Basic Information on Brain Injury: Quick Guide

What is the difference between traumatic and acquired brain injury?

Brain injury can be called by different names, like concussion, shaken baby syndrome, and head injury The brain can be hurt in many different ways; injuries to the brain are classified as non-traumatic or traumatic. **Acquired or non-traumatic** injuries occur as a result of something internal to the brain...like stroke, lack of oxygen, infection, brain tumors, and exposure to toxic substances.

Traumatic injuries fall into two categories:

- **Open head injuries** are those in which the skull is crushed or seriously fractured. Open head injuries also happen when the skull is penetrated, as in a gun shot wound.
- **Closed head injuries**, in which the skull is not damaged, occur much more often, usually because of a car accident or a fall.

What happens to the brain during a traumatic injury?

Several things happen to the brain during traumatic injuries. The effects of some of these can go on for quite some time after the actual accident.

- The brain bounces around in the skull and rubs against the bony ridges on the inside of the skull; this is known as a ***coup/contra-coup injury***. It can cause bleeding, swelling, and increased pressure within the brain.
- The microscopic pathways that send messages through the brain and out to the body are damaged; this is known as ***diffuse axonal injury.***
- The chemicals that help the brain work are disturbed, and instead of helping, begin to hurt the brain; this is known as the ***neurochemical cascade***.

How does the brain work?

The brain is divided into different parts called *lobes* and *hemispheres.* While the whole brain works together to get things done, its different parts are responsible for different jobs.

The left and right sides of the brain are called hemispheres; they have different strengths.

The left side of the brain is associated with verbal, logical, and analytical thinking. It is very good at naming and categorizing things, reading, writing, arithmetic. It likes to think about things logically and in order. It controls the right side of the body.

The right side of the brain is the creative and curious side of the brain, and allows us to be flexible and think about the future. It is good at visual and intuitive information; it thinks quickly and looks at the whole picture. It controls the left side of the body.

What are some noticeable changes after brain injury?

The changes seen after a brain injury depends on a number of factors such as the severity of the injury, where and how the damage was sustained, their general health and age at the time of injury.

- **Common physical changes** after brain injury include difficulty walking, trouble with balance, falling or bumping into things, dizziness, spasticity (very tight muscles), poor coordination, difficulty grasping objects, headaches, nausea, fatigue, and seizures.
- **Common sensory changes** after brain injury include vision, hearing, smell and taste disturbances
- **Common cognitive problems** after brain injury include trouble with memory, concentration and attention, following directions, finding the right word, problem-solving, abstract thinking, organization, planning, social judgment, decision making, self monitoring, and initiating tasks.

Common behavioral/emotional changes after brain injury include irritability, mood swings, acting without thinking, difficulty accepting someone else’s point of view, sadness, low energy, low self-esteem, hostility, depression, and anxiety.

What can I do to help recovery?

Although the physical, sensory, cognitive and psychological changes may improve with treatment and time, they may not go away completely. The key for most survivors and caregivers is learning how to recognize the difficulties that have been caused by their brain injury and how to manage them. The best way to do that is through the use of compensatory strategies, or doing old things in new ways.

Compensatory strategies focus on a person's intact skills and strengths to help them be successful with overcoming challenges in the areas of self-care, attention, memory, behavior. We all use some of these methods. These strategies can be simple, like writing things down in notebooks, posting notes on the refrigerator, or carrying a pocket calendar; some can be more complex, like smart phone Apps, medication alarms, or emergency response systems. Compensatory strategies do not fix the underlying problem; it takes more time, energy, and attention to make them work, but when used consistently, they can dramatically improve function.

A structured environment and good self-care habits can play an important role in recovery:

- Provide consistent schedule or routine, (same times for morning routine, etc).
- Make sure living quarters allow for easy access to items used daily (i.e. bed, dresser, closet, bathroom, etc.) Keep items within reach and in a consistent location.
- Ensure adequate lighting is available. It is important to note that fluorescent lighting may be too bright for the individual.
- Use objects familiar to the individual.
- Be mindful that too much noise/audio may be overwhelming for the individual and they may have difficulty concentrating if there is excess noise/activity in the room.

If your loved one is still in the hospital:

- Go outside and get a breath of fresh air.
- Display pictures of family, friends, and pets.
- Use objects familiar to the individual.
- Speak of familiar names and places; talk of shared interests and experiences.
- Converse when the individual is awake and alert, not tired.
- Encourage communication.

Where can I get help?

- Brain Injury Association of Virginia 1-800-444-5748
- Watch our Webinar: Brain Injury: Basic Information About a Complex Disability
- Download Acrobat Reader here for free to read PDF Files
- Virginia Department for Aging and Rehabilitative Services Brain Injury Services Coordination Unit
- Centers for Disease Control and Prevention - Traumatic Brain Injury & Concussion
- Printable version of Basic Information on Brain Injury
- Read More Quick Guides

The Brain Injury Association of Virginia (BIAV) is a statewide organization dedicated to serving the needs of Virginians with brain injury, their families, and the professionals who assist them. BIAV offers information and education about brain injury, referrals to professionals, services, and programs with brain injury expertise, and a listing of support groups around the state. BIAV also advocates to increase services and programs in the Commonwealth for people whose lives have been touched by this life-altering, often devastating injury. For personal assistance and to talk with helpline staff, call 1-800-444-6443.

Article Source
Brain Injury Association of Virginia (BIAV)
Source URL
https://www.biav.net
Last Reviewed
Monday, December 11, 2023