:

- These substances appear in nearly every household.
- They are inexpensive and readily accessible.



Session 19 - Inhalants

Anesthetic Gases

Abolish Pain

- **Ether**
- **Nitrous Oxide**

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19-10

Notes:____

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Anesthetic Gases

The third subcategory is Anesthetic Gases. Anesthetic gases are drugs that abolish pain. They are used medically during surgical procedures such as childbirth, dental surgery, etc.

Adults may be more frequent users of the anesthetic gases subcategory than of the Aerosols or Volatile Solvents.

Anesthetic gases that sometimes are abused as Inhalants:

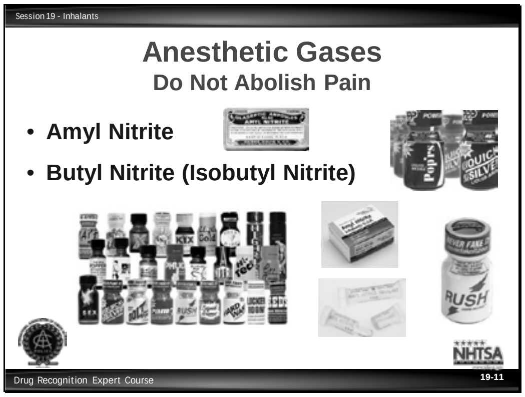
- Ether
- Nitrous Oxide

Many of these substances have a long history of medical and illicit use, e.g., Ether abuse dates to the 1790's in England.

Nitrous Oxide has been used since 1845. It is still used in certain dental procedures.

Nitrous Oxide is a propellant for whipped cream. Drug paraphernalia stores often sell

Nitrous Oxide in cartridges that are identical to carbon dioxide containers. They are termed by users "whippets," and are allegedly sold to purchasers as devices to propel whipped cream.



Anesthetic Gases
Do Not Abolish Pain

- **Amyl Nitrite**
- **Butyl Nitrite (Isobutyl Nitrite)**

Notes:

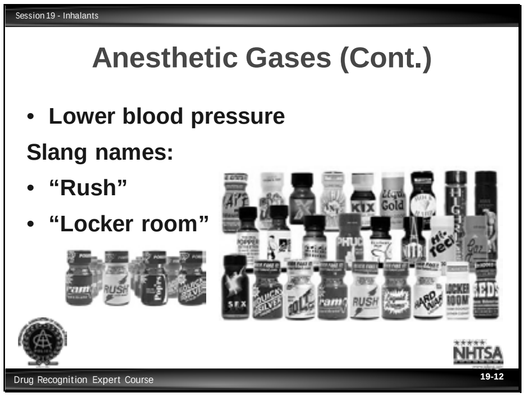
Other common Inhalants in this subcategory that do not relieve pain are:

- Amyl Nitrite
- Butyl Nitrite (Isobutyl Nitrite)

Nitrates are vasodilating substances used medically to relieve angina pectoris (heart-related chest pain) and for treatment of cyanide poisoning. In angina, the nitrates work by dilating blood vessels near the heart so that more blood can reach the heart.

Nitroglycerin, ordinarily not abused as an intoxicant, is also used for this purpose.

Isobutyl Nitrite and Butyl Nitrite have essentially identical effects of Amyl Nitrite.



Anesthetic Gases (Cont.)

- **Lower blood pressure**

Slang names:

- **"Rush"**
- **"Locker room"**

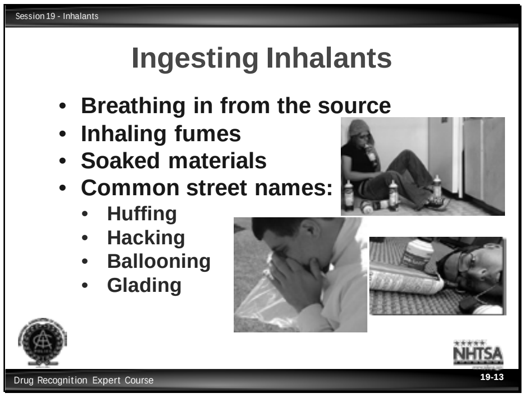
RUSH
LOCKER ROOM
NHTSA

Notes:

Anesthetic gases can dilate the blood vessels around the heart thus causing a lowered blood pressure.

Common slang and brand names for the nitrites are: "Rush" and "Locker Room."

Examples: Amyl Nitrite and Butyl Nitrite are sold in small glass bottles or bulbs. The user simply opens the bottle and breathes in the fumes. They have been marketed in drug paraphernalia stores as room deodorizers.



Session 19 - Inhalants

Ingesting Inhalants

- **Breathing in from the source**
- **Inhaling fumes**
- **Soaked materials**
- **Common street names:**
  - **Huffing**
  - **Hacking**
  - **Ballooning**
  - **Glading**

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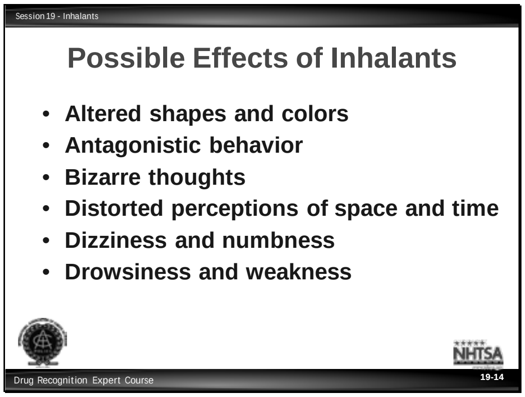
Notes:

Inhalants obviously are ingested by breathing, or inhaling the fumes.

- Some are ingested directly from the source.
- Some are soaked into rags, handkerchiefs, or tissue paper for repeated inhalation.
- Some are placed in paper or plastic bags which the user places over the face or head. These may be placed in twist lock beverage containers.
- Some are used by breathing the fumes or vapors from balloons.

Some common street names that Inhalant users use are: huffing, hacking, ballooning and glading.



Possible Effects of Inhalants

- Altered shapes and colors
- Antagonistic behavior
- Bizarre thoughts
- Distorted perceptions of space and time
- Dizziness and numbness
- Drowsiness and weakness

Notes:____

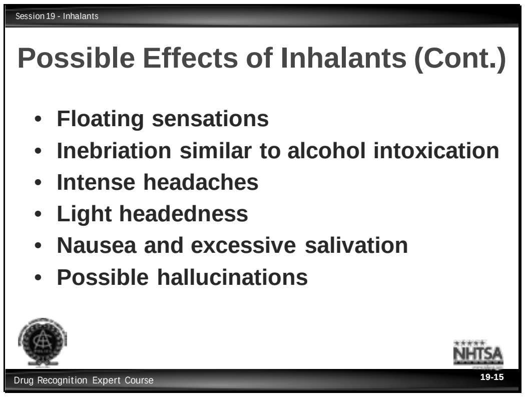
B. Possible Effects

The effects of Inhalants vary somewhat from one substance to another.

In fact, many of the Inhalants are classified as Depressants in medical texts. Their effects, consequently, often mirror alcohol intoxication.

Common effects of Inhalants include:

- Altered shapes and colors
- Antagonistic behavior
- Bizarre thoughts
- Distorted perceptions of time and distance
- Dizziness and numbness
- Drowsiness and weakness



Session 19 - Inhalants

Possible Effects of Inhalants (Cont.)

- Floating sensations
- Inebriation similar to alcohol intoxication
- Intense headaches
- Light headedness
- Nausea and excessive salivation
- Possible hallucinations

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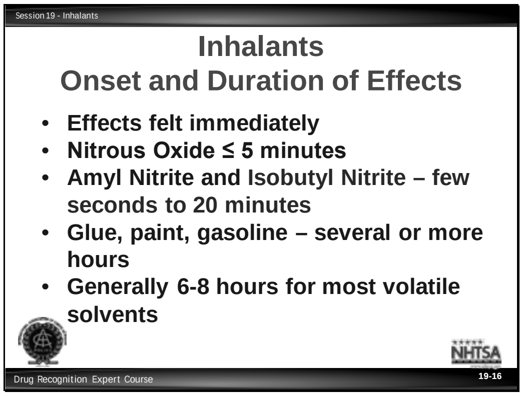
Notes:

- Floating sensations
- Inebriation similar to alcohol intoxication
- Intense headaches
- Light headedness
- Nausea and excessive salivation
- Possible hallucinations

Persons under the influence of Inhalants generally will appear confused and disoriented, and their speech will be slurred.



Session 19 - Inhalants

Inhalants
Onset and Duration of Effects

- Effects felt immediately
- Nitrous Oxide ≤ 5 minutes
- Amyl Nitrite and Isobutyl Nitrite – few seconds to 20 minutes
- Glue, paint, gasoline – several or more hours
- Generally 6-8 hours for most volatile solvents

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Notes:

C. Onset and Duration of Effects

Inhalants’ effects are felt virtually immediately.

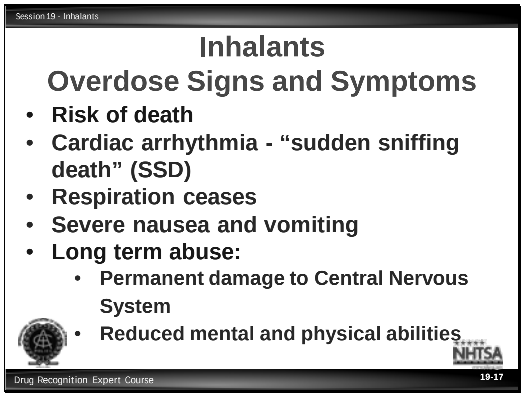
Duration depends on the particular substance.

- The effects of nitrous oxide last 5 minutes or less.
- Amyl Nitrite and Isobutyl Nitrite produce effects that last a few seconds up to 20 minutes.

Users claim these substances enhance sexual excitement. This may occur from dilation of genital arteries (vasodilation) and relaxation of other smooth muscles.

Inhalation of these produces a distinct “rush” similar to that of the related substance, Nitrous Oxide.

Glue, paint, gasoline and other commonly abused Inhalants produce effects that last several or more hours. (Generally 6-8 hours for most volatile solvents depending on exposure).



Session 19 - Inhalants

Inhalants
Overdose Signs and Symptoms

- **Risk of death**
- **Cardiac arrhythmia - "sudden sniffing death" (SSD)**
- **Respiration ceases**
- **Severe nausea and vomiting**
- **Long term abuse:**
  - **Permanent damage to Central Nervous System**
  - **Reduced mental and physical abilities**

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Notes:____

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D. Overdose Signs and Symptoms

There is a risk of death due to overdose of Inhalants.

All volatile solvents make the heart more sensitive to adrenaline. This sometimes causes a dangerous cardiac arrhythmia. The term "sudden sniffing death" (SSD) has been used to describe death resulting from physical exertion and the breathing of Inhalants in an enclosed, poorly ventilated space.

Some Inhalants will depress the Central Nervous System to the point where respiration ceases. Others can produce instant death from heart failure.

Overdoses of Inhalants frequently induce severe nausea and vomiting. If the user vomits while he or she is unconscious, death can result from aspiration of the vomitus.

Death can also result indirectly, if a person places a plastic bag over the head, loses consciousness and suffocates.

Long term abuse of Inhalants can cause permanent damage to the Central Nervous System, and greatly reduce mental and physical abilities.

Evidence also exists of liver, kidney, bone and bone marrow damage resulting from long term Inhalant abuse.

There are no well-defined withdrawal symptoms for these substances. Physical dependence has not been documented, although habituation is common.

Session 19 - Inhalants

Expected Results of the Evaluation

Significant variation in effects from one substance to another

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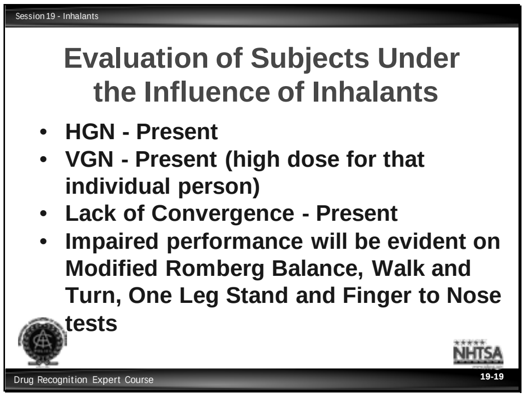
Notes:

E. Expected Results of the Evaluation



Session 19 - Inhalants

Evaluation of Subjects Under the Influence of Inhalants

- **HGN - Present**
- **VGN - Present (high dose for that individual person)**
- **Lack of Convergence - Present**
- **Impaired performance will be evident on Modified Romberg Balance, Walk and Turn, One Leg Stand and Finger to Nose tests**

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Notes:

Observable Evidence of Impairment

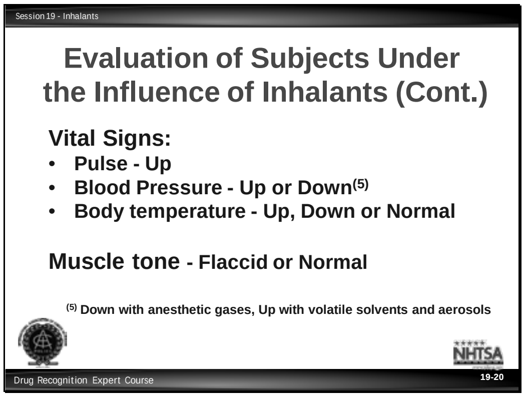
Eye Exam

- *HGN*: Horizontal Gaze Nystagmus will generally be present.
- *VGN:* Vertical Gaze Nystagmus may be present.
- *LOC*: Lack of Convergence will be present.

Psychophysical Exercise

Drug Evaluation Tests

Performance on the Modified Romberg Balance, Walk and Turn, One Leg Stand, and Finger to Nose tests will be impaired.



Session 19 - Inhalants

Evaluation of Subjects Under the Influence of Inhalants (Cont.)

Vital Signs:
- **Pulse - Up**
- **Blood Pressure - Up or Down(5)**
- **Body temperature - Up, Down or Normal**

Muscle tone - Flaccid or Normal

(5) Down with anesthetic gases, Up with volatile solvents and aerosols

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Notes:

Vital Signs

Pulse will be up.

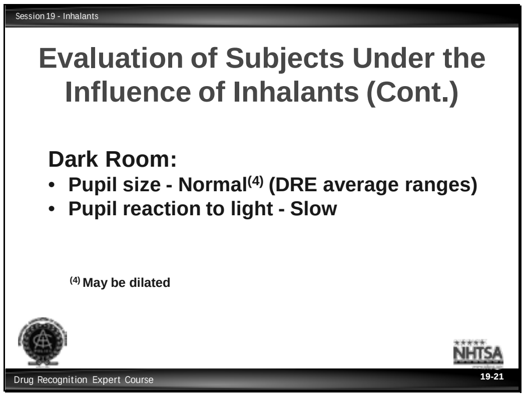
Pulse increase is due to many factors, including oxygen displacement. The heart may beat faster in order to supply body tissues with a sufficient supply of oxygen.

Blood pressure will be up or down.

Note: The Anesthetic Gases generally lower blood pressure while elevating pulse rate. The Volatile Solvents and the Aerosols usually elevate both blood pressure and pulse rate.

The lowering of blood pressure by Anesthetic Gases is due to their vasodilation effect. The heart compensates for this vasodilation by increasing its heart rate.

Effect on body temperature may be up, down or normal range.



Session 19 - Inhalants

Evaluation of Subjects Under the Influence of Inhalants (Cont.)

Dark Room:
- **Pupil size - Normal(4) (DRE average ranges)**
- **Pupil reaction to light - Slow**

(4) May be dilated

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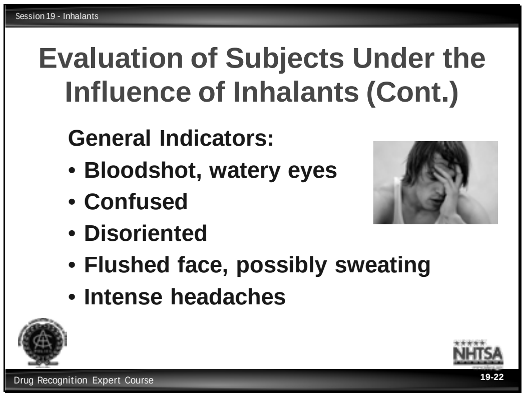
Notes:

Dark Room

Pupil size will be normal (DRE Average Ranges) but may be dilated.

Anesthetic gases may produce some dilation, although usually not to the extent seen with CNS Stimulants or Hallucinogens. No Inhalants produce pupillary constriction.



Session 19 - Inhalants

Evaluation of Subjects Under the Influence of Inhalants (Cont.)

General Indicators:

- **Bloodshot, watery eyes**
- **Confused**
- **Disoriented**
- **Flushed face, possibly sweating**
- **Intense headaches**

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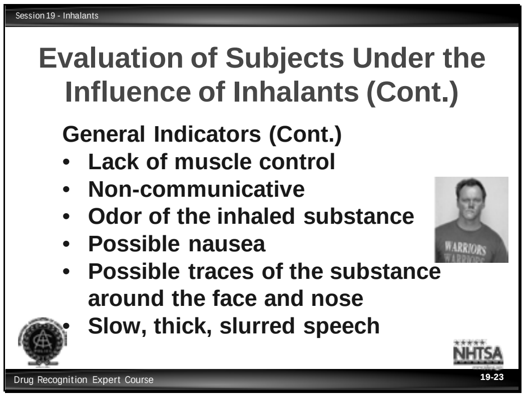
Notes:____

General Indicators

- Bloodshot, watery eyes
- Confusion
- Disoriented
- Flushed face
- Intense headaches



Session 19 - Inhalants

Evaluation of Subjects Under the Influence of Inhalants (Cont.)

General Indicators (Cont.)

- **Lack of muscle control**
- **Non-communicative**
- **Odor of the inhaled substance**
- **Possible nausea**
- **Possible traces of the substance around the face and nose**
- **Slow, thick, slurred speech**

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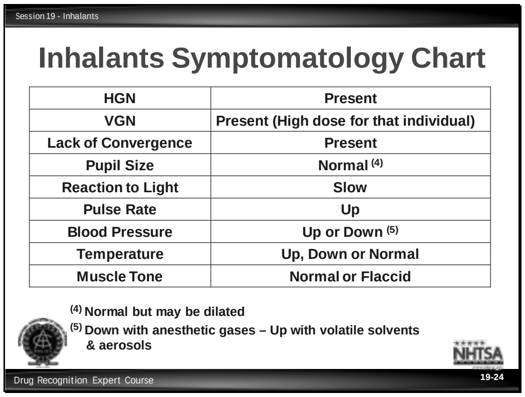
Notes:____

- Lack of muscle control
- Non-communicative
- Normal or Flaccid muscle tone
- Odor of the inhaled substance
- Possible nausea
- Residue of the substance around the face and nose and on the hands or clothing
- Slow, thick, slurred speech

Speech usually clears up quickly when substance is no longer being inhaled.



Session 19 - Inhalants

Inhalants Symptomatology Chart

HGN	Present
VGN	Present (High dose for that individual)
Lack of Convergence	Present
Pupil Size	Normal (4)
Reaction to Light	Slow
Pulse Rate	Up
Blood Pressure	Up or Down (5)
Temperature	Up, Down or Normal
Muscle Tone	Normal or Flaccid

(4) Normal but may be dilated

(5) Down with anesthetic gases – Up with volatile solvents & aerosols

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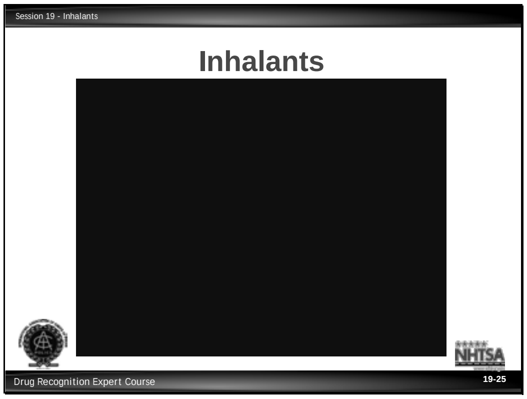
Notes:



Session 19 - Inhalants

Inhalants

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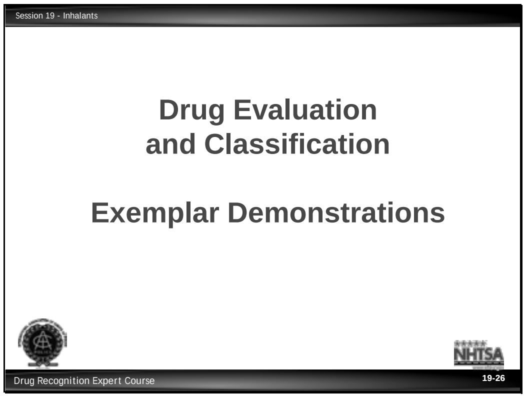
Notes:



Session 19 - Inhalants

Drug Evaluation
and Classification

Exemplar Demonstrations

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Notes:

F. Classification Exemplar

QUESTIONS?

Notes:____

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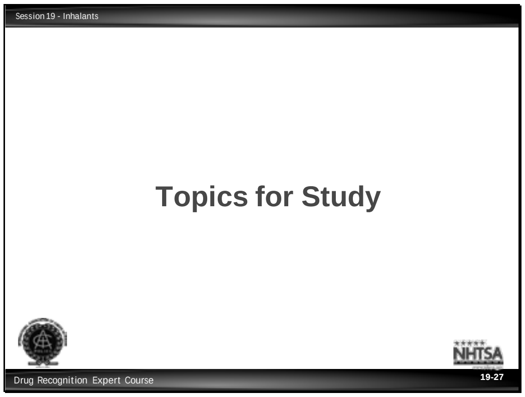


Topics for Study

Topics for Study

1. What are the three major subcategories of Inhalants?

2. What are some of the principal active ingredients in many volatile substances?

3. In what important respect do the effects of Anesthetic Gases differ from the effects of Volatile Solvents and Aerosols?

4. Do any of the subcategories of Inhalants cause pulse rate to decrease?

5. The effects of Amyl Nitrite and Butyl Nitrite last from a few seconds to up to ______ minutes.

DRUG INFLUENCE EVALUATION

Evaluator Sgt. Joe Armstrong, Missouri HP	DRE # 11850	Rolling Log # 12-07-015	**Session XIX - #1**
Recorder/Witness Sgt. Art Amato, Union PD	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-77997
Arrestee's Name (Last, First, Middle) Graves, James L.	Date of Birth 6/8/88	Sex M / Race W	Arresting Officer (Name, ID#) Trooper Blaine Adams, MO HP #7134
Date Examined / Time /Location 07/04/12 2200 Union PD	Breath Results: Results: 0.00	Test Refused ☐ Instrument #: 77880	Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

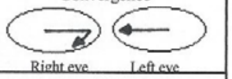
Miranda Warning Given ☒ Yes ☐ No Given By: Tpr. Adams	What have you eaten today? When? Hamburger 6PM	What have you been drinking? How much? Coke N/A	Time of last drink? N/A
Time now/ Actual 10 PM/10:10 PM	When did you last sleep? How long Last night 6 hrs.	Are you sick or injured? ☐ Yes ☒ No	Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No	Do you have any physical defects? ☐ Yes ☒ No		Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No	Attitude: Cooperative		Coordination: Poor, unsteady, barely standing
Speech: Slurred, mumbling	Breath Odor: Paint/chemical odor		Face: Paint residue on cheeks and chin
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft	Eyes: ☐ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☒ Watery	Blindness: ☒ None ☐ Left ☐ Right	Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)	Vertical Nystagmus ☐ Yes ☒ No	Able to follow stimulus ☒ Yes ☐ No	Eyelids ☒ Normal ☐ Droopy

Pulse and time

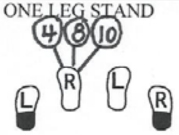
1. 104 / 2215
2. 102 / 2234
3. 104 / 2250

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	30	30

Convergence



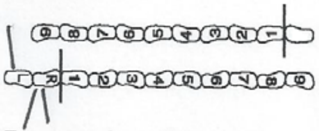
ONE LEG STAND



Modified Romberg Balance

Test stopped

Walk and Turn test



Test stopped - could not stand

Cannot keep balance ✓✓✓

Starts too soon

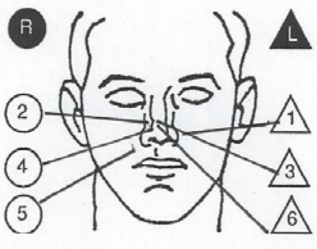
	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken		

L	R	
☑	☐	Sways while balancing
☑	☐	Uses arms to balance
☐	☐	Hopping
✓☑	☐	Puts foot down

Stopped - fell into wall

Internal clock N/A estimated as 30 seconds	Describe Turn N/A	Cannot do test (explain) Unable to stand heel to toe	Type of footwear: Athletic shoes

Draw lines to spots touched



Test administered in seated position

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	4.0	6.5	3.5
Right Eye	4.0	6.5	3.5

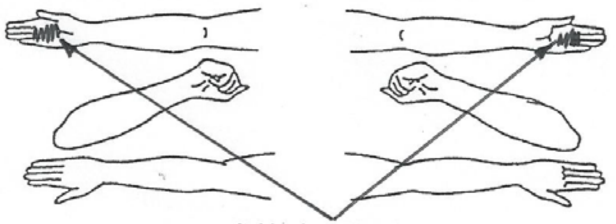
Nasal area:
Red

Oral cavity:
Odor of paint

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT:
Slow

RIGHT ARM **LEFT ARM**



Gold paint on hands

Blood pressure 140/100	Temperature 98.6

Muscle tone:
☒ Normal ☐ Flaccid ☐ Rigid

Comments:

What drugs or medications have you been using? "I huffed some Gold."	How much? "The usual"	Time of use? 9:30 pm	Where were the drugs used? (Location) In the park
Date / Time of arrest: 07/04/12 2130	Time DRE was notified: 2145	Evaluation start time: 2200	Evaluation completion time: 2310
Precinct/Station:			
Officer's Signature:	DRE # 11850	Reviewed/approved by / date:	

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ■ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Graves, James L.

1. **LOCATION:** The evaluation was conducted at the Union Police Department.

2. **WITNESSES:** Sgt. Art Amato of the Union PD witnessed the evaluation.

3. **BREATH ALCOHOL TEST:** Graves had a breath test of 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was requested to contact Trooper Adams at the Union Police Department for a drug evaluation. Trooper Adams advised he arrested Graves for DUI after observing him fail to stop at a red traffic light at Main and 3rd Street. The suspect was cooperative but appeared dazed. He performed poorly on the SFST's and was arrested for DUI. A can of gold spray paint was located on the front seat of the suspect's vehicle along with some paint soaked rags.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the P.D. He appeared passive and dazed. He had very poor coordination and balance. Gold paint smears were visible on his hands and face.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: The suspect was unable to perform the test and it was stopped for safety reasons. Walk & Turn: The suspect lost his balance three times and the test was stopped for safety reasons. One Leg Stand: The suspect put his foot down three times while standing on the left foot and the test was stopped. He was unable to perform the test when attempting to stand on the right foot and the test was stopped for safety reasons. Finger to Nose: The suspect was allowed to sit down for this test. He used the palm of his hands and touched in the general area of his nose.

8. **CLINICAL INDICATORS:** The suspect had six clues of HGN with a 30 degree angle of onset and a Lack of Convergence. His pulse and blood pressure were elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** Paint-like odor on his breath. Paint smears on hands and face.

10. **SUSPECT'S STATEMENTS:** Suspect admitted "huffing" some gold spray paint in his car while in the park to celebrate the 4th of July.

11. **DRE'S OPINION:** In my opinion Graves is under the influence of an **Inhalant** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**

DRUG INFLUENCE EVALUATION

Evaluator Trooper Marc Griggs, Iowa State Patrol	DRE # 8332	Rolling Log # 12-08-124	**Session XIX - #2**
Recorder/Witness Sgt. Russ Belz, Story Co. S.O.	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-12859

Arrestee's Name (Last, First, Middle) Mashburn, Cathy L.	Date of Birth 9/1/88	Sex F	Race W	Arresting Officer (Name, ID#) Trooper Bryan Beckman, IA SP #9990

Date Examined / Time /Location 08/07/12 2015 Story Co. Jail	Breath Results: Test Refused ☐ Results: 0.00 Instrument #: 16670	Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐	

Miranda Warning Given Given By: Trooper Beckman	☒ Yes ☐ No	What have you eaten today? When? Pizza After work	What have you been drinking? Wine coolers	How much? "A couple"	Time of last drink? 7 PM

Time now/ Actual 9pm/8:10 pm	When did you last sleep? How long Last night 7 hrs.	Are you sick or injured? ☒ Yes ☐ No "I feel dizzy"	Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No	Do you have any physical defects? ☐ Yes ☒ No	Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No	Attitude: Cooperative, slow to respond	Coordination: Poor, staggering at times
Speech: Slow, slurred	Breath Odor: Paint-like odor	Face: Flushed

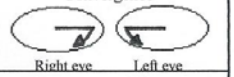
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft	Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☒ Watery	Blindness: ☒ None ☐ Left ☐ Right	Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)	Vertical Nystagmus ☐ Yes ☒ No	Able to follow stimulus ☒ Yes ☐ No	Eyelids ☒ Normal ☐ Droopy

Pulse and time

1. 100 / 2028
2. 100 / 2100
3. 96 / 2120

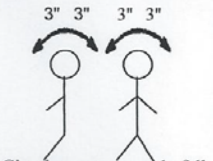
HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	35	35

Convergence



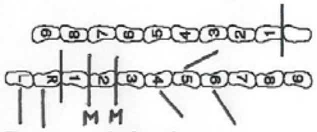
ONE LEG STAND

Modified Romberg Balance



Circular sway – nearly fell

Walk and Turn test



Test stopped after six steps

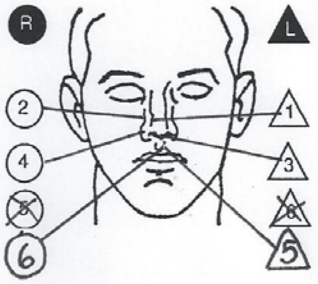
	1st Nine	2nd Nine
Cannot keep balance	✓✓	
Starts too soon		
Stops walking		
Misses heel-toe	✓✓	
Steps off line	✓✓✓	
Raises arms	✓✓	
Actual steps taken	6	

L	R	
☑	☐	Sways while balancing
☑	☐	Uses arms to balance
☐	☐	Hopping
☑	☐	Puts foot down

Test stopped

Internal clock 19 estimated as 30 seconds	Describe Turn N/A	Cannot do test (explain) Stopped - nearly fell	Type of footwear: Sandals

Draw lines to spots touched



PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	5.0	6.5	4.5
Right Eye	5.0	6.5	4.5

Nasal area:
Runny nose, red

Oral cavity:
Paint like odor

REBOUND DILATION ☐ Yes ☒ No

REACTION TO LIGHT: Normal

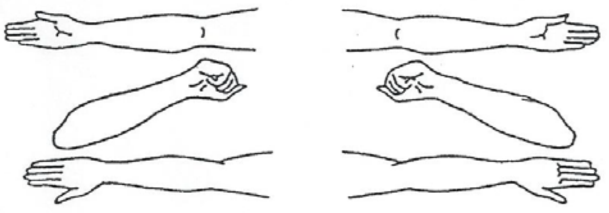
Blood pressure
146/104

Temperature
98.8

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid

Comments:

RIGHT ARM **LEFT ARM**



Nothing observed

What drugs or medications have you been using? "I don't do drugs."	How much? N/A	Time of use? Refused	Where were the drugs used? (Location) Refused

Date / Time of arrest: 08/07/12 1940	Time DRE was notified: 1955	Evaluation start time: 2015	Evaluation completion time: 2140	Precinct/Station:

Officer's Signature:	DRE # 8332	Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ■ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Mashburn, Cathy

1. **LOCATION:** The evaluation was conducted at the Story County Jail.

2. **WITNESSES:** The evaluation was recorded by Sergeant Russ Belz of the Story CO SO.

3. **BREATH ALCOHOL TEST:** Mashburn's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was notified by radio to contact Trooper Beckman at the Story County Jail for a drug evaluation. Trooper Beckman advised he arrested Mashburn after observing her pull out in front of oncoming traffic nearly causing a crash. The suspect was cooperative but slow to respond to questions. She performed poorly on the SFST's and was arrested for DUI. After arresting her, Trooper Beckman located a can of paint remover and several rags in her vehicle.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the jail. Her speech was slow and slurred. Her coordination was poor and she staggered several times. Her eyes were watery and bloodshot.

6. **MEDICAL PROBLEMS AND TREATMENT:** The suspect stated she felt dizzy.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: The suspect had an approximate 3" circular sway and she estimated 30 seconds in 19 seconds. Walk & Turn: The suspect lost her balance twice during the instructions, staggered and nearly fell. The test was stopped after six steps when she again nearly fell. One Leg Stand: After putting her right foot down three times and nearly falling, the test was stopped. Finger to Nose: The suspect had difficulty with this test. She touched the tip of her nose on one of the six attempts. She also used the wrong hand on attempts #5 and #6.

8. **CLINICAL INDICATORS:** The suspect had six clues of HGN and a Lack of Convergence. Her pulse rates and blood pressure were elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** The suspect had a red, runny nose. Her eyes were bloodshot and watery. She also had a paint-like odor on her breath and clothing.

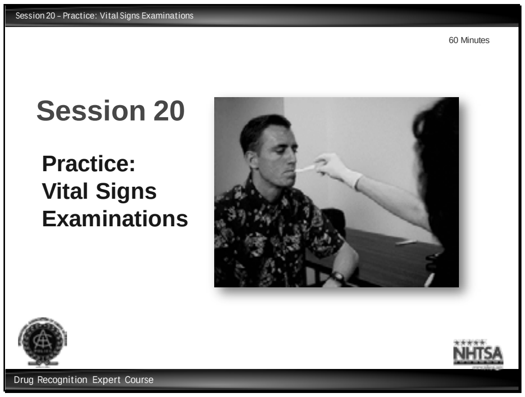
10. **SUSPECT'S STATEMENTS:** Suspect admitted drinking a "couple of wine coolers" but denied using any other substances.

11. **DRE'S OPINION:** In my opinion Mashburn is under the influence of an **Inhalant** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

Participant Manual DRE 7-Day Session 20 – Practice: Vital Signs Examinations



Session 20 – Practice: Vital Signs Examinations

60 Minutes

Session 20

Practice:
Vital Signs
Examinations

Drug Recognition Expert Course

Notes:____

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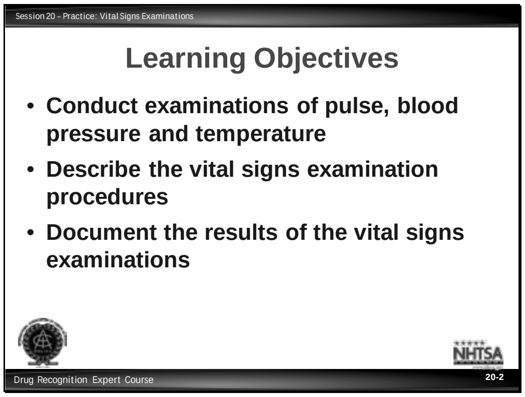

Session 20 – Practice: Vital Signs Examinations

Learning Objectives

- **Conduct examinations of pulse, blood pressure and temperature**
- **Describe the vital signs examination procedures**
- **Document the results of the vital signs examinations**

Drug Recognition Expert Course

20-2

Notes:____

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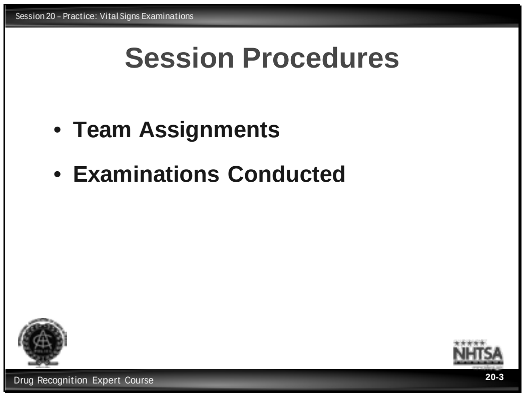
Upon successfully completing this session the participant will be able to:

- Conduct examinations of pulse, and blood pressure.
- Describe the vital signs examination procedures.
- Document the results of the vital signs examinations.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Procedures for this Session	Instructor Led Presentations
B. Pulse Measurements	Participant Hands-On Practice
C. Blood Pressure Measurements	Instructor Led Coaching
D. Session Wrap-Up	Participant Led Coaching



Session 20 – Practice: Vital Signs Examinations

Session Procedures

- Team Assignments
- Examinations Conducted

Drug Recognition Expert Course

20-3

Notes:____

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A. Procedures for this Session

Team Assignments

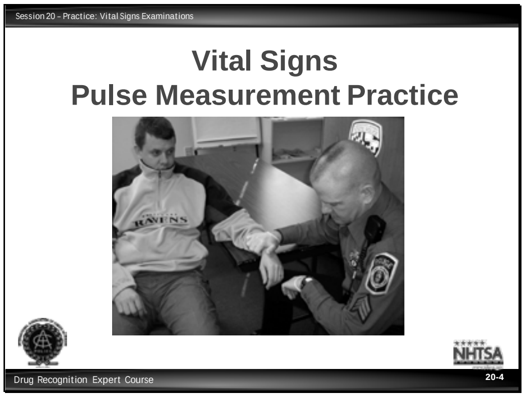
Participants will work in three or four member teams.

At any given time, one member of the team will be engaged in conducting and recording vital signs examinations of another member.

The remaining member(s) will help coach and critique the participant who is conducting the examinations.

Participants will take turns serving as test administrator, test subject, and coach.

Participants will record their measurements using the *Vital Signs Examination Data Sheet.*



Session 20 – Practice: Vital Signs Examinations

Vital Signs
Pulse Measurement Practice

Drug Recognition Expert Course

20-4

Notes:____

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B. Pulse Measurements

Vital Signs Practice

Teams initially will practice taking one another’s pulse.

Pulse Measurements

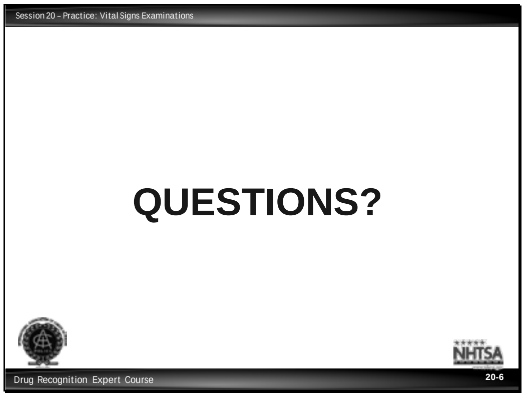
Session 20 – Practice: Vital Signs Examinations

Vital Signs
Blood Pressure Measurement

Drug Recognition Expert Course

Notes:

C. Blood Pressure Measurements



Session 20 – Practice: Vital Signs Examinations

QUESTIONS?

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Notes:

D. Session Wrap-Up

VITAL SIGNS EXAMINATIONS DATA SHEET

EXAMINER'S NAME:

DATE _______/_______/

PULSE MEASUREMENTS

SUBJECT'S NAME ________________

TIME _____________________________

PULSE POINT USED ______________

BEATS PER MINUTES ____________

SUBJECT'S NAME ________________

TIME _____________________________

PULSE POINT USED ______________

BEATS PER MINUTES ____________

SUBJECT'S NAME ________________

TIME _____________________________

PULSE POINT USED ______________

BEATS PER MINUTES ____________

BLOOD PRESSURE MEASUREMENTS

SUBJECT'S NAME____________________

TIME ________________________________

SYSTOLIC ____________________________

DIASTOLIC ___________________________

SUBJECT'S NAME ____________________

TIME _________________________________

SYSTOLIC _____________________________

DIASTOLIC ____________________________

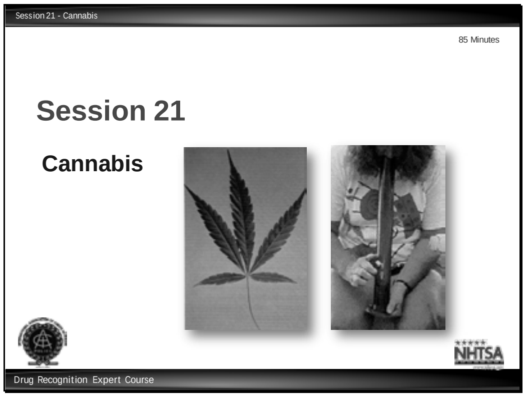
SUBJECT'S NAME _____________________

TIME __________________________________

SYSTOLIC ______________________________

DIASTOLIC _____________________________

Participant Manual DRE 7-Day Session 21 – Cannabis



Session 21 - Cannabis

85 Minutes

Session 21

Cannabis

Drug Recognition Expert Course

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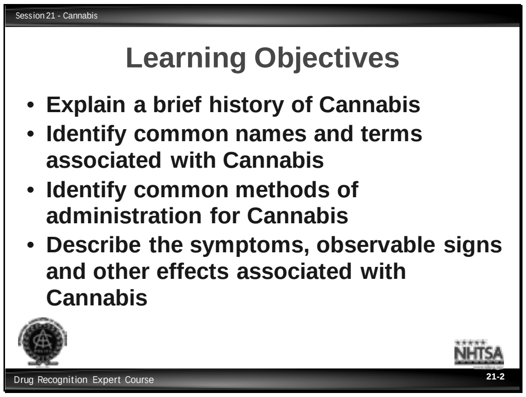

Session 21 - Cannabis

Learning Objectives

- Explain a brief history of Cannabis
- Identify common names and terms associated with Cannabis
- Identify common methods of administration for Cannabis
- Describe the symptoms, observable signs and other effects associated with Cannabis

Drug Recognition Expert Course

21-2

Notes:____

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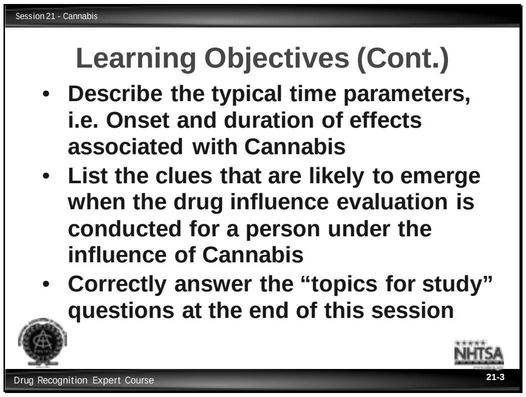
- Upon successfully completing this session the participant will be able to:
- Explain a brief history of Cannabis.
- Identify common names and terms associated with Cannabis.
- Identify common methods of administration for Cannabis.
- Describe the symptoms, observable signs and other effects associated with Cannabis.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Overview of the Category	Instructor-Led Presentations
B. Possible Effects of Cannabis	Review of the Drug Evaluation and Classification Exemplars
C. Onset and Duration of Effects	Reading Assignments
D. Overdose Signs and Symptoms	Video Presentation
E. Expected Results of the Evaluation	Slide Presentations
F. Classification Exemplars	



Session 21 - Cannabis

Learning Objectives (Cont.)

- **Describe the typical time parameters, i.e. Onset and duration of effects associated with Cannabis**
- **List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of Cannabis**
- **Correctly answer the "topics for study" questions at the end of this session**

Drug Recognition Expert Course 21-3

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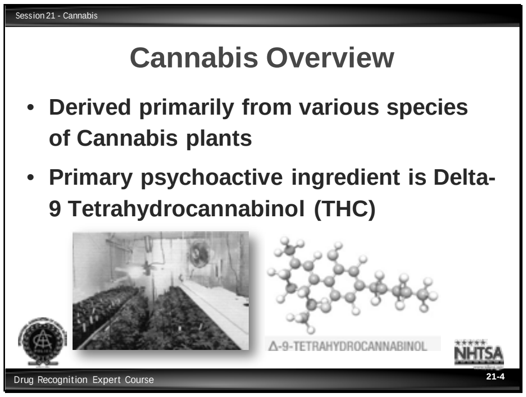
- Describe the typical time parameters, i.e. onset and duration of effects associated with Cannabis.
- List the clues that are likely to emerge when the drug influence evaluation is conducted for a person under the influence of this drug category.
- Correctly answer the “topics for study” questions at the end of this session.



Session 21 - Cannabis

Cannabis Overview

- **Derived primarily from various species of Cannabis plants**
- **Primary psychoactive ingredient is Delta-9 Tetrahydrocannabinol (THC)**

Δ-9-TETRAHYDROCANNABINOL

Drug Recognition Expert Course 21-4

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A. Overview of the Category

“Cannabis” is a category of drugs derived primarily from various species of Cannabis plants, such as Cannabis Sativa and Cannabis Indica. Note that some jurisdictions as well as botanists don’t recognize Cannabis Indica as a separate plant species.

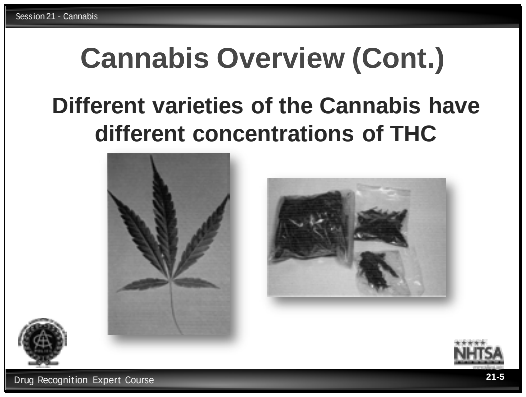
Cannabis grows readily throughout the temperate zones of the world.

It has been cultivated for centuries.

Example: At the first permanent English settlement in America, Jamestown, VA, where it was grown to produce hemp.

The primary psychoactive ingredient in Cannabis is Delta-9 Tetrahydrocannabinol.

THC is found principally in the leaves and flowers of the plant rather than in the stem or branches.



Session 21 - Cannabis

Cannabis Overview (Cont.)

Different varieties of the Cannabis have different concentrations of THC

Drug Recognition Expert Course

21-5

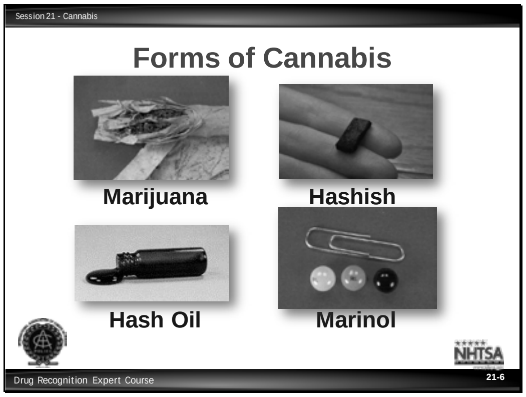
Notes:

Different varieties of the Cannabis have different concentrations of THC.

Source: Drug ID Bible, 2008.

One variety that has a relatively high concentration of THC is Sinsemilla, which is the unfertilized female Cannabis Sativa plant.

Explanatory note: “Sinsemilla” in Spanish means “without seeds.”



Session 21 - Cannabis

Forms of Cannabis

Marijuana

Hashish

Hash Oil

Marinol

Drug Recognition Expert Course

Notes:____

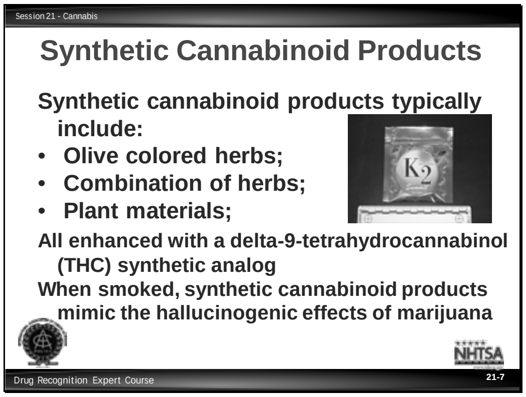
Forms of Cannabis

There are four principal forms of Cannabis.

- Marijuana – the dried leaves of the plant.
- Hashish – a form of Cannabis made from the dried and pressed resin of a marijuana plant.
- Hash Oil – sometimes referred to as “marijuana oil,” it is a highly concentrated syrup-like oil extracted from Marijuana. It is normally produced by soaking Marijuana in a container of solvent, such as acetone or alcohol for several hours after the solvent has evaporated. A thick syrup-like oil is produced with a higher THC content. The average THC content of hash oil seized in the U.S. in 2010 was 29.89%.

Source: Drug Identification Bible, 2012.

- Marinol (or Dronabinol) – a synthetic form of THC. This is a prescription drug used to treat nausea and vomiting. It is prescribed for certain cancer patients undergoing chemotherapy.
- “Dronabinol” is the generic or chemical name for the synthetic THC.
- “Marinol” is a trade name for Dronabinol.
- “Nabilone – an analog of Dronabinol used as an anti-vomiting agent. Trade name: Cesamet



Session 21 - Cannabis

Synthetic Cannabinoid Products

Synthetic cannabinoid products typically include:

- Olive colored herbs;
- Combination of herbs;
- Plant materials;

All enhanced with a delta-9-tetrahydrocannabinol (THC) synthetic analog

When smoked, synthetic cannabinoid products mimic the hallucinogenic effects of marijuana

Drug Recognition Expert Course

21-7

Notes:____

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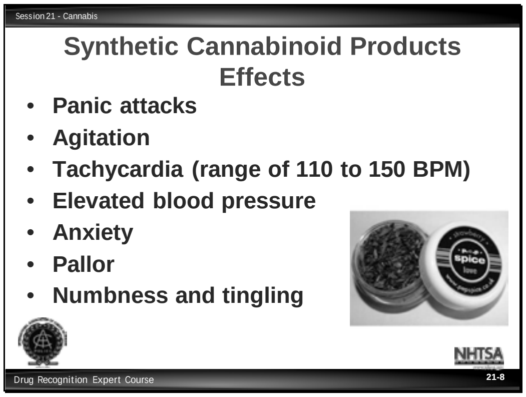
Synthetic Cannabinoid Products

Synthetic cannabinoid products typically include olive colored herbs, combination of herbs, or plant materials enhanced with a delta-9-tetrahydrocannabinol (THC) synthetic analog. When smoked, synthetic cannabinoid products mimic the hallucinogenic effects of marijuana.



Session 21 - Cannabis

Synthetic Cannabinoid Products Effects

- Panic attacks
- Agitation
- Tachycardia (range of 110 to 150 BPM)
- Elevated blood pressure
- Anxiety
- Pallor
- Numbness and tingling

Drug Recognition Expert Course

21-8

Notes:____

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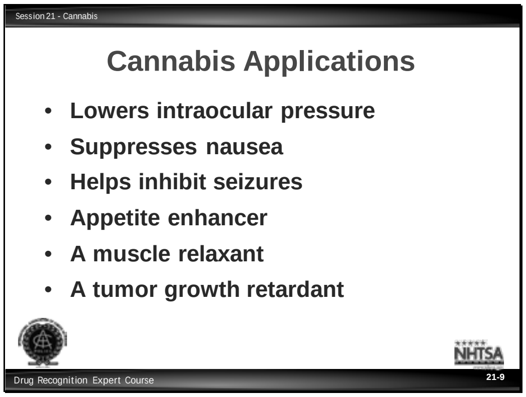
Synthetic Cannabinoid Products Effects

They have many adverse effects that include:

- Panic attacks
- Agitation
- Tachycardia (range of 110 to 150 BPM)
- Elevated blood pressure
- Anxiety
- Pallor
- Numbness and tingling

User report effects lasting between 30 minutes and 2 hours.

Common brand names for synthetic cannabinoids include K2, Spice, Spice Gold, Spice Diamond, Yucatan fire, Solar Flare, K2 Summit, Genie, PEP Spice, and Fire n Ice, to name a few.



Session 21 - Cannabis

Cannabis Applications

- Lowers intraocular pressure
- Suppresses nausea
- Helps inhibit seizures
- Appetite enhancer
- A muscle relaxant
- A tumor growth retardant

Drug Recognition Expert Course

21-9

Notes:

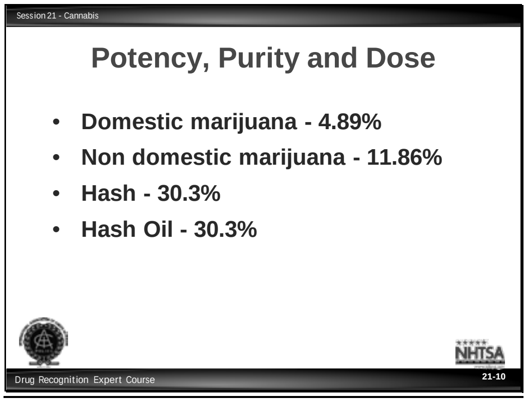
Cannabis Applications

Cannabis has some limited medical applications.

- It lowers intraocular pressure, which can be helpful for glaucoma patients. “Intraocular” – within the eyeball.
  Cannabis lowers the intraocular pressure by dilating in size the blood vessels of the eyes (more size – less pressure). This causes reddening of the conjunctiva. Conjunctiva is the clear membrane of the sclera (white portion of the eye) and lines the inside of the eyelids and is made of lymphoid tissue. Conjunctivae refers to both eyes. Conjunctiva is singular.
- It suppresses nausea, and sometimes is recommended for cancer patients to relieve the nausea accompanying chemotherapy.
- Cannabidiol, a non-psychoactive ingredient found in Cannabis, is used in treating Epilepsy; it helps to inhibit seizures.

Cannabis has also had some limited medical application as:

- An appetite enhancer for victims of Anorexia Nervosa.
- A muscle relaxant.
- A tumor growth retardant.



Session 21 - Cannabis

Potency, Purity and Dose

- **Domestic marijuana - 4.89%**
- **Non domestic marijuana - 11.86%**
- **Hash - 30.3%**
- **Hash Oil - 30.3%**

Drug Recognition Expert Course

21-10

Notes:

Potency, Purity and Dose

Average THC Concentration in marijuana:

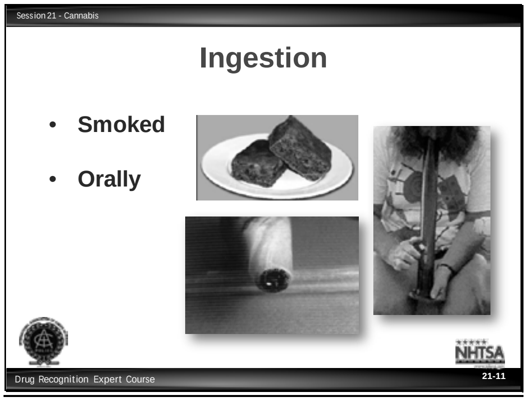
- Domestic marijuana – 4.89%
- Non domestic marijuana - 11.86%
- Hash - 30.3%
- Hash Oil - 30.3%

Source: Drug Identification Bible, 2012

Note: THC levels can vary greatly depending upon areas of the country.

Recreational doses are highly variable.

The lower the THC, the more hits required to achieve desired effects.



Session 21 - Cannabis

Ingestion

- **Smoked**
- **Orally**

Drug Recognition Expert Course

21-11

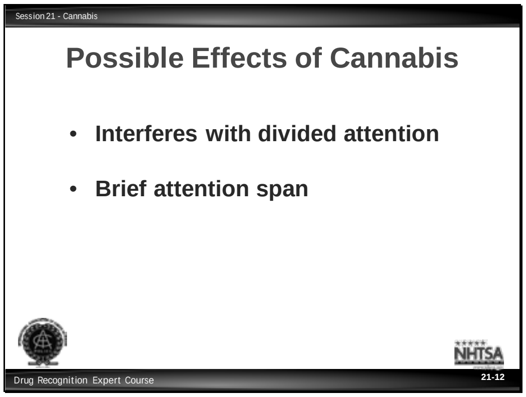
Notes:

Marijuana usually is smoked.

Marijuana, Hash and Hash Oil also can be ingested orally, for example, baked in cookies or brownies and eaten.

Research related to passive inhalation of marijuana smoke causing behavioral effects as well as measurably amounts in toxicology samples is mixed, and is generally dependent on the amount of smoke inhaled.

Source: Cannabis (Marijuana) Effects on Human Behavior and Performance, M.A. Huestis, NIDA, 2002


Session 21 - Cannabis

Possible Effects of Cannabis

- Interferes with divided attention
- Brief attention span

Drug Recognition Expert Course
NHTSA
21-12

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B. Possible Effects of Cannabis

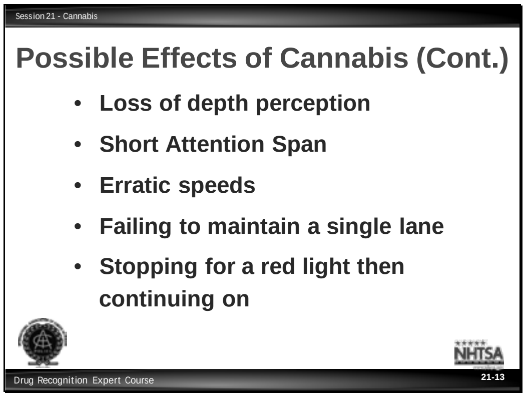
One major effect of Cannabis is that it appears to interfere with a person’s ability to divide attention.

People under the influence of Cannabis have difficulty paying attention, with brief attention spans.

In particular, they do not divide their attention very successfully.

Clarification: They have a difficult time dealing with more than one or two tasks at once.

This can make them very unsafe drivers, since driving requires the ability to divide attention among many simultaneous tasks.


Session 21 - Cannabis

Possible Effects of Cannabis (Cont.)

- Loss of depth perception
- Short Attention Span
- Erratic speeds
- Failing to maintain a single lane
- Stopping for a red light then continuing on

Drug Recognition Expert Course
NHTSA
21-13

Notes:____

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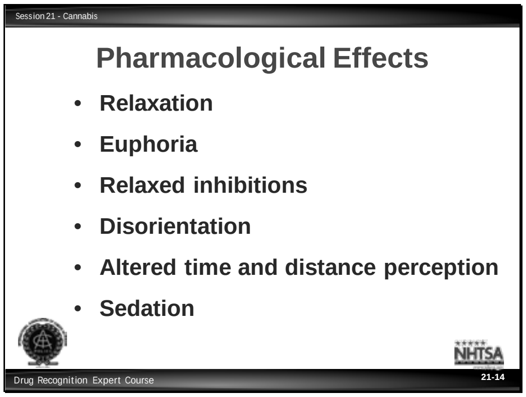
Loss of depth perception would be demonstrated by stopping improperly.

Short attention span would be indicated by erratic speeds, failing to maintain a single lane and stopping for a red light then continuing on.

