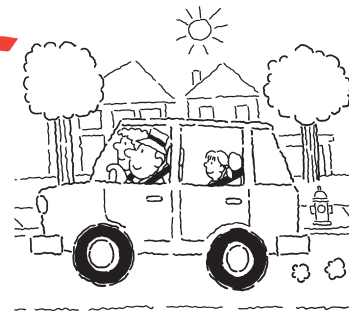


Car Safety Seats:

A Guide for Families

Part I 2003 Safety Information



Every state requires that infants and children ride buckled up. However, state laws do not always require the safest way to transport a child. More children are still killed as passengers in car crashes than from any other type of injury. Using a car safety seat correctly can help prevent injuries to young children, but it is not as easy as you think. Just a little mistake in how the car safety seat is used could cause serious injury to your child.

Which is the “best” car safety seat?

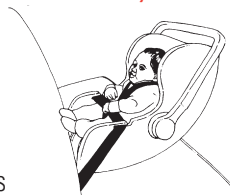
- No one car safety seat is “safest” or “best.” The “best” car safety seat is one that fits your child’s size and weight, can be installed correctly in your car, and that you will use every time you drive.
- Price does not always make a difference. Higher prices can mean added features that may or may not make the car safety seat easier to use.
- When you find a car safety seat you like, try it out! Put your child in the car safety seat and adjust the harnesses and buckles. Make sure it fits in your car.
- Keep in mind that displays or illustrations of car safety seats in stores do not always show them being used correctly.

Types of car safety seats

Infant-only seats

- Only can be used rear-facing
- Are used for babies who weigh up to 20 to 22 pounds depending on the model
- Are small and portable and fit newborns best
- Come with a 3-point harness or a 5-point harness

Infant-only seat



Infant-only seat features

Detachable base. Several infant-only seat models come with detachable bases. The base attaches to the car, and the car safety seat easily snaps into the base. This way, you can carry your baby in and out of the car without needing to install the car safety seat each time. After buckling your baby into the car safety seat, you simply click or snap the seat into the installed base. Some bases come with an angle adjuster that makes it easier to correctly recline newborns. These car safety seats also can be used without the base by installing the safety seat into the vehicle with the seat belt, or you can buy additional bases for other cars. However, this feature is only helpful if the base fits tightly into your car. In some cases, the car safety seat may fit better without the base.

Higher weight and height limits. Several infant-only seats are available for use up to 22 pounds. Most convertible seats also now have higher weight and height limits in the rear-facing position for heavier or taller babies. Keep in mind that many babies may reach the top height limits of the car safety seat before they reach the top weight limits. If your infant’s weight or height exceeds the limits of the car safety seat before 1 year of age, use an infant-only seat or a rear-facing convertible seat that has a higher limit.

Car safety seats and shopping carts

Do not place a child of any age in a shopping cart. Many infant-only car safety seats lock into shopping carts. Although infant seats may help prevent falls from shopping carts, injuries can still occur if the cart tips over. The weight of an infant in an infant seat placed high in a shopping cart may make the cart more top-heavy and more likely to tip over. This is true even for shopping carts with built-in infant seats. Thousands of children are hurt every year from falling from shopping carts or from the carts tipping over. Instead, consider use of a stroller while shopping with young infants or a backpack or frontpack for older children.

Harness slots. Infant-only seats that come with more than one harness slot give more room for growing babies. In the rear-facing position, the harness slots usually should be at or below your baby’s shoulders. Check the car safety seat manufacturer’s instructions to be sure.

Handles. Carrying handles on car safety seats vary greatly in style and ease of use. Most infant-only seats require the handle to be down during travel. Check the manufacturer’s instructions to be sure.

Other features. Angle indicators, built-in angle adjusters, harness adjusters, and head support systems are other features that may make correct installation easier to achieve.

