



Fentanyl

One of the main culprits behind the opioid epidemic in the United States are synthetic opioids like fentanyl. Individuals in the last few years have increasingly turned to synthetic opioids, such as fentanyl, which is especially lethal. According to U.S. law enforcement and drug investigators, the vast

majority of fentanyl in the United States is from China. Fentanyl is cheap to produce, extremely potent and can be shipped easily. As fentanyl variants are produced in laboratories in China, they are then shipped to markets around the world, including the U.S., in powdered form. Some law enforcement officials have labeled the drug “manufactured death” because it is cheaper and up to 50 times more potent than heroin. Fentanyl-related deaths are largely caused by the drug’s illegal use, though it can also be prescribed as a painkiller. The Centers for Disease Control and Prevention (CDC) notes that heroin and fentanyl are most often used in combination with other drugs, such as cocaine, or alcohol, which increases the risk of overdose. The U.S. government recently warned that a surge in cocaine deaths can be attributed to the drug being laced with lethal levels of fentanyl.

According to a December 2018 Centers for Disease Control and Prevention (CDC) report, fentanyl is now the most commonly used drug involved in drug overdoses. The latest numbers from the US Centers for Disease Control and Prevention’s National Center for Health Statistics say that the rate of drug overdoses involving the synthetic opioid skyrocketed by about 113% each year from 2013 through 2016. According to that report which analyzed death certificates for drug overdose deaths between 2011 and 2016, fentanyl was involved in nearly 29% of all overdose deaths in 2016. In 2011, fentanyl was involved in just 4% of all drug fatalities. At the time, oxycodone was the most commonly involved drug, representing 13% of all fatal drug overdoses.

The sharp rise in deaths due to synthetic opioids like fentanyl is truly alarming. According to CDC Wonders, the sharpest increase in drug overdose deaths were related to fentanyl and fentanyl analogs (which are similar in chemical structure to fentanyl) with more than 28,400 overdose deaths. According to 2018 published figures from the Centers for Disease Control and Prevention, there were 70,237 deaths from drug overdoses across the United States in 2017, a record high. Between 2016 and 2017, the overall rate of overdose deaths increased 9.6% while the death rate from synthetic opioids such as fentanyl grew by a shocking 45%. The deaths are being driven by synthetic opioids, primarily fentanyl, sold on the street, often combined with heroin or cocaine, with or without the users’ knowledge.

In New Jersey in 2013, fentanyl and other synthetic analogues of it were involved in just 3.5% of drug deaths. In 2017, fentanyl played a role in the death of nearly 1,400 people, or about 50% of the state’s death toll. Of the 147 people

who died of drug overdoses in Hudson County in 2017, fentanyl was involved 69 times - a 102 percent increase from the year before. Prosecutors and law enforcement officials state that the death rate from fentanyl in 2018 was markedly higher.

Fentanyl, a Schedule II narcotic under the United States Controlled Substances Act of 1970, is a potent synthetic opioid drug approved by the Food and Drug Administration for use as an analgesic (pain relief) and anesthetic. It is approximately 100 times more potent than morphine and 50 times more potent than heroin as an analgesic. The two types of fentanyl are Pharmaceutical fentanyl, primarily prescribed to individuals who are physically tolerant to other opioids to manage severe pain, such as with cancer and end-of-life palliative care. Non-pharmaceutical fentanyl is frequently referred to as illicitly manufactured fentanyl (IMF). IMF is often mixed with heroin and/or cocaine or pressed into counterfeit pills—with or without the user's knowledge. Fentanyl was first developed in 1959 and introduced in the 1960s as an intravenous anesthetic. It is legally manufactured and distributed in the United States. Licit fentanyl pharmaceutical products are diverted via theft, fraudulent prescriptions, and illicit distribution by patients, physicians, and pharmacists.

