Car Seat Safety: Harnessing

The car seat harness is made up of webbing straps that keep the child in the car seat and distributes the crash forces. The harness is designed to keep the child in the car seat during a crash. It is designed to contact the strongest parts of the child's body and spread the crash forces. The harness can best manage the crash forces when it is correctly positioned on the child. Correct shoulder harness height is critical to being fully secured and reducing the child's movement in the event of a sudden stop or crash. The less movement that occurs, the less violent forces the child feels in the collision. Always read and follow the car seat instructions guidance on correctly using the harness.

The harness straps should be positioned differently for rear-facing and forward-facing because crash forces affect your child's body differently depending on the direction the child is facing. As the child grows, it's important to regularly check the harness fit and adjust as needed to provide the best protection during a crash.

Four Steps to Correctly Place a Child in a Car Seat

1. Place the **child all the way back** in a car seat. The child's back and bottom should be in contact with the back and bottom of the car seat.
2. Place the harness straps in the **correct harness slots for the child.**
   - **Rear-Facing:** The harness is placed **AT or BELOW** the child's shoulders.
   - **Forward-Facing:** The harness is placed **AT or ABOVE** the child's shoulders.
3. Tighten the **harness straps snugly**.
   - "A snug strap should NOT allow any slack. It lies in a relatively straight line without sagging. It does not press on the child's flesh or push the child's body into an unnatural position."
4. Place the **harness retainer clip at armpit level**.

Rear - Facing

When a child is rear-facing the harness straps should be coming out of a slot AT or BELOW shoulder level.

The correct position of the shoulder harness in a rear-facing car seat is **at or below** the child's shoulders (see illustration below). Correct shoulder harness height is essential to correctly secure the child to reduce movement in the event of a sudden stop or impact. The less movement that occurs, the less violent forces the child will experience in a collision.

During a frontal collision, the most common type, the crash forces will cause a child in a rear-facing car seat to be pressed against the back of the car seat. It is very important to keep the child's body from sliding upwards. The harness straps, positioned **at or below** the child's shoulders, will hold the child down in the car seat.

Harness straps positioned above a rear-facing child's shoulders allow the child to ride up the back of the car seat possibly exposing the child's head above the car seat shell, increasing the potential for a head injury. Placing the harness in a slot above the shoulder has a similar effect as not fully tightening the harness.

Correct Position
The harness straps are positioned snugly below the rear-facing child's shoulders holding the child securely in place.

Incorrect Position
If the harness is positioned above the shoulders, the child will slide upwards in a crash.

DO NOT use harness slots that are above the child's shoulders. In a rear-facing car seat, if the shoulder straps are too high, they will not hold your child securely in a sudden stop or crash.

Forward - Facing

When a child is forward-facing the harness straps should be coming out of a slot AT or ABOVE shoulder level.

In a frontal collision, a child will move forward with sudden force against the shoulder harness. The correct position of the shoulder harness in a forward-facing car seat is **at or above** the child's shoulders. Correct shoulder harness height is most effective in decreasing the amount of distance the child will travel when thrown forward. Less movement results in less violent forces the child will experience in the crash.

Harness straps positioned below a forward-facing child's shoulders can be compressed allowing the head to travel further forward in the crash.

Only use a reinforced harness slot for forward-facing. Read the car seat instructions to determine which harness slots are reinforced.

Use the harness slots that are at and above the child's shoulders and reinforced for forward-facing.

- **NEVER** use the middle or bottom harness slots on a convertible car seat for forward-facing unless the car seat instruction manual permits their use.
- All harness slots are reinforced on combination car seats.

Use the harness slots that are closest to the child's shoulders and are located at or above the child's shoulders.

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Harnessing Tips & Common Misuse

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Using the Wrong Harness Slot

It is important to select the correct harness slot in the back of the car seat to safely secure a child.

