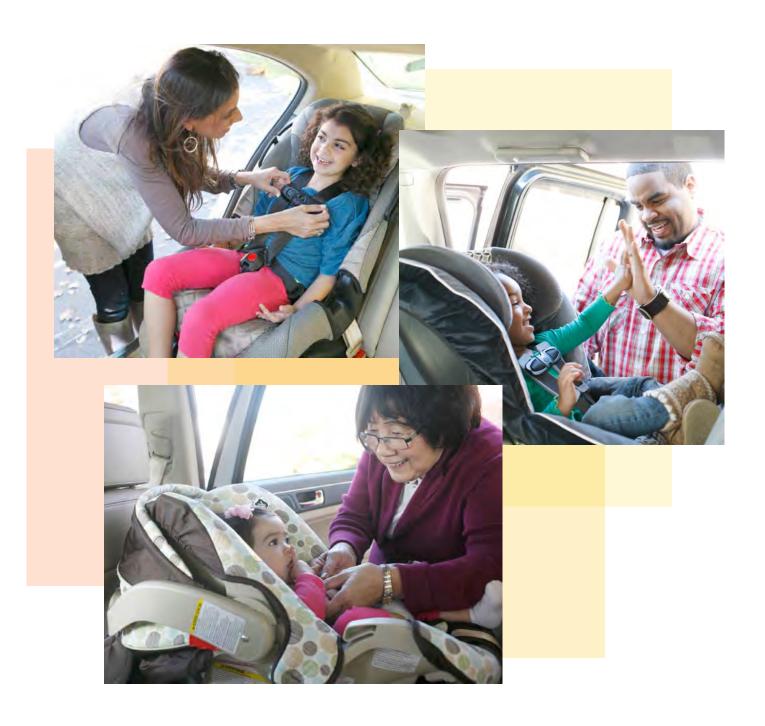
Keeping Children Safe in Vehicles

A Guide for Families and Caregivers



Keeping Children Safe in Vehicles

Why It's Important

- Motor vehicle injuries are a leading cause of death among children in the United States (<u>Centers for</u> <u>Disease Control and Prevention [CDC]</u>, <u>WISQARS</u>, 2016).
- Most of these deaths occur when children are passengers in a motor vehicle (<u>Insurance Institute</u> <u>for Highway Safety</u>, [IIHS] 2016).
- Many child deaths and serious injuries could be prevented through the proper use of car seats, booster seats, and seat belts, also known as a child passenger restraint system.
- Using a car seat reduces the risk of death in passenger vehicles by 71% for infants younger than age 1 and by 54% for toddlers ages 1–4 (Durbin, <u>Technical Report-Child Passenger Safety</u>).
- Of children ages12 years and younger who died in a crash in 2015, 36% were not buckled up (National Highway Traffic Safety Administration [NHTSA, Traffic Safety Facts 2015], CDC).

Talking Points About Why It's Important

- Every family wants to keep their child safe.
- Many young children are seriously injured or killed in motor vehicle crashes.
- You can protect your child by always using a car seat, booster seat, or seat belt that is right for your child's age, height and weight, and developmental needs.
- All 50 states, the territories, the District of Columbia, and most tribes have child passenger safety laws because car seats save lives!
- Many resources can help you find the right seat for your child and install it properly.



Secure his future.

Always seat him in the correct car seat.

Be a Good Role Model. Always Buckle Up!

Why It's Important

- Drivers who buckle up are more likely to use a car seat, booster seat, or seat belt for children riding in their vehicle.
- Drivers who wear a lap and shoulder belt buckle up children 92% of the time. Drivers who don't wear a lap and shoulder belt only buckle up children 70% of the time (Controlled Intersection Study, 2015).





Talking Points About Being a Good Role Model

- You are your child's first and best teacher. When you protect yourself by buckling up, you are also protecting the children in your vehicle. Teach children the habits that you want them to use to stay safe and healthy.
- Did you know that drivers who buckle up are more likely to use a car seat, booster seat, or seat belt for children riding in their vehicle? We know that drivers who wear a lap and shoulder belt buckle up children 92% of the time. Drivers who don't wear a lap and shoulder belt buckle up children only 70% of the time.
- A younger child may be more willing to ride in a car seat when you wear your lap and shoulder belt. An older child is more likely to buckle up because you do.

