

# What is sudden cardiac arrest?

Many people have been asking us about how Michael Jackson died. According to media reports, the probable cause of death is sudden cardiac arrest. But what is sudden cardiac arrest, and why does it happen?

When someone's heart stops beating, it's called cardiac arrest.

Cardiac arrest may be caused by a heart attack or by an electrical disturbance in the heart. Cardiac arrest and heart attack are not the same thing.

A heart attack is the common name for *myocardial infarction*, or MI. It is caused by a blockage in the coronary arteries—usually atherosclerotic plaque but sometimes a blood clot. The blockage prevents blood flow from getting to the heart muscle, and without sufficient oxygen, the heart will stop beating. This is cardiac arrest, but you can also have a heart attack without cardiac arrest, as long as the heart is getting enough oxygen to keep beating.

When someone's heart stops beating but there is no blockage, this is called sudden cardiac arrest or sudden cardiac death. Most cardiac arrests of this type are caused by an irregular heart rhythm.

Your heart has a built-in electrical system that sends signals to the heart muscles, telling them to contract. Normally, this electrical system sends a signal every second or so, and your heart beats, pumping oxygen-rich blood to your brain and the rest of your

body. If the electrical system malfunctions, though, the heart will not beat normally. If the electrical signals become very rapid, very slow, or chaotic, the heart may stop beating.

According to the American Heart Association, 90 percent of adult victims of sudden cardiac death are found to have two or more major coronary arteries narrowed by fatty buildup. Scarring from a prior heart attack is found in two-thirds of victims. In young adults, abnormalities in the shape and size of the heart can cause sudden cardiac death. Various prescription and street drugs can also cause abnormal heart rhythms and sudden cardiac arrest.

Cardiac arrest is reversible in most victims if they are treated within a few minutes by a shock to the heart with a defibrillator. This resets the heart's electrical system and usually restores a normal rhythm. A victim's chances of survival drop 7 to 10 percent for every minute that passes without CPR and defibrillation. Resuscitation is rarely possible after 10 minutes.

**If someone suddenly becomes unconscious, call 911 immediately.** The person may be experiencing cardiac arrest. If you are able to confirm that the person's heart has stopped beating and there is an automated external defibrillator nearby, **use it.** Poudre Valley Health System offers CPR certification classes that include training in the use of AEDs. Call (970) 495-7320 for more information.



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