



# Understanding Concussion



Troy, experienced his first concussion  
in 2003.



## What Is Concussion?

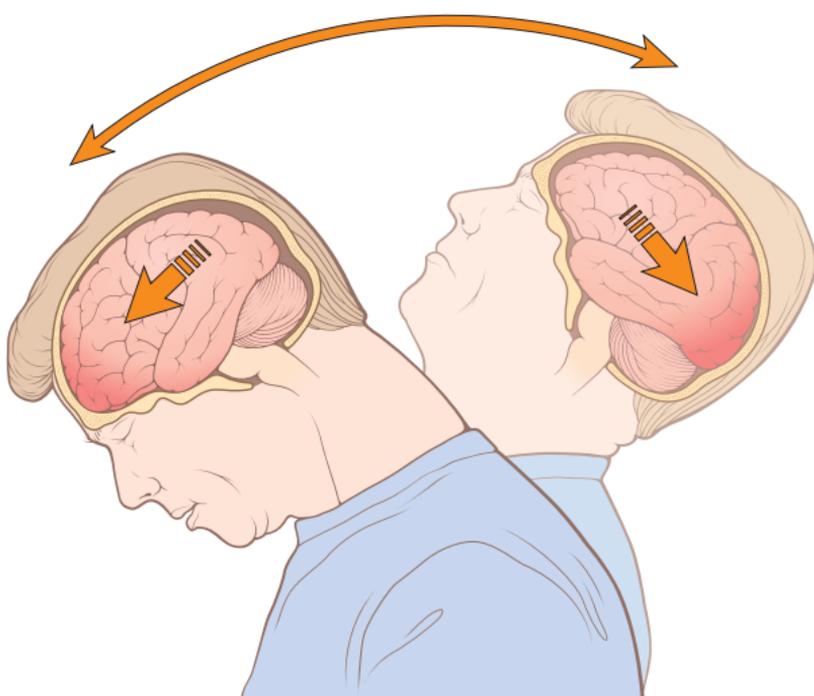
A concussion is a mild traumatic brain injury. It is a physical injury to the brain that disrupts normal functioning. A concussion can result from brain trauma caused by an impact or the sudden stopping of movement. A person does not need to lose consciousness, or pass out, to have a concussion. Because of this, many people are not aware that they have experienced a concussion. Concussions can involve a loss of consciousness for up to 30 minutes.

For most people who experience concussion, full recovery is possible with proper diagnosis and management. Most people with concussion recover fully within days to weeks, but the timetable for recovery differs for each person.

## What Causes Concussion?

The leading causes of concussion are falls, sports injuries, and motor vehicle–related accidents.

### Concussion From Sudden Movement



## **What Are the Symptoms of a Concussion?**

The symptoms of a concussion will vary from person to person. Symptoms may appear right away or as long as hours after the injury. Common symptoms may include:

- Headache
- Dizziness
- Confusion
- Feeling hazy, foggy, or groggy
- Amnesia, or trouble remembering things
- Disorientation
- Loss of consciousness
- Behavior or personality change
- Lack of coordination
- Nausea or vomiting
- Fatigue
- Anxiety or depression
- Change in sleep patterns

Emergency symptoms from concussion that should prompt immediate evaluation by a physician include:

- Convulsions or seizures
- Muscle weakness on one or both sides
- Prolonged confusion or unconsciousness
- Unequal pupils or unusual eye movements
- Severe neck or spine pain
- Walking problems

## **How Is Concussion Diagnosed?**

Anyone who is suspected of having a concussion should be seen by a physician trained in evaluating and managing concussion. The physician may test learning and memory skills, the ability to concentrate, and speed of thinking and problem solving. The physician may also use a brain scan, such as a computerized tomography (CT) scan, to help with the diagnosis.

## How Is Concussion Treated?

The only true “cure” for a concussion is to prevent it from happening. Wearing helmets and seat belts, avoiding risky behaviors, and conducting home safety assessments for older people and others at risk for falls are some ways to lessen the chance of receiving a concussion.

