CONDITION

Doxepin overdose

Doxepin overdose is poisoning caused by taking enough doxepin to harm the brain, heart, or breathing.

WHAT IT IS
Toxic effects from taking too much doxepin

BODY SYSTEM
Nervous system, heart and circulation

MAIN SYMPTOMS
Severe drowsiness, confusion, seizures, abnormal heart rhythm

WHAT CAUSES IT
Excess doxepin exposure, often accidental or intentional

HOW IT IS DIAGNOSED
Clinical assessment and repeated ECGs

MAIN TREATMENT
Emergency supportive care and intravenous sodium bicarbonate

CAN IT BE CURED?
Yes - effects often resolve after prompt treatment

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

LONG-TERM OUTLOOK
Recovery common; severe poisoning can be fatal

Overview

Doxepin overdose happens when someone takes enough doxepin to cause toxic effects. It is a medical emergency because serious heart and nervous system problems can develop quickly, sometimes before the person looks severely unwell.

Doxepin belongs to a group of medicines called tricyclic antidepressants. It may be prescribed for depression, anxiety, or insomnia. A cream form is also used for itching. The amount in each product can differ greatly.

In an overdose, doxepin can interfere with the electrical signals that control the heartbeat. It can also cause severe sleepiness, seizures, low blood pressure, and slowed or ineffective breathing.

You cannot tell whether an exposure is safe from symptoms alone. The risk depends on the product, amount, timing, other substances taken, and the person's health. If an overdose may have happened, contact emergency services or a poison centre immediately rather than waiting for symptoms.

Symptoms

Symptoms often begin within the first few hours. They can worsen rapidly.

Effects on the brain and nerves may include:

Doxepin can also cause "anticholinergic" effects. This means it blocks a chemical involved in sweating, digestion, urination, vision, and alertness. Signs can include a dry mouth, wide pupils, blurred vision, hot or flushed skin, difficulty urinating, and a raised body temperature.

Heart and circulation effects may include a fast heartbeat, low blood pressure, fainting, or an abnormal heart rhythm. These changes may not be obvious without an electrocardiogram, or ECG, which records the heart's electrical activity.

Breathing may become slow or shallow, especially if the person is deeply unconscious or has taken alcohol, opioids like oxycodone or morphine , sleeping medicines, or other sedatives.

A person may initially have mild symptoms and then become more unwell. Absence of symptoms immediately after taking doxepin does not rule out serious poisoning.

- Extreme sleepiness or difficulty waking
- Confusion, agitation, or unusual behaviour
- Poor balance or slurred speech
- Muscle stiffness or uncontrolled movements
- Seizures
- Loss of consciousness or coma

Causes and risk factors

The direct cause is exposure to more doxepin than the body can safely handle. This may follow an accidental dosing mistake, a child swallowing medicine, confusion between products, or an intentional overdose.

Taking several doses close together can also cause excessive exposure. This may happen when someone forgets that a dose was already taken or tries to replace a missed dose.

Factors that can increase the chance or severity of poisoning include:

Excessive use or accidental swallowing of doxepin cream may also cause whole-body effects. Children are particularly vulnerable to accidental medicine exposure.

These factors do not reliably predict what will happen. A poison specialist needs the exact product strength, possible amount, time of exposure, and information about any other substances involved.

- Taking other antidepressants or medicines that affect heart rhythm
- Combining doxepin with alcohol, opioids, sedatives, or sleeping medicines
- Taking products that increase doxepin levels through drug interactions
- Heart, liver, or seizure disorders
- Young age, older age, or a lower body weight
- Easy access to large quantities of medicine

Diagnosis

Doxepin overdose is diagnosed from the circumstances, symptoms, examination, and heart monitoring. Treatment may begin before every detail is known.

An ECG is one of the most important tests. Clinicians look for widening or other changes in the heart's electrical signals. Repeated ECGs may be needed because abnormalities can develop over time.

Blood tests may check blood sugar, salts, kidney and liver function, and signs of muscle injury. Testing may also look for other substances commonly taken in an overdose. A doxepin blood level is not usually fast or reliable enough to determine how severe the poisoning is.

The person is usually observed with continuous heart-rate, blood-pressure, oxygen, and breathing monitoring. How long monitoring continues is based on symptoms, ECG findings, the exposure, and response to treatment.

Treatment and management

Doxepin overdose requires assessment in an emergency department. There is no single antidote that removes all of doxepin's effects, but hospital treatment can support the heart, breathing, and brain while the body clears the medicine.

Initial care may include oxygen, an intravenous line, close heart monitoring, and fluids for low

blood pressure. A breathing tube and ventilator may be needed if the person cannot protect their airway or breathe effectively.

Intravenous sodium bicarbonate is an important treatment when doxepin is disrupting the heart's electrical conduction, causing certain abnormal rhythms, or contributing to severe low blood pressure. It changes blood chemistry in a way that reduces doxepin's harmful effects on heart cells. This treatment requires ECG and blood-test monitoring.

Seizures are treated promptly, usually with medicines that calm excessive electrical activity in the brain. Additional medicines may be used if blood pressure remains low or a dangerous heart rhythm continues.

Activated charcoal can bind medicine in the digestive tract. It may be considered soon after an overdose, but only when clinicians judge that it can be given safely. It can enter the lungs if someone is very sleepy or vomiting. Do not give charcoal or try to make the person vomit at home.

