



Exposing Opiate Abuse and other current Drug trends

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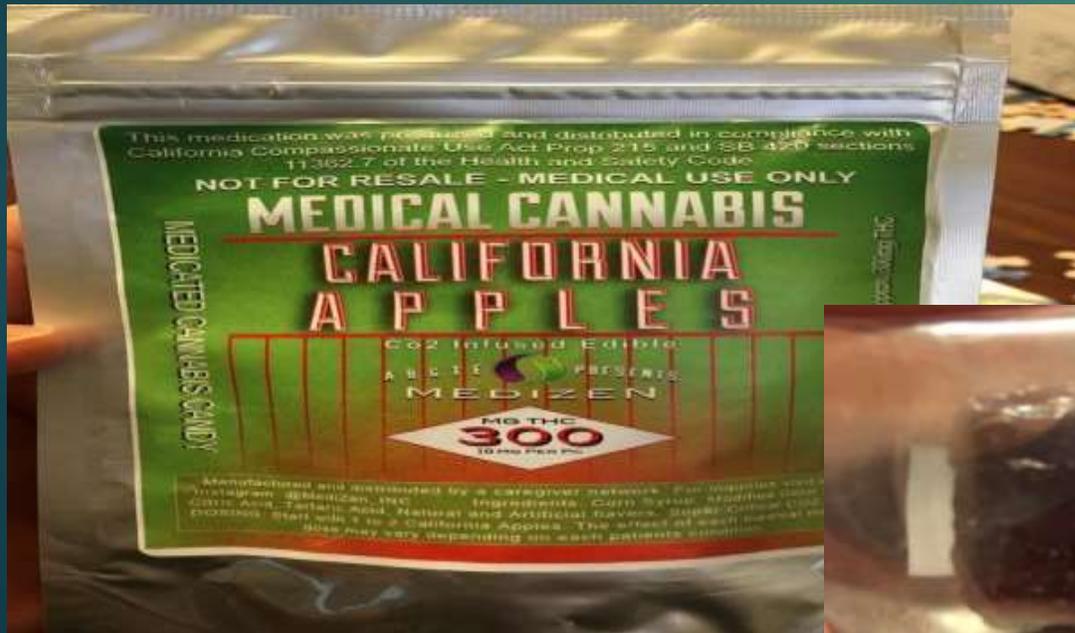
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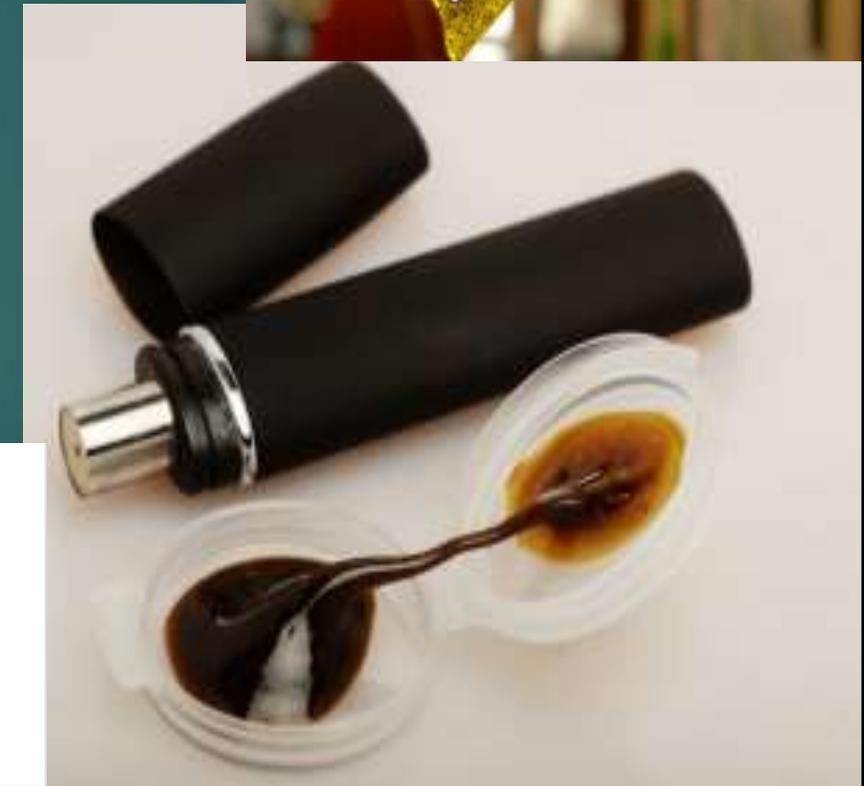
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Medical Marijuana- Harrisburg 2016

- ▶ In states that have legalized medical or recreational marijuana use (or nearby states), there may be “**edibles**” in the form of Cookies, Brownies, Drinks, Candy bars, Hard candies



BHO (Butane Hash Oil): Marijuana Wax



Marijuana Wax: What is it??



