PRELIMINARY TRAINING

FOR DRUG EVALUATION AND CLASSIFICATION

ADMINISTRATOR'S GUIDE

HS 172A R3/99

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A. Purpose of This Document

This Administrator's Guide provides an introduction to and an overview of the two-day course entitled "Preliminary Training for Drug Evaluation and Classification". This course is the first in a series of three training programs that, collectively, prepare police officers and other qualified persons to serve as Drug Recognition Experts (DREs). In some law enforcement agencies, these officers are known as Drug Recognition Technicians. The International Association of Chiefs of Police (IACP) have adopted "DRE" as the generic title for the persons who carry out this program.

A person who satisfactorily completes this Preliminary Training program is eligible for advancement to the second stage of DRE training, i.e., the seven-day classroom program in Drug Evaluation and Classification. The seven-day course commonly is called the "DRE School", to distinguish it from this two-day preliminary course (known as the "PRE-School"). Upon successful completion of the seven-day DRE School, the officer graduates to the final, or Certification Phase, of his or her training. The Certification Phase is conducted on-the-job: under the supervision of duly-authorized instructors, the DRE-trainee conducts evaluations of persons actually under arrest on suspicion of drug impairment. The instructors evaluate the trainee's skill in conducting drug recognition examinations, and also evaluate his or her judgment in forming opinions as to the category or combination of categories of drugs causing the impairment evident in the suspects. And, the trainee's opinions are compared with the results of toxicological examinations, when they are available.

This Administrator's Guide is intended to facilitate planning and implementation of the Preliminary Training Program. The Guide overviews the two-day course of instruction and also overviews the documents that make up the curriculum package.

B. Overview of the Course

1. For Whom Is The Training Intended?

   This course is designed for people who have been selected to serve as DREs. No one is permitted to enroll in the PRE-School unless he or she intend to proceed through the sub-sequent stages of training, and ultimately achieve certification as a DRE. The emphasis here should be kept on the concept of actual service as DREs. The skills that a DRE applies can be kept sharp only if they are frequently used.

There is no point in offering this training to someone who will not routinely and regularly evaluate drug-impaired suspects, since that person would quickly lose whatever competence he or she gained through the training. The DRE's job is not like riding a bicycle: one can and will forget how to do it properly unless he or she does it frequently. Agencies interested in this training should take special note that it is not desirable to send full-time instructors to this course, with the intent of having those instructors come home and teach others. Unless provisions are made to have those instructors actually work as DREs, their ability to serve competently as teachers of other DREs will vanish rapidly. It is far preferable to select trainees who will subsequently serve primarily as DRE practitioners, and who can be called upon part-time to serve as trainers.

Anyone selected as a DRE trainee must be fully competent with the Standardized Field Sobriety Tests (SFSTs), i.e., Horizontal Gaze Nystagmus, Walk and Turn, and One Leg Stand. No one can progress to the seven-day DRE School until he or she demonstrates proficiency with the three SFSTs.

2. What Is The Goal Of This Training?

The goal of this two-day PRE-School is succinct:

To prepare the student to participate successfully in his or her formal classroom training in the drug recognition process, i.e., the seven-day DRE School.

3. What Will The Students Get Out Of The Training?

As a result of successfully completing this PRE-School, the students will be better able to:

(1) Define the term "drug" and name the seven categories.

(2) Identify the twelve major components of the drug recognition process.

(3) Administer and interpret the psychophysical tests used in the process.

(4) Conduct the eye examinations used in the process.

(5) Check the vital signs that are relevant to the process.

(6) List the major signs and symptoms associated with each drug category.

(7) Describe the history and physiology of alcohol as a drug.

These are a subset of the competencies expected of DRE-trainees by the completion of the seven-day DRE School; the PRE-School gives them a "head start" toward achieving those skills.

4. What Subject Matter Does The Course Cover?

The PRE-School covers concepts and skills that are fundamental to the DRE's job.

- o A traffic safety-oriented definition of what constitutes a "drug" (i.e., a chemical substance that impairs driving ability).
- o Enumeration of seven distinct categories of drugs; the drug recognition process allows the DRE to identify which category or combination of categories is causing the impairment evident in a suspect.
- o Demonstrations of and practice with four divided attention psychophysical tests that are used to assess impairment during a drug evaluation.
- o Demonstrations of and practice with four eye examinations that provide cues of the possible presence of various drug categories.
- o Demonstrations of and practice with checks of certain vital signs that point to the possible presence of various drug categories.
- o A review of the major observable signs that distinguish the categories from each other.

5. What Activities Take Place During The Training?

Although a certain minimal amount of formal lectures are required, the course consists primarily of hands-on practice. Students repeatedly drill in the divided attention tests, the eye examinations and in performing checks of the vital signs. A controlled drinking exercise (involving volunteers who are not members of the class) provides an opportunity to practice assessing impairment on the divided attention tests.

6. How Long Does The Training Take?

The training encompasses approximately 13 and ½ hours of actual instruction. With breaks, this occupies two full training days.

C. Overview of the Curriculum Package

1. Instructor's Lesson Plans

The Instructor's Lesson Plans are a complete and detailed outline of what is to be taught in the PRE-School (i.e., the subject matter) and also of how it is to be taught (i.e., the instructional methods). The lesson plans are organized into modules. Each module corresponds to one of the course's ten sessions.

Each module consists of a cover page; an outline page; the lesson plans themselves; and, paper copies of any visuals referenced in the lesson plans.

The cover page presents the session's title and the total time required to conduct the session.

The outline page presents the training objectives for the session, i.e., exactly what the student will be able to do as a result of successfully completing the session. The outline page also lists the major content segments of the session, as well as the principal instructional activities that take place during the session.

The lesson plans themselves are arrayed in a standard two-column format. The left-side column contains the outline of "content", or the subject matter to be taught. The right-side column outlines the "instructional notes", or how the content is to be taught.

The Instructor's Lesson Plans serve, first, to prepare the instructor to teach the course. He or she should review the entire set of plans, for all ten sessions, to become familiar with the content and learning activities and develop a clear understanding of how the course fits together. The instructor is expected to become thoroughly familiar with each lesson plan segment that he or she is assigned to teach; to prepare acetate copies of the visuals; to assemble all "props" and materials needed to deliver the lesson; and, to augment the instructional notes, as necessary and appropriate, to ensure that his or her own style and experience are applied to teaching the lesson.

Subsequently, the Instructor's Lesson Plans serve as an in-class reference document for the instructor, to help him or her maintain the sequence and pace of training.

It is worth emphasizing that the lesson plans are not speeches. Although the outlines of content and instruction-al notes are fairly detailed, those outlines are not to be read verbatim to the students. This training is intended to be a dynamic and highly interactive learning experience. It must not be permitted to degenerate into a series of mere lectures.

2. Visual Aids

Four kinds of audio-visual aids are employed in the PRE-School:

- o wallcharts
- o chalkboard/flip-chart presentations
- o overhead transparencies ("visuals")
- o video tape

The wallcharts are permanently-displayed items. They con-sist of sketches with brief captions, intended to depict major themes and segments of the course. The wallcharts should be positioned high on the far left- and right-sides of the classroom's front wall, where they will be visible without occupying the center of attention.

The chalkboard/flip-chart presentations are outlined in the "instructional notes" column of the lesson plans, and are self-explanatory.

The overhead transparencies are simple graphic and/or narra-tive displays that emphasize key points and support the instructor's presentations. In the "instructional notes", these are referred to as "visuals". Paper copies of all "visuals" are found at the end of each module.

The video tape is a 17-minute portrayal of major components of the drug evaluation. This same tape is used in the 7-day DRE School.

D. General Administrative Requirements

1. Facility Requirements

The PRE-School requires a classroom with ample table/desk space for each student; an overhead projector and screen; a video tape player and one or more monitors easily visible to all students; and, a chalkboard and/or flip-chart. The classroom must have sufficient open space to permit instructors to give full and unimpeded demonstrations of the divided attention tests; the eye examinations; and the checks of vital signs. And, the arrangement of the classroom must permit the students to have full view of these demonstrations.

Adequate space must be available to permit the students to practice the various tests and checks that the instructors demonstrate. The practice space may be a room separate from the classroom; a gymnasium often serves quite well for the practice segments.

The Alcohol Workshop also requires a separate room where the volunteers can do their drinking. Breath testing instruments and operators must be available to monitor the volunteers' BACs.

2. Instructor Qualifications

All faculty for the PRE-School must be duly-certified DREs. The principal instructor, at least, must have completed DRE Instructor Training.

3. Class Size Considerations

This course is a highly participative learning experience. A significant amount of hands-on practice requiring close supervision and coaching takes place. Because of the nature of this training, the recommended maximum class size is 25 students. A more nearly ideal range would be 15 to 20.

4. Requirements For The Controlled Drinking Practice Sessions

This course absolutely requires the participation of volunteers who will consume carefully measured quantities of alcohol and submit to examinations administered by the students. Without these volunteers, students have no opportunity to practice administering the tests under reasonably realistic circumstances, or to practice interpreting test results.

Drinking volunteers, then, are an essential resource for this training. But they can be a difficult, even unpleasant, resource with which to work. Careful steps must be taken to insure that the volunteers contribute to a worthwhile learning experience, and suffer no harm themselves nor cause any harm to others.

The following criteria define who can be considered as drinking volunteers.

- They cannot be members of the class.
- They must be at least 21 years old.
- They cannot have any history of alcoholism.
- They cannot be known to suffer from any medical condition that may be exacerbated by alcohol (such as hypertension or diabetes).
- They cannot be taking any medication (prescription or otherwise) that might interact with alcohol.
- They must be in good physical health, and have no impairments of vision or limbs that might affect their performance of the standardized field sobriety tests.
- They must be under 60 years of age, and less than 50 pounds overweight (conditions for which the standardized divided attention tests have not been validated).

Every volunteer drinker participating in the alcohol workshop must read and sign the "Statement of Informed Consent" before receiving any alcohol. The Course Administrator or a designated DRE Instructor will obtain the individual signatures from each of the volunteer drinkers prior to commencing the alcohol workshop.

Transportation must be provided for the volunteers to and from the training session. Under no circumstances may a volunteer be permitted to drive from the training session, regardless of his or her blood alcohol concentration at the time of departure. Volunteers should be released only into the custody of responsible, sober persons.

The practice sessions require a minimum of one drinking volunteer for every five students. A more desirable ratio is one volunteer for every three students. Thus, for a class of 25 students, at least 5 volunteers, and preferably 8 or 9 must participate in each session.

The effectiveness of the volunteers, as training resources, very much depends on their blood alcohol concentrations. If a volunteer's BAC is too low (i.e., below 0.06%), he or she generally will provide a poor simulation of a typical DWI suspect. If the BAC is too high (i.e., above 0.15%), the volunteer's state of inebriation usually will be evident without standardized sobriety testing, and the learning experience will not contribute as effectively as possible to sharpening the students' detection skills.

Ideally, approximately half of the volunteers at any session should achieve peak BACs between 0.12% and 0.14% and the other half between 0.06% and 0.08%. But this is very difficult to control. It is always preferable to err, if necessary, on the low side: it is better to fail to get volunteers as "high" as desired, rather than to get them too "high".

Volunteers should be instructed to refrain from eating two hours prior to their arrival at the training facility. Food in their stomachs may dramatically affect the absorption of alcohol into their bloodstreams, and significantly impede your ability to control the peak BACs they achieve.

Volunteers should be instructed to remove their hard contact lenses (if any) prior to coming to the training facility. Upon their arrival at the facility, they must be asked whether they are wearing hard contacts. If so, the contacts should be removed before any drinks are served.

Volunteers should be brought to the training facility two hours before the practice session is scheduled to begin. Each volunteer should be breath tested immediately upon arrival to verify that his or her BAC is zero.

The table below indicates the ounces of 80-proof (40%) distilled alcoholic beverage that volunteers should consume, as a function of their weight and the "target" peak BAC.

GUIDELINES FOR ACHIEVING TARGET BAC'S DURING A TWO (2) HOUR INTERVAL

	Ounces of 80-Proof Alcoholic Beverage	
	Target:	Target:
Weight (Pounds)	0.06-0.08%	0.12-0.14%
120	4	6 ½
130	4 ½	6 ½
140	4 ½	7 ½
150	5	7 ½
160	5 ½	8 ½
170	5 ½	8 ½
180	6	9 ½
190	6	9 ½
200	6 ½	10 ½
210	7	10 ½
220	7	11

Volunteers should consume half of the total allocated amount of alcoholic beverage during the first hour following their arrival at the testing facility. At that point, they should refrain from drinking or smoking for 20 minutes, at the end of which they will submit to a breath test. They should consume the remaining portion of their allotted alcoholic beverage during the next 40 minutes, at which time the practice session should begin.

NOTE: Any volunteer must be permitted to cease drinking at any time he or she elects to do so.

NOTE: No weapons should be present in the vicinity of any drinking volunteer.

Volunteers must be kept under constant supervision from the time of their arrival at the training facility. At least one instructor's aide must be present for every four volunteers. The aids must monitor the volunteers, serve their drinks, make sure that they comply with the schedule, and in general keep them under close observation.

NOTE: For a more complete description of Alcohol Workshop procedures, refer to the 1992 Edition of the Student-Instructor's Manual for the DRE Instructor Training School, and specifically Unit Nine, "Planning and Managing an Alcohol Workshop".

National Highway Traffic Safety Administration

Drug Evaluation and Classification Program

Drug Influence Report Checklist

_____ 1. Breath alcohol test

_____ 2. Interview of arresting officer
(Note: Gloves must be worn from this point on.)

_____ 3. Preliminary examination and first pulse

_____ 4. Eye examinations

_____ 5. Divided attention tests:

_____ Romberg balance
_____ Walk and turn
_____ One leg stand
_____ Finger to nose

_____ 6. Vital signs and second pulse

_____ 7. Dark room examinations and ingestion examination

_____ 8. Check for muscle tone

_____ 9. Check for injection sites and third pulse

_____ 10. Interrogation, statements, and other observations

_____ 11. Opinion of evaluator

_____ 12. Toxicological examination

Thirty-Five Minutes

SESSION I

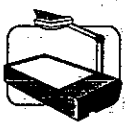
INTRODUCTION AND OVERVIEW

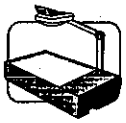
SESSION I INTRODUCTION AND OVERVIEW

Upon successfully completing this session, the participants will be able to:

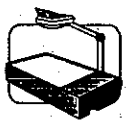
- State the goal and objectives of the course.
- Define the term "drug" as it is used in the course.
- Name the seven categories of drugs and give at least one example of each category.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Welcoming Remarks and Objectives	o Instructor-Led Presentations
B. Definition and Categories of Drugs	

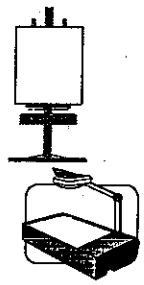
Aides	Lesson Plan	Instructor Notes
 **35 Minutes**	**INTRODUCTION AND OVERVIEW**	
 **10 Minutes**	**A. Welcoming Remarks and Objectives**	
	1. Welcome to the Preliminary Training in Drug Recognition.	Program title on chalkboard.
	2. Instructor introductions.	
	a. Principal instructor(s).	Instructors' names and students' names on tent cards.
	b. Apprentice instructors.	
 I-1 ("Goal")	3. Preliminary training goal: To prepare the students to participate successfully in their formal classroom training in the Drug Recognition Process.	Inform the students of when and where their formal, seven-day DRE School will take place.
	a. This two-day Preliminary School won't make you DREs.	
	b. But it will make it easier for you to pass the 7-day DRE School and successfully complete your Certification Training.	
 I-2 ("First 3 Objectives")	4. Objectives of the Preliminary Training:	
	a. Define "Drug" and name the seven categories.	
	b. Identify the twelve components of the Drug Recognition process.	

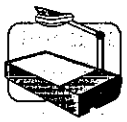
Aides	Lesson Plan	Instructor Notes
 I-3 ("Last 4 Objectives")	c. Administer and interpret the Psychophysical Tests. d. Conduct the Eye Exams. e. Check the Vital Signs. f. List the Major Signs and Symptoms of each Category. g. Describe the history and physiology of alcohol as a drug.	Solicit students' questions about the goal and objectives.
	5. Key point of emphasis: This two-day school is only the first of three stages in your training as DREs. a. Next will come the seven-day formal DRE school. b. After that will come at least several weeks of supervised on-the-job training known as the "Certification Phase".	Solicit students' questions about the three stages of training.
	6. Preview of the remainder of the PRE-School.	Briefly outline the upcoming sessions of the school. Refer to the wallcharts.
	7. Certification Progress Logs.	Instruct students to open their Manuals and remove the Certification Progress Log. Have students fill out the first line of the Log, then collect it.

Aides	Lesson Plan	Instructor Notes
25 Minutes	**B. Definition and Categories of Drugs**	
	1. What do we mean by the word "drug"?	Pose this question. Solicit responses from several students.
	a. Alternative definitions, drawn from several sources.	
	o "A substance used as a medicine or in making medicines."	Source: Webster's Seventh New Collegiate Dictionary, 1971 edition.
		Ask students: "Would you agree that all drugs are medicines or ingredients of medicines?" Ask students to name some substances they consider to be "drugs" that have no medicinal value.
	o "A narcotic substance or preparation."	Source: Webster's. Ask students if they agree that all drugs are narcotics.
	o "A chemical substance administered to a person or animal to prevent or cure disease or otherwise to enhance physical or mental welfare."	Source: Random House College Dictionary, 1982 edition.
		Point out that this definition seems to exclude any drug that is harmful or does not enhance welfare.
	o "A habit-forming medicinal substance, especially a narcotic."	Source: Random House

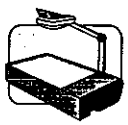
Aides	Lesson Plan	Instructor Notes
		Ask students if they agree that all drugs are habit-forming. Ask if, from an enforcement perspective, they can think of any habit-forming sub-stances they would not ordinarily consider to be a drug.
	o A substance taken by mouth, injected or applied locally to treat a disorder. (i.e., to ease pain)	
	o A chemical substance introduced into the body to cause pleasure or a sense of changed awareness, as in the non-medical use of Lysergic Acid Diethylamide (LSD).	 Source: Medical Dictionary For The Non-professional, Barows Educational Series, Inc., Woodbury, NY. 1984
	o "Any substance, natural or artificial that by chemical nature alters the structure or function of a living organism."	 Source: Los Angeles Police Department Drug Recognition Training, May 1986.
	o "Any substance that, in small amounts, produces changes in the body, mind or both."	 Source: LAPD
 I-4 (Working Definition of "Drug")	2. A simple, enforcement-oriented definition of drugs.	

Aides	Lesson Plan	Instructor Notes
	o "Any chemical substance, natural or synthetic, which, when taken into the human body, can impair the ability of the person to operate a vehicle safely."	Working definition derived from the 1985 California Vehicle Code. Point out that this definition excludes many substances that ordinarily would be considered "drugs" by physicians, chemists, etc. Emphasize that, as traffic law enforcement officers, the students' concern has to remain focused on substances that impair.
	3. Within this simple, enforcement-oriented definition, there are seven categories of drugs. a. Each category consists of substances that impair a person's ability to drive. b. The categories differ from one another in terms of how they impair driving ability and in terms of the kinds of impairment they cause.	Note: Emphasize that the drug categories we define differ from the categories usually named by other agencies, such as the American Medical Association and the Drug Enforcement Administration. That is because those agencies categorize drugs on the basis of their chemical structures, while we categorize drugs on the basis of the kinds of impairment they produce.
	c. Because the categories produce different types of impairment, they generate different signs and symptoms.	

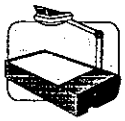
Aides	Lesson Plan	Instructor Notes
	d. With training and practice, you will be able to recognize the different signs of drug influence and determine which category is causing the impairment you observe in a suspect.	
 I-5		Ask students: "What are the seven categories of drugs?" Write the names of the categories on the chalkboard or flip-chart as they are mentioned by the students.
	4. Central Nervous System Depressants.	
	a. The category of CNS Depressants includes some of the most commonly abused drugs.	Point out that Chloralhydrate sometimes is called "Mickey Finn" or "Knockout drops".
	o Alcohol - - the most familiar drug of all - - is abused by an estimated 40-50 million Americans.	
	o At any given time in this country, there are some six million users of prescription drugs such as Valium and similar tranquilizers and sedatives.	Point out that tens of millions of prescriptions for such drugs are written in this country each year.

Aides	Lesson Plan	Instructor Notes
	b. Depressants slow down the operation of the central nervous system (i.e., the brain, brain stem and spinal cord).	
	o cause the user to react more slowly.	
	o cause the user to process information more slowly.	
	o relieve anxiety and tension.	
	o induce sedation, drowsiness and sleep.	
	o in high enough doses, CNS depressants will produce general anesthesia.	i.e., depress the brain's ability to sense pain.
	o in very high doses, induce coma and death.	
 I-6	5. Central Nervous System Stimulants	
	a. CNS Stimulants constitute another widely abused category of drugs.	
	o there appear to be more than 20 million Americans who regularly use cocaine.	
	o several million appear to use amphetamines.	

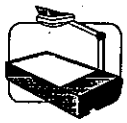
Aides	Lesson Plan	Instructor Notes
	b. Stimulants speed up the operation of the central nervous system, and of the various bodily functions controlled by the central nervous system. o cause the user to become hyperactive, extremely talkative. o speech may become rapid and repetitive. o heart rate increases. o blood pressure increases. o body temperature rises, user may become excessively sweaty. o induce emotional excitement, rest-lessness, irritability. o can induce cardiac arrhythmia (unstable beating of the heart), cardiac seizures and death.	Remind students of well-known athletes and others who have died because of cocaine abuse.
 I-7	6. Hallucinogens	
	a. Hallucinogens are also widely abused In recent years an increase in the abuse of both LSD and Ecstasy (MDA) has been reported	Point out that LSD and Peyote are only two examples of hallucinogens.

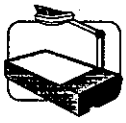
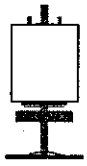
Aides	Lesson Plan	Instructor Notes
	b. It is estimated that approximately one million Americans abuse hallucinogens.	
	c. Hallucinogens create hallucinations. That is, they create apparent perceptions of things not truly present.	
	d. Hallucinogens also create very distorted perceptions, so that the user sees, hears and smells things in a way quite different from how they really look, sound and smell.	
	e. Instead, hallucinogens cause the nervous system to send strange or false signals to the brain.	
	o produce sights, sounds and odors that aren't real.	
	o induce a temporary condition very much like psychosis or insanity.	
	o can create a "mixing" of sensory modalities, so that the user "hears colors", "sees music", "tastes sounds", etc.	Point out that, with all of these false and distorted perceptions, the person under the influence of hallucinogens would be a very unsafe driver.
 I-8	7. Phencyclidine (PCP)	

Aides	Lesson Plan	Instructor Notes
	a. PCP is considered to be by the medical community an hallucinogen. However, because of the symptomatology it presents; it is in a separate category. b. PCP is a synthetic drug, i.e., it does not occur naturally but must be produced in a laboratory-like setting. c. PCP is similar to CNS depressants in that it depresses brain wave activity. o slows down thought o slows reaction time o slows verbal responses d. But PCP is similar to CNS stimulants in that it activates the parts of the brain that control emotions, the heart and the other autonomic systems. o heart rate increases o blood pressure increases o adrenalin production increases o body temperature rises o muscles become rigid e. And PCP is similar to hallucinogens in that it distorts or "scrambles" signals received by the brain.	Point out that people under the influence of PCP may exhibit a combination of the signs associated with hallucinogens, stimulants and depressants.

Aides	Lesson Plan	Instructor Notes
	o sight, hearing, taste, smell and touch may all be distorted o user's perception of time and space may be distorted o user may become paranoid, feel isolated and depressed o user may develop a strong fear of and pre-occupation with death o user may become unpredictably violent	
 I-9	8. Narcotic Analgesics	
	a. There are two subcategories of Narcotic Analgesics o Opiates are derivatives of opium o Synthetics are produced chemically in the laboratory. They are not in any way derived from Opium but produce similar effects	Point out that heroin, morphine and codeine are natural derivatives of opium.
	b. The word "Analgesic" means pain-killer. All of the drugs in this category reduce the person's reaction to pain.	

Aides	Lesson Plan	Instructor Notes
	c. Heroin is the most commonly abused of the Narcotic Analgesics and its use is on the rise. There are an estimated one-half million heroin addicts in America.	
	d. Heroin is highly addictive, and very expensive. o many addicts support their habit by stealing property and converting it to cash. o America's narcotic addicts annually steal property estimated to have a value of $4 billion.	Note: That is $8,000 worth of stolen property annually per heroin addict.
	e. In addition to reducing pain, Narcotic Analgesics produce euphoria, drowsiness, apathy, lessened physical activity and sometimes impaired vision.	
	f. Persons under the influence of Narcotic Analgesics often pass into a semi-conscious type of sleep or near-sleep. o persons "on the nod" may be awakened easily. o they often are sufficiently alert to respond to questions effectively.	Point out that this condition is often called being "on the nod".

Aides	Lesson Plan	Instructor Notes
 I-10	g. Higher doses of Narcotic Analgesics can induce coma, respiratory failure and death. 9. Inhalants a. Inhalants are fumes of certain substances that produce mind-altering results. Inhalant abuse is on the rise. b. There are three sub-categories of inhalants: o Volatile Solvents (e.g., gasoline, glue, oil-based paint, cleaning fluids, paint remover, etc.) o Aerosols (i.e., the propellant gases in spray cans, e.g., hair sprays, insecticides, etc.) o Anesthetic Gases (e.g., nitrous oxide, ether, amyl nitrite, butyl nitrite, etc.) c. Different inhalants produce different effects. o many produce effects similar to those of CNS depressants. o a few produce stimulant-like effects.	

Aides	Lesson Plan	Instructor Notes
	o some produce hallucinogenic effects. d. The inhalant abuser's attitude and demeanor can vary from inattentive, stuporous and passive to irritable, violent and dangerous. e. The abuser's speech will often be slow, thick and slurred.	
 I-11	10. Cannabis	
	a. The category "Cannabis" includes the various forms and products of the <u>Cannabis Sativa</u> plant.	Write "Cannabis Sativa" on the chalkboard or flip-chart.
	b. The active ingredient in Cannabis products is the substance known as "Delta-9 Tetrahydrocannabinol", or "THC".	Write "Δ-9 THC" on the chalkboard or flip-chart.
	c. Apart from alcohol, marijuana is one of the most commonly abused drugs in this country. d. In a household survey in 1996 almost 27% of Americans age 18 - 25 reported using Marijuana in the past year. Nearly half (48%) indicated they had used Marijuana during their lifetime.	

Aides	Lesson Plan	Instructor Notes
	e. Cannabis appears to interfere with the attention process. Drivers under the influence of marijuana often do not pay attention to their driving.	Point out that divided attention field sobriety tests usually disclose the best evidence of cannabis impairment.
	f. Cannabis also produces a distortion of the user's perception of time, an increased heart rate (often over 100 beats per minute) and a reddening of the eyes.	
	11. Polydrug Use	
	a. Though drug evaluation subjects may be under the influence of any one of the mentioned categories of drugs, it is not uncommon to find individuals who have taken several combinations of drugs.	
	b. The term "polydrug" use refers to instances where the subject has taken two or more drug categories and may exhibit varying levels of influence from each of the drugs used.	

IACP

Drug Evaluation and Classification Certification Progress Log

Please Print

Candidate's Name_____

Agency_____ Phone ( )_____

Address_____

City_____ State_____ Zip_____

Item or Step	Date Completed	Location	Authorized Signature	IACP DRE#	Agency
DRE Pre-School					
SFST Proficiency					
DRE School					
DRE School Final Exam					
Evaluation #1					
Evaluation #2					
Evaluation #3					
Evaluation #4					
Evaluation #5					
Evaluation #6					
Evaluation #7					
Evaluation #8					
Evaluation #9					
Evaluation #10					
Evaluation #11					
Evaluation #12*					
Certification Knowledge Exam					
Resume Reviewed and Approved					
Completed the Minimum Number of Evaluations**					
Identify the Minimum Number of Drug Categories**					
"Rolling" Log Reviewed					
Toxicologies Consistent**					

Recommendations for Certification (Standard 1.15)	Authorized Signature	IACP DRE#	Date
I/We certify that this student satisfactorily met the IACP National Standards for the Drug Evaluation and Classification Program and is recommended for certification. (Standards 1.15)			
I recommend this student for certification. (Agency Coordinator – if applicable)			
I recommend this student for certification. (State Coordinator)			

*Please use reverse side to record additional evaluations if necessary.
**Please see reverse side for the exact language of these standards.

Use the back page for additional comments.

Item or Step	Date Completed	Location	Authorized Signature	IACP DRE#	Agency
Evaluation #13					
Evaluation #14					
Evaluation #15					
Evaluation #16					
Evaluation #17					
Evaluation #18					
Evaluation #19					
Evaluation #20					

Standard 1.9 Upon completion of the field certification phase of training, the candidate must demonstrate the ability to conduct a complete drug evaluation in an approved sequence and appropriately document and interpret the results. The candidate must also be able to document the findings of the evaluation and demonstrate proficiency in interviewing techniques.

Standard 1.10 To be considered for certification as a drug recognition expert, the candidate must satisfactorily complete a minimum of twelve (12) drug evaluations, during which the candidate must encounter and identify subjects under the influence of at least three of the drug categories as described in the DRE training program.

Of the evaluations required for certification, the candidate shall administer at least six evaluations. The candidate may observe the remaining evaluations. For each evaluation, either administered or observed, the candidate shall independently record the observations and results of the evaluation, and shall identify the category(s) of drugs affecting the subject.

All evaluations, either administered or observed, and documented for certification purposes, **shall be supervised by at least one certified DRE Instructor.**

Standard 1.11 Prior to completing the certification phase of training, the candidate DRE must demonstrate the ability to draw correct conclusions consistent with observed physiological signs and symptoms. In addition, the conclusions must be supported by the findings of a forensic toxicology laboratory. **No candidate DRE shall be certified as a drug recognition expert unless blood, urine, or other appropriate biological samples are obtained and submitted from at least nine (9) subjects whom the candidate DRE has examined for certification purposes. These may include subjects for whom the candidate DRE served as the examination recorder or observer as well as those subjects directly evaluated by the candidate DRE. Further, the candidate DRE cannot be certified unless the opinion concerning the drug category or categories affecting the subject is supported by the forensic toxicological analysis seventy-five percent (75%) of the time.** For purposes of this standard, a candidate Dre's opinion is supported if the toxicological analysis discloses the presence of at least one drug category named by the candidate DRE. In the event that the candidate DRE has concluded that three or more categories of drugs are involved, at least two categories must be supported by toxicology results.

Additional Comments

Goal

000032

To prepare the students to participate successfully in their formal classroom training in the Drug recognition Process.

Objectives

000033

- Define "Drug" and name the seven categories.
- Identify the twelve components of the Drug Recognition Process.
- Administer and interpret the Psychophysical Tests.

Objectives

000034

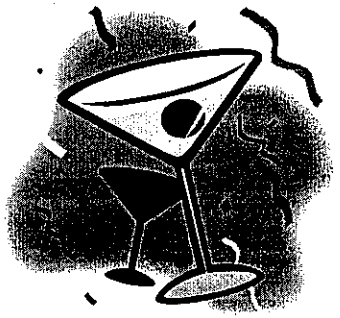
- Conduct the Eye Exams.
- Check the Vital Signs.
- List the Major Signs and Symptoms of each Category.
- Describe the history and physiology of alcohol as a drug.

Working Definition of "Drug"

"Any chemical substance, natural or synthetic, which, when taken into the human body, can impair the ability of the person to operate a vehicle safely."

