CONDITION

Ibuprofen overdose

Ibuprofen overdose is harm caused by taking more ibuprofen than the body can safely process.

WHAT IT IS
Harm from taking more ibuprofen than the body can safely handle

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

MAIN SYMPTOMS
Nausea, vomiting, stomach pain, drowsiness

WHAT CAUSES IT
Too much ibuprofen at once or across repeated doses

HOW IT IS DIAGNOSED
Exposure history, examination, and tests for organ effects

MAIN TREATMENT
Supportive monitoring and treatment of symptoms and complications

CAN IT BE CURED?
Yes - most effects resolve after treatment

IS IT AN EMERGENCY?
Sometimes - trouble breathing, seizures, collapse, or inability to wake

LONG-TERM OUTLOOK
Most recover fully; severe poisoning may cause lasting organ damage

Overview

Ibuprofen is a nonsteroidal anti-inflammatory drug, often shortened to NSAID. It reduces pain, inflammation, and fever. It is available in tablets, capsules, liquids, and some combination medicines.

An ibuprofen overdose happens when someone takes more than their body can safely process. This may involve one large amount, several extra doses close together, or repeated excessive doses over several days.

Many exposures cause mild stomach or nervous system symptoms. Larger amounts can affect breathing, blood pressure, the kidneys, and the balance of acids in the blood. Serious poisoning is less common, but it needs prompt treatment.

If you think an overdose may have happened, contact a poison information service now rather than waiting for symptoms. In the United States, call Poison Help at 1-800-222-1222. Elsewhere, contact your local poison centre or emergency service. Have the package nearby if possible.

Symptoms

Symptoms often begin within several hours of a single overdose, although kidney problems and other complications can take longer to appear. Someone may initially feel well.

Common symptoms include:

More serious poisoning may cause repeated vomiting, bleeding in the digestive tract, very low blood pressure, or abnormal breathing. Severe drowsiness can progress to loss of consciousness. Seizures are possible after a large overdose.

Kidney injury may reduce urine production or cause swelling, weakness, or worsening nausea. However, early kidney injury may have no obvious symptoms and may only be found through blood and urine tests.

A dangerous buildup of acid in the blood, called metabolic acidosis, can develop in severe cases. It may cause deep or rapid breathing, confusion, weakness, or reduced consciousness.

Symptoms alone cannot show how serious an exposure is. The amount taken, when it was taken, the person's age and weight, existing health conditions, and any other substances involved all matter.

- Nausea, vomiting, or stomach pain
- Heartburn or irritation in the upper abdomen
- Dizziness, headache, or ringing in the ears
- Drowsiness, confusion, or unusual tiredness

Causes and risk factors

The immediate cause is taking too much ibuprofen. This may be accidental or intentional.

Accidental overdoses can happen when someone:

Children may swallow ibuprofen when medicine is left within reach. A child can be affected by an amount that would have a different effect in an adult.

The effects may be more serious in someone who is dehydrated or already has kidney, heart,

or digestive tract disease. Older adults and people taking medicines that affect kidney function may also be more vulnerable to kidney injury.

Taking alcohol, sedatives, pain medicines, or other drugs at the same time can change the symptoms and treatment needed. An intentional overdose may involve several substances, even if only ibuprofen is initially reported.

- Takes another dose after forgetting an earlier one
- Uses more than one medicine containing ibuprofen
- Confuses tablet strengths or liquid concentrations
- Uses a household spoon instead of the supplied measuring device
- Gives medicine to a child without confirming the correct product and amount
- Continues taking extra doses because pain or fever has not improved

Diagnosis

There is no routinely available blood test that confirms an ibuprofen overdose or reliably predicts its severity. Diagnosis is usually based on the exposure history, symptoms, examination, and tests for complications.

The healthcare team will try to find out:

Bring the medicine container, packaging, or a clear photograph of the label if it is safe to do so. Do not delay emergency care while searching for it.

Blood tests may check kidney function, salts and minerals, blood sugar, and the acid balance of the blood. Other tests may look for common co-ingestants, such as paracetamol, also called acetaminophen. A urine test and heart tracing may also be used.

People with mild exposures may only need observation and basic checks. Those with significant symptoms, uncertain exposure details, repeated excessive dosing, or abnormal test results may need longer monitoring.

- Which product and strength were involved
- Approximately how much may have been taken
- When the exposure happened
- Whether doses were taken once or repeatedly
- Whether alcohol, medicines, or other substances were also involved

- What symptoms have developed

Treatment and management

There is no specific antidote that reverses ibuprofen. Treatment supports the body while the medicine is cleared and manages any complications.

A poison specialist may recommend monitoring at home for some low-risk accidental exposures. This decision should be made using the exact product, amount, timing, age, weight, symptoms, and medical history. Do not rely on a pill count found online.

In hospital, treatment may include monitoring of breathing, heart rate, blood pressure, urine output, and alertness. Blood tests may be repeated to watch kidney function and blood acidity.

Fluids may be given through a vein when vomiting, dehydration, or low blood pressure is present. Medicines can be used to control nausea, seizures, or other symptoms. Severe breathing problems may require a breathing tube and mechanical ventilation.

Activated charcoal can bind some medicine in the digestive tract. It may be considered soon after a potentially serious ingestion when the person can swallow safely or has a protected airway. It should only be given on specialist advice. Do not use charcoal products at home unless a poison service specifically directs you to do so.

Do not make yourself or another person vomit. Vomiting does not reliably remove the medicine and can lead to choking or inhaling stomach contents into the lungs.