- ▶ It is a marijuana concentrate that is more powerful than marijuana
- ▶ It leads to a quicker and stronger high and is said to be the strongest form of marijuana on the market
- ▶ THC nanogram levels as high as 6,000!



HOW IS IT USED?

- ▶ Once it is made it is either placed in a bong and smoked just like regular marijuana or used with a vaporizer (electronic cigarette).



BHO (SHATTER, WAX, HONEY COMB)

BHO – which costs between \$25 and \$100 a gram, depending on where you live – comes in a variety of consistencies: from hard, amber-like stuff ("shatter") to soft, golden goop ("budder" or "earwax"). The basic process is surprisingly simple: Pack herb (often leftover parts after the buds have been removed) into a tube and force a solvent (usually butane) through it. The solvent is evaporated off, leaving just the plant's resins – which are chock-full of psychoactive chemicals, including astronomic levels of THC that can exceed 80 percent.



Shatter lab in Harrisburg:



Detection and Signs of Use



- ▶ Hallucinations-seeing things that aren't really there
- ▶ Auditory Hallucinations-hearing things that aren't there
- ▶ Tactile Hallucinations-feeling like bugs are crawling on you
- ▶ Blacking out
- ▶ Increased heart rate
- ▶ Nausea, confusion and dizziness

Blacking out is just your brain's way of clearing your memory's browser history.



Synthetic Drugs

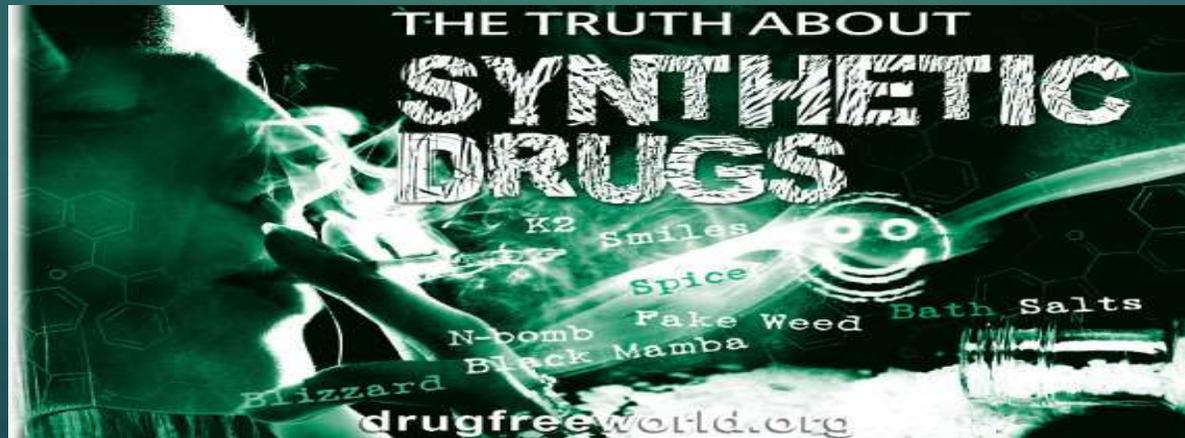


Amphetamine and methamphetamine were the first synthetic drugs. LSD, PCP and Ecstasy (MDMA) followed after that. Today, one new destructive chemical after another is being sold into the illicit drug market. Some of them manage to stay one step ahead of the law by shifting the formula of a particular drug they are selling, as soon as it has become illegal. They just move a few molecules and they have a new chemical that may not be illegal.

This has been the pattern of the game as a long list of new drugs have been distributed across Europe, the UK and the US. Certain formulations have become recognized as "bath salts" or synthetic marijuana and many other drugs are just identified by numbers and letters. As a whole, this category of drug is known for its unpredictable effects.

Synthetic Drugs

- ▶ Synthetic drugs are those man-made chemical compounds that mimic the effects of illicit drugs
 - ▶ "Spice" and "K2" are synthetic marijuana products
 - ▶ Bath Salts are a synthetic amphetamine
- ▶ All drugs of abuse that do not come from plant products or diverted pharmaceuticals could be categorized as synthetics.
 - ▶ Synthetic drugs act on the brain in the same manner as more traditional substances.
 - ▶ Unfortunately the most recent trend is the combination of synthetic substances which complicates testing and research even further.





