INDICATORS OF SUBSTANCE ABUSE

J.I. CORE

Course Objectives

- Learn drug categories, general signs and symptoms associated with being under the influence of commonly abused drugs, and various methods of use
- Identify drugs commonly abused by juveniles by both generic and street names
- List appropriate steps for handling a possible overdose in a correctional setting

San Diego County Probation
Introductions

- Name
- Agency + prior experience
- Something you enjoy doing
- What do you want to learn today?

PS: You WILL learn everything you need to know to pass your test 😊

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Family Guy – Peter on Drugs

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Link to external video
Drugs in San Diego

Link to external video
San Diego County Probation

Drug Culture ~ Narco Saints

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FBI, 03/08/18 – LE seized $6 mill in cash, 209 lb of meth, 138 lb of heroin, 22 lb of fentanyl, 202 lb of cocaine and 554 pounds of marijuana worth millions of dollars on the streets + 20 firearms
SANDAG study

- ↓ Juvenile drug use at all time LOW
- ↑ Meth use UP
- ↓ MJ use down
- Drugs are EASY to obtain & risk factors remain

San Diego County Probation

Figure 1
Almost all juveniles interviewed reported previous substance use

- Last 30 Days: 79%
- Last Year: 85%
- Ever: 92%

TOTAL = 106

NOTE: Cases with missing information not included.
SOURCE: SANDAG SAM Program, 2016

Figure 2
Marijuana and alcohol among substances most often tried by youth

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neon</td>
<td>5%</td>
</tr>
<tr>
<td>Crack</td>
<td>12%</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>16%</td>
</tr>
<tr>
<td>Powder Cocaine</td>
<td>25%</td>
</tr>
<tr>
<td>Meth</td>
<td>12%</td>
</tr>
<tr>
<td>Binge Alcohol</td>
<td>44%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>38%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>38%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>10%</td>
</tr>
</tbody>
</table>

TOTAL = 106

NOTE: Cases with missing information not included.
SOURCE: SANDAG SAM Program, 2016
Figure 9
Around nine in ten youth report marijuana, tobacco, and alcohol are “VERY EASY” or “EASY” to obtain

<table>
<thead>
<tr>
<th>Substance</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heroin</td>
<td>50%</td>
</tr>
<tr>
<td>Meth</td>
<td>60%</td>
</tr>
<tr>
<td>Crack</td>
<td>63%</td>
</tr>
<tr>
<td>Ecstasy</td>
<td>64%</td>
</tr>
<tr>
<td>Powder Cocaine</td>
<td>80%</td>
</tr>
<tr>
<td>Alcohol</td>
<td>89%</td>
</tr>
<tr>
<td>Tobacco</td>
<td>90%</td>
</tr>
<tr>
<td>Marijuana</td>
<td>96%</td>
</tr>
</tbody>
</table>

NOTE: Cases with missing information not included.

SOURCE: SANDAG SAM Program, 2016

Many youth interviewed have common risk factors to be addressed

<table>
<thead>
<tr>
<th>Home</th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>50% parental criminal history</td>
<td>18% have thought about suicide</td>
</tr>
<tr>
<td>47% parental substance use</td>
<td>79% history of truancy</td>
</tr>
<tr>
<td>45% run away from home</td>
<td>Other Risk</td>
</tr>
<tr>
<td>31% family previous CWS contact</td>
<td>8% ever approached for human trafficking</td>
</tr>
<tr>
<td>30% live with no parent</td>
<td>8% ever overdosed</td>
</tr>
</tbody>
</table>

San Diego County Probation
The 7 Drug Categories

- Depressants
- Inhalants
- Dissociative Anesthetics
- Cannabis
- Stimulants
- Hallucinogens
- Narcotic Analgesics

Drug Scheduling Guide

United States

- **Schedule I**
  - Most potential for abuse and dependence
  - No medicinal qualities
  - Heroin, LSD, Marijuana Ecstasy, Peyote

