

# Rear-Facing Seats

## Rear-Facing Basics

Why ride rear-facing?

Rear-facing kids are 5 times safer than those riding forward-facing.

Who should ride rear-facing?

All children who are within the rear-facing height and weight limits for their convertible car seats, no matter what their age--but certainly all infants and toddlers under 2.

Where should rear-facing kids ride?

In the center of the back seat. The center is 43% safer than the side because you cannot take a direct hit if you are sitting in the center.\*\*

When should a child switch from rear-facing to forward-facing?

The American Academy of Pediatrics recommends kids "should continue to ride rear-facing in a convertible car seat for as long as possible," which means till they are too tall or too heavy for their child safety seat. Likewise, NHTSA recommends "Your child should remain in a rear-facing car seat until he or she reaches the top height or weight limit allowed by your car seat's manufacturer."

Too Tall: If head is within one inch of the top of the child safety seat.

Too Heavy: If child is 30 or 35 pounds--it depends on which seat you have.

NOTE: It is OK for the child's feet to touch the vehicle seat. This is SAFE and is NOT uncomfortable.

Which child safety seats go rear-facing?

Infant Seat

Convertible Seat

Infant seats: For newborns and infants up to 22, 30 or 35 pounds--weight limit depends on the model of the seat.

Convertible seats: Rear-facing for babies and toddlers up to 30, 35, 40 or even 50 pounds and then forward-facing for kids up to 40 pounds or more.

**\*\*Note:** If you have more than one child in the rear seat, the forward-facing child should sit in the center, since this child is less safe by virtue of being forward-facing.

{mospagebreak title=Why Ride Rear-Facing?}

Why ride rear-facing?

Sitting rear-facing is simply the safest way to sit in a car. Research shows that the risk of small children being killed or seriously injured is five times higher for those sitting in forward-facing seats than for those in rear-facing seats. New data demonstrates that in a side-impact crash (the most deadly type of collision) rear-facing kids are 4 times safer than those riding forward facing.

Physics: Adults vs Kids

According to the laws of physics, in a crash you always go towards the point of the impact. Therefore, in a frontal crash, everyone moves toward the front of the car. If you are forward-facing--either in a car-seat or a safety belt--your upper body stops quickly as the chest strap on the car seat or seat belt holds you back. However, your head doesn't stop as quickly, but rather travels all the way forward until your chin touches your chest, and then goes all the way back, in the whiplash motion.

Although you'd feel uncomfortable, as an adult you can physically withstand the whiplash motion. Because the head pulls away from the body so violently, having a smaller head in proportion to body makes the effects of whiplash less severe. An adults head is a small percentage of its body--only 6%.

It's quite different for a newborn baby, whose head is a whopping 25% of its body. This means that if a newborn were forward facing in a frontal crash, their head would pull forward with four times as much force as would an adult's!

Strength and rigidity of ligaments and bones in the spine also contribute to an ability to tolerate the whiplash motion. The bones of an infant's spine are made up of soft, stretchy cartilage, the same thing that makes your ears and nose flexible. The ligaments that connect these cartilagenous bones are also underdeveloped and stretchy. Scientists have found that a newborn's spinal column (bones + ligaments) can stretch up to 2 inches, whereas the spinal cord inside can stretch only 1/4 of an inch. If the spinal cord is forced to stretch more than it can, it breaks, leaving the baby paralyzed or worse.

Physics: How rear-facing works in a crash

In a frontal crash, when everyone moves to the point of impact--the front of the car--a rear-facing baby will move in a different way. A rear-facing baby will move into the back of his car seat and will slide gently up the car seat. This allows the back of the car seat to absorb the brunt of the impact and distribute the remaining forces along the child's entire back, which is the strongest part of his body. The most important part: because he sits rear-facing, the child's head, neck, and torso all move together in a straight line. The whiplash motion is avoided totally.

This photo shows two crash tests of properly installed car seats – one rear-facing and the other forward-facing – in a frontal crash. Note that both dummies are properly secured in the car seats (i.e. the harness straps are snug). The rear-facing dummy's head and back are cradled by the back of the car seat. The forward-facing dummy's head and neck are thrown forward in the whiplash motion.

Rear-facing seats also protect children better during side-impact crashes (the most deadly types of crashes). In a side-impact, everyone moves toward the impact. A forward-facing adult or child will pivot around their pelvis and turn to the side, leaving their head at risk for hitting the doorframe, window, other hard structures, etc. When a child is rear-facing in a car seat, the car seat itself does the pivoting, allowing the child's body to stay in a straight line. And since his head usually does not extend beyond the sides of the car seat, his head is better protected. {mospagebreak title=Who Rides Rear-Facing?}

## Who should ride rear-facing?

As mentioned before, in an ideal world everyone would ride rear-facing. Unfortunately, in the US car seats accommodate only children weighing less than 40 pounds in the rear-facing position. Nonetheless, given the wide array of available seats, most kids can ride rear-facing until they are 2, 3 or even 4 years old. If you'd like to keep your child rear-facing till age 2 or 3, look for a convertible seat with high rear-facing weight AND height limits, since most kids outgrow their rear-facing seats in height before weight.

Never seen a 2 1/2 year old rear-facing? This picture proves it can be done! Many parents in the US think it's "weird" to have a 2 year old rear-facing--most children are switched to forward-facing around their first birthday. But if you lived in Sweden, the idea of a 2 year old FORWARD-facing would be "weird," as they keep kids rear-facing until the ages of 3 or 5. In Sweden, children go straight from rear-facing seats to booster seats! Because kids sit rear-facing for so long, fewer than 1 child a year dies in a rear-facing car seat in Sweden. If we also kept more kids rear-facing, we would not only see fewer deaths, but also fewer injuries--especially the really hard to fix ones like those to the spinal cord and head.

{mospagebreak title=Height and Weight Limits}

## Height and Weight Limits

### Height Limits

There should be at least one inch between the top of the child's head and the top of the car seat. Because some kids have longer legs and others longer torsos, it's impossible to give a height limit in terms of the child's total height (since it's only the torso that matters).

Note: A child's feet CAN touch the vehicle seat back. This is okay and does NOT mean that the child is too tall for rear-facing.

### Weight Limits

### Infant Carriers

Most infant carriers go to 22 pounds or higher. Check your car seat's instruction manual or look at the information label on the side of the car seat to find out its weight limit.

### Convertible Car Seats

Most convertible seats (those which can go both rear-facing and forward-facing) have rear-facing weight limits of 35 or 40 pounds, although some newer models go up to 45 or 50 pounds. Again, check your car seat's instruction manual or look at the information label on the side of the car seat to find out its weight limit. When buying a new car seat, make sure that the car seat's height limit makes sense with it's weight limit--for example, a car seat with a 45 lb weight limit should be tall enough to accommodate a 45 lb child rear-facing.

{mospagebreak title=Types of Rear-Facing Seats}

Which types of seats are appropriate for rear-facing children?

Two types of seats may be used rear-facing: Infant Only seats and Convertible seats.

