Employer Drug Impairment Training (EDIT)

Participant Manual

International Association of Chiefs of Police (IACP)

August 2022
Employer Drug Impairment Training Participant Manual IACP 8/22

Session I  INTRODUCTION AND OVERVIEW

Overview

Objectives

Upon successfully completing this session, participants will be better able to

1. Understand the goal of the EDIT training.
2. Recognize drugs that impair and make referrals to the appropriate sources.
3. Understand how EDIT can assist in identifying drug-impaired employees.

Content Segments

A. Welcoming Remarks and Goals
B. Keeping Our Workplace Safe from Drug Impaired Individuals
C. Recognizing Drugs That Impair and Making Referrals
D. Introductions
   • Introduction of representatives of host organization and other dignitaries
   • Instructor introductions
   • Participant introductions
E. Overview of Course Content
F. Overview of Participant Manual

   • The Participant Manual is the basic reference document for this training
The Participant Manual includes a set of class note pages for every session

H. Administrative Matters (as warranted)
   - Restroom locations
   - Lunch locations/plans
   - Parking
   - Cellular phones on silent (return calls can be made at the breaks)

SESSION ONE: GOALS AND OVERVIEW

The goal of this training is:

- To identify drug impaired individuals and types of drugs for the purpose of ensuring a safe working environment.

- A secondary goal of this training is to assist in preventing an impaired employee/coworker from driving to and from the workplace or operating equipment or machinery when impaired.

Objectives

- Understand the goals of EDIT training
- Understand how EDIT can assist in identifying drug-impaired co-workers
- Properly recognize and describe drug impairment indicators
- Understand the involvement of drugs in the workplace and society
- Discuss the seven drug categories and their signs and indicators of impairment
Identify the key factors to be considered when identifying substance abuse

Properly interpret and document the results of your observations

Understand how to make referrals to the appropriate resources

**What is a drug?**

The definition of a drug used in this training is:

Any substance that alters perception or behavior reducing that individual’s ability to function appropriately in the workplace.

We can do something to keep our workplace safe from drug-impaired individuals.

All terminology and information in this training is based on medical and scientific facts and research and is field tested.

The signs, symptoms, and impairment indicators to be presented and discussed have been researched and validated in both laboratory and field studies.

By participating in this training, participants will be better able to recognize drug-impaired individuals and to make proper referrals utilizing the appropriate resources.

**Educationally Oriented, Systematic and Standardized Procedure**

It is important to remember that the EDIT process of identifying suspected impaired individuals is an educationally-oriented, SYSTEMATIC and ATANDARDIZED procedure.

Goals include identifying those who may be impaired by a drug or drugs to 1) improve the work environment, 2) provide an early intervention and diversion, and 3) assess the need for medical assistance.
The conclusion of impairment must be based on the TOTALITY of information gathered through the systematic observations and should not be based on any one element alone. All assessments must be done SYSTEMATICALLY and COMPLETELY in every instance except for medical emergencies.

Test Your Knowledge (Pre-Test)

Notes:
Objectives

Upon successfully completing this session, participants will be better able to

1. Understand current drug trends and drug usage.
2. Understand why and how the EDIT training was developed.

Content Segments

A. National Drug Statistics
B. State/Local Drug Statistics
C. Drug Trends
D. Development of the EDIT training program

Learning Activities

Instructor Led Presentations
SESSION TWO: DRUGS IN SOCIETY

A. National Statistics:

**NOTE: For annual updates, go to www.monitoringthefuture.org or www.decp.org**

According to the National Institute of Drug Abuse, 52 million Americans aged 12 and older reported using a prescription drug outside of its intended use in the month before the survey was conducted.

The United States holds 5% of the world’s population but is responsible for approximately 75% of the world’s prescription drug use.

According to the Substance Abuse and Mental Health Services Administrations (SAMHSA) 2018 “National Survey on Drug Use and Health,” 53.2 million people aged 12 or over, used an illicit drug in the past years, which equates to about 1 in 5 Americans. Marijuana was the most common, accounting for nearly 82% of the national illicit drug use. The second most common was the misuse of prescription pain relievers with approximately 9.9 million people reporting use within the past year.

*Source: 2018 National Survey on Drug Use and Health Substance Abuse of Mental Health Services Administration (SAMHSA)*

Three classes of prescription drugs commonly abused:

- **Opioids, or Narcotic Analgesics**, which are most often prescribed to treat pain (Fentanyl, Oxycodone, Hydrocodone, Morphine, etc.)

- **Central Nervous System (CNS) Depressants**: Used to treat anxiety and sleep disorders (Xanax, Ambien, Prozac, Valium, etc.)

- **CNS Stimulants**: Illicit drugs and prescribed drugs to treat the sleep disorder narcolepsy and attention-deficit hyperactivity disorder (Methamphetamine, Cocaine, Amphetamine)
Illicit Drugs:

- Cocaine: In 2018 it was estimated that 5.5 million Americans age 12 and up used cocaine in the past year
- During the same period, approximately 5.1 million Americans reported illicit use of prescription stimulants
- An estimated 808,000 people reported using heroin in 2018, nearly double the reported use in 2014

Source: 2018 National Survey on Drug Use and Health Substance Abuse of Mental Health Services Administration (SAMHSA)

Drugs and the Workplace

- Positive Workplace Drug testing hits 14 year high, Driven by Marijuana use. Results form more than 10 million workplace drug tests by Quest Diagnostics show a 5% increase in positive results over 2017. This is the highest rate since 2004
- 4.4% of workers and job applicants tested positive for drugs
- There was a 24% increase for safety sensitive workforce (Airplane Pilots, Law Enforcement, Train Conductors) from 2014 to 2018

Source: Quest Diagnostics

Workforce Marijuana Positivity Increase

States that have recreational use marijuana saw significant increases in positive test results for marijuana use. Oregon saw a 63% increase; Nevada had a 55% increase and Colorado had a 47% increase. The national average was 2.3% and the overall workplace positivity increase was 10%.

Source: Smart Approaches to Marijuana (SAM) April 2019

Positive Drug Tests in the Workplace and Drugs Most Often Detected
• According to Quest Diagnostics, drug positivity rates in the workforce climbed to their highest rates in 20 years in 2021

• Quest Diagnostics released results of positive drug tests for 2016 through 2020 in their Annual Report. Although marijuana showed a slight decrease, other drugs remained relatively unchanged or slightly increased.

Source: Quest Diagnostics, 2021

B. State and Local Statistics:

Local Drug Information

C. Drug Trends:

• The instructions for making certain drugs are easily obtained over the Internet. This has added to the increased use, abuse, and popularity of some drugs. Sites like Erowid.com are a good example.

• Certain groups advocate the safe use of drugs by testing for drugs during parties or dance “raves,” and give advice on how to take drugs safely to avoid overdosing

• These groups make up what is known as the “harm reduction movement”

• Other social media allows users to share information about drug use and their experiences.
D. Development of the EDIT Training Program

- Increases in drug use, not only in society, but also in the workplace setting lead to the development of this training.

- Increase use of drugs in the workplace, both licit and illicit, are a concern in schools, businesses, as well as roadways.

- Need for employers to safeguard workplace from drug impaired employees.

- Identifying drug-impaired employees and taking proper action can help us avoid drug-impaired drivers on our roadways.

- Need to reduce potential lawsuits or civil action due to drug-impaired employees.

Notes:
Session III

OVERVIEW OF ALCOHOL

Overview

Objectives

Upon successfully completing this session, participants will be better able to

1. Name the three types of alcohol.
2. Describe a brief history of alcohol.
3. Identify common alcohol types.
4. Describe the physiologic process of absorption, distribution, and elimination of alcohol in the human body.

