

# The Missouri Greenbook Living with Brain Injury



A guide for survivors, families and caregivers



1-800-451-0669

## Effects of TBI

It is hard to predict what changes are likely to occur as a result of a TBI. Each individual is unique. The effects of TBI are not always apparent. TBI is often called “the silent epidemic” because thousands of people

“ It is hard to predict what changes are likely to occur as a result of a TBI. Each person is unique. ”

with TBI have symptoms that are not generally evident to others.

The changes experienced after a TBI depend on a number of factors including:

- Pre-injury: educational and vocational history, health history, history of alcohol and substance abuse, intellectual ability
- Injury characteristics: severity of the injury, secondary complications
- Available medical and rehabilitation resources
- Emotional reaction to the injury
- Family and social support

**Common problems** associated with injury to the brain may include:

- **Motor:** weakness or paralysis of one side of the body (hemiplegia), poor balance and coordination (ataxia), less endurance, abnormal muscle tone and stiffness
- **Perceptual:** hearing, vision, taste, smell, touch, knowing the relationship of the body to fixed objects

- **Speech and language:** difficulty in expressing thought (aphasia), speaking clearly (dysarthria)
- **Executive functioning:** thinking, reasoning, paying attention, judgment, problem-solving
- **Memory and learning:** problems with short-term memory (storing and retrieving recent information), slower learning, limitations in learning, difficulty with retrieval of long-term memory
- **Emotional changes:** moody, easily frustrated, anxious, impatient, angry, depressed and low self-confidence

In addition, a person with a TBI might find changes in basic bodily functions. These include:

- Body temperature control
- Level of alertness
- Swallowing
- Bowel and bladder function
- Sleep patterns
- Endurance for physical and mental activities
- Sexual function

Seizures may occur after a brain injury. They may happen immediately or much later. It is difficult to predict if a survivor will develop seizures.

A diffuse head injury may be mild to severe. It may cause various difficulties with memory, processing speed, attention and reasoning.

A focal injury, on the other hand, affects a specific area of the brain. The difficulties from a focal injury are often more specific and may affect one area such as language or perception.

Following a brain injury, damage to the optic nerve and other parts of the brain can result in a visual blind spot, partial vision loss, or one or more types of visual field deficits.

Visual field deficits after brain injury can be overlooked early on as more severe and life-threatening injuries sustained from the brain injury are treated. People with brain injury should undergo a vision evaluation as soon as possible after injury. Even if problems with vision are not perceived, deficits may be present and can have an extensive impact on life and rehabilitation efforts.

### **TBI severity**

Concussion/mild TBI (MTBI) is defined by an impact to the head that results in minimal to no loss of consciousness, limited posttraumatic amnesia (PTA) and no findings of injury on brain scans.

People with concussion/MTBI might have **postconcussion syndrome** (PCS).

Symptoms include:

- Headache
- Dizziness
- Fatigue

- Diminished concentration
- Memory impairment
- Irritability
- Depression
- Anxiety
- Sleep problems
- Complaints of being physically sick with no apparent reason
- Hypersensitivity to noise and sensitivity to light (photophobia)

Often PCS symptoms cannot be seen by others. This can lead to loss of self-confidence, frustration, depression and anxiety.

Moderate brain injury may be defined as an injury to the brain resulting in extensive loss of consciousness and PTA as well as some finding of injury on brain scans. Individuals with moderate TBI are likely to experience a higher incidence of cognitive, physical and emotional changes.

Severe TBI may be defined as an injury to the brain resulting in significant loss of consciousness of weeks or longer, PTA extending for days or weeks past emerging from unconsciousness and substantial findings on brain scans evidencing injury across areas of the brain. A person with severe TBI is likely to experience impairments in cognitive, physical, perceptual, social and emotional functioning.

**“Be proactive about diagnosis and prognosis. Don’t accept any evaluation as the final word. There is no final word about TBI.”**

- Arpie Vermillion, Seneca, Mo.  
Mother of a TBI survivor