

Fentanyl Abuse: Top 11 Facts About This Potent and Deadly Opioid

[History](#) | [Forms & Uses](#) | [Abuse & Overdose Deaths](#) | [How it's Abused](#) | [DEA Classification](#) | [Compared to Heroin & Others](#) | [Why So Deadly](#) | [Carfentanil](#) | [Withdrawal](#) | [Celebrity Deaths](#) | [Naloxone \(Narcan\)](#)

- **Generic name:** fentanyl (FEN ta nil)
- **Brand names:** Abstral*, Actiq, Duragesic, Fentora, Lazanda, Innovar*, lonsys*, Onsolis*, Sublimaze, Subsys (*brand discontinued)
- **Street names:** Apache, China Girl, China Town, Dance Fever, Friend, Goodfellas, Great Bear, He-Man, Jackpot, King Ivory, Murder 8, and Tango & Cash

Dangerous prescription opioids are no longer just limited to Oxycontin or Vicodin. As reported by the U.S. Centers for Disease Control (CDC) in 2018, **fentanyl** is now considered the number one drug leading to opioid overdose deaths in America.

2019 Report: CDC: Fentanyl Overdose Deaths Are Soaring

Fentanyl is a legal prescription drug used for pain control during surgery and for chronic or breakthrough cancer pain. It's also being manufactured illegally and sold for its euphoric effects. **Street drugs** like heroin, cocaine and methamphetamine are being laced with this opioid, as are counterfeit drugs made to look like the real ones, like Vicodin or Xanax. It's an extremely potent and rapidly fatal substitute for heroin.

- Fentanyl works in the brain to block pain and is in the same class of drugs as morphine or hydrocodone but is about 50 to 100 times more potent.
- Just 2 to 3 milligrams of this drug can kill a person. It blocks opioid receptors and its most dangerous side effect -- like other opioids -- is respiratory depression, which can quickly lead to coma and death.
- Users may not realize the street drug they are buying from a dealer contains this potentially lethal compound.
- Over 70,230 drug overdose deaths occurred in the United States in 2017. Between 2013 and 2016, overdose deaths involving this drug increased by 113% annually.
- In 2017 the steepest increase in drug overdose deaths occurred with this opioid and related analogs at over 28,400 deaths, according to the CDC.

1. Fentanyl history

Timeline of fentanyl development in the U.S.

- **1959-1960:** First developed by Janssen as an intravenous (IV) surgical anesthetic.
- **1968:** Fentanyl citrate (Sublimaze) is FDA-approved and enters general medical use in the United States.
- **1990:** Duragesic, an extended-release transdermal film is developed. This widely used product is a long-acting fentanyl patch applied to the skin to treat severe, ongoing pain, such as breakthrough cancer pain in patients who have already used and are tolerant to opioids.

- **1998:** Actiq, an oral transmucosal lozenge is approved to treat breakthrough cancer in patients who are opioid tolerant. Actiq is sometimes referred to as an Actiq or fentanyl "lollipop".
- **2006:** Fentora, a effervescent buccal tablet is FDA-approved for opioid-tolerant cancer patients. Ionsys, an iontophoretic transdermal system was also approved in 2006 but was voluntarily removed from the market in 2017.
- **2009:** Onsolis, a buccal film (dissolved between the cheek and gum) was approved in 2009 for cancer pain, but was discontinued in 2011.
- **2011:** Abstral sublingual tablets and Lazanda intranasal spray are approved, both for breakthrough pain in opioid-tolerant cancer patients. Abstral no longer available in US market.
- **2012:** Subsys, a sublingual spray formulation is approved for the treatment of breakthrough cancer pain in opioid-tolerant patients.

2. Formulations and uses of fentanyl

Many approved prescription dose forms are available: injection, transdermal patch, oral sublingual tablet or transmucosal lozenge, and nasal or oral spray. **Approved generics** of some formulations are available.

Table 1. Fentanyl Brands in the U.S.

