



# Parent/Athlete Concussion Information Sheet

A concussion is a type of traumatic brain injury that changes the way the brain normally works. A concussion is caused by bump, blow, or jolt to the head or body that causes the head and brain to move rapidly back and forth. Even a “ding,” “getting your bell rung,” or what seems to be a mild bump or blow to the head can be serious.

## WHAT ARE THE SIGNS AND SYMPTOMS OF CONCUSSION?

Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days or weeks after the injury.

If an athlete reports **one or more** symptoms of concussion listed below after a bump, blow, or jolt to

### Did You Know?

- Most concussions occur *without* loss of consciousness.
- Athletes who have, at any point in their lives, had a concussion have an increased risk for another concussion.
- Young children and teens are more likely to get a concussion and take longer to recover than adults.

the head or body, s/he should be kept out of play the day of the injury and until a health care professional, experienced in evaluating for concussion, says s/he is symptom-free and it’s OK to return to play.

| SIGNS OBSERVED BY COACHING STAFF                | SYMPTOMS REPORTED BY ATHLETES              |
|-------------------------------------------------|--------------------------------------------|
| Appears dazed or stunned                        | Headache or “pressure” in head             |
| Is confused about assignment or position        | Nausea or vomiting                         |
| Forgets an instruction                          | Balance problems or dizziness              |
| Is unsure of game, score, or opponent           | Double or blurry vision                    |
| Moves clumsily                                  | Sensitivity to light                       |
| Answers questions slowly                        | Sensitivity to noise                       |
| Loses consciousness ( <i>even briefly</i> )     | Feeling sluggish, hazy, foggy, or groggy   |
| Shows mood, behavior, or personality changes    | Concentration or memory problems           |
| Can’t recall events <i>prior</i> to hit or fall | Confusion                                  |
| Can’t recall events <i>after</i> hit or fall    | Just not “feeling right” or “feeling down” |

## CONCUSSION DANGER SIGNS

In rare cases, a dangerous blood clot may form on the brain in a person with a concussion and crowd the brain against the skull. An athlete should receive immediate medical attention if after a bump, blow, or jolt to the head or body s/he exhibits any of the following danger signs:

- One pupil larger than the other
- Is drowsy or cannot be awakened
- A headache that not only does not diminish, but gets worse
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Cannot recognize people or places
- Becomes increasingly confused, restless, or agitated
- Has unusual behavior
- Loses consciousness (*even a brief loss of consciousness should be taken seriously*)

## WHY SHOULD AN ATHLETE REPORT THEIR SYMPTOMS?

If an athlete has a concussion, his/her brain needs time to heal. While an athlete's brain is still healing, s/he is much more likely to have another concussion. Repeat concussions can increase the time it takes to recover. In rare cases, repeat concussions in young athletes can result in brain swelling or permanent damage to their brain. *They can even be fatal.*

### *Remember*

Concussions affect people differently. While most athletes with a concussion recover quickly and fully, some will have symptoms that last for days, or even weeks. A more serious concussion can last for months or longer.

## WHAT SHOULD YOU DO IF YOU THINK YOUR ATHLETE HAS A CONCUSSION?

If you suspect that an athlete has a concussion, remove the athlete from play and seek medical attention. Do not try to judge the severity of the injury yourself. Keep the athlete out of play the day of the injury and until a health care professional, experienced in evaluating for concussion, says s/he is symptom-free and it's OK to return to play.

Rest is key to helping an athlete recover from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms to reappear or get worse. After a concussion, returning to sports and school is a gradual process that should be carefully managed and monitored by a health care professional.

It's better to miss one game than the whole season. For more information on concussions, visit: [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

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Student-Athlete Name Printed

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Student-Athlete Signature

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Date

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Parent or Legal Guardian Printed

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Parent or Legal Guardian Signature

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Date



## Sudden Cardiac Arrest (SCA) Information for Parents and Student Athletes

**Definition:** Sudden Cardiac Arrest (SCA) is a potentially fatal condition in which the heart suddenly and unexpectedly stops beating. When this happens, blood stops flowing to the brain and other vital organs.