Content Segments

A. Physiology of Alcohol
B. Methyl, Ethyl, and Isopropyl
C. Physiological Process
D. Absorption
E. Distribution
F. Elimination
G. Dose/Response Relationships

Learning Activities

Instructor Led Presentations

Session III: Overview of Alcohol

30 Minutes
SESSION THREE: OVERVIEW OF ALCOHOL

Alcohol abuse and misuse remains a major concern in America and throughout the world.

Alcohol is the most widely abused Central Nervous System (CNS) Depressant.

To understand the impact of alcohol, it is important to take a closer look at alcohol, and its effects on the body.

A. Physiology of Alcohol

The word “Alcohol” refers to several distinct, but similar, chemicals.

Each of the alcohols is a drug within the scope of our definition.

Only one, Ethanol, can be tolerated by the human body in substantial quantities.

B. Methyl, Ethyl and Isopropyl

We primarily focus our attention on Ethanol since it is the only one intended for human consumption.

Ethanol is the active ingredient in beer, wine, whiskey, and other alcoholic beverages.

Ethanol is a naturally occurring drug that is produced in nature through a process called fermentation.

In fermentation, spores of yeast, carried by the wind, come in contact with fruit or grain that has fallen to the ground.

- Sugar in the fruit or grain chemically reacts with the yeast, and produces alcohol
- Today, most fermentation takes place on purpose under controlled conditions
Distillation is the process used to produce a higher concentration of alcohol. Distillation occurs when:

- A fermented beverage is heated to the point where ethanol begins to boil, and
- The ethanol vapor is collected and allowed to cool until it turns back to a liquid

By repeating the process of heating the liquid, cooling, and collecting the vapors, higher concentrations of ethanol can be produced.

Alcoholic beverages produced by distillation are called “distilled spirits.” Distilled spirits include whiskey, vodka, gin, and rum.

Through the years, people have developed standard-size servings of different alcoholic beverages.

- Beer is usually served in 12-ounce bottles or cans. Beer averages an ethanol concentration of 5%. A can or bottle contains a bit more than one-half ounce of pure ethanol
- Typically, a five-ounce glass of wine has the ethanol concentration of 12%. A glass of wine has just a bit more than one-half ounce of pure ethanol

Whiskey and other distilled spirits are dispensed in a “shot” glass. A shot usually contains one and one-half ounces of liquid.

Whiskey usually has an ethanol concentration of 40 percent. A shot of whiskey typically has just a bit more than one-half ounce of pure ethanol.

For all practical purposes, standard-size servings of beer, wine and whiskey all pack the same “punch.”

C. Physiological Process

Alcohol is a Central Nervous System (CNS) Depressant.

- It doesn’t impair until it gets into the brain
- It can’t get into the brain until it gets into the blood
- It can’t get into the blood until it gets into the body
- The most common method of ingesting alcohol is by drinking.

### D. Absorption

- Alcohol, unlike food, does not need to be digested prior to moving from the stomach into the small intestine.
- Stomach acids and enzymes start to break down the food, preparing it to pass to the lower portion of the gastrointestinal track.
- When alcohol is consumed with food, it will be trapped in the stomach and the stomach acids and enzymes will begin to break it down.
- If alcohol is consumed on an empty stomach, it will pass quickly through the base of the stomach, into the small intestine and move quickly into the bloodstream.

### E. Distribution

Once alcohol gets into the blood, the blood carries it to various tissues and organs in the body.

- Alcohol is attracted to water. The blood will deposit the alcohol in all the parts of the body where water is found.
- Parts of the body that have a lot of water will collect much of the alcohol.
- Parts of the body that have little water will receive smaller amounts of alcohol.

Parts of the body that have lots of water include:
- Brain
- Liver
- Muscle tissue
- Kidneys

Parts of the body that have less amounts of water include:
- Bones
- Fatty tissue
Muscle tissue will receive a relatively high proportion of the alcohol that a person consumes.

Fatty tissue will receive very little of the alcohol consumed. An interesting and significant difference between men and women is pound for pound, the average male has more water in his body than the average female.

- The female body has more fatty tissue than the male body
- Pound-for-pound, the average female has more fat and less muscle than the average male
- Fatty tissue contains very little water
- The average female has fewer places in her body to deposit the alcohol consumed

F. Elimination

The woman’s blood alcohol concentration will be higher than the man’s because she has less water in which to distribute the alcohol.

As soon as alcohol gets into the body, the body begins working to eliminate it.

- Some alcohol is expelled directly from the body, i.e., on the breath, in the sweat, in urine, etc.
- The majority of the alcohol consumed is metabolized by the liver

Metabolism of alcohol consists of a slow controlled burning of the alcohol.

The speed that the liver metabolizes the alcohol varies from person to person, and may periodically change for any particular person.

The average rate of human metabolism is 0.015% per hour.

For the average male, a BAC of 0.015% is equal to about two-thirds the alcohol content of a “standard” drink.
For the average female, a BAC of 0.015% is equal to approximately one-half the alcohol content of a “standard” drink.

**Note:** The average male can burn off about two-thirds of a drink in an hour, while the average female can only burn off about one-half of a drink per hour.

There is nothing we can do to speed up the rate of metabolism.

- Drinking coffee doesn’t help
- A cold shower doesn’t help
- Exercise doesn’t help
- “Magic” mystery potions don’t help

G. Dose/Response Relationships

There is no simple answer to the relationship of dose response to alcohol.

- ANY amount of alcohol consumption will affect a person.

- The amount needed to be consumed to get impaired varies as previously described. It can vary person to person.

Reaching blood alcohol concentrations (BAC’s) depends upon numerous factors, including:

- Man or woman
- Size
- Stomach content
- Time consumed
- Amount consumed
- Health conditions
- Type of alcohol consumed

In one respect, it doesn’t take very much alcohol to impair someone. A couple beers can do it.
Session IV

Overview

Objectives
Upon successfully completing this session, participants will be better able to

1. Define the word “drug” and other terms associated with drug impairment.

2. Identify the categories of drugs used in this training.

3. Recognize and describe general indicators of impairment of the drug categories.

4. Become familiar with common drugs from the drug categories.

5. Be familiar with conditions that may mimic indicators of drug impairment.

6. Be familiar with overdose symptoms of the drug categories.

7. Gain a better understanding of why people abuse drugs.

Content Segments

A. Definition of “Drug”
B. Drug Categories
C. CNS Depressants
D. CNS Stimulants
E. Hallucinogens
F. Dissociative Anesthetics
G. Narcotic Analgesics
H. Inhalants
I. Cannabis
J. Drug Combinations

Learning Activities

Instructor-led Presentation

Session IV - Objectives
✓ Define the word “drug” and other terms associated with drug impairment.
✓ For each of the drug categories:
  - Identify common drug types
  - Discuss the different signs of ingestion
  - Identify the general indicators of impairment
✓ Be familiar with conditions that may mimic indicators of drug impairment
✓ Become familiar with overdose symptoms of the drug categories
✓ Gain a better understanding of why people abuse drugs

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SESSION FOUR: DRUG IDENTIFICATION, CATEGORIES AND THEIR OBSERVABLE EFFECTS

Throughout history, people have used psychoactive substances for a variety of reasons which include altering states of consciousness, reducing pain, forgetting harsh surroundings, altering moods, medicating a mental illness, or enhancing the senses.

The popularity of psychoactive substances continues to grow due to new technologies, the Internet, and the proliferation of street chemists and their customers. New drugs and psychoactive substances are constantly being developed or reformulated. Many are specifically designed to stay one-step ahead of detection, and state and federal laws.

Psychoactive substances include natural, semisynthetic, and synthetic substances that directly affect the neurochemistry and the Central Nervous System (CNS), causing mental, emotional, and physical changes and reactions.

