

Traumatic Brain Injury in Teens

Traumatic brain injury (TBI) is a serious public health problem in the United States. Each year, TBIs contribute to a substantial number of deaths and cases of permanent disability. Recent data shows that, on average, approximately half a million children (0-14) sustain a traumatic brain injury annually. This includes:

- 473,900 emergency department visits.
- 35,000 hospitalizations.
- 2,100 deaths.

(U.S. Department of Health and Human Services Centers for Disease Control and Prevention, "Traumatic Brain Injury in the United States 2002-2006")

Causes of Brain Injury in Teens

The causes of moderate/severe brain injury differ from pediatric and adult brain injury. The teenage years bring the special problems of peer pressure, underage drinking, abuse of alcohol and drugs, gang-related violence and inexperienced and/or impaired driving.

Concussion in Teens

A concussion is a type of brain injury that changes the way the brain works. It is caused by a bump, fall or blow to the head or body that causes the head and brain to move back and forth quickly. Not all concussions result in loss of consciousness, but they occur during activities where collisions can occur, such as physical education class or a sports activity. Approximately 1,300 U.S. children experience severe or fatal head trauma from child abuse every year.

In any given season, 20 percent of high school contact sports players sustain a concussion. Among teenagers, brain injury is the most common injury in winter sports such as skiing, sledding, ice skating or ice hockey, accounting for 46 percent of all injuries.

Recognizing and responding to a possible concussion can prevent further injury and help with recovery. Teens should NEVER return to sports/recreation activities on the day of the injury, and should delay a return to any physical activity until they are symptom-free and have their physician's clearance.

Teens that have experienced a suspected concussion should be followed closely by their doctors. A visit after the event allows the doctor to assess the teen for ongoing symptoms and allows the family to ask questions and discuss how to prevent future injury.

Symptoms

Symptoms can vary greatly depending on the extent and location of the injury. It may be years before their effects become apparent. A combination of early diagnosis and ongoing treatment is the best way to lessen the effects of a brain injury. Teens who display the symptoms listed below for several weeks after a concussion may require further assessment and/or evaluation by a neuropsychologist, neurologist, or other specialist:

- Headache.
- Nausea or vomiting.
- Balance problems or dizziness.
- Double or blurry vision.
- Sensitivity to light or noise.
- Feeling sluggish, hazy, foggy or groggy.
- Difficulty concentrating or remembering things.
- Confusion.
- Does not “feel right” or is “feeling down.”

Return to School

When teens with TBI return to school, their educational and emotional needs are often very different from their needs before the injury. The teens can often remember their abilities are different. They may remember their pre-injury abilities and activities. A sudden and traumatic injury has made significant physical, cognitive, emotional and social changes. Family, friends and teachers may have difficulty adjusting their expectations for the teen.

It is extremely important to plan carefully for return to school. Parents will want to find out ahead of time about accommodation plans (see Section 504 of the Americans with Disabilities Act) and special education services (see Individuals with Disabilities Education Act). This information is usually available from the school's principal or special education teacher. The school will need to evaluate the teen thoroughly to determine his or her educational needs. The Individualized Educational Program (IEP) is a flexible plan that can be changed as the parents, the school and the student learn more about what the student needs at school.

- The more you know about TBI, the more you can help your teen and yourself.

- Work with the medical team to understand your teen's injury and treatment plan. Ask questions. Tell the team what you know and think. Make suggestions.
- Keep track of your teen's treatment. A 3-ring binder or a box can help you store this history. As your child recovers, you may meet with many doctors, nurses and others. Write down what they say. Put any paperwork they give you in the notebook or keep it in the box. If you are asked to share your paperwork with someone else, make a copy. Don't give away your original.
- Talk to other parents whose children have sustained a brain injury. There are parent groups all over the U.S. You can share practical advice and emotional support. Check with the Brain Injury Association of Minnesota to find a parent group near you.

To reduce the risk of sustaining a TBI, teens should:

- Wear a seat belt every time they drive or ride in a motor vehicle; do not drive without supervision if inexperienced; do not speed.
- Wear helmets that are fitted properly; use the right protective equipment for sports and recreation, and make sure it is maintained properly.
- Avoid all use of drugs and alcohol.
- Avoid pedestrian injury by wearing reflective clothing at night.

To reduce the risk of TBI in teens, parents/community should:

- Provide a safe recreational and sports environment and adequate adult supervision.
- Seek help for your teen if you suspect drug or alcohol use or notice unexplained changes in behavior.
- Not allow your teen to drive alone or with friends if inexperienced.
- Talk with your teen about ways to solve arguments and fights without violence.

Resources used in developing this fact sheet

- Minnesota Department of Education: <http://www.education.state.mn.us/>.
- Minnesota Low Incidence Projects: <http://www.mnlowincidenceprojects.org/tbi.html>.
- Brain Injury Association of Minnesota: <http://www.braininjurymn.org>
(612) 378-2742; (800) 669-6442.

- Department Of Health and Human Services, Centers for Disease Control and Prevention (CDC) <http://www.cdc.gov/TraumaticBrainInjury/index.html>.