### Infant Only Seats

These have a carrying handle and snap onto strollers and onto a base which you leave in your vehicle--so they're very convenient. You can run errands, get in and out of the car, etc., all without waking the baby. Most infant carriers can be used without the base, a feature you will find very convenient for use in taxis, planes, and other types of travel. Getting a bigger infant carrier seat, where the weight limit is 30 lbs or more, is a good idea, since it extends the length of time during which travel with your sleeping baby is easy. Who wants to wake a sleeping baby to take them in or out of a car seat?

## Convertible Seats

Called convertible seats because they convert from rear-facing to forward-facing, these seats can take a baby on their first ride home from the hospital all the way through the preschool years and even beyond!

This chart will help you compare these two types of seats.

### Types of Rear-facing Child Safety Seats

Features  
 Infant Seats  
 Convertible Seats

Direction?  
 Only Rear-facing  
 Rear-facing OR Forward-facing

Carry Handle?  
 Yes  
 No

Has Base?  
 Yes. Base adds convenience, not safety. Once the base is installed in the vehicle, you just click the carrier in and out.  
 No. Exception is Orbit Baby Toddler seat when used ONLY in rear-facing mode.

Requires Base?  
 Most do not require the base. Exceptions include the Evenflo Embrace, Compass Via and old Peg Perego models  
 No

Stroller Compatible?  
 Yes

No, except for the following:

- Combi Coccoro
- Orbit Baby Toddler Seat
- Sit 'N Stroll

Snap-on wheeled attachments and wheeled bags are available separately for most convertible seats to allow some portability.

## Rear-facing Weight Limits?

22 to 35 lbs.

Infant seats with 30+ lb max:

- Baby Trend Flex Loc (note: base will not install tightly in most vehicles)
- Britax Chaperone
- Evenflo Serenade
- Graco Snugride 35
- Chicco KeyFit30
- Cybex Aton
- Peg Perego Primo Viaggio 30/30 SIP (note: base will not install tightly in many vehicles)
- Teutonia T-tario 32 and 35
- Safety 1st Onboard 35

35 to 50 lbs.

Rear-facing is 5.32 times safer than forward-facing! All manufacturers recommend keeping children rear-facing for as long as possible, meaning until the child exceeds the maximum height or weight limits for his child safety seat's rear-facing mode. More about when to turn your child forward-facing.

## Rear-facing Height Limits?

When top of head is within 1 inch of top of seat

When top of head is within 1 inch of top of seat

## Forward-Facing Weight Limits?

n/a

From 20 or 22 lbs to 40, 65 or even 80 lbs--check your seat's instructions.

Rear-facing is 5.32 times safer than forward-facing! All manufacturers recommend keeping kids rear-facing for as long as possible, meaning until the child exceeds the maximum height or weight limits for his child safety seat's rear-facing mode. More about when to turn your child forward-facing.

## Forward-facing Height Limits?

n/a

When top of ears are even with top of seat or when shoulders are even with highest harness slot

{mospagebreak title=When to Turn Forward-Facing?}When Should Your Child Turn Forward-Facing?

#### Recommendations of American Academy of Pediatrics and NHTSA

The American Academy of Pediatrics has for many years now recommended keeping kids rear-facing until they are too big for their convertible child safety seat.

On March 21 2011, the AAP updated their recommendations in a Policy Statement in the journal Pediatrics, specifying that children remain rear-facing until they are too tall or too heavy for their convertible car seat--until at least age 2, longer if possible. The National Highway Traffic Safety Administration (NHTSA) also updated their recommendations, now specifying that children remain rear-facing until reaching "the top height or weight limit allowed by your car seat's manufacturer." These updated recommendations are based in large part on the research discussed in the following articles:

- A 2007 article in the journal Injury Prevention shows that 2 year olds were FIVE TIMES SAFER riding rear-facing than 2 year olds riding forward facing.

- A 2008 article in Pediatrics (the journal of the AAP) recommends rear-facing till age 2. "A recent analysis of the protection provided in rear-facing compared with forward-facing car safety seats has revealed that children under the age of 2 years are 75% less likely to die or sustain serious injury when they are in a rear-facing seat."

- The AAP article "New advice: Rear-facing car seats safer for children until they are 2" and a handout for pediatricians to give to their patients entitled "Keep your toddler in a rear-facing car seat until at least age 2 (not 1)."

- British Medical Journal (a highly regarded peer-reviewed journal) 2009 article entitled "Advise use of rear facing child car seats for children under 4 years old."

The push to keep pre-schoolers rear-facing is now a worldwide movement! The Swedes, who for more than 35 years have kept kids rear-facing until 4 years of age with extremely low death and injury rates as a result, are probably wondering what took the rest of the world so long to catch on.

I thought I could turn my child at a year and 20 pounds?!

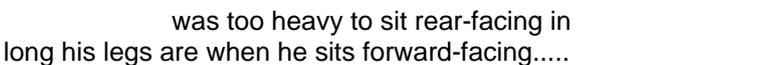
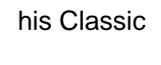
This was the old recommendation. In 2011 both the AAP and NHTSA updated their recommendations to reflect the latest research in child passenger safety. The AAP now recommends that kids sit rear-facing till at least age 2. Since 2002, the AAP has recommended: "If a car safety seat accommodates children rear facing to higher weights, for optimal protection, the child should remain rear facing until reaching the maximum weight for the car safety seat, as long as the top of the head is below the top of the seat back." NHTSA now recommends: "Your child should remain in a rear-facing car seat until he or she reaches the top height or weight limit allowed by your car seat's manufacturer."

Language required in car seat instruction manuals also creates some confusion and may lead parents to believe that a 1 year old and 20 lb child must sit forward-facing in order to be safe. This is untrue for most car seats--read your owners manual carefully to note the maximum rear-facing height and weight limits, not just the minimum allowed.

If not at a year and 20 lbs, then when is my child too big for rear-facing?

A child can be either too heavy, too tall, or both--but all of this depends on the specifications of the car seat. Each car seat has its own height and weight limits for rear-facing children. Most convertible seats allow children to sit rear-facing up to 35, 40 or 50 pounds. The height limit for any rear-facing car seat is that there must be at least 1 inch of room between the top of the child's head and the top of the car seat. This inch ensures that as the child slides up the seat in a crash, his head will stay protected. Given the design of most car seats, the majority of children become too tall for rear-facing seats before they become too heavy. Therefore, when you purchase a convertible car seat, try to select one that is taller in seated height for the child.

Older Toddlers CAN Sit Rear-facing!

At 35 lbs, this 2-year-10-month-old  was too heavy to sit rear-facing in  his Classic Marathon. Look how long his legs are when he sits forward-facing.....

His parents decided to turn him back rear-facing. His legs are okay! He fits fine rear-facing in this Safety 1st Complete Air and he is now 5.32 times safer than before.

What about my baby's legs?

Many parents and even some pediatricians mistakenly think that a child should turn forward-facing when her legs touch the back of the vehicle seat, thinking that this leg position is uncomfortable and/or unsafe. This is untrue. In our experience installing 15,000 car seats, we've seen hundreds of children over the age of 1 riding rear-facing. Many of them are very verbal 2 and 3 year-olds and none have complained of their legs hurting. While your 2-year-old may look

cramped riding rear-facing – as they sit with their legs crossed or in the “frog-legged” position – rest assured that they are both safe and comfortable.