Doxepin spreads widely into body tissues and binds strongly to proteins. For these reasons, dialysis does not remove it effectively and is not routinely used for this poisoning.

After an intentional overdose, care should also include a supportive mental health assessment and a plan for safety after discharge. This is part of treating the circumstances around the overdose, not a judgment about the person.

Complications

The most serious complication is an unstable heart rhythm. Doxepin can slow electrical conduction through the heart and reduce its ability to pump blood. Severe low blood pressure can then limit oxygen delivery to the brain and other organs.

Other possible complications include repeated seizures, coma, breathing failure, and aspiration. Aspiration means saliva or vomit enters the lungs, which can cause inflammation or pneumonia.

Long seizures, severe agitation, or prolonged unconsciousness can lead to muscle breakdown. This can release substances that injure the kidneys.

Brain or organ injury may occur if breathing or circulation is severely impaired for too long. Severe doxepin poisoning can be fatal, but prompt monitoring and treatment improve the chance of recovery.

Prevention

Many doxepin overdoses can be prevented, although no storage or dosing system removes every risk.

Keep tablets, liquid, and cream in their original labelled containers. Store them locked away and out of sight and reach of children. Child-resistant packaging helps, but it is not completely childproof.

Use the measuring device supplied for liquid medicine rather than a kitchen spoon. Keep a written or electronic dose record if it is easy to forget whether a dose was taken. Do not take an extra dose to replace a missed one unless the prescribing instructions specifically say to do so.

Do not share doxepin. Ask a pharmacist about safe disposal of medicine that is no longer needed. If keeping a large supply feels unsafe, a prescriber or pharmacist may be able to discuss practical storage or dispensing options.

If you are thinking about taking an overdose or harming yourself, move away from the medicine if you can and contact emergency or crisis support now. Ask someone you trust to stay with you. In the United States, call or text 988; if medicine has already been taken, call 911 and Poison Control immediately.

Living with it and what to expect

Doxepin overdose is usually an acute event rather than a long-term illness. The highest risk is generally during the early period, when changes in alertness, breathing, blood pressure, or heart rhythm can appear quickly.

People with symptoms or ECG abnormalities may need intensive monitoring until their mental state, circulation, and heart tracing remain stable. Recovery time depends on the severity of poisoning, complications, and whether other substances were involved.

Many people who receive timely care and recover from the acute effects do not have lasting heart or neurological problems. A complicated overdose involving prolonged seizures, lack of oxygen, aspiration, or organ injury may require a longer recovery and follow-up.

After discharge, tiredness or emotional distress may continue for a time. Follow-up may include checking physical recovery, reviewing all medicines, and discussing whether doxepin should be restarted, changed, or stopped. Do not restart it after an overdose unless the clinician responsible for ongoing care has reviewed the plan.

If the overdose was intentional, continued mental health support can help address the crisis

and reduce the chance of another overdose. The type and length of support should reflect the person's needs and circumstances.

When to get medical help

Any known or possible doxepin overdose needs immediate professional advice, even if there are no symptoms.

In the United States, call Poison Control at 1-800-222-1222 . Call 911 immediately if the person is difficult to wake, has a seizure, collapses, has trouble breathing, or has taken doxepin intentionally. Elsewhere, call your local poison centre or emergency number.

While waiting for help:

If an intentional overdose may have occurred, stay with the person if it is safe. Remove access to remaining medicines without putting yourself at risk.

Routine follow-up happens after emergency care. Seek follow-up advice for ongoing tiredness, cough after vomiting, muscle pain, reduced urination, or concerns about restarting medicines. New fainting, seizures, breathing difficulty, or marked confusion after discharge require urgent reassessment.

- Do not make the person vomit
- Do not give food, drink, charcoal, or another medicine unless instructed
- Do not let the person drive
- Keep the medicine container or packaging for responders
- Place an unconscious but breathing person on their side if safe
- Start CPR if they are not breathing and you know how

Common questions

Can one extra doxepin dose cause an overdose?

The answer cannot be determined safely without knowing the product strength, usual dose, age, health conditions, and other medicines. Call a poison centre for case-specific advice. Do not wait for symptoms or take another dose until advised.

Can I sleep off a doxepin overdose?

No. Sleepiness may deepen into unconsciousness or breathing problems, and dangerous heart changes may have no obvious warning signs. A suspected overdose needs immediate

assessment.

How long does doxepin overdose last?

The most dangerous effects often develop early, but symptoms and ECG changes can continue for many hours. Severe cases may require longer hospital care, especially when other substances were taken or complications occurred.

Why is an ECG needed if the person feels fine?

Doxepin can interfere with electrical signals inside the heart before the person notices palpitations, chest symptoms, or faintness. Repeated ECGs help clinicians detect and treat these changes.

Is there an antidote for doxepin overdose?

There is no single antidote that reverses every effect. Sodium bicarbonate specifically treats important heart toxicity, while other supportive treatments protect breathing, circulation, and the brain.

Will there be permanent damage?

Many people recover without lasting damage after prompt treatment and an uncomplicated course. Permanent problems are more likely if poisoning causes prolonged seizures, severe low blood pressure, breathing failure, or lack of oxygen.

Sources

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