- **Schedule II**
  - High potential for abuse and dependence
  - Some medicinal qualities
  - Vicodin, Cocaine, Meth, OxyContin, Adderall

- **Schedule III**
  - Moderate potential for abuse/dependence
  - Acceptable medicinal qualities
  - Doctor’s prescription required
  - Tylenol with Codeine, Ketamine, Steroids, Testosterone

- **Schedule IV**
  - Low potential for abuse and dependence
  - Acceptable medicinal qualities
  - Prescription required - fewer refill regulations
  - Xanax, Darvon, Valium, Allvan, Ambien, Tramadol

- **Schedule V**
  - Lowest potential for abuse/dependence
  - Acceptable medicinal qualities
  - Prescription required - lowest refill regulations
  - Robaxin AC, Lamolit, Motofen, Lyrica

Source: United States Drug Enforcement Agency

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GROUP EXERCISE

- Each group is assigned a drug category
- Each group will research & report
  - Drugs included in category
  - Street names/slang
  - Drug packaging
  - Method(s) of use
  - Signs and symptoms of use
    - TARGET – identify areas of body that are affected
    - Effects on eyes, nervous system, perception, etc.
  - Current trends, cautions & other items of interest

** If you find a VIDEO you would like to show to the class, screen with instructors before your group presents**

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SPECIFIC TYPES

- Alcohol
- Barbiturates/Tranquilizers
- Benzodiazepines
- GHB (Gamma Hydroxy Butyrate), GBL and other analogs

San Diego County Probation

Alcohol

- Alcohol is the most popular drug of choice among youth. Why?
- Most widely used drug. Why?

Link to external video

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Amobarbital (Amytal), Pentobarbital (Nembutal), and Secobarbital (Seconal).

Barbiturates are still used, but have now been replaced by benzodiazepines in routine medical practice because of their potency.
**Benzodiazepines**

- Used to treat anxiety, insomnia, agitation, seizures, muscle spasms, alcohol withdrawal and as a premedication for medical procedures.

- **COMMON Benzos:** Valium, Xanax, Klonopin and Ambian.

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**GHB/GBL & ANALOGS**

*GAMMA HYDROXY BUTYRATE*

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GHB/GBL and analogs

- Effects last 1.5 to 3 hours. For urine testing, the sample must be taken within 8–12 hours.
- GHB is popular in the party scene.
- Became a “date rape drug” because it’s very easy to add to drinks. GHB has a salty taste.
- The “Samantha Reid Date-Rape Drug Prohibition Act of 2000.” Made GHB a schedule 1 controlled substance.
- GBL/Gamma-Butyrolactone is a solvent that can be converted in to GHB. GBL is not a Scheduled 1 drug.
- 1,4 Butanediol is another solvent.

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GENERAL INDICATORS OF DEPRESSANTS:

- Drowsiness
- Droopy Eyelids
- Slurred Speech
- Uncoordinated Movement
- Slow Reactions
- Looks drunk w/o odor of alcohol
- Pupil size normal
- Nystagmus (oscillation of the eye)

Tiger Woods had Vicodin, Dilaudid, Xanax, Ambien and THC in his system during DUI arrest: Report

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INHALANTS

San Diego County Probation

INHALANTS - SPECIFIC TYPES

Volatile Solvents
   Paint thinner, paints, gasoline, etc…

Aerosols
   Dust Off, Hairspray, Deodorants, etc…

Anesthetic gases
   Nitrites, Nitrous Oxide (NO2), etc…

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Nitrous Oxide

- Large canisters stolen from dentist or medical supply house
- Medium canisters from performance vehicle shops
- Little canisters from kitchen stores for whipped cream makers

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DISASSOCIATIVE ANESTHETICS

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SPECIFIC TYPES

PCP
Ketamine
Dextromethorphan (DXM)