People under the influence of Cannabis may attend to one or a few of these driving tasks, but simply ignore the other tasks.

Because Cannabis impairs attention, Standardized Field Sobriety Tests like Walk and Turn and One Leg Stand are excellent tools for recognizing people under the influence of Cannabis.



Session 21 - Cannabis

Pharmacological Effects

- Relaxation
- Euphoria
- Relaxed inhibitions
- Disorientation
- Altered time and distance perception
- Sedation

Drug Recognition Expert Course

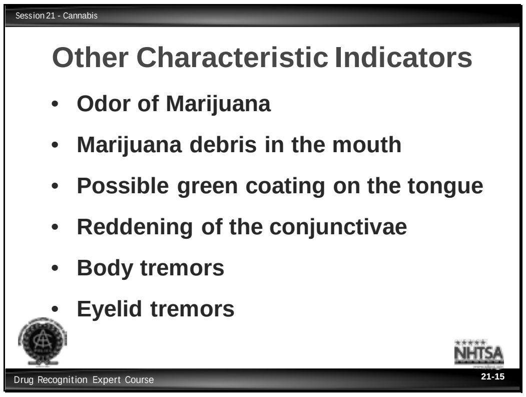
21-14

Notes:

Pharmacological Effects of Cannabis:

Effects will vary with dose, route of administration, experience of user, and other factors.

- Relaxation
- Euphoria
- Relaxed inhibitions
- Disorientation
- Altered time and distance perception
- Sedation



Session 21 - Cannabis

Other Characteristic Indicators

- Odor of Marijuana
- Marijuana debris in the mouth
- Possible green coating on the tongue
- Reddening of the conjunctivae
- Body tremors
- Eyelid tremors

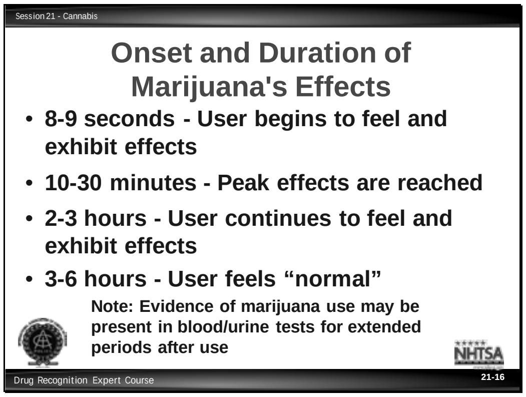
Drug Recognition Expert Course

21-15

Notes:

Other characteristic indicators:

- Odor of Marijuana
- Marijuana debris in the mouth
- Possible green coating on the tongue
- Reddening of the conjunctivae
- Body tremors
- Eyelid tremors



Session 21 - Cannabis

Onset and Duration of Marijuana's Effects

- **8-9 seconds - User begins to feel and exhibit effects**
- **10-30 minutes - Peak effects are reached**
- **2-3 hours - User continues to feel and exhibit effects**
- **3-6 hours - User feels "normal"**

Note: Evidence of marijuana use may be present in blood/urine tests for extended periods after use

Drug Recognition Expert Course

21-16

Notes:

C. Onset and Duration of Effects

Persons begin to feel and exhibit the effects within 8 – 9 seconds after smoking Marijuana.

The effects reach their peak within 10 – 30 minutes.

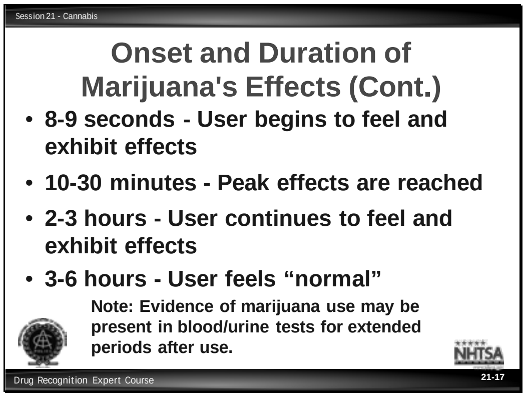
- A 1985 Stanford University study showed that pilots had difficulty in holding patterns and in lining up with runways for up to 24 hours after using Marijuana.

Depending on the amount smoked and on the concentration of THC in the Marijuana, the person will continue to feel and exhibit the effects for 2 – 3 hours.

- In 1990, a second Stanford University study showed: Marijuana impaired performance at .25, 4, 8, and 24 hours after smoking. While 7 of the 9 pilots showed some degree of impairment at 24 hours after smoking Cannabis, only one reported any awareness of the drug's effects.

Generally, the person will feel "normal" within 3 – 6 hours after smoking Marijuana.

- The user may be impaired long after the euphoric feelings have ceased.



Session 21 - Cannabis

Onset and Duration of Marijuana's Effects (Cont.)

- **8-9 seconds - User begins to feel and exhibit effects**
- **10-30 minutes - Peak effects are reached**
- **2-3 hours - User continues to feel and exhibit effects**
- **3-6 hours - User feels "normal"**

Note: Evidence of marijuana use may be present in blood/urine tests for extended periods after use.

Drug Recognition Expert Course

21-17

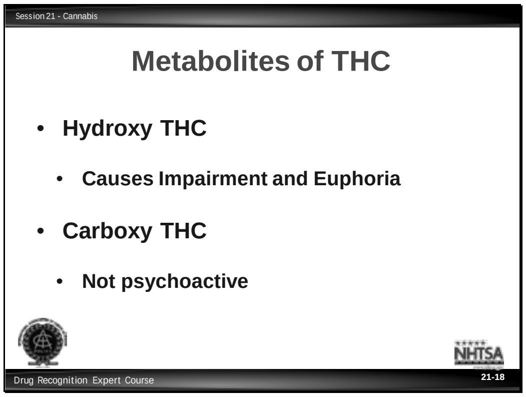
Notes:

Note that blood and urine tests will continue to disclose evidence of the use of Marijuana long after the effects of Marijuana have disappeared.

- Blood tests may disclose Marijuana use for at least 3 days after smoking.

Source: NIDA Study, "Blood Brain Barrier."

- Urine tests may indicate the presence of metabolites of THC for a month or more.



Session 21 - Cannabis

Metabolites of THC

- Hydroxy THC
  - Causes Impairment and Euphoria
- Carboxy THC
  - Not psychoactive

Drug Recognition Expert Course

21-18

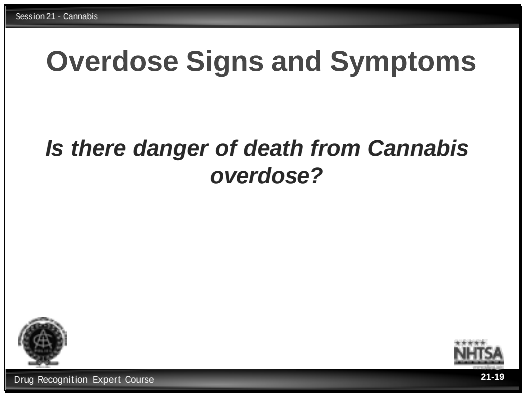
Notes:____

There are two important metabolites, or chemical byproducts of THC.

- Hydroxy THC, which causes the user to feel euphoric.
- Carboxy THC, there is no evidence at this time that it is psychoactive.
- Hydroxy THC usually is eliminated from the blood plasma within six hours.
- Carboxy THC may be found in the blood plasma for several days following Marijuana use.

Cannabis is a fat soluble (i.e. it dissolves easily into fatty tissue); therefore, it can remain for long periods in the brain tissue, which is about one-third fat.

Cannabis principally is eliminated from the body in feces and urine.



Session 21 - Cannabis

Overdose Signs and Symptoms

Is there danger of death from Cannabis overdose?

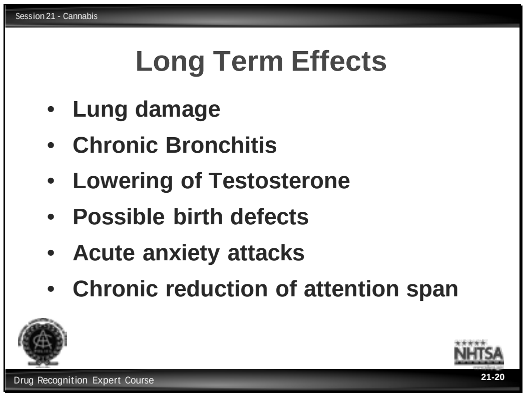
Drug Recognition Expert Course

21-19

Notes:____

D. Overdose Signs and Symptoms

Excessive or long term use of Marijuana can have very undesirable consequences.



Session 21 - Cannabis

Long Term Effects

- Lung damage
- Chronic Bronchitis
- Lowering of Testosterone
- Possible birth defects
- Acute anxiety attacks
- Chronic reduction of attention span

Drug Recognition Expert Course

21-20

Notes:____

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Marijuana has been observed to produce sharp personality changes, especially in adolescent users.

It can create paranoia and possible psychosis.

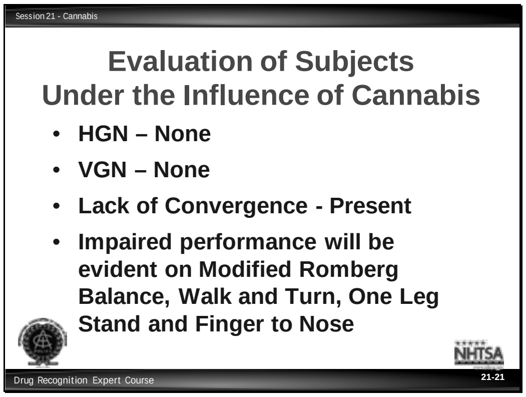
Long term effects include:

- Lung damage
- Chronic Bronchitis
- Lowering of Testosterone (male sex hormone)
- Possible birth defects, still births and infant deaths
- Acute anxiety attacks
- Chronic reduction of attention span

Research indicates that life threatening overdoses rarely if ever occur.

Withdrawal – is similar to alcohol dependence withdrawal

Physical dependence can occur with chronic use



Session 21 - Cannabis

Evaluation of Subjects Under the Influence of Cannabis

- **HGN – None**
- **VGN – None**
- **Lack of Convergence - Present**
- **Impaired performance will be evident on Modified Romberg Balance, Walk and Turn, One Leg Stand and Finger to Nose**

Drug Recognition Expert Course

21-21

Notes:____

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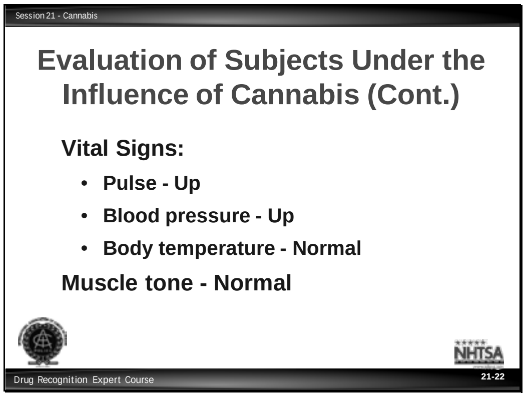
E. Expected Results of the Evaluation

Observable Evidence of Impairment

Clinical Indicators

- Neither Horizontal Gaze nor Vertical Gaze Nystagmus will be present.
- Lack of Convergence generally will be present.
- Performance on the Modified Romberg Balance, Walk and Turn, One Leg Stand, and Finger to Nose tests will be impaired.



Session 21 - Cannabis

Evaluation of Subjects Under the Influence of Cannabis (Cont.)

Vital Signs:

- **Pulse - Up**
- **Blood pressure - Up**
- **Body temperature - Normal**

Muscle tone - Normal

Drug Recognition Expert Course

21-22

Notes:____

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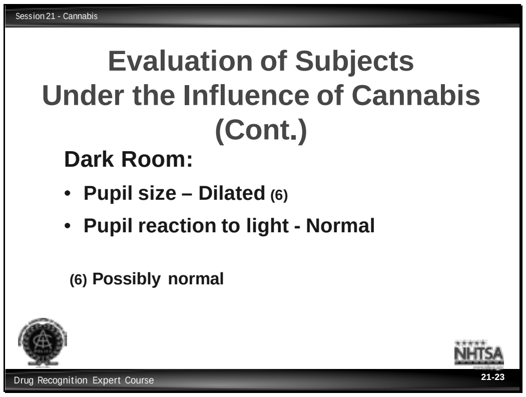
Vital Signs:

- Pulse generally will be elevated.
- Blood pressure generally will be elevated.
- Body temperature will be normal.
- Muscle tone will be normal.



Session 21 - Cannabis

Evaluation of Subjects Under the Influence of Cannabis (Cont.)

Dark Room:

- **Pupil size – Dilated (6)**
- **Pupil reaction to light - Normal**

(6) Possibly normal

Drug Recognition Expert Course

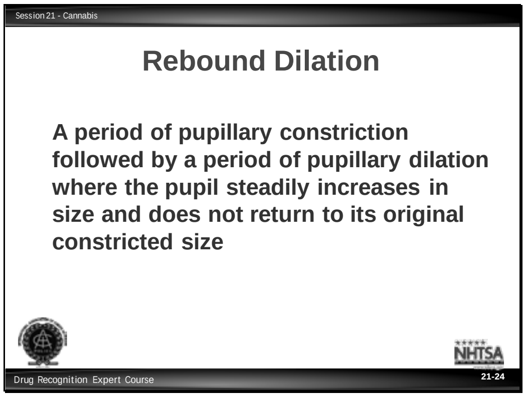
21-23

Notes:____

Pupil size generally will be dilated or possibly normal (within DRE average ranges).

- The content and potency could effect pupil size. The higher THC content will increase the likelihood of pupil dilation. However, Cannabis does not cause pupil constriction.
- Government grown Cannabis has low THC levels. Studies using it tend to show a normal range for pupil size.

Pupil reaction to light will be normal.



Session 21 - Cannabis

Rebound Dilation

A period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size

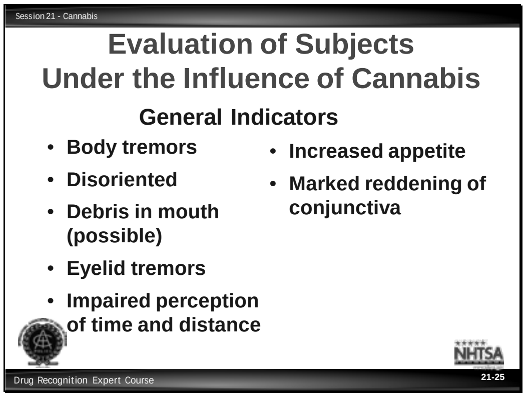
Drug Recognition Expert Course

21-24

Notes:____

DREs report a phenomenon termed “Rebound Dilation” in subjects under the influence of Cannabis.

Clarification: “Rebound Dilation” is a period of pupillary constriction followed by a period of pupillary dilation where the pupil steadily increases in size and does not return to its original constricted size.



Session 21 - Cannabis

Evaluation of Subjects Under the Influence of Cannabis

General Indicators

- Body tremors
- Disoriented
- Debris in mouth (possible)
- Eyelid tremors
- Impaired perception of time and distance
- Increased appetite
- Marked reddening of conjunctiva

Drug Recognition Expert Course

21-25

Notes:____

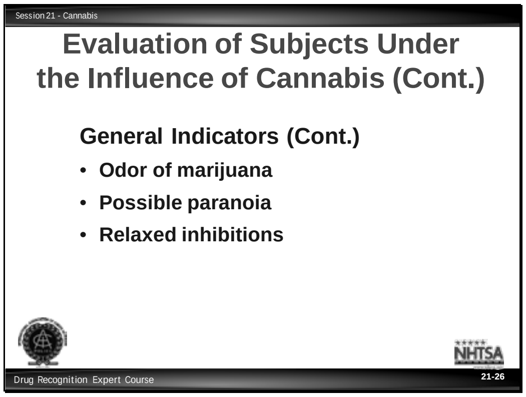
General Indicators

- Body tremors
- Disoriented
- Debris in the mouth

Note: Occasionally some users of Marijuana have displayed a green coating on their tongue after recent use. However, this does not occur with all users.

- Eyelid tremors
- Impaired perception of time and distance
- Increased appetite
- Marked reddening of the conjunctivae

Visine causes vasoconstriction in the eyes and is often used to reduce reddening.



Session 21 - Cannabis

Evaluation of Subjects Under the Influence of Cannabis (Cont.)

General Indicators (Cont.)

- Odor of marijuana
- Possible paranoia
- Relaxed inhibitions

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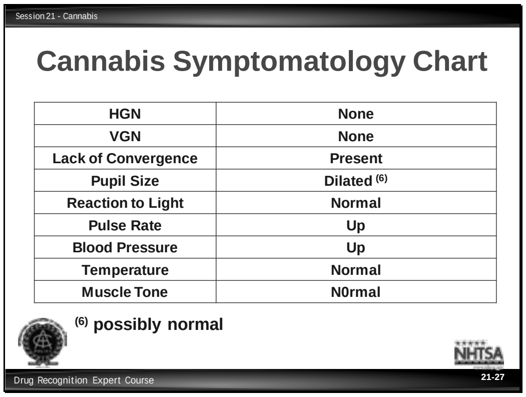
21-26

Notes:____

General Indicators (Cont.)

- Odor of Marijuana
- Possible paranoia
- Relaxed inhibitions



Session 21 - Cannabis

Cannabis Symptomatology Chart

HGN	None
VGN	None
Lack of Convergence	Present
Pupil Size	Dilated (6)
Reaction to Light	Normal
Pulse Rate	Up
Blood Pressure	Up
Temperature	Normal
Muscle Tone	N0rmal

(6) possibly normal

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Notes:____
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Symptomology Matrix

Session 21 - Cannabis

Cannabis

Drug Recognition Expert Course 21-28

Notes:____
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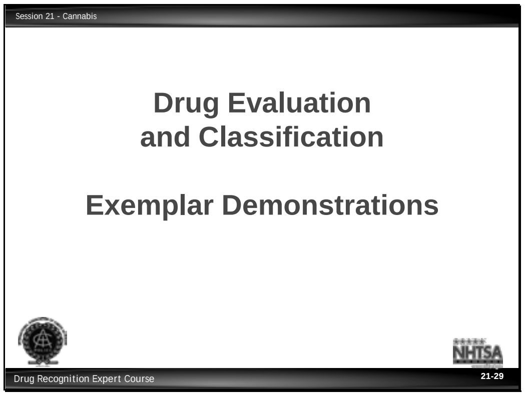

Session 21 - Cannabis

Drug Evaluation and Classification

Exemplar Demonstrations

Drug Recognition Expert Course 21-29

Notes:____
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F. Classification Exemplar

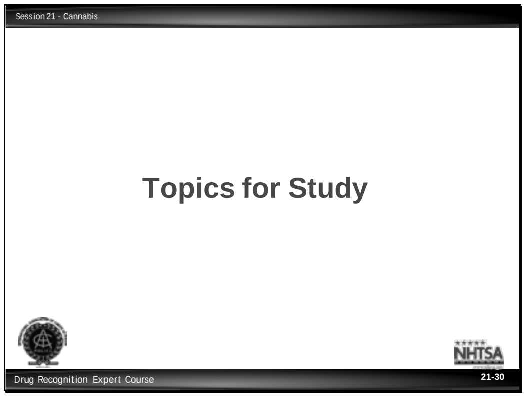
Session 21 - Cannabis

QUESTIONS?

Drug Recognition Expert Course

21-29

Notes:


Session 21 - Cannabis

Topics for Study

Drug Recognition Expert Course

21-30

Notes:

TOPICS FOR STUDY

1. What is the active ingredient in Cannabis?

2. Why are the Walk and Turn and the One Leg Stand tests excellent tools for recognizing persons under the influence of Marijuana?

3. What is Marinol?

4. What is Sinsemilla?

5. Name two important metabolites of THC, and describe how they affect the duration and perception of the effects of Cannabis.

DRUG INFLUENCE EVALUATION

Evaluator Sgt. Christopher Dudzik, Toms River PD	DRE # 15133	Rolling Log # 12-04-015	**Session XXI- #1**
Recorder/Witness Trooper Thomas Synder, NJ SP	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 347817

Arrestee's Name (Last, First, Middle) Clark, Kenneth A.	Date of Birth 5/24/84	Sex M	Race W	Arresting Officer (Name, ID#) Trooper Michael Gibson, NJ SP #14810

Date Examined / Time /Location: 04/05/12 2200 Toms River PD
Breath Results: Results: 0.00 Test Refused ☐ Instrument #: 47451
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No Given By: Tpr. Gibson
What have you eaten today? When? Couple of hot dogs 5 PM
What have you been drinking? How much? Nothing
Time of last drink? N/A

Time now/ Actual: 11:00 pm / 2205
When did you last sleep? How long: Last night 6 hrs.
Are you sick or injured? ☐ Yes ☒ No "Hell no I feel great."
Are you diabetic or epileptic? ☐ Yes ☒ No "No, are you?"

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No "I don't do drugs man."
Attitude: Boisterous, cooperative
Coordination: Unsteady, relaxed

Speech: Loud, talkative
Breath Odor: Odor of marijuana
Face: Flushed, sweaty

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☒ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

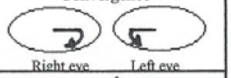
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time

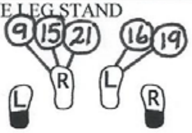
1.	94	2212
2.	92	2227
3.	92	2250

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

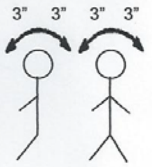
Convergence



32 ONE LEG STAND 28

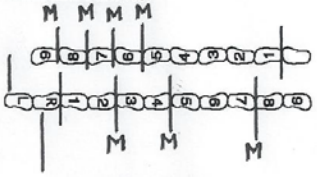


Modified Romberg Balance



Circular Sway

Walk and Turn test



Laughing during test

Cannot keep balance ✓ ✓
Starts too soon

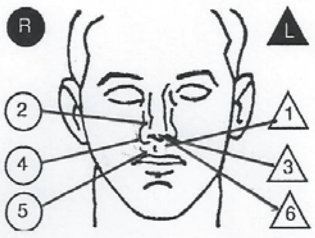
	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓✓✓	✓✓✓✓
Steps off line		
Raises arms	✓	✓✓
Actual steps taken	9	9

L	R	
☑	☑ ✓	Sways while balancing
☑	☑ ✓	Uses arms to balance
☐	☐	Hopping
✓✓ ☑	☑ ✓	Puts foot down

Laughed during the test

Internal clock: 43 estimated as 30 seconds
Describe Turn: Stopped
Cannot do test (explain): N/A
Type of footwear: Boots

Draw lines to spots touched



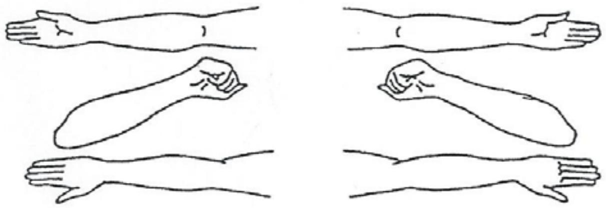
Laughing and eyelid tremors

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	5.5	9.0	5.5 - 7.0
Right Eye	5.5	9.0	5.5 - 7.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☒ Yes ☐ No
REACTION TO LIGHT: Normal

RIGHT ARM LEFT ARM



Nothing observed

Blood pressure: 154/106
Temperature: 98.6
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:

What drugs or medications have you been using? "I told you, I don't do drugs."
How much? No answer
Time of use? No answer
Where were the drugs used? (Location) "I ain't saying anything."

Date / Time of arrest: 04/05/12 2115
Time DRE was notified: 2140
Evaluation start time: 2200
Evaluation completion time: 2315
Precinct/Station:

Officer's Signature:
DRE # 15133
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ■ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Clark, Kenneth A.

1. **LOCATION:** The evaluation was conducted at the Toms River Police Department.

2. **WITNESSES:** Trooper Thomas Snyder of the NJ SP recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Clark's breath test was a 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was contacted by radio and advised to meet Trooper Gibson at the Toms River Police Department for a drug evaluation. Trooper Gibson advised he stopped Clark after observing his vehicle westbound on Hwy 37 drifting out of his traffic lane. When stopped. Clark seemed unconcerned about his driving and told Trooper Gibson that he was "just a little tired." After performing poorly on the SFST's Clark was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the PD. He was laughing a lot and several times said, "I'm not drunk man!" He was having problems with his coordination and several times he bumped into the interview table. He had a noticeable reddening of the conjunctiva.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect had a circular sway of approximately 3" and estimated 30 seconds in 43 seconds. Walk & Turn: Suspect lost his balance twice during the instructions stage, missed heel to toe three times on the first nine steps. On the return nine steps he missed heel-to-toe four times and began laughing. He also used his arms for balance. One Leg Stand: Suspect put his foot down three times while standing on the left foot and twice while standing on the right foot. He also used his arms for balance on both and laughed while completing the test. Finger to Nose: The suspect missed the tip of his nose on four of the attempts and laughed while completing the test.

8. **CLINICAL INDICATORS:** Suspect had a Lack of Convergence and Rebound Dilation. His pupils were dilated and his pulse and blood pressure were elevated.

9. **SIGNS OF INGESTION:** The suspect had an odor of marijuana on his breath and clothes.

10. **SUSPECT'S STATEMENTS:** Suspect stated, "I smoke a little pot. What's the big deal?"

11. **DRE'S OPINION:** In my opinion Clark is under the influence of a **Cannabis** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**

Rev. 01/13

DRUG INFLUENCE EVALUATION

Evaluator: Officer Robert Hayes, Albany P.D.
DRE #: 6606
Rolling Log #: 12-09-025
Session XXI-#2

Recorder/Witness: Sgt. Greg Plummer, Oregon State Police
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-09-12885

Arrestee's Name (Last, First, Middle): Peltier, Charles E.
Date of Birth: 5/16/70
Sex: M
Race: W
Arresting Officer (Name, ID#): Sr. Trooper Steve Webster, Oregon State Police #4220

Date Examined / Time /Location: 09/21/12 2325 Linn Co. Jail
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 2124
Chemical Test: Urine ☒ Blood ☐
Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Tpr. Webster
What have you eaten today? When? Hot dog 3 hours ago
What have you been drinking? Beer
How much? "I had one"
Time of last drink? 2 hours ago

Time now/ Actual: Midnight/11:30 pm
When did you last sleep? How long: Last night About 5 hrs. ago
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No "I don't take anything."
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No "Nothing man."
Attitude: Impatient, anxious
Coordination: Poor, disoriented

Speech: Slow, slurred
Breath Odor: Normal
Face: Normal

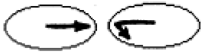
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

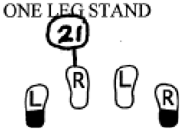
Pulse and time
1. 104 / 2338
2. 102 / 2345
3. 100 / 2358

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence



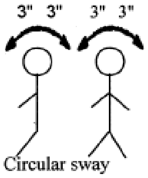
34 ONE LEG STAND 30



L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☑ Hopping
☑ ☐ Puts foot down

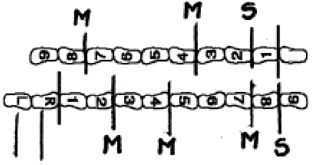
Leg tremors

Modified Romberg Balance



Circular sway
Eyelid tremors

Walk and Turn test



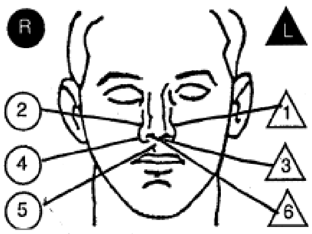
Walked slowly Leg tremors

Cannot keep balance ✓✓
Starts too soon

	1st Nine	2nd Nine
Stops walking	✓	✓
Misses heel-toe	✓✓✓	✓✓
Steps off line		
Raises arms	✓✓	✓✓✓
Actual steps taken	9	9

Internal clock: 35 estimated as 30 seconds
Describe Turn: Lost balance, stepped to the right
Cannot do test (explain): N/A
Type of footwear: Lace-up boots

Draw lines to spots touched



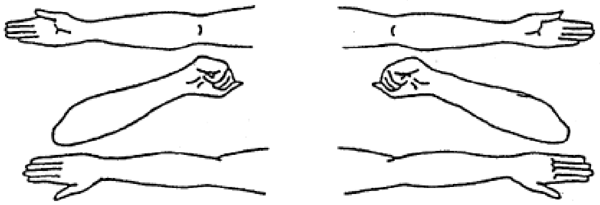
Eyelid tremors

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.5	8.0	6.0 – 7.5
Right Eye	6.5	8.0	6.0 – 7.5

Nasal area: Clear
Oral cavity: Green coating on back of tongue

REBOUND DILATION ☒ Yes ☐ No
REACTION TO LIGHT: Slow

RIGHT ARM LEFT ARM



Nothing observed

Blood pressure: 148/100
Temperature: 98.4
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:

What drugs or medications have you been using? "I told you, just a beer"
How much? N/A
Time of use? N/A
Where were the drugs used? (Location) N/A

Date / Time of arrest: 09/21/12 2210
Time DRE was notified: 2250
Evaluation start time: 2325
Evaluation completion time: 0030 09/22/12
Precinct/Station:

Officer's Signature:
DRE # 6606
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ■ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Peltier, Charles E.

1. **LOCATION:** The evaluation was conducted in the interview room at the Linn County Jail.

2. **WITNESSES:** The evaluation was witnessed and recorded by Sgt. Greg Plummer of the Oregon State Police.

3. **BREATH ALCOHOL TEST:** Peltier's breath test was a 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was dispatched to contact Sr. Trooper Webster at the Linn County Jail for a drug evaluation. Senior Trooper Webster advised he had arrested Peltier for DUI after he attempted to elude officers on I-5 south of Salem. The suspect was detained with the use of spike strips. The suspect had poor balance and coordination and after performing poorly on the SFST's he was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the jail. He seemed impatient and anxious. He had poor coordination and balance and his speech was slow and slurred.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect had an approximate 3" circular sway and estimated 30 seconds in 35 seconds. Walk & Turn: Suspect lost his balance during the instructions stage, missed heel to toe three times on the first nine steps and twice on the second nine steps. He stopped twice while walking and raised his arms for balance. One Leg Stand: Suspect swayed while balancing, used his arms for balance, put his foot down once, hopped once and had leg tremors. Finger to Nose: Suspect missed the tip of his nose on four of the six attempts and exhibited eyelid tremors.

8. **CLINICAL INDICATORS:** Suspect had a Lack of Convergence and Rebound Dilation. His pupils were dilated in room light and in direct light. His pulse and blood pressure were elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** The suspect had a green coating on his tongue.

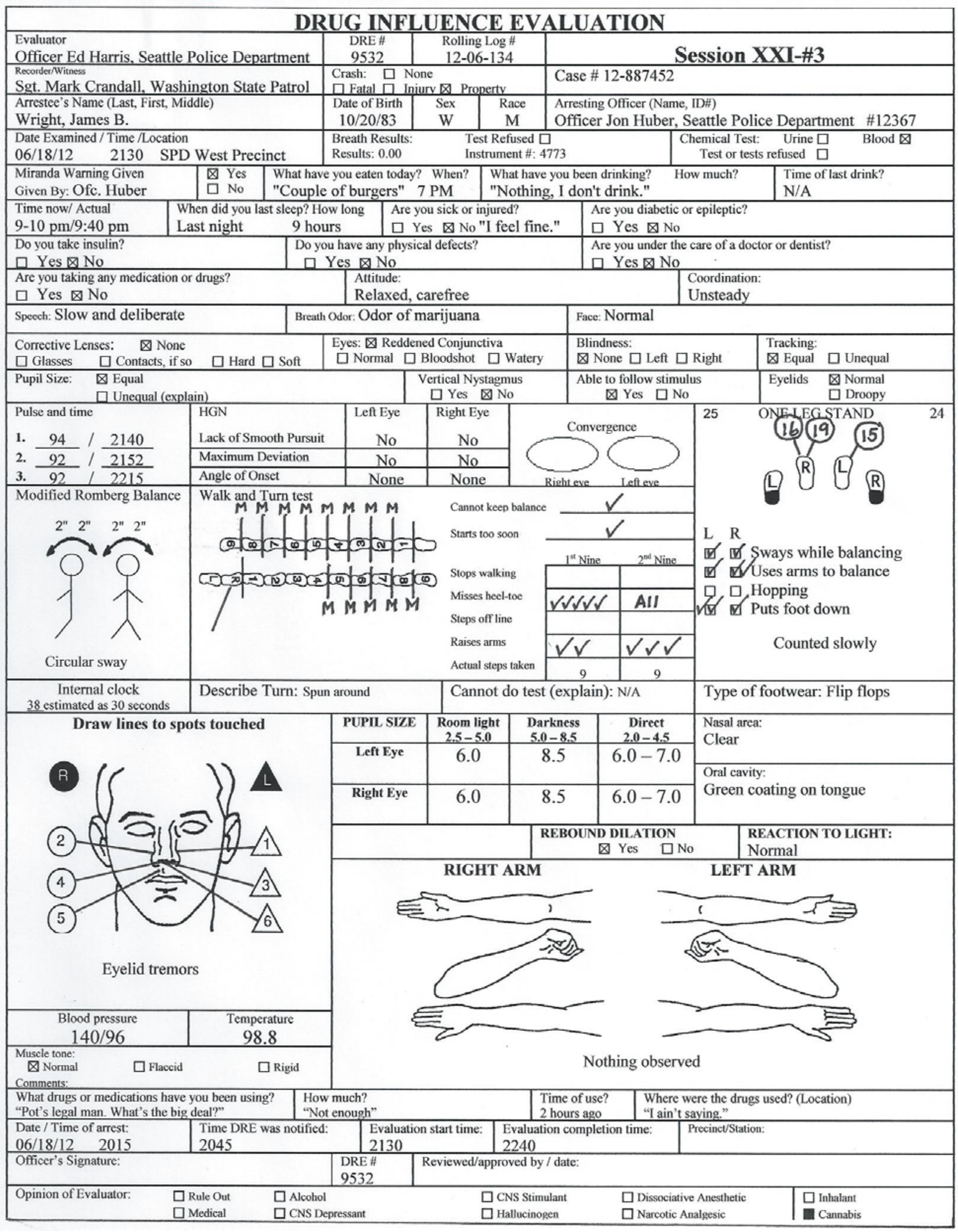
10. **SUSPECT'S STATEMENTS:** Suspect admitted drinking a beer earlier and laughed when asked about other drug use.

11. **DRE'S OPINION:** In my opinion Peltier is under the influence of **Cannabis** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:** Suspect was also charged with Attempting to Elude.

Rev. 01/13



DRUG INFLUENCE EVALUATION

Evaluator: Officer Ed Harris, Seattle Police Department
DRE #: 9532
Rolling Log #: 12-06-134
Session XXI-#3
Recorder/Witness: Sgt. Mark Crandall, Washington State Patrol
Crash: ☐ None ☐ Fatal ☐ Injury ☒ Property
Case # 12-887452
Arrestee's Name (Last, First, Middle): Wright, James B.
Date of Birth: 10/20/83
Sex: W
Race: M
Arresting Officer (Name, ID#): Officer Jon Huber, Seattle Police Department #12367
Date Examined / Time /Location: 06/18/12 2130 SPD West Precinct
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 4773
Chemical Test: Urine ☐ Blood ☒
Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Huber
What have you eaten today? When? "Couple of burgers" 7 PM
What have you been drinking? How much? "Nothing, I don't drink."
Time of last drink? N/A
Time now/ Actual: 9-10 pm/9:40 pm
When did you last sleep? How long: Last night 9 hours
Are you sick or injured? ☐ Yes ☒ No "I feel fine."
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Relaxed, carefree
Coordination: Unsteady
Speech: Slow and deliberate
Breath Odor: Odor of marijuana
Face: Normal
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☒ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time

1. 94 / 2140
2. 92 / 2152
3. 92 / 2215

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence
Right eye Left eye

Modified Romberg Balance
Circular sway

Walk and Turn test

Cannot keep balance ✓
Starts too soon ✓

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓✓✓✓✓	All
Steps off line		
Raises arms	✓✓	✓✓✓
Actual steps taken	9	9

25 ONE LEG STAND 24

L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
✓☑	☑	Puts foot down

Counted slowly

Internal clock: 38 estimated as 30 seconds
Describe Turn: Spun around
Cannot do test (explain): N/A
Type of footwear: Flip flops

Draw lines to spots touched

Eyelid tremors

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.0	8.5	6.0 – 7.0
Right Eye	6.0	8.5	6.0 – 7.0

Nasal area: Clear
Oral cavity: Green coating on tongue
REBOUND DILATION ☒ Yes ☐ No
REACTION TO LIGHT: Normal

RIGHT ARM LEFT ARM

Nothing observed

Blood pressure: 140/96
Temperature: 98.8
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "Pot's legal man. What's the big deal?"
How much? "Not enough"
Time of use? 2 hours ago
Where were the drugs used? (Location) "I ain't saying."
Date / Time of arrest: 06/18/12 2015
Time DRE was notified: 2045
Evaluation start time: 2130
Evaluation completion time: 2240
Precinct/Station:
Officer's Signature:
DRE #: 9532
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ■ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Wright, James B.

1. **LOCATION:** The evaluation was conducted at the West Precinct of the Seattle P.D.

2. **WITNESSES:** Sergeant Mark Crandall, Washington State Patrol.

3. **BREATH ALCOHOL TEST:** Wright's breath test was a 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was on duty at the West Precinct when contacted by Officer Huber requesting a drug evaluation. Officer Huber advised he arrested Wright after his vehicle struck another vehicle on Highway 99 north of Seattle. There was an odor of marijuana coming from the suspect's vehicle. He had poor balance and coordination and was unable to perform the SFST's as directed. A small pipe containing marijuana residue was located in the suspect's vehicle.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the West Precinct. He was very relaxed and carefree acting. He had poor coordination and balance and his speech was slow and deliberate.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect had an approximate 2" circular sway and estimated 30 seconds in 38 seconds. Walk & Turn: Suspect lost his balance during the instructions stage, started walking too soon, raised his arms for balance and failed to touch heel to toe five times on the first nine steps and on all his steps during the second nine steps. One Leg Stand: Suspect swayed while balancing, used his arms for balance and put his foot down twice while standing on the left foot and once while standing on the right foot. Finger to Nose: Suspect missed the tip of his nose on three of the six attempts and exhibited eyelid tremors.

8. **CLINICAL INDICATORS:** Suspect had a lack of convergence. His pupils were dilated in all three lighting levels and he had rebound dilation. His pulse and blood pressure were elevated and were above the DRE average ranges.

9. **SIGNS OF INGESTION:** The suspect had a green coating on his tongue.

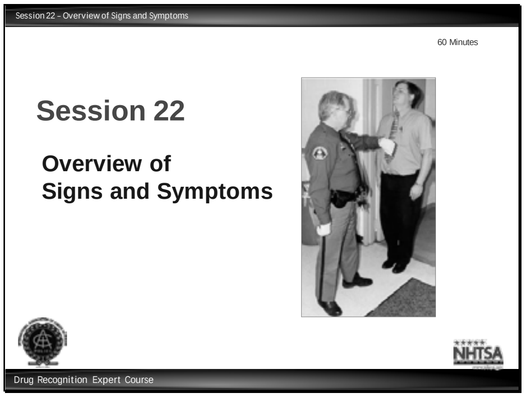
10. **SUSPECT'S STATEMENTS:** Suspect stated, "Pot's legal man. What's the big deal?"

11. **DRE'S OPINION:** In my opinion Wright is under the influence of **Cannabis** and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** The suspect was also charged with possession of marijuana.

Participant Manual DRE 7-Day Session 22 – Overview of Signs and Symptoms



Session 22 – Overview of Signs and Symptoms

60 Minutes

Session 22

Overview of Signs and Symptoms

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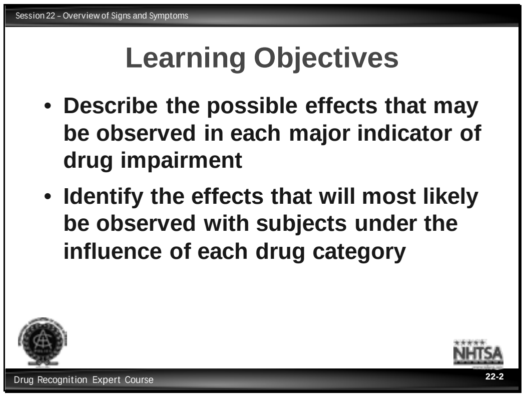
Notes:



Session 22 – Overview of Signs and Symptoms

Learning Objectives

- **Describe the possible effects that may be observed in each major indicator of drug impairment**
- **Identify the effects that will most likely be observed with subjects under the influence of each drug category**

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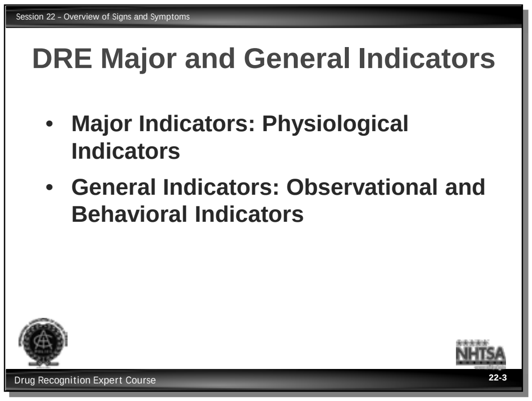
Notes:

Upon successfully completing this session the participant will be able to:

- Describe the possible effects that may be observed in each major indicator of drug impairment.
- Identify the effects that will most likely be observed with subjects under the influence of each drug category.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. The Major Indicators and their Possible Effects	Instructor-Led Presentations
B. Effects Associated with the Drug Categories	Interactive Discussions



Session 22 – Overview of Signs and Symptoms

DRE Major and General Indicators

- Major Indicators: Physiological Indicators
- General Indicators: Observational and Behavioral Indicators

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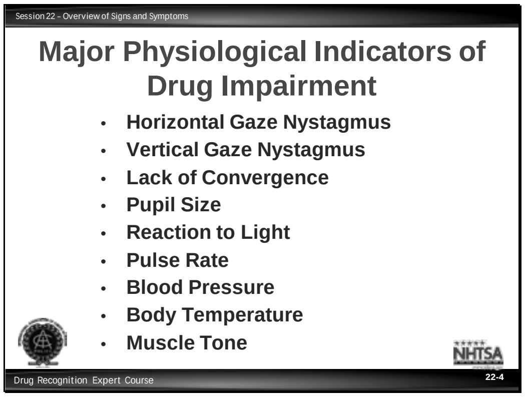
DRE Major and General Indicators

- For DRE purposes, Major Indicators are physiological signs that are specifically addressed and are, for the most part, involuntary; reflecting the status of the Central Nervous System homeostasis.
- For DRE purposes, General Indicators are behaviors or observations of the subject that are observed and not specifically tested for.

Both are of equal value in making a decision in the totality of the evaluation.



Session 22 – Overview of Signs and Symptoms

Major Physiological Indicators of Drug Impairment

- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence
- Pupil Size
- Reaction to Light
- Pulse Rate
- Blood Pressure
- Body Temperature
- Muscle Tone

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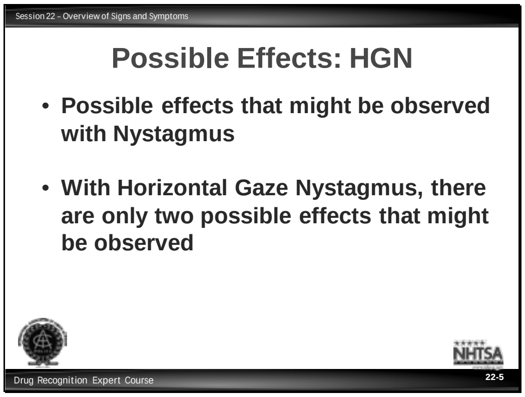
A. The Major Physiological Indicators and Their Possible Effects

Major Physiological Indicators of Drug Impairment

The major physiological indicators of drug impairment are (point to the major indicators on the matrix):

- Horizontal Gaze Nystagmus
- Vertical Gaze Nystagmus
- Lack of Convergence
- Pupil Size
- Reaction to Light
- Pulse Rate
- Blood Pressure
- Body Temperature
- Muscle Tone



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Possible Effects: HGN

- **Possible effects that might be observed with Nystagmus**
- **With Horizontal Gaze Nystagmus, there are only two possible effects that might be observed**

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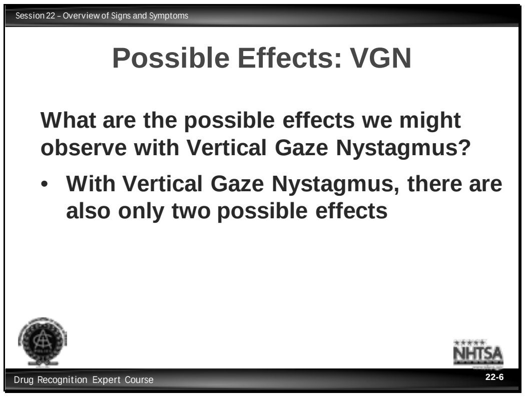
Notes:____

Possible Effects: HGN

Possible effects that might be observed with **Nystagmus**; With Horizontal Gaze Nystagmus, there are only two possible effects that might be observed.

- Either HGN will be **present**;
- Or it will be **none (meaning that it is not present)**.

There is no drug that stops Horizontal Gaze Nystagmus. Some drugs cause HGN to be present, others do not; but there is no drug that “cures” HGN.



Session 22 – Overview of Signs and Symptoms

Possible Effects: VGN

What are the possible effects we might observe with Vertical Gaze Nystagmus?

- **With Vertical Gaze Nystagmus, there are also only two possible effects**

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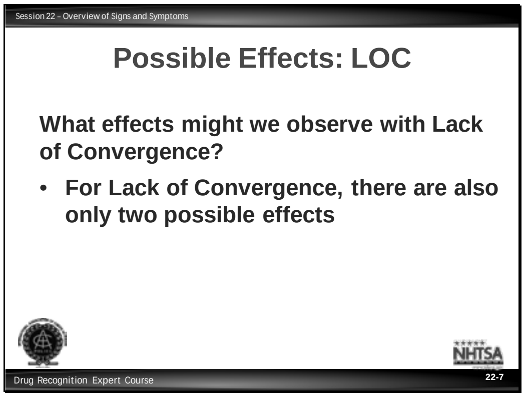
Notes:____

Possible Effects: VGN

With Vertical Gaze Nystagmus, there are also only two possible effects.

- Either it will be **present**;
- Or it will be **none (meaning that it is not present)**.



Session 22 – Overview of Signs and Symptoms

Possible Effects: LOC

What effects might we observe with Lack of Convergence?

- **For Lack of Convergence, there are also only two possible effects**

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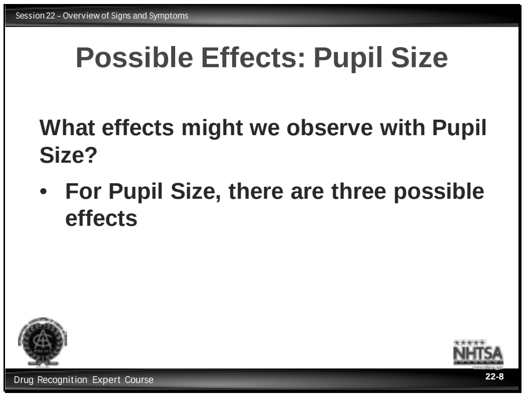
Possible Effects: LOC

For **Lack of Convergence**, there are also only two possible effects.

- Either Lack of Convergence will be **present**;
- Or it will be **none (meaning that it is not present**).

Just as with Nystagmus, there is no drug that “cures” Lack of Convergence.



Session 22 – Overview of Signs and Symptoms

Possible Effects: Pupil Size

What effects might we observe with Pupil Size?

- **For Pupil Size, there are three possible effects**

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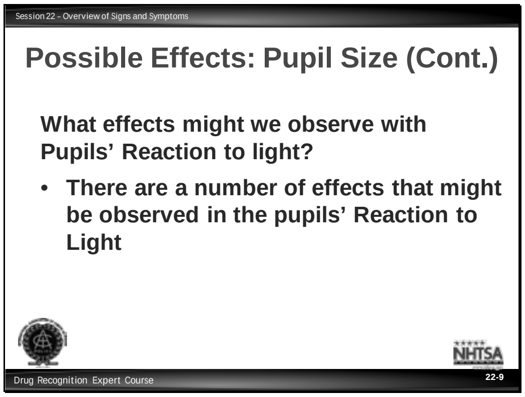
Possible Effects: Pupil Size

For **Pupil Size**, there are three possible effects that might be seen.

- The pupils might be **normal** (within the DRE average ranges).
- Or, the pupils might be **dilated**.
- Or, they might be **constricted**.



Session 22 – Overview of Signs and Symptoms

Possible Effects: Pupil Size (Cont.)

What effects might we observe with Pupils' Reaction to light?

- **There are a number of effects that might be observed in the pupils' Reaction to Light**

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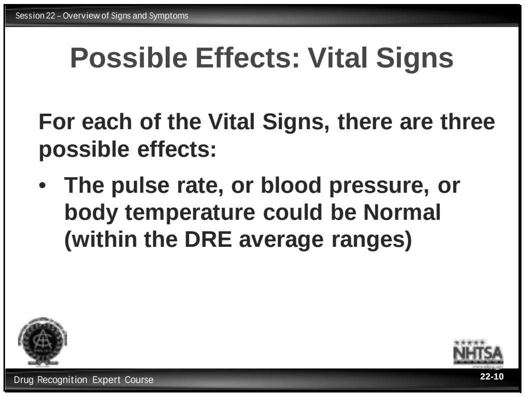
Notes:

Possible Effects: Reaction to Light

There are a number of effects that might be observed in the pupils' **Reaction to Light**.

- The pupils might react in a **normal** manner, i.e. by constricting somewhat in one second or less.
- Or, the pupils might react **slow**, i.e. by constricting somewhat, but requiring more than one second to do so.

In some instances, you may observe very little, or no visible reaction to light. If there is a visible reaction of the pupils, it is possible that Rebound Dilation was seen.



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Possible Effects: Vital Signs

For each of the Vital Signs, there are three possible effects:

- **The pulse rate, or blood pressure, or body temperature could be Normal (within the DRE average ranges)**

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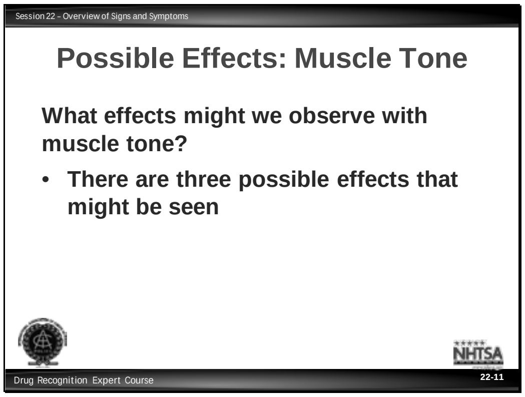
Notes:

Possible Effects: Vital Signs

For each of the **Vital Signs**, there are three possible effects.

The pulse rate, or blood pressure, or body temperature could be **NORMAL (within the DRE average ranges)**.

- Or, it could be **UP**.
- Or, it could be **DOWN**.



Session 22 – Overview of Signs and Symptoms

Possible Effects: Muscle Tone

What effects might we observe with muscle tone?

- There are three possible effects that might be seen

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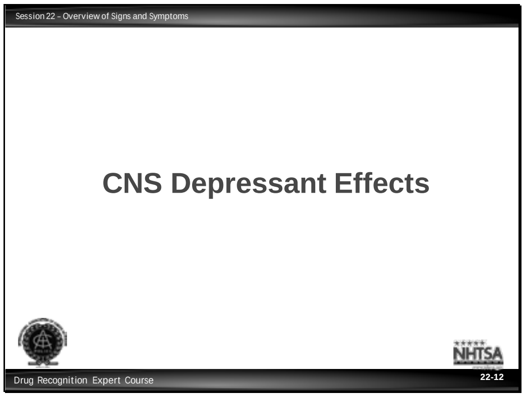
Possible Effects: Muscle Tone

Ask participants: What effects might we observe with muscle tone?

For **Muscle Tone**, there are three possible effects that might be seen.

- Normal (meaning nothing unusual)
- Flaccid
- Rigid



Session 22 – Overview of Signs and Symptoms

CNS Depressant Effects

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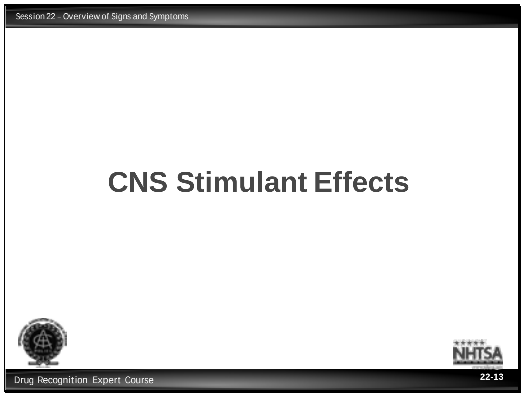
Notes:____

B. Effects Associated with the Drug Categories

CNS Depressants

- HGN: **present**
- VGN: **present** (i.e. at high doses for that individual)
- Lack of Convergence: **present**
- Pupil Size: **normal** (within the average DRE ranges) except Soma, Quaaludes (Methaqualone) and some anti-depressants usually **dilate** pupils.
- Reaction to Light: **slow**
- Pulse Rate: **down** except Quaaludes (Methaqualone), ETOH and possibly some anti-depressants may **elevate**.
- Blood Pressure: **down**
- Body Temperature: **normal** (within the average DRE ranges)
- Muscle Tone: **flaccid**



Session 22 – Overview of Signs and Symptoms

CNS Stimulant Effects

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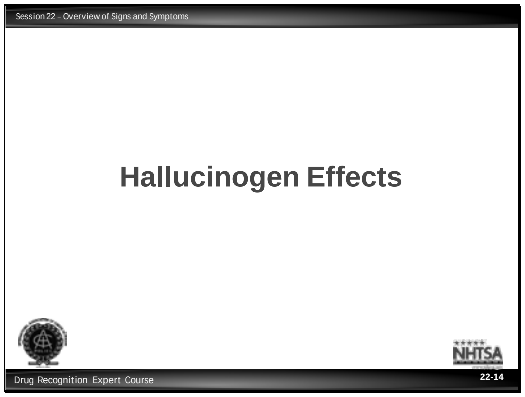
CNS Stimulants

- HGN: **none** (Not present)
- VGN: **none** (Not present)
- Lack of Convergence: **none** (Not present)
- Pupil Size: **dilated**
- Reaction to Light: **slow**
- Pulse Rate: **up**
- Blood Pressure: **up**
- Body Temperature: **up**
- Muscle Tone: **rigid**

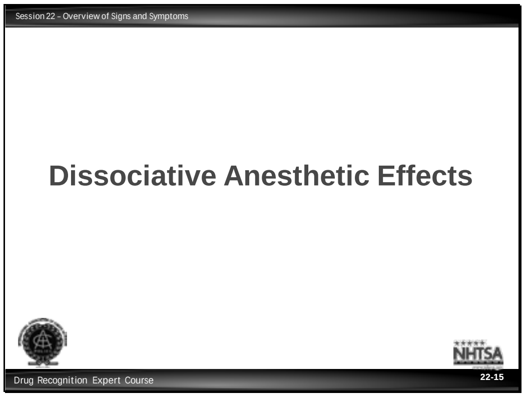


Hallucinogen Effects

Notes:

Hallucinogens

- HGN: **none** (Not present)
- VGN: **none** (Not present)
- Lack of Convergence: **none** (Not present)
- Pupil Size: **dilated**
- Reaction to Light: **normal**, certain psychedelic amphetamines may cause slowing.
- Pulse Rate: **up**
- Blood Pressure: **up**
- Body Temperature: **up**
- Muscle Tone: **rigid**

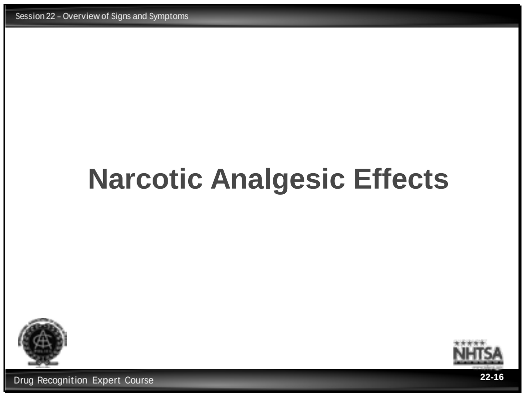


Dissociative Anesthetic Effects

Notes:____

Dissociative Anesthetics

- HGN: **present**
- VGN: **present** (i.e. at high doses; however, it is more common to see Vertical Gaze Nystagmus in someone under the influence of a **Dissociative Anesthetic**)
- Lack of Convergence: **present**
- Pupil Size: **normal** (within the DRE average ranges)
- Reaction to Light: **normal**
- Pulse Rate: **up**
- Blood Pressure: **up**
- Body Temperature: **up**
- Muscle Tone: **rigid**



Session 22 – Overview of Signs and Symptoms

Narcotic Analgesic Effects

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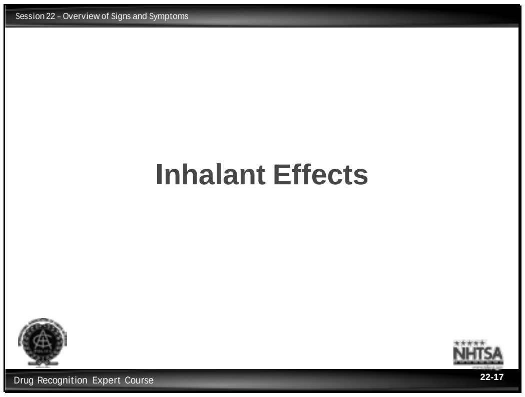
Notes:____

Narcotic Analgesics

- HGN: **none** (Not present)
- VGN: **none** (Not present)
- Lack of Convergence: **none** (Not present)
- Pupil Size: **constricted**
- Reaction to Light: **little or none visible**
- Pulse Rate: **down**
- Blood Pressure: **down**
- Body Temperature: **down**
- Muscle Tone: **flaccid**



Session 22 – Overview of Signs and Symptoms

Inhalant Effects

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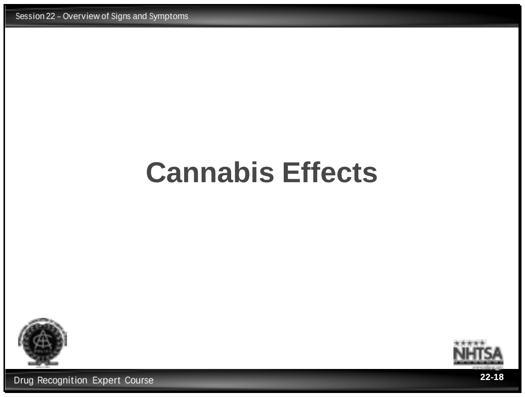
Inhalants

- HGN: **present**
- VGN: **present** (high dose for that individual)
- Lack of Convergence: **present**
- Pupil Size: **normal (within the DRE average ranges) but may be dilated**
- Reaction to Light: **slow**
- Pulse Rate: **up**
- Blood Pressure: **up/down** (the Volatile Solvents and the Aerosols usually cause blood pressure to be **above the average ranges**; but the Anesthetic Gases can cause blood pressure to be **below the average ranges**, even though they **elevate** the pulse rate)
- Body Temperature: **up/down/normal**
- Muscle Tone: **normal or flaccid**



Session 22 – Overview of Signs and Symptoms

Cannabis Effects

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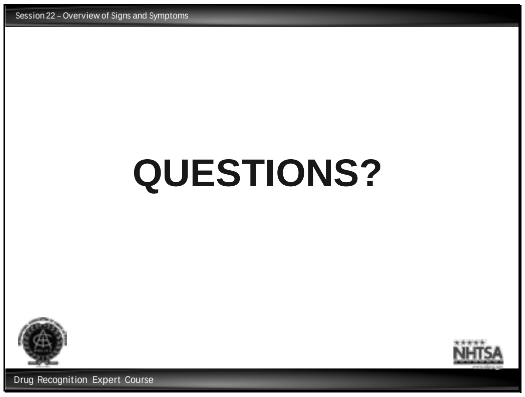
Notes:____

Cannabis

- HGN: **none** (not present)
- VGN: **none** (not present)
- Lack of Convergence: **present**
- Pupil Size: **dilated or possibly normal (within the DRE average ranges)**
- Reaction to Light: **normal**
- Pulse Rate: **up**
- Blood Pressure: **up**
- Body Temperature: **normal (within the DRE average ranges)**



Session 22 – Overview of Signs and Symptoms

QUESTIONS?

