

# BUCKLE UP KIDS



**Guide for Choosing the Right  
Child Safety Restraint and  
Instructions for Correct Use.**

# Table of Contents

## General Information and Seat Placement

Choosing a safety seat .....	1
Used safety seats .....	2
Correctly installing safety seats .....	3
Airbag warning .....	3
Harness fit .....	4
Children in the back .....	4
Retainer clip .....	6
Locking clip .....	19

## Infant Restraints — Birth to at Least 1 year

General information .....	5
Using the seat .....	5

## Convertible Restraint — Rear-Facing Birth to at Least 1 year

General information .....	7
Using the seat .....	7

## Convertible Restraint — Forward-Facing 1 to 4 years

General information .....	9
Using the seat .....	10

## Forward-Facing Only Restraint — 1 to 4 years

General information .....	11
Using the seat .....	11

## Integrated (Built-in) Restraints — 1 to 4 Years or 4 to 8 Years

## Boosters — 4 to 8 Years

General information .....	13
Types of boosters .....	13
Using booster seats .....	14

## Specialty Restraints

## Seat Belts — Over 8 years

General information .....	16
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## Using LATCH (Lower Anchor and Tethers for CHildren) to Install Child Seats

## Using Tethers and Top Anchorage to Install Child Seats

## Using Seat Belts to Install Child Seats

## Pickup Trucks and RV's

## Air Travel Tips for Child Restraint Use

## Final Reminders

Most common child passenger safety mistakes .....	26
Web site resources .....	27



Office of Traffic Safety  
Minnesota Child Passenger Safety Program

Cover photo by Megs Molnau.

# ***Motor Vehicle Crashes Are the Leading Cause of Death and Disability Among Children.***

This booklet provides parents and caregivers with comprehensive information on child passenger safety. This guide explains the different types of child restraints, how to determine what child restraint is correct for your child based on their age and size, and how to install child seats properly. Ages stated are guidelines; always check child seat manufacturer's instructions for weight limits.

- Minnesota law requires booster seat use. A child cannot ride in just a seat belt until they are age 8 or 4 feet 9 inches tall, whichever comes first. It is recommended, however, to keep a child in a booster based on their size rather than age.
- Minnesota law requires drivers and all passengers to be buckled up or in the correct child restraint. Law enforcement will stop and ticket unbelted motorists or passengers.
- The violent forces of a crash can cause unbelted or unrestrained motorists to be ejected from the vehicle and seriously injured or killed. Unrestrained vehicle occupants can also slam into and injure or kill others in the vehicle.
- Eight out of 10 child safety seats are used incorrectly in Minnesota.
- Vehicle seats and seat belts are built to fit adults, not children. Properly securing children in the appropriate restraint can protect them during a crash or sudden stop.

# Choosing a Child Safety Seat

## Don't Skip a Step

A child must progress through different child safety seats based on their height and weight:

- Rear-facing seat: Newborns to at least 1 year and 20 pounds.
- Forward-facing seat: 1 to 4 years old; can use "convertible" (page 7) or "combination" (page 11) styles.
- Booster seat: For children once they have outgrown a forward-facing seat usually after turning 4 years old. Booster seats are required by Minnesota law. Children cannot ride in just a seat belt until age 8 or 4 feet 9 inches tall.

## Selecting a Child Safety Seat

- A seat that is easy to install and use will be the best for you and your child. Reference child seat and vehicle instruction manuals.
- Try the seat in your vehicle. Some safety seats fit in some vehicles better than others. Choose the seat that can be held tightly against the vehicle seat back. Read your vehicle owner's manual and the safety seat instructions.
- Choose the seat that is the right size for your child.
- You'll save some money if you buy one convertible seat to do the job from birth to at least 40 pounds, but an infant-only seat may be easier to use and may fit your newborn baby better.
- Look for a convertible seat that has a higher weight limit (30 pounds or more) in the rear-facing position. Use the seat rear-facing until they reach that weight limit. The American Academy of Pediatrics recommends a child remain rear-facing until at least 2 years old if possible.
- Understand how to use the seat before purchase. Try locking and releasing the buckle, and adjusting the harness. Most stores will allow you to take the child seat out to your vehicle to make sure it fits properly.
- When you buy a safety seat, be sure to register it with the manufacturer so you will be notified of any safety recalls. All new safety seats come with a registration card. If you are not the original owner, be sure to register the seat with your current name and address.
- A safety seat that is more than six years old should be replaced. Normal wear and tear may cause the seat to not work as well as a new seat. Also, newer seats have improved safety designs.
- Combination safety seats can serve as two of the child safety steps (noted above). These seats include a harness system with a set weight limit and can be converted to a belt-positioning booster seat. Check the seat for an expiration date.