A. Definition of “Drug”

1. Are all drugs medicines? Are all medicines drugs?
2. Are all drugs narcotics?
3. Are all drugs habit-forming substances?
4. What substances might be considered “drugs” that are not commonly thought of as drugs?

The definition of drug as used in this training is:

“Any substance that alters perception or behavior reducing that individual’s ability to function appropriately in the work environment.”

B. Drug Categories

Psychoactive drugs have chemical names, trade names, and street names. For this training, psychoactive drugs (or substances) are classified by their overall effects.

Within this training, and impaired driving training courses there are seven drug categories discussed.
Each category consists of many substances that can impair a person’s mental and physical abilities.

The categories differ from one another in terms of how they impair a person and type of impairment produced.

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

With training and practice, participants will be able to recognize the signs, symptoms, and the drug category general impairment indicators.

C. Central Nervous System (CNS) Depressants

CNS Depressants slow down the processes of the brain and many other functions that the brain controls.

In year’s past, they were often referred to as “Downers.”

At first, and immediately recognizable are the effects to the voluntary bodily functions, such as speech, coordination, and mobility.

As the dosage increases, impairment of the automatic nervous system, such as, heartbeat, body temperature and breathing will be observable.

The most familiar and abused CNS Depressant is alcohol.

Because alcohol is the most often abused impairing substance, it is important to understand just how it works and how it can lead to impairment.

Many CNS Depressants are legally prescribed for depression, anxiety, phobias, and other psychotic disorders

Some popular CNS Depressants other than alcohol include:

- Barbiturates (derivative of barbituric acids) such as, Secobarbital and Phenobarbital
- Anti-anxiety tranquilizers, such as Valium, Librium, and Xanax
• Anti-depressant tranquilizers, such as Prozac and Trazadone
• Anti-psychotics, such as Thorazine, Haldol, and Librium
• Non-barbiturates, such as Quaaludes, Soma, Chloral-hydrate, Gamma-Hydroxybutyrate (GHB), and Kava

In general, people under the influence of CNS Depressants look and act much like people under the influence of alcohol.

General Indicators of CNS Depressant Impairment:

• Drowsy acting
• Thick, slurred speech
• Uncoordinated, fumbling fingers
• Flaccid muscle tone
• Sluggish acting
• Droopy eyelids
• Bloodshot, watery eyes
• Slowed reflexes
• Poor balance and coordination

Other Conditions That May Mimic CNS Depressant Indicators:

• Extreme fatigue
• Head injury
• Hypo-tension (abnormally low blood pressure)
• Severe depression
• Diabetic reaction
• Inner ear disorders

Possible CNS Depressant Overdose Symptoms:

• Shallow breathing
• Cold/clammy skin
• Pupils dilated
• Slow heartbeat
Methods of CNS Depressant Ingestion:

- Oral
- Injected

CNS Depressant Duration of Effects:

- Depending on the type of depressant, the effects can last from a few minutes to approximately 12-14 hours.

D. Central Nervous System (CNS) Stimulants

CNS Stimulants accelerate the heart rate and many other processes of the body. For that reason, they have also been referred to as “Uppers.”

Although there is a great difference in strength, all stimulants increase the chemical and electrical activity in the CNS. Stimulants boost energy, raise the heart rate and blood pressure, increase respiration, and reduce appetite.

Legal stimulants can be prescribed for attention-deficit hyperactivity disorder (ADHD), weight loss, and narcolepsy.

Some commonly abused CNS Stimulants include:

- Cocaine – Naturally derived from the leaves of the coca plant. “Crack” is the street name given to cocaine that has been processed from cocaine hydrochloride.

- Amphetamines – Includes many prescription drugs such as Adderall, Dexedrine and Ritalin
• Methamphetamine – Illegally produced drug, except for Desoxyn, which is a prescription drug used to treat narcolepsy and attention deficient disorder (ADD) and attention deficit hyperactivity disorder (ADHD).

• Caffeine, Herbal Ecstasy, Ephedrine, Pseudoephedrine, and various energy drinks

Energy Drink Phenomenon

In the 1980’s the marketing and use of energy drinks changed dramatically with the advent of Red Bull ®.

With 80 mg of caffeine, Red Bull ® contains more than twice the amount of caffeine found in a 12 ounce can of Coca-Cola ® (35 mg), but less than 8 ounces of brewed coffee. In addition to high levels of caffeine, many energy drinks contain taurine, ginseng, guarana, glucose, and other caffeine-like chemicals.

The abuse of energy drinks has been implicated in numerous hospital admissions and impaired driving cases. In large quantities, the effects can mirror the effects of other CNS Stimulants.

Over-the-Counter (OTC) Stimulants

Legal CNS stimulants are often used to boost performance and are available over the counter (OTC). Besides high-caffeine energy drinks, there are many abused OTC stimulants which include Ephedra (Ma Huang) and Ephedrine. Ma Huang is a Chinese herb that comes from the ephedra bush. The active ingredients are ephedrine (a bronchodilator) and pseudoephedrine (a nasal decongestant). Ephedra and ephedrine are commonly used in many legal OTC medications and diet medications.

General Indicators of CNS Stimulant Impairment:

- Restlessness
- Anxiety
- Excited
- Exaggerated reflexes
- Bruxism (grinding of teeth)
- Runny nose
- Paranoia
- Euphoria
- Loss of appetite
- Loss of weight
- Dilated pupils

General Impairment Indicators
Other Conditions That May Mimic CNS Stimulants Indicators:

- Hyperactivity
- Nervousness
- Stress/Fear
- Hypertension

Possible CNS Stimulant Overdose Symptoms:

- Confusion
- Feelings of pleasure to panic
- Convulsions
- Fainting
- Aggressiveness
- Dramatic increase in heart rate
- Hallucinations
- Coma

Typical Methods of Ingestion:

- Oral Smoking
- Snorting
- Injecting

Duration of Effects:

- Cocaine (Powder):
  - Onset/immediate
  - Duration – up to 2 hours

- Cocaine (Crack):
  - Onset/immediate
  - Duration – 5 to 10 minutes

- Amphetamine:
  - Onset – 30 to 40 seconds
  - Duration – 4 to 8 hours
• Methamphetamine (Crank or Speed):
  - Onset – 30 to 40 seconds
  - Duration – Up to 12 hours

E. Hallucinogens

Hallucinogens are drugs that can cause hallucinations and typically cause the user to perceive things differently from what they are. Drugs and other substances in this category have also been referred to as “Psychedelics.”

Hallucinogenic drugs usually produce what are called pseudo-hallucinations. That is, the user is aware that what he sees, hears, or smells isn’t real, but is an effect caused by the drug.

Hallucinogens can cause a disruption of the visual and auditory centers and a crossover or mixing of the senses. This is called synesthesia, which is the transposition of sensory modes or the transposition of senses. Some examples include seeing sounds, hearing colors.

Some hallucinogenic drugs occur naturally, others are synthetically produced.

• Synthetic examples:
  - LSD (Lysergic acid diethylamide) Manufactured from lysergic acid which occurs naturally in the ergot fungus that grows on wheat and rye.
  - MDMA (Methylenedioxymethamphetamine). Street names include Ecstasy, Molly, X, XTC, and the love drug. A derivative of methamphetamine with both stimulant and psychedelic effects.
  - Designer Psychedelics – Group of synthetic drugs similar to mescaline. Used for mental exploration and later for recreation. Includes numerous substances with chemical names, such as, 2C-1, 2C-B, and 2C-1NBOme. Street names include Smiles, C-bomb, N-bomb, Benzofury, and Nexus.
• Natural examples:
  ▪ Salvia Divinorum – Has unique psychic effects likened to a combination of various hallucinogenic drugs. Often compared to the effects of LSD. Street names include Sage, Magic mint, and Sally D. (Legal in some states)
  ▪ Peyote – Contains mescaline, the active ingredient of the peyote cactus.
  ▪ Psilocybin (Mushrooms) – Also referred to as “magic mushrooms” or “shrooms” whose active ingredients are psilocybin and psilocin.
  ▪ Morning Glory Seeds – LSD-like substances about one-tenth as potent as LSD. Street name include heavenly blue, flying saucers, and pearly gates.

