CONDITION

Hydromorphone overdose

Hydromorphone overdose is dangerous opioid poisoning that can slow or stop breathing.

WHAT IT IS
Poisoning from too much hydromorphone

BODY SYSTEM
Brain, breathing, and circulation

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

WHAT CAUSES IT
Excess hydromorphone exposure

HOW IT IS DIAGNOSED
Symptoms, examination, and medication history

MAIN TREATMENT
Naloxone and breathing support

CAN IT BE CURED?
Sometimes - prompt treatment can fully reverse it

IS IT AN EMERGENCY?
Yes - slowed breathing or unresponsiveness

LONG-TERM OUTLOOK
Often good after rapid treatment without oxygen loss

Overview

Hydromorphone is a strong opioid pain medicine. Opioids like oxycodone or morphine reduce pain by acting on receptors in the brain and spinal cord. They also slow the brain signals that control breathing.

An overdose happens when hydromorphone suppresses breathing and alertness more than the body can safely handle. Breathing may become slow, shallow, irregular, or stop completely. This limits oxygen reaching the brain and other organs.

An overdose can occur with tablets, liquid medicine, injections, or extended-release tablets. It may result from a dosing mistake, an interaction with another substance, intentional use of a large amount, or use of a product that is not what it appears to be.

Hydromorphone overdose is a medical emergency. Naloxone, a medicine that temporarily

blocks opioid effects, can restore breathing. However, its effect may wear off while hydromorphone remains in the body. Emergency assessment is still needed even if the person wakes up after naloxone.

Symptoms

The most important sign is abnormal breathing. A person may take fewer breaths, breathe very shallowly, pause between breaths, or stop breathing.

Other possible signs include:

Someone who is overdosing may look as though they are deeply asleep. Loud snoring or gurgling in a person who cannot be woken can mean their airway is partly blocked. It should not be treated as normal sleep.

Not everyone has every sign. Pupils may not always be pinpoint, especially when other medicines or health conditions are involved. Do not wait for all the classic signs before getting help.

Less severe hydromorphone effects can include sleepiness, dizziness, nausea, constipation, and slowed thinking. These still deserve prompt medical advice if they are new, worsening, or interfering with safe breathing or alertness.

- Being unable to wake up or respond normally
- Very small, "pinpoint" pupils
- Limpness or unusual weakness
- Pale, bluish, or gray lips, fingertips, or skin
- Snoring, choking, or gurgling sounds
- A slow or weak pulse
- Cool, clammy skin
- Vomiting

Causes and risk factors

An overdose occurs when the amount of hydromorphone affecting the body is greater than the person can safely tolerate. There is no single amount that causes overdose in everyone.

Possible causes include taking an extra dose by mistake, misunderstanding the medicine label,

using someone else's medicine, or taking doses too close together. Crushing or chewing an extended-release tablet can release hydromorphone too quickly and may cause a dangerous exposure.

The risk increases when hydromorphone is combined with other substances that slow the brain and breathing. These include alcohol, benzodiazepines such as diazepam or alprazolam, sleep medicines, other opioids, and some muscle relaxants or sedating medicines.

A person's tolerance also matters. Tolerance means the body has become used to an opioid's effects. It can fall after a period without opioids, including after a hospital stay, treatment program, or time in custody. Returning to a previously used amount can then cause an overdose.

Other factors that can raise risk include:

Counterfeit tablets may contain fentanyl or other potent substances even if they are sold as hydromorphone. Their strength and contents cannot be judged by appearance.

Children can be severely poisoned by even an unintended exposure. Hydromorphone should always be stored where children and other household members cannot reach it.

- Starting hydromorphone or having a recent dose change
- Taking a formulation incorrectly
- Kidney, liver, lung, or breathing problems
- Older age or physical frailty
- Sleep apnea, which causes breathing pauses during sleep
- A previous opioid overdose
- Using opioids alone
- Taking substances from an unregulated supply

Diagnosis

Emergency teams usually diagnose an opioid overdose from the person's breathing, level of alertness, physical examination, and known or suspected exposure. Improvement after naloxone supports the diagnosis, but treatment should not be delayed while trying to identify the exact substance.

Clinicians may check oxygen levels, breathing rate, heart rhythm, blood pressure, temperature, and blood glucose. Blood tests can help assess oxygen loss, carbon dioxide buildup, kidney or liver function, and other possible causes of unconsciousness.

Toxicology testing may be used, but routine opioid screening does not detect every opioid reliably. A negative screening result does not always rule out hydromorphone exposure. Test results also may not show how severe the poisoning is.

Because several conditions can cause unresponsiveness or abnormal breathing, the medical team may also consider low blood sugar, stroke, seizure, head injury, infection, or poisoning by another substance.

Treatment and management

If hydromorphone overdose is suspected, call your local emergency number immediately. If naloxone is available, give it according to the product instructions. Naloxone is available as a nasal spray and in injectable forms.

Naloxone can restore breathing within minutes, but more than one dose may be needed. Follow the product instructions and emergency dispatcher's guidance. If there is no response, further doses are generally given at the intervals stated on the product label while emergency help is on the way.

After giving naloxone:

Do not make the person vomit. Do not put them in a cold shower, make them walk, give them coffee, or leave them to "sleep it off." These actions do not reverse opioid poisoning and can delay effective care.

In hospital, treatment focuses on keeping the airway open and maintaining oxygen and breathing. This may involve oxygen, assisted ventilation with a mask, or a breathing tube in severe cases. Additional naloxone may be given if opioid effects return.

