

Fentanyl: The Good and the Bad

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Fentanyl: The Good and the Bad

- > The problem that is being created by the illegal use and abuse of fentanyl started with the abuse of other opioids
- > We will look at what opioids started and continue the problem of abuse
 - Heroin
 - Hydrocodone
 - Oxycodone (Oxycontin)
- > We will look at these drugs and see how they lead to the abuse of fentanyl and why people abuse it
 - We will examine if the good use of fentanyl is worth the risk

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Schedule of Opioids

- > There are many different opioid drugs
- > Some are Schedule I or II
 - Schedule I drugs do not have any medical use
 - Schedule II drugs have medical use with severe limitations
- > For this class we will use the term opioids for all opiates and opioids drugs

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, Advan, Ambien, Tramadol
Schedule V	Lowest potential for abuse/dependence Acceptable medicinal qualities Prescription required - fewest refill regulations Robitussin AC, Lorcet, Motrin, Lyrica

Source: United States Drug Enforcement Agency

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Types of Opioids

- > While many opioids are prescribed by a doctor for legitimate medical use this is not the case of all opioids
- > Opioids are primarily used for pain relief
 - When used properly they are good for pain relief
 - Relief of pain not just masking pain like many other drugs
- > There are certain opioids which have become the main problems with overdoses
 - Hydrocodone, Oxycontin, Heroin and Fentanyl are some of the more popular opioid drugs of abuse

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What Opioids do to the user

- > Opioids increase feelings of pleasure by altering activity in the limbic system, which controls emotion.
 - Abuse and misuse of Opioids can lead the user to feel a rush of euphoria and pleasure
- > Opioids can block pain messages transmitted through the spinal cord up to the brain
- > Opioids act by attaching to specific proteins that are located in our brain, spinal cord, and organs. Opioids will bind to these protein receptors, and reduce the perception of pain



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What Opioids do to the user

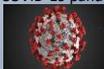
- > So why are these drugs, which are a God send to those in severe pain or consistent pain, so dangerous to the users?
- > Addiction is the problem with even prescribed opioids
 - People like the way the drugs make them feel
 - Relief of pain
 - Escape from reality
 - Physical & psychological addiction



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History of Abuse of Opioids

- > The history of the abuse of opioids is long but the recent trend is longer and more serious than past opioid of abuse trends
- > Over 93,331 drug overdose deaths in 2020
 - Over 29% increase in overdose deaths in 2020 than in 2019
 - 70.6% opioids were involved
- > April 2020 to April 2021 had over 100,000 overdose deaths
 - The increase during the pandemic is not likely to end any time soon
 - Others say premature to say spike is due to COVID-19 pandemic

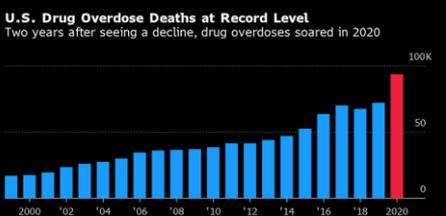



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Opioids: Are they Safe?

U.S. Drug Overdose Deaths at Record Level

Two years after seeing a decline, drug overdoses soared in 2020



Source: National Center for Health Statistics, National Vital Statistics System, Mortality. Bloomberg

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Opioids: Are they Safe?

- > There are many legitimate reasons for a person to use a prescription opioid drug
 - Even using an opioid drug properly there is a risk of becoming addicted
- > Over prescribing the different opioid drugs is part of the problem
 - Over 207 million opioid prescriptions were written in 2013
 - Over 153 million in 2019 This is a reduction put there still is a problem



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Opioids: Are they Safe

- > United States has 5% of the world's population but uses 80% of all prescription opioids
- > 190+ opioids overdose deaths each day in the United States
 - Legal and Illegal opioids



"Look, you've got to stop thinking that one little pill is going to solve all your problems. You need to take at least four, twice a day."

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Prescription Opioids to Street Opioids

- > Increase of heroin users in United States
 - 2007 had 106,000 users
 - 2014 had 212,000 users
- > This increase mirrors the increase of opioid prescription drugs abuse
 - When the user can no longer obtain prescription drugs they go to illegal drugs
 - Heroin has the same effect on the user as opioid prescription drugs



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Hydrocodone

- > Hydrocodone was the #1 abused opioid- even more than Oxycodone (OxyContin)
- > Due to abuse drug was moved from Schedule III to a Schedule II on October 6, 2014
 - This creates more control and restrictions on its prescribing to the public
- > Estimates 99% of worldwide supply of hydrocodone was used in the U.S.