SCA in student athletes is rare; the chance of SCA occurring to any individual student athlete is about one in 100,000. However, student athletes' risk of SCA is nearly four times that of non-athletes due to the increased demands on the heart during exercise.

**Causes:** SCA is caused by several structural and electrical diseases of the heart. These conditions predispose an individual to have an abnormal rhythm that can be fatal if not treated within a few minutes. Most conditions responsible for SCA in children are inherited, which means the tendency to have these conditions is passed from parents to children through the genes. Other possible causes of SCA are a sudden blunt non-penetrating blow to the chest and the use of recreational or performance-enhancing drugs and/or energy drinks.

| Warning Signs of SCA                                                                                                                                                                                                                                                                                                         | Emergency Response to SCA                                                                                                                                                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"><li>• SCA strikes immediately.</li><li>• SCA should be suspected in any athlete who has collapsed and is unresponsive.<ul style="list-style-type: none"><li>◦ No response to tapping on shoulders</li><li>◦ Does nothing when asked if he/she is OK</li></ul></li><li>• No pulse</li></ul> | <ul style="list-style-type: none"><li>• Act immediately; time is most critical to increase survival rates.</li><li>• Recognize SCA.</li><li>• Call 911 immediately and activate EMS.</li><li>• Administer CPR.</li><li>• Use Automatic External Defibrillator (AED).</li></ul> |

**Warning signs of potential heart issues:** The following need to be further evaluated by your primary care provider.

- Family history of heart disease/cardiac arrest
- Fainting, a seizure, or convulsions during physical activity
- Fainting or a seizure from emotional excitement, emotional distress, or being startled
- Dizziness or lightheadedness, especially during exertion
- Exercise-induced chest pain
- Palpitations: awareness of the heart beating, especially if associated with other symptoms such as dizziness
- Extreme tiredness or shortness of breath associated with exercise
- History of high blood pressure

**Risk of Inaction:** Ignoring such symptoms and continuing to play could be catastrophic and result in sudden cardiac death. Taking these warning symptoms seriously and seeking timely appropriate medical care can prevent serious and possibly fatal consequences.

Information used in this document was obtained from the American Heart Association ([www.heart.org](http://www.heart.org)), Parent Heart Watch ([www.parentheartwatch.org](http://www.parentheartwatch.org)), and the Sudden Cardiac Arrest Foundation ([www.sca-aware.org](http://www.sca-aware.org)). Visit these sites for more information.

## Frequently Asked Questions about Sudden Cardiac Arrest (SCA)

### What are the most common causes of Sudden Cardiac Arrest (SCA) in a student athlete?

SCA is caused by several **structural** and **electrical** diseases of the heart. These conditions predispose an individual to have an abnormal rhythm that can be fatal if not treated within a few minutes. Most conditions responsible for SCA in children are **inherited**, which means the tendency to have these conditions is passed from parents to children through the genes. Some of these conditions are listed below.

1. *Hypertrophic cardiomyopathy (HCM)*: HCM involves an abnormal thickening of the heart muscle and it is the most common cause of SCA in an athlete.
2. Coronary artery anomalies: The second most common cause is congenital (present at birth) abnormalities of coronary arteries, the blood vessels that supply blood to the heart.
3. Other possible causes of SCA are:
  - a. *Myocarditis*: an acute inflammation of the heart muscle (usually due to a virus).
  - b. Disorders of heart electrical activity such as:
    - i. *Long QT syndrome*.
    - ii. *Wolff-Parkinson-White (WPW) syndrome*.
    - iii. *Catecholaminergic Polymorphic Ventricular Tachycardia (CPVT)*.
  - c. *Marfan syndrome*: a condition that affects heart valves, walls of major arteries, eyes, and the skeleton.
  - d. Congenital aortic valve abnormalities.
4. *Commotio Cordis*: concussion of the heart from **sudden blunt non-penetrating blow** to the chest
5. Use of recreational, **performance-enhancing** drugs, and **energy drinks** can also bring on SCA.

