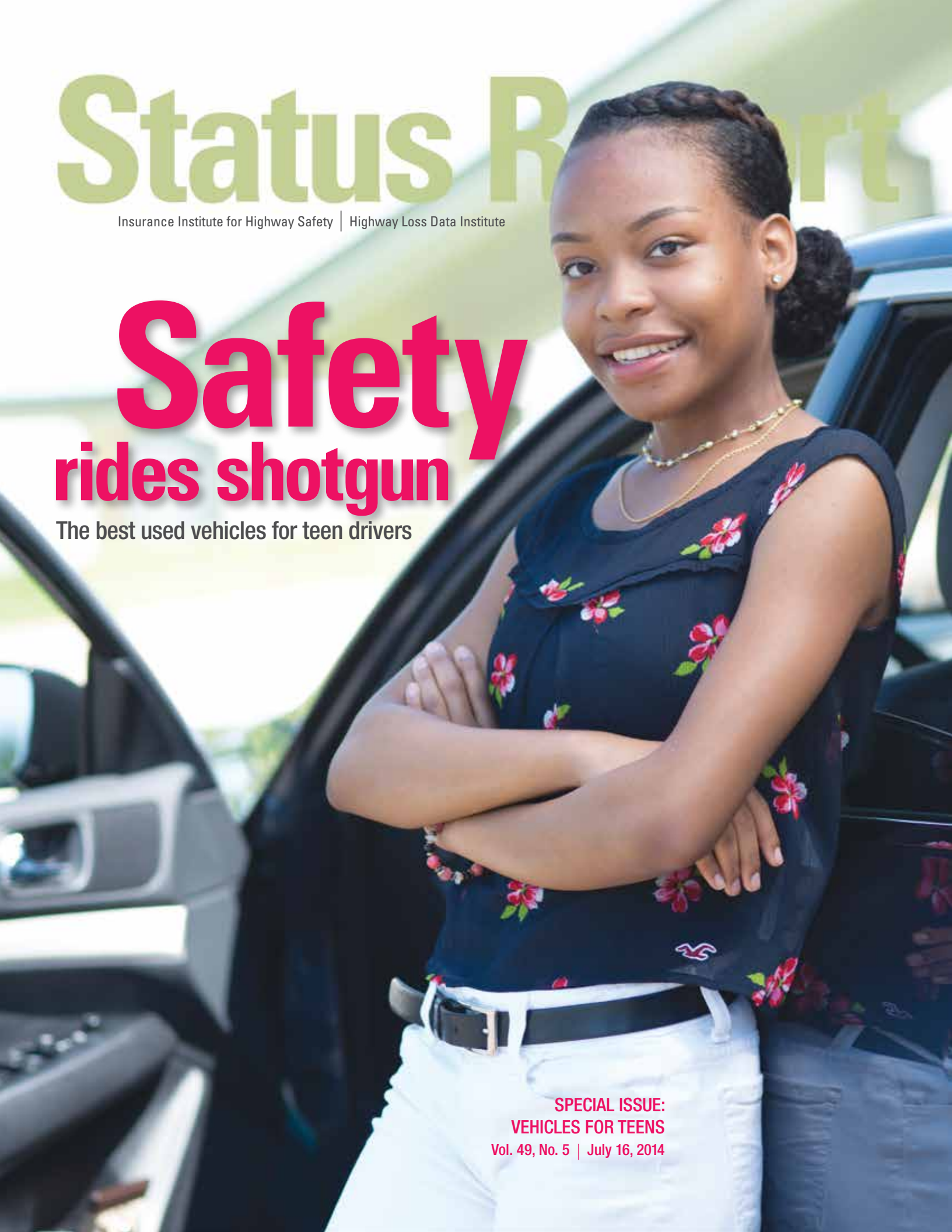
Status Report

Insurance Institute for Highway Safety | Highway Loss Data Institute

Safety rides shotgun

The best used vehicles for teen drivers



SPECIAL ISSUE:
VEHICLES FOR TEENS
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IIHS issues its first-ever recommendations for used vehicles to help parents find the right one for their beginning driver.