People under the influence of hallucinogens are usually extremely impaired and may exhibit bizarre behavior.

Some hallucinogen users experience mental flashbacks or sensations of a trip they had while under the influence of LSD or another hallucinogen months or years later. The flashbacks, which can be triggered by stress, the use of another psychoactive drug, or a sensory stimulus (light, smell, or odor), re-create the original experience. The flashback can also cause anxiety and panic because it is unexpected, and the user seems to have little control over its recurrence.

• General Indicators of Hallucinogen Impairment:
  ▪ Dazed appearance
  ▪ Body tremors
  ▪ Perspiring
  ▪ Paranoia
  ▪ Disoriented
  ▪ Nausea
  ▪ Difficulty with speech
  ▪ Piloerection (hair standing on end)
  ▪ Statements suggesting hallucinations
  ▪ Flashbacks
  ▪ Uncoordinated
  ▪ Memory loss
  ▪ Synesthesia (Transposition of senses)
  ▪ Dilated pupils

General Impairment Indicators

• Hallucinations
• Body tremors
• Paranoia
• Uncoordinated
• Nausea
• Disoriented
• Memory loss
• Dilated pupils
• Perspiring
• Flashbacks
• Difficulty with speech
• Synesthesia (Transposition of senses)
• Other Conditions That May Mimic Hallucinogen Indicators:
  - Mental illness
  - High fever

Possible Hallucinogen Overdose Symptoms:
  - The most common danger of an overdose of hallucinogen is an intense bad trip, which can result in severe and sometimes permanent psychosis.

• Methods of Ingestion:
  - Oral
  - Smoked
  - Transdermal absorption
  - Injected
  - Snorted

• Duration of Effects
  - LSD:
    - Onset – 30 to 60 minutes
    - Duration - up to 12 hours
  - Psilocybin Mushrooms:
    - Onset - within 30 minutes
    - Duration – 3 to 5 hours
  - MDMA:
    - Onset - 30 minutes to 1 hour
    - Duration – 4 to 24 hours
F. Dissociative Anesthetics

Dissociative Anesthetics are a group of unique drugs that dissociate the users thought process and can cause disassociation or an “out-of-body” sensation. This category includes the following substances:

- Phencyclidine (PCP) – A illegal drug with a shortened title of the chemical name Phenylcyclohexylpiperidine. Originally developed for veterinary medicine use and never approved for human use due to its toxic and hallucinogenic effects. Has numerous street names including angel dust, peep, KJ, whack, and rocket fuel

- Ketamine – A drug used in human and veterinary medical procedures that produces similar effects of PCP. It is considered an analog of PCP. Sold under the trade names of Ketanest®, Ketaset®, and Ketalar® with street names of Special K, and Vitamin K

- Dextromethorphan (DXM) – A legally produced synthetic analog of codeine with more specific activity at the cough receptors that the pain and euphoria sites. Found in many cough suppressants and is a popular over-the-counter substance abused by younger people. Often referred to as “purple drank”

Dissociative Anesthetics share characteristics with three of the previously reviewed drug categories:

- Like CNS Depressants, Dissociative Anesthetics will cause nystagmus (jerking of the eyes), slurred speech and slow responses
- Dissociative Anesthetics elevate the vital signs and cause behavior much like CNS Stimulants
- Dissociative Anesthetics can cause hallucinations much like those induced by Hallucinogens

Like many other drugs, the drugs within the Dissociative Anesthetics drug category have numerous street names. Some include: Robo, Skittles, Triple C, Sizzurp, Angel Dust, Rocket Fuel, Special K, and Super K.
Expected Results of Observations/Indicators of Dissociative Anesthetic Impairment:

- Psychophysical Indicators:
  - Divided attention impairment

- General Indicators of Impairment:
  - Blank stare
  - Loss of memory
  - Perspiring heavily (may remove clothing)
  - Warm to touch
  - Incomplete, slurred verbal responses
  - Cyclic behavior
  - Agitation
  - Rigid muscle tone
  - Disoriented
  - Non-responsive
  - Chemical odor on breath or clothing

Sources: National Highway Traffic Safety Administration “Drugs and Human Performance Fact Sheets” April 2014; U.S. Dept. of Justice, Drug Enforcement Administration, Office of Diversion Control; National Institute on Drug Abuse (NIDA)

- Other Conditions That May Mimic Dissociative Anesthetic Impairment:
  - Mental disorders
  - Mental illness

- Possible Overdose Symptoms:
  - A deep coma, lasting for up to 12 hours
  - Seizures and convulsions
  - Respiratory depression
  - Possible cardiac problems
  - Bizarre, violent, and self-destructive behavior
• Typical Methods of Ingestion:
  - smoked
  - snorted
  - oral
  - injected
  - transdermal absorption

Duration of Effects:

• PCP
  - Onset – 1 to 5 minutes
  - Peak – 15 to 30 minutes
  - Duration – 4 to 6 hours

• Ketamine
  - Onset – 1 to 5 minutes
  - Peak – 15 to 30 minutes
  - Duration – 4 to 6 hours

• Dextromethorphan
  - Onset - rapidly absorbed
  - Peak – 2 to 5 hours
  - Duration – 3 to 6 hours

G. Narcotic Analgesics

Narcotic Analgesics are a category of drugs refined from or are synthetic versions of the opium poppy’s active ingredients. This category includes many drugs primarily developed for the treatment of moderate to acute pain, diarrhea, coughing, and other conditions.

Drugs in this category are often referred to as “pain killers.” They typically induce euphoria, alter moods and produce sedation.

Most illicit users take opiate/opioid drugs to avoid emotional and physical pain, to experience euphoric effects, and to suppress withdrawal symptoms.
People develop a tolerance for narcotic analgesics rapidly.

“Tolerance” means the same dose of the drug will produce diminishing effects. Therefore, a narcotic analgesic user will need an increasing dose of the drug to achieve the same effect.

Narcotic Analgesics include:

- Opium – Derived directly from the opium poppy plant.

- Natural Alkaloids of Opium:
  - Morphine (Infumorph®, Kadian®, Roxanol®, MS Contin®) – Used to treat moderate to severe pain that lasts for more than a few days. Available in a variety of prescription forms, including tablets, capsules, suppositories, oral solutions, skin patches, and injectable solutions.
  - Codeine – A pain reliever and cough suppressant similar to morphine and hydrocodone. It typically causes sedation, drowsiness, and depresses breathing. Frequently combined with acetaminophen (Tylenol) or aspirin for more effective pain relief.

- Derivatives of Opium:
  - Heroin (Diacetylmorphine) – An opiate typically used as a recreational drug for its euphoric effects. Medically it is occasionally used to relieve pain as a form of opioid replacement therapy alongside counseling (not in the United States). Typically injected into a vein, but can also be smoked, snorted, or inhaled. Onset of effects is usually rapid and lasts for a few hours.
  - Hydromorphone (Dilaudid®, Hydrostat®, Palladone®) - A short-acting (4 to 5 hours) semisynthetic opioid. Refined from morphine making it five to eight times more potent gram-for-gram than morphine.
- Oxycodone (OxyContin®, Percodan®, Percocet®) - A semisynthetic derivative of codeine used for the relief of moderate to severe pain. Its pain-relieving effects are much stronger than those of codeine but weaker than those of morphine. OxyContin has received much attention for his high abuse. Street names include; “oxy,” “o’cotton,” and “hillbilly heroin.”

