

# Brain Concussion

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*Here is information I have compiled on a very serious topic. —vf*

## Concussion Overview

The term, concussion, describes an injury to the brain resulting from an impact to the head. By definition, a concussion is not a life-threatening injury; but it can cause both short-term and long-term problems. A concussion results from a closed-head type of injury and does not include injuries in which there is bleeding under the skull or into the brain. Another type of brain injury must be present if bleeding is visible on a CT scan (CAT scan) of the brain.

- A mild concussion may involve no loss of consciousness (feeling “dazed”) or a very brief loss of consciousness (being “knocked out”).

- A severe concussion may involve prolonged loss of consciousness with a delayed return to normal.

## Concussion Causes

A concussion can be caused by any significant blunt force trauma to the head such as a fall, a car accident, or being struck on the head with an object.

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## Concussion Treatment

### Self-Care at Home

Bleeding under the scalp, but outside the skull, creates a “goose egg” or large bruise at the site of the head injury. A goose egg is common and will go away on its own with time. **The use of ice immediately after the trauma may help decrease its size.**

- **Do not apply ice directly to the skin; use a washcloth as a barrier and wrap the ice in it. You may also use a bag of frozen vegetables wrapped in cloth, as this will**

**conform nicely to the shape of the head.**

- **Apply ice for 20-30 minutes at a time and repeat about every two to four hours as needed. There is little benefit after 24 hours.**

- For a minor head injury that results from a fall onto a carpet or from a distance that is less than the height of the person who fell, **contacting a doctor is usually not needed if there is no loss of consciousness (in other words, the person was not “knocked out”).** Apply ice to lessen the swelling and monitor for worsening symptoms that necessitate a visit to the doctor.

- **Warning signs of more serious head injury include nausea and vomiting, unsteady gait, confusion, numbness, muscle weakness, visual changes, or persistent dizziness.**

- **Do not drive** yourself to the hospital. There is a risk of seizures with more serious head injuries.

- If at all possible, **do not stay alone for the first 24 hours** after a concussion.

- If you have **neck pain** after a fall, see a medical professional even if the concussion seems minor.

- If you had **dizziness or heart palpitations** that accompanied a fall, see your doctor.

- If you take **blood thinners**, a mild concussion may become more serious over time.

- **Aspirin or Ibuprofen** may make bruising worse. Acetaminophen is preferred.

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**What is the treatment for a concussion? The symptoms of concussion usually**

**clear quickly and without lasting effect, if no further injury is sustained during the healing process.** Guidelines for returning to sports activities are based on the severity of the concussion.

A **grade 1 concussion** can usually be treated with rest and continued observation alone. The person may return to sports activities that same day, but only after examination by a trained professional, and after all symptoms have completely resolved. If the person sustains a second concussion of any severity that same day, he or she should not be allowed to continue contact sports until he or she has been symptom-free, during both rest and activity, for one week.

A person with a **grade 2 concussion** must discontinue sports activity for the day, should be evaluated by a trained professional, and should be observed closely throughout the day to make sure that all symptoms have completely cleared. **Worsening of symptoms, or continuation of any symptoms** beyond one week, indicates the need for a CT or MRI scan. Return to contact sports should only occur after one week with no symptoms at rest, during activity, and following examination by a physician. Following a second grade 2 concussion, the person should remain symptom-free for two weeks before resuming contact sports.

A person with a **grade 3 concussion** (involving **any loss of consciousness, no matter how brief**) should be examined by a medical professional, either on the scene or in an emergency room. More severe symptoms may warrant a CT or MRI scan, along with a thorough neurological and physical exam. The person should be hospitalized if any abnormalities are found or if confusion persists. **Prolonged unconsciousness and worsening symptoms** require urgent neurosurgical evaluation or transfer to a trauma center. Following discharge from professional care, the patient is closely monitored for neurological symptoms which may arise or worsen. **If headaches or other symptoms**

**worsen or last longer than one week**, a CT or MRI scan should be performed. Contact sports are avoided for one week following unconsciousness of only seconds, and for two weeks for unconsciousness of a minute or more. A person receiving a second grade 3 concussion should avoid contact sports for at least a month after all symptoms have cleared, and then only with the approval of a physician. **If signs of brain swelling or bleeding** are seen on a CT or MRI scan, the athlete should not return to the sport for the rest of the season, or even indefinitely.

**For someone who has sustained a concussion of any severity, it is critically important that he or she avoid the possibility of another blow** to the head until well after all symptoms have cleared, to prevent second-impact syndrome. The guidelines above are designed to minimize the risk of this syndrome.

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## Concussion - Overview

### What is a concussion?

A concussion is a brain injury that is caused by a sudden blow to the head or to the body. The blow shakes the brain inside the skull, which temporarily prevents the brain from working normally.

Some people have obvious symptoms of a concussion (such as passing out or feeling lightheaded), while others do not. With rest, most people fully recover from concussions within a few hours to a few weeks.

On rare occasions, concussions cause more serious problems. Repeated concussions or a severe concussion may require surgery or lead to long-lasting problems with movement, learning, or speaking. Because of the small chance of permanent brain problems, it is important to contact a doctor if you or someone you know has symptoms of a concussion.

