



EPSD SPORTS MEDICINE

SUDDEN CARDIAC ARREST

➤ **DEFINITION/BACKGROUND INFORMATION:**

Sudden Cardiac Arrest (SCA) is the leading cause of death in exercising young athletes and is defined as “sudden and unexpected loss of heart function”. The heart stops beating, the student-athlete stops breathing and collapses. The student-athlete may lie motionless or be convulsing. The underlying cause of SCA is usually a structural cardiac abnormality such as hypertrophic cardiomyopathy, “Marfan’s Syndrome” or coronary artery anomalies. “Commotio Cordis” is also a cause of SCA.

➤ **PREVENTION:**

SCA prevention can be very difficult due to the fact that most student-athletes do not exhibit signs or symptoms until SCA suddenly occurs. The pre-participation examination can be helpful because it includes the completion of a standardized history form and attention to episodes of exertional syncope or presyncope, chest pains, a personal or family history of sudden cardiac arrest or a family history of sudden death, and exercise intolerance. Further research is needed to understand whether additional tests such as electrocardiograms and echocardiograms can be performed with acceptable cost-effectiveness and an acceptable false-positive rate.

➤ **RECOGNITION**

Although SCA happens unexpectedly, some student-athletes may have some of the following signs and symptoms:

- dizziness, fainting (syncope)
- unexplained shortness of breath, chest pains
- racing or fluttering heartbeat (palpitations), unexplained seizures
- fatigue (extreme tiredness)

Sudden Cardiac Arrest (SCA) should be suspected in any athlete who has collapsed and is unresponsive. The student-athlete’s airway, breathing, and circulation must be assessed immediately and heart rhythm must be assessed using an Automatic External Defibrillator (AED). All EPSD Athletic Trainers have portable AED units with them at all indoor/outdoor practices/games. In addition, AED units are strategically placed inside school district buildings (see p. 14)

➤ **LOCATION OF AED's (in Athletics Facilities/Venues)**

- EPSD Sports Medicine: athletic trainers have individual floating units.
- EHS Sports Lobby: on pillar next to the Field Hockey Trophy Case.
- EPSD Stadium: inside field house athletic room on the right side of the entrance door.
- Memorial Field: inside Pine Street Ticket Booth, on right wall.
- Eyer Middle School: next to the boys' bathroom in Gym Lobby.
- Lower Macungie Middle School: in the Auditorium/Gymnasium Lobby, on wall opposite the entrance to the right of the *Bee Hive/Cafeteria*.

➤ **MANAGEMENT**

The Emergency Action Plan (EAP) should be initiated immediately. Access to early defibrillation is essential to survival of student-athletes with SCA. A goal of less than 3-5 minutes from the time of collapse to delivery of the first shock is strongly recommended. Cardiopulmonary resuscitation should be provided while the AED is being retrieved, and the AED should be applied as soon as possible. CPR along with AED rhythm analysis and defibrillation should be performed until EMS arrive and transport the student-athlete to the nearest emergency facility.