Dissociative Anesthetics

- PCP (phencyclidine) and ketamine, were initially developed as general anesthetics for surgery
- Distort perceptions of sight and sound and produce feelings of detachment - dissociation - from the environment and self.
- Work by altering distribution of the neurotransmitter glutamate throughout the brain.
- These perceptions are NOT hallucinations. These drugs are "dissociative anesthetics."
PCP/Phencyclidine

- Developed in the 1950s as a surgical anesthetic.
- Patients experience a feeling of being “out of body” and detached.
- Use in humans was discontinued in 1965, due to delusional and irrational effects.
- Tablets, capsules, and colored powders.
- Most commonly sold as a powder or liquid.
- PCP is transdermal!
Ketamine
Cat Tranquilizer, Cat Valium, Jet, Jet K, Kit Kat, Purple, Special K, Special La Coke, Super Acid, Super K, Vitamin K

- Developed in 1963 to replace PCP.
- Used in human anesthesia and veterinary medicine.
- Often diverted from veterinarians’ offices. Ketamine’s chemical structure and mechanism of action are similar to those of PCP.
- Ketamine is odorless and tasteless, so it can be added to beverages without being detected.
Dextromethorphan (DXM)

- Triple C, Red Devils, Orange Crush, Crazy 8’s, Skittles
- Sold over the counter in “Cold & Cough” medicines.
- Some OTC meds have other active ingredients like Acetaminophen.
- Known to produce PCP effects in as little as 30 doses

General Indicators - Dissociative Anesthetics

- Blank stare
- Warm to the touch
- Rigid muscle tone
- Slurred, repetitive speech
- Non to slow responses
- Confused
- Nystagmus (VGN at higher doses)
- Ketamine = more mild effect
- Nausea/vomiting (with DXM)

Link to external video
CANNABIS

FORMS of CANNABIS

- Marijuana
- Hashish
- Hashish Oil
- Marinol
MARIJUANA USE AMONG FULL-TIME COLLEGE STUDENTS AND NON-COLLEGE PEERS REMAINS A CONCERN

2016 Monitoring the Future College Students and Young Adults Survey Results

<table>
<thead>
<tr>
<th>Year</th>
<th>1996</th>
<th>2006</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 12-17 use 10% or more</td>
<td>6.8%</td>
<td>5.3%</td>
<td>7.4%</td>
</tr>
<tr>
<td>Age 12-17 use daily</td>
<td>5.8%</td>
<td>4.3%</td>
<td>6.9%</td>
</tr>
<tr>
<td>Non-college</td>
<td>5.3%</td>
<td>6.7%</td>
<td>12.3%</td>
</tr>
</tbody>
</table>

Daily marijuana use is at the highest level since the early 1990s for this age group.

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Marijuana-Chronic

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Mexican Weed

Marijuana Grow
Outdoor grows

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Outdoor grows

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Edibles

What is Dabbing?
BHO
Dabbing, dabs, Shutter, wax, ear wax, butter, 710, ...

- Butane Hash Oil
- Butane Honey Oil
- THC Extraction
Why did Honey Oil get so popular?
The problem with BHO Extraction

San Diego County Probation

3 injured in San Diego explosion after suspects light cigarette near hash oil

Three people were seriously injured Wednesday after a container of hash oil exploded in a San Diego home, and two suspects were killed during the operation, authorities said.

By Stephanie C. Mayhew

Thursday, January 14, 2016 02:40 AM

Three people were seriously injured Wednesday after a container of hash oil exploded in a San Diego home, and two suspects were killed during the operation, authorities said.

Although most explosions are usually associated with making methamphetamine, they can happen any time a Evelyn is disregarded and, such as its the production of hash oil, a form of marijuana that is super-concentrated in liquid form, with roughly one to ten grams containing the amount of THC as a home laboratory.

Following Wednesday’s blast, police said they found a container of hash oil and a container of methamphetamine, which had apparently been ignited by a smoke. The explosion was contained in the home of the marijuana plant and caused minor injuries to four people, including a child, in the area.