When children are very young, parents have no shortage of information about how to ensure the safety of their precious offspring. Most know to keep small objects out of reach, vigilantly heed recall notices for cribs and strollers, and research the right child restraint for the family vehicle.

But what happens when those kids, who just yesterday were taking their first steps, reach that other mobility milestone — getting their first car? Motor vehicle crashes are the leading cause of death among teenagers, and the type of vehicle a teenager drives has a big effect on the degree of risk. Nevertheless, many teenagers are driving — and dying in — the least protective types of vehicles, new studies from IIHS and HLDI show (see p. 6). Parents need more information about which vehicles are the safest choices for young drivers.

IIHS is known for its ratings of new vehicles, but for many families, a 2014 *TOP SAFETY PICK* or *TOP SAFETY PICK+* isn't in the budget for a teen's vehicle. In a national phone survey conducted for IIHS of parents of teen drivers, 83 percent of those who bought a vehicle for their teenagers said they bought it used.

With that reality in mind, the Institute has compiled a list of affordable used vehicles that meet important safety criteria for teen drivers. There are two tiers of recommended vehicles with options at various price points, ranging from less than $5,000 to nearly $20,000, so parents can buy the most safety for their money, whatever their budget.

"A teenager's first car is more than just a financial decision," says IIHS President Adrian Lund. "These lists of recommended used vehicles can help consumers factor in safety, in addition to affordability."

Defining safety

The recommendations are guided by four main principles:

- **Young drivers should stay away from high horsepower.** More powerful engines can tempt them to test the limits.
- **Bigger, heavier vehicles are safer.** They protect better in a crash, and HLDI analyses of insurance data show that teen drivers are less likely to crash them in the first place. There are no minicars or small cars on the recommended list. Small SUVs are included because their weight is similar to that of a midsize car.
- **Electronic stability control is a must.** This feature, which helps a driver maintain control of the vehicle on curves

Best choices

Recommended used vehicles for teens starting under $20,000

Vehicles on this list earn good ratings in the IIHS moderate overlap front, side, roof strength and head restraint tests. If rated by NHTSA, they earn 4 or 5 stars overall or 4 or 5 stars in the front and side tests under the old rating scheme. All come with standard electronic stability control (ESC).

Prices, rounded to the nearest $100, are from Kelley Blue Book as of July 1, 2014, for the lowest trim level and earliest applicable model year based on the following criteria: vehicle in good condition, typical mileage and private party purchase in Arlington, Va.

Large cars	Price
Saab 9-5 sedan 2010 and later	$17,500
Lincoln MKS 2009 and later	$15,500
Buick Regal 2011 and later	$13,500
Ford Taurus 2010 and later	$13,500
Buick LaCrosse 2010 and later	$12,900
Volvo S80 2007 and later	$9,000

Midsize cars	
Toyota Prius v 2012 and later	$19,100
Mercedes-Benz C-Class sedan 2009 and later	$16,000
Honda Accord sedan 2012 and later; coupe 2013-14	$14,400
Audi A4 2009 and later	$14,300
Toyota Camry 2012 and later	$14,300
Buick Verano 2012 and later	$14,100
Subaru Outback 2010 and later	$14,000
Lincoln MKZ 2010 and later; built after April 2010	$13,500
Kia Optima 2011 and later	$13,300
Hyundai Sonata 2011 and later	$12,100
Subaru Legacy 2010 and later	$11,900
Dodge Avenger 2011 and later	$11,600
Audi A3 2008 and later	$11,300
Volkswagen CC 2009 and later	$11,200
Chevrolet Malibu 2010 and later; built after November 2009	$10,900
Chrysler 200 sedan 2011 and later	$10,700
Mercury Milan 2010 and later; built after April 2010	$10,700
Ford Fusion 2010 and later; built after April 2010	$10,200
Volkswagen Passat 2009 and later	$10,000
Volvo C30 2008 and later	$9,800
Volkswagen Jetta SportWagen 2009 and later	$9,400
Volkswagen Jetta 2009 and later	$8,200