Have you ever watched a 5 year old sleep in the car with their chin on their chest? Kids are much more flexible than adults and can sit and sleep comfortably in positions that would make an adult very uncomfortable.

Simply put, there are ZERO documented cases of rear-facing children breaking their legs, hips, feet, etc., due to their feet touching the back of the vehicle seat. However, since it looks plausible, this rumor persists. Studies show that forward-facing kids are actually more likely to have leg injuries.

Unfortunately there are too many documented cases of head and spinal cord injuries due to children riding forward-facing too soon. Modern medicine can easily fix a broken leg, but not a broken neck.

What about big babies?

A 95th percentile baby may look stronger than his 5th percentile friend, but in a crash the bigger baby is likely MORE at risk if he's riding forward-facing. The rigidity of bones and the strength of ligaments in the spine is likely the same in children of the same age, no matter their size. And a 95th percentile baby likely has a much larger, heavier head, which will pull forward with much more force than that of a 5th percentile child.

My baby is unhappy being rear-facing!

Rear-facing does not have to be boring! Older kids can ride quite upright so they can see out the side and rear windows. If there is a head rest blocking your child's view out the back window, you can usually remove it. By 9-12 months your baby knows you're there when you talk to them from the front - even though they can't see you. So you can calm and entertain your child with songs, stories - and for older children games of "I spy" - all while they are rear-facing. Concerned about car sickness? Volvo looked at several thousand pre-schoolers and found the same rates of motion sickness in those riding rear-facing as those riding forward-facing. Regardless of the direction your child rides, placing them in the center seat with an unobstructed view out the front/back window will help keep the nausea away.

My child is 15 months old and forward-facing - should I really turn her back rear-facing?

Yes! When we know better, we must do better. Three months ago when you turned her forward facing you did what you thought was best, but now you know differently. Avoid regrets, and give her the best protection you know how.

Many parents worry that it will be a disaster turning an older child back rear-facing. Here is one mom's experience turning her almost-3-year-old son back rear-facing:

I was initially very hesitant to move my almost three year old son to rear facing from forward facing. He has been sitting forward facing for over a year and can be strong willed when it comes to change. However, after hearing how much safer it is I was willing to try. The first three or so drives were very difficult as he asked to "look out mama and dada's window" almost the entire time. We ignored and distracted and I was about to give up when I noticed that although he still complained about sitting rear facing it happened less and less. Now (after about three weeks) he asks maybe once every other drive if he can sit forward facing and was even (mostly) fine the other day when his friend joined us and sat forward facing. It was a tough first few drives, but I am very happy we did it and I feel so much safer.

My 20-month-old is too heavy for rear-facing in her current seat - should I really buy a different seat so she can ride rear-facing longer?

Imagine it's November and your 20-month-old has outgrown all of her winter clothes from last year. Would you not buy her new winter clothes because "it will be warmer in four months"? The car seat is one of the only products you will ever buy for your child that has the potential to save her life! Just like your child needs new clothes frequently, they may need a new car seat sooner than you thought. If you are in a crash, you will be relieved knowing that you gave her the best protection possible.

{mospagebreak title=Seat Placement in the Vehicle}

Where should I install my child's safety seat? Which spot is safest?

The center of the back seat is statistically the safest place in the car. It's not just safest for kids...it's safest for adults too! Research from real crashes shows that kids sitting in the center are 43% safer than those sitting on the side, since in the center you cannot take a direct hit in a crash.

What if my car does not have LATCH in the center?

Talk about mixed messages! LATCH was specifically designed for child safety seats, yet the safest place in the vehicle for the child safety seat usually doesn't have LATCH! But.....just because there is no LATCH does NOT mean that you cannot install the child safety seat in the middle. You will just need to use the vehicle safety belt to install the child safety seat instead. Remember, there is almost always a tether anchor for the center seat, so if you are installing a child safety seat forward-facing, make sure to use both the vehicle safety belt AND the tether strap. More about using LATCH in the center.

What if two or more people need to ride in my backseat?

Since the center is the safest place in the vehicle, try to put the person who is the least protected in that position. For example, a rear-facing child (even a 4 pound preemie) is 5 times safer than a forward-facing child or adult, simply because the rear-facing child is rear-facing! So put the forward-facing person in the center seat to "even things out."

Of course, there are times when this might not work. If you have a lap-only belt in the middle seat, things get complicated. A child in a booster seat or an adult should NOT ride with just a lap-only belt. If you have a lap-and-shoulder belt, it will be safer for the child in a booster seat or the adult to sit on the side and use a lap-and-shoulder belt.

My child safety seat won't fit securely in the center! What do I do?

The most important thing is to use the child safety seat properly. If it does not fit in the center correctly, place it on the side. Or buy a different child safety seat that will fit in the center!

Won't my child fly through the front windshield if she sits in the center?

As a parent, you have many things to worry about. And many parents worry about this. But as Car Seat Ladies, we are going to tell you NOT TO WORRY! If a child safety seat is used correctly, you don't need to worry about anyone going through the windshield. A properly used child safety seat is belted tightly to the vehicle and the child is strapped in tightly to the harness. The one people who might go through the windshield are those who forgot to wear their safety belts or kids who were very loose in their harness straps.

Do I need to be concerned about the fold-down armrest in the center seat?

Nope! For those of you who may have heard not to put a rear-facing child safety seat in front of a fold-down armrest, here is how that myth got started. Years ago, one child safety seat manufacturer (Evenflo) slipped this sentence into the instruction manual for all of their rear-facing safety seats: "When this restraint is used rear-facing, DO NOT place it in a seating position with a fold-down armrest. During an impact, the movement of the armrest can cause serious injury or death to your infant." Evenflo was never able to provide even one real-world example where a baby was hurt in a crash because of an armrest. None of the other child safety seat manufacturers ever even thought the arm rest was a

problem. In fact, no one in the safety field is even aware of one injury to a rear-facing baby due to the arm rest. Eventually, Evenflo removed this statement from all of their seats and now allows any of their seats to be placed in front of a fold-down armrest. Remember, the study that found that kids are 43% safer in the center was from real-world crashes, with real babies riding rear-facing in front of fold-down armrests.

{mospagebreak title=Positioning the Child in the Seat}

How should a rear-facing child sit in his car seat?

There are two important components to properly seated rear-facing children: recline angle, shoulder-strap positioning.

### Recline Angle

For safety and comfort, newborns should ride semi-reclined, so that the angle of the car seat (where their head and back rests) is reclined enough to keep their head back and their chin off their chest, but never more than 45 degrees from vertical. Most newborns will require a 45-degree angle to keep their head well-positioned and their airway open. We must position a newborn's head and neck for him, because he doesn't have the neck muscles required to hold his head up himself. Without this reclined position, a child's head could easily fall down onto his chest, pinching off his airway. As he grows older and can hold up his own head, you can move the car seat into a more upright position (if permitted by the car seat manufacturer) to provide better crash protection.