## *Used Safety Seats*

Many parents feel a used safety seat is a good bargain, others may have trouble affording a new seat. However, any used seat could have many problems. It is not recommended to buy seats from a garage sale or re-sale shop.

### **Second-Hand Child Restraints**

May be OK to use if:

- It's not more than six years old.
- It's free of any recalls.
- It has not been involved in a crash.
- All labels are on the child restraint.
- The instruction manual is present.
- You know the individual who previously owned the restraint and you know the history of the restraint.

## *Warning on Child Seats Involved in Crashes*

A safety seat that was used in a vehicle during a crash should not be used again — it should be destroyed. Regardless of how the seat looks or how old it is, possible unseen damage may make the seat less effective in a second crash and cause serious injury to a child.

- Check with the seat manufacturer regarding replacement after a crash.
- Check with your car insurance company about their seat replacement policy.

## Correctly Installing Child Safety Seats

- Always read the instructions that come with the safety seat and the owner's manual that comes with the vehicle. In the owner's manual, turn to the section(s) on safety belts and child safety seats (child restraints or car seats).
- Check your vehicle owner's manual for instructions on air bags.

Some older vehicle owner's manuals have little or no information on safety seats, or the owner's manual may be missing. Contact the vehicle manufacturer for more information and read labels on safety seats.

Check for air bag warning labels on the sun visor and/or on the front of the passenger door frame and throughout the vehicle.

- A child safety seat must be held tightly against the vehicle seat back to protect a child. If the safety belt is

loose or the safety seat slides around on the vehicle seat, your child could be hurt. A restraint should not shift more than one inch side-to-side. See pages 5 and 18 to learn techniques to achieve a safe, tight fit.

- Booster seats are not installed like car seats. Be sure to buckle the child in using the lap and shoulder belt.



*A warning label on a child restraint.*

## Proper Harness Fit

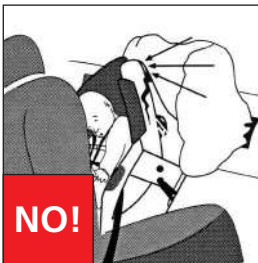
The car seat harness and the safety belt hold a child in the seat for best protection in the case of a crash. It is important that the harness is snug over the strong parts of the child's body. You should not be able to pinch the webbing at the child's shoulder. If the harness is loose, your child could be ejected in a crash. The harness must lie flat on the child to safely spread the forces of a crash; do not allow the straps to become twisted. Always read the instructions that come with the safety seat.

## Children Under Age 13 Should Ride in Back

- It is best for children under age 13 to ride in the rear seat; most crashes occur in the front of the vehicle. Even if the airbag is turned off, the back seat is always the safest place for children under 13 years of age.
- Never put a rear-facing car seat in the front seat with active airbags. Babies (under 1 year old and under 20 pounds) should ride in the back seat facing the rear of the vehicle. Children should ride rear-facing as long as their car seat allows. Check the child safety car seat's instruction manual for weight and height limits of the seat. Consider purchasing a seat with a higher rear-facing weight limit.
- If your child must ride in the front seat, make sure the child is correctly buckled up with the vehicle seat moved all the way back. Make sure the child is being held back snugly by the harness straps of the safety seat or by both the lap and shoulder belt. Use a belt-positioning booster to ensure proper belt fit if necessary. Do not allow the child to slip out of the shoulder belt or lean toward the dashboard. Read the vehicle owner's manual about air bags.

## Airbag Safety

Air bags are effective and life-saving in the event of a crash, but they can also injure or kill motorists who are too close to it when it deploys. Children under age 13 should always ride in the back seat. Never put a rear-facing car seat in the front seat of a vehicle with a passenger air bag.



*Improperly restrained and unrestrained occupants can be severely injured by a deploying airbag.*



## Infant Rear-Facing Restraints

Infant restraints are for newborns to at least age 1 and 20-30 pounds, depending on the seat. It is recommended to keep a baby rear-facing as long as possible.

There are two types of infant restraints: infant-only and convertible restraints (see pages 7–10). Convertible seats can also be used forward-facing once child is at least 1 year old and 20-30 pounds (check seat weight limits).



- Make sure the infant safety seat is approved for use in a motor vehicle. Check the labels and instructions.
- Rear-facing only.
- Some have detachable bases.
- Usually fits a newborn well and some may be the best fit for premature infants.
- Long babies may outgrow this seat before they reach the upper weight limit (17–22 pounds).

- Use only until baby's head comes within 1 inch of the top of the shell; then move to a rear-facing convertible seat until the child reaches the rear-facing weight limit.
- Never place anything between the child and the car seat. Doing so may interfere with the function of the car seat in a crash.
- Never leave the child unattended in the infant carrier.