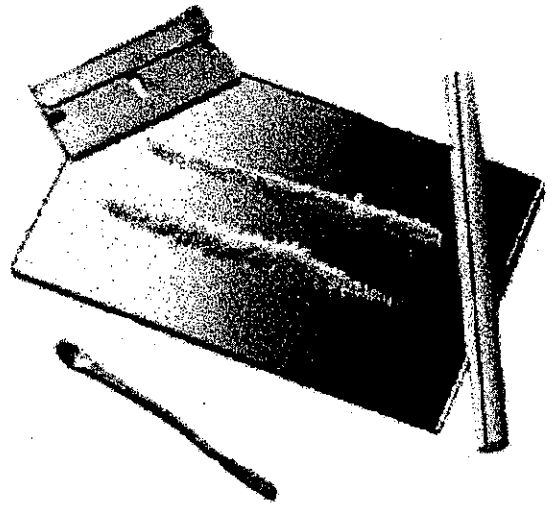
Central Nervous System Depressants

- Alcohol
- Barbiturates
- Valium
- Chloralhydrate



Central Nervous System Stimulants

- Cocaine
- Amphetamines
- Methamphetamines



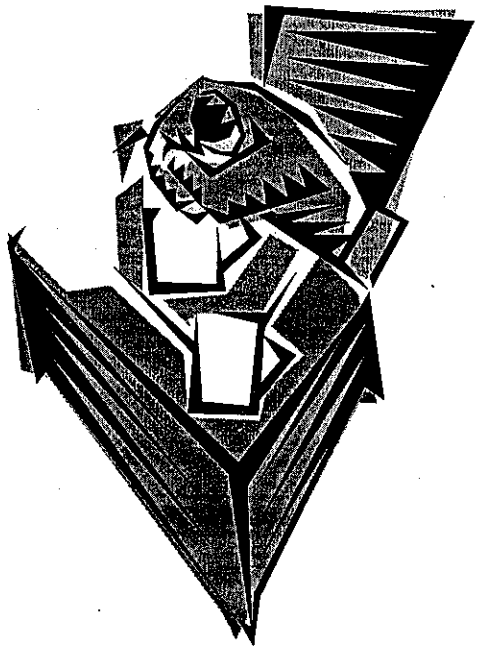
Hallucinogens

- LSD
- Peyote

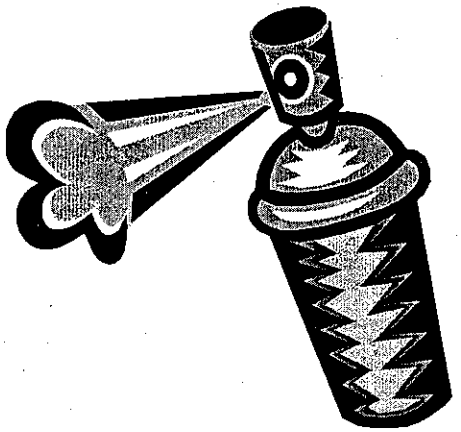
Phencyclidine (PCP)

Narcotic Analgesics

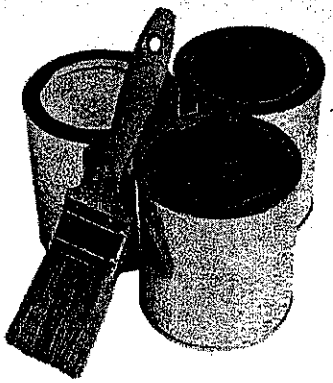
- Heroin
- Morphine
- Codeine
- Synthetic Opiates
  (e.g., demerol, methadone)



Inhalants



- Volatile Solvents
- Aerosols
- Anesthetic Gases



Cannabis

- Marijuana
- Hashish

Fifty Minutes

SESSION II

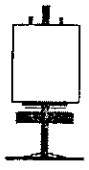
OVERVIEW OF DRUG EVALUATION AND CLASSIFICATION PROCEDURES

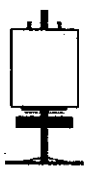
SESSION II OVERVIEW OF DRUG EVALUATION AND CLASSIFICATION PROCEDURES

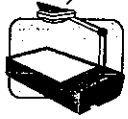
Upon successfully completing this session, the participants will be able to:

- o Identify the twelve major components of the Drug Recognition Process.
- o Discuss the purposes of each component.

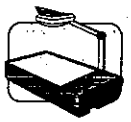
CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Components of the Process	o Instructor-Led Presentations
B. Video Taped Demonstrations	o Video Presentations

Aides	Lesson Plan	Instructor Notes
 **50 Minutes**  **II-1** (Objectives)	OVERVIEW OF DRUG EVALUATION AND CLASSIFICATION PROCEDURES	Session title on wallchart. Briefly review the objectives, content and activities of this session.
 **35 Minutes**	**A. Components of the Process**	
	1. The Drug Evaluation and Classification Process is a systematic, standardized method of examining a subject to determine: a. Whether the subject is under the influence of a drug or combination of drugs. b. If the impairment is resulting from an injury, illness, or drug related. c. The category (or categories) of drugs that is (or are) the likely cause of the subject's impairment.	
	2. The process is <u>systematic</u> 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.	<u>Write</u> on chalkboard or flip-chart: "A SYSTEMATIC PROCESS"
	a. Some of these observable signs and symptoms relate to the subject's <u>appearance</u>.	<u>Write</u> "appearance" on chalkboard or flip-chart.

Aides	Lesson Plan	Instructor Notes
	b. Some of the signs and symptoms relate to the subject's behavior.	Write "behavior" on chalkboard or flip-chart.
	c. Some relate to the subject's performance of carefully - administered psychophysical tests.	Write "psychophysical testing" on chalkboard or flip-chart. Ask students: "What does 'psychophysical' mean?" Point out that "psycho-physical" relates to the subject's mind (psyche) and body (physique).
	o Drugs impair the subject's ability to control his or her mind and body.	
	o Psychophysical tests can disclose that the subject's ability to control mind and body is impaired.	
	o The specific manner in which the subject performs the psycho-physical tests may indicate the type of impairment from which the subject is suffering. In turn, this may indicate the category or categories of drugs causing the impairment.	
	d. Some of the observable signs and symptoms relate to automatic responses of the subject's body to the specific drugs that are present.	Write "automatic responses of the body" on the chalkboard or flip-chart.

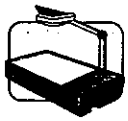
Aides	Lesson Plan	Instructor Notes
	e. <u>All</u> of these reliable indicators are examined and carefully considered before a judgment is made concerning what categories of drugs are affecting the subject.	
 **II-2** ("Standard-ized and Systematic")	3. The process is <u>standardized</u> in that it is administered exactly the same way, to every subject, by every drug recognition expert.	
	a. Standardization helps to ensure that no mistakes are made. o No examinations are left out. o No extraneous or unreliable "indicators" are included.	<u>Ask</u> students: "Why is it so important to perform the drug evaluation and classification examination in exactly the same way, every time?" Probe to draw out all major reasons for standardization.
	b. Standardization helps to promote professionalism among drug recognition experts.	
	c. Standardization helps to secure acceptance in court.	
 **II-3** (DRE Report Form Face Sheet)	4. The Drug Evaluation and Classification Process has <u>twelve</u> components.	
 **II-4** (Breath Alcohol Test)	a. The <u>Breath Alcohol Test</u> to determine Blood Alcohol Concentration (BrAC).	

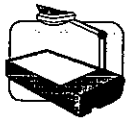
Aides	Lesson Plan	Instructor Notes
	o The purpose of the breath test is to determine whether the specific drug, alcohol, may be contributing to the impairment observable in the subject. o Obtaining an accurate measurement of BAC enables the drug recognition expert to assess whether alcohol may be the 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.	Remind students that many suspects who are under the influence of drugs other than alcohol also have alcohol in their bodies.
 **II-5** (Interview of ... Officer)	b. The Interview of the Arresting Officer. o In most cases, the suspects you will examine will not be people that you arrested. o The arresting officer may have seen or heard things that would be valuable indicators of the kinds of drugs the suspect has ingested. o The arresting officer, in searching the suspect, may have uncovered drug-related paraphernalia, or even drugs themselves.	

Aides	Lesson Plan	Instructor Notes
	o The arresting officer also may be able to alert you to important information about the suspect's behavior that could be very valuable for your own safety.	
 **II-6** (Preliminary Examination)	c. The <u>Preliminary Examination</u>.	
	o The preliminary examination is your first opportunity to observe the suspect closely and directly.	<u>Point out</u> that the preliminary examination begins the "hands on" with the suspect. Use of surgical gloves is imperative.
	o A major purpose of the preliminary examination is to determine if the suspect may be suffering from an injury or some other medical condition not necessarily related to drugs.	<u>Analogy</u>: The preliminary examination is a "fork in the road." It can help you decide whether to continue with the drug examination, or to pursue a possible medical complication, or to proceed with a DWI (alcohol) case.
	o Another major purpose of the preliminary examination is to begin systematically assessing the suspect's appearance, behavior and automatic bodily responses for signs of drug-induced impairment.	<u>Emphasize</u> that the term "preliminary" does <u>not</u> imply "unimportant". Very valuable evidence often comes to light during the preliminary examination.

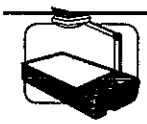
Aides	Lesson Plan	Instructor Notes
	o The preliminary examination consists of a series of questions dealing with possible injuries or medical problems; observations of the suspect's face, speech and breath; initial checks of the suspect's eyes; and, an initial examination of the suspect's pulse.	Emphasize that courts generally accept these questions as not being in conflict with the suspect's Constitutional rights. However, the students must comply with their own departments' policies as to whether they should advise suspects of their Constitutional rights before asking these questions.
	o The initial examination of the eyes may reveal signs of injury or illness. A difference in pupil size of greater that 0.5mm may indicate an injury or existing medical condition.	
 II-7 (Eye Examinations)	d. Examinations of the Eyes.	Ask students: "What do we look for, in a suspect's eyes, to determine if he or she may be under the influence of alcohol?"
	o Certain Drugs produce very easily observable effects on the eyes.	Probe, as necessary, to draw out the response "nystagmus".
	- 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 that occurs as the eyes turn toward the side.	

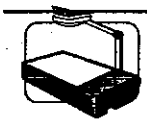
Aides	Lesson Plan	Instructor Notes
	- Alcohol is not the only drug that induces nystagmus.	
	- Horizontal gaze nystagmus is not the only observable effect on the eyes that will be produced by various drugs.	Point out that the examinations of the eyes will be covered in much greater depth subsequently.
 **II-8** (Divided Attention Tests)	e. Divided Attention Psychophysical tests.	
	o All drugs that impair driving ability will also impair the suspect's ability to perform certain carefully-designed divided attention tests.	Ask students: "What does 'divided attention' mean?" Probe, as necessary, to draw out responses indicating the concept of "concentrating on more than one thing at a time".
	o These tests are familiar to you in the context of examining alcohol-impaired suspects.	
	o The same tests are very valuable for disclosing evidence of impairment due to drugs other than alcohol.	Point out that students will have opportunities to practice administering these tests subsequently in the course.
 **II-9** (Vital Signs Examinations)	f. Examinations of Vital Signs.	
	o Many categories of drugs affect the operation of the heart, lungs and other major organs of the body.	

Aides	Lesson Plan	Instructor Notes
	o These effects show up during examination of the suspect's vital signs.	
	o The vital signs that are reliable indicators of drug influence include blood pressure, pulse, and temperature.	Point out that examinations of vital signs will be covered in depth subsequently, and that students will have ample opportunity to practice measuring vital signs.
 **II-10** (Dark Room Examinations)	g. Dark Room Examinations	
	o Many categories of drugs affect how the pupils of the eyes will appear, and how they respond to light.	
	o Certain kinds of drugs will cause the pupils to widen dramatically, or dilate.	
	o Some other drugs cause the pupils to narrow, or constrict tightly.	
	o By systematically changing the amount of light entering the suspect's eyes, we can observe the pupils' appearance and reaction under controlled conditions.	
	o We carry out these examinations in a dark room, using a penlight to control the amount of illumination entering the suspect's eyes.	Exhibit a penlight.

Aides	Lesson Plan	Instructor Notes
	o We use an instrument called a <u>pupillometer</u> to estimate the size of the suspect's pupils.	Exhibit a pupillometer. <u>Point out</u> that the pupillometer has a series of black circles of various sizes. By lining the circles up along-side the suspect's pupil, the pupil's size can be determined. <u>Select</u> a student to step forward and demonstrate the measurement of the student's pupils. <u>Shine</u> the penlight directly into the student's eye, and again demonstrate the measurement of the pupils. <u>Demonstrate</u> that the two eyes "work together"; i.e., shine the penlight into one eye, and demonstrate that the pupil of the other eye also contracts.
	o 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.	<u>Demonstrate</u> the examination of the student's nasal area and oral cavity. Excuse the student and thank him or her for participating. <u>Point out</u> that students will have several opportunities to practice conducting dark room examinations subsequently in the course.
 **II-11** (Muscle Tone)	h. Examination for Muscle Tone.	

Aides	Lesson Plan	Instructor Notes
	o Certain categories of drugs can cause the user's muscles to become markedly tense, and rigid. o Evidence of muscle tone may come to light when the suspect attempts to perform the divided attention test. o Evidence of muscle tone can also be observed when taking the suspect's pulse and blood pressure.	Point out that examination for muscle tone will be covered in greater depth subsequently in the course.
 II-12 (Examination for Injection Sites)	i. Examination for Injection Sites. o Certain drugs are commonly injected by their users, via hypodermic needles. o Heroin is probably most commonly associated with injection, but several other types of drugs also are injected by many users. o Uncovering injection sites on a suspect provides powerful evidence that he or she may be under the influence of speci-fic types of drugs.	Ask students: "What drug is most often associated with injection via hypodermic needle?"

Aides	Lesson Plan	Instructor Notes
 **II-13** (Statements and Other Observations)	j. Suspect's statements and other observations. o At this point in the examination, the trained drug recognition expert should have reasonable grounds to believe that the suspect is under the influence of a drug or drugs. o The DRE should also have at least an articulable suspicion as to the category or categories of drugs causing the impairment. o The DRE should proceed to interview the suspect to confirm his or her suspicion/opinions concerning the drug or drugs involved. o The DRE must carefully record the suspect's statements, and any other observations that may constitute relevant evidence of drug-induced impairment.	Point out that though the interview of the suspect is the formal process of soliciting information about the subjects drug usage, any voluntary statements previously made during the evaluation should be noted and recorded. <u>Emphasize</u> that any such interview can proceed only in conformance with formal admonition and strict observance of the suspect's Constitutional rights. <u>Point out</u> that the appropriate procedures for interviewing suspects vary with the probable category or categories of drugs involved.

Aides	Lesson Plan	Instructor Notes
 **II-14** (Opinions of the Evaluator)	k. Opinions of Evaluator o Based on all of the evidence and observations gleaned from the preceding ten steps, the DRE must reach an informed conclusion as to: - whether the suspect is under the influence of a drug or drugs - if so, the probable category or categories of drugs causing the impairment o The DRE must record a narrative summary of the facts forming the basis for his or her conclusions.	
 **II-15** (Toxicological Examination)	l. Toxicological Examination o The toxicological examination is a chemical test or tests designed to obtain scientific, admissible evidence to substantiate the DRE's conclusions.	

Aides	Lesson Plan	Instructor Notes
	o Departmental policy and procedures must be carefully and completely followed in requesting, obtaining and handling the chemical sample.	Solicit students' comments and questions concerning this preview of the Drug Evaluation and Classification Procedures.
 15 Minutes  II-16 (Drug Influence Evaluation Checklist)	**B. Video Taped Demonstrations**	Instruct students to turn to the Drug Influence Evaluation Checklist in Section II of their Student Manual.
		Show the video tape of excerpts from the Drug Recognition Demonstration. (NOTE: This is the 10-minute video segment that is shown in Session V of the 7-day DRE School.) Solicit students' questions about the video demonstrations. *This video is currently being updated by the Arizona Department of Public Safety under a cooperative agreement with the National Highway Traffic Safety Administration. Once completed an alternative lesson plan will be developed from the script of the video to be used in the event the video or audio-video equipment is not available.*

Objectives

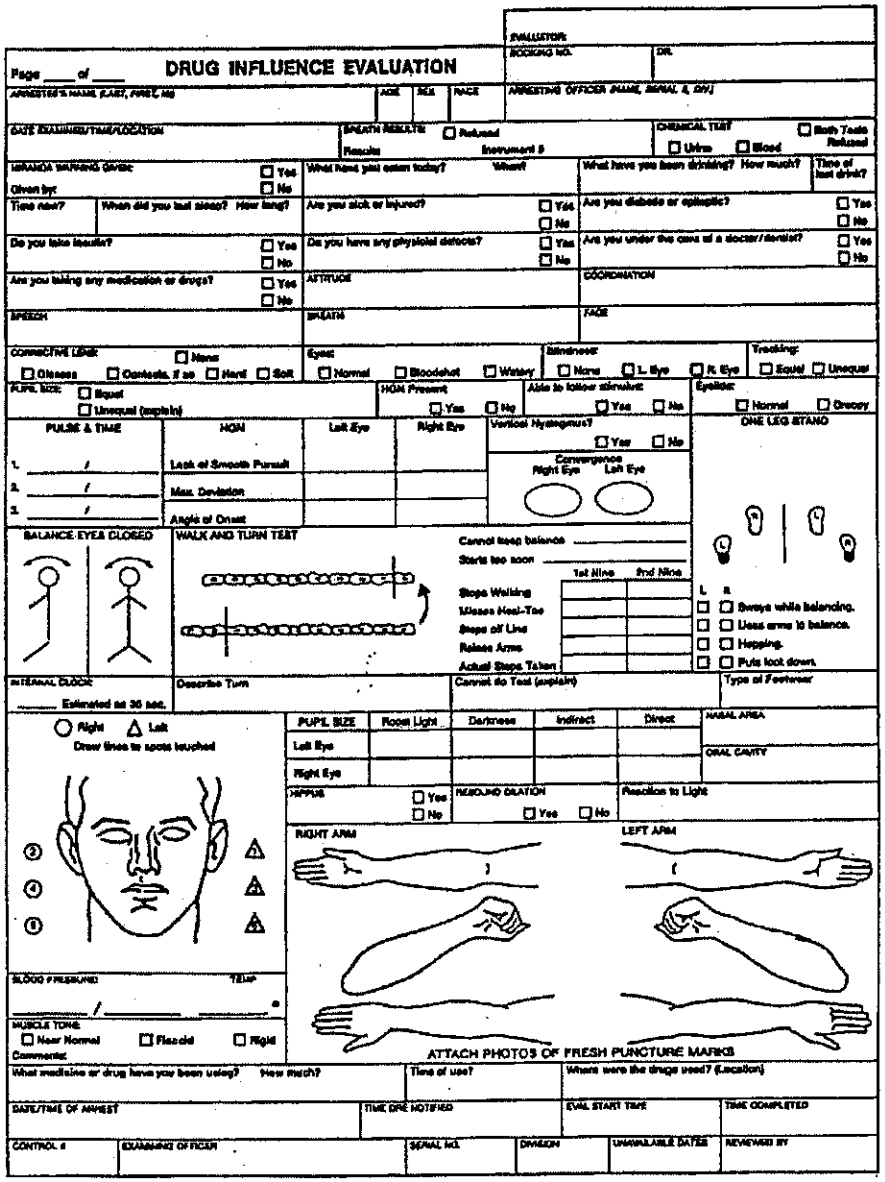
000058

- Identify the twelve major components of the Drug Recognition Process.
- Discuss the purposes of each component.

The Drug Evaluation

000059

A standardized and systematic process.



Page ____ of ____

DRUG INFLUENCE EVALUATION

EVALUATOR

BOOKING NO. | DR.

ARRESTEE'S NAME (LAST, FIRST, MI) | AGE | SEX | RACE | ARRESTING OFFICER (NAME, SERIAL #, DIV.)

DATE EXAMINED/TIME/LOCATION | BREATH RESULTS ☐ Refused Results Instrument # | CHEMICAL TEST ☐ Both Tests Refused ☐ Urine ☐ Blood

MIRANDA WARNING GIVEN: ☐ Yes ☐ No Given by:

What food you eaten today? Where?

What have you been drinking? How much?

Time of last drink?

Time now? 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/dentist? ☐ Yes ☐ No

Are you taking any medication or drugs? ☐ Yes ☐ No

ATTITUDE

COORDINATION

SPEECH

BREATH

FACE

CONVERGENCE: ☐ None ☐ Glasses ☐ Contacts, if so ☐ Hard ☐ Soft

EYES: ☐ Normal ☐ Bloodshot ☐ Watery

Blindness: ☐ None ☐ L. Eye ☐ R. Eye

Tracking: ☐ Equal ☐ Unequal

PUPIL SIZE: ☐ Equal ☐ Unequal (explain)

HGN Present ☐ Yes ☐ No

Able to follow stimulus: ☐ Yes ☐ No

Eyelids: ☐ Normal ☐ Droopy

PULSE & TIME	HGN	Left Eye	Right Eye
1. ____ /	Lack of Smooth Pursuit		
2. ____ /	Max. Deviation		
3. ____ /	Angle of Onset		

Vertical Nystagmus? ☐ Yes ☐ No

Convergence: Right Eye, Left Eye

ONE LEG STAND

BALANCE EYES CLOSED

WALK AND TURN TEST

Cannot keep balance ____

Starts too soon ____

	1st Nine	2nd Nine
Steps 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.

INTERNAL CLOCK ____ Estimated as 30 sec.

Describe Turn

Cannot do Test (explain)

Type of Footwear

○ Right △ Left
Draw lines to spots touched

PUPIL SIZE	Room Light	Darkness	Indirect	Direct
Left Eye				
Right Eye				

NASAL AREA

ORAL CAVITY

HIPPUS ☐ Yes ☐ No

REBOUND DILATION ☐ Yes ☐ No

Reaction to Light

RIGHT ARM

LEFT ARM

ATTACH PHOTOS OF FRESH PUNCTURE MARKS

BLOOD PRESSURE / TEMP ____ / ____ °

MUSCLE TONE: ☐ Near Normal ☐ Flaccid ☐ Rigid

Comments:

What medicine or drug have you been using? How much?

Time of use?

Where were the drugs used? (Location)

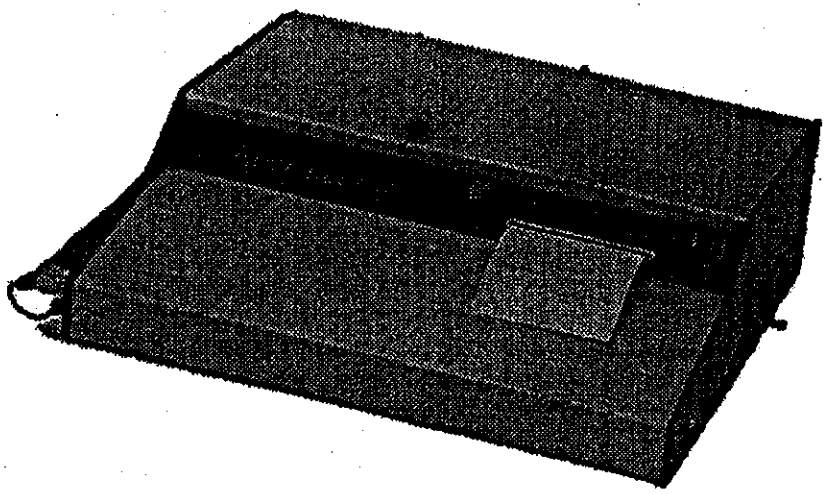
DATE/TIME OF ARREST | TIME DRE NOTIFIED | EVAL START TIME | TIME COMPLETED

CONTROL # | EXAMINING OFFICER | SERIAL NO. | DIVISION | UNAVAILABLE DATES | REVIEWED BY

Step 1

000061

The Breath Alcohol Test



Step 2

000062

Interview of the Arresting Officer

DRUG INFLUENCE EVALUATION

Page_____ of _____
DR Number:
Evaluator:
Control #:
Booking #:

ARRESTEE'S NAME (Last, First, MI)	AGE	SEX	RACE	ARRESTING OFFICER (Name, Badge, District)

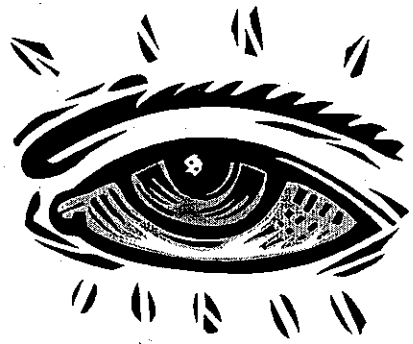
DATE EXAMINED/TIME/LOCATION	BREATH RESULTS: ☐ Refused RESULTS Instrument #	CHEMICAL TEST ☐ Both Tests ☐ Urine ☐ Blood Refused
MIRANDA WARNING GIVEN: ☐ Yes Given by: ☐ No	What have you eaten today? When?	What have you been drinking? Time of last Drink? How much?
Time Now? When did you last sleep? How 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/dentist? ☐ Yes ☐ No
Are you taking any medication or drugs? ☐ Yes ☐ No	ATTITUDE	COORDINATION
SPEECH	BREATH	FACE

CORRECTIVE LENS: ☐ None ☐ Glasses ☐ Contacts, If so ☐ Hard ☐ Soft	Eyes: ☐ Normal ☐ Bloodshot ☐ Watery	Blindness: ☐ None ☐ R. Eye ☐ L. Eye	Tracking: ☐ Equal ☐ Unequa
Pupil Size: ☐ Equal ☐ Unequal (explain)	HGN Present: ☐ Yes ☐ No	Able to follow stimulus: ☐ Yes ☐ No	Eyelids: ☐ Normal ☐ Droopy

Step 4

Examination of the Eyes

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



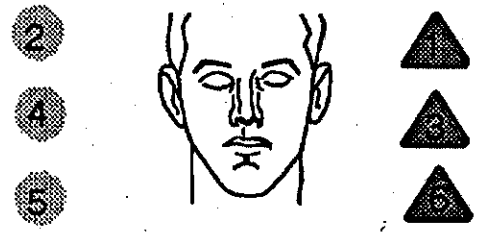
Step 5

000065

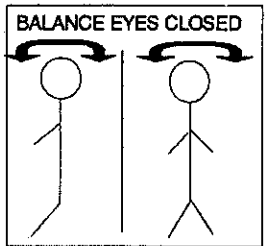
Divided Attention Tests

Right ▲ Left

Draw lines to spots touched



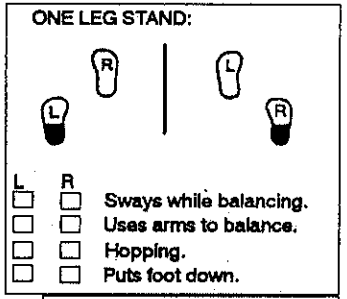
BALANCE EYES CLOSED



INTERNAL CLOCK:

____Estimated as 30 sec.

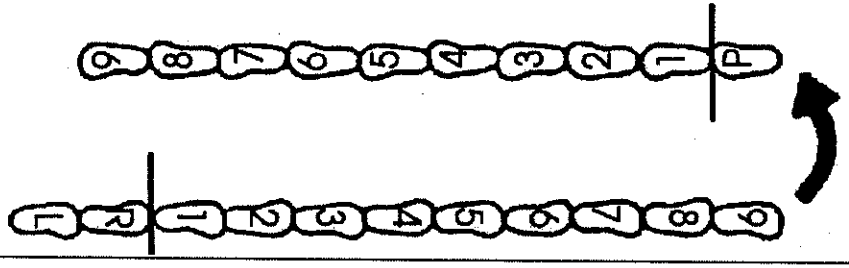
ONE LEG STAND:



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

Type of Footwear

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

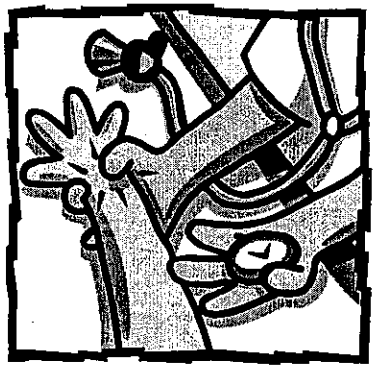
Cannot Do Test (explain)

Step 6

990066

Examination of Vital Signs

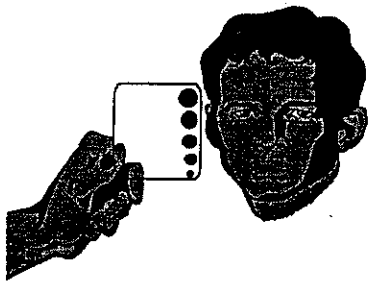
Pulse & Time
1. _____ / _____
2. _____ / _____
3. _____ / _____



Blood Pressure	Temp
_____ / _____	_____ ○

Step 7

Darkroom Examinations



PUPIL SIZE	Room Light	Darkness	Indirect	Direct	NASAL AREA
Left Eye					
Right Eye					ORAL CAVITY
HIPPUS	☐ Yes ☐ No	REBOUND DILATION ☐ Yes ☐ No		Reaction to Light	

Step 8

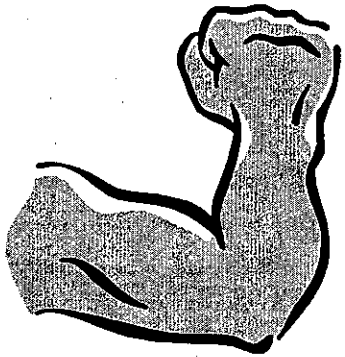
000068

Examination for Muscle Tone

MUSCLE TONE:

☐ Near Normal ☐ Flaccid ☐ Rigid

Comments:



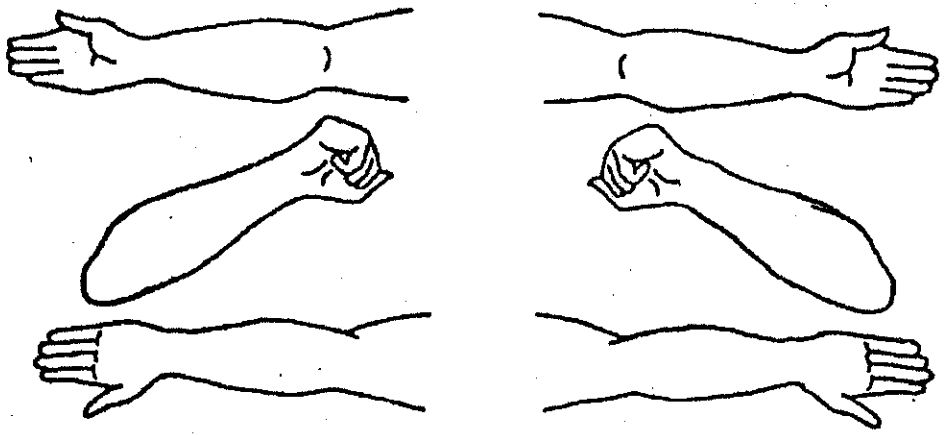
Step 9

690000

Examination for Injection Sites

RIGHT ARM

LEFT ARM



ATTACH PHOTOS OF FRESH PUNCTURE MARKS

Step 10

Suspect's Statements and Other Observations

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
Officer's Signature	District		ID Number	Reviewed By

Step 11

The Opinion of the Evaluator

Step 12

000072

The Toxicological Examination

Drug Influence Report Checklist

1. Breath alcohol test
2. Interview of arresting officer (Note: Gloves must be worn from this point on.)
3. Preliminary examination and first pulse
4. Eye Examinations
5. Divided attention tests:
   - Romberg balance
   - Walk and turn
   - One leg stand
   - Finger to nose
6. Vital signs and second pulse
7. Dark room examinations and ingestion examination
8. Check for muscle tone
9. Check for injection sites and third pulse
10. Interrogation, statements, and other observations
11. Opinion of evaluator
12. Toxicological examination

Ninety Minutes

SESSION III

THE PSYCHOPHYSICAL TESTS

SESSION III THE PSYCHOPHYSICAL TESTS

Upon successfully completing this session, the participants will be able to:

- o Administer the four divided attention tests used in the Drug Recognition Process.
- o Document the suspect's performance of those tests.

CONTENT SEGMENTS

A. Romberg Balance

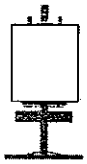
B. Walk and Turn

C. One Leg Stand

D. Finger to Nose

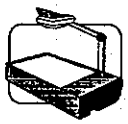
LEARNING ACTIVITIES

- o Instructor-Led Presentations
- o Student-Led Demonstrations
- o Hands-on Practice

Aides	Lesson Plan	Instructor Notes
90 Minutes  III-1 (Objectives)	THE PSYCHOPHYSICAL TESTS Four divided attention psychological tests are administered in the DRE evaluation - Romberg Balance, Walk and Turn, One Leg Stand and Finger to Nose. The Walk and Turn and One Leg Stand as well as HGN have been scientifically validated by conducting controlled research to demonstrate their reliability. The Romberg Balance and Finger to Nose have not been subjected to that sort of scrutiny, however, if properly administered and recorded they are very credible evidence of impairment.	Point out that throughout the evaluation process the evaluator must be cognizant of officer safety issues. Officer survival procedures should be observed as appropriate during the administration of the DRE evaluation.
25 Minutes	**A. Romberg Balance**	
	1. The Romberg Balance is always the first divided attention test that is administered during the drug evaluation.	Write "Romberg Balance" on chalkboard or flip-chart.
	a. The test requires the suspect to stand with the feet together and the head titled back slightly and with the eyes closed.	Demonstrate the stance required of the suspect.
	b. The test also requires that the suspect attempt to estimate the passage of thirty seconds; the suspect must be instructed to open the eyes and tilt the head forward and say stop when they thinks that thirty seconds have gone by.	Emphasize that the DRE must not instruct the suspect as to how they are supposed to estimate the passage of 30 seconds.

Aides	Lesson Plan	Instructor Notes
	c. The DRE must record how much time actually elapsed from the start of the test until the suspect opened the eyes.	Point out that some drugs tend to "speed up" the suspect's body clock, so that the suspect may open the eyes after only 10 or 15 seconds have gone by. Other drugs may "slow down" the body clock, so that the suspect keeps the eyes closed for 60 or more seconds. And, sometimes the drugs confuse the suspect to the point where they won't remember to open the eyes until instructed to do so by the DRE.
	d. If the suspect continues to keep the eyes closed for 90 seconds, the DRE should stop the test and record the fact that it was terminated at 90 seconds.	
	2. Administrative procedures.	Two instructors should demonstrate the administrative procedures for Romberg Balance. One instructor will play the role of the DRE, the other the "suspect".
	a. Stand with your feet together, arms at your sides.	
	b. Just watch me and listen to me while I give you the instructions for this test; don't start doing the test until I tell you to start.	Ask the "suspect" if they understands the instructions thus far. If the subject fails to maintain the starting position during your instructions, discontinue the instructions and direct the subject back to the starting position before continuing.
	c. When I tell you to start, I want you to tilt your head back slightly (demonstrate) and close your eyes (don't demonstrate).	Emphasize that the DRE must not close his or her own eyes, for safety's sake.

Aides	Lesson Plan	Instructor Notes
	d. Once you have closed your eyes I want you to remain in that position until you think that 30 seconds have gone by.	
	e. As soon as you think 30 seconds have passed by, open your eyes and tilt your head forward and say stop.	
	f. When the suspect opens their eyes ask them "how much time was that?".	
		Ask the "suspect" if they understands the instructions.
		Emphasize that the DRE must look at a watch as soon as the suspect starts the test, and must record the actual amount of time that passes by until the suspect opens the eyes.
	3. Instructor-led demonstrations.	One instructor should administer a complete Romberg Balance test to another instructor.
	a. Instructor-to-instructor demonstrations.	Solicit students' questions.
	b. Instructor-to-student demonstration.	Select a student to partici-pate in the demonstration.
		The instructor should administer a complete Romberg Balance test to the student.
		Thank the student for his or her participation and solicit questions.

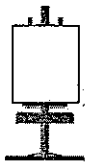
Aides	Lesson Plan	Instructor Notes
	4. Student-led demonstrations.	Select two students to conduct demonstrations. Have the first student administer the test to the second. Offer constructive criticism, as appropriate, about the student-administrator's demonstration. Have the second student administer the test to the first, and offer appropriate constructive criticism. Thank the students for their participation and solicit questions.
 **III-2** (Romberg Test Diagram)	5. Recording results of the Romberg Balance test. a. The major items that need to be recorded for the Romberg test are: o the amount that the suspect sways o the actual amount of time that the suspect keeps the eyes closed. b. To record swaying, the DRE must estimate how many inches the suspect sways, either front-to-back or left-to-right, or both. c. To record the suspect's time estimate, simply write the number of seconds that the suspect kept his or her eyes closed.	Instruct students to turn to the "Romberg Test Diagram" in their Student Manuals (the same diagram that appears on Visual III-1). Example: if the suspect sways approximately two inches toward the left and approximately two inches toward the right, the DRE should write the number "2" on each side of the "stick figure" that shows left-to-right movement. Solicit students' questions.

Aides	Lesson Plan	Instructor Notes
	6. Hands-on practice.	Assign students to work in pairs. Instruct teammates to practice administering the Romberg Balance test to each other. Monitor the practice and offer coaching and constructive criticism, as appropriate.
 **20 Minutes**	**B. Walk and Turn**	
	1. Walk and Turn is always the second divided attention test administered during the drug evaluation. 2. The test is administered in exactly the same way that we have always used it for field sobriety testing purposes. 3. Review of Walk and Turn administrative procedures. a. The test has two stages: the instructions stage and the walking stage. b. During the instructions stage the suspect must stand heel-to-toe, with the right foot ahead of the left foot, and keeping the arms at the sides.	Write "Walk and Turn" on the chalkboard or flip-chart. It is suggested a visible line be placed on the floor for use during the demonstration. Demonstrate the stance that the suspect must maintain during the instructions stage. If the subject fails to maintain the starting position during your instructions, discontinue the instructions and direct the subject back to the starting position before continuing.

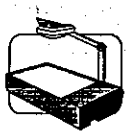
Aides	Lesson Plan	Instructor Notes
	c. The suspect must be told to take nine heel-to-toe steps up the line, to turn, and to return nine heel-to-toe steps down the line.	
	d. You must demonstrate several heel-to-toe steps, and you must demonstrate the turn.	Demonstrate the steps, and demonstrate the turn.
	e. The suspect must be told to watch his or her feet while walking, and to count the steps out loud.	If the suspect stops or fails to count out loud or watch his/her feet, remind him/her to perform these tasks. This interruption will not effect the validity of the test and is essential for evaluating divided attention.
	f. The suspect must be told to keep the arms at the sides at all times.	
	g. The suspect must be told not to stop walking until the test is completed.	
	4. Demonstrations of Walk and Turn.	Select a student to serve as the "suspect".
	a. Instructor-to-student demonstration.	Instructor should administer a complete Walk and Turn test to the "suspect". Thank the student for his or her participation and solicit questions about test administrative procedures.
	b. Student-to-student demonstration.	Select two students to conduct a demonstration. Have one student administer a complete Walk and Turn test to the other. Offer appropriate comments and constructive criticism about the test administration.

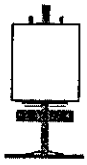
Aides	Lesson Plan	Instructor Notes
		Thank the students for their participation and solicit questions.
 **III-3** (Walk and Turn Test Diagram)	5. Recording results of the Walk and Turn test.	Instruct students to turn to the "Walk and Turn Test Diagram" in their Student Manuals (the same diagram that appears on Visual III-2).
	a. We record the very same clues on this test that we use for field sobriety testing purposes.	Ask students: "What are the two clues that we might observe during the instructions stage of Walk and Turn?"
	b. Instructions stage clues: o failure to maintain balance (feet break away from the heel-to-toe stance) o starting to walk too soon.	
	c. Walking stage clues: o Stops walking o Misses Heel-Toe o Steps off line o Raises arms o Wrong number of steps o Turns improperly	Ask students: "What are the six clues that we might observe during the walking stage?"
	d. During the walking stage clues will be marked in the following manner: o On the lines indicate the number of time the item occurred. Draw a slash mark at an angle in the direction the step was taken.	

Aides	Lesson Plan	Instructor Notes
	e. During the walking stage clues will be marked in the following manner: o Indicate by a check the number of times the suspect stops, misses heel to toe, steps off line, or raises arms. o Record the actual number of steps taken. o If the suspect stops walking a slash mark should cross between the feet and labeled with an "S". o If the suspect steps of the line, indicate with a half of a slash mark at an angle in the direction the step was taken. o If the suspect misses heel to toe, indicate with a slash mark between the feet and label with an "M".	
	6. Hands-on practice.	Assign students to work in pairs. Instruct teammates to take turns administering the Walk and Turn test to each other. NOTE: IT IS NOT NECESSARY THAT THE TEAMMATE PLAYING THE ROLE OF "SUSPECT" ACTUALLY CARRY OUT THE WALKING STAGE OF THE TEST.

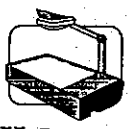
Aides	Lesson Plan	Instructor Notes
		THE IDEA IS TO TAKE TURNS PRACTICING THE PROPER WAY TO GIVE INSTRUCTIONS FOR THE TEST. Monitor the practice and offer coaching and constructive criticism, as appropriate.
 **20 Minutes**	**C. One Leg Stand**	
	1. One Leg Stand is always the third divided attention test administered during the Drug Evaluation.	Write "One Leg Stand" on the chalkboard or flip-chart.
	2. For Drug Evaluation purposes, One Leg Stand is always given twice to the suspect. a. First, the suspect is required to perform One Leg Stand while standing on the left foot. b. Next, they are required to perform the test while standing on the right foot.	Write "given twice" on the chalkboard or flip-chart.
	3. Otherwise, One Leg Stand is used in the same fashion as in field sobriety testing.	
	4. Review of One Leg Stand administrative procedures. a. The test has two stages, the instructions stage and the performance stage.	Two instructors should be used for this demonstration, one as the "suspect" and the other as the examiner.

Aides	Lesson Plan	Instructor Notes
	b. During the instructions stage the suspect must stand with the feet together, arms at the side, facing the examiner.	Demonstrate the stance that the suspect is required to maintain.
	c. The suspect must be told that they will have to stand on the left foot, and raise the right foot approximately 6 inches off the ground, with the right leg held straight and the toes pointed out.	The examiner must demonstrate the one-leg stance. Emphasize that the suspect must maintain the foot elevation throughout the test. If the suspect lowers his/her foot, he/she should be instructed to raise it.
	d. The suspect must be told that they must look at the elevated foot at all times.	Emphasize that the examiner should not look at his or her own foot while giving the instructions; for safety's sake, the examiner must keep the eyes on the suspect at all times.
	e. The suspect must be told that they will have to count out loud for thirty seconds, in the following manner: "one thousand-and one, one thousand-and two, one thousand-and-three", and so on until told to stop.	Ask the "suspect" if they understands. Solicit students' questions about the administrative procedures for One Leg Stand. Point out that the validation of the One Leg Stand was based on a thirty-seconds time period. Therefore, the DRE must keep track of the actual time the suspect stands on each foot. When thirty seconds have passed, stop the suspect.

Aides	Lesson Plan	Instructor Notes
	f. After the suspect has completed the test on the left foot, they must be told to repeat the test on the right foot.	
 III-4 (One Leg Stand Test Diagram)	5. Recording results of the One Leg Stand.	Instruct students to turn to the "One Leg Stand Test Diagram" in their Student Manuals (the same diagram that appears on Visual III-3).
	a. For drug evaluation purposes, we use exactly the same clues on the One Leg Stand that we use for field sobriety testing.	Ask students: "What are the four clues of the One Leg Stand?"
	b. The clues: o Sways while balancing o Uses arms to balance o Hopping o Puts foot down	Solicit questions about documenting the results of the One Leg Stand.
	c. Indicate above the feet the number they were counting when they put their foot down.	
	d. Check marks should be made to indicate the number of times the suspect swayed, used arms for balance, hopped or foot their foot down.	
	e. The suspects actual count during the 30 seconds should be documented in the top area of the box above the foot on which the subject was standing.	

Aides	Lesson Plan	Instructor Notes
	6. Hands-on practice.	Assign students to work in pairs. Instruct teammates to take turns administering the One Leg Stand to each other. NOTE: IT IS NOT NECESSARY THAT THE STUDENT SERVING AS THE "SUSPECT" ACTUALLY STAND ON ONE FOOT FOR THIRTY SECONDS. THE IDEA IS TO PRACTICE GIVING THE INSTRUCTIONS FOR THE TEST. Monitor the practice and offer appropriate coaching and constructive criticism.
 **25 Minutes**	**D. Finger to Nose.**	
	1. The Finger to Nose is the final divided attention test used in the drug evaluation.	Write "Finger to Nose" on the chalkboard or flip-chart.
	2. Finger to Nose differs from the other three tests in that the examiner must continue to give instructions to the suspect throughout the test.	
	3. Administrative procedures for Finger to Nose.	Two instructors should serve in this demonstration, one as the examiner and the other as "suspect".
	a. Suspect must be told to stand with feet together, arms down at the sides, facing the examiner.	"Suspect" should demonstrate the stance.

Aides	Lesson Plan	Instructor Notes
	b. Suspect must be told to clench his or her fists, rotate the palms forward and then to extend the index fingers from the closed fists.	Demonstrate the proper extension of the index fingers.
	c. Examiner must tell suspect that they will be asked to touch the tip of the finger to the tip of the nose.	
	d. Examiner must demonstrate to the suspect exactly how they are expected to touch the fingertip to the nose.	Demonstrate the movement of finger tip to nose by standing at an angle to the suspect so that he/she can see the proper method for touching the nose.
	e. Examiner must notify suspect that the examiner will give a series of commands, i.e., "left, right, etc." to indicate which fingertip is to be brought to the nose.	Demonstrate: "When I say 'right', touch the tip of your right index finger to the tip of your nose."
	f. Examiner must tell suspect that they are expected to return the arm to the side immediately after touching the fingertip to the nose.	
	g. Suspect must be told to tilt the head back slightly and to close the eyes, and keep them closed until the examiner says to open them.	Note: the suspect's head should be tilted back in the same fashion as in the Romberg Balance test. "Suspect" should demonstrate the stance with head tilted back, eyes closed, arms at sides with index fingers extended.

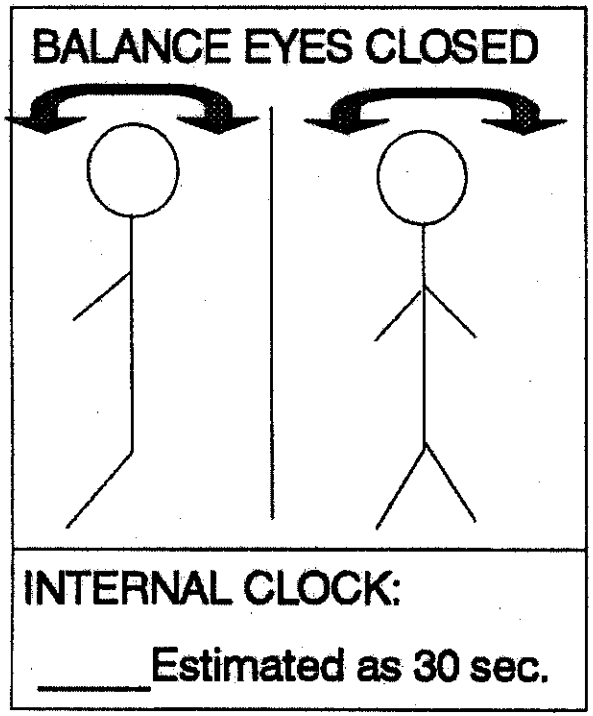
Aides	Lesson Plan	Instructor Notes
	h. We <u>always</u> give the following sequence of commands: o left o right o left o right o right o left	Write the sequence on the chalkboard or flip-chart.
	4. Instructor-led demonstrations.	Solicit students' questions concerning administrative procedures for Finger to Nose.
	a. Instructor-to-instructor demonstration.	One instructor should give a complete demonstration of Finger to Nose, using another instructor as the "suspect".
	b. Instructor-to-student demonstration.	Select a student to serve as the "suspect" and administer a complete Finger to Nose test to that student. Thank the student for his or her participation and solicit questions about the demonstrations.
	5. Student-led demonstrations.	Select two students and have them take turns administering Finger to Nose to each other. Offer appropriate comments and constructive criticisms about the students' administration of the test. Thank the students for their participation and solicit questions from the class.
 **III-5** (Finger to Nose Test Diagram)	6. Recording results of the Finger to Nose.	Instruct students to turn to the "Finger to Nose Test Diagram" in their Student Manuals (the same diagram that appears on Visual III-4).

Aides	Lesson Plan	Instructor Notes
	a. We record the results of Finger to Nose by drawing a "map" showing exactly where the fingertips landed on each attempt.	
	b. A line should be drawn to the appropriate triangle 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. Solicit questions about recording the results of Finger to Nose.
	7. Hands-on practice.	Assign students to work in pairs. Instruct teammates to take turns administering Finger to Nose to each other. NOTE: IT <u>IS</u> NECESSARY FOR THE TEAMMATE WHO IS THE "SUSPECT" TO CARRY OUT THE TEST COMPLETELY. Monitor the practice and offer appropriate coaching and constructive criticism.

Objectives

- Administer the four divided attention tests used in the Drug Recognition Process.
- Document the suspect's performance of those tests.

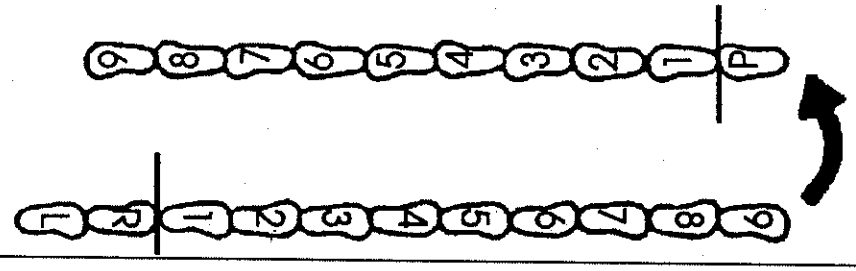
Romberg Test Diagram



Walk and Turn Test Diagram

000093

Walk And Turn Test



Cannot keep balance_____

Starts too soon _____

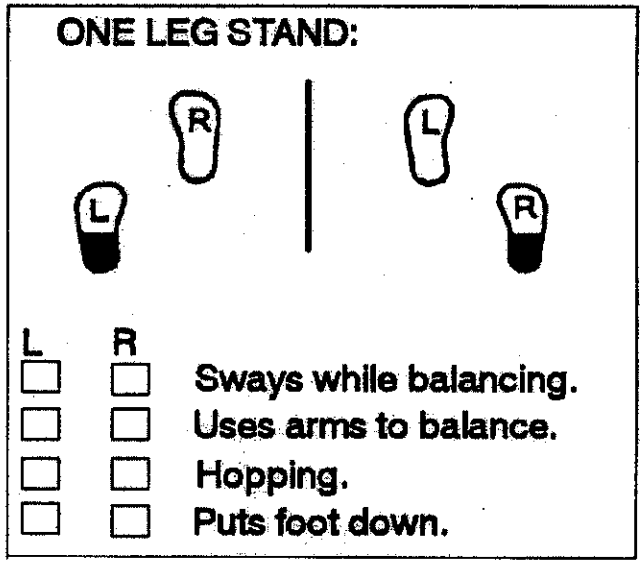
	1st Nine	2nd Nine
Stops Walking		
Misses Heel-Toe		
Steps Off Line		
Raises Arms		
Actual Steps Taken		

Describe Turn

Cannot Do Test (explain)

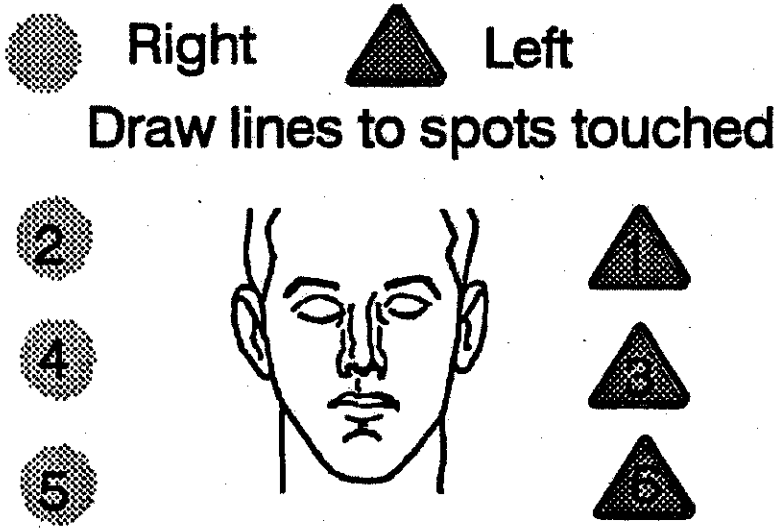
One Leg Stand Test Diagram

000094



Finger to Nose Test Diagram

000095



Ninety Minutes

SESSION IV

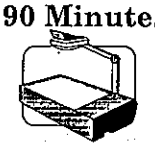
THE EYE EXAMINATIONS

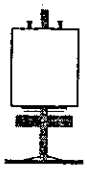
SESSION IV THE EYE EXAMINATIONS

Upon successfully completing this session, the participants will be able to:

- o Administer tests of horizontal gaze nystagmus, vertical nystagmus and lack of convergence.
- o Estimate pupil size.
- o Relate the expected results of eye examinations to the various categories of drugs.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Purposes of the Eye Examinations	o Instructor-Led Presentations
B. Procedures and Clues	o Instructor-Led Demonstrations
C. Demonstrations	o Hands-on Practice
D. Relationship of Drug Categories to the Eye Examinations	

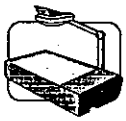
Aides	Lesson Plan	Instructor Notes
90 Minutes  **IV-1** (Objectives) **15 Minutes**  **IV-2** ("The Eye Examinations")	**THE EYE EXAMINATIONS** **A. Purposes of the Eye Examinations** 1. The principal purpose of all of the eye examinations is to obtain articulable facts indicating the presence or absence of specific categories of drugs. a. Certain drug categories usually cause the eyes to react in specific ways. b. Other drug categories usually do not cause those reactions. 2. The tests of <u>horizontal and vertical nystagmus</u> provide important indicators of the drug categories that may or may not be present. a. If horizontal gaze nystagmus is observed, it is likely that the suspect may have taken a CNS depressant, PCP or its analog, an inhalant, or a combination of those.	Briefly review the content, objectives and activities of this session.

Aides	Lesson Plan	Instructor Notes
	b. If vertical nystagmus is observed, the implication may be that the suspect took PCP, or fairly large doses of depressants or inhalants (for that individual).	Point out that it is very unlikely that a suspect would exhibit vertical nystagmus without also exhibiting HGN.
	c. By comparing the suspect'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 onset angle is significantly inconsistent with the BAC, the implication may be that the suspect has also taken PCP or an inhalant, or some CNS depressant other than alcohol. Suspect may have a medical condition.
	d. The consistency of onset angle and BAC can be compared using the following formula: BA = 50 - A	Write the formula on the chalkboard or flip-chart. Explanation: BA = 100 x blood alcohol (e.g., if blood alcohol is 0.10%, BA = 10) A = onset angle (in degrees) Example: If onset angle is 35 degrees, then BA = 50 - 35 = 15. The corresponding blood alcohol concentration would be approximately 0.15%.
	e. Keep in mind that this formula is only a statistical approximation. It is not an exact relation-ship for all subjects at all times.	Emphasize this point: The formula can easily be "off" by 0.05% or more, even though the subject has consumed no drug other than alcohol.

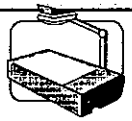
Aides	Lesson Plan	Instructor Notes
	f. The only purpose of comparing BAC and onset angle is to obtain a gross indication of the possible presence of another depressant, or PCP, or an inhalant.	Emphasize that many other facts will also be considered that will help to determine whether PCP, inhalants or depressants may be present.
	g. A DRE is expected to be able to estimate onset angle to the nearest 5 degree increment, over the range from 30 to 45 degrees. o If the suspect's eyes begin to jerk before they have moved to the 30 degree mark, you will not attempt to estimate the angle precisely, but will record they exhibit "immediate onset". o From 30 degrees on out, you will record a numeric estimate of onset.	
	3. The check for lack of convergence can provide another clue as to the possible presence of depressants, PCP, or inhalants.	
	4. Lack of Convergence is also an indicator of the possible presence of cannabis.	Point out that a drug recognition expert might begin to suspect the presence of cannabis if lack of convergence was observed but no nystagmus was observed.
	5. The checks of pupil size and reaction to light provide useful indicators of the possible presence of many drug categories.	Point out that in addition to signs of drug use, the checks of pupil size and reaction to light may reveal signs of injury or other existing medical conditions.

Aides	Lesson Plan	Instructor Notes
	a. Depressants, stimulants and narcotics will usually cause the pupils to react very slowly or not at all to light. b. Stimulants and hallucinogens usually will cause the pupils to dilate. c. Narcotics will usually cause a severe constriction of the pupils.	Solicit students' comments and questions concerning the purposes of the eye examinations.
50 Minutes **IV-3** ("HGN Procedures and Clues") **IV-3** ("Lack of Smooth Pursuit")	**B. Procedures and Clues** 1. Horizontal Gaze Nystagmus test consists of <u>three separate checks</u>, administered independently to each eye. a. The first check is for "lack of smooth pursuit". o Position the stimulus about 12 to 15 inches in front of subject's face. o Hold the tip of the stimulus slightly above the level of the subject's eye.	<u>Select</u> a student, and demonstrate the first check of HGN on that student. <u>Point out</u> that this procedure insures that the eyes will be open wide and easy to observe.

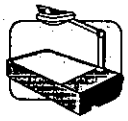
Aides	Lesson Plan	Instructor Notes
	o Instruct the subject to hold the head still and follow the stimulus with the eyes.	
	o Move the stimulus smoothly, all the way to the suspect's left, then all the way to the right, then back again all the way to the left, then once again all the way back to the right.	Point out that we always begin by checking the suspect's left eye, then we immediately check the right eye. And, we always make at least two complete passes in front of both eyes. Demonstrate two complete passes in front of the eyes, using the student-volunteer as your subject. Emphasize: For standardization, we always begin by checking the left eye. Point out that the stimulus should moved at a speed that requires about one or two seconds to bring it from the center to side.
	b. While the eyeball is moving, examine it for evidence of a lack of smooth pursuit.	Use these or similar analogies: (1) A smoothly pursuing eyeball will move without friction, much the way that a windshield wiper glides across the windshield when it is raining steadily. An eyeball showing lack of smooth pursuit will move in a fashion similar to a wiper across a dry windshield.

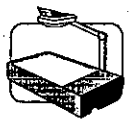
Aides	Lesson Plan	Instructor Notes
		(2) A <u>smoothly pursuing</u> eyeball will roll in the socket the way that a marble or ball bearing would glide smoothly across a polished pane of glass. An eyeball exhibiting <u>lack of smooth pursuit</u> would move more like that marble rolling over a sheet of heavy gauge sandpaper. Excuse the student-volunteer and thank him or her for participating.
	c. Students' initial practice of the check for lack of smooth pursuit.	<u>Instruct</u> students to work in pairs, taking turns checking each other's eyes for lack of smooth pursuit. <u>Monitor</u>, coach and critique the students' practice. Allow this practice to continue for only about 2 minutes.
 **IV-3** ("Distinct...At Maximum")	d. The second check is for "distinct jerking at maximum deviation". o Again position the stimulus as before. o 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.	<u>Select</u> a student and demonstrate the second check of HGN on that student. <u>Remind</u> students that we always start by checking the suspect's left eye.

Aides	Lesson Plan	Instructor Notes
	o Hold the eyeball at that position for approximately 4 seconds, to check carefully for any jerking that may be present.	
	o Then, move the stimulus all the way to the suspect's right side, and hold it there for 4 seconds.	Remind students that, as soon as we have finished checking the left eye, we immediately repeat the check on the right.
	e. With this cue, the examiner looks for a very distinct, unmistakable jerking.	
	o A slight or barely visible tremor is not sufficient to consider this cue present.	
	o A definite, throbbing jerking must be seen.	Point out that for HGN to be considered present, a distinct jerkiness must be present for the full four seconds. Excuse the student-volunteer and thank him or her for participating.
	f. Students' initial practice of the check for distinct jerking at maximum deviation. The formula is BA = 50 - A	Instruct students to work in pairs, taking turns checking each other's eyes for distinct jerking at maximum deviation. Monitor, coach and critique the students' practice. Allow this practice to continue for only about 2 minutes.

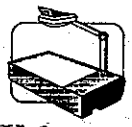
Aides	Lesson Plan	Instructor Notes
 **IV-3** ("Onset Angle")	g. The final check is for the "angle of onset".	
	o Position the stimulus as before.	Select a student and demonstrate the third check of HGN on that student.
	o Slowly move the stimulus to the suspect's left side, carefully watching the eye for the first sign of jerking.	
	o When you think that you see the eyeball jerk, stop moving the stimulus and hold it perfectly still.	
	o Verify that the eyeball is, in fact, jerking.	Point out that, if the eye is not jerking, it will be necessary to resume moving the stimulus slowly to the side, again observing for the first sign of jerking.
	o Once you have established that you have located the point of onset, estimate the angle.	Exhibit a template.
	o Then, repeat this procedure on the suspect's right eye.	Point out that angle estimation simply requires practice. Point out that the template will be used during practice. Excuse the student-volunteer and thank him or her for participating.

Aides	Lesson Plan	Instructor Notes
	h. Students' initial practice of angle estimation.	Instruct students to work in pairs, taking turns estimating angles of each other's eyes. Instruct students that they are to try to draw their partners' eyes to 3 different angles: 30°; 35°; 40° Students will check their accuracy using the template. Monitor, coach and critique the students' practice. Allow this practice to continue for only about 3 minutes. INSTRUCTOR PLEASE NOTE: In their previous training in HGN, some students may have been taught to look for all 3 clues in one eye, and then to check the other eye for all 3 clues. There is nothing wrong with that procedure, from either a scientific or legal perspective. As DREs however, we expect them to switch from eye to eye as they "work through" the three clues. There are two reasons for this: (1) Simply for standardization, we want all DREs to work in the same way; the "left eye/right eye" switching procedure is simply the standard approach that we have adopted.

Aides	Lesson Plan	Instructor Notes
		(2) DREs must always be alert to the possibility of a medical complication, such as a stroke, brain tumor or other injury to the brain. These kinds of injuries often will cause the two eyes to behave quite differently from one another. For example, the left eye might jerk noticeably while the right eye tracks smoothly. By always immediately comparing the performances of the two eyes, the DRE might more quickly spot the possibility of a medical complication.
		Point out that, in 1989, NHTSA modified its HGN training courses to conform to this "left/right" procedure.
 IV-4 ("Vertical Nystagmus")	2. The Vertical Nystagmus test is very simple, and consists of a single check.	Select a student and demonstrate the vertical nystagmus test on the student.
	a. Position the stimulus horizontally, about 12 to 15 inches in front of the subject's nose.	
	b. Instruct the subject to hold the head still and follow a specific point on the stimulus with the eyes only.	
	c. Raise the object until the subject's eyes are elevated as far as possible.	

Aides	Lesson Plan	Instructor Notes
	d. Watch closely for evidence of jerking.	Point out that the examiner should keep the subject's eyes elevated for about 4 seconds to verify that the jerking really is present and continues during the full four seconds. Point out that we do not attempt to estimate an onset angle for vertical nystagmus: We simply record whether a visible up-and-down jerking is present or not present. Excuse the student-volunteer and thank him or her for participating.
	e. Students' initial practice of the vertical nystagmus test.	Instruct students to work in pairs, taking turns administering the vertical nystagmus test to each other. Monitor, coach and critique the students' practice. Allow this practice to continue for only about 2 minutes.
 **IV-5** ("Lack of Convergence")	3. The test for lack of convergence determines whether the suspect is able to cross his or her eyes.	Select a student and demonstrate the test for lack of convergence on that student.
	a. Position the stimulus about 12 to 15 inches in front of the student's nose, with the stimulus pointing toward the nose.	

Aides	Lesson Plan	Instructor Notes
	b. Instruct the subject to hold the head still and follow the object with the eyes only.	
	c. Inform the subject that you will move the tip of the stimulus in toward the bridge of his or her nose.	Emphasize that it is important that the subject be aware of what will happen so that he or she will not flinch when you move the stimulus toward his or her face.
	d. Point out to the subject that he or she will have to try to cross the eyes in order to keep the eyes focused on the stimulus as it moves in toward the nose.	
	e. Keep the object 12 to 15 inches away from the subject's nose, and start to move the object slowly in a circle.	Point out that this initial circular motion helps to verify that the subject has focused on the stimulus and is able to track it.
	f. Once you have verified that the subject is tracking the object, move it slowly and steadily directly in toward the bridge of the nose until the stimulus lightly touches the bridge of the nose, hold the stimulus on the nose for approximately one second, then remove it.	
	g. Carefully observe the subject's eyes to determine whether both eyes converge on the bridge of the nose.	Excuse the student-volunteer and thank him or her for participating.
	h. Students' initial practice of the test for lack of convergence.	Instruct students to work in pairs, taking turns testing each other's eyes for lack of convergence.