- Always wear a lap and shoulder belt on every trip, even if you aren't going far. Most crashes happen close to home.
- If you buckle up, you have a better chance of surviving a crash. So do the children in your vehicle, because you can get them out quickly if there is a crash.
- If you aren't buckled up, you could be thrown out of the car. You could also be thrown around the car, hurting yourself and your passengers.
- Make sure you adjust your headrest so it supports your head. This can protect your head and neck from injury.

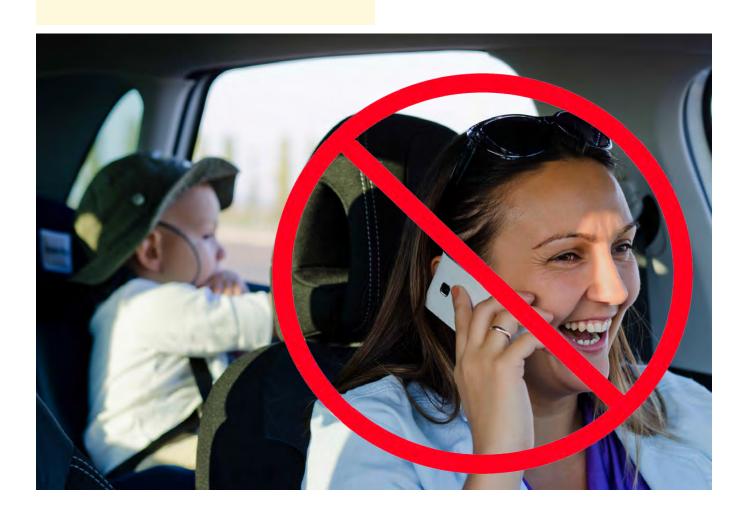
Drive Safely. Keep Your Eyes on the Road.

Why It's Important

- Driving safely requires your full attention.
- Anything that takes your attention away from driving safely increases your risk of being in a motor vehicle crash.
- In 2022, more than 3,300 people were killed and 289,000 injured in crashes due to distracted driving. (<u>Distracted Driving</u>, NHTSA).
- Drivers who stay focused protect themselves and the children in their vehicle.

Talking Points about Keeping Your Eyes on the Road

- Driving safely requires your full attention.
- Distracted driving is any activity that takes your attention away from driving safely.
- Don't text or talk on the phone while you are driving.
 You are more likely to be in a motor vehicle crash.
- Protect yourself and the children in your vehicle by focusing on driving safely.



Make Sure Children Younger than Age 13 Ride in the Back Seat.

Why It's Important

- In 2016, 55% of passenger vehicle deaths were the result of a crash to the front of the car (<u>Insurance Institute for Highway Safety</u> [IIHS]).
- Riding in the back seat keeps a child farther away from the location of a frontal crash.
- It also keeps a child away from front passenger side airbags, which have caused deaths or serious injuries to children.
- These airbags inflate at speeds up to 200 miles per hour!
- Placing children in the rear seat instead of the front seat reduces their risk of fatal injury by about 75% for children up to age 3 and almost 50% for children ages 4 to 8 (Durbin et al, 2015. Rear seat safety: variation in protection by occupant, crash and vehicle characteristics. Accid Analysis Prev.80:185-192; [IIHS]).



Talking Points About Riding in the Back Seat

- In 2016, more than half of passenger vehicle deaths were the result of a crash to the front of the car.
- Studies show that the back seat provides better protection for young children. One study showed that placing children in the back seat instead of the front seat reduced their risk of fatal injury by about 75% for children up to age 3, and almost 50% for children ages 4 to 8.
- It also keeps a child away from front passenger side airbags, which have caused deaths or serious injuries to children. In a crash, these airbags can inflate at speeds up to 200 miles per hour!
- It's amazing how fast children grow! Your child may look big enough to ride in the front seat, but the back seat is the safest place for children under age 13 to sit, regardless of their size.
- Don't let a child under age 13 sit in the front seat, even as a special privilege or reward.
- Make sure everyone who drives your child knows how to properly buckle children up in the back seat.

