



## Sudden Cardiac Arrest (SCA)/Sudden Cardiac Death (SCD) Protocol

### Definition(s)

**Sudden Cardiac Death (SCD)** – Sudden cardiac death (SCD) is the most common cause of death in exercising youth athletes. Most SCD's are caused by an undetected structural heart condition. It can also be caused by a direct blow to the chest over the heart (Comotio Cordis)

**Sudden Cardiac Arrest (SCA)** – An athlete's heart suddenly stops function. Sudden cardiac death is due to sudden cardiac arrest.

Sudden cardiac arrest is fatal if steps to revive the athlete are not taken immediately. For every 1-minute delay in giving a shock to the heart, survival decreases by 10%. You don't have time to wait for EMS.

**YOU NEED TO START CPR AND USE YOUR AED RIGHT AWAY**

### Symptoms and Presentation

- Cardiac arrest is the sudden loss of heart function. The athlete suddenly becomes unresponsive (unconscious). Brief jerking that looks like seizure and gasping breathing may occur, in which case the SCA protocol should still be followed.
- Warning signs: THERE ARE USUALLY NO WARNING SIGNS. Most athletes are high functioning athletes who do not display warning signs or symptoms before they collapse. However, cardiac symptoms during exercise need to be taken very seriously. An athlete who has pain in the chest, ear, neck or shoulder, severe headache, extreme shortness of breath, feeling overly fatigued, dizziness, palpitations (sense of irregular heart beat), heartburn, is breaking into cold sweat or fainting with exercise must stop all athletic participation until they have a medical evaluation.
- SCA can occur in any sport but 75% of cases occur in basketball, football, track/cross country or soccer.

### Management

- Have a venue specific emergency action plan (VEAP) in place, know it and practice it at the start of every season
- If an athlete collapses and becomes unresponsive with abnormal or no breathing, start CPR right away and call 911
- Coaches must be trained on CPR
- A bystander who has no CPR training should do "hands only CPR", pushing hard and fast on the chest
- Coaches who have been trained should start CPR with chest compressions and breaths
- Send someone to get the AED (automated external defibrillator)
- One person must continue CPR while another turns the AED on and follows the voice prompts (remove clothing from chest, attach pads to chest, plug in connector)
- Only stop CPR when the AED tells you to stop (while it analyses the heart rhythm).
- If shock advised, everyone must "stand clear", stop touching the athlete and push the shock button
- As soon as shock has been delivered or if the AED does not recommend shock, immediately restart CPR
- Continue CPR until the athlete becomes responsive, the AED tells you it is time to analyze the rhythm, or EMS arrives to take over
- It is okay to use the AED in a wet environment. However, you should dry off a wet chest before applying pads or move the athlete if they are in a puddle or on a metal surface. (i.e. the bleachers)

### Prevention

- All high school athletes must have a yearly pre-participation exam (PPE) on file. Current guidelines will only detect a small percentage of possible heart conditions. We cannot rely on screening to identify the majority of heart conditions.
- As a general rule, athletes should train with a gradual increase in activity, not with sudden strenuous exercise
- All sporting venues should have an automated external defibrillator (AED) as close to areas of exercise as possible, with the ability to get the AED to the athlete within 3 minutes
- Coaches must be trained in CPR and the use of the AED and must practice their venue specific emergency action plan before the start of the season

**For complete CHSAA Sudden Cardiac Arrest (SCA)/Sudden Cardiac Death (SCD) Protocol information, go to**