Brand	Strengths* / Dosage Form	Manufacturer
Abstral (brand product discontinued)	100, 200, 300, 400, 600, 800 mcg sublingual (under the tongue) tablet	Sentynl Therapeutics, Inc
Actiq	200, 400, 600, 800, 1200, 1600 mcg oral transmucosal lozenge ("lollipop")	Cephalon, Inc.
Duragesic	12, 25, 50, 75, 100 mcg/hour transdermal system (fentanyl skin patch)	Janssen Pharmaceuticals, Inc.
Fentora	100, 200, 400, 600, 800 mcg effervescent buccal tablet (placed in cheek/gum area)	Cephalon, Inc.
Ionsys (discontinued)	40 mcg/activation iontophoretic transdermal system	The Medicines Company
Lazanda	100, 300, 400 mcg/spray nasal spray	Depomed, Inc.
Onsolis (discontinued)	200, 400, 600, 800, 1200 mcg buccal film (placed in cheek/gum area)	BioDelivery Sciences International, Inc.
Sublimaze	50 mcg/mL (base form) injection	Akorn, Inc.
Subsys	100, 200, 400, 600, 800, 1200, 1600 mcg sublingual (under the tongue) spray	Insys Therapeutics, Inc.

*mcg = microgram; mcg/hr = micrograms per hour; the chart does not list recommended doses, dose frequency, or length of time to use the medication. Doses are not equivalent between different dose forms and substitution may be lethal. Only patients who are considered opioid-tolerant (have received certain amounts of opioids within the last week) should use fentanyl. Follow your doctor's dosing exactly.

Fentanyl uses

- The oral transmucosal lozenges (Actiq) the effervescent buccal tablets (Fentora), the nasal spray (Lazanda), and the sublingual spray (Subsys) are used for the management of breakthrough cancer pain in patients who have already received opioid medication (are opioid-tolerant) for their underlying persistent pain.
- Duragesic, the transdermal patch, is used for chronic pain in patients who are opioid tolerant and who require long-term opioid analgesia around the clock and for which other treatments are inadequate.
- Injections (Sublimaze) are administered intravenously (IV) or intramuscularly (IM) by a trained healthcare provider for surgical analgesia and anesthesia uses.

Opioid-tolerant patients have already received a therapeutic dose of an opiate for certain a period of time.

Read the **Patient Medication Guide** that accompanies your medication each time you receive a new prescription.

Certain oral forms are only available through a program called the Transmucosal Immediate Release Fentanyl (TIRF) Risk Evaluation and Mitigation Strategy (REMS) Access program. To receive these medications you and your doctor will need to participate in this program and use a pharmacy that is part of the **TIRF REMS Access program**.

Related: FDA Fell Short in Preventing Fentanyl Abuse Crisis, Report Claims

3. Fentanyl abuse and overdose deaths

While fentanyl can be a useful prescription analgesic, it is now considered the number one opioid killer due to overdose deaths as reported by the U.S. Centers for Disease and Control (CDC) in 2018. Other opioids have held this dubious position; in 2011, **oxycodone (Oxycontin)** held the top spot leading to opioid overdose deaths, and from 2012 until 2015 it was **heroin**.

It is especially dangerous because it is roughly 50 times more potent than heroin and 100 times more potent than morphine and acts quickly due to rapid uptake in the brain.

Duragesic, the patch, can be fatal because high amounts of the drug are retained in the patch after use. The patch can fall off and lead to an overdose if touched. Deaths in children due to accidental exposure have occurred. To lower this risk for children and pets, the FDA states that used patches require proper disposal after use -- fold the patch, sticky sides together, and flush it down the toilet right away.

Related: How to Safely Dispose of Your Old Medications

Fentanyl deaths in the U.S.

Among an estimated 70,200 drug overdose deaths in 2017, the largest increase was related to fentanyl and its analogs with more than 28,400 overdose deaths. However, these numbers are likely underreported.

In a 2018 report from the CDC, the drugs most commonly involved in drug overdose deaths during 2011 to 2016 included fentanyl, heroin, oxycodone, and cocaine. Each year from 2013 to 2016, the rate of deaths due to fentanyl or it's analogs doubled (0.6, 1.3, 2.6, and 5.9 per 100,000 in 2013, 2014, 2015, and 2016, respectively).

