

HEALTH AND SAFETY

WHAT IS A CONCUSSION?

A concussion is a type of traumatic brain injury that can have a serious effect on a young, developing brain. While most children and teens with a concussion recover quickly and fully, some will have concussion symptoms that last for days, weeks or even months.

Not giving the brain enough time to heal after a concussion can be dangerous. A repeat concussion that occurs before the brain heals from the first, usually within a short amount of time – hours, days or even weeks – can slow recovery or increase the chances for long-term health problems. These may include changes in how the child or teen thinks, feels and acts as well as the ability to learn and remember. While rare, a repeat concussion can result in brain swelling or permanent brain damage. It can even be fatal.

Concussion facts:

- Individuals who have had a concussion at any point in their lives have a greater chance of getting another concussion.
- Young children and teens are more likely to get a concussion and can take longer to recover than adults.
- Recognizing and responding properly to concussions when they first occur can help prevent further injury or even death.

SIGNS AND SYMPTOMS OF A CONCUSSION

A concussion can happen at home, school or play, so everyone plays an important role in learning how to spot a concussion and knowing what to do if they think a child or teen has a concussion.

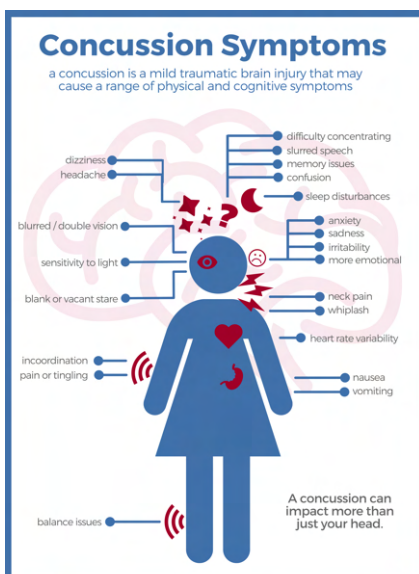
It is important to note that not all individuals display the same concussion signs and symptoms immediately. Some may not become apparent until later on at home or even the next day. That is why it is important to remove the athlete from play until he or she is examined by a qualified medical professional.

Common concussion signs:

- Can't recall events prior to or after a hit or fall
- Appears dazed or stunned
- Forgets instruction; confused about an assignment or position; unsure of game, score or opponent
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even briefly)
- Shows mood, behavior or personality changes

Common concussion symptoms:

- Headache or pressure to head
- Nausea or vomiting
- Loss of balance, dizziness or double/blurred vision
- Bothered by light or noise
- Feeling sluggish, hazy, foggy or groggy
- Confusion or memory problems
- Just not "feeling right" or "feeling down"



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WHAT TO DO WHEN A CONCUSSION OCCURS

First, it is vitally important to remove any individual from practice or competition if a concussion is suspected. High school coaches are not medical professionals and are not asked to make a diagnosis.

An athlete who is believed to have a concussion is to be removed from play right away and cannot return to play or practice until they have clearance from a qualified health care professional.

Some states as well as school and league concussion policies include additional strategies or implementation plans, so talk to your athletic director about what you are legally required to do.

Here are some examples of additional strategies in local policies and action plans:

- Create a concussion emergency medical plan that include contact information for local emergency medical responders and the location of trauma centers.
- Identify appropriate health care professionals for games and practices to help assess and managed suspected concussion among athletes.

HEAT AND HYDRATION

The environment, equipment and intensity can place athletes at risk of heat illness. Heat illnesses represent conditions resulting from heat stress, which can be imposed by a number of factors but usually result from the environment or the body creating this heat load itself. Heat illnesses can range from minor to severe, and in particular, exertional heat stroke is a life-threatening emergency.

HEAT ACCLIMATIZATION

The majority of heat related illnesses happen during the first few days of practice, usually prompted by doing too much, too soon, and in some cases with too much protective gear on too early in the season – wearing helmet, shoulder pads, pants and other protective gear. Players must be allowed the time to adapt safely to the environment, intensity, duration and uniform.

Physical exertion and training activities should begin slowly and continue progressively. An athlete cannot be conditioned in a period of only two to three weeks.

- Begin with shorter, less intense practices and training activities with longer recovery intervals between bouts of activity.
- Emphasize instruction over conditioning during the first several practices.
- Keep each athlete's individual level of conditioning and medical status in mind and adjust activity accordingly. These factors directly affect exertional heat illness risk.
- Lessen intensity
- Increase rest breaks and consider reducing uniform and protective equipment while being sure to monitor all players more closely as conditions are increasingly warm/humid, especially if there is a change in weather from the previous few days.
- Recognize early signs of distress and developing exertional heat illness, and promptly adjust activity and treat appropriately. First aid should not be delayed.

FLUIDS FOR HYDRATION

For exercise longer than 75-90 minutes or intense exercise in the heat, sports drinks may be helpful for athletes to replace electrolytes, sugar, and water lost during exercise.

