

U.S. Department of  
Health and Human  
Services

Facts About  
**Concussion and  
Brain Injury**

Where to get help

If you experience symptoms that require immediate attention (see Danger Signs, pages 4-5), please call or come to the Emergency Room.  
**507-255-5385**

If you experience more minor symptoms that do not lessen over time (see Symptoms of Brain Injury, pages 6-8), or have questions regarding your brain injury, please call the Mayo Brain Rehabilitation Program.  
**507-255-3116**

Brain Injury Association  
National Help Line: 1-800-444-6443

Brain Injury Association Web Site:  
[www.biausa.org](http://www.biausa.org)

Centers for Disease Control and Prevention  
Web Site: [www.cdc.gov/ncipc/tbi](http://www.cdc.gov/ncipc/tbi)

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# 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 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.

This brochure explains what can happen after a concussion, how to get better, and where to go for more information and help when needed.

## **Medical Help**

People with a concussion need to be seen by a doctor. Most people with concussions are treated in an emergency department or a doctor's office. Some people must stay in the hospital overnight for further treatment.

Sometimes the doctors may do a CT scan of the brain or do other tests to help diagnose your injuries. Even if the brain injury doesn't show up on these tests, you may still have a concussion.

Your doctor will send you home with important instructions to follow. For example, your doctor may ask someone to wake you up every few hours during the first night and day after your injury.

Be sure to carefully follow all your doctor's instructions. If you are already taking any medicines — prescription, over-the-counter, or “natural remedies” — or if you are drinking alcohol or taking illicit drugs, tell your doctor. Also, talk with your doctor if you are taking “blood thinners” (anticoagulant drugs) or aspirin, because these drugs may increase your chances of complications. If it's all right with your doctor, you may take acetaminophen (for example, Tylenol®\* or Panadol®\*) for headache or neck pain.

\*Use of trade names is for identification only and does not imply endorsement by the U.S. Department of Health and Human Services.

## **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 and:

- Has any of the danger signs for adults listed on page 4
- 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.

# Symptoms of Brain Injury

## Persons of All Ages

*“I just don’t feel like myself.”*

The type of brain injury called a concussion has many symptoms. These symptoms are usually temporary, but may last for days, weeks, or even longer. Generally, if you feel that “something is not quite right,” or if you’re “feeling foggy,” you should talk with your doctor.

Here are some of the symptoms of a concussion:

- Low-grade headaches that won’t go away
- Having more trouble than usual:
  - ◆ Remembering things
  - ◆ Paying attention or concentrating
  - ◆ Organizing daily tasks
  - ◆ Making decisions and 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 light-headed or dizzy
- Increased sensitivity to:
  - ◆ Sounds
  - ◆ Lights
  - ◆ Distractions
- Blurred vision or eyes that tire easily
- Loss of sense of taste or smell
- Ringing in the ears
- Change in sexual drive
- Mood changes:
  - ◆ Feeling sad, anxious, or listless
  - ◆ Becoming easily irritated or angry for little or no reason
  - ◆ Lack of motivation

## **Young Children**

Although children can have the same symptoms of brain injury as adults, it is harder for young children to let others know how they are feeling. Call your child's doctor if your child seems to be getting worse or if you notice any of the following:

- Listlessness, tiring easily
- Irritability, crankiness
- Change in eating or sleeping patterns
- Change in the way they play
- Change in the way they perform or act at school
- Lack of interest in favorite toys
- Loss of new skills, such as toilet training
- Loss of balance, unsteady walking

## **Older Adults**

Older adults with a brain injury may have a higher risk of serious complications such as a blood clot on the brain. Headaches that get worse or an increase in confusion are signs of this complication. If these signs occur, see a doctor right away.

# 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.

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.

## **Tips for Healing — Adults**

Here are a few tips to help you get better:

- Get plenty of sleep at night, and rest during the day.
- Return to your normal activities gradually, not all at once.
- Avoid activities that could lead to a second brain injury, such as contact or recreational sports, until your doctor says you are well enough to take part in these activities.

- Ask your doctor when you can drive a car, ride a bike, or operate heavy equipment because your ability to react may be slower after a brain injury.
- Talk with your doctor about when you can return to work or school. Ask your doctor about ways to help your employer or teacher understand what has happened to you.
- Consider talking with your employer about returning to work gradually and changing your work activities until you recover.
- Take only those drugs that your doctor has approved.
- Don't drink alcoholic beverages until your doctor says you are well enough to do so. Alcohol and certain other drugs may slow your recovery and can put you at risk of further injury.
- If it's harder than usual to remember things, write them down.