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Drug Symptomatology Sources

COMPARISON OF DRE SYMPTOMATOLOGY WITH CROSS SECTION OF DRUG SYMPTOMATOLOGY SOURCES

CNS DEPRESSANTS:

DRE Symptomatology:

Nystagmus
decreased blood pressure
disoriented
thick slurred speech
decreased pulse
uncoordinated
sluggish
drunk-like appearance

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Barbiturates, pages 546-547:

Nystagmus
difficulty in visual accommodation
vertigo
positive Romberg sign
Dysmetria
sluggishness
slowness, slurring of speech
poor memory
emotional lability
Strabismus
ataxia gait
Hypotonia
Diplopia
difficulty in thinking
poor comprehension
faulty judgement

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 8 Ed. 1997.
Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989. p.19.
Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), page 36: barbiturates effects like alcohol (staggering, poor motor control).

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990), page 11: sedative hypnotics same as alcohol and other depressants

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey (1989), page 72: Benzodiazepines same as barbiturate effects; pages 247; 292): Barbiturates:

Nystagmus
depressed blood pressure
incoordination
depressed pulse
diminished concentration
decreased reaction time

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988), p. 135.
Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 159

Maladaptive behavioral changes, e.g., disinhibition of sexual or aggressive impulses, mood lability, impaired judgment, impaired social or occupational functioning.

slurred speech
unsteady gait
incoordination
impairment in attention or memory

CNS STIMULANTS:

DRE Symptomatology:
dilated pupils
increased temperature
body tremors
excited
talkative
anxiety
redness to nasal area
loss of appetite
increased alertness
increased pulse rate
increased blood pressure
restlessness
euphoric
exaggerated reflexes
grinding teeth
runny nose
insomnia

The Pharmacological Basis of Therapeutics, Seventh Edition,
Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Cocaine 551-554
Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988, Amphetamines, Page 634:

Mild influence:
Mydriasis
restlessness
irritability
tremor
Diaphoresis
nausea
pallor
hyperreflexia
talkativeness
insomnia
flushing
combativeness
vomiting
dry mucous membranes

Moderate:
hyperactivity
hypertension
Tachycardia
chest discomfort
abdominal pain
mild temperature
elevation
repetitive behavior
panic reactions
confusion
Tachypnea
premature ventricular contraction
vomiting
Profuser Diaphoresis
impulsivity
hallucinations

Serious:
delirium
Hyperreflexia
Hypotension
marked Hypertension/Tachycardia
convulsions
coma

Cocaine, page 650-659

Early Stimulation:
euphoria
excitement
irritable behavior
sudden headache
vomiting
twitching of small muscles
tremor
Cocaine Psychosis
elevation of pulse
Garrulity
apprehension
Mydriasis
nausea
dizziness
tics
jerks
hallucinations
increased respiration

Advanced:
convulsions
decreased consciousness
Hyperreflexia
increased pulse and blood pressure

Later Stages:
Hypotension
Dyspnea et al
Hypothermia

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1992, pages 120-123: Amphetamines and cocaine (CNSS):

dilation of pupils
slight tremor
agitation
increased blood pressure
restlessness
possibly hallucinations

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989, page 99: CNSS cause:

dilation of pupils
elevation of blood pressure
increased body temperature
rapid heart rate
tremor in hands
restlessness

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), pages 25, 121: Amphetamine:

dilation of pupils
blood pressure
teeth grinding
tremors
increase heart rate
flushing
dry mouth
lack of coordination

pages 64, 100, 121:

dilation of pupils
increased temperature
increased heartbeat
similar to Amphetamine

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990), pages 8 and 10 Cocaine and Amphetamine:

dilated pupils
increased blood pressure
agitation tremors
increased pulse
vasoconstriction
increased temperature

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989), page 29 Amphetamines:

pupil dilation (Mydriasis)
elevated blood pressure
talkative
restless
tremors
teeth grinding (Bruxism)
illogical, loose thoughts
increased pulse rate
hyperactive
irritable
Anorexia
urinary retention
fidgety, jerky, random motions

Page 295: Cocaine:

dilated pupils
increased blood pressure
Hyperpyrexia
Tachycardia
vasoconstriction

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988) page 142: Amphetamine:

increased pulse
possibly increased temperature
general increase in psychomotor activity
increased blood pressure
increased wakefulness

page 145: Cocaine

Mydriasis (dilated pupils);
euphoria
may cause psychosis
agitation

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 142.

COCAINE:

Maladaptive behavioral changes, e.g., euphoria, fighting, grandiosity, hyper-vigilance, psychomotor agitation, impaired judgment, impaired social or occupational functioning.

pupillary dilation
elevated blood pressure
nausea or vomiting
Tachycardia
perspiration or chills
visual or tactile hallucinations

AMPHETAMINE:

Maladaptive behavioral changes, e.g., fighting, grandiosity, hyper-vigilance, psychomotor agitation, impaired judgment, impaired social or occupational functioning.

pupillary dilation
elevated blood pressure
nausea or vomiting
Tachycardia
perspiration or chills

HALLUCINOGENS:

DRE Symptomatology:
dilated pupils
increased blood pressure
dazed appearance
Synesthesia
paranoia
nausea
difficulty in speech
poor perception of time/distance
increased pulse rate
increased temperature
body tremors
hallucinations
uncoordinated
disoriented
perspiring

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, LSD and Related Drugs, page 564

pupillary dilation
Tachycardia
tremor
Piloerection
increased body temperature
Hyper vigilance
loss of boundaries
increased blood pressure
Hyperreflexia
nausea
muscular weakness
hallucinations
Synesthesia

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988, LSD, pages 667-669:

pupillary dilation
increased body temperature
weakness
Hyperreflexia
hallucinations
poor judgment
increased heart rate
Piloerection
tremor
Ataxia
depersonalization
mood swings

A Primer of Drug Action, Julien, Robert M.; W. H. Freeman and Company, New York, 1992

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed.), Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989 page 160:

dilated pupils
increased awareness
sensory input
flushed face
increased blood pressure
faltered body images
fine tremor
increased body temperature

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, Inc New York (1984), pages 100; 115 120, 153): Hallucinogens:

dilated pupils
increased blood pressure
profuse perspiration
hallucinations
increased heart rate
increased temperature
loss of appetite

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990)
Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey (1989), page 218: LSD:

Ataxia
Hyperreflexia
Tachycardia
high blood pressure
incoordination

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Plenum Medical Book Company, New York (1988)
Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 145.

Maladaptive behavioral changes, e.g., marked anxiety or depression, ideas of reference, fear of losing one's mind, paranoid ideation, impaired judgment, impaired social or occupational functioning.

Perceptual changes occurring in a state of full wakefulness and alertness, e.g., subjective intensification of perceptions, depersonalization, derealization, illusions, hallucinations, Synesthesia

pupillary dilation
sweating
blurring of vision
incoordination
Tachycardia
palpitations
tremors

DISSOCIATIVE ANESTHETICS (PHENCYCLIDINE)

DRE Symptomatology:
Nystagmus
increased blood pressure
perspiring
blank stare
"moon walking"
incomplete responses
repetitive speech
cyclic behavior
hallucinations
increased pulse
increased temperature
warm to the touch
early onset of nystagmus
difficulty in speech
repetitive response
increased pain threshold
confused, agitated
possibly violent and combative

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, PCP, page 565-567

Nystagmus
elevated blood pressure
staggering gait
numbness of extremities
muscular rigidity
drowsiness
repetitive movements
elevated heart rate
feeling of intoxication
slurred speech
sweaty
blank stare
hostile behavior

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988, PCP 768-777:

Nystagmus
depressed light reflexes
diminished pain
tremors
slurred speech
increased pulse rate
Amnesia
body image distortion
depersonalization
hallucinations
Miosis
blurred vision
Ataxia
muscle weakness
drowsiness
increased blood pressure
anxiety/agitation
euphoria
disordered thought processes

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1997, page 262: PCP:

increased blood pressure
disinhibition
muscle rigidity
delirium excitement
hallucinations
speech difficulty
elevated blood pressure
blank stare
mood swings
agitation
disorientation
analgesia
pain tolerance

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed.), Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989 p. 178

sweating
fever convulsions
muscle rigidity
increased blood pressure

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), page 100, 208: PCP:

Nystagmus
increased pulse rate
mood swings
changes in body awareness
violent behavior
increased blood pressure
flushing
hallucinations
speech difficulties
decreased responsiveness

Drug Abuse and Dependence, Grinspoon, Lester, M.D.; Bakalar, James B., Harvard Medical School Mental Health Review No. 1 (1990), page 25: PCP:

body image distortions
Nystagmus
loss of muscle control
memory loss drooling
increased blood pressure
muscle rigidity
incoherent speech
blank stare

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989) page 296: PCP:

Nystagmus
hallucination
loss of motor control
automated speech
Nystagmus at rest
disorientation
extreme agitation
disassociation from environment

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D. Ph.D.D Plenum Medical Book Company, New York (1988), page 156: PCP:

Ataxia
muscular hypertonicity
Ptosis
Horizontal Gaze, Vertical Gaze and Rotary Nystagmus
elevated blood pressure
mood swings
tremors,
Hyperreflexia
Tachycardia

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 155.

Maladaptive behavioral changes, e.g., belligerence, assaultiveness, impulsiveness, unpredictability, psychomotor agitation, impaired judgment, impaired social or occupational functioning.

Vertical or Horizontal Gaze Nystagmus
increased blood pressure or heart rate
numbness or diminished responsiveness to pain.

Ataxia
Dysarthria (slurred speech)
muscle rigidity
seizures
Hyperacusis

NARCOTICS:

DRE Symptomatology:
constricted pupils
decreased blood pressure
Ptosis (droopy eyelids)
drowsiness
low, raspy speech
facial itching
fresh puncture marks
decreased pulse rate
decreased temperature
"on the nod"
depressed reflexes
dry mouth
euphoria

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Opiods page 541-545

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988; Heroin, pages 702-703. See also Methadone, Demerol, etc.:

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1997: Morphine:

constructed pupils
drowsiness
mental clouding
depressed respiration
euphoria
decreased blood pressure
Dysphoria
sedation
Analgesia

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed., Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989

Decrease pain (p.6)

Encyclopedia of Drug Abuse, O'Brien, Robert,Cohen, Sydney. M.D. Facts on File, INC New York (1984) page 100, 120, 123, 124: Narcotics:

constricted pupils
Analgesia
euphoria
reduced heart rate
depressed appetite
going "on the nod"

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990), page 14: Narcotics:

constricted pupils
dreamy state
euphoria
"nodding off"
pain suppression

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey (1989) page 293 - 294:

Miosis (constricted pupils)
Hypothermia
decreased temperature)
drowsiness lethargy
flaccid muscle tone
Analgesia
Bradycardia
(decreased heart beat)
euphoria/dysphoria
confusion
depressed respiration

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988), page 132

Miosis (constricted pupils)
itching
low blood pressure
flushing sweating

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 152.

Maladaptive behavioral changes, e.g., initial euphoria followed by apathy, dysphoria, psychomotor retardation, impaired judgment, impaired social or occupational functioning.

pupillary constriction
slurred speech
drowsiness
impairment in attention or memory

INHALANTS: (Toluene)

DRE Symptomatology:
Nystagmus
increased blood pressure
odor on mouth
slurred speech
increased pulse rate
residue around nose
nausea disorientation
confusion

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Inhalants, page 567

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989. p. 185

- decreased inhibitions
- drowsiness
- sneezing runny nose
- floating sensation
- light sensitivity

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984)

- lowered inhibitions
- incoordination confusion
- nausea
- restlessness
- disorientation
- impaired judgment

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990)

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989), pages 265, 272, 297: Toluene:

- nystagmus
- tremors cerebellar
- rambling speech
- light headedness
- CNS depression that mimics Ataxia
- Narcotic Analgesics
- blank stare
- euphoric mood
- mental dulling
- Ataxia
- irritability
- tremors

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988)

- brief euphoria
- giddy intoxication, similar to alcohol
- CNS depression (volatile solvents/toluene)
- dizziness
- vertigo

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 149.

Maladaptive behavioral changes, e.g., belligerence, assaultiveness, apathy, impaired judgment, impaired social or occupational functioning.

Nystagmus
incoordination
unsteady gait
depressed reflexes
tremor generalized muscle
stupor or coma
euphoria
dizziness
slurred speech
lethargy
psychomotor retardation
blurred vision or diplopia
weakness

CANNABIS

DRE Symptomatology:
dilated pupils
odor of Marijuana
body tremors
relaxed inhibitions
paranoia
impaired perception of time and distance
marked reddening of conjunctivae
debris in mouth
eyelid tremors
increased appetite
disorientation

The Pharmacological Basis of Therapeutics, Seventh Edition, Gilman, A,; Goodman, I.; MacMillan Publishing Co. 1985, Cannabis, pages 559-561

euphoria
temporal disintegration
information processing impairment
dry mouth
short term memory impairment
balance and stance impairment
increased hunger
additive to alcohol

Lower doses
affects perception, impairing well beyond when subject subjectively feels effects; alters all information processing; relatively simple motor skills unaffected

High doses:
anxiety
increased heart rate
marked reddening of Conjunctiva
hallucinations
increased systolic blood pressure
simple motor skills affected

Medical Toxicology-Diagnosis and Treatment of Human Poisoning, Ellenhorn, Matthew J., Barceloux, Donald G. Elsevier Science Pub. Co. 1988; Cannabis, page 678-681

reddening of Conjunctiva
motor coordination impairment
relaxation
temporal distortion (time slows)
impairment of motor tasks and reaction times requires higher dosages
loss of short term memory
systematic thinking impaired
dry mouth
alteration in mood
euphoria
sleepiness
decrease in balance, steadiness and muscle strength
elective attention
stimulated appetite

A Primer of Drug Action, Julien, Robert M. W.H. Freeman and Company, New York, 1997, Marijuana

reddening of Conjunctiva
increased blood pressure
dry mouth
altered sensory perception

Drug and Alcohol Abuse, A Clinical Guide to Diagnosis and Treatment, (3rd Ed. , Schuckit, M.D., Mark A. Plenum Medical Book Co, New York 1989, page 145: Cannabis:

red Conjunctiva
relaxation
increased heart rate
time distortion
impairment in ability to do multi-step tasks
decrease level of motor coordination
euphoria
dry mouth
possibly Nystagmus
short term memory
tremors

Encyclopedia of Drug Abuse, O'Brien, Robert; Cohen, Sydney. M.D. Facts on File, INC New York (1984), pages 100, 120: Marijuana:

red eye
increased heart beat
dryness of mouth and throat
increased pulse rate
increased appetite
time and space distortions
increased heart rate
lack of coordination

Drug Abuse and Dependence, Grinspoon, Lester,MD; Bakalar,James B., Harvard Medical School Mental Health Review No. 1 (1990).page 19: Marijuana:

increased appetite
bloodshot eyes
agitation
hallucinations
faster heartbeat
confusion
incoordination

Drugs of Abuse, Giannini, A. James, M.D.; Slaby, Andrew E. M.D., Ph.D. Medical Economics Books, Oradell, New Jersey(1989), page 296: Cannabis:

red Conjunctiva
pleasant relaxation
slowed time
apathy
problems with motor coordination
increased appetite
intensification of sensations
passivity
Tachycardia (increased heart rate)

Manual of Drug and Alcohol Abuse, Guidelines for Teaching in Medical and Health Institutions, ed Arif, Awni. M.D., Westermeyer, Joseph, M.D.. Ph.D..D Plenum Medical Book Company, New York (1988), page 147: Cannabis:

red Conjunctiva
changes in time sense
memory
coordination
balance and stance
increased hunger
short-term memory loss
dry mouth
Tachycardia (rapid heart beat)
elevated systolic pressure affected

Diagnostic and Statistical Manual of Mental Disorders (Third Ed, Revised), American Psychiatric Association (1987), p. 140.

Maladaptive behavioral changes, e.g., euphoria anxiety, suspiciousness, or paranoid ideation, sensation of slowed time, impaired judgment, social withdrawal.

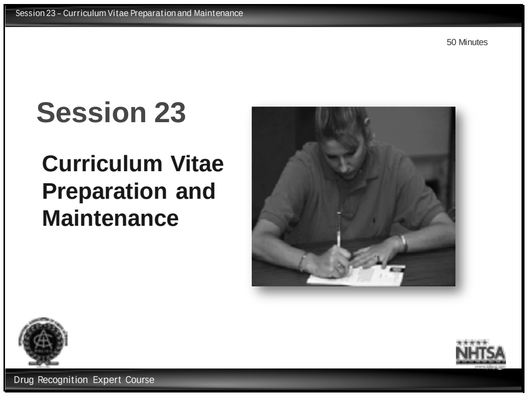
red Conjunctiva
Tachycardia (rapid heart)
increased appetite
dry mouth

LACK OF CONVERGENCE:

Clinical Procedures for Ocular Examination, Kurtz and Carlson; McGraw-Hill Medical, 3rd Edition, September 26, 2003.

A Recognized Clinical Trial of Treatment for Convergence Insufficiency in Children, Scheiman, Cotter, Cooper, et al, Arch Ophthalmology, Jan 2005.

Participant Manual DRE 7-Day Session 23 – Curriculum Vitae Preparation and Maintenance



Session 23 – Curriculum Vitae Preparation and Maintenance

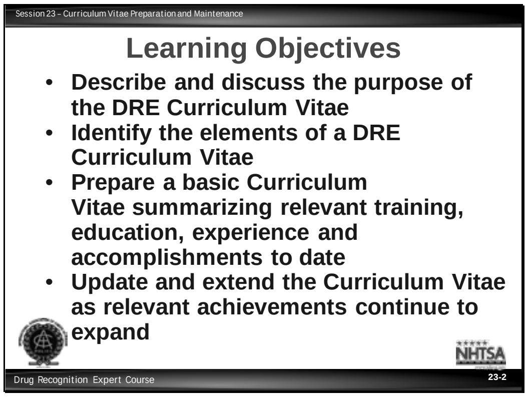
50 Minutes

Session 23

Curriculum Vitae Preparation and Maintenance

Drug Recognition Expert Course

Notes:____



Session 23 – Curriculum Vitae Preparation and Maintenance

Learning Objectives

- **Describe and discuss the purpose of the DRE Curriculum Vitae**
- **Identify the elements of a DRE Curriculum Vitae**
- **Prepare a basic Curriculum Vitae summarizing relevant training, education, experience and accomplishments to date**
- **Update and extend the Curriculum Vitae as relevant achievements continue to expand**

Drug Recognition Expert Course

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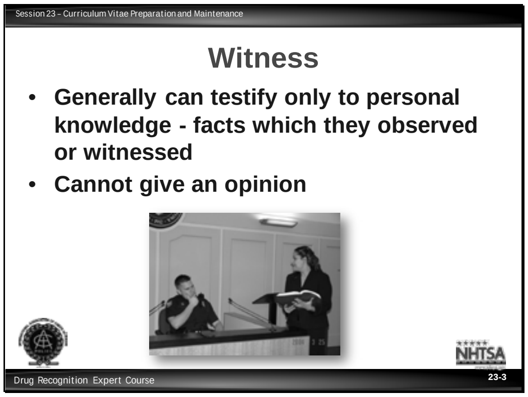
Notes:____

Upon successfully completing this session the participant will be able to:

- Describe and discuss the purpose of the DRE Curriculum Vitae.
- Identify the elements of a DRE Curriculum Vitae.
- Prepare a basic Curriculum Vitae summarizing their relevant training, education, experience, and accomplishments to date.
- Update and extend the Curriculum Vitae, as relevant achievements continue to expand.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Purpose of the Curriculum Vitae	Instructor Led Presentations
B. Preparation for Court Qualification	Group Work Session
C. Curriculum Vitae Content	Reading Assignments
D. Guidelines for Curriculum Vitae Preparation and Maintenance	



Session 23 – Curriculum Vitae Preparation and Maintenance

Witness

- Generally can testify only to personal knowledge - facts which they observed or witnessed
- Cannot give an opinion

Drug Recognition Expert Course

Notes:____

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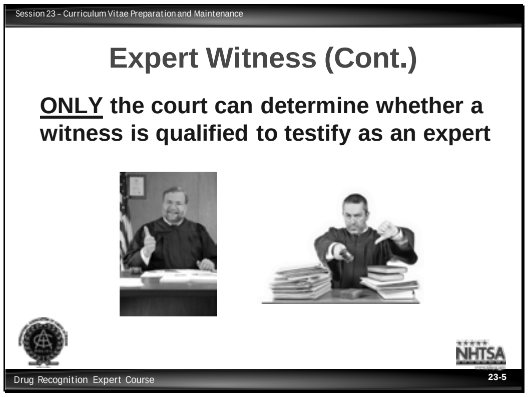
A. Purpose of the Curriculum Vitae

The basic purpose of the Curriculum Vitae is to record education, training, and experience in a single document for use in establishing qualifications when testifying in court.

Generally a witness can testify only to personal knowledge.



Session 23 – Curriculum Vitae Preparation and Maintenance

Expert Witness (Cont.)

ONLY the court can determine whether a witness is qualified to testify as an expert

Drug Recognition Expert Course

Notes:____

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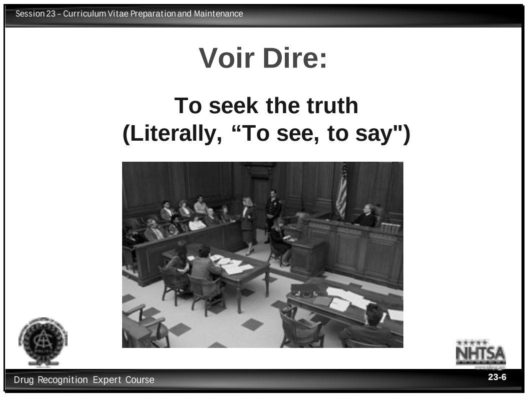
Only the court can determine whether a witness is qualified to testify as an expert.

Where a witness is qualified to give expert testimony, any question as to degree of knowledge goes to weight rather than admissibility.

Source: People vs. Perry, 44 Cal 2d 861



Session 23 – Curriculum Vitae Preparation and Maintenance

Voir Dire:

To seek the truth
(Literally, "To see, to say")

Drug Recognition Expert Course

Notes:____

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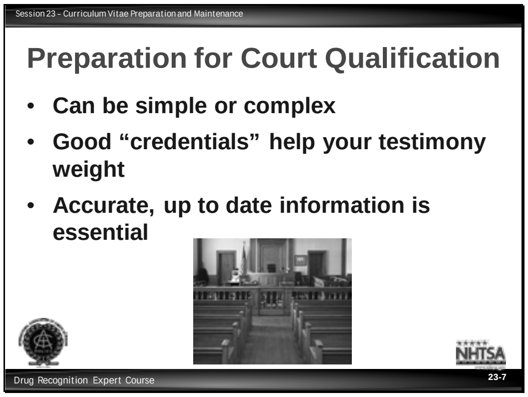
Witnesses' qualification is achieved through Voir Dire Examination.

Voir Dire – literally, French for "to see, to say;" loosely translated as "to seek the truth."



Session 23 – Curriculum Vitae Preparation and Maintenance

Preparation for Court Qualification

- Can be simple or complex
- Good "credentials" help your testimony weight
- Accurate, up to date information is essential

Drug Recognition Expert Course

23-7

Notes:____

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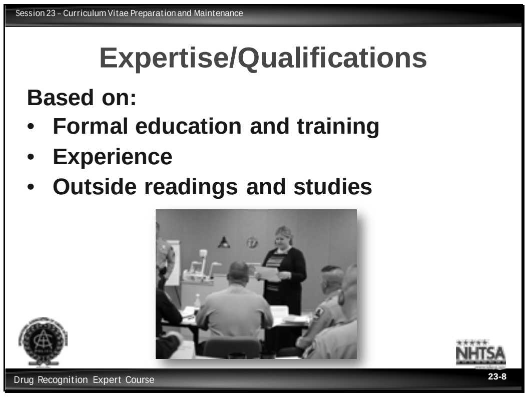
B. Preparation for Court Qualification

Being qualified as an expert may be as simple as stating your occupation, or take several hours of exhausting questioning by both the prosecutor and the defense attorney.

Although knowledge only greater than what the public has is required to qualify you as an expert, your testimony will carry much more "weight" if you have good credentials.

Accurate, up-to-date information is essential for an officer who is called upon to give his or her qualification as an expert in any field.



Session 23 – Curriculum Vitae Preparation and Maintenance

Expertise/Qualifications

Based on:

- Formal education and training
- Experience
- Outside readings and studies

Drug Recognition Expert Course

23-8

Notes:____

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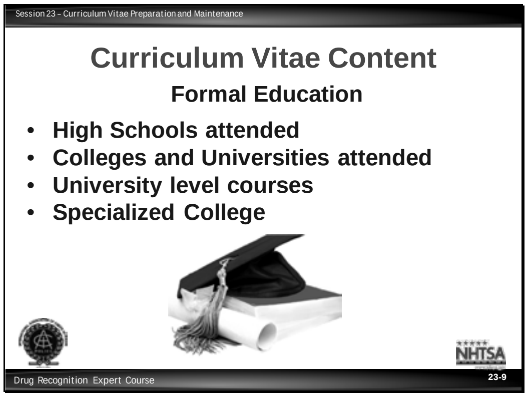
Drug Recognition Experts will base their expertise on the following areas:

- Formal education and training
- Relevant experience
- Outside readings and studies



Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Content

Formal Education

- **High Schools attended**
- **Colleges and Universities attended**
- **University level courses**
- **Specialized College**

Drug Recognition Expert Course

23-9

Notes:____

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C. Curriculum Vitae Content

Formal Education

- High School(s) attended

  List dates – highlight classes which provided knowledge in the area of drugs.

- Colleges and Universities attended

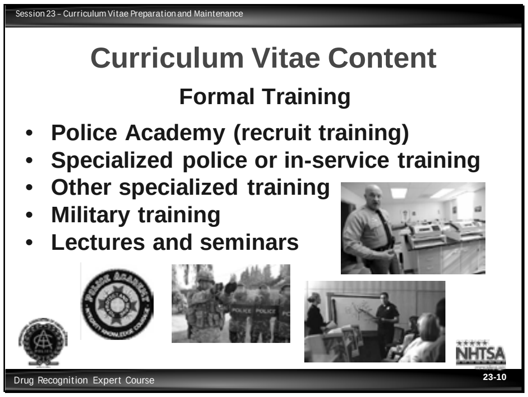
  List dates, instructor, subject(s) covered, credits, etc.

- University level courses

  List dates, instructor, subject(s) covered, credits, etc.

- Specialized College

  List dates, length, major topics covered, etc. Highlight classes which provided knowledge or skills in the area of drugs.



Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Content

Formal Training

- **Police Academy (recruit training)**
- **Specialized police or in-service training**
- **Other specialized training**
- **Military training**
- **Lectures and seminars**

Drug Recognition Expert Course

23-10

Notes:____

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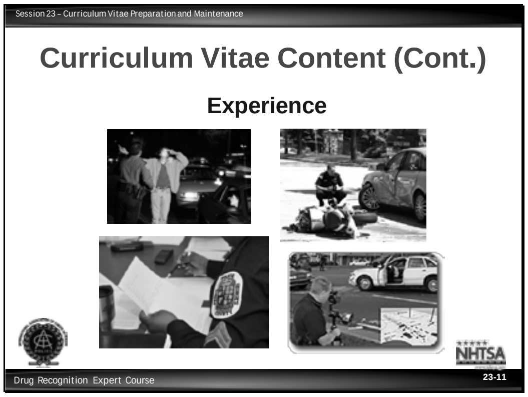
Formal Training

- Police Academy (recruit training).
- Specialized police training or in-service training.

  List dates, length, instructor(s), subject(s) covered, etc. Highlight training which provided knowledge or skills in the area of drugs.
- Other specialized training.
- Military training.
- Lectures and seminars.

  List dates, length, instructor(s), subject(s) covered, etc. Highlight training which provided knowledge or skills in the area of drugs.



Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Content (Cont.)

Experience

Drug Recognition Expert Course

23-11

Notes:

Experience

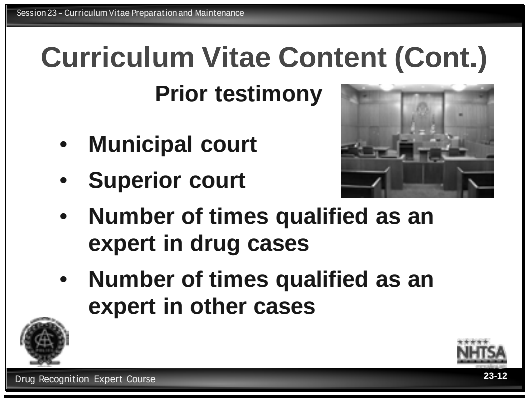
- Job experience – years.

  List dates, division, duties, etc., include loans to specialized units.
- Assignments.
- List agencies, dates, assignments, etc.
- Prior law enforcement experience.

  List employer, dates, duties and assignments, etc. which provided experience in the area of drugs.
- Other job related experience.

Drug enforcement/ evaluation experiences:

- Total vehicle stops
- Total DWI investigations
- Total DWI arrests
- Total drug evaluations
- Total filings
- Total convictions



Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Content (Cont.)

Prior testimony

- **Municipal court**
- **Superior court**
- **Number of times qualified as an expert in drug cases**
- **Number of times qualified as an expert in other cases**

Drug Recognition Expert Course

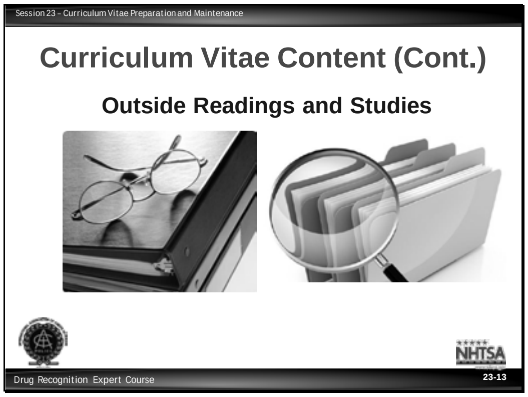
23-12

Notes:____

Prior Testimony

- Municipal court
- Superior court
- Number of times qualified as an expert in drug cases
- Number of times qualified as an expert in other cases

For bulleted items above: list dates, courts, judges, charges, areas qualified, etc.



Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Content (Cont.)

Outside Readings and Studies

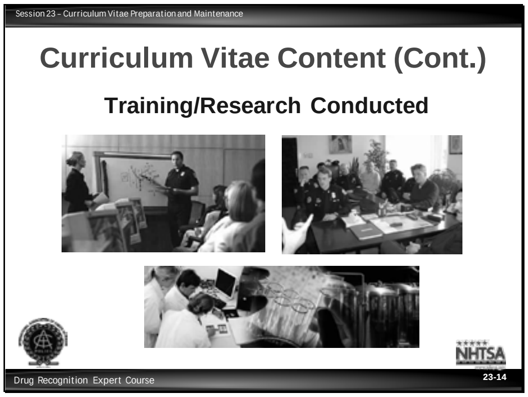
Drug Recognition Expert Course

23-13

Notes:____

Outside Reading and Studies

- Drug related texts read.
- List title(s), author(s), subject(s), etc.
- Departmental training bulletins.
- Journals.
- Research papers.
- Drug related videos viewed.



Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Content (Cont.)

Training/Research Conducted

Drug Recognition Expert Course

23-14

Notes:____

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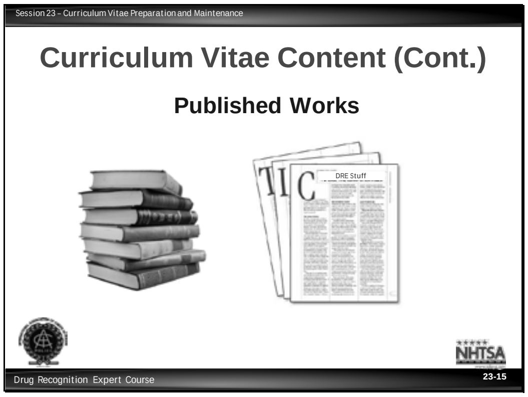
Training or Research Conducted (if applicable)

List classes, briefings, training officer assignments, etc. where you served as an instructor or coach, etc. or conducted or participated in research, e.g. Alcohol Workshop.



Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Content (Cont.)

Published Works

Drug Recognition Expert Course

23-15

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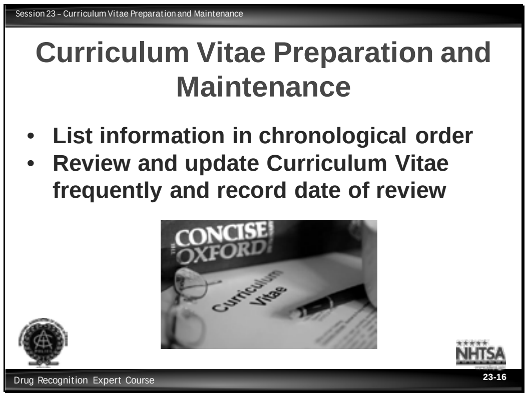
Published Works (if applicable)

List all relevant writings that you authored or co-authored, including departmental briefing papers, training manuals/bulletins, magazine articles, books, etc.


CONCISE
OXFORD
Curriculum Vitae

Session 23 – Curriculum Vitae Preparation and Maintenance

Curriculum Vitae Preparation and Maintenance

- List information in chronological order
- Review and update Curriculum Vitae frequently and record date of review

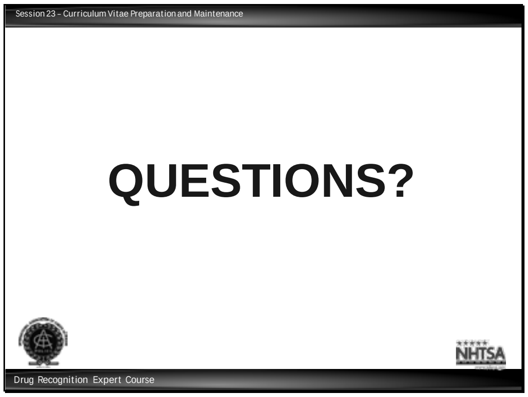
Drug Recognition Expert Course

23-16

Notes:

D. Guidelines for Curriculum Vitae Preparation and Maintenance

- List information in chronological order.
- Review and update Curriculum Vitae frequently and record date of review.



Session 23 – Curriculum Vitae Preparation and Maintenance

QUESTIONS?

Drug Recognition Expert Course

Notes:

SAMPLE Curriculum Vitae NUMBER ONE

The Curriculum Vitae of:

Sgt. David C. Regan

Sgt. David C. Regan

Introduction

Sergeant David Carroll Regan is a supervisor in the Traffic Division, Shelton Police Department. He currently commands the special Impaired Driving Enforcement Activities Squad (IDEAS), a unit he was instrumental in forming. Sgt. Regan is a 15 year veteran of law enforcement. Prior to joining the Shelton Police Department ten years ago, he served for five years as a deputy with the Fairfield County Sheriff's Department.

Sergeant Regan has been assigned to the Traffic Division since his promotion to sergeant on 11/18/YY. His duties have included coordination of speed and DWI enforcement activities, the Joint Shelton-Derby Task Force for Sobriety Checkpoints, the Officer Friendly Program, the Motorcycle Safety Education Project, and general supervision of Traffic Division officers. He also serves as the Department's principal instructor for radar speed measurement, Standardized Field Sobriety Testing and Drug Recognition Expert training.

Sergeant Regan holds a Bachelor's Degree in the Administration of Justice from Fairfield University, and currently is a candidate for a Master's Degree in Police Science and Administration at the University of Stratford. He also holds an Instructor Certificate from the State Law Enforcement Training Board.

Sergeant Regan has served on two committees of the Governor's Task Force to Prevent Drunk Driving: The Standardized Field Sobriety Tests Committee and The Paperwork Reduction Committee. The one page Standard Notetaking Guide for Field Sobriety Testing that is employed by all departments statewide was designed by him.

Law Enforcement Experience

11/18/YY to Present	Sergeant, Traffic Division Shelton Police Department Supervisor, IDEAS Unit Drug Recognition Expert Program Coordinator
7/8/ZZ to 11/17/YY	Patrol Officer First Class Training and Operations Shelton Police Department Unit Supervisor, Traffic Law Enforcement Training Branch
9/11/XX to 7/7/ZZ	Patrol Officer Third Precinct, Motorcycle Shelton Police Department

Sgt. David C. Regan

Law Enforcement Experience (continued)

11/5/MM to 9/10/XX	Patrol Officer First Precinct Shelton Police Department
10/10/NN to 11/4/MM	Deputy Traffic Patrol Fairfield County Sheriff's Department

Special Police Training

10/XX	NHTSA/IACP **DRE Instructor Training** (Certified as a DRE Instructor on 11/12/XX)
8/XX	Drug Enforcement Administration **Drug Interdiction Seminar**
11/YY	NHTSA/IACP **Drug Evaluation and Classification Training: DRE School** (Certified as a DRE on 1/28/XX)
10/YY	NHTSA/IACP **Drug Evaluation and Classification Training: PRE School**
3/YY	Southeastern University Institute of Police Technology **Special Conference: Managing DWI Squads**
4/ZZ	International Association of Chiefs of Police **Instructor Training in Horizontal Gaze Nystagmus and Divided Attention Field Sobriety Tests**
10/MM	University of Stanford, Northern Police Institute **Standardized Field Sobriety Testing**
6/NN	Acme Scientific Instruments, Inc. (Certified to perform inspection and repair of the Intoxotector J2Z breath testing instrument on 6/22/NN)

Sgt. David C. Regan

Court Qualification Record

8/VV	Qualified as Drug Recognition Expert in a case involving Phencyclidine impairment. (Judge Sally Grey, 8th District)
11/WW	Qualified as Drug Recognition Expert in a case involving a combination of CNS Stimulant and Narcotic Analgesic. (Judge Lewis Buchanan, Superior Court)
3/WW	Qualified as Drug Recognition Expert in a case involving Cannabis impairment. (Judge Sally Grey, 8th District)
9/UU	Qualified as Drug Recognition Expert in a case involving Narcotic Analgesic impairment. (Judge Jerome Byrnes, 8th District)

Specialized Readings

Title	Author
Drug and Alcohol Abuse	Marc A. Schuckit, M.D.
A Primer of Drug Action	Jerome Jaffee, Robert Petersen and Ray Hodgson
The Practitioner's Guide to Psychoactive Drugs	Ellen L. Bassuk, M.D. and Stephen C. Schoonover, M.D.
Drug Abuse: A Manual for Law Enforcement Officers	Smith, Kline & French (pub.)
Licit and Illicit Drugs	Edward M. Brecher
Chocolate to Morphine	Andrew Weil, M.D. and Winifred Rosen
Cocaine Addiction	U.S. Department of Health and Human Services
Marijuana Alert	Peggy Mann

SAMPLE Curriculum Vitae NUMBER TWO

TRUMBULL POLICE DEPARTMENT

The Curriculum Vitae of:

OFFICER ANN MARIE REED
Drug Recognition Expert

Latest Update: 4/25/YY

Officer Ann M. Reed

Introduction

Officer Ann Marie Reed is an eight year veteran with the Trumbull Police Department. She is currently assigned to the Special Operations Branch of the Administrative Division, where she serves as a Narcotics Enforcement Officer. Previously, she has served in the same Branch as a Vice Enforcement Officer, and as a patrol officer in the Department's first and second precincts.

Officer Reed is a graduate of Monroe College, with the Bachelor's Degree in Police Science and Administration. She is currently a candidate for the JD Degree at the Law School of the University of Bridgeport.

Law Enforcement Experience

5/12/VV to Present	Narcotics Enforcement Officer and Drug Recognition Expert Special Operations Branch Trumbull Police Department
3/26/WW to 5/11/VV	Vice Enforcement Officer Special Operations Branch Trumbull Police Department
9/23/XX to 3/25/WW	Patrol Officer First Precinct Trumbull Police Department
8/28/NN to 9/22/XX	Patrol Officer Second Precinct Trumbull Police Department
5/15/NN to 8/25/NN	Trainee Fairfield County Regional Police Academy (Graduated 8/25/NN)

Special Police Training

2/YY	University of Norwalk, Police Science Institute **Seminar: Packaging and Transport of Illicit Drugs**
10/VV	University of Norwalk, Police Science Institute **Seminar: Suppression of Drug-related Crime**
3/VV	NHTSA/IACP **Drug Evaluation and Classification Training: DRE School** (Certified as a DRE on 5/22/VV)

Officer Ann M. Reed

Special Police Training (Continued)

2/VV	Fairfield County Regional Police Academy **Drug Evaluation and Classification Training: PRE-School**
10/WW	Fairfield County Regional Police Academy **Standardized Field Sobriety Testing**

Publications Authored

Reed, Ann M. and Cockroft, Robert S., "Narcotics Enforcement Tactics for the Medium-sized Department"; The Police Chief. January 17, 19XX.

Reed, Ann M., Procedures for Requesting Drug Recognition Expert Services; Training Bulletin for the Trumbull Police Department. 6/VV.

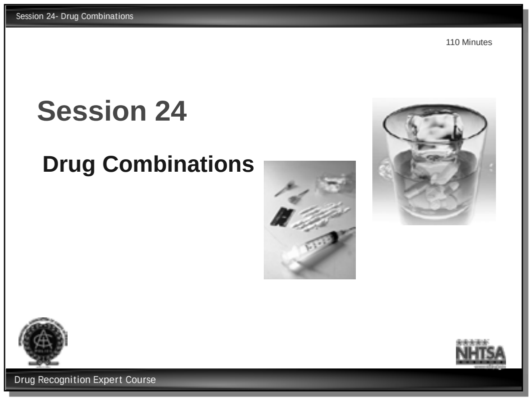
Reed, Ann M., Recognizing the Heroin Addict; Training Bulletin for the Trumbull Police Department. 1/VV.

Court Qualification Record

11/WW	Qualified as an expert witness for identification of Heroin impairment. (Judge Michael Adkins, 7th District)
3/WW	Qualified as a Drug Recognition Expert in a case involving a combination of CNS Stimulant and Narcotic Analgesic. (Judge Roberta Mayer, 7th District)
9/ZZ	Qualified as an expert witness for identification of "track" marks. (Judge Charles Peltier, 7th District)

Specialized Readings

Title	Author
Signs and Symptoms Handbook	Barbara McVan, M.D.
Drugs From A to Z	Richard R. Lingeman
Guide to Psychoactive Drugs	Richard Seymour and David E. Smith, M.D.
Addictions: Issues and Answers	Robert M. Julien, M.D.
Report on Synthetic China White: Fentanyl	Det. James Miller, LAPD



Session 24- Drug Combinations

110 Minutes

Session 24

Drug Combinations

Drug Recognition Expert Course

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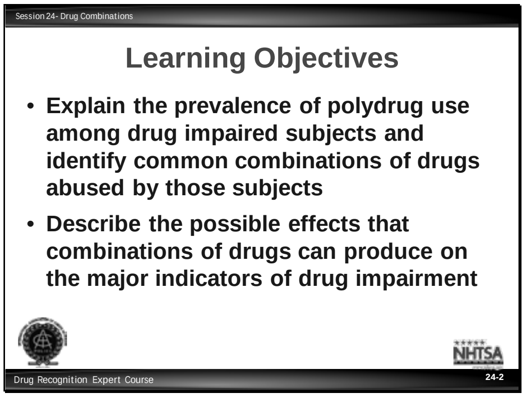

Session 24- Drug Combinations

Learning Objectives

- Explain the prevalence of polydrug use among drug impaired subjects and identify common combinations of drugs abused by those subjects
- Describe the possible effects that combinations of drugs can produce on the major indicators of drug impairment

Drug Recognition Expert Course

24-2

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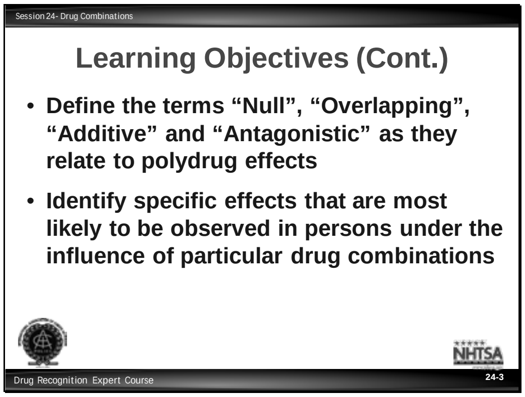
Upon successfully completing this session the participant will be able to:

- Explain the prevalence of polydrug use among drug impaired subjects and identify common combinations of drugs abused by those subjects.
- Describe the possible effects that combinations of drugs can produce on the major indicators of drug impairment.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. The Prevalence of Polydrug Use	Instructor-Led Presentations
B. Possible Effects of Drug Combinations	Interactive Discussions
C. Identifying Expected Indicators of Specific Combinations	Workbook Exercise
	Video Presentations



Session 24- Drug Combinations

Learning Objectives (Cont.)

- **Define the terms “Null”, “Overlapping”, “Additive” and “Antagonistic” as they relate to polydrug effects**
- **Identify specific effects that are most likely to be observed in persons under the influence of particular drug combinations**

Drug Recognition Expert Course

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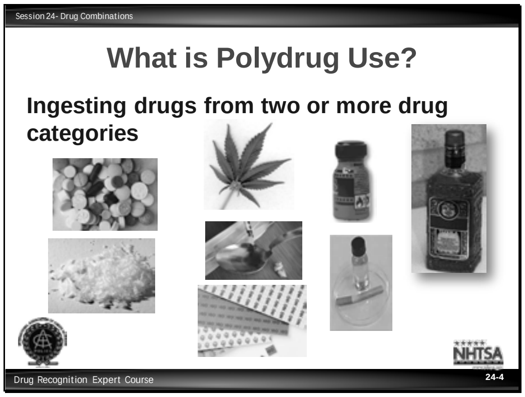
- Define the terms “Null,” “Overlapping,” “Additive” and “Antagonistic” as they relate to polydrug effects.
- Identify the specific effects that are most likely to be observed in persons under the influence of particular drug combinations.



Session 24- Drug Combinations

What is Polydrug Use?

Ingesting drugs from two or more drug categories

Drug Recognition Expert Course

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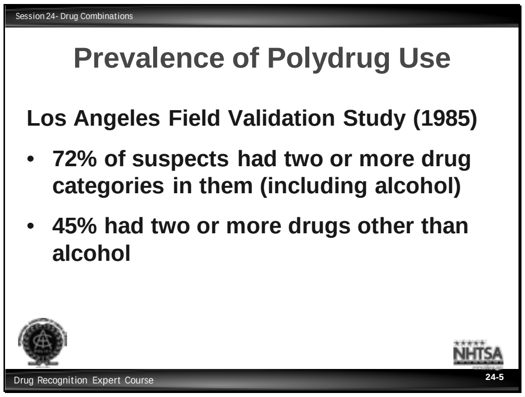
A. The Prevalence of Polydrug Use

Polydrug

Polydrug use means ingesting drugs from two or more drug categories.



Prevalence of Polydrug Use

Los Angeles Field Validation Study (1985)

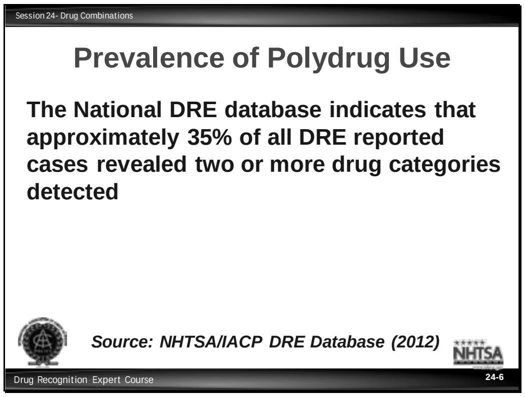
- **72% of suspects had two or more drug categories in them (including alcohol)**
- **45% had two or more drugs other than alcohol**

Notes:

Prevalence of Polydrug Use

It is actually more common for a DRE to encounter polydrug users than single drug users.

- In the Los Angeles Field Study (1985), 72% of the suspects had two or more drugs in them.
- If we discount alcohol, nearly half (45%) of the Field Study suspects had two or more other drugs in them.



Prevalence of Polydrug Use

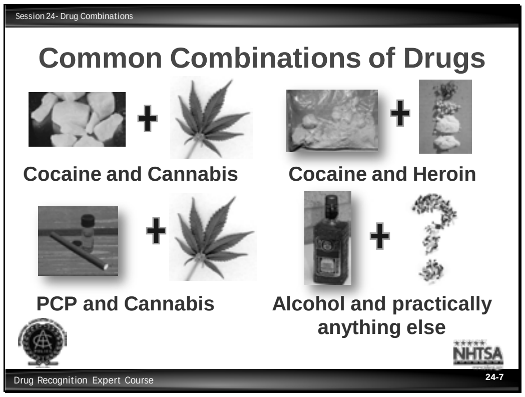
The National DRE database indicates that approximately 35% of all DRE reported cases revealed two or more drug categories detected

Source: NHTSA/IACP DRE Database (2012)

Notes:

National DRE

2011-2012 data collected from the national DRE tracking database from DREs throughout the U.S. indicates that approximately 35% of all cases with toxicology resulted in two or more drug categories detected.



Session 24- Drug Combinations

Common Combinations of Drugs

Cocaine and Cannabis

Cocaine and Heroin

PCP and Cannabis

Alcohol and practically anything else

Drug Recognition Expert Course

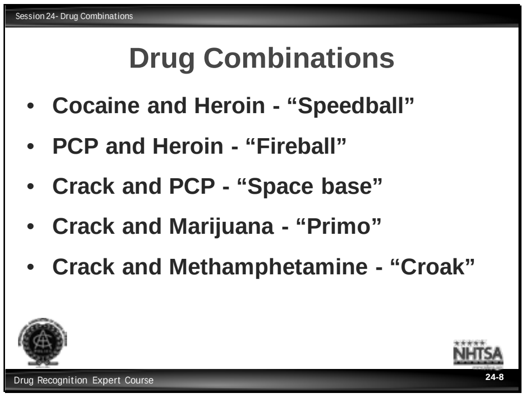
24-7

Notes:____

Common Combinations

- Cocaine and Cannabis.
- Cocaine and Heroin.
- PCP and Cannabis.

Many of the subjects you examine will be exhibiting the effects of two or more drugs acting together.



Session 24- Drug Combinations

Drug Combinations

- **Cocaine and Heroin - “Speedball”**
- **PCP and Heroin - “Fireball”**
- **Crack and PCP - “Space base”**
- **Crack and Marijuana - “Primo”**
- **Crack and Methamphetamine - “Croak”**

Drug Recognition Expert Course

24-8

Notes:____

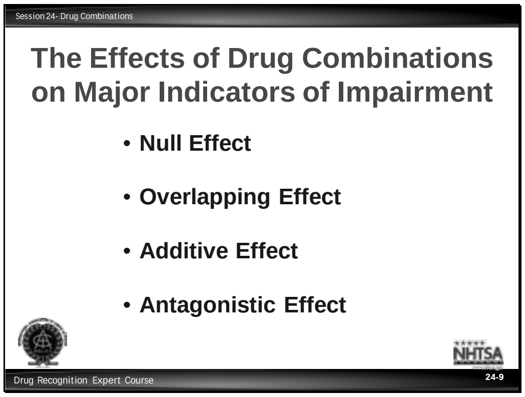
B. Possible Effects of Drug Combinations

Combos

Let us examine the possible ways in which two or more drug categories might interact.

Some common combinations of drug categories and their street names include:

- Cocaine and Heroin - “Speedball”
- PCP and Heroin - “Fireball”
- Crack and PCP - “Space base”
- Crack and Marijuana - “Primo”
- Crack and Methamphetamine - “Croak”



Session 24- Drug Combinations

The Effects of Drug Combinations on Major Indicators of Impairment

- **Null Effect**
- **Overlapping Effect**
- **Additive Effect**
- **Antagonistic Effect**

Drug Recognition Expert Course

24-9

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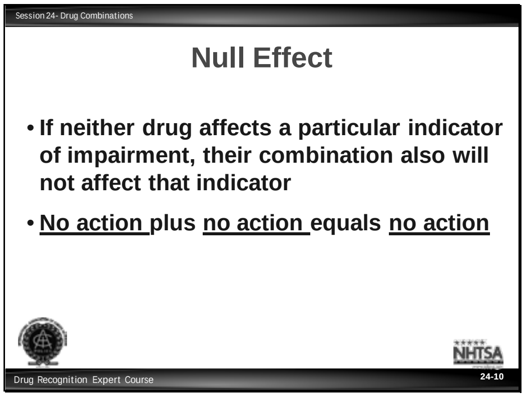
There are four effects of drug combinations on major indicators of impairment:

- Null Effect
- Overlapping Effect
- Additive Effect
- Antagonistic Effect



Session 24- Drug Combinations

Null Effect

- **If neither drug affects a particular indicator of impairment, their combination also will not affect that indicator**
- **No action plus no action equals no action**

Drug Recognition Expert Course

24-10

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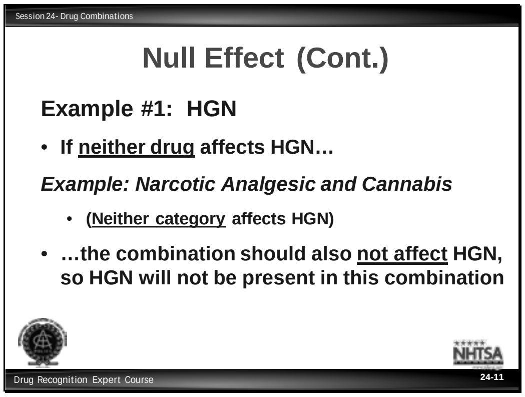
Four Effects

- Null Effect

The first effect is called the “Null Effect.”



Session 24- Drug Combinations

Null Effect (Cont.)

Example #1: HGN

- **If neither drug affects HGN…**

Example: Narcotic Analgesic and Cannabis

  - **(Neither category affects HGN)**

- **…the combination should also not affect HGN, so HGN will not be present in this combination**

Drug Recognition Expert Course

24-11

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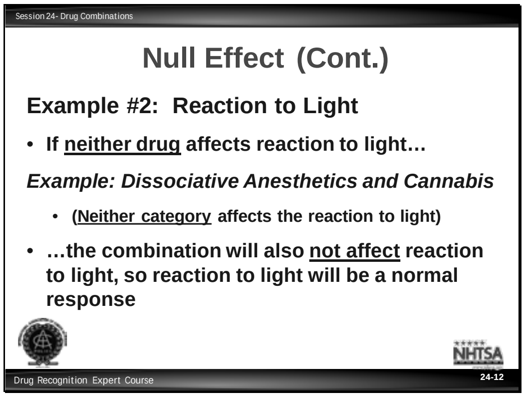
Example #1: HGN

- Neither drug affects HGN.

The combination would not result in HGN being present.

Example #1 is called the Null Effect.



Session 24- Drug Combinations

Null Effect (Cont.)

Example #2: Reaction to Light

- **If neither drug affects reaction to light…**

Example: Dissociative Anesthetics and Cannabis

  - **(Neither category affects the reaction to light)**

- **…the combination will also not affect reaction to light, so reaction to light will be a normal response**

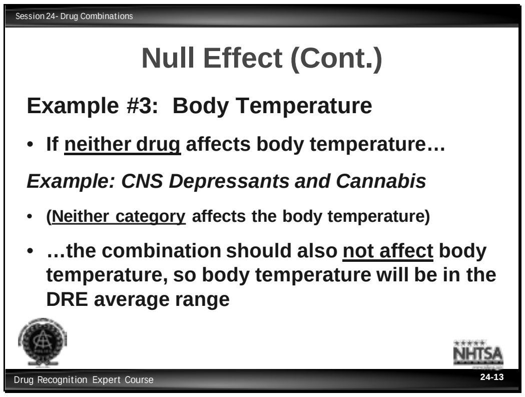
Drug Recognition Expert Course 24-12

Notes:

Example #2: Reactions to Light

Another example of the Null Effect:

Reaction to Light: neither drug affects reaction to light. Example: a Dissociative Anesthetic and Cannabis.



Session 24- Drug Combinations

Null Effect (Cont.)