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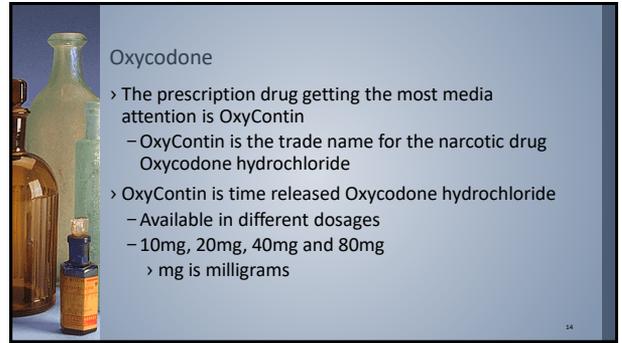
Hydrocodone

- › One form of hydrocodone is in pure form and brand name is Zohydro ER (Zogenix Pharmaceuticals)
 - Approved by FDA in 2014
- › This form is up to 5 times more active opioid as the highest strength in mixture form
- › Zohydro ER is intended to be slowly released over 12 hours
 - Doses from 10mg to 50mg per pill- increments of 5mg



ZohydroER
(hydrocodone bitartrate)
EXTENDED-RELEASE CAPSULES

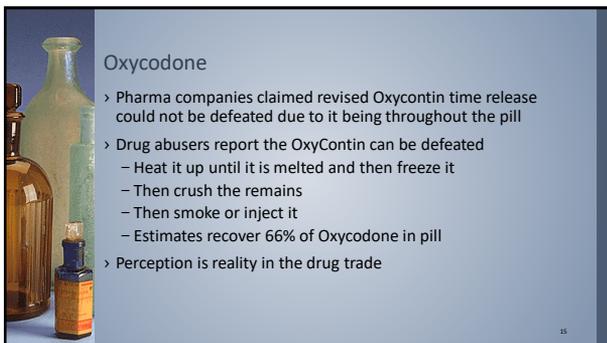
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Oxycodone

- › The prescription drug getting the most media attention is OxyContin
 - OxyContin is the trade name for the narcotic drug Oxycodone hydrochloride
- › OxyContin is time released Oxycodone hydrochloride
 - Available in different dosages
 - 10mg, 20mg, 40mg and 80mg
 - › mg is milligrams

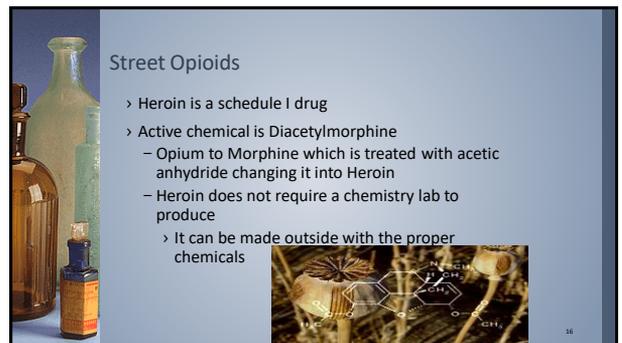
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Oxycodone

- › Pharma companies claimed revised Oxycontin time release could not be defeated due to it being throughout the pill
- › Drug abusers report the OxyContin can be defeated
 - Heat it up until it is melted and then freeze it
 - Then crush the remains
 - Then smoke or inject it
 - Estimates recover 66% of Oxycodone in pill
- › Perception is reality in the drug trade

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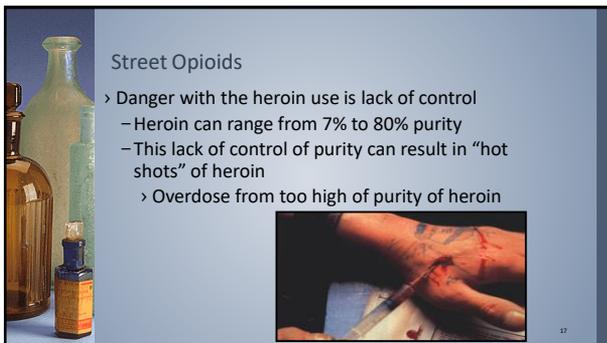


