Traumatic Brain Injury (TBI): Pediatric Causes and Prevention Strategies

TBI is an injury caused by a blow, jolt, or penetrating object that disrupts normal functioning of the brain. CDC reports that more than 2.8 million U.S. people sustain a TBI each year; of those, more than 55,000 die and more than 280,000 are hospitalized.¹

TBI can be mild to severe. Severe TBI can lead to permanent disability and even death. 75% of brain injuries are mild (not life-threatening). Concussion is a type of mild TBI.²

All types of TBI can seriously affect a child’s daily life.

Brain injury can cause problems with speaking or understanding, movement or mobility, thinking or memory, and personality or mood.
**Causes**

The **leading causes** of TBI in the United States are\(^1\)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls</td>
<td></td>
<td>About half of brain injuries in children are caused by falls from objects like stairs and bicycles.</td>
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<tr>
<td>Unintentional blunt trauma</td>
<td>28%</td>
<td>28% of brain injuries in children are caused by being hit in the head with an object, like a baseball or soccer ball.</td>
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<tr>
<td>Motor vehicle crashes</td>
<td></td>
<td>Car accidents are the #1 cause of TBI-related death in children older than age 5.</td>
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<tr>
<td>Homicide</td>
<td></td>
<td>Homicide is the #1 cause of TBI-related death in children age 4 and younger.</td>
</tr>
</tbody>
</table>

**Prevention Strategies**

Take the following actions to **reduce the risk of TBI in children**.

- Use a child safety seat or a seat belt when the child is in a motor vehicle.
- Make sure the child wears a helmet when riding a bicycle, skateboarding, and playing sports like hockey and football.
- Install window guards and stair safety gates at home.
- Avoid shaking your baby. Learn how to prevent shaken baby syndrome.\(^3\)

NICHD supports research to better understand and find safe and effective treatment options for TBI. To learn more, visit: [https://www.nichd.nih.gov/health/topics/tbi](https://www.nichd.nih.gov/health/topics/tbi).

\(^1\) Centers for Disease Control and Prevention. (2019). TBI: Get the Facts.
