50 Minutes

SESSION II

DRUGS IN SOCIETY AND IN VEHICLE OPERATION

SESSION II DRUGS IN SOCIETY AND IN VEHICLE OPERATION

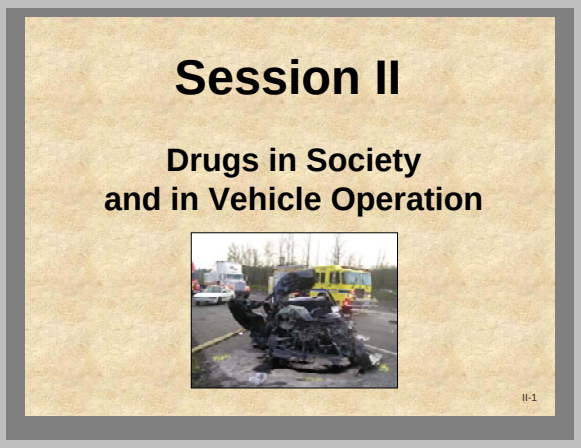
Upon successfully completing this session the student will be able to:

- Define the term "drug" in the context of this course.
- Name the seven major categories of drugs that are relevant to the Drug Evaluation and Classification program.
- State in approximate, quantitative terms the incidence of drug use among various segments of the American public.
- State in approximate, quantitative terms the incidence of drug involvement in motor vehicle crashes and other driving incidents.
- Correctly answer the "topics for study" questions at the end of this session.

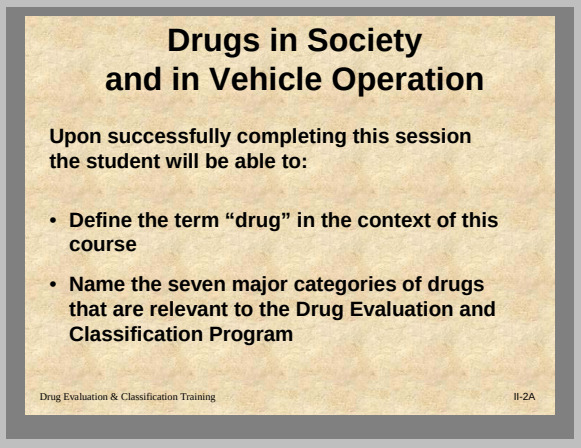
CONTENT SEGMENTS	LEARNING ACTIVITIES
A. Definition and Categories of Drugs	▪ Instructor Led Presentations
B. Incidence and Characteristics of Drug Use in America	▪ Reading Assignments
C. Incidence of Drug Impaired Driving	

I. DRUGS IN SOCIETY AND IN VEHICLE OPERATION

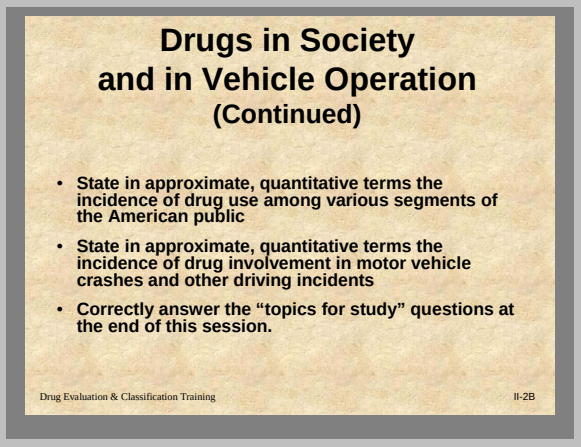
Session 2-1: Drugs in Society and in Vehicle Operation



Session 2-1: Drugs in Society and in Vehicle Operation



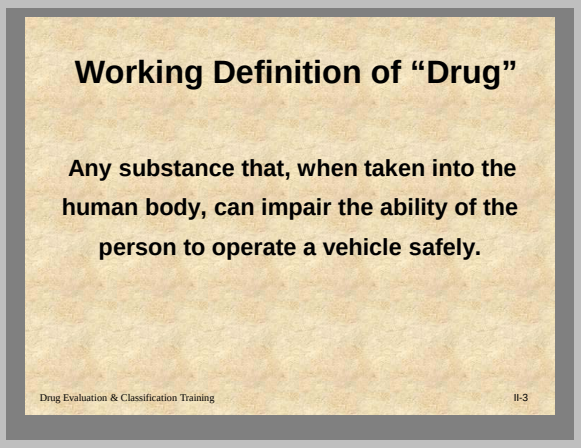
Session 2-2B: Drugs in Society and in Vehicle Operation (continued)



Briefly review the objectives, content and activities of this session.

