

About Sunny Hill

Sunny Hill Health Centre for Children is a provincial facility offering specialized services to children with disabilities, their families and communities throughout British Columbia. Using a family-centred approach, Sunny Hill helps promote the healthy development of children and youth by supporting families and community service providers in their efforts. It is also a resource for educational services and information about disabilities. Services are delivered close to home in a child's community, or on site at Sunny Hill, located in Vancouver.

How To Contact Us

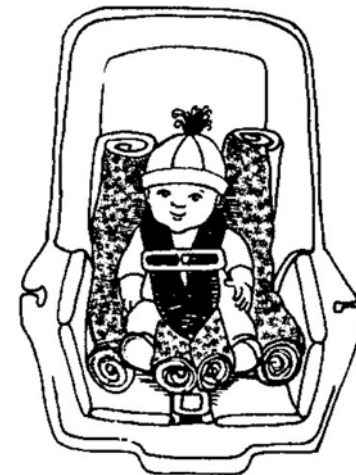
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*Promoting Better Health for Children with Disabilities
through Clinical Services, Education and Research*

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Developed by the health care professionals of the Therapy Department at Sunny Hill Health Centre for Children with assistance from the Department of Learning & Development.

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Introduction

Every child deserves the best possible protection from injury when riding in a motor vehicle. Transporting children with special needs presents unique challenges.

The purpose of this booklet is to provide healthcare professionals with information on issues relating to transporting infants and children with special needs.

General Comments

- Always refer to the manufacturer's instructions for any child safety seat for height, weight and installation.
- Never leave an infant or child alone in a child safety seat, either in or out of the vehicle.
- Child safety seats are also known as "car seats," "child restraints," "infant seats," "convertible seats," and "booster seats."

*A health professional, who is knowledgeable about safe transportation for children with special needs, may be a doctor, nurse, occupational therapist or physiotherapist.

Children In Wheelchairs

- If possible, the child should be transferred to the child safety seat or the vehicle seat and use the regular seat belt.

If the child is transported in a wheelchair:

- The wheelchair is tied down using commercially available tie downs
- The wheelchair is in an upright forward position
- Remove all trays and head straps
- Place the brakes on
- The child should wear the positioning belts plus a shoulder lap belt assembly attached to the vehicle frame

For power wheelchairs:

- Ensure that the power is turned off
- Avoid the free wheel position

Note: Rehabilitation equipment dealers who sell wheelchairs and dealers who do van conversions and wheelchair van lifts often have expertise in securing wheelchairs in vehicles. **A word of caution:** Dealers are selling their product; parents need to do research and consult with health professionals to find what will best work for their situation.

For More Information:

1. American Academy of Pediatrics, "Transporting Children with Special Health Care Needs (RE9852)," Vol. 104, No. 4, October 1999.
2. American Academy of Pediatrics, "School Bus Transportation of Children with Special Health Care Needs," Pediatrics 2001, Vol. 108; pgs. 516-518.
3. Sunny Hill Health Centre for Children, Positioning and Mobility Team, "Wheelchair Transportation Safety Tips for Children and Youth," 2002.

Children With Behavioral Issues

- Use the EZ-ON Vest with rear closure.
- Use commercially available seat belt buckle covers.



EXAMPLE OF AN EZ-ON VEST
THAT HAS A CLOSURE

For More Information:

1. American Academy of Pediatrics, "Transporting Children with Special Health Care Needs (RE9852)," Vol. 104, No. 4, October 1999.
2. Durbin, D.R., Elliot, M.R., & Winston, F.K., Belt-Positioning Booster Seats and Reduction in Risk of Injury Among Children in Vehicle Crashes, Journal of the American Medical Association, June 2003, Vol. 289 No. 21.
3. Perry Rand Transportation Group (imports EZ-ON Vests™) at www.perryrandandltd.ns.ca

Conventional Infant And Child Car Seats

Whenever possible, a conventional car seat is the preferred option over custom systems.

