

Crystal Meth Causes Severe Heart Damage

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[Crystal methamphetamine](#) (crystal meth or "ice") is a potent stimulant drug that can damage the heart. Meth causes blood vessels to narrow and spasm, dramatically increasing blood pressure and heart rate while damaging the heart muscle at the molecular level.¹

As a result, [cardiovascular disease](#) is the second-leading cause of death among crystal meth users following accidental overdose.² Crystal meth can independently increase the risk of stroke, heart attack, [heart failure](#), [acute coronary syndrome](#), [cardiac arrest](#), and sudden death.³

This article describes what crystal meth is, its effect on the body, and how this addictive street drug damages not only the heart but other vital organs.

How Crystal Meth Causes Heart Damage

Some of the most dangerous effects of crystal meth involve the cardiovascular system. Meth use is associated with a 32% higher risk of developing cardiovascular disease compared to non-users.⁴

The profound stress crystal meth puts on the system can cause many complications, including:

Tachycardia: A rapid heart rate is almost always present when using crystal meth, which places stress on the heart, arteries, and veins.

Hypertension: Like tachycardia, high blood pressure is almost always present in meth users. This places excessive strain on the heart and blood vessels.

Arrhythmias: Even at lower doses of crystal meth, some people may experience life-threatening irregular heartbeats. The heart may be unable to pump enough blood to sustain life or stop altogether.⁵

Cardiomyopathy: If addiction occurs, the persistent strain on the heart can lead to the enlargement of the heart muscle.

Heart failure: When the heart is enlarged and structural changes occur, it is unable to pump enough blood to muscles and tissues throughout the body. It is estimated that people who use meth are 53% more likely to develop heart failure.⁴

Atherosclerosis: In people with risk factors for [coronary artery disease \(CAD\)](#), crystal meth can accelerate CAD, leading to plaque buildup in the blood vessels and [arteriosclerosis](#) ("hardening of the arteries").

Cardiac ischemia: When crystal meth use accelerates atherosclerosis, it leads to reduced blood flow to the heart, or cardiac ischemia. The combination of these, plus tachycardia and high blood pressure, can cause an [atherosclerotic plaque](#) to break off and cause a **heart attack** or **stroke**.¹

Sudden cardiac arrest: A crystal meth overdose can cause the heart to stop because the drug effectively "rewires" the nerves that regulate heartbeats. In severe cases, it can cause the [ventricles](#) of the heart—which pump blood through the body—to fail, leading to death.⁵

Even if a crystal meth user manages to kick the habit, blood vessel damage in the heart—as well as the lungs, brain, kidneys, and liver—may be irreversible.¹

Other Effects of Crystal Meth

Whether snorted, smoked, or injected, crystal meth produces quick, powerful highs characterized by feelings of euphoria and hypersexuality.⁶

The physical effects of crystal meth are equally powerful and can have profound effects on the organ systems of the body.⁶

Aside from meth's effects on the heart, it can cause:

- Loss of appetite
- Hyperactivity
- Dilated pupils
- Flushed skin
- Excessive sweating
- Twitching or tremors
- Dry mouth
- Teeth grinding
- Rapid breathing
- Diarrhea or constipation
- Insomnia

Over time, the euphoric effects of crystal meth on the brain and nervous system can start to wane. Higher and more frequent doses are needed to prevent "crashing," characterized by severe fatigue, weakness, and depression.

With long-term use, crystal meth can trigger anxiety, aggression, hallucinations, compulsive behaviors, confusion, and psychosis.⁷

Lung-Related Complications

Lung-related complications of crystal meth abuse include:

- [Pulmonary edema](#) ("water in the lungs")
- [Pulmonary hypertension](#) (high blood pressure in the lungs)
- [Pulmonary hemorrhage](#) (bleeding in the lungs)⁸

Meth users are 42% more likely to develop pulmonary hypertension than non-users.

Skin-Related Complications

Skin sores often arise from scratching due to bug-crawling sensations on the skin paired with increased skin dryness.

People who inject crystal meth often develop skin ulcers due to needle use.

Infections

Injecting meth can also lead to severe bacterial infections that can lead to [septicemia](#) (a blood infection) and [sepsis](#) (a severe immune overreaction to the blood infection).

Transmission of **hepatitis B and C**, as well as **HIV**, is common in those who inject meth. These can affect several organ systems, with hepatitis having a profound impact on the liver and HIV destroying the immune system.⁷

Crystal Meth Overdose

A crystal meth overdose is a medical emergency due in large part to an increased risk of a heart attack, stroke, or cardiac arrest.⁵

Symptoms of a crystal meth overdose include:⁹

- Chest pain
- Arrhythmia
- Difficult or labored breathing
- Extreme agitation
- Rapid or slow heartbeat
- High body temperature
- Hallucinations
- Psychosis
- Paranoia
- Seizures
- Unconsciousness

Call 911 if you suspect that someone has overdosed on crystal meth. The faster that a person gets medical help, the better the chance for recovery.⁹

Even with successful emergency treatment, some symptoms like psychosis and paranoia can persist for up to one year (particularly in long-time users).

Ongoing care may be needed to monitor for heart disease as well as complications involving the brain, lungs, kidneys, or liver.⁹

Summary

Crystal meth is a potent stimulant drug that can damage the entire cardiovascular system, along with the skin, lungs, brain, kidneys, and liver.

Over time, the euphoric effects of crystal meth start to wane and require higher and more frequent doses, leading to fatigue, weakness, depression, anxiety, aggression, hallucinations, and more.

Even if a crystal meth user manages to quit, damage to the heart and other organs may be irreversible.

9 Sources