



# WHAT IS BRAIN INJURY?

*Information on causes and types of Brain Injuries*

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Each year, approximately two million people sustain injury to the brain. Of these, 500,000 will require hospitalization, with many requiring days, weeks, months, or even years of care. This help may include nursing assistance, physical, occupational, or speech therapies, or accommodations to return to work.

The following information should help you ask the right questions, and provide direction as to where educational material can be found.

The road to recovery is unpredictable. The more informed you are, the better.

## WHAT IS A BRAIN INJURY?

The Brain Injury Association of Illinois defines brain injury as an injury to the brain which is not hereditary, congenital, degenerative or induced by birth trauma.

## WHAT ARE THE CAUSES OF BRAIN INJURY?

Causes of acquired brain injury include external forces applied to the head and/or neck (e.g., traumatic brain injury with or without skull fracture), anoxic/hypoxic injury (e.g., cardiopulmonary arrest, carbon monoxide poisoning, airway obstruction, hemorrhage), intracranial surgery, vascular disruption (e.g., arteriovenous malformation [AVM], thromboembolic events, fat emboli), infectious diseases, intracranial neoplasms, metabolic disorder (e.g., hypo/hyper glycemia), seizure disorders and toxic exposure (e.g., substance abuse, ingestion of lead and inhalation of volatile agents). Cerebral aneurysms and cerebral vascular accidents (strokes) are also considered to be an acquired brain injury.

## WHAT ARE THE TYPES OF BRAIN INJURY?

**Closed** - occurs following a blow to the head without penetration of the skull, such as car accidents or falls, which cause the brain to shake within the skull. This violent movement can cause cuts and/or bruises on the brain resulting in possible diffuse or generalized damage.

**Penetrating** - occurs when an object like a bullet penetrates or crushes the skull, enters the soft tissue of the brain. Penetration injuries tend to damage relatively localized areas of the brain which result in fairly discrete and predictable disabilities, but may be severe and result in hemorrhage or infection.

**Mild** - Is also known as a "concussion." A brief loss of consciousness may or may not occur. Often people may not seek medical attention as they do not believe the injury is severe enough to warrant treatment. However, a subtle amount of irreversible brain damage may occur. "Post-Concussion Syndrome" may follow with temporary or longstanding headaches, dizziness, fatigue, nervousness and decreased mental speed. Concussions are typically associated with a gap in memory from some point before the injury to some point following it. The longer the gap in memories, the more likely the person will have permanent cognitive and/or personality changes.

**Moderate** - A moderate brain injury results in loss of consciousness commonly lasting minutes to hours. A variety of physical, cognitive and psychological impairment may occur which should be treated with the appropriate therapies.

**Severe** - Severe brain injury occurs when there is prolonged unconsciousness lasting days, weeks or longer. Cognitive, physical and psychological deficits are likely to occur in individuals with severe brain injuries. Individuals may see significant improvement in these areas during the first year of recovery and slower, more gradual improvements in following years. Despite the recovery, survivors often experience permanent cognitive, physical and psychological impairments.

## WHAT ARE POSSIBLE IMPAIRMENTS?

**Cognitive:** short and long term memory deficits, slowness of thinking; difficulty maintaining attention and concentration; impairments of perception, communication, reading and writing skills; reasoning, problem solving, planning, sequencing and judgment.

**Physical:** speech, vision, hearing, and other sensory impairments, headaches, lack of coordination, muscle spasticity, paralysis on one or both sides and seizure disorders. Many persons with brain injuries appear to be recovered physically but may experience problems with fine motor control.

**Psycho-Social, Behavioral/Emotional:** Fatigue, mood swings, denial, self-centeredness, anxiety, depression, lowered self-esteem, sexual dysfunction, restlessness,

lack of motivation, inability to self-monitor, difficulty with emotional control, inability to cope, agitation, excessive laughing or crying and difficulty in relating to others. After a brain injury, it is important to monitor the individual's emotional status.

*Remember . . . As every person is different, so is every injury, and the person's ability to recover from the injury.*

**The mission of the Brain Injury Association of Illinois is to create a better future through brain injury prevention, research, education and advocacy.**

**This is accomplished through:**

- Acting as an information and resource clearinghouse
- Sponsoring annual educational programming
- Facilitation of statewide support groups
- Sponsoring adult and pediatric recreational camps
- Actively participating in legislative advocacy
- Fostering prevention awareness
- Encouraging research

## **How Will BIA of IL Help Me?**

The Brain Injury Association of Illinois is a statewide non-profit membership organization comprised of people with brain injuries, family members, friends and professionals. Our programs and services include:

### **ADVOCACY**

Individual  
Public Policy

### **EDUCATION**

Annual Educational Conference  
Educational Materials  
Educational Training  
Injury Prevention Program  
Public Awareness

### **SOCIAL/RECREATION**

Camp FunZone (Pediatric Camp)  
Wilderness Endeavor (Adult Camp)

### **FAMILY SUPPORT SERVICES**

Information & Resources  
Support Groups Statewide  
Peer Support Program  
Toll-free Family Resource Line



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