

Opioid Use Disorder

A plain-English guide for you and your family

WHAT IS HAPPENING

Your brain makes its own natural opioids—endorphins and enkephalins—that help you feel good, cope with pain, and enjoy everyday rewards like food, friends, and accomplishments. These chemicals lock onto opioid receptors (tiny docking stations on brain cells) in the ventral tegmental area and nucleus accumbens (your brain's reward center). When you use opioid drugs—pills, heroin, or fentanyl—they flood those same receptors with a much bigger signal than your brain ever made on its own. Your brain responds by turning down its own opioid production and shrinking the number of receptors, like lowering the volume on a radio that's too loud. Now normal life feels flat and empty because your natural reward system can't fire strongly enough. The prefrontal cortex (the front part of your brain that plans ahead and says no to impulses) loses its grip, so cravings override everything else. When the drug wears off, your brain rebounds: the locus coeruleus (a tiny alarm center in the brainstem) fires wildly, dumping norepinephrine (a wake-up chemical) into your system and causing sweating, shaking, pain, and panic—withdrawal. Over time, your body adapts (tolerance), so you need more drug to feel normal. You lose control because the broken reward circuit makes the drug feel more important than food, safety, or the people you love. Life crumbles—money vanishes, relationships break, work disappears, infections spread from needles, and overdose becomes the biggest danger, especially with fentanyl mixed into street drugs. But medication-assisted treatment (buprenorphine, methadone, or naltrexone) steadies the opioid receptors, calms withdrawal, blocks cravings, and cuts overdose deaths in half. Therapy, housing, and social support give you reasons and tools to rebuild. Recovery is real, and the brain can heal when the circuit gets the right help.

What you might feel

- Strong cravings for opioids
- Using more opioids than planned or for longer than planned
- Tolerance (needing more of the drug to feel the same effect)
- Withdrawal symptoms when stopping (sweating, shaking, nausea, muscle aches, runny nose, fast heart)

- Pinpoint pupils (tiny, constricted pupils) when recently using
- Track marks, skin infections, or scars (especially on arms, hands, or legs)
- Giving up important activities (work, school, hobbies, time with family) to use or recover from opioids
- Continuing to use despite harm (legal trouble, broken relationships, health problems)
- Slowed, shallow breathing
- Confusion, extreme sleepiness, or can't be woken up

Call the doctor right away if...

- Slow, shallow breathing or pauses in breathing (sign of overdose—call 911 and give naloxone if available)
- Cannot be woken up, lips or fingernails turning blue (not enough oxygen—life-threatening)
- Chest pain, fever, or new heart murmur (possible endocarditis, a dangerous heart-valve infection from injecting)
- Severe confusion, seizure, or sudden collapse (possible overdose, stroke, or brain infection)
- Injecting alone or using unknown pills or powder (high risk of accidental overdose, especially with fentanyl)

What the care team will do

- Assess airway, breathing, and circulation every 15 minutes if the patient recently used opioids or shows any sedation, and keep naloxone 0.4 mg IV or 4 mg nasal spray at the bedside ready to give immediately.
- Give the patient and at least one family member or friend naloxone nasal spray (4 mg, two-dose pack) or auto-injector and teach step-by-step how to recognize overdose (cannot wake the person, slow or no breathing, blue lips) and how to give naloxone, call 911, perform rescue breathing, and stay until help arrives.
- Screen for withdrawal symptoms using the Clinical Opiate Withdrawal Scale (COWS score), checking for sweating, tremor, yawning, runny nose, dilated pupils, gooseflesh, vomiting, diarrhea, and restlessness, and document the score before starting buprenorphine.
- Check for signs of injection-site infection (redness, warmth, pus, swelling) and systemic infection (fever over 100.4°F or 38°C, chills, new heart murmur on listening with a stethoscope (auscultation)), and notify the provider immediately if present because these may signal endocarditis or sepsis.

- Offer and draw blood for hepatitis C antibody, hepatitis B surface antigen, HIV antigen/antibody test, and complete blood count (CBC) with the patient's informed consent, explaining that injection drug use carries high risk for these infections and early treatment prevents liver failure and death.
- Build trust by using nonjudgmental language (say 'person with opioid use disorder' not 'addict,' say 'substance use' not 'abuse'), listen without interrupting, validate the patient's feelings, and explain that opioid use disorder is a chronic medical brain disease, not a moral failure.
- Coordinate same-day or next-day referral to an addiction-medicine provider, opioid treatment program, or buprenorphine prescriber before discharge, give the patient a written appointment card with date and address, and arrange transportation if needed.
- Assess and document pain level, chronic pain conditions, and psychiatric diagnoses (depression, anxiety, PTSD, bipolar disorder), because untreated pain and mental illness drive continued opioid use and require integrated treatment with non-opioid pain management and psychiatric medication or therapy.

Medicines you may be given — and why

Buprenorphine (Suboxone, Sublocade)

Buprenorphine latches onto the mu opioid receptors (the same brain locks that heroin, fentanyl, and prescription painkillers open) but only turns the key partway. This gives just enough signal to quiet cravings and stop withdrawal pain without causing a high or slowing breathing dangerously. Because it sticks so tightly, it also blocks full opioids from working if someone tries to use them, like a key stuck in a lock that won't let another key fit.

Methadone

Methadone fully activates the mu opioid receptors (the brain's main opioid locks), giving a complete signal that stops withdrawal and cravings without causing a high when taken once daily at a steady dose. Because it works slowly and lasts 24–36 hours, it keeps the brain's opioid system stable all day, preventing the roller coaster of highs and crashes that comes with street opioids.

Naltrexone (Vivitrol monthly injection, ReVia oral tablet)

Naltrexone sits on the mu opioid receptors without turning them on at all — it's like a blank key stuck in the lock. This completely blocks any opioid (heroin, fentanyl, oxycodone) from working. If someone tries to use opioids while on naltrexone, they feel nothing — no high, no relief. Over time, because using brings no reward, the brain's craving and drug-seeking behavior weakens.

Naloxone (Narcan nasal spray, injectable)

Naloxone is an emergency antidote that instantly kicks opioids off the mu opioid receptors and blocks them from reattaching. In an overdose, opioids slow breathing so much that the person stops getting oxygen. Naloxone rapidly reverses this, restarting breathing within 2–3 minutes. It does not treat opioid use disorder itself — it only buys time to get emergency help.

Where this information comes from

- ASAM National Practice Guideline for the Treatment of Opioid Use Disorder (2020)
- SAMHSA TIP 63: Medications for Opioid Use Disorder
- DSM-5-TR (American Psychiatric Association)
- CDC Clinical Practice Guideline for Prescribing Opioids for Pain (2022)

Last reviewed: 2026-07-07