



### Nutritional Supplements & Anabolic Steroids

- Contents and purity of natural supplements are not tested or regulated by the Food and Drug Administration
- Contaminated supplements could lead to a positive steroid test
- Athletes should have their nutritional needs met through a healthy balanced diet and not dietary supplements

### Sudden Cardiac Arrest

In the United States each year, sudden cardiac arrest kills 350,000 people, which is approximated 1,000 people per day. This can also occur in the athletic environment. Death during an athletic event can result from direct or indirect causes. The direct causes of death are primarily traumatic. The major indirect causes from arrhythmia or electrical malfunction resulting in sudden cardiac arrest. Sudden cardiac death is usually caused by unsuspected heart disease or disorder. The National Athletic Trainers Association and the American Heart Association reviewed 158 cases of deaths in athletics and found the following:

- The median age was 17
- Most of the occurrences were in football and basketball, but 18 different sports had occurrences
- Only 12 of the cases reported any symptoms

**Prevention:** Prevention is difficult if the preexisting cardiac condition is not recognized. To try to achieve this physicians should include a thorough history and cardiac examination as part of the pre participation physical exam. Athletes must report symptoms during the physical exam that alert medical personnel of the risk of sudden cardiac arrest. **THE KEY: A GOOD HISTORY IN THE PRE-PARTICIPATION PHYSICAL EXAM**

**CAUSES:** Hypertrophic Cardiomyopathy, Marfan Syndrome, Wolff-Parkinson-White Syndrome, Long QT Syndrome, Coronary artery abnormalities

**WARNING SIGNS:** Palpitations, Dizziness, Chest Pain or Tightness with exercise, Shortness of breath, Syncope, Family History of sudden cardiac death

### Treatments & Care: CHAIN OF SURVIVAL

Prompt EMS Activation



Early CPR



Early Defibrillation



Early Advanced Care

### Staphylococcus Aureus

Staphylococcus Aureus, referred to as "staph" are bacteria commonly carried on the skin or in the nose of healthy people (approximated 30%-50% of the population is colonized). Staph can sometimes cause skin infections.

Some Staph bacteria have mutated and cannot be killed with commonly used antibiotics. MRSA is a type of staph that is resistant to antibiotics including methicillin and other more common antibiotics such as penicillin and amoxicillin.

#### MRSA: Methicillin Resistant Staphylococcus Aureus

Prevention of Staph:

- Keep your hands clean (wash hands frequently)
- Keep scrapes and cuts clean & covered
- Shower after physical activity
- Properly clean gear and equipment
- Consult Athletic Trainer, Nurse or Physician for active wounds
- Avoid contact with other people's wounds
- Avoid sharing personal items such as towels and razors

**Treatment:** See Athletic Trainer, Nurse or Physician Immediately

### Asthma

Asthma is a chronic disease that affects your airways. The inside of the airways become inflamed or swollen which restricts the amount of air volume that can reach the lungs.

Causes:

- Allergens - Pollen, mold, pet dander, dust mites
- Irritants - Scented products, pollution, weather changes
- Other - Medicines, gastric reflux, infections

Major Signs & Symptoms:

- Coughing
- Wheezing
- Tightness in chest
- Shortness of breath
- Breathing difficulty at night
- Breathing Difficulty when exposed to allergens

Treatments:

- Quick relief medicine - inhaler (can be used before exercise) i.e. Albuterol, Xopenex.
- Long relief medicine - inhaler
- Avoid triggers.

**Pulmonary measuring devices are available at all athletic venues**

### Concussion

A concussion is defined as an acute deceleration event causing temporary or permanent damage to the inner ear or brain. The mechanism of injury determines the severity of the symptoms. This is a breakdown of grades of concussion with some common symptoms.

**Grade I** - No loss of consciousness, appropriate verbal and motor responses, mild confusion, transient imbalance, nausea, dizziness, disorientation.

**Grade II** - No loss of consciousness, confusion, imbalance, nausea, dizziness, disorientation, same as Grade I but lasts longer than 15 minutes.

**Grade III** - Any loss of consciousness, any sign of inappropriate speech, severe confusion, severe loss of balance.

**Secondary Impact syndrome** - Rare event which poses a concern for athletes who return too soon after suffering a previous concussion.

- Previous history of concussion
- Difficulty with memory and/or thought
- Visual, motor or sensory changes
- Collapse into coma