Aides	Lesson Plan	Instructor Notes
		Monitor, coach and critique the students' practice. Allow this practice to continue for only about 2 minutes.
 **IV-6** ("Pupil Size")	4. Estimation of pupil size requires use of the pupillometer.	Exhibit a pupillometer.
	a. Hold the pupillometer alongside the subject's eye.	Select a student and demonstrate pupil size estimation using the student.
	b. Make sure that the pupillometer is even with the eyeball (neither closer to you nor farther from you than is the subject's eyeball).	
	c. Move the pupillometer up or down until you find the darkened circle that appears to be approximately the same size as the subject's pupil.	Excuse the student-volunteer and thank him or her for participating.
	d. Students' initial practice of pupil size estimation.	Instruct students to work in pairs, taking turns estimating each other's pupils. Tell the students to record on paper the pupil sizes of their partners. Monitor, coach and critique the students' practice. Allow this practice to continue for only about 2 minutes.

Aides	Lesson Plan	Instructor Notes
		Ask the students how many found that their partners had different-sized pupils (i.e., left pupil larger or smaller than the right). Point out that it is not too uncommon to find people whose pupils differ by as much as one-half millimeter, but the larger differences are more unusual. Tabulate the pupil size estimates made by the students, on the chalkboard or flip-chart. Print the following column on the board or chart, and record the number of students who had pupils of the sizes indicated: 7.0 or larger _____ 6.5 _____ 6.0 _____ 5.5 _____ 5.0 _____ 4.5 _____ 4.0 _____ 3.5 _____ 3.0 _____ 2.5 or smaller_____ Point out that the "normal" range of pupil size is 3.0 to 6.5 mm. Print "NORMAL RANGE: 3.0-6.5" on the chalkboard or flip-chart.
	e. Pupil size estimations must be made in the darkroom, under three different light conditions.	Select a student to participate in demonstrations of darkroom pupil measurements.

Aides	Lesson Plan	Instructor Notes
	f. For the estimation under near total darkness, hold your finger over the tip of the penlight, so that only a reddish glow emerges.	Demonstrate this.
	g. For the estimation under indirect light, uncover the tip of the light source. Shine the light at right angles to the subject's face, so there is a slight shadow of the eye cast on the side of the nose.	Demonstrate this. Emphasize that the light should be shined across the subject's eye, not directly into it.
	h. For the estimation under direct light, completely uncover the tip of the penlight, bring the light from the side of the subject's face, directly into the eye and hold it there for 15 seconds.	Demonstrate this. Emphasize that the penlight should be positioned so that the beam just "fits" the eye socket.
	5. The check of the pupil's reaction to light takes place at the same time as the test of pupil size under direct light.	
	a. Observe the subject's pupil size as the penlight is aimed at the side of the subject's face.	Demonstrate this.
	b. As you bring the beam of light directly into the subject's eye, note how the pupil reacts.	Demonstrate this.
	c. Under ordinary conditions, the pupil should react very quickly, and constrict noticeably when the light beam strikes the eye.	Point out that pupillary reaction to light should occur within one second.

Aides	Lesson Plan	Instructor Notes
	d. Under the influence of certain categories of drugs, the pupil's reaction may be very sluggish, or there may be no constriction at all.	Excuse the student-volunteer and thank him or her for participating.
	e. Students' initial practice in measuring the pupil's reaction to light.	Instruct the students to work in pairs, taking turns shining the light into each other's eye and observing the pupil's reaction. Remind students to position the penlight so that the beam exactly "fits" the eye socket when the beam is brought directly into the eye. Monitor, coach and critique the students' practice. Allow the practice to continue for only about 2 minutes. Solicit students' comments and questions concerning the eye examinations.
 15 Minutes	**C. Demonstrations**	
	1. Demonstration of Horizontal Gaze Nystagmus.	Select two students to come before the class.
	a. Check for lack of smooth pursuit.	Instruct one student to demonstrate the administration of horizontal gaze nystagmus to the other student.
	b. Check for distinct jerking at maximum deviation.	Coach and critique the student-administrator's performance.

Aides	Lesson Plan	Instructor Notes
		Make sure that the student-administrator checks both eyes.
	c. Estimation of onset angle.	When the student-administrator has completed the HGN test, instruct the student-administrator to draw the student-subject's eye to an angle of 35 degrees. Check the accuracy of this estimate, using the template.
		Excuse the two students and thank them for participating.
	2. Demonstration of Vertical Nystagmus and Lack of Convergence.	Select two other students to come before the class.
		Instruct one student to check the other for vertical nystagmus.
		Coach and critique the student-administrator's performance.
		Instruct the second student to check the eyes of the first student for lack of convergence.
		Coach and critique the student-administrator's performance.
		Excuse the two students and thank them for participating.
	3. Demonstration of pupil size estimation and test for reaction to light.	Select two other students to come before the class.
	a. Pupil size estimation under room light.	Instruct one student to estimate the other's pupils under room light.

Aides	Lesson Plan	Instructor Notes
		Coach and critique the student-administrator's performance.
	b. Darkroom estimations of pupil size. o near total darkness o indirect light o direct light	Instruct the second student to demonstrate how to perform the dark room estimations of pupil size. Coach and critique the student-administrator's performance. Point out that assessment of the pupil's reaction to light takes place in conjunction with the direct-light estimation. Excuse the two students and thank them for participating. Solicit students' comments and questions concerning these demonstrations of the eye examinations.
 **10 Minutes** 	**D. Relationship of Drug Categories to the Eye Examinations**	Note: Draw the Matrix at the end of this session on the Chalkboard or Flip-chart at the Outset of this Segment:
	1. Three of the seven drug categories ordinarily will produce horizontal gaze nystagmus.	Ask the students to guess which categories will induce HGN.
	a. CNS Depressants, PCP and Inhalants generally will induce HGN.	Along the "HGN" line on the matrix, write "PRESENT" under the columns for Depressants, PCP and "YES" for Inhalants.

Aides	Lesson Plan	Instructor Notes
	b. The other four categories will not induce HGN.	Write "NONE" on the "HGN" line under the other four columns.
	2. Any drug that will induce HGN also will induce <u>vertical</u> nystagmus, if a high enough dose of the drug is taken.	
	a. So, Depressants, PCP and Inhalants can all induce vertical nystagmus at higher doses.	Along the "VERT NYST" line, write "PRESENT" under the columns for those three categories.
	b. But if a drug will not induce HGN, then it also will not induce vertical nystagmus.	Write "NONE" for "VERT NYST" under the other four columns.
	3. All drugs that induce nystagmus also will cause the eyes to be unable to converge.	
	a. Therefore, Depressants, PCP and Inhalants usually will cause lack of convergence.	Write "PRESENT" along the "LACK CONV" line under the columns for Depressants, PCP and Inhalants.
	b. Interestingly, there is one category of drug that does not induce nystagmus but that does usually induce lack of convergence.	Ask students to guess which category that is.
	c. Cannabis usually does cause lack of conver-gence, even though it does not produce nystagmus.	Write "PRESENT" along the "LACK CONV" line under "CANNABIS".
	d. The other three categories do not produce a lack of convergence.	Write "NONE" along the line under the remaining three columns.

Aides	Lesson Plan	Instructor Notes
	4. An interesting and important fact is that the drugs that produce nystagmus usually don't affect pupil size, and the drugs that don't produce nystagmus usually do affect pupil size.	
	a. CNS Stimulants and Hallucinogens usually cause the pupils to become larger than normal, or "dilated".	Write "DILATED" along the "PUPIL SIZE" line under the columns for Stimulants and Hallucinogens.
	b. Cannabis may cause the pupils to dilate slightly.	Write "DILATED" under the "CANNABIS" column; however, explain they frequently may also be NORMAL.
	c. Narcotic Analgesics usually cause the pupils to become smaller than normal, or "constricted".	Write "CONSTRICTED" under the "NARCOTICS" column.
	d. PCP and most Inhalants tend to leave pupil size in the normal range.	Write "NORMAL" under the columns for PCP and Inhalants. BUT POINT OUT THAT SOME INHALANTS WILL CAUSE PUPIL DILATION.
	e. CNS Depressants also usually leave the pupils near normal.	Write "NORMAL" under the "DEPRESSANT" column.
	f. However, there are some exceptions, i.e., a depressant drugs that usually <u>dilate</u> the pupils.	Ask students to guess which depressants causes pupil dilation.

Aides	Lesson Plan	Instructor Notes
	g. Methaqualone, or "Quaaludes" and Soma usually cause pupil dilation.	Put an asterisk (*) next to the "NORMAL" in the "DEPRESSANT" column, and write "*Methaqualone and Soma dilate pupils" under the matrix. Solicit students' questions and comments.
	5. Generally, the pupillary reaction to light is either slowed by the effect of the drug or the pupil reacts normally. The most signi-ficant exception is the effect caused by narcotic analgesics. Though there is always some reaction to light, in <u>live</u> subjects, the constricted pupil caused by narcotic analgesics makes it nearly impossible to perceive a change in the pupil size.	
	a. CNS Depressants and CNS Stimulants usually cause a slowed reaction to light.	Write "SLOW" under the columns for Stimulants and Depressants.
	b. With Hallucinogens, PCP and Cannabis the pupil-lary reaction to light is usually normal.	Write "NORMAL" under the columns for Hallucinogens, PCP and Cannabis.
	c. Due to the constricted nature of the pupils when under the influence of narcotic analgesics, it is difficult to perceive a reaction to light. As a result we list reaction to light for narcotic analgesics as "little or none visible.	Write "LITTLE OR NONE VISIBLE" under narcotic analgesics.

Aides	Lesson Plan	Instructor Notes
	d. Inhalants may cause a slowed reaction or the pupils may react normally depending on the substance used.	Write "SLOW" in the column for inhalants and explain that this is only a general rule.

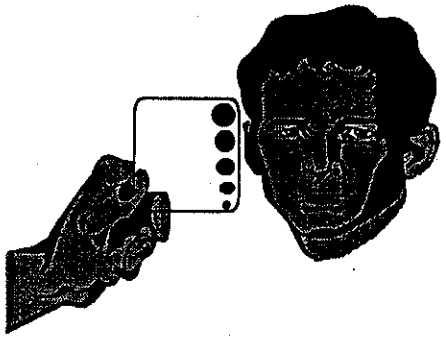
	DEPRESS	STIMULS	HALLUCS	PCP	NARCOTS	INHALS	CANNABIS
HGN							
VERT. NYST.							
LACK CONV.							
PUPIL SIZE							
RCTN-LIGHT							

Objectives

000121

- Administer tests of horizontal gaze nystagmus, vertical nystagmus and lack of convergence.
- Estimate pupil size.
- Relate the expected results of eye examinations to the various categories of drugs.

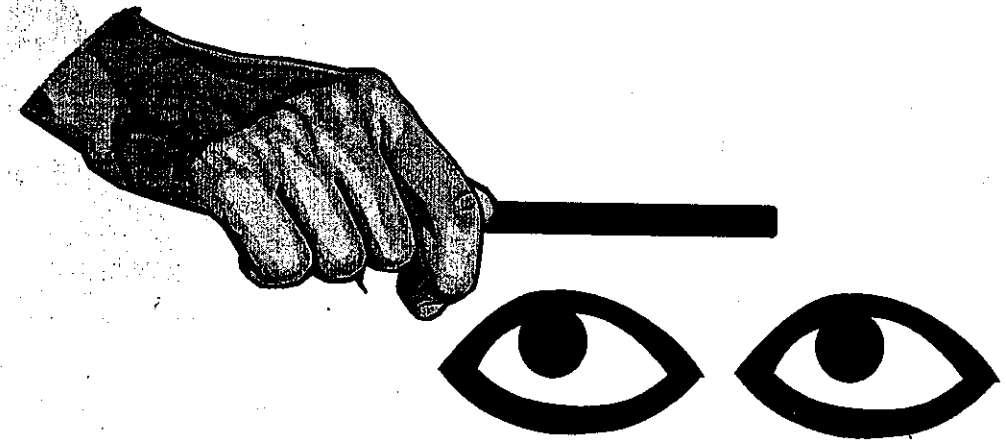
The Eye Examinations



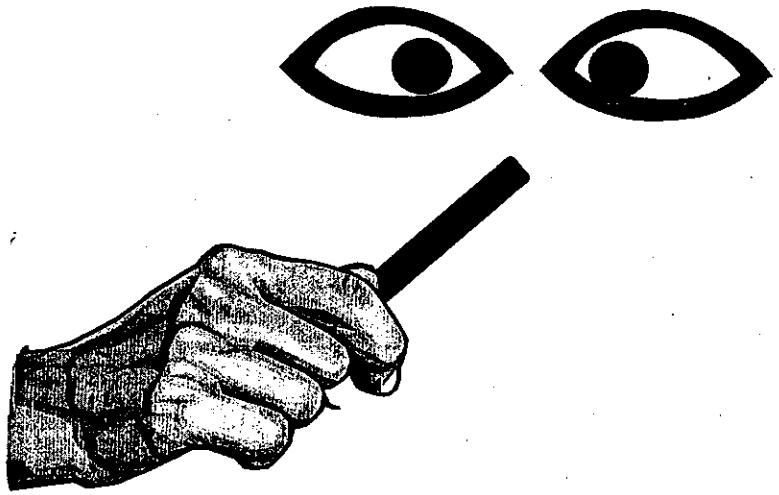
Three Cues of Horizontal Gaze Nystagmus

- Lack of Smooth Pursuit
- Distinct Jerking at Maximum Deviation
- Angle of Onset of Jerking

Vertical Nystagmus



Lack of Convergence



Pupil Size

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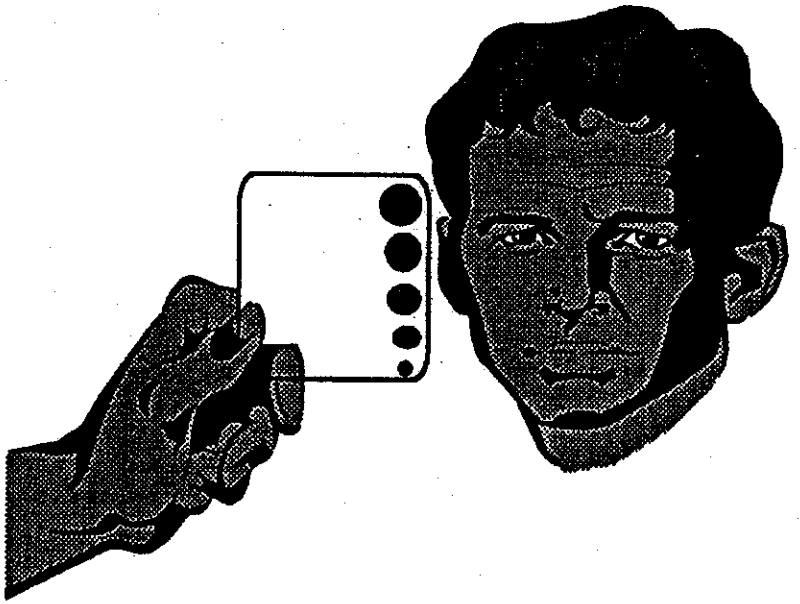


Two Hours

SESSION V

ALCOHOL WORKSHOP

SESSION V ALCOHOL WORKSHOP

Upon successfully completing this session, the participants will be able to:

- Administer the Psychophysical Tests and the Eye Examinations to persons who have consumed varying amounts of alcohol.
- Document the results of these tests and examinations.
- Accurately assess the extent of a person's alcohol-impairment based on the tests and examinations.

CONTENT SEGMENTS

A. Assignments and Procedures

B. Testing

C. Feedback and Discussion

D. Alcohol Workshop Checklist

LEARNING ACTIVITIES

- Hands-on Practice
- Student-led Presentations

Aides	Lesson Plan	Instructor Notes
 **120 Minutes**  **V-1** (Objectives)  **15 Minutes**	**ALCOHOL WORKSHOP** **A. Assignments and Procedures** 1. Team assignments. a. One member will be an examiner and will complete all portions of the exam. b. One member will be the recorder and document the findings of the examination on the evaluation form. c. All others in the group will observe/coach. d. Each team member will conduct at least one complete examination. 2. Explanation of testing procedures. a. Each team will conduct the following sequence of tests and examinations on each volunteer:	Group the participants into teams. The number of students in each team is determined by dividing the total number of students by the total number of volunteer drinkers. Example: if there are 23 students and 7 volunteer drinkers, form five teams of three members and two teams of four members. (**NOTE**: All volunteer drinkers must read and sign the "Statement of Informed Consent" form prior to receiving any alcohol.) Write the sequence of tests and examinations on the chalkboard or flip-chart.

Aides	Lesson Plan	Instructor Notes
	o First pulse o HGN (record onset angle in each eye) o Vertical Nystagmus o Lack of Convergence o Romberg Balance o Walk and Turn o One Leg Stand (on left foot) o One Leg Stand (on right foot) o Finger to Nose o Estimation of Pupil Size (under room light and direct light) o Final pulse b. Teams will record the results of each test and examination. c. Upon completing the test and examinations, the team members will record their best guess as to the volunteer's BAC.	Emphasize that the team will administer each test only <u>once</u> to each volunteer, e.g., only one member of a team will administer the HGN test to a particular volunteer. Emphasize that the tests and examinations are to be given in the order listed for all volunteers. Solicit questions about the testing procedures. Hand out test recording forms to the teams.

Aides	Lesson Plan	Instructor Notes
 **120 Minutes**  **V-1** (Objectives)  **15 Minutes**	**ALCOHOL WORKSHOP** **A. Assignments and Procedures** 1. Team assignments. a. One member will be an examiner and will complete all portions of the exam. b. One member will be the recorder and document the findings of the examination on the evaluation form. c. All others in the group will observe/coach. d. Each team member will conduct at least one complete examination. 2. Explanation of testing procedures. a. Each team will conduct the following sequence of tests and examinations on each volunteer:	Group the participants into teams. The number of students in each team is determined by dividing the total number of students by the total number of volunteer drinkers. Example: if there are 23 students and 7 volunteer drinkers, form five teams of three members and two teams of four members. (**NOTE**: All volunteer drinkers must read and sign the "Statement of Informed Consent" form prior to receiving any alcohol.) Write the sequence of tests and examinations on the chalkboard or flip-chart.

Aides	Lesson Plan	Instructor Notes
	o First pulse o HGN (record onset angle in each eye) o Vertical Nystagmus o Lack of Convergence o Romberg Balance o Walk and Turn o One Leg Stand (on left foot) o One Leg Stand (on right foot) o Finger to Nose o Estimation of Pupil Size (under room light and direct light) o Final pulse b. Teams will record the results of each test and examination. c. Upon completing the test and examinations, the team members will record their best guess as to the volunteer's BAC.	Emphasize that the team will administer each test only <u>once</u> to each volunteer, e.g., only one member of a team will administer the HGN test to a particular volunteer. Emphasize that the tests and examinations are to be given in the order listed for all volunteers. Solicit questions about the testing procedures. Hand out test recording forms to the teams.

Aides	Lesson Plan	Instructor Notes
 **75 Minutes**  **V-2** (Alcohol Workshop Checklist)  **30 Minutes**	**B. Testing**	Monitor the testing to ensure compliance with the procedures. Always allow a team to complete the full sequence of tests and examinations before sending the volunteer to another team. Offer coaching and constructive criticism as appropriate.
	C. Feedback and Discussion	Transcribe on the board the matrix found at the end of this session to be completed during the discussion phase of the workshop. For each volunteer, select <u>one</u> team to report in detail on each test and examination administered to that volunteer. Call upon students to report their best guesses as to that volunteer's BAC. Inform the students of the results of that volunteer's breath tests. Continue this process until all volunteers have been reported upon. Solicit students' questions and comments.

Drinker's Name	Below .05	.05 - .09	.10 - .14	.15 or Greater

Objectives

000135

- Administer the Psychophysical Tests and the Eye Examinations to persons who have consumed varying amounts of alcohol.
- Document the results of these tests and examinations.
- Accurately assess the extent of a person's alcohol-impairment based on the tests and examinations.

Testing Procedures

- HGN
- Vertical Nystagmus
- Lack of Convergence
- Estimation of Pupil Size
- Romberg Balance
- Walk and Turn
- One Leg Stand - Left Right
- Finger to Nose

Three Hours

SESSION VI

EXAMINATIONS OF VITAL SIGNS

SESSION VI EXAMINATIONS OF VITAL SIGNS

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

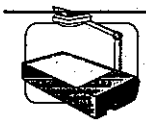
- Define basic terms relevant to pulse rate and blood pressure measurements.
- Measure pulse rate.
- Measure blood pressure.
- Relate the expected results of vital signs examinations to the various categories of drugs.

CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Purposes of the Examinations	o Instructor-Led Presentations
B. Procedures and Cues	o Instructor-Led Demonstrations
C. Demonstrations	o Hands-on Practice
D. Relationship of Drug Categories to the Vital Signs Examinations	
E. Practice	

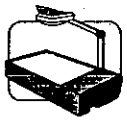
Aides	Lesson Plan	Instructor Notes
 **180 Minutes**  **VI-1** (Objectives)  **5 Minutes**	**EXAMINATIONS OF VITAL SIGNS**	Session title on wallchart. Briefly review the content, objectives and activities of this session.
	A. Purposes of the Examinations	
	1. The Vital Signs that are relevant to the drug evaluation and classification process include: a. Pulse rate b. Blood pressure c. Temperature	<u>Point out</u> these vital signs on the wallchart.
	2. Different types of drugs affect these vital signs in different ways. a. Certain drugs tend to "speed up" the body and <u>elevate</u> these vital signs.	<u>Clarification</u> o pulse may quicken o blood pressure may rise o temperature may rise
	b. Other drugs tend to "slow down" the body and <u>lower</u> these vital signs.	<u>Clarification</u> o pulse may slow o blood pressure may drop o temperature may fall

Aides	Lesson Plan	Instructor Notes
	3. Systematic examination of the vital signs gives us much useful information concerning the possible presence or absence of various categories of drugs.	Point out that for purposes of standardization, the pulse and blood pressure readings will be obtained using the left arm if at all possible.
 75 Minutes  VI-2 ("Pulse Definitions")	**B. Procedures and Cues**	
	1. Measurement of pulse rate.	
	a. Pulse is the expansion and relaxation of an artery generated by the pumping action of the heart.	
	b. Pulse Rate is the number of pulsations in an artery per minute.	Point out that pulse rate is equal to the number of contractions of the heart per minute.
	c. An artery is a strong, elastic blood vessel that carries blood from the heart to the body tissues.	
	d. A vein is a blood vessel that carries blood back to the heart from the body tissues.	
	e. When the heart contracts, it squeezes blood out of its chambers into the arteries.	
	f. The surging blood causes the arteries to expand.	
	g. 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.	Emphasize: The "surge" can be felt as the blood is squeezed from the heart through an artery. The pulse cannot be felt in a vein.

Aides	Lesson Plan	Instructor Notes
	h. By keeping your fingers on the artery and counting the number of pulses that occur in one minute, you will measure the pulse rate.	Demonstrate this, by holding your fingers on your own radial artery.
	i. Pulse is easy to measure, once you locate an artery close to the surface of the skin.	
 **VI-3** ("Radial Artery")	j. One convenient pulse point involves the radial artery.	
	o 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.
	o Hold your left hand out, with the palm down.	Demonstrate this.
	o Place the tips of your right hand's index finger and middle finger into the crease of your left wrist, and exert a slight pressure.	Demonstrate this.
	o Allow your left hand to curl downward.	Demonstrate this.
	o You should be able to feel the pulse in your radial artery.	Ask students whether they can feel their pulses. Coach any students who have difficulty in locating the pulse.

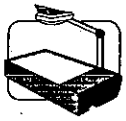
Aides	Lesson Plan	Instructor Notes
 **VI-4** ("Brachial Artery")	k. Another pulse point involves the brachial artery.	
	o The brachial artery can be located in the crook of the arm, halfway between the center of the arm and the side of the arm closest to the body.	Point to the brachial artery pulse point in your own arm. Instruct students to roll up their sleeves, if necessary, to expose their brachial artery pulse points.
	o Hold your left hand out, with the palm up.	Demonstrate this.
	o 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.	Demonstrate this.
	o You should be able to feel the pulse in your brachial artery.	Ask students whether they can feel their pulses. Coach any students who have difficulty locating the pulse.
	l. Another pulse point involves the carotid artery.	
	o 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.
	o Place the tips of your right hand's index and middle fingers alongside the right side of your Adam's apple.	Demonstrate this.

Aides	Lesson Plan	Instructor Notes
	o You should be able to feel the pulse in your carotid artery.	Ask students whether they can feel their pulses. Coach any students who have difficulty locating the pulse.
	m. Basic do's and don'ts of measuring pulse.	
	o 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. If you apply pressure with the thumb, you may wind up measuring your own pulse when you think you are measuring the suspect's.
	o 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.	
	o When measuring the pulse rate, use 30 seconds as the standard time interval.	Point out that pulse rate is always expressed as "beats per minute". If you count the beats during an interval of 30 seconds, you must double the result to obtain the pulse rate.
	n. Students' initial practice at measuring pulse rate.	Instruct students to work in pairs, taking turns measuring each other's pulse. Tell students to record on paper their partner's pulse rates. Monitor, coach and critique the students' practice. Allow the practice to continue for only about 5 minutes.

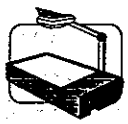
Aides	Lesson Plan	Instructor Notes
		Print the following lists on the chalkboard or flip-chart: 50 or less ____ 76-78 ___ 52-54 ___ 80-82 ___ 56-58 ___ 84-86 ___ 60-62 ___ 88-90 ___ 64-66 ___ 92-94 ___ 68-70 ___ 96-98 ___ 72-74 ___100 or more ___ Tabulate the numbers of students whose pulse rates were in each of the listed intervals. Point out that the "normal range" of pulse rate is 60-90 beats per minute.
 **VI-5** ("Blood Pressure Definitions")	2. Measurement of blood pressure. a. Blood Pressure is the force that the circulating blood exerts on the walls of the arteries. b. Blood Pressure changes constantly as the heart contracts and relaxes. c. Blood Pressure reaches its maximum as the heart contracts and sends the blood surging through the arteries. This is called the systolic pressure.	

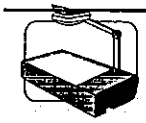
Aides	Lesson Plan	Instructor Notes
	d. Blood Pressure reaches its minimum when the heart is fully expanded. This is called the diastolic pressure.	
	e. It is always necessary to measure and record both the systolic and diastolic blood pressure.	Remind students that "systolic" is the higher number, "diastolic" the lower number. Memory aid: Systolic: "S" for "Superior" Diastolic: "D" for "Down"
	f. The device used for measuring blood pressure is called a sphygmomanometer.	Write "SPHYGMOMANOMETER" on the flipchart. Exhibit a sphygmomanometer.
	g. The sphygmomanometer has a special cuff that can be wrapped around the subject's arm and inflated with air pressure.	Select a student to come before the class. Have the student sit in a chair facing the class, and roll up a sleeve (if necessary) to expose the left bicep. Wrap the cuff around the student-volunteer's arm and inflate it.
	h. As the pressure in the cuff increases, the cuff squeezes tightly on the arm.	Ask the student-volunteer whether he or she can feel the pressure of the cuff.
	i. When the pressure gets high enough, it will squeeze the artery completely shut.	Ask students: "What artery is located in the crook of the arm?" (Point to that location on the student-volunteer's arm).

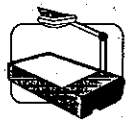
Aides	Lesson Plan	Instructor Notes
	j. Blood will cease flowing through the brachial artery. And, since the brachial artery "feeds" the radial artery, blood will also cease flowing through the radial artery.	Release the pressure in the cuff on the student-volunteer's arm.
	k. If we slowly release the air in the cuff, the pressure on the arm and on the artery will start to drop.	
	l. Eventually, the pressure will drop enough so that blood will once again start to flow through the artery. o Blood will start flowing in the artery once the pressure inside the artery equals the pressure outside the artery. o The two pressures will become equal when the air pressure in the cuff drops down to the systolic pressure. o When that happens, blood will spurt through the artery each time the heart contracts.	Ask students: "How far must the pressure in the cuff drop before the blood can start to squeeze through the artery?"
		Ask students: "What would happen if we allowed the pressure in the cuff to drop down to the systolic level, and held the air pressure at that level?"

Aides	Lesson Plan	Instructor Notes
		Point out that the blood would spurt through the artery each time the heart contracted, but would cease flowing when the heart expanded. Ask students: "How far down must the air pressure in the cuff drop before the blood will flow through the artery continuously?"
	o Once the air pres-sure in the cuff drops down to the diastolic level, the blood will flow continuously through the artery.	
 **VI-6** ("The Basics of Blood Pressure Measure-ment")	m. Overview of procedures for measuring blood pressure.	
	o Apply enough air pressure to the cuff to cut off the flow of blood through the artery.	Demonstrate, using the student-volunteer (apply pressure to the cuff) As DREs we usually inflate the cuff until the manometer shows a reading of approximately 180mmHg.
	o 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. Emphasize that the pressure should drop at approximately 2 mmHg per second. (5 sec for each 10mm drop)

Aides	Lesson Plan	Instructor Notes
	o Continue to release the air pressure until the blood flows continuously through the artery: that level will be the <u>diastolic</u> pressure.	
		<u>Ask</u> students: (1) "How can we tell when the blood starts to spurt through the artery?" (2) "How can we tell when the blood is flowing continuously through the artery?"
	n. We can <u>listen</u> to the spurting blood, using a <u>stethoscope</u>.	<u>Exhibit</u> a stethoscope.
	o Apply the stetho-scope to the skin directly above the artery.	<u>Demonstrate</u>, using the student-volunteer.
	o Apply pressure to the cuff, enough to cut-off the flow of blood.	<u>Inflate</u> the cuff on the student-volunteer's arm.
	o When no blood is flowing through the artery, we hear <u>nothing</u> through the stethoscope.	
	o Slowly release the air from the cuff, letting the pressure start to drop.	<u>Release</u> the air in the cuff.
	o When we drop to the systolic pressure, we start to hear a <u>spurting</u> sound.	<u>NOTE</u>: This begins as a clear, tapping sound.

Aides	Lesson Plan	Instructor Notes
	o 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.
	o When we drop to the diastolic pressure, the blood flows steadily and all sounds cease.	Excuse the student-volunteer and thank him or her for participating.
 VI-7 ("Korotkoff Sounds")	o. The sounds that we listen to are called Korotkoff Sounds. They are divided into 5 phases.	
	o Phase 1 - the first appearance of clear, tapping sounds that gradually increase in intensity.	Point out that the beginning of Phase 1 corresponds to the systolic pressure.
	o Phase 2 - the sounds change to a murmur and take on a swishing quality.	
	o Phase 3 - the sounds develop a loud, knocking quality (not quite as clear as the Phase 1 sounds).	
	o Phase 4 - the sounds suddenly become muffled and again have a faint swishing quality.	
	o Phase 5 - the sounds cease.	Point out that the beginning of Phase 5 corresponds to the diastolic pressure.

Aides	Lesson Plan	Instructor Notes
 VI-8 ("Sphygmo-manometer")	q. Familiarization with the sphygmomanometer.	Hand out stethoscopes and sphygmomanometers (one per each student is desirable. At a minimum, there should be one for every four students).
	o The compression cuff contains an inflat-able rubber bladder.	Point out the components of the sphygmomanometer on Visual VI-7.
	o A tube connects the bladder to the manometer, or pressure gauge.	Clarification: The manometer displays the air pressure inside the bladder.
	o Another tube con-nects the bladder to the pressure bulb, which can be squeezed to inflate the bladder.	
	o The pressure control valve permits infla-tion 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.	Demonstrate this.
	- 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.	

Aides	Lesson Plan	Instructor Notes
	- To <u>deflate</u> the bladder, twist the valve to the left. - The more the valve is twisted to the left, the faster the bladder will deflate.	
 **VI-9** ("Details")	r. Details of blood pressure measurement.	
	o Position the cuff on the bicep so that the tubes extend down the middle of the arm.	<u>Select</u> a student to serve as a blood pressure subject. Demonstrate the procedures using the student.
	o Wrap the cuff snugly around the bicep.	
	o Clip the manometer (pressure gauge) on the subject's sleeve, so that it is readily viewable.	
	o Twist the pressure control valve all the way to the right.	
	o Put the stethoscope earpieces in your ears.	<u>Make sure</u> the earpieces are turned forward, i.e., toward the nose.
	o Place the diaphragm or bell of the stethoscope over the brachial artery.	
	o Rapidly inflate the bladder to a pressure of 180.	

