# INTRODUCTION TO DRUGGED DRIVING

## ADMINISTRATOR'S GUIDE

HS 178A R2/06

TABLE OF CONTENTS

## A. Purpose Of This Document

This Administrator's Guide provides an introduction to and an overview of the half-day instructional module entitled "Introduction to Drugged Driving". The module is designed to be delivered with the curriculum entitled "DWI Detection and Standardized Field Sobriety Testing", a program of instruction intended for delivery to as many as possible of the nation's traffic law enforcement officers. That curriculum is designed to help those officers become more proficient at detecting, apprehending, testing and convicting alcohol-impaired drivers.

The module's subject matter relates to a second curriculum, "Drug Evaluation and Classification", which provides a seven-day classroom training program as the first step in qualifying an officer to serve as a drug recognition expert (DRE). This training is intended to be delivered on a much more selective basis, e.g., perhaps to only a few percent of traffic law enforcement officers. A qualified DRE is a specially-skilled individual who can examine a person suspected of drug impairment and determine, with a high degree of accuracy, the broad category (or combination of categories) of drugs causing the impairment. A DRE conducts an evaluation only after a suspect has been apprehended (for DWI or some other offense), and only when there is reason to believe that alcohol alone is not responsible for the impairment.

A mounting body of data suggests that an appreciable percentage of DWI violators may be under the influence of drugs other than alcohol, either alone or in combination with alcohol. Estimates of this "appreciable percentage" vary, but all estimators agree that the average DWI enforcement officer almost inevitably will encounter drug-impaired drivers from time to time. Therefore, it is important that the officer be able to recognize when he or she has encountered a drug-impaired suspect, and to call this to the attention of a qualified DRE. The half-day module is designed to address that need.

This Administrator's Guide is intended for law enforcement agencies that have already trained their personnel in standardized field sobriety testing. The Guide supports delivery of the module "Introduction to Drugged Driving" as a stand-alone program of instruction, e.g., for in-service training.

This Administrator's Guide facilitates planning and implementation of the module. The Guide overviews the half-day course of instruction and the documents and other materials that make up the module's curriculum package.

It describes the module's curriculum package. It describes the module's administrative requirements and offers guidelines for discharging those requirements satisfactorily. It outlines the preparatory work that must be accomplished by a law enforcement agency before the module can be offered to that agency's personnel. And, it describes the follow-up work that should be undertaken to ensure the continuing delivery of the highest possible quality of instruction.

Before addressing the details of this introductory module, it is appropriate to emphasize one thing that the module will not do:

**THIS TRAINING WILL NOT QUALIFY AN OFFICER TO SERVE AS A DRUG RECOGNITION EXPERT.**

True, the subject matter covered touches upon some (but not all) of the factors a DRE considers in examining a drug-impaired suspect. But no one should attempt to identify drug categories based only on the knowledge acquired through this module. Any such attempt will cheapen, and perhaps diminish the court's willingness to accept, the highly specialized knowledge and skills that a DRE must work long and hard to develop.

B. Overview Of The Module

1. For Whom Is The Training Intended?

This module is designed primarily for police officers who are able to administer and interpret the horizontal gaze nystagmus test for alcohol-impaired suspects. The student should be fully conversant with the procedural "mechanics" of HGN, with the three clues of HGN, and with the interpretation of those clues for assessing alcohol impairment. A major focus of this module is on the examination of a drug-impaired suspect's eyes, and the procedures for those eye examinations derive largely from HGN procedures.

2. What Are The Purposes Of The Module?

The purpose of the module is to improve participants' ability to recognize sus-pects who may be under the influence of drugs other than alcohol, and to take appropriate action when they encounter such suspects. The "appro-priate action" usually will be to request a medical examination of the sus-pect. The hope and expectation is that, due to this training, fewer drug- or medically-impaired suspects will avoid detection or be treated simply as alcohol-impaired. In those agencies that have a drug evaluation and class-ification program, the "appropriate action" would be to summon a DRE.

Note that the purpose of this module does not require that the student develop the ability to distinguish what type of drug is responsible for the observed impairment. Indeed, we assert that this module, by itself, cannot develop that ability. But, the student should become more adept to recognizing the possible presence of some drug other than alcohol, or a medical condition, and at conveying a credible basis for that suspicion.

3. What Will The Participants Get Out Of The Module?

The student who successfully completes the module will be able to:

- o define the term "drug" in the context of this course;
- o describe in approximate, quantitative terms the incidence of drug involvement in motor vehicle crashes and DWI enforcement;
- o name the major categories of drugs;
- o describe the observable signs of impairment generally associated with the major drug categories;
- o describe medical conditions and other situations that can produce similar signs of impairment; and,
- o describe appropriate procedures for dealing with drug-impaired or medically impaired suspects.

It should be noted that material to support training in the appropriate procedures for dealing with drug- or medically-impaired suspects must be developed by each department participating in this training. NHTSA has not attempted to prepare generic lesson plans to cover these procedures, since it is not possible to anticipate the logistic and other considerations that will face every department.

4. What Subject Matter Does The Module Cover?

The principal content topics include:

(1) The concept of "drugs" in the context of DWI enforcement. Basically, as far as the traffic law enforcement officer is concerned, a "drug" is a substance that impairs driving ability.

(2) The magnitude and scope of drug use and abuse in America, and the involvement of drugs in impaired driving incidents.

(3) The role of eye examinations in disclosing the possibility of drug impairment, and in suggesting the possible category or categories of drugs, or medical conditions causing a particular suspect's impairment.

(4) The observable effects of each of seven major categories of drugs.

(5) The effects likely to result from various combinations of drugs.