Children need to be able to:

- Bend and flex at the hips while seated
- Maintain respiration in an upright or semi-upright position
- Maintain head and neck control (if over 22 pounds)

Guidelines For Use Of Conventional safety Seats:

Guidelines	Weight	Approximate Age
Stage 1 Rear-facing infant seat	Up to 22 lbs	0 - 1 year old
Stage 2 Forward-facing car seat	*22 lbs - 65 lbs	1 - 4.5 years
Stage 3 Booster seat	40 lbs - 80 lbs	4.5 - 9 years

For more information: "Transporting Infants and Children with Special Needs in Personal Vehicles: A Best Practice Guide for Health Care Professionals 2007." www.tc.gc.ca

*As of May 2007, the Stage 2 category has been expanded to 65 pounds. Ensure that the vehicle anchor points and car seat combos are tested and approved to the new weight of 65 pounds.

Premature Or Low Birth-Weight Infants

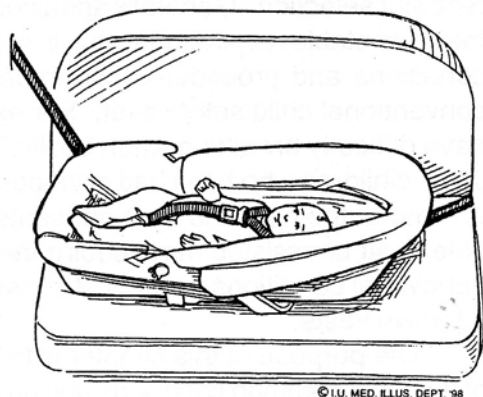
Use an infant-only car seat and make sure that it has the following features:

- 5-point harness (this reduces slouching and provides better support)
- 3 harness slots (with a distance of 15 cm (6 inches) or less between the lowest harness slots to the bottom of the seat)
- A crotch strap with a distance of 14 cm (5 1/2 inches) or less from the crotch strap to the seat back (this reduces forward slouching)
- Ability to recline to a 45 degree angle

Use rolled towels alongside the infant's head, trunk and hips instead of a head hugger or padded insert. Do not add padding under or behind the infant or on top of the infant's head.

To prevent slouching, a rolled face cloth can be added to fill any extra space between the crotch strap and your infant's crotch.

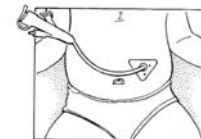
A car bed may be recommended by a physician if an infant cannot tolerate a semi-reclined position.



INFANT IN A CAR BED

Children With Feeding Tubes

- Select a child safety seat with a harness system that does not rub against the feeding tube.
- Use caution to avoid pulling on the tube as harness system is fastened.



CHILD WITH A FEEDING TUBE

Children With A Tracheostomy

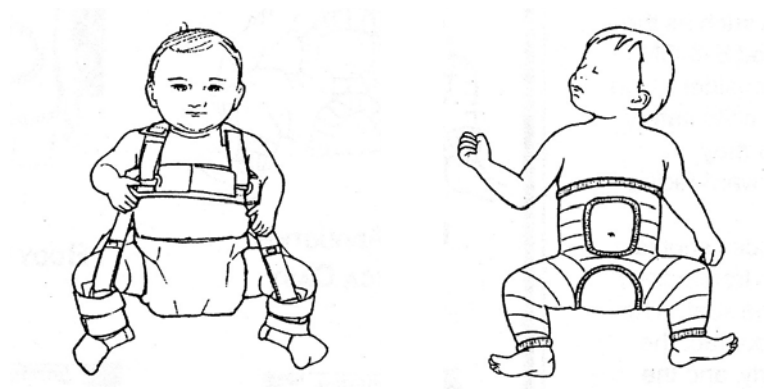
- Avoid child safety seats with trays or shields that could come in contact with the tracheotomy during impact.
- A child safety seat that can be semi-reclined forward facing can help position the child's head back and prevent the chin from covering the tracheostomy.
- Secure medical equipment.
- Any equipment that uses batteries should have enough power for at least double the length of the trip.