Choose the Right Seat for Your Child.

Why It's Important

- Car seat manufacturers design their products to meet federal safety standards.
- Federal motor vehicle safety standard 213 mandates how car seats and booster seats should perform to decrease the severity of injuries and increase the chance of survival in motor vehicle crashes.
- Car seats are designed to keep children safe by spreading the force of a crash across the stronger parts of a child's body, shoulder and hips.
- For the best protection, a child needs a car seat designed for their size (height and weight), age, and developmental needs.
- Child passenger restraint systems offer different levels of protection. Rear-facing car seats are considered the most protective since they distribute crash forces over a child's back; forward-facing car seats distribute forces over a child's shoulders and hips using a 5-point harness; and seat belts distribute forces over the shoulder and hips, but only by 3-points.







Talking Points About Choosing the Right Seat

- A car seat is designed to keep your child as safe as possible in the event of a crash. The right seat can save your child's life.
- All U.S. car seat manufacturers meet the same federal safety standards. But with over 200 different models, it can be confusing to know how to choose the right seat for your child.
- We don't recommend a particular brand. Choosing a seat based on your child's size (height and weight), age, and developmental needs provides the best protection.
- As children grow, they will need different types of car or booster seats.
- Don't be in a hurry to move your child into the next type of seat. Keep your child in their car seat until they have reached the seat's maximum height or weight requirement. Car seats label the minimum and maximum height and weight requirements on their packaging, on their instruction booklet, and on the seat itself.
- Rear-facing car seats are considered the most protective since they distribute crash forces over a child's back; forward-facing car seats that use a 5-point harness distribute forces over a child's shoulders and hips; and seat belts distribute crash forces over the shoulder and hips, but only by 3 points. Let's look at the different types of car seats so you know how to choose the right seat.

Use Rear-Facing Car Seats for Infants & Toddlers.

Why It's Important

- A young child's bones, muscles, and ligaments are not strong enough to withstand the force of a crash—even a minor one. A rear-facing seat provides the best protection.
- A young child's head is larger and heavier in proportion to their body than that of an older child.
- In a frontal crash, the head of a child who is riding forward-facing moves forward abruptly, placing increased force on the neck.
- A rear-facing car seat supports the entire head, neck, and back of a child in a frontal crash. The shell of the car seat absorbs the force of the crash. When a child sits in a rear-facing car seat, the head moves with the seat, reducing the risk of injuries to a child's head, neck, and spine.
- The American Academy of Pediatrics recommends that children ride rear-facing until at least age 2 or until they outgrow the rear-facing height or weight limits of the car seat.



Rear-Facing Only Car Seat



Rear-Facing Convertible Car Seat

Talking Points About Rear-Facing Car Seats

- Rear-facing reduces the risk of neck and spine injuries. It is the safest way for infants and toddlers to ride in a motor vehicle.
- There are different types of rear-facing car seats.
- Rear-facing-only car seats have carrying handles and usually have detachable bases. Most are for children who weigh up to 30-35 pounds. A few are available for children who weigh up to 22 pounds.
- Convertible and all-in-one car seats change from rearfacing to forward-facing car seats. Most rear-face for children who weigh up to 40 pounds.
- It's okay if your child's feet touch the back of the vehicle seat. It may look uncomfortable to us, but a child's legs bend easily, and leg injuries are rare.
- Keep your child rear-facing until your child outgrows the rear-facing height or weight limits of the car seat. Most convertible seats have limits that will permit children to ride rear-facing for 2 years or more.

Use Forward-Facing Car Seats for Toddlers & Preschoolers.

Why It's Important

- Once a child has outgrown a rear-facing car seat, they should move into a forward-facing car seat and continue using the harness straps until they reach the manufacturer's height or weight limit.
- Most car seat manufacturers design the harness straps for children who weigh up to 65 pounds, although some set other limits ranging from 40 to 90 pounds. Check the instructions for your child's seat.
- A car seat with a 5-point harness protects a child better than a booster seat. A 5-point harness has straps over both shoulders, both hips, and between the legs. A booster seat has a lap and shoulder seat belt that only provide 3 points of protection.







