

Latest News and Events

New Study Underscores Need for Booster Seat Use Through Age 8

National study published in Oct. 19 issue of *Pediatrics*

A study released today in *Pediatrics* by The Children's Hospital of Philadelphia offers updated evidence that children ages 4 to 8 who are restrained in the rear seat of a car in a belt-positioning booster seat are 45 percent less likely to be injured in a crash compared with children using a seat belt alone. Furthermore, the study showed there was no difference in the level of protection offered by backless versus high back booster seats. Of those riding in booster seats, children involved in side-impact crashes saw the greatest reduction in injury risk.

Researchers at The Children's Hospital of Philadelphia's Center for Injury Research and Prevention studied more than 7,000 children ages 4 to 8 involved in real-world crashes between 1998 and 2007.

Increase in booster seat use among children 6 to 8 years, fewer injuries

"We wanted to take a fresh look at booster seats' effectiveness to reduce injury among this age group, because when we first evaluated the protective benefits of booster seats in 2002, most children using them were 4 and 5 years old," explains lead researcher Kristy Arbogast, PhD, director of Engineering at CHOP's Center for Injury Research and Prevention. "Since then, usage rates among older kids ages 6 to 8 have tripled, and we wanted to be sure these older kids were as well-protected by booster seats as the younger ones, now that we had more data. We found that injury reduction offered by booster seats remains significant even when a greater proportion of older children are included in the study."

Researchers attribute the sharp increase in booster seat use among older children, in part, to many states passing upgrades to their child restraint laws that require booster seats for children older than age 4. The upper age limit of these booster laws varies by state and ranges from 6 through 8 years. Passage of these laws is associated with a nearly 40 percent increase in child restraint use among children up to age 8. While 47 states have booster seat laws, only 25 states and the District of Columbia require booster seats for children up to at least age 8. Florida, Arizona and South Dakota have no booster seat law. The CHOP researchers recommend policymakers work to close these gaps in the laws to cover children to at least age 8 so that parents have the best information to protect their children.

"Based this new analysis of a decade's worth of data on children involved in crashes, policymakers, pediatricians and health educators should continue to recommend as best practice the use of belt-positioning booster seats once a child outgrows a harnessed based child restraint until he/she is at least 8 years of age," says Dennis Durbin, MD, MSCE, co-scientific director of The Center for Injury Research and Prevention and study co-author. "Additionally, these results can give confidence to parents and health educators that choosing between a high back versus a backless booster seat for their child does not represent a compromise in safety."

Resources for parents

More information about this study, along with videos and fact sheets for parents about how to choose and install the right child restraint for your child and you vehicle are available at www.chop.edu/carseat.

Additionally, an up-to-date chart of state booster seat laws and information is available at <http://www.iihs.org/laws/childrestraint.aspx>.

About The Center for Injury Research and Prevention

The Center for Injury Research and Prevention (formerly TraumaLink) at The Children's Hospital of Philadelphia was established in 1998 to advance the safety of children and young adults through science. Operating with the central belief that children are not small adults, the Center's multidisciplinary team of researchers work to reduce injuries- the leading cause of death and acquired disability among the young. The Center's research is organized around three disciplines: epidemiology/biostatistics, engineering, and behavioral science. Based on the research questions at hand, the Center draws from CHOP and University of Pennsylvania-based expertise in emergency medicine; pediatric trauma; surgery; nursing; social work; pediatric and adolescent medicine; epidemiology and biostatistics; bioengineering; computational engineering; psychology; behavioral science; communications; and health education. Center findings are published in scientific journals and translated into recommendation and education tools for parents, educators, policymakers and product manufacturers. For more information on the Center and its research initiatives, visit www.chop.edu/injury.

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