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Are Opioids and Opiates Different?

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Widespread opioid and opiate use in the United States is a serious national public health crisis, according to the National Institute on Drug Abuse (NIDA). The problem not only makes headlines but also creates a heavy emotional and economic burden. The devastating consequences of the opioid epidemic include not only overdose deaths, but also an increased number of newborns with opioid withdrawal symptoms. Every day, 128 people in the U.S. die from an opioid overdose.

While news reports often use the terms opioid and opiate synonymously, there is a subtle but important distinction between the two.

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Opioid vs Opiate: What's the Difference?

The term *opiate* refers to any drug that is derived from the naturally occurring opium alkaloid compounds that are found in the poppy plant. Types of opiate drugs include opium, codeine, morphine, and opium.

The term *opioid*, on the other hand, is broader and refers to any drug synthesized from an opiate that produces similar effects. Examples of opioid drugs include heroin, hydrocodone (Vicodin), oxycodone (Percocet), and methadone. An opioid is any substance, either natural, synthetic, or partially synthetic, that binds to opioid receptors in the brain and produces opiate-like effects.

> This means that while all opiates are opioids, not all opioids are opiates.

Many organizations use the term opioids for both opiates and opioids. It is also important to note that while opiates are derived from naturally occurring substances, this does not make them safer than synthetic opioids. All opioids have the potential for dependence and overdose.

Types

The three main types of opioid drugs are opiates, synthetic opioids, and semi-synthetic opioids. Semi-synthetic opioids are created in labs from naturally occurring opiates. Synthetic opioids are made completely in a lab.

Opiates

- Opium
- Morphine
- Codeine
- Thebaine

Morphine and codeine are the two of the most commonly known natural opiates. Thebaine is

an opiate alkaloid that is found in small amounts in opium. While it is not used therapeutically as pain medication in its natural state, it is often used to make other synthetic compounds including hydrocodone, hydromorphone, oxycodone, and buprenorphine.

Synthetic Opioids

Fully synthetic opioids are entirely manmade, have a different chemical structure than opiates, but produce opiate-like effects. These include:

- Methadone
- Meperidine (Demerol)
- Tramadol (Ultram)
- Fentanyl (Duragesic, Sublimaze)
- Levorphanol (Levo-Dromoran)

Semi-Synthetic Opioids

Semi-synthetic opioids are synthesized from naturally occurring opiates and have a chemical structure that is similar. These include:

- Heroin
- Hydrocodone (Lortab, Vicodin)
- Hydromorphone (Dilaudid)
- Oxycodone (Percocet, OxyContin)

Synthetic and semi-synthetic opioids are a class of drugs that are made to mimic the effects of natural opiates. These drugs are frequently very potent and, like opiates, can lead to

dependence and overdose.

While synthetic and semi-synthetic opioids are often made by pharmaceutical companies for therapeutic use in the relief of pain, they can also be manufactured and sold illegally.

Fentanyl is one example of a synthetic opioid that has therapeutic use but is often manufactured and sold for illicit use. This drug may be used to treat severe pain, but it is also used illegally and often mixed with other drugs including heroin.

> The CDC reports that in 2018, more than 31,000 people in the U.S. died from synthetic opioids other than methadone.

There are also drugs that act as opioid receptor agonists. While these are also considered opioids, they bind to the receptors without producing euphoric effects. Methadone and buprenorphine are opioid agonists that are used to reduce withdrawal symptoms and drug cravings.

Other drugs, known as opioid antagonists, block opioids from activating the opioid receptors, thus preventing opioids from producing euphoria and other rewarding effects. Naltrexone is one type of opioid antagonist that has been approved to treat opioid use disorder.

The CDC also reports that overdose deaths involving synthetic opioids such as fentanyl and tramadol have surpassed deaths involving heroin as well as commonly prescribed opioids including natural opiates, semi-synthetic opioids, and methadone.

History

So how did the opioid epidemic become such a serious problem? Doctors began prescribing more opioids to treat pain during the 1990s before the risk of dependence and overdose became clear. Rates of opioid overdose began to increase dramatically throughout the 2000s, quadrupling in numbers since 1999.

Unfortunately, these numbers continue to grow. In 2017, an estimated 1.7 million individuals in the U.S. had a substance use disorder related to prescription opioids.

> While the term narcotic was originally used to refer to any psychoactive substance that had euphoric and sleep-inducing effects, the term is now used primarily to refer to opiates and opioids.

Prescription vs Illicit Use

According to the Centers for Disease Control and Prevention (CDC), opioid addiction and overdose deaths in the U.S. decreased by 4% from 2017 to 2018. Of the 67,367 drug overdose deaths in 2018, nearly 70% were opioid-related.

Such deaths are caused by both prescription and illicit opioid use. It is important to note that not everyone who takes prescription opioid painkillers becomes dependent or misuses them, however. Research suggests that between 21% and 29% of people who are prescribed opioid painkillers misuse them. Out of these individuals, an estimated 8% to 12% eventually develop an opioid use disorder, and between 4% and 6% eventually begin using heroin.

While the number of prescriptions for opioid painkillers has declined, illicit use has increased, including the use of heroin.

Whether prescription or illicit, opioid misuse can have serious consequences. The CDC reports that in 2018, 2 out of every 3 drug overdoses were related to opioid use. Accidental drug overdoses have become the leading cause of death for individuals under the age of 50.

A Word From Verywell

While news stories sometimes use the terms opioids and opiates synonymously, there are differences between the two. The term opioid is increasingly used to describe all opiates,

synthetic opioids, and semi-synthetic opioids.

Regardless of type, all opioids have physiological and psychological effects and have the potential to lead to dependence and withdrawal. Most people who take prescription opioids as directed to treat pain will not develop a dependence. Misusing prescription opioids—by taking more than the prescribed dose or by combining the medication with alcohol—can increase the risk of addiction or overdose.

Article Sources

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