

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.

Harnessing Tips & Common Misuse

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.

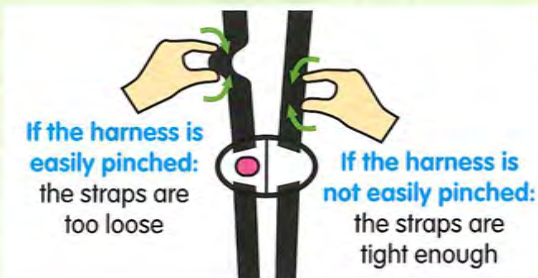
Loose Harness Straps

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.