**A concussion** is defined as a type of traumatic brain injury (TBI) in which the brain suddenly moves back and forth causing a disruption in function.\(^2\) Concussions are typically caused by trauma to the head, but can also be caused by violent shaking of the head or even upper body.\(^1\) Concussions can affect numerous aspects of a person’s normal functioning including memory, reflexes, judgment, balance, muscle coordination, and speech.\(^3\) If a concussion is suspected, a physician should be immediately consulted.

### KNOW THE FACTS

- There are an estimated total of 1.6-3.8 million concussions annually.\(^4\)
- The actual number could exceed 3.8 million per year because some patients do not seek medical attention if they are unaware they have a concussion.
- The annual incidence of sports-related concussions is 300,000 in the United States.\(^5\)
- Other causes of concussions/TBIs that are non-sports related include, in descending order: falls, being struck by/against an object, traffic/motor-vehicle crashes, and assault.\(^6\)

### WHO IS MOST AFFECTED BY CONCUSSIONS?

- Athletes who participate in contact sports are at an elevated risk for suffering a concussion.
- Athletes in contact sports may have as high as a 19% likelihood of sustaining a concussion each season of play.\(^5\)
- There are more than 62,000 concussions sustained by high school athletes each year.\(^3\)
- The elderly (higher fall risk)
- Drivers

### CONCUSSION SYMPTOMS\(^1\)

- Headache/feeling of pressure in the head
- Dizziness
- Ringing in the ears
- Disrupted vision
- Nausea/vomiting
- Amnesia
- Temporary loss of consciousness
- Slurred speech
- Fatigue
- Confusion

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**Test Your Knowledge**

**Q:** Do you have to lose consciousness in order to suffer from a concussion?

**A:** No, patients can be diagnosed with a concussion without losing consciousness from their injury. Some patients may not even be aware they have a concussion because of this.\(^1\)

**Q:** How long do concussion symptoms usually last?

**A:** Symptoms normally disappear within ten days but can last months to more than a year, depending on the severity of the concussion.\(^1\)
Concussion

Think First about...

… protecting yourself and others from concussions! There are many negative health outcomes associated with a concussion, especially multiple concussions over an extended period of time. Simple precautions can be taken to minimize the risk of sustaining a concussion or traumatic brain injury.

PREVENTION TIPS

- Wear certified helmets and other protective equipment when participating in athletics.
- Follow sports rules to avoid head contact and trauma.
- Always buckle your seatbelt in a vehicle and drive responsibly to avoid collisions.
- Avoid violence.
- Never return to athletics after a concussion until all symptoms disappear and you have been cleared by a physician.
- Create and execute an up-to-date concussion protocol (see Brain 101: http://brain101.orcasinc.com/).

SECOND IMPACT SYNDROME (SIS)

- A second concussion shortly following an initial concussion that has not healed does not need to be strong in order to cause permanent disability or possibly death.  
- Consequences of the potential second concussion include cerebral swelling, brain herniation, and death.
- In cases that are not fatal, long-term effects similar to a severe traumatic brain injury are usually present.
- SIS is preventable by avoiding strenuous activity while recovering from a concussion.

Sources