



October 31, 2005

Stephen R. Kratzke
Associate Administrator for Rulemaking
National Highway Traffic Safety Administration
U.S. Department of Transportation
400 7th Street, S.W.
Washington, D.C. 20590

**Comments on NHTSA Notice of Proposed Rulemaking
Federal Motor Vehicle Safety Standards; Child Restraint Systems
Docket NHTSA-2005-21245, August 31, 2005**

Dear Mr. Kratzke:

Public Citizen welcomes the opportunity to comment on the National Highway Traffic Safety Administration's (NHTSA) Notice of Proposed Rulemaking (NPRM) for federal motor vehicle safety standards for child restraint systems.

Motor vehicle crashes are the leading cause of death for children ages 4 to 15.¹ In 2004 alone, 994 children from age 4 to age 7 were killed in motor vehicle crashes,² an increase of 2.7 percent over 2003. Many of these deaths likely could have been mitigated with the proper use of booster seats, which raise the child in the motor vehicle seat to ensure proper safety belt fit. An increasing number of states are requiring the use of these booster seats in motor vehicle, but 17 states still have no booster seat requirements for older children.

Older children are too big for the toddler's safety seat, but not big enough to fit the adult safety belt, designed for 50th percentile males. Booster seats are a tool to increase the safety of long-ignored child passengers.

Anton's Law (Pub. L. 107-318, 116 Stat. 2772), signed into law on December 4, 2002, required a rulemaking to establish performance requirements for child restraints for children weighing more than 50 pounds. After the law passed, NHTSA expanded the applicability of Federal Motor Vehicle Safety Standard (FMVSS) No. 213, Child Restraint Systems, to recommend restraints for children weighing up to 65 pounds.

This latest NPRM further expands the applicability of that standard to children weighing 80 pounds. NHTSA also proposes to develop a 77-pound, hybrid III 10-year-old dummy. The expansion of these recommendations for booster seat use will protect and potentially will save the lives of older children who remain too small for use of adult safety belts only and highly vulnerable if they do use them.

Some areas of the NPRM are in need of improvement. Specifically:

- Performance criteria must be established for safety belt fit for booster seats or other belt guidance devices.
- NHTSA should reevaluate its weight limits for booster seats, and the 10-year-old dummy should be upweighted to more closely match the mean weight of children today.
- NHTSA should continue to emphasize the need for state booster seat laws.
- NHTSA should research and prepare to issue requirements for motor vehicle manufacturers to provide built-in child restraints (integrated restraint systems) in all vehicles.

Performance criteria must be established for safety belt fit for booster seats or other belt guidance devices

NHTSA noted in its NPRM that it is not proposing performance criteria for safety belt fit for booster seats or other belt guidance devices.³ The omission of such performance criteria could lead to the manufacture and subsequent use of booster seats that worsen belt fit for children, thus endangering their lives in the event of a crash. Performance criteria are necessary to give booster seat manufacturers a minimum compliance standard.

Currently, there are booster seats that actually worsen the fit of safety belts. NHTSA should set performance criteria for safety belt fit for booster seats or other belt guidance devices to assure the devices that worsen safety belt fit are no longer manufactured or sold. In a 2001 study on belt fit, the Insurance Institute for Highway Safety (IIHS) reviewed more than 25 booster seats and found that only a small number of booster seats routed the lap belt correctly.⁴ “The photographic evidence in the Institute’s study indicates that some boosters improved belt fit for all the children in the study. However, other booster seats did not improve belt fit, and some actually worsened the fit of the lap belt.”⁵ The IIHS indicates in the study that factors such as a child’s physique and the actual booster seat can negatively or positively affect the fit of a safety belt.

