STREET DRUGS

Master Trooper Mark D. Wright
DRE
Idaho State Police
Objectives

- Define Drug and DRE
- Identify common street drugs
- Signs and Symptoms to Look For
- Resources
Drug Recognition Expert

- Program started in 1979 by LAPD Officers
- Certification issued through International Association of Chiefs of Police (IACP)
- 105 DREs in Idaho
- 6693 DREs Nationwide
- 2 Hong Kong / 1 Germany / 6 UK
Drug – DRE Definition

- Any Substance That When Taken into The Human Body Impairs The Ability of a Person to Operate a Motor Vehicle
DRE – 7 Drug Categories

- CNS Depressants
- CNS Stimulants
- Hallucinogens
- Dissociative Anesthetics
- Narcotic Analgesics
- Inhalants
- Cannabis
STIMULANTS
Biochemistry of Stimulants

- Cause “boost” in central nervous system’s effects on the body.
- Cause:
  - Dilation of pupils
  - Accelerated heart rate
  - Accelerated respiration
  - Elevated blood pressure
Pharmaceutical Use-Stimulants

- Weight loss
  - Dexatrim
- ADD
  - Ritalin
- Decongestant
  - Pseudophedrine
  - Phenylpropanolamine
  - Vick’s Inhaler
Stimulant Drugs

- Cocaine
  - HCL
  - Base
- Amphetamine
- Caffeine
- Nicotine
Cocaine

What is it?
- White powder
- Extracted from leaves cocoa plant
- Cocoa plant found primarily in South America
How is Cocaine Consumed?

- Cocaine (HCL) “Coke”, “Blow”…
  - Lasts 60 to 90 min.
  - Sniffing – Often through a straw or tube
  - Intravenous injection

- Freebase or Base “Crack”, “Rock”…
  - Lasts 4 to 10 min.
  - Smoking or Inhalation
  - Ignited in pipe, vapors are inhaled
  - Most common form of consumption
Amphetamine

What is it?

- Stimulant - increases activity of central nervous system.
- Methamphetamine is the most commonly abused amphetamine
Street Names of Amphetamines

Crank, Meth, Ice, Crystal, Glass, Speed, Snot

Whites, Dexies, Cartwheels, Crosstosps, Yellow Rock
How are Amphetamines Consumed

Lasts 6 to 8 hours:
- Orally
- Snorted/Sniffed
- Injected

Lasts 12 to 24 hours:
- Smoked
Stimulant User ID

- Adolescents
- Shift workers
- Powder in nasal area
- Burns on lips & fingers
- Impaired divided attention
- Excitement
Signs of Stimulant Use

- Aggression & mood swings
- Reduced fatigue
- Increased sense of strength
- Excited behavior/fast speech
- Dilated pupils
- Insomnia & loss of appetite
- Elevated heart rate
- Elevated blood pressure
- Increased body temperature
Signs of Stimulant Overdose

- Euphoria replaced by panic
- Initial confusion
- Sudden aggressiveness
- Dramatic increase in heart rate
- Convulsions
- Death
Signs of Stimulant Withdrawal

- Craving
- Depression
- Irritability
- Lethargic/Increased sleep
- Memory loss
- Confusion
- Increased appetite
HALLUCINOGENS
Biochemistry of Hallucinogens

- Magnify user’s experiences
- User goes into “dream state.”
- Cause:
  - Sensory hallucinations
  - Increased pulse
  - Dilated pupils
  - Sweating
The “Trip”

- Defined as short-term effects of hallucinogens
- There is no such thing as “bad acid”, only bad attitudes which lead to “bad trips”
Pros and Cons of Hallucinogens

**Pleasure (Good Trip)**
- Spiritual Insight
- Magnify Sensations
- Peer Acceptance
- Inspire Creativity
- Peer Acceptance

**Displeasure (Bad Trip)**
- Overdose
- Behavioral Disinhibition
- Increased Risk Of Accidents
- Dain Bramage
- Toxic Effects
Synesthesia

- Occurs when blending of the senses occurs
- Allows user to hear colors and see music
Types of Hallucinogens

Natural
- Seeds
- Peyote
- Mushrooms
- Toad

Synthetic
- LSD (Lysergic Acid Diethylamide)
- MDA/MDMA
Types of Hallucinogens

Lysergic Acid Diethylamide

- LSD is colorless, odorless, and tasteless.
- Consumed by dissolving paper in mouth and liquid absorption through skin.
- LSD, Acid, Blotter
- 8 to 12 Hours
Types of Hallucinogens cont’d

**MDA/MDMA**
- Usually white, bluish, or brown tablets
- Consumed orally or placed in sweet drinks
- MDM, ADAM, XTC, Rave, Ecstasy
- 4 to 6 hours
GHB

Gamma Butyrolactone (GBL) and Sodium Hydroxide or Potassium Hydroxide (degreasing solvent or floor stripper mixed with drain cleaner)

When GBL is ingested, GHB is produced in the body.
In what forms is it available?