Many infant car seats now come with removable head supports. It has been our experience that the vast majority of these head supports are ineffective or worsen the positioning of the baby's head. Most of these head supports place more padding behind the child's head, which further encourages the head to fall forward--exactly what we don't want to occur! Before removing the head rest on your car seat, read the owner's manual, since the head rest on a few car seats (like the Britax Companion) is not supposed to be removed (since it also functions to increase the side impact protection for the child.) If your head rest is removable, better positioning--even for the smallest preemies--can usually be achieved with a rolled diaper cloth or receiving blanket alongside the baby's head. If a newborn needs extra head support, place two rolled up blankets or cloth diapers on either side of his head. Never place anything behind a newborn's head or under his neck.

Note how the head support in the photo to the right pushes the child's head forward, causing it to slump on her chest. Also note that the straps are much too loose--and read on...

### Shoulder Strap Positioning

Properly tightened harness straps also help keep a newborn's body straight, keeping his head straighter and allowing him to breathe more easily. Tight straps do more than just keep a child safely snug in a car seat! Since a rear-facing child is likely to slide up the seat in a crash, the shoulder straps should start slightly BELOW the child's shoulders and come up and over in order to best prevent the child from sliding up too much. When the straps come so far below the shoulders that they slip off, you need to raise them to the next slot level. Note that many convertible seats have 3 slots for shoulder straps--the lowest two for rear-facing and the top one for forward-facing only.

We removed the head support and properly tightened the harness straps, making them so tight that you can fit only one finger between the straps the baby's body. We also raised the chest clip to the baby's armpit level. Finally, we removed the strap covers, which are too long to fit between the chest clip and the top of the seat, and would therefore interfere with getting the straps properly tightened. See how much better the baby's head placement is!

{mospagebreak title=Stroller Compatibility}

### Stroller Compatibility

Below is a stroller/car seat compatibility chart (up to date as of 7/4/2011 and includes ONLY 2011 models). Here's some info before you start:

## Strollers:

There are three pages of strollers divided as follows:

1. Single strollers
2. Double strollers
3. Double strollers that accommodate 2 car seats.

"Snap n' go" type strollers (i.e. metal frames with wheels that accommodate different infant seats) are NOT included in this chart. All the strollers included in this chart can be used WITH OR WITHOUT the car seat – while snap n' go strollers can ONLY be used with the car seat.

## Car Seats:

We include only four infant seats: the Britax Chaperone, Chicco Key Fit 30, Cybex Aton, and Graco Snugride 35 with Classic Connect.

These four seats all fit on most strollers. (Note that the Cybex Aton uses the Maxi Cosi adaptor. Knowing that many strollers worldwide have Maxi Cosi car seat adapters, Cybex designed the Aton to fit onto the Maxi Cosi adapter. Since the Cybex has only been available in the US since May 2011, most stroller companies have not officially listed it as compatible with their strollers. However, since it fits onto Maxi Cosi adapters, we have listed it as fitting on a particular stroller if there is a Maxi Cosi adapter for that stroller.)

Why only four car seats – and why these particular four?

These 4 infant seats are more likely to be used properly than other seats due to the following:

- Built-In Locking Clips: They all have built-in locking clips for an easier installation with the vehicle's shoulder/lap belt. Why is this important if most cars have LATCH? Since few cars allow for the use of LATCH in the center seat AND since the center is 43% safer than the side, it is best to have the car seat installed in the center using the seat belt – and a built in locking clip for the seat belt typically allows for an easier and more secure seat belt installation. Read more about placement of your infant car seat.

- Nice Contours: Due to the contours of their bases these four car seats can be installed securely in a wide variety of vehicles (unfortunately we can't say that about many other car seats).

- User-friendly Harness Straps: The harness straps tighten and loosen easily and the straps can't get uneven. When straps get uneven, as happens with many other car seats, it drives parents crazy and the kids typically ride around with straps that are too loose, which isn't safe.

- Travel Friendly: If you'll be using the carrier without its base – friends' cars, taxis, travel, rental cars, etc – these seats will all work nicely. (If you do this often, the Cybex Aton is best--due to a European-style routing path for the vehicle's shoulder belt it gives a more secure installation without its base than the other three.) Note: installing the carrier by itself is VERY safe as long as it is installed properly – the base is not a safety feature, but rather a convenience feature. Watch how to do it on our Taxi Videos page.

- Low Birth Weight: The Britax, Chicco & Cybex and Graco Snugride 35 are certified for babies 4 pounds and up. The Graco Snugride 35 starts at 5 lbs.

- Stroller Compatibility: These four seats all fit on most strollers. (Note that the Cybex Aton uses the Maxi Cosi adaptor. Knowing that many strollers worldwide have Maxi Cosi car seat adapters, Cybex designed the Aton to fit onto the Maxi Cosi adapter. Since the Cybex has only been available in the US since May 2011, most stroller companies have not officially listed it as compatible with their strollers. However, since it fits onto Maxi Cosi adapters, we have listed it as fitting on a particular stroller if there is a Maxi Cosi adapter for that stroller.)

Trying to decide between these four seats? Ask yourself these questions:

Will you be using the carrier alone, without the base, in taxis, friends cars, rental cars, grandma's car, travel, etc?

If your answer is YES, the Cybex Aton will work best since it installs more easily without its base than the other three car seats. Note: installing the carrier by itself is VERY safe as long as it is installed properly – the base is not a safety feature, but rather a convenience feature. Watch how to do it on our Taxi Videos page.

Does your baby weigh less than 5 pounds?

The Britax, Chicco & Cybex and Graco Snugride 35 LX are certified for babies 4 pounds and up. The Graco Snugride 35 starts at 5 pounds.

Do you have a small car? Does the adult in front need to move his/her seat all the way back?

The Cybex takes up the least amount of space front-back, the Chicco just an inch more than the Cybex, and the Graco a smidge more than the Chicco – and the Britax a little more than the Graco.

Using the Chart:

Scroll to the right to see the Notes column. Click on the tabs at the very bottom of the chart to switch between the list of single strollers, double strollers, and double strollers designed for twins (i.e. can take 2 infant car seats at the same time)

{mospagebreak title=Infant Carrier Handle Positioning}

Infant Carrier Handle Positioning

Where should the handle be?

A lot of parents think the handle has to be down when the safety seat is in the car. This is not true! Many infant carriers allow--and some even require--that the handle be up when the safety seat is in the car. The table below lists the authorized handle positions for travel in the car for current and recently discontinued carriers. Please always double-check the manual for your child's safety seat.

Tip: The most versatile infant carrier is one that allows the handle to be in position #1, as the infant carrier takes up

the least space in the vehicle when the handle is in position #1. The carrier is narrowest when the handle is in #1, meaning that the carrier is more likely to fit in the middle seat, nestled between the two front seats. The infant carrier also takes up the least amount of space in the back seat when the handle is in position #1. This comes in handy (no pun intended) when the infant carrier is placed behind a taller driver or front passenger or behind an adult of any height in a smaller vehicle. Position #3 will also work well in many situations, but in tight spaces it can be difficult to get the carrier handle up without moving the front seats up, and this makes it difficult to easily remove the infant carrier from the vehicle.