A. Definition and Categories of Drugs

Session 2-3: Working Definition of "Drug"



- Instructor, if this has been covered in the Pre-School, pose this question - "What is our working definition of the word "drug"; and proceed to number 2.

Pose this question to the students.

- Solicit several responses.

What do we mean by the word "drug"?

- Medicines? Are all drugs medicines? Are all medicines drugs?

- Narcotics? Are all drugs Narcotics?

- Habit forming substances? Are all drugs habit forming? Are all habit forming substances drugs.

A simple, law enforcement oriented definition.

This definition is derived from the California Vehicle Code.

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

- Point out that this definition excludes many substances that physicians, chemists, etc. might consider to be "drugs," e.g., antibiotics, Novocain, vitamins, etc. It also includes some substances that aren't normally thought of as "drugs," such as model airplane glue, insecticides, etc.

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

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

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

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

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

Session 2-4: Central Nervous System Depressants

Central Nervous System Depressants

Ask students: "What are the seven categories of drugs?"

Write the names of the categories on the dry erase board or flip-chart as they are mentioned by the students.

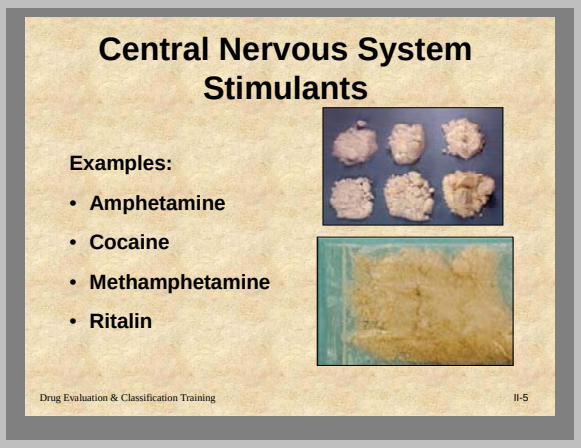
The category of CNS Depressants includes some of the most commonly abused drugs.

- Point out that tens of millions of prescriptions for such drugs are written in this country each year.
- Alcohol remains the most familiar drug. In 2008, 51.6% of the population aged 12 and older were current drinkers of alcohol.
    - Source: National Survey on Drug Use and Health (NSDUH) 2008.

Depressants slow down the operation of the Central Nervous System (i.e., the brain, brain stem and spinal cord).

- cause the user to react more slowly.
- cause the user to process information more slowly.
- relieve anxiety and tension.
- induce sedation, drowsiness and sleep.
- in high doses, CNS Depressants will produce general anesthesia.
    - i.e., depress the brain's ability to sense pain.
- in very high doses, induce coma and death.

Session 2-5: Central Nervous System Stimulants



Central Nervous System Stimulants

CNS Stimulants constitute another widely abused category of drugs.

- There appears to be approximately 1.9 million Cocaine users in the U.S.
    - Source: NSDUH Survey, 2008.
- Cocaine is one of the most frequently reported drugs in overdose cases treated at hospital emergency rooms.
    - Estimates of drug use vary widely, especially for illicit drugs such as Cocaine, Methamphetamines, etc.
- In 2008, 52 million Americans aged 12 or older admitted using psychotherapeutic drugs non-medically at least once in their lifetime.
    - Source: NSDUH Survey, 2008.
- In 2004, 1.4 million persons aged 12 or older reported they had used methamphetamines at least once in their lifetime.
    - Source: 2004 National Survey on Drug Use and Health.