Talking Points About Forward-Facing Car Seats

- Move your child to a forward-facing car seat with a 5-point harness when your child outgrows their rearfacing car seat.
- A 5-point harness provides better protection than a booster seat by spreading the force of a crash across more parts of the body.
- Most car seat manufacturers design the harness straps for children who weigh up to 65 pounds, although some set other limits ranging from 40 to 90 pounds. Check the instructions for your child's seat.
- Some forward-facing seats change into rear-facing seats. Others change into booster seats. Make sure you are using the seat the right way for your child's age and size. You can find this information on the seat or in the instruction booklet.
- Keep your child in a forward-facing car seat and continue using the harness straps until your child reaches the manufacturer's height and weight limits. This usually happens when a child is between the ages of 4 and 7, depending on their height and weight.
- When your child outgrows their forward-facing car seat, move them into a booster seat.

Use Booster Seats for School-Age Children.

Why It's Important

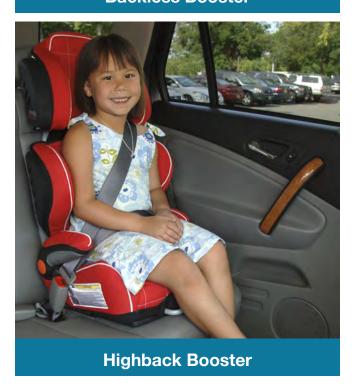
- Booster seats reduce the risk of serious injury by 45% for children ages 4–8 compared to seat belts alone (Durbin, <u>Technical Report-Child</u> <u>Passenger Safety</u>).
- The bones in a child's hips aren't fully developed until ages 12–13. This can cause the lap part of the seat belt to ride up on the abdomen instead of staying low on the hips. The hip bone is strong and can tolerate crash forces better than soft abdominal tissue. If the lap belt isn't positioned low on the hips, it can cause serious injuries to a child's abdominal organs or spine in a crash.
- A child in a booster seat can also be thrown around or even thrown from a vehicle when a seat belt does not fit properly.



Backless Booster

Talking Points About Booster Seats

- After your child outgrows a forward-facing car seat with a harness, your child should use a booster seat. This is usually somewhere between ages 4 and 7.
- A booster seat lifts your child up so the adult seat belt fits correctly.
- Use a lap and shoulder belt with a booster. NEVER use just a lap belt.
- When used the right way, the lap belt fits snugly on the upper thighs or low on the hips. The shoulder belt fits snugly across the middle of the shoulder and chest. A properly positioned shoulder and lap belt can spread the force of the crash across the stronger parts of a child's body, shoulder and hips.
- Without a booster seat, a seat belt can ride up on a child's stomach or across the neck. This can cause serious injuries to the stomach or spine in a crash.
- There are two types of booster seats, backless and highback. The backless model is a small platform. The highback model has head and neck support. It is best to use the highback type of booster seat if your vehicle does not have headrests or a high vehicle seat back.
- If your child puts the shoulder belt under their arm or behind their back, check the seat belt fit. This is not a safe way to ride. Your child may not be ready for a booster seat and may still need a car seat with a harness.



Use Seat Belts for Older Children and Adults.

Why It's Important

- For older children and adults, seat belt use reduces the risk of serious injury and death by about half (Source: NHTSA, Traffic Safety Facts, 2023, 2021 data) https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813515.
- Proper use of a seat belt will prevent an older child from being ejected or thrown around the car.
- A seat belt spreads the forces of a crash over stronger parts of the body, the shoulders and hips.

Talking Points About Seat Belts

- Use a lap and shoulder belt, not just a lap belt, so your child has upper body protection.
- When used correctly, the lap seat belt fits low on the hips, and the shoulder belt lies across the middle of the shoulder and chest. This spreads the forces of a crash over stronger parts of the body, the shoulders and hips.
- Your child is ready to use a seat belt when
 - Your child can sit all the way back on the vehicle seat without slouching.
 - Your child's knees hang over the edge of the vehicle seat with feet on the floor.
 - The seat belt fits the right way—with the shoulder belt across the middle of the shoulder and chest and the lap belt flat across the hips.
- This is usually when a child is about 4'9" tall and between ages 8 and 12.
- Make sure your child has support behind their head.
- If your child puts the shoulder belt under their arm or behind their back, check the seat belt fit. This is not a safe way to ride. Your child may still need a booster seat.
- Remember that the back seat is the safest place in a vehicle for a child to sit until age 13.
- Use your seat belt every time you're in the car.