Convertible seats

- Are bigger and heavier than infant-only seats, and since they can be used rear-facing and forward-facing, they can be used longer and for larger children.
- May not fit newborns as well as some infant-only seats. Make sure that your baby can recline comfortably in the car safety seat. Check the car safety seat manufacturer’s instructions to be sure that harnesses can be adjusted properly.
- Are used rear-facing for infants until they have reached at least 1 year of age *and* weigh at least 20 pounds (or more depending on model). The American Academy of Pediatrics (AAP) recommends that babies be kept rear-facing until they reach the maximum weight and height allowed by the maker of the car safety seat.
- Can be used forward-facing for toddlers who are at least 1 year of age *and* weigh more than 20 pounds. When your child is older than 1 year of age *and* has reached the highest weight or height allowed by the manufacturer for use rear-facing, you may turn the car safety seat forward-facing and make the following 3 adjustments:
 - Move the shoulder straps to the top slots or as they are described in the manufacturer’s instructions. The shoulder straps must be at or above your child’s shoulders. Check your instructions for any additional information on the placement of the shoulder straps that may be specific for your car safety seat.

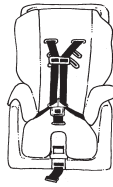
- Move the car safety seat into the upright position. (Check the manufacturer's instructions for the recline angle allowed when forward-facing.)
- Route the seat belt through the belt path for forward-facing.

- Have the following 3 types of harnesses:

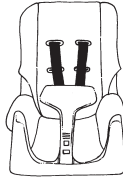
- **5-point harness** — 5 straps: 2 at the shoulders, 2 at the hips, 1 at the crotch
- **T-shield** — A padded T-shaped or triangular shield attached to shoulder straps
- **Overhead shield** — A padded tray-like shield that swings down around the child

Note: If using a convertible seat for a small infant, the best choice for safety and a more secure fit is the 5-point harness. A small baby's face can hit a shield in a crash.

5-point harness



T-shield



Overhead shield



Convertible seat features

Adjustable buckles and shields. Many convertible seats have 2 or more buckle positions to give you extra room for a growing child. Many overhead shields can be adjusted as well.

Higher weight limits. Several convertible seats are now available with higher rear-facing weight limits for bigger babies. For larger babies, look for a convertible seat that can be used rear-facing up to 30 or 35 pounds.

Forward-facing seats

- Cannot be used rear-facing
- Are only for children who are at least 1 year of age and weigh at least 20 pounds
- Can be used with lap only belt or lap/shoulder belt

Combination seats

- Cannot be used rear-facing.
- Are only for children who are at least 1 year of age *and* weigh at least 20 pounds.
- Have an internal harness system for children who weigh up to 40 to 50 pounds depending on model.
- Convert to belt-positioning boosters (by removing the harnesses) for children who have exceeded the height or weight limits for use with the internal harness. This allows the seat to be used longer.
- Can be used with lap only belt or lap/shoulder belt with internal harness or lap/shoulder belt as a booster seat.

Booster seats

When your child reaches the top weight or height allowed for his car safety seat, his shoulders are above the harness slots, or his ears have reached the top of his car safety seat, you need a booster seat. Booster seats should be used until your child can correctly fit in a lap/shoulder seat belt. (See page 3 for information on using seat belts.) Following are 2 types of booster seats:

- **Belt-positioning boosters** are used with lap/shoulder belts. The booster raises your child so that the lap/shoulder belt fits properly. This helps protect your child's upper body and head. Both high-backed (for vehicles that do not have head rests) and backless models are available.

High-backed belt-positioning booster



- **Shield boosters:** Based on federal motor vehicle safety standards established by the National Highway Traffic Safety Administration (NHTSA), shield boosters have not been certified by their manufacturers for use by children who weigh more than 40 pounds. For these children, or for children who are too heavy or too tall to fit in a seat with a full harness, the shield may be removed and the seat used with a lap/shoulder belt as a belt-positioning booster.

Children who weigh 40 pounds or less are best protected in a seat with a full harness. Significant injuries have occurred to children in shield boosters in crashes due to ejection, excessive head movement, and shield contact. Although boosters with shields may meet current federal safety standards for use by children who weigh 30 to 40 pounds, on the basis of current published peer-reviewed data, the AAP does not recommend their use. Children should remain in a convertible, forward-facing, or combination seat with a full harness until they reach the top weight or height allowed by the manufacturer.

Travel vests

A travel vest may be an option if your car has only lap belts.

Built-in seats (integrated seats)

Built-in seats are available in some cars and vans. They may be used for children who are at least 1 year of age *and* weigh at least 20 pounds. Built-in seats eliminate installation problems. However, weight and height limits vary. Check with vehicle manufacturers for details about built-in seats that are currently available.

