



CONCUSSION

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What is a concussion?

A **concussion** is a traumatic injury to the brain that alters mental status or causes other symptoms. Many people assume they do not have a concussion if they have not lost consciousness. However, significant injury can occur without losing consciousness at all. Football players often say, “I just got my bell rung,” when a blow to the head causes ringing in the ears, but those symptoms are often consistent with concussion.

What are the signs/symptoms of a concussion?

- Balance problems
- Difficulty communicating, concentrating
- Dizziness
- Drowsiness
- Fatigue
- Feeling emotional
- Feeling mentally foggy
- Headache
- Irritability
- Memory difficulties
- Nausea
- Nervousness
- Numbness or tingling
- Sadness
- Sensitivity to light or noise

- Sleeping more than usual or difficulty falling asleep
- Visual problems — blurry or double vision
- Vomiting

How is a concussion diagnosed?

When concussion is suspected, a trained coach, certified athletic trainer, or the team physician should immediately perform an initial “sideline” evaluation, including:

- Symptoms list review
- Focused neurological exam
- Focused orientation exam that tests short-term memory recall such as the event, play, opponent, score, or last meal
- Focused orientation exam that tests long-term recall such as name, birth date, place of birth
- Assessment of athlete’s ability to stay attentive to a complex task such as reciting months backwards

If left undiagnosed, a concussion may place an athlete at risk of developing second impact syndrome (SIS)—a potentially fatal injury that occurs when an athlete sustains a second head injury before a previous head injury has completely healed.

Statistics

According to the Centers for Disease Control:

- ▶ Each year, U.S. emergency departments treat an estimated 135,000 sports- and recreation-related traumatic brain injuries, including concussions, among children ages 5 to 18.
- ▶ Athletes who have ever had a concussion are at increased risk for another concussion.
- ▶ Children and teens are more likely to get a concussion and take longer to recover than adults.

Athletes who had concussions

- ▶ Ted Johnson, New England Patriots Linebacker
- ▶ Tim Tebow, University of Florida Quarterback, Denver Broncos

What is second impact syndrome?

Second impact syndrome is a potentially FATAL injury that occurs when an athlete sustains a second head injury before a previous head injury has completely healed. Unfortunately it is difficult to determine if the brain has healed from the first injury. Even after all symptoms have resolved, healing may not be complete and the brain may still

You DO NOT have to lose consciousness to have sustained a concussion!



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be at increased risk of second impact syndrome. Neurocognitive testing may help doctors determine when it is safe to return to competition.

What is neurocognitive testing?

Neurocognitive testing is a questionnaire the athlete takes (usually by computer) that tests multiple areas of brain function including memory, problem solving, reaction times, brain processing speeds, and post concussion symptoms. It is most valid if the athlete has a pre-injury baseline test on file to compare the post concussion test. This information can be very helpful to the physician in determining return to play. It is not a substitution for an evaluation by a physician.

When should a concussed athlete return to play?

All athletes who sustain a concussion—no matter how minor—should undergo an evaluation by a qualified health care provider before returning to play. Athletes can return to play after they are completely free of all symptoms of a concussion and remain symptom free during and after physical testing.

Baseline testing is important for assessing concussion symptoms after an incident. The baseline testing often includes neurocognitive tests, symptom checklists, sideline assessment tools such as the Sideline Concussion Assessment Tool (SCAT), and balance testing.

Additional Information

www.sportsmed.org

www.orthoinfo.org

www.STOPSportsInjuries.org

It is recommended that all athletes who sustain a concussive episode, no matter how minor, undergo an evaluation by a medical physician before return to play.