Street Opioids

- › Heroin is a schedule I drug
- › Active chemical is Diacetylmorphine
 - Opium to Morphine which is treated with acetic anhydride changing it into Heroin
 - Heroin does not require a chemistry lab to produce
 - › It can be made outside with the proper chemicals



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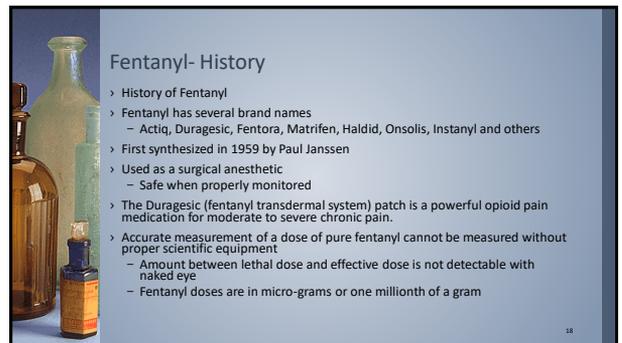


Street Opioids

- › Danger with the heroin use is lack of control
 - Heroin can range from 7% to 80% purity
 - This lack of control of purity can result in “hot shots” of heroin
 - › Overdose from too high of purity of heroin



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Fentanyl- History

- › History of Fentanyl
- › Fentanyl has several brand names
 - Actiq, Duragesic, Fentora, Matrifen, Haldid, Onsolis, Instanyl and others
- › First synthesized in 1959 by Paul Janssen
- › Used as a surgical anesthetic
 - Safe when properly monitored
- › The Duragesic (fentanyl transdermal system) patch is a powerful opioid pain medication for moderate to severe chronic pain.
- › Accurate measurement of a dose of pure fentanyl cannot be measured without proper scientific equipment
 - Amount between lethal dose and effective dose is not detectable with naked eye
 - Fentanyl doses are in micro-grams or one millionth of a gram

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Fentanyl- The Good

- > There are many legitimate uses of fentanyl
 - Fentanyl is a pain killer which is 80-100 times stronger than morphine
- > Used as a surgical anesthetic
 - Safe when properly monitored
- > Used for pain relief
 - First designed users were cancer patients
 - Expanded for patients with chronic severe pain
 - > This will often be long-term use if there is no other way to relieve pain, such as surgery for a back problem
 - Severe pain following surgery
 - > This would be a short-term use



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Fentanyl- The Good

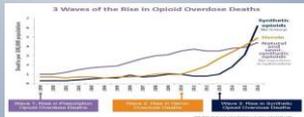
- > Often prescribed in a patch for time release
 - The Duragesic (fentanyl transdermal system) patch is a powerful opioid pain medication for moderate to severe chronic pain
 - > Patch contains Fentanyl in gel form
 - Powder form has a similar appearance to cocaine
 - > Use in hospitals with IVs




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Fentanyl- The Bad

- > Approximately 80% of all overdose deaths involve an opioid
 - 75% of these deaths involve illicitly manufactured fentanyl
- > Fentanyl was mixed with heroin to increase the potency of heroin
 - There have been 3 waves of mixing fentanyl into heroin over the last 30+ years
 - Current trend has been going on since approx. 2013
 - > It is the longest trend and there does not seem to be an end in sight



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Fentanyl- The Bad

- With the increased amount of fentanyl being smuggled into the U.S. it is being sold by itself instead of mixed in with heroin
 - > It is also being mixed with other drugs, especially simulate drugs (cocaine and methamphetamine)
 - > Heroin and meth used to be mixed and called a "speedball"
 - > This increases the risk of overdose by the user



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Fentanyl- Analogues

- > Fentanyl Related Substances have been temporarily made a Schedule I substance
 - Estimates there are over 3,000 potential fentanyl analogues
 - Most of these analogues are from China
- > There has been a recommendation made to Congress to place the Fentanyl Related Substances permanently as a Schedule I substance
 - The temporary order is set until February 18, 2022
- > This order is because of the proliferation of fentanyl in the United States
 - Some of the fentanyl analogues are even more potent than fentanyl itself



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Fentanyl- Profitable

- > Counterfeit pills can be made from 1 kilo of fentanyl (cost for kilo approx. \$4,000.00)
 - With 2 mg (micro gram) per pill
- > Profit can be potentially \$10,000,000
 - Sales at \$20 per pill
- > Requires a pill press, fentanyl and other powder (binder)