Position 1

Position 2

Position 3

### Handle Position for Infant Child Safety Seats

Infant Carrier Brands  
 Infant Carrier Seat Name  
 Authorized Handle Position for Travel in the Car

Baby Trend  
 All Models (Latch-Loc and Flex-Loc)  
 2, 3

Britax  
 Baby Safe  
 2

Britax  
 Companion

Chaperone  
 3

Chicco  
 KeyFit and KeyFit30  
 Any locked position

Combi  
 Centre and Shuttle  
 1

Combi  
 Connection  
 Any locked position3

Combi  
 Tyro  
 1,2

Compass  
 All Models (Via, I-400, I-410, I- 420)  
 Any locked position EXCEPT 1

Cybox  
Aton  
1

Team Tex  
Baby Ride  
2

Dorel

(Cosco, Eddie Bauer, Safety 1st, including Maxi Cosi)  
All Models (retroactive)  
Any locked position

Evenflo  
All Models  
2

Graco  
All Models  
Any locked position (retroactive, applies to all seats)

Maxi Cosi  
All Models  
Any locked position

Mia Moda  
Viva  
Any locked position

Orbit Baby  
Infant Seat  
Soft handles are lowered to the top edge of the seat.

Peg Perego  
Primo Viaggio-All models  
2

Curious how the rumor "the handle must always be down" got started?

The first infant carrier with a base ever sold in the United States--the Century 580--hit the market in the mid 1980's. On this particular seat, you placed the infant carrier into the base with the handle up (position #1) and then rotated the handle to position #2 to lock the carrier into the base. Forgetting to move the handle to position #2 meant that the carrier was not locked into the base and could come out of the base in a crash! The Century 580 and its successor the 590 were the only carriers to feature this type of locking mechanism. All other seats lock automatically when you place the carrier into the base. Other manufacturers were concerned that if they allowed their seats to use position #1, parents might mistakenly think it was okay to use position #1 on a Century 580/590, which could be a deadly mistake. With the last Century 590 made in 1997 (and too old to be used after 2003), manufacturers now feel comfortable recommending different handle positions. In fact, most seats sold in Europe use position #1.

{mospagebreak title=Keeping Rear-Facing Kids Happy}

How to Keep Your Kids Happy (and safe)

Warmth

Cleanliness

Toys

Mirrors

Sun Shades

Motion Sickness

Interacting with your Child

Irritability

Warmth: Keeping the baby warm is very important. Unfortunately some products designed to keep the baby warm can also make the baby unsafe in the car. Products that have a layer that goes UNDER the baby's body can make the baby unsafe. This is true even if the product is designed with slots for the harness straps to fit through.

Snug harness straps are like the baby's parachute in a crash, helping the baby to land slowly and gently. You wouldn't put thick padding underneath a parachute harness, because if you did that the harness wouldn't hold you tight. Don't put padding underneath your baby in the safety seat!

Even if the product has openings for straps it is not safe! These openings do not line up with the straps on the car seat and will cause the straps to fall off the child's shoulders--which could lead to the child coming out of the seat during a crash. Products which fit under the baby also add too much slack into the harness, which also might lead to the child coming out of the seat during a crash.

Does the product say it was "Safety Tested?" BUYER BEWARE! In order to sell a child safety seat in the US, the seat has to pass rigorous crash test standards to prove that it is safe. However, in order to sell a product for use with a child safety seat---but one that does not come with the seat---there are NO standards or crash tests required! Despite what such "aftermarket" products may claim, the child safety seat manufacturers feel that using such products may be unsafe and violates the warranty on the child safety seat.

Remember, kids get uncomfortable when dressed in bulky layers because they feel restricted and soon overheat when the car warms up. If it's cold outside, you can dress your child in several thin and tight layers. Once you've buckled him into the car seat, cover him with blankets to keep him warm. When the car warms up, you can pull the blankets off.

There are many ways to keep your baby warm and safe! See our Car Seat Lady Approved product page for a list of fleece covers that will keep the baby warm and toasty.

Here is what the car seat manufacturers have to say about aftermarket products. These excerpts were taken directly from the child safety seat instruction manuals.

#### Baby Trend

"Do Not dress your child in bulky clothing or other garments that will hinder the harness from being snug around your baby and properly latched between your child's legs."

"Accessory products for use with the Safety Seat are acceptable for use provided that they do not interfere with the harness assembly, or the proper adjustment of the harness such that it remains tight on the child's shoulders at all times. Thick, soft, or other compressible material in excess of 1/4 inch thick should not be placed behind or under the child or between the child and harness straps. Examples of accessory products are head support pillows or rolled blankets to add additional head support."

#### Britax

"The use of non-Britax Child Safety, Inc. covers, inserts, toys, accessories, or tightening devices is not approved by Britax. Their use could cause this restraint to fail Federal Safety Standards or perform worse in a crash. Their use automatically voids the Britax warranty."

#### Chicco

"NEVER use clothing or blankets that interfere with fastening or tightening the harness. An unsecured child could be ejected in a sudden stop or crash! To keep child warm, place a blanket over child and restraint AFTER you have properly secured child in harness."

DO NOT use any accessories, pads or products supplied by other manufacturers with this Child Restraint. Items not tested with this restraint could injure your child."

#### Dorel

Maxi Cosi, Eddie Bauer

and Safety 1st

"Dorel Juvenile Group does not recommend the use of any child restraint accessories except those recommended by DJG."

#### Evenflo

"In cold weather, DO NOT dress the child in bulky clothing like snowsuits if the child is riding in a child restraint. Bulky coats/ snowsuits make it difficult to properly tighten the harness to the child, which may allow the child to be ejected from the restraint during a crash."

#### Graco

"DO NOT use accessories or parts other than those provided by Graco. Their use could alter the performance of the car seat."

#### Orbit

"Do not modify your Infant Car Seat or Base. Only use products and accessories approved by Orbit Baby to ensure the safety of your child. This limited warranty does not apply to: defects resulting from use with covers, inserts, accessories, tightening devices, or other components not supplied by or expressly approved in writing by Orbit Baby."

#### Peg Perego

"Use only approved parts. Use of unapproved parts can affect the safety of the car seat and cause

serious injuries in an accident."

#### Sunshine Kids

"Using any non-Sunshine Kids product with this restraint; or any product not specifically approved by Sunshine Kids for use with this restraint is not allowed. Use of such products voids manufacturer's warranty and may seriously impact the products ability to perform properly in an accident."

**Cleanliness:**The same applies to products made to keep the car seat clean as to those which keep kids warm. If the product goes under the child, it is not safe to use.

**Toys:**Lightweight objects can become deadly missiles in a crash, where an object or person will weigh their weight MULTIPLIED by the speed of the crash! For example, a 5 pound DVD player will weigh 150 pounds in a 30 mph crash ( $5 \times 30 = 150$ ). Therefore, it is important to make sure that toys and other objects surrounding the child are soft and lightweight. If you have an infant carrier that allows the handle to be up while riding in the car, then you can attach toys to the handle. Never attach a toy to the straps of the child safety seat!

