

Opioid Safety

What are Opioids?

Opioids, also called opiates or narcotics, are medications used in the management of moderate-to-severe pain. Opioids include both prescription drugs, such as, morphine, codeine, oxycodone, and fentanyl and the illicit drug, heroin. The opioid class includes natural opioids derived from the poppy plant, semi-synthetic opioids chemically derived from the poppy plant, and synthetic opioids that are created without the naturally occurring ingredients.¹



Using Opioids in Therapy

Opioids have many uses in both the hospital setting and outpatient setting for pain. Examples include:

<u>Illness and Disease</u>	<u>Injury</u>	<u>Surgical Procedure</u>
Cough	Broken bones	Hospital procedures
Diarrhea	Muscle sprains/strains	Dental procedures
Cancer		

These uses can be broken down by type of pain or severity of pain.

- Types of Pain
 - Acute (lasting less than 1 month)
 - Unresolved acute pain
 - Subacute pain (lasting 1-3 months)
 - Chronic pain (lasting 3 or more months)
- Severity of Pain
 - Mild
 - Moderate
 - Severe

In therapy, opioids are used to alleviate symptoms and allow the body to rest.^{2,3,4}

Acute and Chronic Pain

The approach to both acute and chronic pain is the same when it comes to considering opioid therapy. It is recommended to use non-opioid therapies first. Research shows that over-the-counter medications, physical therapy, and exercise may reduce symptoms as effectively or more effectively than opioids while causing less side effects. If opioid therapy is needed, it should be used at the lowest effective dose for the shortest amount of time. Opioid therapy should begin with immediate-release opioids. Extended-release and long-acting opioids should be reserved for those patients with severe, continuous pain.^{2,3}

Cancer Therapy and Palliative Care

Pain in cancer patients can come from a variety of causes such as late-stage cancer, surgery, radiation, and chemotherapy. The pain may be continuous pain or breakthrough pain. Opioids have long been the first-line treatment in this population. Like acute pain, the aim is to use the lowest effective dose to manage the patient's pain. However, patients with cancer or in palliative care are often seen with dosages that are higher, putting them at risk for increased side effects from their opioid therapy.^{5,6}

Risks and Adverse Effects of Opioid Therapy

Risk

There is a measure of risk involved when a patient begins using opioids. Opioids are addictive and may lead to physical dependence resulting in withdrawal symptoms if the patient stops taking the medication suddenly. Patients may also have increased tolerance for their opioid with long-term use and require higher doses to achieve the same analgesic effect.¹

There are risk factors that can lead to a higher chance of opioid addiction and overdose. These risk factors increase if the patient...



- has a history of overdose or a substance use disorder
- has sleep apnea or another breathing-related sleep disorder
- requires opioid dosages of 50 MME/day or greater
- attempts to return to a higher dosage of an opioid after having not been on it for some time and has lost their tolerance
- is also taking a benzodiazepine along with their opioid
- has kidney or liver failure
- is 65 years of age or older⁷

Mitigating Risk

In 2018, the FDA approved the Opioid Analgesic (OA) Risk Evaluation and Mitigation Strategy (REMS) program as part of the strategy to reduce the risk of using opioids. The OA REMS program requires educational material be available to all healthcare providers who participate in pain management. The educational material ranges from prescribing information to how to counsel patients on using their opioid.⁸

Another way to lower risk is to routinely check the state Prescription Drug Monitoring Program (PDMP) for the applicable state or territory. This database monitors prescriptions for controlled substances including fill dates and quantities. This tool can be used to make sure a patient is utilizing their medication while also allowing the ability to see if the patient is receiving controlled substances from more than one provider.⁹

Adverse Effects

The use of opioids, whether for a short time or long-term, can lead a patient to experience adverse effects. The severity of the adverse effects can range in severity based on patient tolerance and the dosage of the opioid. Common side effects include:^{3,4}

Confusion	Constipation	Increased sensitivity to pain
Dizziness	Dry mouth	Itching
Euphoria	Nausea	Low levels of testosterone
Relaxation	Vomiting	Sleepiness
Slowed breathing, which can lead to hypoxia : a reduction of circulating oxygen in the body that can be dangerous and life threatening.		

Risks in Pregnancy

Opioid use during pregnancy can lead to complications and harm to the patient and/or the baby that may be fatal.

Babies exposed to opioids during gestation may experience premature birth, low birth weight, and/or withdrawal symptoms.¹



Opioid Therapy Alternatives

The best and easiest way to avoid the risks and side effects of opioid use is to use alternative therapies where they are appropriate and effective. Alternative therapies should be a discussion between the patient and prescriber in order to create a plan to best treat the patient's pain.³

Acute Pain Alternatives	Chronic Pain Alternatives
Over-the-Counter (OTC) pain medications	Over-the-Counter (OTC) pain medications
Physical therapy or exercise	Physical therapy or exercise
Application of heat or ice	Cognitive behavioral therapy (CBT)
Transcutaneous electrical nerve stimulation (TENS)	Certain antidepressant and antiseizure medications

OTC pain medications can be an effective way to treat pain when taken as directed. Just as with opioids, the lowest effective dosage should be used.³

Commonly used OTC pain medications include:

- Acetaminophen (Tylenol)
- Ibuprofen (Advil, Motrin)
- Naproxen (Aleve)

Morphine Milligram Equivalent (MME)

A Morphine Milligram Equivalent (MME) is a standardization of equating the dosing of one opioid to another using morphine as the standard. This allows for ease of comparison and risk evaluation when determining opioid therapy.