### How can we minimize the risk of SCA and improve outcomes?

The risk of SCA in student athletes can be minimized by providing appropriate prevention, recognition, and treatment strategies. One important strategy is the requirement for a yearly pre-participation screening evaluation, often called a sports physical, performed by the athlete's medical provider.

1. It is very important that you **carefully and accurately complete the personal history and family history section** of the "Pre-Participation Physical Evaluation Form" available at <http://www.mpssaa.org/HealthandSafety/Forms.asp>.
2. Since the majority of these conditions are inherited, **be aware of your family history**, especially if any close family member:
  - a. had sudden unexplained and unexpected death before the age of 50.
  - b. was diagnosed with any of the heart conditions listed above.
  - c. died suddenly /unexpectedly during physical activity, during a seizure, from Sudden Infant Death Syndrome (SIDS) or from drowning.
3. **Take seriously the warning signs and symptoms of SCA**. Athletes should notify their parents, coaches, or school nurses if they experience any of these warning signs or symptoms.
4. Schools in Maryland have AED policies and emergency preparedness plans to address SCA and other emergencies in schools. Be aware of your school's various preventive measures.
5. If a cardiovascular disorder is suspected or diagnosed based on the comprehensive pre-participation screening evaluation, a referral to a child heart specialist or pediatric cardiologist is crucial. Such athletes will be excluded from sports pending further evaluation and clearance by their medical providers.



For official use only:

Name of Athlete \_\_\_\_\_

Sport/season \_\_\_\_\_

Date Received \_\_\_\_\_

## Parent/Student Athlete Acknowledgement Statement

### Parent/Guardian

I acknowledge that I have read and understand the following:

- Sudden Cardiac Arrest (SCA) Information Sheet
- Concussion Awareness Information Sheet

\_\_\_\_\_  
PRINT NAME

\_\_\_\_\_  
PARENT/GUARDIAN SIGNATURE

Date \_\_\_\_\_

### Student Athlete

I acknowledge that I have read and understand the following:

- Sudden Cardiac Arrest (SCA) Information Sheet
- Concussion Awareness Information Sheet

\_\_\_\_\_  
PRINT NAME

\_\_\_\_\_  
STUDENT ATHLETE SIGNATURE

Date \_\_\_\_\_



# Parents' and Coaches' Guide to Dehydration and Other Heat Illnesses in Children

These guidelines were developed to help parents and coaches increase the safety and performance of children who play sports in hot weather. Children who play sports or are physically active in hot weather can be at risk for heat illnesses. The good news is heat illnesses can be prevented and successfully treated.

Children sweat less than adults. This makes it harder for children to cool off. Parents and coaches must make sure that children take it slow to be sure they can get used to the heat and humidity gradually.

There are other reasons why a child may become ill from a heat illness. Those who have a low level of fitness, who are sick, or who have suffered from dehydration or heat illness in the past should be closely watched. A medical professional such as a certified athletic trainer (ATC) should be on site to monitor the health and safety of all participants during games and practice, especially when it is very hot and humid.

## Dehydration

Children get dehydrated if they do not replace body fluids lost by sweating. Being even a little dehydrated can make a child feel bad and play less effectively. Dehydration also puts children at risk for more dangerous heat illnesses.

### Signs and Symptoms

- ◆ Dry mouth
- ◆ Thirst
- ◆ Being irritable or cranky
- ◆ Headache
- ◆ Seeming bored or disinterested
- ◆ Dizziness
- ◆ Cramps
- ◆ Excessive fatigue
- ◆ Child not able to run as fast or play as well as usual

### Treatment

- ◆ Move child to a shaded or air-conditioned area.
- ◆ Give him or her fluids to drink.

