

Every state requires that infants and children ride buckled up. However, more children are killed and injured in car crashes than from any other type of injury. Using a car seat correctly can prevent many of these injuries, but it is not as easy as you think. Just a little mistake in how the seat is used could cause serious injury to your child.

## Which is the "best" car seat?

- No one seat is "safest" or "best." The "best" car seat is one that fits your child's size and weight, and can be installed correctly in your car.
- Price does not always make a difference. Higher prices usually mean added features that may or may not make the seat easier to use.
- When you find a seat you like, try it out! Put your child in the seat and adjust the harnesses and buckles. Make sure it fits in your car.
- Keep in mind that displays or illustrations of seats in stores do not always show them being used correctly.
- Car seats are constantly being tested to make sure they pass the safety standards. Sometimes they are recalled. When you buy a new seat, make sure you send the registration card to the manufacturer so you will be notified of any problems or recalls.


## Types of car seats

## Infant-only seats

- Can only be used rear-facing
- Are used for babies up to 1 year of age and up to 20 pounds (or more, depending on model)
- Are small and portable and fit newborns best
- Come with a 3-point harness or a 5 -point harness (See list at the end of this handout.)


## Infant seat features

Detachable base. Several infant seat models come with detachable bases. The base stays in the car so you do not need to install it every time you put your baby in the car. After buckling your baby into the seat, you simply lock the seat into the base. Some bases are adjustable to make it easier to recline newborns. These seats also can be used without the base 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 seat may fit better without the base.

Higher weight limits. Several infant seats are available for use up to 22 pounds. This may make it easier to keep your baby rear-facing for a full year. However, if your infant's weight exceeds even the 22-pound limit before a year, use a rear-facing convertible seat that has a higher weight limit. (Many now go up to 30 pounds rear-facing for bigger babies.)

Harness slots. Infant seats that come with more than one harness slot give more room for growing babies. On rear-facing seats, the harness slots should always be at or below your baby's shoulders.
Locks into shopping carts. Many infant 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 likely to tip over. This is true even for shopping carts with built-in infant seats. Do not place a child of any age in a shopping cart. Thousands of children are hurt every year from falling from shopping carts or from the carts tipping over. Instead, use a backpack, front pack, or stroller while shopping.

Handles. Carrying handles vary greatly in style and ease of use. Check the instructions for how to adjust the handle during travel.

## Convertible seats

- Are bigger and heavier than infant seats but can be used longer.
- Do not fit newborns as well as infant seats.
- Can be used rear-facing for infants and forward-facing for toddlers.
- Are used rear-facing for babies up to 1 year of age and up to 20 pounds (or more depending on model).
- Can be used forward-facing for toddlers who are at least 1 year of age and at least 20 pounds. When your child is big enough to turn around, make the following three adjustments:
-Move the shoulder straps to the slots above your child's shoulders (usually the top slots, but check your instructions to make sure).
-Move the seat into the upright position.
-Route the seat belt through the forward-facing belt path.
- Convertible seats have three types of harnesses.
- 5-point harness - five straps: two at the shoulders,two at the hips, one 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 a more secure fit is the 5 -point harness.
(See list at the end of this handout.)


## Convertible seat features

Adjustable buckles and shields. Many convertible seats give you two or more buckle positions to give you extra room for a growing child or bulky clothing. Many overhead shields can be adjusted as well.
Higher weight limits. Several convertible seats are now available with higher weight limits for bigger babies. For larger babies, look for a seat that can be used rear-facing up to 25 or 30 pounds.

## Forward-facing seats:

- Cannot be used rear-facing.
- Are only for children over 1 year of age and over 20 pounds.
- May convert to belt-positioning boosters for children over 40 pounds. This allows the seat to be used Ionger.
(See list at the end of this handout.)

Built-in seats are available in some cars and vans. Built-in seats eliminate installation problems. However, weight and height limits vary. (See the list at the end of handout.)

