

## RECOGNIZING PERSONS UNDER THE INFLUENCE

### “PEOPLE ON DRUGS”

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DRUG RECOGNITION EXPERT

## Objectives

- Define the term “drug”
- Define the term “impairment”
- Name the seven categories of drugs
- Identify common methods of drug administration
- Describe the symptoms, observable signs, and other effects for each drug category as it applies to EMS
- Explain the “polydrug” effect as it applies to EMS
- Drugs vs. Medical Conditions



## What is a drug?

- Any substance that, when taken into the human body, alters the effects of a body system
  - Thousands of variations
  - Widely different interpretations
  - Many non-traditional substances used illicitly which may or may not be considered a drug

## Impairment

When the effects of a drug, or a combination of drugs, visibly alters normal functioning of the body to perform a function or task.

## Law Enforcement Definition of Drug

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

## Workplace Definition of Drug

Any substance, which when taken into the human body can impair the ability of the of the person to perform their job both safely and efficiently

## EMS Definition of Drug

- You tell me

## Impairing Drug Categories

- Broken down into seven categories:
  - CNS Depressants
  - CNS Stimulants
  - Hallucinogens
  - Dissociative Anesthetics
  - Narcotic Analgesics
  - Inhalants
  - Marijuana

## CNS Depressants

- Barbiturates
- Non-Barbiturates
- Anti-Anxiety Tranquilizers
- Anti-Depressants
- Anti-Psychotic Tranquilizers

## CNS Depressants

- Sedate the function of the CNS
  - Tranquilizers
- Taken orally or injected
- Onset and duration are varied, depending on the drug
- Many are abused prescription medications

## Common Depressants

- **Barbiturates**
  - Seconal
  - Nembutal
  - Tuinal
  - Amytal
- **Anti-anxiety**
  - Valium
  - Librium
  - Xanax
  - Serax
- **Non-barbiturates**
  - Noctec or Felsule
  - Doriden
  - Noludar
  - Quaalude
  - Placidyl
  - Equanil or Miltown
  - Soma

## Alcohol is a CNS Depressant

- Most common used and abused
- We run into this at all different stages

## Alcohol

### *Effects of Intoxication*

- Smell
- Slurred Speech
- Uncoordinated
- Unsteady Gait
- Glassy gaze
- Droopy eyes
- Watery, reddened eyes
- Depressed internal clock
- Inability to concentrate
- Emotion amplification

## CNS Depressant Effects

- Reduced inhibitions
- Divided attention impairment
- Slowed reflexes
- Impaired judgment and concentration
- Impaired vision
- Lack of coordination
- Slurred mumbled or incoherent speech
- Emotional instability

## Central Nervous System Stimulants

- Cocaine
- Methamphetamine
  - Ice, crank
- Ephedrine
- Caffeine

## Central Nervous System Stimulants

- Enhance the body's "fight or flight" chemical response
- Speed metabolism, alertness
- Heightens sensory response
- Suppresses appetite
- Creates a euphoric effect
- Decreases pain response

## Effects of Cocaine

- Onset is almost immediate
- Effects can last hours
- Inability to concentrate
- Decreased perception of time, distance
- Restless, overtalkative

## Influence of CNS Stimulants

- Anxiety
- Body tremors
- Bruxism
- Dry mouth
- Euphoria
- Exaggerated reflexes
- Eyelid and Leg tremors
- Irritability
- Redness to nasal area
- Restlessness
- Running nose
- Talkative

## Hallucinogens

- Causes a distortion of reality
  - Illusions
  - Delusions
  - Synesthesia
- Many naturally occurring agents
  - Peyote
  - Psilocybin
- A chemical, LSD
- A chemical, MDMA



## Indicators of Hallucinogen Impairment

- Dazed appearance
- Body tremors
- Perspiring
- Paranoia
- Disoriented
- Nausea
- Difficulty with speech
- Piloerection
- Statements suggesting hallucinations

## Dissociative Anesthetics

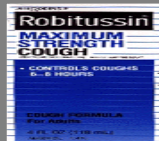
- Drugs that inhibit pain by cutting off or dissociating the brain's perception of pain
- Induce a state of sedation, immobility, amnesia and analgesia

## PCP

- Phencyclidine
- Patented in the 50's as an IV anesthetic and in treatment of psychological disorders
- Discontinued in 1967 due to undesirable side effects

