

CONCUSSION RECOVERY GUIDE



Important Facts...

- A concussion is a **TRAUMATIC BRAIN INJURY**
- All concussions are serious
- Most concussions occur without loss of consciousness
- Concussions can occur in **ANY SPORT**
- Recognition and proper treatment of concussions when they first occur can help prevent further injury or death
- Athletes can decrease their risk of concussion by wearing properly fitting headgear and following the rules of good sportsmanship
- Helmets are not designed to prevent concussions. There is no such thing as a “concussion-proof” helmet. Even with a helmet it’s important for athletes to avoid hits to the head
- Concussions cannot be detected with X-ray, CT scan, or other imaging methods, making them more difficult to identify than fractures, bleeding or swelling of the brain

What Is A Concussion?

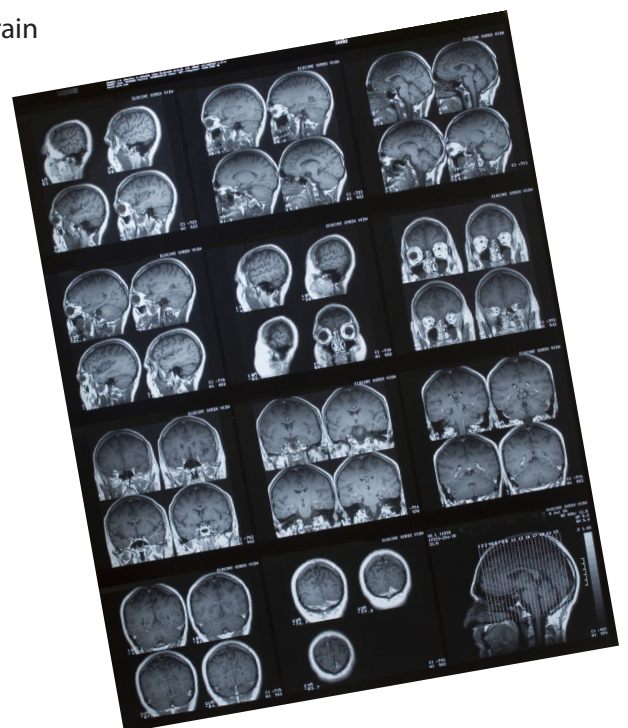
A concussion is a type of traumatic brain injury (TBI). Concussions are caused by a bump, jolt or blow to the head or body that causes the brain to move quickly back and forth. This sudden movement of the brain can cause stretching and tearing of brain cells, damaging the cells and creating chemical changes in the brain. “Getting your bell rung” or what seems to be a mild blow to the head can be serious.

You can’t see a concussion, therefore it is important to learn to recognize the signs and symptoms. Signs and symptoms of concussion can show up immediately after the injury or may not appear until days or weeks following the injury. You may not even realize you have problems until you try to do your usual activities.



Some symptoms, such as headache and dizziness, tend to fade fairly quickly, according to research. But neurocognitive symptoms, including problems with memory and paying attention, tend to linger.

If you suspect that your child has a concussion, make sure they stop whatever activity they’re doing, especially if they’re involved in a sport. Their brain injury might not only cloud their thinking but it can also slow reaction times and make them more susceptible to another injury. Seek medical attention right away.



Signs and Symptoms

Concussion symptoms range from mild to severe and may appear right away or days, even weeks, following the injury. Each concussion is unique, making each individual demonstrate different combinations of signs and symptoms depending on which area of the brain was most affected.



Physical

Headache
Nausea/Vomiting
Balance Problems
Dizziness
Visual Problems
Fatigue
Sensitivity to Light
Sensitivity to Noise
Numbness/Tingling
Dazed or Stunned



Cognitive

Feeling Mentally Foggy
Feeling Slowed Down
Difficulty Concentrating
Difficulty Remembering
Forgetful of recent information or conversation
Confused about recent events
Answers Questions Slowly
Repeats Questions



Emotional

Irritability
Sadness
More Emotional
Nervousness



Sleep

Drowsiness
Sleeping Less than Usual
Sleeping More than Usual
Trouble Falling Asleep

Symptoms Reported by Athletes:

- Headache (mild to severe)
- Nausea and/or vomiting
- Balance problems
- Dizziness
- Blurry vision
- Sensitivity to light and/or noise
- Feeling “foggy”
- Memory or concentration problems
- Confusion
- “Feeling down”

Signs Observed by Parents:

- Appears dazed
- Is confused about assignment or position
- Moves clumsily
- Answers questions slowly
- Shows mood or personality changes
- Forgets instructions
- Is unsure of game, score or opponent

Concussions can also affect sleep, causing people to sleep more or less than usual, feel drowsy or have trouble falling asleep.

Did you know...

According to the Women’s Sports Foundation, females participating in high school sports now have a higher incidence rate of sport-related concussions than do males.

