

## SAFETY ALERT

# What if this were your child?

## Most infant car seats fail our new front- and side-crash tests

**Y**ou'd think that in a car crash, infants in their cozy car seats would be the most protected passengers of all. But you'd be wrong, our tests reveal.

Cars and car seats can't be sold unless they can withstand a 30-mph frontal crash. But most cars are also tested in a 35-mph frontal crash and in a 38-mph side crash. Car seats aren't.

When we crash-tested infant car seats at the higher speeds vehicles routinely withstand, most failed disastrously. The car seats twisted violently or flew off their bases, in one case hurling a test dummy 30 feet across the lab. Here are the details:

- Of 12 infant seats we tested, only 2 performed well: the Baby Trend Flex-Loc and the Graco SnugRide with EPS.
- Nine infant seats provided poor protection in some or all of our tests, even though they meet the federal safety standard. One seat, the Evenflo Discovery, didn't even meet that standard. We urge federal officials to order a recall of that seat.
- Infant car seats sold in Europe under-

go more rigorous testing than do models sold in the U.S. Indeed, when we crash-tested an infant seat we bought in England, it was the best in our tests. An infant seat sold in the U.S. by the same manufacturer failed.

- Our findings offer added evidence of problems with LATCH, the federally mandated attachment system for child car seats. Most car seats performed worse with LATCH than with vehicle safety belts. And LATCH attachments aren't always easy to use.

One federal agency, the National Highway Traffic Safety Administration, regulates both vehicles and child car seats. Why aren't car seats tested as rigorously as cars?

NHTSA spokesman Rae Tyson says the U.S. car-seat standard is rigorous and that side-crash tests are problematic. For side crashes, "our engineers do not have a performance test they're comfortable with," he says.

### TOUGHER SAFETY TESTS

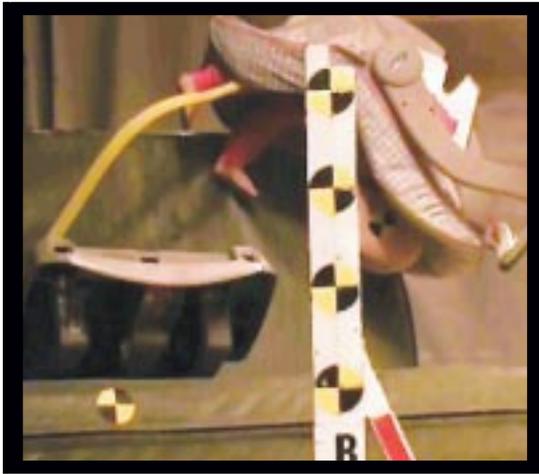
Our new tests are tougher than the federal car-seat standard because a sig-

nificant performance gap exists between vehicles and the car seats they carry.

The federal New Car Assessment Program tests most cars and minivans, and some pickups and SUVs, in 35-mph frontal crashes and 38-mph side crashes. Scores in the form of "star" ratings are widely publicized, and as a result carmakers have improved the crash protection of vehicles. There has been no such incentive for the makers of child car seats sold in the U.S.

The infant seats we evaluated are rear-facing carriers that snap in and out of a base. The base connects to the car by means of the vehicle's safety belts or LATCH attachments. (LATCH, which stands for Lower Anchors and Tethers for Children, includes belts that hook the base to metal anchors in the car.)

We crash-tested multiple units of each infant seat. In some crashes we used vehicle safety belts to secure the base; in other tests we used LATCH attachments. The collisions mimic a crash in a Ford Explorer SUV, a popular family vehicle. (The Toyota Camry sedan crumples similarly, especially in



**A SIDE CRASH, UP CLOSE**  
**The Evenflo Discovery infant seat performed poorly in our new side-impact test, shown here. It also failed to meet the federal frontal-crash standard.**

a side crash, so we would expect comparable results for some sedans.)

We used a test dummy weighing the maximum claimed weight for each seat. That's 30 pounds for the Graco SafeSeat and 22 pounds for the others.

In our 35-mph front-impact test, seven car seats failed. They separated from their bases, rotated too far, or would have inflicted grave injuries, as measured by our test dummy, whose sensors record the severity of impact. We retested these to see whether they passed the 30-mph federal standard. All passed except the Evenflo Discovery.

When we performed side-impact tests at 38 mph, eight models failed. Four of the seats flew out of their bases.

Three seats failed all our tough tests: the Evenflo Discovery, the Graco SafeSeat, and the Britax Companion, formerly our top-rated seat based on earlier tests that mirrored the federal standard. Most other tested seats passed either the front- or side-crash test in some configuration, though only the Baby Trend Flex-Loc and the Graco SnugRide with EPS passed all our tests. (EPS stands for expanded polystyrene, a cushioning material.)

Some Britax Companion seats were recalled in October because carriers were assembled incorrectly; we tested a

**A seat sold abroad outperforms U.S. models**

The Cosy Tot and the Companion are infant car seats made by the same company, Britax Childcare Group LTD based in Andover, England.

But the similarities end there.