## Dextromethorphan

- A drug used in OTC cough medicines that inhibits the cough reflex in the brain
- In high doses (the whole bottle) it produces effects similar to PCP



## Indicators of Dissociative Anesthetic Impairment

- Blank stare
- Loss of memory
- Perspiring heavily
- Warm to touch
- Incomplete, slurred verbal responses
- Cyclic behavior
- Agitated
- Rigid muscle tone
- Disoriented
- Non-responsive
- Chemical odor

## Narcotic Analgesics

- Refers to any natural or synthetic derivative of the opium poppy
- Painkillers (analgesics)
- Rx drugs widely used
  - Morphine, Codeine, Demerol, etc.
- Rx drugs widely abused
- Heroin the most common illicit narcotic

## Indicators of Narcotic Analgesic Impairment

- "Track marks"
- "On the nod"
- Slowed reflexes
- Low, slow, raspy speech
- Facial itching
- Dry mouth
- Euphoria
- Pupils visibly and obviously constricted
- Flaccid or normal muscle tone

## Inhalants

- Typically, powerful solvents that create a short duration dissociative effect
  - Buzz, head rush
- Anesthetic gasses (NO<sub>2</sub>)
  - “Whipits”
- Glues, spray paint

## Indicators of Inhalant Impairment

- Odor of the inhaled substance
- Dizziness, numbness
- Possible traces of the substance around the face and nose
- Bloodshot, watery eyes
- Distorted perception of time and distance
- Confused, disoriented appearance

## More Indicators of Inhalant Impairment

- Light headedness
- Flushed face, possible sweating
- Intense headaches
- Slow, thick, slurred speech
- Nausea
- Non communicative
- Floating sensation

## Cannabis

- Marijuana
- Hashish
- Hashish Oil



## Marijuana

- Active Ingredient: THC
  - Tetrahydrocannabinol
- How Administered:
  - Smoked
  - Can be ingested
- Onset
  - If smoked, immediate onset of effects which last 1-3 hours... If ingested, onset of effects within 1 hour and lasts up to 12 to 24 hours

## Marijuana Effects

- Body tremors
- Disoriented
- Debris in mouth (possible)
- Eyelid tremors
- Impaired perception of time and distance
- Increased appetite
- Marked reddening of conjunctiva
- Odor of marijuana
- Possible paranoia
- Relaxed inhibitions

## The Problem

- Estimates vary widely, however we do know that:
  - Marijuana is the most used illegal drug with about 14.6 million users
  - In 2004, 19.1 million Americans <sup>CDC</sup> aged 12 years or older were current illicit drug users <sup>CDC</sup>
  - A 2009, Center for Disease Control showed More than one-third (36.8 percent) had ever smoked marijuana, including 20.8 percent in the past month.
- Approximately 6 million people were users of psychotherapeutic drugs taken non-medically

## The Studies

- Over 90% of alcohol abusers and 74% of drug users are employed
- An average of 15 to 17% of employees in every US company are substance abusers
  - US Department of Labor statistics

## More Studies

- 2009 National Youth Risk Behavior Survey
  - One high school student in five has taken a prescription drug without a doctor's order
- Unintentional overdose deaths involving prescription opioids increased 114 percent from 2001 (3,994) to 2005 (8,541)Center for Disease Control

## Recognizing Impairment

- A multi-sensory perception task
  - The “look test”
  - Smells
  - Alertness levels, attentiveness
  - Changes in behavior
  - Changes in patterns
    - Absenteeism, tardiness
    - Chronic illnesses, issues

## Divided Attention

- The ability for a person to perform two or more tasks simultaneously
- The ability to follow a series of directions
- The ability to question direction prior to performance
- ***Almost all substance impairment has an effect on divided attention***

## How Cops do it....



## How Cops do it...

- For decades, officers had various informal tests in their battery:
  - Alphabet recital
  - Finger to nose
  - Walk and Turn
  - Finger Count
  - Time estimation (Romberg Test)
  - Eye Tests (Horizontal Gaze Nystagmus)
  - Their observations & experience

## Roadside Standardization

- NHTSA standardized the DWI Field Sobriety testing.
- Tasks were given scientific justification, and unified probability
- Three tasks, one physiologic and two divided attention, are standard nationwide

## Our Divided Attention Tasks

- The “walk and turn”
  - 9 heel-to-toe steps out and back in a straight line
  - A specifically prescribed turn
  - Arms not to be used for balancing

## Our Divided Attention Tasks

- The “one leg stand”
  - Keep a foot elevated for 30 seconds
  - 6” off the ground
  - Can’t put it down
  - Don’t use arms to balance

## The Physiologic

- Horizontal gaze nystagmus
  - The involuntary jerking of the eyes due to sedation
  - Check for smooth tracking
  - Angle of onset
  - Nystagmus at maximum deviation

## Divided Attention Tests

● Right ▲ Left  
Draw lines to spots touched

Balance Eyes Closed

Internal Clock:  
Estimated as 30 sec.