Young children and teenagers are more likely to get a concussion and take longer to recover than adults. ^{1,2}

A repeat concussion that occurs before the brain recovers from the first - usually within a short period of time (hours, days, or weeks) - can slow recovery or increase the likelihood of having long-term problems. ^{3,4}

1 Buzzini SR, Guskiewicz KM. Sport-related concussion in the young athlete. *Curr Opin Pediatr* 2006; 18:376-82

2 Centers for Disease Control and Prevention (CDC). Nonfatal traumatic Brain Injuries from Sports and Recreation Activities - United States, 2001 - 2005. *Morbidity and Mortality Weekly Reports* 2007; 56(29):733-737

3 Institute of Medicine (US). Is soccer bad for children’s heads? Summary of the IOM Workshop on Neuropsychological Consequences of Head Impact in Youth Soccer. Washington (DC): National Academy Press; 2002

4 Centers for Disease Control and Prevention (CDC). Sports-Related recurrent brain injuries - United States. *Morbidity and Mortality Weekly Reports* 1997; 46(10):224-227

Treatment & Recovery

In order to prevent further damage, athletes must allow the appropriate amount of time for healing and recovery. Most athletes recover fully from concussion as long as they do not return to sport or other activities too soon. The severity of concussion and length of time it takes to recover differs for each individual so it is important to follow your physician's specific instructions for your treatment and recovery.

The Center for Sports Medicine physicians are all board certified and fellowship trained. This clinic is also home to the only Credentialed ImPACT Consultant in the region, providing specialized care for concussion patients using ImPACT concussion testing.

The following are general recommendations following diagnosis of sports-related concussions.



Rest- Rest is the most important part of recovery. It is important to increase the amount of sleep, which will aid in the healing process. We also use the term “relative rest” which means reducing physical and mental activity as much as possible. Only do the minimum required to complete daily commitments including schoolwork, chores, work, etc. This may also include avoiding computers, cell phones, video games, bright light and loud noises. Your physician will provide you with guidance specific to your level of injury.

ImPACT Testing- We suggest initial evaluation 24 to 72 hours after injury. This neurocognitive test measures subtle changes in cognitive function. Recent research has suggested that athletes at all levels of sport routinely hide their symptoms so they can continue to play. The information gained from ImPACT testing can be valuable in assisting parents, teachers and coaches in making decisions about the athlete's academic and extracurricular needs during the recovery period. Your physician will determine when and how quickly the athlete can return to sport and other activities.

Exertional Provocative Tests- Once the athlete has recovered from symptoms while at rest, activities can be gradually resumed. If activity is tolerated and symptoms do not return, activity can be progressed with direction from your physician or athletic trainer.

Return to Play- Once the athlete is free from symptoms at rest and with exertion, and ImPACT test results are back to baseline, your physician will clear the athlete for a progressive, step-by-step return to sport. If any concussion symptoms recur after returning to sport, it is critical to inform your coach, athletic trainer or physician.

Caring for Concussion

- Carefully monitor the athlete for signs of more significant head injury. (See Signs & Symptoms section)
- Do not allow the athlete to consume alcohol.
- Do not allow the athlete to operate a motor vehicle.
- Do not provide aspirin or ibuprofen products after the injury. These products thin the blood and may mask symptoms of more severe injury.
- Acetaminophen products are okay 48 hours after the injury.

Concussion Danger Signs

Seek immediate medical attention if any of the following symptoms appear. These symptoms may indicate significant head injury:

- Difficulty waking
- Dizziness or disorientation
- Repeated vomiting or nausea
- Severe headache that doesn't diminish or gets worse
- Blurred or double vision
- Dilated, unequal or nonreactive pupils
- Weakness or numbness in the extremities
- Slurred speech
- Convulsions or seizures
- Bizarre behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)
- Other unusual physical or mental signs or symptoms

Follow your physician's instructions regarding:

- Return to school
- Academic accommodations
- Cognitive rest
- Physical exertion

Remember, each concussion is unique and may require more specific treatment. Most athletes with a concussion recover quickly and fully however some will have symptoms that last for days or even weeks. A more serious concussion can last for months or possibly longer. Be sure to follow your physician's instructions.



Return to Play

Patient Name _____ Date of Evaluation: _____

Please excuse the patient named above from school today due to a medical appointment. The student named above has suffered a concussion and is currently under the care of this clinic. He/she is not permitted to participate in any contact sport activity until formally cleared by this clinic. Additional recommendations follow.

Please excuse this student from school from _____ thru _____.

No participation in gym class.

Restricted gym class activity as follows:

____ No contact sports

____ Additional restrictions: _____

Full academic accommodations as specified below:

____ Untimed tests

____ Preprinted class notes

____ Tutoring

____ Reduced workload when possible

____ Half days

____ May need frequent breaks from school during the school day

____ May need to be excused from school if concussion symptoms return

Additional restrictions: _____

Physician Signature

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