

AORP ALBERTA OCCUPANT RESTRAINT PROGRAM

A Provincial Traffic Safety Program

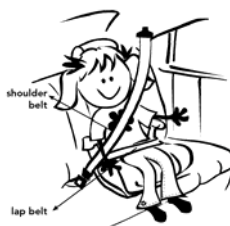
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No child between 6 and 8 years of age is big or strong enough to be adequately protected by an adult seat belt system.⁶

A young child wearing an adult seat belt is 3 ½ times more likely to be injured in a crash than if they were in a booster seat.²



High Back Booster



Backless Booster



Shield Booster

Administered and funded by:

Booster Seats: The Right Choice for Children up to 8 years or 80 lbs (36 kg)

Alberta law requires that at a minimum, children **under 40 lbs (18 kg)** must be properly secured in an approved child safety seat. For children **over 40 lbs (18 kg)**, they must be secured using the complete seat belt system, properly adjusted and securely fastened.

However, safety experts recommend the use of booster seats for children who have outgrown child safety seats but are too small to fit into the existing adult seat belt systems. The Alberta Occupant Restraint Program recommends that at a minimum all child passengers under 8 years of age, who weigh 18-36 kg (40-80 lbs) be properly seated in an approved booster seat while traveling in a motor vehicle.

The Reality....

- In Alberta, the leading cause of death and injury for children under 16 is motor vehicle collisions.
- There is a dramatic decrease in **proper** restraint use with increasing child age.¹

Why Use a Booster Seat?

- Adult seat belt systems provide inadequate protection for children less than 8 years of age and less than 80 lbs (36 kg)
- Booster seats position a seat belt over the strongest bones in a child's body.
- Young children restrained in seat belts alone are over 3 times more likely to be injured in a motor vehicle collision than children in age appropriate restraints.²
- Most injuries to restrained children are attributed to incorrectly fitting restraints.³
- For children, the frequency of head injuries, brain injuries, spinal fractures and other injuries known as "seat belt syndrome" increases when the child is placed in an adult seat belt.⁴

If a booster seat is NOT used, a young child often is injured because of:

- **Slouching.** This causes the lap belt portion to move up over the soft abdomen instead of across the pelvis. In a collision, forces will be transferred to the abdomen and spine rather than the stronger pelvis. This could result in internal bleeding, fractures of the spine and paraplegia.
- **Placing the shoulder belt behind the back.** Without the proper placement of a shoulder belt in a crash, the child's torso is unrestrained and will jack-knife forward. This can result in the child's head hitting his/her knees or the vehicle's interior, resulting in a serious head or brain injury.
- **Placing the shoulder belt under the arm.** If the shoulder belt is placed under the arm, serious internal injuries, such as bleeding, liver damage or broken ribs can occur in a crash.⁵

Which booster seat to use?

- The recommended booster seat for children in a lap/shoulder belt is either a:
 - High back booster seat, or
 - Backless booster seat.
- The recommended booster seat for children when only a lap belt is available is a:
 - Shield booster seat.
- Always use the booster seat according to the manufacturers instructions.
- A properly fitted lap/shoulder belt is safer than a lap belt only.
- Children 12 years and under should be riding in the rear of the vehicle, never in a position with an active front passenger air bag.

Resources:

“Boost their chances” brochure. Capital Health, Community Health Services, CHP02-0978

- Website: www.cha.ab.ca

“Take the booster seat YES test” brochure. Calgary Health Region, Calgary Injury Prevention Coalition

- Website: www.calgaryhealthregion.ca/injuryprevention Go to “Resources”

Alberta Occupant Restraint Manual: A manual on seat belts and child restraints. A.O.R.P. 2003

- Website: www.saferoads.com Go to “Vehicle Safety” to “Occupant Restraints” – “AORP Manual”

Alberta Traffic Safety Act: Sections 78: Seat Belts.

- Website: www.qp.gov.ab.ca Go to Vehicle Equipment Regulations Part 3

Alberta Transportation

- Website: www.saferoads.com

Alberta Centre for Injury Control & Research

- Website: www.med.ualberta.ca/acicr

References:

¹ Ramsey, A., Simpson, E., Rivara, F.P. (2000). Booster seat use and reasons for non-use. *Pediatrics*, 106(2): e20.

² Durbin, D., Kallan, M.J. & Winston, F.K. (2001). Trends in booster seat use among children in crashes. *Pediatrics*, 108(6): e109.

³ Kunkel, N.C., Nelson, D.S., & Schunk, J.E. (2001). Do parents choose appropriate automotive restraint devices for their children? *Clinical Pediatrics*, 40(1):35-40.

⁴ Durbin, D. R., Arbogast, K.B., & Moll, E.A. (2001). Seat belt syndrome in children: A case report and review of the literature. *Pediatric Emergency Care*, 17(6): 474-7.

⁵ Weber, K. (2000). Crash protection for child passengers: A review of best practice. *UMTRI Research Review*, 31(3).

⁶ Winston, F.K., Durbin, D., R., Kallan, M. J., & Moll, E.K., (2000). The danger of premature graduation to seat belts for young children. *Pediatrics*, 105(6): 1179-83.