Aides	Lesson Plan	Instructor Notes
	o Twist the pressure control valve slightly to the left to release the pressure slowly.	Emphasize the need to release the pressure slowly. If the pressure drops too fast, the needle will sweep down the gauge too quickly to be read accurately. The pressure should be released at a speed that takes one second for the needle to move a single gradation (i.e., 2 millimeters of mercury) on the gauge.
	o Keep your eyes on the gauge and listen for the Korotkoff sounds.	Point out that the needle on the pressure gauge generally will "bounce" slightly when blood starts to spurt through the artery. Excuse the student and thank him or her for participating. Solicit students' questions concerning these procedures. Point out that "normal" values of blood pressure are: Systolic 120 - 140 Diastolic 70 - 90 Note, however, that "normal" people can have significantly different blood pressures: there is wide variation in human blood pressure.
	s. Do's and Don'ts of blood pressure measurement:	
	o If you inflate the bladder and then need to repeat the measurement, wait at least three minutes to allow the subject's artery to return to normal.	Point out that if difficulty is encountered in hearing the Korotkoff sounds, try having the subject raise his/her arm and clench the fist to allow blood flow back to the heart.

Aides	Lesson Plan	Instructor Notes
	o Hold the bell of the stethoscope with your fingers; don't slide it under the cuff: that will distort the measurement.	
	t. Students initial practice at measuring blood pressure.	If at least one sphygmomanometer and stethoscope are available for every two students, instruct students to practice in pairs. Otherwise, assign students to practice in teams of 3 or 4 members.
	3. Measurement of temperature.	
	a. Temperature is measured orally using an electronic thermometer.	Exhibit this. Point out that the "normal" range for body temperature taken orally is 98.6 degrees +/- 1 degree.
	b. Make sure that a fresh disposable mouthpiece is used each time.	Solicit students' comments and questions concerning this overview of procedures and cues.
15 Minutes	**C. Demonstrations**	
	1. Pulse rate measurement demonstrations.	Select two students to come before the class.
	a. Radial artery pulse point.	Instruct the first student to measure the second's pulse using the radial artery pulse point. (Simultaneously, the instructor should measure the subject's pulse using a carotid artery pulse point).

Aides	Lesson Plan	Instructor Notes
	b. Carotid artery pulse point.	Instruct the second student to measure the first's pulse using the carotid artery pulse point. (Simultaneously, the instructor should measure the subject's pulse using a radial artery pulse point.) Excuse the two students and thank them for participating.
	2. Blood pressure measurement demonstrations.	Select two other students to come before the class. Instruct the first student to measure the second's blood pressure. Have the students reverse roles. Excuse the two students and thank them for participating.
 **15 Minutes** 	**D. Relationship of Drug Categories to the Vital Signs Examinations.**	Note: Draw the Matrix at the end of this session on the Chalkboard or Flipchart at the Outset of this Segment.
	1. All seven categories of drugs ordinarily will affect pulse rate and blood pressure.	
	2. Two of the categories usually will lower pulse and blood pressure.	Ask the students to guess which categories will lower pulse rate and blood pressure.

Aides	Lesson Plan	Instructor Notes
	a. Narcotic Analgesics usually lower pulse and BP.	Write "DOWN" on the pulse and blood pressure lines under the columns for Depressants (with the footnote except soma and quaaludes) and Narcotics.
	b. So do CNS Depressants except soma and quaaludes.	
	3. The other five categories all tend to elevate pulse rate.	Write "UP" on the pulse line under the five remaining columns.
	4. Most of the drugs that elevate pulse rate also elevate blood pressure.	
	a. Stimulants, Hallucino-gens, PCP and Cannabis all usually cause blood pressure to rise.	Write "UP" on the blood pressure line for those four categories.
	b. The vast majority of Inhalants -- namely, the volatile solvents and the aerosols -- also elevate blood pressure.	
	c. But the remaining small group of Inhalants -- the anesthetic gases -- actually lower the blood pressure.	Remind students that the anesthetic gases include such things as nitrous oxide, amyl nitrite and ether.
	d. So for Inhalants, we can say about the effect on blood pressure is that it will be up or down.	Write up/down with the footnote - down with anesthetic gases, up with volatile solvents and aerosols on the blood pressure line under the Inhalants column.
	5. Three of the categories usually will cause the body temperature to rise.	Ask students to guess which categories usually cause an elevation in body temperature.

Aides	Lesson Plan	Instructor Notes
	a. PCP usually increases body temperature; PCP users have been known to remove their clothing in an effort to cool down.	Write "UP" on the "TEMP" line under the PCP column.
	b. CNS Stimulants and Hallucinogens also will usually increase body temperature.	Write "UP" on the "TEMP" line for Stimulants and Hallucinogens.
	6. The effect of Inhalants on body temperature depends on the specific substance that is inhaled.	Write "up/down/or normal" on the "TEMP" line for Inhalants.
	a. Some inhalants may cause temperature to increase or be down.	
	b. But other inhalants may leave the temperature near normal.	
	7. One category usually causes body temperature to be lowered.	Ask students to guess which category usually lowers temperature.
	a. Narcotic Analgesics usually lower body temperature.	Write "DOWN" on the "TEMP" line for Narcotics.
	8. The remaining two categories usually do not affect temperature.	Write "NORMAL" on the "TEMP" line for Depressants and Cannabis.
		Solicit students' questions and comments.

Aides	Lesson Plan	Instructor Notes
 **70 Minutes**	**E. Practice** 1. Assignments and procedures. a. Team assignments. b. Explanation of practice procedures. o Teammates will take turns measuring each other's pulse rate and blood pressure. o Each student will write down every measurement he or she makes and the time at which the measurement was made. o Whichever member of the team is not engaged in taking the measurement or in serving as the "suspect" will act as a coach and offer appropriate constructive criticism to his or her teammate.	Group the students into teams of three (3) members each. Each team must have at least one blood pressure kit.

Aides	Lesson Plan	Instructor Notes
	o Practice will continue until each student has taken at least three complete pulse and blood pressure measurements on both teammates. 2. Testing (students testing students).	Solicit questions about the practice procedures. Monitor the practice to ensure compliance with the procedures. Offer coaching and constructive criticism as appropriate.

	DEPRESS	STIMULS	HALLUCS	PCP	NARCOTS	INHALS	CANNABIS
PULSE							
BLOOD PRESS							
TEMP							

Objectives

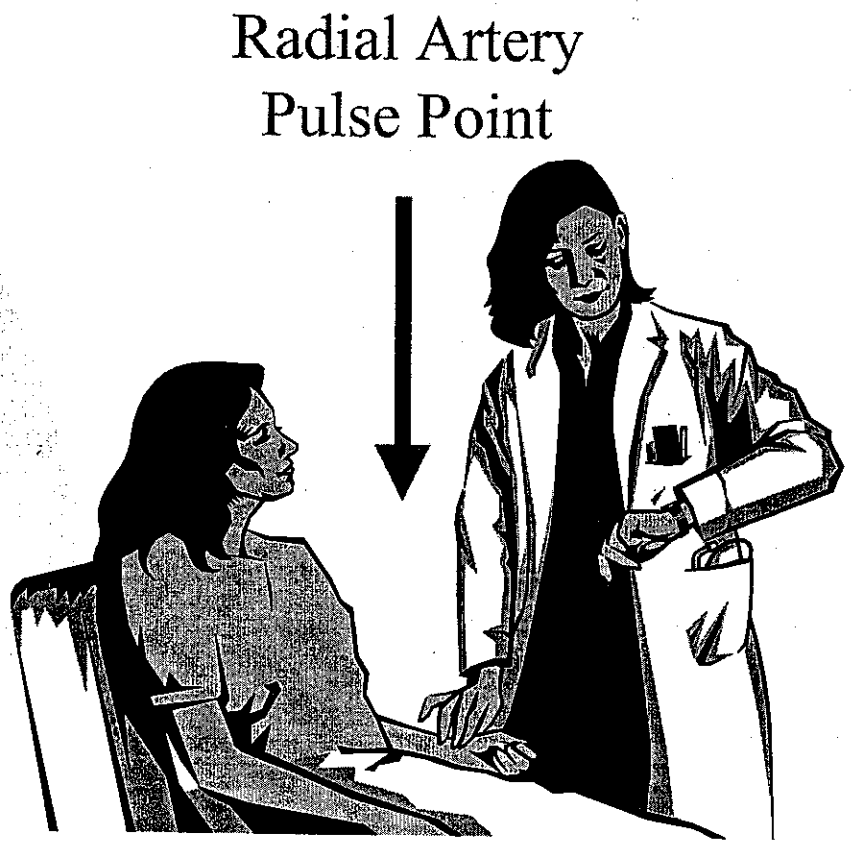
000160

- Define basic terms relevant to pulse rate and blood pressure measurements.
- Measure pulse rate.
- Measure blood pressure.
- Relate the expected results of vital signs examinations to the various categories of drugs.

Definitions Concerning "Pulse"

- PULSE
  - The expansion and relaxation of an artery due to 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's tissues.
- VEIN
  - A blood vessel that carries blood back to the heart from the body's tissues.

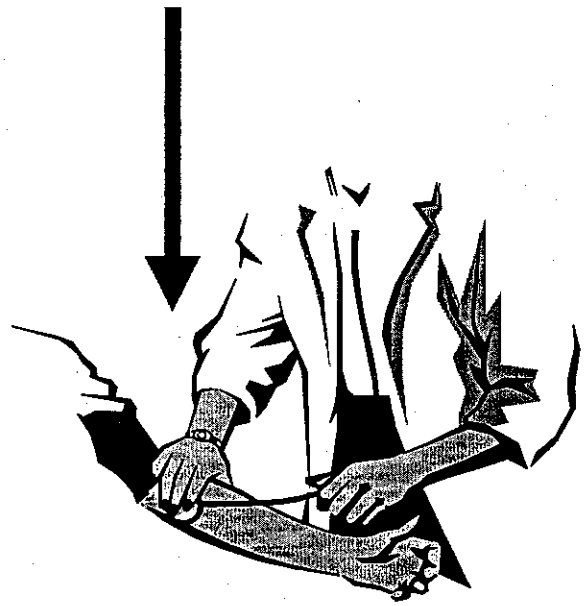
Radial Artery



Brachial Artery

000163

Brachial Artery
Pulse Point



Definitions Concerning "Blood Pressure"

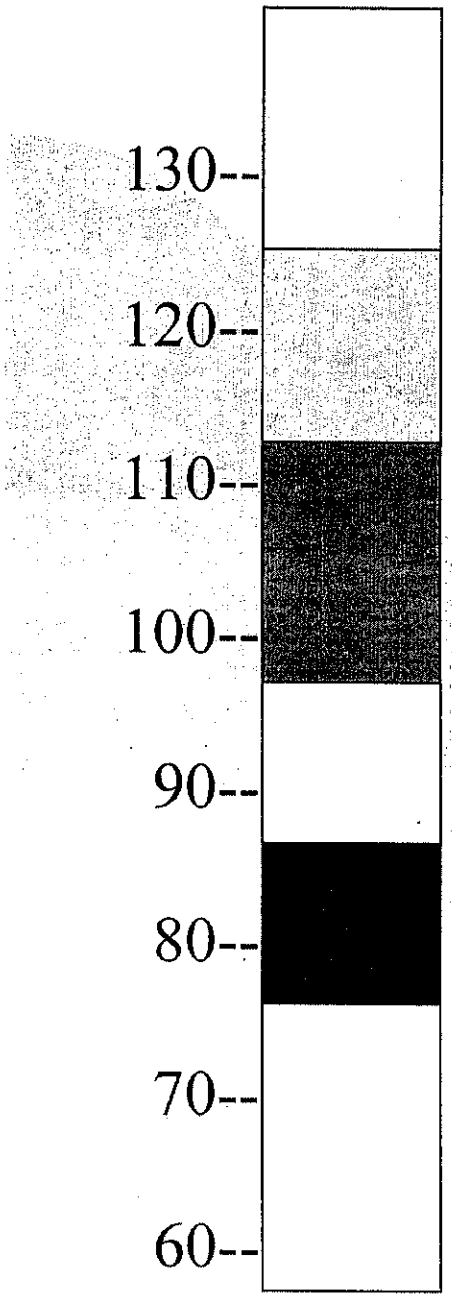
- Blood Pressure
  - The force that the circulating blood exerts on the walls of the arteries.
- Systolic Pressure
  - The maximum blood pressure, reached as the heart contracts.
- Diastolic Pressure
  - The minimum pressure, reached when the heart is fully expanded.

The Basics of Blood Pressure Measurement

000165

- Apply enough air pressure to cut off the flow of blood through the artery.
- Slowly release the air, about 2mmHg 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.

Korotkoff Sounds



Phase 1 begins (SYSTOLIC)
CLEAR, TAPPING SOUNDS

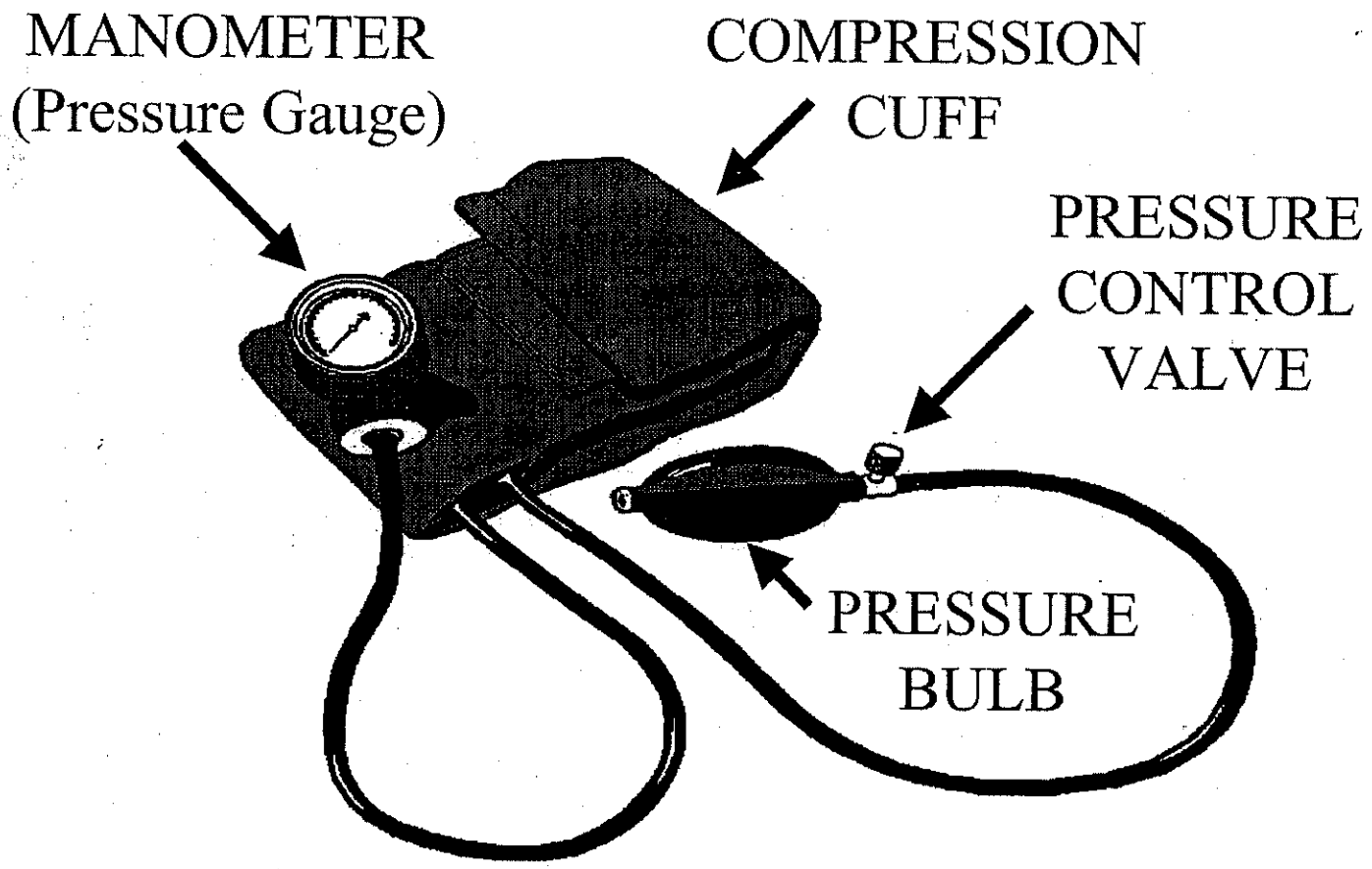
Phase 2 begins
SOUNDS CHANGE TO MURMUR, TAKE ON A "SWISHING" QUALITY

Phase 3 begins
SOUNDS DEVELOP A LOUD, KNOCKING QUALITY

Phase 4 begins
SOUNDS BECOME MUFFLED, "SWISHING"

Phase 5 begins (DIASTOLIC)
THE SOUNDS CEASE

Sphygmomanometer



Details of Blood Pressure Measurement

000168

1. Position cuff on bicep so that tubes extend down middle of arm.
2. Wrap cuff snugly around bicep.
3. Clip manometer to subject's sleeve.
4. Twist pressure control valve all the way to the right.
5. Put stethoscope earpieces in your ears.
6. Place stethoscope over brachial artery.
7. Rapidly inflate bladder to 180.
8. Twist the valve slightly to the left.
   (pressure should drop at 2 mmHg per second)
9. Keep your eyes on the gauge and listen for the Korotkoff sounds.

Seventy-Five Minutes

SESSION VII

OVERVIEW OF SIGNS AND SYMPTOMS

SESSION VII OVERVIEW OF SIGNS AND SYMPTOMS

Upon successfully completing this session, the participants will be able to:

- Give examples of specific drugs belonging to the seven categories.
- Describe the major signs and symptoms of impairment associated with each category.

CONTENT SEGMENTS

A. CNS Depressants

B. CNS Stimulants

C. Hallucinogens

D. Phencyclidine

E. Narcotic Analgesics

F. Inhalants

G. Cannabis

H. Wrap-Up

LEARNING ACTIVITIES

- Interactive Discussions

Aides	Lesson Plan	Instructor Notes
 **75 Minutes**  **VII-1** (Objectives) 	**OVERVIEW OF SIGNS AND SYMPTOMS**	Briefly review the content, objectives and activities of this session. Note: Prior to the Start of this Session, Draw the Matrix found at the end of this session on the Chalkboard or Flip-chart.
	1. Sign: An observable or detectable indicator of drug influence. (i.e., dilated pupils, vital signs) 2. Symptom: A subjective indicator of drug influence that is reported by the drug-impaired subject. (i.e., "I feel nauseous.")	Frequently the term "objective symptoms" is used in law enforcement to refer to "signs".
 **10 Minutes**	**A. CNS Depressants**	
	1. Central Nervous System Depressants is a category that includes many different drugs.	Ask students to name some examples of CNS Depressants. Make sure that the examples given include alcohol, some barbiturates and some tranquilizers.
	2. Indicators of CNS Depressant influence found in Eye Exams.	Ask students: "Do depressants induce Horizontal Gaze Nystagmus?"

Aides	Lesson Plan	Instructor Notes
	a. HGN usually will be present.	Write "Present" on the "HGN" line for Depressants. Ask: "Do Depressants induce Vertical Nystagmus?"
	b. Vertical Nystagmus may be present, especially with high doses (for that individual) of depressants.	Write "Present" on the "VERT NYST" line for Depressants. Denote in parentheses above "(High Doses)". Ask: "Do Depressants cause the eyes to be unable to converge?"
	c. Under the influence of depressants, lack of convergence usually will be present.	Write "Present" on the "LACK CONV" line for Depressants. Ask: "How do Depressants affect pupil size?"
	d. Depressants usually do not affect pupil size; therefore, Depressants usually leave the pupils near normal in size.	Write "Normal" on the "PUPIL SIZE" line for Depressants.
	o But some specific depressant drugs do affect pupil size.	Ask: "What are the Depressants that affect pupil size?"
	o Methaqualone (Quaaludes) and Soma causes pupils to dilate.	Put a (1) next to "Normal" and write "Common exceptions: Soma and Quaaludes " below the matrix.
	e. Depressants generally will cause pupillary reaction to light to be sluggish.	Write "Slow" on the "RCTN-LIGHT" line for Depressants.
	3. Indicators of CNS Depressant influence found in checks of Vital Signs.	Ask: "How do Depressants affect pulse rate?"

Aides	Lesson Plan	Instructor Notes
	a. Depressants usually lower pulse rate.	Write "Down" on the "PULSE" line for Depressants.
	o But some specific depressant drugs may elevate the pulse.	Ask: "What are the Depressants that may elevate pulse rate?"
	o Methaqualone (Quaaludes) and alcohol may cause an elevation in pulse rate.	Put a (2) next to "Down" and write "Quaaludes and ETOH may elevate." below the matrix.
		Ask: "How do Depressants affect blood pressure?"
	b. Depressants usually lower blood pressure.	Write "DOWN" on the "BLOOD PRESS" line for Depressants.
		Ask: "How do Depressants affect body temperature?"
	c. Depressants usually leave temperature near normal.	Write "Normal" on the "TEMP" line for Depressants.
		Solicit students' questions about CNS Depressants.
	**B. CNS Stimulants**	
10 Minutes		
	1. The category called Central Nervous System Stimulants includes many drugs.	Ask students to name some examples of CNS Stimulants. Make sure the examples include cocaine and some amphetamines.
	2. Indicators of CNS Stimulant influence found in Eye Exams.	Ask students: "Do Stimulants induce Horizontal Gaze Nystagmus?"
	a. HGN will not be present.	Write "None" on the "HGN" line for Stimulants.

Aides	Lesson Plan	Instructor Notes
		Ask: "Do Stimulants induce Vertical Nystagmus?"
	b. Vertical Nystagmus will not be present.	Write "None" on the "VERT NYST" line for Stimulants.
		Ask: "Do Stimulants cause the eyes to be unable to converge?"
	c. Under the influence of stimulants, the eyes should still be able to converge; therefore, lack of convergence will not be present.	Write "None" on the "LACK CONV" line for Stimulants.
		Ask: "How do Stimulants affect pupil size?"
	d. Stimulants usually cause the pupils to dilate.	Write "Dilated" on the "PUPIL SIZE" line for Stimulants.
	e. We have seen that CNS Depressants effect pupillary reaction; similarly, CNS Stimulants may cause a slowing in the pupillary reaction to light.	Write "Slow" on the "RCTN-LIGHT" line for Stimulants.
	3. Indicators of CNS Stimulant influence found in checks of Vital signs.	Ask: "How do Stimulants affect pulse rate?"
	a. Stimulants usually increase pulse rate.	Write "Up" on the "PULSE" line for Stimulants.
		Ask: "How do Stimulants affect blood pressure?"
	b. Stimulants usually increase blood pressure.	Write "Up" on the "BLOOD PRESS" line for Stimulants.
		Ask: "How do Stimulants affect body temperature?"
	c. Stimulants usually elevate body temperature.	Write "Up" on the "TEMP" line for Stimulants.

Aides	Lesson Plan	Instructor Notes
	d. Though not directly related to the vital signs, the evaluator may find the subjects muscle tone to be rigid with possible body tremors. A grinding of the teeth , referred to as "bruxism", may also be noticed.	Point out that, as shown on the matrix, the signs of Stimulant influence are almost exactly opposite to the signs of Depressant influence. Solicit students' questions about CNS Stimulants.
 **10 Minutes**	**C. Hallucinogens**	
	1. Hallucinogens include some naturally-occurring substances as well as some synthetic drugs.	Ask students to name some hallucinogenic drugs. Make sure the examples include some natural hallucinogens as well as some synthetics.
	2. Indicators of Hallucinogen influence found in Eye Exams.	Ask students: "Do Hallucinogens induce Horizontal Gaze Nystagmus?"
	a. HGN will not be present.	Write "None" on the "HGN" line for Hallucinogens. Ask: "Do Hallucinogens induce Vertical Nystagmus?"
	b. Vertical Nystagmus will not be present.	Write "None" on the "VERT NYST" line for Hallucinogens. Ask: "Do Hallucinogens cause the eyes to be unable to converge?"
	c. Under the influence of Hallucinogens, the eyes should still be able to converge; therefore, lack of convergence will not be present.	Write "None" on the "LACK CONV" line for Hallucinogens. Ask: "How do Hallucinogens affect pupil size?"
	d. Hallucinogens usually cause the pupils to dilate.	Write "Dilated" on the "PUPIL SIZE" line for Hallucinogens.

Aides	Lesson Plan	Instructor Notes
	e. Normally Hallucinogens do not effect pupillary reaction to light. o However, Psychedelic Amphetamines will cause a slowing in the pupillary reaction.	Write "Normal" on the "RCTN-LIGHT" line for Hallucinogens. Put a (3) next to "Normal", and write Psychedelic Amphetamines cause slowing.
	3. Indicators of Hallucinogen influence found in checks of Vital Signs.	Ask: "How do Hallucinogens affect pulse rate?"
	a. Hallucinogens usually increase pulse rate.	Write "Up" on the "PULSE" line for Hallucinogens. Ask: "How do Hallucinogens affect blood pressure?"
	b. Hallucinogens usually increase blood pressure.	Write "Up" on the "BLOOD PRESS" line for Hallucinogens. Ask: "How do Hallucinogens affect body temperature?"
	c. Hallucinogens usually elevate body temperature.	Write "Up" on the "TEMP" line for Hallucinogens. Point out that, as shown on the matrix, the major signs of Hallucinogen influence are identical to the major signs of Stimulant influence. If we only had these major signs to go by, it would be impossible to distinguish between someone under the influence of stimulants from someone under the influence of hallucinogens.

Aides	Lesson Plan	Instructor Notes
		Point out that, in their seven-day DRE school, the students will learn of more subtle indicators that help to distinguish hallucinogen influence from stimulant influence. But emphasize that it <u>is</u> often difficult to distinguish between these two categories. Solicit students' questions about hallucinogens.
 **10 Minutes**	**D. Phencyclidine (PCP)**	
	1. The category called Phencyclidine consists of the drug PCP and its various analogs.	Ask students: "What does 'analog' mean in this context?"
	a. An 'analog' of PCP is a drug that is a 'chemical first cousin' of PCP; that is, it is a drug that has a slightly different molecular structure from that of PCP, but produces the same effects as PCP.	
	b. One of the analogs of PCP is the drug called Ketamine.	Write "Ketamine: An analog of PCP" on the chalkboard or flip-chart.
	c. Ketamine is a legally-manufactured (but controlled) drug that is used as an anesthetic in some surgical applications.	

Aides	Lesson Plan	Instructor Notes
	d. There are numerous other analogs of PCP as well.	
	2. Indicators of PCP influence found in Eye Exams.	Ask students: "Does PCP induce Horizontal Gaze Nystagmus?"
	a. HGN usually will be present, and often with a very early onset.	Write "Present" on the "HGN" line for PCP. Ask: "Does PCP induce Vertical Nystagmus?"
	b. Vertical Nystagmus usually will be present.	Write "Present" on the "VERT NYST" line for PCP. Ask: "Does PCP cause the eyes to be unable to converge?"
	c. Under the influence of PCP, lack of convergence usually will be present.	Write "Present" on the "LACK CONV" line for PCP. Ask: "How does PCP affect pupil size?"
	d. PCP does not affect pupil size; therefore, a person under the influence of PCP usually will have pupils that are near normal in size.	Write "Normal" on the "PUPIL SIZE" line for PCP.
	e. PCP normally will not effect pupillary reaction to light.	Write "Normal" on the "RCTN-LIGHT" line for PCP.
	3. Indicators of PCP influence found in checks of Vital Signs.	Ask: How does PCP affect pulse rate?"
	a. PCP usually increases pulse rate.	Write "Up" on the "PULSE" line for PCP. Ask: "How does PCP affect blood pressure?"

Aides	Lesson Plan	Instructor Notes
	b. PCP usually elevates blood pressure.	Write "Up" on the "BLOOD PRESS" line for PCP. Ask: "How does PCP affect body temperature?"
	c. PCP usually elevates body temperature.	Write "Up" on the "TEMP line for PCP. Point out that PCP tends to produce the <u>eye</u> indicators associated with Depressants, and the <u>vital sign</u> indicators associated with stimulants or hallucinogens. Solicit students' questions about PCP.
10 Minutes	**E. Narcotic Analgesics**	
	1. Narcotic Analgesics include some natural derivatives of opium as well as some synthetic drugs.	Ask students to name some examples of narcotic analgesics. Make sure the examples include some natural opiates as well as some synthetics.
	2. Indicators of Narcotic Analgesic influence found in Eye Exams.	Ask students: "Do Narcotics induce Horizontal Gaze Nystagmus?"
	a. HGN will not be present.	Write "None" on the "HGN" line for narcotics. Ask: "Do Narcotics induce Vertical Nystagmus?"
	b. Vertical Nystagmus will not be present.	Write "None" on the "VERT NYST" line for narcotics.

Aides	Lesson Plan	Instructor Notes
	c. Under the influence of narcotics, the eyes should still be able to converge; therefore, lack of convergence usually is not present.	Ask: "Do narcotics cause the eyes to be unable to converge?"
		Write "None" on the "LACK CONV" line for narcotics.
		Ask: "How do narcotics affect pupil size?"
	d. Narcotic Analgesics usually cause a very noticeable constriction of the pupils.	Write "Constricted" on the "PUPIL SIZE" line for narcotics.
	e. Though there is always some reaction to light, if the individual is alive, the constricted pupils caused by narcotic analgesics make it nearly impossible to perceive a change in pupil size. However, when observed it will generally be little or none visible.	Write "Little or None Visible" on the "RCTN-LIGHT" line for narcotics.
	3. Indicators of Narcotic Analgesic influence found in checks of Vital Signs.	Ask: "How do narcotics affect pulse rate?"
	a. Narcotics usually lower pulse rate.	Write "Down" on the "PULSE" line for narcotics.
		Ask: "How do narcotics affect blood pressure?"
	b. Narcotics usually lower blood pressure.	Write "Down" on the "BLOOD PRESS" line for narcotics.
		Ask: "How do narcotics affect body temperature?"

Aides	Lesson Plan	Instructor Notes
	c. Narcotics usually lower body temperature.	Write "Down" on the "TEMP" line for narcotics. Point out that Narcotics and Depressants tend to produce similar indicators in the Vital Signs, but very different indicators in the eyes. Solicit students' questions about Narcotic Analgesics.
 **10 Minutes**	**F. Inhalants**	
	1. The category of Inhalants includes a wide variety of gases and fumes that have the power to intoxicate.	Ask students to name some commonly-abused inhalants.
	2. Not all inhalants affect their users in exactly the same way. a. There is probably less consistency in the signs and symptoms of inhalants than there is with any other category. b. When we talk of the signs and symptoms of inhalants, we often must qualify our statements. c. For example, we may say that a particular effect will be observed "for <u>most</u> inhalants".	
	3. Indicators of Inhalant influence found in Eye Exams.	Ask students: "Do Inhalants induce Horizontal Gaze Nystagmus?"

Aides	Lesson Plan	Instructor Notes
	a. With <u>most</u> Inhalants, HGN usually will be present.	Write "Present" on the "HGN" line for Inhalants. Ask: "Do Inhalants induce Vertical Nystagmus?"
	b. With most Inhalants, Vertical Nystagmus may be present, especially with large doses.	Write "Present" on the "VERT NYST" line for Inhalants. Denote in parentheses above "(High Doses)". Ask: "Do Inhalants cause the eyes to be unable to converge?"
	c. Under the influence of Inhalants, lack of convergence usually will be present.	Write "Present" on the "LACK CONV" line for Inhalants. Ask: "How do Inhalants affect pupil size?"
	d. The effect of Inhalants on pupil size depends on the particular substance inhaled. o Most Inhalants usually leave the pupils near normal in size. o Some Inhalants may cause pupil dilation.	Write "Normal" on the "PUPIL SIZE" line for Inhalants. Put a (4) next to "Normal", and write "Normal, may be dilated." below the matrix.
	e. Depending on the substance used, inhallants may cause a slowed reaction to light or the pupils may react normally. However, the most frequently observed effect will be a sluggish reaction to light.	Write "Slow" on the "RCTN-LIGHT" line for inhalants.

