MATTERS OF THE HEART



ABOUT SUDDEN CARDIAC ARREST (SCA)

- SCA is the leading cause of sudden death in sports. It occurs when the heart unexpectedly stops beating, cutting blood flow to the brain and vital organs.
- SCA usually stems from an electrical disturbance that disrupts the heart's pumping. A heart attack results from blocked blood flow to the heart.
- Each minute of delay in AED application lowers the chance of surviving SCA by 10%.
- The CDC estimates 2,000 U.S. deaths from SCA each year among people younger than 25.

COMMOTIO CORDIS

- A blunt blow that does not penetrate the chest can cause commotio cordis, triggering ventricular arrhythmia in an otherwise structurally normal heart.
- Recent reports put survival above 50%, likely due to better recognition and early treatment.
- A less common cause of SCA, commotio cordis can occur in any sport, but is more frequent in sports like baseball, lacrosse, hockey and martial arts.

PLANNING FOR CARDIAC EMERGENCIES

- Schools, clubs and sports facilities should maintain venue-specific emergency action plans, policies and procedures for SCA incidents.
- Schools, clubs and sports facilities should have staff trained in CPR and AED use, including an athletic trainer and members of the coaching staff.
- Reported cardiac arrest survival is as high as 74% when CPR and an AED shock are given within the first 3 to 5 minutes after a collapse.

ATHLETE SCREENING FOR CARDIOVASCULAR PROBLEMS

- Athletes should have cardiovascular screening before taking part in sports.
- Screening should, at minimum, include a thorough medical history, family history and physical exam.

CARDIAC ARREST WARNING SIGNS AND SYMPTOMS IN ATHLETES

Pain in chest, ear or neck	Intermittent pain in the center of the chest
Intense headache	Feeling lightheaded
Excessive breathlessness	Breathlessness, with or without discomfort
Nonspecific discomfort	Pressure, squeezing or fullness
Dizziness or palpitations	Nausea or vomiting
Unusual fatigue	Cold sweating
Indigestion or heartburn	Arm, back, neck, jaw or stomach pain or discomfort

NOTE: Many young cardiac arrest victims show no symptoms before the arrest itself.

References: National Athletic Trainers' Association, Korey Stringer Institute, American Heart Association, National Center for Catastrophic Sport Injury Research, National Library of Medicine

Infographic courtesy of the National Athletic Trainers' Association (Updated 2023)