A concussion is an injury to the brain usually caused by a blow to the head. In most cases, it does not involve a loss of consciousness. When you’ve bumped your head, it’s important to know:

- the symptoms of a concussion
- how it should be managed
- its lasting effects

**Monitor your symptoms**

Because the brain is very complex, every brain injury is different. Some symptoms may appear right away; others may not show up for days or weeks after the concussion.

Seek medical care if you experience any of the following symptoms after suffering from a head injury:

- low-grade headaches that won’t go away
- having trouble (more than usual):
  - remembering things
  - paying attention or concentrating
  - organizing daily tasks
  - making decisions or solving problems
- slowness in thinking, acting, speaking, or reading
- getting lost or easily confused
- neck pain
- feeling tired all the time, lack of energy
- change in sleeping pattern
  - sleeping for much longer periods of time than before
  - trouble sleeping or insomnia
- loss of balance, feeling dizzy, light-headed
- increased sensitivity to light, sound, distractions
- blurred vision, eyes that tire easily
- loss of sense of taste or smell
- ringing in the ears
- mood changes:
  - feeling sad, anxious, listless
  - becoming easily irritated or angry
  - for little or no reason
  - lack of motivation

Sometimes the injury makes it hard for people to recognize or acknowledge they are having problems. It may be helpful to enlist the support of others for help with recognizing symptoms. Most individuals can be safely observed at home by friends, roommates, or family members. In fact, friends and family members may be better at noticing changes in behavior than a medical provider (who may not know the patient as well).

Symptoms of a concussion are usually temporary, but may last for days, weeks, or even longer. Watch for new symptoms. If you feel something is “not quite right,” or if you’re “feeling foggy,” talk with your health care provider.

**RECOGNIZE DANGER SIGNS**

In rare cases, along with a concussion, a dangerous blood clot may form on the brain, crowding the brain against the skull.

Visit your health care provider or emergency department immediately if — after a blow to the head — you have any of these signs:

- headaches that get worse
- weak or numb arms or legs
- unsteadiness
- repeated vomiting

The people checking on you should take you to the emergency department right away if you:

- are very drowsy or cannot be awakened
- cannot recognize people or places
- have one pupil that is larger than the other
- have convulsions or seizures
- have slurred speech
- behave unusually, seem confused or are very irritable

**Facilitate full recovery**

While signs of concussion can last for weeks to months, most people recover without any permanent damage. The two most important things you can do to facilitate a full recovery are rest and careful observation. Resting your mind and body can be hard for busy, highly motivated students; however, taking shortcuts may compromise your ability to return to work and play at pre-concussion levels.

**Take care of your body**

You should never return to strenuous activity (including sports) while you still have signs of a concussion, like headache or dizziness. If you’ve
had memory loss or loss of consciousness, you may not be able to return to heavy activity for 2 to 4 weeks.

- Get plenty of sleep.
- Because your ability to react may be slower after a brain injury, ask your health care provider when you are ready to drive a car, ride a bike, etc.
- Don’t drink alcoholic beverages until your health care provider says you are well enough to do so. Alcohol and certain other drugs may slow your recovery and put you at risk of further injury.
- Take only drugs approved by your health care provider. Avoid any medications that cause drowsiness or changes in level of consciousness: pain medications, sleeping pills, muscle relaxants, tranquilizers, or recreational drugs.
- Eat a light diet, especially if you’re feeling nauseated.

**Take care of your brain**

Reducing cognitive strain during the healing process is critical to allowing the brain to heal. You’ll need to be patient because healing takes time. Prematurely engaging in activities involving mental exertion or multitasking (e.g., reading, taking notes, problem-solving, test-taking, computer or smartphone use) may exacerbate or prolong symptoms and decrease your ability to perform at your pre-concussion level.

- Return to daily activities, such as work or school, gradually and at your own pace.
- Meet regularly with your academic advising office to discuss your symptoms and develop a plan for return to study.
- Write things down if you are having trouble remembering.
- If you’re easily distracted, try to do just one thing at a time (e.g., don’t watch TV while preparing dinner).
- Consult with family members or close friends when making important decisions.

**Don’t risk 2nd brain injury**

During the healing process, you should be extremely careful to avoid activities that could lead to another blow or a jolt to your head (including contact or recreational sports). Suffering from a second brain injury may cause serious problems later in life, including difficulty with concentration, memory, and/or physical coordination. There is evidence that repeated head injuries over time (especially within 3 months of each other) can result in permanent brain damage and sometimes even death.

**Recovery time**

Most people recover fully from a brain injury. How quickly they improve depends on a variety of factors, including:

- how severe their concussion was
- how healthy they were before the concussion
- their age
- how quickly they respond to treatment
- how long they return to activities (e.g., school, work) before return to sport
- how severe their symptoms are
- how many previous concussions they have had

**Return to play**

Report all head injuries or symptoms of concussion to your team athletic trainer immediately. Never return to your sport or a heavy activity level after a major concussion until you’ve gone through the following stages of recovery and been cleared by your team physician:

**Stages of recovery**

- No activity (physical & mental rest) until asymptomatic and ImPACT scores have normalized
- Light aerobic exercise (e.g., walking, stationary cycling), no resistance training
- Sport-specific exercise (e.g., skating or running drills), no head impact activities
- Non-contact training drills (start light, progressive resistance training)
- Full contact practice after clearance by team physician & athletic trainer
- Return to competition

At least 24 hours should be devoted to each stage of recovery. If symptoms recur, you should rest until they resolve and then resume the program at the stage previous to when your symptoms recurred. Resistance training should be added only in the later stages.

**Medical clearance must be given before return to play.**

Even after your brain injury has healed, you should protect yourself from having another concussion. After several concussions, most doctors will recommend that you consider changing sports or current activities.

**ImPACT & SCAT 3 testing**

Cornell varsity athletes at higher risk for head injury will have baseline neuropsychological (ImPACT) testing and baseline SCAT 3 test before starting their sport. Post-injury testing will be used to inform their return to sport. ImPACT testing may also be used to assess concussions for patients who have not had baseline testing. SCAT 3 test includes balance testing to assess the vestibular system* which can be negatively affected by concussion.

* A system in the body that controls sense of movement and balance.