Detection and Signs of USE:

- ▶ Seizures
- ▶ Suicidal tendencies and attempts
- ▶ Homicidal tendencies
- ▶ Delusions
- ▶ Overstimulation
- ▶ Aggression
- ▶ Paranoia
- ▶ Chest pain
- ▶ Heart attack/ Death
- ▶ Overheating that causes a person to tear off his clothes
- ▶ Self-destructive behavior (like bashing one's body or head against walls)



- ▶ Anxiety progressing to violent behavior
- ▶ Severe Hallucinations/Psychotic Delusions
- ▶ Intense Paranoia
- ▶ Increased Heart Rate/Elevated Blood Pressure
- ▶ Insomnia/Lack of appetite
- ▶ Muscle spasms/tense muscles
- ▶ Not sleeping
- ▶ Inability to feel pain
- ▶ Vomiting



Synthetics: Detection and Signs of Use

- ▶ Snorting
- ▶ Oral
- ▶ Injection
- ▶ Smoking
- ▶ Used with electronic cigarettes



Synthetic Drugs: Marijuana

- ▶ Many experts say "synthetic marijuana" is a huge misnomer for these drugs, which have also taken on street names like "K2" and "Spice," since they produce far different effects and can be up to 100 times more potent than traditional marijuana.
- ▶ Just like with the main psychoactive ingredient in traditional marijuana, THC, the psychoactive ingredients in synthetic marijuana bind to the brain's CB1 receptors. Because spice is so much stronger, however, it is much more likely to cause everything from seizures to psy



Synthetic Drugs: Marijuana



- ▶ The majority of synthetic marijuana users report they use the drug to avoid positive drug tests
- ▶ Most users of synthetic marijuana report using it as a substitute for marijuana during drug-testing periods, and returned to marijuana use once that period has ended.
- ▶ Synthetic marijuana is particularly dangerous because its ingredients are unknown, they have not been tested for safety, and their ever-changing ingredients can be unusually powerful. Users don't know what they are getting. Excerpts from Cesar FAX January 13, 2014
- ▶ Detection periods for synthetic marijuana is up to 72 hours. Synthetic marijuana does not bind to the fat cells in the body like THC does.



Synthetic Drugs: Mephedrone, Methyldone, Bath Salts and Flakka

- ▶ These are psychoactive drugs that are meant to mimic the effects of both amphetamines and hallucinogens; their effects can be somewhat similar to the effects of MDMA, methamphetamine, and cocaine.
- ▶ Flakka, for example, is made from a compound called alpha-PVP, a chemical cousin of cathinone, the amphetamine-like drug found in bath salts.
- ▶ The active ingredient in bath salts was officially banned in 2011, its newer relative, alpha-PVP, was not. That means it is legal in any state without its own ban.
- ▶ Like cathinone, alpha-PVP is a type of stimulant. Stimulants are linked with feelings of euphoria, enhanced alertness and wakefulness, and increased movement — all symptoms that are similar to those experienced by people on other drugs like amphetamines or cocaine.
- ▶ These drugs cause a surge in 2 chemicals: Dopamine and Norepinephrine. Dopamine is responsible for making you feel good and causing euphoric sensations. Norepinephrine raises your heart rate and blood pressure and make us feel more alert.

Synthetic drugs: Flakka

- ▶ It's cheap! \$5.00 a dose!
- ▶ Raises the body's temperature to 106 degrees. At temperatures that high the brain and other organs can be irreversibly damaged.
- ▶ Even a higher addictive quality than crystal meth
- ▶ It is easy to obtain small quantities through the mail
- ▶ It gives people the paranoia of meth, the aggression of cocaine, and the inability to feel pain that heroin causes
- ▶ Treating it with Narcan appears to strengthen the effects and causes a risk to first responders



5

'Zombie drug' flakka at center of brutal Pa. killing



0 shares



Flakka is called the 'zombie drug' because people who use it go into a zombie state and either eat themselves or bite and chew other people. Two Pa. men were taking it for the first time, and now one is dead and the other is charged with beating him to death. Pictured: Bethlehem homicide suspect James Heimbach, 30, who told police the beating victim attacked him, trying to bite his face and then biting his hand. The suspect claimed he was "fighting for his life" to escape the allegedly drug-crazed victim. (via LehighValleyLive.com)



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MOST READ

Synthetic drugs: *Barriers*

- ▶ There will never be a test available for every synthetic drug out there.
- ▶ Finding creative ways to work with your clients/offenders to determine if they are using or have used.
- ▶ The inability to get them into a drug and alcohol rehab if you don't get a positive screen or if they do not admit
- ▶ Hospitals discharging without referral to inpatient once symptoms subside
- ▶ There is a highly addictive quality of the substance (presumed)
- ▶ The lack of research on the subject related to long term effects

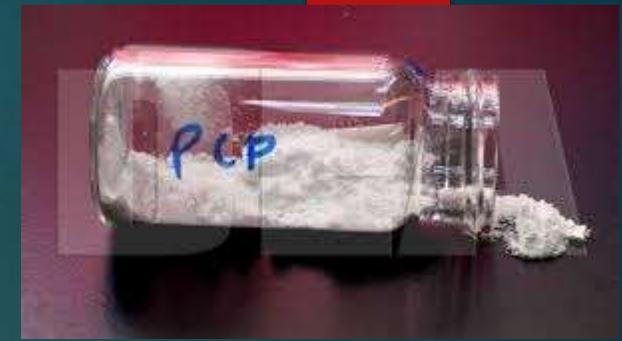
GHB: (gamma hydroxybutyric acid)