Table 2. Top 10 Fentanyl Overdoses Ranked by State, DEA 2018

State	Overdose Rate*
New Hampshire	30.3

State	Overdose Rate*
West Virginia	26.3
Massachusetts	23.6
Ohio	21.1
District of Columbia (DC)	19.2
Maryland	17.8
Rhode Island	17.8
Maine	17.3
Connecticut	14.8
Kentucky	11.5

*Table 2: Overdose rate = fentanyl-involved overdose deaths per 100,000 people.

- Law enforcement seizures with this drug show that the states of Ohio, Massachusetts, and New Hampshire have encounter rates that are extremely high (>20 per 100,000 state residents).
- Increases have been seen in many states across the nation, especially the midwest and northeast. Pennsylvania, New York, New Jersey, Florida and Illinois are other affected states; however, all states are vulnerable.
- While heroin is often laced with fentanyl, in 2017, multiple deaths in Florida were linked to fake **Xanax (alprazolam)** pills containing the opioid. Fentanyl has also shown up in pill form on the street disguised to look exactly like **Vicodin (hydrocodone-acetaminophen)** tablets.

The China and Mexico connection

According to the DEA, illegally manufactured fentanyl it is being produced in China and Mexico and crossing over the U.S. border or coming in via the mail. Online pharmacies from China are also selling this illegal substance. Many of the pills found on the street are made in illegal tableting and encapsulating machines bought in China.

Fentanyl is easy to make, less bulky, and easier to ship than heroin. According to the DEA, one kilogram can be bought in China for \$3,000 to \$5,000 and yields over \$1.5 million in illicit sales in the U.S.

Do not buy drugs from unverified online pharmacies whether they are foreign or in the states. As noted by the FDA, at any one time there are thousands of illegal websites offering counterfeit drugs to Americans.

4. Fentanyl use and abuse

Fentanyl side effects (prescription use)

There are many side effects with fentanyl and they can be similar whether the drug is being used legally with a prescription or taken illegally. The risk for detrimental effects may be reduced with a prescription because doses are being selected and monitored by a healthcare provider and you will receive information and education about its use.

However, even if you take your dose correctly as prescribed by your doctor you are at risk for opioid addiction, abuse, and misuse that can lead to death. Call your healthcare provider or emergency responders (911) immediately if you have any severe symptoms.

Common side effects:

- constipation and black, tarry stools
- nausea
- sleepiness or feeling tired
- vomiting
- headache
- dizziness
- stomach pain
- low red blood cell count
- swelling of the arms, hands, legs and feet
- decreased blood pressure
- light-headedness or fainting

Serious side effects:

- extreme drowsiness
- heart rhythm changes
- chest pain
- stiff muscles
- trouble walking
- high body temperature
- swelling of the face, throat, or tongue
- confusion
- agitation
- unconsciousness
- respiratory depression (slowed breathing)
- respiratory arrest (breathing stopped)

These serious reactions are life-threatening and may mean that an excessive dose has been taken. Contact a healthcare professional or call emergency personnel (911) immediately.

This is not a full list of all possible fentanyl side effects. Call your doctor for more medical advice about side effects.

Related: More Information on Fentanyl Side Effects

Fentanyl effects (abuse)

Fentanyl is abused by:

- injection
- snorting or sniffing
- smoking
- taking it orally
- spiking it onto blotter paper which is then put in the mouth

Fentanyl patches may be abused by removing the contents and then injecting or ingesting the drug. Patches may also be frozen, cut into pieces, or placed under the tongue or in the cheek cavity.

People who abuse this opioid do it for the pleasurable effect. When opioid drugs bind to opioid receptors, they boost dopamine levels in the brain's reward areas, causing a state of euphoria or a "high", with relaxation, calm and drowsiness.

Like other opioids, the use of this drug, whether legal or illegal, is highly addictive. It can lead to a desire for more drug use, an increase in tolerance, and physical and mental dependence on the drug. Abuse and addiction occurs due to its fast action and powerful euphoria.

When fentanyl is being abused the magnitude of the effects are often unpredictable because the amount of drug taken is usually unknown. Some of the expected effects that might occur include:

- intense, short-term high
- relaxation, sedation
- temporary feelings of euphoria
- pain relief
- addiction, dependence
- sweating
- itchiness
- nausea
- slowed respiration
- reduced blood pressure
- fainting
- seizures
- death

Other side effects effects may include: confusion, clammy or blue skin, drowsiness, dizziness, nausea, vomiting, and urinary retention.