The two suspects were both arrested and were charged with possession and distribution of marijuana, among other crimes. The suspect who was killed in the explosion was identified as 28-year-old Michael J. Sanchez, who lived in the home. His vehicle was one of the last to be seen in the area.

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GENERAL INDICATORS - CANNABIS

- Odor of marijuana
- Marked reddening in the white of the eye
- Body tremors
- Disorientation
- Relaxed inhibitions
- Pupils may be normal to dilated

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Synthetic Cannabinoids
Spice

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K2 and Spice

- **Synthetic cannabis** is a psychoactive herbal and chemical product that, when consumed, mimics the effects of cannabis. It is best known by the brand names **K2** and **Spice**.

- On November 24, 2010, the DEA announced that it would make JWH-018, JWH-073, JWH-200, CP-47,497, and cannabicyclohexanol, which are often found in synthetic cannabis, illegal using emergency powers.

- Currently illegal to sell synthetic cannabis in California.

- Psychological effects are similar to those of marijuana and include paranoia, panic attacks, and giddiness.

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Rolling Exercise

- Using rolling papers and “green leafy substance” at your table, everyone will do their best to roll a “joint”

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STIMULANTS

SPECIFIC TYPES
- Cocaine
  - Powder/Rock/ Crack
- Methamphetamine
  - Powder/Ice / Glass
- Prescription Stimulants
- Bath salts
What about Nicotine?

- Stimulates adrenal glands ~ adrenaline
- Pancreas secretes less insulin
- Release of dopamine (pleasure/motivation)
- Can act as sedative
- Heart rate, heart O2 consumption rate UP
- Alertness, euphoria, relaxation

HIGHLY ADDICTIVE
Cocaine

- Cocaine is a powerfully addictive drug of abuse.
- Powder form is Cocaine Hydrochloride (hcl)
- “Rock” or “Crack” are the street names given to cocaine that has been processed and heated. After it cools it forms a water insoluble substance that can only be smoked.
- Effects are felt within seconds.
- Smoking cocaine base gives a more intense “rush” to the user.
Methamphetamine

- Highly addictive drug with potent central nervous system (CNS) stimulant properties

- Most often injected or smoked, but can be swallowed or snorted

- Chronic meth abusers exhibit violent behavior, anxiety, confusion, insomnia, and psychotic features, including paranoia, aggression, visual and auditory hallucinations, mood disturbances, and delusions
Substance Identification

- Powder – White, Off-White, Brown, Tan, Pink Color
- Chunky Powder – White, Off-White, Brown, Tan, Pink Color

ICE

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ICE

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Paraphernalia

- Smoking: Glass pipe w/ bowl
- Inhaling: razor blades, mirrors and straws
- Injecting: syringes, spoons, surgical tubing, bandanas, and/or a belt used to constrict the vein.

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**Physical Signs - Stimulants**

*Burnt and/or Blistered fingers*

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**Physical Signs - Stimulants**

*Temporary blackened gums (not teeth)*

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Stimulants & the Eyes

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Prescription Stimulants

Adderall

Concerta

Ritalin

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Bath Salts or Designer Cathinones

- Synthetic stimulants that are marketed as “bath salts” are often found in a number of retail products.
- There are two of the designer cathinones most commonly found in these “bath salt” products.
- The synthetic derivatives of cathinone, which is an active chemical found naturally in the khat plant.
- Mephedrone and MDPV (3-4 methylene-dioxypyrovalerone)
- Many of these products are sold over the Internet, in convenience stores, and in “head shops.”

Side effects:
- Agitation, insomnia, irritability, dizziness, depression, paranoia, delusions, suicidal thoughts, seizures, and panic attacks. Users have also reported effects including impaired perception of reality, reduced motor control, and decreased ability to think clearly.
- Cause rapid heart rate, chest pains, nosebleeds, sweating, nausea, and vomiting.