### "When can I play again?"

A child may be active again as soon as he or she is symptom-free. However, it's important to continue to watch the child.

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## Heat Cramps

Heat cramps are a mild heat illness that can be easily treated. These intense muscle spasms usually develop after a child has been exercising for a while and has lost large amounts of fluid and salt from sweating. While heat cramps are more common in children who perform in the heat, they can also occur when it's not hot (for example, during ice hockey or swimming).

Children who sweat a lot or have a high concentration of salt in their sweat may be more likely to get heat cramps. Heat cramps can largely be avoided by being adequately conditioned, getting used to the heat and humidity slowly, and being sure a child eats and drinks properly.

### Signs and Symptoms

- ◆ Intense pain (not associated with pulling or straining a muscle)
- ◆ Persistent muscle contractions that continue during and after exercise

### Treatment

- ◆ The child should be given a sports drink to help replace fluid and sodium losses.
- ◆ Light stretching, relaxation and massage of the cramped muscles may help.

### "When can I play again?"

A child may be active again when the cramp has gone away and he or she feels and acts ready to participate. You can help decrease the risk of recurring heat cramps by checking whether the child needs to change eating and drinking habits, become more fit, or get better adjusted to the heat.

## Heat Exhaustion

Heat exhaustion is a moderate heat illness that occurs when a child continues to be physically active even after he or she starts suffering from ill effects of the heat, like dehydration. The child's body struggles to keep up with the demands, leading to heat exhaustion.

### Signs and Symptoms

- ◆ Child finds it hard or impossible to keep playing
- ◆ Loss of coordination, dizziness or fainting
- ◆ Dehydration
- ◆ Profuse sweating or pale skin
- ◆ Headache, nausea, vomiting or diarrhea
- ◆ Stomach/intestinal cramps or persistent muscle cramps

### Treatment

- ◆ Move child to a shaded or air-conditioned area.
- ◆ Remove any extra clothing and equipment.
- ◆ Cool the child with cold water, fans or cold towels (replace towels frequently).
- ◆ Have child lie comfortably with legs raised above heart level.
- ◆ If the child is not nauseated or vomiting, have him or her drink chilled water or sports drink.
- ◆ The child's condition should improve rapidly, but if there is little or no improvement, take the child for emergency medical treatment.

### "When can I play again?"

A child should not be allowed to return to play until all symptoms of heat exhaustion and dehydration are gone. Avoid intense practice in heat until at least the next day, and if heat exhaustion was severe, wait longer. If the child received emergency medical treatment, he or she should not be allowed to return until his or her doctor approves and gives specific return-to-play instructions.

Parents and coaches should rule out any other conditions or illnesses that may predispose the child for continued problems with heat exhaustion. Correct these problems before the child returns to full participation in the heat, especially for sports with equipment.

## Exertional Heat Stroke

Heat stroke is a severe heat illness that occurs when a child's body creates more heat than it can release, due to the strain of exercising in the heat. This results in a rapid increase in core body temperature, which can lead to permanent disability or even death if left untreated.

### Signs and Symptoms

- ◆ Increase in core body temperature, usually above 104°F/40°C (rectal temperature) when the child falls ill
- ◆ Central nervous system dysfunction, such as altered consciousness, seizures, confusion, emotional instability, irrational behavior or decreased mental acuity

Other possible indicators include:

- ◆ Nausea, vomiting or diarrhea
- ◆ Headache, dizziness or weakness
- ◆ Hot and wet or dry skin
- ◆ Increased heart rate, decreased blood pressure or fast breathing
- ◆ Dehydration
- ◆ Combativeness

### Treatment

If there are no on-site medical personnel:

- ◆ Call emergency medical services for immediate transport to the nearest emergency medical facility. Begin cooling the child while waiting for and during transport to the emergency facility.

