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Calcium-channel blocker overdose

Calcium-channel blockers are a type of medicine used to treat high blood pressure and heart rhythm disturbances. They are one of several classes of drugs used to treat the heart and related conditions. These medicines are a common cause of poisoning.

Calcium-channel blocker overdose occurs when someone takes more than the normal or recommended amount of this medicine.

This article is for information only. DO NOT use it to treat or manage an actual overdose. If you or someone you are with overdoses, call your local emergency number (such as 911), or your local poison control center can be reached directly by calling the national toll-free Poison Help hotline (1-800-222-1222) from anywhere in the United States.

Poisonous Ingredient

The specific ingredients in each type of calcium-channel blocker vary. However, the main ingredient is called a calcium-channel antagonist. It relaxes your blood vessels which lowers your blood pressure and also may affect the contractions of your heart.

Where Found

Calcium-channel blockers are found in these medicines:

- Amlodipine
- Diltiazem
- Felodipine
- Isradipine
- Nicardipine
- Nifedipine
- Nimodipine
- Verapamil

Other medicines may also contain calcium-channel blockers.

Symptoms

Symptoms of a calcium-channel blocker overdose include:

- Agitation (hyperactivity) and delirium (confused thinking and possible hallucinations)
- Breathing difficulty
- Confusion
- Constipation
- Lightheadedness, dizziness
- Drowsiness
- Increased blood sugar
- Irregular heartbeat
- Nausea and vomiting
- Rapid heartbeat
- Slow heartbeat
- Slurred speech
- Shock (extremely low blood pressure)
- Weakness

Home Care

Seek medical help right away. Do NOT make a person throw up unless poison control or a health care provider tells you to do so.

Before Calling Emergency

Have this information ready:

- Person's age, weight, and condition
- Name of the medicine (strength, if known)
- Time it was swallowed
- Amount swallowed

Poison Control

Your local poison control center can be reached directly by calling the national toll-free Poison Help hotline (1800-222-1222) from anywhere in the United States. This national hotline will let you talk to experts in poisoning. They will give you further instructions.

This is a free and confidential service. All local poison control centers in the United States use this national number. You should call if you have any questions about poisoning or poison control. It does NOT need to be an emergency. You can call for any reason, 24 hours a day, 7 days a week.

What to Expect at the Emergency Room

Take the container with you to the hospital, if possible.

The provider will measure and monitor the person's vital signs, including temperature, pulse, breathing rate, and blood pressure.

Tests that may be done include:

- Blood and urine tests
- Chest x-ray
- ECG (electrocardiogram, or heart tracing)

Treatment may include:

- Activated charcoal
- Breathing support, which may include oxygen or a ventilator (tube through the mouth into the lungs and breathing machine)
- Intravenous fluids (IV, given through a vein)
- Laxatives
- Medicine to treat symptoms and reverse the effect of the drug
- Pacemaker for the heart for serious heart rhythm disturbances

Outlook (Prognosis)

Taking too much of a calcium-channel blocker can be very dangerous. Death can occur, especially with verapamil. If the person's heart rate and blood pressure can be corrected, survival is likely. Survival depends on how much and what type of this medicine the person took and how quickly they receive treatment.

An overnight hospital stay may be required even in less serious cases, as some long-acting drug preparations remain in the body for many hours.

Risk factors for a more severe outcome, including multiple organ failure and death, include:

- Co-ingestion with other drugs which affect the heart; for example, digoxin, calcium channel blockers, tricyclic antidepressants
- People with other health conditions, such as congestive heart failure and heart rhythm disturbances

Verapamil (a type of calcium channel blocker) overdose is associated with the highest mortality risk.

References

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