(6) The department's prescribed procedures for dealing with cases involving suspected drug influence or medical conditions.

5. What Activities Take Place During The Training?

The module relies primarily on instructor-led presentations. This is in keeping with its focus on information development, rather than skill development.

6. How Long Does The Module Take?

The total instructional time (excluding breaks) is three hours and thirty minutes.

C. Overview Of The Curriculum Package

In addition to this Administrator's Guide, the curriculum package for this module includes the following materials:

- Instructor's Lesson Plans Manual
- Visual Aids
- Student's Manual

1. Instructor's Lesson Plans Manual

The Instructor's Lesson Plans Manual is a complete and detailed blueprint of what the module covers and how it is to be taught. The lesson plans are arranged in a standard, side-by-side format. The left side page outlines the subject-matter content, i.e., what is to be taught. The "content" page presents:

- Facts;
- Concepts;
- Procedural Steps;
- Rules and Regulations;
- Etc.

The right side page presents "instructional notes" associated with the content. The notes outline how the content is to be taught. Typical entries under the instructional notes column include:

- o The approximate amount of time to be devoted to each major content segment;
- o Indications of what visual aids are to be used and when they are to be used;
- o Questions that can be posed to the participants to involve them more actively in the presentation;
- o Indications of points requiring special emphasis;
- o Examples and other techniques for clarifying the concepts being presented.

The Instructor's Lesson Plans Manual serves, first, as a means of preparing the instructor to teach the module. They should review the entire set of lesson plans, and become familiar with their contents and learning activities, to develop a clear understanding of how the various segments of the module "fit" together. The instructor is expected to become thoroughly familiar with each segment that they are assigned to teach, to prepare the relevant visual aids, and to assemble all "props" and other instructional equipment referenced in the lesson plans. The instructor should also modify or augment the instructional notes as necessary to ensure that their own teaching style is applied to the content.

Subsequently, the Instructor's Lesson Plans Manual serves as an in-class reference document for the instructor, to help them maintain the sequence and pace of presentations and other learning activities.

It is worth emphasizing that the Instructor's Lesson Plans Manual does not contain the texts of speeches. Although its outlines of content information are fairly well detailed, those outlines are not to be read verbatim to the participants.

2. Visual Aids

Three types of visual aids are used in this module:

- o Dry-erase board/flip-chart presentations (which are indicated in the "instructional notes" of the lesson plans, and are self-explanatory);

- o Overhead transparencies;
- o Video/DVD;
- o PowerPoint.

The overhead transparencies, or "visuals", are simple displays of graphic and/or narrative material that emphasize key points and support the instructor's presentation.

Each visual is numbered, and is referenced by number in the lesson plans to indicate when and how the visual is to be used.

Paper copies of all visuals are included in the Instructor's Lesson Plans Manual. Those copies can be photocopied onto acetate to produce overhead transparencies, or they can be photographed to produce 35mm slides.

The videos are excerpts from the videos developed for NHTSA's Drug Evaluation and Classification Training Program. They depict portions of examinations of persons suspected of drug impairment.

3. Student's Manual

The Student's manual is the principal reference source for this module. It contains summaries of the main points of the module's content, and guidance for further study and review by the student.

D. General Administrative Requirements

1. Delivery Contexts

This module is compatible with a wide variety of delivery contexts. NHTSA designed the module as an integral part of the "DWI Detection and Standardized Field Sobriety Testing" curriculum. But the module can also be delivered as a stand-alone training program, e.g., as a portion of the department's annual in-service training schedule. With some minor modifications, it should also be possible to sub-divide the module into 20-30 minute segments suitable for delivery as roll call training. The module is also suited to serve as briefing material for judges, prosecutors and other traffic safety personnel.

2. Facility Requirements

The module requires no special instructional facilities. A standard classroom, equipped with a screen, dry-erase board, appropriate projector, (LCD as necessary) video player and monitor and adequate seating/table space for all participants will suffice.

3. Instructor Qualifications

Ideally, the principal instructor(s) for this module should at least have completed the classroom training phase of the Drug Evaluation and Classification Program. However, it is possible to teach this module adequately without having had that training, provided:

(1) The instructor is thoroughly versed in Standardized Field Sobriety Testing; and,

(2) has studied the student manual for the module in detail; and,

(3) has participated in demonstrations of the eye examinations featured in the module.

4. Class Size Considerations

Because the module is concerned primarily with information delivery rather than skills development, reasonably large classes can be accommodated. A practical upper limit is approximately 35-40 participants. Any larger class probably would not afford individual participants sufficient opportunity to interact with instructors (e.g., through questions, comments, etc.) as much as would be desired.

E. Planning and Preparation Requirements

The planning and preparation requirements for this module are the standard requirements associated with any classroom training:

- Select instructors and assign them to deliver specific segments of the module. Make sure that all instructors review all portions of the module, so that they understand how their assignments "fit into" the total program.

- Prepare all visuals.

- o Obtain the necessary instructional equipment and make sure that all equipment is in proper working order (including LCD projector for PowerPoint)

- o Verify that all candidate participants have previously completed (or will have completed, prior to delivery of the module) training in horizontal gaze nystagmus.

- o Arrange the classroom so that all participants will have a clear view of the instructor, screen, dry-erase board and video monitor.

- o Obtain (or reproduce) sufficient copies of the Student's manual and any other handout materials.

F. Follow-Up Requirements

It is highly desirable that both the delivery and impact of this module be evaluated. Evaluation of "delivery" focuses on the general question "what did the participants think of this training?" Evaluation of "impact" concerns itself with "how has the training affected participants' on-the-job performance?"