### What causes a concussion?

Your brain is a soft organ that is surrounded by spinal fluid and protected by

## Brain Concussion

your hard skull. Normally, the fluid around your brain acts like a cushion that keeps your brain from banging into your skull. But if your head or your body is hit unexpectedly hard, your brain can suddenly crash into your skull and temporarily stop working normally.

**There are many ways to get a concussion. Some common ways include fights, falls, playground injuries, car crashes, and bike accidents.** Concussions can also happen while participating in **rough or high-speed sports** such as football, boxing, hockey, soccer, skiing, or snowboarding.

### What are the symptoms?

It is not always easy to know if someone has a concussion. Not everyone who has a concussion passes out. A person who might have a concussion should immediately stop any kind of activity or sport. **Becoming active again before the brain returns to normal functioning increases the person's risk of having a more serious brain injury.**

**Symptoms of a concussion range from mild to severe and can last for hours, days, weeks, or even months.** If you notice any symptoms of a concussion, contact your doctor.

### Symptoms of a concussion include:

- Passing out
- Not being able to remember what happened after the injury
- Acting confused, asking the same question over and over, slurring words, or not being able to concentrate
- Feeling lightheaded, seeing “stars,” having blurry vision, or experiencing ringing in the ears
- Not being able to stand or walk; or having coordination and balance problems
- Feeling nauseous or throwing up

Sometimes it can be hard to tell if a small child has a concussion. If your child has had a head injury, call your doctor for advice on what to do

Occasionally a person who has a more serious concussion develops new symptoms

over time and feels worse than he or she did before the injury. This is called post-concussive syndrome. If you have symptoms of post-concussive syndrome, call your doctor. Symptoms of post-concussive syndrome include:

- Changes in your ability to think, concentrate, or remember
- Headaches or blurry vision
- Changes in your sleep patterns, such as not being able to sleep or sleeping all the time
- Changes in your personality such as becoming angry or anxious for no clear reason
- Lack of interest in your usual activities
- Changes in your sex drive
- Dizziness, lightheadedness, or unsteadiness that makes standing or walking difficult

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## Concussion & Brain Injury - A Guide for Family and Friends

**Source: Centers for Disease Control 2004**

### About Brain Injury:

• A blow or jolt to the head can disrupt the normal function of the brain. Doctors often call this type of brain injury a “**concussion**” or a “closed head injury.” Doctors may describe these injuries as “**mild**” because concussions are usually not life threatening. Even so, **the effects of a concussion can be serious.**

• **After a concussion**, some people lose consciousness or are “knocked out” for a short time, but not always. —**You can have a brain injury without losing consciousness.** Some people are simply dazed or confused. Sometimes **whiplash** can cause a concussion.

• Because the **brain is very complex**, every brain injury is different. Some symptoms may appear right away, while others may not show up for days or weeks after the concussion. **Sometimes the injury makes it hard for people to recognize or to admit that they are having problems.**

- **The signs of concussion** can be subtle. Early on, problems may be missed by patients, family members, and doctors. People may look fine even though they're acting or feeling differently.

- Because all brain injuries are different, so is recovery. Most people with mild injuries recover fully, but **it can take time**. Some symptoms can last for days, weeks, or longer. (In many cases impairments can last a lifetime.)

- In general, recovery is slower in **older persons**. Also, persons who have had a concussion in the past may find that it takes longer to recover from their current injury.

#### **Danger Signs - Adults**

**In rare cases, along with a concussion, a dangerous blood clot may form** on the brain and crowd the brain against the skull. Contact your doctor or emergency department right away if, after a blow or jolt to the head, you have any of these danger signs:

- Headaches that get worse
- Weakness, numbness, or decreased coordination
- Repeated vomiting

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

- Cannot be awakened
- Have one pupil — the black part in the middle of the eye — larger than the other
- Have convulsions or seizures
- Have slurred speech
- Are getting more and more confused, restless, or agitated

#### **Danger Signs - Children**

Take your child to the emergency department right away if the child has received a blow or jolt to the head

- Won't stop crying
- Can't be consoled
- Won't nurse or eat

Although you should contact your child's doctor if your child vomits more than once or twice, vomiting is more common in younger children and is less likely to be an urgent sign of danger than it is in an adult.

#### **Getting Better**

**"Sometimes the best thing you can do is just rest and then try again later."** How fast people recover from brain injury varies from person to person. Although most people have a good recovery, how quickly they improve depends on many factors. These factors include how severe their concussion was, what part of the brain was injured, their age, and how healthy they were before the concussion.

**Rest is very important** after a concussion because it helps the brain to heal. You'll need to be patient because **healing takes time**.

Return to your daily activities, such as work or school, at your own pace. As the days go by, you can expect to gradually feel better.

If you already had a medical problem at the time of your concussion, it may take longer for you to recover from your brain injury. Anxiety and depression may also make it harder to adjust to the symptoms of brain injury.

#### **Second Impact Syndrome**

While you are healing, you should be very careful to avoid doing anything that could cause a blow or jolt to your head. On rare occasions, **receiving another concussion before a brain injury has healed can be fatal**. Even after your brain injury has healed, you should protect yourself from having another concussion. **People who have had repeated brain injuries, such as boxers or football players, may have serious problems later in life**. These problems include difficulty with concentration and memory and sometimes with physical coordination.