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

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

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