**Treatment:** See Athletic Trainer, Coach, Nurse, or Physician for immediate evaluation and care.

In the case of a Grade III with loss of consciousness, activate EMS

<div> <div> <b>Diabetes</b>  <b>Treatment:</b> <ul style="list-style-type: none"> <li>• 4oz fruit juice</li> <li>• 15gm glucose</li> <li>• 1 tube glucose gel</li> <li>• 4-6 small candies</li> <li>• 1-2 tbs honey</li> <li>• 6oz regular soda</li> </ul> </div> <div> <b>Mild Symptoms:</b>  Hunger, shakiness, weakness, paleness, blurry vision, sleepiness, changed behavior, sweating, anxiety, dilated pupils.  <b>Moderate to severe Symptoms:</b>  Yawning, confusion, restlessness, irritability, frustration, extreme fatigue, dazed appearance, sudden crying, seizures, inability to swallow, coma. </div> <div> <b>Normal Blood Glucose</b>  Adult: 90-130  Child: 100-140 </div> <div> <b>Hyperglycemia - Blood Sugar is <math>\geq 180</math></b>  <b>Mild Symptoms:</b>  Lack of concentration, thirst frequent urination, blurred vision, flushing of skin, increased hunger, sweet fruity breath, fatigue, weight loss, stomach pain.  <b>Moderate to severe Symptoms:</b>  Dry mouth, vomiting, nausea, stomach cramps.  <b>Severe Symptoms:</b>  Very weak, labored breathing, confused, unconscious </div> <div> <b>Treatment:</b> <ul style="list-style-type: none"> <li>• Verify blood glucose</li> <li>• Allow time for use of bathroom and access to water</li> <li>• Administer insulin</li> <li>• Call parents</li> </ul> </div> </div> <div> <b>Hypoglycemia - Blood Sugar is <math>\leq 70</math></b> </div>			
Disorder	Symptoms	Treatment	Lightning Safety
<b>Heat Cramps</b> May occur after working in moderate-to hot environments. This disorder usually occurs after performing hard physical work. Heat cramps may occur during or after school.	<ul style="list-style-type: none"> <li>• Cramps in skeletal muscles or abdominal muscles</li> <li>• Cramps may be recurrent</li> <li>• Muscle pain may continue after cramps subside</li> </ul>	<ul style="list-style-type: none"> <li>• Move person to cool environment</li> <li>• Remove unnecessary clothing</li> <li>• Provide water or electrolyte solution</li> <li>• Transport to medical facility</li> </ul>	<b>Designate a safe shelter for each venue</b>  Flash-to-bang count: (can be used to determine when to go to safety) <ul style="list-style-type: none"> <li>• When flash-to-bang count approaches thirty seconds all individuals should be already in a safe structure.</li> </ul> Once activities have been suspended, wait at least thirty minutes after the last sound of thunder or lightning flash before resuming activities.  Avoid being at the highest point in an open field  Do not take shelter near trees, flag poles or light poles.  Individuals who feel their hair stand on end, skin tingle, or hear "crackling" noises should assume the lighting safe position: <i>crouched on ground, weight on balls of feet, feet together, head lowered and ears covered. Never lie flat on the ground.</i>  <b>First Aid</b> <ul style="list-style-type: none"> <li>• Survey the scene</li> <li>• Activate EMS</li> <li>• Victims are safe to touch - they do not carry a charge</li> <li>• Evaluate airway, breathing, and circulation and begin CPR if necessary.</li> <li>• Evaluate for hypothermia, shock, fractures and burns</li> </ul>
<b>Heat Syncope</b> Occurs due to salt loss and water loss in sweat. Predisposes to heat stroke	<ul style="list-style-type: none"> <li>• Weakness, fatigue</li> <li>• Fainting</li> </ul>	<ul style="list-style-type: none"> <li>• Move person to cool environment</li> <li>• Provide water or electrolyte solution</li> </ul>	
<b>Heat Exhaustion</b> May occur after working in hot environments without adequate fluid replacement or electrolyte replacement. Heat exhaustion may be confused with heat stroke, which is a medical emergency.	<ul style="list-style-type: none"> <li>• Weakness, fatigue</li> <li>• Headache, nausea, vomiting and/or loss of appetite and thirst</li> <li>• Pale, clammy skin with large of amount of sweating</li> <li>• Lightheadedness, fainting</li> <li>• Impaired performance</li> </ul>	<ul style="list-style-type: none"> <li>• Emergencies call 911</li> <li>• Call ambulance and move patient to cool environment</li> <li>• Do not delay transportation to medical facility</li> <li>• Remove unnecessary clothing</li> <li>• Person should lie flat</li> <li>• If person is alert, offer small amounts of cool water</li> </ul>	
<b>Heat Stroke</b> <i>Least common, but most dangerous</i> Occurs when the body's system of temperature regulation fails and the body's temperature rises to critical levels. This disorder is associated with high fatality rates, so early recognition and treatment is critical.	<ul style="list-style-type: none"> <li>• Red or flushed skin</li> <li>• Confusion, irrational behavior</li> <li>• Lack of sweating, hot dry skin (although person may have been sweating earlier)</li> <li>• High body temperature</li> <li>• Dizziness, convulsions, nausea, vomiting, and headache can result</li> <li>• Loss of consciousness</li> </ul>	<ul style="list-style-type: none"> <li>• Emergencies call 911</li> <li>• Do not delay transportation to medical facility</li> <li>• Move person to cool environment</li> <li>• Remove unnecessary clothing</li> <li>• Sponge body with cool water and fan individual</li> <li>• If person is alert, offer small amounts of cool water</li> <li>• No one suspected of being ill from heat stroke should be sent home without a medical evaluation</li> </ul>	