The presence of unconsciousness or coma, pupil constriction, and respiratory depression (slowed or absent breathing) together strongly suggests an opioid overdose. **Contact emergency personnel (911) immediately.**

Fentanyl drug interactions

Dangerous drug interactions with fentanyl can occur. Drugs such as other pain medicines, anti-depressant medicines, sleeping pills, anti-anxiety medicines, antihistamines, or tranquilizers may interact and have serious or life-threatening effects. Always tell any doctor you see that you use this drug and have a drug interaction screen before taking any medicine with fentanyl.

Learn More: Review Fentanyl Drug Interactions

5. How does the DEA classify fentanyl?

Legal prescription opioids, with the exception of certain forms of codeine, are classified as schedule II controlled substances per the U.S. Drug Enforcement Agency (DEA).

Illegal opioids, such as heroin, and black market opioid analogs, or other designer opioids are grouped in schedule I of the Controlled Substances Act. Fentanyl analogs are illegal drugs that are chemically related and designed to mimic its opiate-like effects.

Learn More: How to Classify Drugs: The Controlled Substances Act

6. How does fentanyl compare to heroin or other opiates?

Fentanyl is an extremely potent, fully synthetic (man-made) opioid. It is 50 times stronger than heroin and 100 times more potent than morphine. Heroin is derived from morphine, which is a natural substance that is gathered from the opium poppy plant. In contrast, heroin is 2 to 3 times more powerful than morphine. Like heroin, it has a quick onset of action and one dose can be fatal.

Most other opioids are naturally-occurring opiates (codeine, morphine) or are semi-synthetic opiates (oxycodone, hydrocodone) partially derived from opium and part man-made. They are less potent but can still be deadly due to respiratory depression (slowed breathing) if recommended doses are exceeded.

Compared to other prescription opioids, the risk of death is much higher with the abuse of fentanyl due to its relative potency. Errors during illicit production can occur due to the small microgram dose.

In fact, fentanyl is so potent that law officers and first responders are warned to wear protective clothing during known raids to prevent inhalation or skin absorption of the drug.

- The DEA has posted a video, **Fentanyl: The Real Deal** to provide recommendations to law enforcement and first responders, as well as these **safety recommendations** for first responders who may encounter the drug.
- Also, review the The National Institute for Occupational Safety and Health (NIOSH) webpage for further details on **Preventing Occupational Exposure to Emergency Responders**. NIOSH is a division of the CDC.

7. Why is fentanyl so deadly?

In the outpatient setting for control of cancer pain, fentanyl is only given to patients who are “opioid-tolerant” and have already been taking around-the-clock opioids for severe cancer pain. It’s a strong medication, but when monitored and used as directed by your physician, it can effectively relieve severe pain, and it has an important use in medicine.

However, when abused or taken in an overdose, this opioid can quickly be fatal because it is so potent. When it's used in combination with other central nervous system depressants like opioids or benzodiazepines, the risk of overdose multiplies.

Prescription fentanyl is dosed in micrograms, designated by the abbreviation “mcg”. This is an extremely small dose. Most other drugs are dosed in milligrams (“mg”), for example, 500 mg of acetaminophen (Tylenol) or 25 mg of diphenhydramine (Benadryl).



Source: DEA, 2018. Two milligrams of fentanyl, a lethal dose in most people.

What is a microgram?

- One gram is equal 1,000 milligrams.
- One milligram equals 1,000 micrograms (mcg).
- So, one microgram is equal to one-thousandth of a milligram or one-millionth of a gram.
- Put another way, one gram is equal to 1,000,000 micrograms.

It's hard to imagine that a drug dose could be so small. And it's easy to see how an error could be made in an illegal lab lacing fentanyl into heroin, cocaine, methamphetamine, or fraudulent prescription tablets. And honestly, do you think dealers really care about their calculations? One 2 milligram dose of fentanyl is enough to kill an adult.

This opioid is not typically identified in routine urine drug testing that occurs in the emergency setting. A delay in identifying the drug responsible for the overdose may hinder appropriate treatment, like adequate doses of naloxone.