Like heroin, morphine and other opioid drugs, fentanyl works by binding to the body's opioid receptors, which are found in areas of the brain that control pain and emotions. When opioid drugs bind to these receptors, they can drive up dopamine levels in the brain's reward areas, producing a state of euphoria and relaxation. After taking opioids many times, the brain adapts to the drug, diminishing its sensitivity, making it hard to feel pleasure from anything besides the drug. When individuals become addicted, drug seeking and drug use take over their lives.

In its prescription form, fentanyl is known by such names as Actiq[®], Duragesic[®], and Sublimaze[®]. When prescribed by a physician, fentanyl is often administered via injection, transdermal patch or in lozenges. However, the fentanyl and fentanyl analogs associated with recent overdoses are produced in laboratories and sold in the following forms: as a pill, powder, spiked on blotter paper, spray, or under-the-tongue film mixed with or substituted for heroin, or as tablets that mimic other less potent opioids. Time-release formulas of fentanyl come in gel patches or lollipops. Individuals can swallow, snort or inject fentanyl, or they can put blotter paper in their mouths so that fentanyl is absorbed through the mucous membrane. In many cases, individuals

unknowingly take fentanyl when mixed with other drugs like heroin or cocaine or as counterfeit prescription pills. Injectable forms are found in hospital settings. When prescribed by a doctor, fentanyl can be given as a shot, a patch that is put on a person's skin, or as lozenges that are sucked like cough drops.

The illegally used fentanyl most often associated with recent overdoses is made in labs. This synthetic fentanyl is sold illegally as a powder, dropped onto blotter paper, put in eye droppers and nasal sprays, or made into pills that look like other prescription opioids. The street-produced version of fentanyl is typically in powder form. The street names/slang terms for fentanyl are Apace, China Girl, China Town, China White, Dance Fever, Friend, Goodfellas, Great Bear, He-Man, Jackpot, King Ivory, Murder 8, Poison and Tango & Cash.

Fentanyl is relatively cheap to produce, increasing its presence in illicit street drugs. Some drug dealers are mixing fentanyl with other drugs, such as heroin, cocaine, methamphetamine, and MDMA. This is because it takes very little to produce a high with fentanyl, making it a cheaper option. Dealers use it to improve their bottom line. According to a report from the Office of National Drug Control Policy, evidence suggests that fentanyl is being pressed into pills that resemble OxyContin, Xanax, hydrocodone and other sought-after drugs, as well as being cut into heroin and other street drugs. A loved one buying illicit drugs may think they know what they're getting, but don't realize they might contain fentanyl as a cheap but dangerous additive. Individuals might be taking stronger opioids than their bodies are used to and can be more likely to overdose.

Fentanyl's effects on the body resemble those of heroin and produces effects such as relaxation, euphoria, pain relief, tolerance, addiction, constipation, sedation, confusion, drowsiness, dizziness, nausea, vomiting, urinary retention, pupillary constriction, respiratory depression, respiratory arrest, unconsciousness, coma, and death. Because of its potency, fentanyl use leads to drug addiction, the most severe form of a substance use disorder (SUD). An individual taking prescription fentanyl as instructed by a doctor can experience dependence, which is characterized by withdrawal symptoms when the drug is stopped. These symptoms include muscle and bone pain, sleep problems, diarrhea and vomiting, cold flashes with goose bumps, uncontrollable leg movements, and severe cravings. They can be extremely uncomfortable and are the reason many people find it so difficult to stop taking fentanyl. A person can be dependent on a substance without being addicted, but dependence can

sometimes lead to addiction. People addicted to fentanyl who stop using it can have severe withdrawal symptoms that begin as early as a few hours after the drug was last taken.

An individual can overdose on fentanyl. An overdose occurs when a drug produces serious adverse effects and life-threatening symptoms. Overdose effects may result in stupor, changes in pupillary size, cold/clammy skin, cyanosis, coma, and respiratory failure when an individual's breathing can slow or stop. This can decrease the amount of oxygen that reaches the brain, a condition called hypoxia. Hypoxia can lead to a coma and permanent brain damage, and even death. The presence of triad of symptoms such as coma, pinpoint pupils, and respiratory depression are strongly suggestive of opioid poisoning.