- If you're easily distracted, try to do one thing at a time. For example, don't try to watch TV while fixing dinner.
- Consult with family members or close friends when making important decisions.
- Don't neglect your basic needs such as eating well and getting enough rest.

## **Tips for Healing — Children**

Parents and caretakers of children who have had a concussion can help them heal by:

- Having the child get plenty of rest.
- Making sure the child avoids activities that could result in a second blow or jolt to the head — such as riding a bicycle, playing sports, or climbing playground equipment — until the doctor says the child is well enough to take part in these activities.
- Giving the child only those drugs that the doctor has approved.



- Talking with the doctor about when the child should return to school and other activities and how to deal with the challenges the child may face.
- Sharing information about concussion with teachers, counselors, babysitters, coaches, and others who interact with the child so they can understand what has happened and help meet the child's needs.

# Where to Get Help

## Help for People With Brain Injuries

*“It was the first time in my life that I couldn’t depend on myself.”*

There are many people who can help you and your family as you recover from your brain injury. You don’t have to do it alone.

Show this brochure to your doctor or health care provider and talk with them about your concerns. Ask your doctor whether you need specialized treatment and about the availability of rehabilitation programs.

Your doctor may be able to help you find a health care provider who has special training in the treatment of concussion. Early treatment of symptoms by professionals who specialize in brain injury may speed recovery. Your doctor may refer you to a neurologist, neuropsychologist, neurosurgeon, or specialist in rehabilitation.

Keep talking with your doctor, family members, and loved ones about how you are feeling, both physically and emotionally. If you do not think you are getting better, tell your doctor.

For more information, see *Resources for Getting Help* on page 17.

## Help for Families and Caregivers

*“My husband used to be so calm. But after his injury, he started to explode over the littlest things. He didn’t even know that he had changed.”*

When someone close to you has a brain injury, it can be hard to know how best to help. They may say that they are “fine” but you can tell from how they are acting that something has changed.

If you notice that your family member or friend has symptoms of brain injury that are getting worse or are not getting better, talk to them and their doctor about getting help. They may also need help if you can answer YES to any of the following questions:

- Has their personality changed?
- Do they get angry for no reason?
- Do they get lost or easily confused?
- Do they have more trouble than usual making decisions?

You might also want to talk with people who have experienced what you are going through. The Brain Injury Association can put you in contact with people who can help (see page 17).

## Resources for Getting Help

*“I thought I was all alone, but I’m not. There are lots of people out there who understand what I’ve been through.”*

Several groups help people with brain injury and their families. They provide information and put people in touch with local resources, such as support groups, rehabilitation services, and a variety of health care professionals.

Among these groups, the Brain Injury Association (BIA) has a national office that gathers scientific and educational information and works on a national level to help people with brain injury. In addition, 44 affiliated state Brain Injury Associations provide help locally.

You can reach the BIA office by calling the toll-free **BIA National Help Line at 1-800-444-6443**. You can also get information through the national **BIA Web site at [www.biausa.org](http://www.biausa.org)**. Both the Help Line and the Web site can provide you with information about your closest state Brain Injury Association.

More information about brain injury is available through the Centers for Disease Control and Prevention (CDC) **Web site at [www.cdc.gov/ncipc/tbi](http://www.cdc.gov/ncipc/tbi)**.

## **For More Information:**

- **BIA National Help Line: 1-800-444-6443**
- **BIA Web site: [www.biausa.org](http://www.biausa.org)**
- **CDC Web site: [www.cdc.gov/ncipc/tbi](http://www.cdc.gov/ncipc/tbi)**
- **State Brain Injury Association**

Prepared with the assistance of Prospect Associates under  
Contract Number 200-95-0900.



A blow or jolt to the head can cause a type of mild brain injury called a concussion.

Some symptoms of a concussion are:

- Persistent low-grade headaches
- Having more trouble than usual remembering things, concentrating, or making decisions
- Feeling tired all the time
- Feeling sad, anxious, or listless
- Becoming easily irritated for little or no reason

For more information on danger signs, symptoms, tips for getting better, and where to go for help, look inside this brochure.

U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Center for Injury Prevention and Control  
Emergency Nurses Association  
Brain Injury Association  
American College of Emergency Physicians

MIC242081