

# Safe Transportation of Children With Special Needs:

## A GUIDE FOR FAMILIES



All children must ride in cars and other vehicles as safely as possible. Some children with certain medical conditions can ride in the standard types of car safety seats that are commonly found in stores. Children with breathing or muscle control conditions, casts, or other health care needs may need to use special medical car safety seats or restraints. If your child has special needs, a variety of child restraint options are available.

### General guidelines for transporting a child with special needs

- Talk to your pediatrician or surgeon about your child's positioning and transportation needs.
- Remember that some children with special needs are able to use standard child restraints such as infant-only seats, convertible seats, forward-facing seats/restraints, or belt-positioning booster seats. (See "Standard car safety seats" on page 5.)
- Check the label on the car safety seat and make sure it states that the seat meets or exceeds Federal Motor Vehicle Safety Standards.
- Never try to alter a car safety seat to fit a child with special needs. Never use a car safety seat that has been altered to fit a child with special needs unless it has been crash tested with the change.
- Stay up-to-date on what might be available for your child. New child restraints offer more options every year.
- Keep your child in the type of car safety seat that gives the most protection until your child reaches the top weight or height recommended by the manufacturer.

See "Special needs car safety seats/restraints product information" on page 5 for more information.

### Getting help with costs

Car safety seats for children with special needs are often expensive. However, you may be able to get help with the cost. Insurance, including Medicaid, may cover the cost of a specialized restraint in some cases. For special needs car safety seat programs in your area, contact

- Your pediatrician.
- A local children's hospital.
- Your rehabilitation therapist.
- A Child Passenger Safety Technician in your area. To find one check the National Highway Traffic Safety Administration (NHTSA) Technician Contact Locator at [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov) or 888/DASH-2-DOT (888/327-4236).
- Easter Seals at 800/221-6827.

### Positioning guidelines

- Read the instructions for the car safety seat/restraint **and** your vehicle. Both sets of instructions will be necessary to make sure that your child is secure in the safety seat/restraint and the safety seat/restraint is correctly installed in your vehicle.

### Standard car safety seats

**Infant-only seats** are for babies who weigh up to 20 to 35 pounds, depending on the seat's manufacturer. They must be rear-facing (the baby faces the back of the vehicle) and keep the baby in a semi-reclined position.

**Convertible seats** are for babies and toddlers. They are used rear-facing for babies who weigh up to 20 to 35 pounds, depending on the manufacturer. When a child is at least 1 year of age **and** weighs at least 20 pounds, the seat can be used forward-facing for toddlers up to 40 pounds.

**Combination seats** are only used forward-facing. They are used as car safety seats with a harness for children who are at least 1 year of age and who weigh at least 20 to 30 pounds, depending on the manufacturer. When your child reaches 40 pounds, you may remove the harness and the seat may be used as a belt-positioning booster seat with a lap and shoulder belt.

**Forward-facing seats/restraints** allow children who are at least 1 year of age and who weigh at least 20 pounds to stay in a harness system until they weigh 40 to 80 pounds, depending on the manufacturer.

**Belt-positioning booster seats** are designed for children who have outgrown car safety seats but are too small for seat belts. They raise the child up to position the lap belt low on the child's thighs and the shoulder belt across the child's shoulder and chest.

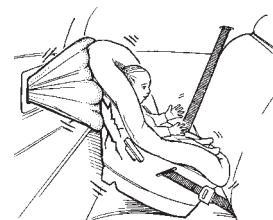
A new anchor system, Lower Anchors and Tethers for Children (LATCH) will be available in most new cars and on all new car safety seats in 2002. This system allows you to install standard car safety seats without using seat belts.

For more information on standard car safety seats, ask your pediatrician about the American Academy of Pediatrics (AAP) brochure *Car Safety Seats: A Guide for Families*.