Travel vests may be an option if your car has only lap belts. However, it is not usually the best choice. (See the list of travel vests at the end of this handout.)

When your child reaches 40 pounds or his ears have reached the top of his car seat, you need a booster seat. Following are two types:

- Belt-positioning boosters are used with lap/shoulder belts. The booster raises your child so that the seat belts fit properly. This helps protect your child's upper body and head. (See list at the end of this handout.)
- Shield boosters are designed to be used with lap belts. However, they do not provide enough upper body protection to be recommended.

High-backed beltpositioning booster


Shield boosters cannot be used for children over $\mathbf{4 0}$ pounds. Children under 40 pounds should remain in a convertible or forward-facing seat. Shield boosters should only be used without their shields as belt-positioning boosters for children over 40 pounds. While manufacturers may recommend use of shield boosters at lower weights, children under 40 pounds are at risk of ejection from the booster in the event of a rollover crash.

## Basics of car seat use

- Always use a car seat, starting with your baby's first ride home from the hospital. Help your child form a lifelong habit of buckling up.
- Read the manufacturer's instructions and always keep them with the car seat.
- Read your vehicle owner's manual for more information on how to install the car seat.
- Put your child in the back seat. It is the safest place in the car because it is farthest away from a head-on crash (the most common type of crash).
- The harness system holds your child in the car seat and the seat belt holds the seat in the car. Attach both snugly to protect your child.


## Using car seats correctly

Read the instructions carefully to be sure you have installed the car seat correctly. After you install the seat in your car, check the following:

## Is your baby buckled into the car 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 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. Do not use bulky clothes that could increase slack in a crash.
- In cold weather, put blankets on top of your baby after adjusting the harness straps snugly.
- To keep your newborn from slouching, pad the sides of the seat and between the crotch with rolled up diapers or receiving blankets. If your infant's head flops forward, the seat may not be reclined enough. Tilt the seat back until it is level (according to manufacturer's instructions) by wedging firm padding, such as a rolled towel, under the front of the base of the seat.


## Is the car seat buckled into your vehicle correctly?

- Route the seat belt through the correct path on the car seat (check your instructions to make sure) and pull it tight.
- Before each trip, check to make sure the car seat is installed tight enough by pushing on the car seat where the seat belt passes through. It should not move easily side to side or toward the front of the car.
- Check the seat belt buckle. Make sure it does not lie just at the point where the belt bends around the car 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.
- Many lap/shoulder belts allow passengers to move freely even when they are buckled. 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 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. Check your car owner's manual for more information.
- All new car seats are now required to come equipped with top tether straps. Tether straps are belts that are attached to the car seat and bolted to the window ledge or the floor of the car. They give extra protection and keep the car seat from being thrown forward in a crash. Tether kits are also available for most older car seats. Check with the 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 seats that are difficull to install fit more tightly.
- Starting in model year 2002, all new vehicles and new child seats will be equipped with lower anchors and attachments. This new anchor system will make correct installation much easier because you will no longer need to use seat belts to secure the car seat. However, unless both the vehicle and the car seat have this new anchor system, seat belts will still be needed to secure the car seat.


## Is your child ready for a regular seat belt?

Keep your child in a car 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 shoulder, not the neck or throat. The lap belt must be low and flat across the hips, not the stomach. The child's knees should bend easily over the edge of the vehicle seat. Seat belts are made for adults. If the seat belt does not fit your child correctly, he should stay in a booster seat until the belt fits.

Other points to keep in mind when using seat belts are as follows:

- 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 worn tight and low on the hips, not across the stomach. Use lap belts only as a last resort. Try to get a lap/shoulder belt installed in your car.


