

Cardiac Arrest

What is cardiac arrest?

Cardiac arrest means the heart has stopped beating. Cardiac arrest can be fatal. When cardiac arrest causes death with little or no warning, it is called sudden cardiac death.

How does it occur?

Cardiac arrest is caused by an abnormal heart rhythm. These abnormal heart rhythms are:

- Ventricular fibrillation (VF). In VF, the electrical signals that cause the heart to beat become uncoordinated. This loss of an organized heartbeat causes the heart to suddenly stop pumping blood.
- Bradycardia. In bradycardia, the heartbeat slows so much that the heart no longer pumps enough blood.

The abnormal heart rhythms can occur due to several conditions. A few examples of these conditions are:

- Coronary artery disease. A blocked blood vessel may affect the part of the heart that carries the signal for the heart to beat. This kind of blockage is especially dangerous when the heart is scarred from a heart attack.
- Cardiomyopathy. Cardiomyopathy is an abnormality of the heart muscle. The heart muscle may be weakened or thickened. This makes the heart less able to pump enough blood.
- Long Q-T syndrome (LQTS). This is a form of heart disease that is often present from birth. It sometimes results in heart rhythm problems, particularly when there is emotional or physical stress. LQTS can appear at any age, but often occurs in children and young adults.

In people with heart disease, several things make sudden cardiac death more likely. People who do not exercise regularly and then engage in heavy physical activity are most at risk. Stress may cause cardiac arrest in people who have heart disease. Certain medicines can cause an irregular heartbeat that is life threatening. Illegal drug abuse can also cause sudden cardiac death.

Can it be treated?

When cardiac arrest occurs, lack of blood flow to the brain and other body tissues results in death. The only treatment is to restore the normal rhythm of the heart before severe damage is done.

Call 911. Start CPR (cardiopulmonary resuscitation). CPR can maintain blood flow to the brain and other organs until a normal heart rhythm is restored. You may be able to use

an automatic external defibrillator (AED), available in many public places and on some airplanes. AEDs are designed to be used by people without medical training. AEDs shock the heart and change the VF to a normal rhythm. For other causes of cardiac arrest, the person may need to be treated with medicines.

Can it be prevented?

The first step to prevent cardiac arrest is to find conditions that increase your risk of sudden cardiac death. Often these conditions can be treated with medicines or a pacemaker. If you have had a heart attack, follow the treatment prescribed by your healthcare provider.

People at highest risk for cardiac arrest may need an implantable cardioverter-defibrillator (ICD). ICDs detect abnormal heart rhythms and shock the heart back to a normal rhythm. For other people, medicines such as beta blockers can reduce the risk of sudden cardiac death.

It is important to treat the condition that increases your risk for cardiac arrest, prevent coronary artery disease, and make lifestyle changes.

[Related Topics]

VF

Beta-Blockers

ICDs

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