

Opioids and Your Health

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www.msktc.org/SCI/factsheets

SCI Factsheet

This factsheet explains how opioids can affect your health after a spinal cord injury (SCI). It also describes problems to watch for if you take opioids for any reason.

Opioids are drugs naturally found in the opium poppy plant. While some opioids like morphine are made from the plant directly, others such as fentanyl and tramadol are created in a lab. Opioids are often used as medicines because they can relieve pain. However, opioids can also make people feel very relaxed or "high" which is why they are sometimes misused for non-medical reasons. Opioids are addictive. Overdoses and death are more common when people use opioids for non-medical reasons; however, as more and more people have been prescribed opioids for the treatment of severe pain, there has been an increase in overdose deaths reported in persons who are prescribed opioids for pain as well. This factsheet provides an overview of opioids and their effects on your health.



What you need to know about opioids

- Opioids have side effects that can affect your health.
- Many people get used to opioids over time and need higher doses to get the same effect.
- Even if prescribed by a doctor for pain, taking opioids can lead to an opioid use disorder, addiction, or accidental overdose.
- There are effective treatments for opioid use disorders.
- Opioid use is linked to serious risks such as accidental overdose and death.
- Risks of overdose or death go up when opioids are taken at high doses but can occur even with low doses.
- Accidental overdose can occur even if opioids are prescribed for pain.
- There are other treatments other than opioids for pain. Please see the MSKTC fact sheet on Pain after SCI at <https://msktc.org/sci/factsheets/pain>.

The Spinal Cord Injury Model System is sponsored by the National Institute of Disability, Independent Living, and Rehabilitation Research, U.S. Department of Health and Human Services' Administration for Community Living. (See <http://www.msktc.org/sci/model-system-centers> for more information).

Are opioid pain medicines right for you?

People with SCI are more likely to be prescribed an opioid than someone without an SCI. This is because four out of five people with an SCI have ongoing pain. Pain interferes with activities of daily living or work for one third of people with ongoing pain.

Compared with people without an SCI, people with an SCI have an increased risk of having many of the side effects of opioids. They are also at higher risk of having adverse health effects from opioid use.

Due to these risks, doctors recommend only using opioids to treat pain under the following circumstances:

- Severe acute pain from an injury or illness that can't be controlled with other treatments such as non-opioid pain relievers or physical therapy treatment. In this case, opioids should only be used for 1–2 weeks.
- Severe pain from cancer.
- Severe chronic pain (pain that has been present for more than 3 months) when all other non-opioid treatments have been tried and when
 - **For people not already on opioids**, there is both less pain and an improvement in the ability to perform daily activities during a trial of a low to moderate dose of opioids lasting no longer than 3 months. (See below for more dosing details.)
 - **For people on a low or moderate dose of opioids**, there is both less pain and an improvement in the ability to perform daily activities. Also, the benefits of ongoing opioid use outweigh the harms and potential risks.

What is the right opioid dosage for you?

When compared milligram (mg) to milligram, some opioids are stronger than others. To compare opioid doses between different types of opioids, opioid researchers developed a tool to equalize the many different opioid doses into one standard value. This standard value is based on the strength of morphine. It's called a morphine milligram equivalent (MME). Some opioids such as oxycodone and hydromorphone are stronger than morphine when compared on a milligram to milligram basis; these opioids have higher corresponding MME values. Other opioids such as tramadol and codeine are weaker than morphine when compared on a milligram to milligram basis; these opioids have lower corresponding MME values. This is important to identify high-risk opioid doses that can lead to accidental overdose and death.



Opioid doses should not exceed 60 MMEs per day; this is generally regarded as a moderate dose. Low doses are less than 20 MMEs per day. Doctors recommend that people taking more than 60 MMEs per day taper to a dose less than 60 MME per day. If you take opioids for chronic pain, ask your doctor how many MMEs you take each day. If you take more than 60 MMEs each day, ask your doctor about how to safely lower your dose. Do not just lower the dose on your own without guidance from your doctor.

What are the effects of opioid use?

Potential effects of taking opioids include constipation; respiratory depression and sleep apnea; decreased ability to think, confusion, drowsiness, and sedation; bad dreams or hallucinations; and decreased sex drive and other effects of low hormone levels.

Other potential effects of taking opioids include increased pain sensitivity, tolerance to opioid effects, withdrawal if you stop taking them, developing an opioid use disorder or an addiction to opioids, having a child with birth defects if you are pregnant while taking opioids, and dying from an overdose.