CHILD WITH A TRACHEOSTOMY

Children With A Hip Spica Cast/Brace

- The Spelcast car seat is an option for children rear facing (10-20 lbs) and forward facing (20-40 lbs). Since 2005 it is no longer manufactured in Canada and access has been limited. The Spelcast seat can be used if it is in good condition, the history of the seat is known and it is less than 10 years old.
- The Britax Hippo is awaiting to be approved in Canada.
- The Radian car seat by Sunshine Kids may work for some children since it is wider.



For More Information:

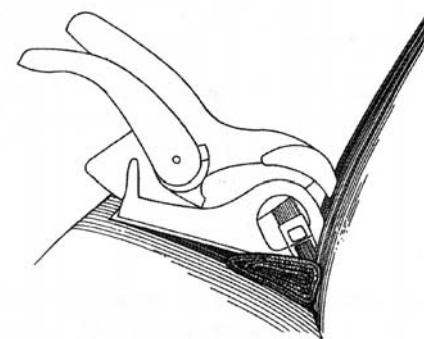
1. The Halo Thoracic Brace (2005), BC Children's Hospital.
2. American Academy of Pediatrics, "Transporting Children with Special Health Care Needs (RE9852)," Vol. 104, No. 4, October 1999.
3. Automotive Safety Program, Indiana University School of Medicine, Riley Hospital at www.preventinjury.org

For More Information:

1. Car Safety for Tiny Babies, Fact Sheet, Safe Ride News Publications, Canadian Revision (October 2006) at www.saferidenews.com
2. American Academy of Pediatrics Policy Statement (1996). Safe Transportation of Premature and Low Birth Weight Infants. Pediatrics, Vol. 97 No. 5, pgs. 758-760.
3. Fetus and Newborn Committee, Canadian Pediatric Society (2000). Assessment of Babies for Car Seat Safety Before Hospital Discharge. Pediatrics and Child Health, Vol. 5 No. 1, pgs. 53-56.
4. Children's and Women's Health Centre of BC, Special Care Nursery Car Seat Positioning and Monitoring Guidelines (Draft 2004).

Children With Poor Head And Neck Control

- Infants and young children must use rear-facing position as long as possible.
- If required, a rolled towel or pool noodle can be placed at the crease of the vehicle seat, under the rear-facing infant seat to increase the tilt to 45 degrees or as per the manufacturer's instructions.



- If the child is ready for the forward-facing position, choose a car seat that can be semi-reclined in the forward-facing position.
- Use padding along sides of the child's trunk and head for support.



- If more support is needed, consider a soft neck collar. Soft collars are not recommended for infants.



EXAMPLE OF A SOFT NECK COLLAR

For More Information:

1. American Academy of Pediatrics, "Transporting Children with Special Health Care Needs (RE9852)", Vol. 104 No. 4, October 1999.

Children With Low Or High Muscle Tone (Sliding or Thrusting Forward)

- Place a folded towel between the child and the crotch strap to fill excess space.
- Place a rolled towel under the child's knees to increase bending at the waist (hip flexion). You can put the rolled towel under the upholstery and under the child's thighs. Do not place it under the child's pelvis.

For More Information:

1. American Academy of Pediatrics, "Transporting Children with Special Health Care Needs (RE9852)", Vol. 104 No. 4, October 1999.

Children With A Halo Brace

- The halo may interfere with the functioning of the 5-point harness.
- Select a car seat that has enough room for the halo brace.
- Thread the shoulder harness straps through the halo between the outside bars and the neck to fit snugly over the child's shoulders.
- Keep a pair of scissors in the vehicle that are large enough to cut the webbing in case of an emergency.