DEPARTMENT OF HEALTH AND HUMAN SERVICES
Centers for Disease Control and Prevention

CDC
CENTERS FOR DISEASE CONTROL AND PREVENTION

What is Traumatic Brain Injury?

A traumatic brain injury (TBI) is caused by a blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. Not all blows or jolts to the head result in a TBI. The severity of a TBI may range from "mild," i.e., a brief change in mental status or consciousness to "severe," i.e., an extended period of unconsciousness or amnesia after the injury.

How many people have TBI?

TBIs contribute to a substantial number of deaths and cases of permanent disability annually.

Of the 1.4 million who sustain a TBI each year in the United States:

- 50,000 die;
- 235,000 are hospitalized; and
- 1.1 million are treated and released from an emergency department.[1]

Among children ages 0 to 14 years, TBI results in an estimated:

- 2,685 deaths;
- 37,000 hospitalizations; and
- 435,000 emergency department visits annually.[1]

The number of people with TBI who are not seen in an emergency department or who receive no care is unknown.

What causes TBI?

The leading causes of TBI are:

- Falls (28%);
- Motor vehicle-traffic crashes (20%);
- Struck by/against events (19%); and
- Assaults (11%).[1]

What are the signs and symptoms of TBI?

The signs and symptoms of a traumatic brain injury (TBI) can be subtle. Symptoms of a TBI may not appear until days or weeks following the injury or may even be missed as people may look fine even though they may act or feel differently.

What are the long-term outcomes of TBI?

CDC estimates that at least 5.3 million Americans, approximately 2% of the U.S. population, currently have a long-term or lifelong need for help to perform activities of daily living as a result of a TBI.[2]

TBI can cause a wide range of functional changes affecting thinking, sensation, language, and/or emotions. It can also cause epilepsy and increase the risk for conditions such as Alzheimer's disease, Parkinson's disease, and other brain disorders that become more prevalent with age.[3]

What are the costs of TBI?

Direct medical costs and indirect costs such as lost productivity of TBI totaled an estimated $60 billion in the United States in 2000.[4]

References

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2. Thurman D, Alverson C, Dunn K, Guerrero J, Sniezek J. Traumatic brain injury in the United States: a public health perspective. Journal of Head Trauma and Rehabilitation 1999;14(6):602–15.

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4. Finkelstein E, Corso P, Miller T and associates. The Incidence and Economic Burden of Injuries in the United States. New York (NY): Oxford University Press; 2006.