For each of these effects, please see the additional information below:

Constipation

Opioids can slow down the muscles in the gut and cause hard stools and constipation. Constipation can cause nausea and vomiting.

People with an SCI usually have a neurogenic bowel. This means that a nerve problem has caused the bowel to stop working normally and slow down.

Having both constipation from opioids and constipation from a neurogenic bowel can make having a bowel movement much more difficult.

Effective treatments for constipation are available. They include over-the-counter laxatives and stool softeners such as senna, polyethylene glycol, and docusate. Other options include medicines that block the effects of opioids on the gut. If you have constipation caused by opioids, ask your doctor what you can do. The factsheet developed by the Model Systems Knowledge Translation Center (MSKTC) on bowel function may also be useful. It can be found at https://msktc.org/sci/Hot-Topics/Bowel_Function.

Respiratory depression and sleep apnea

Using opioids can slow your breathing and make your breaths shallower. This is called respiratory depression. Although this may happen when you are awake or asleep, it's usually more obvious when you're asleep. Sleep apnea is a disorder in which a person has periods of shallow breathing or stops breathing. If you live alone, it may be hard to know if you have sleep apnea. Even though sleep apnea may not wake you up, it will disrupt your sleep; this may make you sleepy during the day, no matter how long you sleep at night. Both opioid use and SCI cause sleep apnea; having both raises the risk of serious health effects.



Without treatment, sleep apnea alone may raise your risk of heart attack, stroke, heart failure, and of having a car crash. The most severe problem caused by respiratory depression is death.

Sleep apnea can be treated in a number of ways. The most common and effective treatment is continuous positive airway pressure (CPAP), which requires wearing a mask that is connected to a machine to help you breathe while you sleep. If you need long-term opioid treatment, ask your doctor about being tested for sleep apnea. The MSKTC factsheet on respiratory health and spinal cord injury may also be helpful. It can be found at <https://msktc.org/sci/factsheets/respiratory>.

Decreased ability to think, confusion, drowsiness, and sedation

Using opioids can affect your ability to concentrate and remember things. It can affect your ability to understand complex information. It can also slow down your reaction time. Opioids can also make you feel drowsy or sleepy.

Stimulant medicines may be used to help you feel less drowsy when taking opioids. If you think opioids are affecting your thinking or level of alertness, ask your doctor what you can do to lessen or stop these side effects.

Bad dreams or hallucinations

Using opioids can make you have bad dreams or see things that aren't there (hallucinations). Using a lower dose or switching to a different opioid may ease these side effects. Talk to your doctor about what you can do to help with bad dreams or hallucinations if you have them.

Decreased sex drive and other effects of lower hormone levels

For men, using opioids can lower levels of a hormone called testosterone. Opioid use can also decrease sex drive, and the ability to have erections and orgasms. For women, in addition to decreasing sex drive and

orgasms, using opioids may cause irregular menstrual cycles. In both men and women, low testosterone may cause weight gain, fatigue, hot flashes, night sweats, depression, and loss of muscle mass. People with SCI often have erectile dysfunction or vaginal lubrication dysfunction. Using opioids after SCI can make these things worse.

Testosterone replacement is an effective treatment for low testosterone levels caused by opioid use. This treatment can be given either through injections into the muscle or by wearing a medicated patch. Regular exercise can help offset loss of muscle mass due to the hormonal changes you may have when taking long-term opioids for pain. Ask your doctor about the effects of lower hormone levels caused by long-term opioid use.

Birth defects

Pregnant women who take opioids are twice as likely to have a baby born with birth defects such as spina bifida and congenital heart defects. Finding other treatments for pain before you become pregnant reduces your risk of having a child with birth defects to normal.



Increased pain sensitivity

Using opioids, especially at high doses for long periods, often makes people more sensitive to pain. This increased sensitivity is not just related to the specific pain someone is experiencing but to any pain they might experience. In many cases, taking a lower dose of opioid, changing to a different opioid, or even stopping the opioid (after gradually taking a lower and lower dose) altogether may decrease any increased pain sensitivity caused by opioid use.

Opioid tolerance

Most people who take an opioid for pain will develop tolerance to the drug. Tolerance occurs when the body gets used to a drug. As a result, people take more medicine or a different medicine to get the same effect. If you keep taking the same dose of an opioid, it often won't work as well over time.