Aides	Lesson Plan	Instructor Notes
	4. Indicators of Inhalant influence found in checks of Vital Signs.	Ask: "How do Inhalants affect pulse rate?"
	a. Inhalants usually elevate pulse rate.	Write "Up" on the "PULSE" line for Inhalants.
		Ask: "How do Inhalants affect blood pressure?"
	b. Most inhalants usually elevate blood pressure, but some inhalants lower blood pressure.	Write "Up/Down" on the "BLOOD PRESS" line for Inhalants. Put a (5) Next to "Up/Down" and write down with "Anesthetic Gases and "UP" with "Volatile Solvents and Aerosols".
		Ask: "How do Inhalants affect body temperature?"
	c. The effects of inhalants on temperature depend on the particular substance inhaled.	Write "Up/Down/or Normal" on the "TEMP" line for Inhalants.
		Solicit students' questions about Inhalants.
10 Minutes	**G. Cannabis**	
	1. Indicators of Cannabis influence found in Eye Exams.	Ask students: "Does Cannabis induce Horizontal Gaze Nystagmus?"
	a. HGN will not be present.	Write "None" on the "HGN" line for Cannabis.
		Ask: "Does Cannabis induce Vertical Nystagmus?"
	b. Vertical Nystagmus will not be present.	Write "None" on the "VERT NYST" line for Cannabis.

Aides	Lesson Plan	Instructor Notes
		Ask: "Does Cannabis cause the eyes to be unable to converge?"
	c. Under the influence of Cannabis, lack of convergence will be present.	Write "Present" on the "LACK CONV" line for Cannabis. Point out that Cannabis is the only category that induces lack of convergence but does not induce nystagmus.
		Ask: "How does Cannabis affect pupil size?"
	d. Under the influence of Cannabis, the pupils may be slightly dilated.	Write "Dilated" on the "PUPIL SIZE" line for Cannabis.
		Put a (6) next to "Dilated", and write "Possibly normal".
	e. The pupillary reaction to light will appear normal when under the influence of Cannabis.	Write "Normal" on the "RCTN-LIGHT" line for Cannabis.
	2. Indicators of Cannabis influence found in checks of Vital Signs.	Ask: "How does Cannabis affect pulse rate?"
	a. Cannabis usually elevates pulse rate.	Write "Up" on the "PULSE" line for Cannabis.
		Ask: "How does Cannabis affect blood pressure?"
	b. Cannabis usually elevates blood pressure.	Write "Up" on the "BLOOD PRESS" line for Cannabis.
		Ask: "How does Cannabis affect body temperature?
	c. Cannabis usually leaves temperature near normal.	Write "Normal" on the "TEMP" line for Cannabis.

Aides	Lesson Plan	Instructor Notes
		Solicit students questions about Cannabis.
 5 Minutes	**H. Wrap-Up**	Point out that the matrix summarizes the major signs of drug influence that are examined by drug recognition experts. But emphasize there are other signs that a DRE considers in reaching a determination as to the category or combination of drugs affecting a particular suspect. These additional signs will be covered in depth during the seven-day DRE School. Solicit students' questions.

	DEPRESS	STIMULS	HALLUCS	PCP	NARCOTS	INHALS	CANNABIS
HGN							
VERT NYST							
LACK CONV							
PUPIL SIZE							
RCTN-LIGHT							
PULSE RATE							
BLOOD PRESS							
TEMP							

Objectives

- Give examples of specific drugs belonging to the seven categories.
- Describe the major signs and symptoms of impairment associated with each category.

One Hour and Thirty Minutes

SESSION VIII

ALCOHOL AS A DRUG

SESSION VIII ALCOHOL AS A DRUG

Upon successfully completing, this session, the student will be better able to:

- Describe a brief history of alcohol;
- Identify common types of alcohols;
- Describe the physiologic processes of absorption, distribution and elimination of alcohol in the human body;
- Describe dose-response relationships that impact on alcohol's impairing effects.

CONTENT SEGMENTS

A. A Brief Overview of Alcohol

B. Physiologic Processes

C. Dose-Response Relationships

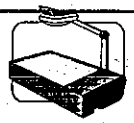
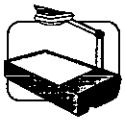
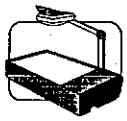
D. Questions for Review

LEARNING ACTIVITIES

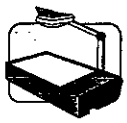
- Instructor-led Presentations
- Oral Quiz

Aides	Lesson Plan	Instructor Notes
90 Minutes **VIII-1** (Objectives)	**ALCOHOL AS A DRUG**	Briefly review the objectives, content and learning activities of this session. **POSE** this question to the class: "This is a course on drug impairment recognition; why do we have a session on alcohol?" **GUIDE** the students' responses to bring out these and other appropriate points: (1) Alcohol is a drug, and in fact is the most commonly-abused drug. (2) As DREs, the students will often encounter persons who are under the combined influence of alcohol and some other drug. (3) There are important fundamental concepts about drug impairment that we can introduce in the familiar context of alcohol, to help students grasp these concepts later in the context of other drugs.
25 Minutes **VIII-2** (Alcohol)	**A. A Brief Overview of Alcohol** 1. The word "Alcohol" refers to a number of distinct but similar chemicals.	

Aides	Lesson Plan	Instructor Notes
	a. Each of the chemicals that is called an "alcohol" is composed of the three elements, hydrogen, carbon and oxygen.	
	b. Each of the "alcohols" is a <u>drug</u> within the scope of our definition.	Clarification: All of the "alcohols" are chemicals that impair driving ability.
	c. But only one can be tolerated by the human body in substantial quantities.	Clarification: Most "alcohols" are highly toxic, and will cause blindness or death if consumed in significant quantities. Only one is intended for human consumption.
		ASK STUDENTS: What are the names of some of the chemicals that are "alcohols"?
 **VIII-3** (Some Types)	2. Three of the more commonly-known "alcohols" are Methyl, Ethyl and Isopropyl.	
	a. Methyl Alcohol, also known as **Methanol**, or "wood alcohol".	
	b. Ethyl Alcohol, also known as **Ethanol**, or "beverage alcohol".	EMPHASIZE: Ethanol is the only kind of alcohol that humans can tolerate in significant quantities.
	c. Isopropyl Alcohol, also known as **isopropanol**, or "rubbing alcohol".	
	3. Ethanol is the kind of alcohol on which we will focus, because it is the only type intended for human consumption.	

Aides	Lesson Plan	Instructor Notes
 **VIII-4** ("Ethanol")	a. Ethanol is the active ingredient in beer, wine whiskey and other alcoholic beverages intended for drinking. b. Like all "alcohols", ethanol is composed of hydrogen, carbon and oxygen.	
 **VIII-4** ("ETOH")	c. Chemists use a number of different symbols to represent ethanol.	
	d. We will stick with the symbol "ETOH".	Instructor, for your information: The "ET" represents "ethyl", and the "OH" represents an oxygen atom and hydrogen atom, bonded together in what the chemists refer to as the "hydroxy radical". All alcohols have an hydroxy radical in their molecules.
	4. Ethanol has been around for a long time. People drank it long before they learned to write.	
 **VIII-5** ("Production")	5. Ethanol is a naturally-occurring drug. That is, it is produced in nature through a process called **fermentation**. a. In fermentation, spores of yeast, carried by the wind, come in contact with fruit or grain that has fallen to the ground.	<u>Selectively reveal the first part only</u>.

Aides	Lesson Plan	Instructor Notes
	b. Sugars in the fruit or grain chemically react with the yeast, and produce ethanol.	POINT OUT that humans almost certainly first encountered ethanol that had been produced accidentally in this fashion.
	6. Of course, today we don't sit around waiting for the wind to bring yeast to fallen fruit: Most fermentation takes place **on purpose**, under controlled conditions.	
	7. Through the process of fermentation, we can produce a beverage that has, at most, about 14% ethanol.	ASK STUDENTS: "Why can't fermentation produce a higher ethanol concentration than 14%?"
	a. When the ethanol concentration reaches 14%, the yeast die, so fermentation stops.	
 VIII-5	b. If we want to have a higher concentration ethanol beverage, we have to use another step in the production.	Reveal the lower part of Visual.
	8. **Distillation** is the process used to produce a higher concentration of ethanol.	
	a. In distillation, a fermented beverage is heated to the point where the ethanol begins to boil.	POINT OUT that ethanol starts to boil at a lower temperature than does water.
	b. The ethanol vapor is collected and allowed to cool until it turns back into a liquid.	

Aides	Lesson Plan	Instructor Notes
	c. By repeating the process of heating the liquid and collecting and cooling the vapors, higher and higher concentrations of ethanol can be produced.	
	d. Ethanol beverages that are produced by distillation are called **distilled spirits**.	ASK STUDENTS to name some "distilled spirits" (e.g., whiskey; vodka; gin; rum; etc.)
	9. Over the centuries in which people have produced ethanol, some standard-sized servings of different beverages have evolved.	
 **VIII-6** ("Standard")	a. Beer is usually served in 12-ounce cans or bottles. Since beer averages an ethanol concentration of four percent, a can or bottle contains a bit less than one-half ounce of pure ethanol.	Reveal only the "beer" part.
 **VIII-6**	b. Wine typically is served in a four-ounce glass. At an ethanol concentration of 12 percent, the glass of wine also has just a bit less than one-half ounce of pure ethanol.	Reveal the "wine" part of Visual.
 **VIII-6**	c. Whiskey and other distilled spirits are dispensed in a "shot" glass, which usually contains one and one-quarter ounces of liquid.	Reveal the "whiskey" part of Visual.

Aides	Lesson Plan	Instructor Notes
	d. Since whiskey usually has an ethanol concentration of 40%, a "shot" of whiskey has exactly one-half ounce of pure ethanol.	POINT OUT that the "proof" of a distilled spirit is equal to twice the ethanol concentration.
	10. For all practical purposes, standard-sized servings of beer, wine and whiskey all pack the same "punch".	SOLICIT students comments and questions on this overview of alcohol.
35 Minutes  VIII-7 (Alcohol/Drug Abuse)	**B. Physiologic Processes**	
	1. Alcohol is the most abused drug in the United States.	
	2. Ethanol is a central nervous system depressant:	
	a. It doesn't impair until it gets into the brain.	
	b. It can't get into the brain until it first gets into the blood.	
	c. It can't get into the blood until it first gets into the body.	
	3. There are a number of ways in which alcohol can get into the body.	
	a. It can be **injected** into a vein, via hypodermic needle.	

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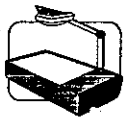
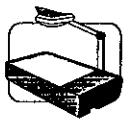
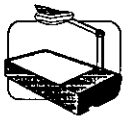
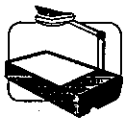
	b. It can be **inhaled**, i.e., alcohol fumes can be brought into the lungs, and some molecules will pass into the blood.	POINT OUT that a person would have to inhale concentrated alcohol fumes for a prolonged period of time in order to develop a significant blood alcohol concentration.
	c. It could also be inserted as an enema and ingested by quickly passing from the large intestine into the blood.	
 VIII-8 ("Absorption")	d. But the vast majority of times that alcohol gets into the body, it gets their via **drinking**.	
	4. Once the alcohol is in the stomach, it will take two routes to get into the blood.	
 VIII-8	a. One interesting thing about alcohol is that it is able to pass directly through the stomach walls.	POINT to that "route of passage" on visual.
	b. Under normal conditions, about 20% of the alcohol a person drinks gets into the blood by diffusing through the walls of the stomach.	
 VIII-8	c. But most of the alcohol usually passes through the base of the stomach into the **small intestine**, from which it passes quickly into the blood.	POINT to that "route of passage" on visual.

Aides	Lesson Plan	Instructor Notes
 VIII-8	5. Another interesting thing about alcohol is that it does not have to be digested before it can move from the stomach to the small intestine. a. When a person eats food, the food must remain for a time in the stomach. b. Acids and enzymes in the stomach must begin to break down the food to prepare it to pass to the lower portion of the gastrointestinal track. c. While the initial digestive process is underway, a muscle at the base of the stomach will con-strict, and shut off the passage to the small intestine. d. That muscle is called the **pylorus**, or pyloric valve. 6. Since alcohol doesn't have to be digested, the pylorus does not constrict when alcohol enters the stomach. a. If we drink on an empty stomach, the pylorus stays wide open. b. The alcohol will pass immediately through the base of the stomach, into the small intestine, and quickly move into the bloodstream.	POINT to the pylorus on Visual.

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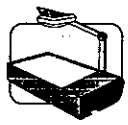
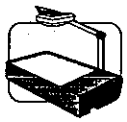
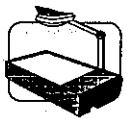
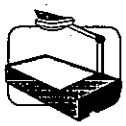
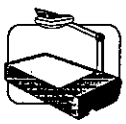
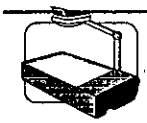
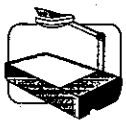
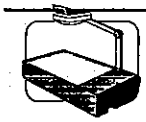
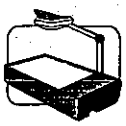
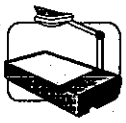
	7. But what will happen if there is food in the stomach when the person drinks alcohol? a. Food will cause the pylorus to constrict. b. While the pylorus is closed, nothing will move from the stomach to the small intestine. c. Any alcohol that is in the stomach will be "trapped" there, along with the food. d. The alcohol will not get into the blood as quickly, and the blood alcohol concentration will not get as high, as if the drinking had been done on an empty stomach. e. While the alcohol is trapped in the stomach, the acids and enzymes will start to react with it and break it down. f. By the time the pylorus opens, some of the alcohol will have been chemically changed, so there will be less available to get into the blood.	POSE this question to the class. SOLICIT students' comments and questions about the absorption of alcohol into the blood.
 **VIII-9** (Distribution)	9. Once the alcohol gets into the blood, the blood will carry it to the various tissues and organs of the body.	Reveal top part only.

Aides	Lesson Plan	Instructor Notes
 **VIII-9** ("Basic Principle")		Now reveal lower part of visual.
	a. Alcohol is attracted to water. The blood will deposit the alcohol in all the parts of the body where water is found. b. Parts of the body that have a lot of water will receive a lot of alcohol. c. Parts of the body that have only a little water will receive little alcohol.	
 **VIII-10** (Which Parts ..)	10. Which parts of the body have a lot of water? a. The brain b. The liver c. Muscle Tissue d. The Kidney	POSE this question, and solicit responses from students. Then, display the <u>first part</u> of visual.
 **VIII-10**	11. Which parts contain very little water? a. Bones b. Fatty tissue	POSE this question and solicit responses from students. Then, display the <u>second part</u> of visual.
 **VIII-10**	12. The **muscle tissue** will receive a relatively high proportion of the alcohol that a person drinks.	POINT to "muscle tissue" on visual.
 **VIII-10**	13. The **fatty tissue** will receive very little of the alcohol.	POINT to "fatty tissue" on visual.

Aides	Lesson Plan	Instructor Notes
 **VIII-10** (The average..)	14. Here is an interesting and significant difference between men and women: pound-for-pound, the average male has much more water in his body than the average female has exists.	NOW REVEAL the last part of visual. ASK students to suggest <u>why</u> this significant difference exists.
	a. The female body has more fatty tissue than does the male body.	Clarification: the female's extra fatty tissue serves as a "shock absorber" and thermal insulator to protect a baby in the womb.
	b. Pound-for-pound, the average female has more fat and less muscle than does the average male.	
	c. Since fatty tissue has very little water, the average female, pound-for-pound, has less water than the average male.	
	d. This means that the average woman has fewer places in her body in which to deposit the alcohol she drinks.	ASK STUDENTS: Suppose a woman and a man who weigh exactly the same drink exactly the same amount of alcohol under exactly the same conditions. Who will reach the higher BAC?
	15. The woman's blood alcohol concentration will be higher than the man's, because she has less water in which to distribute the alcohol.	Solicit students' comments and questions about the distribution of alcohol in the body.
 **VIII-11** (Elimination)	16. As soon as alcohol gets into the body, the body begins working to get rid of it.	<u>Reveal only the top part</u> of visual.

Aides	Lesson Plan	Instructor Notes
 VIII-11 (Direct ...)	a. Some alcohol is simply **expelled directly** from the body, i.e., on the breath, in the sweat, in urine, etc.	Reveal the <u>middle part</u> of visual.
	b. Relatively little of the alcohol we drink is directly expelled from the body.	Clarification: Only about 2-10% of the alcohol we consume is directly excreted in the breath, urine, etc.
 VIII-11	c. The body eliminates most of the alcohol by chemically breaking it down.	ASK STUDENTS: What organ in the body is primarily responsible for chemically breaking the alcohol down? Reveal the <u>bottom part</u> of visual.
	d. The liver is primarily responsible for breaking down, or **metabolizing**, the alcohol.	Instructor, for your information: Some metabolism of alcohol also takes place in other parts of the body, including the brain. But the liver does the vast majority of the job.
 VIII-12	17. Metabolism of alcohol actually consists of a slow, controlled **burning** of the alcohol.	Reveal the <u>first "bullet"</u> of visual.
 VIII-12	a. In the burning process, the alcohol combines with oxygen.	Reveal the <u>second "bullet"</u>.
	b. The liver has an enzyme called **alcohol dehydrogenase**, which helps to speed up the reaction of oxygen with the alcohol.	Clarification: The enzyme does not react with the alcohol itself, but simply makes it easier for the oxygen to react with the alcohol. The technical term for something that helps a chemical reaction while not itself taking part in the reaction is a **catalyst**.

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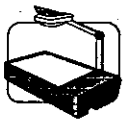
		Alcohol dehydrogenase is a catalyst for the metabolism of alcohol.
 VIII-12	c. The reaction of alcohol with oxygen ultimately produces carbon dioxide and water, which can be directly expelled from the body.	Reveal the third "bullet".
 VIII-12	d. The speed with which the liver burns alcohol varies from person to person, and will change from time to time for any particular person.	Reveal the final "bullet".
	e. BUT ON THE AVERAGE: Due to metabolism, a person's BAC will drop by about 0.015% per hour.	
		POSE this problem to the class:
		Suppose a person reaches a peak BAC of 0.15%. How long will it take for his or her body to eliminate all of the alcohol?
		Answer: ten hours [0.15%-(X hours)(0.015%/hour) X = 10]
	18. For the average male, a BAC of 0.015% is equal to the alcohol content of about two-thirds of a "standard drink".	
	a. i.e., about two-thirds of a can of beer.	

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	b. or about two-thirds of a glass of wine, or two-thirds of a shot of whiskey. 19. For the average woman, a BAC of 0.015% is equal to the alcohol content of only one-half of a "standard drink". a. So the average male can "burn up" about two-thirds of a drink in an hour. b. But the average female can only burn up about one-half of a drink in an hour. c. In other words: Suppose a person gulps down a can of beer, or a glass of wine, or a shot of whiskey; if the person is an average man, it will take him about an hour and one-half to burn up that alcohol; if the person is a woman, it will take her about two hours. 20. How can we speed up the metabolism of alcohol? a. **We can't speed it up**. b. Drinking coffee won't help. c. A cold shower won't help. d. Exercise won't help. 21. Our livers take their own sweet time burning the alcohol.	POSE this question to the class.

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		Solicit students' comments and questions about the elimination of alcohol from the body.
10 Minutes	**C. Symptomatology of Alcohol**	
	Note: Prior to the Start of this Session, Draw the Following Chart on the Chalkboard or Flip-chart.	
	ALCOHOL HGN ---> _____ VERT NYST ---> _____ LACK CONV ---> _____ PUPIL SIZE ---> _____ RCTN-LIGHT ---> _____ PULSE RATE ---> _____ BLOOD PRESS ---> _____ TEMP ---> _____	
	1. Indicators of Alcohol influence found in Eye Exams.	Ask students: "What category of drugs is alcohol most closely associated?"

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	a. HGN will be present.	Write "Present" on the "HGN" line. Ask: "Does Alcohol induce Vertical Nystagmus?"
	b. Vertical Nystagmus may be present, especially with high doses (for that individual) of alcohol.	Write "Present" on the "VERT NYST" line. Denote in parentheses "(High Doses)". Ask: "Does alcohol cause the eyes to be unable to converge?"
	c. Under the influence of alcohol, lack of convergence frequently will be present.	Write "Present" on the "LACK CONV" line. Ask: "How do Depressants affect pupil size?"
	d. Alcohol does not affect pupil size; therefore, Alcohol usually leaves the pupils normal in size.	Write "Normal" on the "PUPIL SIZE" line.
	e. Alcohol will cause pupillary reaction to light to be sluggish.	Write "Slow" on the "RCTN-LIGHT" line.
	2. Indicators of Alcohol influence found in checks of Vital Signs.	
		Ask: "How does Alcohol affect pulse rate?"
	a. When under the influence of Alcohol, many subjects have been found to have elevated pulse rates.	Write "Up" on the "PULSE" line. Ask: "How does Alcohol affect blood pressure?"

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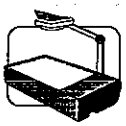
	b. Blood pressure response to Alcohol may be up, down or near normal depending on the personal physiology of the subject.	Write "Up/Down/Normal" on the "BLOOD PRESS" line. Ask: "How does Alcohol affect body temperature?"
	c. Alcohol usually leaves temperature near normal.	Write "Normal" on the "TEMP" line. Solicit students' questions about the signs and symptoms of alcohol.
 **20 Minutes**	**D. Dose-Response Relationships**	
 **VIII-13** (Blood ...)	1. What does "**Blood Alcohol Concentration**" mean?	(Reveal only the question at the top) Solicit students' responses.
 **VIII-13**	a. Blood alcohol concentration means the number of **grams** of pure ethanol that are found in every **100 milliliters** of a person's blood.	Reveal the middle part of visual.
	b. A gram is a measure of <u>weight</u>; it takes almost 500 grams to make a pound.	Instructor, for your information: It actually takes 454 grams to make a pound.
	c. A milliliter is a measure of <u>volume</u>. It takes about 500 milliliters to make a pint.	Example: A 12-ounce can of beer has about 350 milliliters.
 **VIII-13**	d. The so-called "illegal limit" of BAC in most States is 0.10%.	Reveal the bottom part of visual.

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	e. If a person has a BAC of 0.10%, it means there is **one-tenth of a gram** (0.10) of pure ethanol in every **100 milliliter** ("percent") sample of his or her blood.	
	2. How much alcohol does a person have to drink to reach a BAC of 0.10%?	POSE this question to the class.
	a. Take an average male weighing 175 pounds and in reasonably good physical shape.	
	b. Assume he does his drinking on an empty stomach.	
	c. He would have to gulp down five cans of beer, or five glasses of wine, or five shots of whiskey in a fairly short period of time to reach 0.10% BAC.	
	d. In terms of **pure ethanol**, that would amount to just about two and one-half fluid ounces, or about two shot glasses.	DISPLAY two standard-sized shot glasses, filled with water.
	e. If these two shot glasses were filled with pure ethanol, we would have just enough of the drug to bring an average man to a BAC of 0.10%.	HOLD up the two shot glasses while posing the next question.

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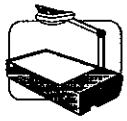
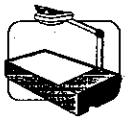
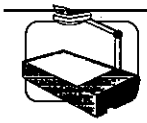
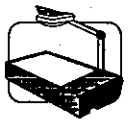
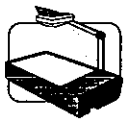
	f. So answer this: Does it take a <u>lot</u> of ethanol to impair a person, or only a <u>little</u>?	Solicit students' responses to the question.
	3. In one respect, it certainly doesn't take much ethanol to impair: Just two full shot glasses will more than do the trick for a full-sized man.	HOLD up the glasses again.
	4. BUT COMPARED TO OTHER DRUGS, it takes an enormous quantity of ethanol to cause impairment.	
 VIII-14 (Grams...)	5. In order to compare ethanol to other drugs, we have to review some more **units of weight**.	Reveal only the first "bullet".
 VIII-14	a. We're already familiar with the **gram**. It weighs only about one five-hundredth of a pound.	Now reveal the second "bullet".
	b. The **milligram** is much lighter still; it takes one thousand milligrams to make a gram.	Instructor, for your information: The prefix "milli" derives from the latin word **mille**, meaning one thousand.
	c. That means it takes nearly five hundred thousand milligrams to make a pound.	
 VIII-14	d. If one gram is equal to one thousand milligrams, then one-tenth of a gram is equal to one hundred milligrams.	Now reveal the third "bullet". Clarification: 100 is one-tenth of 1,000.

Aides	Lesson Plan	Instructor Notes
 **VIII-14**	e. So a person with a BAC of 0.10% has 100 milligrams of ethanol in every 100 milliliters of his or her blood.	Now reveal the remainder of visual.
 **VIII-15** (More on ...)	f. That is exactly the same as saying there is one milligram of ethanol in every one milliliter of blood.	Reveal only the first "bullet".
	6. Here is a new term: the **nanogram.**	
	a. It takes a million nano-grams to make a milligram.	
 **VIII-15**	b. That means it takes one <u>billion</u> nanograms to make a gram.	Now reveal the parenthetic sentence on visual.
 **VIII-15**	c. And that means that it takes almost **five hundred billion** nanograms to make a single pound.	Now reveal the second "bullet" on visual.
 **VIII-15**	d. So if a person's BAC is 0.10%, he or she has one million nanograms of pure ethanol in every milliliter of blood.	Now reveal the question at the bottom of visual.
	7. What kinds of concentrations of other drugs does it take to produce impairment?	<u>Don't</u> solicit responses to this question; it is purely rhetorical.
 **VIII-16** (Drug ...)	8. IT IS MOST IMPORTANT to under-stand that we cannot state exact correspondences between alcohol concentrations and other drug concentrations.	Reveal only the "alcohol" segment of the visual.

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	a. For example, we can say that someone with a blood alcohol concentration between 0.05% and 0.10% will exhibit significant impairment, because there is a large body of scien-tific research that backs up that statement.	
 VIII-16	b. So we can say that research shows that significant impairment will be found, with alcohol, at concentrations of 500,000 to one million nanograms per milliliter.	POINT to the alcohol line on visual.
	c. But we can't say exactly how much cocaine, or THC, or morphine or any other drug it would take to produce exactly the same impairment that we would find at 0.10% BAC.	
	d. In part, this is because we do not have extensive scientific research for most other drugs.	
	e. But also it is because many other drugs do not impair in the same way that alcohol impairs.	EXAMPLE: Unlike alcohol, some other drugs (such as THC and PCP) readily deposit in fatty tissue, and may continue to cause impairment even after they have cleared from the blood.

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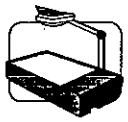
	9. Nevertheless, based on the available research, it is possible to make some general statements about drug concentrations that can safely be said to induce significant driving impairment.	
 VIII-16	a. First example: **Amphetamines**.	Reveal the Amphetamine line on visual.
	b. Researchers agree that if we had two shot glasses full of pure amphetamine, we'd have enough to impair as many as **ten thousand people**.	HOLD UP the two shot glasses again. ASK STUDENTS: What if these shot glasses were full of pure THC, the active ingredient in Cannabis?
 VIII-16	c. Second example: **Cannabis**	Reveal the Cannabis line on visual.
	d. Available evidence suggests that if these two little glasses were full of pure THC, we'd have enough drug to impair as many as **twenty thousand people**.	ONCE AGAIN, hold up the two shot glasses. ASK STUDENTS: But what if these glasses were full of pure LSD?
	e. Many researchers believe that significant impair-ment results from very low LSD concentrations.	
	f. If these two glasses contained pure LSD, we could impair up to **one million people**.	

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	10. What does all this mean?	NOTE: This is a rhetorical question.
	a. First, it means that, compared to alcohol, most other drugs are very powerful: A little goes a very long way.	Example: A person who is "only" carrying one fluid ounce of LSD (hold up one shot glass) would be capable of impairing "only" the entire population of, say, Wyoming.
	b. Second, it means that laboratories may be stretched to the limits of their technologic capabilities when we send them blood or urine samples and request certain drug analyses.	
	c. All analytic techniques have **detection thresholds**, i.e., minimum concentrations of drugs that must be present if a scientific confirmation of the presence of the drug is to be obtained.	
	d. If the concentration of the drug is less than the detection threshold, the laboratory simply will not be able to confirm that the drug is present in the blood or urine.	
	e. The problem is that some people will be significantly impaired at drug concentrations that are below the lab's detection threshold.	

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f. What this means is that a DRE sometimes examines a suspect, concludes **correctly** that he or she is under the influence of a certain drug category, perhaps even obtains an admission from the suspect that he has taken a drug, gets a blood or urine sample and sends it off to the lab, ONLY TO HAVE THE LAB REPORT BACK THAT "NO DRUGS WERE FOUND".

11. When this happens to you -- and it **will** -- it is important that you don't let yourself become discouraged.

    a. As a DRE, all you are expected to do is the best that you <u>can</u> do, given the tools available.

    b. You will never become perfect in your diagnosis of drug impairment.

    c. There will be times when you will "miss" the fact that a suspect is impaired.

    d. And there will be times when you will conclude that a suspect is under the influence of a drug when, in fact, he or she isn't.

Aides	Lesson Plan	Instructor Notes
	e. We rely on the laboratory to corroborate our opinions, to help make sure that an innocent person is not punished because of an honest mistake in judgment on our part. f. The problem is that the laboratory isn't perfect either: The chemists won't always be able to corroborate your opinion, even though your opinion is accurate.	SOLICIT students' comments and questions about dose-response relationships involving alcohol and other drugs.
10 Minutes	**E. Questions for Review** 1. Name three different ... a. Methyl, Ethyl and Isopropyl. (or, Methanol, Ethanol and Isopropanol.) (or, Wood Alcohol, Beverage Alcohol, and Rubbing Alcohol.)	Direct students to turn to the review questions, at the end of Section VIII of their Student Manual. POSE each question to the class, and solicit responses. Make sure all students understand the correct answers.

Aides	Lesson Plan	Instructor Notes
	b. Ethanol is the beverage alcohol, intended for human consumption. c. The four-letter chemical symbol is **ETOH**. 2. What is the name ... a. Fermentation b. Distillation 3. Multiple Choice: "Blood ..." Correct answer is A, "grams". 4. True or False: Pound-for ... The statement is false. The average woman actually has a good deal less water, pound-for-pound, than does the average man. She is about 55% water, he is about 68%. 5. What do we mean ... "Proof" means twice the ethanol percentage of the bever-age. For example, 80-proof vodka is 40% ethanol. 6. Every chemical that ... The three elements common to all alcohols are carbon, hydrogen and oxygen.	

Aides	Lesson Plan	Instructor Notes
	7. True or False: Most ... The statement is <u>true</u>. Under normal conditions, about 80% of the ethanol in the stomach will pass through the pyloric valve into the small intest-ine, from which it will quickly move into the bloodstream. 8. What is the name ... The muscle is called the **pylorus**, or pyloric valve. 9. True or False: Alcohol ... The statement is <u>true</u>. Usually, about 20% of the ethanol a person drinks diffuses through the stomach walls to enter the blood. 10. Multiple Choice: Suppose ... Correct answer is <u>A</u>, "more". 11. In which organ ... The **liver** is where most metabolism takes place. 12. What is the name ... **Alcohol dehydrogenase** is the enzyme that serves as a catalyst for alcohol's metabolism in the liver.	

Aides	Lesson Plan	Instructor Notes
	13. Multiple Choice: Once ... Correct answer is B, "0.015%" (But remember: This is an average value, with wide variations among individuals.) 14. Multiple Choice: If a ... Correct answer is A, "one million". 15. True or False: It takes ... The statement is false. The average 175-pound man will need more like ninety minutes to metabolize the alcohol.	SOLICIT students' comments and questions about "Alcohol as a Drug".

Objectives

000218

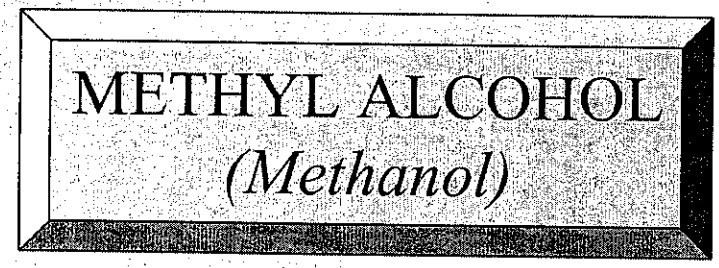
- Describe a brief history of alcohol.
- Identify common types of alcohols.
- Describe the physiologic processes of absorption, distribution and elimination of alcohol in the human body.
- Describe dose-response relationships that impact on alcohol's impairing effects.