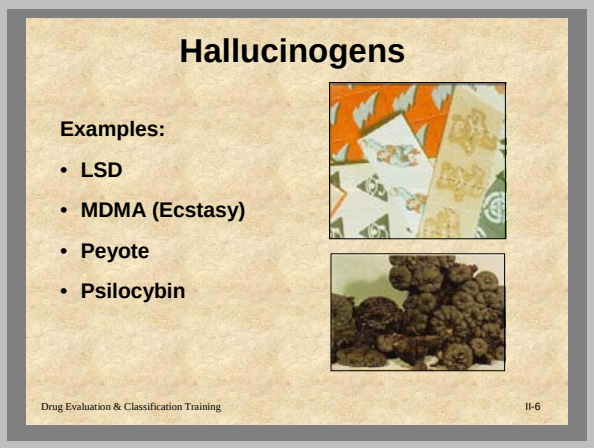
CNS Stimulants speed up the operation of the central nervous system, and of the various bodily functions controlled by the Central Nervous System.

- cause the user to become hyperactive, extremely talkative.
- speech may become rapid and repetitive.

- heart rate increases.
- blood pressure increases.
- body temperature rises, user may become excessively sweaty.
- induce emotional excitement, restlessness, irritability.
- can induce cardiac arrhythmia (abnormal beating of the heart), cardiac seizures and death.

Remind students of well-known athletes and others who have died because of Cocaine abuse.

Session 2-6: Hallucinogens



Hallucinogens

Hallucinogens are also widely abused.

- Point out that LSD and Peyote are only two examples of Hallucinogens. There are many other Hallucinogens.

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

Hallucinogens create perceptions that differ from reality.

These perceptions are often very distorted, so that the user sees, hears, and smells things in a way quite different from how they really look, sound, and smell.

Hallucinogens cause the nervous system to send strange or false signals to the brain.

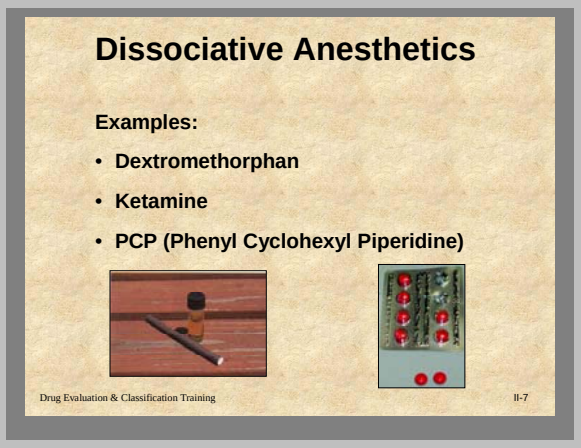
Clarification: Hallucinogens confuse the Central Nervous System (as well as speeding it up, like CNS Stimulants).

- Produce sights, sounds, odors, feelings and tastes that aren't real.
- Induce a temporary condition very much like psychosis or insanity.
- Can create a "mixing" of sensory modalities, so that the user "hears colors," "sees music."

Point out that this mixing of the senses is called Synesthesia.

Point out that, with all of these false, and distorted perceptions, a person under the influence of hallucinogens would be a very unsafe driver.

Session 2-7: Dissociative Anesthetics



Dissociative Anesthetics

- Point out that this category was changed from PCP to Dissociative Anesthetics in 2005.

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

- Point out that people under the influence of Dissociative Anesthetics may exhibit a combination of the signs associated with Hallucinogens, CNS Stimulants, and Depressants.
- Phencyclidine is a short form of the chemical name Phenyl Cyclohexyl Piperdine, from which we get the abbreviation "PCP."

