



Susan's Story

Susan was 7 years old when she was hit by a car while riding her bike. She broke her arm and leg. She also hit her head very hard. The doctors say she sustained a traumatic brain injury. When she came home from the hospital, she needed lots of help, but now she looks fine.

In fact, that's part of the problem, especially at school. Her friends and teachers think her brain has healed because her broken bones have. But there are changes in Susan that are hard to understand. It takes Susan longer to do things. She has trouble remembering things. She can't always find the words she wants to use. Reading is hard for her now. It's going to take time before people really understand the changes they see in her.

Traumatic Brain Injury

NICHCY Disability Fact Sheet #18
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What is TBI?

A traumatic brain injury (TBI) is an injury to the brain caused by the head being hit by something or shaken violently. (The exact definition of TBI, according to special education law, is given in the box on the next page.) This injury can change how the person acts, moves, and thinks. A traumatic brain injury can also change how a student learns and acts in school. The term TBI is used

for head injuries that can cause changes in one or more areas, such as:

- thinking and reasoning,
- understanding words,
- remembering things,
- paying attention,
- solving problems,
- thinking abstractly,
- talking,
- behaving,
- walking and other physical activities,
- seeing and/or hearing, and
- learning.

The term TBI is not used for a person who is born with a brain injury. It also is not used for brain injuries that happen during birth.



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The definition of TBI in the box to the right comes from the Individuals with Disabilities Education Act (IDEA). The IDEA is the federal law that guides how schools provide special education and related services to children and youth with disabilities.

How Common is TBI?

Approximately 1.7 million people receive traumatic brain injuries every year.¹ Of children 0-19 years old, TBI results in 631,146 trips to the emergency room annually, 35,994 hospitalizations, and nearly 6,169 deaths.²

What Are the Signs of TBI?

The signs of brain injury can be very different depending on where the brain is injured and how severely. Children with TBI may have one or more difficulties, including:

- *Physical disabilities:* Individuals with TBI may have problems speaking, seeing, hearing, and using their other senses. They may have headaches and feel tired a lot. They may also have trouble with skills such as writing or drawing. Their muscles may suddenly contract or tighten (this is called spasticity). They may also have seizures. Their balance and walking may also be affected. They may be partly or completely paralyzed on one

Definition of "Traumatic Brain Injury" under IDEA

Our nation's special education law, the Individuals with Disabilities Education Act (IDEA), defines traumatic brain injury as. . .

Traumatic brain injury means an acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. Traumatic brain injury applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual, and motor abilities; psychosocial behavior; physical functions; information processing; and speech. Traumatic brain injury does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma. [34 Code of Federal Regulations §300.8(c)(12)]

side of the body, or both sides.

- *Difficulties with thinking:* Because the brain has been injured, it is common that the person's ability to use the brain changes. For example, children with TBI may have trouble with short-term memory (being able to remember something from one minute to the next, like what the teacher just said). They may also have trouble with their long-term memory (being able to remember information from a while ago, like facts learned last month). People with TBI may have trouble concentrating and only be able to focus their attention for a short time. They may think
 - *Social, behavioral, or emotional problems:* These difficulties may include sudden changes in mood, anxiety, and depression. Children with TBI may have trouble relating to others. They may be restless and may laugh or cry a lot. They may not have much motivation or much control over their emotions.
- A child with TBI may not have all of the above difficul-

ties. Brain injuries can range from mild to severe, and so can the changes that result from the injury. This means that it's hard to predict how an individual will recover from the injury. Early and ongoing help can make a big difference in how the child recovers. This help can include physical or occupational therapy, counseling, and special education.

It's also important to know that, as the child grows and develops, parents and teachers may notice new problems. This is because, as students grow, they are expected to use their brain in new and different ways. The damage to the brain from the earlier injury can make it hard for the student to learn new skills that come with getting older. Sometimes parents and educators may not even realize that the student's difficulty comes from the earlier injury.

Is There Help Available?

Yes, there's a lot of help available, beginning with the free evaluation of the child. The nation's special education law, IDEA, requires that all children suspected of having a disability be evaluated *without cost to their parents* to determine if they do have a disability and, because of the disability, need special services under IDEA. Those special services are:

- **Early intervention** | A system of services to support infants and toddlers with disabilities (before their 3rd birthday) and their families.
- **Special education and related services** | Services available through the public school system for school-aged children, including preschoolers (ages 3-21).

To access early intervention: To identify the EI program in your neighborhood, consult NICHCY's *State Organizations* page, online at: <http://nichcy.org/state-organization-search-by-state>

Early intervention is listed under the first section, *State Agencies*. The agency that's identified will be able to put you in contact with the early intervention program in your community. There, you can have your child evaluated free of charge and, if found eligible, your child can begin receiving early intervention services.

To access special education and related services: We recommend that you get in touch with your local public school system. Calling the elementary school in your neighborhood is an excellent place to start. The school should be able to tell you the next steps to having your child evaluated free of charge. If found



eligible, he or she can begin receiving services specially designed to address your child's needs. In the fall of 2011, nearly 26,000 school-aged children (ages 3-21) received special education and related services in our public schools under the category of "traumatic brain injury."³

What About School?

Although TBI is very common, many medical and education professionals may not realize that some difficulties can be caused by a childhood brain injury. Often, students with TBI are thought to have a learning disability, emotional disturbance, or an intellectual disability. As a result, they don't receive the type of educational help and support they really need.

