

What are opioids?

Prescription opioids are chemicals that are similar to our own endorphins – opioids that our bodies produce naturally to relieve pain. Opioid medications act on opioid receptors in the spinal cord, gastrointestinal tract, and brain to reduce the intensity of pain perception. Opioids affect brain areas that control emotion, which can further diminish the effects of painful stimuli. They have been used for centuries to treat pain, cough, and diarrhea.

The most common modern use of opioids is to treat acute pain. Opioid pain relievers are generally safe when taken for a short time and as prescribed by a doctor. However, since the 1990s, they have been increasingly used to treat chronic pain, despite sparse evidence for their effectiveness when used long term. Indeed, some patients experience a worsening of their pain or increased sensitivity to pain as a result of treatment with opioids, a phenomenon known as hyperalgesia.

Importantly, in addition to relieving pain, opioids also activate reward regions in the brain causing the euphoria—or high—which can increase the potential for misuse and addiction. Chemically, these medications are very similar to heroin, which was originally synthesized from morphine as a pharmaceutical in the late 19th century. These properties confer an increased risk of addiction and overdose even in patients who take their medication as prescribed.

Prescription opioid medications include hydrocodone (e.g., Vicodin®), oxycodone (e.g., OxyContin®, Percocet®), oxymorphone (e.g., Opana®), morphine (e.g., Kadian®, Avinza®), codeine, fentanyl, and others. You may not be familiar with many of these names, but the death of Prince brought awareness to the use of the drug Fentanyl. Hydrocodone products are the most commonly prescribed in the United States for a variety of indications, including dental and injury-related pain. Oxycodone and oxymorphone are also prescribed for moderate to severe pain relief. Morphine is often used before and after surgical procedures to alleviate severe pain, and codeine is typically prescribed for milder pain. In addition to their pain-relieving properties, some of these drugs—codeine and diphenoxyllate (Lomotil®), for example—are used to relieve coughs and severe diarrhea. Opioid also include the **Illegal** drug heroin.