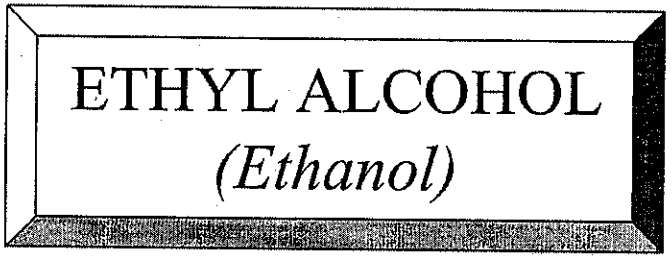
Alcohol

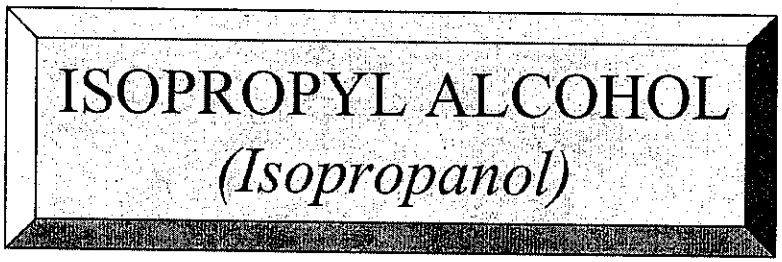
000219

A family of closely-related chemicals whose molecules are made up of hydrogen, carbon, and oxygen.

Some Types of Alcohol







Ethanol

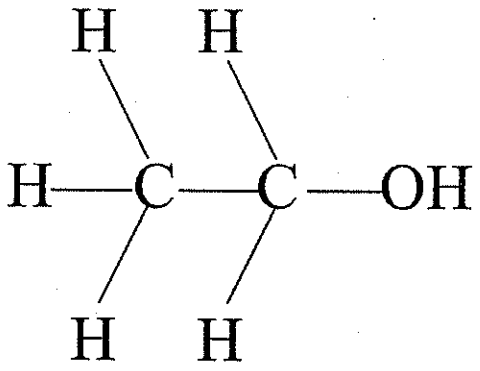
000221

Ethyl Alcohol
(Intended for human consumption.)

<u>Chemical Symbols</u>

ETOH

C_2H_5OH



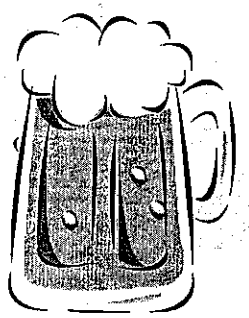
Production of Ethanol

000222

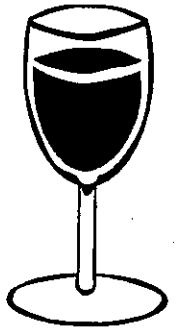
- FERMENTATION
  - Yeast combines with sugars from fruit or grains in a chemical reaction that results in ETOH.

- DISTILLATION
  - Fermented beverage is boiled at a controlled temperature to extract and concentrate the ethanol fumes.

Standard-Sized Drinks



- A CAN OF BEER
  - 12 ounces of fluid @ 4% alcohol equals 0.48 ounces of pure alcohol

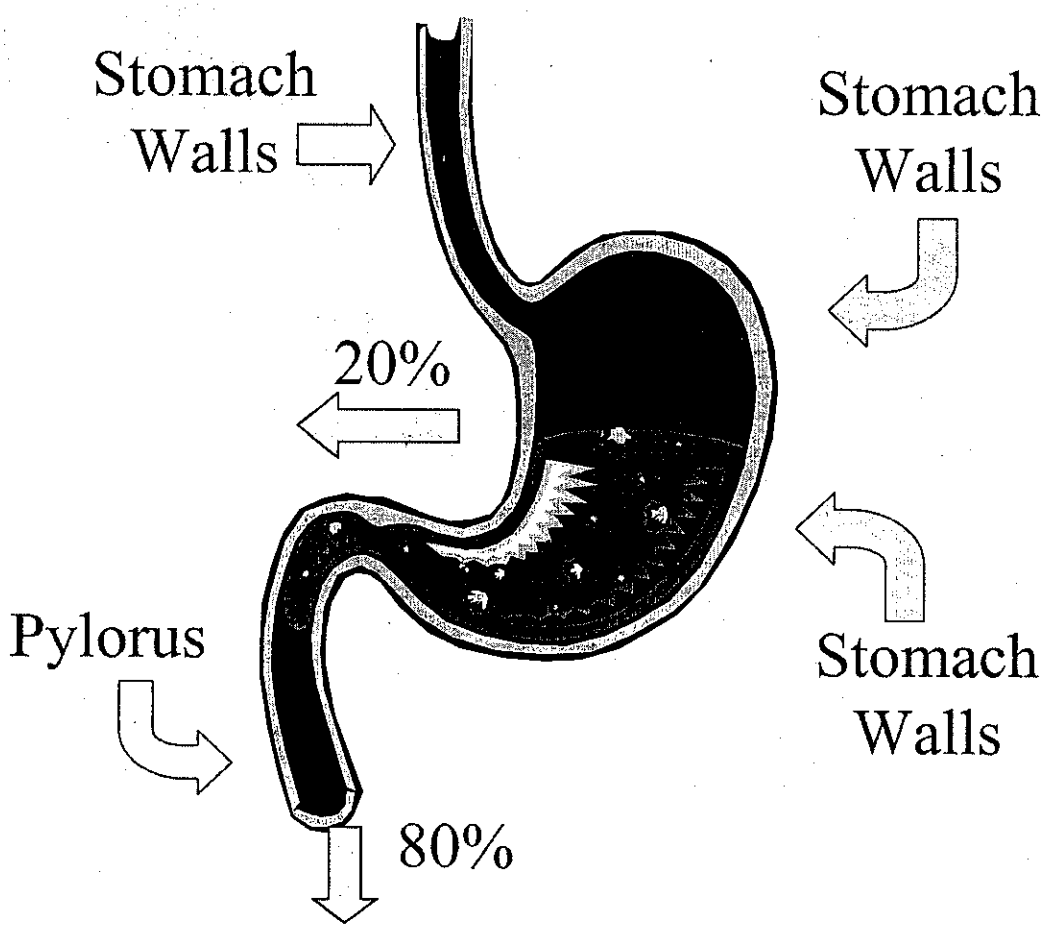


- A GLASS OF WINE
  - 4 ounces of fluid @ 12% alcohol equals 0.48 ounces of pure alcohol

- A SHOT OF WHISKEY (80-Proof)
  - 1 and 1/4 ounces @ 40% alcohol equals 0.50 ounces of pure alcohol

Alcohol is a CNS Depressant.

Absorption of Alcohol



Getting the ethanol out of the stomach and into the blood.

Distribution of Alcohol

000226

Getting the ethanol into the body's tissues and organs.

Basic Principle:

Ethanol goes wherever it finds **water**.

Which parts of the body have lots of water?

The **BRAIN** The **LIVER** **MUSCLE** Tissue

Which parts don't?

Bones **FATTY** Tissue

The average male is 68 percent water.

The average female is only 55 percent water.

Elimination of Alcohol

Getting the ethanol out of the body.

Direct Excretion:
Breath, sweat, tears, urine, etc.

Metabolism:
Primarily in the **liver**.

Metabolism in the Liver

- The liver **burns** the ethanol (i.e., causes a chemical reaction of ethanol with oxygen).
- The process is aided by an enzyme called **alcohol dehydrogenase**.
- The ultimate products of the chemical reaction are carbon dioxide and water.
- Due to metabolism, the average person's BAC drops by about **0.015% per hour**.

Blood Alcohol Concentration

What does it mean?

BAC is the number of grams of alcohol found in 100 milliliters of the person's blood.

Example

If a person has a BAC of .10%, then there is one-tenth of a gram of alcohol in every 100 milliliter sample of his or her blood.

Grams, Milligrams, and Nanograms

- A "gram" is pretty light
  (it takes almost 500 grams to make one pound)
- One gram is equal to one thousand **milligrams**.
- One-tenth of a gram therefore is equal to one hundred milligrams.

So if a person has a BAC of 0.10%, he or she has 100 milligrams of alcohol in every 100 milliliters of blood. That is the same as **one milligram in every milliliter**.

More on Grams and Nanograms

- One milligram is equal to one million nanograms.
  (A nanogram is ***very*** light: it takes almost 500 billion of them to make a pound.)
- A person whose BAC is 0.10% **has one million nanograms** of alcohol in every milliliter of blood.

How does alcohol compare with other drugs?

Drug Concentrations Typically Associated With "Significant" Impairment

DRUG	NANOGRAMS per MILLILITER
ALCOHOL	500,000 to 1,000,000
AMPHETAMINES	100 to 300
THC	50 to 100
LSD	1 to 2

Thirty Minutes

SESSION IX

PREPARING FOR THE DRE SCHOOL

SESSION IX PREPARING FOR THE DRE SCHOOL

Upon successfully completing this session, the participants will be informed of the logistic and other arrangements necessary for their participation in the seven-day DRE School.

SESSION IX GUIDE

Review the following points with the students:

a. Dates of the seven-day school

b. Location of the school

c. Dress code

d. Materials that the students should bring to the school

e. Transportation arrangement (if applicable)

f. Lodging arrangements (if applicable)

g. Recreational facilities and opportunities (if appropriate)

Tell the students to open their manuals to Session IX. Point out that a detailed description of "Things you will need at the DRE School" is presented there. Also point out that some very important suggestions of "things to do prior to the DRE School" are given there. Emphasize that the students will be expected to be fully prepared when they come to the school. This is also a good time for the students to begin preparation of their professional resume. A worksheet for the resume is provided on the following page and is located in Session IX of the DRE student manual.

RESUME WORKSHEET

Formal Education

- High School
- College
- Specialized College / Vocational Courses

Formal Professional Training

- Academy
- Specialized Police Training
- Other Specialized / Professional Training

Relevant Experience

- Job Experience (Law Enforcement)
- Other Job-related Experiences
- Drug Enforcement / Evaluation Experience
- Court Qualifications

Outside Readings - (relative to the DRE program)

Forty-Five Minutes

SESSION X

CONCLUSION OF THE PRELIMINARY TRAINING

SESSION X CONCLUSION OF THE PRELIMINARY TRAINING

Upon successfully completing this session, the participants will have:

- Demonstrated their knowledge of the concepts covered during the training.
- Offered anonymous comments and criticisms concerning the school.

CONTENT SEGMENTS

A. Post-Test and Critique

B. Certificates and Dismissal

LEARNING ACTIVITIES

- Written Examinations

Aides	Lesson Plan	Instructor Notes
45 Minutes  X-1 (Objectives)	CONCLUSION OF THE PRELIMINARY TRAINING	Briefly review the content, objectives and activities of this session.
35 Minutes	**A. Post-Test and Critique**	
	1. Post-test	Hand out copies of the post-test. Allow 15 minutes for students to complete the test.
	2. Critique	Hand out copies of the Student's Critique Form. Allow about 15 minutes for students to complete the critique.
	3. Review of Post-test	Go over the post-test questions. Limit this review to 10 minutes. Instruct the students to retain the PRE-School post-test as a study guide for the upcoming DRE School. Collect the completed critiques.
10 Minutes	**B. Certificates and Dismissal**	Hand out certificates of course completion. Hand back the students' Certification Progress Logs, after making sure than an instructor has signed the PRE-School line on each log. Remind the students that they must bring the progress logs with them to the DRE School.

Aides	Lesson Plan	Instructor Notes
		Tell the students to open their manuals to Session X. Point out the "Post Test" that is given there. Emphasize that the "Post Test"is a very useful study device that will help them get ready for the DRE School. Urge them to take the "Test" as a self-study exercise at least once between now and the start of the school. Thank the students for their participation.

Course Location _____ Date _____

Preliminary Training For Drug Evaluation And Classification
Student's Critique Form

A. Course Objectives

Please indicate whether you feel that you personally achieved the following course objectives.

	Yes	No	Not Sure
Can you define the term "drug" and name the seven drug categories?			
Can you identify the twelve major components of the Drug Recognition Process?			
Can you administer and interpret the psychophysical tests used in a drug evaluation?			
Can you conduct the eye examinations used in the evaluations?			
Can you check the vital signs used in the evaluation?			
Can you list the major signs and symptoms associated with each drug category?			
Can you describe the history and physiology of alcohol as a drug?			

B. Course Activities

Please rate how helpful each workshop session was for you personally. Also, please rate the quality of instruction (subject knowledge, instructional techniques and learning activities). Use a scale from 1 to 5 where: 5=Excellent, 4=Very Good, 3=Good, 2=Fair, 1=Poor.

	Session/ Activity	Quality
Overview of Drug Evaluation and Classification Procedures		
The Psychophysical Tests		
The Eye Examinations		
Alcohol Workshop		
Examination of Vital Signs		
Overview of Signs and Symptoms		
Alcohol as a Drug		
Preparing for the DRE School		

C. Course Design

Please indicate your own personal feeling about the accuracy of each statement.

	Agree	Disagree	Not Sure
1. I wish we had more practice with drinking volunteers.			
2. There was too much "bull throwing" in this course.			
3. I now have a much better idea as to what the Drug Recognition Process is all about.			
4. The course was at least one-half day too long.			
5. I got a great deal of practical, useful information from this course.			
6. I'm still pretty confused as to what the Drug Recognition Process is all about.			
7. I think I could do a pretty good job conducting a drug evaluation right now, without additional training.			
8. This course should have been at least one-half day longer.			
9. We spent too much time with the volunteer drinkers session.			
10. Some of the practice sessions in this course were dragged out a bit too much.			
11. I don't think that our instructors were as well prepared as they should have been.			
12. This course was a good review, but it really didn't teach me anything new.			
13. I am very glad that I attended this course.			
14. The instructors seemed to be more interested in practicing their teaching skills than in seeing to it that we learned what we were supposed to learn.			
15. I would have to say that this course was not quite as good as I expected it to be.			

D. Suggestions for Deletion and Additions

If you absolutely had to cut four hours out of this course, what would you delete or shorten?

If you could add four hours to this course, how would you spend the extra time?

E. Ratings of the Course and the Instructors

On a scale from 1 (=very poor) to 5 (=excellent), please give your opinion of the course as a whole.

The course as a whole: _____

On a scale from 1 (=very poor) to 5 (=excellent), please give your opinion of each instructor.

Instructor	Rating

F. Final Comments and Suggestions

Please offer any final comments that you wish to make.

Objectives

000245

- Demonstrate knowledge of the concepts covered during the training.

- Offered anonymous comments and criticisms and concerning the school.

The International Standards of the Drug Evaluation and Classification Program

A Product of

The DEC Standards Revision Subcommittee of the Technical Advisory Panel of the IACP Highway Safety Committee

Revised June 2, 1999

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Since 1984, the National Highway Traffic Safety Administration (NHTSA) has supported the Drug Evaluation and Classification Program. The program which was initially developed by the Los Angeles, California, Police Department, was validated through both laboratory and field studies conducted by Johns Hopkins University. In 1987, the Highway Safety Committee of the International Association of Chiefs of Police (IACP) was requested by NHTSA to participate in the development and national expansion of the program. As the program grew, it became apparent that in order to ensure continued success, nationally accepted standards needed to be established. These standards, which establish criteria for the selection, training and certification of drug recognition experts, helped to ensure the continued high level of performance of the Drug Evaluation and Classification Program. In 1988, NHTSA asked the IACP and its Highway Safety Committee to develop this system of nationally accepted standards.

In March of 1989, the IACP and NHTSA sponsored a meeting at the Transportation Safety Institute in Oklahoma City, Oklahoma. Persons invited to this meeting included experienced drug recognition experts, instructors, curriculum specialists, toxicologists, prosecutors and training administrators. The participants met in working groups to reach consensus concerning the many issues relating to the Drug Evaluation and Classification Program and to develop recommended minimum standards to the Highway Safety Committee. The standards were drafted and presented to the committee for review at its mid-year meeting in June 1989. In addition, the committee agreed to name a Drug Evaluation and Classification Technical Advisory Panel to assist and advise the committee concerning technical aspects relating to the operation of the program.

The Highway Safety Committee, by resolution, adopted the *Interim National Standards of the Drug Evaluation and Classification Program.* The standards were subsequently approved by the voting membership of the IACP. The standards were adopted on an interim basis pending the outcome of an evaluation of the effective-ness of the program to be performed by NHTSA. In October 1992, the standards were officially approved and adopted. Revisions and updates are periodically made to the standards.

Presented in this document are standards specifying the requirements for certification and recertification of DREs and DRE instructors; standards for decertification and reinstatement; and standards for agency participation. Also, for those agencies participating in the program, a set of administrative guidelines is provided.

These standards, when adopted by other countries, will be administered pursuant to their political structure.

DEFINITIONS

Associate Instructor: Persons not certified as DREs but who possess knowledge, expertise or credentials deemed valuable to the program may be designated as associate instructors for the Drug Evaluation and Classification Program.

Blood Alcohol Concentration (BAC): A person's blood alcohol concentration indicates the grams of alcohol per 100 milliliters of blood. For example, a BAC of 0.10% means that there is one-tenth of a gram of alcohol in 100 milliliters of the person's blood.

Candidate DRE: An individual in the process of achieving certification as a drug recognition expert. To achieve certification, a person must successfully complete a training program consisting of

An IACP/NHTSA-approved SFST training course of instruction
A two-day IACP/NHTSA-approved DRE preschool
A seven-day IACP/NHTSA-approved DRE school
On-the-job field certification

Candidate DRE Instructor: An individual in the process of achieving certification as a DRE instructor. To achieve certification, a DRE must successfully complete the IACP/NHTSA-approved DRE instructor training, conduct a minimum of two hours of DRE training, and witness two drug evaluations.

Course Manager: An individual who ensures that each training event follows the standardized curriculum and evaluates the training event to identify ways to improve it. The course manager represents the National Highway Traffic Safety Administration and the International Association of Chiefs of Police and resolves issues with the content and/or delivery of the training.

DRE Coordinator: The appropriate DRE coordinator will be one of the following:

Agency Coordinator: The person designated within each department or agency responsible for maintaining program records, ensuring maintenance of program standards and conducting training and certification sessions within the agency. Responsibility for this function may rest with one individual, in the case of a small or closely coordinated effort, or may be decentralized among several people throughout the agency. If there is no designated agency coordinator, the appropriate DRE coordinator shall be the state coordinator.

State Coordinator: In each of the states in which the Drug Evaluation and Classification Program has been implemented under the auspices of the National Highway Traffic Safety Administration, an individual has been designated to act as the statewide coordinator for the DEC Program. The duties of the position generally include but are not limited to

1. Acting as an information clearinghouse and central communication point for the program within the state.
2. Assisting in coordinating training and other support activities for all agencies participating in the program within the state.
3. Coordinating the assignment of instructors in response to requests for service from federal and other sources.

The Governor's Office of Highway Safety shall be responsible for designating the state coordinator. If there is no designated state coordinator, the appropriate DRE coordinator shall be the TAP regional coordinator, who shall assume the duties and responsibilities as described above.

TAP Regional Coordinator: One DRE from each of the four regions, as established by the Division of State and Provincial Police, is appointed by the IACP Highway Safety Committee Chair to serve on the Technical Advisory Panel.

DRE Instructor: Individuals who, having been trained and certified as drug recognition experts, receive further training and experience instructing within the Drug Evaluation and Classification Program. Certified instructors will usually be certified DREs with experience in performing drug evaluations and in providing testimony in court in the area of drug recognition. Certified instructors are responsible for observing, evaluating and verifying the performance of candidate DREs.

Criminal Justice Agency: For purposes of these standards, a criminal justice agency is any organization, funded by public monies, that is involved in the apprehension, prosecution, adjudication of public miscreants; or in the incarceration, detention, supervision or control of said miscreants following apprehension, prosecution and/or adjudication.

Drug: For purposes of the Drug Evaluation and Classification Program, a drug is any substance that, when taken into the human body, can impair the ability to operate a motor vehicle safely. Note that this is not necessarily a strict medical definition.

Drug Evaluation: A process of systematically examining a person suspected of being under the influence of a drug, for the purpose of ascertaining what category of drugs (or combination of categories) is causing the person's impairment. A trained DRE can identify, with a high degree of reliability, the distinguishing signs and symptoms of seven broad categories of drugs.

Drug Evaluation and Classification Technical Advisory Panel: This group was formed to assist the Highway Safety Committee of the International Association of Chiefs of Police on specific matters relating to the Drug Evaluation and Classification Program. These matters include the revision of the approved training curriculum, review and approval of proposed alternative training programs, and other matters relating to the technical aspects of the DEC Program.

Drug Recognition Expert (DRE): An individual who has successfully completed all phases of training requirements for certification established by the International Association of Chiefs of Police and the National Highway Traffic Safety Administration.

Highway Safety Committee: A standing committee of the IACP that addresses highway safety issues.

Horizontal Gaze Nystagmus (HGN): A loss of the normal control of the eyes observed as an involuntary jerking occurring when a person attempts to follow as stimulus with the eyes and/or looks to the left or right side.

Impairment: One of the several terms used to describe the degradation of mental and/or motor abilities necessary for safely operating a motor vehicle.

Implied Consent: Every state has enacted a version of an Implied Consent law, which serves to encourage persons arrested for DWI to submit to a chemical test to determine blood alcohol content. Many states also allow for the testing of blood, breath or urine for the presence of drugs and/or alcohol. The concept of implied consent is that the state views the suspect as already having agreed to take the test, as a condition of operating a vehicle in the state. The typical wording of an implied consent law is as follows: "Any person who operates a motor vehicle upon the public highways of this state shall be deemed to have given consent to a chemical test or tests for the purpose of determining the alcohol (or drug) content of his or her blood, when arrested for any act alleged to have been committed while the person was operating a vehicle while under the influence of alcohol (or any drug)."

The law further provides that, if the arrestee nevertheless refuses to submit to the chemical test, he or she will not be forced to submit, but the driver's license will be suspended or revoked.

IACP Staff: With grant assistance from the National Highway Traffic Safety Administration, the Division of State and Provincial Police of the IACP has agreed to develop standards and assist in managing the certification process for the Drug Evaluation and Classification Program. As part of this agreement, the IACP will perform necessary staff and coordination functions for the program. The staff of the Division of State and Provincial Police is responsible for maintaining records for the program and will coordinate certification and recertification processes.

Instructor Trainer: An experienced DRE instructor who conducts instructor training courses and who must be knowledgeable of and have audited all phases of the Drug Evaluation and Classification training program and must be fully conversant with the student and instructor manuals.

Intoxication: One of the several terms used to describe the degradation of mental and/or motor skills and other faculties due to ingestion of alcohol or other drugs.

NHTSA: The National Highway Traffic Safety Administration, within the United States Department of Transportation that exercises primary responsibility for coordinating federal efforts to ensure the safe design and operation of motor vehicles.

Standardized Field Sobriety Tests: The Standardized Field Sobriety Tests include three tests that were developed and validated through a series of controlled experiments supported by research grants from NHTSA. The three tests include Horizontal Gaze Nystagmus (HGN); Walk and Turn (WAT); and One Leg Stand (OLS).

The HGN test is described elsewhere in these definitions.

Walk and Turn and One Leg Stand are *divided attention tests.* As such, they require the suspect to concentrate on more than one thing at a time.

The training course developed by IACP and NHTSA, "DWI Detection and Standardized Field Sobriety Testing," is a program designed to train traffic enforcement officers to administer the sobriety tests. The training includes two approved alcohol workshops. During these workshops, students practice administering the test battery. In order to complete the course satisfactorily, students must pass a written examination and demonstrate proficiency in administering the field sobriety test battery.

STANDARDS FOR THE DRUG EVALUATION AND CLASSIFICATION PROGRAM

I. Standards for Certification as a Drug Recognition Expert

The standards in this section specify the criteria that must be met prior to an individual's being certified as a drug recognition expert (DRE). These criteria outline the knowledge and skills required to be considered for training, as well as the knowledge and proficiencies required for final certification.

The currently approved curriculum involves a three-phase training process. Prior to beginning the training program, students are required to be trained in and demonstrate proficiency in the use of the IACP/NHTSA-approved standardized field sobriety tests, including the horizontal gaze nystagmus test. Phase I of the drug recognition training consists of a two-day (16-hour) preschool. During this preschool, students are taught the definition of the term "drug" as it is used in the Drug Evaluation and Classification Program, and become familiar with the techniques of the drug evaluation. Students also begin to learn the techniques and procedures for evaluating persons suspected of drug impairment.

Phase II of training is a seven-day (56-hour) classroom program during which stu-dents receive detailed instruction in the techniques of the drug evaluation examina-tion as well as in physiology, the effects of drugs and legal considerations. Upon completion of this phase of training, the student must pass a comprehensive written examination before proceeding to Phase III of training, the field certification.

The field certification portion of training follows completion of the classroom training and is conducted at periodic intervals for the next sixty to ninety days. During this portion of the training, students, under the direction of certified instructors, evaluate subjects suspected of being impaired by drugs other than alcohol. After participating in and documenting the results of at least twelve drug evaluations and completing a comprehensive examination, the student is certified as a drug recognition expert.

1.1 In order to be considered for certification as a drug recognition expert, a person shall be in the employ and under the direct control of a public criminal justice agency or institution involved in providing training services to officers of law enforcement agencies.

Commentary: At the discretion of the agency head or administrator, and with the consent of the training body, other persons may audit or observe any or all portions of the DRE training. Persons attending the course as auditors or observers shall not be eligible for certification.

Persons pursuing certification as drug recognition experts for the purpose of instructing in the Drug Evaluation and Classification Program must meet all requirements for certification and recertification in order to maintain their standing as DREs or DRE instructors.

1.2 The candidate DRE must have experience in preparing comprehensive investigative reports and in providing detailed court testimony.

Commentary: The technical nature of the drug evaluation process and the need to provide detailed and accurate documentation of findings and conclusions requires proficiency in preparing reports. Candidate DREs should have demonstrated the ability to investigate, document and prepare detailed reports of incidents such as major traffic crashes or criminal violations. In addition, DREs must be able to provide court testimony concerning their methods and results, as well as their training and qualifications.

1.3 All DRE candidates must attend and complete the IACP/NHTSA-approved course of instruction in Standardized Field Sobriety Testing, or an equivalent curriculum approved by the IACP Highway Safety Committee and Technical Advisory Panel. They shall demonstrate proficiency in the use of Standardized Field Sobriety Tests, to the satisfaction of a DRE instructor, by the conclusion of the IACP/NHTSA DRE Pre-school or a school meeting Standard 1.2 above.

Commentary: The drug evaluation process requires that the contribution of alcohol to observed impairment be determined. The National Highway Traffic Safety Administration has developed, and the IACP has adopted, the Standardized Field Sobriety Test procedure in conjunction with immediate breath testing, as a means of identifying the alcohol-impaired driver. If the effects of alcohol are determined not to be the sole cause of impairment, the officer can begin the evaluation process to determine what other causes may be responsible.

In order to conform to the IACP/NHTSA model curriculum, SFST training must contain the specified number of hours and include at least two approved alcohol workshops. In addition, the training must instruct students in the administration of the horizontal gaze nystagmus, walk and turn, and one leg stand tests.

Each agency should ensure that candidates submitted for DRE training have had adequate time prior to beginning the training program to develop and to demonstrate proficiency in the use of SFST/HGN or allow for refresher training in these techniques as necessary.

1.4 All DRE candidates must attend and complete the IACP/NHTSA DRE Pre-school or an IACP-recognized equivalent prior to progressing to Phase II, the DRE School.

1.5 Prior to attending phase II of the DRE training, the candidate shall have met the learning objectives for phase I of the training program, the IACP/NHTSA-approved DRE preschool. The candidate shall be able to

1. Define the term "drug" as it is used in the DEC Program;
2. Name the seven drug categories identified in the DRE training program;
3. Measure vital signs, including blood pressure, pulse and body temperature;
4. Show familiarity with the 12-step drug recognition evaluation process;
5. Demonstrate proficiency in the administration of the Standardized Field Sobriety Tests, including Horizontal Gaze Nystagmus;
6. Show familiarity with the administration of the eye examinations, including pupil size, vertical nystagmus and lack of convergence.

These learning objectives are generally met through completion of Phase I, the DRE preschool. However, agencies have the latitude to determine the best means of ensuring that candidate DREs meet the prerequisites. The agency must verify, through the application process to the instructor responsible for delivering the training, that a candidate meets all requirements. Each candidate DRE will be required to demonstrate the knowledge and skills outlined.

Administrative guidelines and suggested application forms containing the necessary information will be provided by IACP staff to agencies and training institutions.

1.6 The candidate DRE shall complete an approved classroom training course which shall, at minimum, achieve the learning objectives as stated in the IACP-approved training curriculum.

Commentary: The National Highway Traffic Safety Administration and the International Association of Chiefs of Police have developed a classroom training course that, when completed, qualifies the student to proceed to the field certification portion of the training program. Because of differences in the type and level of training for officers in the detection of the impaired subject, agencies should determine the most effective means of providing classroom training in drug recognition. However, in order to maintain the credibility and integrity of the certification program, agencies that use a training program other than that currently approved by the IACP, must have the alternative curriculum approved by the IACP Technical Advisory Panel as meeting learning objectives. In addition, the Technical Advisory Panel will be responsible for providing periodic updates and modifications to the IACP training curriculum.

1.7 All candidate DREs shall attend and complete all classroom portions of an approved DRE curriculum prior to progressing to Phase III (the field certification phase) of the training. This shall include satisfactorily completing all assignments and required examinations. Students shall not be permitted to "test out" of portions of the training, nor shall they be permitted to attend only those classes that they have not previously completed.

Commentary: Class sessions missed should be made up prior to the final exam.

1.8 In order to complete satisfactorily the classroom portion of the training and proceed to field certification, candidate DREs must complete an IACP-approved final examination with a score of not less than eighty percent (80%). Candidates scoring less than 80% on the final examination may be retested one time, under the supervision of a certified DRE instructor. The retest shall be completed not less than fifteen nor more than thirty days following the completion of the classroom training.

Commentary: Upon satisfactory completion of the examination, the candidate may then proceed to field certification. The examination used to retest the candidate shall be an IACP-approved examination and shall not have been administered to the candidate previously. If the candidate does not achieve a passing score on reexamination, the candidate must retake the classroom portion of the training and pass the knowledge examination before proceeding further in the certification process.

1.9 Upon completion of the field certification phase of training, the candidate must demonstrate the ability to conduct a complete drug evaluation in an approved sequence and appropriately document and interpret the results. The candidate must also be able to document the findings of the evaluation and demonstrate proficiency in interviewing techniques.

Commentary: One of the primary factors in the success of the Drug Evaluation and Classification Program has been the emphasis upon a standardized approach to the drug recognition process. The training stresses the importance of a systematic, structured approach to performing the drug evaluation. This includes completing all portions of the evaluation in the appropriate sequence. Upon conclusion of an evaluation the DRE reviews the results of all tests, examinations and observations; documents the findings; and draws a conclusion based on the totality of the evidence.

1.10 To be considered for certification as a drug recognition expert, the candidate must satisfactorily complete a minimum of twelve (12) drug evaluations, during which the candidate must encounter and identify subjects under the influence of at least three of the drug categories as described in the DRE training program. All three drug categories must be supported by toxicology.

Of the evaluations required for certification, the candidate shall administer at least six evaluations. The candidate may observe the remaining evaluations. Certification training evaluations will be conducted in accordance with the current procedures and guidelines established in the DECP training curricula.

All evaluations, either administered or observed, and documented for certification purposes, shall be observed and supervised by at least one certified DRE instructor.

Commentary: Ideally, a drug evaluation will be performed by no more than two persons: the evaluator and one observer. At no time should more than four persons participate in an evaluation, as the results of the evaluation may be influenced by the distraction caused by a large number of persons observing the process.

1.11 Prior to completing the certification phase of training, the candidate DRE must demonstrate the ability to draw correct conclusions consistent with observed physiological signs and symptoms. In addition, the conclusions must be supported by the findings of a forensic toxicology laboratory. No candidate DRE shall be certified as a drug recognition expert unless blood, urine, or other appropriate biological samples are obtained and submitted from at least nine (9) subjects whom the candidate DRE has examined for certification purposes. These may include subjects for whom the candidate DRE served as the examination recorder or observer as well as those subjects directly evaluated by the candidate DRE. Further, the candidate DRE cannot be certified unless the opinion concerning the drug category or categories affecting the subject is supported by forensic toxicological analysis seventy-five percent (75%) of the time, or in at least seven (7) of the nine (9) samples submitted for certification purposes. For purposes of this standard, a candidate DRE's opinion is supported if the toxicological analysis discloses the presence of at least one drug category named by the candidate DRE. In the event that the candidate DRE has concluded that three or more categories of drugs are involved, at least two categories must be supported by toxicology results.

