



Traumatic Brain Injury

✧ 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.

✧ 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 right.) 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.

The definition of TBI in the box on page 4 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.



NICHCY is the
National Dissemination Center
for Children with Disabilities.

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✧ How Common is TBI? ✧

More than one million children receive brain injuries each year. More than 30,000 of these children have lifelong disabilities as a result of the brain injury.

✧ 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 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 slowly. They may have trouble talking and listening to others. They may also have difficulty with reading and writing, planning, understanding the order in which events happen (called sequencing), and judgment.
- *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 difficulties. 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.

✧ 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 mental retardation. 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. See the list of resources and organizations at the end of this publication.
- ❑ 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. Call NICHCY (800-695-0285) or find resources in your state, online at (www.nichcy.org/states.htm) to locate parent groups near you.
- ❑ 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. See the list of resources and organizations at the end of this publication.
- ❑ Give the student more time to finish schoolwork and tests.
- ❑ Give directions one step at a time. For tasks with many steps, it helps to give the student written directions.
- ❑ Show the student how to perform new tasks. Give examples to go with new ideas and concepts.
- ❑ 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.
- ❑ Check to make sure that the student has actually learned the new skill. Give the student lots of opportunities to practice the new skill.
- ❑ 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.
- ❑ Be flexible about expectations. Be patient. Maximize the student's chances for success.



✧ Resources ✧

DeBoskey, D.S. (Ed.). (1996). *Coming home: A discharge manual for families of persons with a brain injury*. Houston, TX: HDI. (Phone: 800-321-7037; Web: www.braininjurybooks.com)

DePompei, R., Blosser, J., Savage, R., & Lash, M. (1998). *Special education: IEP checklist for a student with a brain injury*. Wolfeboro, NH: L&A Publishing/Training. (Phone: 919-562-0015. Web: www.lapublishing.com)

DePompei, R., & Cluett, B. (1998). *All about me!* Wolfeboro, NH: L&A Publishing/Training. (For use by elementary school children with TBI. See contact information above.)

DePompei, R., & Tyler, J. (2004). *Learning and cognitive communication challenges: Developing educational programs for students with brain injuries*. Wolfeboro, NH: L&A Publishing/Training. (See contact information above.)

Hibbard, M., Gordon, W., Martin, T., Rashkin, B., & Brown, M. (2001). *Students with traumatic brain injury: Identification, assessment, and classroom accommodations*. New York: Research and Training Center on Community Integration of Individuals with Traumatic Brain Injury. (Phone: 888-241-5152; Web: www.mssm.edu/tbinet/alt/pubs/tbikids.pdf)

Lash, M., Wolcott, G., & Pearson, S. (2000). *Signs and strategies for educating students with brain injuries: A practical guide for teachers and schools*. (2nd ed.). Houston, TX: HDI. (See contact information above.)

Schoenbrodt, L. (Ed.). (2001). *Children with traumatic brain injury: A parents' guide*. Bethesda, MD: Woodbine House. (Phone: 800-843-7323; Web: www.woodbinehouse.com)

Senelick, R.C., & Dougherty, K. (2001). *Living with brain injury: A guide for families* (2nd ed.). San Diego, CA: Singular. (Phone: 800-347-7707; Web: www.delmarhealthcare.com)

Snyder, H. (1998). *Elvin the elephant who forgets*. Wolfeboro, NH: L&A Publishing/Training. (A 16-page picture book for children. See contact information above.)

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

" . . . 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. The term 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; psycho-social behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma." 34 Code of Federal Regulations §300.7(c)(12)

✧ Organizations ✧

Brain Injury Association (formerly the National Head Injury Foundation), 8201 Greensboro Drive, Suite 611 Mclean, VA 22102. Phone: 703.761.0750; 800.444.6443 (Family Helpline) Email: FamilyHelpline@biausa.org Web site: www.biausa.org

Emergency Medical Services for Children—National Resource Center, 111 Michigan Avenue N.W., Washington, DC 20010. Phone: 202.884.4927 Email: information@emscncr.com Web site: www.ems-c.org/

Epilepsy Foundation-National Office, 4351 Garden City Drive, Suite 500, Landover, MD 20785-7223. Phone: 301.459.3700; 800.332.1000; 800.332.2070 (TTY) Web site: www.epilepsyfoundation.org

Family Caregiver Alliance, 180 Montgomery St., Suite 1100 San Francisco, CA 94104. Phone: 415.434.3388; 800.445.8106 Email: info@caregiver.org Web site: www.caregiver.org

Family Voices, 2340 Alamo SE, Suite 102 Albuquerque, NM 87106. Phone: 505.872.4774; 888.835.5669 Email: kidshealth@familyvoices.org Web site: www.familyvoices.org

Head Injury Hotline, 212 Pioneer Building, Seattle, WA 98104-2221. Phone: 206.621.8558 Email: brain@headinjury.com Web site: www.headinjury.com

National Resource Center for Traumatic Brain Injury Department of Physical Medicine and Rehabilitation P.O. Box 980542 Richmond, VA 23298-0542 . Phone: 804.828.9055 E-mail: mbking@hsc.vcu.edu Web site: www.neuro.pmr.vcu.edu

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