Install Car Seats Correctly.

Why It's Important

- If a car seat isn't installed or is installed incorrectly, it can move around in the vehicle and injure your child. In some cases, both the car seat and your child could be thrown out of the vehicle.
- Use either the vehicle seat belt or the LATCH (lower anchors and tethers for children) system to secure the seat tightly. To use the LATCH system, the vehicle must have lower anchors.
- Rear-facing car seats must be installed tilted back, according to the manufacturers' instructions. Some infants have breathing problems if they ride too upright. Rear-facing seats have a feature, such as leveling bubbles or leveling lines, that show when the seat is at the correct angle.





Seat Belt Through Forward-Facing Belt Path



Talking Points About Installing Car Seats

- Even if you have the right car seat, it has to be installed correctly to protect your child. Test the seat once you install it. It should not move more than 1 inch side to side and back to front when grabbed where the seatbelt goes through the car seat (seat belt path).
- If it moves too much, your child could be seriously injured or thrown out of the vehicle in a crash.
- A car seat is installed with either a vehicle seat belt or lower anchors. You only need to use one.
- If you use a seat belt, make sure the seat belt is locked at all times and does not loosen.
- Lower anchors are attached to a car seat. They can be used instead of seat belts to install car seats. To use lower anchors, the vehicle must have anchor connectors. All vehicles model year 2002 and later are required to have anchor connectors.

- Read your vehicle owner's manual to learn how to install a car seat in your vehicle. It explains how to lock your seat belts and find the lower anchor connectors.
- Never install a rear-facing car seat in front of an airbag. The force of an airbag hitting the back of a rear-facing car seat can seriously injure or kill a child.
- Rear-facing car seats must be installed tilted back, at an angle determined by the manufacturer. If the seat is at the wrong angle, an infant's head can flop over and affect how they breathe. Rear-facing seats have a feature, such as leveling bubbles or leveling lines, that show when the seat is at the correct angle.
- Car seats that can be used rear-facing and forward-facing have different seat belt paths for each direction. It's important to use the correct belt path labeled on the seat or in the manufacturer's guide.

Position Children in Car Seats Properly.

Why It's Important

- Proper positioning in a car seat is essential to protecting a child in a crash.
- In a rear-facing car seat, the harness holds the child down low in the seat so they do not slide up and out of the seat. The crotch strap keeps the child from moving forward. If the crotch strap is too far forward, it can cause a small child to slump. This can affect their breathing.
- The harness straps in a forward-facing car seat keep the child in the seat and help to distribute crash forces to stronger parts of the child's body, the shoulders and hips.

- If a harness is too loose, the child could be thrown out of the seat.
- The 5-point harness straps need to be positioned snugly over a child's shoulders and across the child's hips and buckled at the crotch strap.
- A snug harness should pass the "pinch test." This means you cannot pinch excess webbing on the harness at the shoulders and hips when buckled.
- The chest clip helps keep the harness over the child's shoulders. It needs to be mid-chest or in line with the child's armpits.

Talking Points About Positioning Children

- Even if you choose the right car seat, and install it correctly, it won't protect your child completely unless you position your child in the seat correctly.
- Place your child's back and bottom flat against the car seat.
- Position the harness straps at or slightly below the shoulders of your rear-facing child.
- Position the harness straps at or slightly above the shoulders of your forward-facing child.

- Tighten the harness until you can no longer pinch any webbing at the shoulders and hips.
- Fasten and move the chest clip to the middle of the chest or armpit level.
- Never add positioning pillows, cushions, or inserts that do not come with the car seat.
- Avoid having your child wear bulky coats. They can interfere with proper harness fit. Put the bulky coat on backwards, over your child's arms and chest, after you buckle the harness. You can also place blankets over your child after you buckle the harness.



Know When to Use Tethers.