The Cosy Tot is sold only in Europe; we bought ours in England. It was the top performer in our crash tests. By contrast, the Companion, sold in the U.S., performed poorly in our frontal-crash tests and flew off its base in side crashes we performed using LATCH attachments and vehicle safety belts.

Britax touts its commitment to safety. "When it comes to child seat safety and innovation, Britax continues to be the world leader," says the Britax Web site. Indeed, the U.S. model passes federal safety standards.

But the disparity in our test results raises this question: Why don't seats sold in the U.S. perform as well as this European model?

**STARK DIFFERENCES**

Infant seats sold in England and the 24 other countries of the European Union must meet safety standards that include a 31-mph frontal crash. Many are also tested in a 40-mph frontal crash and a 31-mph side collision. The results are the basis of widely publicized safety ratings for cars. The ratings include an assessment of how a car seat performs in a specific car. Automakers are required to make those seats available for purchase.

In the U.S., car seats must withstand only a 30-mph frontal crash, even though most passenger vehicles are tested in a 35-mph frontal crash and a 38-mph side impact.

Another notable difference between the European and U.S. infant seats we tested is that the European Cosy Tot includes an attachment or "foot" as part of the base that adds stability in frontal crashes.

The U.S. safety standard makes it difficult for companies to incorporate the foot into U.S. car-seat designs because of the way compliance testing is conducted. The test, for example, includes no car floor on which the foot can rest. The extra weight of the attachment dangling off the vehicle seat could make the infant seat perform poorly.

Britax spokeswoman Jeanna Rimmer says that nuances in the regulations and consumer preferences of different countries mean that manufacturers must create different car seats for different markets.

Peter Claeson, secretary of the Standards Working Group for Child Restraints for the International Standards Organization, says a common safety standard for car seats would benefit everyone.

"If you could agree on what is a good regulation worldwide, it is good for all parties," Claeson says. "It is much easier for consumers to be confident that they have a safe seat."



**WORLDS APART** The Britax Cosy Tot, left, sold in Europe, has a "foot" to help stabilize the base, which the Britax Companion sold in the U.S., right, lacks. The Cosy Tot was the top performer in our tests; the Companion performed poorly.

later model. The Evenflo Discovery, which we deem Not Acceptable and believe should be recalled, was the subject of a NHTSA investigation in 2004 after the agency received seven reports about the carrier separating from its base. (Evenflo received 52 reports, 6 involving fatalities, NHTSA says.) NHTSA said it could not identify a safety defect and closed the investigation.

The Eddie Bauer Comfort infant seat also had problems, specifically in our fit-to-vehicle test of one of two bases sold with the seat. Because of that test result we judge the seat Not Acceptable and believe the base should be recalled.

Our trained car-seat installers could not get the base to fit securely in five different vehicles. The seat also performed poorly in our side-crash tests. The company Web site indicated that our model included a new and improved base.

The Web site was wrong, which we learned when we later bought another sample of the seat and discovered a different base that fit better. We have also learned that the manufacturer will supply that base through a “customer satisfaction program” but only to those consumers who know to complain to the company. The car seat (also called the Caress Comfort) is being discontinued though it is still sold. We’re crash-testing the seat with the other base. Results will be posted at [www.ConsumerReports.org](http://www.ConsumerReports.org).

### ONGOING PROBLEMS WITH LATCH

No car seat can provide good protection if it’s not installed right, something that the LATCH system was devised to address. A tight fit is important for crash protection, and our testers find that you are more likely to get a secure fit with LATCH than with vehicle safety belts. Nevertheless, the car-seat tests underscore continuing problems. For example, more seats failed when attached with LATCH than with safety belts, even when the installation was done by professionals. The same has been true in our previous car-seat tests.

Our tests suggest that infant car



**VICTIMS** Matthew Gallardo was killed and his older cousin, Arron, was injured in a side crash in which Matthew was ejected from his car seat. Below, Carlye Siebens holds her son, Landon, who was bruised in a collision when his car seat separated from its base.



seats might be better secured if their bases were attached to floorboard anchor points in addition to existing LATCH anchors. Another improvement would be for the U.S. standard to allow for car-seat bases similar to many sold in Europe. They include a “foot” that adds stability in a frontal crash.

Another problem with LATCH is that anchors in many cars are hard to access. And most vehicles don’t have LATCH anchors in the safest seat in the car: the center rear. It can also be hard to adjust safety belts to a car seat located in the center rear.

General Motors vehicles are an exception; many have center LATCH

anchors. And some Ford models allow parents to use the inner two LATCH anchors from the outer seats to install a child seat in the center rear.

NHTSA spokesman Tyson says the agency will hold a public hearing on LATCH probably in February; the date had not been set as of press time. LATCH has been successful, he says, but there are concerns. “The problem we have now,” he says, “is parents who are not installing the seats properly.”

### REAL-WORLD COLLISIONS

All states and the District of Columbia require infants to be secured in car seats when traveling in passenger vehicles. Still, 572 infants under 1 year old were killed in traffic accidents from 2001 to 2005, with side crashes accounting for 151 of those deaths, or 26 percent, NHTSA data show.