## Are you using a second-hand seat? Double-check everything!

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

## Do not use a car seat that

- Is too old. Look on the label for the date it was made. If made before January 1981, the seat may not meet strict safety standards and its parts are too old to be safe. Some manufacturers recommend that seats only be used for 6 years. Check with the manufacturer to find out when the company recommends getting a new seat.
- Was ever in a crash. If so, it may have been weakened and should not be used, even if it looks all right.
- 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 seat. Do not rely on the former owner's directions. Get a copy of the instruction manual from the manufacturer.
- Has any cracks in the frame of the seat.
- Is missing parts. Used seats often come without important parts. Check with the manufacturer to make sure you can get the right parts.
Has the seat been recalled? You can find out by calling the manufacturer or the Auto Safety Hot Line at 888/DASH-2-DOT. If the seat has been recalled, be sure to follow instructions to fix it or get the necessary parts. You may also get a registration card for future recall notices from the hot line.


## ALWAYS READ AND FOLLOW MANUFACTURER'S INSTRUCTIONS If you do not have them, write to the company's consumer relations department, identifying the model number, name of seat, and date of manufacture. The manufacturer's address is on the label on the seat.

All products listed on the following pages meet current Federal Motor Vehicle Safety Standard 213.
There may be car seats available that are not listed in this handout. The products listed here are current only as of the date of publication.
The appearance of the name American Academy of Pediatrics does not constitute a guarantee or endorsement of the products listed or the claims made.

## Common questions about car seats

## "What if my baby is premature?"

- Use a car seat without a shield. Shields are often too high and too far from the body to fit correctly.
- While still in the hospital, your baby should be observed in her car 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 her closely.
- Children with special health problems may need other restraint systems. Talk to your pediatrician, or contact the National Easter Seal Society (800/221-6827), and ask about Special KARS (Kids are Riding Safe) programs that may have trained technicians in your local area.
- For more information and a list of seats available for children with special needs, see the AAP brochure Car Seat Shopping Guide for Children With Special Needs.


## "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 not safe when used with rear-facing car seats. If your car has a passenger air bag, rear-facing seats must go in the back seat. Even in a low-speed crash, the air bag can inflate, strike the car seat, and cause serious brain injury and death.

Even toddlers who ride in forward-facing car seats 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 should only be used if all the following are true:

- Your child has special heath care needs and
- Your pediatrician recommends constant supervision during travel and
- 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 baby is over $\mathbf{2 0}$ pounds but is not 1 year old yet?"
There are now several infant and convertible seats that can be used rear-facing at higher weights. See the product listing at the end of this brochure for specific seats.


## "What if my car has only lap belts in the back seat?"

Lap belts work fine with infant seats, convertible seats, and toddler seats. They cannot be used with belt-positioning boosters (which are safest for children over 40 pounds who are not big enough to fit in adult seat belts). If your car has only lap belts, check with your dealer or the manufacturer of your car to see if shoulder harnesses can be installed. Some travel vests can be used with lap belts, but may not provide as much protection as a belt-positioning booster. Another thing you can do is to buy another car with lap/shoulder belts in the back seat.

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

It is best to avoid this situation, especially if your car has passenger air bags. However, in an emergency, place the child least likely to be out of position in the front seat, with the vehicle seat moved as far back as possible. Often a child in a forward-facing car seat is the best choice because older children 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 seat?"

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

## "What if my car seat was in a crash?"

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

## "Can I use a car seat on an airplane?"

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

## Infant seats

Manufacturer's names are boldfaced.