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

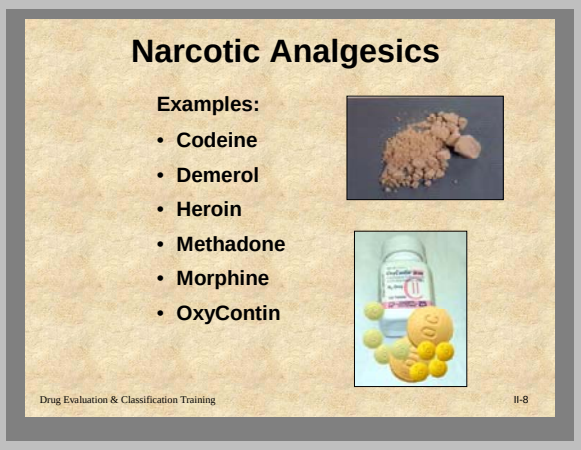
- Point out that PCP has many analogs, or "chemical cousins" that are very similar to PCP in chemical structure, and that produce essentially the same effects.

Analogs of PCP include Ketamine, Ketalar and Ketajet.

PCP is also a very powerful pain killer, or anesthetic.

- Point out that the reason PCP is a Dissociative Anesthetic is because it "separates" the user from any sensation of pain without making him or her unconscious.
- Dextromethorphan (DXM) is found in many over-the-counter anti-tussive cold medications such as Robitussin, Coricidin Cough and Cold, and Dimetapp. DXM is typically abused by school age children, teenagers or young adults to achieve impairment.
- DXM is normally used in liquid or pill form.
- In high doses, DXM impairment is similar to the effects of PCP or Hallucinogens.

Session 2-8: Narcotic Analgesics



Narcotic Analgesics

There are two subcategories of Narcotic Analgesics.

- Opiates are derivatives of Opium.

- Point out that Morphine and Codeine are examples of Opiates.

- Synthetics are produced chemically in the laboratory. The synthetics are not derived in any way from Opium, but produce similar effects.

- Point out that Methadone is an example of a Synthetic Narcotic.

The word "Analgesic" means pain killer. All of the drugs in this category reduce the person's reaction to pain.

Heroin is one of the most commonly abused of the Narcotic Analgesics.

Heroin is highly addictive.

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

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

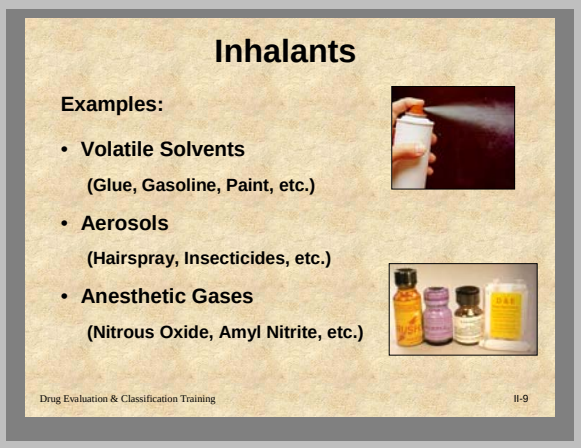
Persons under the influence of Narcotic Analgesics often pass into a semi-conscious type of sleep or near-sleep.

- Point out that this condition is often called being "on the nod."

- They often are sufficiently alert to respond to questions effectively.

Higher doses of Narcotic Analgesics can induce coma, respiratory failure and death.

Session 2-9: Inhalants



Inhalants

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

These substances are found in many common products.

- gasoline
- oil-based paints
- glue
- aerosol cans
- varnish remover
- cleaning fluids
- etc.

Different Inhalants produce different effects.

- Many produce effects similar to those of CNS Depressants.

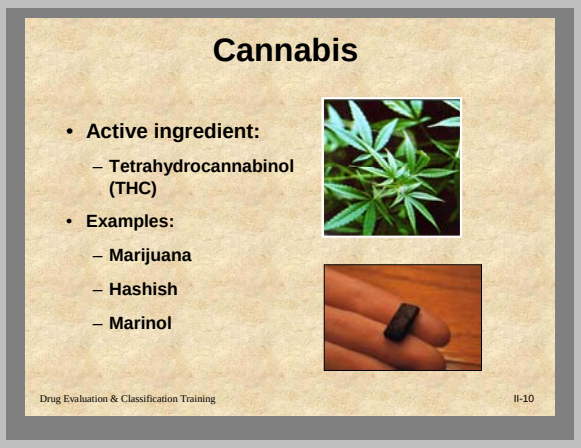
- A few produce stimulant-like effects.