Basics of car safety seat use

- Always use a car safety seat, starting with your baby's first ride home from the hospital, and always use your own seat belt. Help your child form a lifelong habit of buckling up.
- Read the car safety seat manufacturer's instructions and always keep them with the car safety seat.
- Read your vehicle owner's manual for important information on how to install the car safety seat correctly in your vehicle.
- The safest place for all children to ride is in the back seat.
- Never place a child in a rear-facing car safety seat in the front seat of a vehicle that has an active passenger airbag.
- The harness system holds your child in the car safety seat and the seat belt or Lower Anchors and Tethers for Children (LATCH) system holds the car safety seat in the car. Attach both snugly to protect your child. (See page 3 for more information on the LATCH system.)

Using car safety seats correctly

Read the car safety seat manufacturer's instructions and the child restraint section of your vehicle owner's manual carefully to be sure you are installing and using the car safety seat correctly. When you install the car safety seat in your car, check the following:

Is your child buckled into the car safety seat correctly?

- Be sure to use the correct harness slots for the child.
- Keep the harnesses snug.
- Place the plastic harness clip, if provided, at armpit level to hold shoulder straps in place.
- Make sure the harness straps lie flat and are not twisted.
- Dress your baby in clothes that allow the straps to go between the legs. Adjust the straps to allow for the thickness of your child's clothes, making sure that the harness still holds the child securely.

CPS Technicians

For specific information about installing your car safety seat you may consult a certified Child Passenger Safety (CPS) Technician. CPS Technicians are certified by the American Automobile Association (AAA). A list of certified CPS Technicians is available by state or ZIP code on the National Highway Traffic Safety Administration (NHTSA) Web site at <http://www.nhtsa.dot.gov/people/injury/childps/contacts/index.cfm>.

A list of inspection stations staffed by certified CPS Technicians is available at <http://www.nhtsa.dot.gov/people/injury/childps/cpsfitting/Index.cfm>.

The information is available by telephone on the NHTSA Auto Safety Hot Line at 888/DASH-2-DOT (888/327-4236), from 8 am to 10 pm ET, Monday through Friday.

- In cold weather, tuck blankets around your baby after adjusting the harness straps snugly. Never place blankets under the baby.
- To keep your newborn from slouching, pad the sides of the seat and between the crotch with rolled up diapers or receiving blankets.

Is the car safety seat buckled into your vehicle correctly?

- Place the car safety seat facing the correct direction for the size and age of your child. Route the seat belt (or LATCH strap if it comes as a separate detachable kit) through the correct path on the car safety seat (check the instructions to make sure), buckle or attach it, and pull it tight. Before each trip, check to make sure the car safety seat is installed tightly enough by pulling on the car safety seat where the seat belt passes through or the LATCH system is attached. It should not move more than an inch side to side or toward the front of the car.
- If your infant's head flops forward, the car safety seat may not be reclined enough. Tilt the car safety seat back until it is reclined as close as possible to a 45-degree angle (according to manufacturer's instructions). Your car safety seat may have a built-in recline adjuster for this purpose. If not, you may wedge firm padding, such as a rolled towel, under the foot end of the base on a rear-facing car safety seat.
- Check the seat belt buckle. Make sure it does not lie just at the point where the belt bends around the car safety seat. If it does, you will not be able to get the belt tight enough. If you cannot get the belt tight, look for another set of belts in the car that can be tightened properly or consult a Child Passenger Safety Technician for assistance.
- Many lap/shoulder belts allow passengers to move freely even when they are buckled. These belts will not secure a car safety seat during travel. Read your car owner's manual to see if your seat belts can be locked into position or if you will need to use a locking clip. Locking clips come with all new car safety seats (some have them built in). Read your instructions for information on how to use the locking clip.
- Some lap belts need a special heavy-duty locking clip, available from the vehicle manufacturer, to secure a car safety seat. Check your car owner's manual for more information.

What is LATCH?

LATCH (Lower Anchors and Tethers for Children) is a new car safety seat attachment system that has been developed to make car safety seats easier to use. This new anchor system will make correct installation much easier

because you will no longer need to use seat belts to secure the car safety seat. All cars, minivans, pickup trucks, and car safety seats made after September 2002 come with LATCH. However, unless both the vehicle and the car safety seat have this new anchor system, seat belts will still be needed to secure the car safety seat.

