

Sudden Cardiac Arrest

Sudden cardiac arrest is the leading cause of death in young athletes while training or participating in sport competition. Even athletes who appear healthy and have a normal preparticipation screening may have underlying heart abnormalities that can be life threatening.

What is Sudden Cardiac Arrest?

1. Occurs suddenly and often without warning.
2. An electrical malfunction (short-circuit) causes the bottom chambers of the heart (ventricles) to beat dangerously fast (ventricular tachycardia or fibrillation) and disrupts the pumping ability of the heart.
3. The heart cannot pump blood to the brain, lungs and other organs of the body.
4. The person loses consciousness (passes out) and has no pulse.
5. Death occurs within minutes if not treated immediately.

What are the symptoms/warning signs of Sudden Cardiac Arrest?

1. Fainting/blackouts (especially during exercise)
2. Dizziness
3. Unusual fatigue/weakness
4. Chest pain
5. Shortness of breath
6. Nausea/vomiting
7. Palpitations (heart is beating unusually fast or skipping beats)
8. Family history of sudden cardiac arrest at age < 50

ANY of these symptoms/warning signs that occur while exercising may necessitate further evaluation from your physician before returning to practice or a game.

**** Note that a student-athlete who exhibits unexplained fainting may be SCA because it is the number one warning sign of a potential heart condition. ****

There is potential for effective secondary prevention of sudden cardiac death by having automated external defibrillators (AEDs) easily accessible and trained staff available. The presence of trained individuals and access to AEDs at sporting venues provides a potential means of early defibrillation, not only for athletes but also for spectators, coaches, officials, event staff and other attendees in the case of sudden cardiac arrest.

It is advisable to have an **Emergency Action Plan** in place for all sport practice and competition sites that outlines the plan of action in case of the sudden collapse of an athlete. It is advisable to review and practice the emergency action plan with respective school personnel, coaches, on site medical personnel and local EMS.

Time is Critical: If not properly treated within minutes, SCA is fatal in 92% of cases.

Basic actions include:

1. have a cell phone available at all venues
2. immediately activate EMS
3. Immediately initiate continuous CPR (push hard, push fast, push often)

Your school's medical personnel (team physician, licensed athletic trainer, school nurse) and/or local EMS may wish to assist in the development and implementation, if not already in place, of the **emergency preparedness plan** for the management of the collapsed athlete. the "Inter-association task Force recommendations on emergency Preparedness and Management of sudden cardiac arrest in high school and college athletic Programs; a "**consensus statement**" is one source of guidance as to the development and implementation of an emergency action plan for the management of sudden cardiac arrest in an athlete.

What are ways to screen for Sudden Cardiac Arrest?

1. The American Heart Association recommends a pre-participation history and physical including 12 important cardiac elements.
2. The WIAA Pre-Participation Physical Evaluation – Medical History form includes ALL 12 of these important cardiac elements and is mandatory bi-annually.
3. Additional screening using an electrocardiogram and/or an echocardiogram is readily available to all athletes, but is not mandatory.