CONDITION

Chlorpromazine overdose

Learn how chlorpromazine overdose affects the body, which symptoms need emergency care, and how healthcare teams diagnose, treat, and monitor it.

WHAT IT IS
Poisoning from too much chlorpromazine

BODY SYSTEM
Nervous system, heart and circulation

MAIN SYMPTOMS
Marked sleepiness, low blood pressure, slow breathing, irregular heartbeat

WHAT CAUSES IT
Taking too much chlorpromazine

HOW IT IS DIAGNOSED
Exposure history, clinical assessment, ECG

MAIN TREATMENT
Supportive care and monitoring

CAN IT BE CURED?
Sometimes - effects improve with supportive treatment

IS IT AN EMERGENCY?
Yes, any suspected overdose

LONG-TERM OUTLOOK
Depends on severity, other substances, and prompt treatment

Overview

Chlorpromazine is a prescription antipsychotic medicine. It is used for conditions such as schizophrenia and may also be used for severe nausea, persistent hiccups, or other medical problems. It belongs to a group of medicines called phenothiazines.

A chlorpromazine overdose happens when someone takes more than their body can safely handle. It may occur after an accidental medication error, an unintentional exposure in a child, or intentional self-harm. Taking chlorpromazine with alcohol, opioids like oxycodone or morphine , sedatives, or other medicines can make its effects more dangerous.

An overdose can slow brain activity, lower blood pressure, interfere with breathing, and affect the heart's electrical rhythm. It may also cause muscle stiffness, abnormal movements, seizures, or coma. The amount that causes serious illness varies. A person's age, health, regular

medicines, and other substances taken at the same time all affect the risk.

A possible chlorpromazine overdose needs immediate expert advice, even if there are no symptoms yet. Do not wait for symptoms or try to make the person vomit. In the United States, call Poison Help at 1-800-222-1222 . Call 911 for collapse, trouble breathing, a seizure, severe confusion, or inability to wake. Outside the United States, contact the local poison center or emergency service.

If the overdose may have been intentional, emergency assessment is important even when the person says they feel well. Stay with them if it is safe to do so, and move other medicines or weapons out of reach.

Symptoms

Symptoms depend on the dose, the person's health, and whether other substances were involved. They may begin before the full amount has been absorbed, so someone who initially appears well can still become ill.

Effects on alertness and behavior may include:

Chlorpromazine can block signals that help control blood pressure. This may cause dizziness, fainting, a fast pulse, or dangerously low blood pressure. The risk of falling can be higher when someone tries to stand.

Breathing may become slow or shallow, especially if the person is deeply drowsy or has also taken alcohol, opioids, sleeping medicines, or other sedatives. Vomiting while consciousness is reduced creates a risk that stomach contents will enter the lungs. This is called aspiration.

The medicine can also affect the heart's electrical system. An overdose may produce a fast heartbeat, abnormal electrocardiogram findings, or an irregular rhythm. These effects are not always noticeable without monitoring.

Other possible symptoms include dry mouth, blurred vision, enlarged pupils, difficulty urinating, constipation, and changes in body temperature. Muscle stiffness, tremor, restlessness, an abnormal neck or jaw position, or uncontrolled movements may occur because chlorpromazine affects dopamine, a chemical messenger involved in movement.

Get emergency help now for:

- Marked sleepiness, weakness, confusion, or agitation
- Slurred speech or poor coordination
- Reduced response to people or surroundings

- Seizures or coma in severe poisoning
- Trouble breathing, blue or gray lips, or choking sounds
- Collapse, fainting, severe weakness, or inability to wake
- A seizure
- A very fast or irregular heartbeat with dizziness or chest discomfort
- Severe muscle stiffness with fever or major confusion
- Any suspected intentional overdose

Causes and risk factors

An overdose may result from taking too many tablets at once, repeating a dose after forgetting that it was already taken, or misunderstanding medication instructions. Liquid medicines can also be measured incorrectly. A child may swallow medicine that was not stored securely.

People who take several medicines may accidentally confuse bottles or dosing schedules. Vision problems, memory difficulties, changes in routine, or moving medicines into unmarked containers can increase this risk.

Intentional overdose may occur during a mental health crisis. This requires medical care for the poisoning and a compassionate assessment of the person's immediate safety and support needs.

The effects can be more serious when chlorpromazine is combined with substances that cause sleepiness or low blood pressure. Examples include alcohol, opioids, sedatives, and some other psychiatric medicines. Certain medicines can also add to chlorpromazine's effects on heart rhythm.

Older adults and people with heart, lung, liver, or kidney disease may have less ability to tolerate an overdose. Dehydration can worsen low blood pressure. Individual risk still cannot be judged safely at home from the number of tablets alone.

Keep chlorpromazine in its original, labeled container. Store it out of sight and reach of children and anyone at risk of self-harm. A pharmacist can help with blister packs, pill organizers, or other systems when missed or repeated doses are a concern.