### Using Infant Rear-Facing Restraints

- Place the safety seat in the vehicle so that its base is resting flat on the vehicle seat cushion. If this is not possible, try another seating position or find a safety seat that fits better. At least 80 percent of the safety seat base must contact the vehicle seat.
- Be sure the restraint is secured tightly, not shifting more than one inch side-to-side. To achieve a tight fit, apply pressure on seat with knee or foot and pull to tighten the seat belt (see page 18) or the strap, if installing using the LATCH system (page 21).
- Children under 1 year and under 20 pounds must face the rear of the vehicle in a safety seat that is designed for their height and weight. Children must ride facing the rear, even when they are out of the driver's view in the back seat. If the baby has special health needs that require full-time monitoring, ask another adult to ride with the baby in the back seat and travel alone as little as possible.



## Using Infant Rear-Facing Restraints, *continued*

- Be sure the rear-facing safety seat is reclined according to the manufacturer's instructions. Use the level indicator to guide the angle of the seat in order to keep infant's head from falling forward. A tightly rolled towel or foam swimming noodle cut to fit the width of the base of the safety seat may be used to maintain angle, but be careful not to tip the seat too far back.
- Use the harness slot that is at or below baby's shoulders.
- Be sure the straps are threaded through the shell not just the pad. Check the instructions.
- The harness must fit snugly — you should not be able to pinch any webbing at the child's shoulders and between the legs. A snug harness is important, it holds the baby down in the safety seat during a crash. The harness is tight when no excess fabric can be pinched.
- The plastic harness retainer clip keeps the straps on baby's shoulders. Make sure the clip is threaded correctly to keep the strap from sliding off. Place the clip at mid-chest, armpit level.
- Dress the baby in clothes that keep the legs free. If you want to cover the baby, buckle the harness first, adjust it for a snug fit, then put a blanket over the baby. Avoid using bulky snowsuits or buntings, this can make it hard to adjust the harness snugly.
- Some manufacturers require the handle on an infant safety seat in the down position when the seat is in the vehicle. Check instructions.
- A new baby needs support. To fill empty spaces and give support, roll up a couple of small blankets and tuck them in on each side of your baby's body and head. If the baby still slides down, put a rolled diaper between the legs behind the crotch strap. Never put padding behind or under the baby.



*Rolled towel for angle when using seat without the base.*



*Plastic harness retainer clip should be at child's armpit level.*



*Spaces filled with cloths*

# Convertible Restraints — Rear-Facing

Convertible restraints can be used rear-facing or forward-facing. A child should be positioned rear-facing as long as seat instructions permit.

After child outgrows weight limit for rear-facing, convertible seats can be switched to forward-facing.



## Types of Convertible Restraints

### Five-point harness

This seat uses two shoulder, two hip and one crotch strap. Many safety experts prefer this system because the straps can be adjusted to fit snugly across the child's strong hipbones. Straps may twist and tangle — keep straps flat for best protection and snug so that no webbing can be pinched at the child's shoulders.



### Tray shield with harness

While tray shields with a harness are safe, it is preferable to use a 5-point for infants.



## Using Convertible Rear-Facing Seats

- Make sure the convertible safety seat you use is approved for use in a motor vehicle. Check the labels and instructions.
- Use the harness strap slots that are at or below baby's shoulders.
- Be sure the straps are threaded through the shell, not just the pad. Check the instructions.

## Using Convertible Rear-Facing Seats, *continued*

- The harness must fit snugly — you should not be able to pinch any webbing at the child's shoulders and between the legs. A snug harness is important, it holds the baby down in the safety seat during a crash. The harness is tight when no excess fabric can be pinched.
- Dress the baby in clothes that keep the legs free. If you want to cover the baby, buckle the harness first, adjust it for a snug fit, then put a blanket over the baby. Avoid using bulky snowsuits or buntings, this can make it hard to adjust the harness snugly.
- Make sure the harness will stay snug. Check if there is a metal slide in back of the seat which must be locked by threading the strap back through.
- The plastic harness retainer clip keeps the straps on the baby's shoulders. Make sure the clip is threaded correctly to keep the strap from sliding off. Place the clip at mid-chest, armpit level (see photo on page 6).
- A new baby needs support. To fill empty spaces and give support, roll up a couple of small blankets and tuck them in on each side of your baby's body and head. If the baby still slides down, put a rolled diaper between the legs behind the crotch strap. Never put padding behind or under the baby (see photo on page 6).
- Place the safety seat in the vehicle so that its base is resting flat on the vehicle seat cushion. If this is not possible, try another seating position or find a safety seat that fits better. At least 80 percent of the safety seat base must contact the vehicle seat.
- Be sure the restraint is secured tightly, not shifting more than one inch side-to-side. To achieve a tight fit, apply pressure on seat with knee or foot and pull to tighten the seat belt (see page 18) or the strap, if installing using the LATCH system (page 21).
- Children under 1 year and under 20 pounds must face the rear of the vehicle in a safety seat that is designed for their height and weight. Children must ride facing the rear, even when they are out of the driver's view in the back seat. If the baby has special health needs that require full-time monitoring, ask another adult to ride with the baby in the back seat and travel alone as little as possible.
- Be sure the rear-facing safety seat is reclined according to the manufacturer's instructions. Use the level indicator as a guide to keep infant's head from falling forward. A tightly rolled towel or foam swimming noodle cut to fit the width of the base of the seat, may be used to maintain angle, but be careful not to tip the seat too far back (see photo on page 6).
- Use the convertible safety seat rear-facing until the child reaches the restraint's rear-facing weight limit. The child can continue to face the rear until she/he reaches the upper weight limit. A child seat with a higher rear-facing weight limit allows you to keep a baby rear-facing longer, which is the safest position.