- **When rear-facing,** the harness straps should be located at or below your child's shoulders.
- **When forward-facing,** the harness straps should be located at or above your child's shoulders.

Where Do The Harness Straps Go?

Rear-facing seats

Straps should originate **AT** or **BELOW** the child's shoulders

Forward-facing seats

Straps should originate **AT** or **ABOVE** the child's shoulders

Why are the harness straps positioned differently for rear-facing and forward-facing car seats?

Positioning the harness straps depends on the different way crash forces affect a child's body when they are secured rear-facing or forward-facing.

- During a frontal crash, the forces will cause a **rear-facing** child's body to ride up the back of the car seat shell. The harness straps positioned **at or below** the child's shoulders firmly holds the child down in the car seat, preventing the child from sliding up the back of the car seat.
- During a frontal crash, the forces will cause a **forward-facing** child to be thrown forward. The harness straps positioned **at or above** the child's shoulders is most effective in decreasing the distance the child will travel when propelled forward and limits the forces on the child's spine and shoulders.

Correct Use:
Snugly secure the harness at or below a rear-facing child's shoulders to better restrain the child from sliding upwards.

Correct Use:
Snugly secure the harness at or above a forward-facing child's shoulders to better restrain the child from moving forward.

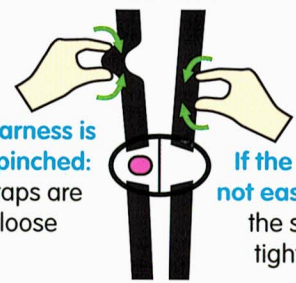
Loose Harness Straps

Loose harnesses do not properly restrain a child in a crash, increasing the child's forward movement and possible ejection from the car seat.

- **Harness straps must lay flat,** without any twists.
- **Harness straps must be snug,** without extra webbing that can be pinched at the child's shoulder.

How Tight Should The Harness Be?

The harness should pass the 'pinch test'; when pinching the harness webbing vertically at the shoulder with the thumb and forefinger, your fingers should slide off easily and you should not be able to pinch any webbing between them.



The harness should lie flat, and fit snugly (not uncomfortable) at the child's shoulders and hips.

Harness Retainer Clip (Chest Clip)

The harness retainer clip is designed to keep the shoulder straps together, parallel over the body. Place the harness retainer clip at armpit level.

Why is the position of the harness retainer clip important?

- **Too high:** the child could suffer a neck injury.
- **Too low:** the child could suffer abdominal injuries and the harness straps could slide off the child's shoulders, allowing the child to slip out of the harness and be ejected in the event of a crash.

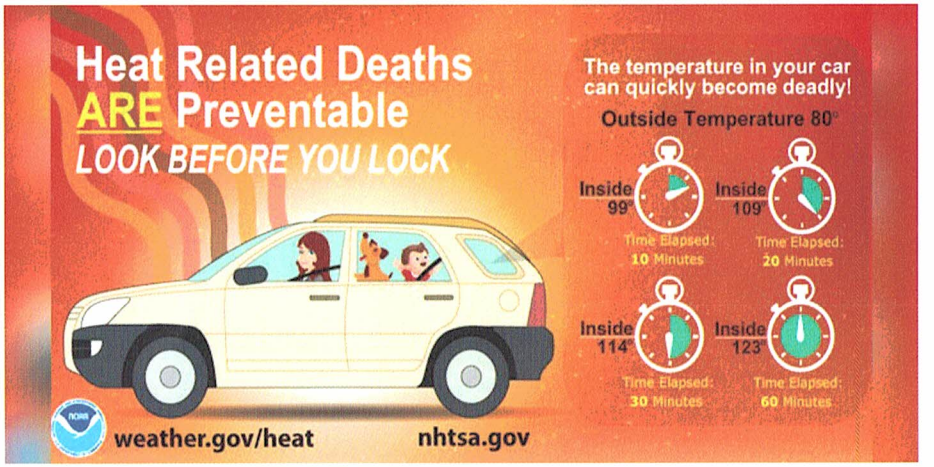
Leaving Children Alone in Hot Cars — Know the Risks and Consequences

Prevent Vehicle Related Heatstroke!

