CONDITION

Promethazine overdose

Promethazine overdose is poisoning caused by taking enough promethazine to disrupt breathing, alertness, movement, or heart function.

WHAT IT IS
Toxic effects from taking too much promethazine

BODY SYSTEM
Nervous system, breathing, heart and circulation

MAIN SYMPTOMS
Severe drowsiness, confusion, fast heartbeat, breathing problems

WHAT CAUSES IT
Too much promethazine, sometimes with other sedating substances

HOW IT IS DIAGNOSED
Exposure history, examination, ECG, and targeted blood tests

MAIN TREATMENT
Emergency monitoring and supportive hospital care

CAN IT BE CURED?
Sometimes - recovery depends on overdose severity

IS IT AN EMERGENCY?
Yes - any suspected overdose needs immediate assessment

LONG-TERM OUTLOOK
Most recover; severe oxygen loss can cause lasting harm

Overview

Promethazine is an antihistamine like cetirizine or loratadine used for problems such as allergies, nausea, motion sickness, and short-term sleep difficulty. It also affects several chemical signals in the brain.

A promethazine overdose happens when someone takes enough of the medicine to cause toxic effects. It may follow an accidental extra dose, a child swallowing medicine, a dosing mistake with liquid promethazine, or intentional self-harm. The risk can be greater when promethazine is combined with alcohol, opioids like oxycodone or morphine , sleeping tablets, anxiety medicines, or other substances that cause drowsiness.

An overdose can slow breathing, reduce consciousness, disturb heart rhythm, and cause seizures or severe agitation. Young children may become unusually excited rather than sleepy.

There is no single amount that reliably predicts what will happen. The person's age, health, medicine strength, amount taken, and other substances involved all matter. Any suspected overdose needs immediate advice from emergency services or a poison centre, even if there are no symptoms yet.

Symptoms

Symptoms often involve the brain and nervous system. A person may become very sleepy, difficult to wake, confused, unsteady, or agitated. Some people have hallucinations, meaning they see or hear things that are not present.

Promethazine also has anticholinergic effects . This means it blocks a chemical used by nerves in many parts of the body. Possible signs include:

Breathing may become slow, shallow, noisy, or irregular. This is especially concerning if the person is hard to wake or has taken another sedating substance.

Other possible symptoms include vomiting, low blood pressure, fainting, abnormal heart rhythms, muscle stiffness, tremor, or uncontrolled movements. Seizures can occur in a serious overdose.

Children may develop agitation, nightmares, abnormal movements, hallucinations, or seizures. Their symptoms can change quickly.

- Dry mouth, flushed or hot skin, and wide pupils
- Blurred vision, fast heartbeat, or difficulty passing urine
- Confusion, restlessness, hallucinations, or unusual behaviour
- Severe drowsiness, poor coordination, or loss of consciousness

Causes and risk factors

The direct cause is exposure to more promethazine than the body can safely handle. This may involve tablets, capsules, liquid medicine, suppositories, or an injected form.

Accidental overdose can happen when doses are repeated because someone forgets a dose was already given. Liquid medicines can also be measured incorrectly if a kitchen spoon is used instead of the supplied syringe or measuring device.

Risk may be higher when promethazine is taken with substances that also slow the brain or breathing. These include alcohol, opioids, sedatives, sleeping medicines, and some anxiety or

seizure medicines. Taking several antihistamines or cold remedies together may also lead to an unintended overdose because their ingredients can overlap.

Babies and young children are particularly vulnerable to promethazine's breathing effects. Product information warns that promethazine must not be used in children younger than 2 years because fatal breathing suppression has occurred, including at recommended doses.

Older adults may be more sensitive to drowsiness, confusion, low blood pressure, and anticholinergic effects. Existing breathing, heart, liver, or kidney problems may also affect how the body responds.

Diagnosis

Promethazine overdose is diagnosed mainly from what was taken, the symptoms, and the medical examination. If possible, take the medicine container or packaging to the hospital. Information about the strength, possible amount, time taken, and any other substances can guide care.

The healthcare team will check alertness, breathing, oxygen level, temperature, blood pressure, heart rate, and pupil size. They may perform an ECG , a painless test that records the heart's electrical activity. This can identify rhythm changes or electrical delays caused by poisoning.

Blood tests may check blood sugar, salts, kidney function, liver function, and the effects of poor breathing. Tests may also look for commonly combined substances, such as paracetamol, when the full history is uncertain.

A routine drug screen does not reliably confirm or rule out promethazine poisoning. Treatment should not be delayed while waiting for a laboratory result.

Treatment and management

Promethazine overdose requires urgent professional assessment. Do not make the person vomit. Do not give food, drink, or another medicine unless a poison specialist or emergency professional tells you to do so.

Initial treatment focuses on supporting breathing and circulation. The person may receive oxygen and close monitoring. If they cannot protect their airway or breathe adequately, a breathing tube and ventilator may be needed.

Hospital care may include:

Activated charcoal can bind some medicine in the digestive system. A toxicology team may consider it soon after a significant ingestion, but only when it can be given safely. It can enter the lungs if a person is drowsy or vomiting, so it should never be used at home.

There is no specific antidote that reverses all promethazine effects. Treatment is adjusted to the symptoms and complications. A poison centre or medical toxicologist may advise the hospital team in a serious or unusual case.

A person who took promethazine intentionally will also be offered a mental health assessment once they are medically stable. This is part of treating the circumstances around the overdose, not a punishment.