## Convertible Restraints — Forward-Facing

Convertible restraints can be turned to a forward-facing position for children that have reached the weight and height limits for the rear-facing seat. It is recommended to keep a child rear-facing as long as possible.



### Types of Convertible Restraints

#### Five-point harness

Many safety experts prefer this system because the straps can be adjusted to fit snugly across the child's strong hipbones. Straps may twist and tangle — keep straps flat for best protection.



#### Tray shield with harness

While tray shield with harnesses are safe, it is preferable to use a 5-point for infants.



## Using Convertible Forward-Facing Seats

- Use facing forward for children over 1 year and 20 pounds or more. Children should ride rear-facing until they reach the weight and height limits for the seat. It is recommended to keep a child rear-facing as long as possible.
- A child should use a forward-facing convertible restraint until they reach the height and weight limit of the restraint. A child is ready for a booster seat when the top of the ears reach top of the seat, shoulders are above the top slots, or child reaches the upper weight/ height limit.
- Seats are sold with a tether strap to anchor the top of the seat to the vehicle. A tether strap keeps the seat more tightly secured. For tether anchor installation, contact your vehicle dealer (see page 20 for more information about tethers).
- Place seat in the upright position so the child is sitting up straight. Only recline the seat if the manufacturer allows. The more upright position is preferred for safety.
- If changing from rear-facing to forward-facing, harness straps must be threaded at or above child's shoulders.
- In some cases, only the top harness strap slots on front-facing convertible seats are reinforced. The top slots are reinforced to prevent the harness from breaking through in a crash. Always check the child seat instructions for additional reinforced slots.
- The harness must fit snugly — you should not be able to pinch any webbing at the child's shoulders and between the legs. A snug harness is important, it holds the child down in the safety seat during a crash. The harness is tight when no excess fabric can be pinched. Check harness tightness on every ride.
- Make sure the harness will stay snug. Be sure the straps are threaded correctly through the shell, not just the pad. Check the instructions.
- The plastic harness retainer clip keeps the straps on the child's shoulders. Make sure the clip is threaded correctly to keep the strap from sliding off. Put the clip at mid-chest, armpit level (see photo on page 6).

## Forward-Facing Only (Combination) Restraints

Forward-facing only seats provide full harness for upper body and head restraint.

Use until child outgrows it — when the top of the ears reach top of the seat, when shoulders are above the top slots, or when child reaches the upper weight limit, check the instructions. Children are ready for a booster seat when they outgrow a forward-facing restraint.



*This car seat converts to a booster by removing the harness and rerouting the safety belt.*

### Using Combination Restraints

- Harness strap slots should be at or above the child's shoulders on forward-facing only seats.
- The harness must fit snugly — you should not be able to pinch any webbing at the child's shoulders and between the legs. A snug harness is important, it holds the child down in the safety seat during a crash. The harness is tight when no excess fabric can be pinched. Check harness tightness on every ride.
- Be sure the harness straps are threaded correctly through the shell and not just the pad. Check the safety seat instructions.
- The plastic harness retainer clip keeps the straps on the child's shoulders. Make sure the clip is threaded correctly to keep the strap from sliding off. Put the clip at mid-chest, armpit level (see photo, page 6).

## ***Integrated (Built-in) Restraints***

Integrated restraints are forward-facing only; some convert to a belt-positioning booster, others have a 5-point harness that can be used up to 60 lbs. (Check the vehicle manual.)

Integrated seats provide good protection because they are anchored directly to the vehicle. However, they cannot be moved from one vehicle to another.





## Booster Seats — the Law in Minnesota

Booster seats are for kids who have outgrown a forward-facing harnessed restraint, usually after turning age 4.

Booster seats help adult safety belts fit correctly on a child's body. Booster's keep the lap belt low on the hips and the shoulder belt across the chest.

Minnesota law requires booster seat use. A child cannot ride in just a seat belt until they are age 8 or 4 feet 9 inches tall, whichever comes first. It is recommended, however, to keep a child in a booster based on their size rather than age.