The 2022 CDC Clinical Practice Guideline for Prescribing Opioids for Pain categorize MMEs into the following categories:

Low opioid dose range	1–36 MME/day
Medium opioid dose range	36–120 MME/day
High opioid dose range	≥120 MME/day

The guideline also shows that patients using ≥ 50 MME per day may begin to experience increased risks and side effects.

It is important to note that the guidelines specifically exclude pain related to sickle cell disease or cancer or to patients receiving palliative or end-of-life care.²

Opioid Use Disorder

Opioid Use Disorder (OUD) is the official term for “opioid addiction” and “opioid abuse or dependence.” It is a chronic disease that can impact anyone from any walk of life. OUD does not discriminate based on race, sex, social class, or any other identifiable category.

Preventing OUD includes using PDMPs, educating both patients and providers about opioids regarding their usage and safe storage, and improving communication between patients and providers.¹⁰

Treating Opioid Use Disorder

Treating OUD begins with understanding that it can happen to anyone. Removing the stigma and looking at each patient individually is important. OUD can impact patients who do not misuse their medications, as much as patients who do.

There are prescription medications available to help treat OUD in patients. These medications help prevent withdrawal symptoms in patients that are seeking to stop their opioid usage and recover from OUD.

The three medications approved by the FDA for the treatment of OUD are:

- **Buprenorphine:**
 - Brixadi (buprenorphine extended-release) injection for subcutaneous use
 - Sublocade (buprenorphine extended-release) injection for subcutaneous use
 - Suboxone (buprenorphine and naloxone) film for sublingual or buccal use
 - Zubsolv (buprenorphine and naloxone) tablets for sublingual use
 - Buprenorphine and naloxone tablets and film for sublingual or buccal use
 - Buprenorphine tablets for sublingual use
- **Methadone:**
 - Methadone hydrochloride tablets for oral suspension
 - Methadose (methadone hydrochloride) oral concentrate and tablets for oral suspension
 - Methadone hydrochloride oral concentrate
- **Naltrexone:**
 - Vivitrol (naltrexone for extended-release injectable suspension) intramuscular

It is important for prescribers and patients to come together and decide the best treatment option and what services are available in their area. Outpatient counseling and inpatient rehabilitation are additional supportive treatment plans, that when used with medication, may help lead to positive outcomes for the patient.^{10,11}

Opioid Overdose

An opioid overdose can occur when a person ingests more of an opioid medication than their body can process. When this occurs, there are multiple signs and symptoms that may be present. They include:¹

- Difficulty breathing or slowing of breathing – this can be life-threatening
- A purplish discoloration of the skin, particularly in the lips or nails
- Unconsciousness or inability to wake up

One of the ways to combat the risks of opioid is to have access to the medication, naloxone (Narcan).

Naloxone (Narcan)

Naloxone is a medication that reverses the side-effects of opioids. It can restore normal breathing in 2-3 minutes even if breathing has slowed or stopped. In some cases, a second dose may be necessary. If an opioid overdose is suspected, naloxone should be administered. It is safe to use, even if opioids are not the cause of the patient's overdose.¹²

Who should carry naloxone?

- Anyone that is at risk for an opioid overdose or has OUD
- Anyone that knows someone at risk for an opioid overdose or has OUD
- Anyone with a prescription for high dose opioids of 50 MME or higher per day
- Anyone taking benzodiazepines and opioids together
- Anyone using illicit drugs



Naloxone is available at retail pharmacies in all 50 states with or without a prescription. Carrying naloxone is similar to carrying an epinephrine auto-injector (EpiPen) in that it is a medication that provides an additional layer of safety.¹²

A discussion between patients and their prescriber or pharmacist can help answer any questions or concerns that may arise from being advised to carry naloxone.

If you or a loved one is seeking assistance for Opioid Use Disorder, SAMHSA's National Hotline may be able to help.

Call [1-800-662-HELP \(4537\)](tel:1-800-662-HELP).

If you or a loved one is seeking treatment programs and facilities, you can find options at www.findtreatment.gov.

Resources for Patients

American College of Emergency Physicians (ACEP):
Opioid Patient Material
<https://www.acep.org/by-medical-focus/mental-health-and-substanc-use-disorders/opioids/opioid-patient-materials>

CDC: Preventing Opioid Use Disorder
<https://www.cdc.gov/overdose-prevention/prevention/preventing-opioid-use-disorder.html>

Substance Abuse and Mental Health Services Administration (SAMHSA)
<https://www.samhsa.gov/>

National Opioid Crisis: Help and Resources
<https://www.hhs.gov/opioids/index.html>

Resources for Prescribers

Preventing Overdose (State of RI)
<https://preventoverdoseri.org/providers/education-resources/>

CDC: Overdose Prevention
<https://www.cdc.gov/overdose-prevention/hcp/index.html>

CDC: Clinical Guidance
<https://www.cdc.gov/overdose-prevention/hcp/clinical-guidance/index.html>

Opioid Analgesic REMS
<https://www.opioidanalgesicrems.com/home.html>

DSM-5 Criteria for OUD
<https://www.asam.org/docs/default-source/education-docs/dsm-5-dx-oud-8-28-2017.pdf>

For a list of locations to dispose of unused prescriptions visit:

<https://apps.deadiversion.usdoj.gov/pubdispsearch/spring/main?execution=e1s3>

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