No one is saying that a car-seat standard with side-crash tests would prevent all deaths and injuries from side impacts. Still, the families of some victims say it would be an improvement.

Mary and John Gallardo’s grandson, Matthew, was one of those victims. In March 2004, Matthew’s infant seat flew off its base in a side-impact crash on U.S. 49 in Harrison County, Miss., and he was ejected from the car. The Gallardos’ daughter, Candace, was also killed and another grandson, Arron, was injured. “This was devastating,” says John Gallardo, who wants car seats made so that they better withstand side crashes. “We just want to help see that no one else has to suffer what my family went through.”

Carlye Siebens and her son Landon were luckier. Last May, after securing Landon in his car seat, Siebens pulled out from a stop sign near her home in Deland, Fla. Her car was broadsided, and Landon, then 7 months, suffered bruises and minor cuts when his car seat separated from its base and he landed face down. “The first thing I did was look in my mirror to check on my child, and he wasn’t where he had been,” Siebens says. “You assume the car seat would have been intact.”

BOTTOM: PHOTOGRAPHY BY CHRIS CASLER

## WHAT YOU CAN DO

Consumers Union, the nonprofit publisher of CONSUMER REPORTS, strongly believes that NHTSA should strengthen safety testing for car seats so that it is comparable with the tests conducted on new cars. That means including a side-crash test. If the New Car Assessment Program is any indication, crash performance improves when results are publicized.

The agency also needs to revisit the LATCH standard. Automakers should make anchors and tethers easy to access. And LATCH anchors should be required in center-rear seats.

For now, here's how to keep your baby as safe as possible while traveling:

- If you're shopping for an infant car seat, buy one of the two we recommend.
- If you already own a Chicco KeyFit, Compass I410, Evenflo Embrace, or Peg Perego Primo Viaggio SIP, use it with vehicle safety belts, which passed our tests, not with LATCH, which didn't. If you can't get a tight fit with the safety belt, buy one of the two seats we recommend.
- If you own a different infant seat, consider replacing it with the Baby Trend Flex-Loc or the Graco SnugRide with EPS.
- Secure your child in the center-rear seat if the car seat can be tightly fastened there. Go to [www.nhtsa.gov](http://www.nhtsa.gov) to find a free car-seat inspection station near you.
- Send in the registration card that comes with new car seats, so that the manufacturer can contact you if the seat is recalled.
- Remember that any child car seat is better than no seat at all.



# Ratings infant car seats

• **Availability** Most models at stores through February 2007.

● Excellent  
◐ Very good  
○ Good  
◐ Fair  
● Poor

In performance order. Blue key numbers indicate Quick Picks.

Key number	Brand & model	Price	Overall score	Test results			
				Crash protection	Ease of use	Fit to vehicle	
			0	100			
			P	F	G	VG	E
<b>INFANT SEATS</b> Most accommodate children 5 to 22 lb.							
1	Baby Trend Flex-Loc Adjustable Back	\$90	64	●	○	●	●
2	Graco SnugRide with EPS	90	61	○	○	○	●
3	Chicco KeyFit	150	34	○	●	●	●
4	Peg Perego Primo Viaggio SIP	230	27	●	●	●	●
5	Compass I410	130	26	○	●	●	●
6	Evenflo Embrace	70	25	●	●	○	●
7	Britax Companion	190	20	●	●	●	●
8	Graco SafeSeat	150	18	●	●	●	●
9	Safety 1st Designer ☐	120	16	●	●	○	●
10	Combi Centre ST	110	12	●	●	●	●

**NOT ACCEPTABLE; DID NOT MEET FEDERAL STANDARD**

11	Evenflo Discovery	60					
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**NOT ACCEPTABLE; COULD NOT BE INSTALLED SECURELY**

12	Eddie Bauer Comfort ☐ ☐	200					
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☐ Discontinued but still available at some stores. ☐ Sold only as part of a travel system.

## Guide to the Ratings

**Overall score** is based on crash protection, ease of use, and fit to vehicle, in LATCH and belt modes. To judge **crash protection**, we paid a contract laboratory to perform crash tests in which dummies at the manufacturer's maximum claimed weight were strapped into seats and run through a simulated 35-mph head-on crash and a 38-mph side crash. **Belt** means using a vehicle safety belt to attach the car seat; **LATCH** means using the Lower Anchors and Tethers for Children system to attach the seat. **Ease of use** includes installing the seat, adjusting harness positions, placing a child in the car seat, securing the harness, and removing the child. Seats were installed in cars with various seat configurations and safety-belt designs to assess **fit to vehicle**. **Price** is approximate retail.

## CR Quick Recommendations

The **Ratings** list tested models by overall performance. **Quick Picks** are models that deserve special consideration.

### QUICK PICKS

The only models we can recommend:

1 Baby Trend \$90

2 Graco \$90

The Baby Trend and Graco are the only models that passed our crash tests in both belt and LATCH modes.