

# Brain Injury in Children Under 4

## Children under 4 have the highest rates of brain injury of any age group

Almost all children will bump their heads, especially when they are babies or toddlers and are just learning to roll over, crawl, or walk; the most common cause of brain injury in children is falls.

The second most common cause of serious brain injury in young children is abusive head trauma, such as shaken baby syndrome. The more force involved in a brain injury, the more likely it is that the injury will be life threatening.

Very young children can't control the movement of their heads as well as adults, they are more easily injured, because

- Their heads are larger in relation to their bodies.
- Their neck muscles are not as well developed.
- Their legs are somewhat shorter in proportion to the rest of their bodies, which makes a child's center of gravity closer to the head than an adult's.
- They are more likely to have an accident as they learn new skills such as running, climbing and jumping.

Following an injury, watch the child carefully for 24 hours and seek medical attention if they display any of the following symptoms appear, as they may be signs of serious brain injury:

- Passing out
- Confusion
- Extreme sleepiness
- Unsteady walking
- Slurred Speech
- A difference in the size of the pupils of the eyes
- New vision problems
- Vomiting

## Many Brain Injuries Can Be Prevented

**Look for injuries to other parts of the body, and make sure to check the face, mouth, or teeth.**

### Protecting babies

Each new learning stage for your baby requires increased attention on your part to prevent an injury. Being aware of your baby's abilities and what skills he or she is likely to develop next will help you prevent injuries.

Take steps to lessen your baby's risk from falling:

- **Never leave your baby unattended in high places**, such as on a tabletop, in a crib with the sides down, or even on a bed or sofa.
- **Don't leave your baby unattended in any infant seat or "sitting" toy**, such as a swing or jumper. Use all the safety straps provided.
- A baby with a pacifier or other object in his or her mouth is at risk for face and mouth injuries in addition to other injuries from a fall.

Take steps to prevent falls:

- **Use sliding gates at both ends of stairways.** Avoid accordion-style gates, because a child's head could get caught in the gate. Look for a gate with openings no bigger than 2.3 in. (5.8 cm).
- **Don't use baby walkers.** Walker injuries can include pinches and falls. Walkers can cause severe accidents, such as a fall down a flight of stairs.
- **Keep your baby away from elevated porches, decks, and landings.**
- **Never leave your baby alone in or around a bathtub.**
- **Make your home safe** from falls by removing hazards that might cause a fall.

## Protecting toddlers and young children

Toddlers and young children like to explore, climb, walk, run, and dance. These activities put them at risk for falls and injuries.

You can help prevent accidents in the following ways:

- As soon as your baby can walk, **lock doors to all dangerous areas** and keep keys out of reach.
- Be careful when using equipment such as high chairs and changing tables. **Always use the safety straps**, and keep a close eye on your child.
- **Use sliding gates at both ends of stairways.** Look for a gate with openings no bigger than 2.3 in. (5.8 cm), and avoid accordion-style gates because a child's head could get caught in the gate.
- **Keep stairways clean and safe.** Carpeting on stairs should be in good repair. Uncarpeted stairs should be kept clean but not slick. Train your child to hold on to the rail and to walk carefully down each step one at a time. If you have pets, teach your child to keep away from them while on stairs.
- **Use double-sided tape, foam backing, or a rubber pad to secure throw rugs on flooring.**
- **Have your child stay seated when he or she is eating or drinking.** And don't allow your child to walk or run with any objects in his or her mouth. Your unsteady toddler could get face and mouth injuries in addition to other injuries from a fall.
- **Install window guards.** Also, don't place furniture, including chairs, close to windows. Make sure windows are closed and locked securely when children are present.
- **Don't allow your child to climb on high furniture.**

Think ahead for new falling hazards your child may encounter, such as:

- **Playground equipment**, especially slides and monkey bars. Avoid taking your child to playgrounds that don't have a soft surface beneath the equipment.
- **Trampolines.** Even with constant adult supervision and protective netting, many children are injured on them. It's best to keep your child off trampolines.
- **Tricycles.** Only allow your child to ride solid, stable tricycles that are low to the ground. Make sure your child wears a helmet. Also, watch where your child rides. Steep downhill slopes can make your child lose control and fall.
- **Falling off the bed.** Install bed rail guards to help prevent falls. Many are now available that are easy to attach and remove. Make sure openings in rails are small enough to prevent a child from getting trapped, which can lead to choking or suffocating.

**Use car seats, seat belts, helmets, and make your home safe from falls to prevent an injury.**