| Name | Harness Type | Rear-Facing Weight limits | Price |
| :---: | :---: | :---: | :---: |
| Britax Handle With Care | 5-point | 20 pounds | \$150 |
| Century Advanta | 3-point | 22 pounds | \$70-80 |
| Century Assura | 3-point | 20 pounds | \$29-39 |
| Century Smart Fit, Smart Fit Plus | 3-point/5-point | 22 pounds | \$50-70 |
| Cosco Arriva | 3-point | 22 pounds | \$29-44 |
| Cosco Dream Ride | 3-point | 20 pounds | \$79 |
| Cosco TLC | 3-point | 20 pounds | \$20 |
| Cosco Turnabout | 3-point/5-point | 22 pounds | \$59-79 |
| Evenflo First Choice, Discovery | 3-point | 20 pounds | \$35-60 |
| Evenflo Discovery With Adjust Right | 3-point | 20 pounds | \$60-100 |
| Evenflo On My Way Position Right | 3-point/5-point | 20 pounds | \$60-100 |
| Fisher-Price Safe Embrace | 5-point | 22 pounds | \$70 |
| Graco Snug Seat | 3-point/5-point | 20 pounds | \$59 |
| Kolcraft Secura | 3-point | 20 pounds | \$59-69 |

Convertible seats

| Name | Harness Type Weight limits | Rear-Facing Weight Limits | Forward-Facing | Price |
| :---: | :---: | :---: | :---: | :---: |
| Britax Roundabout | 5-point | 30 pounds | 20-40 pounds | \$199-219 |
| Century 1000 STE | 5-point | 22 pounds | 20-40 pounds | \$50 |
| Century 2000 STE | T-shield | 22 pounds | 20-40 pounds | \$60 |
| Century 3000 STE/3500 STE | Overhead Shield | 22 pounds | 20-40 pounds | \$60-70 |
| Century Accel | 5-point | 30 pounds | 20-40 pounds | \$60-80 |
|  | Overhead Shield |  |  |  |
| Century Bravo | 5-point <br> Overhead Shield | 30 pounds | 20-40 pounds | \$120-130 |
| Century Encore | 5-point <br> Overhead Shield <br> T-shield | 22 pounds | 20-40 pounds | \$80-90 |
| Century Ovation | Overhead Shield | 22 pounds | 20-40 pounds | \$90 |
|  | T-Shield |  |  |  |
| Century Smart Move | 5-point | 30 pounds | 20-40 pounds | \$100-120 |
| Cosco Alpha Omega | 5-point <br> Overhead Shield | 35 pounds | 22-70 pounds | \$129-149 |
| Cosco Olympian | Overhead Shield | 35 pounds | 22-40 pounds | \$59-89 |
| Cosco Touriva | 5-point | 35 pounds | 22-40 pounds | \$35-49 |
|  |  | Overhead Shield T-Shield |  |  |
| Evenflo Conquest I, V | 5-point <br> Overhead Shield | 30 pounds | 20-40 pounds | \$50-70 |
| Evenflo Horizon I | Overhead Shield | 30 pounds | 20-40 pounds | \$80-90 |
| Evenflo Horizon V | 5-point | 30 pounds | 22-40 pounds | \$70-80 |
| Evenflo Medallion V, XL | 5-point | 30 pounds | 20-40 pounds | \$100-140 |
| Evenflo Secure Advantage I, V | 5-point <br> Overhead Shield | 30 pounds | 20-40 pounds | \$80-110 |

## Convertible seats, continued

| Name | Harness Type | Rear-Facing <br> Weight Limits | Forward-Facing <br> Weight limits | Price |
| :--- | :--- | :--- | :--- | :---: |
| Evenflo Secure Choice | 5-point | 30 pounds | $20-40$ pounds | $\$ 50$ |
| Evenflo Town and Country | 5-point | 30 pounds | $20-40$ pounds | $\$ 90-100$ |
| Evenflo Ultara I, Premiere | Overhead Shield | 30 pounds | $20-40$ pounds | $\$ 80-110$ |
| Fisher-Price Safe Embrace | 5-point | 30 pounds | $22-40$ pounds | $\$ 100$ |
| Guardian Comfort | 5-point <br> T-shield | 20 pounds | $20-40$ pounds | $\$ 80-100$ |
| Guardian Folder | 5-point <br> Overhead Shield | 20 pounds | $20-40$ pounds | $\$ 90-120$ |
|  | T-shield |  |  |  |
| Kolcraft Auto-Mate | 5-point | Overhead Shield | 22 pounds | $20-40$ pounds |
| Kolcraft Performa | Overhead Shield | 22 pounds | $20-40$ pounds | $\$ 50-60$ |
| Kolcraft Secure Fit | 5-point | 22 pounds | $20-40$ pounds | $\$ 60-80$ |
| Safeline Sit'n Stroll |  | $22-40$ pounds | $\$ 199$ |  |