### Types of Booster Seats

#### High-Back Boosters

- Some have a clip or strap to hold the shoulder belt in place.
- High-backs provide head support for taller children or for vehicles without headrests.
- Children who outgrow forward-facing seats with harness straps before age 4 may not be mature enough to stay seated properly in a belt-positioning booster. A vest or harness that uses the belt system and a tether strap would be an option in this situation.
- A high-back booster with a harness can be converted to a booster by removing the harness system and rerouting the safety belt.



*High-back Booster*



*3-in-1 restraint*

#### No-Back Boosters

- No-back boosters can be used if the vehicle seat has a head restraint that the child can utilize.



*No-back Booster*

## Using Booster Seats

- Make sure the booster you use is approved for use in a motor vehicle, and check the labels and instructions. Boosters are specially designed and crash-tested. Do not use boosters designed for dining table use, or pillows or books because they can cause serious injury in a crash.
- Most children under 4 feet 9 inches are not big enough to fit the adult safety belt properly. A belt that rides up on the tummy can cause serious injury. A belt that is put under the arm or behind the back can also cause serious injury.
- Boosters are comfortable for children because the raised base gives the child a better view and allows their legs to bend normally. This also reduces slouching, which leads to poor lap belt fit.
- If the child's ears come above the top of the vehicle seat back, use a high-back booster. A lap and shoulder belt must be used.
- A child is ready to ride in just a seat belt when they can sit comfortably without slouching on the vehicle seat. Seat belt use without a booster seat can be determined by doing the six-step test located on page 16.
- Use only with a lap/shoulder belt; cannot be used with the lap belt alone. The lap belt should stay low on the hips and the shoulder belt should comfortably cross the chest and shoulder.
- If the booster seat comes with a clip or strap to hold the shoulder belt in place, make sure to thread it correctly.
- If only lap belts are available in your vehicle, adding a manufacturer-provided shoulder belt (retrofit) or using a vest or harness that uses the lap belt system and a tether strap would be better in this situation. Contact the vehicle manufacturer regarding installation of a tether anchor. A higher weight limit harnessed restraint is also an option. Some go as high as 65 pounds with a harness.
- Secure booster seat with seat belt when child is not riding in booster seat.

### Warning on Seat Belt Fit Products

Products or devices sold in catalogs and stores that say they will improve seat belt fit for older children and adults are not required to pass any government safety standards. Using these “after-market” products could be dangerous. Some have been shown to reduce the effectiveness of lap/shoulder belts in crash tests. These products might make the shoulder belt fit more comfortably but may allow too much slack in the shoulder belt. These products may also cause the lap belt to ride up on the tummy, which can cause serious internal injury. Approved booster seats are the better — and legally required — way to make a safety belt fit a small child.

## Specialty Restraints

Children with special health care needs should have access to proper resources for safe transportation. Standard child restraints may be used if compatible with the child's needs. If a standard restraint is not workable, several options are available. It is possible that insurance will cover the costs of specialty restraints. Contact your insurance carrier for specific information. For a listing of special needs products contact:

American Academy of Pediatrics  
141 Northwest Point Blvd.  
P. O. Box 927  
Elk Grove Village, IL 60009-0927  
www.aap.org

Riley Hospital  
www.preventinjury.org

### Types of Specialty Restraints

- Vests and harnesses for children and adults are designed for use with the vehicle belt system and a tether strap. Tethers provide additional upper body protection.
- Several restraints have been designed for children with special health or physical needs and have upper weight limits of 100 or more pounds.
- Many of these devices require additional hardware.
- Car beds for low birth weight and/or medically fragile infants are available for infants who must lie flat. Ask your baby's doctor about testing for breathing problems before discharge.



*Hippo car seat for hip spica cast*



*Angel Ride car bed*

# Seat Belts

A child is ready for a seat belt when they can sit comfortably without slouching. Minnesota law requires drivers and all passengers to be buckled up or in the correct child restraint. Law enforcement will stop and ticket unbelted drivers and passengers.



## Six Steps to Seat Belt Safety

- 1: Does your child sit with their back against the vehicle seat back?
- 2: Does your child's knee bend comfortably around the vehicle seat edge?
- 3: Do your child's feet touch the floor?
- 4: Does the belt rest on the shoulder (not on the face or upper arm)?
- 5: Does the lap portion of the belt stay low on the hips?
- 6: Can your child ride comfortably in this position for the whole trip?

If you answer "no" to any of these questions, your child needs a booster seat with the lap/shoulder safety belt.

