CONDITION

Phenothiazine overdose

Phenothiazine overdose is poisoning caused by taking more of a phenothiazine medicine than the body can safely handle.

WHAT IT IS
Toxic effects from taking too much phenothiazine medicine

BODY SYSTEM
Brain, nerves, heart and circulation

MAIN SYMPTOMS
Extreme sleepiness, agitation, low blood pressure, abnormal heartbeat

WHAT CAUSES IT
Excess phenothiazine dose, accidental or intentional

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

MAIN TREATMENT
Emergency monitoring and supportive hospital care

CAN IT BE CURED?
Yes - toxic effects are usually reversible

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

LONG-TERM OUTLOOK
Most survivors recover fully after acute effects resolve

Overview

Phenothiazine overdose happens when someone takes more of a phenothiazine medicine than their body can safely handle. It is a form of poisoning and requires immediate medical advice.

Phenothiazines are a family of medicines. Some, including chlorpromazine and fluphenazine, are used to treat psychosis and other mental health conditions. Others, such as prochlorperazine and promethazine, may be used for nausea, dizziness, allergies, or related symptoms. Their effects and strengths are not identical.

An overdose can slow or disrupt activity in the brain, nerves, heart, and circulation. It may cause severe drowsiness, confusion, low blood pressure, abnormal movements, seizures, or dangerous changes in heart rhythm. Combining a phenothiazine with alcohol, opioids like oxycodone or morphine , sleeping medicines, or other sedatives can increase the risk of

breathing and consciousness problems.

There is no single antidote that reverses all phenothiazine effects. Treatment supports breathing, blood pressure, heart function, and other body systems while the medicine is cleared.

Symptoms

Symptoms often begin within several hours, but timing differs by medicine, amount, formulation, and what else was taken. Long-acting products or several medicines taken together may cause longer-lasting effects.

Possible symptoms include:

Phenothiazines can cause dystonia , meaning sudden and sometimes painful muscle contractions. The neck may twist, the eyes may roll upward, or the jaw may tighten. These movements can look frightening but are treatable. Tightening involving the throat or difficulty breathing needs emergency care.

Heart effects may not be obvious without testing. Some phenothiazines can disturb the heart's electrical timing, including the QT interval measured on an electrocardiogram. This can occasionally lead to a serious abnormal rhythm even when the person initially appears stable.

- Marked sleepiness, confusion, agitation, or unusual behaviour
- Slurred speech, poor coordination, or unsteady walking
- Blurred vision, dry mouth, dilated pupils, or difficulty passing urine
- A fast heartbeat, low blood pressure, dizziness, or fainting
- Shallow or slowed breathing
- Muscle stiffness, tremor, restlessness, or involuntary movements
- Seizures
- Very high or low body temperature
- Coma or inability to wake

Causes and risk factors

An overdose may happen after taking a large amount at once, repeating a dose by mistake, or confusing one medicine with another. Children may swallow medicine they find. Errors can also

occur when medicines have similar names or when more than one product contains a sedating ingredient.

Some overdoses are intentional. Anyone who has taken a medicine to cause self-harm needs urgent medical and emotional support, even if there are no symptoms yet.

The effects may be more severe when phenothiazines are taken with:

Older adults and people with heart, kidney, liver, breathing, or neurological conditions may have less reserve when poisoning occurs. However, serious poisoning can happen to anyone, and symptoms alone cannot show exactly how much was taken.

- Alcohol, opioids, sleeping tablets, or other sedatives
- Medicines that lower blood pressure
- Other medicines that affect heart rhythm
- Several antipsychotic or anti-nausea medicines
- Substances that cause seizures or alter body temperature

Diagnosis

Diagnosis is based mainly on the exposure history, symptoms, physical examination, and heart monitoring. If possible, healthcare staff will need the medicine name, strength, estimated amount, and time it was taken. They will also ask about alcohol, non-prescription products, recreational substances, and other medicines.

An ECG , or electrocardiogram, records the heart's electrical activity. It can identify a fast rhythm, a widened electrical signal, or prolonged QT interval. The ECG may be repeated because heart effects can change over time.

Blood tests may check glucose, salts such as potassium and magnesium, kidney and liver function, and signs of muscle injury. Testing for other common poisons may be needed if it is unclear what was taken. A pregnancy test may be offered when relevant because it can affect investigation and treatment decisions.

Routine drug screens do not reliably identify every phenothiazine or measure how severe the poisoning is. A negative screen therefore does not necessarily rule it out. Imaging may be used if there was a fall, head injury, or concern that vomit entered the lungs.

Treatment and management

Phenothiazine overdose is usually treated in an emergency department. People with significant symptoms may need admission to a monitored hospital unit.

Immediate care focuses on the airway, breathing, circulation, level of consciousness, temperature, and heart rhythm. Treatment may include oxygen, intravenous fluids, and continuous ECG monitoring. A breathing tube and ventilator may be needed if the person cannot protect their airway or breathe adequately.

Activated charcoal may sometimes reduce absorption if the overdose was recent. It is only used in selected situations and must not be given to a very drowsy person unless the airway is protected. Do not try to cause vomiting or give charcoal at home.

Other treatment is directed at the effects of the poisoning:

Because phenothiazines are widely distributed through body tissues, dialysis generally does not remove them effectively. Observation continues until consciousness, blood pressure, breathing, temperature, movement, and heart tests are stable. The required time differs according to the medicine and the severity of the exposure.

If the overdose was connected with self-harm, treatment also includes a mental health and safety assessment. This is part of overdose care, not a punishment.