- Some produce hallucinogenic effects.

The Inhalant abuser's attitude and demeanor can vary from inattentive, stuporous and passive to irritable, violent and dangerous.

The abuser's speech will often be slow, thick and slurred.

Session 2-10: Cannabis



Cannabis

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

Write "Cannabis Sativa" on the dry erase board or flip-chart.

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

Write "△-9 THC" on the dry erase board or flip-chart.

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

In a household survey from 2008, marijuana was listed as the most common illicit drug used in the U.S. There were 15.2 million Americans over the age of 12 reporting use in the past month.

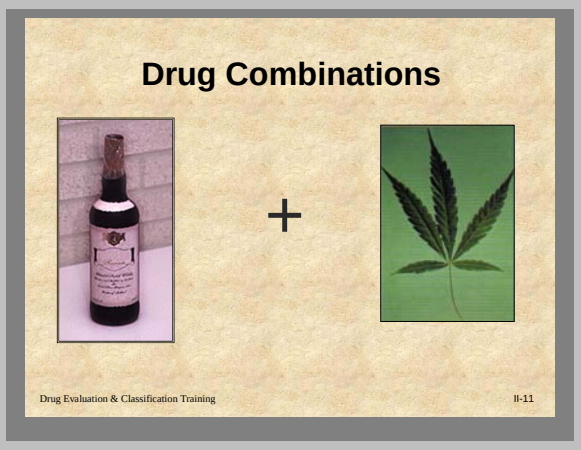
- Source: National Household Drug Use and Health Survey, 2008.

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 Standardized Field Sobriety Tests usually disclose some of the best evidence of Cannabis impairment.

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

Session 2-11: Drug Combinations



Drug Combinations

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

The term for this is "polydrug use."

- "poly" is the Greek prefix for "many."

Write "polydrug use" on the dry erase board or flip-chart.

Some very common examples of polydrug use include:

- Alcohol with virtually any other drug
- Marijuana and PCP
  - Point out that a common way to ingest PCP is to sprinkle it on a Marijuana "joint" and smoke it.
- Cocaine and Heroin
  - Sometimes called a "speedball."
- Heroin and Amphetamine
  - Sometimes called a "poor man's speedball."
- Heroin and PCP
  - Sometimes called a "fireball."

- "Crack" Cocaine and PCP
    - This is sometimes called a "space base."
- "Crack" Cocaine and Marijuana
    - Sometimes called a "primo."
- "Crack" and Methamphetamine
    - Sometimes called "croak."

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

Example:

- Heroin tends to lower blood pressure.
- Cocaine tends to elevate blood pressure.

Write on dry erase board or flip-chart: "Polydrug use unique, interactive effects."

Different drug combinations may produce unique, interactive effects.

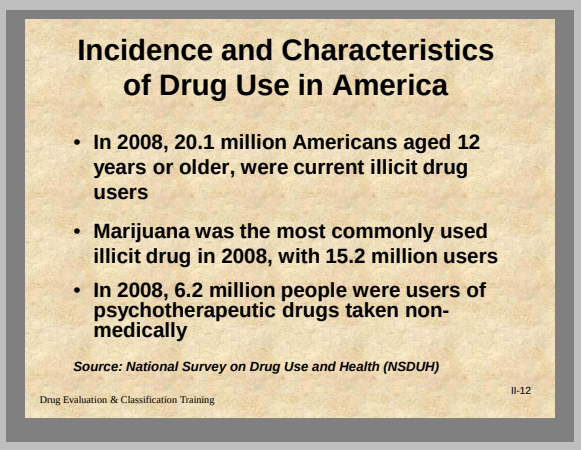
When a person has ingested multiple drugs, that person will experience multiple drug effects.

- Note, however, that under proper medical supervision, specific drugs often are used to reverse overdose conditions.

However, it is important to bear in mind that, in a polydrug situation, some of the signs of a particular drug may not be evident even though the person is under the influence of that drug.

B. Incidence and Characteristics of Drug Use in America

Session 2-12: Incidence and Characteristics of Drug Use in America



- In 2008, 20.1 million Americans (8.0% of the population) aged 12 years or older were current illicit drug users.
  - Source: 2008 National Survey on Drug Use and Health.
- Marijuana was the most commonly used illicit drug in 2008, with 15.2 million users reporting use.
  - Source: 2008 National Survey on Drug Use and Health.
- In 2008, 6.2 million people were users of prescription type psychotherapeutic drugs taken non-medically.
  - Source: 2008 National Survey on Drug Use and Health.
- In 2008, there were an estimated 1.9 million Cocaine users in the U.S.
  - Source: 2008 National Survey on Drug Use and Health.
- In 2004, there were an estimated 166,000 users of Heroin.
  - Source: 2004 National Survey on Drug Use and Health.
- Data from the 2008 NSDUH report shows that there were 2.2. million new users of pain relievers in 2008, with an average age of first use of 21.2 years.
  - Source: NSDUH, 2008.

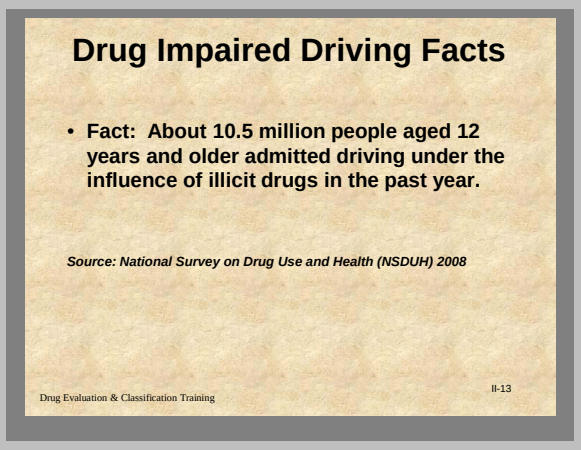
C. Incidence of Drug Impaired Driving

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

This is due to the various reasons that include:

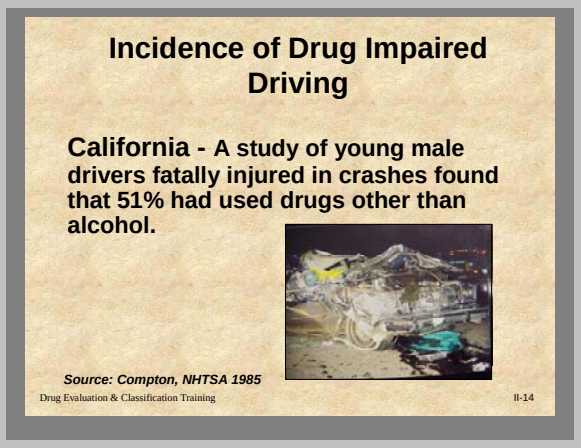
- Many impaired drivers are never detected.
- Many drug users also consume alcohol, when they are stopped for impaired driving they may be arrested (and tabulated in statistics) as alcohol impaired drivers only.
- When they are involved in crashes, they may not be tested for drugs.

Session 2-13: Drug Impaired Driving Facts



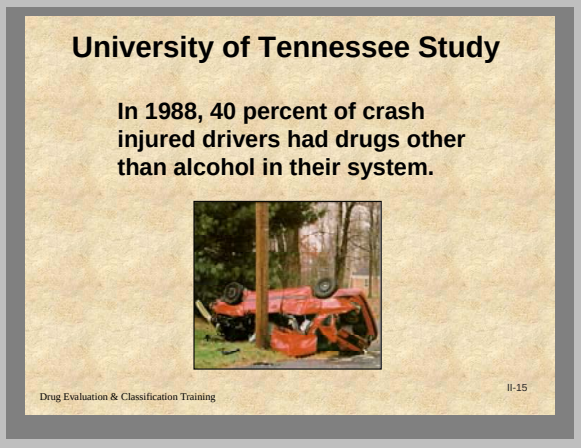
- Fact: About 10.5 million people aged 12 years and older admitted driving under the influence of illicit drugs in the past year.
    - Source: SAMHSA, Results from the 2009 National Survey on Drug Use and Health, Vol. 1.