- ▶ GHB is commonly in an odorless, colorless liquid form or it appears as a white powder material.
- ▶ GHB is commonly ingested in the liquid form, usually mixed with alcohol.
- ▶ In lower doses, GHB causes drowsiness, dizziness, nausea, and visual disturbances. At higher dosages, unconsciousness, seizures, severe respiratory depression, and coma can occur. Overdoses usually require emergency room treatment, including intensive care for respiratory depression and coma.
- ▶ GHB has been used in the commission of sexual assaults because it renders the victim incapable of resisting, and may cause memory problems that could complicate case prosecution.
- ▶ GHB has become popular among teens and young adults at dance clubs and “raves.”
- ▶ Slang: G, Sodium Oxybate, Easy Lay, Soap, Gamma 10, Georgia Home Boy
- ▶ Detection: It is possible to detect GHB in urine for 12-24 hours, a drug test for GHB use is generally only done if there is suspected abuse, such as a case of date rape.

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Phencyclidine (PCP)



- ▶ PCP or “angel dust” is a powerful psychedelic known for its dissociative effects at high doses. PCP also possesses hallucinogenic, central nervous system stimulant, central nervous system depressant and analgesic properties.
- ▶ PCP can be ingested, inhaled, injected intravenously, but is most commonly smoked.
- ▶ PCP is most commonly used in combination with other drugs such as THC and ketamine.
- ▶ Common signs of a person under the influence include tachycardia, hypertension, hallucinations, stupor, disorientation, lethargy, sensory isolation, and gross loss of coordination. Excitation and violent behavior may also occur, leading to unpredictably violent behavior not usually encountered with other hallucinations. Higher doses of PCP can result in convulsions and prolonged or fatal coma.
- ▶ **Detection: PCP is detectable in urine for 1-8 days after a single use and for up to 30 days with regular use.**

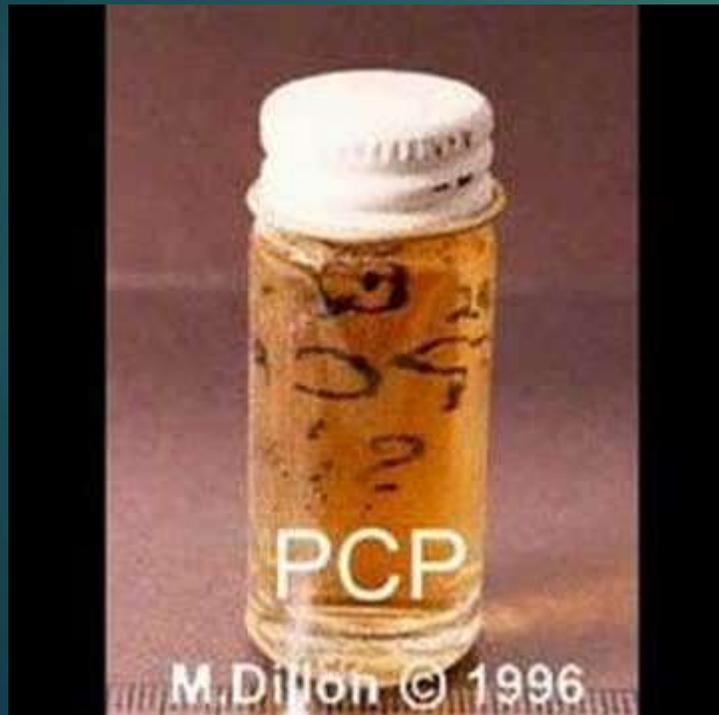
PCP abuse can result in dangerous hallucinations coupled with aggressive behavior.

PCP

Sherm (PCP plus Embalming Fluid)



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Questions....

- ▶ Is there a drug test for formaldehyde?
 - ▶ Not in the context of formaldehyde, but when it starts to break down in the body, the metabolite is the same as PCP and can be caught that way.
- ▶ WET can be formaldehyde or PCP, right?
 - ▶ Yep it is the same. When formaldehyde breaks down chemically the active ingredients are the same and produce the same effect.
- ▶ Does PCP have a smell or a taste?
 - ▶ Yes it will smell that rubber or plastic.
- ▶ A mother who abused PCP for about 12 years. She is now trying to get custody of her children back. She is still showing the signs of PCP use, but testing negative. How would the worker determine if there is any long term psychological damage to her brain from so many years of PCP use?
 - ▶ A neuropsychological would be a good start. The concern is that she has ongoing psychosis as a result of extended PCP use. They may be able to make appropriate recommendations from there. That is a long time of use!! Depending though on frequency of use and the time between screens she could potentially be beating the screens.