- Intravenous fluids and, if needed, medicines to support low blood pressure
- Medicines to control seizures or severe agitation
- Treatment for painful muscle spasms or abnormal movements
- Correction of potassium, magnesium, or other electrolyte problems
- Cooling measures for a dangerously high temperature
- Specific treatment for serious ECG changes or abnormal heart rhythms

Complications

Most people recover with timely supportive treatment, but severe poisoning can cause complications.

A person who is deeply drowsy may inhale saliva or vomit into the lungs. This is called aspiration and can cause breathing problems or pneumonia. Prolonged unconsciousness may also lead to pressure injuries.

Other possible complications include:

A rare but serious reaction called neuroleptic malignant syndrome can occur with antipsychotic medicines, including some phenothiazines. It causes severe muscle stiffness,

high temperature, altered consciousness, and unstable blood pressure or heart rate. These symptoms need immediate hospital treatment.

- Dangerous heart rhythm disturbances
- Seizures or coma
- Falls and other injuries
- Severe low blood pressure and reduced blood flow to organs
- Muscle breakdown, which can strain the kidneys
- Kidney injury
- Brain injury if breathing or circulation is severely impaired

Prevention

Accidental overdose can often be prevented, although not every medication error or intentional overdose is predictable.

Keep phenothiazines in their original labelled packaging and store them out of sight and reach of children. A locked container is safest when children or vulnerable adults are present. Do not share prescription medicines.

Follow the dispensing label rather than relying on tablet colour or shape. If you miss a dose or are unsure whether a dose was already taken, check with a pharmacist or prescribing clinician rather than taking an extra one.

Keep an up-to-date list of prescription medicines, non-prescription products, and supplements. This can help identify duplicate ingredients or combinations that increase sedation or affect heart rhythm. Avoid alcohol when the medicine label or healthcare advice warns that the combination is unsafe.

If you are worried that you might intentionally take too much medicine, put distance between yourself and the tablets. Contact emergency services, a crisis service, or someone who can stay with you and help secure the medicine.

Living with it and what to expect

Phenothiazine overdose is an acute event rather than a lifelong condition. Mild effects may improve as the medicine leaves the body. More serious poisoning can require several days of monitoring and treatment, especially after a large exposure, a long-acting medicine, or a

mixture of substances.

Most people who recover without major complications do not have lasting physical effects. Recovery may take longer after aspiration pneumonia, prolonged low blood pressure, a serious abnormal heart rhythm, kidney injury, or lack of oxygen. Follow-up is then based on the complication rather than the overdose alone.

After discharge, temporary tiredness, poor concentration, or weakness may occur. Follow the hospital's instructions about driving, work, alcohol, and restarting medicines. Do not restart, stop, or change a regular phenothiazine on your own after an overdose. A clinician may need to review why it was prescribed and whether the dose, packaging, supervision, or medicine should change.

An intentional overdose may be followed by mental health care and a practical safety plan. This can include limiting the amount of medicine kept at home, arranging supervised dispensing, and addressing the distress that led to the overdose. Ongoing support can reduce the chance of another crisis.

When to get medical help

Any suspected phenothiazine overdose needs immediate expert advice, even if the person feels well. Symptoms and ECG changes can develop after the tablets were swallowed.

In the United States, call Poison Help at 1-800-222-1222 . Elsewhere, contact your local poison information centre or emergency medical service. Have the medicine container available if possible.

Call emergency services now if the person:

Do not leave the person alone. Do not make them vomit, give food or drink to a drowsy person, or let them drive to hospital. Place an unconscious but breathing person on their side if it is safe to do so. Begin CPR if they are not breathing normally and follow instructions from emergency services.

Routine follow-up is appropriate after emergency treatment if there are questions about restarting medicine, persistent mild tiredness, movement symptoms, or prevention of another medication error. New fainting, breathing difficulty, seizures, worsening confusion, or severe stiffness is not routine and requires urgent reassessment.

- Is difficult to wake, unconscious, or behaving very unusually
- Has trouble breathing, blue or grey lips, or choking sounds
- Faints, collapses, or has a seizure

- Has severe muscle stiffness or a very high temperature
- Develops a very fast, irregular, or pounding heartbeat
- Took the medicine intentionally or may take more

Common questions

How much phenothiazine causes an overdose?

There is no single amount that is safe to use as a cutoff. Phenothiazines differ in strength, and the effect is influenced by age, health, formulation, and other substances taken. Call a poison centre for any amount above the prescribed or labelled dose.

How quickly do symptoms start?

Symptoms often appear within hours, but they may be delayed or prolonged. Long-acting products, slowed digestion, and mixed overdoses can change the timing. Do not wait for symptoms before seeking advice.

Is there an antidote for phenothiazine overdose?

There is no general antidote that removes all phenothiazine effects. Hospital treatment supports breathing, blood pressure, heart rhythm, temperature, and brain function while the body clears the medicine. Individual complications have specific treatments.

Can someone recover completely?

Yes. Many people recover fully, particularly when treatment begins before serious complications develop. The outlook is less certain after prolonged breathing problems, severe low blood pressure, a dangerous heart rhythm, or lack of oxygen.

Can I monitor a possible overdose at home?

Not without advice from a poison centre or emergency clinician. A person may look well while heart rhythm or blood pressure problems are developing. Poison specialists can use the exact medicine, amount, timing, symptoms, and medical history to recommend the safest location for observation.

Will a drug test prove that a phenothiazine was taken?

Not reliably. Standard urine drug screens may not test for the specific medicine and do not measure poisoning severity. Clinicians rely more on the exposure history, examination, ECG, and targeted blood tests.

Sources

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