

# TRAUMATIC BRAIN INJURY



## What is Traumatic Brain Injury?\*

As defined by the Center for Disease Control and Prevention, a Traumatic Brain Injury (TBI) is:

“a blow or jolt to the head that disrupts the function of the brain. Not all blows or jolts to the head will result in a TBI. However, the severity of brain injuries can range from “mild”, such as a brief change in mental status or consciousness to “severe”, or an extended period of unconsciousness or amnesia after the injury. A traumatic brain injury can result in short-term or long-term impairment in the person’s ability to function independently.”

Traumatic Brain Injury is considered the “signature injury” for soldiers returning from Iraq and Afghanistan.

## How many people are affected by TBI?\*

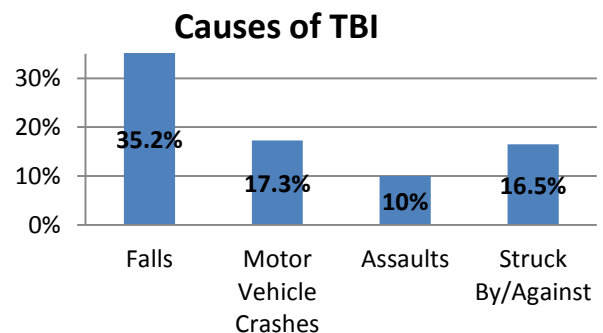
- Approximately 13,000 people in North Dakota live with a TBI-related disability.
- Every 21 seconds, one person in the U.S. sustains a TBI.
- Each year in the United States, 1.4 million people sustain a TBI, resulting in 50,000 deaths and 235,000 hospitalizations.
- Annually, 1.1 million people with a TBI injury are treated and released.
- The number of people not seen in emergency rooms or who receive no care for traumatic brain injuries is unknown.
- Elders age 75 or older have the highest rates of TBI-related hospitalizations and death.
- Among children 0 to 14 years of age, TBI results in an estimated 2,685 deaths each year.
- Sixty percent of soldiers injured in Operation Iraqi Freedom have

sustained blast injuries, and 2/3 of them have a traumatic brain injury.

- Veterans returning from combat may have traumatic brain injuries caused by Improvised Explosive Devices (IEDs), mortars, grenades, bullets, car accidents, mines, or falls.

## What are the causes of TBI?

Leading causes of TBI are falls, motor vehicle crashes, and assaults:



## What are the characteristics of TBI?\*

- **Each brain injury is unique and will affect each individual differently.**
- **Physical symptoms** may include headaches, pain, stiffness, weakness, lack of coordination or balance, problems with sleep or fatigue, slurred speech or no speech, bladder/bowel control problems, seizures, problems with swallowing, walking or dressing.
- **Cognitive/Sensory problems** may include slowed thinking, memory problems, impaired judgment or concentration, difficulty learning new information, difficulty planning, easily distracted, language/communication problems, difficulty with reading or writing skills, changes in smell, taste hearing, vision, difficulty sequencing,

decreased problem solving skills, loss of personal safety skills.

- **Behavioral/Emotional changes** may include irritability, impatience, anxiety, low self-esteem, restlessness/agitation, difficulty reading social cues, mood swings, depression, sexual dysfunction, trouble starting/completing tasks, inability to cope, self-centeredness, anger, and frustration.
- **Learning** may be affected for students impacted by traumatic brain injury. Students may exhibit new learning and behavioral problems after being injured. These students may require special support and assistance in the educational environment.

### **Helpful Resources:**

#### **North Dakota:**

- ND Aging and Disability Resource-LINK [carechoice@nd.gov](mailto:carechoice@nd.gov)  
1-800-451-8693
- ND Interagency Program for Assistive Technology [www.ndipat.org](http://www.ndipat.org)  
1-800-265-4728
- ND Centers for Independent Living:
  - Options Center for Independent Living –East Grand Forks  
[www.macil.org/options.html](http://www.macil.org/options.html)  
1-218-773-6100
  - Freedom Resource Center – Fargo  
[www.freedomrc.org/](http://www.freedomrc.org/)  
1-800-450-0459
  - Dakota Center for Independent Living - Bismarck  
[www.dakotacil.org/](http://www.dakotacil.org/)  
1-800-489-5013
  - Independence, Inc. – Minot  
[www.independencecil.org/](http://www.independencecil.org/)  
1-800-377-5114
- ND Association for the Disabled  
[www.ndad.org](http://www.ndad.org) 1-800-532-6323
- North Dakota Department of Human Services [www.nd.gov/dhs](http://www.nd.gov/dhs)  
1-800-472-2622

- Head Injury Association of North Dakota  
547 South 7<sup>th</sup> St #189  
Bismarck, ND 58504  
1-877-525-2724
- Indigenous People's Brain Injury Association, Dakota Center for Independent Living  
[www.dakotacil.org](http://www.dakotacil.org)  
1-800-489-5013
- Dakota Alpha  
1304 27<sup>th</sup> St NW  
Mandan ND 58554  
1-701-663-0376
- Dakota Pointe  
3503 43<sup>rd</sup> St NW  
Mandan ND 58554  
1-701-667-4552
- HI Soaring Eagle Ranch  
209 2<sup>nd</sup> St SE  
Valley City ND 58072  
1-701-845-5114

#### **National:**

- Brain Line [www.BrainLine.org](http://www.BrainLine.org)
- Center for Disease Control and Prevention [www.cdc.gov](http://www.cdc.gov)
- Brain Injury Association of America  
[www.biausa.org](http://www.biausa.org)
- Nat'l Brain Injury Information Center  
1-800-444-6443
- Nat'l Assoc. of State Head Injury Administrators [www.nashia.org](http://www.nashia.org)
- Defense and Veterans' Brain Injury Center [www.dvbic.org](http://www.dvbic.org)  
1-800-870-9244
- Bob Woodruff Family Foundation  
<http://remind.org>

**ND Protection & Advocacy Project**  
**400 East Broadway, Suite 409**  
**Bismarck, ND 58501-4071**  
**1-701-328-2950**

**Centralized Intake: 1-701-328-3950**  
**1-800-472-2670 (Statewide)**  
**1-800-642-6694 (Emergency)**  
**1-701-328-3934 (fax)**  
**Relay ND 711 TTY**  
[panda@nd.gov](mailto:panda@nd.gov)  
[www.ndpanda.org](http://www.ndpanda.org)

#### **\*References:**

National Center for Injury Prevention and Control  
Brain Injury Association of Michigan  
Brain Injury Association of America  
Defense and Veterans Brain Injury Center