



Purpose:

The following policy is intended to assist the Embry-Riddle Aeronautical University Sports Medicine Staff and physicians in establishing the steps necessary to prepare and respond to potentially unexpected sudden cardiac arrest (SCA) episode. The policy is based on the recommendations found in the consensus statement established by the Inter-association Consensus Statement on Cardiovascular Care of College Student-Athletes.

What is Sudden Cardiac Arrest (SCA)?:

Sudden cardiac arrest (SCA) is the leading cause of death in young athletes. The cause of sudden cardiac death (SCD) in young athletes is generally a structural cardiovascular abnormality. Hypertrophic cardiomyopathy and coronary artery anomalies represent the vast majority of cardiovascular abnormalities that cause SCA in athletic populations. Other less common causes of SCA are myocarditis, arrhythmogenic right ventricular dysplasia, Marfan syndrome, valvular heart disease, dilated cardiomyopathy, and atherosclerotic coronary artery disease. In an effort to identify cardiovascular abnormalities, ERAU Athletics and Sports Medicine support cardiovascular screening by way of implementing **the 12-Element AHA Recommendations for Pre-participation Cardiovascular Screening of Competitive Student-Athletes as well as Electrocardiography (ECG) exam of ALL ERAU student-athletes.**

Common Signs of SCA:

- Chest pain (angina pectoralis)
- Difficulty breathing (dyspnea)
- Rapid/racing heart rate (tachycardia)
- Nausea/Vomiting
- Dizziness/Feeling faint (syncope)
- Sometimes SCA can occur with no prior symptoms

Management for SCA:

The presence and timely access of AEDs at sporting venues provide a means of early defibrillation not only for student-athletes but also for spectators, coaches, officials, event staff, and other attendees on campus in the case of an unexpected SCA. Prompt identification of SCA is critical in the management of this life-threatening emergency. Sudden cardiac arrest of traumatic or atraumatic origin should be suspected in any collapsed and unresponsive student-athlete and an AED applied as soon as possible. A collapsed student-athlete experiencing myoclonic jerking or seizures should be treated as having sudden cardiac arrest until proven otherwise. Prompt resuscitation of young student-athletes with sudden cardiac arrest maximizes survival rate.

- The initial components of SCA management are early activation of EMS, early CPR, early defibrillation, and rapid transition to advanced cardiac life support (ACLS).
- Sudden cardiac arrest should be suspected in any collapsed and unresponsive student-athlete.
- Student-athletes who collapse shortly after being struck in the chest by a firm projectile or by player contact should be suspected of having SCA from commotio cordis (disruption in heart rhythm).
- An AED should be applied as soon as possible on any collapsed and unresponsive athlete for rhythm analysis and defibrillation if indicated. Access to early defibrillation is essential, and a target goal of less than 3 to 5 minutes from the time of collapse to the first shock is strongly recommended.
- Cardiopulmonary resuscitation should be provided while waiting for an AED. Effective CPR consists of cycles of 30 chest compressions at a rate of 100/minute followed by 2 rescue breaths.
- Interruptions in chest compressions should be minimized and CPR stopped only for rhythm analysis and shock.
- Cardiopulmonary resuscitation should be resumed immediately after the first shock, beginning with chest compressions, with repeat rhythm analysis after every 2 minutes or 5 cycles of CPR, and continued until advanced life support providers take over or the victim starts to move.

- Sudden cardiac arrest in student-athletes can be mistaken for other causes of collapse, and rescuers should be trained to recognize SCA in student-athletes with special focus on potential barriers to recognizing SCA, including inaccurate rescuer assessment of pulse or respirations, occasional or agonal gasping, and myoclonic jerking or seizure-like activity.
- Rapid access to the SCA victim should be facilitated for EMS personnel.

Personnel during SCA Emergency:

- Athletic trainer/medical staff at event/practice
 - Assess collapsed student-athlete and check vitals
 - Will determine if student-athlete is suffering from SCA vs other cause of collapse
 - In charge of initial care and will request need for AED and EMS activation
 - Start CPR immediately while awaiting arrival of AED
- ERAU Coaches (all are required to be AED/CPR certified)
 - Will retrieve AED
 - Assist in AED placement/CPR
 - Activate EMS by calling 9-1-1 (Provide medical need for EMS, location, phone number)
 - Call Campus Safety (386-226-7233) and dispatch will contact ERAU Emergency Response Team (ERT)
- Event managers
 - Crowd control
 - Direct EMS to location of medical emergency