Important data for evaluating training "delivery" can be obtained from the anonymous Student's Critique Form (included in the Instructor's Lesson Plans Manual). Each student should be requested to complete and submit the form immediately upon conclusion of the training. Guidelines for analyzing the student's Critique Form and preparing a post-course evaluation report are covered in Section G.

G. Guidelines For Preparing Post-Course Evaluation

A standard NHTSA/TSI participant's critique form is provided to document participant's initial ratings of course content and activities. The form is divided into eight parts:

A. Workshop/Seminar Objectives
B. Course Activities
C. Course Design
D. Topic Deletions
E. Topic Additions
F. Overall Quality of the Course
G. Quality of Instruction
H. Final Comments or Suggestions

The following instructions are provided to guide review, analysis and interpretation of participant's comments:

Section A - Workshop/Seminar Objectives

Determine raw tabulation and percentages for each objective:

- If the "no"/"not sure" responses total 20% or more, some explanation should be provided. Assess the problem and explain or recommend changes as appropriate.

Section B - Course Activities

The rating choices are as follows:

1. Very Important
2. Somewhat Important
3. Un-Important
4. Not Sure

Analysis Procedures

Step 1: Tabulate total number of responses in each category for each category for each activity.

Step 2: The following values should be applied:

- +2 for each "very important"
- 0 for each "somewhat important"
- -2 for each "un-important"
- -1 for each "not sure"

Step 3: Determine total number of points for each activity.

Step 4: Divide the totals by twice the number of votes (N).

Step 5: The result is the final rating.

Any rating of +.5 or higher indicated the participant's consensus was that the activity (segment) was "very important".

If the rating is below +.2, some explanation should be provided... assess the reason(s) and explain or recommend changes as appropriate.

If the rating is below 0 there is a serious problem...assess the problem(s) and explain or recommend changes as appropriate.

Section C - Course Design

Determine raw tabulation and percentage for each statement.

Some comment or explanation should be provided if the inappropriate ("agree"/"disagree") or "not sure" responses exceed 20%.

Section D & E - Topic Deletion/Additions

Prepare a summary of responses for each section. Comment as appropriate.

Section F - Overall Quality of the Seminar

Total the numerical ratings, and divide by the number of responding participants. That gives the average rating for the seminar, on the scale from 1 ("very poor") to 5 ("excellent"). Comment as appropriate.

Section G - Quality of Instruction

For each instructor, tabulate his or her numerical ratings, and divide by the number of responding participants. Comment as appropriate.

Section H - Final Comments

Prepare a summary of responses for each section. Comment as appropriate.

NOTE: A copy of the completed post course evaluation report should be forwarded to the appropriate State Highway Safety Office and/or NHTSA Field Region Office.

H. Requests For Information, Assistance or Materials

Requests for further assistance should be directed to the Transportation Safety Institute, via your State's Office of Highway Safety and your NHTSA Regional Office.

# INTRODUCTION TO DRUGGED DRIVING

## INSTRUCTOR'S LESSON PLANS

Printed 2/06

U.S. DEPARTMENT OF TRANSPORTATION
Transportation Safety Institute
National Highway Traffic Safety Administration

HS 178A R2/06

# INTRODUCTION TO DRUGGED DRIVING

Instructor's Lesson Plans

HS 178A R2/06

# INTRODUCTION TO DRUGGED DRIVING

Upon successfully completing this module of instruction, the participant will be able to:

- Define the term "drug" in the context of DWI enforcement.
- Describe in approximate, quantitative terms the incidence of drug involvement in motor vehicle crashes and in DWI enforcement.
- Name the major categories of drugs.
- Describe the observable signs generally associated with the major drug categories.
- Describe medical conditions and other situations than can produce similar signs.
- Describe appropriate procedures for dealing with drug-impaired or medically-impaired suspects.