Another concern with booster seats cited by IIHS is that some booster seats with guides to reposition shoulder belts could instead introduce some slack in the belt, which would put children at risk of serious injury in motor vehicle crashes by allowing excursion from the seat.⁶

In its November 2003 study on child belt fit, NHTSA also acknowledged that there is “potential for establishing vehicle seat belt fit requirements with further investigation.”⁷

But it lacks a specific proposal to establish criteria to ensure proper safety belt fit for booster seats.

Performance criteria are necessary to ensure that booster seats are compatible with safety belts. As the above demonstrates, without minimum criteria to provide safety for children, companies could create booster seats that actually put children in more danger of injuries in a motor vehicle crash.

NHTSA should reevaluate weight limits; the 10-year-old dummy must be upweighted to more closely match the mean weight of children today

The NPRM proposes to recommend restraints for children weighing up to 80 lbs. It also proposes to “require booster seats and other restraints to meet performance criteria when tested with a crash test dummy representative of a 10-year-old child.”⁸ These weight and age limits are at odds with each other because the average 10-year-old today weighs more than 80 pounds. Because the weight of children is steadily increasing, NHTSA should reevaluate its weight limits for booster seats to make sure all children are adequately protected in motor vehicles.

In its NPRM, NHTSA uses outdated data from 2000 to determine its mean child weight of 79.3 pounds.⁹ The mean weight for children has increased during the past three decades, according to figures released in October 2004 by the Centers for Disease Control and Prevention (CDC). For children ages 6 to 11, mean weight increased from approximately 65 pounds in 1963-65 to almost 74 pounds in 1999-2002.¹⁰ The mean weight for a 6-year-old boy is 51.7 pounds, and the mean weight for a 10-year-old boy is 84.9 pounds.¹¹ The mean weight for a 6-year-old girl is 49.2 pounds and for 10-year-old girl is 87.9 pounds.¹²

The agency’s proposed increase for recommended restraints – to cover children weighing up to 80 pounds – does not accurately reflect the increased weight of children who will need to use the booster seats. NHTSA should reconsider its upper weight limit recommendation and adjust it according to the most recent CDC study on weight.

Almost half of the 33 states with booster seat laws have established a weight guideline under which children must be restrained. Some states require restraints only until a child reaches 60 pounds, which would restrain children up to 7 years old for the average girl and 8 years old for the average boy, according to the CDC mean figures.¹³ NHTSA should recommend that states update their laws to reflect the new weight figures for children.

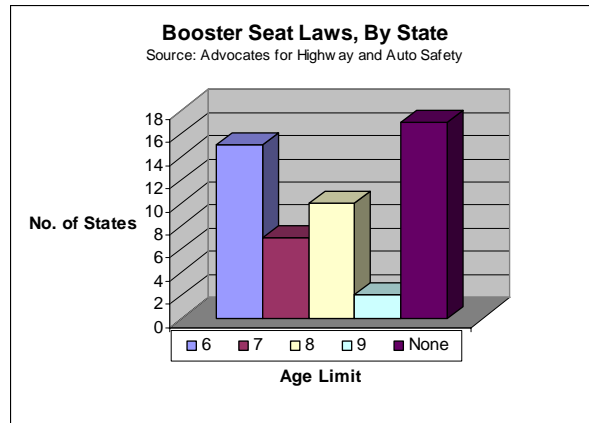
NHTSA also should reevaluate its 10-year-old dummy design to reflect the increased weight of children. The NPRM states that the Hybrid III 10-year-old dummy is 77 pounds – far less than the mean weight of 10-year-old boys or girls, which is 84.9 and 87.9 pounds, respectively. Dr. Carol Berkowitz, president of the American Academy of Pediatrics, acknowledged in her September 12, 2005 comments to NHTSA on “Anthropomorphic Test Devices: Hybrid III-10 Year Old Child Test Dummy” that the

size and proportions of the 10-year-old dummy does not “approximate any human child.”¹⁴ According to Berkowitz, the dummy may be a more accurate representation of a 9-year-old. NHTSA’s current dummy would be between the 50th and 75th percentiles in weight for a 10-year-old.¹⁵

NHTSA should revise its proposed rule and recommend a higher weight limit for booster seats to more accurately reflect the weight of today’s children. The improved 10-year-old dummy should be used to test any child restraint that is recommended for use by children weighing over 50 pounds.