Example #3: Body Temperature

- **If neither drug affects body temperature…**

Example: CNS Depressants and Cannabis

- **(Neither category affects the body temperature)**
- **…the combination should also not affect body temperature, so body temperature will be in the DRE average range**

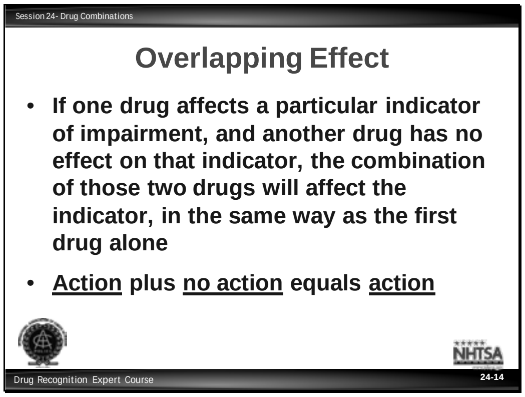
Drug Recognition Expert Course 24-13

Notes:

Example #3: Body Temperature

Another example of the Null Effect:

Body Temperature: neither a CNS Depressant nor Cannabis usually affects body temperature; the combination of the two leaves body temperature in the DRE average range.



Session 24- Drug Combinations

Overlapping Effect

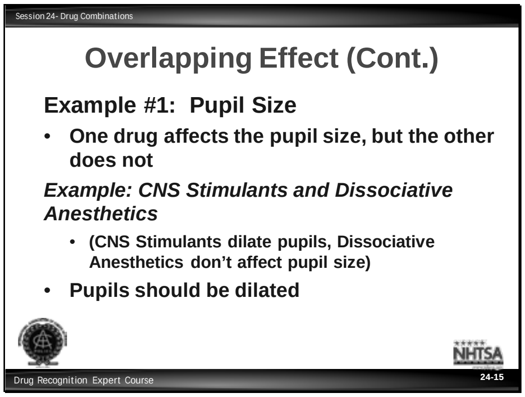
- **If one drug affects a particular indicator of impairment, and another drug has no effect on that indicator, the combination of those two drugs will affect the indicator, in the same way as the first drug alone**
- **Action plus no action equals action**

Drug Recognition Expert Course 24-14

Notes:

Overlapping Effect

The second effect is called the “Overlapping Effect.”



Session 24- Drug Combinations

Overlapping Effect (Cont.)

Example #1: Pupil Size

- **One drug affects the pupil size, but the other does not**

Example: CNS Stimulants and Dissociative Anesthetics

  - **(CNS Stimulants dilate pupils, Dissociative Anesthetics don't affect pupil size)**

- **Pupils should be dilated**

Drug Recognition Expert Course

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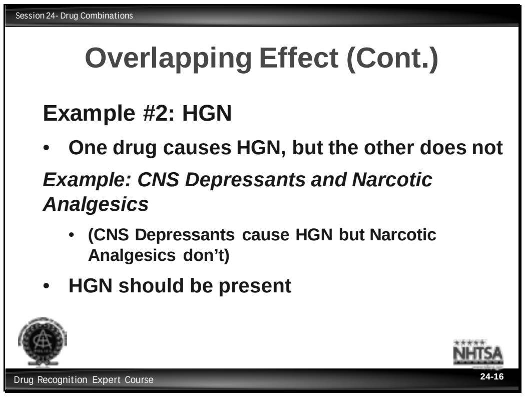
Notes:

Example #1: Pupil Size

Example #1: one drug affects pupil size, but the other does not.

Example: CNS Stimulants and Dissociative Anesthetics. CNS Stimulants dilate pupils, Dissociative Anesthetics do not affect pupil size.

Therefore, pupils should be dilated.



Session 24- Drug Combinations

Overlapping Effect (Cont.)

Example #2: HGN

- **One drug causes HGN, but the other does not**

Example: CNS Depressants and Narcotic Analgesics

  - **(CNS Depressants cause HGN but Narcotic Analgesics don't)**

- **HGN should be present**

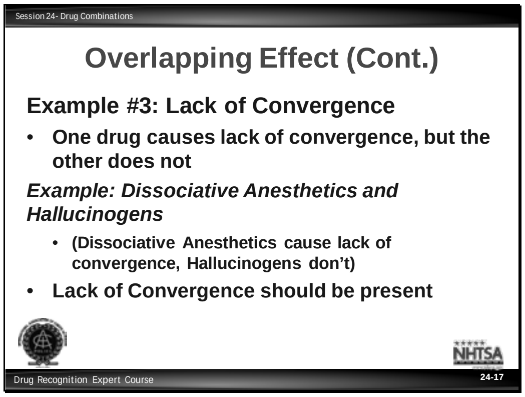
Drug Recognition Expert Course

24-16

Notes:

Example #2: HGN

HGN: a CNS Depressant will cause HGN, but Cannabis will not cause HGN; a person under the combined influence of a CNS Depressant and Cannabis will usually have HGN.



Session 24- Drug Combinations

Overlapping Effect (Cont.)

Example #3: Lack of Convergence

- **One drug causes lack of convergence, but the other does not**

Example: Dissociative Anesthetics and Hallucinogens

  - **(Dissociative Anesthetics cause lack of convergence, Hallucinogens don't)**

- **Lack of Convergence should be present**

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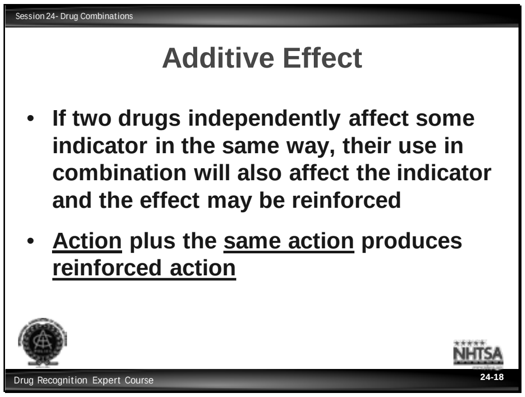
Notes:

Example #3: Lack of Convergence

Another example of the "Overlapping Effect":

Lack of Convergence. Dissociative Anesthetics cause Lack of Convergence, Hallucinogens do not. Under the influence, lack of convergence should be present.



Session 24- Drug Combinations

Additive Effect

- **If two drugs independently affect some indicator in the same way, their use in combination will also affect the indicator and the effect may be reinforced**
- **Action plus the same action produces reinforced action**

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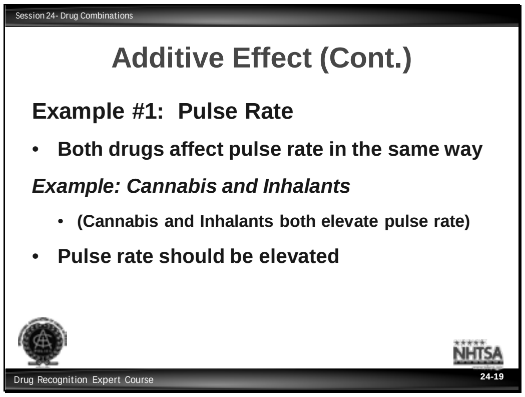
Notes:

Additive Effect

The third effect is called the Additive Effect.

- If two drugs independently affect some indicator in the same way, their use in combination will also affect the indicator and the effect may be reinforced.
- Action plus the same action produces reinforced action.



Session 24- Drug Combinations

Additive Effect (Cont.)

Example #1: Pulse Rate

- **Both drugs affect pulse rate in the same way**

Example: Cannabis and Inhalants

  - **(Cannabis and Inhalants both elevate pulse rate)**
- **Pulse rate should be elevated**

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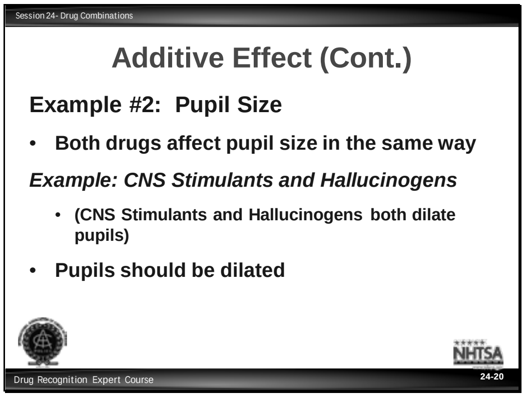
Notes:

Example #1: Pulse Rate

Pulse Rate. Cannabis and Inhalants both elevate pulse rate. Therefore, pulse rate should be elevated, or up.



Session 24- Drug Combinations

Additive Effect (Cont.)

Example #2: Pupil Size

- **Both drugs affect pupil size in the same way**

Example: CNS Stimulants and Hallucinogens

  - **(CNS Stimulants and Hallucinogens both dilate pupils)**
- **Pupils should be dilated**

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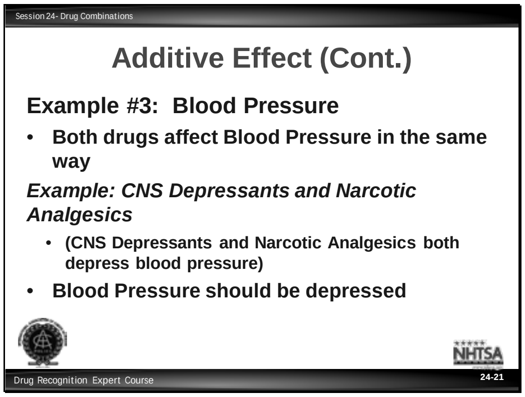
Notes:

Example #2: Pupil Size

Pupil Size. CNS Stimulants and Hallucinogens both dilate the pupils; therefore, pupils should be dilated.



Session 24- Drug Combinations

Additive Effect (Cont.)

Example #3: Blood Pressure

- **Both drugs affect Blood Pressure in the same way**

Example: CNS Depressants and Narcotic Analgesics

  - **(CNS Depressants and Narcotic Analgesics both depress blood pressure)**
- **Blood Pressure should be depressed**

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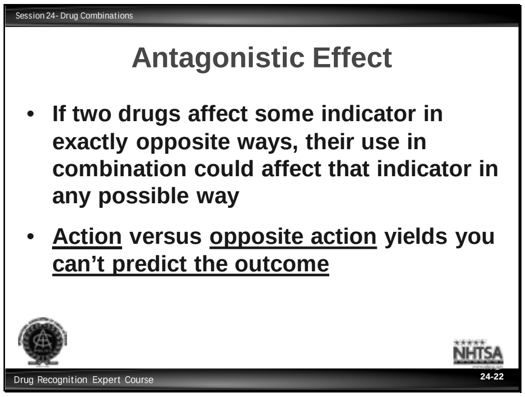
Notes:

Example #3: Blood Pressure

Blood Pressure. CNS Depressants and Narcotic Analgesics both depress blood pressure. Therefore, the blood pressure should be depressed or down.



Session 24- Drug Combinations

Antagonistic Effect

- **If two drugs affect some indicator in exactly opposite ways, their use in combination could affect that indicator in any possible way**
- **Action versus opposite action yields you can't predict the outcome**

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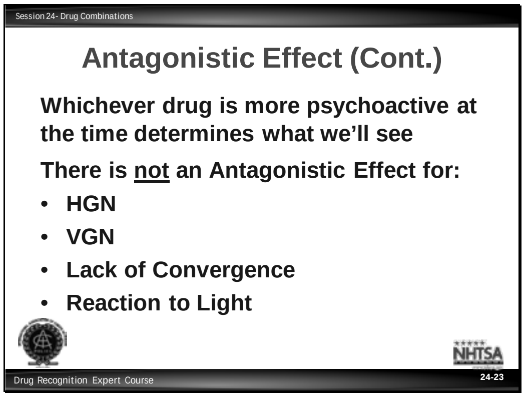
Notes:

Antagonistic Effect

The fourth effect is called the Antagonistic Effect.

When two drugs produce an “Antagonistic Effect,” they tend to try to override or compete with the effect of the other drug(s) until the drug with the longest duration of effects prevails. Normally, whichever drug is more psychoactive at the time determines what we’ll see.



Session 24- Drug Combinations

Antagonistic Effect (Cont.)

Whichever drug is more psychoactive at the time determines what we'll see

There is not an Antagonistic Effect for:

- **HGN**
- **VGN**
- **Lack of Convergence**
- **Reaction to Light**

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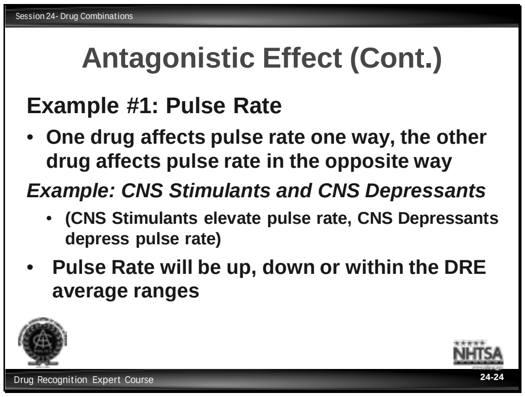
Notes:

There is not an Antagonistic Effect for:

- HGN
- VGN
- Lack of Convergence and
- Reaction to Light



Session 24- Drug Combinations

Antagonistic Effect (Cont.)

Example #1: Pulse Rate

- **One drug affects pulse rate one way, the other drug affects pulse rate in the opposite way**

Example: CNS Stimulants and CNS Depressants

  - **(CNS Stimulants elevate pulse rate, CNS Depressants depress pulse rate)**
- **Pulse Rate will be up, down or within the DRE average ranges**

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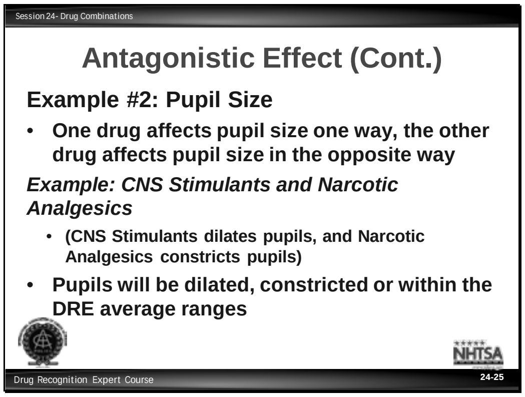
Notes:

Example #1: Pulse Rate

Pulse Rate. CNS Stimulants elevate pulse rate, CNS Depressants depress pulse rate; therefore, pulse rate will be up, down or within the DRE average ranges.



Session 24- Drug Combinations

Antagonistic Effect (Cont.)

Example #2: Pupil Size

- **One drug affects pupil size one way, the other drug affects pupil size in the opposite way**

Example: CNS Stimulants and Narcotic Analgesics

  - **(CNS Stimulants dilates pupils, and Narcotic Analgesics constricts pupils)**
- **Pupils will be dilated, constricted or within the DRE average ranges**

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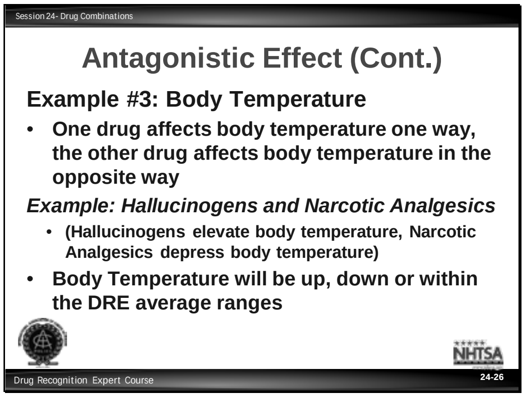
Notes:

Example #2: Pupil Size

Pupil Size. CNS Stimulants dilate pupils, Narcotic Analgesics constrict pupils. Pupil size will be dilated, constricted or within the DRE average ranges.



Session 24- Drug Combinations

Antagonistic Effect (Cont.)

Example #3: Body Temperature

- **One drug affects body temperature one way, the other drug affects body temperature in the opposite way**

Example: Hallucinogens and Narcotic Analgesics

  - **(Hallucinogens elevate body temperature, Narcotic Analgesics depress body temperature)**
- **Body Temperature will be up, down or within the DRE average ranges**

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Notes:

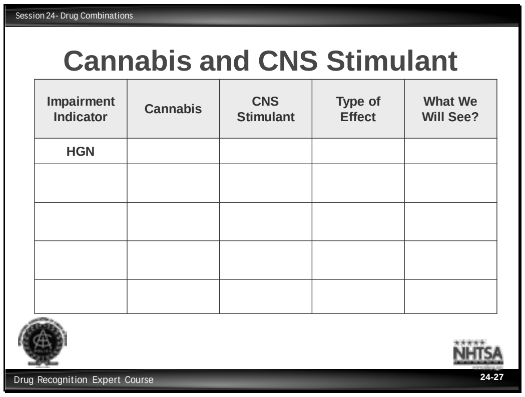
Example #3: Body Temperature

Body Temperature. Hallucinations elevate body temperature, Narcotic Analgesics depress body temperature. Body temperature will be up, down or within the DRE average ranges.

With an "Antagonistic Effect," we just can't predict what we will see.

Summary

When drugs from two or more drug categories are taken together, they tend to produce a combination of Null Effects, Overlapping Effects, Additive Effects and Antagonistic Effects.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN				

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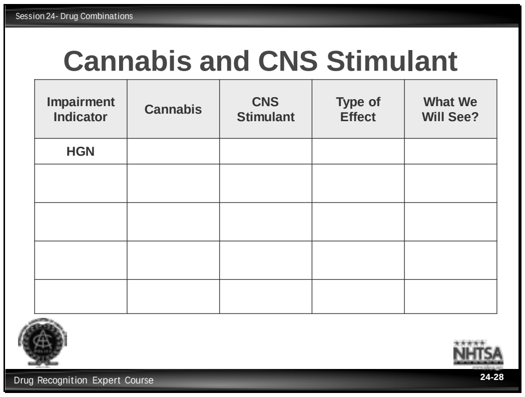
Notes:

HGN

A specific example: consider a person who is under the influence of a combination of Cannabis and a CNS Stimulant.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN				

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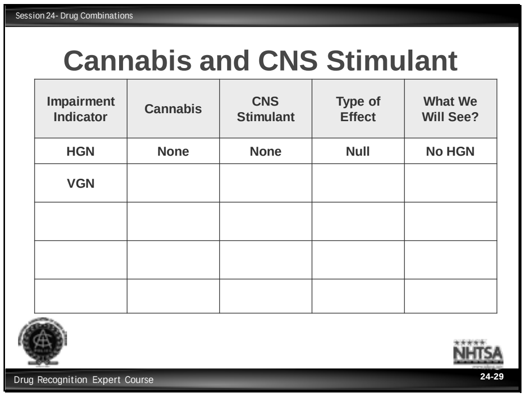
Notes:____

Neither Cannabis nor a CNS Stimulant causes HGN.

This is a case of no action plus no action equals no action.

We will not see HGN with this combination.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN				

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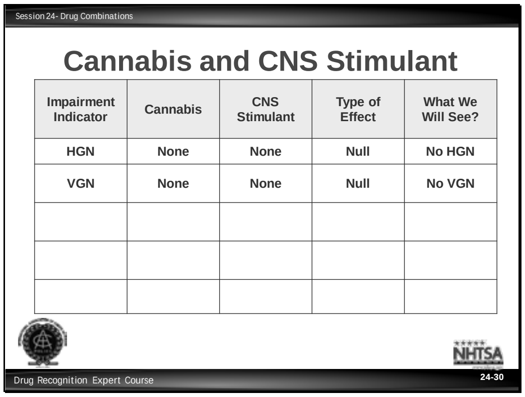
Notes:____

Vertical Gaze Nystagmus



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN	None	None	Null	No VGN

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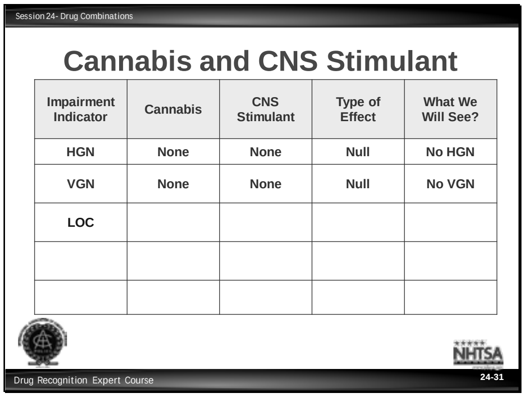
Notes:____

Neither Cannabis nor a CNS Stimulant causes VGN.

This is another Null Effect.

We won’t see VGN.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN	None	None	Null	No VGN
LOC				

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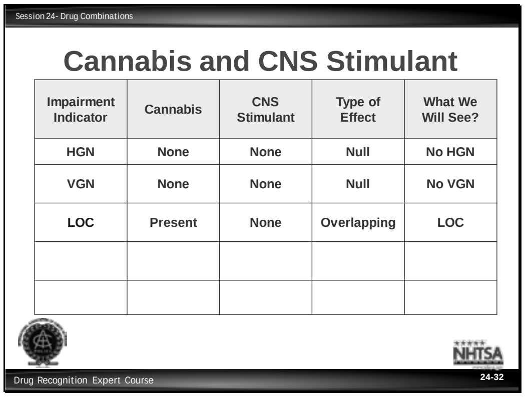
Notes:

Lack of Convergence



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN	None	None	Null	No VGN
LOC	Present	None	Overlapping	LOC

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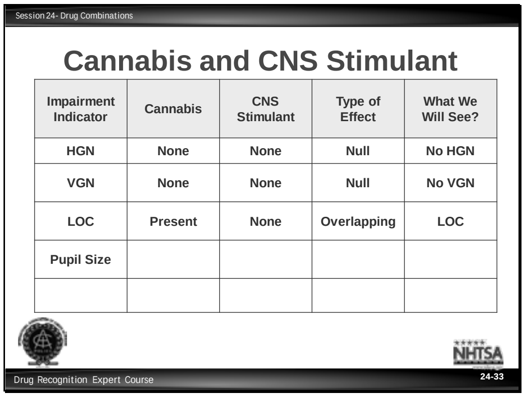
Notes:

Cannabis causes Lack of Convergence; a CNS Stimulant does not.

This is a case of action plus no action equals action.

We will see Lack of Convergence with this combination.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN	None	None	Null	No VGN
LOC	Present	None	Overlapping	LOC
Pupil Size				

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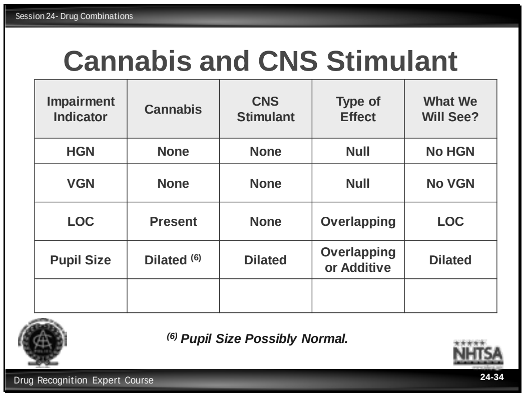
Notes:

Pupil Size



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN	None	None	Null	No VGN
LOC	Present	None	Overlapping	LOC
Pupil Size	Dilated (6)	Dilated	Overlapping or Additive	Dilated

(6) Pupil Size Possibly Normal.

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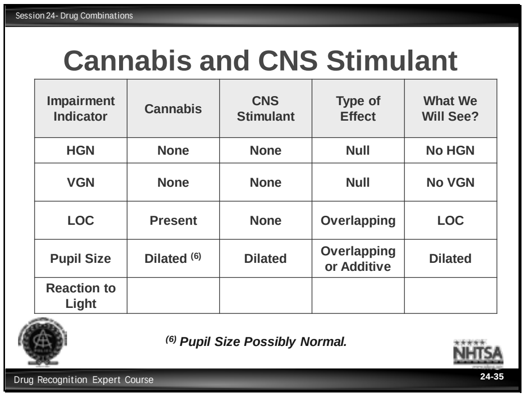
Notes:

CNS Stimulants dilate pupils; Cannabis either dilates pupils or has no effect on them.

This may be a case of action plus no action equals action.

Or it may be a case of action plus same action reinforces action.

In either case, we should see dilated pupils with this combination.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN	None	None	Null	No VGN
LOC	Present	None	Overlapping	LOC
Pupil Size	Dilated (6)	Dilated	Overlapping or Additive	Dilated
Reaction to Light				

(6) Pupil Size Possibly Normal.

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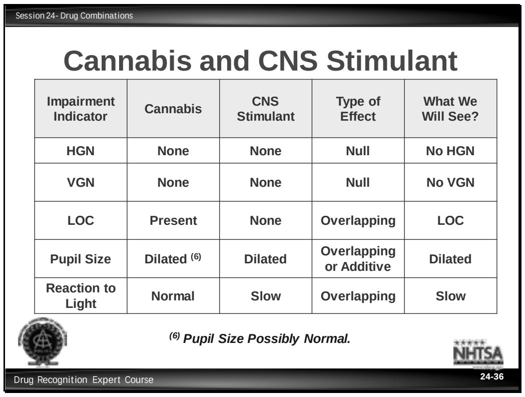
Notes:

Reaction to Light



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
HGN	None	None	Null	No HGN
VGN	None	None	Null	No VGN
LOC	Present	None	Overlapping	LOC
Pupil Size	Dilated (6)	Dilated	Overlapping or Additive	Dilated
Reaction to Light	Normal	Slow	Overlapping	Slow

(6) Pupil Size Possibly Normal.

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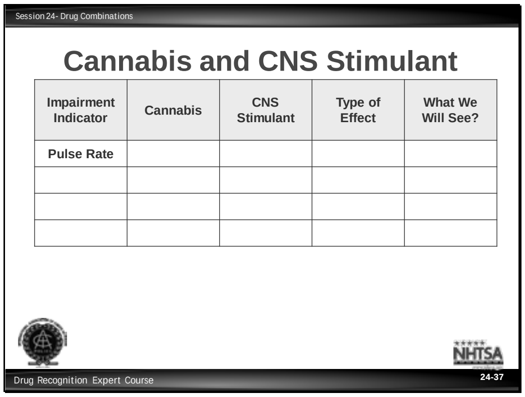
Notes:

CNS Stimulants slow the pupils' Reaction to Light; Cannabis usually doesn't affect the pupils' reaction.

Here we have another Overlapping Effect.

We should observe a slowed reaction of the pupils.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
Pulse Rate				

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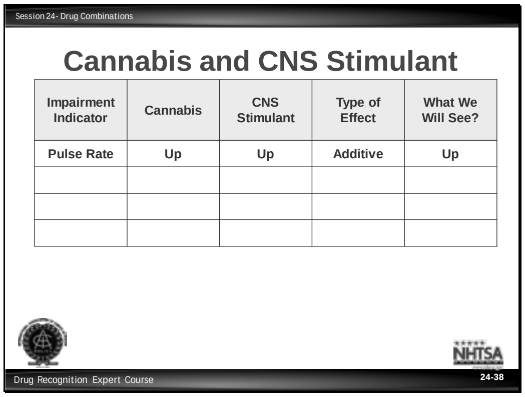
Notes:____

Pulse Rate



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
Pulse Rate	Up	Up	Additive	Up

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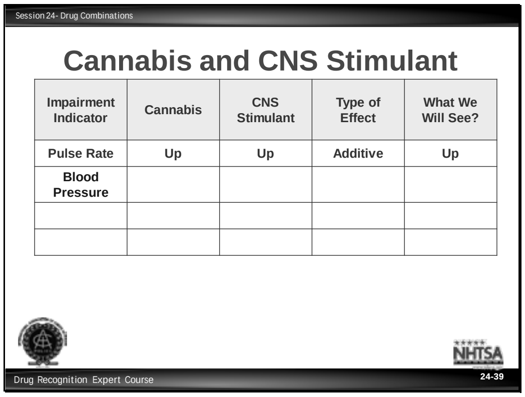
Notes:____

Both Cannabis and CNS Stimulants usually elevate pulse rate.

This is an Additive Effect.

We should see a pulse rate that is up or elevated.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
Pulse Rate	Up	Up	Additive	Up
Blood Pressure				

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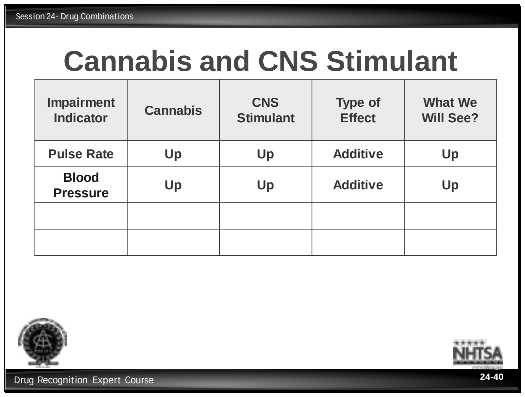
Notes:____

Blood Pressure



Cannabis and CNS Stimulant

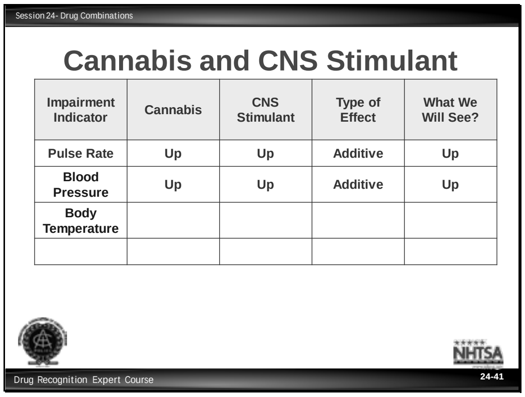
Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
Pulse Rate	Up	Up	Additive	Up
Blood Pressure	Up	Up	Additive	Up

Notes:

Cannabis usually causes blood pressure to be up or elevated; so does a CNS Stimulant.

This is another Additive Effect.

We should see a blood pressure that is up or elevated.

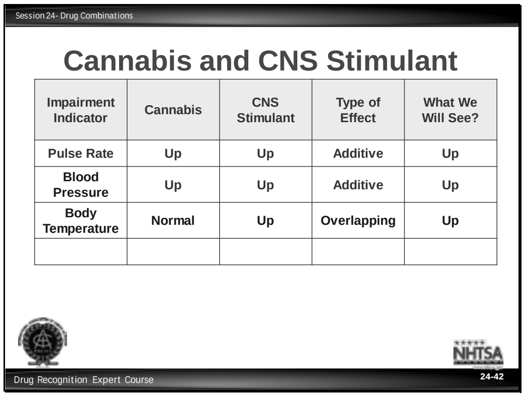


Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
Pulse Rate	Up	Up	Additive	Up
Blood Pressure	Up	Up	Additive	Up
Body Temperature				

Notes:

Body Temperature



Cannabis and CNS Stimulant

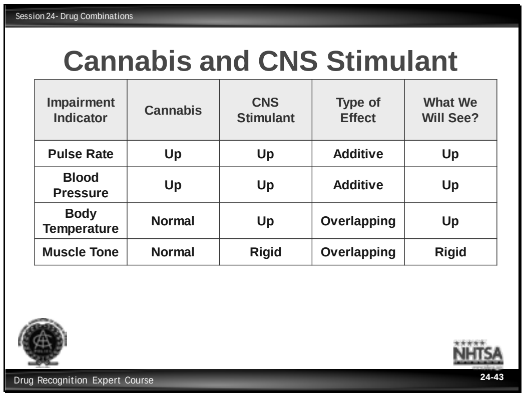
Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
Pulse Rate	Up	Up	Additive	Up
Blood Pressure	Up	Up	Additive	Up
Body Temperature	Normal	Up	Overlapping	Up

Notes:

Cannabis usually does not affect body temperature. But CNS Stimulants usually elevate temperature.

This is another case of action plus no action equals action.

We can expect to see an elevated temperature with this combination.



Session 24- Drug Combinations

Cannabis and CNS Stimulant

Impairment Indicator	Cannabis	CNS Stimulant	Type of Effect	What We Will See?
Pulse Rate	Up	Up	Additive	Up
Blood Pressure	Up	Up	Additive	Up
Body Temperature	Normal	Up	Overlapping	Up
Muscle Tone	Normal	Rigid	Overlapping	Rigid

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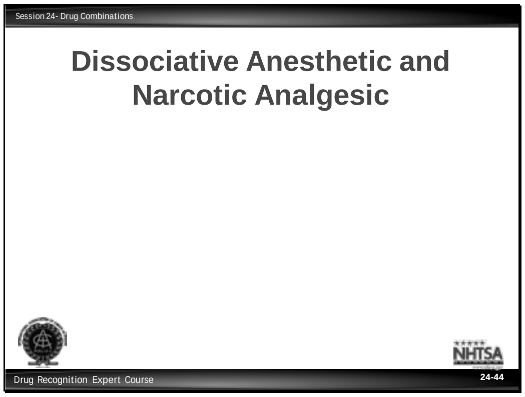
Notes:____

Muscle Tone

Cannabis usually does not affect muscle tone. CNS Stimulants cause muscle tone to be rigid.

This is another case of action plus no action equals action.

We can expect to see rigid muscle tone with this combination.



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

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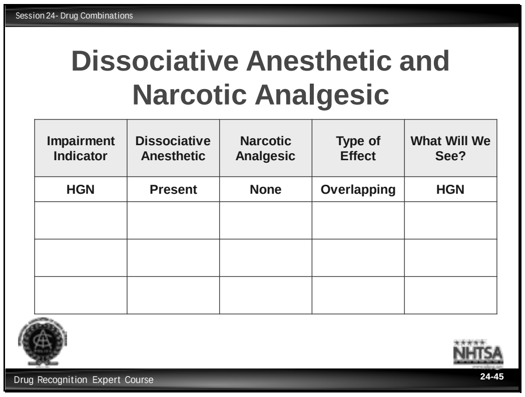
Notes:____

Dissociative Anesthetics and Narcotic Analgesics

Another specific example: consider a person under the influence of a combination of a Dissociative Anesthetic and a Narcotic Analgesic.



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
HGN	Present	None	Overlapping	HGN

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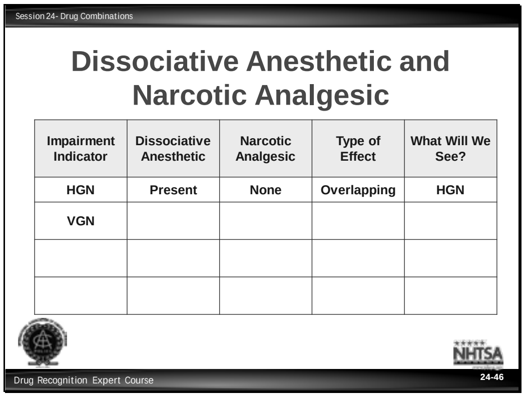
Notes:____

HGN

A Dissociative Anesthetic causes HGN, Narcotic Analgesics do not.

This is an Overlapping Effect.

We can expect to see HGN with this subject.



Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
HGN	Present	None	Overlapping	HGN
VGN				

Notes:____

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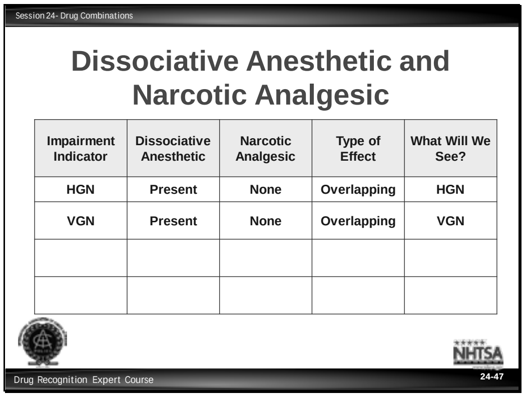
Vertical Gaze Nystagmus



Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
HGN	Present	None	Overlapping	HGN
VGN	Present	None	Overlapping	VGN

Notes:____

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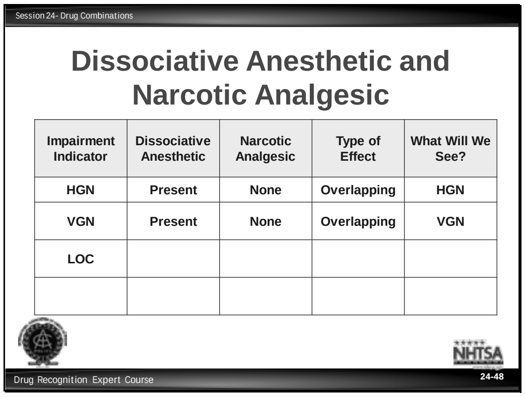
A Dissociative Anesthetic should cause Vertical Gaze Nystagmus, especially at high doses. A Narcotic Analgesic will not cause Vertical Gaze Nystagmus.

This is another Overlapping Effect.

We should see Vertical Gaze Nystagmus in this subject.



Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
HGN	Present	None	Overlapping	HGN
VGN	Present	None	Overlapping	VGN
LOC				

Notes:____

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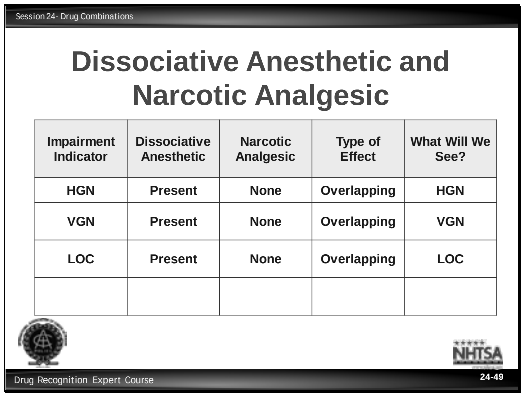
Lack of Convergence



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
HGN	Present	None	Overlapping	HGN
VGN	Present	None	Overlapping	VGN
LOC	Present	None	Overlapping	LOC

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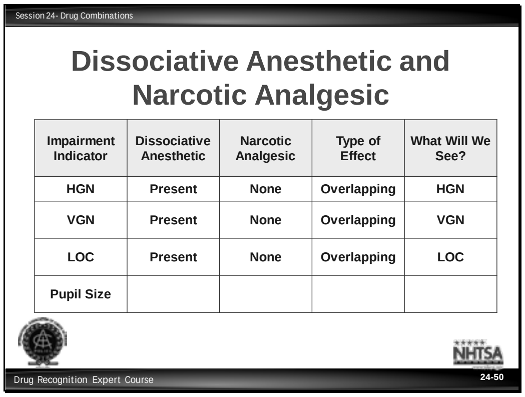
Notes:____

A Dissociative Anesthetic causes Lack of Convergence; Narcotic Analgesics do not.

Another Overlapping Effect.

We can expect to see Lack of Convergence.



Session 24- Drug Combinations

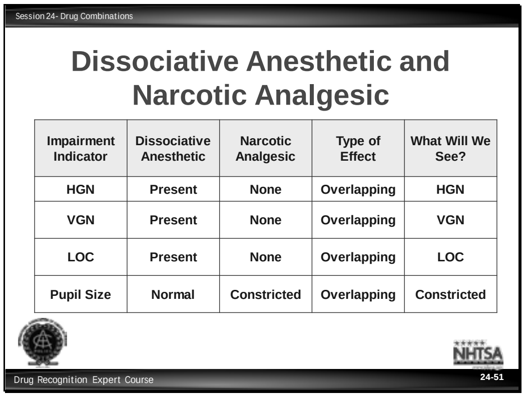
Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
HGN	Present	None	Overlapping	HGN
VGN	Present	None	Overlapping	VGN
LOC	Present	None	Overlapping	LOC
Pupil Size				

Drug Recognition Expert Course 24-50

Notes:____

Pupil Size



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
HGN	Present	None	Overlapping	HGN
VGN	Present	None	Overlapping	VGN
LOC	Present	None	Overlapping	LOC
Pupil Size	Normal	Constricted	Overlapping	Constricted

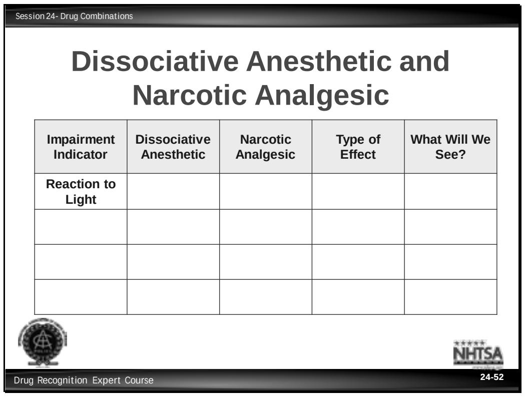
Drug Recognition Expert Course 24-51

Notes:____

A Dissociative Anesthetic doesn’t affect pupil size, but a Narcotic Analgesic constricts pupils.

This is another Overlapping Effect.

We can expect to see constricted pupils with this subject.



Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Reaction to Light				

Notes:____

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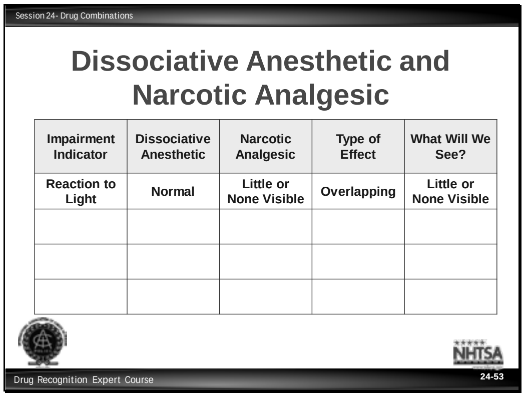
Reaction to Light



Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Reaction to Light	Normal	Little or None Visible	Overlapping	Little or None Visible

Notes:____

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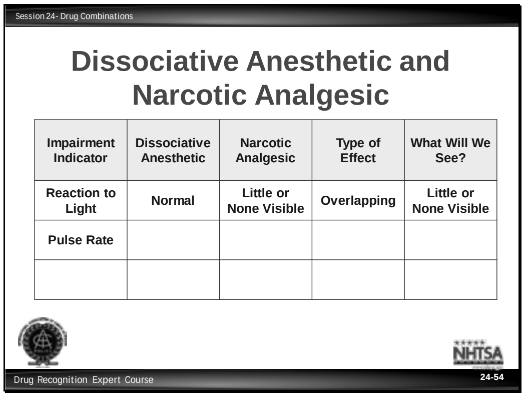
A Dissociative Anesthetic doesn’t affect pupil’s Reaction to Light; but a Narcotic Analgesic usually produces a “little or none visible” reaction.

This, too, is an Overlapping Effect.

We can expect a “little or none visible” reaction in this subject’s pupils.



Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Reaction to Light	Normal	Little or None Visible	Overlapping	Little or None Visible
Pulse Rate				

Notes:____

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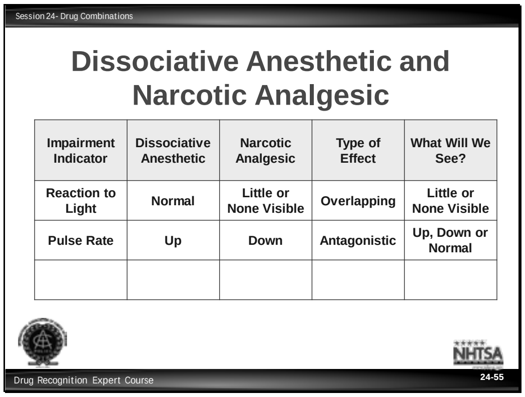
Pulse Rate



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Reaction to Light	Normal	Little or None Visible	Overlapping	Little or None Visible
Pulse Rate	Up	Down	Antagonistic	Up, Down or Normal

Drug Recognition Expert Course 24-55

Notes:

A Dissociative Anesthetic usually causes pulse rate to be elevated; a Narcotic Analgesic usually produces a depressed or lower pulse rate.

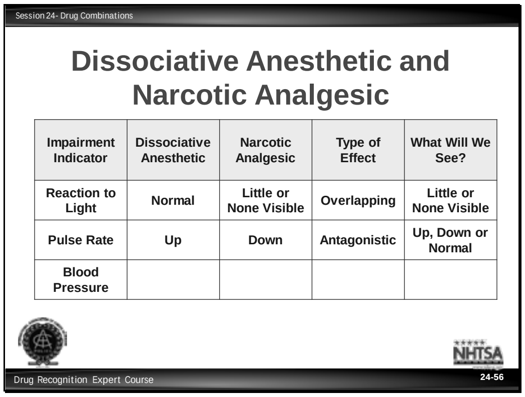
This is our first Antagonistic Effect.

We cannot predict what this subject's pulse rate will be.

The pulse rate could be elevated, or depressed, or within the DRE average ranges.

This subject's pulse rate will depend on many factors, including:

- How much of each drug was taken.
- How and when each drug was taken.
- How tolerant the subject is of each drug.



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Reaction to Light	Normal	Little or None Visible	Overlapping	Little or None Visible
Pulse Rate	Up	Down	Antagonistic	Up, Down or Normal
Blood Pressure				

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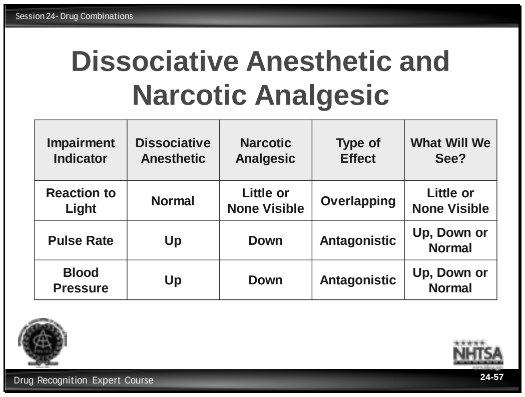
Notes:

Blood Pressure



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Reaction to Light	Normal	Little or None Visible	Overlapping	Little or None Visible
Pulse Rate	Up	Down	Antagonistic	Up, Down or Normal
Blood Pressure	Up	Down	Antagonistic	Up, Down or Normal

Drug Recognition Expert Course

24-57

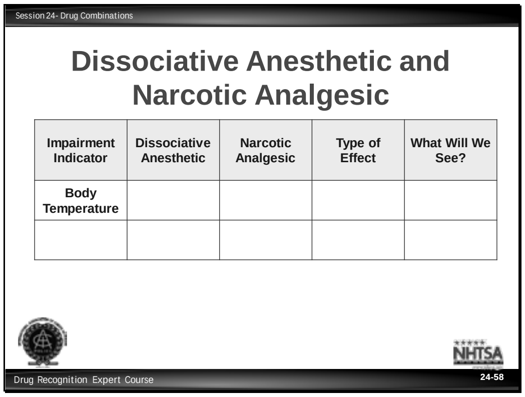
Notes:____

A Dissociative Anesthetic usually elevates blood pressure; a Narcotic Analgesic usually lowers blood pressure.

This is another Antagonistic Effect.

We can’t predict what the blood pressure will be.

It could be above DRE average ranges, below DRE average ranges, or within the DRE average ranges.



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Body Temperature				

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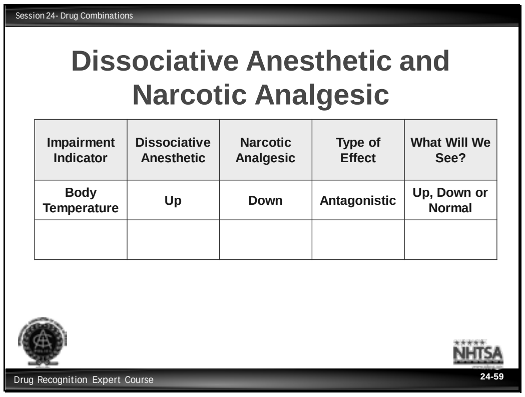
24-58

Notes:____

Temperature



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Body Temperature	Up	Down	Antagonistic	Up, Down or Normal

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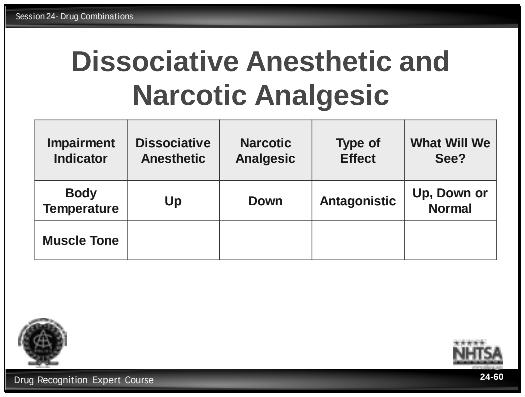
24-59

Notes:____

A Dissociative Anesthetic usually elevates temperature; a Narcotic Analgesic usually lowers it.

This, too, is an Antagonistic Effect.

The temperature could be elevated (up), or depressed (down) or within the DRE average range.



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Body Temperature	Up	Down	Antagonistic	Up, Down or Normal
Muscle Tone				

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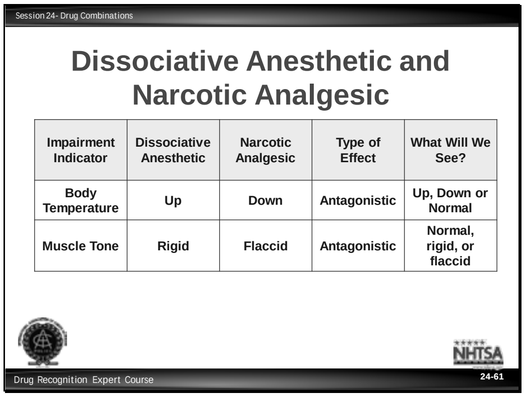
24-60

Notes:____

Muscle Tone



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Body Temperature	Up	Down	Antagonistic	Up, Down or Normal
Muscle Tone	Rigid	Flaccid	Antagonistic	Normal, rigid, or flaccid

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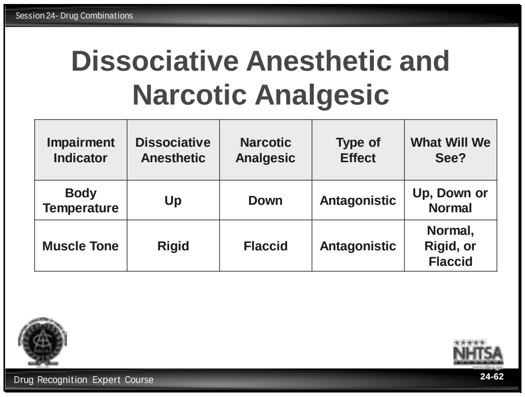
Notes:____

A Dissociative Anesthetic usually causes rigid muscle tone. A Narcotic Analgesic usually causes flaccid muscle tone.

This could be an Overlapping or Antagonistic Effect.

Muscle tone could be normal, rigid, or flaccid.



Session 24- Drug Combinations

Dissociative Anesthetic and Narcotic Analgesic

Impairment Indicator	Dissociative Anesthetic	Narcotic Analgesic	Type of Effect	What Will We See?
Body Temperature	Up	Down	Antagonistic	Up, Down or Normal
Muscle Tone	Rigid	Flaccid	Antagonistic	Normal, Rigid, or Flaccid

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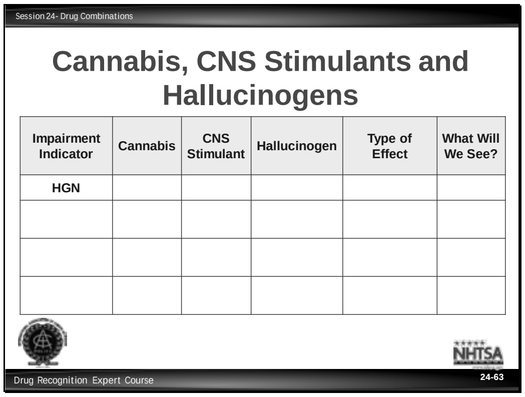
24-62

Notes:____

A Dissociative Anesthetic usually causes rigid muscle tone, a Narcotic Analgesic usually causes flaccid muscle tone.

This could be an Overlapping or Antagonistic Effect.

Muscle tone could be normal, rigid, or flaccid.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
HGN					

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24-63

Notes:____

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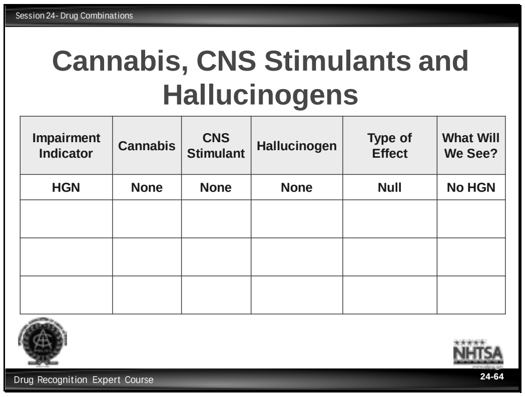
Cannabis, CNS Stimulant and Hallucinogens

Another specific example: consider a person under the influence of Cannabis, a CNS Stimulant and a Hallucinogen.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
HGN	None	None	None	Null	No HGN

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24-64

Notes:____

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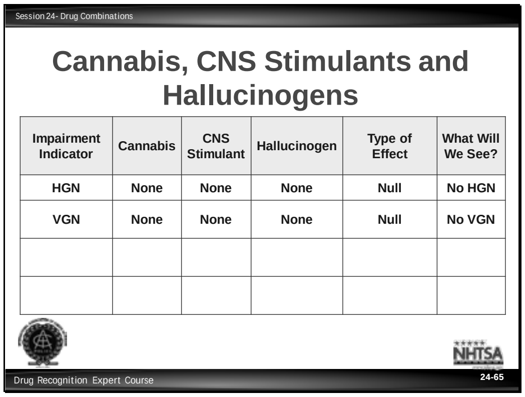
HGN

None of the three categories causes HGN, This is an example of the Null Effect.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
HGN	None	None	None	Null	No HGN
VGN	None	None	None	Null	No VGN

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24-65

Notes:____

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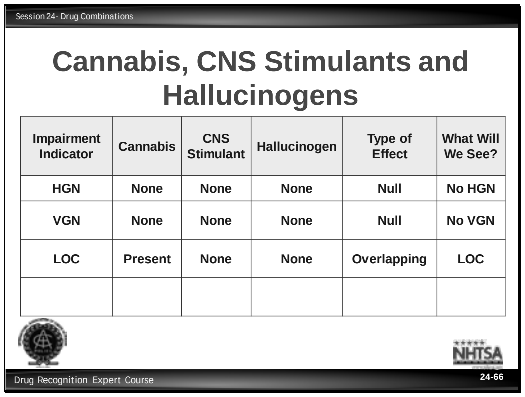
VGN

None of the three drug categories cause Vertical Gaze Nystagmus, another example of the Null Effect.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
HGN	None	None	None	Null	No HGN
VGN	None	None	None	Null	No VGN
LOC	Present	None	None	Overlapping	LOC

NHTSA

Drug Recognition Expert Course

24-66

Notes:____

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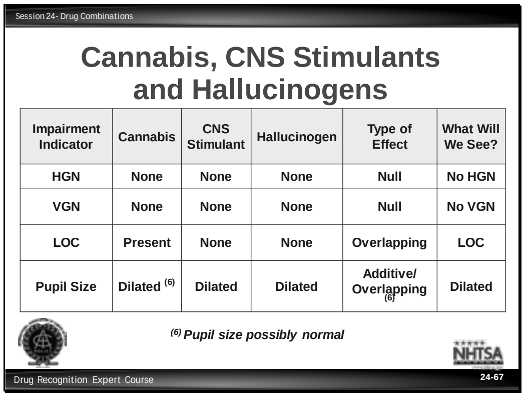
LOC

Cannabis causes a Lack of Convergence while CNS Stimulants and Hallucinogens do not.

This is an example of an Overlapping Effect and Lack of Convergence should be present.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
HGN	None	None	None	Null	No HGN
VGN	None	None	None	Null	No VGN
LOC	Present	None	None	Overlapping	LOC
Pupil Size	Dilated (6)	Dilated	Dilated	Additive/ Overlapping (6)	Dilated

(6) *Pupil size possibly normal*

NHTSA

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24-67

Notes:____

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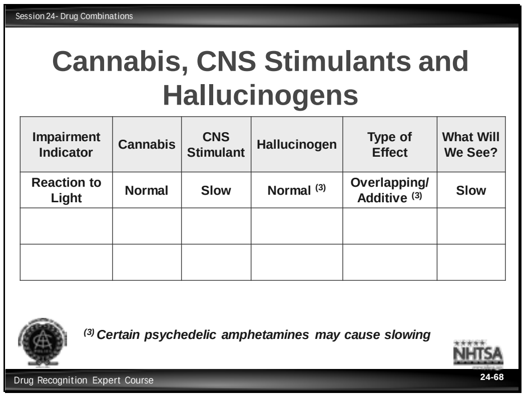
Pupil Size

Cannabis usually dilates pupils. CNS Stimulants and Hallucinogens also dilate the pupils.

This is an example of an Additive or Overlapping Effect.

The pupils should be dilated.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
Reaction to Light	Normal	Slow	Normal [3]	Overlapping/ Additive [3]	Slow

[3] Certain psychedelic amphetamines may cause slowing

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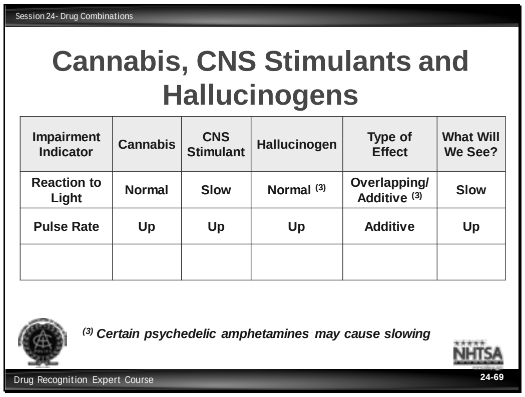
Notes:

Reaction to Light

Cannabis does not effect the Reaction to Light. CNS Stimulants will slow down the reaction. Most Hallucinogens, with some exceptions, will cause a normal Reaction to Light.

This is an example of either an Overlapping or Additive Effect.

We could probably see a slow Reaction to Light.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
Reaction to Light	Normal	Slow	Normal [3]	Overlapping/ Additive [3]	Slow
Pulse Rate	Up	Up	Up	Additive	Up

[3] Certain psychedelic amphetamines may cause slowing

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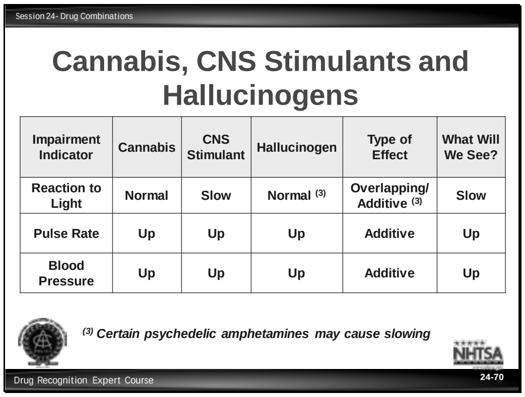
Notes:

Pulse Rate

Cannabis will normally elevate the pulse rate as will CNS Stimulants and Hallucinogens.

This is an example of an Additive Effect.