Not sure if a toy is safe? Do the Ouch Test. Hit yourself in the head with the toy or object. If you have to say ouch, it will hurt your child in a crash.

Have you found a toy that is sold for the car seat but which fails the Ouch Test? Wonder how products like this can make it to the store shelves despite posing a danger to your child? While there are extremely strict standards including crash testing that child safety seats must pass, there are NO standards or crash testing for products sold to be used with a child safety seat (but that don't come with the safety seat.) Buyer Beware!!

**Mirrors:** It's best not to use a mirror for two reasons. First, the mirror is a risk to the baby's face (it fails the Ouch Test.) Second, and more importantly, the mirror is also a risk to everyone in the car, because it encourages the driver to take her eyes off the road to look at the baby. Driver distraction is a real problem, as is evident from the number of crashes caused by cell phone usage or texting. In the second that you take your eyes off the road to look at your cute baby you could miss avoiding a crash.

Many parents worry about not being able to see their child in the car. But no parent can or should watch a child 24/7. Just as you can't watch the baby while you are sleeping, so too you can't watch the baby while you are driving. Besides, what's the mirror going to show you that you don't already know? It will show you that the baby's crying---but you already know that, since you hear the baby crying! Or it will show you that the baby is sleeping--but you already know that because the car is very quiet. Are you worried that the baby spit up and is choking? Gravity will take care of getting the spit up away from the baby's mouth. Are you worried that the baby god forbid stopped breathing? As a pediatrician, Alisa can tell you that this would be an exceptionally rare occurrence in a healthy baby. If your baby has medical needs that require close monitoring, there needs to be an adult in the vehicle to tend to the baby, so the driver can tend to the road.

**Sun Shades:** Many parents install sun shades on the rear windows of their cars. Unfortunately, many sun shades are dangerous. Some block the view out of the rear window so much that the driver can't see out clearly. Others have hard plastic rollers that in a crash can fly around and hit the baby. If you use a sunshade, it should be lightweight and allow drivers to see through it easily, like this one from The First Years. Another option is this sunshade which attaches to the child's safety seat--and has no hard parts or sharp edges.

**Motion Sickness:** : An adult's experience riding rear-facing – usually on a train – is very different from that of a young child riding rear-facing in a car. When rear-facing on a train, you are forced to look out the side windows as the scenery passes by very quickly. Ask any adult who gets motion sick, and they'll tell you looking out the side windows makes them the sickest! They'll be quick to point out that looking out the front window is the best thing to do, since the scenery goes by much more slowly, making them much less likely to feel sick. A rear-facing child in a car seat can easily see out the

rear window, where the scenery goes by more slowly than the side windows--just like the front window. The only difference between being rear-facing and forward facing in a car is whether you see where you have been or where you are going. A study of several hundred children in rear-facing and forward facing car seats supports this conclusion – finding identical rates of “car sickness” – about 2%.

**Interacting with your Child:** While your child can't see you when you're driving, even very young babies can recognize the voices of their parents. Talk to your baby – or play music and sing to it. You don't necessarily need to listen to “baby” songs – kids like music with a beat, so many of your favorite songs might become the baby's favorites too.

**Irritability:** It's developmentally appropriate for infants and toddlers to dislike the car seat and other forms of restraint (like high chairs or strollers). These restraints limit a child's mobility and freedom; most kids would much rather be crawling around exploring the world around them instead of strapped into a car seat. But while it's disconcerting to hear a baby cry, it's also important to realize that it's unlikely that the baby is crying out of pain. Crying is the baby's only form of communication. He might be trying to ask "Are we there yet? I want to get out and play!" As any pediatrician can tell you, the crying baby is the most reassuring baby, because you know his airway is open. {mospagebreak title=Tips for Newborns}

### Tips for Newborns

- What makes a seat fit a newborn well?
- How should I position my newborn in the car seat?
- Can I use a head support device?
- Can I swaddle my baby in the car seat?
- How do I calm my baby? He cries when I put him in the car seat!
- Can I use a convertible child safety seat for my newborn?
- My baby weighs less than 5 pounds. What should I do?

What makes a seat fit a newborn well?

A few things:

1. Low shoulder strap slot. The closer the shoulder strap slots are to the baby's shoulders, the better. Remember, it is best to have the straps start **BELOW** the baby's shoulders when kids are rear-facing. Many newborns are not tall enough to have the straps start below the shoulders, but finding a seat that has the slots as close as possible is important.

2. Close crotch buckle position.

3. Narrow spacing between the hip straps on seats with a 5-point harness.

4. Small, short and narrow chest clip. On some seats the clip is so big that it pushes under the baby's chin. On other seats it's so wide that it pushes the shoulder straps so far apart that they fall off the baby's shoulders.

Here's a short video showing how to buckle in your newborn.

We know parents of newborns don't have too much time to watch videos--but we have a longer version with more detail on our Videos page. The baby in this video is 7 weeks old and about 8 lbs. She's being buckled into a Graco Safe Seat.

How can I position my newborn in the car seat?

New babies do not have enough strength in their necks to hold their heads up. Their heads tend to flop sideways---this is OKAY! But when the car seat is too upright, their heads tend to flop forward, and this is NOT OKAY. A baby's head should not fall forward in the car seat, so that his chin touches his chest. This is dangerous and can interfere with the baby's breathing.

Two tips to make sure your newborn's head stays in a safe position.

1. Make the harness straps snug. Snug straps do more than just keep a baby safe in a crash. They prevent babies from slumping over, giving them the support they need to keep their bodies and heads straight.

2. Recline the car seat properly. For safety and comfort, a newborn should ride semi-reclined, so that the angle of the car seat (where their head and chest rest) is reclined enough to keep the baby's head back and his chin off his chest, but never more than 45 degrees from vertical. Most newborns will require a 45 degree angle to keep their heads well positioned and their airways open. We must position the newborn's head and neck for him, since he doesn't have the neck muscles to do it himself. Without this reclined position, a child's head could easily fall onto his chest, pinching off his airway. As he grows older and can hold up his own head, you can move the car seat into a more upright position to provide better crash protection.

Can I use a head support device with the car seat?

It has been our experience that the vast majority of head supports that come with child safety seats are ineffective or worsen the positioning of the baby's head. Most of these head supports place more padding behind the child's head, which further encourages the head to fall forward---exactly what we DON'T want to occur! (Before removing your child safety seat's head support, read your owners manual, since a few car seats (like the Britax Companion) require the head support for crash protection.)

Better positioning, even for the smallest preemies, can usually be achieved with a rolled diaper cloth or receiving blanket alongside the baby's head. Never place anything behind a newborn's head or under his neck. Do not use a head support device that did not come with your car seat. In order to sell a product for use with a child safety seat---but one that does not come with the seat---there are NO standards and NO crash tests required! Despite what such "aftermarket" products may claim, the child safety seat manufacturers feel that using such products may be unsafe. Using these products violates the warranty on the child safety seat.