Ketamine:



- ▶ Ketamine is a tranquilizer most commonly used on animals.
- ▶ The liquid form can be injected, consumed in drinks, or added to smokable materials. The powder form can be used for injection when dissolved. In certain areas, Ketamine is being injected intramuscularly.
- ▶ Ketamine comes in a clear liquid and a white or off-white powder form.
- ▶ Higher doses produce an effect referred to as “K-Hole,” an “out of body,” or “near-death” experience.
- ▶ Use of the drug can cause delirium, amnesia, depression, and long-term memory used as a date-rape drug.
- ▶ **Slang:** jet, super acid, Special “K”, green, K, cat Valium



W18



W18

- ▶ W-18 (1-(4-Nitrophenylethyl)piperidylidene-2-(4-chlorophenyl)sulfonamide) is an interesting drug of a potency 10000x that of morphine that was discovered in 1981, the details of which were laid out in a patent (US4468403), and has virtually no history of human use.
- ▶ In August 2015, law enforcement officials in Calgary, Alberta, made a routine drug bust that yielded 110 tablets. As part of regular procedure, these pills were sent to Health Canada for their properties to be analyzed. The laboratory experts were astonished to find that the tablets contained an ultra-potent form of opioids that had never been seen on the street before. The compound in the pills is dubbed W-18.



W18

- ▶ W-18 is a synthetic opioid compound, meaning that it was created in a laboratory setting. The drug was actually developed 30 years ago by researchers in Edmonton, Alberta, who were seeking to create novel opioids that could be used in medical settings. W-18 was never picked up by a pharmaceutical company, but its chemical structure was published in medical journals. Authorities speculate that clandestine Chinese laboratories used this information to produce the W-18 tablets that have hit streets in North America.
- ▶ W-18 tablets were apparently sold as fentanyl, a schedule II prescription drug that is much stronger than morphine.
- ▶ Unlike fentanyl, which is used pharmaceutically, W-18 has no known clinical use. It is 10,000 times more potent than morphine and 100 times more potent than fentanyl. This makes W-18 an incredibly dangerous drug that could have lethal consequences.

W18



- ▶ The average dose of fentanyl is 125 micrograms, about the same as two grains of salt. With W-18 being 100 times more potent, that means that users cannot safely consume more than a tiny amount, perhaps just 1 or 2 micrograms, without suffering serious consequences.
- ▶ Given that the drug is produced in clandestine laboratories, it is unlikely that its creators are being careful about quality control. This means that individual batches of W-18 could have irregular amounts of the drug. Getting a bad pill could be fatal.



HARMFUL CONSEQUENCES OF W-18

- ▶ This drug is relatively new to the drug market. As its availability spreads, it is likely to cause major health problems among users. The typical effects of opioids include analgesia, euphoria, drowsiness, lightheadedness, fatigue, weakness, and slowed breathing. As a drug that is several orders of magnitude more potent than morphine, W-18 is likely to have an even more severe profile of effects than other opioids. Even at very small doses, W-18 could cause a person to stop breathing.
- ▶ One of the most alarming aspects of W18 is that it so closely resembles fentanyl and other opioid pills. Unsuspecting users could easily overdose from this



MOLLY MDMA ECSTASY



- ▶ MDMA (**3,4-Methylenedioxymethamphetamine**) is one of the most common popular recreational psychoactives, also known as ecstasy. Ecstasy is usually ingested in tablet form, but can also be crushed and snorted, injected, or used in suppository form.
- ▶ It is known for its empathogenic, euphoric, and stimulant effects, and has also been used in psychotherapy. In addition to chemical stimulation, the drug reportedly suppresses the need to eat, drink, or sleep.
- ▶ When taken at raves, where all-night dancing usually occurs, the drug often leads to severe dehydration and heat stroke in the user since it has the effect of “short-circuiting” the body’s temperature signals to the brain.

Molly: slang for molecular



- ▶ The term Molly is used interchangeably with MDMA and ecstasy
- ▶ What is in Molly is up to the person who is making it. It can be any of the following:
 - ▶ Synthetic drugs
 - ▶ Cocaine
 - ▶ Methamphetamine
 - ▶ Opiates
 - ▶ Amphetamines



Detection and Signs of Use:

- ▶ MDMA is detectable in urine for 1-3 days after a single use and for 3-5 days after heavy use, MDMA is closely enough related to amphetamines that MDMA users will test positive in both amphetamines and methamphetamines
- ▶ If you get a person that tests positive for AMP, MET, COC, OPI, etc...it could be that they used Molly.
- ▶ An Ecstasy overdose is characterized by a rapid heartbeat. High blood pressure, faintness, muscle cramping, panic attacks, and, in more severe cases, loss of consciousness or seizures.
- ▶ One of the side effects of the drug is jaw muscle tension and teeth grinding. As a consequence, Ecstasy users will often suck on pacifiers to help relieve the tension. Ecstasy may cause hyperthermia, muscle breakdown, seizures, stroke, kidney and cardiovascular system failure, possible permanent damage to sections of brain critical to thought and memory, and death.



