

Booster seat use: Better safe than sorry!

On a crisp, winter morning, a seven-year-old boy sets out with his family on a journey to visit his grandparents. Coming out of a road bend, the car crashes head-on with a small van driving on the wrong side of the road, at an estimated speed of 80 km/h. The boy's mother dies on impact. The boy, who was only wearing a lap belt, is rushed to the nearest emergency department, where he arrives in

shock and is unable to move any extremities. After initial resuscitation measures, transfusions and investigations, he undergoes surgery for a hepatic laceration and small bowel perforations. Neuroradiological imaging confirms a cervical spinal fracture with cord injury. After a prolonged stay in hospital, he recovers from his abdominal injuries but remains completely paraplegic.

LEARNING POINTS

- Between September 2003 and August 2005, the CPSP lap-belt syndrome study confirmed 28 cases. Of importance:
 - Almost 80% of cases involved children between four and 12 years of age.
 - Although 12 children were younger than eight years of age, only one was restrained in a booster seat (wearing only a lap belt).
 - Nearly all (24 cases) suffered abdominal trauma requiring surgery and prolonged hospital stay.
 - One-quarter of cases had permanent spinal cord lesions and remained paraplegic.
- Age- and size-appropriate motor vehicle restraints, when used properly, save lives daily.
- School-aged children between five and 12 years of age are at the highest risk for lap-belt syndrome because:
 - no lap belts or three-point restraints (lap-shoulder belts) are designed specifically for this age group;
 - standard restraints currently used are designed for adults; and
 - children tend to wear these restraints with the shoulder belt behind their backs.
- The Canadian Paediatric Society advocates for:
 - the need for automobile engineers to review restraints in motor vehicles to protect children adequately; and,
 - all provinces and territories to legislate and enforce a booster seat law for all children:
 - younger than eight years of age;
 - weighing 18 kg to 36 kg; and
 - shorter than 145 cm.
- Health care providers need to alert parents to the proper use of appropriate motor vehicle restraints, including prolonged booster seat use.

The Canadian Paediatric Surveillance Program (CPSP) is a project of the Canadian Paediatric Society, which undertakes the surveillance of rare diseases and conditions in children. For more information, visit our Web site at <www.cps.ca/cpsp> or <www.cps.ca/pcsp>. This article has been peer-reviewed.