Ibuprofen is strongly attached to proteins in the blood, so dialysis does not remove much of the drug itself. Dialysis may still be needed to support someone with severe kidney failure, dangerous blood chemistry changes, or fluid problems.

An intentional overdose also requires a compassionate mental health assessment and a plan for immediate safety and ongoing support.

Complications

Most mild overdoses settle without lasting problems. Complications are more likely after a large ingestion, repeated excessive doses, delayed treatment, dehydration, or exposure to several substances.

Possible complications include:

Kidney injury often improves with supportive care, but severe injury can require temporary dialysis. Lasting kidney damage is possible after a very serious overdose.

Prolonged low blood pressure, severe breathing failure, or repeated seizures can injure the brain and other organs. These outcomes are uncommon but explain why severe symptoms need emergency treatment.

- Acute kidney injury, meaning a sudden reduction in kidney function
- Metabolic acidosis, or excessive acid in the blood
- Low blood pressure and reduced blood flow to organs
- Digestive tract irritation, ulcers, or bleeding
- Seizures, coma, or breathing failure
- Aspiration, when vomit enters the lungs

Prevention

Most accidental ibuprofen overdoses can be prevented.

Keep ibuprofen and all other medicines in their original, child-resistant packaging. Store them locked away and out of sight. Child-resistant packaging reduces risk but is not childproof.

Read the active ingredients before combining pain, fever, cold, or flu products. Do not take two products containing ibuprofen unless a healthcare professional has specifically advised it.

Check the product strength each time, especially with liquids. Use the supplied oral syringe or measuring cup rather than a kitchen spoon. When several adults care for a child, keep a written record of each dose and time.

Follow the package directions or instructions from your healthcare professional. Do not take extra doses to make up for a missed dose or because the medicine has not worked quickly enough.

If someone is at risk of intentional overdose, storing smaller quantities in a locked place may reduce access. Immediate emotional support and professional help are also important.

Living with it and what to expect

An ibuprofen overdose is usually a short-term event rather than an ongoing condition. People with mild symptoms may recover within hours after observation. Stomach discomfort or tiredness can sometimes last longer.

A serious overdose may require several days in hospital. Recovery time is shaped by kidney function, blood pressure, breathing, the amount taken, and whether other substances were

involved.

Follow-up blood tests may be needed after kidney injury or abnormal blood chemistry. Routine follow-up is also appropriate if stomach pain, vomiting, changes in urination, or unusual tiredness continue after discharge.

Once symptoms have resolved and kidney tests are normal, most people do not have ongoing health effects. Severe organ injury can lead to a longer recovery and, occasionally, lasting problems.

After an accidental overdose, reviewing how medicines are measured, recorded, and stored can help prevent another exposure. After an intentional overdose, recovery also includes attention to emotional distress, safety, and access to continuing mental health support.

When to get medical help

Contact a poison centre promptly for any suspected overdose, even if there are no symptoms. Early advice can help determine whether home observation or medical assessment is appropriate.

Call emergency services now if the person:

Do not drive yourself if you are severely drowsy, confused, faint, or unwell. Do not give food, drink, charcoal, or another medicine unless emergency or poison specialists advise it.

Routine follow-up is different from emergency care. Arrange follow-up after discharge if repeat kidney tests were recommended or if mild symptoms are not improving. New breathing difficulty, collapse, seizures, reduced consciousness, or significant bleeding require emergency help instead.

- Has trouble breathing or is breathing unusually slowly
- Has a seizure
- Collapses, faints, or cannot be awakened
- Is severely confused or agitated
- Has blue, grey, or very pale skin or lips
- Vomits blood or passes black, tar-like stool
- Has taken ibuprofen intentionally to cause self-harm

Common questions

How much ibuprofen causes an overdose?

There is no single safe pill-count answer. Tablets and liquids come in different strengths, and risk is affected by age, weight, timing, medical conditions, and other substances. Contact a poison centre with the exact product details.

I took extra ibuprofen but feel fine. Do I still need help?

Yes, seek poison advice. Symptoms may not start immediately, and kidney injury can develop without obvious early warning signs. A poison specialist can assess whether you need observation or testing.

Should I make myself throw up?

No. Induced vomiting does not reliably remove ibuprofen and may cause choking or aspiration. Call a poison centre for instructions instead.

Is there an antidote for ibuprofen overdose?

No specific antidote is available. Treatment focuses on monitoring and supporting breathing, circulation, kidney function, and blood chemistry while the body clears the medicine.

Can an ibuprofen overdose permanently damage the kidneys?

It can, particularly after severe poisoning or prolonged low blood pressure. Many cases of acute kidney injury improve with treatment, but recovery cannot be predicted from symptoms alone.

How long does an ibuprofen overdose last?

Mild symptoms may settle within several hours. Severe poisoning or kidney injury can require days of treatment and later blood tests. The course also changes if repeated doses or other substances were involved.

Sources

- MedlinePlus Medical Encyclopedia: Ibuprofen overdose , U.S. National Library of Medicine
- Clinical Practice Guideline: Nonsteroidal Anti-inflammatory Drug poisoning , Royal Children's Hospital Melbourne
- Ibuprofen: Is it safe and how much can you take? , National Capital Poison Center
- Wood DM, Dargan PI, Jones AL. The patterns of toxicity and management of acute nonsteroidal anti-inflammatory drug overdose , Open Access Emergency Medicine , 2011



- Manoguerra AS and colleagues. An evidence-based consensus guideline for out-of-hospital management of human exposures to nonsteroidal anti-inflammatory drugs , Clinical Toxicology , 2007
- Chyka PA and colleagues. Position paper: Single-dose activated charcoal , Clinical Toxicology , 2005