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# Traumatic Brain Injury in the United States: Fact Sheet

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## Overview

Traumatic brain injury (TBI) is a major cause of death and disability in the United States, contributing to about 30% of all injury deaths.<sup>1</sup> Every day, 138 people in the United States die from injuries that include TBI. Those who survive a TBI can face effects lasting a few days to disabilities which may last the rest of their lives. Effects of TBI can include impaired thinking or memory, movement, sensation (e.g., vision or hearing), or emotional functioning (e.g., personality changes, depression). These issues not only affect individuals but can have lasting effects on families and communities.

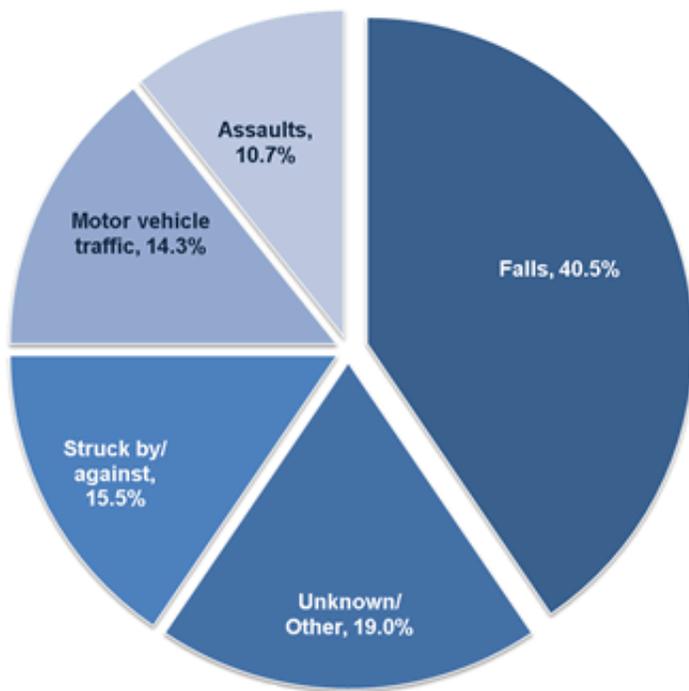
## What is a TBI?

A TBI is caused by a bump, 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 memory loss after the injury). Most TBIs that occur each year are mild, commonly called concussions.<sup>2</sup>

## How big is the problem?

- In 2010, about 2.5 million emergency department (ED) visits, hospitalizations, or deaths were associated with TBI—either alone or in combination with other injuries—in the United States.
  - TBI contributed to the deaths of more than 50,000 people.
  - TBI was a diagnosis in more than 280,000 hospitalizations and 2.2 million ED visits. These consisted of TBI alone or TBI in combination with other injuries.
- Over the past decade (2001–2010), while rates of TBI-related ED visits increased by 70%, hospitalization rates only increased by 11% and death rates decreased by 7%.
- In 2009, an estimated 248,418 children (age 19 or younger) were treated in U.S. EDs for sports and recreation-related injuries that included a diagnosis of concussion or TBI.<sup>3</sup>
  - From 2001 to 2009, the rate of ED visits for sports and recreation-related injuries with a diagnosis of concussion or TBI, alone or in combination with other injuries, rose 57% among children (age 19 or younger).<sup>3</sup>

## Leading Causes of TBI



## TBI?

## What are the leading causes of

- From 2006–2010, falls were the leading cause of TBI, accounting for 40% of all TBIs in the United States that resulted in an ED visit, hospitalization, or death. Falls disproportionately affect the youngest and oldest age groups:
  - More than half (55%) of TBIs among children 0 to 14 years were caused by falls.
  - More than two-thirds (81%) of TBIs in adults aged 65 and older are caused by falls.
- Unintentional blunt trauma (e.g., being hit by an object) was the second leading cause of TBI, accounting for about 15% of TBIs in the United States for 2006–2010.
  - Close to a quarter (24%) of all TBIs in children less than 15 years of age were related to blunt trauma
- Among all age groups, motor vehicle crashes were the third overall leading cause of TBI (14%). When looking at just TBI-related deaths, motor vehicle crashes were the second leading cause of TBI-related deaths (26%) for 2006–2010.
- About 10% of all TBIs are due to assaults. They accounted for 3% of TBIs in children less than 15 years of age and 1.4% of TBIs in adults 65 years and older for 2006–2010. About 75% of all assaults associated with TBI occur in persons 15 to 44 years of age.

## Risk factors for TBI

Among TBI-related deaths in 2006–2010:

- Men were nearly three times as likely to die as women.
- Rates were highest for persons 65 years and older.
- The leading cause of TBI-related death varied by age.
  - Falls were the leading cause of death for persons 65 years or older.
  - Motor vehicle crashes were the leading cause for children and young adults ages 5-24 years.
  - Assaults were the leading cause for children ages 0-4.

## Among non-fatal TBI-related injuries for 2006–2010:

- Men had higher rates of TBI hospitalizations and ED visits than women.
- Hospitalization rates were highest among persons aged 65 years and older.
- Rates of ED visits were highest for children aged 0-4 years.
- Falls were the leading cause of TBI-related ED visits for all but one age group.
  - Assaults were the leading cause of TBI-related ED visits for persons 15 to 24 years of age.
- The leading cause of TBI-related hospitalizations varied by age:
  - Falls were the leading cause among children ages 0-14 and adults 45 years and older.
  - Motor vehicle crashes were the leading cause of hospitalizations for adolescents and persons ages 15-44 years.

## Related Pages

- [TBI Data and Statistics \(data/index.html\)](#)
- [Publications, Reports, and Fact Sheets \(/traumaticbraininjury/factsheets\\_reports.html\)](#)
- [Watch Your Head, a CDC podcast \(http://www2c.cdc.gov/podcasts/player.asp?f=8631703\)](http://www2c.cdc.gov/podcasts/player.asp?f=8631703)
- [CDC's HEADS UP \(/headsup/index.html\)](/headsup/index.html)

## References

1. Faul M, Xu L, Wald MM, Coronado VG. Traumatic brain injury in the United States: emergency department visits, hospitalizations, and deaths. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2010.
2. Centers for Disease Control and Prevention (CDC), National Center for Injury Prevention and Control. Report to Congress on mild traumatic brain injury in the United States: steps to prevent a serious public health problem. Atlanta (GA): Centers for Disease Control and Prevention; 2003.
3. Centers for Disease Control and Prevention. Nonfatal Traumatic Brain Injuries Related to Sports and Recreation Activities Among Persons Aged  $\leq 19$  Years — United States, 2001–2009. MMWR 2011; 60(39):1337–1342.

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