

MATTERS OF THE

HEART



SUDDEN CARDIAC ARREST

- SCA is a condition in which the heart unexpectedly stops beating, halting blood flow to the brain and vital organs.
- SCA is usually caused by an electrical disturbance in the heart that disrupts pumping, while a heart attack is caused by a blockage of blood flow to the heart.
- SCA results in death if not treated within minutes.
- 2,000 patients under age 25 die of SCA every year in the U.S., the Center for Disease Control estimates.
- The cause of SCA in athletes is unknown, however, young athletes with underlying heart conditions are at greater risk during vigorous exercise.

COMMOTIO CORDIS

- Commotio Cordis is caused by a blunt, nonpenetrating blow to the chest. It induces ventricular arrhythmia in an otherwise structurally normal heart.
- Commotio Cordis accounts for approximately 20 percent of sudden cardiac deaths in young athletes.

PREPARING FOR CARDIAC EMERGENCIES

- Schools, clubs and sports facilities should have emergency action plans that include a response plan for SCA events.
- All facilities where sports are played should have automatic external defibrillators (AEDs) within 1-3 minutes.
- Schools, clubs and sports facilities should have someone on staff trained in CPR.
- When CPR is provided and an AED shock is administered within the first 3 to 5 minutes after a collapse, reported survival rates from cardiac arrest are as high as 74%.

SCREENING ATHLETES FOR CARDIOVASCULAR ISSUES

- Athletes should undergo cardiovascular screening before athletic participation.
- A minimum standard of cardiovascular screening should include a comprehensive medical history, family history and physical exam.
- An electrocardiogram (ECG) can help identify underlying cardiac conditions that put athletes at greater risk. However, it's not a universal standard right now because of cost, physician infrastructure and sensitivity and specificity concerns.

SIGNS AND SYMPTOMS OF CARDIAC ARREST IN ATHLETES

MALE ATHLETES	FEMALE ATHLETES
Chest, ear or neck pain	Center chest pain that comes and goes
Severe headache	Lightheadedness
Excessive breathlessness	Shortness of breath with or without discomfort
Vague discomfort	Pressure, squeezing, fullness
Dizziness, palpitations	Nausea, vomiting
Abnormal fatigue	Cold sweat
Indigestion, heartburn	Pain or discomfort in arms, back, neck, jaw or stomach

NOTE: Many young cardiac arrest victims have no symptoms until the cardiac arrest occurs.

Sources: NATA, Korey Stringer Institute, American Heart Association
Infographic provided by the National Athletic Trainers' Association