Can I swaddle my baby in the child safety seat?

No.....and yes. It is dangerous to have anything under the straps that is not the baby's body. But you can still give the baby that snuggly feeling of being swaddled with these simple steps.

1. Buckle the baby into the safety seat and make the straps snug. There should be NO blankets or bulky clothing under the straps or on the baby's body.

2. Take a blanket and, while keeping the baby's arms down at the sides, tuck the blanket very tightly along the sides of the baby's body and underneath the baby's legs. Of course if it is very hot outside don't do this, since the baby will overheat.

The 2 week old baby in this photo is buckled tightly into her Graco Snugride 35. You can't see the straps due to the swaddle, but rest assured that she's ready to go for a ride (just as long as the carrier handle is moved to an approved position for use in the car!)

How do I calm the baby? He cries when I put him in the child safety seat!

Dr. Harvey Karp, a pediatrician and author of the *Happiest Baby on the Block*, talks about the 5 S's system to calm a baby. Just like your new baby cries when you change his diaper or dress him, he may cry when you buckle him into his safety seat. Here are a few tips adapted from Dr. Karp's 5 S's for calming the baby.

1. Swaddling. In the last few months of pregnancy, the baby tucks up into fetal position and spends her time with constant touch and support. Tight straps mimic this constant touch. Adding a blanket overtop the straps tucked alongside the baby's body gives an extra element of support by keeping the baby's arms at her sides, preventing her from setting off her own startle reflex.

2. Shushing Sounds. Babies in utero listen to a constant white noise "soundtrack," the sound of blood whooshing through the mom's body. You can mimic this sound by making a loud shushing noise.

3. Swinging. Babies in utero are used to constant motion, since when mom moves, so does baby. Most babies miss this constant motion and have trouble adjusting to it not being there. With your baby snugly buckled into the car seat, swing the car seat by the handle gently to mimic the motion he misses.

4. Sucking. This is a very powerful calming technique for babies. Once the baby is in the safety seat, offer her a pacifier.

5. Side or Stomach Position. This is not possible in the child safety seat, unfortunately.

Can I use a convertible child safety seat for my newborn?

Yes! People often use infant carriers for newborns because they tend to be more convenient. But a convertible seat is just as safe, provided it fits your child correctly (see What makes a seat fit a newborn well, above). There are certain circumstances where it makes more sense to use a convertible seat instead of an infant carrier.

- 1. Money is tight and baby will typically be riding in just one vehicle. If you are using multiple vehicles and/or taxis, the convenience of the infant carrier makes it a better choice.
- 
- 2. The second parent or the grandparent wants a child safety seat in his/her car, but won't be taking the baby frequently in the first months. Buying a second base for an infant carrier which a baby will use only a few times does not make sense.
- 
- 3. You plan to use a sling to carry the baby instead of carrying them in the infant carrier car seat.

My baby weighs less than 5 pounds. What should I do?

Here's a list of car seats with their minimum weight limits.

No minimum weight

- Combi: Shuttle 22, Shuttle 33, Navette\*
- Nania: BabyRide\* (model with 4 shoulder strap settings)

3 lb minimum

- Combi: Coccoro (convertible seat, those manufactured 8/2011 and newer)

4 lb minimum

- Britax: Chaperone
- Chicco: Keyfit 22, Keyfit 30, Keyfit30 Magic
- Cybex: Aton
- Graco: Snugride 30, Snugride 35 (certain models)

- Maxi Cosi Pria 70 (convertible)
- Orbit Baby: G2 Infant Car Seat
- Safety 1st: Comfy Carry, OnBoard 35, 35 Air

5 lb minimum

- Baby Trend: Flex Loc, EZ Flex Loc
- Evenflo: Embrace 5, Discovery, 5 Serenade, Secure Ride (some models)
- Graco: Snugride, Snugride 32, Snugride 35 (certain models)
- Maxi Cosi: Mico
- Peg Perego: Primo Viaggio SIP 30/30
- Safety 1st: Designer
- Teutonia: t-tario
- The First Years: iVia470

\*Note: Combi Navette and Nania BabyRide are available ONLY to agencies/institutions in industrial sized packs.

{mospagebreak title=Tips for Premies}

Tips for Premies

Printable Premie Tip Sheet

More than 1 in 10 parents take home a baby weighing less than 10 lbs. Every year, more than 10,000 US babies go home weighing less than 4 lbs! Just like infant-sized clothes are too big for these tiny babies, infant-sized car seats are often also too big. Many infant car seats have a starting minimum weight of 5 lbs; only some fit babies 4 lbs or less. Some infant car seats also come with newborn inserts or positioners to improve the harness fit for very tiny babies.

It's important to note that ANYTHING in the box with your car seat has gone through rigorous crash testing and by law must meet certain standards. Other products sold separately, like infant or newborn head/body positioners, strap covers, fleece sleeping bags, etc, are not regulated and do not have to meet any standards or pass any crash tests. These 'aftermarket products' should NOT be used since they will make your baby less safe and void the car seat's warranty. NOTHING should be placed under your baby or under the straps. Once your baby is wearing a few thin layers of clothing and is buckled snugly, you can use blankets on top to keep the baby warm and rolled blankets on the sides for extra support.

- What makes a seat fit a preemie well?
- Isn't it true that most infant seats have a 5 pound minimum?
- What is the Car Seat Test?

- Who should get a Car Seat Test?
- Tips for passing the Car Seat Test
- Who needs a car bed?
- Which car beds are available?
- Traveling with medical equipment
- Tips for physicians and nurses

What makes a seat fit a preemie?

A few things:

1. Low shoulder strap slot. The closer the shoulder strap slots are to the baby's shoulders, the better. It is best to have the straps start **BELOW** the baby's shoulders when the baby is rear-facing. With preemies and even newborns, it is usually not possible to have the straps start below the shoulders, but getting a seat where the strap slot is as close as possible is important.

2. Close crotch buckle position

3. Small, short, and narrow chest clip. On some seats, the clip is so big that it pushes under the baby's chin. On other seats the clip is so wide that it pushes the straps so far apart that they fall off the baby's shoulders.

4. Narrow spacing between hip straps, on a 5-point harness seat.

Isn't it true that most seats start with a 5 pound minimum weight?

Yes. But there are some seats that can be used for babies under 5 pounds, as follows (the number in parentheses is the height of the lowest shoulder strap):

No minimum weight

- Combi: Shuttle 22, Shuttle 33, Navette\*
- Nania: BabyRide\* (model with 4 shoulder strap settings)

3 lb minimum

- Combi: Coccoro (convertible)

4 lb minimum

- Britax: Chaperone
- Chicco: Keyfit 22, Keyfit 30, Keyfit30 Magic
- Cybex: Aton
- Graco: Snugride 30, Snugride 35 (certain models)
- Maxi Cosi Pria 70 (convertible)
- Orbit Baby: G2 Infant Car Seat
- Safety 1st: Comfy Carry, OnBoard 35, 35 Air

5 lb minimum

- Baby Trend: Flex Loc, EZ Flex Loc
- Evenflo: Embrace5, Discovery5, Serenade, Secure Ride (some models)
- Graco: Snugride, Snugride 32, Snugride 35 (certain models)
- Maxi Cosi: Mico
- Peg Perego: Primo Viaggio SIP 30/30
- Safety 1st: Designer
- Teutonia: t-tario
- The First Years: Via (must use base)

\*Note: Combi Navette and Nania BabyRide are available ONLY to agencies/institutions in industrial sized packs.

