

**Connecticut State Department of Education
and the
Connecticut Interscholastic Athletic Conference
Sudden Cardiac Arrest Awareness Annual Review**

NOTE: This Sudden Cardiac Arrest Awareness Annual Review was developed to educate coaches on current and relevant information regarding Sudden Cardiac Arrest (SCA). This form is required to be reviewed, signed and dated annually by any coach who holds or is issued a coaching permit by the State Board of Education and is a coach of intramural or interscholastic athletics. The signed form must be kept on file by the coach's associated school district to comply with Connecticut General Statutes (C.G.S.) Chapter 163, Section 10-149g: *Coaches to annually review cardiac arrest education program. Revocation of coaching permit. Immunity from suit or liability.*

Part 1: *What is Sudden Cardiac Arrest?*

Sudden Cardiac Arrest (SCA) is when the heart suddenly and unexpectedly stops pumping blood due to a rhythm abnormality. When this happens, blood stops flowing to the brain and other vital organs and, if left untreated, can quickly result in death. SCA does not just happen to adults; it also takes the lives of students. However, the causes of SCA in students and adults can be different. A student's SCA will likely result from an inherited condition, extreme overheating/dehydration or from trauma to the chest, while an adult's SCA is most often caused by a heart attack. SCA is NOT a heart attack. A heart attack may cause SCA, but they are not the same. A heart attack is caused by a blockage that stops the flow of blood to the heart, while SCA is a malfunction in the heart's electrical system, causing the heart to go into an unstable rapid rhythm.

Part 2: *How Common is Sudden Cardiac Arrest?*

SCA is the number one cause of death for adults in this country. It is also a leading cause of death for student-athletes. About 300,000 cardiac arrests occur outside hospitals each year. According to an April 2014 study for PubMed, the current incidence of SCA is:

- 0.63 per 100,000 students (6 in 1,000,000)
- 1.14 per 100,000 student-athletes (11 in 1,000,000)
- 0.31 per 100,000 student non-athletes (3 in 1,000,000)
- There is a significantly higher risk of SCA for boys than girls

Leading causes of sudden death among high school and college athletes, according to the National Collegiate Athletic Association (NCAA), are heat stroke, heart disease and traits associated with sickle cell anemia. The same study concludes that prevention of sudden death is associated with more advanced cardiac screenings with attention to medical histories and birth records, improved emergency procedures, and good coaching and conditioning practices. SCA can be prevented if the underlying causes can be diagnosed and treated.

SCA is a medical emergency. If not treated immediately it can cause irreversible organ and brain damage, and even death. With fast, appropriate medical care, however, survival is possible. Administering cardiopulmonary resuscitation (CPR) — or even just compressions to the chest — can improve the chances of survival until emergency personnel arrive.

<http://www.mayoclinic.org/diseases-conditions/sudden-cardiac-arrest/basics/definition/con-20042982>

Part 3: *What are the warning signs and symptoms of Sudden Cardiac Arrest?*

Although SCA happens unexpectedly, some people may have signs or symptoms, such as: fainting or seizures during exercise; unexplained shortness of breath; dizziness; extreme fatigue; chest pains; or racing heart. These symptoms can be unclear in athletes, since people often confuse these warning signs with physical exhaustion.

Risks of continuing activity after experiencing warning signs and symptoms

There are serious risks associated with continuing to practice or play after experiencing these symptoms. When the heart stops pumping efficiently, the brain and other vital organs are compromised. Death or permanent brain damage can occur in just a few minutes. Most people who experience SCA will die from it. Any student-athlete who shows signs or symptoms of SCA must be immediately removed from the athletic activity.

Part 4: *What should a coach do when a student-athlete experiences Sudden Cardiac Arrest?*

When a person experiences SCA, three actions should be taken immediately:

1st: Get Help! Call out for assistance and call 911.

2nd: Start CPR! Begin hands-only CPR.

3rd: Attach and activate an Automated External Defibrillator (AED)! An AED should be attached, activated and the user should follow the prompts. The AED will be able to determine if a shock should be given to the heart or if CPR should be continued without a shock. If the AED determines that a shock should be given, it will give instructions on how to proceed.

Only CPR and AED use have been proven to help a person get out of a cardiac arrest. For every minute a person does not receive a shock, the chances of survival goes down by 10% per minute. Keep in mind that the average response time for emergency medical services (EMS) is approximately 5-8 minutes. The AED will not allow the user to deliver an electric shock if it is not clinically applicable. The person using the AED can attach the device to the person suffering the SCA, turn it on and push the shock button, but the AED will not allow a shock to be delivered if it is unwarranted. No harm can be done by applying an AED to an individual.

Return to Play

Before returning to play, the athlete must be evaluated by a licensed medical provider. Following the evaluation, written clearance, signed by the licensed medical provider, must be given prior to the student-athlete engaging in any athletic activity.

Summary

- SCA is, by definition, sudden and unexpected.
- SCA can happen in individuals who appear healthy and have no known heart disease.
- Most people who have SCA die from it, usually within minutes.
- Rapid treatment of SCA with CPR and an AED can be lifesaving.
- Training in recognition of signs of SCA, and the availability of AEDs and personnel who possess the skills to use one, may save the life of someone experiencing SCA.

National Heart, Lung and Blood Institute: <http://www.nhlbi.nih.gov/health/health-topics/topics/scda>

I have read and understand the information provided in this document and understand that the law requires me to complete this Sudden Cardiac Arrest Annual Review to maintain my coaching permit. I further understand that the State Board of Education may revoke my coaching permit if I do not comply with this requirement.

Coach: _____ School: _____
(Print Name)

Coach's Signature: _____ Date: _____

Sources/Resources:

Simons Fund - <http://www.simonsfund.org/>

Pennsylvania Department of Health - <http://www.simonsfund.org/wp-content/uploads/2012/06/Parent-Handout-SCA.pdf>

Mayo Clinic - <http://www.mayoclinic.org/diseases-conditions/sudden-cardiac-arrest/basics/definition/con-20042982>

National Heart, Lung and Blood Institute (NHLBI) - <http://www.nhlbi.nih.gov/health/health-topics/topics/scda>

American Heart Association (AHA) - <http://www.heart.org>