

## **YouTube Video Sparks Concerns About Safety Belts**

Kyle David Miller--40 pounds, 3 years old, and riding in a booster--was ejected in a rollover crash and died 5/29/05. His almost-5-year-old sister, restrained in the same system, survived all 4 rolls.

Christine Miller memorializes her son on a YouTube video (“Importance of a 5-Point Harness Carseat”), promoting the use of 5-point-harness safety seats with tethers far beyond 40 pounds. Other goals are to raise awareness that safety belts may fail and to encourage testing the use of both LATCH attachments and safety belts to hold safety seats in place. A foundation in Kyle’s name supports access to safety seats for low-income youngsters.

Kyle’s story ignited concern and generated interest in resuming use of 5-point-harness safety seats for older kids. But because of Miller’s contention that the safety belt holding Kyle into his booster failed, the video implies parents should avoid using vehicle belts to protect children, either to attach harnessed safety seats or with a booster.

Data do not indicate frequent instances of belt failure/buckle unlatching. Investigations conducted through the Center for Injury Research & Prevention at Children’s Hospital of Philadelphia of 800 crashes in which appropriately restrained children were injured or killed, did not turn up any such cases.

Their 2003 paper examining subsets of children ages 4 to 8 riding unrestrained, belted, or in boosters, shows a 38% reduction of injury for kids in belts compared to those unrestrained and an additional 59% reduction between belted and “boosted” kids.

Since the 1970s, reported effectiveness of forward-facing safety seats has been based on a comparative study of kids in crashes 1974-84. Much has changed since then, including a drop in unrestrained kids from 54% to 9%! Examining outcomes for children 12-47 months in the back seats of vehicles, excluding pickups, which were towed away post-crash, the CHOP team compared those in safety seats, virtually all restrained by belts, and kids in belts alone. The reduction in injury risk was 71%. The overall risk to the safety-seat kids was less than 1%, despite 80% incorrect use.

SBS USA turned to Chip Chidester, National Center for Statistics & Analysis of NHTSA, to pursue data on belt failure. He reports that data from National Automotive Sampling System-Crashworthiness Data System (CDS) indicate belt failure, of any kind, for children is rare, possibly occurring once or twice annually.

Overall results for the past 8 years for kids 14 and under in CDS crashes was about .05%; such failures may result from any aspect of the crash, from massive destruction of the belt in the crash to a buckle release. Using these nationally representative data, NCSA calculated unrestrained children 0 to 4 years, 5 to 7 years, and 8 to 14 years were 6.6, 14.9, and 10 times more likely respectively to receive serious-to-fatal injury compared to those restrained, a statistically significant finding at  $p < .05$  level.

NHTSA investigates reports of failures due to equipment malfunction through the Office of Defects Investigation where all such incidents should be sent.

However, there have been data collected indicating problems of buckle release either due to the mechanism being activated by flailing arms or legs or flying objects, by particular “pulses” from webbing elongation, or by deterioration of internal springs. Certain designs have been recalled over the years, so the issue should not be ignored.

(See other side for assistance with making important decisions about your child’s safety.)

## Decisions for Parents

What can parents do to increase confidence in their choices for their kids?

- 1) Recognize each stage of restraint as a demotion, not a graduation.
- 2) Examine vehicle features and buckle recalls.
- 3) Be aware of harnessed safety seats for larger kids.\*
- 4) Learn to assess safety seats in relation to one's own kids, cars, and lifestyles.

How parents and professionals can make sure children are as safe as possible:

- 1) Keep children rear facing until age two. (Most convertible seats fit up to 30-35 lbs. rear facing.)
- 2) Use a seat with an internal harness as long as possible (40-80 lbs).
- 3) Use a booster until the child can pass the 5-Step Test in the vehicle in which he/she is riding.
- 4) Have children ride in the back until they start learning to drive.

Once parents look at seats accommodating bigger kids, here are practical issues to review:

- 1) Fit the chosen product into the vehicle. Will parents move the product from car to car?
- 2) Use the tether for higher-weight child seats. Get tether anchors retrofitted in pre-2001 vehicles.
- 3) Install the child seat with a vehicle belt if the child's weight is over the limit for lower LATCH connectors (39-60 pounds, depending on the vehicle).
- 4) Check the instruction booklet; for many seats, the harness is only certified up to 40 pounds.
- 5) Check the top harness slot height for any higher-weight seat to ensure it will be at or above the child's shoulders.
- 6) Recognize that rear facing is preferred for kids up to two years and don't move to a forward-facing seat before then.
- 7) When using a booster, consider locking the switchable retractor on the shoulder-lap belt, if present, to ensure movement of the child doesn't introduce slack in the belt. Use the center location if an appropriate belt is available.

When shopping for a vehicle, consider those with electronic stability control systems and side curtain air bags, both of which show promise in reducing the number of rollovers and ejections, respectively. (See SBS News, 7/06 & 11/04.) Safety belts have been documented as the best tool to reduce vehicle deaths, but several crash avoidance and mitigation features give additional benefit. Finally, parents can check for recall information for their vehicles.

**\*Products with a harness for children over 40 lbs.** (\*\*convertible; used rear facing to 30 lbs. or more)

*To 100 lbs or more:* **Columbia** 2000 (to 102 lbs.), 2500 (to 130 lbs.); **Snug Seat** Traveller Plus (to 105 lbs);

**E-Z-On** Products tethered vests and harnesses.

*To 70-80 lbs:* **Britax** Regent; **Recaro** Como\*\*, Signo\*\*, Start Plus; **Safe Traffic System** Ride Safer Vest; **Sunshine Kids** Radian80\*\*

*To 50-65 lbs.:* **Britax** Boulevard\*\*, Decathlon\*\*, Marathon\*\*; **Dorel** Apex 65; **Evenflo** Titan Elite\*\*, Triumph Advance\*\*; **Fisher-Price** Safe Voyage Deluxe Convertible\*\*; **Graco** Nautilus; **Learning Curve** True Fit\*\*, **Reha-Partner** Peppino, **SafeGuard** Child Seat, Go (lower LATCH connectors certified up to 60 lbs.); **Safe Traffic System** Ride Safer Vest; **Safety Angel** Ride Rytte; **Sunshine Kids** Radian65\*\*

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