

Traumatic Brain Injury (TBI)

About Traumatic Brain Injuries (TBI)

Traumatic brain injury (TBI) is a complex injury with a broad spectrum of symptoms and disabilities. The impact on a person and his or her family can be devastating. Traumatic brain injury, often referred to as TBI, is most often an acute event similar to other injuries. That is where the similarity between traumatic brain injury and other injuries ends. One moment the person is normal and the next moment life has abruptly changed.

According to the CDC (United States Centers for Disease Control and Prevention), there are approximately 1.5 million people in the U.S. who suffer from a traumatic brain injury each year. 50,000 people die from TBI each year and 85,000 people suffer long term disabilities. In the U.S., more than 5.3 million people live with disabilities caused by TBI. Since our brain defines who we are, the consequences of a brain injury can affect all aspects of our lives, including our personality. A brain injury is different from a broken limb or punctured lung. An injury in these areas limit the use of a specific part of your body, but your personality and mental abilities remain unchanged. Most often, these body structures heal and regain their previous function.

Brain injuries do not heal like other injuries. Recovery is a functional recovery, based on mechanisms that remain uncertain. No two brain injuries are alike and the consequence of two similar injuries may be very different. Symptoms may appear right away or may not be present for days or weeks after the injury. One of the consequences of brain injury is that the person often does not realize that a brain injury has occurred.

Effects of a TBI

The effects of TBI can be profound. Individuals with severe injuries can be left in long-term unresponsive states. For many people with severe TBI, long-term rehabilitation is often necessary to maximize function and independence. Even with mild TBI, the consequences to a person's life can be dramatic. Change in brain function can have a dramatic impact on family, job, social and community interaction.

Source: <http://www.biausa.org/>

Types of Brain Injuries

Diffuse Axonal Injury

- A Diffuse Axonal Injury can be caused by shaking or strong rotation of the head, as with Shaken Baby Syndrome, or by rotational forces, such as with a car accident.
- Injury occurs because the unmoving brain lags behind the movement of the skull, causing brain structures to tear.
- There is extensive tearing of nerve tissue throughout the brain.
- The tearing of the nerve tissue disrupts the brain's regular communication and chemical processes.
- This disturbance in the brain can produce temporary or permanent widespread brain damage, coma, or death.

Concussion

- A concussion can be caused by direct blows to the head, gunshot wounds, violent shaking of the head, or force from a whiplash type injury.
- A concussion is caused when the brain receives trauma from an impact or a sudden momentum or movement change. The blood vessels in the brain may stretch and cranial nerves may be damaged.
- A person may or may not experience a brief loss of consciousness (not exceeding 20 minutes). A person may remain conscious, but feel "dazed" or "punch drunk".
- A concussion can cause diffuse axonal type injury resulting in permanent or temporary damage.
- It may take a few months to a few years for a concussion to heal.

Coup-Contrecoup Injury

- Coup-Contrecoup Injury describes contusions that are both at the site of the impact and on the complete opposite side of the brain.

Penetrating Injury

- Penetrating injury to the brain occurs from the impact of a bullet, knife or other sharp object that forces hair, skin, bone and fragments from the object into the brain.

Sources: Brumback R. Oklahoma Notes: Neurology and Clinical Neuroscience. (2nd ed.). New York: Springer; 2006. and [Center for Disease Control and Injury Prevention](#).

TBI Resources

Brain Injury Association of America

www.biausa.org

Defense and Veterans Brain Injury Center

www.dvbic.org

Traumatic Brain Injury

www.traumaticbraininjury.com

Brain Line

www.brainline.org

Arizona Rehabilitation services

www.azdes.gov/rsa/

Brain Injury Alliance of Arizona

www.biaaz.org

SwabLearning

www.swablearning.org

Abledata

www.abledata.com

Barrow Neurological Institute Concussion and Brain Injury Center

www.thebarrow.org

Arizona Support Groups

<http://www.brainandspinalcord.org/support-groups/brain-injury/arizona.html>

https://groups.psychologytoday.com/rms/prof_results.php?state=AZ&spec=206

<http://braininjury.meetup.com/>

TBI APPS for Computer and Mobile Devices

<u>NAME</u>	Category	Platform	Age
Any.DO	productivity	iPhone iPad iPod Touch android	(iOS 7.0 or later) any
Ginger Page	productivity writing	iPhone iPad iPod Touch	(iOS 7.0 or later) any
Dragon Dictation	Communication Business	iPhone iPad iPod Touch	(iOS 7.0 or later) any
Audible	Reading	iOS Android	any
Breathe2Relax	Stress Anxiety	iOS Android	any
Evernote	Organization	iOS Android Web	any
Where Am I?	Location	Android	any