Small SUVs	Price
Honda CR-V 2012 and later	$18,100
Kia Sportage 2011 and later	$13,800
Hyundai Tucson 2010 and later	$13,100
Subaru Forester 2009 and later	$12,800
Mitsubishi Outlander Sport 2011 and later	$12,000
Volkswagen Tiguan 2009 and later	$10,200
Honda Element 2007 and later	$8,900

Midsize SUVs	
Volvo XC60 2010 and later	$18,000
Saab 9-4X 2011-12	$17,800
Toyota Highlander 2008 and later	$17,100
Toyota Venza 2009 and later	$15,900
Ford Edge 2011 and later; built after February 2011	$15,500
Ford Flex 2010 and later	$15,100
GMC Terrain 2010 and later	$14,900
Kia Sorento 2011 and later	$14,500
Inifiniti EX 2008 and later	$14,400
Chevrolet Equinox 2010 and later	$13,700
Dodge Journey 2010 and later	$11,200
Subaru Tribeca/B9 Tribeca 2006 and later	$8,500
Volvo XC90 2005 and later	$7,300

Large SUVs	
Buick Enclave 2011 and later	$19,900
GMC Acadia 2011 and later	$17,800
Chevrolet Traverse 2011 and later	$16,600

Minivans	
Chrysler Town & Country 2012 and later	$18,100
Honda Odyssey 2011 and later	$17,100
Toyota Sienna 2011 and later	$16,400
Dodge Grand Caravan 2012 and later	$15,200
Volkswagen Routan 2012	$14,000

Safety bargain

Valued at about $7,000, the 2005 Volvo XC90 is the least expensive vehicle on the list of best choices. It also happens to be one of the few vehicles on the list to meet current IIHS *TOP SAFETY PICK* criteria, thanks to a good rating for small overlap front protection. Only four other best choices have good or acceptable small overlap protection, dating back to the earliest model year listed. They are the Volvo S80, Chrysler 200, Dodge Avenger and Mitsubishi Outlander Sport.

Note: Some listed models include a "built after" date. This applies when a manufacturer makes changes to improve safety in the middle of a model year. Information about when a specific vehicle was manufactured can be found on the certification label typically affixed to the driver door or near it.

and slippery roads, reduces risk on a level comparable to safety belts.

- **Vehicles should have the best safety ratings possible.** At a minimum, that means good ratings in the IIHS moderate overlap front test, acceptable ratings in the IIHS side crash test and four or five stars from the National Highway Traffic Safety Administration (NHTSA). IIHS has been conducting frontal tests since 1995 and side tests since 2003, so it is possible to factor these in even for relatively old vehicles. NHTSA's tests have been around even longer.

In the survey of parents, the mean purchase price for a teen's vehicle was about $9,800, while the median was just $5,300. There are many options on the recommended list for under $10,000 but just three that cost less than $5,300.

"Unfortunately, it's very difficult to get a safe vehicle for a teenager at the prices most people are paying," says Anne McCartt, IIHS senior vice president for research. "Our advice to parents would be to remember the risks teens take and consider paying a little more."

There are good options under $10,000, but many people spend much less on vehicles for their teens. Parents are encouraged to consider safety in addition to price.

All of the recommended used vehicles have standard ESC and provide good protection in moderate overlap front crashes. Those considered "best choices" for under $20,000 also have good ratings for side crash protection, good head restraints and seats for rear crash protection, and good roof strength to protect occupants in rollover crashes. Vehicles considered "good choices" for under $10,000 have good or acceptable side crash protection and head restraints rated better than poor.

