CONDITION

Naproxen sodium overdose

Naproxen sodium overdose happens when someone takes enough of this pain medicine to cause harmful effects.

WHAT IT IS
Too much naproxen sodium taken at once or over time

BODY SYSTEM
Digestive tract, kidneys, nervous system, heart and circulation

MAIN SYMPTOMS
Nausea, stomach pain, drowsiness, vomiting

WHAT CAUSES IT
Excess dosing, accidental ingestion, or intentional ingestion

HOW IT IS DIAGNOSED
History, examination, blood tests, urine tests, and monitoring

MAIN TREATMENT
Poison-centre guidance, observation, and supportive hospital care

CAN IT BE CURED?
Sometimes - severe organ damage may persist

IS IT AN EMERGENCY?
Yes - suspected overdose needs immediate poison-centre advice

LONG-TERM OUTLOOK
Most recover; severe cases can cause lasting organ damage

Overview

Naproxen sodium is a non-steroidal anti-inflammatory drug, or NSAID. It is used to reduce pain, inflammation, and fever. It is sold over the counter in some countries and is also available in prescription products.

An overdose happens when more naproxen sodium is taken than directed, either in one episode or through repeated extra doses. Taking too much can irritate the stomach and affect the kidneys, brain, breathing, and circulation. Large overdoses can be life-threatening, although many people recover with prompt assessment and supportive care.

Naproxen sodium overdose should not be assessed from symptoms alone. A person may appear well at first, and the risk cannot be judged reliably without knowing the product, amount, timing, health history, and any other substances taken.

There is no specific antidote that reverses naproxen. Treatment focuses on reducing further absorption when appropriate, monitoring for complications, and supporting the body while it clears the medicine.

Symptoms

Early symptoms are often related to the digestive system or nervous system. They may include:

Some people have few or no early symptoms. This does not prove that the amount taken was safe.

More serious poisoning may cause bleeding from the stomach or intestines, low blood pressure, kidney injury, seizures, slowed or difficult breathing, or loss of consciousness. Severe overdose can also cause metabolic acidosis, meaning the blood becomes too acidic.

Repeatedly taking more than directed may cause less sudden symptoms. These can include persistent nausea, worsening stomach pain, reduced urination, swelling, weakness, or dark or bloody stools. Kidney injury may be more likely when the person is dehydrated or already has reduced kidney function.

- Nausea, vomiting, or stomach pain
- Heartburn or irritation in the upper abdomen
- Dizziness, headache, ringing in the ears, or unusual drowsiness
- Confusion, poor coordination, or blurred vision

Causes and risk factors

Overdose may happen because someone takes several doses too close together, misunderstands the label, or uses more than one product containing naproxen. Confusion between prescription and non-prescription strengths may also contribute.

An accidental overdose can occur when a child reaches an unsecured container or when medicines are stored outside their original packaging. Intentional ingestion may happen during a mental health crisis and requires immediate emergency assessment.

The chance of serious harm is influenced by the amount taken, whether it was taken all at once or repeatedly, and how long ago it happened. The exact product matters because some formulations release the medicine differently.

Complications may be more likely in people who have kidney disease, heart failure, liver disease, dehydration, or a history of stomach ulcers or digestive bleeding. Older adults may also be more vulnerable to kidney and digestive complications.

Other medicines can add to the risk. These include other NSAIDs, blood thinners like warfarin or apixaban , corticosteroids like prednisone or hydrocortisone , and certain medicines that affect kidney blood flow. Alcohol can increase stomach irritation and bleeding risk. Other substances taken at the same time may be more dangerous than naproxen itself, so all possible exposures should be reported.

Diagnosis

Naproxen sodium overdose is diagnosed mainly from the history of what was taken and the person's clinical condition. There is no routine blood level that reliably predicts how severe the poisoning will be.

A healthcare team will try to identify the exact product, strength, possible amount, time of ingestion, and whether any other medicines or substances were involved. The container, blister pack, receipt, or a photograph of the label can be helpful.

Assessment may include checking alertness, breathing, blood pressure, heart rate, temperature, and urine output. Blood tests may be used to look for kidney injury, electrolyte changes, anemia from bleeding, or excess acid in the blood. Urine tests and an electrocardiogram, which records the heart's electrical activity, may also be used.

When the amount or substances taken are uncertain, tests may be performed for other common overdoses, such as acetaminophen or salicylates. These tests do not confirm naproxen poisoning, but they may identify another exposure that needs different treatment.

Treatment and management

If an overdose may have happened, contact a poison centre or emergency service immediately. Do not wait for symptoms. Do not make the person vomit, and do not give food, drink, or home remedies unless a poison specialist or healthcare professional advises it.

Hospital treatment is based on symptoms and risk. A person who remains well may need a period of observation. During this time, staff may monitor alertness, breathing, blood pressure, urine output, and blood test results.

Activated charcoal may be considered in selected recent and potentially serious overdoses. It binds some medicine in the digestive tract. It is not suitable for everyone and can enter the

lungs if given to someone who is very drowsy or cannot protect their airway. It should only be used under professional guidance.

Supportive treatment may include intravenous fluids, medicine for nausea, and treatment for stomach irritation or bleeding. Severe breathing problems may require airway support. Seizures and major changes in blood acidity are treated in hospital with appropriate emergency medicines and monitoring.

Naproxen binds strongly to proteins in the blood. For this reason, dialysis does not remove it effectively. Dialysis may still be needed to support someone who develops severe kidney failure or an acid imbalance that does not improve with other care.

There is no safe way to "flush out" naproxen at home. Drinking excessive water can itself be harmful and does not replace medical assessment.

