

# Concussion

## *What is a concussion?*

A concussion is an injury to the brain caused by a blow to *the head*. A concussion may cause you to become temporarily confused or disoriented, have memory loss (amnesia), or become unconscious. Concussions are the most common head injuries in sports.

## *How does it occur?*

A concussion occurs when a blow to the head causes shaking, jarring, stretching, swelling, or tearing of brain tissue and delicate nerve fibers.

The sports in which concussions most commonly occur are football, soccer, gymnastics, ice hockey, and wrestling. However, concussions can occur in any sport or activity where you may get hit in the head.

## *What are the symptoms?*

If you have had a concussion you may have any of the following symptoms:

- ▶ headache
- ▶ confusion
- ▶ memory loss (amnesia)
- ▶ loss of consciousness
- ▶ sleepiness
- ▶ nausea or vomiting
- ▶ trouble concentrating
- ▶ dizziness
- ▶ weakness
- ▶ seizures
- ▶ loss of balance.

You may have these symptoms, called post-concussive syndrome, for several days or weeks after the injury.

## *How is it diagnosed?*

Your health care provider will examine you and find out what happened. If you can't remember what happened, he or she may need to get this information from other people saw the accident. Your health care provider will do a neurologic examination, testing your strength, sensation, balance, reflexes, and memory. He or she will also look at your eyes with a flashlight to see if your pupils are the same size. You may be tested again several times during the next hour to detect any worsening of brain function, which might occur if you have any bleeding or swelling in the brain.

Your provider may do a special x-ray called a computed tomography (CT) scan or a magnetic resonance image (MRI) of your head to be sure there is no damage to your brain. Depending on how your head injury occurred, you may have neck x-rays to check your spine.

Concussions are graded as I, II, or III, depending upon the severity of the confusion, amnesia, or loss of consciousness.

## *How is it treated?*

The treatment for a concussion is rest. Headache may be treated with a mild pain reliever. Nausea may be treated with a medication.

If you have had a concussion, you need to be watched by a friend or relative for 8 to 12 hours. Your provider may want you to be awakened and checked every 2 to 4 hours while sleeping. Symptoms to report to your health care provider include:

- ▶ confusion
- ▶ seizures
- ▶ unequal pupil sizes
- ▶ restlessness or irritability
- ▶ trouble using your legs or arms
- ▶ worsening vomiting
- ▶ headache that will not go away after being treated with acetaminophen (Tylenol)

- ▶ garbled speech
- ▶ bleeding from the ears or nose
- ▶ decreasing alertness
- ▶ unusual sleepiness
- ▶ unusual behavior.

### ***When can I return to my sport or activity?***

To avoid complications from the concussion, it is very important that you do not return to your sport or activity too soon. After a very mild concussion, you may be allowed to return to your sport or activity in 20 to 30 minutes. If you had a loss of memory or loss of consciousness, you may not be able to return for 1 week. After a severe concussion, you may not be able to return to sports for up to 1 month.

If you have had repeated concussions, your health care provider may talk to you about limiting your participation in certain sports.

### ***How can I prevent a concussion?***

A concussion is caused by a blow to the head. It is important in contact sports that you wear proper protective head gear that fits well. In sports such as football, it is important to use proper blocking and tackling techniques and not to use your head for initial contact. In sports such as bicycling and rollerblading, wear a helmet.

When accidents do happen, however, concussions can be severe. It is especially important to understand that receiving a second blow to the head before the first injury is fully healed can be fatal, even if the second injury seems minor.