When a concussion does occur, the person should be evaluated by a physician or other professional experienced with concussion. A physician will rule out complications of concussion, such as bleeding in the brain or severe brain injury. Rest to allow the brain to heal itself and education about what to expect during recovery are needed. The person should be re-evaluated before restarting activities. Children, in particular, may need time off from classes, physical education, and normal play.

The American Academy of Neurology recommends that athletes suspected of having a concussion be removed from play until they can be evaluated by a physician with training in evaluating and managing sports concussion. A second concussion within days or weeks of a first can lead to more severe symptoms, prolonged recovery, and even death.

Some states have laws on managing concussions in organized sports. Coaches and parents should learn about the laws and concussion signs. For more information, visit the American Academy of Neurology website at [www.aan.com/concussion](http://www.aan.com/concussion).

### Did you know?

Neurologists are medical doctors who specialize in disorders of the brain and nerves. They are the specialists who often diagnose and treat concussions.

## **Living with Concussion**

Recovering from a concussion can take time. You may feel withdrawn, easily upset, or confused. Some people have mild headaches and are less tolerant of noise. Others have a hard time with tasks that require memory or concentration.

Getting plenty of sleep and resting during the day is important. Talk to your physician about when you can return to regular activities, but then ease into them gradually. If you start to feel symptoms coming back, you may need to get more rest. Avoid activities that are physically demanding or require a great deal of concentration. Avoid activities that could lead to another concussion. Do not drink alcohol until your physician says you are ready. It could slow your recovery.

## **Partnering with Your Neurologist**

To provide the best care, your neurologist needs to know all about your symptoms and medical history. Likewise, you need to get answers to your questions. Keeping a notebook about your condition and bringing a few well-organized questions to your appointments can be helpful.

# For Family and Friends

The effects of a concussion can also take a toll on family members and friends. Knowing how to help can be difficult. The organizations listed in **Resources** can be sources for information and help.

## Help Us Cure Brain Disease

### Make a Donation to Research

The American Brain Foundation supports vital research and education to discover causes, improved treatments, and cures for brain and other nervous system diseases. To learn more or to make a donation to support research, visit [www.CureBrainDisease.org](http://www.CureBrainDisease.org).

### Make Your Voice Heard

To keep research advancing toward future cures and treatments for brain disease, it is important for people affected by neurologic disorders to advocate for more research funding. Contact your members of Congress and ask them to support neurology research by increasing funding for the National Institutes of Health (NIH). Look up your Congressional representatives at [www.senate.gov](http://www.senate.gov) and [www.house.gov](http://www.house.gov). Your voice can make a difference.

### Take Part in Research

People are needed for clinical trials that can help find new treatments for neurologic disorders. Clinical trials are research studies. They help ensure that new drugs are both safe and effective. Ask your neurologist how to volunteer for a clinical trial. You can also find trials through patient organizations or the American Academy of Neurology website at [www.aan.com/view/clinicaltrials](http://www.aan.com/view/clinicaltrials).

## **Resources**

### **American Academy of Neurology**

*www.aan.com*

**(800) 879-1960**

The American Academy of Neurology website for patients and caregivers offers a wealth of articles, information about events and resources, and links to support groups, clinical trial information, and more.

### **Neurology Now® magazine**

*www.neurologynow.com*

**(800) 879-1960**

Free magazine for patients and caregivers, courtesy of the American Academy of Neurology. Stories about people living with neurologic disorders, the latest information on resources and treatments, and more.

### **American Academy of Neurology Sports**

#### **Concussion Toolkit**

*www.aan.com/concussion*

**(800) 879-1960**

### **Brain Injury Association**

*www.biausa.org*

**(800) 444-6443**

### **Brain Trauma Foundation**

*www.braintrauma.org*

**(212) 772-0608**

### **Centers for Disease Control and Prevention**

*www.cdc.gov/concussion*

**(800) CDC-INFO (232-4636)**



*www.aan.com*

**(800) 879-1960**

The American Academy of Neurology, an association of 25,000 neurologists and neuroscience professionals, is dedicated to promoting the highest quality patient-centered neurologic care. For more information about the American Academy of Neurology, visit *www.aan.com*.

*Cover photo by Jim Hopwood*