Monitoring is important because naloxone may wear off before hydromorphone does. Delayed or prolonged effects are a particular concern after large exposures or extended-release products. The observation period is based on the formulation involved, the person's response, other substances taken, and their overall health.

Naloxone can trigger sudden withdrawal in someone whose body is dependent on opioids. Symptoms may include agitation, sweating, nausea, vomiting, diarrhea, pain, and a fast heartbeat. These symptoms can be distressing, but restoring breathing takes priority.

- Check whether the person is breathing
- Give rescue breaths or CPR if trained or directed
- Place a breathing person on their side to reduce choking risk

- Stay with them and watch for breathing to slow again
- Tell responders what was taken, if known

Complications

The main danger is a lack of oxygen. If breathing remains inadequate, oxygen deprivation can cause brain injury, coma, heart rhythm problems, organ damage, or death.

Vomiting while deeply unconscious can allow stomach contents to enter the lungs. This is called aspiration and may cause airway blockage or pneumonia.

Other possible complications include lung swelling, injuries from falling, pressure damage to muscles from lying in one position, and kidney injury related to severe muscle breakdown. Combining several substances can make the course less predictable.

Most serious complications are linked to how long breathing was reduced and how quickly effective treatment began.

Prevention

Many hydromorphone overdoses can be prevented, although risk cannot be removed completely while taking an opioid.

Take hydromorphone only as directed on its label. Do not take extra doses, use it more often than directed, or change how the medicine is swallowed. Extended-release tablets should not be crushed, split, dissolved, or chewed unless the product information specifically says this is safe.

Avoid alcohol and do not combine hydromorphone with sedating medicines or other opioids unless the clinician managing your medicines knows about the combination. Before starting a new prescription, over-the-counter medicine, or supplement, check for interactions with a pharmacist or prescriber.

Other practical steps include:

If opioid use has become difficult to control, confidential treatment is available. Evidence-based care may include medicines for opioid use disorder, counseling, and practical support. Seeking help is a safety step, not a failure.

- Keep an up-to-date list of medicines
- Use one pharmacy when possible to help identify interactions

- Store hydromorphone locked away from children and visitors
- Never share opioid medicine
- Return unused medicine through an approved disposal program
- Keep naloxone available and show household members how to use it
- Avoid using unregulated tablets or powders

Living with it and what to expect

A hydromorphone overdose is an acute event rather than a long-term illness. Some people recover fully after naloxone, breathing support, and monitoring, especially when treatment begins before prolonged oxygen loss.

Sleepiness or other opioid effects can return after initial improvement. This is why medical monitoring matters even when the person feels normal or wants to leave.

Recovery over the following days depends on whether complications occurred. Aspiration, injuries, or organ damage may require further treatment. A period of low oxygen can lead to longer-lasting problems with memory, movement, concentration, or daily activities.

Follow-up usually includes reviewing what led to the overdose. This may mean checking the prescribed dose, medicine formulation, kidney or liver health, interacting substances, pain treatment, and access to naloxone. If the overdose involved nonmedical opioid use, follow-up can include treatment for opioid use disorder.

A previous overdose raises concern for another one. A safety plan, naloxone access, and changes to opioid use can reduce future risk, but no plan can guarantee that another overdose will not happen.

When to get medical help

Call your local emergency number now if someone who may have taken hydromorphone:

Give naloxone if it is available. Do not wait to see whether the person improves without treatment. Stay with them until emergency responders arrive.

An accidental extra dose also needs prompt expert advice, even if there are no symptoms yet. Contact a poison center or urgent medical service right away because dangerous sleepiness and breathing problems may develop later. In the United States, Poison Help is available at 1-800-222-1222.

For routine follow-up, contact the clinician who prescribes the medicine if hydromorphone is causing persistent sleepiness, dizziness, confusion, or other difficult side effects. Do not stop regular opioid treatment suddenly without medical guidance, because withdrawal and uncontrolled pain may result.

- Cannot be woken
- Is not breathing normally
- Has long pauses between breaths
- Makes choking, snoring, or gurgling sounds while unresponsive
- Has blue, gray, or unusually pale lips or skin
- Collapses, has a seizure, or becomes suddenly confused

Common questions

Can you overdose on prescribed hydromorphone?

Yes. Overdose can happen with a prescribed medicine, especially after an extra dose, a dose increase, loss of opioid tolerance, incorrect use of an extended-release product, or combination with alcohol or sedating medicines.

How long does a hydromorphone overdose last?

There is no fixed duration. It is affected by the amount, formulation, route of use, other substances, and the person's health. Extended-release products and large exposures may cause prolonged or returning symptoms.

Will naloxone reverse hydromorphone?

Naloxone can temporarily reverse hydromorphone's opioid effects, including slowed breathing. Its effects may not last as long as the hydromorphone, so symptoms can return. Emergency care is still needed.

What if I am not sure it is an opioid overdose?

Call emergency services and give naloxone if the person is unresponsive and not breathing normally. Naloxone will not reverse most non-opioid causes, but it can save a life when opioids are involved. The person still needs assessment for other causes.

Can someone sleep after receiving naloxone?

They should not be left alone to sleep. Breathing can slow again after naloxone wears off. Keep monitoring them and wait for emergency responders, even if they say they feel well.

Does an overdose always cause permanent damage?

No. Many people recover without permanent injury when normal breathing is restored quickly. Lasting effects are more likely when the brain or other organs have lacked oxygen for a prolonged period.

Sources

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