Diagnosis

Diagnosis begins with the history of the exposure and the person's symptoms. Emergency staff may ask about the tablet strength, possible amount, time taken, regular medicines, alcohol or drug use, and whether the exposure was accidental or intentional. Bringing the medication container can help, but emergency care should not be delayed to look for it.

The healthcare team checks breathing, oxygen level, heart rate, blood pressure, temperature, alertness, pupil size, and muscle findings. Repeated checks are important because the person's condition can change.

An electrocardiogram, or ECG, records the heart's electrical activity. It can show delayed electrical conduction or rhythm changes caused by chlorpromazine or another substance. Continuous heart monitoring may be needed when symptoms or ECG abnormalities are present.

Blood tests may be used to check glucose, electrolytes, kidney function, liver function, and signs of muscle injury. Tests for common co-ingestions may be appropriate when the history is unclear or the overdose was intentional. A blood chlorpromazine level is not usually needed to guide emergency treatment; clinicians rely more on symptoms, vital signs, and ECG findings.

Other conditions can resemble chlorpromazine poisoning. The team may consider low blood sugar, stroke, infection, head injury, or exposure to another medicine, depending on the circumstances.

Treatment and management

There is no specific antidote that reverses chlorpromazine overdose. Treatment focuses on supporting breathing and circulation, controlling complications, and watching the heart and nervous system until the effects improve.

At the scene, do not give food, drinks, or home remedies unless a poison specialist says to do so. Do not make the person vomit. If they are unconscious but breathing, place them on their side if this can be done safely. Do not put anything in the mouth during a seizure.

In the emergency department, treatment may include oxygen and close monitoring. People who cannot protect their airway or breathe well enough may need a breathing tube and a ventilator. Suction and other measures may be needed if vomiting or aspiration occurs.

Low blood pressure is often treated first with intravenous fluids. If fluids are not enough, a medicine called a vasopressor may be used to tighten blood vessels and support circulation. The healthcare team selects this carefully because chlorpromazine changes how the body responds to some blood-pressure medicines.

Activated charcoal can bind some medicine remaining in the digestive tract. Clinicians may

consider it soon after a potentially serious ingestion, but it is not appropriate for everyone. A person who is very drowsy may inhale charcoal into the lungs unless the airway is protected. It should not be given at home unless a poison center or healthcare professional specifically directs it.

ECG abnormalities and irregular heart rhythms are managed according to the type of electrical disturbance. Treatment may include correcting potassium, magnesium, or other electrolyte problems. Some people with specific ECG changes may receive intravenous sodium bicarbonate or another targeted treatment under toxicology or emergency guidance.

Seizures are generally treated with medicines that calm excessive brain activity. Abnormal muscle spasms or severe restlessness may also be treated. Body temperature, urine output, and muscle injury may need attention. Dialysis is not generally expected to remove chlorpromazine effectively because the drug is widely distributed into body tissues and is strongly attached to blood proteins.

Observation time is individualized. It depends on symptoms, ECG results, the amount and formulation involved, other substances taken, and the person's medical conditions. Someone with ongoing drowsiness, low blood pressure, breathing problems, seizures, or abnormal heart findings may need hospital or intensive-care monitoring.

Complications

Severe nervous-system depression can lead to loss of airway control, low oxygen levels, aspiration pneumonia, or coma. Prolonged low blood pressure may reduce blood flow to the brain, kidneys, and other organs.

Abnormal heart rhythms can occur when chlorpromazine disrupts electrical conduction. Continuous monitoring allows clinicians to identify and treat these changes.

A person who remains unconscious or has a seizure for a long period may develop muscle breakdown. This is called rhabdomyolysis. The released muscle proteins can damage the kidneys. Pressure injuries, falls, and trauma are also possible.

Severe stiffness, fever, confusion, and unstable blood pressure may suggest neuroleptic malignant syndrome, a rare but serious reaction associated with antipsychotic medicines. These findings need urgent evaluation and can overlap with infection or other types of poisoning.

The outlook depends on the severity of the exposure, other substances involved, and how quickly breathing or circulation problems are treated.

Follow up

Before discharge, the healthcare team should confirm that alertness, blood pressure, breathing, walking ability, and heart findings are stable. Follow-up needs depend on any complications and on the reason for the overdose.

Do not restart, stop, or change chlorpromazine without speaking with the prescribing clinician. After an overdose, the prescriber may review whether the medicine is still appropriate, whether the dose or packaging should change, and whether other medicines could interact with it.

After an accidental dosing error, a pharmacist can help simplify the schedule and check for duplicate products. A locked storage box, supervised administration, or limited quantities may help prevent another exposure when appropriate.

An intentional overdose should be followed by a mental health and safety assessment. Follow-up may include contact with a psychiatrist, therapist, primary care clinician, or crisis service. The goal is to address the circumstances that led to the overdose and create a practical safety plan.

Seek urgent medical advice after discharge for increasing sleepiness, repeated vomiting, new muscle stiffness, difficulty urinating, or worsening dizziness. Call emergency services for fainting, trouble breathing, a seizure, inability to wake, or a fast or irregular heartbeat with severe symptoms.

Sources

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