



Sports-Related Concussions

Concussions should be taken seriously. All athletes with suspected concussions should not return to full sports practice or participation until cleared by a doctor or another qualified health care professional.

Here is information from the American Academy of Pediatrics about concussions, including knowing the signs and symptoms of a concussion and what to do if an athlete has a concussion.

What is a concussion?

A *concussion* is an injury to the brain that disrupts normal brain function, typically temporarily. It is usually caused by a blow or jolt to the head. However, a concussion may also occur from a hit to the body that produces a reflex force to the head. A concussion may also be called a *mild traumatic brain injury* (mTBI).

How do concussions occur?

Concussions can happen in any sport but more often occur in collision sports, such as football, rugby, and ice hockey. They are also common in contact sports that don't require helmets, such as soccer, basketball, wrestling, cheerleading, and lacrosse. Many concussions also occur outside organized sports. For example, a child riding a bike or skateboard can fall down and hit his head on the street or an obstacle.

What are the signs and symptoms of a concussion?

The signs and symptoms of a concussion range from subtle to obvious. They usually happen right after the injury. However, some may take hours to a few days to develop. With most concussions, athletes are not knocked out or unconscious. Athletes who have had concussions may report feeling normal even though their brain hasn't fully recovered. See "Signs and Symptoms of a Concussion" table.

What if an athlete has signs and symptoms of a concussion?

Concussions should be taken seriously. Athletes who continue to play after their injury are at increased risk for worse symptoms, a longer than usual recovery, and more serious injury to the brain if other head injuries occur during recovery. No athlete should be allowed to return to play on the same day of an injury.

All athletes with suspected concussions should not return to full sports practices, competitions, or physical education class until cleared by a doctor. A doctor can confirm whether an athlete has a concussion and decide when it is OK for an athlete to resume physical activity. However, athletes should be allowed to return to school with symptoms after only a few days.

No one knows how many concussions are too many before permanent damage occurs. Repeated concussions are of greater concern, especially if each one takes longer to resolve or if a repeat concussion occurs from a light blow. The evaluating doctor needs to know about all past concussions, including those that occurred outside a sports setting, to properly recommend return to play and future sports participation. See the When can an athlete return to play? section.

Signs and Symptoms of a Concussion

Signs Observed by Parents or Guardians	Symptoms Reported by Athlete
<ul style="list-style-type: none"> • Appears dazed or stunned • Acts or seems confused • Forgets an instruction • Is unsure of game, score, or opponent • Moves clumsily • Answers questions slowly • Loses consciousness (even briefly) • Shows mood, behavioral, or personality changes • Can't recall events before hit or fall • Can't recall events after hit or fall 	<ul style="list-style-type: none"> • Headache or "pressure" in head • Nausea or vomiting • Balance problems or dizziness • Double or blurry vision • Sensitivity to light or noise • Feeling sluggish, hazy, foggy, or groggy • Concentration or memory problems • Confusion • Just not "feeling right" or "feeling down"

NOTE: An athlete with a concussion should be monitored often, but there is no need for wake-up checks during sleep. If symptoms worsen or there are changes in behavior, a doctor should be contacted right away.

How are concussions treated?

Initial treatment of a concussion is reducing physical and mental activities. For example, after an athlete has been cleared to go back to school,

- The athlete may need to be excused from physical education class or recess activities. Light physical exertion, such as brisk walking, may be recommended to improve recovery.
- School attendance and work may need to be modified. For example, workload may need to be reduced and extended time may be needed for tests and assignments.

Physical therapy may be started, as some problems associated with concussion may need active rehabilitation.

How long does it take to recover from a concussion?

Recovery time from concussion varies with each injury. However, it may take athletes longer than usual to recover if they continue to play soon after the concussion. Athletes may feel ready, but their brains may not have completely recovered.

When can an athlete return to play?

Because the time frame for recovery is uncertain and unpredictable, all formal sports activity should be on hold until symptoms have fully resolved at rest and the athlete is feeling back to his normal self. A stepwise (gradual) return to physical activity can begin once the athlete has clearance from his doctor. Having an athletic trainer, if available, involved in monitoring this plan can be very helpful. It is important to pay close attention to any worsening symptoms, such as increasing headache, nausea, or dizziness, while progressing through the plan. Any concussion-related symptoms that return with exertion possibly indicate that the concussion has not fully resolved. Final clearance to return to full activity should also be approved by the athlete's doctor.

From Your Doctor



Can concussions be prevented?

Not all concussions can be prevented, but some may be avoided. Here are safety tips for athletes.

- Never ignore a head injury, no matter how minor. Always tell coaches, athletic trainers, or parents when you've hit your head or have symptoms of a head injury—even if it means stopping play.
- Learn and follow safe playing techniques.
- Follow the rules of the game.
- Wear helmets that are in condition and fit properly.
- Wear helmets for any collision sports, such as football, rugby, or ice hockey.
- Wear helmets for any other sports in which head injuries are more common, such as lacrosse, horseback riding, scooter riding, all-terrain vehicle (ATV) riding, motorbiking, biking, skateboarding, skiing, or snowboarding.

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