- Buprenorphine (Suboxone®, Buprenex®, Subutex®, Butrans®) – Semisynthetic powerful opioid agonist at low doses and an opioid antagonist at high doses. Primarily prescribed for the treatment of opioid addiction, but may also be used to treat pain, and sometimes nausea, most often in transdermal patch form.

- Synthetics: Chemically produced Narcotic Analgesics with no relation to opium but producing similar effects. They can include:
  - Hydrocodone (Vicodin®, Hydodan®, Tussend®, Norco®, Lorab®) – Most widely prescribed opioid with many of the same actions as codeine, but produces less nausea. Used orally for relief of moderate to severe pain, but also commonly taken in liquid form as an antitussive/cough suppressant.
  - Meperidine (Demoral®, Pethidine®, Mepergan®) – A short-acting opioid used to treat moderate-to-severe pain, help put people to sleep before surgery, and provide pain relief after childbirth.
  - Methadone (Dolophine®) - An opioid used to treat pain and as maintenance therapy or to help with detoxification in people with opioid dependence.
  - Oxymorphone (Numorphan®) - Used to treat moderate to severe pain. Often used before surgery to cause sedation and to anxiety. As a narcotic pain reliever, it works by dulling the pain perception center in the brain.
  - Fentanyl (Sublimaze®, Actiq®) - A highly potent, synthetic opioid pain medication with a rapid onset and short duration of action. It is 50 to 100 times more potent than morphine on a weight-for-weight basis. Involved in high amounts of drug overdoses.
People under the influence of Narcotic Analgesics exhibit slow deliberate movements. They have difficulty concentrating and can be slow to respond to questions.

- **General Indicators:**
  - “Track marks”
  - “On the nod”
  - Slowed reflexes
  - Low, slow, raspy speech
  - Facial itching
  - Dry mouth
  - Euphoria
  - Flaccid muscle tone

- **Psychological effects:**
  - Relief from the symptoms of withdrawal
  - Euphoria
  - Relief from pain

- **Other Conditions That May Mimic Narcotic Analgesic Impairment Symptoms:**
  - Extreme fatigue
  - Head injury
  - Hypotension (abnormally low blood pressure)
  - Severe depression
  - Diabetic reaction (“insulin shock”)

**Possible Overdose Symptoms:**
- Slow and shallow breathing
- Clammy skin
- Bluish colored lips
- Pale or bluish colored body parts
- Extremely constricted pupils

- **Signs and Symptoms of Withdrawal:**
  - Chills
  - Aches of the muscle or joints
  - Nausea
  - Sweating
- Goose bumps
- Yawning
- Tearing of the eyes
- Runny nose
- Vomiting

- Methods of Ingestion:
  - Injected
  - Smoked
  - Snorted
  - Suppositories
  - Oral
  - Transdermal

- Duration of Effects:
  - Heroin:
    - Onset – 5 to 30 minutes
    - Duration – 4 to 6 hours
  - Methadone:
    - Onset – 5 to 30 minutes
    - Duration - up to 24 hours
  - Dilaudid:
    - Onset - 15 minutes
    - Duration - 5 hours
  - Percodan:
    - Onset - 15 minutes
    - Duration – 4 to 6 hours
  - Fentanyl:
    - Onset - 15 minutes
    - Duration – 2 to 3 hours

With the emergence of Fentanyl abuse and other narcotic analgesics drugs, it has become necessary for many workplaces to have the availability of Narcan or Naloxone and train people in it’s use.

Narcan (Naxoxone) is a medicine that rapidly reverses an opioid overdose. It is an opioid antagonist. This means that it attaches to opioid
receptors and reverses and blocks the effects of other opioids. Naloxone can quickly restore normal breathing to a person if their breathing has slowed or stopped because of an opioid overdose.

Narcan has no effect on someone who does not have opioids in their system, and it is not a treatment for opioid use disorder.

Naloxone should be given to any person who shows signs of an opioid overdose or when an overdose is suspected. Naloxone can be given as a nasal spray or it can be injected into the muscle, under the skin, or into the veins.

Naloxone works to reverse opioid overdose in the body for only 30 to 90 minutes. But many opioids remain in the body longer than that. Because of this, it is possible for a person to still experience the effects of an overdose after a dose of naloxone wears off. Also, some opioids are stronger and might require multiple doses of naloxone. Therefore, one of the most important steps to take is to call 911 so the individual can receive immediate medical attention.

People who are given naloxone should be observed constantly until emergency care arrives. They should be monitored for another 2 hours after the last dose of naloxone is given to make sure breathing does not slow or stop.

H. Inhalants

Inhalants are breathable chemicals that produce mind-altering results. They are also referred to as “deliriants” and comprise a wide variety of substances and delivery methods: volatile liquids that give off fumes, gases that come in pressurized tanks or bottles, and aerosol cans that are sprayed.

Inhalants vary widely in terms of chemical composition and specific effects produced. They are popular, especially with younger people, because they are cheap, quick acting, and readily available.

The effects produced depend on the chemical nature of the inhaled substance. Effects may be similar to those of a stimulant, depressant or hallucinogen.
Within this training, there are three sub-categories of inhalants:

- **Volatile solvents**: Comprised mostly of carbon and hydrocarbon-based compounds that are volatile (turn to gas) at room temperature. They include such substances as gasoline, gasoline additives, butane, kerosene, glues and plastic cements, nail polish remover, paint thinners, cleaning fluid and many other substances.

  Volatile solvents are quick acting; they are absorbed into the blood almost immediately after inhalation and within 7 – 10 seconds move to the heart, liver, brain and other tissues. Volatile solvents are exhaled by the lungs leaving a telltale odor on the user’s breath.

- **Aerosols**: Includes spray substances such as hair spray, insecticides, paints (metallic paints), air dusters, computer keyboard cleaners (Dust-Off® and Endust®), and analgesic/asthma sprays.

  Many of the volatile solvent and aerosol substances share two major volatile compounds; toluene and trichloroethylene. Toluene (methyl benzene) is the most frequently abused solvent because it is found in so many substances. Trichloroethylene (TCE) is a common organic solvent and an ingredient in correction fluids, pains, antifreeze, metal degreasers and spot removers.

- **Anesthetic Gases**: Includes ether, nitrous oxide (“Whippets,” “laughing gas,” “nitrous”), and various nitrates which include amyl nitrite and butyl nitrite.

  Nitrates, amyl nitrite in particular, have a sweet odor when fresh but a “wet-dog” or spoiled banana smell when stale. Amyl nitrite is available only by prescription.

  Butyl and propyl nitrites are banned in the U.S.; however, variants of these formulations are still sold as room, and shoe cleaners. Nitrates are sometimes called “poppers” because amyl nitrates were formerly packaged in glass capsules wrapped in cotton, and they broke open with an auditable popping sound.

People under the influence of inhalants typically exhibit impairment similar to alcohol intoxication.

Subjects using inhalants are commonly referred to as “huffing.”
Expected results of observation/indicators of Inhalant impairment include:

- **General Indicators:**
  - Odor of inhaled substance
  - Dizziness, numbness
  - Possible traces of substance (face, nose, hands)
  - Bloodshot, watery eyes
  - Distorted perception, time, and space
  - Inebriation similar to alcohol intoxication
  - May complain of intense headache
  - Nausea
  - Possible hallucinations
  - Slurred speech

- **Other Conditions That May Mimic Inhalant Impairment Symptoms:**
  - Severe head injury
  - Inner ear disorder

- **Possible Overdose Symptoms:**
  - Coma
  - Unconscious/Unresponsive

- **Methods of Ingestion:**

  Inhalants are ingested into the body through inhalation. There are various inhalation methods that include:
  - Sniffing – use directly from the container through the nose
  - “Bagging” – inhaling fumes from solvent-soaked material placed in a paper or plastic bag
  - “Balloons and crackers” – inhaling from a balloon filled with nitrous oxide or other “cracking” devices used to puncture the gas canisters
• **Duration of Effects:**
  - Onset is typically immediate
  - **Duration:**
    - Nitrates - up to 20 minutes (Amyl, Butyl, “Rush”)
    - Nitrous Oxide - 5 minutes or less
    - Volatile solvents – 6 to 8 hours (gasoline, paint)

Inhalants are easily accessible in the work environment. Most Inhalants are readily available in retail markets. Paints, cleaning solvents, etc., are easily accessible.