| Content Segments | Learning Activities |
|---|---|
| A. Overview | o Instructor-Led Presentations |
| B. Eye Examinations: Detecting Signs of Drug Influence | o Participant Practice |
| C. Drug Categories and Their Observable Effects | o Video Presentations |
| D. Combinations of Drugs | |
| E. Demonstrations of Drug Influence (Video/DVD) | |
| F. Dealing with Suspected Drug Influence or Medical Impairment | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| **45 Minutes**<br>  <br>**Display** 1 | INTRODUCTION TO DRUGGED DRIVING<br><br>A. Overview<br><br>1. Session purpose and objectives.<br><br>a. The <u>purpose</u> of this session is to improve your ability to recognize suspects who may be medically impaired or impaired by drugs other than alcohol and to take appropriate action when you encounter such a suspect.<br><br>b. Alcohol certainly remains the most frequently abused drug, and most impaired drivers are under the influence of alcohol.<br><br>c. But many other drugs also are routinely abused by many drivers.<br><br>d. It is highly likely that every experienced DWI enforcement officer has encountered at least some suspects who were under the influence of drugs other than alcohol.<br><br>e. Depending upon the specific types of drugs they have taken, some drug-impaired suspects may look and act quite a bit like persons who are under the influence of alcohol. | <u>Ask participants</u>: "What is responsible for most DWI violations in America?" |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | f. But others will look and act very differently from alcohol-impaired suspects.<br><br>g. It is important that you be able to recognize suspects who may be under the influence of other drugs, so that you will know when to summon assistance from physicians or other appropriate persons, or trained drug recognition experts. | |
|  <br>**Display** 2A | h. Upon successfully completing this session, you will be better able to:<br><br>o Define the term "drug" in the context of DWI enforcement.<br><br>o Describe in approximate, quantitative terms the incidence of drug involvement in motor vehicle crashes and DWI enforcement.<br><br>o Name the major categories of drugs. | |
|  <br>**Display** 2B | o Describe the observable signs generally associated with the major drug categories.<br><br>o Describe medical conditions and other situations that can produce similar signs. | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o Describe appropriate procedures for dealing with drug-impaired or medically impaired suspects. | Solicit participants' questions concerning these objectives. |
|  **Display** 3 | i. One important thing that this session will <u>not</u> accomplish: it will <u>not</u> qualify you to perform the functions of a Drug Recognition Expert (DRE). | |
| | j. Officers become DREs only after they have completed a very challenging program that includes nine days of classroom training and many weeks of closely-supervised on-the-job training. | Two-day Pre-School followed by Seven-day classroom training. |
| | 2. Definition of "drug". | |
|  | a. The word "drug" is used in many different ways, by many different people. | |
| **Display** 4 | b. The corner <u>druggist</u> and the U.S. <u>Drug Enforcement Administration</u> are both concerned with "drugs", but they don't have exactly the same thing in mind when they use that word. | |
| | c. And neither the druggist nor the DEA have the same perspective as the <u>DWI enforcement officer</u>. | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
|  **Display** 5 | d. For our purposes, a "drug" is:<br><br>Any substance which, when taken into the human body, can impair the ability of the person to operate a vehicle safely. | Working definition is derived from California Vehicle Code, Section 312; 1985. |
| | e. This definition <u>excludes</u> some substances that physicians consider to be drugs.<br><br><u>examples</u>: nicotine; caffeine. | <u>Ask</u> participants: what are some things that physicians would consider to be "drugs" that would <u>not</u> be covered under this definition? |
| | f. This definition <u>includes</u> some substances that physicians don't usually think of as drugs.<br><br><u>examples</u>: model airplane glue; paint. | <u>Ask</u> participants: what are some common chemical substances that doctors don't usually consider drugs, but that definitely impair driving ability? |
| | 3. Within this simple, enforcement-oriented definition, there are <u>seven categories of drugs</u>. | |
|  **Display** 6 | a. <u>Central Nervous System Depressants</u> include the most familiar drug, alcohol, but also include numerous other substances that <u>slow down</u> the operation of the central nervous system. Rohypnol, Valium, Xanax, and GHB are some CNS Depressants. | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
|  **Display** 7 | b. <u>Central Nervous System Stimulants</u> include cocaine, numerous drugs of the amphetamine family including methamphetamine, and many other substances that cause impairment by speeding up, or over-stimulating, the central nervous system. | |
|  **Display** 8 | c. <u>Hallucinogens</u> include some natural, organic substances found in certain cactus and mushrooms, and many artificial substances including LSD and MDMA (Ecstasy). They all impair the user's ability to perceive the world as it really is. | |
|  **Display** 9 | d. The category Dissociative Anesthetic includes the drug PCP and its various analogs. Dissociative Anesthetics are in a category by themselves because they produce some effects that are similar to depressants, some similar to stimulants, and some similar to hallucinogens. | |
|  **Display** 10 | e. <u>Narcotic Analgesics</u> include heroin, morphine and other derivatives of opium, and many synthetic drugs that affect people in similar ways. | <u>Point out</u> that "Analgesic" means "pain killer". |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
|  **Display** 11 | f. <u>Inhalants</u> include many familiar household materials, such as glue (Toluene), paint, gasoline, aerosol sprays, etc. that produce volatile fumes. | |
|  **Display** 12 | g. The category <u>Cannabis</u> includes the various products of the Cannabis Sativa plant, e.g., marijuana, hashish, hash oil. | |
| | 4. These seven categories are organized on the basis of the clinical effects that they produce. | <u>Point out</u> that some medical texts may use different numbers of drug categories, with different names for the various categories. |
| | a. The drugs that belong to a particular category all produce basically the same effects. | <u>Example</u>: Alcohol and Valium both are CNS depressants. A person under the influence of Valium will look, act and feel basically the same as a person under the influence of alcohol. |
| | b. Two different categories produce different effects. | <u>Example</u>: A person under the influence of a CNS Stimulant will not look, act or feel exactly like someone under the influence of a Dissociative Anesthetic.<br><br>Solicit participants' questions concerning drug categories. |
| | 5. Because many drugs are illegally manufactured, sold and consumed, it is difficult to determine how many people actually use the various drugs. | |

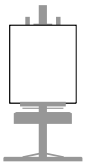
| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
|  **Display** 13 | a. All available information shows that drug use and abuse are widespread among large segments of the American public. | |
|  | (1) In 2004, 19.1 million Americans (7.9% of the population) aged 12 years or older were current illicit drug users. | Source: Results from the 2004 National Survey on Drug Use and Health: National Findings |
|  | (2) Marijuana was the most commonly used illicit drug in 2004, with 14.6 million. | Source: Results from the 2004 National Survey on Drug Use and Health: National Findings |
|  | (3) In 2004, 6.0 million people were users of psychotherapeutic drugs taken non-medically. | Source: Results from the 2004 National Survey on Drug Use and Health: National Findings |
|  | (4) In 2004, an estimated 2 million persons were current Cocaine users. | Source: Results from the 2004 National Survey on Drug Use and Health: National Findings |
| | b. It is especially disturbing that juveniles frequently abuse drugs. | |
|  **Display** 14 | c. Evidence of drug use frequently shows up in people killed or injured in motor vehicle crashes. | |
| | (1) <u>Fact</u>: University of Tennessee (1988) found 40% of crash injured drivers had drugs other than alcohol in them. | |

