CONDITION

Hydrocodone/oxycodone overdose

A hydrocodone or oxycodone overdose dangerously slows breathing and requires immediate emergency treatment.

WHAT IT IS
Dangerous poisoning from too much hydrocodone or oxycodone

BODY SYSTEM
Nervous system and breathing

MAIN SYMPTOMS
Slow breathing, extreme sleepiness, pinpoint pupils, unresponsiveness

WHAT CAUSES IT
Excess opioid effect, sometimes combined with other sedatives

HOW IT IS DIAGNOSED
Clinical assessment, oxygen measurement, and response to naloxone

MAIN TREATMENT
Breathing support, naloxone, monitoring, and treatment of co-poisoning

CAN IT BE CURED?
Sometimes - prompt reversal can prevent lasting harm

IS IT AN EMERGENCY?
Yes - slowed breathing or unresponsiveness needs immediate help

LONG-TERM OUTLOOK
Full recovery possible; delayed treatment can cause permanent harm

Overview

Hydrocodone and oxycodone are opioid medicines used to treat pain. An overdose happens when the opioid effect becomes strong enough to suppress essential body functions, especially breathing.

Someone who has overdosed may look as though they are deeply asleep. Their breathing may become slow, shallow, irregular, or stop completely. Without enough oxygen, the brain, heart, and other organs can be injured.

An overdose can happen after taking more medicine than intended, taking a dose after opioid tolerance has fallen, or combining an opioid like oxycodone or morphine with alcohol or another sedating drug. It can also happen when a pill contains an unexpected opioid, such as illegally manufactured fentanyl.

Some hydrocodone and oxycodone products also contain acetaminophen. An overdose of one of these combination products can cause serious liver injury even when early symptoms seem mild.

A suspected opioid overdose is always an emergency. Naloxone can temporarily reverse opioid effects, but emergency assessment is still needed because symptoms can return.

Symptoms

The main danger is reduced breathing. Warning signs include:

Not everyone has all these signs. Pupils may not be pinpoint, particularly if other substances were taken or the brain is not receiving enough oxygen.

Someone with acetaminophen poisoning may initially feel well or have only nausea, vomiting, sweating, or abdominal discomfort. Liver injury can appear later, so the absence of early symptoms does not make a combination-product overdose safe.

- Breathing that is slow, shallow, irregular, noisy, or absent
- Extreme sleepiness or inability to wake the person
- Very small, "pinpoint" pupils
- Pale, gray, or blue lips, fingertips, or skin
- A limp body, weak pulse, or choking and gurgling sounds
- Vomiting, confusion, or loss of consciousness

Causes and risk factors

An overdose results from more opioid reaching the brain than the body can safely handle. This may follow an accidental dosing error, deliberate self-harm, nonmedical use, or exposure to a counterfeit pill.

The risk is higher when hydrocodone or oxycodone is taken with other substances that slow the nervous system. These include alcohol, benzodiazepines such as diazepam or alprazolam, sleep medicines, some muscle relaxants, and other opioids.

Other factors that can increase risk include:

Tolerance means the body has adapted to repeated opioid use. It can fall after a hospital stay, time in custody, detoxification, or a period of not using opioids. A previously tolerated amount may then become dangerous.

- Restarting opioids after a break, when tolerance has fallen
- Using an extended-release product incorrectly
- Taking someone else's medication
- Having severe lung, liver, or kidney problems
- Having sleep apnea or another condition affecting breathing
- Taking more than one medicine containing the same opioid or acetaminophen
- Using pills obtained outside a licensed pharmacy

Diagnosis

Emergency clinicians usually diagnose opioid overdose from the circumstances, symptoms, breathing pattern, oxygen level, and physical examination. Improvement after naloxone supports the diagnosis, but failure to respond immediately does not rule it out.

A finger sensor measures oxygen in the blood. Clinicians may also test carbon dioxide levels, because carbon dioxide can rise when breathing is too slow. An electrocardiogram, or ECG, checks the heart's electrical activity.

Blood tests may assess kidney and liver function, blood sugar, acid levels, and injury caused by low oxygen. If the product might contain acetaminophen, a timed acetaminophen blood level and liver tests are important.

Urine drug screens have limits. Some routine opioid screens may miss oxycodone, and a positive result does not show when the drug was taken or whether it caused the current symptoms. Treatment should not wait for a toxicology result.

Treatment and management

If an overdose is suspected, call emergency services immediately. Give naloxone if it is available and follow the product instructions. Naloxone is a medicine that pushes opioids off their receptors in the brain, which can restore breathing.

More than one naloxone dose may be needed. Its effect can wear off before hydrocodone or oxycodone has left the body, especially with extended-release products. Stay with the person until emergency help arrives.

If the person is not breathing normally, begin rescue breathing or cardiopulmonary resuscitation if you are trained. An emergency dispatcher can guide you. If the person is

breathing but unconscious, place them on their side when it is safe to do so. This can reduce the chance of choking on vomit.

Do not make the person vomit, put them in a cold shower, or try to keep them awake by walking them around. Do not leave them alone or assume that they can "sleep it off."

In hospital, treatment may include oxygen, assisted ventilation, repeated naloxone, and close monitoring. A breathing tube and ventilator may be needed if breathing cannot be maintained safely. Clinicians also treat low blood pressure, abnormal body temperature, aspiration, or other complications.

Activated charcoal is used only in selected recent ingestions when clinicians can protect the airway. It should not be given at home.

If acetaminophen poisoning is possible, clinicians may give the antidote N-acetylcysteine. It works best when started early but may still help later. Treatment should not be delayed when the history and test results suggest significant poisoning.