## Using Seat Belts

- Children who have outgrown safety seats are better protected by lap/shoulder belts. If several children are riding in the back, and there are shoulder belts, let the older ones use the shoulder belts. Put the child riding in the harnessed safety seat in the middle where there is only a lap belt.
- If the shoulder belt stays loose when it is pulled out, teach your child how to take up the slack by pulling on the shoulder belt to reset it. Too much slack can cause injuries in a crash.
- If the shoulder belt fits so badly that it goes across the neck or face, have the child use a belt-positioning booster.
- Never use pillows or books to raise a child to fit the belt. These will not keep the belt in the right place in a crash and could cause serious injury.
- Never put a shoulder belt under the arm or behind the back. This could cause serious injury in a crash. The lap belt of a lap and shoulder belt is not designed to work alone.
- If no shoulder belt is available, keep the lap belt low and snug across the hips or thighs. If the lap belt rides up onto the tummy, it could cause serious injury in a crash. Also, check with the vehicle manufacturer for a seat belt retrofit. However, it is safer for anyone (except small babies who cannot sit up) to use just a lap belt than to ride completely unrestrained.

## Using LATCH to Secure Child Seats (Lower Anchor and Tethers for Children)

LATCH provides an alternative option for child seat installation to bypass the safety belt system. All vehicles since 2002 have the LATCH system that uses child restraint lower anchors and top tether anchors. At least two rear-seating positions in each vehicle are equipped with the system. In addition, a third rear-seating position has an upper tether anchorage to hold the child seat tightly. The child restraint anchorage system are standardized and independent of the vehicle seat belts.



*Tether anchor logo*

### The anchor system consists of three points of attachment:

- Two small bars (lower anchors) in or near the set bight (where the vehicle seat cushion meets the vehicle back) to which two special hooks on the lower frame of the child restraint are attached. The hooks may be on straps (flexible) or part of the child restraint frame (rigid).
- One tether anchor behind the seating position to which a tether strap from the top of the child restraint is hooked. This will appear as a ring-like object, permanently attached to the vehicle at the top of the rear seat.
- Belt positioning booster seats, vests, and car beds are exempt from LATCH requirements.



*Flexible LATCH hook using anchor bar*



*Lower anchor bars*

## LATCH Facts

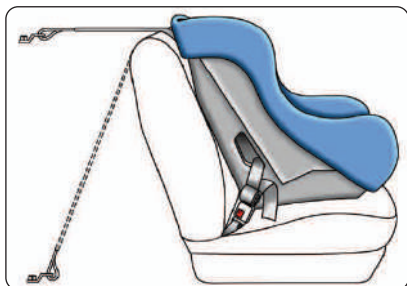
- Most LATCH-equipped vehicles have anchors in the right- and left- rear seat positions. If the center seat does not have anchors, you can still install a child safety seat using a safety belt.
- If your vehicle is not LATCH-equipped, use the safety belt and, if available, a top tether.
- LATCH anchor bars are required to be a specific distance apart, which may lead to a rear-center seating position in the vehicle that does not have LATCH anchors. You may not use the two inboard lower anchors (of the outboard LATCH seating positions) to install a child seat in the rear-center seating position. The only exception is if both the vehicle and child seat manufacturers specifically state that this installation is acceptable. It is safe and acceptable to install a car seat using the standard safety belt in the rear-center seating position.
- Safety belts and LATCH may not be used together to restrain a car seat. Choose one or the other. Refer to your vehicle and child restraint manuals.

## LATCH Installation

- Always read and follow both the vehicle owner's manual and child safety seat manufacturer's instructions for correct installation and proper use.
- Locate the lower LATCH attachments on the child safety seat.
- Locate the lower LATCH anchor bars in or near vehicle seat crack.
- Hook the LATCH attachments to the vehicle anchor bars.
- Use your body weight in the child safety seat by kneeling in the seat, then pull excess webbing to tighten flexible LATCH attachments.
- Check for secure fit by testing for tightness at the base of the seat, near the LATCH attachments. The child safety seat should not move more than one inch side-to-side or forward.
- Attach the tether to a tether anchor (if applicable). Pull excess webbing and tighten tether strap.

## Using Tethers and Top Anchors to Secure Child Seats

A tether is a strap attachment system that connects the top of a safety seat to an anchor in the vehicle's metal structure. Tethers are used in addition to the vehicle safety belt or the lower anchorage. Check the vehicle owner's manual for installation instructions.



### Using Tethers and Top Anchors

- When tethering the safety seat to the vehicle, be certain to use the tether anchor point, not a cargo tie-down anchor. Consult the vehicle owner's manual to verify correct tether anchor point locations.
- Installation of tether anchor kits can be done by the owner, vehicle manufacturer or local mechanic. Newer vehicles may have factory-installed tether anchor brackets and will not need kits.
- Designated anchor points take many forms. Consult the vehicle manual in the child restraint section under "top strap" or "tether strap." Tether anchor locations can also be found in safety equipment diagrams through the local dealership parts department.