Slang MDMA:

X, XTC, ROLLS, ROLLING, ADAM, GO,
HUG DRUG, ADAM, E, XTC, ROLLS,
CLARITY, ESSENCE, STACY, LOVER'S
SPEED, EVE, HUG, WHITE DOVES, LOVE
DRUG, BEANS, DISCO BISCUITS,
STARFISH SEX



Krokodil



- ▶ This drug is easily made from codeine, iodine, lighter fluid, industrial cleaning fluid, paint thinner, gasoline, and red phosphorus.
 - ▶ Similar to the process for making methamphetamine
- ▶ Krokodil is primarily used by Heroin addicts that can no longer afford heroin due to the price being much lower.
- ▶ Krokodil first appeared in Siberia and East Russia in 2002. It's US alternative is Desomorphine which was invented in 1932.
- ▶ Sedative and analgesic effects.
- ▶ The drug is named for it's scale-like appearance of the skin on the user. Causes severe tissue damage- phlebitis and gangrene sometimes requiring limb amputation in long-term users- and deterioration of kidney and liver.
- ▶ Life expectancies 2-3 years.



DANGERS



- ▶ Too much codeine and promethazine can depress the central nervous system and respiratory systems, stopping the heart and breathing
- ▶ The person can feel nausea, dizziness, impaired vision, memory loss, hallucinations, and seizures
- ▶ It can be deadly especially when it is mixed with other drugs and alcohol
- ▶ Teen may think because it comes from a pharmacy it's won't harm them but that isn't true
- ▶ US Drug Enforcement Agency estimates 1 in 10 teens uses it to get high
- ▶ They may also be using other OTC cough medicines to get high with the active ingredient of dextromethorphan.

LIQUID METH

Crystal Meth Suspended in Liquid



LIQUID METH

- ▶ It is the newest form of methamphetamine that is reported to be surfacing throughout many areas of the United States
- ▶ Manufacturers of this highly toxic drug are beginning to dissolve meth in water in order to liquefy the drug
- ▶ The reason that liquid meth is quickly becoming popular with many of the individuals who are meth dealers, is because it had made transporting the toxic drug so much easier



LIQUID METH

- ▶ Individuals who produce meth will often place the liquid form of the drug into various different types of liquor bottles, which are regularly seen at various different ports of entry
- ▶ Once the liquid meth has passed inspection and been shipped to its destination, individuals will then boil away the water; then only the solid form of meth will remain
- ▶ It is being applied to paper and is sometimes sent through packages in the U.S. mail



LIQUID METH

- ▶ It has been reported to be stronger than any of the other forms of methamphetamine that is currently available on the street
- ▶ Users report that liquid meth is much better than any of the other forms of methamphetamine
- ▶ The rest of the ingredients can be purchased at the local grocery store or pharmacy
- ▶ Lab techs have determined it would take minutes to make a batch of liquid meth, and just over ten minutes to cook it up



LIQUID METH SIDE EFFECTS

- ▶ Tremors and involuntary spasms that often occur automatically in the body
- ▶ Chest pain
- ▶ High blood pressure
- ▶ Irreversible damage to the brain or the heart
- ▶ Dilated pupils
- ▶ Extreme irritability
- ▶ Talking incessantly
- ▶ Disturbance in sleep patterns
- ▶ Extreme nervousness
- ▶ Increase in body temperature





PANIC

LIQUID METH

Suicide?

OR

MURDER

SHORT TERM EFFECTS

- ▶ Tremors and involuntary spasms that often occur automatically in the body
- ▶ Chest pain
- ▶ High blood pressure
- ▶ Irreversible damage to the brain or the heart
- ▶ Dilated pupils
- ▶ Extreme irritability
- ▶ Talking incessantly
- ▶ Disturbance in sleep patterns
- ▶ Extreme nervousness
- ▶ Increase in body temperature

LONG TERM EFFECTS

- ▶ Damage to the major organs of the body including kidneys, liver, and the lungs
- ▶ Panic
- ▶ Paranoia
- ▶ Repetitive behavior patterns
- ▶ Feeling of being homicidal or suicidal

MORNING GLORY SEEDS

- ▶ These are seeds from a flowering plant with the same name.
- ▶ They contain a chemical that is similar in nature and effects as LSD.
- ▶ The amount present in each seed is very small, so you have to eat a lot to get the psychoactive effects.
- ▶ Some people crush up the seeds and mix the powder with alcohol to increase the effects.
- ▶ Some even extract the active chemical and inject it intravenously.
- ▶ This is not a new trend by any means, it was very popular in the 1960's and is resurfacing.