- Continuous monitoring of heart rate, rhythm, oxygen level, and blood pressure
- Fluids through a vein for low blood pressure or dehydration
- Medicines to control seizures, dangerous agitation, or abnormal movements
- Treatment for significant heart rhythm or blood pressure problems
- Temperature management if the person becomes dangerously hot

Complications

The most important complications involve breathing, consciousness, and the heart. Severe drowsiness can allow vomit or saliva to enter the lungs. This is called aspiration and may lead to lung inflammation or infection.

Slow or stopped breathing can reduce oxygen reaching the brain and other organs. If prolonged, oxygen loss may cause lasting injury. Serious poisoning can also result in coma, seizures, very low blood pressure, or a dangerous heart rhythm.

Severe agitation, seizures, or muscle rigidity may damage muscle tissue. The damaged muscle can release substances that strain the kidneys, although this is not expected in every overdose.

Falls and other injuries may occur because promethazine affects balance and alertness. Combining it with alcohol, opioids, or other sedatives increases the chance of profound drowsiness and breathing failure.

Death is possible in a severe overdose, particularly when treatment is delayed or several substances have been taken. Prompt emergency care improves the chance of recovery.

Prevention

Promethazine overdose is often preventable. Keep it in its original, child-resistant packaging and store it where children and other household members cannot reach or see it.

Use the measuring syringe or cup supplied with liquid medicine. A kitchen teaspoon does not provide a reliable dose. Keep a written record when more than one person is responsible for giving medicine, so that doses are not repeated.

Read the active ingredients on allergy, cough, cold, nausea, and sleep products. Several products may contain antihistamines or other sedating medicines. A pharmacist can help check for ingredient overlap.

Do not share promethazine with another person. Avoid alcohol while taking it, and do not combine it with opioids, sleep medicines, or other sedatives unless the combination has been specifically reviewed by a qualified prescriber.

Return unwanted medicine through a pharmacy take-back service where available. Do not keep large quantities "just in case," particularly if someone in the household is at risk of self-harm.

Living with it and what to expect

Promethazine overdose is an acute event rather than an illness that usually continues for months or years. Symptoms may change over hours as the medicine is absorbed and then cleared from the body.

Some people need only observation and monitoring. Others require intensive care for breathing problems, seizures, low blood pressure, or heart rhythm changes. The length of observation is based on symptoms, the amount and type of medicine involved, and whether other substances were taken.

Many people recover without lasting effects after an isolated overdose when complications are prevented or treated promptly. Tiredness, slowed thinking, dry mouth, blurred vision, or poor coordination may continue for a while after the most serious effects have passed. Driving and other risky activities should wait until alertness and coordination are fully back to normal.

Recovery can take longer after aspiration, prolonged oxygen loss, muscle injury, or another major complication. Follow-up may be arranged to check breathing, kidney function, movement symptoms, or other problems identified in hospital.

After an accidental overdose, routine follow-up can help review storage, liquid measurement, and the medicine list. After intentional self-poisoning, ongoing mental health care and practical

safety planning may reduce the risk of another crisis.

When to get medical help

Treat any suspected promethazine overdose as urgent. Contact your local poison centre or emergency medical service immediately. Do not wait for symptoms to appear.

Call emergency services now if the person:

Place an unconscious but breathing person on their side if it is safe to do so. If they are not breathing normally, begin cardiopulmonary resuscitation if you know how and follow the emergency operator's instructions. Do not leave them alone.

Routine follow-up is appropriate after discharge if symptoms are improving as expected. Contact the follow-up service sooner for persistent confusion, breathing symptoms, fainting, abnormal movements, reduced urination, or worsening weakness.

- Is difficult to wake, unconscious, or behaving very unusually
- Has slow, shallow, irregular, or stopped breathing
- Has a seizure, collapses, or develops severe muscle stiffness
- Has blue, grey, or unusually pale lips or skin
- Has taken promethazine intentionally
- May have combined it with alcohol, opioids, or other sedatives

Common questions

How much promethazine causes an overdose?

There is no single amount that is safe for everyone or guaranteed to cause poisoning. Age, body size, health, medicine strength, and other substances all affect the risk. Contact a poison centre immediately for advice based on the actual exposure.

How quickly do overdose symptoms start?

Symptoms can begin within the first several hours, but timing is not predictable enough to make home observation safe. Modified-release products, uncertain timing, or other medicines can change when symptoms appear.

Can I make someone vomit after they take too much?

No. Making someone vomit can cause choking or allow vomit to enter the lungs, especially if

promethazine has made them drowsy. Follow instructions from a poison centre or emergency service instead.

Is there an antidote for promethazine overdose?

There is no routine antidote that reverses all its effects. Hospital treatment supports breathing, circulation, temperature, and heart function while the body clears the medicine. Specific symptoms such as seizures may be treated with targeted medicines.

Can you recover fully from promethazine overdose?

Many people recover fully with prompt supportive care, particularly when promethazine was the only substance taken and breathing remained adequate. Lasting problems are more likely if there was prolonged oxygen loss or another serious complication.

Can promethazine overdose be treated at home if there are no symptoms?

No. A person can appear well before significant symptoms develop. A poison centre can advise whether emergency transport or monitored assessment is needed, but home remedies should not be used.

Sources

- DailyMed: Promethazine Hydrochloride Tablets-prescribing information , U.S. National Library of Medicine; warnings and overdosage information
- MedlinePlus Medical Encyclopedia: Promethazine overdose , U.S. National Library of Medicine
- Royal Children's Hospital Melbourne: Clinical Practice Guideline-Antihistamine poisoning , assessment, monitoring, and supportive care guidance
- Electronic Medicines Compendium: Phenergan 25 mg Tablets-Summary of Product Characteristics , sections on warnings and overdose
- America's Poison Centers: Poison Help , immediate poisoning response and poison-centre access guidance