One Leg Stand

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

Type of Footwear

<p>Walk And Turn Test</p> <p>Describe Turn</p>	<p>Cannot keep balance _____</p> <p>Starts too soon _____</p> <p>Stops Walking _____</p> <p>Misses Heel-Toe _____</p> <p>Steps Off Line _____</p> <p>Raises Arms _____</p> <p>Actual Steps Taken _____</p> <p>Cannot Do Test (explain)</p>																				
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## HGN

[www.youtube.com/watch?v=9fQ2Zaiay2U&feature=related](http://www.youtube.com/watch?v=9fQ2Zaiay2U&feature=related)

## Walk and Turn

## One Leg Stand



## The eyes never lie...

- Eye and pupillary response is involuntary, and a great indicator
  - HGN for alcohol, Dissociative Anesthetics, and many inhalants
  - Marked Dilation for stimulants, cannabis, and hallucinogens
  - Pinpoint constriction for narcotics

## Other Tests We Use

- Romberg Test
- Finger to Nose
- Pulse Rate
- Blood Pressure
- Body Temperature
- Muscle Tone

## Putting It All Together

	Depressant	Stimulant	Hallucinogen	Dissociative Anesthetic	Narcotic Analgesic	Inhalant	Cannabis
Horizontal Nystagmus	Present	None	None	Present	None	Present	None
Vertical Nystagmus	Present	None	None	Present	None	Present	None
Lack of Convergence	Present	None	None	Present	None	Present	Present
Pupil Size	Normal	Dilated	Dilated	Normal	Constricted	Normal	Dilated
Pupil Reaction	Slow	Slow	Normal	Normal	Little or None	Slow	Normal
Pulse Rate	Down	Up	Up	Up	Down	Up	Up
Blood Pressure	Down	Up	Up	Up	Down	Up/Down	Up
Body Temp.	Normal	Up	Up	Up	Down	Any	Normal

## Driving While Intoxicated

- Driving a car is the most common divided attention task
- .08% BAC is the recognized level of impairment for driving
- There is no lab results with drugs that show impairment

## Observations

### SUSPECT'S BREATH

Odor of alcohol  
 Chemical odor  
 Cannabis odor

### OBSERVATION OF FACE

Normal  Flushed  
 Other (describe)  Pale

### GENERAL APPEARANCE

Clean  Orderly  
 Disarranged  Bloody  
 Vomit  Urine

### EYES

Normal  Watery  
 Bloodshot  Pink/Red

### SPEECH

Talkative  Thick, slurred  
 Incoherent  Rapid  
 Slow  Repetitive  
 Non-communicative

### ATTITUDE

Anxious  
 Restless  
 Agitated  
 Excited  
 Combative  
 Disinterested  
 Uninhibited  
 Disoriented  
 Drowsy  
 Confused  
 Hallucinating  
 Loss of memory  
 Cyclic mood swings  
 Polite  
 Antagonistic  
 Stuporous  
 Cooperative/indifferent  
 Laughing  
 Insulting  
 Argumentative  
 Fumbling

### PHYSICAL ACTIONS

Facial itching  
 Dry mouth  
 Nodding  
 Droopy eyelids  
 Low, raspy voice  
 Body tremors  
 Muscle tone - rigid  
 Muscle tone - flaccid  
 Muscle tone - normal  
 Grinding of teeth

### OTHER

Nasal redness  
 Runny nose  
 Track marks  
 Perspiring  
 Warm to touch  
 Intense headaches  
 Residue of paint on person  
 Debris  
 Pills  
 Vials  
 Syringes  
 Drug paraphernalia

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## EMS CASE REVIEW WHAT MIGHT TRICK US

- Hypoglycemia
- Hypoxia
- Stroke
- Traumatic Head Injuries
- Hypo/Hyperthermia
- Seizure Disorders

## Discussion and Questions

## My Contact Information

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