The result would be an elevated pulse rate.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
Reaction to Light	Normal	Slow	Normal (3)	Overlapping/ Additive (3)	Slow
Pulse Rate	Up	Up	Up	Additive	Up
Blood Pressure	Up	Up	Up	Additive	Up

(3) *Certain psychedelic amphetamines may cause slowing*

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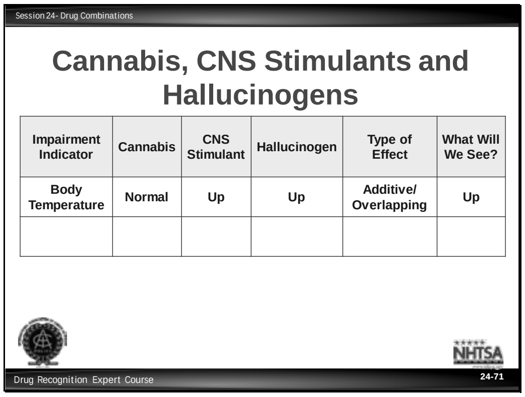
Notes:

Blood Pressure

All three drug categories will elevate blood pressure.

Blood pressure should be elevated with this combination.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
Body Temperature	Normal	Up	Up	Additive/ Overlapping	Up

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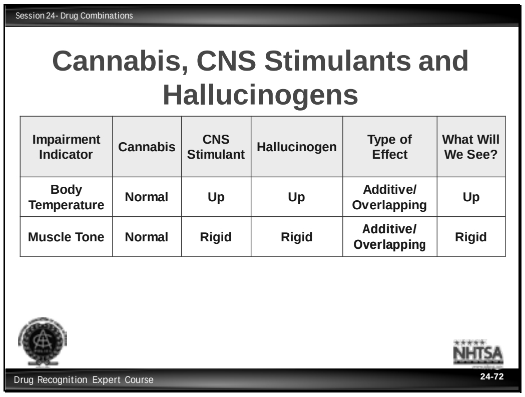
Notes:

Body Temperature

Cannabis usually causes a body temperature in the average range. CNS Stimulants and Hallucinogens elevate body temperature.

This would be an example of an Additive or Overlapping Effect.

The body temperature should be elevated with this combination.



Session 24- Drug Combinations

Cannabis, CNS Stimulants and Hallucinogens

Impairment Indicator	Cannabis	CNS Stimulant	Hallucinogen	Type of Effect	What Will We See?
Body Temperature	Normal	Up	Up	Additive/ Overlapping	Up
Muscle Tone	Normal	Rigid	Rigid	Additive/ Overlapping	Rigid

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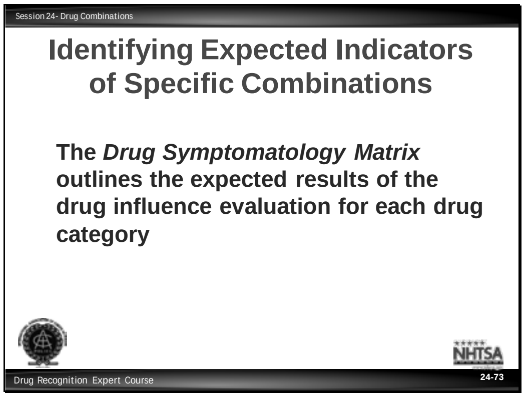
Notes:

Muscle Tone

Cannabis causes a normal muscle tone, while CNS Stimulants and Hallucinogens will cause rigid muscle tone.

This would be an example of an Additive or an Overlapping Effect.

The muscle tone should be rigid with this combination.



Session 24- Drug Combinations

Identifying Expected Indicators of Specific Combinations

The *Drug Symptomatology Matrix* outlines the expected results of the drug influence evaluation for each drug category

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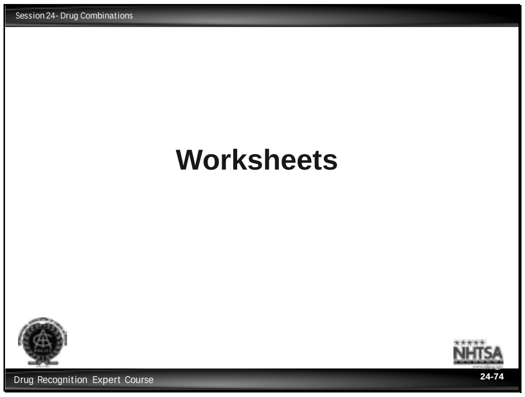
24-73

Notes:

C. Identifying Expected Indicators of Specific Combinations

Drug Symptomatology Matrix

The Matrix outlines the expected results of the drug influence evaluation for each drug category.



Session 24- Drug Combinations

Worksheets

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Notes:

Worksheet Exercises

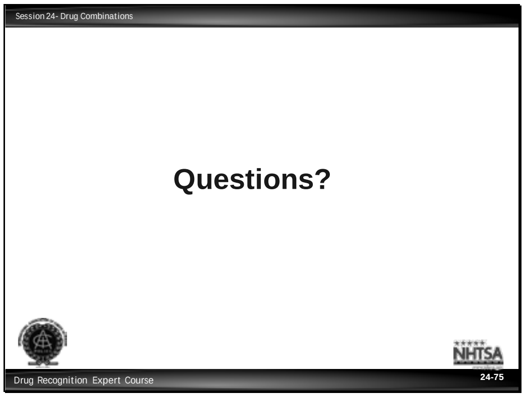
Worksheet #1: Dissociative Anesthetic and a Hallucinogen.

Worksheet #2: Cannabis and CNS Depressant.

Worksheet #3: CNS Depressant and CNS Stimulant.

Discussion of Worksheets

On the final five pages of this session, you will find examples of specific drug combinations. The expected results for the first two of these combinations (Cannabis and Stimulants, and Dissociative Anesthetic and Narcotic Analgesic) have been worked out for you. Study those examples, and then complete the work sheets for the three remaining combinations.



Session 24- Drug Combinations

Questions?

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24-75

Notes:

CANNABIS AND CNS STIMULANT IN COMBINATION

IMPAIRMENT INDICATOR	EFFECT DUE TO CANNABIS	EFFECT DUE TO CNS STIMULANT	TYPE OF COMBINED EFFECT	WHAT WILL WE SEE
VERTICAL GAZE NYSTAGMUS	NONE	NONE	NULL	NONE
LACK OF CONV.	PRESENT	NONE	OVERLAPPING	PRESENT
PUPIL SIZE	DILATED OR NORMAL	DILATED	OVERLAPPING OR ADDITIVE	DILATED
REACTION TO LIGHT	NORMAL	SLOW	OVERLAPPING	SLOW
PULSE RATE	UP	UP	ADDITIVE	UP
BLOOD PRESSURE	UP	UP	ADDITIVE	UP
BODY TEMP	NORMAL	UP	OVERLAPPING	UP
MUSCLE TONE	NORMAL	RIGID	OVERLAPPING	RIGID

DISSOCIATIVE ANESTHETIC AND NARCOTIC ANALGESIC IN COMBINATION

IMPAIRMENT INDICATOR	EFFECT DUE TO PHENCYCLIDINE	EFFECT DUE TO HEROIN	TYPE OF COMBINED EFFECT	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS	PRESENT	NONE	OVERLAPPING	PRESENT
VERTICAL GAZE NYSTAGMUS	PRESENT	NONE	OVERLAPPING	PRESENT
LACK OF CONV.	PRESENT	NONE	OVERLAPPING	PRESENT
PUPIL SIZE	NORMAL	CONSTRICTED	OVERLAPPING	CONSTRICTED
REACTION TO LIGHT	NORMAL	LITTLE OR NONE VISIBLE	OVERLAPPING	LITTLE OR NONE VISIBLE
PULSE RATE	UP	DOWN	ANTAGONISTIC	DOWN/ NORMAL/UP
BLOOD PRESSURE	UP	DOWN	ANTAGONISTIC	DOWN/ NORMAL/UP
BODY TEMP	UP	DOWN	ANTAGONISTIC	DOWN/ NORMAL/UP
MUSCLE TONE	RIGID	FLACCID	ANTAGONISTIC	RIGID/ FLACCID/ NORMAL

WORKSHEET #1
KETAMINE AND LSD

IMPAIRMENT INDICATOR	EFFECT DUE TO DISSOCIATIVE ANESTHETICS	EFFECT DUE TO HALLUCINOGEN (Hall)	TYPE OF COMBINED EFFECT*	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS				
VERTICAL GAZE NYSTAGMUS				
LACK OF CONV.				
PUPIL SIZE				
REACTION TO LIGHT				
PULSE RATE				
BLOOD PRESSURE				
BODY TEMP				
MUSCLE TONE				

*Null; Overlapping; Additive; or, Antagonistic

WORKSHEET #2
CANNABIS AND CNS DEPRESSANT

IMPAIRMENT INDICATOR	EFFECT DUE TO CANNABIS	EFFECT DUE TO DEPRESSANT	TYPE OF COMBINED EFFECT*	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS				
VERTICAL GAZE NYSTAGMUS				
LACK OF CONV.				
PUPIL SIZE				
REACTION TO LIGHT				
PULSE RATE				
BLOOD PRESSURE				
BODY TEMP				
MUSCLE TONE				

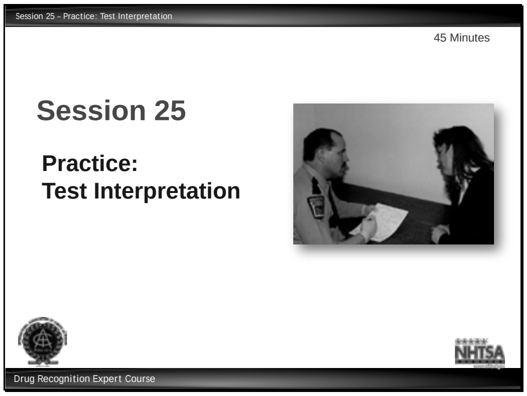
*Null; Overlapping; Additive; or, Antagonistic

WORKSHEET #3
CNS STIMULANT AND CNS DEPRESSANT

IMPAIRMENT INDICATOR	EFFECT DUE TO CNS STIMULANT	EFFECT DUE TO DEPRESSANT	TYPE OF COMBINED EFFECT*	WHAT WILL WE SEE
HORIZONTAL GAZE NYSTAGMUS				
VERTICAL GAZE NYSTAGMUS				
LACK OF CONV.				
PUPIL SIZE				
REACTION TO LIGHT				
PULSE RATE				
BLOOD PRESSURE				
BODY TEMP				
MUSCLE TONE				

*Null; Overlapping; Additive; or, Antagonistic

Participant Manual DRE 7-Day Session 25 – Practice: Test Interpretation



Session 25 - Practice: Test Interpretation

45 Minutes

Session 25

Practice:
Test Interpretation

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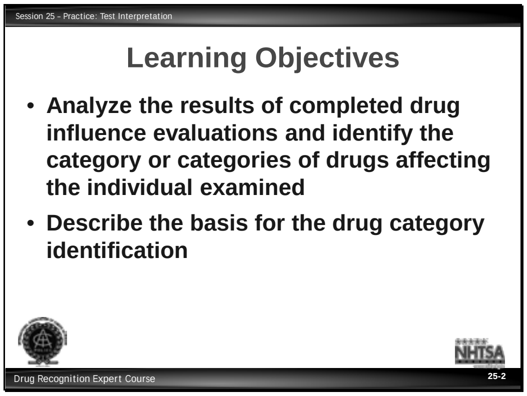
Notes:____



Session 25 - Practice: Test Interpretation

Learning Objectives

- Analyze the results of completed drug influence evaluations and identify the category or categories of drugs affecting the individual examined
- Describe the basis for the drug category identification

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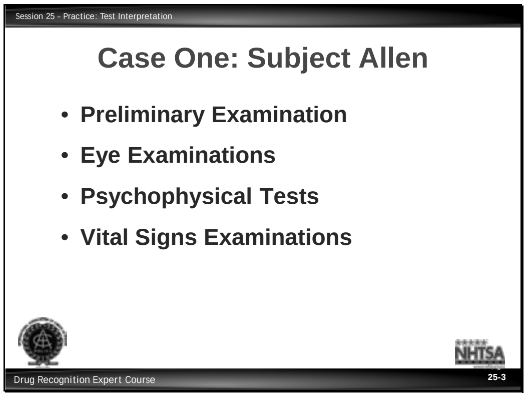
25-2

Notes:____

Upon successfully completing this session the student will be able to:

- Analyze the results of completed drug influence evaluations and identify the category or categories of drugs affecting the individual examined.
- Describe the basis for the drug category identification.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Interpretation Demonstrations	Instructor Led Demonstrations
B. Interpretation Practice	Small Group Practice
	Participant Led Presentations



Session 25 – Practice: Test Interpretation

Case One: Subject Allen

- Preliminary Examination
- Eye Examinations
- Psychophysical Tests
- Vital Signs Examinations

Drug Recognition Expert Course 25-3

Notes:____
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A. Interpretation Demonstrations

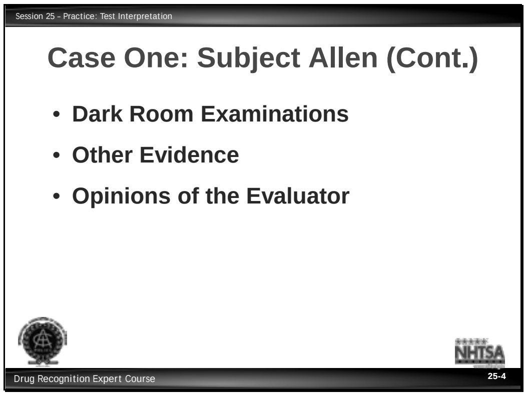
Case One: Subject Allen

Preliminary Examination

Eye Examinations

Psychophysical Tests

Vital Signs Examinations



Session 25 – Practice: Test Interpretation

Case One: Subject Allen (Cont.)

- Dark Room Examinations
- Other Evidence
- Opinions of the Evaluator

Drug Recognition Expert Course 25-4

Notes:____
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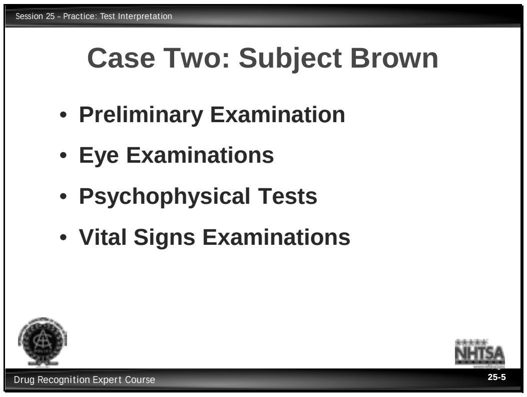
Dark Room Examinations

Other Evidence

Opinions of Evaluator



Case Two: Subject Brown

- Preliminary Examination
- Eye Examinations
- Psychophysical Tests
- Vital Signs Examinations

Notes:____

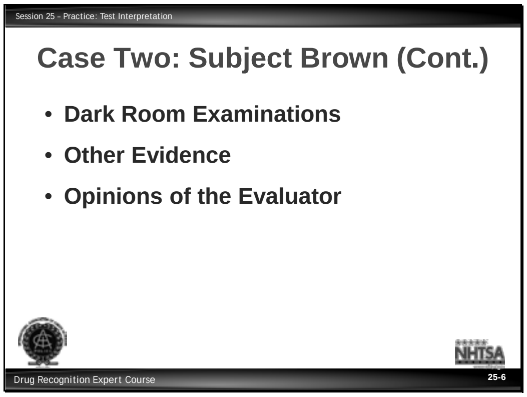
Case Two: Subject Brown

Preliminary Examination

Eye Examinations

Psychophysical Tests

Vital Signs Examinations



Case Two: Subject Brown (Cont.)

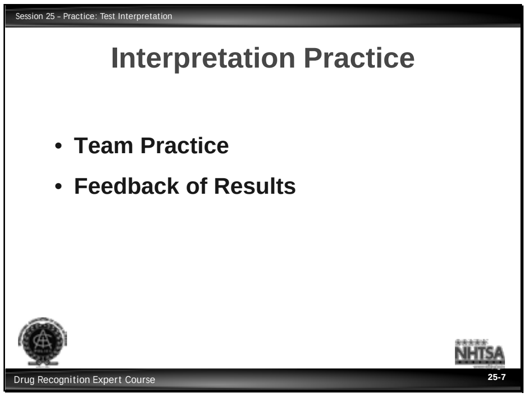
- Dark Room Examinations
- Other Evidence
- Opinions of the Evaluator

Notes:____

Dark Room Examinations

Other Evidence

Opinions of Evaluator



Interpretation Practice

- Team Practice
- Feedback of Results

Notes:____

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B. Interpretation Practice

Team Practice

Feedback of Results

Session Wrap-Up

QUESTIONS?

Notes:____

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DRUG INFLUENCE EVALUATION

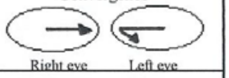
Evaluator Officer Ed Finnegan, Rockland PD	DRE # 8070	Rolling Log # 12-03-79	**Session XXV #1**
Recorder/Witness Lt. Tom Reagan, Bangor PD	Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property		Case # 12-55790
Arrestee's Name (Last, First, Middle) Allen, Thomas E.	Date of Birth 9/3/78	Sex M / Race W	Arresting Officer (Name, ID#) Tpr. Aaron Turcotte, Maine SP, #11644
Date Examined / Time /Location 03/21/12 2030 Bangor PD	Breath Results: Results: 0.00	Test Refused ☐ Instrument #: 44773	Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Tpr. Turcotte
What have you eaten today? When? Cookies "Few hours ago"
What have you been drinking? Coffee How much? 2 cups
Time of last drink? N/A
Time now/ Actual "No idea"
When did you last sleep? How long "Don't remember"
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Cooperative, slow, disinterested
Coordination: Disoriented, unsteady
Speech: Slow, thick
Breath Odor: Stale odor
Face: Normal
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☒ Reddened Conjunctiva ☐ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

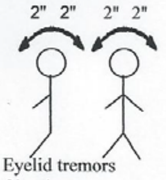
Pulse and time
1. 90 / 2040
2. 90 / 2056
3. 88 / 2110

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

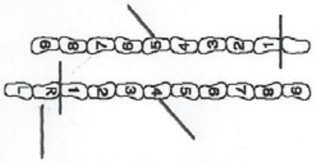


Modified Romberg Balance



Eyelid tremors
Circular sway

Walk and Turn test

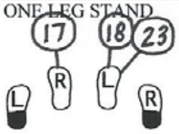


Lower body tremors

Cannot keep balance ✓
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line	✓	✓
Raises arms	✓✓	✓✓✓
Actual steps taken	9	9

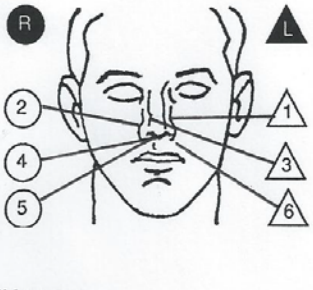
34 ONE LEG STAND 32



L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
☑	☑✓	Puts foot down

Internal clock 43 estimated as 30 seconds
Describe Turn: As instructed, but slow
Cannot do test (explain): N/A
Type of footwear: Lace-up boots

Draw lines to spots touched



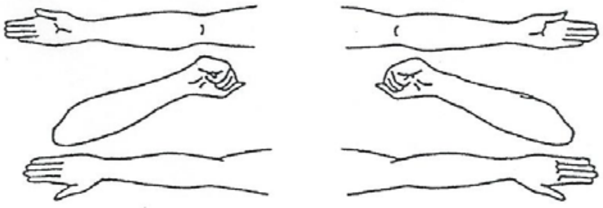
Eyelid tremors

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	7.0	9.0	6.0
Right Eye	7.0	9.0	6.0

Nasal area: Clear
Oral cavity: Brownish-green coating on tongue
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

Blood pressure 152/92
Temperature 98.6
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:

RIGHT ARM LEFT ARM



Nothing observed

What drugs or medications have you been using? "Nothing"
How much? N/A
Time of use? No answer
Where were the drugs used? (Location) No answer
Date / Time of arrest: 03/21/12 1940
Time DRE was notified: 2000
Evaluation start time: 2030
Evaluation completion time: 2130
Precinct/Station:
Officer's Signature:
DRE # 8070
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Allen, Thomas E.

1. **LOCATION:** The evaluation was conducted in the interview room at the Bangor PD.

2. **WITNESSES:** Lt. Tom Reagan of Bangor PD witnessed and recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Allen's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was on duty when contacted by Tpr. Turcotte requesting a drug evaluation. Writer met Tpr. Turcotte at B.P.D. where he advised that he had arrested Allen for DUI after observing his vehicle without headlights and driving 15 mph under the posted speed limit. The suspect seemed disoriented and had slow, unsteady movements. He had poor balance and coordination and was unable to perform the SFST's as directed.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room. He seemed disinterested in what was going on around him. He had poor coordination and balance and his speech was slow and thick.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect had an approximate 2" circular sway and estimated 30 seconds in 43 seconds. Walk & Turn: Suspect lost his balance during the instructions stage and raised his arms for balance. He stepped off the line twice, once during the first nine steps and once during the second nine steps. He also had lower body tremors when performing the test. One Leg Stand: Suspect swayed while balancing, used his arms for balance and put his foot down once while standing on his left foot and twice when standing on his right foot. Finger to Nose: Suspect missed the tip of his nose on four of the six attempts and exhibited eyelid tremors.

8. **CLINICAL INDICATORS:** Suspect had a lack of convergence and his pupils were dilated. His pulse and blood pressure were elevated.

9. **SIGNS OF INGESTION:** The suspect had a brownish-green coating on his tongue.

10. **SUSPECT'S STATEMENTS:** Suspect denied using drugs.

11. **DRE'S OPINION:** In my opinion Allen is under the influence of ______________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:** Suspect had eyelid and body tremors throughout the evaluation.

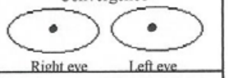
DRUG INFLUENCE EVALUATION

Evaluator: Sgt. Matt Shapiro, New Hampshire SP
DRE #: 5754
Rolling Log #: 12-08-012
Session XXV #2
Recorder/Witness: Trooper Marc Beaudoin, NH SP
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-23334
Arrestee's Name (Last, First, Middle): Brown, Jerome A.
Date of Birth: 4/6/77
Sex: M
Race: B
Arresting Officer (Name, ID#): Officer Jessica Humphrey, Bedford PD #16387
Date Examined / Time /Location: 08/08/12 2210 Bedford PD
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 451130
Chemical Test: Urine ☒ Blood ☐
Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Officer Humphrey
What have you eaten today? When? No response
What have you been drinking? How much? No response
Time of last drink? N/A
Time now/ Actual: No response
When did you last sleep? How long: "Eat? I had a hot dog"
Are you sick or injured? ☐ Yes ☐ No No response
Are you diabetic or epileptic? ☐ Yes ☐ No No response
Do you take insulin? ☐ Yes ☐ No No response
Do you have any physical defects? ☐ Yes ☐ No "I didn't drink anything"
Are you under the care of a doctor or dentist? ☐ Yes ☐ No No response
Are you taking any medication or drugs? ☐ Yes ☒ No Answered "no" very slow
Attitude: Passive, non-responsive
Coordination: Very poor, staggering
Speech: Slow, repetitive at times
Breath Odor: Chemical like odor
Face: Sweaty, blank stare
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☒ Yes ☐ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

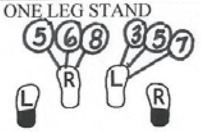
Pulse and time	
1.	108 / 2224
2.	110 / 2240
3.	108 / 2255

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	30	30

Convergence



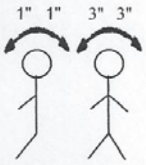
ONE LEG STAND



L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☐ Hopping
☑ ☑ Puts foot down

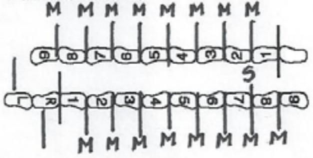
Test stopped

Modified Romberg Balance



Very rigid

Walk and Turn test

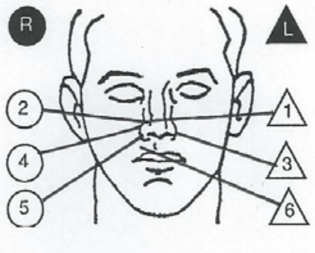


Arms and legs rigid

	1st Nine	2nd Nine
Cannot keep balance	✓✓	
Starts too soon		
Stops walking	✓	
Misses heel-toe	All Steps	All Steps
Steps off line		
Raises arms	Constant	Constant
Actual steps taken	9	9

Internal clock: 55 estimated as 30 seconds
Describe Turn: Stopped, walked in circle
Cannot do test (explain): N/A
Type of footwear: Running shoes

Draw lines to spots touched

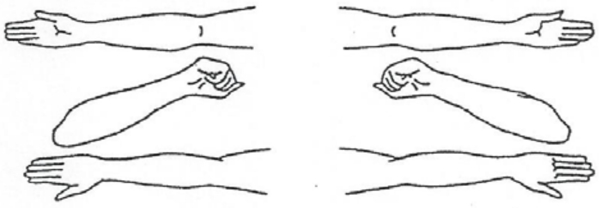


Rigid arms

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.0	7.5	6.0 – 7.5
Right Eye	6.0	7.5	6.0 – 7.5

Nasal area: Clear
Oral cavity: Green material in teeth
REBOUND DILATION ☒ Yes ☐ No
REACTION TO LIGHT: Normal

RIGHT ARM **LEFT ARM**



Nothing observed

Blood pressure: 148/102
Temperature: 99.8
Muscle tone: ☐ Normal ☐ Flaccid ☒ Rigid
Comments:
What drugs or medications have you been using? No response (blank stare)
How much? No response
Time of use? No response
Where were the drugs used? (Location) "I'm not saying"
Date / Time of arrest: 08/08/12 2130
Time DRE was notified: 2145
Evaluation start time: 2210
Evaluation completion time: 2315
Precinct/Station:
Officer's Signature:
DRE # 5754
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Brown, Jerome A.

1. **LOCATION:** The evaluation was conducted in the interview room at Bedford PD.

2. **WITNESSES:** Trooper Beaudoin witnessed and recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Brown's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was contacted by telephone by Officer Humphrey requesting a drug evaluation. Writer and Trooper Beaudoin contacted Officer Humphrey at the Bedford Police Department where it was determined that the suspect had nearly hit a B.P.D. officer while on a traffic stop. The suspect was non-responsive when contacted. He had a blank stare and was sweating profusely. He performed very poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the breath testing room. He was looking straight ahead with a blank stare. When asked questions he responded slowly and at times did not respond at all. He was perspiring heavily and his speech was slow and thick. When he stood, he would stagger and nearly fell several times.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect had an approximate 3" side to side sway and estimated 30 seconds in 55 seconds. Walk & Turn: Suspect lost his balance during the instructions, stopped once while walking, missed heel to toe on every step and used his arms for balance. One Leg Stand: The suspect lost his balance while attempting this test and nearly fell and the test was stopped. He also swayed and used his arms for balance. Finger to Nose: Suspect missed the tip of his nose on each attempt and kept his finger in contact with his face on each attempt.

8. **CLINICAL INDICATORS:** Suspect had HGN, VGN, a Lack of Convergence and Rebound Dilation. His pulse, blood pressure and temperature were all elevated.

9. **SIGNS OF INGESTION:** Suspect had a marijuana odor on his breath.

10. **SUSPECT'S STATEMENTS:** Suspect denied using any medication or drugs.

11. **DRE'S OPINION:** In my opinion Brown is under the influence of a __________________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

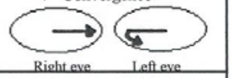
DRUG INFLUENCE EVALUATION

Evaluator: Officer Cullen Kau, Honolulu PD
DRE #: 5992
Rolling Log #: 12-05-61
Session XXV #3
Recorder/Witness: Sgt. Ben Moszkowicz, Honolulu PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-55778
Arrestee's Name (Last, First, Middle): Cole, Ricky Lee
Date of Birth: 6/4/88
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer Michelle Yoshiki, HPD #13052
Date Examined / Time /Location: 05/07/12 0200 HPD
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 45704
Chemical Test: Urine ☐ Blood ☒ Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Yoshiki
What have you eaten today? When? Sandwich "don't remember"
What have you been drinking? Mountain Dew
How much? One
Time of last drink? N/A
Time now/ Actual: 1 AM/0208
When did you last sleep? How long: Last night 8-9 hours
Are you sick or injured? ☐ Yes ☒ No
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Withdrawn, passive
Coordination: Poor, stumbling
Speech: Slow, slurred
Breath Odor: Rancid odor
Face: Flushed
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☒ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☒ Yes ☐ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time		
1.	102	0214
2.	104	0222
3.	104	0240

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	Yes	Yes
Maximum Deviation	Yes	Yes
Angle of Onset	35	35

Convergence



ONE LEG STAND

1
2
3
2
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4
R
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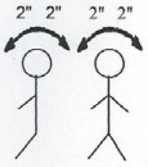
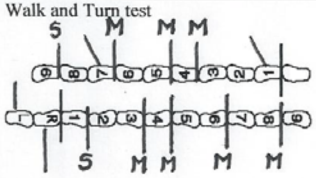
L
R

Modified Romberg Balance



Circular sway

Walk and Turn test



Cannot keep balance ✓✓
Starts too soon

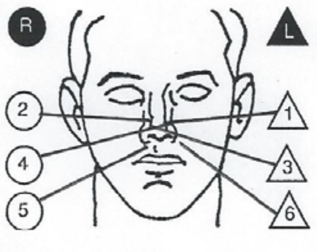
	1st Nine	2nd Nine
Stops walking	✓	✓
Misses heel-toe	✓✓✓✓	✓✓✓
Steps off line		✓✓
Raises arms		
Actual steps taken	9	9

L	R	
☑	☑	Sways while balancing
✓☑	☑	Uses arms to balance
☐	☐	Hopping
✓✓☑	✓☑	Puts foot down

Nearly fell, test stopped

Internal clock: 45 estimated as 30 seconds
Describe Turn: Slow
Cannot do test (explain) N/A
Type of footwear: Flip-flops

Draw lines to spots touched

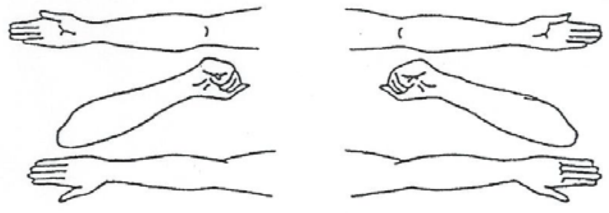


Swaying Opened eyes

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	5.0	6.5	4.0
Right Eye	5.0	6.5	4.0

Nasal area: Runny nose, redness to nasal area
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

RIGHT ARM **LEFT ARM**



Blood pressure: 142/98
Temperature: 98.8
Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "Nothing"
How much? No answer
Time of use? No answer
Where were the drugs used? (Location) No answer
Date / Time of arrest: 05/07/12 0135
Time DRE was notified: 0145
Evaluation start time: 0200
Evaluation completion time: 0310
Precinct/Station:
Officer's Signature:
DRE # 5992
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Cole, Ricky L.

1. **LOCATION:** The evaluation was conducted at the Honolulu Police Department.

2. **WITNESSES:** Sgt. Ben Moszkowicz of the Honolulu Police Department witnessed and recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Cole's breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** Writer was on-duty and was contacted by Officer Yoshiki requesting a drug evaluation. Officer Yoshiki advised that she detained the suspect after observing him fail to stop at a red traffic light at King Street at University Ave. The suspect's speech was slow and slurred. He had a strong chemical type odor on his hands and clothing. He performed poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at HPD. He appeared passive and withdrawn. He had poor balance and coordination. He swayed as he stood and stumbled several times when walking.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: The suspect swayed approximately 2" in a circular motion and estimated 30 seconds in 45 seconds. When asked how he estimated the 30 seconds the suspect stated, "Just guessed." Walk & Turn: The suspect lost his balance twice during the instructions, stopped walking twice on the first nine steps and once on the second nine steps. He missed heel to toe seven times and stepped off the line twice. One Leg Stand: The suspect was unable to maintain his balance and the test was stopped for safety reasons. Finger to Nose: The suspect was unable to touch the tip of his nose on any of the six attempts, repeatedly opened his eyes and swayed noticeably.

8. **CLINICAL INDICATORS:** Suspect had six clues of HGN. VGN and LOC were also present. His pulse and blood pressure were elevated and above the DRE average ranges.

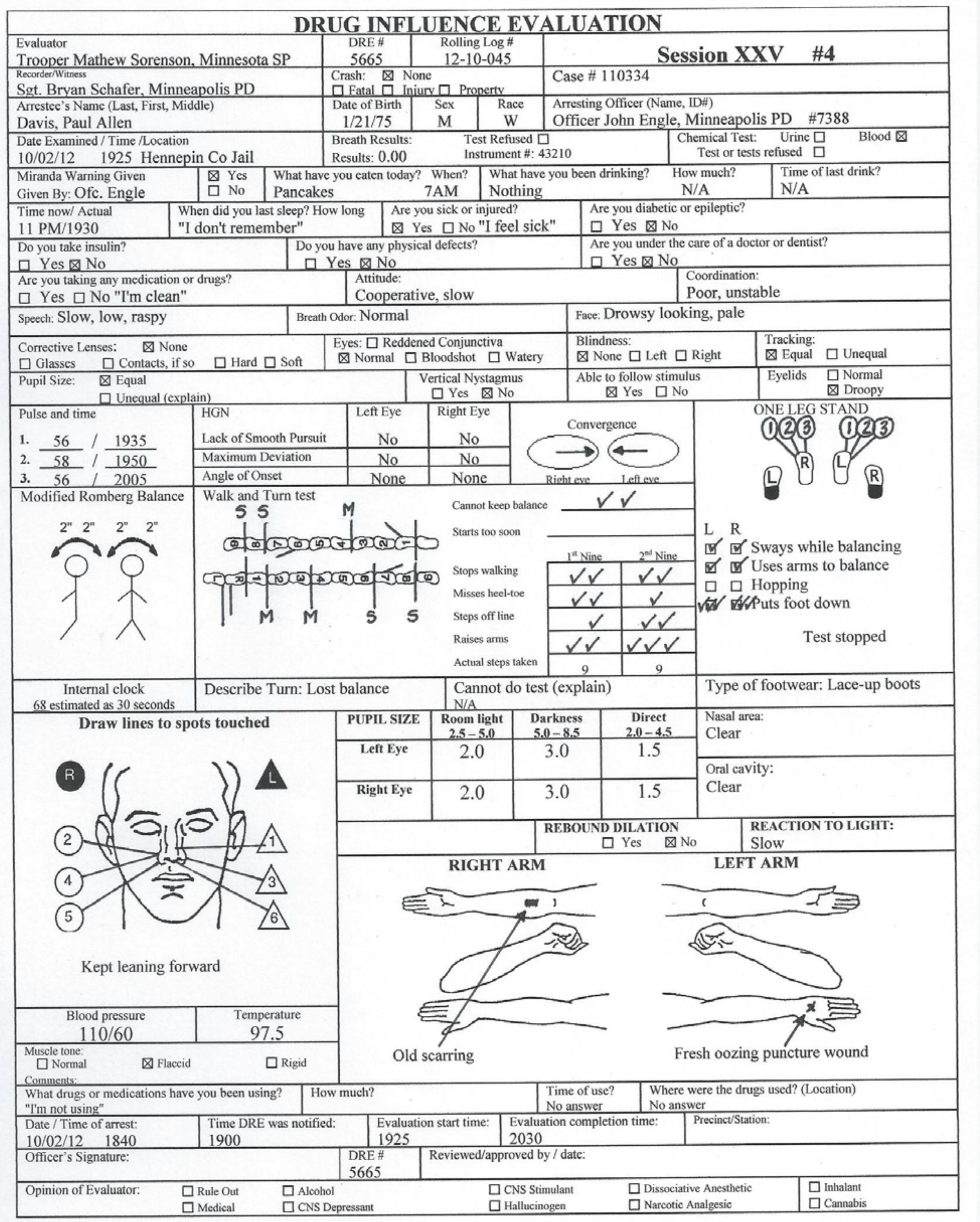
9. **SIGNS OF INGESTION:** The suspect had a severe redness to his nasal area.

10. **SUSPECT'S STATEMENTS:** Suspect denied using any medication or drugs.

11. **DRE'S OPINION:** In my opinion Cole is under the influence of an ____________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**



DRUG INFLUENCE EVALUATION

Evaluator: Trooper Mathew Sorenson, Minnesota SP
DRE #: 5665
Rolling Log #: 12-10-045
Session XXV #4
Recorder/Witness: Sgt. Bryan Schafer, Minneapolis PD
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 110334
Arrestee's Name (Last, First, Middle): Davis, Paul Allen
Date of Birth: 1/21/75
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer John Engle, Minneapolis PD #7388
Date Examined / Time /Location: 10/02/12 1925 Hennepin Co Jail
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 43210
Chemical Test: Urine ☐ Blood ☒
Test or tests refused ☐
Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Engle
What have you eaten today? Pancakes
When? 7AM
What have you been drinking? Nothing
How much? N/A
Time of last drink? N/A
Time now/ Actual: 11 PM/1930
When did you last sleep? How long: "I don't remember"
Are you sick or injured? ☒ Yes ☐ No "I feel sick"
Are you diabetic or epileptic? ☐ Yes ☒ No
Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No
Are you taking any medication or drugs? ☐ Yes ☐ No "I'm clean"
Attitude: Cooperative, slow
Coordination: Poor, unstable
Speech: Slow, low, raspy
Breath Odor: Normal
Face: Drowsy looking, pale
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal
Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

Pulse and time
1. 56 / 1935
2. 58 / 1950
3. 56 / 2005

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence

ONE LEG STAND

Modified Romberg Balance

Walk and Turn test

Cannot keep balance ✓✓
Starts too soon

	1st Nine	2nd Nine
Stops walking	✓✓	✓✓
Misses heel-toe	✓✓	✓
Steps off line	✓	✓✓
Raises arms	✓✓	✓✓✓
Actual steps taken	9	9

L	R	
☑	☑	Sways while balancing
☑	☑	Uses arms to balance
☐	☐	Hopping
✓☑	☑✓	Puts foot down

Test stopped

Internal clock: 68 estimated as 30 seconds
Describe Turn: Lost balance
Cannot do test (explain): N/A
Type of footwear: Lace-up boots

Draw lines to spots touched

Kept leaning forward

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	2.0	3.0	1.5
Right Eye	2.0	3.0	1.5

Nasal area: Clear
Oral cavity: Clear
REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Slow

RIGHT ARM

LEFT ARM

Old scarring

Fresh oozing puncture wound

Blood pressure: 110/60
Temperature: 97.5
Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments:
What drugs or medications have you been using? "I'm not using"
How much?
Time of use? No answer
Where were the drugs used? (Location) No answer
Date / Time of arrest: 10/02/12 1840
Time DRE was notified: 1900
Evaluation start time: 1925
Evaluation completion time: 2030
Precinct/Station:
Officer's Signature:
DRE #: 5665
Reviewed/approved by / date:
Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Davis, Paul A.

1. **LOCATION:** The evaluation was conducted in interview room at the Hennepin Co Jail.

2. **WITNESSES:** Sgt. Bryan Schafer of the Minneapolis PD recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Davis' breath test was 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was on-duty and requested to contact Officer Engle for a drug evaluation. Officer Engle advised that he had located the suspect slumped over behind the steering wheel of his vehicle parked along the shoulder of W. 13th Street with the vehicle in drive and his foot on the brake. The suspect's speech was slow, low and raspy. His coordination was poor and he was very unstable on his feet. He performed poorly on the SFST's and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** Writer first observed the suspect in the interview room at the Jail. He appeared drowsy and was having difficulty keeping his eyes open. His head was nodding forward and he had droopy eyelids. His voice was slow, low and raspy and his pupils appeared to be constricted.

6. **MEDICAL PROBLEMS AND TREATMENT:** The suspect said he felt sick but did not request or need medical assistance.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately two inches side to side and two inches front to back. He estimated 30 seconds in 68 seconds. Walk & Turn: Suspect lost his balance twice during the instructions, stopped walking four times, missed heel to toe three times, stepped off the line three times and used his arms for balance. One Leg Stand: Suspect put his foot down three times on both the left and right foot and the tests were stopped for safety reasons. Finger to Nose: Suspect missed the tip of his nose on five of the six attempts. His movements were slow and his head was leaning forward towards his chest.

8. **CLINICAL INDICATORS:** Suspect's pupils were constricted and had a slow reaction to light. His pulse, blood pressure and temperature were below the DRE average ranges.

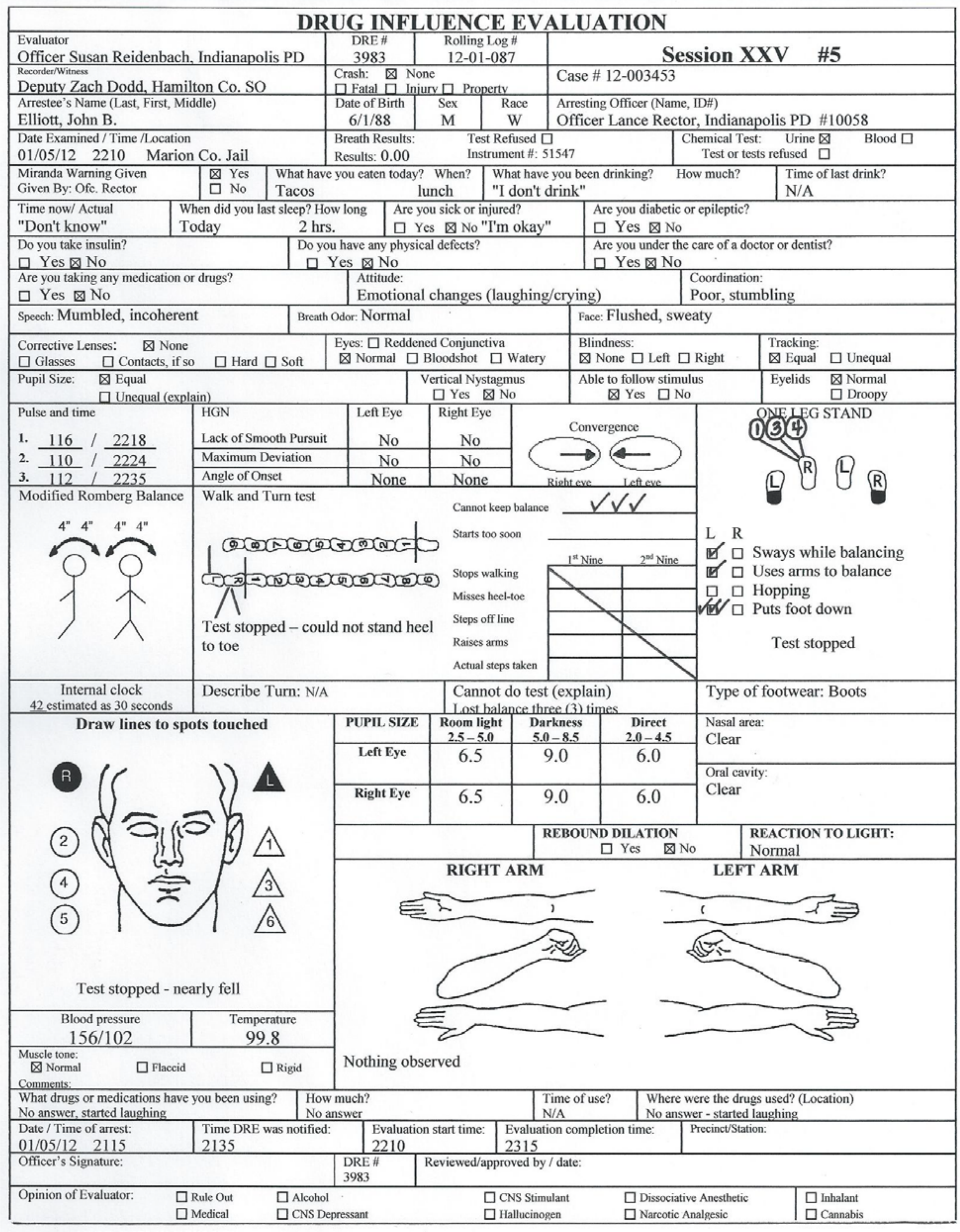
9. **SIGNS OF INGESTION:** A fresh puncture mark was located on the back of his left hand.

10. **SUSPECT'S STATEMENTS:** The suspect made several references to being "clean."

11. **DRE'S OPINION:** In my opinion Davis is under the influence of a ________________and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a blood sample.

13. **MISCELLANEOUS:**



DRUG INFLUENCE EVALUATION

Evaluator: Officer Susan Reidenbach, Indianapolis PD
DRE # 3983
Rolling Log # 12-01-087

Session XXV #5

Recorder/Witness: Deputy Zach Dodd, Hamilton Co. SO
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-003453

Arrestee's Name (Last, First, Middle): Elliott, John B.
Date of Birth: 6/1/88
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer Lance Rector, Indianapolis PD #10058

Date Examined / Time /Location: 01/05/12 2210 Marion Co. Jail
Breath Results: Results: 0.00
Test Refused ☐
Instrument #: 51547
Chemical Test: Urine ☒ Blood ☐
Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Ofc. Rector
What have you eaten today? Tacos
When? lunch
What have you been drinking? "I don't drink"
How much?
Time of last drink? N/A

Time now/ Actual: "Don't know"
When did you last sleep? Today
How long: 2 hrs.
Are you sick or injured? ☐ Yes ☒ No "I'm okay"
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No
Attitude: Emotional changes (laughing/crying)
Coordination: Poor, stumbling

Speech: Mumbled, incoherent
Breath Odor: Normal
Face: Flushed, sweaty

Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☒ Normal ☐ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☒ Normal ☐ Droopy

Pulse and time
1. 116 / 2218
2. 110 / 2224
3. 112 / 2235

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence
Right eye Left eye

ONE LEG STAND
1 3 4
L R L R

Modified Romberg Balance
4" 4" 4" 4"

Internal clock
42 estimated as 30 seconds

Walk and Turn test
9 8 7 6 5 4 3 2 1
L R 1 2 3 4 5 6 7 8 9

Test stopped – could not stand heel to toe

Cannot keep balance ✓✓✓
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken		

Describe Turn: N/A
Cannot do test (explain)
Lost balance three (3) times

L R
☑ ☐ Sways while balancing
☑ ☐ Uses arms to balance
☐ ☐ Hopping
☑ ☐ Puts foot down

Test stopped

Type of footwear: Boots

Draw lines to spots touched

R L 2 1 4 3 5 6

Test stopped - nearly fell

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	6.5	9.0	6.0
Right Eye	6.5	9.0	6.0

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Normal

RIGHT ARM **LEFT ARM**

Nothing observed

Blood pressure: 156/102
Temperature: 99.8

Muscle tone: ☒ Normal ☐ Flaccid ☐ Rigid
Comments:

What drugs or medications have you been using? No answer, started laughing
How much? No answer
Time of use? N/A
Where were the drugs used? (Location) No answer - started laughing

Date / Time of arrest: 01/05/12 2115
Time DRE was notified: 2135
Evaluation start time: 2210
Evaluation completion time: 2315
Precinct/Station:

Officer's Signature:
DRE # 3983
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**:** Elliott, John B.

1. **LOCATION:** The evaluation was conducted at the Marion Co Jail Intake Center.

2. **WITNESSES:** Deputy Zach Dodd of the Hamilton Co SO and recorded the evaluation.

3. **BREATH ALCOHOL TEST:** Elliott’s breath test was a 0.00%.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was on-duty and dispatched to the Marion Co. Jail to conduct a drug evaluation. I contacted Officer Reidenbach of the Indianapolis PD who advised me that the suspect had just left a concert when she stopped him for driving without headlights and for failure to yield the right of way. The suspect was acting very strange and was highly emotional and his speech was incoherent at times. He performed poorly on the SFST’s and was arrested for DUI.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the Jail. He had very poor balance and was unsteady on his feet. He was very emotional. At times he was laughing uncontrollably and then would start crying for no reason. His speech was mumbled and mostly incoherent. His pupils appeared dilated.

6. **MEDICAL PROBLEMS AND TREATMENT:** None noted or stated.

7. **PSYCHOPHYSICAL TESTS:** Modified Romberg Balance: Suspect swayed approximately 4” front to back and 4” side to side until losing his balance and the test was stopped for safety reasons. Walk & Turn: The suspect could not maintain his balance in the instructions stage and the test had to be stopped for safety reasons. One Leg Stand: Suspect could not stand on one foot and nearly fell each time. The test was stopped for safety reasons. Finger to Nose: The suspect was unable to complete the test and it was also stopped for safety reasons.

8. **CLINICAL INDICATORS:** The suspect’s pupils were dilated in all three lighting conditions. His pulse, blood pressure and body temperature were elevated and above the DRE average ranges.

9. **SIGNS OF INGESTION:** None noted or stated.

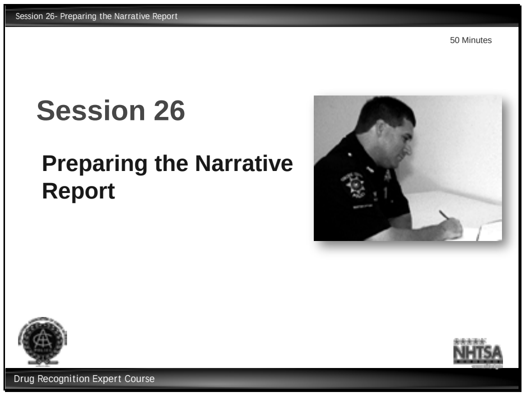
10. **SUSPECT’S STATEMENTS:** When asked about drug use, the suspect started laughing.

11. **DRE'S OPINION:** In my opinion Elliott is under the influence of a ________________ and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** The suspect provided a urine sample.

13. **MISCELLANEOUS:**

Participant Manual DRE 7-Day Session 26 – Preparing the Narrative Report



Session 26- Preparing the Narrative Report

50 Minutes

Session 26

Preparing the Narrative Report

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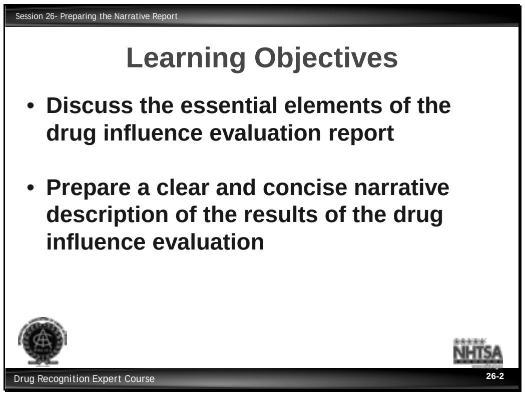
Notes:____



Session 26- Preparing the Narrative Report

Learning Objectives

- Discuss the essential elements of the drug influence evaluation report
- Prepare a clear and concise narrative description of the results of the drug influence evaluation

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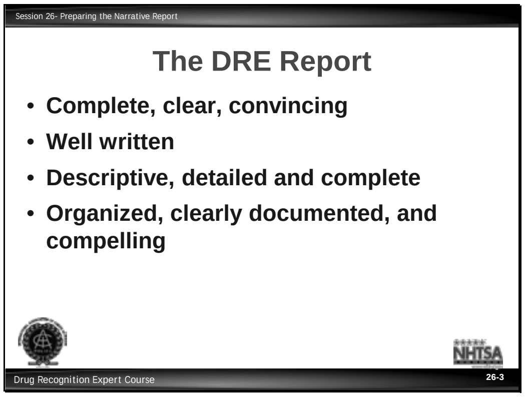
Notes:____

Upon successfully completing this session the participant will be able to:

- Discuss the essential elements of the drug influence evaluation report.
- Prepare a clear and concise narrative description of the results of the drug influence evaluation.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Components of the Process	Instructor Led Presentations
B. Components of the Drug Evaluation Report	Interactive Discussion
C. Drug Evaluation Narrative Report Format	
D. Sample Report	



Session 26- Preparing the Narrative Report

The DRE Report

- Complete, clear, convincing
- Well written
- Descriptive, detailed and complete
- Organized, clearly documented, and compelling

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Notes:

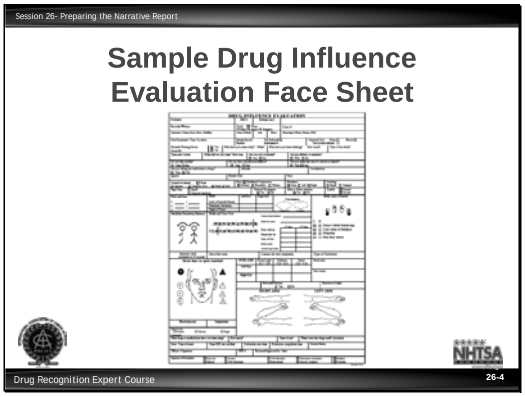
A. Components of the Process

The DRE Report

Successful prosecution depends on how clearly, completely and convincingly the DRE presents their observations, measurements, and conclusions.

A well written, clear, and convincing drug evaluation report increases the likelihood that the suspect will be convicted.

- A prosecutor is more likely to file the charge if the evidence is organized, clearly documented and compelling.
- The defense is less likely to contest the charge when the report is descriptive, detailed, and complete.



Session 26- Preparing the Narrative Report

Sample Drug Influence Evaluation Face Sheet

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Notes:____

B. Components of the Drug Influence Evaluation Report

The Face Sheet

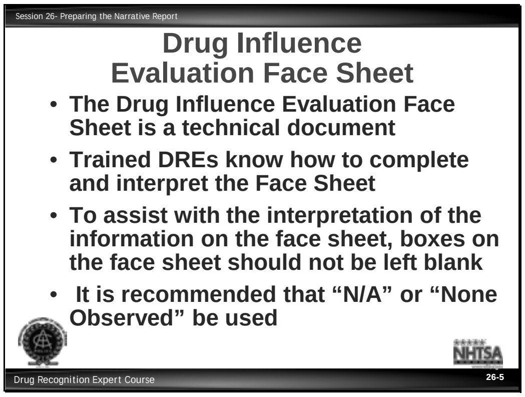
The Drug Influence Evaluation Face Sheet is part of your drug influence evaluation report; but it is not the entire report.

The Face Sheet contains some very important information.

Examples:

- Suspect’s pulse rate was elevated on all three measurements.
- Suspect’s eyes failed to converge.
- Suspect’s pupils were constricted.

But the Face Sheet does not contain all of the important information that is available concerning this suspect.



Session 26- Preparing the Narrative Report

Drug Influence Evaluation Face Sheet

- The Drug Influence Evaluation Face Sheet is a technical document
- Trained DREs know how to complete and interpret the Face Sheet
- To assist with the interpretation of the information on the face sheet, boxes on the face sheet should not be left blank
- It is recommended that “N/A” or “None Observed” be used

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Notes:____

Most importantly, the Drug Influence Evaluation Face Sheet is a technical document.

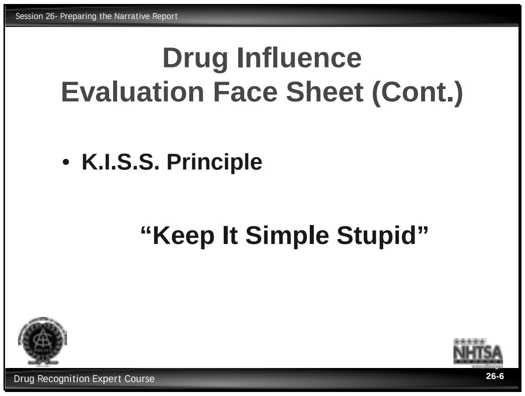
- Trained DREs know how to complete and interpret the Face Sheet.

Examples:

- Information obtained during the interview of the arresting officer.
- Elaborate or lengthy statements made by the suspect.
- Paraphernalia found in the suspect’s possession.

Many prosecutors, judges, and jurors won’t know how to interpret the face sheet.

- It is up to you to take all of the information you work so hard to obtain, and put it into a clear, plain English, written report so that the prosecutor, the judge, and the jury will understand what you observed and what it means.



Session 26- Preparing the Narrative Report

Drug Influence Evaluation Face Sheet (Cont.)

- K.I.S.S. Principle

“Keep It Simple Stupid”

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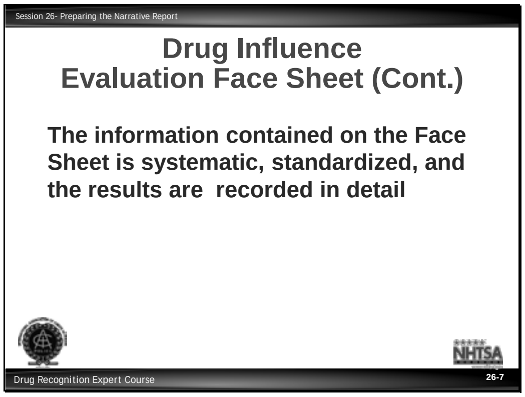
Notes:____

As a DRE, you have a special ability to secure powerful, scientific evidence that can make the difference between success and failure in court.

It would be a shame to waste that special ability by submitting an inadequate written report.



Session 26- Preparing the Narrative Report

Drug Influence Evaluation Face Sheet (Cont.)

The information contained on the Face Sheet is systematic, standardized, and the results are recorded in detail

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Notes:____

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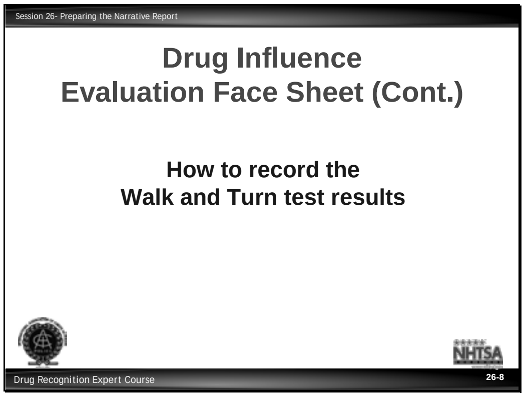
To ensure that the information contained on the Face Sheet is systematic and standardized, the results of the tests should be recorded as follows:

Lack of Convergence

- A dot should be made where the pupil is and draw an arrow to indicate the movement and where the pupil stops.

Modified Romberg BalanceTest

- The first figure indicates the sway from front to back and should be estimated in inches from center.
- The second figure indicates the sway from side to side and is estimated in inches from center.
- Put the approximate number of inches from center the suspect sways on either end of the arrows.
- Record actual elapsed time.