EFFECTS OF MORNING GLORY SEEDS

- ▶ They vary person to person depending on dose, age, and life experience
- ▶ Most users experience strong sensory and visual distortion
- ▶ Colors seem brighter, patterns could seem to “breathe” and users can experience an altered sense of time.
- ▶ Morning glory seeds may also impair judgement and the ability to perceive danger, so accidents on morning glory seeds are common, sometimes even fatal.
- ▶ A morning glory trip can last up to 12 hours and have long term psychological effects.
- ▶ There is another compound in morning glory seeds that can also cause nausea and headache



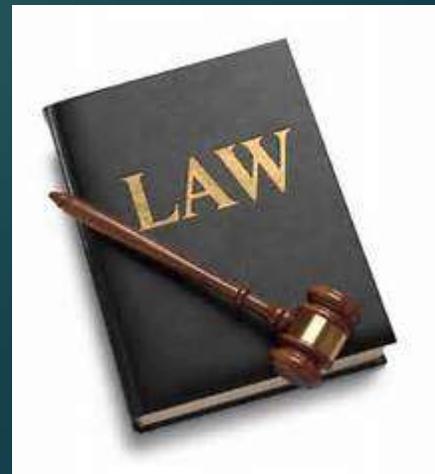
EFFECTS OF MORNING GLORY SEEDS CONTINUED

- ▶ Many people have reported vomiting from eating morning glory seeds.
- ▶ Some can experience what is known as “bad trip”.
- ▶ A bad trip can be terrifying and disorienting. Users experience intense sensations and feelings with rapid mood swings.
- ▶ Some morning glory users experience severe, frightening thoughts and feelings, fear of losing control, fear of insanity and death, and despair while using morning glory seeds. This can cause anxiety, panic attacks, or full blown mental psychosis.
- ▶ For people with pre-existing mental illness, such as schizophrenia, this can be very dangerous.



The Legalities

- ▶ Morning glory seeds are legal to buy and grow at home
- ▶ Some retailers monitor whether or not they are being bought in bulk
- ▶ The chemical compound in morning glory seeds is not legal
- ▶ Therefore, using an extraction techniques like crushing and combining with alcohol, you would then be in possession of a controlled substance
- ▶ It is a popular trend as it easily obtained and relatively inexpensive



Buprenorphine (BUP) and Methadone (MTD)

- ▶ Buprenorphine is an opioid medication that produces even lower levels of euphoria than methadone. As is true with methadone, doctors can use this medication as a substitute for more powerful opioid substances in order to control the risks for withdrawal symptoms during the addiction treatment process.
- ▶ Naloxone is an anti-opioid medication that stops opioids from triggering their mind- and body-altering effects. Pharmaceutical manufacturers combine these two medications in order to reduce the chances that any given person using buprenorphine will abuse his or her prescription and start taking the opioid for recreational purposes.
- ▶ In this context, naloxone plays its part by effectively limiting the amount of time in which buprenorphine remains active and produces an opioid effect. In the U.S., most patients receive a buprenorphine/naloxone combination known as suboxone, which dissolves gradually when placed under the tongue.

WHAT IS SUBOXONE?

- ▶ It was a drug developed for the treatment of addiction to opiates.
- ▶ It is a combination of buprenorphine and naloxone. Buprenorphine is the synthetic opiate that prevents withdrawal in a person who stops using opiates and naloxone is a drug intended to block the euphoric effects of the opiate.



SYMPTOMS OF ABUSE

- ▶ Nausea
- ▶ Vomiting
- ▶ Muscle pain and cramps
- ▶ Watery eyes
- ▶ Diarrhea
- ▶ Fever
- ▶ Insomnia
- ▶ Sweating
- ▶ Depression
- ▶ Drowsiness
- ▶ Slurred Speech
- ▶ Increased Blood Pressure
- ▶ Poor Memory
- ▶ Small Pupils



SUBOXONE ABUSERS

- ▶ The person who chooses to abuse Suboxone is likely to have abused opiates over a long period of time
- ▶ They may simply abuse Suboxone as a way to prevent withdrawal symptoms from heroin and other opiate addiction, or may want to get high, or simply be curious about the effect of the drug.



WAYS TO GET HIGH OFF OF SUBOXONE

- ▶ **Crushing:** Users crush the tables for either nasal inhalation, to later be dissolved in solution for injection, or in an attempt to speed the drug in their mouths.
- ▶ **Injecting:** Users dilute Suboxone with water or another liquid so it can be directly injected into their bloodstreams.



- ▶ **Injecting Suboxone can paradoxically cause someone to go into immediate withdrawal because of a sudden and full potential for the naloxone to antagonize the activity of any other opioid drug present in the user's system**

METHADONE

- ▶ It is used not only as treatment for opiate addiction but also for pain relief.
- ▶ Methadone can come in a small pill that is intended to be swallowed or dissolved, or as a liquid to be drunk, diluted or injected.
- ▶ It is not expected to cause the same initial euphoric rush as heroin but they will still feel high when they first start abusing it.
- ▶ As they develop a tolerance, if they don't increase their dosage, they will probably just feel numb and drugged without the high
- ▶ There is a high risk of overdose with Methadone for this reason
- ▶ It is a very long lasting drug. Taking doses too close together makes it easy to overdose.