As outside temperatures rise, the dangers for children being seriously injured or even dying from being left alone inside a hot car also rise. Heatstroke begins when the core body temperature reaches about 104 degrees and the thermoregulatory system is overwhelmed. Children and Hot Cars are a Deadly Combination!

Vehicles heat up quickly - even with a window rolled down two inches, if the outside temperature is in the low 80s° Fahrenheit, the temperature inside a vehicle can reach deadly levels in only 10 minutes. Children's bodies overheat easily, and infants and children under four years of age are among those at greatest risk for heat-related illness.

Children's bodies absorb more heat on a hot day than an adult. Also, children are less able to lower their body heat by sweating. When a body cannot sweat enough, the body temperature rises rapidly. In fact, when left in a hot vehicle, a young child's body temperature may increase three to five times as fast an adult. High body temperatures can cause permanent injury or even death.

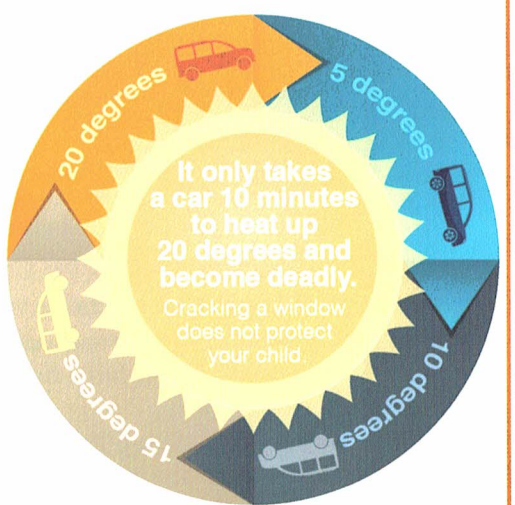


Risks

- In 10 minutes, a car can heat up **20 degrees Fahrenheit**.
- Cracking a window **does little to keep the car cool**.
- With temperatures in the 60s, your car can heat up to **well above 110 degrees**.
- A child's body temperature can rise up to **five times faster** than an adult's.
- Heatstroke can happen when the temperature is **as low as 57 degrees outside!**
- A child dies when his/her temperature **reaches 107**.

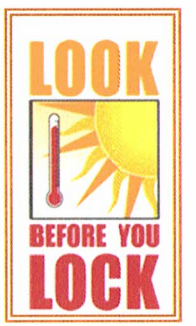
Warning signs of heatstroke include:

- Red, hot, and moist or dry skin
- No sweating
- Strong rapid pulse or slow weak pulse
- Nausea
- Confusion, or acting strangely.



If a child exhibits any of these signs after being in a hot vehicle, cool the child rapidly (not an ice bath but by spraying them with cool water).
Call 911 or your local emergency number immediately.

Prevention Tips to Avoid a Tragic Heatstroke



- **ALWAYS LOOK BEFORE YOU LOCK!**
- Always check the back seat before you lock the vehicle and walk away.
- Get in the habit of always opening the back door to check the back seat before leaving your vehicle.
- Create a reminder to check the back seat. Put something you'll need like your cell phone, handbag, employee ID or brief case, etc., in the back seat so that you have to open the back door to retrieve that item every time you park.
- Keep a large stuffed animal in the child's car seat. When the child is placed in the car seat, put the stuffed animal in the front passenger seat. It's a visual reminder that the child is in the back seat.
- Make sure you have a strict policy in place with your childcare provider about morning drop-off. If your child will not be attending childcare as scheduled, it is the parent's responsibility to call and inform the childcare provider. If the child does not show up as scheduled, and a call was not received from the parent, the childcare provider pledges to contact you immediately to ensure the safety of your child.
- If someone else is driving your child, or your daily routine is altered, always check to make sure your child has arrived safely.
- Never leave a child alone in a car.
- Never let your children play in an unattended vehicle. Teach them that a vehicle is not a play area.
- Never leave a child in a parked vehicle, even if the windows are partially open.
- **Observe and Report: If you see a child alone in a car, call 911, especially on warm days!**