- Make sure that all harness adjustments are made according to instructions.
- Be sure that all harness straps are snug and flat against your child's body.
- Position plastic chest or harness retainer clips at armpit level to keep the harness straps over the shoulders.
- Never place anything under or behind your child in a car safety seat/restraint.
- You may place rolled blankets, foam, or towels along each side of your child to keep him centered in the car safety seat.
- To help keep your child from sliding down in the seat, you may place a rolled cloth such as a washcloth or diaper between the crotch strap and your child's diaper area.

### Travel guidelines

- The **back seat** is the safest place for all children to ride.
- Never put a rear-facing baby in front of a passenger air bag. In a crash, the air bag inflates very quickly and with great force. The child safety seat could be hit by the air bag and cause serious injuries or even death to the baby (see picture).

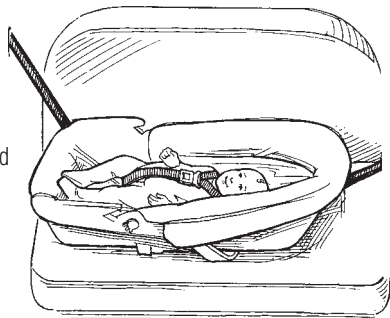


## Car beds

Car beds that meet Federal Motor Vehicle Safety Standards allow babies to travel while lying down. There are many reasons why a baby may need to travel in a car bed, including the following:

- Problems breathing when sitting upright or semi-reclined
- Decreased muscle control
- Bones that break very easily
- Recent surgery on the spine
- Wearing a cast

At this time there are a number of car beds available. They are designed for babies, not larger children. Although the beds vary in design, all of them must be installed lengthwise with the baby's head toward the center of the car.



- If you have no other option than to transport a child who is medically fragile in the front seat and your car has a passenger air bag, you will need to have your air bag switched off. Contact the NHTSA for a permission form and details (888/DASH-2-DOT [888/327-4236] or [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)).
- Depending on your child's condition, it may be wise to limit the amount of car travel.
- Stop often if your trip is long.
- When possible, an adult should ride in the back seat next to your child to watch her closely.
- Develop a medical care plan in case your child has a medical emergency during travel. Some parents attach a copy of the plan to the child's car safety seat/restraint.
- Carry with you an emergency kit that includes any special medications or supplies that your child may need. A checklist will help you ensure that the right medications and supplies are always with you. Do not leave this kit in the vehicle.
- Keep a cellular phone with you to contact help, if needed. Some cellular phones can dial 911 even if you do not purchase a service contract.
- Never use a reclined vehicle seat to transport a child. In a crash, the child can slip out of position and not be protected by the seat belt.
- In some instances, such as very tall children in casts, professional transport may be needed.
- Apply for a handicap parking permit on behalf of your child if it is hard to get her in and out of the car safety restraint. Handicap parking often allows more space to maneuver.
- **Never** leave your child alone in a vehicle, even to do an errand that should only take a minute. Your child's safety is worth the effort to remove her from the car safety seat/restraint, take her with you, and then secure her again when you return.

## Premature and small babies

If your baby was born prematurely (early) or is small, the following information will help you transport your child safely:

- Select a car safety seat that fits your baby. Seats that have the shortest distance from the seat back to the crotch strap will help keep your baby from slouching. Seats that have the shortest distance from the harness slots to the seat bottom will fit better by keeping the harness over your baby's shoulders and holding your baby in the seat.

- Do not use a car safety seat with a shield or tray. In a crash or sudden stop, your small baby's neck or head could hit the shield or tray.
- Place rolled receiving blankets on both sides of your baby to center him in the car safety seat. Place a rolled diaper or washcloth between your child's diaper area and the crotch strap to keep your baby from slipping down (see picture). Do not place these behind or under the baby.

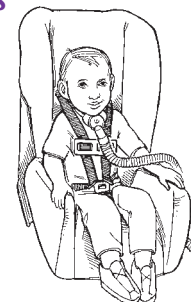


Some babies who were born prematurely have breathing problems when they sit semi-reclined in a car safety seat. Make sure that the hospital staff observes and monitors your baby in a car safety seat before going home. Your baby may need to use a car bed if he has any of the following while in a car safety seat:

- A decrease in oxygen levels
- Slow heart rate
- Apnea (breathing stops for a moment or two)

## Babies and toddlers with tracheostomies

Most babies and toddlers with tracheostomies (a breathing tube placed into the windpipe) are able to use standard car safety seats. However, avoid using child restraints with tray or shield harness systems. In a crash or sudden stop, these could come in contact with the tracheostomy, and injure your child or block her airway.



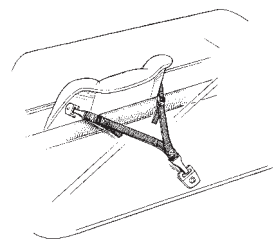
## Babies and toddlers in hip spica casts

Hip spica casts and other devices, such as splints, can make it impossible for a baby or toddler to sit in a standard car safety seat. The Spelcast convertible car seat is designed for babies and toddlers in casts. It is used rear-facing for babies 10 to 20 pounds and forward-facing for toddlers up to 40 pounds and 40 inches. A tether strap is available for use forward-facing. (See "Tether straps," below.) Other options for young children in hip spica casts may be car beds for babies or combination car seat/booster seats with low sides for toddlers.



## Tether straps

Many child restraints that are designed for children with special needs must be installed with a tether strap and a seat belt. A tether strap limits forward movement of the child safety restraint in the vehicle. It attaches to the restraint and is bolted into your car at a vehicle anchor point (see picture). The tether strap and hardware come from the car safety seat or restraint manufacturer. If your car safety seat requires a tether, be sure to take your vehicle to a dealer who can help you find the hole or drill one for you in your vehicle if necessary. Never drill a hole yourself. You could puncture the gas line or damage your vehicle. If you have a newer car, you may already have tether anchors. However, **these anchors are for use with standard car safety seats and may not be strong enough to tether heavier, specialized medical restraints.** Follow the child restraint manufacturer's instructions and vehicle owner's manual regarding tether installation.



## Should you keep your child rear-facing?

Babies are safest riding rear-facing until they are at least 1 year of age **and** weigh at least 20 pounds. In a rear-facing car safety seat, a baby sits back at an angle to help prevent his head from falling forward and affecting his breathing. This position helps to support his head and back and spreads the forces of a crash over these areas instead of his neck.

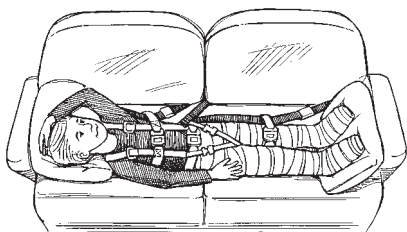
The rear-facing position also can help children who

- Have trouble holding up their heads because of a nerve or muscle disorder
- Break their bones easily
- Have trouble breathing
- Are small for their age

Many car safety seats allow babies and small children to ride rear-facing until they reach about 30 to 35 pounds or the top of the head is near the top of the seat. If a car safety seat holds children rear-facing to higher weights, the child should remain rear-facing until reaching the top weight or height allowed for the car safety seat for best protection. Check the labels on your car safety seat and the instruction manual for the seat for rear-facing weight and height limits.

## Older children in hip spica casts

The modified E-Z-On Vest is designed for children 2 to 12 years of age who weigh 20 to 100 pounds. It allows a child to lie down in the back seat of the vehicle (see picture). The vest must be installed with 2 seat belts. One seat belt is secured under the chest strap of the vest, and the other seat belt is secured under the hip strap of the vest. Older children in hip spica casts may also fit in a combination car seat/booster with low sides.



Remember, never use a reclined vehicle seat to transport a child. In some instances, professional transport may be needed.

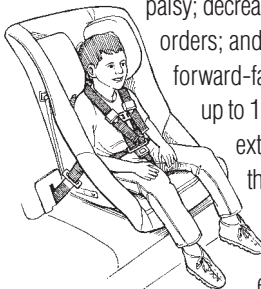
## Babies and children who can bend at their hips or sit up in their casts

Most babies and children who can bend at their hips or sit up in their casts can use standard car safety seats. Make sure the cast does not get in the way of the buckle and fits inside the restraint. A Spelcast car safety seat, forward-facing car seat/restraint, or combination car seat/booster seat with low sides can be useful for children in broomstick casts whose legs are spread widely apart. A convertible car seat with a 5-point harness is an option for children who have a thick, long leg cast that prevents buckling of a tray or T-shield harness.

If an older child is in a cast and can sit up, she may be able to use a belt-positioning booster seat or a seat belt if she is big enough. Make sure she is using the booster seat or seat belt properly and has enough legroom. The lap belt should be worn low and snug across the thighs. The shoulder belt should be across the chest, never behind the back or under the arm. Put padding or blankets on the floor so that the child's legs will be better supported during travel.

## Larger children and forward-facing medical seats

Some children still need the support of a child restraint even after they have outgrown a standard car safety seat. This might include children with cerebral palsy; decreased head, neck, and trunk control; skeletal disorders; and various nerve and muscle disorders. There are forward-facing medical seats that fit children who weigh up to 105 pounds (see picture). These seats come with extra pads and devices to help position the child in the seat. Work with an occupational or physical therapist to position your child in these types of seats. These child restraints also come with an extra strap called a tether. (See "Tether straps," on page 2.) The tether, along with the vehicle seat belt, must be used to install the restraint correctly.



## Children and upright vests

If your older child does not need the added support and positioning features of a medical seat but has difficulty sitting still in a vehicle or gets out of his seat belt, an upright vest may be used. It is installed in the car with the vehicle seat belt and a tether. In some cases, a vest can be used on a school bus. Check with your pediatrician and your school transportation director for current information.

## Older children and belt-positioning booster seats

If your child is able to sit up without help and is too large for a standard car safety seat with a harness or a forward-facing seat/restraint, he should use a belt-positioning booster seat until he is large enough to use a seat belt. Belt positioning booster seats raise a child up so that the lap and shoulder belts fit properly (see picture). This helps protect the upper body and head. These seats must be used with a lap/shoulder belt.



## Older children and seat belts

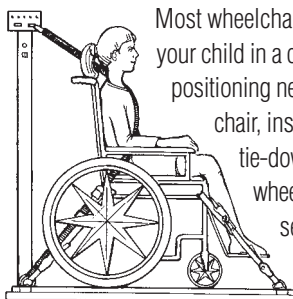
Typically, a child is ready to use a seat belt when all 3 of the following conditions occur:

- The child is tall enough so that when she sits against the vehicle seat back her legs bend at the knee and her feet hang down.
- The shoulder belt lies across the chest, not the neck or throat.
- The lap belt lies low and snug across the thighs, not the stomach.

Children usually do not fit seat belts until they are between 8 to 12 years of age and are about 4 feet 9 inches tall. When your child is ready to wear a seat belt, make sure it fits properly. Shoulder belts should be worn across the chest. Never place a shoulder belt behind a child's back or under a child's arms. This could cause injury to the child.

## Children and wheelchairs

Most wheelchairs are not crash tested. When possible, buckle your child in a car safety seat or restraint that fits her size and positioning needs. If you must transport your child in a wheelchair, install it in a forward-facing position with 4-point tie-down devices attached to the main frame of the wheelchair (see picture). Then restrain your child separately with a shoulder/lap belt. Positioning belts used with wheelchairs are not safety



restraints. Lap trays attached to the wheelchair should be removed and secured separately during transport.

Several wheelchair manufacturers now offer certified transit models of their chairs. The tie-down attachment points on these chairs have been crash tested. Check with your child's therapist to determine if a certified transit model will meet your child's positioning, mobility, and safety needs. You can find more information on wheelchairs on the Internet at [www.wheelchairnet.org](http://www.wheelchairnet.org).

## When a child goes to school

When a child with special needs is ready to enter school, federal laws ensure her right to have equal services, including transportation. Any special transportation needs should be noted in the child's Individual Education Plan. The child's parents or caregivers, school representatives, and medical or rehabilitation personnel develop this plan.

## Adapted vehicles

In some instances, families need an adapted vehicle to meet the transportation needs of their children. In general, families should work with a qualified rehabilitation specialist to decide the changes needed to protect everyone in the vehicle. For names of qualified driver rehabilitation specialists, contact a local rehabilitation center or the Association for Driver Rehabilitation Specialists at 800/290-2344 or [www.driver-ed.org](http://www.driver-ed.org). When choosing a vehicle, families should work with a reputable dealer of adaptive vehicles. *Adapting Motor Vehicles for People With Disabilities* is a brochure published by the NHTSA to help families learn more about adapting vehicles. To get a free copy, call 888/DASH-2-DOT (888/327-4236) or view it on the Internet at [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov).

## Medical home

For children with special needs, it is very important to have a medical home. A medical home is the group of people who work together to provide your child's health care. The medical home doctor (often a pediatrician or other primary care doctor) works as a partner with your family and others who care for your child. The same caring people meet all of your child's needs in your community from birth until she grows up. In addition to providing medical care, the people involved can help your family get special equipment and services for your child. Experts can help you find ways to pay the costs.

More information is available at [www.aap.org/medhome](http://www.aap.org/medhome) or by sending an e-mail to [medical\\_home@aap.org](mailto:medical_home@aap.org).

## Resources

The *Emergency Information Form for Children With Special Needs* is available from the AAP and the American College of Emergency Physicians. This form is on the Internet at [www.aap.org/advocacy/emergprep.htm](http://www.aap.org/advocacy/emergprep.htm).

The American Academy of Pediatrics  
[www.aap.org](http://www.aap.org)

Medem, an e-health network  
[www.medem.com](http://www.medem.com)

American Academy  
of Pediatrics



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## Medical equipment

Some children must travel with devices such as apnea monitors, oxygen tanks, ventilators, walkers, and crutches. Secure these in the vehicle so that they do not become flying objects in the event of a crash or sudden stop. At this time, there is no single product available to secure medical devices. Try wedging the equipment on the vehicle floor with pillows or securing it with seat belts not being used by a passenger. Make sure that any devices that use batteries have enough power for at least double the length of your trip.

Automotive Safety for Children Program  
Riley Hospital for Children  
575 West Dr, Room 004  
Indianapolis, IN 46202  
317/274-2977  
[www.preventinjury.org](http://www.preventinjury.org)

Easter Seals  
230 W Monroe, Suite 1800  
Chicago, IL 60606  
800/221-6827  
[www.easter-seals.org](http://www.easter-seals.org)

National Highway Traffic Safety Administration  
(NHTSA)  
Office of Occupant Protection-NTS-13  
400 7th St, NW  
Washington, DC 20590  
888/DASH-2-DOT (888/327-4236)  
[www.nhtsa.dot.gov](http://www.nhtsa.dot.gov)

Web site devoted to issues related to  
wheelchairs.  
[www.wheelchairnet.org](http://www.wheelchairnet.org)

There may be car safety seats/restraints available that are not listed in this brochure. The products listed here are current only as of the date of publication. Some of the products noted may accommodate children with medical conditions not listed here. Addresses, phone numbers and Web site addresses are as current as possible, but may change at any time.  
Suggested retail prices may vary.

The appearance of the name American Academy of Pediatrics (AAP) does not constitute a guarantee or endorsement of the products listed or claims made.

The information contained in this publication should not be used as a substitute for the medical care and advice of your pediatrician. There may be variations in treatment that your pediatrician may recommend based on individual facts and circumstances.

Although the American Academy of Pediatrics (AAP) is not a testing or standard-setting organization, this guide sets forth the Academy's recommendations based on the peer-reviewed literature available at the time of its publication and sets forth some of the factors that parents should consider before selecting and using a car safety seat or safety restraint.

The American Academy of Pediatrics is an organization of 55,000 primary care pediatricians, pediatric medical subspecialists, and pediatric surgical specialists dedicated to the health, safety, and well-being of infants, children, adolescents, and young adults.

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# Special Needs Car Safety Seats/Restraints Product Information

## Standard infant-only seats

Model Name	Manufacturer	Price	Weight Limits	Height Limits	Conditions	Comments
Varies	Varies For more information about standard car seats, ask your pediatrician about the American Academy of Pediatrics brochure, <i>Car Safety Seats: A Guide for Families</i> .	Varies	Upper limit varies from 20–35 pounds.	Up to 35"	Premature or small babies	Choose seats with smaller harness size. Use seats without shield or tray for best fit. Use rolled receiving blankets along both sides of baby for side support and a rolled cloth under the crotch strap to prevent slouching. At least 1 infant-only seat rear-faces to higher weights. Check instructions for weight and height limits.

## Standard convertible seats

Varies	Varies	Varies	Rear-facing varies from 20–35 pounds; forward-facing up to 40 pounds.	Up to 40"	Decreased head and neck control, tracheostomies, long leg casts, eyeglasses	Use rear-facing for all children until they are at least 1 year of age AND at least 20 pounds. Use seats that rear-face to higher weights for larger babies or children with decreased head, neck, and trunk control. In forward-facing position, use a seat that can be semi-reclined for children with decreased head and neck control. Use 5-point harness for children with tracheostomies, eye-glasses, and thick, long leg casts.
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## Standard combination seats

Varies	Varies	Varies	Up to 40 pounds with harness; up to 80 pounds used as booster seat without harness	Up to 40" with harness; up to 54" used as booster seat without harness	Some casts, behavioral conditions, decreased muscle tone	Forward-facing car seat with harness. After 40 pounds, harness is removed and seat becomes a high-back belt-positioning booster seat. Must have a lap and shoulder belt when used as a booster seat.
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## Standard forward facing seats/restraints

Varies	Varies	Varies	Upper limit varies from 40–80 pounds.	Upper limit varies from 40"–53".	Some casts, behavioral conditions, decreased muscle tone	Forward-facing only. Some require use of a tether.
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## Standard booster seats

Varies	Varies	Varies	Varies from 80–100 pounds.	Varies from 50"–56".	For children who can sit up unassisted	Must be used with a lap and shoulder belt. Low-back and high-back models are available.
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## Car beds

Angel Ride Infant Car Bed	Mercury Distributing 800/815-6330 www.mercurydistributing.com Angel Guard Products, Inc www.angel-guard.com	\$45	Up to 9 pounds	20" or less	Small and premature babies	Harness with dual-tongue buckle. Install lengthwise with baby's head toward the center of the vehicle.
Ultra Dream Ride Car Bed	Cosco, Inc 2525 State St Columbus, IN 47201 800/544-1108 www.djgusa.com	\$70	Up to 20 pounds	Up to 26"	Useful for babies who must travel flat because of breathing problems, fragile bones, Pierre Robin Sequence, spina bifida, and orthopedic conditions.	Install lengthwise with baby's head toward the center of the vehicle. If it is medically necessary for the baby to travel on his stomach, he will outgrow the bed before weighing 20 pounds.
Snug Seat Car Bed	Snug Seat, Inc PO Box 1739 Matthews, NC 28106 800/336-SNUG (7684) www.snugseat.com	\$500	4–21 pounds	Up to 29"	Useful for babies who must travel lying down because of conditions such as breathing problems, osteogenesis imperfecta, Pierre Robin Sequence, spina bifida, and orthopedic conditions.	Baby is secured in a sturdy cloth bunting (sleeping bag) inside the bed. Snug Seat may modify sleeping bag for special applications. Install lengthwise with baby's head toward the center of the vehicle.

## Specialized convertible car seat

Spelcast	Snug Seat, Inc PO Box 1739 Matthews, NC 28106 800/336-SNUG (7684) www.snugseat.com	\$295	10–20 pounds rear-facing; 20–40 pounds forward-facing	Up to 40"; child's head should not go above seat.	Designed for babies and toddlers who cannot use a standard car seat because of hip spica casts or other orthopedic devices.	Designed specifically for children in casts. Tether recommended for forward-facing position. Check with manufacturer to see how the weight of the cast affects how you use the seat.
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## Special Needs Car Safety Seats/Restraints Product Information, continued

### Forward facing medical seats

Model Name	Manufacturer	Price	Weight Limits	Height Limits	Conditions	Comments
Columbia Orthopedic Positioning Seat	Columbia Medical PO Box 633 Pacific Palisades, CA 90272 800/454-6612 www.columbiamedical.com	\$745	20–102 pounds	Up to 60"	Lack of upper body strength	Comes with adjustable head support pads, 4 positioning pads, crotch strap pad, and tether. Optional seat depth extender and abductor pad. Fits in many stroller bases including Columbia Stroller Base. Tether required for installation for children more than 65 pounds.
Carrie Car Seat	Tumble Forms Bergeron Health Care 15 S Second St Dolgeville, NY 13329 800/371-2778 www.tumbleforms.com	\$745– \$885 (depend- ing on size)	Four sizes • 20–40 pounds (preschool) • 30–60 pounds (elementary) • 50–100 pounds (junior) • 60–130 pounds (small adult)	Four sizes • 30"–38" (preschool) • 38"–48" (elementary) • 48"–58" (junior) • 56"–68" (small adult)	Decreased head, neck, and trunk control	Lateral head support and molded seat shape. Adjustable seat-to-back angle. Tether required. Optional footrest adjusts to maintain hip, knee, and ankle flexion. Optional stroller base and Cozee cover. Seat designed to stabilize the pelvis to assist with positioning problems.
Traveller Plus	Britax Child Safety, Inc 13501 S Ridge Dr Charlotte, NC 28273 704/409-1700 www.britaxusa.com	\$450	20–105 pounds and minimum 1 year of age	19"–56"	Decreased head, neck, and trunk control	Forward-facing only. Comes with seat extender, recline bar, and crotch pommel. Must use top tether. Tether anchored to 2 points for children 80–105 pounds. Interchangeable foam padding allows for customizing seat.
Gorilla Postural Seat	Snug Seat, Inc PO Box 1739 Matthews, NC 28106 800/336-SNUG (7684) www.snugseat.com	\$595	20–105 pounds and minimum 1 year of age.	Child's head not to extend above car seat back height	Cerebral palsy, spina bifida, muscular dystrophy, and similar conditions	Forward-facing only. Tether required. Comes with adjustable head support pads. Optional seat extension kit and seat recline wedge. Optional stroller base.
Snug Seat I Postural Seat	Snug Seat, Inc PO Box 1739 Matthews, NC 28106 800/336-SNUG (7684) www.snugseat.com	\$750	20–45 pounds	Child's head not to extend above car seat back height	Decreased head, neck, and trunk control and skeletal deformities	Forward-facing only. Tether required. Foam pad positioning system for customized fit. Crash tested in conjunction with the Transport Stroller Base for tie-down in school buses.
Snug Seat 1000 Car Seat	Snug Seat, Inc PO Box 1739 Matthews, NC 28106 800/336-SNUG (7684) www.snugseat.com	\$295	30–60 pounds	Child's head not to extend above car seat back height.	Decreased trunk control and weak neck muscles	Forward-facing only. Uses shoulder/lap belt. Has 5-point positioning harness. Comes with adjustable head support pads, built-in abduction, support tray, and seat wedge. Optional trunk and hip pads available. Lightweight.

### Travel vests

BESI Restraining Harness	Besi Manufacturing 9445 Sutton Pl Hamilton, OH 45011 800/543-8222 www.besi-inc.com	\$85	Up to 164 pounds	None; for waists 22"–43"	Behavioral con- ditions; decreased trunk control	For school bus use only. Need hip measurement. Adjustable sizes. Cam wrap required for school bus installation, along with lap belt.
E-Z-On Vest	E-Z-On Products, Inc of Florida 605 Commerce Way W Jupiter, FL 33458 800/323-6598 www.ezonpro.com	\$77–\$102 (varies with size and model)	Manufacturer recommends for ages 2 years and older and 40–164 pounds.	None; for waists 22"–43"	Behavioral conditions; decreased trunk control	Standard and fully adjustable sizes. Optional crotch strap. Tether required for vehicle installation; cam wrap required for school bus installation. Styles include "adjustable" zippers and shoulder straps.
E-Z-On 86-Y Universal Harness	E-Z-On Products, Inc of Florida 605 Commerce Way W Jupiter, FL 33458 800/323-6598 www.ezonpro.com	\$60–\$80	Manufacturer recommends for ages 4 years and older and 40–164 pounds.	None	Behavioral conditions	Harness supplements vehicle lap belt with 2 straps to hold upper body. Attaches to car with single bolt.
Q'Vest	Q'Straint 5553 Ravenswood Rd Bldg 110 Fort Lauderdale, FL 33312 800/987-9987 www.qstraint.com	\$84	Two sizes • 20–60 pounds • 60 pounds or more	None	Behavioral condi- tions; decreased trunk control	Manufacturer recommends for school bus use only.

### Travel vests (reclined)

Modified E-Z-On Vest	E-Z-On Products, Inc of Florida 605 Commerce Way West Jupiter, FL 33458 800/323-6598 www.ezonpro.com	\$111– \$132	Manufacturer recommends for ages 2–12; 20–100 pounds.	Child must fit lengthwise on a bench seat. Sizes are for hips 22"–32".	For older children who must lie down because of conditions such as spinal injuries, body casts, long leg casts, or hip spica casts	Need hip measurement to determine size. Standard and adjustable models. Optional crotch strap. Requires 2 seat belts for installation.
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## Special Needs Car Safety Seats/Restraints Product Information, continued

### Mobility base systems

Model Name	Manufacturer	Price	Weight Limits	Height Limits	Conditions	Comments
Kid Kart Xpress	Sunrise Medical 7477 E Dry Creek Pkwy Longmont, CO 80503 800/388-5278 www.sunrisemedical.com	\$2,195 (standard package)	Seat is built on basis of child's measurements; maximum user weight of 55 pounds.	Based on specific measurements of child.	Decreased head, neck, and trunk control and other conditions requiring use of wheelchair	For use in school bus or van. Tie-down locations on mobility base tested and approved for transit. Manufacturer recommends use of Q'Straint tie-down system. Center mount joystick. Seating system options and accessories, including vent base frame, IV pole, and spica cast support.
Kid Kart TLC	Sunrise Medical 7477 E Dry Creek Pkwy Longmont, CO 80503 800/388-5278 www.sunrisemedical.com	\$2,750 (standard package)	Seat is built on basis of child's measurements; maximum user weight of 75 pounds.	Based on specific measurements of child	Decreased head, neck, and trunk control and other conditions requiring use of wheelchair	For use in school bus or van. Tie-down locations on mobility base tested and approved for transit. Manufacturer recommends use of Q'Straint tie-down system. Seating system options and accessories, including vent and battery tray, and IV pole.
Mulholland Growth Guidance System	Mulholland Positioning Systems, Inc 215 N 12th St PO Box 391 Santa Paula, CA 93061 800/543-4769 www.mulhollandinc.com	\$2,500– \$4,500	Up to 50 pounds	None	Decreased head, neck, and trunk control	Postural support system with stroller base. Remove from stroller for installation in vehicle. Requires a tether. Install in bus or van only with Positioning Systems, Inc tie-down system.
Pixie Positioning Chair	Sammons Preston PO Box 5071 Bollingbrook, IL 60440-5071 800/323-5547 www.sammonspreston.com	\$1,435– \$1,625	Children ages 3–12; small and large sizes up to 110 pounds	None	Cerebral palsy and conditions that require positioning	Height-adjustable footrest and multiple harness settings. Folds for storage and travel.

From your doctor