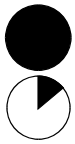
| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | (2) Fact: The Maryland Shock Trauma Center (1986) found nearly one-third of crash injured drivers had recently used Marijuana. | |
|  **Display** 15 | e. Studies of fatally-injured drivers consistently show that nearly 20 percent had drugs or the combination of drugs and alcohol in their systems at the time of the crash. | FARS, 1995.<br><br>Solicit participants' questions or comments concerning drug use and drug involvement in impaired driving. |
|  **35 Minutes** | B. Eye Examinations: Detecting Signs of Drug Influence | |
| | 1. The eyes disclose some of the clearest signs of drug impairment or medical conditions.<br><br>a. Horizontal gaze nystagmus is a very clear indication, in a suspect's eyes, of possible alcohol impairment.<br><br>b. There are a number of drugs, other than alcohol, that will cause horizontal gaze nystagmus.<br><br>c. There are a number of other drugs that will not cause horizontal gaze nystagmus.<br><br>d. There are many other clues that the eyes will disclose, all of which will suggest the presence or absence of drugs or medical impairment. | Ask participants: what is one of the most reliable signs of alcohol influence that can be observed in the eyes? |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
|  **Display** 16 | 2. Overview of eye examinations.<br><br>a. The eye examinations that you can conduct to assess possible drug or medical impairment include:<br><br>o Resting nystagmus<br><br>o Tracking ability<br>o Pupil size<br>o Horizontal gaze nystagmus<br>o Vertical nystagmus<br><br>b. <u>Resting</u> Nystagmus is referred to as jerking as the eyes look straight ahead. This condition is not frequently seen. Its presence usually indicates a pathology or high doses of a Dissociative Anesthetic drug such as PCP.<br><br>c. <u>Tracking Ability</u> will be affected by certain categories of drugs, and also by certain medical conditions or injuries involving the brain:<br><br>o If the two eyes do not <u>track together</u>, the possibility of a serious medical condition or injury is present.<br><br>o By passing a stimulus across <u>both</u> eyes, you can check to see if both eyes are tracking equally. | NOTE: Resting Nystagmus may also be a medical problem.<br><br>Although this observation is an important medical assessment, it is NOT an HGN administrative procedure step.<br><br><u>Select</u> a student to serve as a demonstration subject.<br><br><u>Position</u> a stimulus in front of that student's eyes, and check for <u>lack of smooth pursuit</u> across <u>both</u> of the student's eyes. |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o If they don't (i.e., if one eye tracks the stimulus, but the other fails to move, or lags behind the stimulus) there is the possibility of a neurological disorder. | Point out that this can occur because the suspect is blind (or nearly blind) in one eye. This can be checked by having the suspect cover one eye, and instructing the suspect to reach out and touch the tip of the stimulus. |
| | o If a person has sight in both eyes, but the eyes fail to track together, there is a possibility that the person is suffering from an injury or illness affecting the brain. | Point out that "unequal tracking" is a condition that should prompt the officer to request a medical examination of the suspect.<br><br>Point out that this "jerking" is horizontal gaze nystagmus. |
|  <br>**Display** 17 | o If the eyes track equally, but "jerk" while they are moving, then the possible presence of three categories of drugs should be noted:<br>- Central Nervous System Depressants<br>- Dissociative Anesthetics<br>- Inhalants | |
| | d. Pupil Size will be affected by several categories of drugs, and also by some medical conditions or injuries: | |
|  <br>**Display**18 | o If the two pupils are distinctly different in size, it is possible that the subject has a glass eye, or is suffering from a head injury or a neurological disorder. | Point out that it is sufficient to look at a suspect's pupils and estimate whether they look noticeably small, about normal, or noticeably large. |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o If the pupils are noticeably dilated, then the possibility exists that the subject could be impaired by certain categories of drugs: | |
| | - CNS stimulants | Examples: cocaine, methamphetamine, amphetamine sulfate, etc. |
| | - Hallucinogens | Examples: LSD, peyote, psilocybin, MDA, Ecstasy, etc. |
| | - Cannabis | Examples: Marijuana, Hashish, Hash Oil. |
|  **Display** 19A | o If the pupils are noticeably constricted, then the possibility exists that the subject could be impaired by a narcotic analgesic. | Examples: Heroin, codeine, demerol, etc. |
|  **Display** 19B | o CNS Depressants, Dissociative Anesthetics, and Inhalants usually do not affect pupil size. | Point out that the types of drugs that usually cause nystagmus usually don't affect pupil size.<br><br>Major exception: Methaqualone (a CNS Depressant) will cause pupils to dilate. |
| | 3. The test of Horizontal Gaze Nystagmus for subjects suspected of drug impairment is identical to the HGN test for alcohol-impaired subjects. | Ask participants: "What are the three clues of HGN?" |
| | a. First clue - lack of smooth pursuit. | |
| | b. Second clue - distinct and | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | sustained nystagmus at maximum deviation.<br><br>c. Third clue - onset of nystagmus prior to 45 degrees. | |
|  <br>**Display** 19C | 4. The angle of onset becomes of special interest when a subject is under the influence of a Dissociative Anesthetic such as PCP.<br><br>a. PCP-impaired subjects may exhibit <u>immediate onset</u>, i.e., the jerking begins virtually as soon as the eyes start to move toward the side. | |
|  | b. Sometimes, PCP-impaired subjects will exhibit <u>resting nystagmus</u>, i.e., the eyes jerk while they are looking straight ahead. | Write "Resting Nystagmus" on dry-erase board or flip-chart. |
|  <br>**Display** 20 | 5. The <u>Vertical Nystagmus</u> test is very simple to administer.<br><br>a. Position the stimulus <u>horizontally</u>, approximately 12-15 inches (30-38 cm) in front of the subject's nose.<br><br>b. Instruct the subject to hold their head still, and follow the stimulus with the eyes only. | <u>Point out</u> that vertical nystagmus was not examined in the research that led to the validation of the Standardized Field Sobriety Test battery, horizontal gaze nystagmus, walk and turn and one leg stand. |