1. **Cannabis**

Cannabis is a term that refers to marijuana and other drugs made from the Cannabis Sativa plant.

Strong forms of cannabis include Sinsemilla, hashish ("hash" for short), and hash oil.

Marijuana, which is part of the cannabis drug category, is a green, brown, or gray mixture of dried, shredded leaves, stems, seeds, and of the Cannabis Sativa plant. There are many different slang terms for marijuana and, as with other drugs, they change quickly and vary from region to region.

No matter its form or label, all cannabis products contain the primary psychoactive (mind-altering) chemical delta-9-tetrahydrocannabinol (THC). Marijuana contains more than 400 other chemicals. THC is the chemical in marijuana responsible for producing the euphoria or “the high.”

Cannabidiol (CBD) another chemical in marijuana and is considered non-psychoactive and lacks the intoxicating properties of THC. There is some evidence that CDB may hold medicinal value to treat several medical conditions such as neurological disorders (i.e. seizures and epilepsy), psychosis and anxiety.

Although the current national THC average level of marijuana is approximately 11%, any states report recreational marijuana is approximately 30% THC. This does not include high-potency extract concentrates, which can have 80 - 90% or more THC.
When people smoke marijuana, they feel its effects almost immediately. THC rapidly reaches every organ in the body, including the brain, and attaches to specific receptors on nerve cells.

One use of THC is called “Dabbing” which is a concentrated, high potency form of THC. Dabbing is a way to get the quickest, long-lasting high with a single inhale. A single puff from a pipe or vaping pen can give the effect of smoking many joints. Unfortunately, the new vaping pens make it extremely difficult to see, smell or detect.

It involves the use of butane or other various chemicals to heat and refine the THC into “BHO” or butane hash oil. The resulting waxy ball of THC is then heated or put into a vaporizing pen and inhaled. Many concentrates can have THC levels that exceed 90%. This ingestion method can affect the user for 4 - 5 hours.

THC is chemically similar to chemicals that the body produces naturally, called endocannabinoids. THC disrupts the normal function of these chemicals. Because of this system’s wide-ranging influence over many critical functions, marijuana can have multiple adverse effects — not just on the brain, but on a person’s general health.

Some of these effects last only as long as marijuana is in the body while others may build up over time to cause longer-lasting problems, including addiction.

Edible cannabis or marijuana when consumed in foods can cause the effects to come on slower. However, because edibles containing marijuana are often unlabeled or poorly labeled, users can use too much waiting for the "high" and can end up in an emergency situation.
Synthetic Marijuana

Synthetic marijuana or synthetic cannabinoids have quickly become a worldwide concern. They quickly came on the market in the early 2000’s and continue to evolve. These products go by many different names or identifiers.

Spice, which is sometimes also called K2, herbal incense, or "fake weed," is one of the more popular or more familiar synthetic cannabinoids.

Spice and similar products consist of shredded dried plant material that has been sprayed with chemicals designed to act on the same brain cell receptors as THC but are often much more powerful and unpredictable. These products are typically labeled "not fit for human consumption," and most are illegal. But their manufacturers are constantly creating new chemical compounds to sidestep legal restrictions.

People under the influence of Cannabis are typically relaxed, care-free acting.

- General Indicators:
  - Odor of marijuana
  - Relaxed inhibitions
  - Marked reddening of the whites of the eyes
  - Body tremors
  - Disorientation
  - Attention difficulties
  - Impaired perception of time and distance
  - Marijuana debris in the mouth
  - Eyelid tremors
  - Increased appetite

- Other Conditions That May Mimic Cannabis Impairment Symptoms:
  - Some medical conditions can be associated with a lack of attention. An example would be Attention Deficit Disorder (ADD)
• Possible Overdose Symptoms:
  ▪ Sharp personality changes (Paranoia)
  ▪ Possible psychosis
  ▪ Excessive vomiting (Hyperemesis Syndrome)

• Long-term Effects on Cannabis Use:
  ▪ Lung damage
  ▪ Chronic bronchitis
  ▪ Lowering of testosterone
  ▪ Possible birth defects
  ▪ Chronic reduction in attention span
  ▪ Withdrawal is similar to alcohol dependence withdrawal

• Methods of Ingestion:
  ▪ Smoked
  ▪ Oral
  ▪ Transdermal (patches)

• Duration of Effects:
  ▪ Smoked Cannabis
    - Onset – 8 to 9 seconds
    - Peak – 10 to 30 minutes
    - Duration – 3 to 4 hours
  ▪ Edibles
    - Up to 8 hours

J. Drug Combinations

Poly-drug use refers to the use of two or more psychoactive drugs in combination to achieve a particular effect. In many cases one drug is used as a base or primary drug, with additional drugs to leaven or compensate for the side effects of the primary drug and make the experience more enjoyable with drug synergy effects, or to supplement for primary drug when supply is low.

For our purposes, poly-drug use is defined as: having two or more drug categories in the body at the same time.
It is very common to encounter poly-drug users more than single drug users.

Per the National Cannabis Prevention and Information Center (NCPIC), the most common type of poly-drug mix is marijuana and alcohol.

A person addicted to both can experience the same symptoms but to a wholly unpredicted level. This may be due to the psychedelic properties of marijuana, which can affect the mind in different ways. These psychedelic effects may be heightened with the sedative effect of alcohol. This, in turn, can increase the risk for psychological problems and psychotic symptoms.

NCPIC also reported that alcohol can increase the rate of absorption of THC, the primary active component of cannabis, or marijuana. Taking alcohol with marijuana can strengthen the effect of the latter and cause a condition referred to as "greening out." This is a term used to describe when marijuana users experience nausea or sickness after smoking marijuana. Alcohol was often found in combination with one or more drugs.

Drug combinations often produce conflicting signs and symptoms.

An example would pupil size. A person under the influence of Cocaine and Heroin could have pupils that are small (constricted), large (dilated) or normal in appearance.

- Medically Impaired Individuals:

Some medical conditions may mimic drug induced impairment:

- Diabetes
- Brain disorders
- Injuries
Notes:
Session V  POLICY & PROCEDURES

Overview

Objectives

Upon successfully completing this session, participants will be better able to

1. Understand their roles as team members in the awareness and identification of impaired individuals.
2. Discuss local issues regarding possession and use of drugs in the workplace.

CONTENT SEGMENTS     LEARNING ACTIVITIES

A. Review of Company Policy    Instructor Led Presentations
B. Words to Use When Talking with Employees
C. Words That May Cause a Negative Reaction

A. Review of Policy

Remember: Always follow your company policy when dealing with drug-impaired individuals.

Serious consideration should be given to the development and implementation of a written policy if one is not in place. An ideal policy should include the following:

- Prohibiting the unlawful manufacture, distribution, dispensing, possession, use, sale, purchase, consumption, or being under the influence of a controlled substance on company property or as part of any company sponsored activity.
- Prohibiting the abuse of prescription drugs as well as the illegal use, purchase, sale or attempted sale of prescription drugs.
• Prohibiting the use of alcoholic beverages while on company premises, including meal periods and breaks.