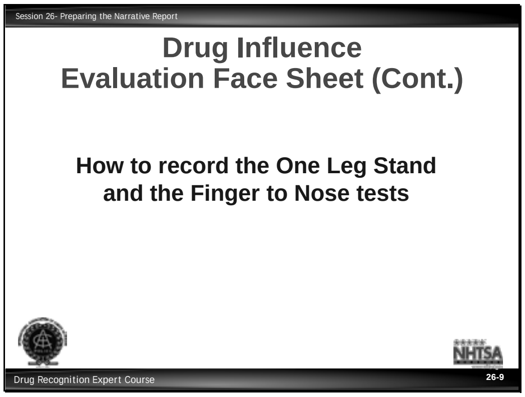
Drug Influence Evaluation Face Sheet (Cont.)

How to record the Walk and Turn test results

Notes:

Walk and Turn

- The first two – cannot keep balance and stops too soon – are observed during the instruction stage.
- Indicate by a check mark the number of times the suspect stops, misses heel-to-toe, steps off line, or raises arms.
- Record the actual number of steps taken.
- If the suspect stops walking, indicate where with a vertical slash mark and an “S” under that mark.
- If the suspect steps off the line, indicate with half of a slash mark at an angle in the direction the step was off the line.
- If the suspect misses heel-to-toe, indicate with a vertical slash mark and an “M” under that mark.
- Describe turn.



Session 26- Preparing the Narrative Report

Drug Influence Evaluation Face Sheet (Cont.)

How to record the One Leg Stand and the Finger to Nose tests

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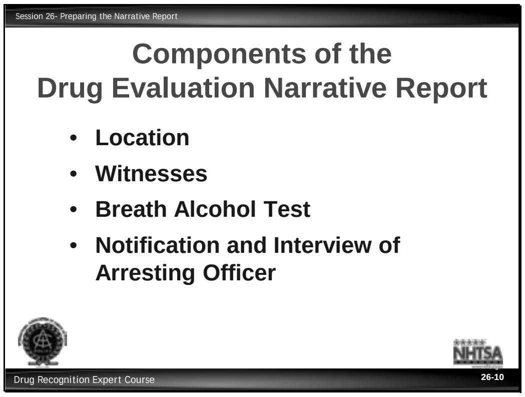
Notes:

One Leg Stand

- Indicate in the one leg stand box the number they were counting when they put their foot down.
- Check marks should be made to indicate the number of times the suspect swayed, used arms, hopped, or put foot down.
- Indicate how far the suspect counted in 30 seconds in the top area of the box above the foot raised.

Finger to Nose

- A line should be drawn to the appropriate triangle or circle to indicate where the suspect touched their nose.
- Suggestion – If the DRE draws the line from the place where the suspect touches to the triangle it enables them to draw a straighter line.



Session 26- Preparing the Narrative Report

Components of the
Drug Evaluation Narrative Report

- **Location**
- **Witnesses**
- **Breath Alcohol Test**
- **Notification and Interview of Arresting Officer**

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Notes:____

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C. Drug Evaluation Narrative Report Format

The Narrative Report

The typical Drug Evaluation Narrative Report format contains 13 components.

First item: Location (i.e. where the evaluation was conducted).

Second item: Witnesses

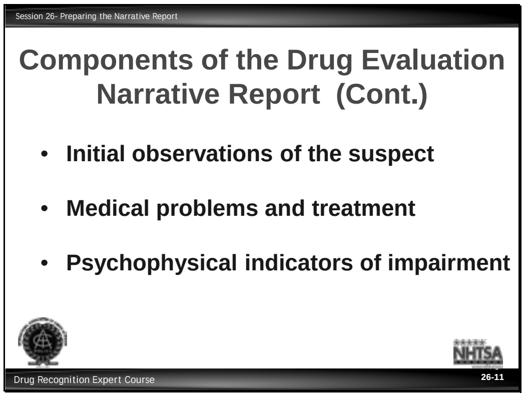
- List the person who served as the evaluator and the recorder with the complete agency name spelled out.
- Other officers who helped to conduct the evaluation.
- Others who observed the evaluation.
- Include any instructors who witnessed the evaluation.

Third item: the Breath Alcohol Test

- Indicate BAC.
- Who administered the breath alcohol test?
- Time the test was administered.

Fourth item: Notification and Interview of the Arresting Officer

- When were you first notified of the request for a drug evaluation?
- Summarize the information you were given at that time.
- Document any information provided by the arresting officer.
- Summary of your interview with the arresting officer and other witnesses.



Session 26- Preparing the Narrative Report

Components of the Drug Evaluation Narrative Report (Cont.)

- Initial observations of the suspect
- Medical problems and treatment
- Psychophysical indicators of impairment

Drug Recognition Expert Course

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Notes:

Fifth item: Initial Observation of the Suspect

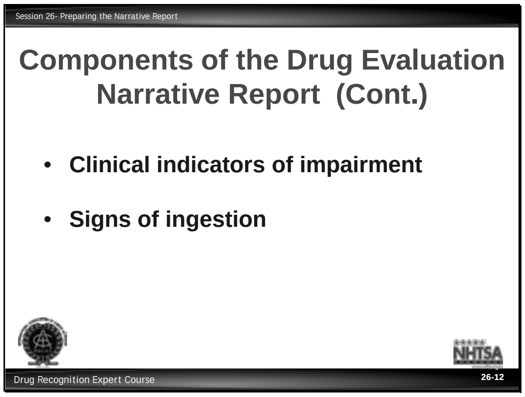
- Where you first saw the suspect.
- Noteworthy aspects of your initial observations.
- Findings of the Preliminary Examination of the suspect.

Sixth item: Medical Problems and Treatment

- Your observations of any apparent injury or illness affecting the suspect.
- Suspect’s statements of injury or illness.
- Summary of any medical treatment provided to the suspect.

Seventh item: Psychophysical Indicators of Impairment

- Briefly summarize performance of the Modified Romberg Balance Test, Walk and Turn, One Leg Stand, and Finger to Nose tests.
- Include any relevant behaviors on the tests that are not included on the face sheet.



Session 26- Preparing the Narrative Report

Components of the Drug Evaluation Narrative Report (Cont.)

- **Clinical indicators of impairment**
- **Signs of ingestion**

Drug Recognition Expert Course

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Notes:____

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Eighth item: Clinical Indicators of Impairment

Eye signs

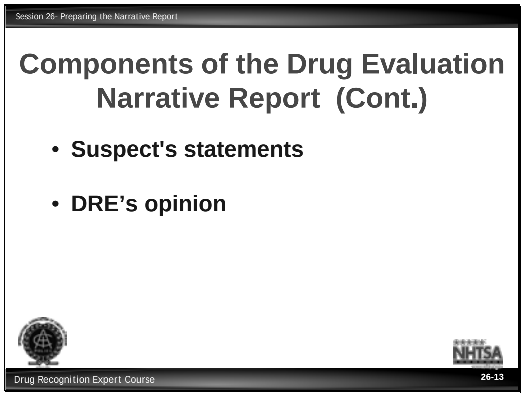
- Briefly summarize your observations of HGN, VGN, Lack of Convergence, pupil size, reaction to light, and appearance of the suspect’s eyes.
- Document any observations of eyelid tremors.

Vital signs

- Briefly summarize the suspect’s pulse rate, blood pressure, and temperature.
- Document if body, leg, or eyelid tremors are present.

Ninth item: Signs of Ingestion

- Results of examinations of oral and nasal cavities.
- Results of examinations for injection marks.
- Odors detected on suspect’s breath, hands, clothing, etc.
- Physical debris of drugs or drug paraphernalia found on suspect’s person.



Session 26- Preparing the Narrative Report

Components of the Drug Evaluation Narrative Report (Cont.)

- **Suspect's statements**
- **DRE’s opinion**

Drug Recognition Expert Course

26-13

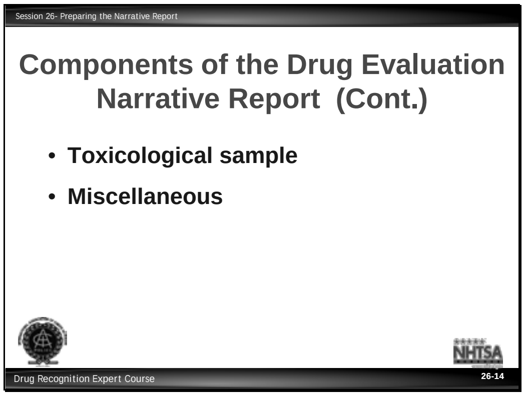
Notes:

Tenth item: Suspect’s Statements.

- “Miranda” waiver and responses.
- Volunteered or spontaneous statements.
- Statements made as a result of your interview.
- Include admission or denial of drug use, time, location drugs were used, and statements relating to the suspect’s perception of their impairment, if applicable.

Eleventh item: DRE’s Opinion.

- State the category or categories of drugs that you believe is/are affecting the suspect.
- State your opinion concerning the suspect’s ability to operate a vehicle safely, if applicable to this case.



Session 26- Preparing the Narrative Report

Components of the Drug Evaluation Narrative Report (Cont.)

- **Toxicological sample**
- **Miscellaneous**

Drug Recognition Expert Course

26-14

Notes:

Twelfth item: Toxicological Sample

- State who drew the sample or observed the collection of the sample.
- State where the sample was taken and to whom it was given.
- If the suspect refused to provide a sample, state that fact.

Thirteenth item: Miscellaneous

Any other pertinent information such as drugs or drug paraphernalia found in the suspect’s possession.

Session 26- Preparing the Narrative Report

Sample Report

Drug Recognition Expert Course

26-15

Notes:____

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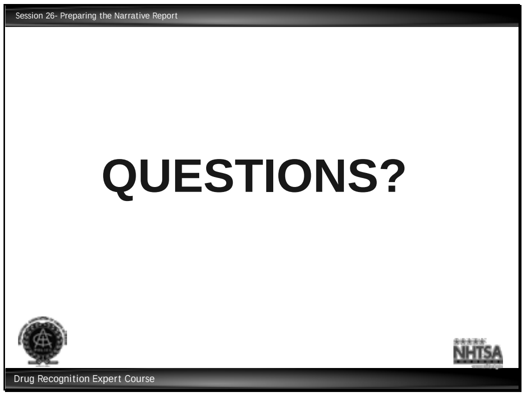
D. Sample Report

A copy of this report is found at the end of this lesson plan, for your reference.



Session 26- Preparing the Narrative Report

QUESTIONS?

Drug Recognition Expert Course

Notes:____

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DRUG INFLUENCE EVALUATION

Evaluator: Officer Alan Haywood, AZ DPS
DRE #: 10149
Rolling Log #: 12-10-124
Session XXVI

Recorder/Witness: Sgt. Paul White, Maricopa Co. S.O.
Crash: ☒ None ☐ Fatal ☐ Injury ☐ Property
Case # 12-398776

Arrestee's Name (Last, First, Middle): Richardson, John M.
Date of Birth: 9/6/84
Sex: M
Race: W
Arresting Officer (Name, ID#): Officer Kemp Layden, Phoenix PD #7022

Date Examined / Time / Location: 10/21/12 2130 Maricopa Co. Jail
Breath Results: Results: 0.00
Test Refused ☐ Instrument #: 474501
Chemical Test: Urine ☒ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☒ Yes ☐ No
Given By: Officer Layden
What have you eaten today? Hamburger
When? 5 PM
What have you been drinking? Nothing
How much? N/A
Time of last drink? N/A

Time now/ Actual: 7 pm/9:40 pm
When did you last sleep? Last night
How long: 4 hrs.
Are you sick or injured? ☒ Yes ☐ No "Bad back"
Are you diabetic or epileptic? ☐ Yes ☒ No

Do you take insulin? ☐ Yes ☒ No
Do you have any physical defects? ☐ Yes ☒ No
Are you under the care of a doctor or dentist? ☐ Yes ☒ No

Are you taking any medication or drugs? ☐ Yes ☒ No Long pause before answering
Attitude: Cooperative, withdrawn
Coordination: Poor, trouble standing

Speech: Low, slow, raspy
Breath Odor: Normal
Face: Pale

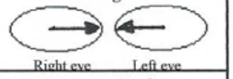
Corrective Lenses: ☒ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal ☒ Bloodshot ☐ Watery
Blindness: ☒ None ☐ Left ☐ Right
Tracking: ☒ Equal ☐ Unequal

Pupil Size: ☒ Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes ☒ No
Able to follow stimulus ☒ Yes ☐ No
Eyelids ☐ Normal ☒ Droopy

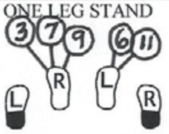
Pulse and time
1. 58 / 2142
2. 56 / 2154
3. 58 / 2212

HGN	Left Eye	Right Eye
Lack of Smooth Pursuit	No	No
Maximum Deviation	No	No
Angle of Onset	None	None

Convergence



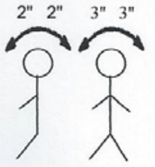
21 ONE LEG STAND 23



L R
☑ ☑ Sways while balancing
☑ ☑ Uses arms to balance
☐ ☐ Hopping
☑ ☑ Puts foot down

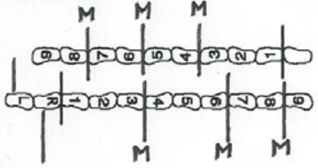
Counted slowly

Modified Romberg Balance



Head dropped forward

Walk and Turn test

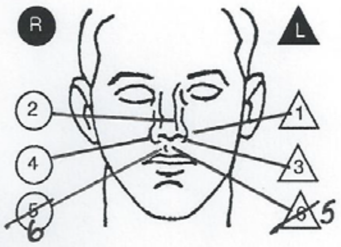


Cannot keep balance ✓✓
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe	✓✓✓	✓✓✓
Steps off line		
Raises arms	✓✓✓✓	✓✓✓✓✓
Actual steps taken	9	9

Internal clock: 52 estimated as 30 seconds
Describe Turn: Pivoted
Cannot do test (explain): N/A
Type of footwear: Athletic shoes

Draw lines to spots touched



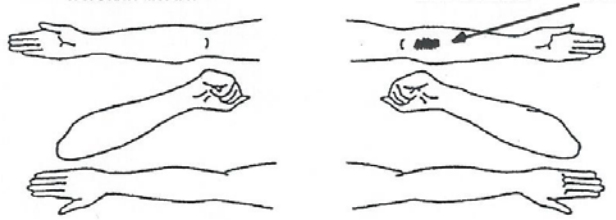
Switched hands on #5 and #6

PUPIL SIZE	Room light 2.5 – 5.0	Darkness 5.0 – 8.5	Direct 2.0 – 4.5
Left Eye	2.0	4.5	1.5
Right Eye	2.0	4.5	1.5

Nasal area: Clear
Oral cavity: Clear

REBOUND DILATION ☐ Yes ☒ No
REACTION TO LIGHT: Little to None Visible

RIGHT ARM
LEFT ARM



Blood pressure: 114/68
Temperature: 97.2

Muscle tone: ☐ Normal ☒ Flaccid ☐ Rigid
Comments: Arms cool to the touch

What drugs or medications have you been using? "I don't do drugs"
How much? No answer
Time of use? No answer
Where were the drugs used? (Location) No answer

Date / Time of arrest: 10/21/12 2025
Time DRE was notified: 2115
Evaluation start time: 2130
Evaluation completion time: 2230
Precinct/Station:

Officer's Signature:
DRE # 10149
Reviewed/approved by / date:

Opinion of Evaluator: ☐ Rule Out ☐ Medical ☐ Alcohol ☐ CNS Depressant ☐ CNS Stimulant ☐ Hallucinogen ☐ Dissociative Anesthetic ■ Narcotic Analgesic ☐ Inhalant ☐ Cannabis

DRUG INFLUENCE EVALUATION NARRATIVE

Suspect**: Richardson, John**

1. **LOCATION:** The evaluation was conducted in the DRE interview room at the Maricopa County Jail. The room has adequate lighting and has a concrete floor with sufficient space for conducting an evaluation.

2. **WITNESSES:** Sergeant Paul White of the Maricopa County SO witnessed and recorded the entire evaluation. Arresting officer Kemp Layden observed the preliminary exam and the psychophysical tests.

3. **BREATH ALCOHOL TEST:** Officer Layden obtained a breath test from the suspect prior to my arrival. Officer Layden used the Intoxilyzer 8000 at the Jail and obtained a 0.00 BrAC at 2100 hours.

4. **NOTIFICATION AND INTERVIEW OF THE ARRESTING OFFICER:** I was on-duty and at approximately 2115 hours was dispatched to the Maricopa Co. Jail to conduct a drug evaluation for Officer Layden. I contacted Officer Layden at the Jail where he informed me that the suspect had been arrested during a DUI crackdown event. The suspect was observed driving slowly and failed to stop at a red light at McDowell Road and 40th Street. When Officer Layden activated his emergency lights to stop the suspect, he continued on for approximately a half mile before stopping and when he did, his right front tire struck the curb. When contacted, the suspect's voice was low and raspy sounding. When asked for his operator's license and other documents, he appeared confused and had slow and deliberate movements. When he exited his vehicle he had to use the car door to balance himself and he was unsteady with poor balance and coordination. The suspect was administered SFST's which he had difficulty with. Several times during the Walk and Turn and the One Leg Stand he lost his balance and nearly fell and the tests had to be stopped for his safety. According to Officer Layden, the suspect did not show any clues of HGN and he did not detect an odor of alcoholic beverage on the suspect's breath. The suspect was arrested for DUI and transported to the Maricopa County Jail.

5. **INITIAL OBSERVATION OF SUSPECT:** I first observed the suspect in the interview room at the Jail. He moved very slowly, was unsteady of his feet and when he walked across the room he lost his balance and had to use the wall to steady himself. Several times his head nodded forward and he appeared to be "on the nod." When he answered questions from Officer Layden, his speech was slow and at times he slurred his words. His eyelids were droopy appearing and he was frequently licking his lips.

6. **MEDICAL PROBLEMS AND TREATMENT:** During the preliminary examination the suspect indicated that he had a "bad back." When asked about his back, he indicated that it was sore and that he was not under a doctor's care for it. He was asked if his back would create any problems for him in performing the drug evaluation he said "it shouldn't." He was asked if he needed any medical assistance and he said he did not.

7. **PSYCHOPHYSICAL TESTS:** Each of the tests were explained and demonstrated to the suspect prior to him attempting them. After each demonstration, the suspect indicated that he understood the instructions. The suspect exhibited impairment throughout all portions of the psychophysical tests. At no time did he indicate that his difficulties were related to his back or any other condition.

   Modified Romberg Balance: The suspect exhibited a front to back sway of approximately 2 inches and a side to side sway of approximately 3 inches. He had a slowed internal clock estimating 30 seconds in 52 seconds. While doing the test his head repeatedly dropped forward towards his chest.
   Walk and Turn: Twice during the instruction stage the suspect lost his balance. Once he began walking, his steps were slow and deliberate. He missed heel to toe three times during the first nine steps and three times on the second nine steps. He turned incorrectly making a pivot. He also raised his arms for balance for the majority of the test.
   One Leg Stand: The suspect counted slowly throughout the test making it to 1021 in 30 seconds while attempting to stand on his left foot and to 1023 while attempting to stand on his right foot. He also put his foot down three times while standing on his left foot and twice while standing on his right. Additionally, he swayed and used his arms for balance throughout both attempts.
   Finger to Nose: The suspect responded to the commands very slowly and used the wrong hands on attempts #5 and #6. He did not touch the tip of his nose on any of the six attempts.

8. **CLINICAL INDICATORS:** Eyes: No clues of HGN were observed. His pupils were constricted in all three lighting conditions and his pupils showed little to no visible reaction to light.

   Vital Signs: The suspect's pulse rates (58, 56, 58 bpm) were below the DRE average ranges for pulse rate and his blood pressure (114/68) was also below the DRE average range for blood pressure. His body temperature (97.2) was also below the DRE average range.

9. **SIGNS OF INGESTION:** Some old scars were located on the inside of his left forearm. When asked about the scars, the suspect stated, "That was a long time ago man." The suspect's muscle tone was flaccid and his arms felt cool to the touch.

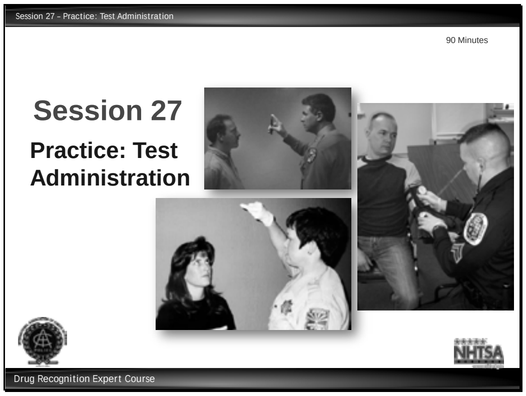
10. **SUSPECT'S STATEMENTS:** The suspect repeatedly denied using drugs stating, "I told you, I don't do drugs."

11. **DRE'S OPINION:** In my opinion Richardson is under the influence of a Narcotic Analgesic and unable to operate a vehicle safely.

12. **TOXICOLOGICAL SAMPLE:** At 2220 hours a blood sample was collected from the suspect and was delivered to the Evidence Property Room pending an analysis by Arizona Crime Laboratory.

13. **MISCELLANEOUS:** The suspect was also cited for Driving While Suspended.

Participant Manual DRE 7-Day Session 27 – Practice: Test Administration



Session 27 – Practice: Test Administration

90 Minutes

Session 27

Practice: Test Administration

Drug Recognition Expert Course

Notes:____

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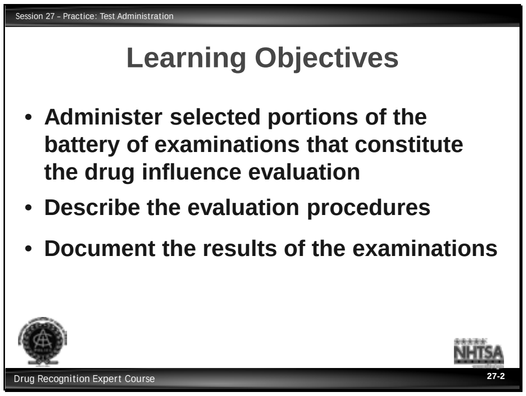

Session 27 – Practice: Test Administration

Learning Objectives

- **Administer selected portions of the battery of examinations that constitute the drug influence evaluation**
- **Describe the evaluation procedures**
- **Document the results of the examinations**

Drug Recognition Expert Course

27-2

Notes:____

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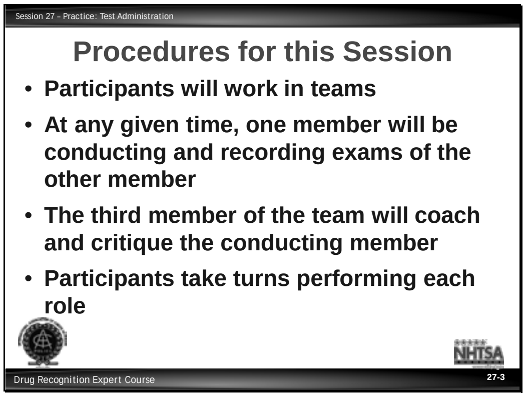
Upon successfully completing this session the student will be able to:

- Administer selected portions of the battery of examinations that constitute the drug influence evaluation.
- Describe the evaluation procedures.
- Document the results of the examinations.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Procedures for this Session	Instructor Led Presentations
B. Hands-On Practice	Instructor Led Coaching
C. Session Wrap-Up	Participant Led Coaching



Session 27 – Practice: Test Administration

Procedures for this Session

- Participants will work in teams
- At any given time, one member will be conducting and recording exams of the other member
- The third member of the team will coach and critique the conducting member
- Participants take turns performing each role

Drug Recognition Expert Course 27-3

Notes:____

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A. Procedures for this Session

Team Assignments

- Participants will work in two or three member teams.
- At any given time, one member of the team will be engaged in conducting and recording examinations of another member.
- The third member of the team will help coach and critique the participant who is conducting the examinations.
- Participants will take turns serving as test administrator, test subject, and coach.

Session 27 – Practice: Test Administration

Hands-On Practice

Drug Recognition Expert Course 27-4

Notes:____

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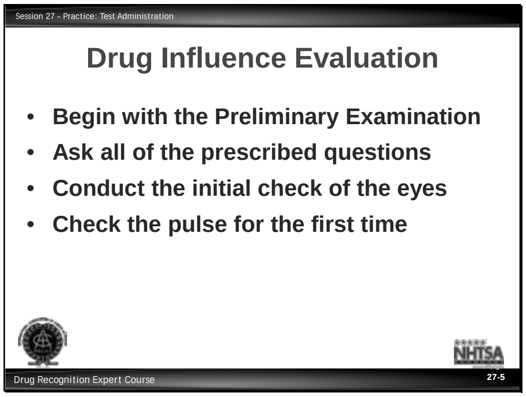
B. Hands-On Practice



Session 27 – Practice: Test Administration

Drug Influence Evaluation

- Begin with the Preliminary Examination
- Ask all of the prescribed questions
- Conduct the initial check of the eyes
- Check the pulse for the first time

Drug Recognition Expert Course

Notes:____

Drug Influence Evaluation

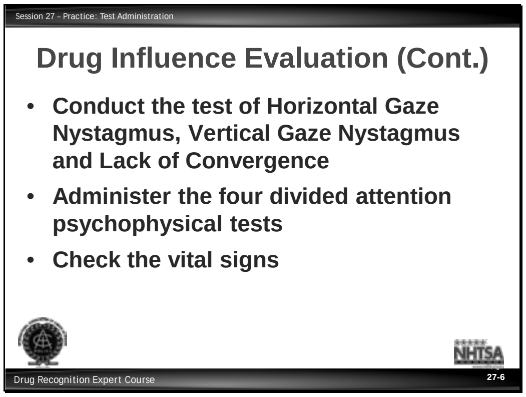
For this practice session, each participant will conduct a complete drug influence evaluation.

Begin with the Preliminary Examination.

Ask all of the prescribed questions.

Conduct the initial check of the eyes.

Check the pulse for the first time.



Session 27 – Practice: Test Administration

Drug Influence Evaluation (Cont.)

- Conduct the test of Horizontal Gaze Nystagmus, Vertical Gaze Nystagmus and Lack of Convergence
- Administer the four divided attention psychophysical tests
- Check the vital signs

Drug Recognition Expert Course

Notes:____

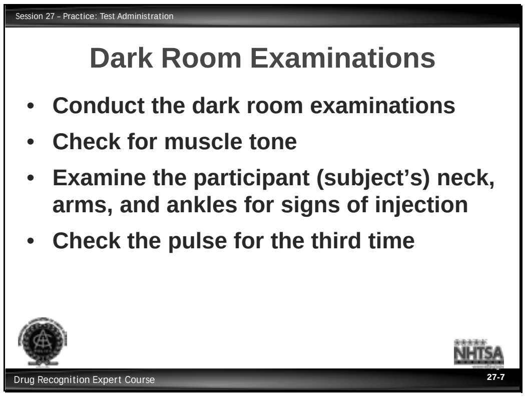
Conduct the test of Horizontal Gaze Nystagmus, Vertical Gaze Nystagmus, and Lack of Convergence.

Administer the four divided attention psychophysical tests.

- Modified Romberg Balance Test
- Walk and Turn test
- One Leg Stand test
- Finger to Nose test

Check the vital signs.

- Blood pressure
- Temperature
- Check the pulse for the second time



Session 27 – Practice: Test Administration

Dark Room Examinations

- **Conduct the dark room examinations**
- **Check for muscle tone**
- **Examine the participant (subject’s) neck, arms, and ankles for signs of injection**
- **Check the pulse for the third time**

Drug Recognition Expert Course 27-7

Notes:____

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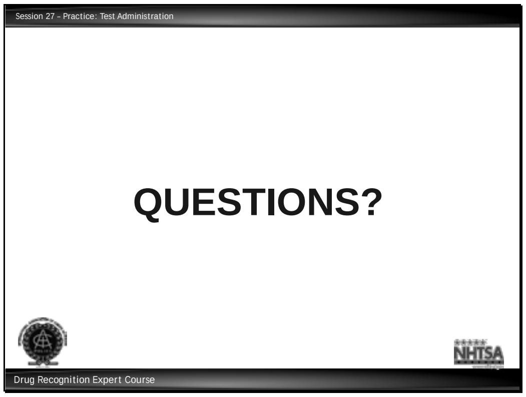
Dark Room Examinations

- Conduct the dark room examinations.
- Check for muscle tone.
- Examine the participant (subject’s) neck, arms, and ankles for signs of injection.
- Check the pulse for the third time.



Session 27 – Practice: Test Administration

QUESTIONS?

Drug Recognition Expert Course

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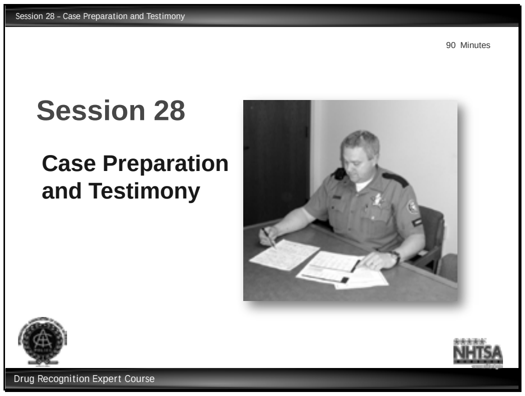
C. Session Wrap-Up

Participant Manual DRE 7-Day Session 28 – Case Preparation and Testimony



Session 28 – Case Preparation and Testimony

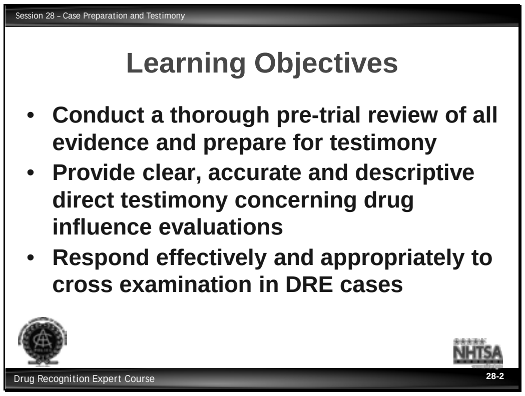
90 Minutes

Session 28

Case Preparation and Testimony

Drug Recognition Expert Course

Notes:



Session 28 – Case Preparation and Testimony

Learning Objectives

- Conduct a thorough pre-trial review of all evidence and prepare for testimony
- Provide clear, accurate and descriptive direct testimony concerning drug influence evaluations
- Respond effectively and appropriately to cross examination in DRE cases

Drug Recognition Expert Course

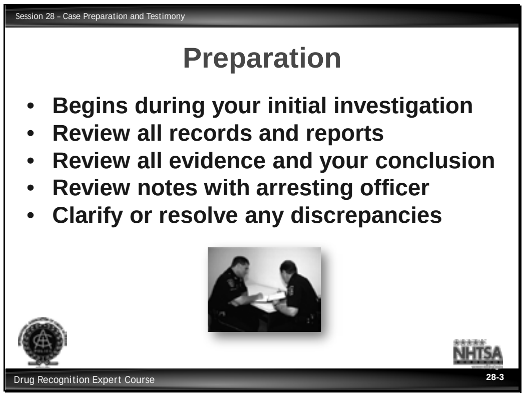
28-2

Notes:

Upon successfully completing this session, participants will be able to:

- Conduct a thorough pre-trial review of all evidence and prepare for testimony.
- Provide clear, accurate, and descriptive direct testimony concerning drug influence evaluations.
- Respond effectively and appropriately to cross examine in DRE cases.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Guidelines for Case Preparation	Instructor Led Presentations
B. Guidelines for Direct Testimony	Instructor Led Demonstrations
C. Typical Defense Tactics	Reading Assignments



Session 28 – Case Preparation and Testimony

Preparation

- Begins during your initial investigation
- Review all records and reports
- Review all evidence and your conclusion
- Review notes with arresting officer
- Clarify or resolve any discrepancies

Drug Recognition Expert Course

28-3

Notes:

A. Guidelines for Case Preparation

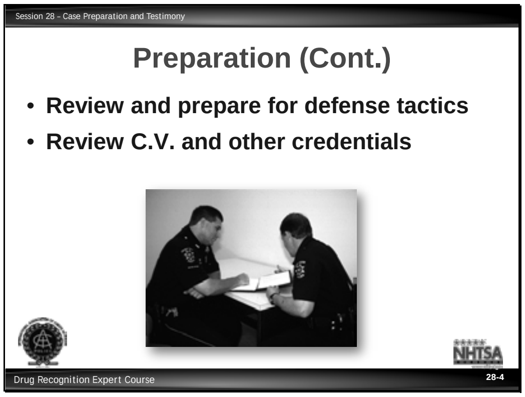
Preparation

Preparation to present your case in court begins during your initial investigation.

The quality of your investigation and documentation will ultimately determine your ability to accurately present information during trial.

When you receive the trial notice you should schedule a pre-trial conference with the prosecutor.

- Review all records and reports associated with the case.
- Review all evidence and your conclusion.
- Review notes with arresting officer.
- Review any weak areas.
- Clarify or resolve any discrepancies.



Session 28 – Case Preparation and Testimony

Preparation (Cont.)

- Review and prepare for defense tactics
- Review C.V. and other credentials

Drug Recognition Expert Course

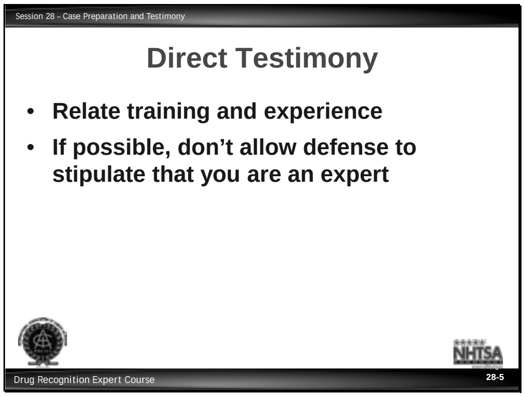
28-4

Notes:

- Review questions the prosecutors will be asking.
- Review typical tactics the prosecutors expect the defense to use.
- Review your curriculum vitae and credentials.

If a pre-trial conference is not possible, identify the main points of the case and discuss them with the prosecutor during the few minutes before the trial.

- It is very important to meet with prosecutors that have never been exposed to the DEC Program before trial to explain that it cannot be treated like a typical DUI trial. You must explain that there are different protocols for DUI vs. DRE cases.
- Excellent resources for prosecutors can be obtained through the National Traffic Law Center. Another excellent resource is your state's Traffic Safety Resource Prosecutor (TSRP).



Session 28 – Case Preparation and Testimony

Direct Testimony

- **Relate training and experience**
- **If possible, don't allow defense to stipulate that you are an expert**

Drug Recognition Expert Course

28-5

Notes:

B. Guidelines for Direct Testimony

Direct Testimony

Although knowledge only greater than what the public has is required to qualify as an "expert," your testimony will carry much more weight if you have good credentials.

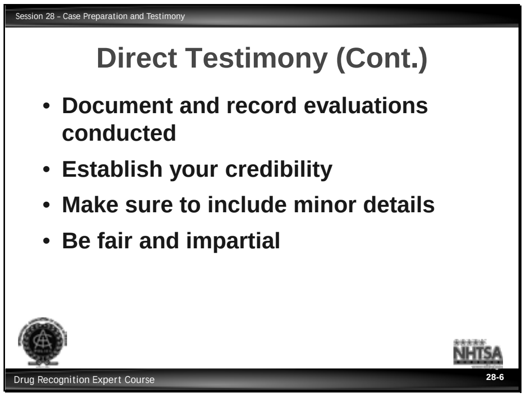
Qualifications will be established during Voir Dire:

Voir Dire is a French expression literally meaning "to see, to say." Loosely, this would be rendered in English as "to seek the truth," or "to call it as you see it." In a law or court context, one application of voir dire is to question a witness to assess his or her qualifications to be considered an expert in some matter pending before the court.

When testifying, relate training and experience to the type of arrest being tried (e.g., DWI, Methamphetamine, Cocaine, etc.)

Being qualified as an expert in the past does not automatically qualify you as an expert in a particular court case.

- Highlight fact that you were selected to attend specialized DRE training, not just assigned randomly.
- If possible, do not allow the defense to stipulate that you are an expert.



Session 28 – Case Preparation and Testimony

Direct Testimony (Cont.)

- **Document and record evaluations conducted**
- **Establish your credibility**
- **Make sure to include minor details**
- **Be fair and impartial**

Drug Recognition Expert Course 28-6

Notes:____

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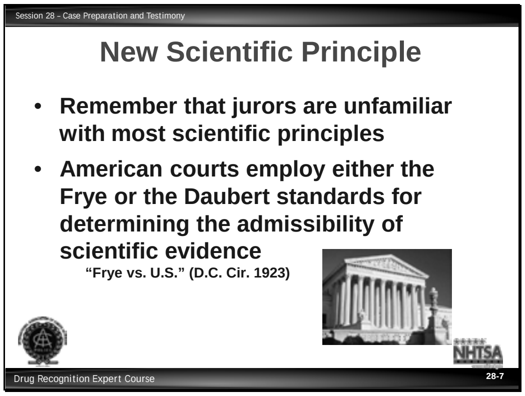
- Document and record all evaluations conducted. Establish ratio of evaluations that resulted in a finding that the subject was not under the influence.

- Highlight the number of times you have seen a person under the influence of the drug(s) in question and have observed the symptomatology, etc.

- Ability to answer specific questions with confidence, skill and exactness will bolster a professional image in the eyes of the judge and/or jury.



Session 28 – Case Preparation and Testimony

New Scientific Principle

- **Remember that jurors are unfamiliar with most scientific principles**
- **American courts employ either the Frye or the Daubert standards for determining the admissibility of scientific evidence**
  "Frye vs. U.S." (D.C. Cir. 1923)

Drug Recognition Expert Course 28-7

Notes:____

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New Scientific Principle

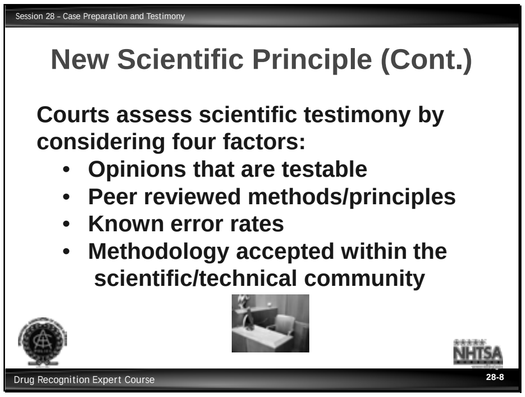
- The scientific principles are unfamiliar to the jury or judge.

Your task is to establish that your hard work through training will be acceptable in the court.

- American courts employ either the Frye or the Daubert standards for determining the admissibility of scientific evidence.

The landmark case "Frye vs. U.S.""Frye vs. U.S." 293F 1013 (D.C. Cir. 1923).

Frye requires that the scientific principle or theory used to support "evidence" be in conformity with a generally accepted explanatory theory, if the "evidence" is to be admissible.



Session 28 – Case Preparation and Testimony

New Scientific Principle (Cont.)

Courts assess scientific testimony by considering four factors:

- **Opinions that are testable**
- **Peer reviewed methods/principles**
- **Known error rates**
- **Methodology accepted within the scientific/technical community**

Drug Recognition Expert Course 28-8

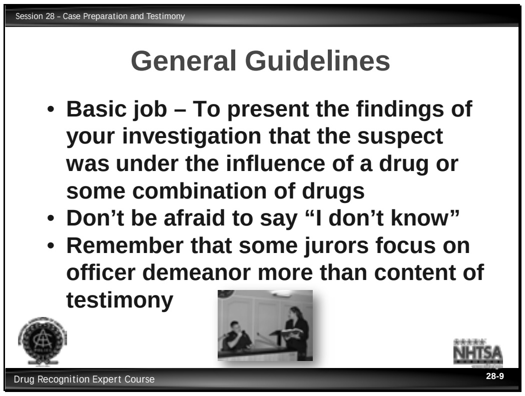
Notes:

In Daubert, courts serve as a gatekeeper for all scientific evidence.

Source: Daubert vs. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

Courts assess evidence by considering four factors:

- Opinions are testable.
- Methods/principles have been subject to peer review.
- Known error rate can be identified.
- Opinions rest on methodology that is generally accepted within the relevant scientific/technical community.



Session 28 – Case Preparation and Testimony

General Guidelines

- **Basic job – To present the findings of your investigation that the suspect was under the influence of a drug or some combination of drugs**
- **Don’t be afraid to say “I don’t know”**
- **Remember that some jurors focus on officer demeanor more than content of testimony**

Drug Recognition Expert Course 28-9

Notes:

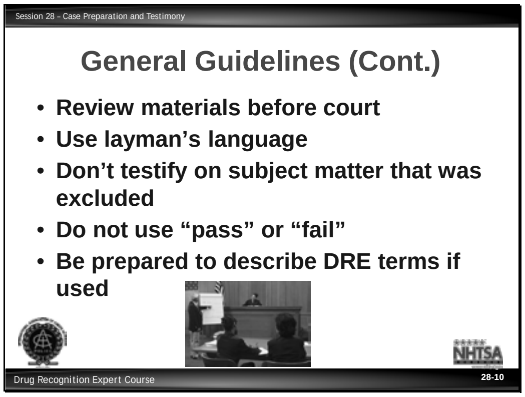
General Guidelines

- Basic job is to present the findings of your investigation that the suspect was under the influence of a drug or some combination of drugs. Keep this in mind at all times.
- Don’t be afraid to say “I don’t know.”
- Testify to only what you know.
- Remember, an expert witness can rely on hearsay to develop his or her expertise.

Avoid contact with the defense attorney if possible.

Don’t be upset if prosecutor and defense attorney appear friendly to each other.

- Remember, some jurors focus on an officer’s demeanor more than content of testimony.



Session 28 – Case Preparation and Testimony

General Guidelines (Cont.)

- **Review materials before court**
- **Use layman's language**
- **Don't testify on subject matter that was excluded**
- **Do not use "pass" or "fail"**
- **Be prepared to describe DRE terms if used**

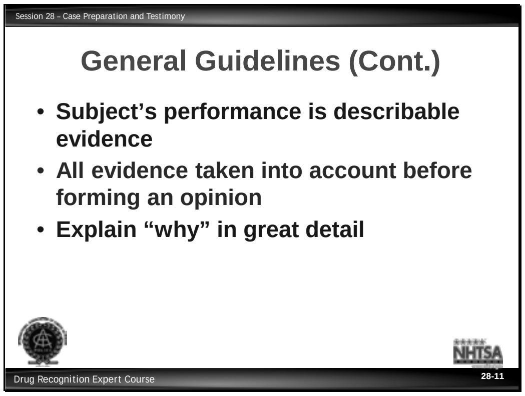
Drug Recognition Expert Course 28-10

Notes:

Do not bring manuals or articles into court for reference.

- Review materials before court to become familiar with contents.
- Explain technical terms in layman's language. For example, HGN means an involuntary jerking of the eyes occurring as the eyes gaze to the side.
- Pay attention to what evidence or testimony can be and is excluded.

When describing subject's performance on SFST's, explicitly describe exactly what the subject did or neglected to do.



Session 28 – Case Preparation and Testimony

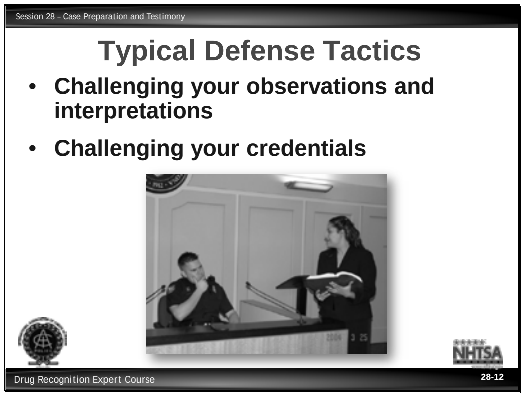
General Guidelines (Cont.)

- **Subject's performance is describable evidence**
- **All evidence taken into account before forming an opinion**
- **Explain "why" in great detail**

Drug Recognition Expert Course 28-11

Notes:

- Results of subject's performance are describable evidence.
- Be sure to emphasize that all evidence is taken into account before forming an opinion.
- If defense attorney asks a "why" question, take the opportunity to explain in great detail if appropriate.



Session 28 – Case Preparation and Testimony

Typical Defense Tactics

- **Challenging your observations and interpretations**
- **Challenging your credentials**

Drug Recognition Expert Course

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C. Typical Defense Tactics

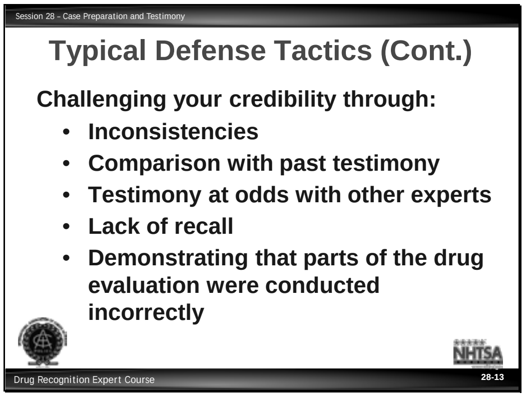
The defense relies on several factors to “impeach” or discredit your testimony.

The defense will challenge your observations and interpretations. They will attempt to show that the signs, symptoms and behaviors observed have other explanations.

Defense will challenge your credentials…a bona fide expert has both formal training resulting in a high degree of knowledge and experience in applying knowledge, resulting in a skill.

By demonstrating the officer lacks depth of knowledge in the drug field by contrasting his or her knowledge with the defense expert’s knowledge.

- The trial tactic is to show that the officer does not have the expertise to accurately determine the cause of intoxication / impairment because of inadequate formal training which lessens the value of his/her field experience and increases likelihood that he/she is mistaken in his/her conclusion.



Session 28 – Case Preparation and Testimony

Typical Defense Tactics (Cont.)

Challenging your credibility through:

- **Inconsistencies**
- **Comparison with past testimony**
- **Testimony at odds with other experts**
- **Lack of recall**
- **Demonstrating that parts of the drug evaluation were conducted incorrectly**

Drug Recognition Expert Course

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Notes:____

Some examples of challenging your credibility are:

Inconsistencies:

- Arresting officer’s and examining officer’s testimony must be complimentary. Any differences must be explained.
- Get your facts straight and stick to them.

Comparison with past testimony:

- Try to get copies of transcripts of pervious trials to review your strong/weak points. If possible, review your testimony with the prosecutor.

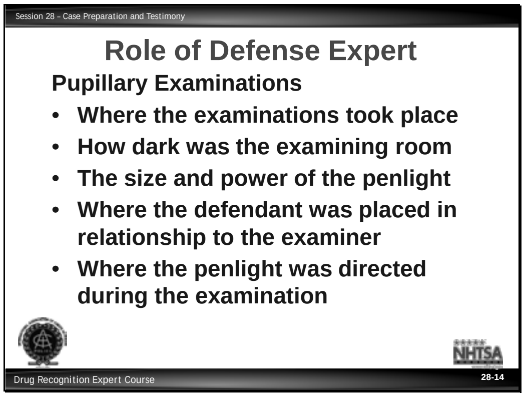
Testimony that is at odds with other established experts:

- Do your homework…review the literature. Explain any differences if possible.

Lack of recall:

- Try to be prepared, but don’t be afraid to say “I don’t know.” Be honest.

By demonstrating that the officer incorrectly performed part of the evaluation, resulting in an erroneous conclusion.



Session 28 – Case Preparation and Testimony

Role of Defense Expert

Pupillary Examinations

- **Where the examinations took place**
- **How dark was the examining room**
- **The size and power of the penlight**
- **Where the defendant was placed in relationship to the examiner**
- **Where the penlight was directed during the examination**

Drug Recognition Expert Course

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Role of Defense Expert

To impeach credibility of the arresting officer and/or the prosecution expert

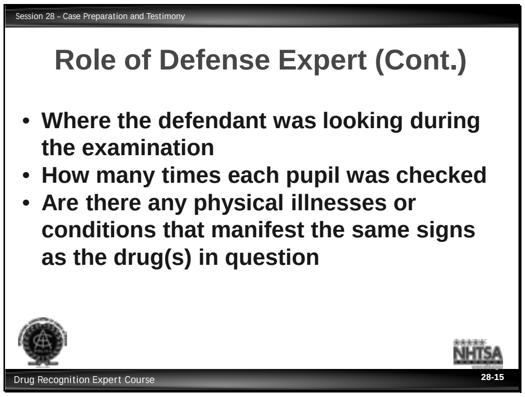
- My expert vs. your expert. Usually they are 180 degrees apart in their opinions.

To present alternative conditions and states that could have produced the same or similar symptoms

Typical Defense Questions

Pupillary examinations:

- Where the examination took place.
- How dark was the examining room.
- The size or power of the penlight.
- Where the defendant was placed in relationship to the examiner.
- Where the penlight was directed during the examination?



Session 28 – Case Preparation and Testimony

Role of Defense Expert (Cont.)

- **Where the defendant was looking during the examination**
- **How many times each pupil was checked**
- **Are there any physical illnesses or conditions that manifest the same signs as the drug(s) in question**

Drug Recognition Expert Course

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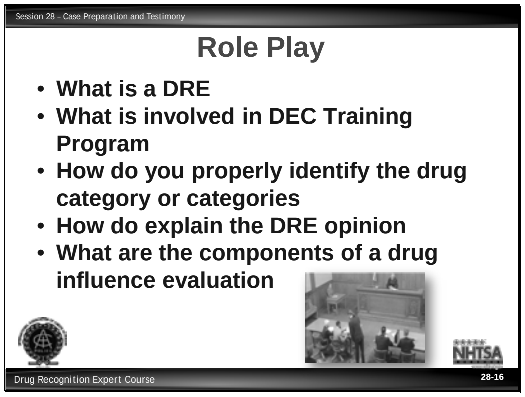
Typical Defense Questions (Cont.)

- Where the defendant was looking during the examination?
- How many times each pupil was checked?
- Are there any physical illnesses or conditions that manifest the same signs as the drug(s) in question?



Session 28 – Case Preparation and Testimony

Role Play

- What is a DRE
- What is involved in DEC Training Program
- How do you properly identify the drug category or categories
- How do explain the DRE opinion
- What are the components of a drug influence evaluation

Drug Recognition Expert Course

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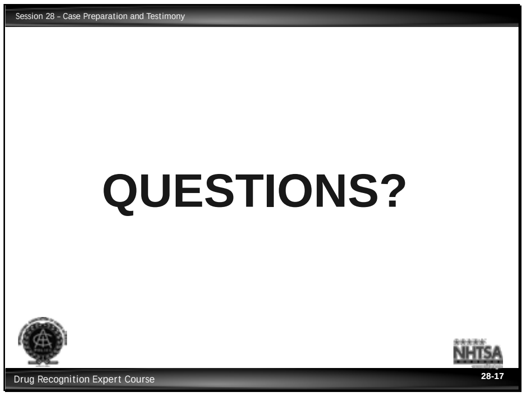
Suggested role play to discuss the following questions:

- What is a DRE?
- What is involved in the DEC training program?
- How do you properly identify the drug category or categories?
- How do you explain the DRE opinion?
- What are the components of a drug influence evaluation?



Session 28 – Case Preparation and Testimony

QUESTIONS?

Drug Recognition Expert Course

28-17

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DRE DEFENSE CROSS EXAMINATION QUESTIONS

The following are representative of questions the defense may use to challenge the DRE's in court. (The defendant is identified as Miss Alicia Ann Ace.)

Missing Symptoms/Normals

This line of questions attempts to elicit the fact that the defendant did not have all of the expected signs or symptoms of the drug (s) in question.

Officer, you were taught that bruxism or grinding of the teeth is a sign of CNS Stimulant influence, isn't it? Miss Ace didn't have that sign, did she?

The defense may also focus on those signs or symptoms that were normal, and were therefore, not consistent with the drug in question.

Officer, you learned the normal range of temperature in DRE training, didn't you? And that range is 98.6 plus or minus one degree, isn't it? What was Miss Ace's temperature? (98) 98 is within normal ranges, isn't it? Miss Ace's temperature was normal, wasn't it? CNS Stimulants cause elevated temperature, don't they? Miss Ace's was not elevated, was it?

Alternative Explanations

The defense elicits alternative explanations for the signs and symptoms of the drug (s) in question. These alternative explanations usually deal with medical conditions, stress, a traffic crash, etc.

Officer, an elevated pulse rate can be caused by things other than drugs, can't it? Excitement may cause it? Stress may cause it? Being involved in a traffic crash is stressful, isn't it? And being involved in a traffic crash may cause elevated pulse, right? Being interviewed in the early morning by three police officers is stressful? And that may also cause the pulse to be elevated, can't it?

Defendant's Normals

The defense attempts to emphasize the fact that not everyone is so-called normal, that normal is subjective.

Officer, you were taught the normal range for pulse in DRE training, weren't you? And you agree that not all people fall in that normal range, don't you? That there are people with pulse rates above normal that aren't on drugs, right? A person's pulse changes over time, doesn't it? You don't know what Miss Ace's normal pulse is, do you? It could be in the normal range, right? But it could be above or below the normal range - normally for her, isn't that so?

Doctor Cop

The line of questioning challenges the credibility of the officer's teachers - that they are police officers, rather than medical professionals.

Officer, the teachers in this DRE school weren't doctors, were they? They weren't nurses either? Toxicologists? Pharmacologists? Paramedics? They were police officer, right?

Just a Cop

This line of questioning challenges the DRE's credentials - that they are "just a cop." This infers that the DRE evaluation is actually a medical evaluation that should be undertaken only by a medical professional.

Officer, you're not a doctor, are you? A toxicologist? A pharmacologist? A nurse? A physiologist? You don't have a degree in chemistry, do you? You're a police officer, right?

The Unknown

By causing the officer to state that they don't know how a sign or symptom is caused, the defense attacks the officer's credibility. This line of questioning challenges the officer's expertise, by implying that a real expert would know these things.

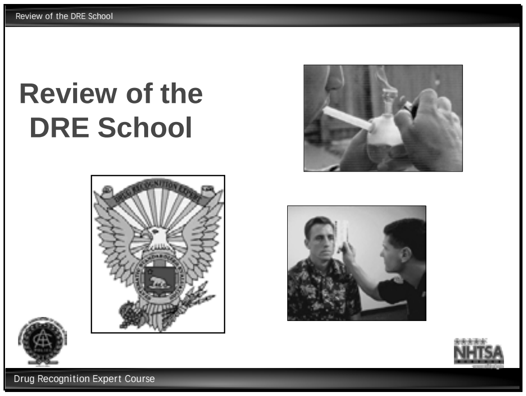
Officer, you don't know how CNS Stimulants dilate the pupil, do you? You don't know how alcohol supposedly causes Nystagmus, do you? You don't know how CNS Stimulants supposedly elevate the heart rate, do you?

Guessing Game

This tactic attacks the DRE's opinion as a subjective guess, a belief, rather than objective. Guesses can be wrong.

Officer, your opinion in a DRE case is subjective, isn't it? It's a belief on your part? You've made these beliefs in DRE cases in the past, haven't you? A sometimes toxicology didn't find the drug you predicted, isn't that so? And, in fact, sometimes, toxicology didn't find any drug, isn't that so? And so, sometimes your opinion is not correct, right? Sometimes, you guess wrong?

Participant Manual DRE 7-Day: Review of the DRE School



Review of the DRE School

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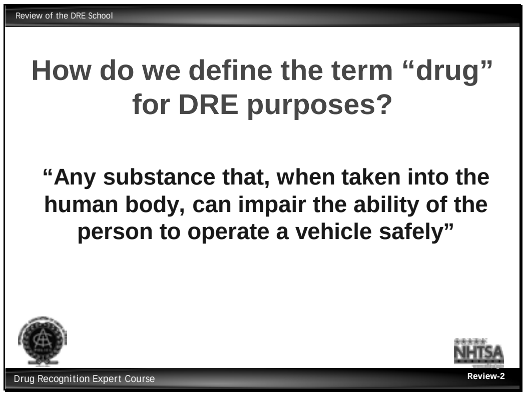

Review of the DRE School

How do we define the term “drug” for DRE purposes?

“Any substance that, when taken into the human body, can impair the ability of the person to operate a vehicle safely”

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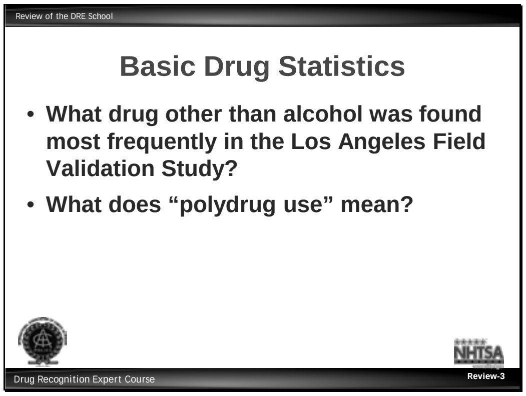
Review-2

Notes:____

How do we define the term “drug” for DRE purposes?



Review of the DRE School

Basic Drug Statistics

- **What drug other than alcohol was found most frequently in the Los Angeles Field Validation Study?**
- **What does “polydrug use” mean?**

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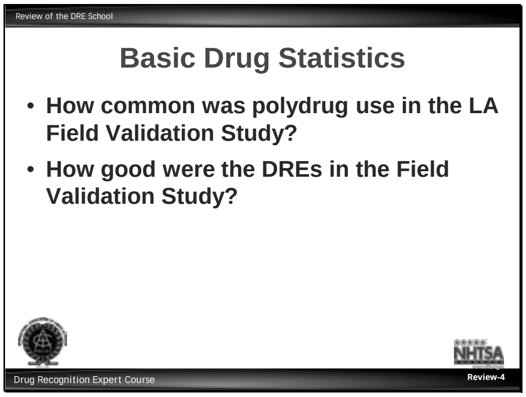
Review-3

Notes:____

Basic Drug Statistics

- What drug other than alcohol was found most frequently in the Los Angeles Field Validation Study?
- What does “polydrug use” mean?



Review of the DRE School

Basic Drug Statistics

- How common was polydrug use in the LA Field Validation Study?
- How good were the DREs in the Field Validation Study?

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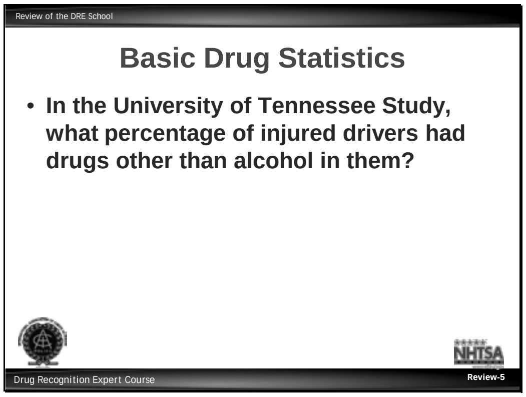
Review-4

Notes:____

Basic Drug Statistics

- How common was polydrug use in the LA Field Validation Study?
- How good were the DREs in the Field Validation Study?