- Odorless liquid
- Usually clear
- Sold in small bottles

- Slightly salty to the taste
- Can be powder or capsule
What does it do?

- Euphoric effect similar to alcohol
- Creates low inhibitions
- Causes memory loss
- Acts as aphrodisiac
- Relaxes muscles
How and where is it used?

- Dosed in capfuls or “sips”
- Added to liquid/drink
- Internet
  - “Date Rape” drug
  - Raves and Clubs
Overdoses of GHB

- Always cause loss of consciousness
- Temporary coma
- Slow down breathing
- Can cause respiratory failure
Hallucinogen User ID

- High School Students
- College Students
- Detachment from reality
- Poor perception of time and distance
- Hallucinations
- Incoherent speech
Signs of Hallucinogen Use

- Hyperactivity
- Impaired divided attention
- Elevated temperature, blood pressure
- Dry mouth
- Heavy perspiration
- Lowered inhibitions
- Extreme mood swings
- Violence
- Nausea
Pupillary Comparison

- Compare in:
  - A. Room light
  - B. Near total darkness
  - C. Indirect light
  - D. Direct light
What are “designer drugs”?

“a drug produced by a minor modification in the chemical structure of an existing drug, resulting in a new substance with similar pharmacologic effects, especially one created to achieve the same effect as a controlled or illegal drug” (dictionary.com)
Synthetic Cathinones
“Bath Salts”

- Stimulant
- Similar to Methamphetamines
- Chemicals are synthetic derivatives of stimulant found naturally in the Khat plant.

- Synthetic substances include:
  - Mephedrone (48%)
  - MDPV [(3-4methylene-dioxypyrovalerone)40%]

- Majority of reports were from the Southern Region
American Poison Control Centers

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Calls to poison centers about exposures to synthetic cathinones
Synthetic Cathinones

- **Packaged:**
  - White, off-white, or slightly yellow powder
  - Tablets or capsules
  - Sold in small plastic or foil packages of 200 and 500mg under various name brands
  - Labeled “Not intended for human consumption”

- **Place of origin:**
  - Manufactured in China and India
  - Packaged for wholesale distribution in Eastern Europe

- **Sold in:**
  - Head shops
  - Gas stations or convenience shops
  - Tobacco shops
  - Over the internet
Synthetic Cathinones - Street Names

- Bath salts
- Blue silk
- Bliss
- Cloud nine
- Drone
- Energy-1
- Ivory wave
- Lunar wave
- Meow meow
- White rush

- Ocean burst
- Pure ivory
- Purple wave
- Red dove
- Snow leopard
- Stardust
- Vanilla sky
- White dove
- White knight
- White lightening
Synthetic cathinones
Availability

Bath Salts -- $10 to $15 per pound
Synthetic cathinones

Availability

“Bath Salts”

3.5 grams = $100
Synthetic Cathinones

- **Route**
  - Sniffing or snorting (typical)
  - Orally
  - Smoked
  - Diluted and injected

- **Action** - similar to dopamine, norepinephrine and epinephrine
Synthetic Cathinones - Signs and Symptoms

- Agitation
- Insomnia
- Irritability
- Dizziness
- Depression
- Paranoia
- Delusions/hallucinations
- Suicidal thoughts
- Seizures
- Panic attacks

- Impaired perception of reality
- Impaired motor control
- Tachycardia
- AMI
- Stroke
- Chest pain
- Nosebleeds
- Sweating
- Nausea
- Vomiting
- Hyperthermia
SYNTHETIC CANNABINOIDS “SPICE”
Mind altering: it could awaken dormant parts of the human mind and encourage expanded sensory perceptions. In some humans heavy doses led to powerful abilities that include prescience;

Health benefits: taken regularly it increased life expectancy and fortified over all health levels (in many cases life expectancy was tripled);

Addictiveness: the spice had narcotic properties, thus increasing demand and creating a large and hungry market for it. An individual's addiction to the spice would worsen the more they consumed it.