When children with TBI return to school, their educational and emotional needs are often very different than before the injury. Their disability has happened suddenly and traumatically. They can often remember how they were before the brain injury. This can bring on many emotional and social changes. The child's family, friends, and teachers also recall what the child was like before the injury. These other people in the child's life may have trouble changing or adjusting their expectations of the child.

Therefore, it is extremely important to plan carefully for the child's return to school. Parents will want to find out ahead of time about special education services at the school. This information is usually available from the school's principal or special education teacher. The school will need to evaluate the child thoroughly. This evaluation will let the school and parents know what the student's educational needs are. The school and parents will then develop an Individualized Education Program (IEP) that addresses those educational needs.

It's important to remember that the IEP is a *flexible* plan. It can be changed as the parents, the school, and the student learn more about what the student needs at school.

Tips for Parents



- Learn about TBI. The more you know, the more you can help yourself and your child. The resources and organizations listed in this fact sheet offer a great deal of information about TBI.
- Work with the medical team to understand your child's injury and treatment plan. Don't be shy about asking questions. Tell them what you know or think. Make suggestions.
- Keep track of your child'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 throw it in the box. You can't remember all this! Also, if you need to share any of this paperwork with someone else, make a copy. Don't give away your original!
- Talk to other parents whose children have TBI. There are parent groups all over the U.S. Parents can share practical advice and emotional support. Email NICHCY (nichcy@fhi360.org) or use NICHCY's *State Organizations* page to locate parent groups near you. Look under the heading "Organizations for Parents." Find your state sheet at: <http://nichcy.org/state-organization-search-by-state>
- If your child was in school before the injury, plan for his or her return to school. Get in touch with the school. Ask the principal about special education services. Have the medical team share information with the school.
- When your child returns to school, ask the school to test your child as soon as possible to identify his or her special education needs. Meet with the school and help develop a plan for your child called an Individualized Education Program (IEP).
- Keep in touch with your child's teacher. Tell the teacher about how your child is doing at home. Ask how your child is doing in school.



Tips for Teachers

- Find out as much as you can about the child's injury and his or her present needs. Find out more about TBI through the resources and organizations listed in this fact sheet. These can help you identify specific techniques and strategies to support the student educationally.
- Recognize that you can make an enormous difference in this student's life! Find out what the student's strengths and interests are, and emphasize them. Create opportunities for success.
- If you are not part of the student's IEP team, ask for a copy of his or her IEP. The student's educational goals will be listed there, as well as the services and classroom accommodations he or she is to receive.
- Make sure that needed accommodations are provided for classwork, homework, and testing. These will help the student learn successfully.
- Show the student how to perform new tasks. Give directions one step at a time. For tasks with many steps, it helps to give the student written directions.
- Check to make sure that the student has actually learned the new skill. Give the student lots of opportunities to practice the new skill.
- Give the student more time to finish schoolwork and tests.
- Have consistent routines. This helps the student know what to expect. If the routine is going to change, let the student know ahead of time.
- Show the student how to use an assignment book and a daily schedule. This helps the student get organized.
- Realize that the student may get tired quickly. Let the student rest as needed. Reduce distractions.
- Keep in touch with the student's parents. Share information about how the student is doing at home and at school.



References

¹ National Center for Injury Prevention and Control. (2012). *Traumatic brain injury*. Available online at the Centers for Disease Prevention and Control (CDC) website: <http://www.cdc.gov/TraumaticBrainInjury/index.html>

² CDC. (2010). *Traumatic brain injury in the United States: Emergency department visits, hospitalizations and deaths, 2002–2006*. Available online at: http://www.cdc.gov/traumaticbraininjury/pdf/blue_book.pdf

³ Data Accountability Center. (2012). *Data tables for OSEP state reported data*. Available online at:

- <https://www.ideadata.org/TABLES35TH/B1-2.xls>
- <https://www.ideadata.org/TABLES35TH/B1-3.xls>

Basic Readings about TBI

American Academy of Family Physicians. (2010). *Traumatic brain injury*. Online at: <http://familydoctor.org/familydoctor/en/diseases-conditions/traumatic-brain-injury.html>

CDC | Centers for Disease Control and Prevention. (2010). *Traumatic brain injury*. Online at: <http://www.cdc.gov/TraumaticBrainInjury/>

Center on Brain Injury Research and Training. (n.d.). *Traumatic brain injury: An overview* (interactive learning module). Online at: <http://www.cbirt.org/resources/interactive-learning-modules/>

National Institute of Neurological Disorders and Stroke. (2011, January). *NINDS traumatic brain injury information page*. Online at: <http://www.ninds.nih.gov/disorders/tbi/tbi.htm>

Organizations

Brain Injury Association of America

- Main website: <http://www.biausa.org/>
- Find your state BIA affiliate: <http://www.biausa.org/state-affiliates.htm>
- National Brain Injury Information Center (*brain injury information only*)
1.800.444.6443

National Resource Center for Traumatic Brain Injury (NRCTBI)

<http://www.tbinrc.com/>

TBI Education

<http://www.cbirt.org/tbi-education/>

Brainline

Information available in English and Spanish.
info@BrainLine.org | <http://www.brainline.org/>

Family Caregiver Alliance

Information in English, Spanish, and Chinese.
<http://www.caregiver.org/caregiver/jsp/home.jsp>

TBI Recovery Center

<http://www.tbirecoverycenter.org/>



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