The good choices list is meant to provide consumers with a wider array of affordable options. However, compared with the best choices, this second-tier list is somewhat limited and includes many low-volume vehicles that may be hard to find.

"For the list of good choices, we compromised on the things we thought we could compromise on. Standard ESC is not one of those things, and that, frankly, is what is keeping this list so short," Lund says. "That's how important we believe this feature is."

ESC is an offshoot of antilock braking systems that prevents sideways skidding and loss of control that can lead to rollovers and other kinds of crashes. The technology monitors how a vehicle responds to steering input and selectively applies the brakes and modulates engine power to keep the vehicle on the right path. ESC reduces fatal single-vehicle crash risk by about half and fatal multiple-vehicle crash risk by one-fifth (see *Status Report*, June 19, 2010, at iihs.org).

Vehicles that have been rated by NHTSA were included in the recommended lists only if they earned four or five stars in the front and side tests under the agency's original testing regime or an overall rating of four or five stars under the newer, more stringent rating system that began with 2011 models. One vehicle, the Hyundai Santa Fe, was excluded from the list of best choices because its 2012 model had an overall rating of just three stars.

High-horsepower vehicles also were left off the lists, but many of the recommended models have high-horsepower versions that should be avoided. The base engines of all the listed vehicles have adequate power for teens.

Parents who don't find a suitable vehicle from the lists of recommended models should seek out a midsize or larger car or an SUV or a minivan with the most safety they can afford. Besides ESC, specific things to look for in a used vehicle are side airbags and low horsepower. In some cases, it may be possible to find an ESC-equipped vehicle for a model on which the technology was optional. Those models aren't included in the recommended lists because equipped vehicles can be difficult to locate. Keep in mind that SUVs and pickups are particularly risky when not equipped with ESC because they are the most prone to rollover crashes. Information about the availability of ESC and side airbags by make and model can be found at iihs.org/safety-features.

Planning ahead

All of the best choices among the recommended used vehicles and many of the good choices on the list are prior winners of the Institute's *TOP SAFETY PICK* award.

Good choices

Recommended used vehicles for teens starting under $10,000

Vehicles on this list earn good ratings in the IIHS moderate overlap front test and good or acceptable ratings in the side test. If rated by NHTSA, they earn 4 or 5 stars overall or 4 or 5 stars in the front and side tests under the old rating scheme. They also have standard ESC and a better-than-poor rating for head restraints and seats.

Prices, rounded to the nearest $100, are from Kelley Blue Book as of July 1, 2014, for the lowest trim level and earliest applicable model year based on the following criteria: vehicle in good condition, typical mileage and private party purchase in Arlington, Va.

Large cars	Price
Acura RL 2005 and later	$9,700
Mercury Sable 2009	$9,700
Kia Amanti 2009	$9,500
Ford Taurus 2009*	$9,100
Audi A6 sedan 2005 and later	$8,300
Hyundai Azera 2006 and later	$5,700

Midsize cars	
Subaru Legacy 2009*	$9,900
BMW 3-series sedan 2006 and later	$9,300
Mazda 6 2009 and later	$8,900
Saturn Aura 2009	$8,800
Acura TL 2004 and later	$7,900
Volvo S40 2007 and later	$7,700
Audi A3 2006-07*	$7,400
Mercedes-Benz C-Class sedan 2005-08*	$6,900
Suzuki Kizashi 2010 and later	$6,600
Volvo S60 2007-09	$6,500
Audi A4 2005-08; built after October 2004*	$6,200
Volkswagen Passat 2006-08*	$5,100
Saab 9-3 2005 and later	$4,000

* Later model years are on the "best choices" list.