• Prohibiting being under the influence of alcohol at any company function.

• Prohibiting the use or being under the influence of unauthorized drugs while attending company approved functions and that a violation of this policy will constitute grounds for disciplinary action and/or referral to law enforcement and prosecution.

What to Do When You Suspect an Employee Is Using Drugs

If the employee is taking his/her prescribed medication at the recommended dosage, the employee should not be impaired.

Observations and changes that may indicate drug abuse:

• Social/Behavioral symptoms: may include changes in emotional functioning such as depression, irritable mood, nervousness, euphoria, and apathy

• Cognitive functioning: may include poor concentration, sensation of slowed time, confusion, rambling flow of thoughts and speech, poor memory and attention

• Biological/Physical symptoms: may include changes in the employee’s ability to self-regulate, changes in heart rate, blood pressure, appetite and weight; muscle twitching, weakness or tremors; seizures, lack of coordination, dizziness, blurred vision, dilated or constricted pupils; red, glassy eyes, sweating, nausea, vomiting, respiratory distress, chills

• Psychomotor agitation: may include pacing, hand wringing, picking at skin, fidgeting, and restlessness

• Psychomotor retardation: may include listlessness, slowed speech, thinking or body movements and deterioration of handwriting

• Emotional/Cognitive symptoms: may include changes in behavioral functioning, increased combativeness and competitiveness, lethargy, discontinuation of previously enjoyed activities, becoming more secretive, and engaging in lying behavior

• Changes in social functioning: may include involvement in a sudden new peer group or marked isolation from peers

If possible, discuss your observations with a supervisor having contact with the employee.

Others may have made observations similar to, or in addition to, what you have seen.
Be discreet when making your inquiries.

- Public queries may be misinterpreted as fact or an accusation
- Be careful to not place additional stress on the individual

Do not accuse the employee.

Make your observations and get the facts using all your senses. **Just the facts.**

**Team Effort**

- Supervisors
  - First line of defense
  - Encounter the employee daily
  - Observe physical and behavioral changes
  - Document your observations

- Employer, Administrators
  - Take appropriate action consistent with policies
  - Include all applicable team members
  - Consider the observations of employees and supervisors
  - Consider the welfare and safety of the entire staff
  - Ensure the employee has access to an Employee Assistance Program (EAP)

- Others
  - Emergency medical personnel
  - Security
  - On-Duty law enforcement personnel

**First Contact (Supervisors/HR)**

In order to take appropriate action and assist an employee suspected of substance impairment, it is necessary to be familiar with the signs and symptoms of an alcohol or other drug problem.
It is important to remember that you are not expected to be an expert in this area, nor are you expected to be able to diagnose an employee’s problem.

Intervention is a proactive method used to increase awareness of problem behaviors, prevent problems from becoming worse, and promote referral for further assessment and possible treatment. Intervention simply means meeting with an employee and discussing your concern. The following are some tips for conducting an informal intervention:

- Select a private location
- Let the employee know that you are genuinely concerned
- Describe to the employee the specific behaviors that have caused the concern
- Speak to the employee in an objective, nonjudgmental manner
- Be prepared for the employee to provide excuses, promise behavior change, attempt to redirect the conversation, or pass the problem off as no big deal
- Document your contact with the employee

Interventions tips:

- Avoiding lecturing and admonishing
- Have a positive attitude towards the employee
- Avoiding judgmental responses
- Avoiding medical jargon
- Being attentive, genuine, and empathic
- Identifying the problem
- Avoid writing during the interview, especially during sensitive questions
- Criticizing the activity, not the employee and highlighting the positive.

Remember that even if the employee refuses your help, you are an important part of the process in helping him/her recognize that there is a problem. If you are uncomfortable intervening with the employee yourself but would still like to help, involve another member of the team.

C. Words That May Cause a Negative Reaction

- Messed up
- Loaded
- High
- Drugs
- Impaired
- Druggie
- Junkie

Words Which May Result in a Negative Reaction

- Diagnosed
- Drugs
- Loaded
- High
- Drunk
- Suspect
- Arrest
- Out of Control
- Crazy
- Jail
- Others
- Tested positive
- Dirty
- Suspect
- Arrest
- Diagnosed
- Assessed
- Jail
Session VI

Overview

Objective

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

1. Access additional references and resources provided.

Content Segments

Learning Activities

A. Internet Resources  Instructor-led Presentations
B. Printed Resources/References
C. Review of References, Resources and Impairment Chart
D. Course Conclusion, Post-Test and Critique

Appendix 6A: Suggested Additional References and Resources
Appendix 6B: General Indicators Chart
Appendix 6C: Duration and Detectability of Drugs in Urine
SESSION SIX: REFERENCES

There are numerous references available to administrators, supervisors and others regarding drugs and their various impairing effects. Some of those resources are covered in this session.

A. Internet Resources:

- Contains specific pages about drugs of abuse, drug trends, and treatment options

Erowid - https://www.erowid.org
- A pro-drug non-profit educational and harm-reduction resource with online information about psychoactive drugs, plants, chemicals, and drug effects

- Government site for highway safety information and statistics

National District Attorneys Association - http://www.ndaa.org
- Site for legal issues and materials explaining drug assessment procedures in lay terms

- A pill identification resource site

B. Printed Resources/References

1. Physician’s Desk Reference
   Available at: www.pdr.net/resources/pdr-books

2. Drug Identification Bible
   Amera-Chem, Inc.
   Available at: www.drugidbible.com
3. Drugs and Human Performance Fact Sheets National Highway Traffic Safety Administration
   Available at: https://one.nhtsa.gov/people/injury/research/job185drugs/technical-page.htm

4. Street Drugs, 2022
   Publishers Group West, LLC
   Available at: www.streetdrugs.org

5. Drug Effects on Psychomotor Performance
   Randall C. Baselt, Biomedical Publications

6. Uppers, Downers, All Arounders, 8th Edition
   CNS Productions, Inc., Medford, Oregon
   Available at: www.cnsproductions.com

C. Review of References, Resources, and Indicators Chart

   Review the References, Resources and Impairment Indicators Chart located at end of the Participant Manual.

D. Course Conclusion and Wrap-Up

   • Post-Test
   • Critique

   If applicable, give the 10 question Post-Test located in the Administrator Guide of the Instructor Guide. Go through each of the questions and answers with the participants. Have participants complete the course critique located in the Administrator Guide.

   Thank the participants and close the training. Provide contact information.
Appendix 6A