Complications

Most mild overdoses cause temporary digestive or nervous-system symptoms. Serious complications are less common but can occur, especially after a large ingestion, repeated excessive dosing, or when other health problems are present.

Possible complications include:

Kidney function often improves with treatment, but severe injury can occasionally lead to lasting impairment. Major bleeding, prolonged low blood pressure, or lack of oxygen can also cause long-term harm.

- Stomach or intestinal ulcers and bleeding
- Acute kidney injury, meaning a sudden loss of kidney function
- Severe drowsiness, confusion, seizures, or coma
- Metabolic acidosis and unstable blood pressure
- Breathing problems or inhaling vomit into the lungs
- Rare liver injury or abnormal clotting

Prevention

Naproxen sodium overdose is often preventable. Read the active-ingredient and dosing sections of the label each time you use a product. Do not take extra doses because pain has not improved as quickly as expected.

Keep a written or phone-based record if it is difficult to remember when a dose was taken. Avoid using two naproxen products together. Do not combine naproxen with another NSAID, such as ibuprofen, unless a healthcare professional has specifically said to do so.

Keep medicines in their original, labelled containers. Store them out of sight and reach of children, preferably in a locked location. Child-resistant caps reduce risk but are not childproof.

A pharmacist can help check whether a new pain medicine contains naproxen or another NSAID. They can also review possible interactions with existing medicines.

If intentional overdose is a concern, reducing access to large quantities of medicine and involving trusted support can improve safety. A current mental health crisis needs urgent help rather than waiting for a routine appointment.

Living with it and what to expect

Naproxen sodium overdose is usually a single event rather than an ongoing condition. People with mild poisoning often recover as the medicine leaves the body, but the time needed for observation and recovery is not the same for everyone.

Symptoms and abnormal blood tests may take longer to resolve after a large ingestion, repeated excess doses, or kidney injury. Modified-release products and other substances taken at the same time may also affect how long monitoring is needed.

After discharge, follow any instructions about repeat blood tests or appointments. Kidney function, blood counts, or digestive symptoms may need follow-up even if you feel better. Avoid restarting naproxen or another NSAID until the healthcare team has explained when it is safe.

Seek further assessment if symptoms return or worsen after discharge. Reduced urination, swelling, ongoing vomiting, black stools, or increasing abdominal pain are not expected parts of routine recovery.

If the overdose was intentional, emotional and mental health care is an important part of recovery. Follow-up may include crisis support, counselling, medication review, or practical steps to make medicine storage safer. Recovery from the physical effects does not remove the need for this support.

When to get medical help

Get immediate poison-centre or medical advice for any suspected naproxen sodium overdose,

even if there are no symptoms. In the United States, Poison Help can be reached at 1-800-222-1222 . Elsewhere, use your local poison information service or emergency number.

Call emergency services now if the person:

Do not leave an unconscious or severely drowsy person alone. Place them on their side if it is safe to do so, and do not give anything by mouth. Do not drive yourself if you are drowsy, confused, or unwell.

For routine follow-up after emergency assessment, contact the treating service if vomiting continues, urine output decreases, swelling develops, or stomach symptoms do not improve. Attend any planned blood tests even if symptoms have settled.

- Is difficult to wake, collapses, or loses consciousness
- Has a seizure, severe confusion, or trouble breathing
- Vomits blood or passes black, tar-like stools
- Has severe or rapidly worsening abdominal pain
- Has taken naproxen intentionally to cause self-harm
- May have taken other dangerous medicines or substances

Common questions

How much naproxen sodium causes an overdose?

There is no single amount that predicts poisoning for everyone. Risk is affected by body size, kidney function, age, the product taken, timing, repeated doses, and other substances. A poison centre can assess the specific exposure without relying on symptoms alone.

Can I sleep after taking too much naproxen?

Do not simply go to sleep before getting poison-centre or medical advice. Drowsiness can be a symptom of poisoning, and someone who becomes difficult to wake needs emergency help. A poison specialist can say whether home monitoring or hospital observation is appropriate.

Should I make myself throw up?

No. Vomiting does not reliably remove the medicine and can lead to choking or inhaling vomit. Activated charcoal is sometimes used in healthcare settings, but only when the likely benefit is greater than the risk.

How long does a naproxen overdose last?

Mild symptoms may improve as the medicine is cleared, while kidney injury, bleeding, or a large

overdose can require longer monitoring and recovery. The formulation and whether doses were repeated also matter. Follow the observation and testing plan given after assessment.

Can a naproxen overdose damage my kidneys permanently?

It can cause sudden kidney injury, particularly with dehydration, existing kidney disease, or severe poisoning. Many people recover kidney function, but lasting damage is possible after a serious injury. Follow-up blood and urine tests may be needed.

Is naproxen sodium the same as naproxen?

Naproxen sodium is a salt form of naproxen that is absorbed relatively quickly. Product strengths and labels may be written differently, so report the exact name and strength shown on the package rather than trying to convert the amount yourself.

Sources

- U.S. National Library of Medicine. Naproxen sodium overdose . MedlinePlus Medical Encyclopedia.
- U.S. National Library of Medicine. DailyMed: Naproxen prescribing information . Overdosage and clinical pharmacology information.
- Hunter LJ, Wood DM, Dargan PI. The patterns of toxicity and management of acute nonsteroidal anti-inflammatory drug overdose . Open Access Emergency Medicine . 2011;3:39-48.
- Chyka PA, Seger D, Krenzelok EP, Vale JA. Position paper: Single-dose activated charcoal . Clinical Toxicology . 2005;43(2):61-87.
- Royal Children's Hospital Melbourne. Clinical practice guideline: Nonsteroidal anti-inflammatory drug poisoning . Pediatric poisoning assessment and management guidance.