

► Why Coaches?

Concussions can occur in any sport or situation, in any age group, and at any time. When trained medical personnel are not easily accessible, it is often a coach's responsibility to evaluate an injury and decide if an athlete should return to play or be seen for further medical care.

► What Is a Concussion?

A common assumption is that an athlete must be “knocked out” to sustain a concussion. That is not true. *Any* change in mental status or function qualifies as a concussion. Unconsciousness is clearly a severe injury but does not occur frequently. The classic “having your bell rung” or “ding” commonly occurs and is often ignored, which can be a serious oversight.

Recognizing a subtle concussion is extremely important in preventing the rare but deadly **Second Impact Syndrome (SIS)**. **SIS** occurs when an athlete sustains a second blow to the head while *still symptomatic* from the first “ding.” The second blow might be relatively gentle (a slap can provide enough force) and may occur days or weeks later. The second blow can cause a sudden swelling of the brain that quickly leads (within two or three minutes) to unconsciousness or cardiac arrest. Fifty percent of people who sustain **SIS** die, and the rest have a very high risk of permanent brain damage.

► How to Recognize Concussions

Symptoms of a concussion may include dizziness, nausea, vomiting, headache, blurred or double vision, ringing in the ears, a funny taste in the mouth, poor coordination, or emotional

instability/behavior (anger, crying, and anxiety). Keep in mind that your athlete won't necessarily come up to you and complain of these symptoms. Watch out for the athlete who just sits and stares, seems to be a step behind where he or she usually is, blows a routine play, or “just doesn't look right” to you. If you are at all suspicious that an athlete may have a concussion, test him or her using the pocket card on the back. *If any of these symptoms are present, remove your athlete from competition or practice even if he or she becomes completely normal later in the practice or game.* Symptoms can recur for days after the initial injury and are a sign that the brain has not healed enough to participate in *any athletic activity*. If you notice any of these post-concussion syndrome symptoms in your athlete, report it to the athletic trainer, a parent or guardian, and/or a physician. In their desire to play, many athletes try to hide or minimize injuries. Be aware of changes or concerns reported by teammates or teachers. Post-concussion syndrome often has long-term effects that interfere with functioning at home, school, or work. If you suspect an athlete may have a concussion, he or she should be evaluated by a physician.

► Concussions and Return-to-Play Decisions

Recent research on athletes under 18 years of age has shown that even when they say they feel better and deny symptoms after they had symptoms of concussion on their first evaluation, brain function and reflexes do not return to normal for five to seven days. If your athlete meets the criteria for having a concussion when you test him or her, remove the athlete from all athletic activity until a physician or certified athletic trainer clears him or her. Resist the parent or well-meaning bystander who may offer to make that choice for you.

Grade 1: “Ding” or “Having Your Bell Rung”

The athlete is conscious at all times but is dazed, foggy, or fuzzy. The player may miss one or two items in the concentration test but shows no confusion or memory loss. The athlete may feel like he or she is just “kind of out of it” or off balance. These are the concussions that can clear in 15 to 20 minutes. But, unlike adults, there is still injury happening in the adolescent brain, and recommendations now are to treat these more conservatively than in athletes over the age of 18.

If a player suffers a second “ding” in the same season, he or she should not return to activity until seen and cleared by a physician.

No matter how minor the head injury, notify the family about it and what symptoms to look for (see card), and do not rely on the athlete to tell anybody. A responsible person needs to watch for delayed problems.

Regardless of others' recommendations, if your gut feeling tells you to bench a player, do not let anyone — not players, parents, coaches, fans, or circumstances — change your mind. *You are never wrong to keep a player out of a practice or game.* It is the safest option.

Grade 2: Out to Lunch

The athlete remains awake at all times but is dazed or stares blankly. Any amnesia (memory loss) is a critical warning sign. For example, you may notice the athlete repeatedly asking the same questions without remembering that he or she asked them, or without remembering the answers. If an athlete misses any of the confusion/orientation or memory test questions, suspect a grade 2 concussion and immediately remove him or her from all activities. Seek emergency medical attention for this athlete. He or she should not return to athletic activity for a minimum of five to seven days **after all symptoms have disappeared** and should be cleared first by a physician or certified athletic trainer.

Grade 3: Knocked Out – Blacked Out

Any loss of consciousness, no matter how brief, is a grade 3 concussion *requiring immediate medical attention*; therefore, there is no need for you to perform any exams. However, you must do the following:

- ▶ If the athlete wakes up within one minute and does not have any neck pain, you may move the athlete to the sideline, where you should keep him or her calm and quiet. Call an ambulance or ask a responsible adult to take the player directly to an emergency room.
- ▶ If the athlete is unconscious longer than one minute, does not wake up, or complains of neck pain after returning to consciousness, assume the athlete has a neck/spine injury. Do not move the athlete. Make sure that he or she is breathing. Do not allow others to move the athlete. Call an ambulance. While waiting for the ambulance to arrive, keep the athlete's head from being moved.

In either case, expect the athlete to be prohibited from taking part in the activity for a minimum of two weeks to one month.

The information contained in this brochure is intended to serve as a general resource and guide. It is not to be construed as medical advice or legal opinion. Trained medical personnel should be consulted for the application of any medical guidelines in specific situations. The ultimate judgment regarding any specific recommendation, procedure, or medical treatment must be made in light of the individual situation and present circumstances.



© 1999, 2003 Massachusetts Medical Society Committee on Student Health and Sports Medicine
Editor: Catherine E. O'Connor, M.D.

Developed in cooperation with the Massachusetts Interscholastic Athletic Association and the Massachusetts Medical Society Alliance.

To order additional copies, please contact the Massachusetts Medical Society at (800) 843-6356 or visit www.massmed.org/pages/concussion_brochure.asp.

For more information or to request reprint permission, contact the Massachusetts Medical Society
Department of Public Health and Education
860 Winter Street, Waltham, MA 02451
dph@massmed.org

Illustration by Tim Vining

Please remove this card, add important telephone numbers, and keep it in an easily accessible place for reference during games and practices. It can be folded into a wallet-sized card.



*When using the concussion evaluation card,
please remember to tailor your questions to the age of your athletes.*

CONCUSSION

A COACHES' GUIDE FOR SIDELINE EVALUATION



Massachusetts Medical Society Committee on Student Health and Sports Medicine