After recovery, care may include a medication review, take-home naloxone, mental health support, or treatment for opioid use disorder. Opioid use disorder is a medical condition involving loss of control over opioid use despite harm.

Complications

The most serious complication is brain injury from a lack of oxygen. A prolonged overdose can also cause death.

Other possible complications include:

Naloxone can trigger sudden withdrawal in someone who is physically dependent on opioids. This may cause agitation, sweating, nausea, vomiting, diarrhea, and pain. These symptoms can be distressing, but restoring breathing remains the priority.

- Vomit entering the lungs, called aspiration
- Lung swelling or inflammation
- Muscle breakdown after lying unconscious for a long time
- Kidney injury
- Pressure injuries to skin, nerves, or muscles
- Heart rhythm problems
- Liver failure from acetaminophen in combination products

Prevention

Many hydrocodone or oxycodone overdoses can be prevented, although no strategy removes all risk.

Take opioid medicine only as directed and use the original labeled container. Check whether the product also contains acetaminophen, and avoid taking multiple products with the same ingredients unless a clinician or pharmacist has confirmed that it is safe.

Do not mix opioids with alcohol or sedating medicines unless the combination has been specifically reviewed by a healthcare professional. Never share opioid medication.

Store opioids where children and other household members cannot reach them. Dispose of unwanted medicine through an authorized take-back program when possible.

Keep naloxone available if you or someone close to you uses opioids. Household members should know where it is and how to use it. Naloxone does not encourage opioid use, and giving it should not delay an emergency call.

Pills bought online, on the street, or from another person may contain unexpected amounts of fentanyl or other substances. Their appearance cannot confirm what is inside.

Living with it and what to expect

An overdose is an acute event rather than a long-term illness. People treated before prolonged oxygen loss may recover fully. Symptoms can return after initial improvement, so medical monitoring is important even after naloxone appears to work.

Recovery is less predictable if breathing stopped for a long time, aspiration occurred, or there was major liver, kidney, or brain injury. Rehabilitation and ongoing medical care may be needed when lasting injury occurs.

Routine follow-up after discharge can review how the overdose happened and reduce the chance of another one. This may include checking prescriptions, adjusting pain care, replacing naloxone, and discussing safer storage.

If the overdose was related to ongoing opioid use, effective treatment is available. Medicines for opioid use disorder can reduce withdrawal, cravings, and overdose risk. If it was intentional, prompt mental health follow-up and a safety plan are important.

A past overdose raises the risk of another overdose. This does not mean another event is inevitable, but it makes access to naloxone and follow-up care especially important.

When to get medical help

Call emergency services now if someone who may have taken hydrocodone or oxycodone:

Give naloxone immediately if available. Call even if the person wakes up, says they feel better, or refuses help, because breathing problems can return.

If someone has taken more than intended but has no symptoms, contact a poison information service immediately rather than waiting for symptoms. In the United States, Poison Control is available at 1-800-222-1222. Elsewhere, use your local poison centre or emergency service.

Routine follow-up is appropriate after emergency treatment to review pain medicines, substance use, mental health, safe storage, and access to naloxone. New sleepiness, breathing changes, repeated vomiting, worsening abdominal pain, or yellowing of the skin after discharge needs urgent reassessment.

- Cannot be woken
- Is breathing slowly, irregularly, or not at all
- Has blue, gray, or unusually pale lips or skin
- Makes choking, snoring, or gurgling sounds while unresponsive
- Collapses, has a seizure, or becomes severely confused

Common questions

Can naloxone completely fix a hydrocodone or oxycodone overdose?

Naloxone can rapidly reverse opioid-related breathing suppression, but its effect is temporary. The opioid may last longer, and other substances or complications may still need treatment. Emergency care is necessary even when the person wakes up.

How long does an opioid overdose last?

There is no single duration. It is affected by the product, amount taken, release type, other substances, and the person's health. Extended-release tablets and large ingestions may cause prolonged or returning symptoms.

Can someone overdose on their prescribed dose?

It is possible, particularly after a break from opioids or when the medicine is combined with alcohol or another sedative. Illness, medication changes, or accidental duplicate doses can also increase risk. Prescribed use lowers some risks but does not eliminate them.

What if the tablets also contain acetaminophen?

Tell emergency clinicians or the poison centre the exact product and amount if known. Acetaminophen can damage the liver without causing obvious early symptoms. Blood testing and an antidote may be needed.

Will naloxone hurt someone if I am not sure opioids are involved?

Naloxone generally has little effect on someone who has not taken an opioid. If opioid overdose is possible and the person is unresponsive or not breathing normally, use naloxone and call emergency services.

Can a person overdose again after leaving hospital?

Yes. Another overdose can occur if opioids are taken again, especially after tolerance has fallen. Follow-up care, naloxone access, medication review, and treatment for opioid use disorder can reduce this risk.

Sources

- Centers for Disease Control and Prevention. Preventing Opioid Overdose .
- Substance Abuse and Mental Health Services Administration. Overdose Prevention and Response Toolkit .
- U.S. Food and Drug Administration. Discuss Naloxone With All Patients When Prescribing Opioid Pain Relievers . 2020.
- American Heart Association. 2020 Guidelines for CPR and Emergency Cardiovascular Care: Special Circumstances of Resuscitation . 2020.
- Boyer EW. Management of Opioid Analgesic Overdose . New England Journal of Medicine. 2012;367:146-155.
- U.S. National Library of Medicine, DailyMed. Oxycodone and Acetaminophen Tablet Prescribing Information .