Why It's Important

- A tether is a strap that is attached to the top of a car seat. It has a hook on one end that connects to a tether anchor in a vehicle.
- A tether holds the back of a forward-facing car seat against the vehicle seat. It can decrease the distance a child's head moves forward in a crash by as much as 4–6 inches, reducing the risk of head injuries.
- Tethers are only used with forward-facing car seats, not rear-facing car seats.
- Tethers can be used with either lower anchors or seat belt installations.

Talking Points about Tethers and Forward-Facing Car Seats

- A tether is a strap that is attached to the top of your car seat. It has a hook on one end that connects to a tether anchor in your vehicle.
- Tethers are only used with forward-facing car seats, not rear-facing car seats.
- A tether holds the back of a forward-facing car seat against the vehicle seat. It can decrease the distance your child's head moves forward in a crash by as much as 4–6 inches.
- Using a tether reduces the risk of a head injury in the event of a crash. Check your vehicle's owner's manual to learn where to find the tether anchors. They may be on the rear window shelf, the floor, the ceiling, or the back of the vehicle seat.
- First, install your car seat with either a seat belt or lower anchors. Then attach the tether and tighten it.



Tether Strap on Car Seat



Tether Anchor on Rear Window Shelf



Tether Anchor on Seat Back



Tether Symbol Found in Some Vehicles

Important Questions About Car Seats

These Pages Provide Additional Information that can Help you Answer Questions from Families.

Did you register your car seat?

Families should send in the registration card that is attached to new car seats so they can be notified if their seat is recalled. They can also call the manufacturer's customer service number to register their car seat. Or, they can use this link to find out how to register a car seat: https://www.nhtsa.gov/equipment/car-seats-and-booster-seats#car-seat-registration.

Did you sign up to receive car seat recall notices?

Car seats are recalled for a variety of reasons, ranging from crash worthiness to missing labels. Use this link to find out how to sign up for car seat recall notices: https://www-odi.nhtsa.dot.gov/nhtsa/subscriptions.

Is your car seat used or secondhand?

Using a secondhand seat can be risky, especially if you don't know the history of the seat. Families need to know if the seat meets federal safety standards, is expired, is on recall, has been in a crash, or is missing parts or instructions. If you don't know the history of the seat, the safest thing to do is to get a different seat.



Talking Points About Important Questions

There are some important questions to ask yourself before you use your car seat.

- Did you send in the registration card attached to your car seat? If so, the car seat manufacturer will notify you about any recalls on your seat. You can also contact the car seat manufacturer directly to find out how to register your seat. Or contact the National Highway Traffic Safety Administration at https://www.nhtsa.gov/equipment/car-seats-and-booster-seats#car-seat-registration. They will provide the information to the manufacturer for you. Recalls happen for different reasons. These range from how a car seat performs in a crash to missing labels. The car seat manufacturer will fix the problem.
- Are you the original owner of your car seat? Using a secondhand car seat can be risky if you don't know the history of the seat. The safest thing to do is to get a different seat.
- A certified child passenger safety technician can help you determine if your car seat is safe for your child. You can find a technician by going to https://www.nhtsa.gov/equipment/car-seats-and-booster-seats#installation-help-inspection.

Important Questions About Car Seats

Has your car seat expired?

Car seats have expiration dates that vary by manufacturer and can range from 6 to 10 years. These dates account for possible deterioration of the plastic shell, lost or broken parts, and failure of older seats to meet updated safety standards. Expiration dates can be found on a label embedded in the shell of the seat or in the owner's manual.

Has your car seat been in a motor vehicle crash?

Car seats are designed to protect a child during one crash, not multiple crashes, and usually have to be replaced after a crash. Families should check with the manufacturer to learn if the seat needs to be replaced after all types of crashes, including minor ones.

Is it safe to let infants sleep in a car seat when you aren't driving?

No. Infants, especially those younger than age 4 months, can get into a position that creates a risk of suffocation or airway obstruction. Once you are no longer driving, move them to a crib or other appropriate flat surface as soon as possible (American Academy of Pediatrics, <u>Pediatrics</u>, 2016).



Talking Points About Important Questions

There are some important questions to ask yourself before you use your car seat.