| | c. Raise the stimulus until the subject's eyes are elevated as far as possible, hold for four seconds. | <u>Select</u> a student or another instructor to serve as a subject and demonstrate the vertical nystagmus test. |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | d. Watch closely for evidence of jerking (up and down).<br><br>6. Vertical Nystagmus usually will be present in subjects under the influence of PCP. | |
| | 7. Vertical Nystagmus may be present in subjects under the influence of CNS depressants or inhalants. | Point out that vertical nystagmus usually develops after high doses of alcohol, other depressants or inhalants.<br><br>Solicit participants' questions concerning nystagmus. |
|  <br>**70 Minutes** | C. Drug Categories and Their Observable Effects. | |
|  <br>**Display** 21 | 1. CNS Depressants slow down the operations of the brain, and usually depress the heartbeat, respiration, and many other processes controlled by the brain.<br><br>a. The most familiar CNS Depressant is alcohol.<br><br>b. Other CNS Depressants include:<br><br>o Barbiturates (such as Secobarbital and Pentobarbital)<br><br>o Non-Barbiturates (GHB - Gama hydroxy Butyrate and soma) | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o Anti-Anxiety Tranquilizers (such as Valium, Librium, Xanax, and Rohypnol)<br><br>o Anti-Depressants (such as Prozac and Elavil)<br><br>o Muscle relaxants and many other drugs.<br><br>c. CNS Depressants usually are taken <u>orally</u>, in the form of pills, capsules, liquids, etc.<br><br>d. In general, people under the influence of any CNS Depressant look and act like people under the influence of alcohol.<br><br>e. General indicators of CNS Depressant influence:<br><br>o "Drunken" behavior and appearance<br><br>o Uncoordinated<br><br>o Drowsy<br><br>o Sluggish<br><br>o Disoriented<br><br>o Thick, slurred speech<br><br>f. Eye indicators of CNS Depressant influence:<br><br>o Horizontal gaze nystagmus usually <u>will</u> | |
|  <br>**Display** 22A | | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | be present.<br><br>o Vertical nystagmus <u>may</u> be present (with high doses).<br><br>o Pupil size usually will be <u>normal</u>, except that Methaqualone and Soma will cause pupil dilation. | <u>Solicit</u> participants' questions concerning indicators of CNS Depressant influence. |
|  <br>**Display** 22B | 2. CNS Stimulants accelerate the heart rate, respiration and many other processes of the body.<br><br>a. The two most widely abused kinds of CNS Stimulants are <u>cocaine</u> and <u>methamphetamines</u>.<br><br>b. Cocaine is made from the leaves of the coca plant.<br><br>c. Methamphetamines are chemically produced (manufactured) drugs.<br><br>d. Cocaine abusers may take the drug<br><br>o by "snorting"<br>o by smoking (freebase, or "Crack")<br>o by injection<br>o orally<br><br>e. Abusers of amphetamines may take their drugs:<br><br>o by injection<br>o orally<br>o by "snorting" | Illegal and illicit production. |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o or smoked (i.e., “ice”)<br><br>f. People under the influence of CNS Stimulants tend to be <u>hyperactive</u>, indicated by nervousness, extreme talkativeness and an inability to sit still. They also are usu-ally unable to concentrate, or to think clearly for any length of time. | |
|  <br>**Display** 23A | g. General indicators of CNS stimulant influence:<br><br>o Restlessness<br>o Talkative<br>o Excitation<br>o Euphoria<br>o Exaggerated reflexes<br>o Loss of appetite<br>o Anxiety<br>o Grinding teeth (bruxism)<br>o Redness to nasal area (if "snorting")<br>o Runny nose (if "snorting")<br>o Body tremors<br><br>h. Eye indicators of CNS Stimulant influence:<br><br>o Neither horizontal nor vertical nystagmus will be observed.<br><br>o The pupils generally will be <u>dilated</u>. | <u>Solicit</u> participants' questions concerning indicators of CNS Stimulant influence. |
|  <br>**Display** 23B | 3. Hallucinogens are drugs that affect a person’s perceptions, sensations, thinking, self | The word “Hallucinogen” means <u>something that may cause hallucinations</u>. |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | awareness and emotions. | Definition from <u>The Random House College Dictionary</u> (Revised Edition, 1980). |
|  **Display** 24A | a. One common type of hallucination caused by these drugs is called <u>synesthesia</u>, which means a transposing of the senses. | |
| | o Sounds, for example, may be transposed into sights. | <u>Example</u>: the user may "see" a flash of color whenever the telephone rings. |
| | o Sights, for example, may be transposed into odors or sounds. | <u>Example</u>: the user may "smell" a particular fragrance when he or she looks at something painted red. |
| | b. Some hallucinogenic drugs come from natural sources. | |
| | o <u>Peyote</u> is an hallucinogen found in a particular specie of cactus. | |
| | o <u>Psilocybin</u> is an hallucinogen found in a number of species of mushroom. | |
| | c. Other hallucinogens are synthetically manufactured: | |
| | o <u>LSD</u> (Lysergic Acid Diethylamide) | |
| | o <u>MDA</u> (3,4-Methylene-dioxyamphetamine) | |
| | o MDMA (Ecstasy) | |
| | o Many others. | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | d. Hallucinogen abusers usually take their drugs orally; however, some hallucinogens can be smoked, or injected or "snorted". | |
|  **Display** 24B | e. General indicators of Hallucinogen influence:<br>o Hallucinations<br>o Dazed appearance<br>o Body tremors<br>o Uncoordinated<br>o Perspiring<br>o Disorientation<br>o Paranoia<br>o Difficulty in speech<br>o Nausea<br>o Piloerection (goose bumps) | |
| | f. Eye indicators of Hallucinogen influence:<br>o Neither horizontal nor vertical nystagmus will be present.<br>o The pupils usually will be noticeably <u>dilated</u>. | <u>Point out</u> that the indicators of hallucinogen influence are very similar to the indicators of CNS Stimulant Influence.<br><br><u>Solicit</u> participants' questions concerning indicators of hallucinogen influence. |
|  | 4. <u>Dissociative Anesthetics</u> is the category of drugs that includes PCP and its various analogs. | |
| **Display** 24C | a. PCP is a synthetic drug, that was first developed as an intravenous anesthetic. | <u>Point out</u> that PCP is a very powerful anesthetic, or pain-killer. |
| | b. Because PCP produces very undesirable side effects, it is no longer legally manufactured. However, an analog (chemical cousin) | |

