

Sports Medicine

What is sudden cardiac arrest?

Sudden cardiac arrest (SCA) is when the heart stops beating, suddenly and unexpectedly. When this happens blood stops flowing to the brain and other vital organs. SCA is NOT a heart attack. A heart attack is caused by a blockage that stops the flow of blood to the heart. SCA is a malfunction in the heart's electrical system, causing the victim to collapse. The malfunction is caused by a congenital or genetic defect in the heart's structure.

How common is sudden cardiac arrest in the United States?

SCA is the #1 cause of death for adults in this country. There are about 300,000 cardiac arrests outside hospitals each year. About 2,000 students die of SCA each year. It is the #1 cause of death for student athletes.

Warning Signs of SCA

Tell Your Coach, Athletic Trainer or School Nurse and Consult Your Doctor if These Conditions Are Present in Your Student Athlete

- Fainting or seizure, especially during or right after exercise
- Fainting repeatedly or with excitement or startle
(Fainting is the #1 sign of a potential heart condition)
- Excessive shortness of breath during exercise
- Racing or fluttering heart palpitations or irregular heartbeat
- Repeated dizziness or lightheadedness
- Chest pain or discomfort with exercise
- Excessive, unexpected fatigue during or after exercise
- Severe headache, Vague malaise, Cold Sweat or Indigestion / Heartburn / Gastrointestinal symptoms

What should you do if you experience any of these symptoms?

Immediate removal from play. Any student-athlete who shows signs or symptoms of SCA must be removed from play. We need to let student-athletes know that if they experience any SCA-related symptoms it is crucial to alert an adult and get follow-up care as soon as possible with a primary care physician.

Factors That Increase the Risk of SCA

- Family history of known heart abnormalities or sudden death before age 50
- Specific family history of Long QT Syndrome, Brugada Syndrome, Hypertrophic Cardiomyopathy, or Arrhythmogenic Right Ventricular Dysplasia (ARVD)
- Family members with unexplained fainting, seizures, drowning or near drowning or car accidents
- Known structural heart abnormality, repaired or unrepaired
- Use of drugs, such as cocaine, inhalants, "recreational" drugs, excessive energy drinks, diet pills or performance-enhancing supplements.

What should you do if your student athlete has any risk factors for SCA?

If the athlete has any of the SCA risk factors based on family history, these should also be discussed with a doctor to determine if further testing is needed. Wait for your doctor's feedback before returning to play, and alert your coach, trainer and school nurse about any diagnosed conditions.

When should a student athlete be removed from play and when can they return?

Any student athlete who shows signs or symptoms of SCA before, during or after activity must be removed from play/practice. Play includes all athletic activity. Before returning to play, the athlete must be evaluated by an appropriate licensed health care provider determined by the Virginia Department of



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Education (Licensed physician, physician assistant certified registered nurse practitioner or cardiologist (heart doctor). Clearance for the student athlete to return to play must be provided in writing.

What can you do to protect young hearts?	Cardiac Chain of Survival
<ol style="list-style-type: none">1. Talk with your student athlete about potential warning signs noted above and check your family tree for the above risk factors. Discuss any warning signs and risk factors with your primary care physician immediately.2. Know the Cardiac Chain of Survival.3. Help make AEDs available at your school or sports team	<ol style="list-style-type: none">1. Recognition of Sudden Cardiac Arrest Collapsed and unresponsive. They are not breathing, even if you hear gasping, gurgling, snorting, moaning or labored breathing noises, or see seizure-like activity. Do not lose precious minutes trying to “wake them up” – act immediately!2. Call 9-1-13. Begin CPR Begin cardiopulmonary resuscitation (CPR) immediately. Hands-only CPR involves hard and fast and continual two-inch chest compressions in the center of the chest—about 100 per minute. CPR can be a bridge to life until the AED arrives.4. Retrieve an AED. Know the location of the school’s automated external defibrillator (AED) and use it as soon as possible. Mobile AED units have step-by-step instructions for a bystander to use in an emergency – you do not need to be a medical professional to use an AED.

I have reviewed and understand the symptoms and warning signs of SCA.

Signature of Student-Athlete

Student-Athlete’s Name (Print)

Date

Signature of Parent/Guardian

Parent/Guardian’s Name (Print)

Date