NHTSA should continue to emphasize the need for state booster seat laws

While 33 states and the District of Columbia have adopted booster seat laws, 17 states still have no such laws for children who have outgrown child safety seats¹⁶ (see chart). NHTSA must continue to emphasize the life-saving importance of these laws to states and encourage states to adopt booster seat laws for children 4 and older.



Belt-positioning booster seats, which raise the child up to improve the fit of lap and shoulder portions of the safety belt, reduce a child’s risk of injury in a crash by 59 percent.¹⁷ In a study published in the 2003 Journal of the American Medical Association, researchers found that “children in belt-positioning booster seats in our sample had no injuries to the abdomen, spine, or lower extremities, while children in seat belts had injuries to every body region.”¹⁸

NHTSA recommends that all children who have outgrown toddler safety seats be restrained in booster seats until they are at least 8 years old, unless they are 4’9” or taller.¹⁹ “When used correctly, booster seats can help prevent injury to older children by making adult-sized safety belts fit better,”²⁰ according to NHTSA.

Still, of the 33 states and the District of Columbia that have booster seat laws, only 10 have laws requiring children to be restrained in booster seats until they are 8 years old and 2 states have laws requiring children to be restrained until they are 9 years old.²¹

For these reasons, NHTSA should continue to stress to states the critical importance of properly restraining children – even older children – in booster seats. NHTSA should consider a public education campaign targeted to those states with no booster seat laws, to build a public groundswell of support for the laws.

NHTSA should require that motor vehicle manufacturers provide built-in child restraints in all vehicles

NHTSA should encourage and promote the installation of built-in booster seat restraints with five-point harnesses in domestically sold vehicles. These restraints, which would be permanently installed in cars, would eliminate the current problems of improper installation of booster seats and the possibility of seat dislocation during motor vehicle crashes.

The built-in child restraint with a five-point harness is the “safest” form of restraint for children between 4 and 8 years old, as shown by earlier Public Citizen research.²² The five-point harness in the built-in seat also would provide increased protection for children involved in side-impact collisions by providing upper-body protection for both shoulders.²³

Unfortunately, only a few manufacturers offer built-in child safety seats.²⁴

Built-in child restraints would eliminate many of the errors commonly made when restraining children in motor vehicles. The built-in child restraints would:

- Eliminate the common mistake of improper installation of aftermarket booster seats in vehicles;
- Ensure that the child restraint is compatible with the vehicle;
- Be crash-tested with vehicles;
- Be secure and unable to slide around during crashes or sharp turns;
- Further increase the likelihood that children would be seated in the rear of the vehicles, away from air bags, because the seats are installed in the rear of vehicles;
- Prevent children from being unrestrained or forced to use poorly fitting adult belts;
- Enable children to safely ride in vehicles other than their parents’ vehicles, because the built-in seat would be installed in all vehicles;
- Provide better records to ensure that defective or recalled child restraints are being repaired because owner records are available to vehicle manufacturers for recalls. Generally, recalls of the aftermarket child and booster seats are far too frequent but often ineffective.²⁵

NHTSA should issue a proposed rule to require manufacturers to install built-in child safety seats in all of their vehicles.

NHTSA should be commended for expanding its recommended restraints for children up to 80 pounds

NHTSA should be commended for its NPRM expanding child restraints recommended for children up to 80 pounds, an increase over the current recommendation for children

up to 65 pounds. While the standard could be expanded even further, NHTSA's efforts are critically important to improving protections for children in motor vehicles.