## Forward-facing seats

| Name | Harness Type | Weight limits | Price |
| :--- | :--- | :--- | :---: |
| Britax Freeway Plus | 5-point | $20-40$ pounds | $\$ 169-179$ |
| Chicco Shuttle | 5-point | $20-40$ pounds | $\$ 149$ |
| Fisher-Price Futura 20/60 | 4-point | $20-60$ pounds | $\$ 80$ |

## Forward-facing seats/high-backed booster seats

| Name | Weight limits <br> With Harness | Weight limits <br> Without Harness | Price |
| :--- | :--- | :--- | :--- |
| Century Breverra, Classic, Metro, Ascend | $30-40$ pounds | $30-80$ pounds | $\$ 50-80$ |
| Century Next Step | $20-40$ pounds | $30-80$ pounds | $\$ 99-109$ |
| Cosco Adventurer II | $22-40$ pounds | $30-80$ pounds | $\$ 44$ |
| Cosco High Backed Booster | $22-40$ pounds | $30-80$ pounds | $\$ 39-59$ |
| Graco Cherished Cargo | $20-40$ pounds | $40-80$ pounds | $\$ 59$ |

## Belt-positioning boosters

| Name | Type | Weight Limits | Price |
| :--- | :--- | :--- | :--- |
| Basic Comfort Galaxy 2000 | High back | $30-70$ pounds | $\$ 70$ |
|  | Low back | $40-70$ pounds |  |
| Britax Cruiser | High back | $30-60$ pounds | $\$ 99$ |
| Britax Roadster | High back | $40-100$ pounds | $\$ 119$ |
|  | Low back | $40-100$ pounds |  |
| Britax Star Riser/Comfy | High back | $30-80$ pounds | $\$ 119$ |
|  | Low back | $30-80$ pounds |  |
| Century Breverra Sport | High back | $30-80$ pounds | $\$ 30$ |
| Cosco Grand Explorer | Shield | $30-40$ pounds | $\$ 19-29$ |
|  | Low back | $40-80$ pounds |  |
| Cosco Complete Voyager | High back | $30-80$ pounds | $\$ 29$ |
| Guardian Double Up | High back | $30-60$ pounds | $\$ 45$ |
| Evenflo Right Fit | Low back | $40-60$ pounds | $\$ 25-35$ |
| Fisher-Price Safe Embrace | High back | $30-80$ pounds | $\$ 60$ |

## Belt-positioning boosters continued

| Name | Type | Weight limits | Price |
| :--- | :--- | :--- | :--- |
| Jupiter Komfort Rider | High back | $30-70$ pounds | $\$ 79$ |
| Jupiter Grand Touring | High back | $30-90$ pounds | $\$ 99$ |
| La Roche Grizzly Bear | High back | $40-95$ pounds | $\$ 99$ |
| La Roche Teddy Bear | High back | $30-80$ pounds | $\$ 90$ |
| Safeline Mission Control | High back | $30-70$ pounds | $\$ 89$ |

## Vests and built-in seats

| Name | Weight limits | Price |
| :--- | :--- | :--- |
| E-Z-On Vest | 160 pounds | $\$ 77-100$ |
| Chrysler Built-in Seats | $20-50$ pounds | $\$ 125-250$ |
| E-Z-On Modified Vest | 100 pounds | $\$ 120$ |
| General Motors Built-in Seats | NA | NA |
| Cosco Travel Vest | $25-40$ pounds | $\$ 29$ |

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.