If there are on-site medical personnel:

- ◆ Locate medical personnel immediately. Remove extra clothing or equipment. Begin aggressive whole-body cooling by immersing the child in a tub of cold water. If a tub is not available, use alternative cooling methods such as cold water, fans, ice or cold towels (replaced frequently), placed over as much of the body as possible.
- ◆ Call emergency medical services for transport to the nearest emergency medical facility.

### "When can I play again?"

No child who has suffered heat stroke should be allowed to return until his or her doctor approves and gives specific return-to-play instructions. Parents should work with the child's doctor to rule out or treat any other conditions or illnesses that may cause continued problems with heat stroke. The child should return to physical activity slowly, under the supervision of an ATC or other qualified health care professional, especially for sports with equipment.

### Parents: How Much Should Your Child Drink When Active?

- ◆ Before activity in the heat, record your child's body weight. (Remember if your child has already been exercising in the heat, he or she may already be dehydrated.)
- ◆ Weigh your child again, after the activity is over.
- ◆ Compare your child's pre-activity body weight to his or her post-activity body weight.

If post-activity weight is less than pre-activity weight, your child is not drinking enough fluids while active. A loss of as little as 1 percent of body weight can cause a decrease in performance. Because scientists have proven that children replace less of their fluid losses when drinking water, you may want to offer a flavored sports drink to increase the amount of fluid your child consumes.



## Tips for Parents

- ◆ Before your child starts playing a sport, he or she should have a physical examination that includes specific questions about any history of heat illness.
- ◆ Tell your child's coach about any history of heat illness.
- ◆ Make sure your child is properly hydrated before he or she heads out the door to practice or a game. Give your children their own water bottles.
- ◆ Make sure your child's coach has your emergency contact numbers.
- ◆ Check that your child's league/team has an emergency action plan.

## Tips for Coaches

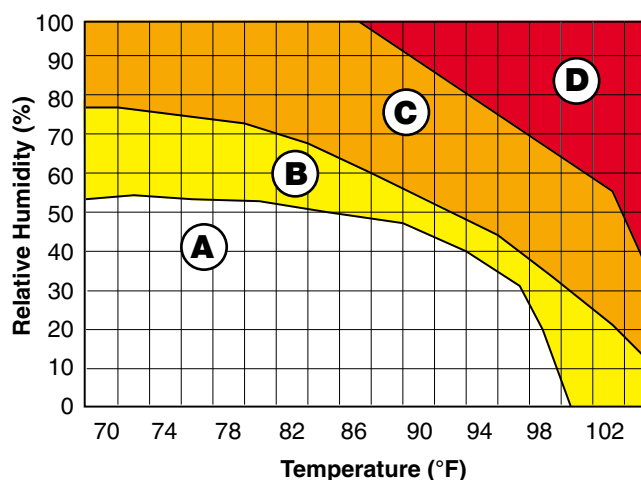
- ◆ Be aware of temperature and humidity levels. Change practice length, intensity and equipment use as the levels rise.
- ◆ It should be easy for children to drink fluids during practice, and you should remind them to drink regularly. Fluid breaks should be scheduled for all practices and become more frequent as the heat and humidity levels rise.
- ◆ Every athletic organization should have an emergency action plan for obtaining emergency medical services if needed.
- ◆ Always have contact information for parents available.

## Activity Guidelines

Fluid breaks should be scheduled for all practices and become more frequent as the heat and humidity levels rise.

Add 5°F to the temperature between 10:00 a.m. and 4:00 p.m. from mid-May to mid-September on bright, sunny days.

- A. Children should receive a 5-10 minute rest and fluid break after every 25 to 30 minutes of activity.
- B. Children should receive a 5-10 minute rest and fluid break after every 20 to 25 minutes of activity. Children should be in shorts and t-shirts (with helmet and shoulder pads only, not full equipment, if worn for activity).



- C. Children should receive a 5-10 minute rest and fluid break after every 15 to 20 minutes of activity. Children should be in shorts and t-shirts only (with all protective equipment removed, if worn for activity).
- D. Cancel or postpone all outdoor practices/games. Practice may be held in an air-conditioned space.