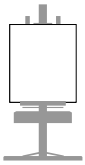
| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | Ketamine is still being legally manufactured and available.<br><br>c. However, it is easy to manufacture:<br><br>o The formula for making PCP and PCP analogs have been widely publicized.<br><br>o The manufacturing process involves readily available chemicals.<br><br>d. Many Dissociative Anesthetic users <u>smoke</u> the drug, by using it to adulterate tobacco, marijuana, or various other substances.<br><br>e. Dissociative Anesthetics can also be taken orally or by injection, or inhaled.<br><br>f. General indicators of Dissociative Anesthetic influence:<br><br>o Warm to the touch<br>o Perspiring<br>o Blank stare<br>o Repetitive speech<br>o Incomplete verbal responses<br>o Confused<br>o Muscle rigidity<br>o Possibly violent & combative<br><br>g. Eye indicators of Dissociative Anesthetic | |
|  <br>**Display** 25A | | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | influence:<br><br>o Horizontal gaze nystagmus generally <u>will</u> be present, often with very early onset and very distinct jerking.<br><br>o Vertical nystagmus generally <u>will</u> be present.<br><br>o Pupil size usually will be <u>normal</u>. | <u>Solicit</u> participants' questions concerning indicators of Dissociative Anesthetic influence. |
|  <br>**Display** 25B | 5. <u>Narcotic Analgesics</u> include a large number of drugs that share three important characteristics. | |
| | a. They will relieve pain. | <u>Point out</u> that "analgesic" means "pain killer". |
| | b. They will produce withdrawal signs and symptoms, when the drug is stopped after chronic administration. | <u>Point out</u> that this characteristic implies that narcotic analgesics are physically addicting. |
| | c. They will suppress the withdrawal signs and symptoms of chronic morphine administration. | |
| | d. Some narcotic analgesics are natural derivatives of <u>opium</u>:<br><br>o Morphine<br>o Heroin<br>o Codeine | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o Many Others.<br><br>e. Some are <u>synthetic</u> drugs:<br><br>o Demerol<br>o Methadone<br>o Numorphan<br>o Fentanyl<br>o OxyContin<br>o Many Others.<br><br>f. Some narcotic analgesics (such as heroin) usually are <u>injected</u>.<br><br>g. Others (such as codeine) usually are taken orally. | |
|  <br>**Display** 26A | h. An important characteristic of narcotic analgesics is that users develop <u>tolerance</u> to them.<br><br>i. "Tolerance" means that the same dose of the drug will produce diminishing effects, or that a steadily larger dose is needed to produce the same effects.<br><br>j. A tolerant user who has taken his or her "normal" dose of heroin (for example), may exhibit little or no evidence of physical impairment. | |
|  <br>**Display** 26B | k. General indicators of Narcotic Analgesic influence:<br><br>o "On the nod"<br>o Droopy eyelids | <u>Clarification</u>: "On the nod" is a sedated condition. The subject |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o Depressed reflexes<br>o Dry mouth<br>o Facial itching<br>o Low, raspy speech<br>o Fresh puncture marks may be evident | is in a semi-conscious type of sleep. |
| | l. Eye indicators of Narcotic Analgesic influence:<br><br>o Neither horizontal nor vertical nystagmus will be present.<br><br>o Pupils generally will be <u>constricted</u>. | <u>Solicit</u> participants' questions concerning indicators of Narcotic Analgesic influence. |
|  <br>**Display** 26C | 6. <u>Inhalants</u> are breathable chemicals that produce mind-altering results. | |
| | a. A wide variety of familiar household items are sometimes abused as inhalants. | <u>Examples</u>:<br>o plastic cement (model airplane glue, Toluene)<br>o gasoline<br>o paint<br>o vegetable frying pan lubricants<br>o hair sprays<br>o insecticides<br>o many others |
| | b. Certain anesthetics also may be abused as inhalants. | <u>Examples</u>:<br>o nitrous oxide<br>o ether<br>o chloroform |
|  <br>**Display** 27A | c. General indicators of Inhalant influence:<br><br>o Disorientation<br>o Slurred speech<br>o Residue of substance on face, hands, clothing | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | o Confusion<br>o Possible nausea<br><br>d. Eye indicators of Inhalant influence:<br><br>o Horizontal gaze nystagmus generally <u>will</u> be present.<br><br>o Vertical nystagmus <u>may</u> be present (especially with high doses).<br><br>o Pupil size generally will be normal. | <u>Solicit</u> participants' questions concerning inhalants. |
| **Display** 27B | 7. <u>Cannabis</u> is the category that includes the various products of the Cannabis Sativa plant.<br><br>a. Marijuana<br><br>b. Hashish<br><br>c. Hash Oil<br><br>d. Cannabis products generally are <u>smoked</u>, although they also can be ingested orally. | |
| **Display** 28A | e. General indicators of Cannabis influence:<br><br>o Marked reddening of the Conjunctiva (white part of the eyeball)<br>o Body tremors<br>o Odor of marijuana<br>o Disoriented<br>o Relaxed inhibitions<br>o Difficulty in dividing | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | attention. | |
|  | f. Eye indicators of Cannabis influence:<br>o Neither horizontal nor vertical nystagmus will be present.<br>o Pupil size generally will be dilated, but may be normal. | Solicit participants' questions concerning Cannabis. |