*An anchor option for tether hook*



# Using Seat Belts to Install Child Seats

## How to Install a Child Seat with a Seat Belt

- Put the seat belt through the correct belt path (where the belt goes through the seat) and buckle the belt. Belt paths are different depending on whether the seat is rear- or forward-facing and whether an infant-only seat base is being used. Check labels and read the safety seat instructions.
- Push down on the safety seat while you tighten the belt.
- To check if it is tight enough, grasp the seat on both sides at the belt path. Pull the safety seat forward and pull it from side-to-side. It is safe for the rear-facing safety seat to tip slightly toward the back of the vehicle seat. If the belt loosens or the safety seat slides more than an inch, be sure you have locked the seat belt. It is critical to have the car seat installed tightly. Seats that move more than an inch side-to-side are too loose. Reinstall the seat or move the seat to a different seating position. You may need to try a different safety seat.



## Using Non-Traditional Seat Belts

Belts that do not lock (ELR), belts that come out forward of the seat back, belts in the door, and belts on a track require special attention. Some may need a special part from the dealer, others may require a tether strap (see page 19). Check the vehicle owner's manual and safety seat instructions.



# Using Seat Belts to Install Child Seats

## Using Non-Traditional Seat Belts

There are several types of seat belt systems that need to be considered when using a belt to install a child restraint. Some may not stay tight and will need special hardware.

### Emergency Locking Retractor (ELR)

Will lock only in a crash or sudden stop. It cannot hold a child safety seat on its own. Check the label on the belt or the vehicle owner's manual for further instructions. See page 22 for information about locking clips.

### Automatic Locking Retractor (ALR)

Will lock whenever you stop pulling it out. It can hold a safety seat tightly; take the slack out by pushing the webbing back into the retractor.

### Switchable

Works well with safety seats. It is an emergency locking retractor that switches to an automatic locking retractor when belt is completely pulled out and allowed to retract back in. Check the label on the belt or the vehicle owner's manual on how to use this type.



- Lap belt with a locking latch plate — Usually found in the center rear seat. A locking bar keeps the lap belt from loosening.



- If the latch plate rests on the safety seat at the wrong spot, the seat belt may still loosen. Do not use a locking clip to fix this problem. To keep the belt from loosening in this situation:
  - Buckle and tighten the belt
  - Unbuckle the belt and turn the latch plate over once so that the locking bar faces up and then rebuckle it
  - Check the vehicle owner's manual to be sure this is correct.

# Using Seat Belts to Install Child Seats

## Why Use a Locking Clip



Lap and shoulder belt with a free-sliding latch plate has one piece of belt webbing that slides through the latch plate. If the free-sliding latch plate is on an ELR belt, a locking clip is needed. See page 21 for more on ELR belts.

## How to Use a Locking Clip



- Check the vehicle owner's manual and the safety seat instructions for how to use the metal locking clip. Always use the locking clip next to the latch plate.
- Do not use on a lap only belt.

# Special Considerations for Pickup Trucks and RV's

## Pickup Trucks

- Pickup trucks with passenger air bags and no 'shut-off' switch and no back seat cannot safely transport babies under 1 year of age and under 20 pounds. Babies this age must ride rear-facing and always in the back seat; the front may only be used if there is no danger from an airbag.
- If there is an air bag 'shut-off' switch, read the pickup truck owner's manual for instructions.
- Extended cab pickups with side-facing jump seats are not appropriate to transport children, or adults for that matter. Seat belts do not provide good protection in these seats. Safety seats cannot be installed in these seats.
- Extended cab pickups with rear bench seats may be appropriate. Make sure at least 80 percent of the base of the safety seat fits on the vehicle seat. Make sure the rear-facing seat will fit when reclined according to manufacture instructions.
- Even when a forward-facing safety seat is installed tightly with the seat belt, a child's head could hit the front seat in a crash. A tether strap is recommended (see page 19). Check the safety seat instructions and vehicle owner's manual.
- Never allow anyone to ride in the cargo bed of a pickup truck. Ejection can cause serious injury or death and a canopy does not guarantee safety. In fact, covered cargo beds can trap poisonous carbon monoxide fumes, which can be deadly.



*A rear bench seat of a pickup truck.*

## Motor Homes and RV's

- Motor homes and RV's are considered passenger vehicles under Minnesota law, and as such adult seat belt and child seat requirements apply where seating positions with belts are available.

## Tips for Safe Air Travel and Child Safety Seats

Proper use of an approved child restraint system (CRS) on an aircraft enhances child safety in the event of turbulence or a crash. In addition to protecting your child during flight, there is also the added benefit of having a child seat on hand when traveling by motor vehicle away from home. An added note of precaution: research the child restraint laws for the state or country in which you will be traveling. Laws may vary.