Withdrawal symptoms

Withdrawal symptoms occur when people who have been taking opioids stop taking them or cut the dose suddenly. This is especially true if you've been taking them for more than a few weeks or if you've been taking high doses. Withdrawal symptoms may include seizures, increased pain, autonomic dysreflexia symptoms due to increased pain, anxiety, cravings for the opioid, a feeling of being unwell, sweating, and yawning. The MSKTC factsheet on autonomic dysreflexia has information about the symptoms of autonomic dysreflexia. It can be found at https://msktc.org/sci/factsheets/autonomic_dysreflexia. Other symptoms of withdrawal include "goosebumps," or small bumps on the skin; excessive tears; a runny nose; an inability to sleep; nausea; vomiting; diarrhea; seizures; anxiety; opioid cravings; sweating; yawning; cramps; muscle aches; and fever.

- With short-acting opioids, withdrawal symptoms may first appear within 12 hours of the last dose and may last 7–10 days.
- With a long-acting opioid, symptoms may start within 1–2 days of the last dose, and symptoms may last a few weeks.

If you want to lower your daily dose of opioids, slowly decreasing the dose over time can help prevent or lessen withdrawal symptoms.

Opioid use disorder

Opioid use disorder is a condition in which a pattern of opioid use leads a person to have impaired mental function or distress. This disorder also affects life activities and relationships. It often includes a strong urge to use opioids and an inability to control or reduce opioid use. There is usually an increased tolerance to opioids. Withdrawal symptoms (see above) may occur when opioids are suddenly stopped. Addiction is the most severe form of the disorder.

The most effective treatment for opioid use disorder is opioid replacement therapy. With this treatment, either buprenorphine or methadone is substituted for your usual opioids. This therapy lowers your risk of accidental death from overdose, especially if used with behavioral therapy with a mental health professional. Behavioral therapy alone is less effective in preventing relapse and reducing the risk of death from accidental overdose. Abstinence, or not using opioids at all, is not usually effective in preventing relapse. If you think you may have an opioid use disorder, talk to your doctor about getting treatment.

Death from unintentional overdose

The main cause of death from opioid use is respiratory failure. Death occurs because not enough oxygen passes from the lungs to the bloodstream. The longer someone takes opioid medications and the higher the dose, the more likely they will develop respiratory failure and die. This is much more likely to occur in people who are taking high doses of opioids than in those who are taking low or moderate doses and in anyone with pulmonary disease or dysfunction.



Having naloxone available and teaching those around you how to use it may save your life. The brand names are Narcan and Evzio. If you take too much opioid medication and stop breathing, naloxone may possibly reverse the overdose. If you are found unresponsive, you may have overdosed. Your pupils may be the size of a pinpoint; you may not be breathing. If this happens, those with you should give you the naloxone and call 911.

Naloxone is available over the counter in some states and by prescription in others. It can be given through a nasal spray or by injection under the skin or into a muscle. Ask your doctor how you can get naloxone and how it should be given to you if needed.

If you take opioids and benzodiazepines together, you are at increased risk of an unintentional overdose. If you take both, ask your doctor about safer options.

What are some common medicines that contain opioids?

Generic Name	Brand Name
Morphine	MS Contin, Roxinol, Arymo, Kadian
Codeine	Tylenol with codeine
Fentanyl	Duragesic, Actiq, Fentora
Hydrocodone	Vicodin, Norco, Lorcet, Lortab
Hydromorphone	Dilaudid, Exalgo, Palladone

Generic Name	Brand Name
Methadone	Methadose, Dolophine
Oxycodone	Percocet, Oxycontin, Roxycodone
Oxymorphone	Opana, Numorphone
Tramadol	Ultram, Ultracet

What are some common medicines that contain benzodiazepines?

Generic Name	Brand Name
Diazepam	Valium
Clonazepam	Klonopin
Alprazolam	Xanax

Generic Name	Brand Name
Temazepam	Restoril
Lorazepam	Ativan

If you aren't sure what medicines you're taking, contact your doctor.

Are there ways to treat pain without opioids?

Learn about other treatments for pain after SCI. Check out the MSKTC fact sheet on Pain after SCI at <https://msktc.org/sci/factsheets/pain>. Ask your doctor about other treatments.



Additional Resources

Taking Opioids Responsibly for Your Safety and the Safety of Others

(<https://www.va.gov/PAINMANAGEMENT/docs/TakingOpioidsResponsibly20121017.pdf#>)

Opioid Overdose: Information for Patients (<https://www.cdc.gov/drugoverdose/patients/index.html>)

Treating for Two: Medicine and Pregnancy: Use of Pain Medicine During Early Pregnancy May Be Related to Birth Defects (<https://www.cdc.gov/pregnancy/meds/treatingfortwo/index.html>)

Authorship

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