Session 2-14: Incidence of Drug Impaired Driving



- Fact: A study in California of young male (15-34 years old) drivers killed in crashes in the early 1980's revealed that more than half (51%) tested positive for drugs other than alcohol. The most prevalent drug (other than alcohol) was Cannabis at 37%. Thirty percent (30%) of all cases had both alcohol and Cannabis.
    - Source: Compton, R. and Anderson, T., The Incidence of Driving Under the Influence of Drugs: 1985. National Highway Traffic Safety Administration, 1985.

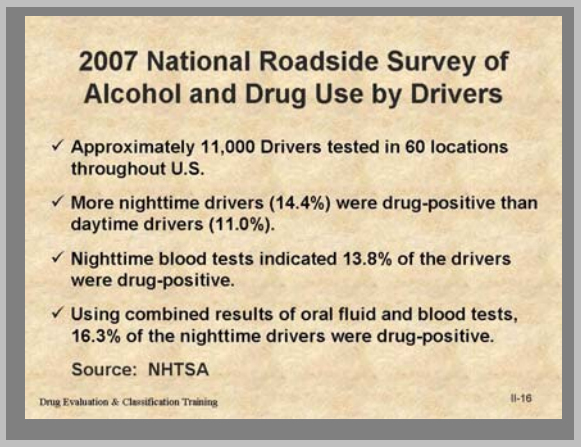
Session 2-15: University of Tennessee Study



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

- Fact: A NHTSA study of various locations in seven states revealed that alcohol was present in more than 50% of the drivers. Drugs other than alcohol were present in 18% of the drivers.
    - Source: NHTSA: 1993 Traffic Tech.
- Fact: A Monitoring the Future National Survey concluded that in 2008, 10 million people aged 12 or older reported driving under the influence of illicit drugs during the past year.

Session 2-16: 2007 National Roadside Survey of Alcohol and Drug Use by Drivers

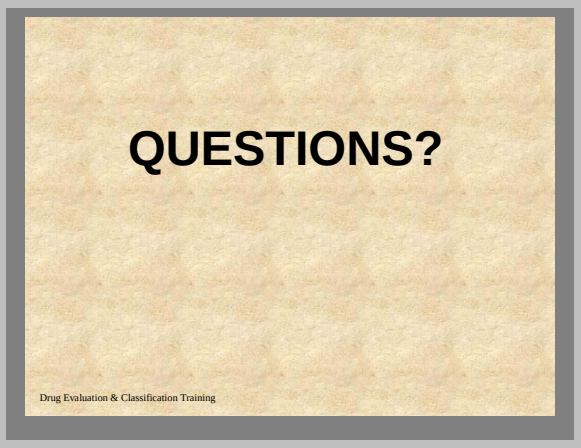


- NHTSA undertook a comprehensive study of the prevalence of potentially-impairing drug use by drivers in 2007.
    - Report: The 2007 National Roadside Survey of Alcohol and Drug Use by Drivers.
- Approximately 11,000 drivers were asked to provide an oral fluid and blood sample. Samples were tested for legal prescription, illegal and OTC products.
- Fact: Based on the oral fluid results, more nighttime drivers (14.4% were drug positive than daytime drivers (11.0%).
- Fact: Based on the blood test results administered only at nighttime, 13.8% of the drivers were drug-positive.
- Fact: Using the combined results, 16.3% of the nighttime drivers were drug-positive.
    - Source: NHTSA Traffic Safety Facts, DOT HS 811 175, July 2009.

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

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

Session 2-17: Questions



Solicit students' comments and questions about drugs in society and vehicle operation.

TOPICS FOR STUDY

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

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

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

   CNS Depressants, CNS Stimulants, Hallucinogens, Dissociative Anesthetics, Narcotic Analgesics, Inhalants and Cannabis

3. What does "polydrug use" mean?

   Ingesting drugs from two or more drug categories.

4. What is a "Speedball"? What is a "Space Base"?

   Cocaine and Heroin; Crack and PCP

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

   16.3%