Review of the DRE School

Basic Drug Statistics

- In the University of Tennessee Study, what percentage of injured drivers had drugs other than alcohol in them?

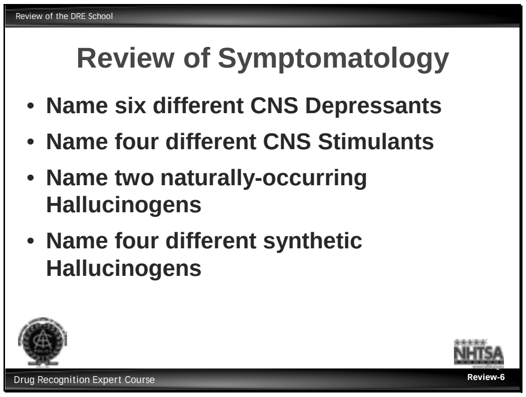
Drug Recognition Expert Course

Review-5

Notes:____

Basic Drug Statistics

- In the University of Tennessee Study, what percentage of injured drivers had drugs other than alcohol in them?



Review of the DRE School

Review of Symptomatology

- **Name six different CNS Depressants**
- **Name four different CNS Stimulants**
- **Name two naturally-occurring Hallucinogens**
- **Name four different synthetic Hallucinogens**

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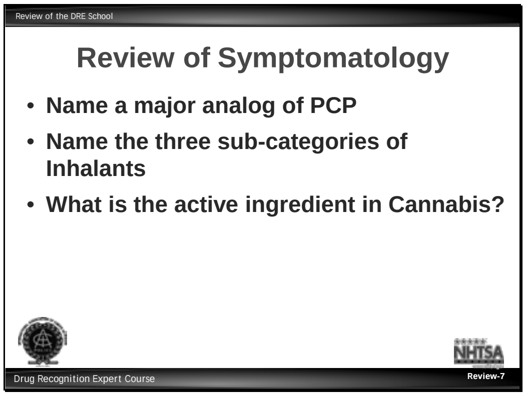
Review-6

Notes:

Review of Symptomatology

- Name six different CNS Depressants
- Name four different CNS Stimulants
- Name two naturally-occurring Hallucinogens
- Name four different synthetic Hallucinogens



Review of the DRE School

Review of Symptomatology

- **Name a major analog of PCP**
- **Name the three sub-categories of Inhalants**
- **What is the active ingredient in Cannabis?**

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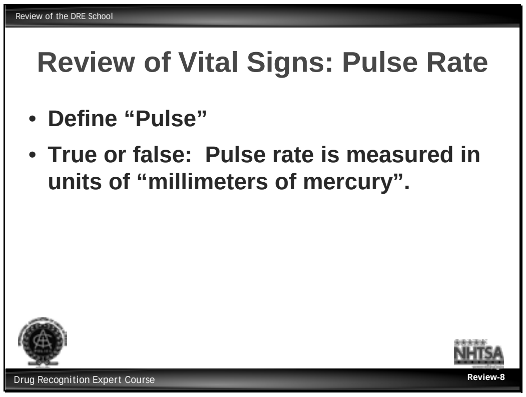
Review-7

Notes:

Review of Symptomatology

- Name a major analog of PCP
- Name the three sub-categories of Inhalants
- What is the active ingredient in Cannabis?



Review of the DRE School

Review of Vital Signs: Pulse Rate

- **Define “Pulse”**
- **True or false: Pulse rate is measured in units of “millimeters of mercury”.**

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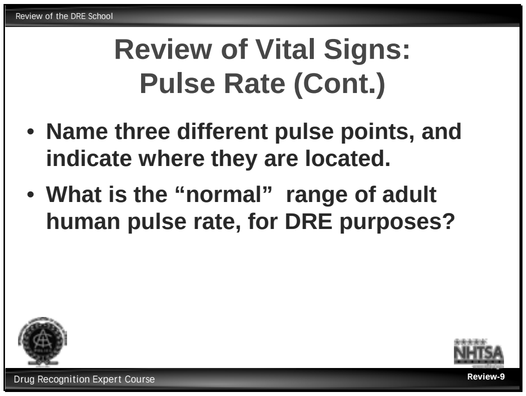
Review-8

Notes:

Review of Vital Signs

- Define “Pulse”
- True or false: Pulse rate is measured in units of “millimeters of mercury”.



Review of the DRE School

Review of Vital Signs: Pulse Rate (Cont.)

- **Name three different pulse points, and indicate where they are located.**
- **What is the “normal” range of adult human pulse rate, for DRE purposes?**

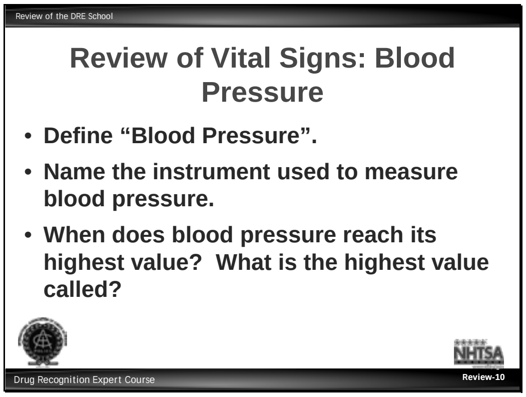
Drug Recognition Expert Course

Review-9

Notes:

Review of Vital Signs: Pulse Rate (Cont.)

- Name three different pulse points, and indicate where they are located.
- What is the “normal” range of adult human pulse rate, for DRE purposes?



Review of the DRE School

Review of Vital Signs: Blood Pressure

- **Define “Blood Pressure”.**
- **Name the instrument used to measure blood pressure.**
- **When does blood pressure reach its highest value? What is the highest value called?**

Drug Recognition Expert Course

Review-10

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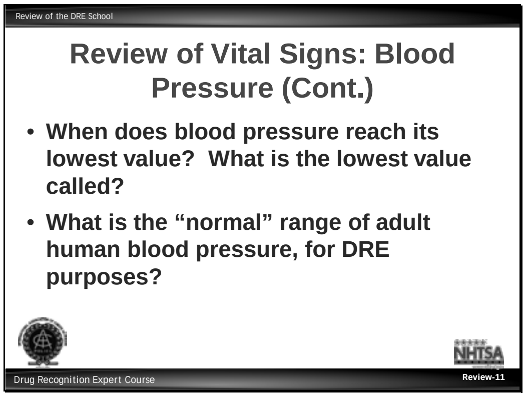
Review of Vital Signs: Blood Pressure

- Define “Blood Pressure”.
- Name the instrument used to measure blood pressure.
- When does blood pressure reach its highest value? What is the highest value called?



Review of the DRE School

Review of Vital Signs: Blood Pressure (Cont.)

- **When does blood pressure reach its lowest value? What is the lowest value called?**
- **What is the “normal” range of adult human blood pressure, for DRE purposes?**

Drug Recognition Expert Course

Review-11

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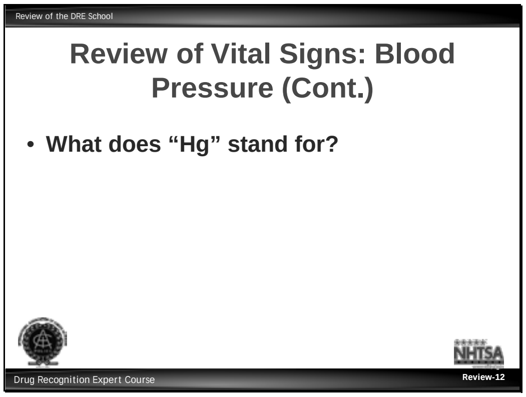
Review of Vital Signs: Blood Pressure (Cont.)

- When does blood pressure reach its lowest value? What is the lowest value called?
- What is the “normal” range of adult human blood pressure, for DRE purposes?



Review of the DRE School

Review of Vital Signs: Blood Pressure (Cont.)

- **What does “Hg” stand for?**

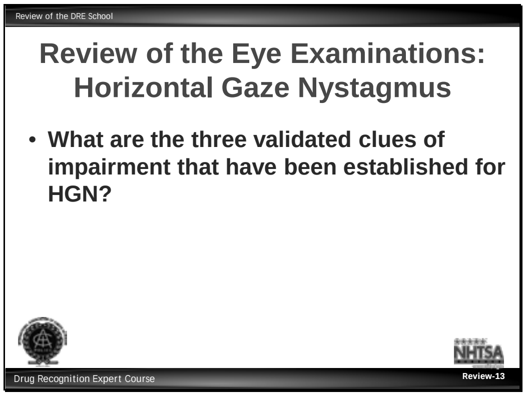
Drug Recognition Expert Course

Review-12

Notes:

Review of Vital Signs: Blood Pressure (Cont.)

- What does “Hg” stand for?



Review of the DRE School

Review of the Eye Examinations: Horizontal Gaze Nystagmus

- **What are the three validated clues of impairment that have been established for HGN?**

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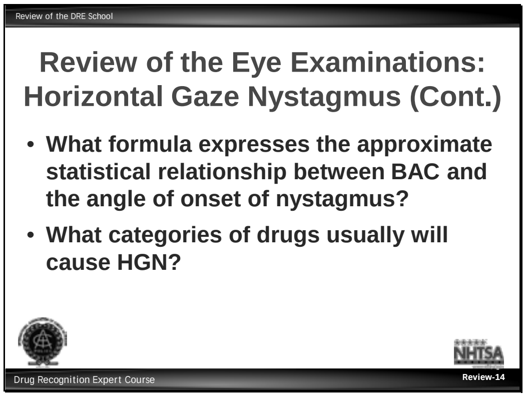
Review-13

Notes:

Review of the Eye Examinations: Horizontal Gaze Nystagmus

- What are the three validated clues of impairment that have been established for HGN?



Review of the DRE School

Review of the Eye Examinations: Horizontal Gaze Nystagmus (Cont.)

- What formula expresses the approximate statistical relationship between BAC and the angle of onset of nystagmus?
- What categories of drugs usually will cause HGN?

Drug Recognition Expert Course

Review-14

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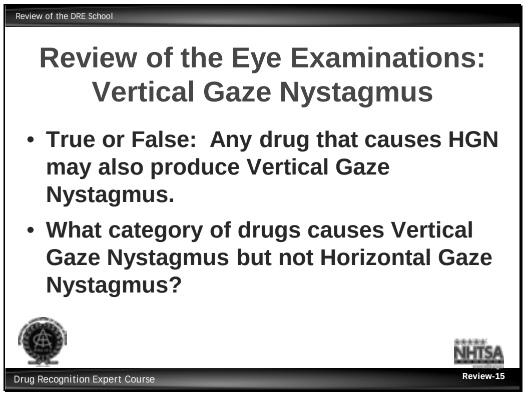
Review of the Eye Examinations: Horizontal Gaze Nystagmus (Cont.)

- What formula expresses the approximate statistical relationship between BAC and the angle of onset of nystagmus?
- What categories of drugs usually will cause HGN?



Review of the DRE School

Review of the Eye Examinations: Vertical Gaze Nystagmus

- True or False: Any drug that causes HGN may also produce Vertical Gaze Nystagmus.
- What category of drugs causes Vertical Gaze Nystagmus but not Horizontal Gaze Nystagmus?

Drug Recognition Expert Course

Review-15

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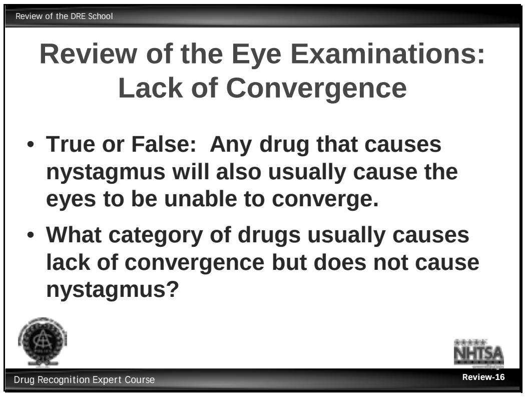
Review of the Eye Examinations: Vertical Gaze Nystagmus

- True or False: Any drug that causes HGN may also produce Vertical Gaze Nystagmus.
- What category of drugs causes Vertical Gaze Nystagmus but not Horizontal Gaze Nystagmus?



Review of the DRE School

Review of the Eye Examinations: Lack of Convergence

- **True or False: Any drug that causes nystagmus will also usually cause the eyes to be unable to converge.**
- **What category of drugs usually causes lack of convergence but does not cause nystagmus?**

Drug Recognition Expert Course

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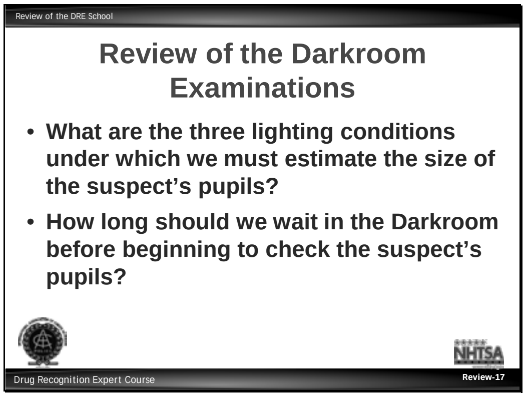
Notes:____

Review of the Eye Examinations: Lack of Convergence

- True or False: Any drug that causes nystagmus will also usually cause the eyes to be unable to converge.

- What category of drugs usually causes lack of convergence but does not cause nystagmus?



Review of the DRE School

Review of the Darkroom Examinations

- **What are the three lighting conditions under which we must estimate the size of the suspect's pupils?**
- **How long should we wait in the Darkroom before beginning to check the suspect's pupils?**

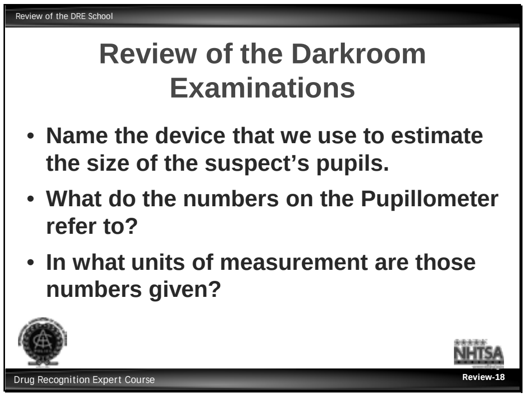
Drug Recognition Expert Course

Review-17

Notes:____

Review of the Darkroom Examinations

- What are the three lighting conditions under which we must estimate the size of the suspect's pupils?
- How long should we wait in the Darkroom before beginning to check the suspect's pupils?



Review of the DRE School

Review of the Darkroom Examinations

- **Name the device that we use to estimate the size of the suspect's pupils.**
- **What do the numbers on the Pupillometer refer to?**
- **In what units of measurement are those numbers given?**

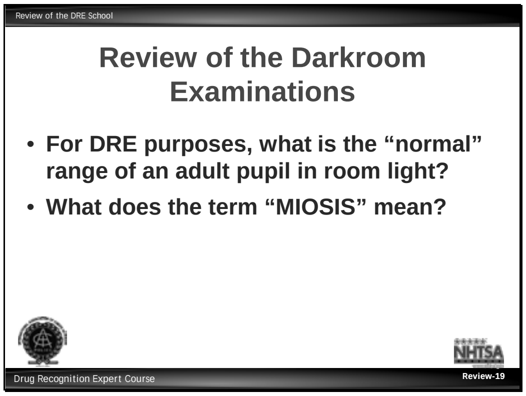
Drug Recognition Expert Course

Review-18

Notes:____

Review of the Darkroom Examinations

- Name the device that we use to estimate the size of the suspect's pupils.
- What do the numbers on the Pupillometer refer to?
- In what units of measurement are those numbers given?



Review of the DRE School

Review of the Darkroom Examinations

- **For DRE purposes, what is the "normal" range of an adult pupil in room light?**
- **What does the term "MIOSIS" mean?**

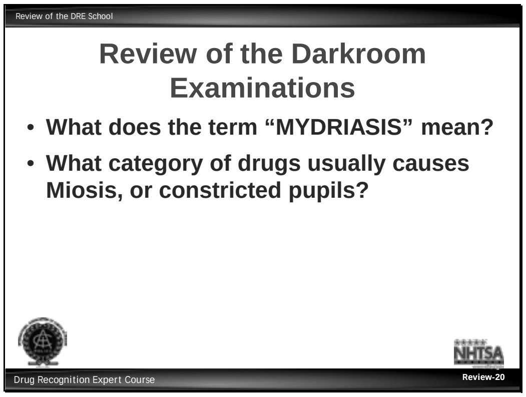
Drug Recognition Expert Course

Review-19

Notes:____

Review of the Darkroom Examinations

- For DRE purposes, what is the "normal" range of an adult pupil in room light?
- What does the term "MIOSIS" mean?



Review of the DRE School

Review of the Darkroom Examinations

- What does the term “MYDRIASIS” mean?
- What category of drugs usually causes Miosis, or constricted pupils?

Drug Recognition Expert Course

Review-20

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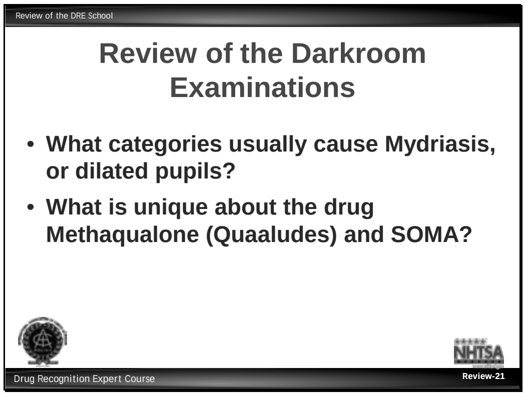
Review of the Darkroom Examinations

- What does the term “MYDRIASIS” mean?
- What category of drugs usually causes Miosis, or constricted pupils?



Review of the DRE School

Review of the Darkroom Examinations

- What categories usually cause Mydriasis, or dilated pupils?
- What is unique about the drug Methaqualone (Quaaludes) and SOMA?

Drug Recognition Expert Course

Review-21

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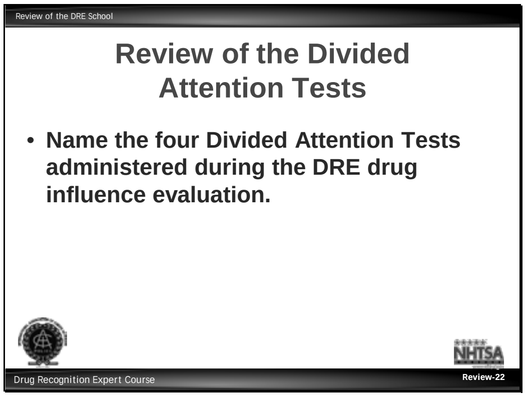
Review of the Darkroom Examinations

- What categories usually cause Mydriasis, or dilated pupils?
- What is unique about the drug Methaqualone (Quaaludes) and SOMA?



Review of the DRE School

Review of the Divided Attention Tests

- Name the four Divided Attention Tests administered during the DRE drug influence evaluation.

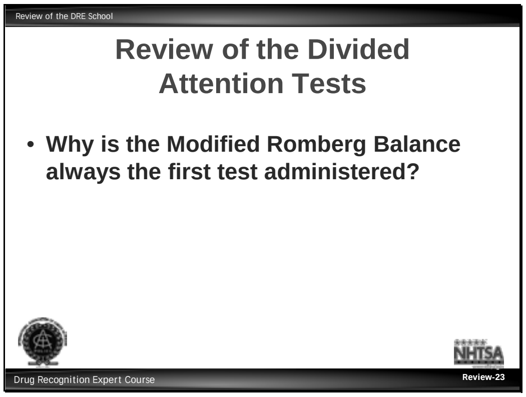
Drug Recognition Expert Course

Review-22

Notes:

Review of the Divided Attention Tests

- Name the four Divided Attention Tests administered during the DRE drug influence evaluation.



Review of the DRE School

Review of the Divided Attention Tests

- Why is the Modified Romberg Balance always the first test administered?

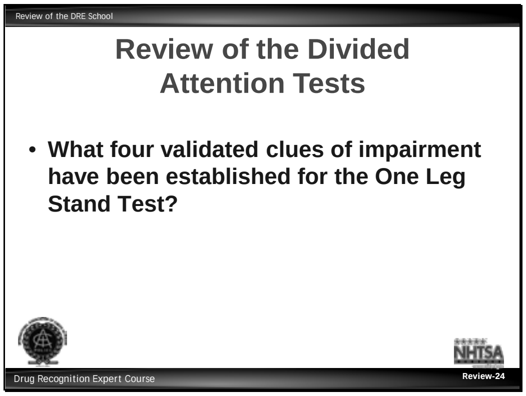
Drug Recognition Expert Course

Review-23

Notes:

Review of the Divided Attention Tests

- Why is the Modified Romberg Balance always the first test administered?



Review of the DRE School

Review of the Divided Attention Tests

- What four validated clues of impairment have been established for the One Leg Stand Test?

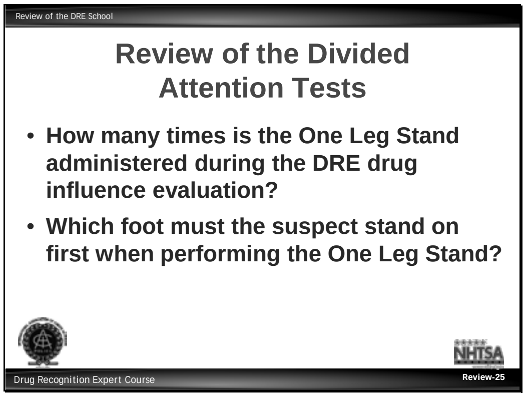
Drug Recognition Expert Course

Review-24

Notes:

Review of the Divided Attention Tests

- What four validated clues of impairment have been established for the One Leg Stand Test?



Review of the DRE School

Review of the Divided Attention Tests

- **How many times is the One Leg Stand administered during the DRE drug influence evaluation?**
- **Which foot must the suspect stand on first when performing the One Leg Stand?**

Drug Recognition Expert Course

Review-25

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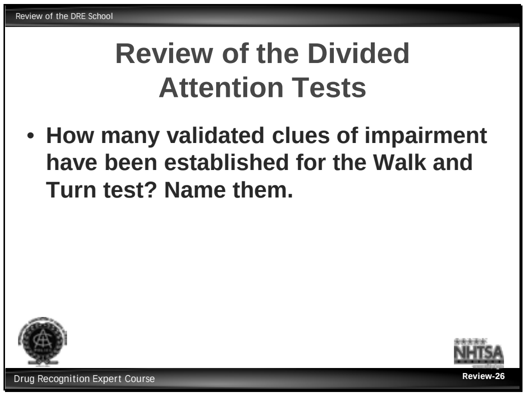
Review of the Divided Attention Tests

- How many times is the One Leg Stand administered during the DRE drug influence evaluation?
- Which foot must the suspect stand on first when performing the One Leg Stand?



Review of the DRE School

Review of the Divided Attention Tests

- **How many validated clues of impairment have been established for the Walk and Turn test? Name them.**

Drug Recognition Expert Course

Review-26

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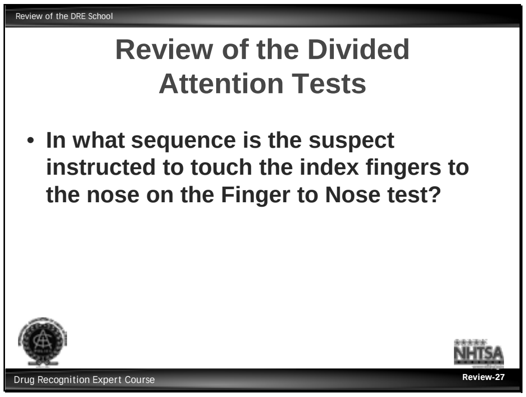
Review of the Divided Attention Tests

- How many validated clues of impairment have been established for the Walk and Turn test? Name them.



Review of the DRE School

Review of the Divided Attention Tests

- In what sequence is the suspect instructed to touch the index fingers to the nose on the Finger to Nose test?

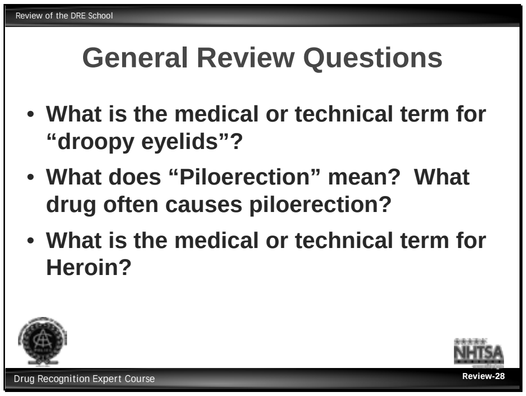
Drug Recognition Expert Course

Review-27

Notes:____

Review of the Divided Attention Tests

- In what sequence is the suspect instructed to touch the index fingers to the nose on the Finger to Nose test?



Review of the DRE School

General Review Questions

- What is the medical or technical term for “droopy eyelids”?
- What does “Piloerection” mean? What drug often causes piloerection?
- What is the medical or technical term for Heroin?

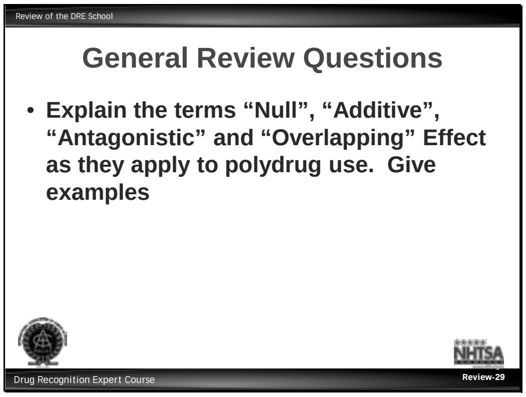
Drug Recognition Expert Course

Review-28

Notes:____

General Review Questions

- What is the medical or technical term for “droopy eyelids”?
- What does “Piloerection” mean? What drug often causes piloerection?
- What is the medical or technical term for Heroin?



Review of the DRE School

General Review Questions

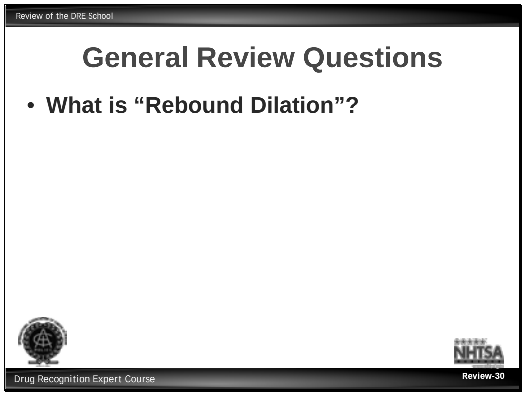
- Explain the terms “Null”, “Additive”, “Antagonistic” and “Overlapping” Effect as they apply to polydrug use. Give examples

Drug Recognition Expert Course

Notes:

General Review Questions

- Explain the terms “Null”, “Additive”, “Antagonistic” and “Overlapping” Effect as they apply to polydrug use. Give examples



Review of the DRE School

General Review Questions

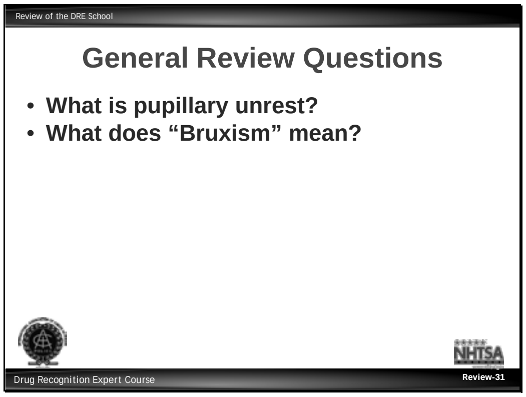
- What is “Rebound Dilation”?

Drug Recognition Expert Course

Notes:

General Review Questions

- What is “Rebound Dilation”?



Review of the DRE School

General Review Questions

- What is pupillary unrest?
- What does “Bruxism” mean?

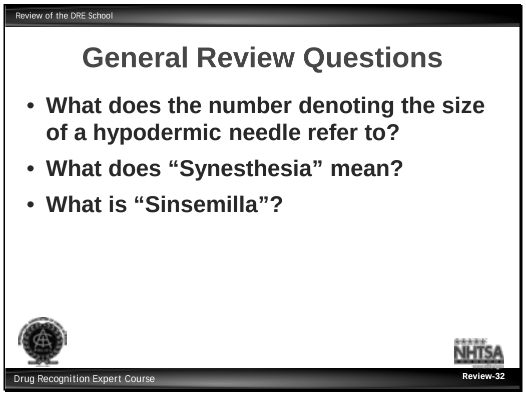
Drug Recognition Expert Course

Review-31

Notes:

General Review Questions

- What is pupillary unrest?
- What does “Bruxism” mean?



Review of the DRE School

General Review Questions

- What does the number denoting the size of a hypodermic needle refer to?
- What does “Synesthesia” mean?
- What is “Sinsemilla”?

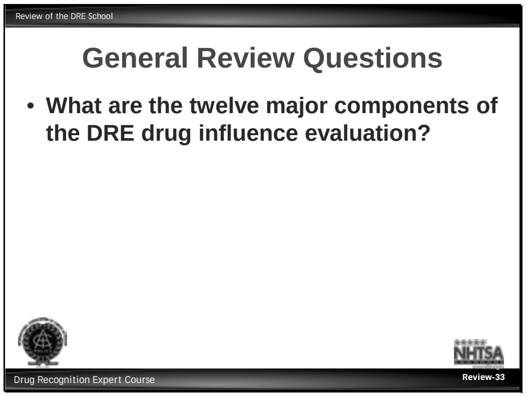
Drug Recognition Expert Course

Review-32

Notes:

General Review Questions

- What does the number denoting the size of a hypodermic needle refer to?
- What does “Synesthesia” mean?
- What is “Sinsemilla”?



Review of the DRE School

General Review Questions

- **What are the twelve major components of the DRE drug influence evaluation?**

Drug Recognition Expert Course

Review-33

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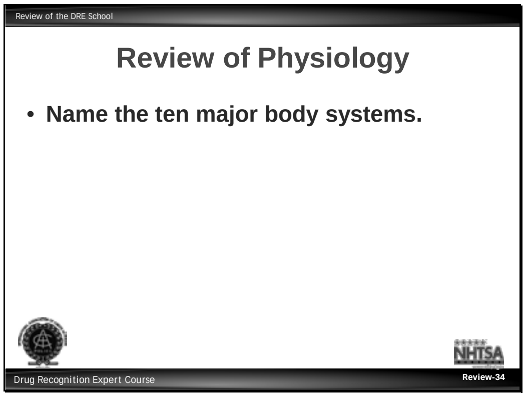
General Review Questions

- What are the twelve major components of the DRE drug influence evaluation?



Review of the DRE School

Review of Physiology

- **Name the ten major body systems.**

Drug Recognition Expert Course

Review-34

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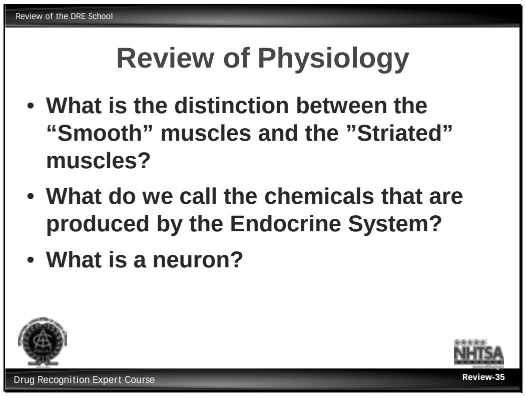
Review of Physiology



Review of the DRE School

Review of Physiology

- What is the distinction between the “Smooth” muscles and the ”Striated” muscles?
- What do we call the chemicals that are produced by the Endocrine System?
- What is a neuron?

Drug Recognition Expert Course

Review-35

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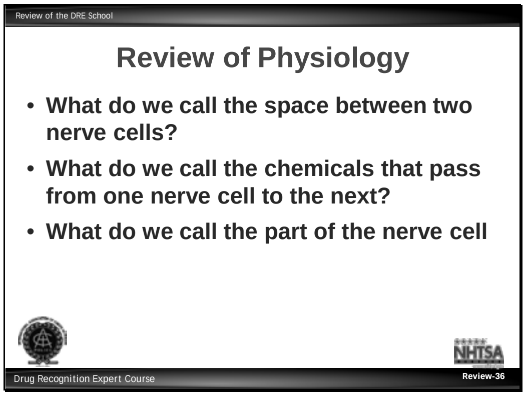
Review of Physiology

- What is the distinction between the “Smooth” muscles and the ”Striated” muscles?
- What do we call the chemicals that are produced by the Endocrine System?
- What is a neuron?



Review of the DRE School

Review of Physiology

- What do we call the space between two nerve cells?
- What do we call the chemicals that pass from one nerve cell to the next?
- What do we call the part of the nerve cell

Drug Recognition Expert Course

Review-36

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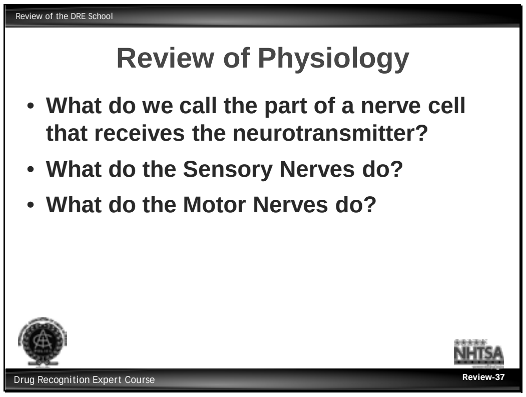
Review of Physiology

- What do we call the space between two nerve cells?
- What do we call the chemicals that pass from one nerve cell to the next?
- What do we call the part of the nerve cell that sends out the neurotransmitter?



Review of the DRE School

Review of Physiology

- What do we call the part of a nerve cell that receives the neurotransmitter?
- What do the Sensory Nerves do?
- What do the Motor Nerves do?

Drug Recognition Expert Course

Review-37

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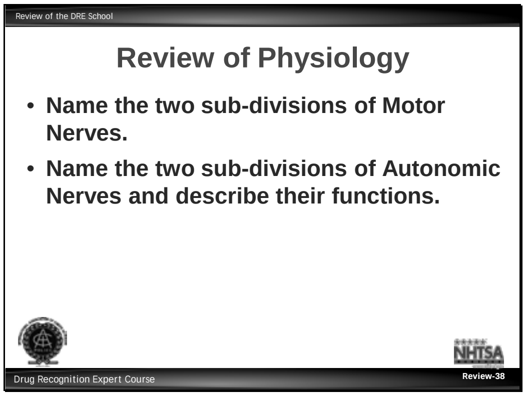
Review of Physiology

- What do we call the part of a nerve cell that receives the neurotransmitter?
- What do the Sensory Nerves do?
- What do the Motor Nerves do?



Review of the DRE School

Review of Physiology

- Name the two sub-divisions of Motor Nerves.
- Name the two sub-divisions of Autonomic Nerves and describe their functions.

Drug Recognition Expert Course

Review-38

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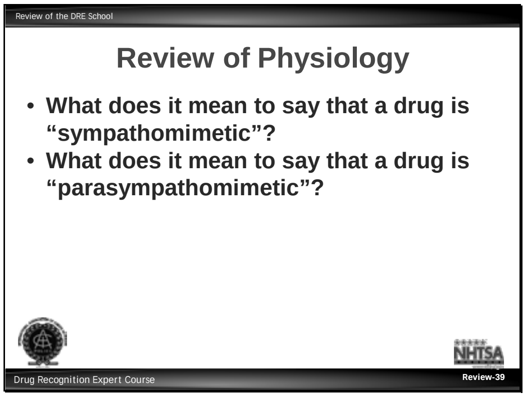
Review of Physiology

- Name the two sub-divisions of Motor Nerves.
- Name the two sub-divisions of Autonomic Nerves and describe their functions.



Review of the DRE School

Review of Physiology

- What does it mean to say that a drug is “sympathomimetic”?
- What does it mean to say that a drug is “parasympathomimetic”?

Drug Recognition Expert Course

Review-39

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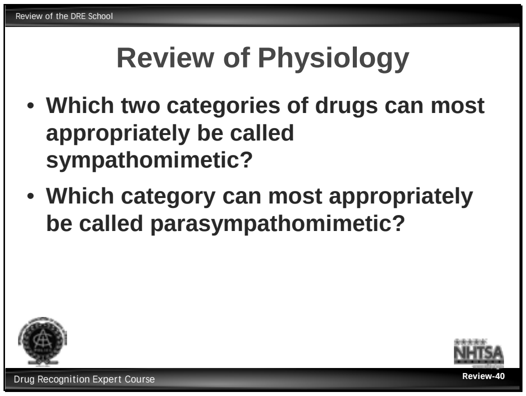
Review of Physiology

- What does it mean to say that a drug is “sympathomimetic”?
- What does it mean to say that a drug is “parasympathomimetic”?



Review of the DRE School

Review of Physiology

- Which two categories of drugs can most appropriately be called sympathomimetic?
- Which category can most appropriately be called parasympathomimetic?

Drug Recognition Expert Course

Review-40

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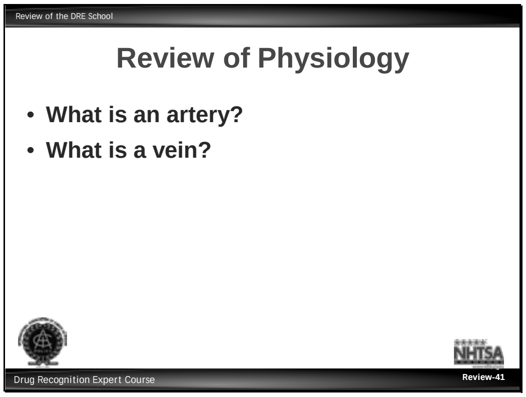
Review of Physiology

- Which two categories of drugs can most appropriately be called sympathomimetic?
- Which category can most appropriately be called parasympathomimetic?



Review of the DRE School

Review of Physiology

- What is an artery?
- What is a vein?

Drug Recognition Expert Course

Review-41

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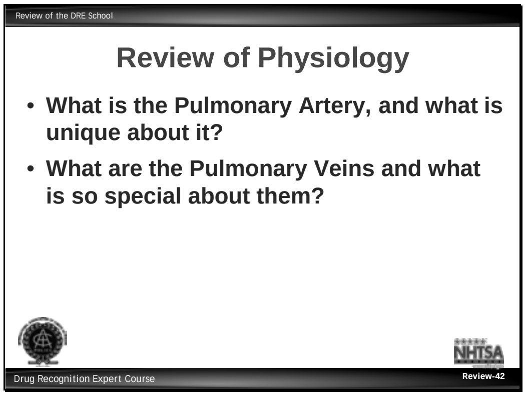
Review of Physiology

- What is an artery?
- What is a vein?



Review of the DRE School

Review of Physiology

- What is the Pulmonary Artery, and what is unique about it?
- What are the Pulmonary Veins and what is so special about them?

Drug Recognition Expert Course

Review-42

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Review of Physiology

- What is the Pulmonary Artery, and what is unique about it?
- What are the Pulmonary Veins and what is so special about them?

Review of the DRE School

QUESTIONS?

Drug Recognition Expert Course

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A SELF-TEST FOR REVIEW AND STUDY

Circle the letters corresponding to the correct answers. Note that some questions have **more than one** correct answer.

1. Suppose you examine a suspect that you know is under the combined influence of Demerol and Thorazine. Which of the following would you **not** expect to find in that suspect? (Circle all that you wouldn't expect to see.)

   A. Tachycardia is present
   B. Horizontal Gaze Nystagmus is present
   C. Hypotension is present
   D. Mydriasis is present
   E. Lack of Convergence is present

2. The Autonomic Nervous System has **sympathetic** nerves and **_____** nerves.

   A. parasympathetic
   B. metasympathetic
   C. postsympathetic
   D. mesosympathetic
   E. pilosympathetic

3. Suppose you examine a suspect that you know is under the combined influence of Ketamine and Methamphetamine, and you observe that he or she exhibits Horizontal Gaze Nystagmus. This is an example of ....

   A. A Synergistic Effect
   B. An Antagonistic Effect
   C. The Null Effect
   D. An Overlapping Effect
   E. An Additive Effect

4. The technical term meaning "constricted pupils" is ....

   A. Mydriasis
   B. Occulosis
   C. Miosis
   D. Bruxism
   E. Ptosis

5. **Chloral Hydrate** is an example of ....

   A. a Non-Barbiturate
   B. an Anti-Psychotic Tranquilizer
   C. an Anti-Depressant
   D. a Barbiturate
   E. an Anti-Anxiety Tranquilizer

6. **Numorphan** is an example of ....
   A. a Synthetic Opiate
   B. an Analog of Phencyclidine
   C. a Natural Alkaloid of Opium
   D. an Opium Derivative
   E. a non-Amphetamine-based Stimulant

7. Which of the following ordinarily will cause Horizontal Gaze Nystagmus? (Circle all that usually cause nystagmus.)

   A. Methamphetamine
   B. Valium
   C. The combination of Cocaine and Xanax
   D. The combination of Cannabis and LSD
   E. The combination of Heroin and Dilaudid

8. **Ritalin** is an example of ....

   A. a CNS Stimulant
   B. a Narcotic Analgesic
   C. an Hallucinogen
   D. a CNS Depressant
   E. an Analog of Phencyclidine

9. Suppose you examine a suspect that you know is under the combined influence of Heroin and PCP, and you observe that he or she exhibits **miosis**. This is most likely due to ....

   A. The "Downside" of Heroin
   B. An Overlapping Effect between the two drugs
   C. An Antagonistic Effect between the two drugs
   D. An Additive Effect between the two drugs
   E. The "Downside" of PCP

10. Which of the following usually will be true in a subject who is under the influence of an Hallucinogen? (Circle all that usually will be true.)

    A. Pupils will be constricted
    B. Body temperature will be elevated
    C. Eyes will be unable to converge
    D. Blood pressure will be elevated
    E. Horizontal Gaze Nystagmus will be present

11. Which of the following is not classified as an Hallucinogen? (Circle all that **are not** Hallucinogens.)

    A. ETOH
    B. DOM
    C. MDMA
    D. 2CB
    E. THC

12. Which of the following ordinarily will leave body temperature within the DRE average range? (Circle all that usually don't affect body temperature.)

    A. CNS Stimulants
    B. Dissociative Anethetics
    C. Cannabis
    D. CNS Depressants
    E. All of the above **usually do** affect body temperature

13. Suppose you examine a suspect that you know is under the combined influence of Percodan and Cannabis, and you find that the suspect's pulse rate is 74 bpm. This is most likely due to ....

    A. An Additive Effect between the two drugs
    B. The "Downside" of Cannabis
    C. An Overlapping Effect between the two drugs
    D. An Antagonistic Effect between the two drugs
    E. The "Downside" of Percodan

14. How many distinct, validated clues have been established for the Modified Romberg Balance test?

    A. Eight
    B. Six
    C. Four
    D. Three
    E. There are **no validated** clues for that test.

15. A person under the combined influence of Ritalin and LSD usually will have above normal blood pressure. This is an example of ....

    A. An Overlapping Effect
    B. A Synergistic Effect
    C. The Null Effect
    D. An Additive Effect
    E. An Antagonistic Effect

16. The gap between two nerve cells is called the ....

    A. Vesicle
    B. Neuron
    C. Synapse
    D. Dendrite
    E. Axon

17. **"Ptosis"** most nearly means ....

    A. Dilated pupils
    B. Grinding the teeth
    C. Constricted pupils
    D. Droopy eyelids
    E. Goose bumps

18. How many distinct, validated clues have been established for the Walk-and-Turn test?

    A. Eight
    B. Six
    C. Four
    D. Three
    E. There are **no validated** clues for that test.

19. Which of the following are not subcategories of Inhalants? (Circle all that are not proper names for Inhalant Subcategories.)

    A. Fluorocarbons
    B. Anesthetic Gases
    C. Aerosols
    D. Volatile Solvents
    E. Propellants

20. **Phencyclidine** is best described as ....

    A. parasympathomimetic
    B. an anti-depressant
    C. a cellular stimulant
    D. psychotophobic
    E. a dissociative anesthetic

21. Which of the following usually **will not cause** the pupils to dilate? (Circle all that usually do not cause dilation.)

    A. MDMA
    B. Methaqualone
    C. Desoxyn
    D. Peyote
    E. Ketamine

22. Which subcategory or subcategories of Inhalants usually cause blood pressure to **be depressed**? (Circle all that usually cause a depressed pressure.)

    A. Anesthetic Gases
    B. Propellants
    C. Volatile Solvents
    D. Aerosols
    E. Fluorocarbons

23. Which of the following are **Natural Alkaloids** of opium? (Circle all that are Natural Alkaloids.)

    A. Lortab
    B. Dilaudid
    C. Codeine
    D. Thebaine
    E. Hycodan

24. **"Crank"** is a street name for ....

    A. Heroin
    B. Cocaine
    C. PCP
    D. Methamphetamine
    E. LSD

25. Which of the following are **not validated clues** for the One Leg Stand test? (Circle all that aren't validated clues.)

A. Hopping
B. Raising the arms
C. Putting the foot down
D. Failing to count out loud
E. Swaying

26. Which of the following would be considered **sympathomimetic** drugs? (Circle all that are sympathomimetic.)

A. MDMA
B. Dexedrine
C. Xanax
D. Oxycontin
E. Desoxyn

27. Suppose you examine a suspect, and you observe **all** of the following: Horizontal Gaze Nystagmus is present, with an onset of approximately 30 degrees; BAC is 0.00; eyes are unable to converge; pupil size is 5.5 mm in near-total darkness and 3.5 mm in direct light; pupil reaction to light is within normal; pulse rate is 100 bpm; blood pressure is 148/96; body temperature is 99.8 degrees. In your opinion, this suspect is under the influence of ....

A. a combination of a CNS Depressant and a CNS Stimulant
B. a CNS Depressant alone
C. a Dissociative Anesthetic alone
D. a combination of a Dissociative Anesthetic and a CNS Stimulant
E. a combination of a CNS Depressant and Cannabis

28. The only artery that carries **de-oxygenated** blood is the ____ artery.

A. Carotid
B. Brachial
C. Pulmonary
D. Radial
E. Coronal

29. Suppose a subject is under the influence of **Hycodan** and nothing else. Indicate whether each of the following will be true or false:
A. T F Horizontal Gaze Nystagmus will not be present
B. T F Pupils will be constricted
C. T F Bradycardia will be present
D. T F Eyes will be able to converge
E. T F Hypotension will be present

30. **"Bruxism"** most nearly means ....

A. Dilated pupils
B. Grinding the teeth
C. Constricted pupils
D. Droopy eyelids
E. Goose bumps

31. Suppose a suspect is under the influence of a combination of Marijuana and Cocaine, but nothing else. Indicate whether each of the following will be true or false:

A. T F Pulse rate will be elevated
B. T F Pupils will be dilated
C. T F Horizontal Gaze Nystagmus will be present
D. T F Eyes will be able to converge
E. T F Blood pressure will be elevated

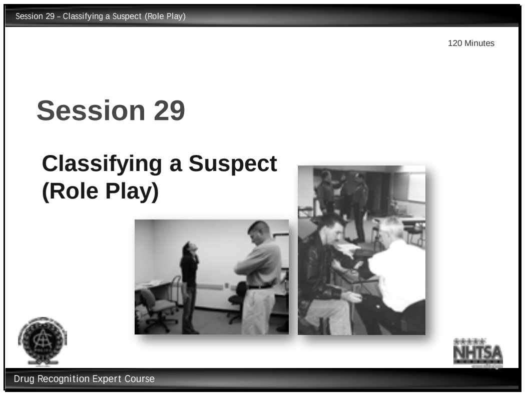
32. How many distinct, validated clues have been established for the Finger-to-Nose test?

A. Eight
B. Six
C. Four
D. Three
E. There are **no validated** clues for this test.

33. The drug ____ is an example of an Anti-Anxiety Tranquilizer. (Circle all that are Anti-Anxiety Tranquilizers.)

A. Librium
B. Valium
C. Amobarbital
D. Chloral Hydrate
E. Xanax

Participant Manual DRE 7-Day Session 29 – Classifying a Suspect (Role Play)



Session 29 – Classifying a Suspect (Role Play)

120 Minutes

Session 29

Classifying a Suspect (Role Play)

Drug Recognition Expert Course

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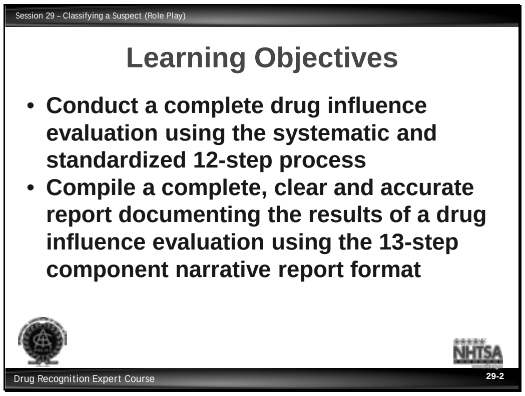

Session 29 – Classifying a Suspect (Role Play)

Learning Objectives

- **Conduct a complete drug influence evaluation using the systematic and standardized 12-step process**
- **Compile a complete, clear and accurate report documenting the results of a drug influence evaluation using the 13-step component narrative report format**

Drug Recognition Expert Course

29-2

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Upon successfully completing this session the student will be able to:

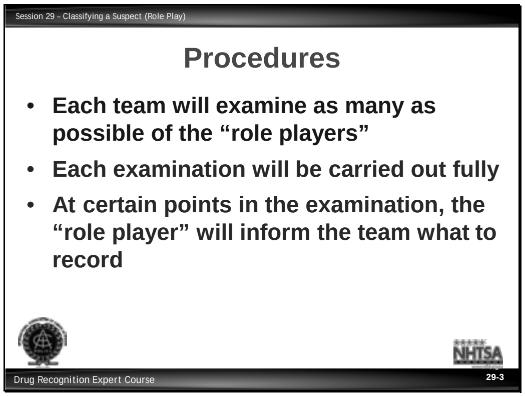
- Conduct a complete drug influence evaluation using the systematic and standardized 12-step process.
- Compile a complete, clear and accurate report documenting the results of a drug influence evaluation using the 13-step component narrative report format.

CONTENT SEGMENTS	LEARNING ACTIVITES
A. Scenarios: Simulated Examinations	Interviewing Practice
B. Report Preparation Practice	Note-taking Practice
C. Report Review and Critique	Small Group Work Session
	Instructor-Led Presentations
	Participant-Led Presentations
	Participant-Led Critiques

A. Scenarios: Simulated Examinations

Team Assignments

The total number of student teams should not be more than the number of “role players” participating in this session. Otherwise, one or more teams would be unoccupied during major portions of this segment.



Session 29 – Classifying a Suspect (Role Play)

Procedures

- Each team will examine as many as possible of the “role players”
- Each examination will be carried out fully
- At certain points in the examination, the “role player” will inform the team what to record

Drug Recognition Expert Course

29-3

Notes:____

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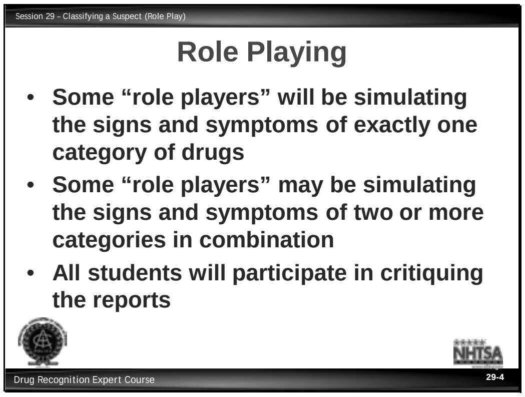
Procedures

Each team will examine as many as possible of the “role players”, until the time scheduled for this segment elapses.

Each examination will be carried out fully: nothing will be omitted except for the breath alcohol test.

At certain points in the examination, the “role player” will inform the team what to record. Example: the “role players” will instruct the teams concerning the evidence to be recorded from the Horizontal Gaze Nystagmus test.



Session 29 – Classifying a Suspect (Role Play)

Role Playing

- Some “role players” will be simulating the signs and symptoms of exactly one category of drugs
- Some “role players” may be simulating the signs and symptoms of two or more categories in combination
- All students will participate in critiquing the reports

Drug Recognition Expert Course 29-4

Notes:

All data will be recorded on the standard Drug Influence Evaluation Form.

- Some “role players” will be simulating the signs and symptoms of exactly one category of drugs. Clarification: “Role player Alpha” might be simulating a person who is under the influence of a CNS Stimulant only.

“Role player Delta” might be simulating a person under the influence of an Inhalant only.

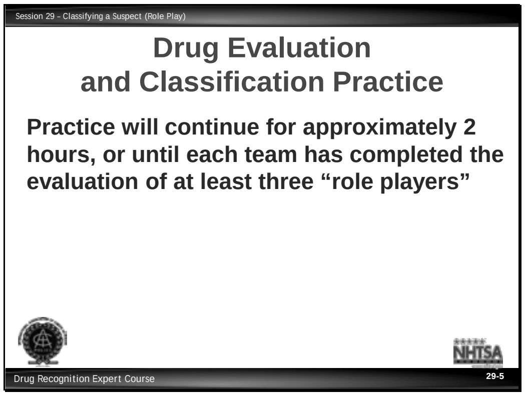
Some “role players” may be simulating the signs and symptoms of two or more categories in combination. “Role player Bravo” might be simulating someone who is under the influence of both PCP and Marijuana.

It is possible that one or more “role players” may be simulating persons who are not under the influence of any drugs.

At the completion of each examination, the team will discuss the evidence obtained and reach a consensus concerning the category or categories of drugs present.

Subsequently, each team will be assigned the responsibility of preparing and presenting a complete narrative report on one “role player.”

All students will participate in critiquing the reports.



Session 29 – Classifying a Suspect (Role Play)

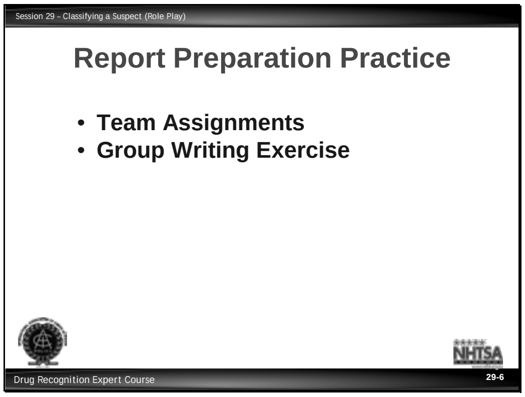
Drug Evaluation and Classification Practice

Practice will continue for approximately 2 hours, or until each team has completed the evaluation of at least three “role players”

Drug Recognition Expert Course 29-5

Notes:

Drug Evaluation and Classification Practice


Session 29 – Classifying a Suspect (Role Play)

Report Preparation Practice

- Team Assignments
- Group Writing Exercise

Drug Recognition Expert Course

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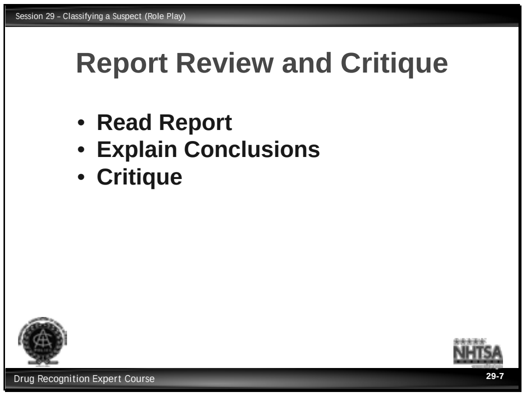
Notes:____

B. Report Preparation Practice

Team Assignments

Group Writing Exercise


Session 29 – Classifying a Suspect (Role Play)

Report Review and Critique

- Read Report
- Explain Conclusions
- Critique

Drug Recognition Expert Course

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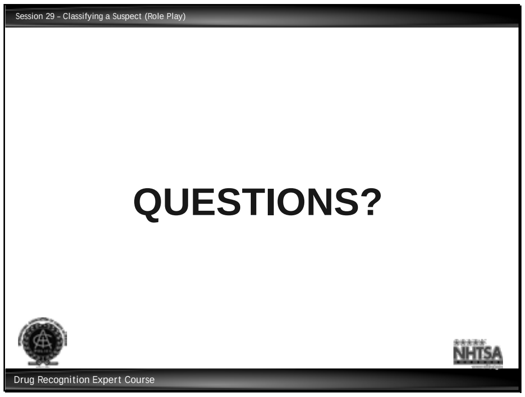
Notes:____

C. Report Review and Critique

Report Presentation

- Each team should appoint a speaker to read its report. The speaker should explain exactly what led the team to its conclusion concerning the category or categories of drugs.

Report Critique



Session 29 – Classifying a Suspect (Role Play)

QUESTIONS?