Many children over age 4 who now use no child restraints and use poorly fitting adult restraints would be saved from death and disability with the proper use of booster seats in vehicles, and NHTSA should continue to urge states to pass laws requiring the use of booster seats for older children. NHTSA should also require auto manufacturers to install built-in child restraint systems in their vehicles.

Thank you for your consideration and dedication to making our highways safer.

Sincerely,

Joan Claybrook

Endnotes

¹ Subramanian, Rajesh. “Motor Vehicle Traffic Crashes as a Leading Cause of Death in the United States, 2002.” *Traffic Safety Facts Research Note*, NHTSA, January 2005.

² NHTSA’s “2004 Annual Assessment: Motor Vehicle Traffic Crash Fatality Counts and Injury Estimates for 2004.” August 2005, released Sept. 6, 2005.

³ 49 CFR Parts 571. p. 51726

⁴ See Docket No. NHTSA-2001-10359-10.

⁵ Id.

⁶ Id.

⁷ Louden, Allison E. “Static Evaluation of Belt Fit for Hybrid III 6-Year-Old, 10-Year-Old and 5th Female in Rear Outboard Seating Positions.” NHTSA Vehicle Research and Test Center, November 2003.

⁸ 49 CFR Parts 571. p. 51720

⁹ 49 CFR Parts 571. p.51723.

¹⁰ Ogden, Cynthia L., PhD; Cheryl D. Fryar, MSPH; Margaret D. Carroll, MSPH; and Katherine M. Flegal, PhD. “Mean Body Weight, Height, and Body Mass Index, United States 1960-2002.” CDC Advance Data from Vital and Health Statistics, No. 347. October 27, 2004.

¹¹ Id.

¹² Id.

¹³ Ogden, Cynthia L., PhD; Cheryl D. Fryar, MSPH; Margaret D. Carroll, MSPH; and Katherine M. Flegal, PhD. “Mean Body Weight, Height, and Body Mass Index, United States 1960-2002.” CDC Advance Data from Vital and Health Statistics, No. 347. October 27, 2004.

¹⁴ Berkowitz, Dr. Carol. “Comments on Anthropomorphic Test Devices; Hybrid III 10-Year- Old Test Dummy.” Docket No. NHTSA-2004-21247. September 12, 2005.

¹⁵ Id.

¹⁶ Advocates for Highway and Auto Safety. “Booster Seat Chart (33 states and DC).” July 5, 2005.

¹⁷ Partners for Child Passenger Safety (State Farm Insurance Companies and The Children’s Hospital of Philadelphia). “4- to 8-Year-Old Children in Motor Vehicle Crashes.” Produced by The Children’s Hospital of Philadelphia, 2003.

¹⁸ Durbin, Dr. Dennis R., MD, MSCE; Michael R. Elliott, PhD; and Flaura K. Winston, MD, PhD. “Belt-Positioning Booster Seats and Reduction in Risk of Injury Among Children in Vehicle Crashes.” *Journal of the American Medical Association*. Vol. 289, No. 21, June 4, 2003. p. 2839.

¹⁹ NHTSA. “Buying a Safer Car for Child Passengers” 2005.

²⁰ Id.

²¹ Advocates for Highway and Auto Safety. “Booster Seat Chart (33 states and DC).” July 5, 2005.

²² Public Citizen with C. Tab Turner and Susan Lister. “The Forgotten Child: The Failure of Motor Vehicle Manufacturers to Protect 4- to 8-year-olds in Crashes.” April 2002 p. 28.

²³ Public Citizen with C. Tab Turner and Susan Lister. “The Forgotten Child: The Failure of Motor Vehicle Manufacturers to Protect 4- to 8-year-olds in Crashes.” April 2002.

²⁴ NHTSA. “Buying a Safer Car for Child Passengers” 2005.

²⁵ Public Citizen with C. Tab Turner and Susan Lister. “The Forgotten Child: The Failure of Motor Vehicle Manufacturers to Protect 4- to 8-year-olds in Crashes.” April 2002. p. 29-30.