Physical effects: sustained use of the spice led to human eyes being discolored so that the entire eye would be stained blue. Extensive exposure to the spice created a huge physical dependency that could radically alter the entire body.
Synthetic cannabinoid timeline

- Mid-1980’s research groups researching cannabis alternatives
- 1990’s cannabinoid receptors isolated and cloned
  - CB1
  - CB2
Synthetic cannabinoid timeline

- Scientific research with CB1 and CB2 agonists
  - Increase food intake
  - Control nausea/vomitting
  - Increase fat storage
  - Insulin modulation
  - Stimulate the GI tract
Research: CB1 and CB2 antagonists

- Decrease food intake
- Rimonabant
  - Showed great promise for treatment of obesity, smoking cessation
  - Major drawback:
    - High rate of suicide
  - 2008 drug was suspended from use
    - Pfizer, Merck have stopped drug trials and research
Synthetic cannabinoids timeline

- Reported on the internet as early as 2004
- Europe was target group
  - Widespread in Europe by 2008
- 2008 – introduced to the US
- Widespread by 2009

- Researchers are very clear—
  - **NEVER INTENDED FOR HUMAN CONSUMPTION**
Figure 3. National counts of exposure calls to poison control centers, by month: Synthetic cannabinoids, January 2010 through June 2011
American Poison Control Centers

Calls to poison centers about exposures to synthetic MJ

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Synthetic cannabinoids
Manufacturing Process

- Powder form is obtained
  - China, Canada, ??
- Dissolved in acetone
- Applied to plant material
- Dried
- Packaged
Synthetic marijuana

- Spice
- Spice Gold
- Spice Silver
- K2 Summit
- K2 Blonde
- K2 Pink
- K2 Gold
- Yucatan Fire
- Chunky Monkey
- Blaze
- Blue Lotus
- Dwarf Skullcap
- Space
- Genie
- Fire and Ice
- Black Mamba
Synthetic marijuana
Route of administration

 Smoked
  • Onset of effects
    ○ ~Within minutes of first inhalation
    ○ Duration ~3-4 hours
  • Plant material
  • Powder form

 Oral ingestion
Synthetic Cannabinoids- Signs and Symptoms

- Paranoia - 4-10x greater than other hallucinogens
- Panic attacks
- Giddiness
- Tachycardia
- Hypertension
- Euphoria
- Hallucinations
- Seizures
OPIATES
Biochemistry of Opiates

- Narcotic Analgesics used to relieve pain
- Cause:
  - Slow movements
  - Slow pulse
  - Slow respiration
  - Low blood pressure
  - Low body temperature
  - Droopy eyelids
Opioid (Narcotic Analgesic)

What is it?
An opioid is a drug that:
1. will relieve pain
2. will produce withdrawal signs when stopped after chronic use
3. will stop withdrawal signs when used
Types of Opioids

- Natural
  - Powdered Opium
  - Morphine
  - Codeine
- Synthetic
  - Demerol
- Derivatives
  - Heroin, Tar, Smack
Sources of Opiates

Natural
- Poppy Plant

Synthetic
- Dilaudid, Percodan, Demerol...

Neurotransmitter
- Endorphin
Consumption of Opiates

- Orally
- Snorted/Sniffed
- Injected
  - Intravenous
  - Intramuscular
  - Subcutaneous
- Smoked
Signs of Opiate Use

- Injection marks
- Respirations slow/shallow
- Droopy eyelids
- Licking lips/“cotton” mouth
- Muscle relaxation
- Slow speech & movements
- Skin cold/clammy
- Scratching face
- “On the Nod”
MARIJUANA
Biochemistry of Marijuana

- **Cause:**
  - Elevated pulse
  - Elevated blood pressure
  - Impaired divided attention
  - Muscle relaxation
  - Pain relief
Marijuana

What is it?

- Any drug derived from cannabis plant:
  - Marijuana
  - Hashish (Concentrated Cannabis)
  - Marinol (Synthetic Cannabis)
Marijuana

- **Delta-9 Tetrahydrocannabinol or THC**
- **Consumed:**
  - Smoked
    - 4 to 6 secs
  - Ingested orally
    - 20 to 40 mins
Sinsemilla

- Result of special growing technique
- Highest THC content
- 90% grown in CA
Hashish

- Concentrated version of marijuana
- Obtained by boiling leaves of female plant
- Dries to semisolid mass
- THC concentration is relatively high
Hashish Oil

- Liquid
- Extracted from marijuana by percolation
- Black in color
- Thick in consistency
- Light sensitive (sold in amber vials)
Signs of Marijuana Use