Another reason it is so deadly is that many people are simply unaware of this ongoing threat on the streets. Unsuspecting people are taking adulterated drugs that are laced with fentanyl and becoming the next accidental overdose victim.

Fentanyl test strips

Fentanyl test strips are now available that allow those who abuse street drugs like cocaine and heroin to test if their drugs are laced with this product. Once the strip is dipped into a sample of the drug, the results indicate if it's present. Some U.S. programs that distribute clean syringes are also giving out the test strips.

However, these strips aren't always 100% effective. False positives can occur, and the strips do not quantify the amount of drug that may be present. Also, these strips will not identify newer analogs or other lethal chemicals. Plus, the test is surrounded by controversy: some worry these tests create a false sense of security or justify the use of illegal drugs. It also assumes the user is acting rationally and will avoid use of a drug if it is detected, but this may not always be the case.

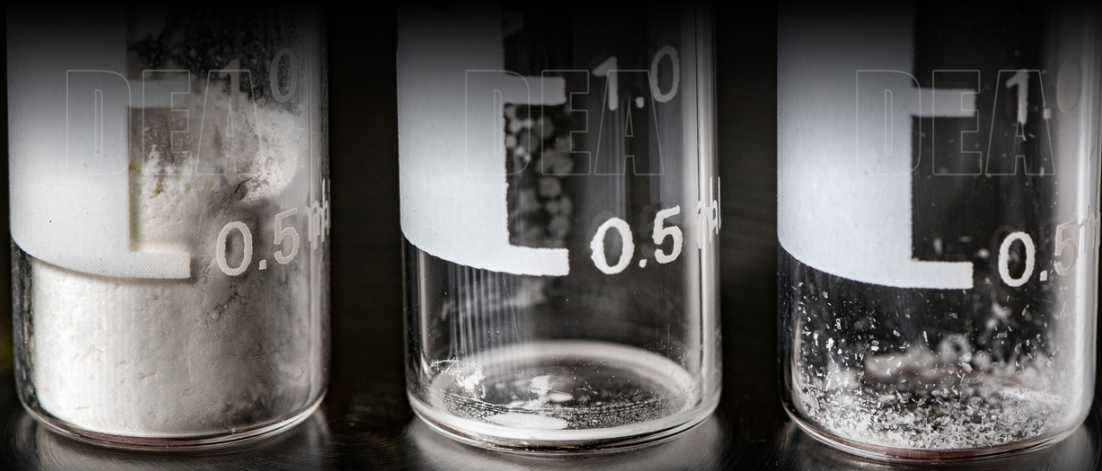
8. Carfentanil: Fentanyl's more dangerous cousin

While fentanyl is one of the most potent opioids in medicine, it's not the most potent opioid out there.

An analog known as carfentanil is used exclusively as a tranquilizer in large animal veterinary medicine and is estimated to be 10,000 times more potent than morphine. Carfentanil is often used to tranquilize elephants that can weigh over 15,000 lbs (6800 kg). It has NO medical use in humans.



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



Heroin

Carfentanil

Fentanyl

Source: DEA, 2018. Lethal doses of heroin, carfentanil, fentanyl

Today, this dangerous drug is appearing on the streets, too. Like fentanyl, carfentanil is being cut into other illicit drugs such as heroin or packaged in pills. Street carfentanil first appear in the early 2000s, and there has been an escalation in cases since 2016.

- In 2017, carfentanil was linked to fatal overdoses in several states, including Illinois, Colorado, Wisconsin, Ohio, Maryland and Minnesota.
- In some cases, heroin was laced with carfentanil, leading to the death of unsuspecting users.
- It has been detected in pills received from patients who presented to emergency rooms during an overdose.
- A tiny, almost invisible amount of the drug is deadly.
- Multiple doses or continuous infusions of the opioid antidote naloxone are needed to reverse effects, which may or may not be successful.

Emergency responders are at risk too. Contamination through the skin, lungs, or mucous membranes by carfentanil can kill. Emergency personnel must wear full protective gear. According to the New Hampshire State Police Forensic Lab, when carfentanil is handled someone needs to be on standby with the naloxone antidote.