The Federal Aviation Administration (FAA) strongly recommends that all children who fly, regardless of age, use the appropriate restraint based on their size and weight. Before you fly:

- Ensure that your CRS has received FAA approval. Check for a label reading, “This restraint is certified for use in motor vehicles and aircraft.”
- Check the width of your CRS. While airline seats vary in width, a CRS no wider than 16 inches should fit in most coach seats. Even if the armrests are moved out of the way, a CRS wider than 16 inches is unlikely to fit properly into the frame of the aircraft seat.
- Ask the airline if they offer a discounted fare for a child traveling in a CRS. Purchasing an airline ticket (discounted or full fare) for your child is the only way to guarantee that you will be able to use a CRS.
- Check with the airline to determine their busiest days and times. By avoiding these times, you are more likely to be on a flight with an empty seat next to you. In many cases, airlines will allow you to seat your child under 2 years of age in your CRS in the empty airplane seat without having to pay the airline fare for the child. Be sure to ask your airline for its policy regarding an empty seat.
- Arrive early for departure and request ample pre-boarding time to install the CRS properly.
- If you purchase a ticket for your child, reserve adjoining seats. A CRS must be placed in a window seat so it will not block the escape path in an emergency. A CRS may not be placed in an exit row.
- If you need to change planes to make a connecting flight, it can be very challenging to transport a CRS, child and luggage through a busy airport. Most airlines will help parents make the connection if they can arrange for assistance in advance.
- Children under 20 pounds and under 1 year of age should be placed in a rear-facing CRS.
- Children 20 to 40 pounds and over 1 year of age use a forward-facing restraint. Current restraints offer dramatic improvement in protection compared to lap-held or unrestrained children.
- Booster seats and harness vests are banned for use on aircraft. These devices may be checked as baggage.
- In the United States, supplemental lap restraints are banned from use in aircraft.

## ***Be Sure Your Child Rides Safely Every Time***

- Minnesota law requires drivers and all passengers to be buckled up or in the correct child restraint. Law enforcement will stop and ticket motorists for belt violations, including unbelted passengers.
- Children ages 4 to 8, under 4 feet 9 inches tall, 40–80 pounds, should always ride in a booster seat.
- The back seat usually is safer than the front, because head-on crashes are the most common type of crash. Children under age 13 should ride in back.
- If the vehicle has a front passenger air bag, Never put a rear-facing baby in the front seat.
- Babies under 1 year old and under 20 pounds must ride facing the rear, even when they are out of the driver's view in the back seat.
- Always use a safety seat that is the right size for your child. The best child safety seat for your child is the one that fits your child, fits your vehicle and you can use correctly every time.
- Read and follow the instructions in the safety seat manufacturer's directions and the vehicle owner's manual.
- Always make sure the safety seat is held tightly by the vehicle safety belt, or LATCH system. Child seats should not move more than one inch side-to-side.
- Always make sure the safety seat harness is snug on the child and buckled into the crotch strap.
- There must be one seat belt for each person. Two people with one belt around them could hurt each other.
- Never hold a child on your lap because you could crush the child in a crash even if the seat belt is around both of you. If only you are using a safety belt, the child would be torn from your arms in a crash.
- The cargo area of a station wagon, hatchback, van or pick-up is a very dangerous place for anyone to ride.
- On long trips, plan to stop in a safe place to let everyone out so they can stretch. Never unbuckle when the car is moving or stopped on the road.
- Bring small soft toys, books and snacks to keep children happy in the vehicle.
- Never hang toys from the safety seat handle or secure them to a shield. The handle should be positioned according to manufacture instructions. Toy accessories that attach to the back of the seat for baby's amusement are not recommended.
- Never put anything in the back window of your vehicle. Secure items in the cargo area of a station wagon or hatchback. Loose objects, such as large toys, or other heavy things in the vehicle can be thrown around in a crash and hurt someone. Secure all loose objects in the cargo area.

# ***Most Common Child Passenger Safety Mistakes***

- Turning a child from a rear-facing restraint to a forward-facing restraint too soon.
- Restraint is not secured tight enough — it should not shift more than one inch side-to-side or out from the seat.
- Harness on the child is not tight enough — if you can pinch harness material, it's too loose.
- Retainer clip is up too high or too low — should be at the child's armpit level.
- The child is in the wrong restraint — don't rush your child into a seat belt.



## **[BuckleUpKids.mn.gov](http://BuckleUpKids.mn.gov)**

The Minnesota Office of Traffic Safety Child Passenger Safety Program Web site has valuable information designed to address many questions. Visit [BuckleUpKids.mn.gov](http://BuckleUpKids.mn.gov) for:

- Car seat inspection clinics.
- Car seat distribution programs.
- Car seat recall list.
- Minnesota car seat law.
- Resource materials.
- Related links.
- Training information.





Learn more about child passenger safety at:  
[BuckleUpKids.mn.gov](http://BuckleUpKids.mn.gov)  
[www.carseatsmadesimple.org](http://www.carseatsmadesimple.org)



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