



Concussion information

What you need to know to protect your family

What is a concussion?

A concussion is a disturbance in brain function that occurs following either a blow to the head or as a result of violent shaking of the head.

What are the symptoms?

Common signs and symptoms following a concussion include:

- Headache.
- Dizziness.
- Nausea or vomiting.
- Balance problems.
- Fatigue.
- Drowsiness.
- Sensitivity to light or noise.
- Irritability.
- Difficulty concentrating.
- Ringing in the ears.
- Feeling mentally “foggy” or slowed down.
- Difficulty remembering events (before or after injury).
- Visual problems (blurry vision, double vision, etc.).
- Confusion and/or disorientation.
- Motor clumsiness (stumbling or slowed movement).



What can I do to get better?

Rest is the key. The goal is to allow the brain injury to heal:

When returning to daily activities:

- Get plenty of rest and limit your activity (exertion).
- Be sure to get adequate sleep at night, no late nights or overnights. Keep a routine bedtime.
- Take daytime naps or rest breaks, if you feel tired.
- Limit physical and cognitive (mental) activity. Symptoms typically worsen or return with too much activity.
 - Physical activity includes: physical education, sports practices, weight-training, running, exercising, heavy lifting, etc.
 - Cognitive activity includes: heavy concentration or focus, memory, reasoning, reading or writing (e.g. homework, classwork, job-related mental activity, cell phone/text messaging, computer/social media usage, etc.).
- Drink lots of fluids and eat carbohydrates or protein every three to four hours to maintain appropriate blood sugar levels.
- Limit exposure to drugs - do not take medicines without your doctor's permission.
- It is normal to feel frustrated and sad because you do not feel right and your activity is reduced.
- Frequent evaluations of symptoms and cognitive status are recommended to help guide recovery.
- As symptoms decrease, begin to return to activities gradually, paying attention to any increase in symptoms. Let the worsening or return of symptoms be your guide.

When returning to school:

- Students with symptoms after a concussion often need support to perform school-related activities. As symptoms decrease during recovery, these supports may be gradually removed.
- Inform the teacher(s), school nurse, school psychologist or counselor, and administrator(s) about your injury and symptoms. The following difficulties may occur after a concussion:
 - Increased problems paying attention or concentrating.
 - Difficulty remembering or learning new information.
 - Longer time needed to complete tasks or assignments.
 - Increase in symptoms (e.g. headache) when doing schoolwork.
 - Greater irritability, less tolerance with stressors.
- Until full recovery is achieved, students with a concussion may need the following supports:
 - Time off from school.
 - Shortened day.
 - Shortened classes (e.g. rest breaks during classes).
 - Extended time to work on coursework/assignments and tests.
 - Reduced homework/classwork.
 - No significant classroom or standardized testing.
 - No phy ed/gym class until cleared.
 - Rest breaks during the day.

When should I call a doctor?

If any of the following symptoms persist or worsen, contact your primary care physician or go to the nearest hospital emergency room immediately:

- Headaches that worsen.
- Increased confusion.
- Seizures.
- Weakness or numbness in arms or legs.
- Drowsiness or can't be awakened.
- Neck pain.
- Repeated vomiting.
- Unusual change in behavior.
- Slurred speech.
- Significant irritability.
- Can't recognize people or places.
- Fluid coming from the ear or nose.

Any time you are concerned about a particular symptom, especially if it is worsening, call your doctor. The appearance of any of the above symptoms may indicate the athlete has a more significant head injury that requires immediate medical attention.

When can I return to playing sports?

An athlete should be completely symptom-free while at rest, during physical exertion (e.g. sprints, non-contact aerobic activity), and during cognitive exertion (e.g. going to school, studying, schoolwork, etc.) prior to returning to sports. A graded, step-wise process can help determine when an athlete is symptom-free with physical exertion, and formal neurocognitive testing can help identify when cognitive function has returned to normal.

After the athlete is symptom-free at rest AND has been medically cleared to return to physical activity, the following progression can be started:



1. Rest until symptom-free (physical and mental rest).
2. Light aerobic activity (e.g. stationary bike).
3. Sport-specific exercise.
4. Non-contact training drills.
5. Full-contact training drills.
6. Return to competition.

- Each stage should be approximately 24 hours (or longer).
- If symptoms recur, the athlete should return to the previous stage.
- Medical clearance is required before return to play.

Contact your local Ascension concussion clinic to schedule an appointment for return-to-play clearance.

For more information, visit:

The Center for Disease Control: www.cdc.gov

Wisconsin Interscholastic Athletic Association: www.wiaawi.org

The Physician and Sports Medicine Journal: www.physsportsmed.com

ascension.org/wisconsin | Ascension Wisconsin

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What's involved in getting medical clearance?

A visit for medical clearance usually includes the following:

ImPACT™ test is a computerized neurocognitive test that assists in determining if an athlete is cognitively impaired following a concussion. Results received after a concussion are compared to baseline data obtained from the athlete at the beginning of the sport season. If no baseline test is available, comparisons can be made to available normative data.

Medical evaluation often includes education about concussions, a thorough history of the current and prior concussive symptoms, and a detailed physical and neurologic exam. Medical clearance can only be given after the athlete has no symptoms at rest and with exertion.

What is Second Impact Syndrome?

Athletes who sustain a second head injury while not fully recovered from an initial concussion could suffer sudden, massive brain swelling resulting in death. The current thought is that after the initial concussion, injured brain neurons are in a more vulnerable state. A second blow to the head, even a relatively minor one, can result in loss of autoregulation of the brain's blood supply. Loss of autoregulation leads to brain swelling, which can progress to brainstem herniation and death. These events can happen rather quickly, sometimes over the course of two to five minutes. Second Impact Syndrome is fairly rare, with only a handful of cases documented in literature. The tragic outcome, though, is the primary reason to limit activity while an athlete is still symptomatic from a head injury.