Non-medical and powerful fentanyl analogs such as acetylfentanyl, acrylfentanyl, furanylfentanyl and ocfentanyl are also fully synthesized and considered illegal. The DEA has identified at least 15 other related compounds. None of the illicitly manufactured analogs are routinely detected in emergency settings because specialized toxicology testing is required. These analogs have been found in counterfeit drugs as reported by the FDA.

9. Fentanyl withdrawal symptoms

This drug, like other opioids can lead to dependence and withdrawal symptoms whether it is being used legitimately for pain or recreationally. Quickly stopping the drug or even just lowering the dose may lead to withdrawal symptoms.

If you are using medically supervised fentanyl, do not stop it abruptly ("cold turkey") as this will lead to an opioid withdrawal syndrome. Your doctor will direct you on a careful and slow "taper" of the medication. Tapering is the slow removal of the drug from your body over a set period of time to help lessen the unpleasant effects. If needed, a treatment clinic can start and monitor your safe withdrawal.

Fentanyl withdrawal symptoms:

- overwhelming desire for the opioid
- anxiety, irritability, depression
- difficulty sleeping, or being tired during the day
- nausea and vomiting
- stomach cramps and diarrhea
- sweating or shivering
- muscle aches
- shivering or goosebumps
- yawning
- runny nose and watery eyes

Withdrawal signs and symptoms may begin within 6 to 30 hours after you stop using fentanyl. Symptoms tend to peak at around 36 to 72 hours. By about day 5 to 8 the worst symptoms should begin to subside, but some symptoms, such as a lower tolerance to pain, sleep disturbances, or anxiety, can continue for months.

Once you have stopped using fentanyl, you are at a much greater risk of fatal overdose because your opioid tolerance has decreased. Speak with your doctor or clinic about how to manage cravings that may occur after you have tapered your dose.

Related: Opioid Use Disorder: These Treatments Are Available, Now

There is also a free, national hotline that can be used to help those with drug addiction needs.

- Call 1-800-662-HELP (4357) for the hotline.
- Callers can get help navigating treatment, finding centers, and directing finances.
- It is funded by the US Substance Abuse and Mental Health Services Administration (SAMHSA).

10. Celebrity deaths linked to fentanyl

Celebrities -- especially of the American music industry -- have been hit hard by the opioid epidemic. Several famous musicians have been lost in recent years to **drug overdoses** that included fentanyl. Due to the physical demands of performing, many celebrities deal with chronic, ongoing pain and may be prescribed potent pain medication.

- Mac Miller, an American rapper, singer, and record producer suffered an accidental overdose of fentanyl, cocaine, alcohol, and other prescription drugs on Sept. 7, 2018 at age 26.
- Tom Petty, a beloved American singer and songwriter also accidentally overdosed on October 2, 2017 on a mix of medications including fentanyl and oxycodone. Tom was known to be treating pain due to a hip fracture, and had just come off of a 53 date concert tour. He was 66.
- Prince, also an iconic American singer, songwriter and musician died in 2016 at the age of 57 due to an accidental fentanyl overdose.
- Anthony Durante, a professional wrestler, experienced an accidental oxycodone or fentanyl overdose in 2003 at age 36.

It's important to remember many people, including celebrities, first start these medications with a valid, legal prescription. As stated by the Petty family, "Many people who overdose begin with a legitimate injury or simply do not understand the potency and deadly nature of these medications."

What must we do? Detailed education of the dangerous nature of these types of medications should be of the highest priority for every healthcare provider and their patients, families, and caregivers. Alternative treatments need to be explored for patients with a history of substance abuse, depression, or other factors that may predispose to overdose. Families, parents, children, and teens - especially kids going off on their own to college - should be engaged in early and ongoing discussions with parents and healthcare providers about the danger of these street drugs and their fatal nature. Naloxone should be available for anyone who is prescribed a potent opioid or who is known to be abusing opioids.

Learn More: CDC Guideline for Prescribing Opioids for Chronic Pain

11. Naloxone (Narcan) use for a fentanyl overdose

Naloxone, often sold under the brand name **Narcan**, is a safe and easily accessible medication used to reverse an opioid overdose and help restore breathing by blocking or reversing the opioid effects. However, use of naloxone for a fentanyl or carfentanil overdose from adulterated pills or heroin off the street paints a different picture. These potent drugs mean that multiple bolus injections of naloxone or even continuous infusions may be needed to reverse the opioid action.

A 2017 case report published in *Academic Emergency Medicine* detailed an outbreak of fentanyl overdoses in Northern California.

- Analysis of the generic hydrocodone-acetaminophen pills (brand examples: Lortab, Lorcet, Vicodin, Norco) surrendered at the emergency department revealed fentanyl in amounts of 600 to 6,900 mcg per pill. One patient admitted to using as little as one and one-half pill purchased from the street.
- All 18 patients tested positive for the drug. The mean serum fentanyl concentration of 52.9 ng/mL was considerably higher than therapeutic concentrations ranging from 0.63 to 2 ng/mL.
- Four of 18 patients required continuous intravenous (IV) naloxone infusions ranging from 26 to 39 hours for the toxic effect to be reversed. One patient had a recurrence of fentanyl toxicity and respiratory arrest 8 hours after the naloxone was stopped and required further naloxone. One patient died.
- With large overdose outbreaks, the authors note that hospital supplies of naloxone can be quickly depleted and may require emergency refurbishments.
- Because the duration of respiratory depression produced by fentanyl may last longer than the reversal action of naloxone, monitoring for return of respiratory depression should be maintained in the emergency setting.

Further examination of the illicit pills revealed that they were formulated to be identical in appearance to **generic prescription hydrocodone-acetaminophen tablets**. At the time of the publication, there had been 56 overall cases and 15 fatalities in a single California county.

Another important take-away to consider: even though an **online pill identifier** might suggest that a pill bought on the street is a legitimate prescription pill because it has the same color and imprint code, this may NOT be true. Illegal drug manufacturers are now creating fake contaminated pills to look exactly like the real ones. You cannot tell if a pill bought off of the street contains a deadly dose of any drug just by looking at it.

Table 3. Naloxone products

Product Name	Strength / Dose form*	Manufacturer
Narcan injectable (brand discontinued); naloxone injection (generic)	0.4 mg/mL, 1 mg/mL, 2 mg/2ml Injection (IV, IM, SC) - available in vial or syringe	Various
Narcan Nasal Spray (naloxone nasal spray)	2 mg, 4 mg per spray Nasal spray, metered dose	Adapt Pharma, Inc
Evzio (naloxone)	2 mg/0.4mL Autoinjector (IM, SC)	Kaleo, Inc.

- People at risk for an overdose, or their family members or friends, are encouraged to have naloxone on hand in case of an emergency. It is available in pharmacies and can be acquired without a prescription in most U.S. states. Speak to your doctor or pharmacist or doctor about this *before* an emergency occurs.
- If you believe someone has overdosed, administer naloxone, and then immediately call emergency personnel, such as 911. Learn how to use the naloxone before it is needed.
- Naloxone can be life-saving for patients who overdose on narcotics, although in patients dependent upon opioids, it can also cause a severe withdrawal effect.

- If symptoms return, give another dose of naloxone in 2 to 3 minutes. Larger or repeat naloxone doses may be required until emergency responders arrive.

Learn More on How to Use Naloxone: Do You Know Your Naloxone? How to Save a Life

See Also

- **Bath Salts**
- **Cannabis: Uses, Effects and Safety**
- **Cocaine**
- **Devil's Breath**
- **Ecstasy**
- **GHB**
- **Gray Death**
- **Hashish (Hash)**
- **Heroin**
- **Ketamine**
- **Kratom**
- **Krokodil**
- **LSD**
- **Marijuana**
- **MDMA (Ecstasy, Molly)**
- **Mescaline (Peyote)**
- **Opium**
- **PCP (Phencyclidine)**
- **Psilocybin (Magic Mushrooms)**
- **Quaaludes**
- **Rohypnol**
- **Speed (methamphetamine)**
- **Synthetic Cannabinoids (Synthetic Marijuana, Spice, K2)**
- **TCP (Tenocyclidine)**
- **U-47700 (Pink)**

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Further information

Always consult your healthcare provider to ensure the information displayed on this page applies to your personal circumstances.