- Stimulation
- Decreased attention span
- Mood elevation
- Euphoria & Giddiness
- Sedation & Sleepy appearance
- Slow, slurred speech
- Slow Gait
- Poor depth perception
- Muscle relaxation
- Glassy Eye

- Anesthesia/Pain relief
- Increased hearing
- Memory loss
- Hallucinations (high dose)
- Paranoid delusions
- Craving for sweets
- Poor concentration
- Poor muscle coordination
- Poor balance
- Red conjunctiva
- Time distortion
Paraphernalia
Paraphernalia Continued
DEPRESSANTS
Biochemistry of Depressants

- Possible shallow respiration
- Lack of muscle rigidity
- Decreased blood pressure
- Drowsy appearance
Signs of Depressant Use

- Euphoria
- Suicidal Tendencies
- Confusion
- Anxiety
- Restlessness
- Looks like alcohol use
- No smell of alcoholic beverage
Medical Uses of Depressants

- Sedation
- Insomnia
- Convulsive disorders
- Epilepsy
Classes of Depressants

- **Barbiturates**
  - Sodium Pentothol
  - Nembutal
- **Non-barbiturates**
  - Quaalude
  - Robaxin
- **Antidepressants**
  - Prozac
  - Sinequan
- **Antianxiety Tranquilizers**
  - Xanaz
  - Valium
- **Antipsychotic Tranquilizers**
  - Haldol
  - Prolixin
Rohypnol (Flunitrazepam)

- Benzodiazepine
INHALANTS
Biochemistry of Inhalants

- Flushed appearance
- Possible sweating
- Elevated blood pressure
- Muscle relaxation
- Nausea
- Bloodshot eyes
Classes of Inhalants

- Volatile Solvents
  - Plastic cement
  - Paint
  - Gasoline

- Aerosols
  - Hair spray

- Anesthetics
  - Ether
  - Chloroform
  - Nitrous Oxide
Signs of Inhalant Use

- Symptoms similar to alcohol
- Bizarre thoughts
- Possible Hallucinations
- Evidence of sniffing
- Slurred speech
- Distorted time/space perception

- Dizziness
- Numbness
- Confusion
- Incomplete verbal responses
- Euphoria
- Floating sensations
- Lack of Coordination
DISSOCIATIVE ANESTHETICS
Ketamine

- Ketamine is similar molecularly to phencyclidine (PCP) and thus creates similar effects including numbness, loss of coordination, sense of invulnerability, muscle rigidity, aggressive/violent behavior, slurred or blocked speech, exaggerated sense of strength, and a blank stare.
Since ketamine is an anesthetic, it stops the user from feeling pain, which could lead the user to inadvertently cause injury to himself/herself.

Ketamine may relieve tension and anxiety, is purported to be a sexual stimulant, and intensifies colors and sounds.
The effects of a ketamine 'high' usually last an hour but they can last for 4-6 hours, and 24-48 hours are generally required before the user will feel completely "normal" again.

Effects of chronic use of ketamine may take from several months to two years to wear off completely.
 Low doses (25-100mg) produce psychedelic effects quickly.
 Large doses can produce vomiting and convulsions and may lead to oxygen starvation to the brain and muscles; one gram can cause death.
 Flashbacks may even occur one year after use.
 Long-term effects include tolerance and possible physical and/or psychological dependence.
Biochemistry of PCP

- Impaired divided attention
- Muscle rigidity
- Elevated blood pressure
- Elevated body temperature
- Sweating
- Lack of pain
Signs of PCP Use

- Disorientation
- Robot like movements
- Muscle rigidity
- High stepping walk
- Loss of memory
- Extreme agitation or excitement
- Passive, turning violent suddenly

- Often remove clothing
- Attracted to water
- Great strength
- Lack of pain
- Non-communicative
- Sensory distortion or hallucination
- De-personalization
- Heavy sweating
Forms of PCP

**Liquid (Base)**
- Amber colored
- Strong ether/chemical odor
- Dark cigarettes are dipped into liquid and smoked

**Solid (HCL)**
- Colors vary to white
- No odor
- Placed into cigarettes and smoked
- Crushed and snorted
- Dissolved in liquid and injected
PCP
Triple C

- Corcidin Cough, Cold, and Congestion
- Legally obtained OTC medication
- Contains Dextromethorphan (DXM)
- Usual dose 1 to 2 tablets
- Abusers take 8 to 20 at once
- Street name – Skittles, Triple C
Resources

- Drugs.com
- Getsmartaboutdrugs.com
- Drugabuse.gov
- Methproject.org
- Erowid.org

Questions?