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Bath Salts Video

- Restlessness
- Anxiety
- Euphoria
- Talkativeness
- Irritability
- Bruxism
- Eyelid and leg tremors
- Dilated pupils

GENERAL INDICATORS - STIMULANTS
HALLUCINOGENS

SPECIFIC TYPES

- Synthetic
  - LSD (Lysergic Acid Diethylamide)
  - MDMA-Ecstasy (3,4 Methylenedioxymethamphetamine)

- Natural
  - Jimson weed
  - Psilocybin (mushrooms)
LSD

(lysergic acid diethylamide)

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LSD Usage

- Commonly known as “acid,” LSD is an extremely powerful hallucinogen - a drug that radically changes a person’s mental state by distorting the perception of reality to the point where hallucinations occur. This is even with very minute doses.

- LSD is an odorless and colorless chemically manufactured drug

- Because LSD is so potent, the dosage needed for a trip is incredibly small. A microscopic drop of the drug can be put on paper, small gelatin squares, or any other absorbent material and ingested.

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MDMA
(3,4-Methylenedioxymethamphetamine)

Names: Ecstasy, XTC, Adam, Love Drug

Effects:
- Senses heightened
- Bruxism
- Euphoria
Molly is the slang for “molecular” that refers to the powder or crystal form of MDMA.

Molly is often mixed with other drugs and substances and is not pure MDMA or safe to use.
EFFECTS – MDMD/Molly

- It produces feelings of increased energy, euphoria, emotional warmth, empathy, and distortions in sensory and time perception.

- Feelings of sadness, anxiety, depression and memory difficulties are other effects.

- It can seriously deplete serotonin levels in the brain, causing confusion and sleep problems.

Mushrooms

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**Salvia Divinorum**

Sage Salvia divinorum is a herb in the mint family native to certain areas of the Sierra Mazateca region of Oaxaca, Mexico.

Fresh Leaves are chewed or extracted juices are ingested. Dried leaves can be smoked or vaporized and inhaled or made into a tea.

Short-lived hallucinations appearing in less than 1 minute and lasting less than 30 minutes. Usually the high last just minutes.

Legal to purchase in California if 18 or over.

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**Jimson Weed**

A common weed along roadsides, cornfields and pastures.

Many names have been given to this plant, such as Locoweed, Angel’s trumpet Thorn apple, etc...

Its toxic effects are seen most commonly in teens, who intentionally misuse it for its hallucinogenic and euphoric effects.
GENERAL INDICATORS - HALLUCINOGENS

- Dazed appearance
- Body tremors
- Perspiring
- Uncoordinated movements
- Normal/rigid muscle tone
- Difficulty with speech
- Dilated pupils

NARCOTIC ANALGESICS
COMMON TYPES

- Morphine
- Codeine
- Heroin
- Oxycodone (OxyContin)
- Synthetic opioids (fentanyl)

Heroin

- Narcotic Analgesic – pain relieving addictive drug.
- Heroin is processed from morphine, a naturally occurring substance extracted from the seedpod of the Asian poppy plant.
- All narcotic analgesics can be substituted for each other because of similar characteristics.
Heroin Usage

- Street names include “smack”, “thunder”, “hell dust”, “big H”, “nose drops”
- Varies in color from white to dark brown depending on type (i.e. China White, Mexican Brown)
- "Black tar" heroin is sticky like roofing tar or hard like coal, and its color may vary from dark brown to black.
- Most common type to this region is “Mexican Black Tar.”

Common Types

- China White
- Mexican Brown
- Black tar
Heroin
Black Tar

San Diego County Probation
Paraphernalia

Paraphernalia for injecting heroin include hypodermic needles, small cotton balls used to “strain” the drug, and water and spoons or bottle caps used for cooking or liquefying the heroin.

“Chasing the Dragon”
• Droopy eyelids
• Head slumped forward with chin moving towards chest
• Easily awakened
• Alert to questions

“On the Nod”

Opiates and the Eyes

Below 2.9mm
Stages of Injection Site Healing

- **Fresh-**
  - 8 to 12 hours old
  - Red
  - Raised
  - Oozing either clear fluid or blood
  - There can be 50-100 injections per inch*

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Common Opioid Pain Relievers

Vicodin
OxyContin
Percocet
Opana
Soboxone

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14 months on Oxy

August 2007    October 2008

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OxyContin (oxycodone): Excellent drug with unanticipated uses...