Why are tethers important?

Most new car safety seats that can be used facing forward come with top tethers. A tether is a strap that hooks the top of the car safety seat to a special permanent anchor in the vehicle called a tether anchor. Most anchors are located on the rear window ledge, the back of the vehicle seat, or the floor or ceiling of the vehicle. Tethers give extra protection by keeping the car safety seat and the child's head from being thrown too far forward in a crash.

Tether kits are available for most older car safety seats. Check with the car safety seat manufacturer to find out how to get a top tether for your seat. Be sure to install it according to instructions. The tether strap may help make some car safety seats that are difficult to install fit more tightly.

All new cars, minivans, and light trucks have been required to have upper tether anchors for securing the tops of car safety seats since September 2000.

Is your child ready for a regular seat belt?

Keep your child in a car safety seat for as long as possible. When your child is big enough, make sure the seat belts in your vehicle fit your child correctly. The shoulder belt should lie across the chest, not the neck or throat. The lap belt must be low and snug across the thighs, not the stomach. In addition, the child should be tall enough to sit against the vehicle seat back with her legs bent at the knees and feet hanging down. Seat belts are made for adults. If the seat belt does not fit your child correctly, she should stay in a booster seat until the adult seat belt fits. This is usually when the child reaches about 4' 9" in height and is between 8 to 12 years of age.

Other points to keep in mind when using seat belts include the following:

- Never tuck the shoulder belt under the child's arm or behind the child's back.
- If only a lap belt is available, make sure it is snug and low on the child's thighs, not across the stomach. Try to get a lap/shoulder belt installed in your car by a dealer.

There are a number of products on the market that claim to solve the problem of poorly fitting seat belts. However, these products may actually interfere with proper lap and shoulder belt fit by causing the lap belt to ride too high on the abdomen and making the shoulder belt too loose. Until NHTSA develops standards for these products, the AAP recommends they not be used.

Has the car safety seat been recalled?

You can find out by calling the manufacturer or the Auto Safety Hot Line at 888/DASH-2-DOT (888/327-4236), from 8 am to 10 pm ET, Monday through Friday. This information is also available online at the National Highway Traffic Safety Administration (NHTSA) Web site at <http://www.nhtsa.dot.gov/people/injury/childps/recall/canister.htm>.

If the seat has been recalled, be sure to follow instructions to fix it or get the necessary parts. You also may get a registration card for future recall notices from the hot line.

Common questions about car safety seats

“What if my baby is premature?”

Use a car safety seat without a shield. Shields often are too high and too far from the body to fit correctly. A small baby's face could hit a shield in a crash. While still in the hospital, your baby should be observed in his car safety seat to make sure the semi-reclined position does not cause low heart rate, low oxygen, or other breathing problems. If your baby needs to lie flat during travel, use a crash-tested car bed. If possible, an adult should ride in the back seat next to your baby to watch him closely.

“What if my baby weighs more than 20 pounds but is not 1 year old yet?”

There are now several infant and convertible seats that can be used rear-facing for children weighing more than 20 pounds. See Part II Product Information for specific seats.

“What if my child has special health care needs?”

Children with special health problems may need other restraint systems. Discuss this with your pediatrician. Easter Seals, Inc, offers programs about car seat safety for children with special health care needs in the following states: Georgia, Kentucky, New Mexico, Missouri, Pennsylvania, Texas, West Virginia, and Wisconsin. More information is available from Easter Seals, Inc, at 800/221-6827. You also can learn more by calling the Automotive Safety for Children Program at 317/274-2977.

For more information and a list of car safety seats available for children with special needs, see the AAP brochure, “Safe Transportation of Children With Special Needs: A Guide for Families.”

“What if my car has air bags?”

Most new cars have air bags. When used with seat belts, air bags work very well to protect older children and adults. However, air bags are very dangerous when used with rear-facing car safety seats or when passengers are not properly positioned. If your car has a passenger air bag, infants in rear-facing seats must ride in the back seat. Even in a low-speed crash, the air bag can inflate, strike the car safety seat, and cause serious brain injury and death.

Toddlers who ride in forward-facing car seats also are at risk from air bag injuries. All children, even through school age, are safest in the back seat. If you must put an older child in the front seat, slide the vehicle seat back as far as it will go. Make sure your child is buckled, and stays in the proper position at all times. This will help prevent the air bag from striking your child.

