

Week of October 15 -19

Sudden Cardiac Arrest

According to the Sudden Cardiac Arrest Foundation (www.sca-aware.org), Sudden Cardiac Arrest is the **third leading cause of death in the U.S.** Approximately 356,000 people of all ages experience EMS-assessed, out-of-hospital, non-traumatic SCA each year -- and 9 out of 10 victims die. When bystanders intervene immediately by giving CPR or using a defibrillator, survival rates double or triple.

Sudden Cardiac Arrest is the unexpected loss of heart function, breathing and consciousness. Sudden Cardiac Arrest usually results from an electrical disturbance in your heart that disrupts its pumping action, stopping blood flow to the rest of your body. **Sudden Cardiac Arrest is different from a heart attack**, which occurs when blood flow to a portion of the heart is blocked. However, a heart attack can sometimes trigger an electrical disturbance that leads to Sudden Cardiac Arrest. Sudden Cardiac Arrest is a medical emergency. If not treated immediately, it causes sudden cardiac death. With fast, appropriate medical care, survival is possible. Administering cardiopulmonary resuscitation (CPR), treating with a defibrillator — or even just compressions to the chest — can improve the chances of survival until emergency personnel arrive.

Sudden Cardiac Arrest - Causes

Most Sudden Cardiac Arrest cases occur when a diseased heart's electrical system malfunctions. This malfunction causes an abnormal heart rhythm such as ventricular tachycardia or ventricular fibrillation. Some cardiac arrests are also caused by extreme slowing of the heart's rhythm (bradycardia). Irregular heartbeats such as these that can cause cardiac arrest should be considered life-threatening arrhythmias. Other causes of cardiac arrest include:

- Scarring of the heart tissue Such scarring may be the result of a prior heart attack or another cause. A heart that's scarred or enlarged from any cause is prone to develop life-threatening ventricular arrhythmias. The first six months after a heart attack represents a particularly high-risk period for Sudden Cardiac Arrest in patients with atherosclerotic heart disease.
- A thickened heart muscle (cardiomyopathy) Damage to the heart muscle can be the result of high blood pressure, heart valve disease or other causes. A diseased heart muscle can make you more prone to Sudden Cardiac Arrest, especially if you also have heart failure. Learn more about cardiomyopathy.
- Heart medications Under certain conditions, various heart medications can set the stage for arrhythmias that cause Sudden Cardiac Arrest. (As odd as it may sound, antiarrhythmic drugs used to treat arrhythmias can sometimes produce ventricular arrhythmias even at normally prescribed doses. This is called a "proarrhythmic" effect.) Significant changes in blood levels of potassium and magnesium (from using diuretics, for example) also can cause life-threatening arrhythmias and cardiac arrest.
- Electrical abnormalities Certain electrical abnormalities such as Wolff-Parkinson-White syndrome and Long QT syndrome may cause Sudden Cardiac Arrest in children and young people.
- Blood vessel abnormalities In rare cases, congenital blood vessel abnormalities, particularly in the coronary arteries and aorta, may cause cardiac arrest. Adrenaline released during intense physical activity often acts as a trigger for Sudden Cardiac Arrest when these abnormalities are present.
- Recreational drug use Use of certain recreational drugs can cause Sudden Cardiac Arrest, even in otherwise healthy people.

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Week of October 15 -19

Sudden Cardiac Arrest - Symptoms

Sudden Cardiac Arrest symptoms are immediate and drastic and include:

- Sudden collapse
- No pulse
- No breathing
- Loss of consciousness

Sometimes other signs and symptoms precede Sudden Cardiac Arrest. These may include fatigue, fainting, blackouts, dizziness, chest pain, shortness of breath, weakness, palpitations or vomiting. But Sudden Cardiac Arrest often occurs with no warning.

When to see a doctor

If you have frequent episodes of chest pain or discomfort, heart palpitations, irregular or rapid heartbeats, unexplained wheezing or shortness of breath, fainting or near fainting, or you're feeling lightheaded or dizzy, see your doctor promptly. If these symptoms are ongoing, you should call 911 or emergency medical help. When the heart stops, the lack of oxygenated blood can cause brain damage in only a few minutes. Death or permanent brain damage can occur within four to six minutes. Time is critical when you're helping an unconscious person who isn't breathing. Take immediate action.

Sudden Cardiac Arrest - Risk Factors

Because Sudden Cardiac Arrest is so often linked with coronary artery disease, the same factors that put you at risk of coronary artery disease may also put you at risk of Sudden Cardiac Arrest. These include:

- A family history of coronary artery disease
- Smoking
- High blood pressure
- High blood cholesterol
- Obesity
- Diabetes
- A sedentary lifestyle
- Drinking too much alcohol (more than two drinks a day)

Other factors that may increase your risk of Sudden Cardiac Arrest include:

- A previous episode of cardiac arrest or a family history of cardiac arrest
- A previous heart attack
- A personal or family history of other forms of heart disease, such as heart rhythm disorders, congenital heart defects, heart failure and cardiomyopathy
- Age the incidence of Sudden Cardiac Arrest increases with age
- Being male men are two to three times more likely to experience Sudden Cardiac Arrest
- Using illegal drugs, such as cocaine or amphetamines
- Nutritional imbalance, such as low potassium or magnesium levels



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Sudden Cardiac Arrest - Prevention

There's no sure way to know your risk of Sudden Cardiac Arrest, so reducing your risk is the best strategy. Steps to take include regular checkups, screening for heart disease and living a heart-healthy lifestyle with the following approaches:

- Don't smoke, and use alcohol in moderation (no more than one to two drinks a day).
- Eat a nutritious, balanced diet.
- Stay physically active.

If you know you have heart disease or conditions that make you more vulnerable to an unhealthy heart, your doctor may recommend that you take appropriate steps to improve your health, such as taking medications for high cholesterol or carefully managing diabetes.

If you have a high risk of Sudden Cardiac Arrest, you may also wish to consider purchasing an automated external defibrillator (AED) for home use. Before purchasing one, discuss the decision with your doctor. AEDs can be expensive and aren't always covered by health insurance.

If you live with someone who is vulnerable to Sudden Cardiac Arrest, it's important that you be trained in CPR. The American Red Cross and other organizations offer courses in CPR and defibrillator use to the public. Being trained will help not only your loved one but also those in your community. The more people who know how to respond to a cardiac emergency, the more the survival rate for Sudden Cardiac Arrest can be improved.

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