- Car seats have an expiration date. Has your car seat expired? Check for the expiration date on a label on the shell of the seat or in the owner's manual.
 An expired car seat is not safe to use.
- Car seats are meant to protect your child during one crash. Has your car seat been in a crash? If so, check the car seat owner's manual or call the manufacturer to learn if you should replace it.
- A certified child passenger safety technician can help you determine if your car seat is safe for your child. You can find a technician by going to https://www.nhtsa.gov/equipment/car-seats-and-booster-seats#installation-help-inspection.
- Car seats are not safe for routine sleeping. Infants, especially those younger than age 4 months, can get into a position that creates a risk of suffocation or airway obstruction. Once you are no longer driving, move them to a crib or other appropriate flat surface as soon as possible.

Want to Learn More?

- Child restraint systems are often used incorrectly. An estimated 46% of car seats and booster seats (59% of car seats and 20% of booster seats) are misused in a way that could reduce their effectiveness. (National Child Restraint Use Special Study, June 2015)
- Car seat manufacturers have specific instructions for their products, based on how the seats performed in crash tests.
- If a car seat is not used correctly, it cannot protect a child as well as it should.





Certified Child Passenger Safety Technician

Talking Points About Important Questions

- There are many resources to help you learn how to properly use and install your car seat or booster seat, such as
 - The owner's manual for your car seat and your vehicle
 - The labels on the side of the seat
 - Car seat manufacturers' websites
 - Certified child passenger safety technicians
- Certified child passenger safety technicians have in-depth training about the best way to protect children in a motor vehicle. They offer their services at car seat check-up events such as child safety seat inspection stations and car seat clinics.
- You can find a technician by going to https://www.nhtsa.gov/equipment/car-seats-and-booster-seats#installation-help-inspection.
- Enter your city and state or zip code where it asks you to enter your location.

Information About the Flip Chart and Tips for Speakers

The purpose of this flip chart is to share information with families about child passenger safety.

- Each page has information on the front and back side.
 - The front side of each page is for parents. It has photos that illustrate some of the talking points.
 - The back side has speaker notes and talking points. The talking points are the key points to discuss with parents.
- Ask parents what type of vehicle they drive. Then, as you review each page of the flip chart, you can talk about what they can do to keep their child safe in their car or truck.
- Please stay as close as possible to these talking points.

Talking Points for Speakers

Before using this flip chart, know:

- The child passenger safety law in your state, territory, the District of Columbia, or tribe. You can find basic information about the laws for states and territories at https://www.ghsa.org/state-laws/issues/Child-Passenger-Safety. Check with local officials for information about the laws for tribes.
- Local child passenger safety resources to share with families and caregivers.
 Learn more by visiting one or more of the following websites:
 - www.healthychildren.org/car seatguide
 American Academy of Pediatrics website for families
 - https://www.nhtsa.gov/equipment/car-seats-andbooster-seats
 National Highway Traffic Safety Administration's website for families
 - www.safekids.org
 Worldwide organization with injury prevention information for the general public
 - https://www.cdc.gov/tribal-road-safety/about/ Information for tribes on car seat safety from the Centers for Disease Control and Prevention





Staff Notes

The content of this flip chart was originally developed by the Automotive Safety Program, Indiana University School of Medicine, with funding from the Indiana Criminal Justice Institute, and adapted with permission by the National Center on Health, Behavioral Health, and Safety. Select images downloaded from the NHTSA image Library.







National Center on

Health, Behavioral Health, and Safety

Although the National Center on Health, Behavioral Health, and Safety is not a testing or standard-setting organization, this document sets forth some of the factors that parents should consider before selecting and using a car seat based on guidance from the National Highway Traffic Safety Administration and recommendations from peer-reviewed literature available at the time of its publication. For specific recommendations regarding the selection and installation of a car seat for your child and vehicle type, you may want to consult a Certified Passenger Safety Technician (CPST). You can find a CPST at: https://portalskcms.cyzap.net/dzapps/dbzap.bin/apps/assess/webmembers/secure/manage?webid=SKCMS&pToolCode=CERT-SEARCH&pAdd=Yes.

888-227-5125

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