What is the "Car Seat Test?"

If your baby is born before 37 weeks or has a medical condition that may affect her breathing or her ability to maintain her oxygen level, before she leaves the hospital she will get a 'car seat test' as recommended by the American Academy of Pediatrics. During the test, the baby will sit properly strapped into her car seat for 90 minutes to make sure that her heart rate, breathing rate and oxygen levels stay in a normal range. The semi upright position of the rear-facing child safety seat is a stressful position for a baby, compared to laying flat. A baby "fails" the test if his heart rate drops (bradycardia) OR his oxygen level drops (desaturation) OR he stops breathing (apnea).

The AAP recommends that babies who 'pass' the car seat test go home in a rear-facing car seat, NOT in a car bed, since the protection provided by a rear-facing car is better documented than that for car beds. Car beds should ONLY be used for babies who 'fail' the car seat test, meaning for those babies who cannot maintain a normal heart rate, breathing rate or oxygen level while in the car seat.

#### Who exactly should get a Car Seat Test?

The American Academy of Pediatrics recommends that all babies born before 37 weeks get a car seat test. Other babies who should get a car seat test before going home are those:

- Going home on an apnea monitor
- Going home on oxygen
- With craniofacial deformities--like Pierre Robin sequence--that may make it harder to breathe in a semi-upright position
- For whom the pediatrician is concerned that the baby may not tolerate the semi-upright position

#### Tips for passing the Car Seat Test:

- Buckle the baby into the safety seat exactly as you would if they were to ride in the car. Make sure of the following: the straps are snug the baby is not swaddled, and nothing that did not come with the safety seat, including blankets, infant positioners, pillows, etc, is in the safety seat. once the baby is buckled in snugly, you can put receiving blankets alongside their head and/or body to provide extra support if you'd like.
- Make sure the car seat is reclined to 45 degrees.
- Wait at least 30 minutes after a feed to do the test.

#### Who needs a car bed?

Car beds are for use only by babies who have a medical need to lay flat. According to the American Academy of Pediatrics, a baby (even a 4 pound preemie) who can tolerate sitting in a semi-upright position should ride in a rear-facing safety seat, not a car bed. A car bed is a safe option for babies for whom there is no other option. A rear-facing safety seat offers better protection than a car bed for a baby who can tolerate sitting semi-upright. Rear-facing safety seats have an excellent track record in all real world crashes of providing the best protection in any type of crash. In a rear-facing safety seat, the shell of the safety seat does a tremendous amount to absorb the crash forces and distribute them on the strongest parts of the baby's body--the baby's entire back. A car bed's shell is not able to do as much, especially in a side impact. Babies who fail the car seat test and leave the hospital in a car bed should have a plan in place for when they will be retested in a rear-facing safety seat.

#### What Car Beds are available?

- Angel Guard Products Angel Ride Infant Car Bed. This goes from birth to 9 pounds and 21.5 inches. Babies with taller torsos may need a longer harness, available from the manufacturer.
- Dorel Cosco Dream Ride SE. Goes from 5 to 20 pounds.

Traveling with medical equipment? Here are some tips:

Some children must travel with devices such as apnea monitors, oxygen tanks and ventilators.

- Secure these devices in the vehicle so that they do not become flying objects in a crash or sudden stop. At this time, there is no single product available to secure medical devices. Try wedging the equipment on the vehicle floor with pillows or securing it with seat belts not being used by a passenger.
- Make sure that any devices that use batteries have enough power for your entire trip.

Are you a physician or nurse working in a well baby nursery or neonatal intensive care unit?

This 2 page handout is a fantastic guide for helping ensure new babies leave the hospital safely.

{mospagebreak title=Videos and Installation Tips}

Installation Tips, Tricks and Videos

When installing your rear-facing car seat (convertible or infant) try the following:

- Move the front seats up as much as possible so that you have lots of room to work in the back seat.
- If possible, recline the vehicle seat where the car seat will go before starting your installation. Make the seat upright once you've finished. This will help you get the seat installed tightly.
- Pull the seat belt or latch belt from inside the car seat, not from outside the seat. This means that if you dropped the latch belt, it should fall down on top of where the child goes, not outside the car seat. This rule applies to most car seats except for the following:
  - Britax Classic convertible models, older Britax convertibles (i.e. Marathon, Boulevard, Roundabout, Decathlon--those that go up to 40 or 65 lbs)
  - Chicco KeyFit and KeyFit30

- Recaro Signo
- Sunshine Kids Radian models

#### For Infant Seats specifically:

- Put your weight on the base when you pull the seat belt or latch belt tight. Do not just use a hand on the base, this generally won't be enough weight to get the seat installed tightly. In this photo, Alisa has her left knee in the base and her right foot on the ground. If you are short and flexible, like all three Car Seat Ladies, you can probably get your foot in the base--this works even better.
- Put weight on the right side of the seat, and then the left side, then the right side again, etc, as you pull the latch belt or seat belt tight. This will help you get the belt as tight as possible. In the photo, see how Alisa is pushing with her hand and her knee on the right side of the base. After she pulls the latch strap, she'll move her knee into the left side of the base and push there as she pulls more slack from the latch strap.
- Unless you are installing a Chicco Keyfit, pull the latch strap or the seat belt from inside the base, as Alisa is doing in the photo.

#### For Convertible Seats specifically:

- To tighten the seat belt or latch belt, go behind the car seat, between the car seat and the front seat. Use your stomach to push the car seat into the back of the car and sway from side to side as you pull the seat belt or latch belt tight. You will have to lean over onto the car seat. Note how Alisa is leaning over onto the car seat and pushing it with her belly as she pulls the lower latch straps tight. Also note that the vehicle seat is very reclined. She will move the vehicle seat upright after she has installed the car seat.
- If you don't fit behind your rear-facing convertible seat or if you don't want to use your belly to push the car seat into the vehicle seat, you can stand or kneel beside the car seat and push down with one hand on the seat (put your hand where your baby's bottom would go) and pull the latch strap with the other hand. Sway the car seat as you do this. Then switch to the other side and repeat. You may have to switch a few times before you get the car seat completely tight.

#### Videos

The following videos illustrate many of the tips above and may help you get a tight, secure installation. Of course you should always read your car seat's instruction manual before you attempt any installation.

Installing a Snugride 32 or Snugride 35 base with the seat belt

Installing a Combi Coccoro rear-facing with the seat belt

Installing an Infant Carrier using the European routing path

Installing a Britax Boulevard Classic using lower LATCH anchors and Swedish tether method

How to Use a 5-point harness (Long Version-8:29)

How to use a 5-point harness (Short Version-1:30)