For most families, air bag on/off switches are not necessary. Air bags that are turned off cannot protect other passengers riding in the front seat. Air bag on/off switches only should be used if *all* of the following are true:

- Your child has special health care needs.
- Your pediatrician recommends constant supervision of your child during travel.
- No other adult is available to ride in the back seat with your child.

On/off switches also must be used if you have a vehicle with no back seat or a back seat that is not made for passengers.

“What if my car has side air bags?”

Side air bags improve safety for adults in side impact crashes. However, children who are seated near a front or rear side air bag can be at risk for serious injury. Refer to your vehicle owner's manual for recommendations that apply to your vehicle.

“What if my car only has lap belts in the back seat?”

Lap belts work fine with infant-only, convertible, and forward-facing car safety seats. They cannot be used with belt-positioning boosters (which are safest for children who have outgrown the top weight or height limit of their forward-facing car safety seat and who are not big enough to fit in adult seat belts). If your car only has lap belts, use a forward-facing car safety seat with a harness approved for use to higher weights, or check with your dealer or the manufacturer of your car to see if shoulder belts can be installed. Some travel vests can be used with lap belts. Another thing you can do is buy another car with lap/shoulder belts in the back seat.

“What if I drive more children than can be buckled safely in the back seat?”

Avoid this situation, especially if your car has passenger air bags. However, in an emergency, place the child most likely to sit in the proper forward-facing position in the front seat, with the vehicle seat moved as far back as possible. A child in a forward-facing car safety seat with a harness may be the best choice because a child who is in a booster seat or using a regular seat belt can more easily move out of position and be at greater risk for injuries from the air bag.

“What if I lose my instructions to my car safety seat?”

Call or write the manufacturer and ask for a new set of instructions.

“What if my car safety seat was in a crash?”

A car safety seat that was in a crash may have been weakened and should not be used even if it looks fine. Call the car safety seat manufacturer if you have questions about the safety of your seat.

“Can I use a car safety seat on an airplane?”

The Federal Aviation Administration (FAA) and the AAP recommend that children be securely fastened in child safety seats until 4 years of age, then be secured with the airplane seat belts. This will help keep them safe during takeoff and landing, or in case of turbulence. Most infant, convertible, and forward-facing seats are certified to be used on airplanes. Booster seats and travel vests are not. Check the label on your car safety seat and call the airline before you travel to be sure your seat meets current FAA regulations.

ALWAYS READ AND FOLLOW
MANUFACTURER'S INSTRUCTIONS.

If you do not have the car safety seat manufacturer's instructions, write or call the company's consumer relations department, identifying the model number, name of seat, and date of manufacture. The manufacturer's address and phone number are on the label on the seat.

Before purchasing a car safety seat, check the manufacturer's instructions for important safety information about proper fitting and use.

Are you using a secondhand car safety seat?
Double-check everything!

A new car safety seat is best. However, if you must get a used seat, shop very carefully. To tell if a used car safety seat is safe, keep the following points in mind:

Do not use a car safety seat that

- **Is too old.** Look on the label for the date it was made. If it is more than 10 years old, it should not be used. Some manufacturers recommend that car safety seats only be used for 5 to 6 years. Check with the manufacturer to find out how long the company recommends using their seat.
- **Was in a crash.** It may have been weakened and should not be used, even if it looks fine. Do not use a car safety seat if you do not know its full history.
- **Does not have a label with the date of manufacture and model number.** Without these, you cannot check on recalls.
- **Does not come with instructions.** You need them to know how to use the car safety seat. Do not rely on the former owner's directions. Get a copy of the instruction manual from the manufacturer before you use the seat.
- **Has any cracks in the frame of the seat.**
- **Is missing parts.** Used car safety seats often come without important parts. Check with the manufacturer to make sure you can get the right parts.

From your doctor

The American Academy of Pediatrics expresses its appreciation to all those who contributed to this brochure, including Marilyn Bull, MD, on behalf of the Committee on Injury, Violence, and Poison Prevention.

Although the American Academy of Pediatrics (AAP) is not a testing or standard setting organization, this guide sets forth the AAP 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.

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

Prices are approximate and may vary.

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.

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