



## Protecting Children's Brains

The brains of young children grow and develop rapidly. Injuries during this time can affect the way the brain works, sometimes for a long time. Recognizing ways that the brain can be injured is an important step in protecting children's brains from serious injury.

The following chart provides some characteristics of children at different ages and stages, what these mean for preventing injuries in children, and specific tips for protecting their brains.

<i>Infants and Toddlers</i>		
<b>Ages and Stages</b>	<b>Brain-Related Safety Concerns</b>	<b>Prevention Tips</b>
Heads are larger and heavier in relation to their body.	A larger head size means the brain can be more easily injured in falls, car crashes, or other incidents.	Use a properly fitted and installed car seat to protect children’s heads and necks on every drive. Use safety equipment to prevent falls (e.g., safety straps, window guards, safety gates).
Control over their head, neck, hand, and arm movements is limited.	Limited control of body movements means suffocation, an obstruction of the airway due to an object that blocks the nose and mouth, can happen more easily.	Keep objects such as stuffed animals, quilts, pillows, and bumper pads out of cribs.
Reach developmental milestones rapidly (e.g., rolling over, standing up).	The rapid changes mean that children can move in new ways, and falls can happen quickly.	Anticipate what the child will do next and make the space safer before the child reaches the next milestone (e.g., lower crib mattress or move child to a toddler bed before they are able to stand). Keep eyes and one hand on infants and toddlers when they are on high surfaces (e.g., change table).
Reach, grab, cruise along furniture, climb, and pull themselves up. By doing these things, children learn how their bodies work.	As children learn, they may pull heavy items (e.g., dresser, television) onto themselves or climb to a height and then fall.	Secure heavy furniture to the wall using anchors. Be within an arm’s reach of children when they are at heights or climbing. Provide age-appropriate play spaces so children are less likely to be seriously injured when they fall.



## 1 to 3 Years of Age

Ages and Stages	Brain-Related Safety Concerns	Prevention Tips
<p>Heads are larger and heavier in relation to their body.</p>	<p>A larger head size means the brain can be more easily injured in falls, car crashes, or other incidents.</p>	<p>Use a properly fitted and installed car seat to protect children's heads and necks on every drive. Use safety equipment to prevent falls (e.g., safety straps, window guards, safety gates). Use appropriate and properly fitted helmets when biking, skating, sledding, etc.</p>
<p>Use their imagination, are naturally curious, like to explore, and test their limits to learn new skills.</p>	<p>Children's curiosity and desire to explore and test limits means that they may put themselves into situations that are unsafe, increasing the risk of falls, drowning, and other injuries.</p>	<p>Young children should be within an arm's reach of an adult when at heights or when in or near water. Provide active supervision to prevent falls, choking, strangulation, or drowning.</p> <p>Tie curtain and blind cords out of reach of children by using a safety device, clothes pin, hook, or nail. Cut the bottom loop out of curtain and blind cords.</p>
<p>Young children tend to put non-food items in their mouths. This is one way they learn about the world around them, but their airways are smaller than adults.</p>	<p>Choking can cause serious brain injury due to an extended period of time where the brain is not supplied with oxygen.</p>	<p>Keep hard foods (e.g., candy) and objects (e.g., small toys, coins, plastic bags) away from young children.</p>



## 4 to 6 Years of Age

Ages and Stages	Brain-Related Safety Concerns	Prevention Tips
Children are small humans. Many things are not designed for them, including vehicle seat belts.	Children's small size makes them vulnerable to serious injury in the event of a motor vehicle collision if they are not properly restrained.	Use a properly fitted and installed car seat or booster seat to protect children on every drive.
Use their imagination, are naturally curious, like to explore, and test their limits to learn new skills.	Children's curiosity and desire to explore and test limits means that they may put themselves into situations that are unsafe, increasing the risk of falls, strangulation, drowning, and other injuries.	Provide age-appropriate play spaces so that children are less likely to be seriously injured when they fall. Drawstrings and scarves can result in strangulation if a child falls and these become trapped in playground equipment. Remove these items and/or ensure scarf ends are tucked into jackets before going on playground equipment.
Balance, strength, visual and auditory skills (e.g., knowing where sounds are coming from and the speed of objects), motor skills, and coordination are continually developing; children may overestimate their skills and abilities.	Children's continual growth and development mean they are at a greater risk of injury in certain circumstances (e.g., falls, being hit by a motor vehicle).	Provide a variety of movement experiences to build gross motor skills and balance. Be within an arm's reach of children while they are playing at heights greater than 5 feet (e.g., playground). Teach children the rules of the road and practice bike and pedestrian safety skills. Help children learn about risks and hazards in their environment.