Commentary: Successful and uniform application of this standard places important forensic toxicological requirements on the program. First, the blood or urine specimen must be obtained as soon as possible after the arrest so that the contents of the sample refer to the subject's status at the time of the offense. Second, the sample must be properly sealed, stored, transported to the forensic toxicology laboratory and analyzed in a timely fashion to maintain the integrity of the specimen. Third, the drug recognition examination should be conducted as soon as possible after the offense so that the results of the evaluation accurately refer to the subject's status at the time of the offense. Fourth, the laboratory should use its full powers of analysis and detection to attempt to identify each category named by a candidate DRE; in some cases this may require the laboratory to modify its routine screening and confirmation procedures. Finally, the laboratory must complete its report on the samples as soon as possible and provide a copy of the report to the arresting officer, DRE or candidate DRE submitting the sample. It is the submitting officer's responsibility to provide a report to each DRE or candidate DRE who participated in the evaluation.

Although the candidate DRE must complete a minimum of twelve (12) drug evaluations (standard 1.10), standard 1.11 requires only 75 percent of those to include a biological sample. This allows for those cases in which a biological sample is unavailable, such as when a subject refuses or cannot provide one. In those cases when an evaluation is not supported by forensic toxicology, a certified DRE instructor should ensure that the candidate DRE's opinion was based on observable signs and symptoms consistent with the opinion.

1.12 Prior to concluding field certification training, the candidate shall satisfactorily complete an approved "Certification Knowledge Examination." The examination shall be administered and the results reviewed by at least one certified instructor. The examination shall only be administered after the candidate has completed not less than three drug evaluations.

Commentary: The "Certification Knowledge Examination" consists of a comprehensive written examination followed by a detailed interview with the reviewing instructor(s). As stated previously, certification is based on the evaluation by the instructor(s) of the skills and abilities of the candidate rather than on the completion of a specified set of tasks. The purpose of the examination and interview is to aid the instructor(s) in evaluating the candidate's qualifications, performance and general abilities.

The examination should be administered when, in the judgment of the reviewing instructor(s), the candidate has demonstrated proficiency in conducting, evaluating and documenting results of the drug evaluation process.

1.13 The candidate DRE shall complete the field certification phase of training within six months following completion of the classroom training, unless the time limit is extended by the appropriate DRE coordinator.

Commentary: Under normal circumstances, a candidate not completing field certification within the prescribed time period will be dropped from the program. However, a reevaluation of the candidate's qualifications and the reasons for non-completion may be conducted by the appropriate DRE coordinator to determine whether or not circumstances exist that indicate that the candidate should continue in the program.

1.14 By the time the candidate DRE has completed field certification training, the candidate shall have prepared a résumé which shall reflect the candidate's training and experience in drug recognition. The résumé shall include a complete log of all evaluations in which the candidate has participated.

Commentary: In order to be accepted as a credible witness, the drug recognition expert must be able to document and articulate a body of information concerning training, qualifications and experience in the field of drug evaluation and classification. Toward this end, candidates are instructed in the importance and proper preparation of a professional résumé.

1.15 When the candidate DRE has satisfactorily completed all requirements of the classroom and field certification portions of training, at least two certified DRE instructors who have observed the candidate during the field certification process will verify that the candidate meets all requirements for certification as a drug recognition expert.

Commentary: The certification process relies in large part on the judgment of the instructor(s) as to the abilities and performance of the candidate. Experience has shown that in many cases, particularly those in which a candidate's qualifications may be in question, the opinion of a second instructor as to readiness for certification is of value. In addition, the use of a second instructor to evaluate the candidate may overcome any bias, either for or against a candidate. For these reasons, each candidate must be evaluated by at least two instructors prior to becoming certified as a DRE.

1.16 Following completion of certification requirements, copies of all documents, including test results, evaluation logs and drug evaluation reports shall be forwarded to the agency DRE coordinator who shall forward all documents to the state coordinator. The state DRE coordinator shall forward the names and copies of certification progress logs of the DREs they have certified as having successfully completed all phases of the DRE training program. The IACP will then credential each applicant and will register him as a certified drug recognition expert.

Commentary: The IACP staff shall maintain current listings of persons certified as drug recognition experts. Upon notification that a person has met all requirements, staff shall complete and forward to the state coordinator a certificate indicating that he meets all requirements of the Drug Evaluation and Classification Program as a drug recognition expert. The state coordinator shall forward these documents to the agency which, in turn, will present them to the DRE.

II. Standards for Certification as Drug Recognition Expert Instructor

Because of the highly technical nature of the functions performed by the drug recognition expert, only persons experienced in the techniques of drug evaluation should instruct in the Drug Evaluation and Classification Program. In general, these instructors will be certified drug recognition experts with experience in performing drug evaluations and in providing testimony in court in the area of drug recognition. However, persons who possess specialized skills or credentials may be utilized to teach certain parts of the training course as associate instructors. Dedicated, qualified instructors are critical to the continued success of the Drug Evaluation and Classification Program.

Certified instructors are responsible for observing, evaluating and verifying the performance of candidate DREs throughout the training and certification process. In addition, certified instructors must provide periodic update training to DREs already certified.

Also addressed in this section are standards for the use of instructor trainers in the program. These individuals are responsible for the training of DRE instructors.

2.1 Only persons certified as drug recognition experts may be certified as DRE instructors.

Commentary: Persons not certified as DREs but who possess knowledge, expertise or credentials deemed valuable to the program may be designated as associate instructors for the Drug Evaluation and Classification Program. Persons who might be considered for such designation may include medical professionals, attorneys and others who possess knowledge in a designated field of expertise. Associate instructors must be familiar with the Drug Evaluation and Classification Program and fully conversant with the lesson plans for their assigned blocks of instruction. Classes taught by associate instructors shall be taught in cooperation with certified DRE instructors to ensure consistency.

Each associate instructor should provide to the state coordinator a biographical sketch to be included in the file of approved instructional staff. The biographical sketch shall include those segments of the training curricula that the associate instructor is qualified to teach.

2.2 A DRE desiring to become an instructor in the Drug Evaluation and Classification Program shall make written application to the agency coordinator. The agency coordinator will ensure that the candidate meets all requirements to become an instructor and will refer the application to the state coordinator.

Commentary: The agency head shall verify to the training provider that a candidate instructor meets all prerequisites to enter DRE instructor training. Prerequisites may also include any state, local or agency requirements specified for instructors within the jurisdiction. The state coordinator shall provide to requesting agencies the administrative guide and sample application forms for candidate instructors.

2.3 The candidate shall satisfactorily complete the IACP/NHTSA-approved Drug Evaluation and Classification Instructor Training Program, or an approved equivalent, which shall include both knowledge and practical examination of candidate instructors.

Commentary: This requirement does not preclude states or local jurisdictions from placing additional requirements on persons wishing to teach in the local law enforcement community.

2.4 Upon satisfactory completion of the IACP-approved classroom portion of training or completion of an equivalent program, the student shall be designated as a candidate instructor for purposes of completing instructor certification. To complete instructor certification, the candidate instructor must teach for a minimum of two hours in the classroom portion of an approved drug recognition training program; and supervise the administration of not less than two drug evaluations performed by candidate DREs during certification training.

The candidate instructor's progress shall be monitored and evaluated by at least one certified DRE instructor.

Commentary: The National Highway Traffic Safety Administration and the IACP have developed a training curriculum for instructors in the Drug Evaluation and Classification Program. The learning objectives for this program emphasize specific techniques for teaching the specialized information contained in the drug recognition training program.

The Technical Advisory Panel shall be responsible for reviewing and evaluating alternative training programs submitted by agencies. Those programs meeting or exceeding the approved learning objectives for instructor training shall be deemed "equivalent." This does not preclude agencies or states from adopting more stringent standards.

2.5 Upon satisfactory completion of instructor training, copies of all documentation, including instructor progress logs, examination scores and instructor evaluations, shall be forwarded to the appropriate DRE coordinator. The agency DRE coordinator will forward these documents to the state coordinator who shall certify that they have successfully completed all phases of DRE instructor training. The IACP will then credential each applicant and will register him as a certified DRE instructor.

Commentary: The IACP staff will maintain a current register of persons certified as instructors in the Drug Evaluation and Classification Program. Upon notification that a person has met all requirements, the staff shall complete and forward to the state coordinator a certificate indicating that he/she meets all requirements as a DRE instructor. The state coordinator shall forward these documents to the agency who, in turn, will present them to the DRE instructor.

The administrative guidelines shall provide sample forms for necessary progress logs and certification documents.

2.6 To ensure the proper conduct and delivery of the approved curriculum, all training sessions conducted as part of the Drug Evaluation and Classification Program shall be coordinated by a certified DRE instructor who has previously instructed. All classes taught by associate or candidate instructors shall be supervised directly by a certified DRE instructor.

Commentary: To ensure that all training classes are conducted in accordance with applicable standards, it is recommended that the instructor coordinating the training program have a minimum of one-year experience as a drug recognition expert instructor.

2.7 An instructor trainer shall have demonstrated proficiency as an instructor.

2.8 An instructor trainer must be knowledgeable of and have audited all phases of the Drug Evaluation and Classification training program and must be fully conversant with the student and instructor manuals.

Commentary: An instructor trainer must present evidence of the satisfactory completion of the NHTSA/*IACP* Instructor's Development Course or equivalent. Instructor trainers must be familiar with the Drug Evaluation and Classification Program and fully conversant with the lesson plans for their assigned blocks of instruction. To ensure consistency, classes taught by instructor trainers shall be taught in cooperation with certified DRE instructors.

Each instructor trainer shall provide to the appropriate DRE coordinator a biographical sketch to be included in the file of approved instructional staff. The biographical sketch shall include those segments of the training curricula that the instructor trainer is qualified to teach.

The state coordinator should maintain a record of persons qualified as instructor trainers in the Drug Evaluation and Classification Program.

2.9 The course manager shall perform four duties: planning and preparation, on-scene course management, data collection, and reporting. These responsibilities involve the following:

1. Assigning instructors, and verifying in advance that the training is conducted in the standardized manner and that it is properly evaluated;
2. Ensuring at the training site that all necessary conditions exist to maximize the students' ability to learn;
3. Collecting certain data following every training event and forwarding it to the host state coordinator; and
4. Preparing a comprehensive report following every training event.

III. Standards for Recertification

Recertification is necessary to ensure that DREs and DRE instructors maintain proficiency. Just as the standards in the previous sections have outlined the criteria for original certification, the standards outlined in this section are required to ensure that professional integrity is maintained throughout the recertification process.

3.1 The following records concerning certification and recertification shall be maintained:

Individual DRE/ DRE Instructor	Copies of all drug evaluations Evaluation logs Resume Certification and recertification progress logs Certificates
Agency DRE Coordinator	Copies of evaluation logs Certification progress logs Copies of certificates Instructor ratings and summaries of student critiques Records of classes taught by each instructor
State DRE Coordinator and/or IACP Staff	Copies of evaluation logs (optional) Certification progress logs File of certified DREs and instructors Recertification information

Commentary: Guidelines for the retention of pertinent records concerning the program operation help to ensure integrity of the program and provide valuable information for purposes of statistics and court verification of training. Other records as deemed appropriate by local agencies or certification commissions may be required of the individual DRE or the appropriate DRE coordinator.

3.2 DREs shall be required to renew their certificates of continuing proficiency every two years. A one-year grace period following the lapse of certification may be allowed for those not meeting recertification standards. During the grace period, the DRE may be rectified without having to repeat the original certification process.

3.3 The state coordinator shall be notified of those DREs in need of recertification at least six months prior to the expiration of the certificates. The state DRE coordinator shall forward to the IACP staff required documentation indicating the completion of recertification requirements. The staff will issue new cards when requirements are met.

Commentary: In the absence of a state coordinator, the TAP regional coordinator will perform these functions.

3.4 A DRE shall demonstrate continuing proficiency by

Performing a minimum of four (4) acceptable evaluations since the date of last certification, all of which shall be reviewed and approved by a certified DRE instructor and one (1) of which shall be witnessed by a certified DRE instructor. These evaluations may be performed on subjects suspected of drug and/or alcohol impairment or during classroom simulations; and Completing a minimum of eight hours of recertification training since the date of the DRE's most recent certification, which may alternatively be presented in two sessions of no less than four hours, and which shall be consistent with any IACP standards for such training; and Presenting an updated resume and rolling log to the appropriate coordinator or his/her designee for review.

Commentary: All coordinators are responsible for maintaining the integrity of the program, and the appropriate coordinator, consistent with this responsibility, is encouraged to withhold recertification for, or refer for remediation, any DRE whose rolling log indicates an unacceptable level of accurate evaluations, as indicated by toxicology results.

3.5 When a DRE has completed all requirements for recertification, a certified DRE instructor shall verify to the appropriate DRE coordinator that minimum recertification requirements have been met.

3.6 A certified instructor shall maintain instructor certification so long as DRE certification is maintained.

Commentary: An instructor may be decertified for cause, such as for conducting substandard instructional programs, and still maintain certification as a DRE.

IV. Standards for Decertification of Drug Recognition Experts and Instructors

The standards in this section outline the circumstances and procedures for decertifying individual DREs or DRE instructors. In order to ensure that standards of performance are maintained, a means is needed for removing from the roles of the program those persons unable to meet the criteria of competence and professionalism. The responsibility for maintaining program standards lies with the agency and the appropriate DRE coordinator. It shall be incumbent upon all DRE coordinators to ensure that certified DREs meet approved standards for conduct and qualifications.

4.1 Decertification shall occur when a DRE or DRE instructor fails to meet minimum standards and requirements for certification or recertification, or demonstrates evidence of poor performance, inconsistent findings, or other substantiated acts on the part of the DRE that reflect discredit upon the Drug Evaluation and Classification Program.

Commentary: All DREs are responsible for maintaining and forwarding to the appropriate DRE coordinator information regarding required training or experience. If such information is not provided in a timely manner, certification will lapse.

Local agencies and licensing/certification bodies may, at their discretion, establish certification and decertification criteria to conform to local laws or rules. Nothing in these standards should be construed to overrule local authority in establishing standards no less stringent for the performance of officers in this area or to prevent an agency from following internal disciplinary or administrative personnel procedures.

4.1.1 Before decertification is finalized, a DRE or DRE instructor will be given written notice by the initiating DRE coordinator of the reasons for decertification. The subject of the action shall have the opportunity for a written or an oral response to the initiating DRE coordinator.

4.2 Requests for voluntary decertification will be honored when submitted by a DRE or DRE instructor to the section IACP staff and with approval of the agency appropriate DRE coordinator.

4.3 Cases involving poor performance or inconsistent findings shall be referred to the agency appropriate DRE coordinator for investigation, recommendation and action.

4.4 Certification of a DRE shall not terminate as long as the DRE meets the requirements of Standards 1.1 and 4.1.

4.5 The state DRE coordinator, upon the recommendation of the agency DRE coordinator or based on substantiated independent knowledge shall initiate the decertification process against a DRE or DRE instructor. The state coordinator shall inform the IACP staff of all decertification actions. In instances where these complaints have not been resolved by the appropriate coordinator, these complaints will be referred to the state's Governor's Office of Highway Safety for resolution.

V. Standards for Reinstatement of a Decertified Drug Recognition Expert

The standards in this section outline the procedures for reinstating a previously decertified DRE and/or DRE instructor.

5.1 An individual can be reinstated as a DRE when the following conditions are met:

(1) The applicant must pass the 100-item exam (same as that given at the end of the DRE school, or the make-up exam) as witnessed by a certified DRE instructor, with a score of at least 80%.

(2) The applicant must complete four (4) hands-on drug evaluations within a one-year period from the date of request to be reinstated.

(3) The applicant's eligibility and reinstatement as a DRE is reviewed and approved by the DRE's agency and the agency, state, and TAP regional DRE coordinators, where applicable.

5.2 An individual can be reinstated as a DRE instructor when the following conditions are met:

(1) The applicant meets conditions 5.1 and is reinstated as a DRE.

(2) The applicant's eligibility and reinstatement as a DRE instructor is reviewed and approved by the DRE's agency and the agency, state, and TAP regional DRE coordinators, where applicable.

Commentary: In many instances, a DRE certification lapses through no fault of the DRE due to transfers, promotions, etc., and recertification requirements have not been met. In many cases a DRE may want to reapply DRE skills with a new assignment. IACP suggests that a written request for reinstatement to the program come from the applicant to the appropriate coordinator, through the proper agency channels. A form is provided by the IACP to DEC state and TAP regional coordinators for the purpose of reinstatement. All coordinators are cautioned to conduct a thorough check on the cause of the applicant's decertification and reason for application for reinstatement.

VI. Standards for Agency Participation

Since 1986, the National Highway Traffic Safety Administration has endeavored to expand the Drug Evaluation and Classification Program. In an effort to contain costs, ensure the most efficient use of resources and maintain a high probability of program success, NHTSA developed site selection criteria to be used in assessing potential suitability of sites. Factors such as demographics, favorable legislation, agency operations and system support for the program are considered in evaluating potential sites for the implementation of the Drug Evaluation and Classification Program.

It is recognized that law enforcement agencies, in considering the implementation of new traffic enforcement programs, must be aware of both short- and long-term costs that are involved. In order for the program to achieve maximum results, the Drug Evaluation and Classification Program requires that agencies commit considerable resources long term to the detection and apprehension of the drug-impaired driver.

6.1 A DEC Program site should be a state, a political subdivision of a state, or a group of subdivisions.

Commentary: Experience has shown that a DEC Program will take firm root only if the resources to support the program are concentrated in a relatively small geographical area, such as a major city or county. Given that these new sites will begin operations with a small cadre of DREs, a community-focused DEC Program will allow the DREs to respond quickly to the location(s) where drug-impaired drivers might be taken for processing. By concentrating its forces, the program can ensure that a qualified DRE is available at any time or place needed. The concentrated focus of a community-based program allows the DREs ample opportunity to conduct evaluations and maintain skills at peak proficiency.

6.2 A proposed program site should be able to produce enough drug-impaired driving arrests to (1) justify the expense of training the DREs, and (2) provide enough evaluation opportunities for DREs to maintain proficiency.

Commentary: Studies indicate that up to 40 percent of the persons arrested for impaired driving are actually under the influence of drugs, either alone or in combination with alcohol. Thus, a site should produce an adequate number of DUI arrests annually per DRE to provide ample drug evaluation opportunities.

6.3 Prior to implementation of a DEC Program, a site should be located in a state with an implied consent law that

> Explicitly allows the chemical test sample to be analyzed to determine the presence and/or concentration of drugs other than alcohol;

Explicitly indicates that the "consent" applies to multiple tests, i.e., that the person is "deemed to have given consent to a test or tests of blood, breath or urine"; and

Empowers the arresting officer and/or the law enforcement agency to select the types of chemical tests to be taken, rather than giving the suspect the option of choosing the tests.

In the absence of an implied consent law, a site must certify that the above three criteria are met and apply to the Technical Advisory Panel for consideration for acceptance to the program.

Commentary: It is pointless to evaluate drivers for drug-induced impairment unless those found to be so impaired can be prosecuted successfully. The requirements for multiple chemical tests are essential because both a breath test and blood or urine tests are integral components of the drug recognition process. In addition to implied consent legislation, the effectiveness of DEC programs is greatly enhanced by legislation that

Allows the fact of a suspect's refusal to submit to the chemical test to be introduced as evidence in court; and

Makes it an offense to drive under the influence of any drug.

6.4 At least eighty percent (80%) of a participating agency's traffic law enforcement officers must be fully trained and proficient in the use of the IACP/NHTSA-approved standardized field sobriety tests, including the horizontal gaze nystagmus test.

Commentary: It is recommended that the agency's SFST training program is consistent with the IACP/NHTSA model curriculum. In particular, the training must contain the specified number of hours and include at least two approved alcohol workshops.

6.5 Participating agencies must maintain accurate and timely records of

- Alcohol and drug-related arrests and convictions;
- Alcohol and drug offense processing time;
- All toxicological examinations; and
- All drug recognition evaluations to include documenting and collecting of basic data which includes, but is not limited to, the name and age of arrestee, date of arrest, sex, the DRE opinion, and the name of evaluator.

Commentary: In order to evaluate critically the effectiveness of the Drug Evaluation and Classification Program, it is necessary that, at a minimum, the above records be maintained. In addition to evaluation purposes, the records may prove beneficial in establishing program validity for court purposes. The IACP and NHTSA has endorsed a data collection software program which DECP states are encouraged to use.

6.6 Participating agencies should have the capability to establish centralized booking or processing of all DUI arrestees.

Commentary: The ideal situation is one in which all persons arrested for DUI are taken to a single location for processing. One or two DREs could then be stationed at that location to ensure prompt access to all suspects apprehended for drug-impaired driving. However, it is feasible for a jurisdiction to have a few centralized processing facilities as long as there are enough DREs to staff them adequately and enough DUI arrests to ensure that the DREs conduct frequent evaluations.

6.7 Each location where DRE evaluations are conducted must have adequate facilities, including

A room sufficiently large to permit unobstructed administration of the Standardized Field Sobriety Tests;

A separate room that can be completely darkened for the eye examination;

Storage space for test data forms, reference documents, blood pressure kits, etc;

Access to breath testing equipment producing on-the-spot results; and

Facilities and materials for collecting blood and/or urine samples.

Commentary: Because of the unique requirements of the DEC Program, it is sometimes more economical for several agencies within a site to share DUI processing facilities. Other desirable characteristics for a DUI processing facility include

Adequate holding cells for arrestees;

Separate interrogation and report writing areas that provide privacy from the general prisoner population; and

Testing facilities that are out of main traffic patterns and allow the drug evaluation process to be performed without interruption or distraction.

6.8 Participating agencies must have access to laboratories that are capable of identifying the presence of the most commonly abused drugs when these drugs are present in sufficient concentrations to produce impairment.

Commentary: Ideally, the laboratories will also be able to identify the concentration of these drugs. In any case, the accuracy of the chemical analysis should be consistent with state-of-the-art drug testing. In other words, screening tests are not sufficient; a jurisdiction should be able to produce a confirmatory analysis. Although either blood or urine samples are acceptable, it is best if the jurisdiction has the ability to test both.

6.9 All agencies and states interested in participating in a Drug Evaluation and Classification Program must have the following endorsements:

The state governor's representative for highway safety;

The chief elected official of each political subdivision to be included in the site;

The commanding officer of each participating law enforcement agency;

The administrative judge of each court that tries people arrested for DUI within the jurisdiction;

The chief prosecuting attorney for each court in the jurisdiction; and

Representatives of any other agencies that would be involved in covering the costs of developing and sustaining the DEC Program.

DRUG EVALUATION AND CLASSIFICATION PROGRAM ADMINISTRATIVE GUIDELINES INTERNATIONAL ASSOCIATION OF CHIEFS OF POLICE

With grant assistance from the National Highway Traffic Safety Administration (NHTSA), the International Association of Chiefs of Police has developed certification standards and administers the Drug Evaluation and Classification Program. Under these administrative guidelines, it will be the responsibility of the individual and all coordinators to ensure that specific requirements of the standards are met. The staff at the IACP will be responsible for maintaining records, issuing certificates of completion, coordinating certain training-related events and maintaining and updating training materials as required.

The following procedures have been developed by the staff of the International Association of Chiefs of Police for use by agencies participating in the Drug Evaluation and Classification Program and wishing to certify drug recognition experts and instructors in their employ.

Obtaining certification as a drug recognition expert or DRE instructor ensures that an individual meets minimum requirements for training and experience as established by the IACP and the IACP Technical Advisory Panel. The Drug Evaluation and Classification Administrative Guidelines accompany the *International Standards of the Drug Evaluation and Classification Program.*

For the certification process to operate efficiently, it is recommended that coordinators at the agency, ~~and~~ state, and regional levels be identified. The responsibilities of the coordinators may include reviewing the qualifications of the candidate DREs, supplying required documentation that minimum standards have been met, and maintaining individual and program records. The coordination functions may be performed by one person or may be divided among several persons, as operational needs demand.

1. Notification of Candidate Drug Recognition Experts

When an individual has completed all agency application requirements for admission for training as a drug recognition expert, the agency shall provide the following information to the appropriate coordinator:

1. Candidate's name
2. Mailing address
3. Sponsoring agency
4. Social security number
5. Verification that candidate has satisfactorily completed a NHTSA/*IACP*-approved course in Standardized Field Sobriety Testing

In addition, the appropriate DRE coordinator shall provide the above information to the agency or individual responsible for providing training to ensure that all students meet prerequisites prior to the beginning of the training phase:

State program coordinators shall forward to the IACP staff the above information on all candidate DREs at the following address:

International Association of Chiefs of Police
Division of State and Provincial Police
515 North Washington Street
Alexandria, VA 22314

2. Obtaining Certification as a Drug Recognition Expert

All candidates for certification under the International Drug Evaluation and Certification Program must demonstrate completion of all requirements specified in Section I of the *International Standards of the Drug Evaluation and Classification Program*. Each candidate's progress toward meeting certification requirements shall be documented on the "Certification Progress Log," which shall be supplied to all appropriate DRE coordinators by the IACP staff. Each candidate shall be responsible for maintaining a certification progress log.

Completion of each step in the certification process shall be verified by the signature of at least one certified DRE instructor. Final recommendation for certification must be verified by the signatures of two certified instructors. Upon completion of all certification requirements, copies of the certification progress log shall be forwarded to the agency DRE coordinator and to the state coordinator. The state coordinator shall verify all information on the certification *progress* log and ensure that all entries are correct. The state coordinator shall forward to the IACP staff a copy of each candidate's completed certification progress log.

Upon receipt of the completed certification progress log, the IACP staff shall ensure that all necessary information is complete. Upon verifying that the information is complete, the IACP staff shall forward to the DRE state or TAP regional coordinator a certificate of completion and an identification card signifying that the candidate has met or exceeded all requirements for certification as a drug recognition expert. In the event that proper documentation is not provided, notification will be sent to the state coordinator indicating the specific reasons(s) for non-qualification.

The IACP staff shall maintain records of all certified DREs. Each record will contain the following information:

1. Name
2. Social Security Number
3. Department/agency
4. Mailing address

5. Telephone number
6. Dates of all events specified on the progress log
7. Name(s) of instructors verifying completion of training events
8. Date certificate is awarded
9. Date certification expires

3. Obtaining Certification as DRE Instructor

Candidates for certification as DRE instructors must demonstrate that they meet all requirements specified in Section II of the *International Standards of the Drug Evaluation and Classification Program*. The candidate instructor's progress toward completing certification requirements shall be documented on the form, "DRE Instructor's Certification Progress Log," which shall be supplied by IACP staff to all appropriate DRE coordinators. The individual candidate DRE instructor shall be responsible for maintaining the log.

Completion of each step in the instructor certification phase shall be verified by at least one certified DRE instructor. Upon completion of all certification requirements, copies of the DRE instructor's certification progress log shall be forwarded to the agency DRE coordinator and to the state DRE coordinator. The state DRE coordinator, after verifying that all information on the logs is complete and accurate, shall forward copies of all completed instructors' certification progress logs to the IACP staff.

Upon receipt of the instructor certification progress log, the IACP staff shall verify that all information on the log is complete. Upon verification, the IACP staff shall forward to the state coordinator a certificate of completion signifying that the candidate meets or exceeds all requirements of the Drug Evaluation and Classification Program as a DRE instructor. The IACP staff shall send notification to the state coordinators that the instructor has been certified. In the event that the instructor does not meet all requirements for certification, notification will be sent to the state coordinators indicating the specific reason(s) for non-qualification.

The IACP staff will maintain records of all certified DRE instructors. Each record will contain the following information:

1. Name
2. Social Security Number
3. Department/agency
4. Mailing address
5. Telephone number
6. Dates of all training events specified in the progress log
7. Name(s) of instructors verifying completion of training events
8. Date certificate was awarded
9. All pertinent information relating to the instructor's experience and credentials

Drug recognition expert instructors shall maintain certification as long as DRE certification is maintained. State coordinators will maintain a list of persons designated as associate instructors or as instructor trainers for the Drug Evaluation and Classification Program. In order that the list for instructors and associate instructors may be kept current and, therefore, of use to the participants, agencies hosting DRE training events (pre-schools, DRE training, instructor schools) should provide the state coordinator a list of all instructors and their instruction assignments.

4. Procedures for Recertification of Drug Recognition Experts and DRE Instructors

As specified in Section III of the *International Standards of the Drug Evaluation and Classification Program*, all drug recognition experts must be recertified every two years following original certification. DRE instructors shall maintain their instructor certification as long as DRE certification remains in effect. All applicable recertification standards for DREs shall apply to DRE instructors.

The following process will be utilized to ensure timely notification and compliance with recertification requirements:

1. Eighteen (18) months following the date of original certification, the IACP will send a renewal advisory notice to state DRE coordinators.

2. The DRE shall forward to his state coordinator evidence of completion of all recertification requirements as well as a recertification form signed by his agency coordinator. The state coordinator, after signing the recertification form, will forward a copy to IACP staff.

3. Upon notification that a person has met all requirements under section III of the *International Standards of the Drug Evaluation and Classification Program,* IACP staff shall issue a card recertifying the DRE for a period of two years.

In the event that information verifying completion of recertification requirements is not received by the IACP staff prior to the expiration of certification, the IACP staff will notify the state coordinators that certification has expired. Following expiration of certification, the DRE may renew certification without penalty for a period of one year by providing proof of completion of recertification requirements. A decertified DRE wishing to be reinstated following the expiration of the one-year grace period must complete all training and certification requirements enumerated in Section V of the *International Standards of the Drug Evaluation and Classification Program.*

5. Decertification of Drug Recognition Experts

Decertification of a drug recognition expert may take place if one or more of the following conditions exist:

1. The requirements as enumerated in Section III of the *International Standards of the Drug Evaluation and Classification Program* are not met by the individual DRE, allowing certification to lapse.

2. A DRE voluntarily requests decertification.

3. There is evidence of poor performance, inconsistent findings, or other acts on the part of the DRE that reflect discredit upon the Drug Evaluation and Classification Program.

In the case of a lapse of certification, the procedures in Section 4 of the Administrative Procedures shall be followed.

A DRE wishing to be decertified shall submit a written request through the appropriate agency and state coordinators to the IACP staff. Upon receipt of approval of the request by the state DRE coordinator, IACP staff shall remove the name of the individual from the list of certified DREs.

Agency DRE coordinators shall monitor the performance of DREs within their agencies and shall investigate complaints arising from their activities in the drug evaluation area. When, in the opinion of the agency coordinator, and with the approval of the agency head or his designee, a DRE's actions warrant decertification, the agency shall notify the state coordinator that the DRE is no longer certified within that agency.

Nothing in this procedure should be construed as to prevent an agency from following internal disciplinary or administrative personnel procedures. The IACP staff will maintain records of all decertified DREs and the reason(s) for decertification.

6. Approval of Drug Recognition Training Curricula

The National Highway Traffic Safety Administration (NHTSA) and the International Association of Chiefs of Police (IACP) have developed a course of instruction to train police officers in the techniques of drug recognition. This course of training has been adopted by the IACP as the minimum training requirement for certification for DREs and DRE instructors. NHTSA and IACP are responsible for revising and updating the DRE training curricula.

The course of instruction adopted by the IACP requires a total of seventy-two hours of classroom instruction followed by field certification during which a candidate must participate in a minimum of twelve drug evaluations. In the course of the required drug evaluations, a candidate must encounter and correctly identify subjects under the influence of at least three different categories of drugs. The complete requirements for certification as a DRE are enumerated in Section I of the *International Standards of the Drug Evaluation and Classification Program.*

In recent years, several training programs have been developed by police agencies and commercial training institutions with the aim of training individuals to detect persons impaired by drugs. A number of agencies currently utilize portions of the NHTSA/IACP approved program or variations of it in teaching officers the techniques of detecting the drug-impaired driver.

Section I of the *International Standards of the Drug Evaluation and Classification Program* requires that a candidate for certification complete "...an approved classroom training course which shall, at minimum, achieve the learning objectives as stated in the IACP approved training curriculum." The Highway Safety Committee of the IACP is charged with overseeing the operation and development of the Drug Evaluation and Classification Program. In order to maintain the high standards of the program, the committee has established the Technical Advisory Panel. Responsibilities of this panel, appointed by the IACP Highway Safety Committee, include the review of proposed alternative training programs to determine whether or not course content and learning objectives are consistent with approved standards.

Organizations wishing to submit proposed training curricula for review and approval as equivalent programs for the purpose of certifying individuals as drug recognition experts shall submit lesson plans, visual aids and any other required materials to the IACP staff. The IACP staff will submit the proposed course to the Technical Advisory Panel for evaluation. Courses that meet applicable standards and learning objectives shall be termed as equivalent courses. Completion of said courses shall qualify the candidate for certification as a DRE.