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Fentanyl- Addiction

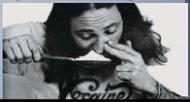
- > There is a tolerance build up with all different types of opioids; including fentanyl
 - With street opioids the user needs the drug more often as the high does not last as long and then they will have to use more of the drug
 - With prescription opioids the time frame of the elimination of the pain shortens so the user eventually uses more of the drug to obtain pain relief



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Fentanyl- Addiction

- > All the different Opioids can be abused in similar methods
- > It is very common for first time drug users to favor the least intrusive method of absorption
 - Which often does not give the best high
- > Unfortunately, as the addiction grows and gets worse, these individuals switch to a different method of use
 - These other methods will increase the high from the drug, but it also increase the overdose risks



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Fentanyl- Use/Paraphernalia

- > Taken orally- most prescriptions are designed to be taken orally
 - Fentanyl can be used in this manner
 - Not an effective manner to get high
 - Mostly method by new users or legitimate users
 - > No paraphernalia for this use unless mixed with liquid



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Fentanyl- Use/Paraphernalia

- > Snorting- powder forms can be snorted
 - Pills can be crushed and then snorted
 - Other opioids are in powder form
 - > Tar Heroin is not one you would snort
- > Straws or things which can be made into a straw
 - Money, fingernail, etc...



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Fentanyl- Use/Paraphernalia

- > Smoking is a very common method of using many different types of drugs, including opioids
- > Pipes can vary with what they are made from
 - Metal pipes, glass pipes and even cans bent just right
- > Commercially made pipes are becoming more popular



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Fentanyl- Use/Paraphernalia

- > Injecting or "shooting up" is very common with all opioids
 - Syringes- all varieties
- > Injecting is considered the best or most effective method of use for the best high
 - Danger of sharing syringes
 - User will use their own blood to rinse out the syringe and get all the drug



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Fentanyl: Overdose

- > Dangers of overdosing on fentanyl or any opioid
- > A person has receptors which receive a signal to breath
- > When a person uses heroin, it attaches or covers the receptors, so the signal does not get through
 - If too many receptors are blocked the person stops breathing
 - If they don't take too much the person's breathing just slows down
 - As the heroin "wears off" the receptors start receiving the signal again and users starts breathing again



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Narcan: Methods of Use

- > Naloxone hydrochloride better known as Narcan
 - It is a liquid which is administered through different methods
 - Injection- remember the scene in Pulp Fiction
 - Nasal spray- this is method Albuquerque PD issues to their officers
 - > Works almost as quickly as IV route since nasal mucosa is highly vascularized and absorbs drugs directly into the blood stream



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Narcan: Saves Lives

- > Narcan only works on opioid overdose
- > It removes the effects of the opioid and can have the user feel like they are in withdrawal
 - It takes effect in 2-5 minutes
 - May take several doses with fentanyl
- > Effect of Narcan is short lived; in comparison to the effects of the opioid drug
 - Narcan will last 20-90 minutes
 - So, if person is not watched they can overdose again when the Narcan wears off
 - Recommend they are watched by medical personnel for several hours
 - > Few states have laws requiring surveillance period of person

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Opioids: Are they Safe?

- > Ways pharmacists can help make the use of LEGAL opioids safer:
 - Get to know why your customer is using an opioid
 - > Is the reason for use seem legitimate
 - > Oxycontin at 80mg for a sprained ankle
 - How long has your customer been using opioids
 - > 2 years for a knee surgery
 - > Is the dosage increasing too quickly
 - How many doctors are prescribing the opioid
 - > Does your customer get a new doctor every few months?



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Opioids: Are they Safe?

- > Doctors may prescribe the opioids; but pharmacists are the most knowledgeable about the affects of the drugs
 - You must be aware of the problem and attempt to minimize the problem as much as possible
- > If pharmacist fills a prescription knowing it is excessive or not appropriate for the customers- what is their responsibility?
 - Criminal liability?
 - Civil liability?
 - Moral obligation?



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Opioids: Are they Safe?

- > Are opioids safe?
 - If the use of LEGAL opioids are properly managed, they can be a very effective medicine
 - > But the risk of addiction is always there
 - Fentanyl use must be closely monitored even with legitimate use
- > We all must work together to reduce this dangerous problem



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