

Child Passenger Safety: Fact Sheet

Motor vehicle injuries are the leading cause of death among children in the U.S.¹ but many of these deaths can be prevented. Placing children in age- and size-appropriate car seats and booster seats reduces serious and fatal injuries by more than half.²

How big is the problem?

- In the United States during 2005, 1,335 children ages 14 years and younger died as occupants in motor vehicle crashes, and approximately 184,000 were injured. That's an average of 4 deaths and 504 injuries each day.²
- Among children under age 5, in 2006, an estimated 425 lives were saved by car and booster seat use.²

What are the risk factors?

- One out of four occupant deaths among children ages 0 to 14 years involved a drinking driver.³ More than two-thirds of these fatally injured children were riding with a drinking driver.⁴
- Restraint use among young children often depends upon the driver's seat belt use. Almost 40% of children riding with unbelted drivers were themselves unrestrained.⁵
- Child restraint systems are often used incorrectly. One study found that 72% of nearly 3,500 observed car and booster seats were misused in a way that could be expected to increase a child's risk of injury during a crash.⁶

How can injuries to children in motor vehicles be prevented?

- Child safety seats reduce the risk of death in passenger cars by 71% for infants, and by 54% for toddlers ages 1 to 4 years.²
- There is strong evidence that child safety seat laws, safety seat distribution and education programs, community-wide education and enforcement campaigns, and incentive-plus-education programs are effective in increasing child safety seat use.⁷
- The National Highway Traffic Safety Administration recommends booster seats for children until they are at least 8 years of age or 4'9" tall.⁸
- According to researchers at the Children's Hospital of Philadelphia, for children 4 to 7 years, booster seats reduce injury risk by 59% compared to seat belts alone.⁹
- All children ages 12 years and younger should ride in the back seat. Adults should avoid placing children in front of airbags. Putting children in the back seat eliminates the injury risk of deployed front passenger-side airbags and places children in the safest part of the vehicle in the event of a crash.

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- Overall, for children less than 16 years, riding in the back seat is associated with a 40% reduction in the risk of serious injury.¹⁰ To learn more about effective interventions to increase child safety seat use, visit CDC's [Motor Vehicle Occupant Safety](#) page.

What are CDC's research and program activities in this area?

Child passenger restraint use and emergency department-reported injuries: A special study using the National Electronic Injury Surveillance System-All Injury Program, 2004

CDC's Injury Center conducted a special study of the NEISS-All Injury Program for 635 injured children aged 12 years or under treated at 15 hospital emergency departments (ED) in 2004. These children all sustained injuries in motor-vehicle crashes. Multiple injury diagnoses were collected and parents of children were interviewed about motor-vehicle crash circumstances. The study found that nine percent of the children were unrestrained and 36% were inappropriately restrained.¹¹

ICARIS 2 Child Counseling Study

CDC's Injury Center researchers conducted a cross-sectional, list-assisted random-digit-dial telephone survey of randomly selected children in English or Spanish-speaking households in all 50 states and the District of Columbia. The main outcome measures were respondents' reports that they or their children received injury-prevention counseling from their child's health care provider in the 12 months preceding the interview, children's practices of safety behaviors, and the association of injury-prevention counseling and such behaviors. Findings suggest that, although the prevalence of pediatric injury-prevention counseling remains low, such counseling was associated with safer behaviors.¹²

ICARIS 2 Child Restraint Study (in progress)

CDC's Injury Center funded the Second Injury Control and Risk Survey, a nationally representative cross-sectional telephone survey conducted in all 50 states. Respondents were asked about their children's restraint practices (ages 0-12 years) during the past 30 days. While there have been several observational studies that record restraint use at one point in time, this study is investigating whether parents are always using correct restraints or whether children are sometimes inappropriately restrained during a one-month period.

Identifying risk factors and examining outcomes for older children involved in motor vehicle crashes

CDC's Injury Center is supporting the Children's Hospital of Philadelphia to examine risk factors and outcomes for children younger than 16 years of age who were involved in motor vehicle crashes. Researchers are interviewing parents to learn about their typical use of child restraints and the particular restraint in use at the time of the crash. Interview questions also assess the parent's understanding of child restraint laws in their state and explore how the motor vehicle crash has affected the child's

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daily life. This information will be considered with data about the types of injuries sustained in the crash, the child's position in the car, and demographic characteristics of the child and driver. This research is part of an ongoing surveillance system that is a collaborative effort between researchers at the Children's Hospital of Philadelphia and State Farm Insurance. The study will shed light on the impact of motor vehicle crashes on children's daily lives. Results will be used to improve prevention strategies.

References

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