Drug Recognition Expert Course

Notes:____

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DRUG INFLUENCE EVALUATION

REPORT NUMBER:
TYPE OF EVALUATION:

EVALUATOR:
IACP#: **XXIX #1**
SCRIBE:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle) **ALPHA**
Date of Birth
Age
Sex
Race
Arresting Officer (Name, ID#)

Date Examined / Time /Location
Breath Results: Results: **0.00**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **"Nothing today"**
What have you been drinking? How much **"Just coffee"**
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? How long **"Two days ago"**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes **X** No
Attitude: **Passive, Cooperative**
Coordination: **Slow, Unsteady at times**

Speech: **Normal**
Breath Odor: **Normal**
Face: **Flushed**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal **X** Bloodshot ☐ Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids ☐ Normal **X** Droopy

Pulse and time
1. **80** /
2. **76** /
3. **76** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**No**	**No**
Maximum Deviation	**No**	**No**
Angle of Onset	**None**	**None**

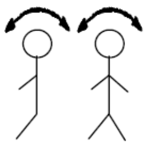
Convergence

Right eye
Left eye

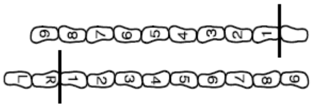
ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

Modified Romberg Balance



Walk and turn test

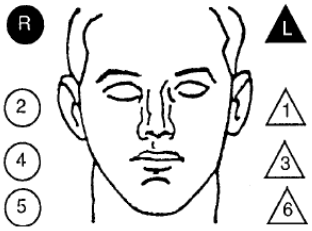


Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**9**	**9**

Internal clock 27 estimated as 30 seconds
Describe Turn: **Correct, Slow**
Cannot do test (explain) **N/A**
Type of footwear: **Lace-up shoes**

Draw lines to spots touched

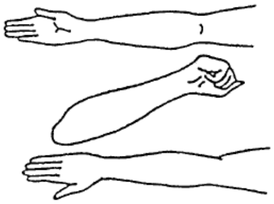


PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**4.5**	**6.5**	**3.5**
Right Eye	**4.5**	**6.5**	**3.5**

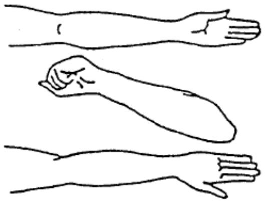
Nasal area: **Clear**
Oral cavity: **Clear**

REBOUND DILATION ☐ Yes **X** No
REACTION TO LIGHT: **Normal**

RIGHT ARM



LEFT ARM



Blood pressure **128/84**
Temperature **98.7°**

Muscle tone: **X** Near Normal ☐ Flaccid ☐ Rigid
Comments:
No Visible Marks

What drugs or medications have you been using? **"Nothing, I just need some sleep."**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

EVALUATOR:
IACP#: **XXIX-2**
REPORT NUMBER:
SCRIBE:
TYPE OF EVALUATION:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle): **BRAVO**
Date of Birth:
Age:
Sex:
Race:
Arresting Officer (Name, ID#):

Date Examined / Time /Location:
Breath Results: Results: **0.00**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? **"Sandwich"** When? **"Noon"**
What have you been drinking? **"Nothing"** How much
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? **"Last night"** How long **"About 8 hrs"**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes **X** No
Attitude: **Carefree, Cooperative**
Coordination: **Fair, Unsteady at times**

Speech: **Normal**
Breath Odor: **Normal**
Face: **Normal**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal **X** Bloodshot ☐ Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus ☐ Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids ☐ Normal **X** Droopy

Pulse and time

1. **120** /
2. **116** /
3. **118** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**No**	**No**
Maximum Deviation	**No**	**No**
Angle of Onset	**None**	**None**

Convergence

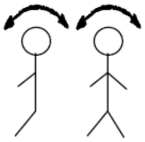
Right eye
Left eye

ONE LEG STAND

L	R	
☐	☐	Sways while balancing
☐	☐	Uses arms to balance
☐	☐	Hopping
☐	☐	Puts foot down

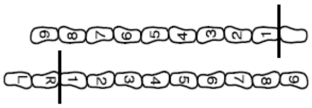
Counted fast/No clues observed

Modified Romberg Balance



Eyelid Tremors

Walk and turn test

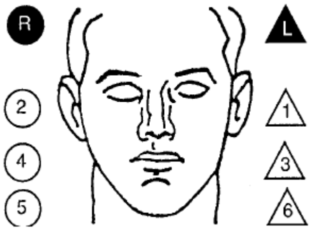


Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**9**	**11**

Internal clock **17** estimated as 30 seconds
Describe Turn: **Proper**
Cannot do test (explain) **N/A**
Type of footwear: **Tennis Shoes**

Draw lines to spots touched

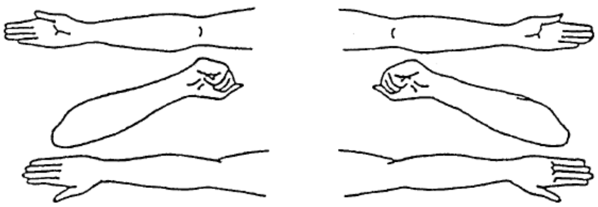


PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**6.5**	**8.5**	**5.5**
Right Eye	**6.5**	**8.5**	**5.5**

Nasal area: **Clear**
Oral cavity: **Green Coating on Tongue**
REBOUND DILATION ☐ Yes **X** No
REACTION TO LIGHT: **Normal**

RIGHT ARM

LEFT ARM



Blood pressure **168/100**
Temperature **98.6⁰**
Muscle tone: **X** Near Normal ☐ Flaccid ☐ Rigid
Comments:

No Visible Marks

What drugs or medications have you been using? **"Nothing man, it's all good."**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

EVALUATOR:
IACP#: **XXIX-3**
REPORT NUMBER:
SCRIBE:
TYPE OF EVALUATION:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle) **CHARLIE**
Date of Birth
Age
Sex
Race
Arresting Officer (Name, ID#)

Date Examined / Time /Location
Breath Results: Results: **0.00**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **Today? (Long Pause) "No"**
What have you been drinking? How much **"Drink?" "No"**
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? How long **"This morning" "4 hours"**
Are you sick or injured? ☐ Yes **X** No **"I'm hot"**
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes **X** No
Attitude: **Dazed, Confused**
Coordination: **Slow, Rigid movements**

Speech: **Slow to respond, Confused**
Breath Odor: **Normal**
Face: **Sweaty**

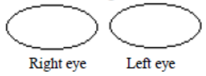
Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva ☐ Normal **X** Bloodshot ☐ Watery
Blindness: None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus **X** Yes No
Able to follow stimulus **X** Yes ☐ No
Eyelids ☐ Normal **X** Droopy

Pulse and time		
1.	**104**	/
2.	**106**	/
3.	**108**	/

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**Yes**	**Yes**
Maximum Deviation	**Yes**	**Yes**
Angle of Onset	**Immed**	**Immed**

Convergence

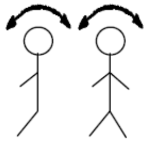


ONE LEG STAND

L	R	
☐	☐	Sways while balancing
☐	☐	Uses arms to balance
☐	☐	Hopping
☐	☐	Puts foot down

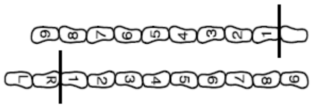
Reminded twice to count out loud

Modified Romberg Balance



Circular Sway. Test stopped after 90 seconds

Walk and turn test



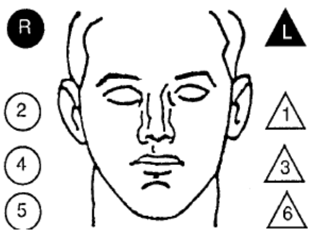
Stopped after first 9 steps. Had to be reminded to continue walking.

Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**9**	**9**

Internal clock **90 estimated as 30 seconds**
Describe Turn: **Did not leave foot on line when making turn.**
Cannot do test (explain) **N/A**
Type of footwear: **Lace-up boots**

Draw lines to spots touched

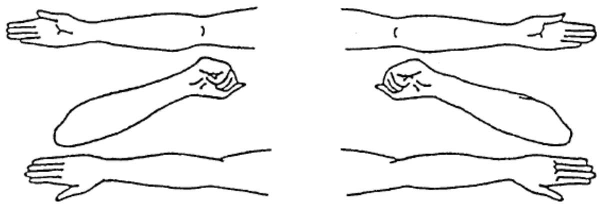


PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**4.0**	**6.5**	**3.5**
Right Eye	**4.0**	**6.5**	**3.5**

Nasal area: **Clear**
Oral cavity: **Clear**

REBOUND DILATION ☐ Yes **X** No
REACTION TO LIGHT: **Normal**

RIGHT ARM **LEFT ARM**



No Visible Marks

Blood pressure **170/98**
Temperature **100.6^0**

Muscle tone: Near Normal ☐ Flaccid **X** Rigid
Comments: **Arms very rigid**

What drugs or medications have you been using? **"Drugs? … Nothing man"**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

REPORT NUMBER:
TYPE OF EVALUATION:

EVALUATOR:
IACP#: **XXIX-4**
SCRIBE:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle) **DELTA**
Date of Birth
Age
Sex
Race
Arresting Officer (Name, ID#)

Date Examined / Time /Location
Breath Results: Results: **0.00**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **"I didn't eat today"**
What have you been drinking? How much **"Nothing, No alcohol today"**
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? How long **"I don't remember"**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes **X** No **"I'm clean"**
Attitude: **Passive, Uncaring**
Coordination: **Slow, Sluggish, Unstable**

Speech: **Slow to respond, Low**
Breath Odor: **Normal**
Face: **Red marks; Continually rubbed his face**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva **X** Normal Bloodshot Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids ☐ Normal **X** Droopy

Pulse and time
1. **52** /
2. **56** /
3. **54** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**No**	**No**
Maximum Deviation	**No**	**No**
Angle of Onset	**None**	**None**

Convergence

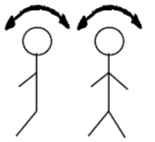
Right eye
Left eye

ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

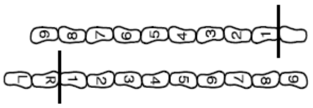
Counted slowly, very unsteady

Modified Romberg Balance



Circular Sway. Test stopped after 90 seconds

Walk and turn test



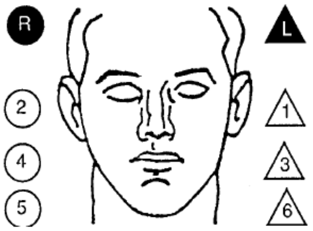
Slow, lethargic movements

Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**9**	**9**

Internal clock **90** estimated as 30 seconds
Describe Turn: **Slow, unstable**
Cannot do test (explain) **N/A**
Type of footwear: **Tennis Shoes**

Draw lines to spots touched

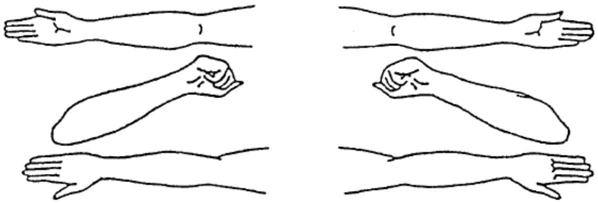


PUPIL SIZE	Room light	Darkness	Direct
Left Eye	2.0	2.5	2.0
Right Eye	2.0	2.5	2.0

REBOUND DILATION ☐ Yes **X** No
REACTION TO LIGHT: **Slow**

Nasal area: **Clear**
Oral cavity: **Clear**

RIGHT ARM **LEFT ARM**



Four fresh puncture wounds on left forearm.

Blood pressure **108/60**
Temperature **97.0^{0}**

Muscle tone: Near Normal **X** Flaccid Rigid
Comments:

What drugs or medications have you been using? **"Honest man, I'm clean"**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest:
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

REPORT NUMBER:
TYPE OF EVALUATION:
EVALUATOR:
IACP#: **XXIX-5**
SCRIBE:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle): **ECHO**
Date of Birth:
Age:
Sex:
Race:
Arresting Officer (Name, ID#):

Date Examined / Time /Location:
Breath Results: Results: **0.00**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **"Nothing today"**
What have you been drinking? How much **"Water"**
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? How long **"Last night" "About 2 hrs"**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No **"I used to"**
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes **X** No **"Not now"**
Attitude: **Cooperative, Passive**
Coordination: **Staggering, Poor balance**

Speech: **Slurred, mumbled**
Breath Odor: **Normal**
Face: **Normal looking**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva **X** Normal Bloodshot Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids ☐ Normal **X** Droopy

Pulse and time
1. **48** /
2. **46** /
3. **46** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**Yes**	**Yes**
Maximum Deviation	**Yes**	**Yes**
Angle of Onset	**40**	**40**

Convergence

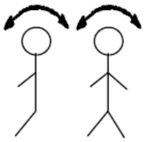
Right eye Left eye

ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

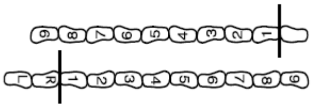
Test stopped for safety reasons

Modified Romberg Balance



Head slumped forward

Walk and turn test



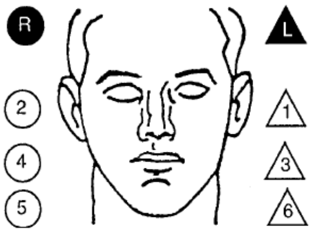
Stopped test, nearly fell

Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**N/A**	**N/A**

Internal clock **70** estimated as 30 seconds
Describe Turn: **N/A**
Cannot do test (explain) **N/A**
Type of footwear: **Boots**

Draw lines to spots touched



Head nodded forward. Didn't use left hand.

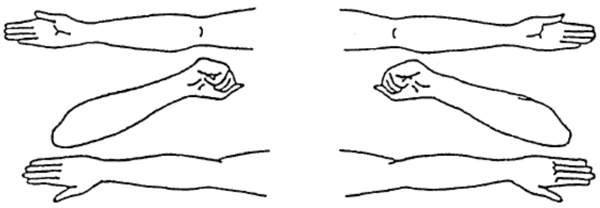
PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**2.0**	**2.5**	**2.0**
Right Eye	**2.0**	**2.5**	**2.0**

Nasal area: **Clear**
Oral cavity: **Clear**
REBOUND DILATION ☐ Yes **X** No
REACTION TO LIGHT: **None**

Blood pressure **104/58**
Temperature **97.2°**

Muscle tone: Near Normal **X** Flaccid Rigid
Comments: **Arms very flaccid**

RIGHT ARM LEFT ARM



Two fresh puncture wounds on inside left forearm.

What drugs or medications have you been using? **"I stopped using about two years ago "**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest:
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

REPORT NUMBER:

TYPE OF EVALUATION:

EVALUATOR:

IACP#: **XXIX-6**

SCRIBE:

WITNESS:

ARRESTEE'S NAME (Last, First, Middle) **FOXTROT**

Date of Birth | Age | Sex | Race

Arresting Officer (Name, ID#)

Date Examined / Time /Location

Breath Results: Results: **0.00** Test Refused ☐ Instrument #: **1234**

Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No

Given By:

What have you eaten today? When? **"Chips & Cookies" "10 am"**

What have you been drinking? How much **"Nothing"**

Time of last drink? **N/A**

Time now/ Actual /

When did you last sleep? How long **"Last night" "Three hrs"**

Are you sick or injured? ☐ Yes **X** No

Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No

Do you have any physical defects? ☐ Yes **X** No

Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes **X** No **"Not now"**

Attitude: **Cooperative, Mellow**

Coordination: **Relaxed, Unsteady**

Speech: **Talkative**

Breath Odor: **Normal**

Face: **Normal**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva Normal **X** Bloodshot Watery

Blindness: **X** None ☐ Left ☐ Right

Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)

Vertical Nystagmus Yes **X** No

Able to follow stimulus **X** Yes ☐ No

Eyelids **X** Normal Droopy

Pulse and time

1. **112** /
2. **110** /
3. **110** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**No**	**No**
Maximum Deviation	**No**	**No**
Angle of Onset	**None**	**None**

Convergence

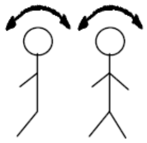
Right eye
Left eye

ONE LEG STAND

L R
- ☐ ☐ Sways while balancing
- ☐ ☐ Uses arms to balance
- ☐ ☐ Hopping
- ☐ ☐ Puts foot down

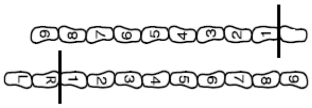
Leg tremors

Modified Romberg Balance



Eyelid Tremors

Walk and turn test



Laughed during test. Had to be reminded to count out loud.

Cannot keep balance

Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**9**	**8**

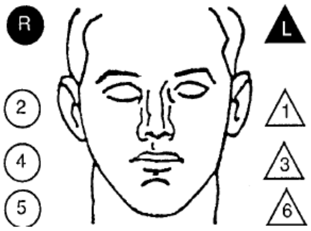
Internal clock **25** estimated as 30 seconds

Describe Turn: **Abrupt swivel**

Cannot do test (explain) **N/A**

Type of footwear: **Sandals**

Draw lines to spots touched



Eyelid tremors. Used first pad of fingers

PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**5.0**	**8.5**	**3.0 – 5.5**
Right Eye	**5.0**	**8.5**	**3.0 – 5.5**

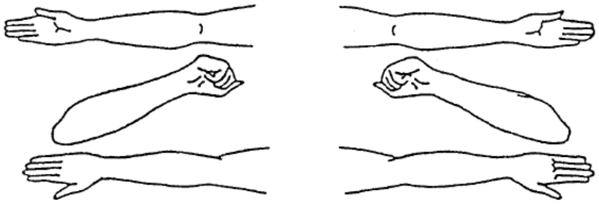
Nasal area: **Clear**

Oral cavity: **Clear**

REBOUND DILATION **X** Yes No

REACTION TO LIGHT: **Slow**

RIGHT ARM **LEFT ARM**



No visible marks

Blood pressure **160/98**

Temperature **98.6^0**

Muscle tone: **X** Near Normal Flaccid Rigid

Comments:

What drugs or medications have you been using? **"None"**

How much? **N/A**

Time of use? **N/A**

Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /

Time DRE was notified:

Evaluation start time:

Evaluation completion time:

Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:

Felony Offense:

Misdemeanor Offense:

Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

EVALUATOR:
IACP#: **XXIX-7**
REPORT NUMBER:
SCRIBE:
TYPE OF EVALUATION:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle) **GOLF**	Date of Birth	Age	Sex	Race	Arresting Officer (Name, ID#)

Date Examined / Time /Location
Breath Results: Results: **0.00** Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **"Cookies" "Hour ago"**
What have you been drinking? How much **"I don't drink"**
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? How long **"Yesterday" "Two hours"**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No **"Am I under arrest?"**

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No **"Why are you doing this?"**

Are you taking any medication or drugs? ☐ Yes **X** No **"I told you, I don't do drugs!"**
Attitude: **Excited, Upset, Animated**
Coordination: **Unsteady, Jittery**

Speech: **Talkative, rapid**
Breath Odor: **Normal**
Face: **Sweaty**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva **X** Normal Bloodshot Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids **X** Normal Droopy

Pulse and time		
1.	**102**	/
2.	**100**	/
3.	**104**	/

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**No**	**No**
Maximum Deviation	**No**	**No**
Angle of Onset	**None**	**None**

Convergence

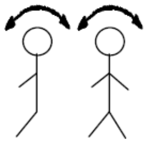
Right eye
Left eye

ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

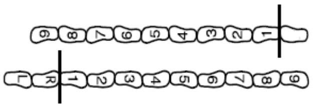
Counted quickly, stumbled over his numbers

Modified Romberg Balance



Circular Sway

Walk and turn test



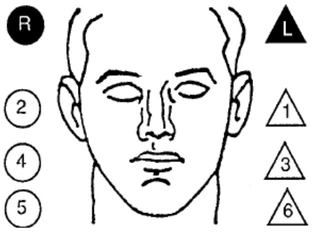
Had to be reminded to count out loud. Took quick steps.

Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	9	9

Internal clock **18** estimated as 30 seconds
Describe Turn: **Abrupt spin**
Cannot do test (explain) **N/A**
Type of footwear: **Boots**

Draw lines to spots touched

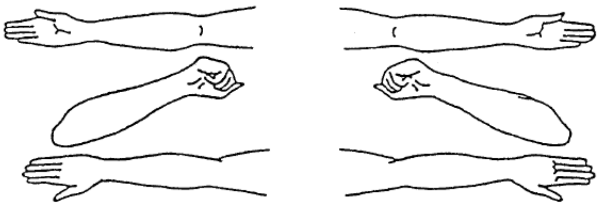


Quick and jerky movements

PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**7.0**	**9.0**	**6.5**
Right Eye	**7.0**	**9.0**	**6.5**

Nasal area: **Redness in nostrils**
Oral cavity: **Clear**
REBOUND DILATION Yes **X** No
REACTION TO LIGHT: **Slow**

RIGHT ARM
LEFT ARM



Blood pressure **170/100**
Temperature **99.8°**

No visible marks

Muscle tone: **X** Near Normal Flaccid Rigid
Comments:

What drugs or medications have you been using? **"I told you. Quit asking me that!"**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest:
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

REPORT NUMBER:
TYPE OF EVALUATION:

EVALUATOR:
IACP#: **XXIX-8**
SCRIBE:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle): **HOTEL**
Date of Birth
Age
Sex
Race
Arresting Officer (Name, ID#)

Date Examined / Time /Location
Breath Results: Results: **0.00**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **"I don't remember"**
What have you been drinking? How much **"Uh, …..Water"**
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? How long **(No response)**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes No **(No response)**

Are you taking any medication or drugs? ☐ Yes No **(No response)**
Attitude: **Dazed, Indifferent**
Coordination: **Poor, Staggering**

Speech: **Slow, Deliberate**
Breath Odor: **Normal**
Face: **Flushed**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva Normal **X** Bloodshot Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus **X** Yes No
Able to follow stimulus **X** Yes ☐ No
Eyelids **X** Normal Droopy

Pulse and time
1. **112** /
2. **110** /
3. **114** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**Yes**	**Yes**
Maximum Deviation	**Yes**	**Yes**
Angle of Onset	**Immed**	**Immed**

Convergence

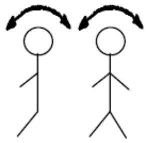
Right eye
Left eye

ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

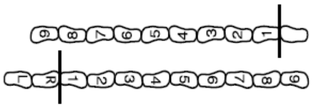
Leg tremors

Modified Romberg Balance



Eyelid tremors
Circular sway

Walk and turn test



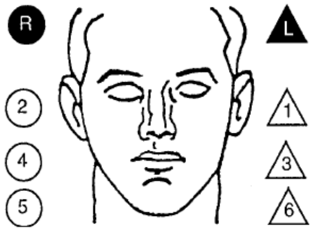
Did not touch heel to toe after the turn.

Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	9	8

Internal clock **60** estimated as 30 seconds
Describe Turn: **Staggered**
Cannot do test (explain) **N/A**
Type of footwear: **Boots**

Draw lines to spots touched



Had to be reminded to actually touch nose

PUPIL SIZE	Room light	Darkness	Direct
Left Eye	7.0	9.0	6.5
Right Eye	7.0	9.0	6.5

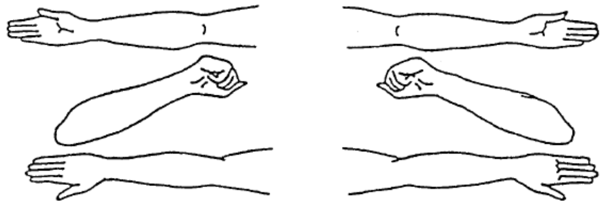
Nasal area: **Clear**
Oral cavity: **Bits of greenish/brown material in teeth**

REBOUND DILATION Yes **X** No
REACTION TO LIGHT: **Normal**

Blood pressure **172/104**
Temperature **100.4^0**

Muscle tone: Near Normal Flaccid **X** Rigid
Comments:

RIGHT ARM
LEFT ARM



No visible marks

What drugs or medications have you been using? **(No response)**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

EVALUATOR:
IACP#: **XXIX-9**
REPORT NUMBER:
SCRIBE:
TYPE OF EVALUATION:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle): **INDIA**
Date of Birth:
Age:
Sex:
Race:
Arresting Officer (Name, ID#):

Date Examined / Time /Location:
Breath Results: Results: **0.00**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **"Eggs" "At lunch"**
What have you been drinking? How much **"Nothing"**
Time of last drink? **N/A**

Time now/ Actual /
When did you last sleep? How long **"This morning" "2 hours"**
Are you sick or injured? ☐ Yes **X** No **"I feel okay"**
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes No **(No response)**

Are you taking any medication or drugs? ☐ Yes No **(No response)**
Attitude: **Cooperative, Confused**
Coordination: **Stumbling, Staggering**

Speech: **Low, Slow, Mumbling**
Breath Odor: **Gas-like odor**
Face: **Flushed**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva Normal **X** Bloodshot Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids **X** Normal Droopy

Pulse and time
1. **96** /
2. **92** /
3. **94** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**Yes**	**Yes**
Maximum Deviation	**Yes**	**Yes**
Angle of Onset	**30**	**30**

Convergence

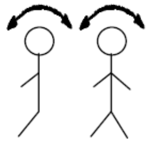
Right eye Left eye

ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

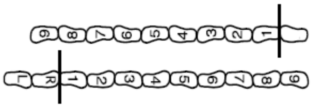
Leg tremors, nearly fell

Modified Romberg Balance



Lost balance and nearly fell.

Walk and turn test



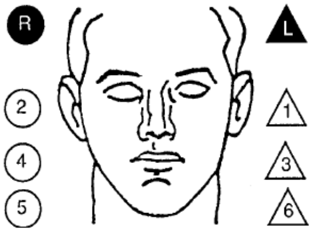
Reminded to count out loud

Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**9**	**8**

Internal clock **42** estimated as 30 seconds
Describe Turn: **Staggered**
Cannot do test (explain) **N/A**
Type of footwear: **Boots**

Draw lines to spots touched



Had to be reminded to actually touch nose

PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**5.0**	**6.5**	**3.5**
Right Eye	**5.0**	**6.5**	**3.5**

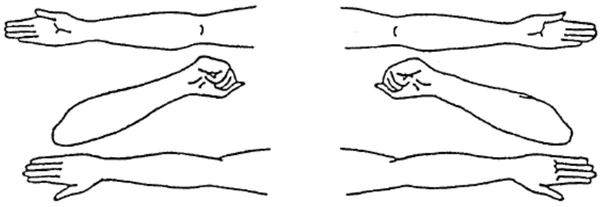
Nasal area: **Redness, runny**
Oral cavity: **Clear**

REBOUND DILATION Yes **X** No
REACTION TO LIGHT: **Normal**

Blood pressure **148/88**
Temperature **98.8^0**

Muscle tone: Near Normal Flaccid **X** Rigid
Comments:

RIGHT ARM LEFT ARM



No visible marks

What drugs or medications have you been using? **"Nothing"**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

REPORT NUMBER:

TYPE OF EVALUATION:

EVALUATOR:

IACP#: **XXIX-10**

SCRIBE:

WITNESS:

ARRESTEE'S NAME (Last, First, Middle) **JULIET**

Date of Birth

Age

Sex

Race

Arresting Officer (Name, ID#)

Date Examined / Time /Location

Breath Results: Results: **0.06**

Test Refused ☐ Instrument #: **1234**

Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No

Given By:

What have you eaten today? When? **"Cereal" "About 7 am"**

What have you been drinking? How much **"Two beers"**

Time of last drink? **"Hour ago"**

Time now/ Actual /

When did you last sleep? How long **"Last night" "8 hours"**

Are you sick or injured? ☐ Yes **X** No

Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No

Do you have any physical defects? ☐ Yes **X** No

Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes No

Attitude: **Cooperative, Withdrawn**

Coordination: **Unsteady**

Speech: **Low, Mumbling**

Breath Odor: **Alcoholic Beverage**

Face: **Flushed**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

Eyes: ☐ Reddened Conjunctiva Normal **X** Bloodshot Watery

Blindness: **X** None ☐ Left ☐ Right

Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)

Vertical Nystagmus Yes **X** No

Able to follow stimulus **X** Yes ☐ No

Eyelids Normal **X** Droopy

Pulse and time

1. **82** /
2. **80** /
3. **80** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**Yes**	**Yes**
Maximum Deviation	**Yes**	**Yes**
Angle of Onset	**45**	**45**

Convergence

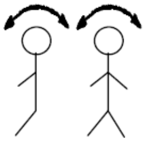
Right eye Left eye

ONE LEG STAND

L	R	
☐	☐	Sways while balancing
☐	☐	Uses arms to balance
☐	☐	Hopping
☐	☐	Puts foot down

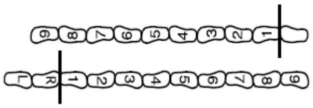
Reminded to count out loud

Modified Romberg Balance



Circular Sway

Walk and turn test



Cannot keep balance

Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	**9**	**9**

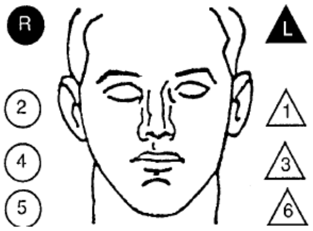
Internal clock **38** estimated as 30 seconds

Describe Turn: **Proper, Slow**

Cannot do test (explain) **N/A**

Type of footwear: **Boots**

Draw lines to spots touched



Had to be reminded to actually touch nose

PUPIL SIZE	Room light	Darkness	Direct
Left Eye	**4.5**	**6.0**	**3.5**
Right Eye	**4.5**	**6.0**	**3.5**

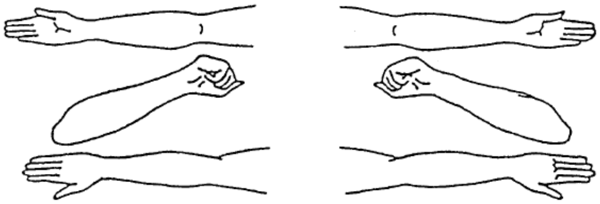
Nasal area: **Clear**

Oral cavity: **Clear**

REBOUND DILATION Yes **X** No

REACTION TO LIGHT: **Normal**

RIGHT ARM **LEFT ARM**



No visible marks

Blood pressure **128/84**

Temperature **98.7^0**

Muscle tone: Near Normal Flaccid **X** Rigid

What drugs or medications have you been using? **"Nothing"**

How much? **N/A**

Time of use? **N/A**

Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /

Time DRE was notified:

Evaluation start time:

Evaluation completion time:

Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:

Felony Offense:

Misdemeanor Offense:

Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

EVALUATOR:
IACP#: **XXIX-11**
REPORT NUMBER:
SCRIBE:
TYPE OF EVALUATION:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle): **KILO**
Date of Birth
Age
Sex
Race
Arresting Officer (Name, ID#)

Date Examined / Time /Location
Breath Results: Results: **0.05**
Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? When? **"Nothing"**
What have you been drinking? How much **"Couple of beers"**
Time of last drink? **"Couple hours ago"**

Time now/ Actual /
When did you last sleep? How long **"Last night" "5 hours"**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes No
Attitude: **Cooperative, Drowsy acting**
Coordination: **Unsteady, Slow**

Speech: **Slurred, Slow, Raspy**
Breath Odor: **Alcoholic Beverage**
Face: **Flushed, Licking Lips, Dry Mouth**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva **X** Normal Bloodshot Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids Normal **X** Droopy

Pulse and time
1. **60** /
2. **58** /
3. **58** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**Yes**	**Yes**
Maximum Deviation	**No**	**No**
Angle of Onset	**None**	**None**

Convergence

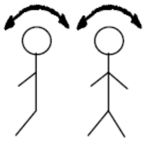
Right eye
Left eye

ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

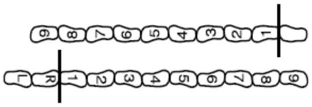
Stopped tests for safety reasons

Modified Romberg Balance



Head nodded forward

Walk and turn test

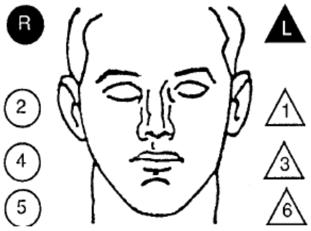


Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	9	9

Internal clock **48** estimated as 30 seconds
Describe Turn: **Staggered**
Cannot do test (explain) **N/A**
Type of footwear: **Boots**

Draw lines to spots touched



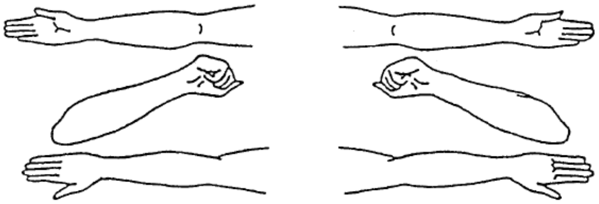
Had to be reminded to actually touch nose

PUPIL SIZE	Room light	Darkness	Direct
Left Eye	1.5	1.5	1.5
Right Eye	1.5	1.5	1.5

Nasal area: **Clear**
Oral cavity: **Clear**
REBOUND DILATION Yes **X** No
REACTION TO LIGHT: **None**

Blood pressure **108/64**
Temperature **97.2^0**
Muscle tone: Near Normal **X** Flaccid Rigid

RIGHT ARM **LEFT ARM**



No visible marks

What drugs or medications have you been using? **"Nothing, I'm clean now"**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

DRUG INFLUENCE EVALUATION

EVALUATOR:
IACP#: **XXIX-12**
REPORT NUMBER:
SCRIBE:
TYPE OF EVALUATION:
WITNESS:

ARRESTEE'S NAME (Last, First, Middle) **LIMA**
Date of Birth | Age | Sex | Race
Arresting Officer (Name, ID#)

Date Examined / Time /Location
Breath Results: Results: **0.03** Test Refused ☐ Instrument #: **1234**
Chemical Test: Urine ☐ Blood ☐ Test or tests refused ☐

Miranda Warning Given ☐ Yes ☐ No
Given By:
What have you eaten today? **"Eggs and Toast"** When? **"Noon"**
What have you been drinking? **"Wine"** How much **"One glass"**
Time of last drink? **"Hour ago"**

Time now/ Actual /
When did you last sleep? **"Yesterday"** How long **"5 hours"**
Are you sick or injured? ☐ Yes **X** No
Are you diabetic or epileptic? ☐ Yes **X** No

Do you take insulin? ☐ Yes **X** No
Do you have any physical defects? ☐ Yes **X** No
Are you under the care of a doctor or dentist? ☐ Yes **X** No

Are you taking any medication or drugs? ☐ Yes No
Attitude: **Nervous, Anxious**
Coordination: **Unsteady, Jittery**

Speech: **Rapid, slurred**
Breath Odor: **Alcoholic Beverage**
Face: **Normal**

Corrective Lenses: **X** None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft
Eyes: ☐ Reddened Conjunctiva **X** Normal Bloodshot Watery
Blindness: **X** None ☐ Left ☐ Right
Tracking: **X** Equal ☐ Unequal

Pupil Size: **X** Equal ☐ Unequal (explain)
Vertical Nystagmus Yes **X** No
Able to follow stimulus **X** Yes ☐ No
Eyelids **X** Normal Droopy

Pulse and time
1. **100** /
2. **102** /
3. **102** /

HGN	Right Eye	Left Eye
Lack of Smooth Pursuit	**Yes**	**Yes**
Maximum Deviation	**No**	**No**
Angle of Onset	**None**	**None**

Convergence

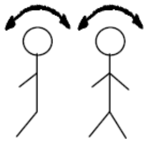
Right eye
Left eye

ONE LEG STAND

L R
☐ ☐ Sways while balancing
☐ ☐ Uses arms to balance
☐ ☐ Hopping
☐ ☐ Puts foot down

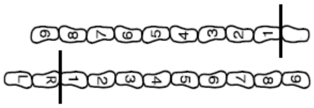
Counted quickly

Modified Romberg Balance



Circular Sway

Walk and turn test



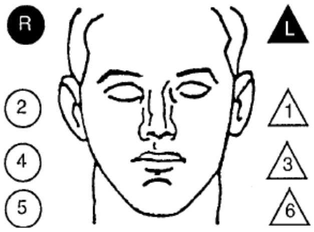
Had to be reminded to count out loud. Quick steps.

Cannot keep balance
Starts too soon

	1st Nine	2nd Nine
Stops walking		
Misses heel-toe		
Steps off line		
Raises arms		
Actual steps taken	9	9

Internal clock **18** estimated as 30 seconds
Describe Turn: **Spun around**
Cannot do test (explain) **N/A**
Type of footwear: **Boots**

Draw lines to spots touched



Kept opening eyes. Quick movements.

PUPIL SIZE	Room light	Darkness	Direct
Left Eye	7.5	9.0	7.0
Right Eye	7.5	9.0	7.0

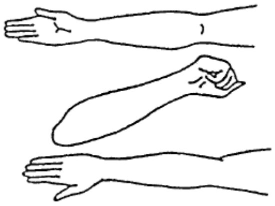
REBOUND DILATION Yes **X** No
REACTION TO LIGHT: **Slow**

Nasal area: **Redness in nostrils, no nasal hair**
Oral cavity: **Clear**

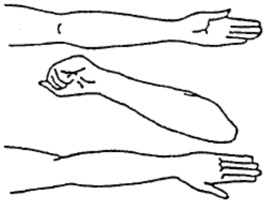
Blood pressure **170/96**
Temperature **99.6°**

Muscle tone: Near Normal **X** Flaccid Rigid

RIGHT ARM



LEFT ARM



No visible marks

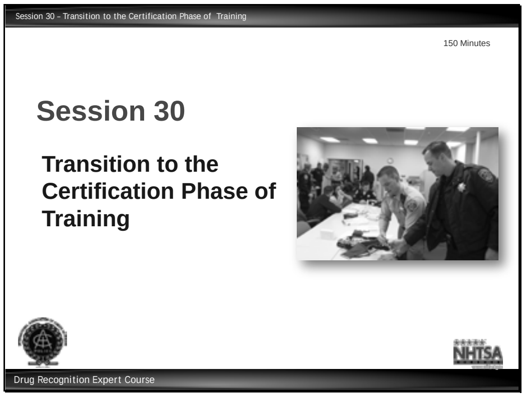
What drugs or medications have you been using? **"Nothing, just a little wine"**
How much? **N/A**
Time of use? **N/A**
Where were the drugs used? (Location) **N/A**

Date / Time of arrest: /
Time DRE was notified:
Evaluation start time:
Evaluation completion time:
Precinct/Station:

Opinion of Evaluator: ☐ Depressant ☐ Stimulant ☐ Hallucinogen ☐ Dissoc. Anesthetic ☐ Narcotic Analgesic ☐ Inhalant ☐ Cannabis ☐ Alcohol ☐ Medical Rule Out ☐ No Opinion

Officer's Signature:
Felony Offense:
Misdemeanor Offense:
Reviewed/approved by / date:

Participant Manual DRE 7-Day – Session 30 – Transition to the Certification Phase of Training



Session 30 – Transition to the Certification Phase of Training

150 Minutes

Session 30

Transition to the Certification Phase of Training

Drug Recognition Expert Course

Notes:____

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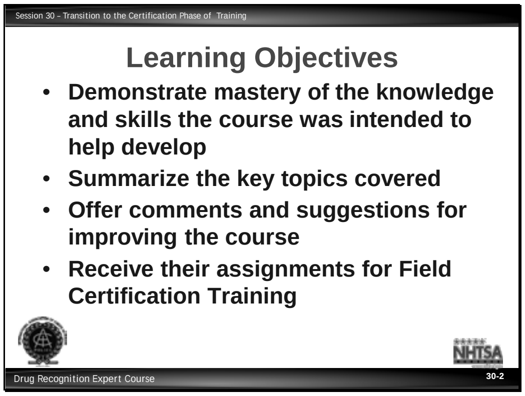

Session 30 – Transition to the Certification Phase of Training

Learning Objectives

- Demonstrate mastery of the knowledge and skills the course was intended to help develop
- Summarize the key topics covered
- Offer comments and suggestions for improving the course
- Receive their assignments for Field Certification Training

Drug Recognition Expert Course

30-2

Notes:____

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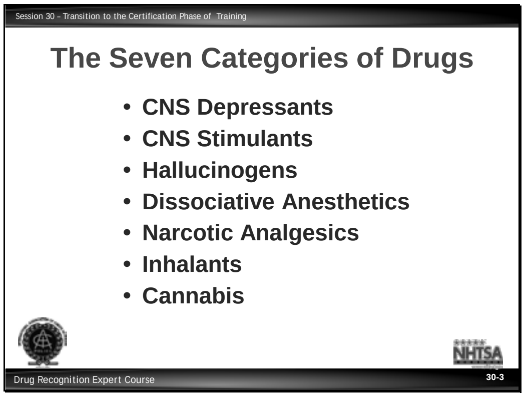
Upon successfully completing this session the participant will be able to:

Demonstrate their mastery of the knowledge and skills the course was intended to help develop.

- Summarize the key topics covered.
- Offer comments and suggestions for improving the course.
- Receive assignments for Field Certification Training.
- Understand the steps involved in the DRE certification process.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Summary	Participant-Led Presentations
B. Post Test	Participants’ Anonymous Critique of Course
C. Session Wrap-Up	Knowledge Examination
D. Certification Process, Training Assignments and Schedule	Instructor-Led Presentation
E. Closing Remarks	



The Seven Categories of Drugs

- **CNS Depressants**
- **CNS Stimulants**
- **Hallucinogens**
- **Dissociative Anesthetics**
- **Narcotic Analgesics**
- **Inhalants**
- **Cannabis**

Notes:____

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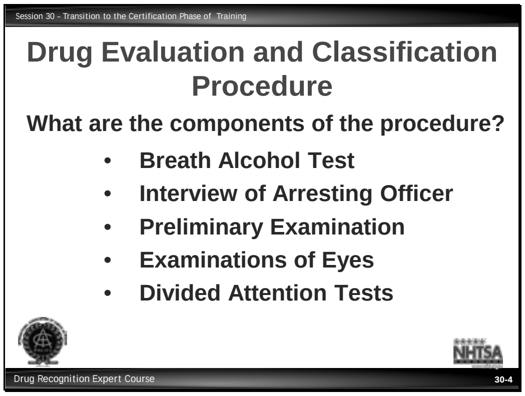
A. Summary

The Seven Categories of Drugs

- CNS Depressants
- CNS Stimulants
- Hallucinogens
- Dissociative Anesthetics
- Narcotic Analgesics
- Inhalants
- Cannabis



Drug Evaluation and Classification Procedure

What are the components of the procedure?

- **Breath Alcohol Test**
- **Interview of Arresting Officer**
- **Preliminary Examination**
- **Examinations of Eyes**
- **Divided Attention Tests**

Notes:____

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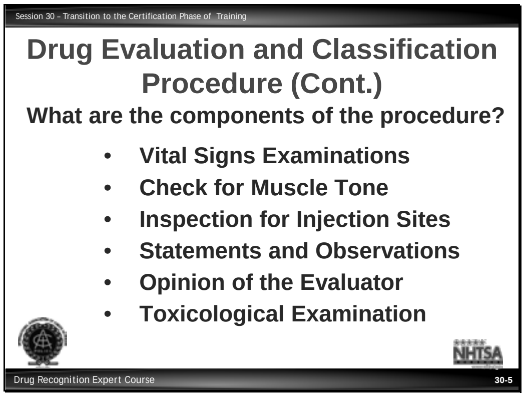
The Drug Evaluation and Classification Procedure

- Breath Alcohol Test
- Interview of Arresting Officer
- Preliminary Examination
- Examinations of Eyes
- Divided Attention Tests


Session 30 – Transition to the Certification Phase of Training

Drug Evaluation and Classification Procedure (Cont.)

What are the components of the procedure?

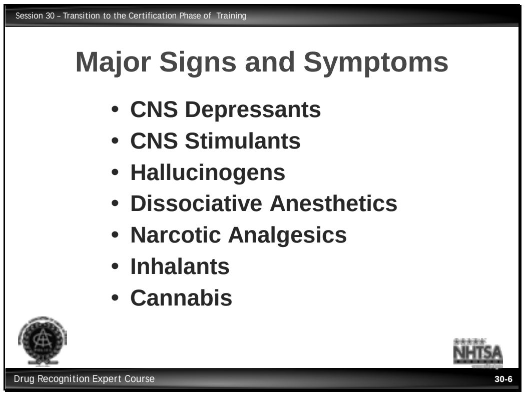
- **Vital Signs Examinations**
- **Check for Muscle Tone**
- **Inspection for Injection Sites**
- **Statements and Observations**
- **Opinion of the Evaluator**
- **Toxicological Examination**

Drug Recognition Expert Course 30-5

Notes:____

The Drug Evaluation and Classification Procedure

- Vital Signs Examinations
- Check for Muscle Tone
- Inspection for Injection Sites
- Statements and Observations
- Opinion of the Evaluator
- Toxicological Examination


Session 30 – Transition to the Certification Phase of Training

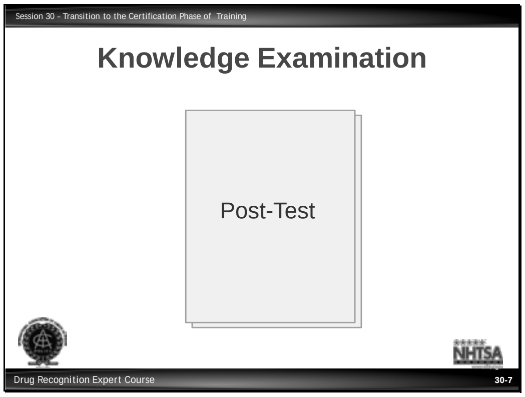
Major Signs and Symptoms

- **CNS Depressants**
- **CNS Stimulants**
- **Hallucinogens**
- **Dissociative Anesthetics**
- **Narcotic Analgesics**
- **Inhalants**
- **Cannabis**

Drug Recognition Expert Course 30-6

Notes:____

Major Signs and Symptoms



Session 30 – Transition to the Certification Phase of Training

Knowledge Examination

Post-Test

Drug Recognition Expert Course

30-7

Notes:____

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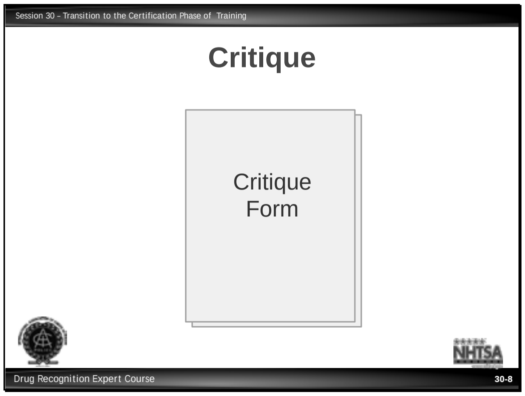
B. Post-Test

Knowledge Examination



Session 30 – Transition to the Certification Phase of Training

Critique

Critique Form

Drug Recognition Expert Course

30-8

Notes:____

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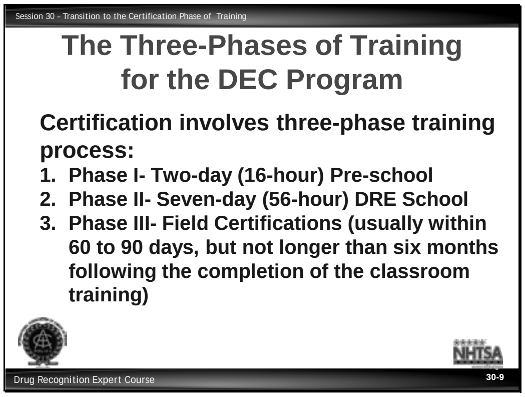
C. Session Wrap-Up

Critique



Session 30 – Transition to the Certification Phase of Training

The Three-Phases of Training for the DEC Program

Certification involves three-phase training process:

1. Phase I- Two-day (16-hour) Pre-school
2. Phase II- Seven-day (56-hour) DRE School
3. Phase III- Field Certifications (usually within 60 to 90 days, but not longer than six months following the completion of the classroom training)

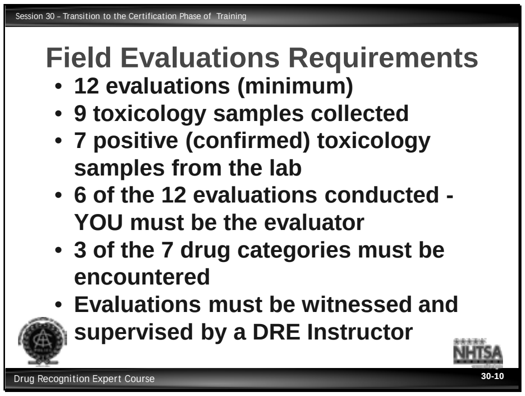
Drug Recognition Expert Course

30-9

Notes:

D. Certification Training Assignments and Schedule

- **Phase I - Pre-School**
- **Phase II - DRE School**
- **Phase III - Field Certifications**



Session 30 – Transition to the Certification Phase of Training

Field Evaluations Requirements

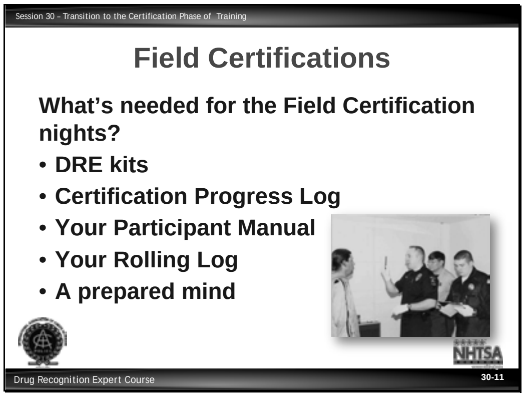
- 12 evaluations (minimum)
- 9 toxicology samples collected
- 7 positive (confirmed) toxicology samples from the lab
- 6 of the 12 evaluations conducted - YOU must be the evaluator
- 3 of the 7 drug categories must be encountered
- Evaluations must be witnessed and supervised by a DRE Instructor

Drug Recognition Expert Course

30-10

Notes:

- IACP Standard 1.10 requires that the candidate DRE satisfactorily complete a minimum of twelve (12) evaluations, identifying subjects under the influence of at least three of the drug categories. All three must be supported by toxicology.
- The candidate DRE must also act as the evaluator for at least six evaluations.
- All evaluations, either administered or observed must be documented on the candidate’s rolling log.
- Candidate DREs need to have toxicology samples from at least nine (9) subjects evaluated during the certification process.
- The candidate DRE cannot be certified unless the opinion concerning the drug category(s) is supported by toxicology 75 percent of the time or in at least seven (7) of the nine samples submitted for certification.



Session 30 – Transition to the Certification Phase of Training

Field Certifications

What's needed for the Field Certification nights?

- **DRE kits**
- **Certification Progress Log**
- **Your Participant Manual**
- **Your Rolling Log**
- **A prepared mind**

Drug Recognition Expert Course

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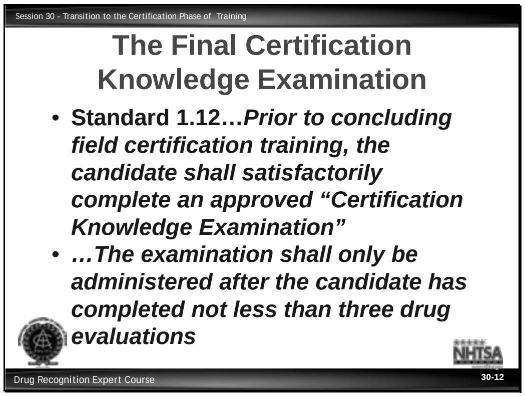
Notes:

Field Certifications

Should include the following:

- DRE kits
- Certification Progress Log
- DRE Participant Manual
- Rolling Log
- A "prepared mind"



Session 30 – Transition to the Certification Phase of Training

The Final Certification Knowledge Examination

- **Standard 1.12…*Prior to concluding field certification training, the candidate shall satisfactorily complete an approved "Certification Knowledge Examination"***
- ***…The examination shall only be administered after the candidate has completed not less than three drug evaluations***

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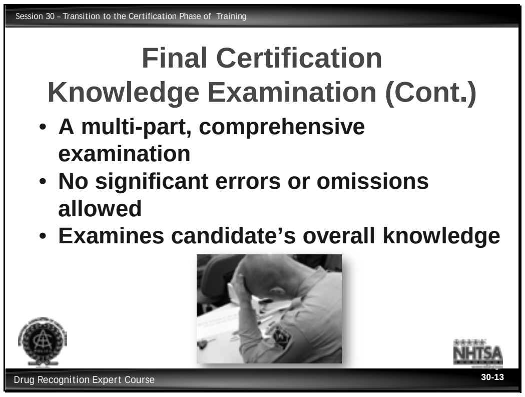
Notes:

- Standard 1.12…Prior to concluding field certification training, the candidate shall satisfactorily complete an approved "Certification Knowledge Examination"
- …The examination shall only be administered after the candidate has completed not less than three drug evaluations



Session 30 – Transition to the Certification Phase of Training

Final Certification Knowledge Examination (Cont.)

- **A multi-part, comprehensive examination**
- **No significant errors or omissions allowed**
- **Examines candidate's overall knowledge**

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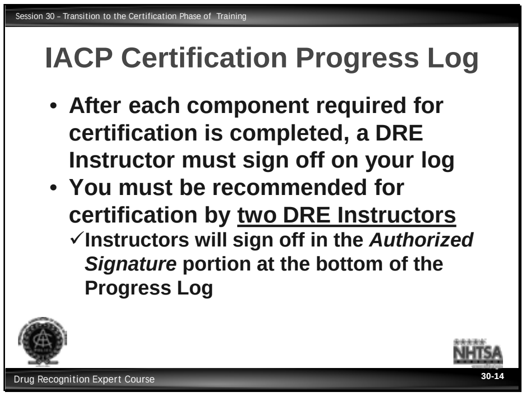
Notes:

Final Certification Knowledge Examination

- Prior to concluding the certification process, the candidate DRE must satisfactorily complete an IACP approved Final Certification Knowledge Examination.

- The Final Certification Knowledge Examination is a multi-part comprehensive examination where the participant cannot make significant errors or omissions.

- Examination consists of five parts which tests the candidate DRE's knowledge of the drug symptomatology matrix, drug effects, drug combinations, and report writing skills.



Session 30 – Transition to the Certification Phase of Training

IACP Certification Progress Log

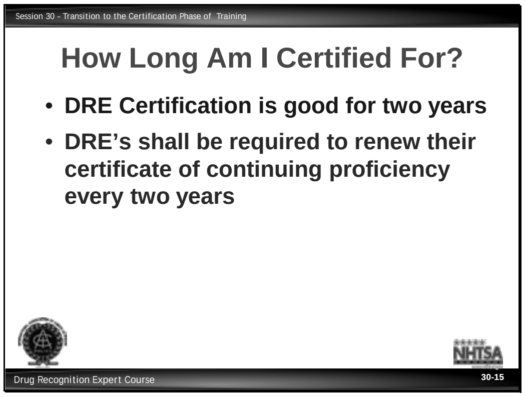
- **After each component required for certification is completed, a DRE Instructor must sign off on your log**
- **You must be recommended for certification by two DRE Instructors**
  - ✓**Instructors will sign off in the *Authorized Signature* portion at the bottom of the Progress Log**

Drug Recognition Expert Course 30-14

Notes:

- After each component required for certification is completed, a DRE Instructor must sign off on the DRE candidate's log.

- The candidate DRE must be recommended for certification by two DRE instructors.



Session 30 – Transition to the Certification Phase of Training

How Long Am I Certified For?

- **DRE Certification is good for two years**
- **DRE's shall be required to renew their certificate of continuing proficiency every two years**

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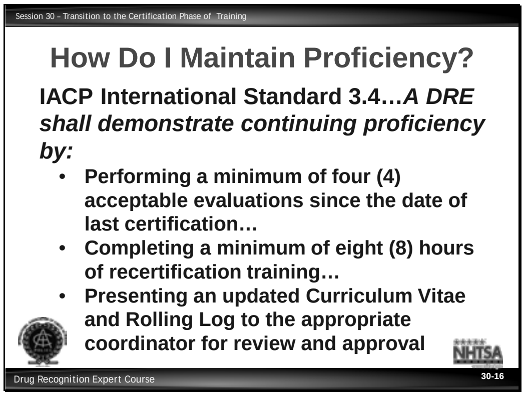
Notes:

DRE Certification

DRE certification is for a period of two years.

DRE's shall be required to renew their certificate of continuing proficiency every two years



Session 30 – Transition to the Certification Phase of Training

How Do I Maintain Proficiency?

IACP International Standard 3.4…*A DRE shall demonstrate continuing proficiency by:*

- **Performing a minimum of four (4) acceptable evaluations since the date of last certification…**
- **Completing a minimum of eight (8) hours of recertification training…**
- **Presenting an updated Curriculum Vitae and Rolling Log to the appropriate coordinator for review and approval**

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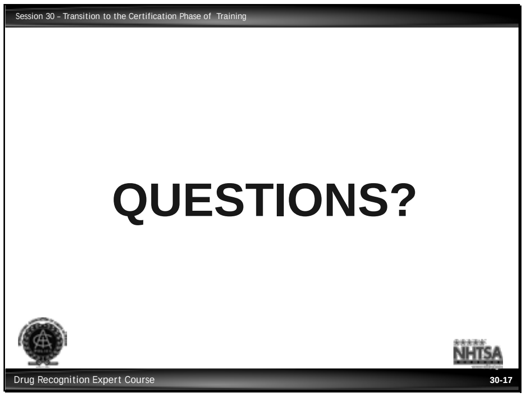
Notes:

Once certified, DREs shall be required to renew their certificates of continuing proficiency every two years.

Continuing proficiency requires:

- Performing a minimum of four (4) acceptable drug evaluations since the last date of certification;
- Completing a minimum of eight (8) hours of approved re-certification training; and
- Presenting an updated C.V. and Rolling Log to the appropriate coordinator for review.



Session 30 – Transition to the Certification Phase of Training

QUESTIONS?

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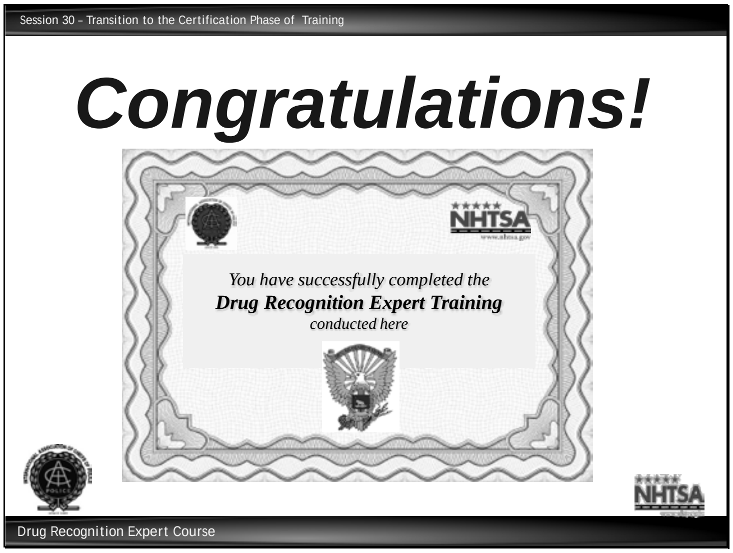
Notes:



Session 30 – Transition to the Certification Phase of Training

Congratulations!

You have successfully completed the

Drug Recognition Expert Training

conducted here

Drug Recognition Expert Course

E. Closing Remarks

DRUG EVALUATION AND CLASSIFICATION PROGRAM

LOG OF DRUG INFLUENCE EVALUATIONS

Drug Recognition Expert ________________________________ Page: __________

IACP Certification Number ________________________________

CONTROL NUMBER	SUSPECT'S NAME	WITNESS	DATE	OPINION OF DRE	TOXICOLOGICAL RESULTS