

Pediatric Injury Prevention and Auto Crashes

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While any auto accident is sobering, those involving children are especially disheartening. With students returning to school this fall, Los Angeles and Orange counties in California recently experienced a rash of such accidents, reminding all of us to be a little more careful when minors' lives are at stake. We all want happy and healthy children. This requires thought and effort by parents, caregivers and health care providers every day.

Injuries are the number-one killer of children in the United States. In 2004, injuries accounted for a chilling 59.5 percent of all deaths in children younger than 18 years. The financial burden to society of children who survive childhood injury, but with disability, continues to be enormous.

The entire process of managing childhood injury is complex and varies by region. According to a *Pediatrics* article [April 2008;121(4):849-54]: "Only the comprehensive cooperation of a broadly diverse group of people will have a significant effect on improving the care and outcome of injured children."

It is my opinion that this statement includes the active participation of the chiropractic provider in parent-caregiver education. In this article, we will address only the injury prevention of children involved in motor vehicle accidents.

Motor vehicle crashes are the leading cause of death for the age group 2 to 14 years old (based on 2004 figures, which are the latest mortality data currently available from the National Center for Health Statistics). In 2006, an average of five children ages 14 or younger were killed and 568 were injured in motor vehicle crashes.

Injuries suffered while riding in cars are the number-one preventable cause of death in young children. As chiropractic providers, we must continue with education, outreach and legislation to ensure that all children are properly restrained in the correct restraint system for their age and size every time they travel in a motor vehicle. While great progress has been recently made in preventing child deaths and injuries, and increasing the correct use of child-safety seats, booster seats and safety belts, more work needs to be done to protect child occupants who remain at heightened risk.

The magnitude of this problem demands that chiropractors and other health providers educate parents about the hazards to children, particularly those in the high-risk group. Certainly, young children have delicate bodies and bone structures, and because they are light, may be easily thrown upon impact. In a low-speed crash, an infant or small child can smash into the windshield with the same force as if you dropped the child from a third-story window.

Research has shown that lap/shoulder seat belts, when used, reduce the risk of fatal injury to front-seat occupants (ages 5 and up) of passenger cars by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent

and the risk of moderate-to-critical injury by 65 percent. During 2006, 6,983 passenger vehicle occupants ages 14 and younger were involved in fatal crashes. For those cases in which restraint use was known, 25 percent were unrestrained. Among those who were fatally injured, 45 percent were unrestrained.

One of the best ways to prevent an injury is for infants and children to always ride in car-safety seats, and a proper restraint system must be used each and every time older children ride. For example, a safety seat can hold the child securely in the car and even help absorb some of the forces of violent car crashes. As a rule, every child should be buckled up for every ride.

It's also important to follow the manufacturer's instructions very carefully on the various types of restraints systems in use today. Broadly speaking, we include only the seat belt, booster seat and safety seats in our discussion. Using the safety seat correctly does make a difference. The child must be held securely in the safety seat with harness, straps and a shield. Just a little mistake in the way a seat is secured in a car can make even the safest seat fail in a crash.

The primary goal is to remind all parents and other adults responsible for children traveling in motor vehicles that if children are less than 4'9" tall, they must be in a booster seat. "Only an estimated 10 to 20 percent of children ages 4 to 8 are placed in booster seats by the adults who care for them," said DPH Commissioner J. Robert Galvin, MD, MPH.

A study by the Children's Hospital of Philadelphia shows that children in this age group who use booster seats are 59 percent less likely to be injured in a car crash than children restrained by a seat belt alone. Every year, children suffer preventable injuries and deaths in motor vehicle crashes because they are not riding in an appropriate child-safety seat or booster seat. Booster seats help to correctly position lap-shoulder safety belts for children who have outgrown their child safety seats.

For maximum child-passenger safety, parents and caregivers simply need to remember and follow what is known as the 4 Steps for Kids:

1. Use rear-facing infant seats in the back seat from birth to at least 1 year of age and at least 20 pounds.
2. Use forward-facing toddler seats in the back seat from age 1 and 20 pounds to about age 4 and 40 pounds.
3. Use booster seats in the back seat from about age 4 to at least age 8 unless the child is 4' 9" or taller.
4. Use safety belts in the back seat after age 8 or if taller than 4' 9". It is also important to remember that all children under age 13 should ride in the back seat.

As a personal injury chiropractor, I find myself perfectly placed to educate parents and assist guardians in dealing with injuries to children entrusted to their care and in injury prevention. It is our collective responsibility to keep them safe and provide an environment that is secure.

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