SUGGESTED ADDITIONAL REFERENCES AND RESOURCES


DRUG INFORMATION SOURCES

1. National Institute of Drug Abuse
   5600 Fishers Lane
   Rockville, Maryland 20857

2. National Clearinghouse for Drug Abuse Info (NCDAI)
   P.O. Box 416
   Kensington, Maryland 20795

3. Substance Abuse and Mental Health Services Administration
   (SAMSHA)
   Website - www.samsha.gov

4. International Association of Chiefs of Police (IACP) Drug Evaluation
   and Classification Program
   Website – www.decp.org
<table>
<thead>
<tr>
<th>Impairment Indicators</th>
<th>CNS Depressants</th>
<th>CNS Stimulants</th>
<th>Hallucinogens</th>
<th>Dissociative Anesthetics</th>
<th>Narcotic Analgesics</th>
<th>Inhalants</th>
<th>Cannabis</th>
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<tr>
<td><strong>GENERAL INDICATORS</strong></td>
<td>Uncoordinated</td>
<td>Restlessness</td>
<td>Dazed appearance</td>
<td>Perspiring</td>
<td>Droopy eyelids</td>
<td>Residue of substance</td>
<td>Red, bloodshot eyes</td>
</tr>
<tr>
<td></td>
<td>Disoriented</td>
<td>Body tremors</td>
<td>Body tremors</td>
<td>Warm to the touch</td>
<td>“On the nod”</td>
<td>around nose &amp; mouth</td>
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<tr>
<td></td>
<td>Sluggish</td>
<td>Synesthesia</td>
<td>Synesthesia</td>
<td>Blank stare</td>
<td></td>
<td>Odor of substance</td>
<td></td>
</tr>
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<td></td>
<td>Excited</td>
<td>Hallucinations</td>
<td>Hallucinations</td>
<td>Very early angle of HGN onset</td>
<td>Drowsiness</td>
<td>Possible nausea</td>
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<td></td>
<td>Euphoric</td>
<td>Panic</td>
<td>Panic</td>
<td>Difficulty in speech</td>
<td>Depressed reflexes</td>
<td>Slurred speech</td>
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<td>Talkative</td>
<td>Uncoordinated</td>
<td>Nausea</td>
<td>Incomplete verbal Responses</td>
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<td>Disorientation</td>
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<td></td>
<td>Exaggerated</td>
<td>Anxiety</td>
<td>Anxiety</td>
<td>Cyclic behavior</td>
<td></td>
<td>Confusion</td>
<td></td>
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<td></td>
<td>reflexes</td>
<td>Grinding teeth</td>
<td>Perspiring</td>
<td>Hallucinations</td>
<td></td>
<td>Marijuana debris in mouth</td>
<td></td>
</tr>
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<td></td>
<td>Drunk-like</td>
<td>(bruxism)</td>
<td>Poor perception of time &amp; distance</td>
<td>Possibly violent &amp; Combative</td>
<td></td>
<td>Lack of concentration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>behavior</td>
<td>Restlessness</td>
<td>Memory loss</td>
<td>Increased pain threshold</td>
<td></td>
<td>Lack of muscle control</td>
<td></td>
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<td></td>
<td>Drowsiness</td>
<td>Disorientation</td>
<td>Disorientation</td>
<td></td>
<td></td>
<td>Dry mouth</td>
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<tr>
<td></td>
<td>Droopy eyes</td>
<td>Flashbacks</td>
<td>Flashbacks</td>
<td></td>
<td></td>
<td>Flushed face</td>
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<td></td>
<td>Fumbling</td>
<td>NOTE: With LSD, pilorrhection may be observed (goose bumps, hair standing on end)</td>
<td>Hallucinations</td>
<td></td>
<td></td>
<td>Non-communicative</td>
<td></td>
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<td>Loss of appetite</td>
<td>Runny nose</td>
<td>NOTE: With LSD, pilorrhection may be observed (goose bumps, hair standing on end)</td>
<td></td>
<td></td>
<td>Intense headaches</td>
<td></td>
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<td>Insomnia</td>
<td>Loss of appetite</td>
<td>Hallucinations</td>
<td>Possibly violent &amp; Combative</td>
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<td><strong>NOTE:</strong> Anesthetic gases cause below normal blood pressure; volatile solvents and aerosols cause above normal blood pressure.</td>
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<td>Increased alertness</td>
<td>Redness to nasal area</td>
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<td></td>
<td></td>
<td>Increased appetite</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dry mouth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Altered perception of time &amp; distance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Irritability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Disorientation</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Possible paranoia</td>
<td></td>
</tr>
</tbody>
</table>

| DURATION OF EFFECTS | Barbiturates | Cocaine | Duration varies widely from one hallucinogen to another. | Heroin: | 6-8 hours for most volatile solvents | 3 to 4 hours (Smoked) |
|                    | 1-16 hours | Up to 2 hours | | 3-5 hours | | |
|                    | Tranquilizers | Meth | LSD 10 – 12 hours | Fentanyl: | 2-3 hours | Edibles: Up to 8 hours |
|                    | 4-8 hours | Up to 12 hours | Exhibits effects up to 4-6 hours | | | |
|                    | | | DXM Onset: 15-30 minutes | | Others: Vary | |

<table>
<thead>
<tr>
<th>USUAL METHODS OF ADMINISTRATION</th>
<th>Oral</th>
<th>Insufflation (snorting)</th>
<th>Oral</th>
<th>Smoked</th>
<th>Injected</th>
<th>Inhalation (Historically, have been taken orally)</th>
<th>Smoked</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Injected</td>
<td>Smoked</td>
<td>Injected</td>
<td>Smoked</td>
<td>Injected</td>
<td>Oral</td>
<td>Oral</td>
</tr>
<tr>
<td></td>
<td>Insufflation</td>
<td>Injected</td>
<td>Oral</td>
<td>Transdermal</td>
<td>Insufflation</td>
<td></td>
<td>Transdermal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OVERDOSE SIGNS</th>
<th>Shallow breathing</th>
<th>Agitation</th>
<th>Long intense “trip”</th>
<th>Long intense “trip”</th>
<th>Slow, shallow breathing</th>
<th>Possible psychosis</th>
<th>Fatigue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clammy skin</td>
<td>Increased body temperature</td>
<td>Hallucinations</td>
<td></td>
<td>Clammy skin</td>
<td></td>
<td>Paranoia</td>
</tr>
<tr>
<td></td>
<td>Pupils dilated</td>
<td>Rapid, weak pulse, coma</td>
<td></td>
<td></td>
<td>Coma</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Convulsions</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Risk of death</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 6C

**DURATION OF DETECTABILITY OF DRUGS IN URINE**

<table>
<thead>
<tr>
<th>DRUG</th>
<th>DETECTABLE TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamine/methamphetamine</td>
<td>12-72 hours</td>
</tr>
<tr>
<td><strong>Barbiturates</strong></td>
<td></td>
</tr>
<tr>
<td>Amobarbital (Tuinal)</td>
<td>2-4 days</td>
</tr>
<tr>
<td>Pentobarbital (Fiorinal)</td>
<td>2-4 days</td>
</tr>
<tr>
<td>Phenobarbital (Nembutal)</td>
<td>Up to 30 days</td>
</tr>
<tr>
<td>Secobarbital (Seconal)</td>
<td>2-4 days</td>
</tr>
<tr>
<td><strong>Benzodiazepines</strong></td>
<td></td>
</tr>
<tr>
<td>Alprazolam (Xanax)</td>
<td>Up to 30 days</td>
</tr>
<tr>
<td>Diazepam (Valium)</td>
<td>Up to 30 days</td>
</tr>
<tr>
<td>Chlordiazepoxide (Librium)</td>
<td>Up to 30 days</td>
</tr>
<tr>
<td><strong>Cocaine Metabolites</strong></td>
<td>12-72 hours</td>
</tr>
<tr>
<td><strong>Cannabis (Marijuana)</strong></td>
<td></td>
</tr>
<tr>
<td>Single use</td>
<td>3 days</td>
</tr>
<tr>
<td>Moderate smoker (4 times/week)</td>
<td>5 days</td>
</tr>
<tr>
<td>Heavy smoker (daily)</td>
<td>10 days</td>
</tr>
<tr>
<td>Chronic smoker (daily)</td>
<td>21-27 days</td>
</tr>
<tr>
<td><strong>Methadone</strong></td>
<td>1-4 days</td>
</tr>
</tbody>
</table>
Opiates (Narcotic Analgesics)

- Codeine 2-4 days
- Hydromorphone (Dilaudid) 2-4 days
- Morphine/Heroin 2-4 days

PCP

- Casual Use Up to 5 days
- Chronic use Up to 14 days

NOTE: Retention times may vary depending on variables including drug metabolism and half life, patient’s physical condition, fluid intake, and method and frequency of ingestion.

SOURCES: National Institute on Drug Abuse; PharmChem Laboratories. Reprinted from The Drug Identification Bible 2022 - 2023