

DECREASING THE RISK FOR CONCUSSIONS

Is it possible to prevent concussions? More than half of football and hockey players report suffering concussions each season! You can do certain things that will decrease the risk for concussion.

This is a four-point program:

1. Wear a helmet certified for your sport. Make sure that the helmet fits tight so that it does not move around on your head. The helmet should be attached by a chin or neck strap.
2. Wear a mouthguard, preferably a mouthguard fitted by a dentist. There is no proof that the use of a mouthguard decreases the risk for concussions, but it may be useful in certain situations.
3. Hydrate. A hydrated player makes better decisions and can make better plays. A hydrated player may also have a decreased risk for head trauma.
4. Think ahead. Players should be aware of what is going on in the field or on the ice. A player should not put his or her head in situations that may lead to a concussion.

▼ 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.

The evaluation of an athlete with a suspected concussion should be prompt and thorough.

Treatment is individualized according to the player's age, concussion history, symptoms, signs, and type of sport. All concussed athletes should be cleared for return to play by a sports medicine professional.

CONCUSSION IN SPORTS GROUP (CISG) PROTOCOL

Acute response — when a player shows ANY symptoms or signs of a concussion:

- The player should not be allowed to return to play in the current game or practice.
- The player should not be left alone; and regular monitoring for deterioration is essential.
- The player should be medically evaluated after the injury.
- The player must follow a medically supervised stepwise process to return to play.
- The player should never return to play when still symptomatic.
- **When in doubt, sit them out!**

PLAYER'S SIGNS AND SYMPTOMS SEEN BY COACH

- Appears to be confused, dazed, or stunned
- Is confused about assignment
- Is not sure of game, score, or opponent
- Forgets plays
- Moves clumsily
- Answers questions slowly
- Loses consciousness (even for a very short time)
- Forgets events prior to head trauma
- Shows unusual changes in behavior

Based on the Summary and Agreement Statement of the First International Conference on Concussion in Sports, Vienna 2001 (www.bjsportmed.com). Also see www.cdc.gov/concussioninyouthsports/ and www.cdc.gov/ncipa/tbi/.



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.

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MASSACHUSETTS
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CONCUSSION

A COACHES' GUIDE FOR SIDELINE EVALUATION



Massachusetts Medical Society Committee on Student Health and Sports Medicine

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. When a player sustains a concussion, he or she should not return to that game or practice. Returning the following day or the following week should be at the discretion of the player's physician.

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. Amnesia (loss of memory) following head trauma is a more severe sign of concussion. The classic “having your bell rung” or “ding” commonly occurs and is often ignored, which is 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 confusion, dizziness, nausea, vomiting, headache, blurred or double vision, vacant stare, ringing in the ears, a funny taste in the mouth, poor coordination, loss of balance, sensitivity to light and noise, flashing lights, personality changes including emotional instability/behavior (anger, crying, and anxiety), feeling sluggish, slurred speech, or loss of memory. It is important to recognize that most athletes won't necessarily come up to you and complain of these symptoms, so a responsible coach has to always be on the lookout for abnormal behaviors. 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, immediately 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. **When in doubt, sit them out!**

CONCUSSIONS AND RETURN-TO-PLAY DECISIONS

Recent research on athletes under 18 years of age has shown that even when they say they are normal after having shown symptoms after an initial concussion, brain function and reflexes may not return to normal for weeks in some athletes. If available, psychometric testing such as the IMPACT program may be helpful to assess when a player may return to play. If your athlete meets the criteria for having a concussion when you test him or her, remove the athlete from that game or practice and from all further athletic activity until a physician or certified athletic trainer clears him or her for such activity. Resist the parent or well-meaning bystander who may offer to make that choice for you. These guidelines are for the good of the student athlete, and are not negotiable under any circumstances.

There have been various grading scales to evaluate the seriousness of a concussion. According to guidelines established at an International Conference on Concussions in Sports in Vienna 2001, concussions are no longer graded; if a player has had head trauma and has sustained a concussion of any severity, the player cannot return to play on the day of the concussion. Those grading scales have been found not to be useful to determine when a player can return to play.

Regardless of the recommendations of others, if your gut feeling tells you to bench a player, do not let anyone — 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. **When in doubt, sit them out!**

The athlete may be 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 where the symptoms can “clear” in 15 to 20 minutes. But there may still be injury occurring in the adolescent brain, and recommendations now are to treat these young players more conservatively than in athletes over the age of 18.

If a player suffers a second “ding” in the same season, returning to play should be more conservative than after the first such incident. He or she should not return to athletic activity until they have been seen and cleared for return to play by a physician.

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

The athlete should have no symptoms (subjective findings as expressed by the player such as headache, feeling groggy, or foggy) or signs (objective findings that are seen by another observer, such as the player moving clumsily or appearing stunned or dazed) of a concussion. 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, in addition to not returning to play, the player should seek emergency medical attention. 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. Rest is the only known method of treating concussions.

Any loss of consciousness, no matter how brief, is a 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. DO NOT remove the player's helmet. 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.

Return to play after a concussion should take place in a stepwise process **after the player is free of all signs and symptoms of a concussion**. The player can then proceed to the next level if he or she continues to be free of symptoms and signs at the current level. If any signs or symptoms recur, the player should drop back to the previous level and progress to the next level again after 24 hours.

Levels of activity:

1. No activity, complete rest
2. Light aerobic activity, exercise such as walking or stationary cycling
3. Sports-specific training such as skating
4. Non-contact training drills
5. Full-contact training after clearance by a sports medicine professional
6. Return to competition

Remember, when in doubt, sit them out!

SIGNS AND SYMPTOMS REPORTED BY ATHLETE

- Headache or “pressure” in head
- Throwing up or feeling the need to throw up
- Dizziness and loss of balance
- Blurred, fuzzy, or double vision
- Flashing lights
- Ringing in one or both ears
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish or slowed down
- Feeling foggy or groggy
- Unable to sleep
- Unable to study

These signs and symptoms can worsen under exercise.

RETURN-TO-PLAY PROGRAM

Return to play after a concussion follows a stepwise program:

- Proceed to the next level if free of symptoms at the current level.
 - If any signs or symptoms occur, drop back to the previous level, and progress to next level again after 24 hours.
1. No activity, complete rest
 2. Light aerobic activity, exercise such as walking or stationary cycling
 3. Sports-specific training such as skating
 4. Non-contact training drills
 5. Full-contact training after clearance by a sports medicine professional
 6. Return to competition

EMERGENCY NUMBERS: