



Car Safety for Children with Down Syndrome

Children with Down syndrome may have additional needs that may affect travel. This brochure answers some questions you may have about safely transporting your child.



Figure 1

How long should my child ride rear-facing?

The American Academy of Pediatrics recommends keeping your child rear-facing *as long as possible* (Figure 1) until they reach the highest height or weight limits allowed by the manufacturer for the car seat they are using. Since some children with Down syndrome have decreased muscle tone or unstable neck bones, riding rear-facing helps support their entire body and protects them better from injury,

especially to the spine. Most new rear-facing only car seats go up to 30-35 pounds and convertible car seats (Figure 1) allow children to ride rear-facing up to 40 or 50 pounds.

Will the car seat harness straps hurt my child after heart surgery?

Ask your surgeon if you are worried that your car seat's harness straps will put too much pressure on your child's stitches (Figure 2). If this is a problem, you may need to use a different car seat. Pressure from harness straps in a crash is less in a rear-facing position.



Figure 2



Figure 3

What if my child has a tracheostomy?

Use a car seat with a five-point harness. A five-point harness has straps that come over your child's shoulders and hips and buckle into a crotch strap (Figure 3). Car seats with multiple recline options may provide improved positioning options for your child.

What if my child has trouble sitting up?

If your child fits well in a conventional car seat (rear-facing or forward-facing) and needs only minimal additional support, you can place rolled blankets or rolled towels along the side of your child's trunk to prevent your child from leaning side to side (if allowed by the car seat manufacturer). Never put anything behind or under your child. Many new car seats have inserts and postural foam added for support.

What car seat should I use when I turn my child around forward-facing?

After outgrowing the rear-facing highest height or weight limits allowed by the manufacturer for the car seat they are using, turning forward-facing is the next step. Using a forward-facing car seat with a five-point harness until your child outgrows the highest height or weight limits allowed by the manufacturer for the car seat they are using is recommended. Most forward-facing car seats allow children to remain in a five-point harness system up to 65 pounds (*Figure 4*).



Figure 4



Figure 5

What if my child is too big for the car seats at the store?

Some children with Down syndrome outgrow conventional car seats but need additional support or have difficulty understanding the importance of staying buckled. Your child may need an adaptive restraint like a large medical seat (*Figure 5*). Large medical seats have harnesses for weights up to 115-130 pounds.

Adaptive Restraints

Large medical seats, adaptive boosters, and adaptive vests offer a variety of accessories, such as head supports, trunk supports, or anti-escape accessories to meet your child's unique transportation and positioning needs. Many adaptive booster seats and adaptive vests are for weights up to 175-225 pounds. It is important to work with your child's medical team to determine the best adaptive restraint. Adaptive restraints are usually ordered following a therapist evaluation through a local durable medical equipment vendor. Insurance providers may cover the cost if medically necessary documentation is provided.

When can my child ride in a booster seat?

If your child does not need additional support and will stay buckled, a booster seat can be used until they reach the highest height or weight limits allowed by the manufacturer for the booster seat they are using (*Figure 6*). This is usually when a child is ~49 inches and/or weighs ~65 pounds. A booster seat will lift up your child so the vehicle lap-and-shoulder belt fits properly and will make your child safer in a crash. Never use a booster seat with a lap-only seat belt.



Figure 6

When will my child be ready to use a seat belt?

It is recommended that your child stay in a booster seat until the seat belt fits (usually around 4' 9"/57 inches). Your child must be able to sit all the way back against the vehicle seat without slouching, knees bend easily over the edge of the seat, and wear the lap-and-shoulder seat belt flat and snug on upper thighs and between neck and shoulder (over clavicle). This is often when a child is between around 13 years or older.

When should my child ride in the front seat?

The back seat is the safest place for all children 12 years and younger, even if your car does not have an airbag.

Where should I put medical equipment in the car?

Place medical equipment such as apnea monitors and oxygen tanks on the floor of the vehicle wedged with pillows, foam, or blankets (if allowed by vehicle manufacturer - as they may interfere with the advanced airbag sensors). Equipment can also be placed in an unoccupied vehicle seat with the lap-and-shoulder belt restraining the equipment. There are currently no straps, belts, or bags commercially available specifically made for securing medical equipment in a vehicle.



Figure 7

How should my child ride in a school bus?

Best practice is for preschool-age children who weigh less than 40 pounds to use a car seat on a school bus. Talk with the school about your child's transportation needs. Make sure transportation staff are included in the IEP (Individual Education Program) meeting. There are school bus specific restraints (Figure 7), large medical seats, or children may be asked to ride in their wheelchair.

How can I be sure my child is buckled up correctly?

Always read and follow the directions that come with your car seat and your vehicle owner's manual. You can find a certified child passenger safety technician (CPST) who is trained in adaptive transportation (*Safe Travel for All Children* course) at cert.safekids.org. Click on "Find a Tech". In the CPS Technician search form, choose your state, and make sure to click "Safe Travel for All Children" in the Extra Training field.

If there is not someone trained in adaptive transportation in your area, please call 800-543-6227 for further assistance.



SCHOOL OF MEDICINE

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FOR MORE INFORMATION CONTACT:
National Center for the Safe Transportation of Children
with Special Health Care Needs
Indiana University School of Medicine

800-543-6227

preventinjury.medicine.iu.edu

Inclusion of products in this brochure does not imply endorsement.
Figure 7 source:www.imminet.com

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This brochure was developed by the National Center for the Safe Transportation of Children with Special Health Care Needs and funded by the National Highway Traffic Safety Administration and the National Safety Council.

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02/29/2024