METHADONE SIDE EFFECTS

- ▶ Drowsiness
- ▶ Weakness
- ▶ Nausea
- ▶ Vomiting
- ▶ Constipation
- ▶ Trouble Sleeping/Unusual Sleep Schedule
- ▶ Skin rashes
- ▶ Headache
- ▶ Dry Mouth
- ▶ Itchiness
- ▶ Lack of Appetite
- ▶ Sweating
- ▶ Flushing
- ▶ Weight Gain
- ▶ Water retention
- ▶ Difficulty urinating



Methadone 40mg Dispersible Tablets



OVERDOSE DEATHS IN PENNSYLVANIA

- ▶ In 2015, 3,383 drug-related overdose deaths were reported in Pennsylvania, an increase of 23.4 percent from the total number of overdose deaths (2,742) reported in 2014
- ▶ The 2015 statewide drug overdose death rate in Pennsylvania was 26 per 100,000 people, an increase from the reported 2014 rate of 21 per 100,000 people. According to the CDC, the national drug overdose death rate in 2014 (most recent available) was 14.7 per 100,000 people.
- ▶ Heroin was the most frequently identified drug in toxicology test results, as nearly 55 percent of drug-related overdose decedents showed the presence of heroin in 2015.
- ▶ Heroin remains a pervasive drug of abuse, as it was present in overdose decedents in 59 of the 62 counties (95 percent) that reported drug-related overdose deaths and associated toxicology resultsⁱⁱⁱ.

OVERDOSE DEATH IN PENNSYLVANIA

- ▶ The presence of heroin or at least one opioid (acetyl fentanyl, fentanyl, hydrocodone, methadone, oxycodone, tramadol) was reported in approximately 81 percent of decedents
- ▶ Toxicology results of approximately 53 percent of drug-related overdose decedents indicated the presence of an opioid (acetyl fentanyl, fentanyl, hydrocodone, methadone, oxycodone, tramadol), with fentanyl the most frequently identified, appearing in approximately 51 percent of opioid-positive decedents. At least one opioid-positive decedent was present in every county that reported drug-related overdose deaths and associated drugs in 2015.
- ▶ Fentanyl was the second most frequently identified drug in decedents in 2015 (27 percent); of fentanyl-positive decedents, approximately 36 percent were also positive for heroin, and approximately 26 percent were positive for cocaine.
- ▶ The majority (67 percent) of drug-related overdose decedents were male. Whites comprised the largest race demographic of decedents (74 percent). The median age of decedents was 40, and the majority (26 percent) of decedents was in the 30-39 year old category.

OVERDOSE DEATHS IN PENNSYLVANIA

- ▶ The PFD received and analyzed data on 3,383 drug-related overdose deaths in 2015 from 65 counties in Pennsylvania. Cameron and Warren counties reported no drug-related overdose deaths in 2015.
- ▶ Acetyl fentanyl was found to be an emerging drug of concern in 2015. Acetyl fentanyl was not reported in any 2014 overdose deaths, however, it was present in approximately 4 percent of all 2015 decedents whose toxicology test results were reported. Further, acetyl fentanyl was present in approximately 7 percent of opioid-positive and approximately 4 percent of heroin-positive 2015 decedents.
- ▶ Fentanyl was the most commonly reported drug (23 percent) in 2015 heroin-positive decedents in 2015, followed closely by cocaine (20 percent). In fentanyl-positive decedents, 36 percent were also heroin-positive, while 26 percent were cocaine-positive. The combinations of heroin and/or cocaine with fentanyl present in this dataset is supported by law enforcement intelligence regarding illicit drug suppliers utilizing fentanyl as an adulterant to heroin and cocaine to increase potency and attract users.

Opiates (OPI) and Oxycodone (OXY)

- ▶ **Opiates** originate from the poppy plant. Codeine and morphine are examples of naturally occurring opiates. Hydrocodone, Oxycodone, Hydromorphone, and Oxymorphone are examples of semi-synthetic opiates derived from compounds found in the poppy plant.
- ▶ While the Opiate test will give you a positive test for all of the drugs listed below, the **Oxycodone test** will only give you a positive test for those drugs that are specifically from the Oxycodone family.
 - ▶ Examples of opiates include:
 - ▶ Heroin
 - ▶ Codeine
 - ▶ Morphine
 - ▶ **Oxycodone (ex: OxyContin, Percodan, Percocet)**
 - ▶ Oxymorphone (ex: Opana, Numorphan)
 - ▶ Hydrocodone (ex: Vicodin, Loracet, Lortab, Hycodan)
 - ▶ Hydromorphone (ex: Dilaudid)
 - ▶ Fentanyl

Heroin



Heroin



- ▶ Heroin is a powerful opiate pain killer that produces euphoria and blissful apathy.
- ▶ Heroin is usually take in one of two ways- it is either injected or smoked. Smoking is by far the safest way of using, as injecting makes you much more liable to the risks of infection and overdose.
- ▶ Chemical name: Diacetylmorphine. It is processed from morphine extracted from the seed pod of poppy plants
- ▶ It is typically sold as a white or brownish powder that is “cut” with sugars, starch, or powdered milk