As previously mentioned, some drug dealers mix the cheaper fentanyl with other drugs like heroin, cocaine, MDMA and methamphetamine to increase their profits, making it often difficult to know which drug is causing the overdose. Even if someone could tell a product had been laced with fentanyl, it may not prevent their use. Some individuals claim they can tell the difference between product that has been laced with fentanyl and that which hasn't, but overdose statistics would say otherwise. Some harm reduction programs are offering test strips to determine whether heroin has been cut with fentanyl, but that knowledge may not be much of a deterrent to a loved one who just spent their last dollar to get high.

Calling 911 is the first step to enable the individual to receive immediate medical attention from any suspected drug overdose. Once medical personnel arrive, they will administer naloxone if they suspect an opioid drug is involved. Naloxone is a medicine that can treat a fentanyl overdose when given right away. Naloxone is available as an injectable (needle) solution, a hand-held auto-injector (EVZIO®), and a nasal spray (NARCAN® Nasal Spray). It works by rapidly binding to opioid receptors and blocking the effects of opioid drugs. In the case of a fentanyl-related overdose the help of emergency responders, who will have more naloxone, is critical. Since fentanyl is stronger than other opioid drugs like morphine, the standard 1-2 doses of naloxone may not be enough. Individuals who are given naloxone should be monitored for another two hours after the last dose of naloxone is given to make sure breathing does not slow or stop.

Some states have passed laws that allow pharmacists to dispense naloxone without a personal prescription. This allows friends, family, and others in the community to use the auto-injector or nasal spray versions of naloxone to save someone who is overdosing. Individuals who are or know someone at risk for an opioid overdose can be trained on how to give naloxone and can carry it with them in case of an emergency.

There are medicines being developed to help with the withdrawal process for fentanyl and other opioids. The US Food and Drug Administration (FDA) has approved lofexidine, a non-opioid medicine designed to reduce opioid withdrawal symptoms. Also, the NSS-2 Bridge device is a small electrical nerve stimulator placed behind the person's ear, that can be used to try to ease symptoms for up to five days during the acute withdrawal phase. In December 2018, the FDA cleared a mobile medical application, reSET[®], to help treat opioid use disorders.

Like other opioid addictions, medication with behavioral therapies has been shown to be effective in treating people with a fentanyl addiction. Buprenorphine and methadone work by binding to the same opioid receptors in the brain as fentanyl, reducing cravings and withdrawal symptoms. Another medicine, naltrexone, blocks opioid receptors and prevents fentanyl from having an effect. Individuals can discuss treatment options with their health provider.

Behavioral therapies for addiction to opioids like fentanyl can help individuals modify their attitudes and behaviors related to drug use, increase healthy life skills, and help them stick with their medication. Some examples include the following:

- Cognitive behavioral therapy, which helps modify the individual's drug use expectations and behaviors, and effectively manage triggers and stress**
- Contingency management, which uses a voucher-based system giving patients "points" based on negative drug tests, affording individuals the use of points to earn items that encourage healthy living**
- Motivational interviewing, which is a patient-centered counseling style that addresses a patient's mixed feelings to change**

Attached are two information pieces on Fentanyl to review. Please network this information and media release to your personal and professional contacts.

For more information on Fentanyl, visit the National Institute on Drug Abuse at www.drugabuse.gov/publications/drugfacts/fentanyl or the United States Drug Enforcement Agency (DEA) at www.dea.gov/factsheets/fentanyl.

For more information on Naloxone, visit www.drugabuse.gov/related-topics/opioid-overdose-reversal-naloxone-narcan-evzio.

The Bergen County Department of Health Services Office of Alcohol and Drug Dependency (OADD) is committed to the prevention and treatment of substance use and substance abuse disorders. For more information on available services, contact 201-634-2740 or visit www.co.bergen.nj.us/addiction-services.

Information for this release was researched through the websites of the National Institute on Drug Abuse, CDC, and United States Drug Enforcement Agency (DEA).

Be well.

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