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1-800-CAR BELT
www.pakidstravelsafe.org

https://www.safercar.gov/parents/InandAroundtheCar/heatstroke.htm

Keeping Kids Warm & Safe Through Winter

The Danger of Winter Coats in Car Seats

As cooler weather approaches, parents bundle children in bulky coats to keep them warm. Using these thick coats may keep children warm, but they reduce the safety of their car seat. The car seat harness keeps the child in the car seat and spreads the crash forces over a large area of the body. The harness provides the best protection when correctly placed on the child and tightened snugly. A bulky coat can compress in a crash and create slack in the harness .

To determine if the child's coat is too bulky and not safe to use under the harness while traveling in the car:

1. Put the coat on the child and correctly place the car seat harness on the child's body. Secure the harness and adjust snugly to fit the child. A snug harness does not allow the webbing to be folded between your thumb and forefinger when pinched at the shoulder.
2. Without loosening the harness, unbuckle and remove the child from the car seat.
3. Remove the coat and place the child back in the car seat. Correctly place the harness on the child's body and buckle the harness straps. If you can pinch the webbing between your thumb and forefinger, the coat is too bulky to be worn under the harness.

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Winter Coats and Harnessing

What you CAN Do

- Purchase coats that come in layers or offer warmth with thinner fabrics and fillers.
- Place a blanket over the child in a car seat for additional warmth.
- Put your child's coat on backwards once in the car and buckled.
  - Secure the child in the car seat with the clothes that will be worn while indoors.
  - Buckle and tighten the harness snugly. A snug harness does not allow any slack. It lies in a relatively straight line without pressing on the child's body and pushing it into an unnatural position. The harness should be snug enough on the child that you cannot pinch any extra webbing.
  - Slip the child's arms through the sleeves to wear the coat backwards and over the snug harness.
  - In the event of a crash, the snug harness will keep the child secure.
- Warm up the car in a well-ventilated area prior to taking the child outside.

What you SHOULD NOT Do

- Purchase and use puffy coats, buntings and snowsuits or too much padding under the harness.
- Use head roll supports that do not come with the car seat (non-regulated). These items can actually interfere with the harness, add padding under the child and affect how the car seat protects in a crash.
- Use car seat covers that cover the entire car seat for warmth and decoration. Unless the car seat cover comes with the car seat, it should not be used in the car during travel.

Note: A common misuse for car seats is a loose harness. Wearing a bulky winter coat under the harness is just one of the causes for a loose harness. Extra slack in the harness can be very dangerous; it can lead to too much forward movement or even ejection during a crash.

Following Manufacturer's Instructions

Install the child's car seat correctly to reduce the risk of injury in a crash. It is important to follow the car seat and vehicle instructions carefully to achieve a correct installation. Useful tips to obtain a correct installation:

- **Read the car seat instruction manual and the portion of your vehicle's owner's manual covering car seat installation.**
- Place the car seat in a back seat of the vehicle and secure it tightly. It should not move side-to-side or front-to-back more than 1-inch when pulled at the belt path.

Secure Children Correctly In the Car Seat

- Properly position the harness on your child.
- **Rear-facing:** The harness straps should lie flat and be threaded through the slot that is **at or below** your child's shoulders.
- **Forward-facing:** The harness straps should lie flat and be threaded through the **reinforced slot** that is **at or above** your child's shoulders.
- Buckle the harness and secure the chest clip. Tighten the harness until it is snug on the child.
  - The harness is snug when the webbing cannot be pinched at the shoulder.
  - Make sure the chest clip is at armpit level.