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brain injury

Q&A

What is acquired brain injury?

Acquired brain injury refers to a traumatic or non-traumatic brain injury that occurs after birth. Traumatic brain injury (TBI) is caused by an external force. Non-traumatic brain injury occurs as a result of disease or illness.

What are the leading causes of brain injury?

TBI is most often the result of falls, motor vehicle or bicycle accidents, sporting accidents, violence, or abuse. Non-traumatic brain injury can be caused by electric shock, infectious disease, lightning strike, near drowning, oxygen deprivation, stroke, seizure disorder, toxic exposure, or tumor. Drug or alcohol abuse can also cause brain injury. Although falls are the leading cause of TBI, motor vehicle accidents are the leading cause of TBI-related deaths.

How prevalent is traumatic brain injury?

According to the Centers for Disease Control and Prevention (CDC), there were approximately 214,110 TBI-related hospitalizations in 2020 and 69,473 TBI-related deaths in 2021.

Currently, more than 5.3 million children and adults in the U.S. live with a lifelong disability as a result of TBI. The 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 also have lasting effects on families and communities.¹

What are the most common symptoms of a brain injury?

Brain injury may affect an individual's ability to function well at work, school, home, and in other settings, causing difficulties in the following areas:

- **Cognitive:** memory loss, organizational difficulties, speech and/or communication problems, difficulty in reasoning and problem solving
- **Behavioral:** impulsiveness, aggression, and decline in social skills
- **Physical:** impairment or changes in vision, hearing, coordination, balance and muscle tone

How can brain injury be prevented?

Children should receive instruction on street safety at an early age (“stop, look, and listen before you cross the street”) and be required to wear properly fitted helmets during many sporting and recreational activities, including:

- Riding bicycles, tricycles, scooters, and skateboards, and while rollerblading, skiing, and snowboarding;
- Playing football, baseball, hockey, soccer and other impact sports.

In addition, small children riding as passengers in trailers or bicycle seats should also wear helmets. Riders should use trails and other designated areas for biking, and avoid busy streets.

Children who are passengers in automobiles should be in car seats or seat belts, depending upon their age and weight. Children under 12 years of age and/or those who weigh less than 100 pounds should ride in the back seat of a motor vehicle.

¹ Brain Injury Association of America, 2021

The Centers for Disease Control and Prevention also recommends:

- Making living areas safer for children by:
 - ▶ Installing window guards to keep young children from falling out of open windows;
 - ▶ Using safety gates at the top and bottom of stairs when young children are around; and
 - ▶ Making sure the surface on your child's playground is made of shock-absorbing material, such as hardwood mulch or sand.
- Making living areas safer for seniors by:
 - ▶ Removing tripping hazards such as throw rugs and clutter in walkways;
 - ▶ Using nonslip mats in the bathtub and on shower floors;
 - ▶ Installing grab bars next to the toilet and in the tub or shower;
 - ▶ Installing handrails on both sides of stairways;
 - ▶ Improving lighting throughout the home; and
 - ▶ Maintaining a regular physical activity program, if your doctor agrees, to improve lower body strength and balance.

Can people recover from a brain injury?

Individuals who receive prompt diagnosis and treatment for a brain injury often make great progress in regaining skills following a trauma or illness. Treatment should include rehabilitation and special education services through a multidisciplinary team of professionals, including licensed psychologists, physical and occupational therapists, speech and language pathologists, behavioral specialists and teachers trained specifically in the treatment of brain injury. Residential services can also be useful for individuals with brain injury who need extra care.

Additional resources include:

- ▶ Brain Injury Association of Massachusetts
www.biama.org
- ▶ Brain Injury Association of America
www.biausa.org
- ▶ Centers for Disease Control and Prevention
<http://www.cdc.gov/traumaticbraininjury/>
- ▶ National Institutes of Health
<https://www.ninds.nih.gov/Disorders/All-Disorders/Traumatic-Brain-Injury-Information-Page>

mayinstitute.org

May Institute is a nonprofit organization that is a national leader in the field of applied behavior analysis and evidence-based interventions, serving autistic individuals and individuals with other developmental disabilities, brain injury, neurobehavioral disorders, and other special needs. Founded nearly 70 years ago, we provide a wide range of exceptional educational and rehabilitative services across the lifespan. May Institute operates a school for children and adolescents with brain injury and neurobehavioral disorders in Norwood, Mass.

For more information, contact May Institute at 800.778.7601 or info@mayinstitute.org.