Purple Drank
Sizzurp, Lean, Syrup, Drank, purple jelly, Texas tea, and Tsikoni

Codeine cough syrup, Sprite, and Jolly Ranchers.
Fentanyl & Synthetic Opioids

- Pharmaceutical Fentanyl developed in 1959 – pain management
- **30-50 times MORE powerful than heroin** and **50-100 times MORE powerful than morphine**
- Found in powder, pill, capsule, liquid, rocks, and blotter paper
- Can be aerosolized, creating **DANGEROUS** exposure for first responders, leading to possible overdose. Precautions must be taken, changing drug handling and testing for all LE.

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Lethal doses of Fentanyl and Carfentanil relative to a lethal dose of Heroin

San Diego County Probation
Fentanyl: Overdoses On the Rise

Fentanyl is a synthetic opioid approved for treating severe pain, such as advanced cancer pain. Illicitly manufactured fentanyl is the main driver of recent increases in synthetic opioid deaths.

**50-100x More Potent Than Morphine**

- **SYNTHETIC OPIOID DEATHS ACROSS THE U.S.**
  - 73% increase from 2015 to 2016
  - 264% increase from 2011 to 2016

- **ILLICITLY MANUFACTURED FENTANYL**
  - Although prescription rates have fallen, overdoses associated with fentanyl have risen dramatically, contributing to a spike in synthetic opioid deaths.

San Diego County Probation
Deaths from fentanyl jump in California

Source: California Department of Public Health

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Personal Protective Equipment (PPE)

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KRATOM

- Kratom is a tropical tree native to Southeast Asia, with leaves that contain psychoactive (mind-altering) opioid compounds.
- Pills, chewed, or made into tea
- Classified as an opiate by FDA
- $1 billion in sales in 2017 (US)
- Deaths of at least 36 people
- MAY be banned by DEA

Current News Video (online)

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GENERAL INDICATORS - NARCOTIC ANALGESICS

- "Track marks"
- On the nod
- Droopy eyelids
- Slowed reflexes
- Slow, low, raspy speech
- Facial rubbing/itching
- Constricted pupils
- Nausea

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External Video – Opiate user, on the nod during an interview while in custody (ABC World News, 10/19/2010)

- The eyes are a MAJOR indicator of someone being under the influence; however, there are many factors that can affect pupil size, reaction to light

- Trained officers can glean valuable clues about possible drug use by looking at the eyes
HORIZONTAL GAZYE NYSTAGMUS (HGN)

Three Clues of Horizontal Gaze Nystagmus

- Lack of smooth pursuit
- Distinct and sustained nystagmus at maximum deviation
- Onset of nystagmus prior to 45 degrees

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ROMBERG TEST

Romberg Balance Test

Eyes closed
Estimate 30s
Feet together

LET'S TRY IT!!

Irish police officer demonstrating head tilt for the modified Romberg test

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Our Secret Weapon?

- **DRUG TESTING!**
  - 4th waiver conditions *generally* include drug and alcohol testing (always check conditions)
  - Random drug testing
  - Drug testing for suspected UTI
- We can test our skills of observation (eyes, pulse, mannerisms, etc.) and determine if we are right 😊

Possible Overdose

- Noticing the signs…
- Seek immediate medical attention
- Investigate the source
- Follow up procedures
What do you know?

- Pinpoint pupils + on the nod = ??
- Dilated pupils + rapid speech & fidgety = ??
- White powdery substance = ??
- Slang for methamphetamine = ??
- Slang for marijuana = ??
- Immediate response to possible OD = ??
  - Priority: Medical attention or search of room??

CONGRATS! You learned something new 😊