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WHEN ATHLETES SHOULD HYDRATE

Before exercise:

- Hydrate with 16-24 ounces of water or a sports drink.
- During exercise
- Have unlimited access to water during exercise/activity.
- Be able to drink as much as they want.
- Be able to drink for the entire break period if they wish.
- Access to sports drinks when exercise is greater than 60 minutes or if exercise is going to be intense and in the heat.
- Rehydration should occur within 2 hours post-exercise to assure optimal rehydration.

RECOGNITION AND TREATMENT

Recognize the signs, find out the causes and learn to treat various exertional heat illnesses.

Heat exhaustion. The inability to continue to exercise in the heat because of weakness or dizziness. Remove athlete from play. Lay on ground with legs 12 inches above torso. Replenish fluids and treat with cold, moist towels.

Heat cramps. Painful localized muscle cramps that will feel hard and often are visible. Replenish fluids. Use light stretching, ice and massage to treat.

Heat syncope. A fainting or lightheadedness because of exercise in heat. Lay on ground with legs 12 inches above torso to normalize blood pressure.

Heat stroke. A condition marked by an increased body temperature and often abnormal behavior or altered consciousness, caused by failure of the body's temperature-regulating mechanism. Call 911 and begin cooling while ambulance is on the way. Remove all equipment and excess clothing. Cool the athlete in a whole body ice water immersion. Cease cooling when temperature reaches 102 degrees Fahrenheit.

SUDDEN CARDIAC ARREST

Sudden cardiac arrest (SCA) is the leading cause of death for youth and teenage athletes during exercise.

The majority of athletes who suffer SCA on the field show no warning symptoms. Knowing how to react is crucial when a cardiac event occurs. Ensure your program is equipped with the right tools and training to react properly when an incident occurs.

What is sudden cardiac arrest?

Often, the first sign of a heart condition is collapse from sudden cardiac arrest during exercise. It is the result of structural or electrical disorders in the heart that lead to a potentially lethal arrhythmia.

Often, the first sign of a potential cardiac arrest is collapse during exercise. By having a properly trained staff and an AED (defibrillator) onsite, school and league administrators can greatly reduce tragic outcomes when SCA occurs.



DID YOU KNOW:

Early defibrillation dramatically improves survival. In fact, survival rates as high as 89% have been achieved in student-athletes when CPR and defibrillation are provided within three minutes of collapse.

*Source: Drezner J, Torresdahl B, Roa A, Huszti E, Harmon K. Outcomes from Sudden Cardiac Arrest in U.S. High Schools: A Two-Year Prospective Study from the National Registry for AED Use in Sports. Br J Sports Med. 2013; 47(18): 11-79-83.

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Signs and Symptoms:

Some athletes may have warning signs or symptoms of an underlying heart disorder. An athlete passing out during exercise is not normal, especially in the middle of exercise, practice, or a game. Chest pain with exercise, or fatigue and shortness of breath that is new or disproportionate to their peers or the level of exertion should also warrant evaluation by a physician.

Be aware of warning symptoms of a current heart condition:

- Chest pain with exercise
- Racing heart (when it shouldn't)
- Passing out with exercise
- Shortness of breath or fatigue that is disproportionate to the level of exertion
- A family member who died suddenly from a heart condition or suffered SCA before the age of 50

It is paramount that coaches and adults supervising youth athletes during sports be prepared to respond to someone who collapses in sudden cardiac arrest.

Here's what to look for to recognize SCA:

- A collapsed and unresponsive athlete (especially without any recent trauma)
- 50 percent of athletes with SCA have brief seizure-like activity (i.e., arm and leg movements)
- Gasping respirations with abdominal movement

A challenge to responding to sudden cardiac arrest is quickly recognizing the emergency. If an athlete collapses while running and is unconscious without any recent trauma, you have to assume cardiac arrest.

What is an AED?

Automated external defibrillators (AEDs) are portable devices that check the heart rhythm and can provide an electrical shock to the heart to restore a normal rhythm.

Putting an AED in schools and youth sports settings is really a public safety measure. You may use it to save a child's life, but half the time you use the devices on an adult - a coach, a teacher, a spectator.



Every Second Counts! Key Steps to Save a Life:

- Prompt recognition of SCA
- Call 9-1-1
- Begin hands-only CPR
- Retrieve and use an AED

Action Plan:

As soon as sudden cardiac arrest is suspected, call 911.

Then as soon as possible, begin hands only CPR with chest compressions and have someone close-by get the defibrillator if there is one available. AEDs are safe and easy to use and provide voice and visual instructions so anyone can use them effectively.

If you do these things, you have a good chance to saving someone who is in a life-threatening situation.

Every league should develop an emergency action plan. Include these steps in your preparations:

- Know the location of AEDs at practice and game fields
- Have a way to call 9-1-1 in case of an emergency during football activities; if cell availability is bad in your area, know where the good spots are
- Make sure coaches know how to recognize SCA and are trained in CPR
- Define emergency routes for an ambulance at practice and game facilities
- Designate key personnel to meet and direct emergency responders
- Designate personnel to stay with the child on the way to the hospital in case a parent or guardian is not present
- Designate a coach to organize and remove the rest of the team from the injury site
- Have player/parent phone numbers available and a designated person to contact the parents if one is not present