|  **20 Minutes** | D. Combinations of Drugs<br>1. Many drug users routinely ingest drugs from two or more drug categories at the same time. | |
| **Display** 28B  | a. The term for this condition is "polydrug use". | Point out that the prefix "poly" derives from the Greek word for "many". |
| | b. In the Los Angeles Field Study (1985), 72% of the suspects had two or more drugs in them. | |
| | c. In that study, alcohol was often found in combination with one or more other drugs. | |
| | d. But even if we discount alcohol, nearly half (45%) of the Field Study suspects had two or more other drugs in them. | Point out that 81 of the 173 suspects (47%) in the Los Angeles Field Study had alcohol in combination with one or more other drugs. |
| | e. During Certification | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | Training in New York City in early 1989, two-thirds (67%) of the suspects evaluated had two or more drugs **other than alcohol** in their urine. | |
| | 2. Certain combinations of drugs appear to be fairly common. | Write these common combinations on the dry-erase board or flip-chart. |
| | a. Alcohol and some other drug is the most frequent combination. | |
| | b. PCP and Cannabis is another common combination. | Remind participants that many PCP users prefer to ingest that drug by smoking, and a favorite method is to sprinkle powdered PCP on marijuana. |
| | c. Cocaine and Heroin is another common combination. | |
| | 3. Because polydrug use is so common, you should not be surprised to encounter suspects who are under the influence of more than one category of drugs. | |
| | a. At some times and places, polydrug users may be more common than single drug users. | |
|  | b. Be especially alert to the possibility that suspects who have been drinking may also have ingested some other drug or drugs. | |
| **Display** 29 A, B, C, D | 4. The effects of polydrug use may vary widely, depending on exactly what combination of | |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | drugs is involved, how ingested and when they were ingested. | |
| | 5. Any particular combination of drugs may produce four general kinds of effects. | |
| | a. Null - Neither drug has an effect on the indicator. | Null Effect: The combination of no action plus no action equals no action.<br><br>EXAMPLE OF NULL EFFECTS: CNS Stimulant and Narcotic Analgesic. Neither drug causes nystagmus, therefore you will not see nystagmus with this combination. |
| | b. Overlapping - Each drug may affect the suspect in some different way. In combination, both effects may appear. | Overlapping Effect: Action plus no action equals action.<br><br>EXAMPLE OF OVERLAPPING EFFECTS: PCP and Narcotic Analgesic. PCP will enhance nystagmus, while a Narcotic Analgesic does not cause nystagmus. Therefore, you will see nystagmus. |
| | c. Additive - The two drugs may independently produce some similar effects. In combination, these effects may be enhanced. | Additive Effect: Action plus the same action reinforces the action.<br><br>EXAMPLE OF ADDITIVE EFFECTS: Stimulants and Hallucinogens both cause pupil dilation. Pupils would be dilated. |
| | d. Antagonistic - The two drugs may produce some effects that are exactly opposite. In combination, these effects may mask each | Antagonistic Effect: Action versus opposite action can't predict the outcome. |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | other. | |
| | | EXAMPLE OF ANTAGONISTIC EFFECTS: A CNS Stimulant usually causes pupil dilation, a narcotic usually causes constriction. It is possible that someone who is simultaneously under the influence of a stimulant and a narcotic may have pupils that are nearly normal in size. It is also possible that the suspect's pupils may be dilated at one time, and then become constricted, as the effects of one drug diminish while the effects of the other increase. |
|  **15 Minutes** | E. Demonstrations of Drug Influence (Video) | Show the video of the examinations of suspects under the influence of various drugs. |
|  **25 Minutes** | . Dealing With Suspected Drug Influence or Medical Impairment.<br><br>NOTE: This segment of the Lesson Plans must be developed locally. Relevant topics may include:<br><br>o Local and state laws governing drug-impaired driving and chemical testing of drug- | Instructor Note: This may be an opportunity to discuss various medical conditions that mimic impaired driving, i.e., diabetic shock and hypoglycemia. |

| Aids | Lesson Plan | Instructor Notes |
|---|---|---|
| | impaired suspects.<br><br>o Departmental procedures for interviewing, searching, etc. drug-impaired suspects.<br><br>o Procedures for contacting drug recognition technicians and assisting in or witnessing the drug evaluation and classification examination.<br><br>o Procedures for requesting, obtaining and handling chemical test specimens. | |
|  <br>**Display** 30 | G. Closing<br><br>1. Although this course is not designed to qualify you as a DRE, it is intended to make you more knowledgeable when encountering suspects impaired by substances other than alcohol. | Consult with a DRE, if possible, and document in detail all observations. |