Small SUVs	Price
Nissan Rogue 2008 and later	$9,800
Ford Escape 2009 and later	$8,700
Mazda Tribute 2009 and later	$8,100
Mitsubishi Outlander 2007 and later	$6,300
Suzuki Grand Vitara 2006 and later	$5,600

Midsize SUVs	
Mazda CX-9 2007 and later	$9,800
Ford Edge 2007-10*	$9,600
Hyundai Veracruz 2007 and later	$9,600
Hyundai Santa Fe 2007-10	$8,900
Honda Pilot 2006 and later	$8,800
Saturn Vue 2008-09	$7,700
Ford Taurus X 2008-09	$7,500
Mazda CX-7 2007-11	$7,200
Suzuki XL7 2008-09	$6,200

Minivans	
Volkswagen Routan 2009-11*	$8,600
Dodge Grand Caravan 2008-11*	$8,200
Chrysler Town & Country 2008-11*	$8,100
Honda Odyssey 2005-10*	$6,700
Hyundai Entourage 2007-08	$6,300
Kia Sedona 2006 and later	$4,600

However, most of these vehicles wouldn't meet the current *TOP SAFETY PICK* criteria. In addition to good ratings in the moderate overlap front, side, roof strength and head restraint tests, 2014 winners must have a good or acceptable rating in the Institute's newest crash test, the small overlap front test, which replicates what happens when one edge of the vehicle's front hits another vehicle or an object such as a tree or pole. Until recently, few manufacturers designed vehicles with this kind of crash in mind, though many are doing so now because of the IIHS test.

Although there are few affordable used vehicles with good small overlap protection today, in a few years it will be easier to factor in ratings from this new evaluation. Parents whose children still are years away from driving should consider planning ahead for that day. If possible, when buying the next family vehicle, choose one with the most up-to-date safety features, with an eye to giving it to your teenager to drive when the time comes. Look for an IIHS *TOP SAFETY PICK* or *TOP SAFETY PICK+* winner that also earns at least 4 of 5 stars from NHTSA (see safercar.gov). ■

Vehicle choice can exacerbate teen drivers' crash risk

Survey of parents shows teenagers often drive the least safe vehicles

Teen drivers are at greater risk of crashing no matter what they drive. The risk is exacerbated when young drivers get behind the wheel of a sports car or a small vehicle, HLDI first showed in 2011 (see *Status Report*, Nov. 17, 2011, at iihs.org). A new report covering 2000-13 models during calendar years 2008-12 confirms that thesis.

Meanwhile, two IIHS studies show that teenagers are more likely than other drivers to have the least safe types of vehicles.

In the new HLDI study, analysts looked at how the claim rate under collision coverage, which pays for crash damage to the insured vehicle, varies depending on the size and class of vehicle for two groups of drivers — those ages 15-17 and those ages 35-50. Both groups saw variation, but it was much more pronounced for teenagers. Teen claim frequency ranged from 15.4 claims per 100 insured vehicle years for small two-door cars to 5.4 for very large SUVs and 3.2 for large cargo/passenger vans, which few teens drive. (An insured vehicle year is one vehicle insured for one year, two vehicles insured for six months, etc.) In contrast, for the 35-50-year-old group, claim frequency ranged from 7.5 for very large luxury cars to 3.4 for large cargo/passenger vans.

The ratio of teen frequency to frequency for 35-50-year-old drivers shows how much more risky each of the vehicle types are for teens. Teenagers file claims at more than twice the rate of 35-50 year-olds for small two-door cars and many other small and mini vehicle types. Midsize sports cars have the largest variation: Teens are 2.6 times as likely to file claims as 35-50 year-olds.

Sports cars and other high-horsepower vehicles tempt teenagers to drive fast and aggressively. It's not entirely clear why small cars and minicars have high crash rates, but their greater maneuverability may encourage young drivers to make sudden moves. In addition, cars with shorter wheelbases are less stable and therefore less forgiving when drivers make mistakes.

Small cars and minicars are a double-whammy. Not only are teens more likely to crash them, they also don't offer much protection when a crash occurs because of their minimal weight and small crush zone.

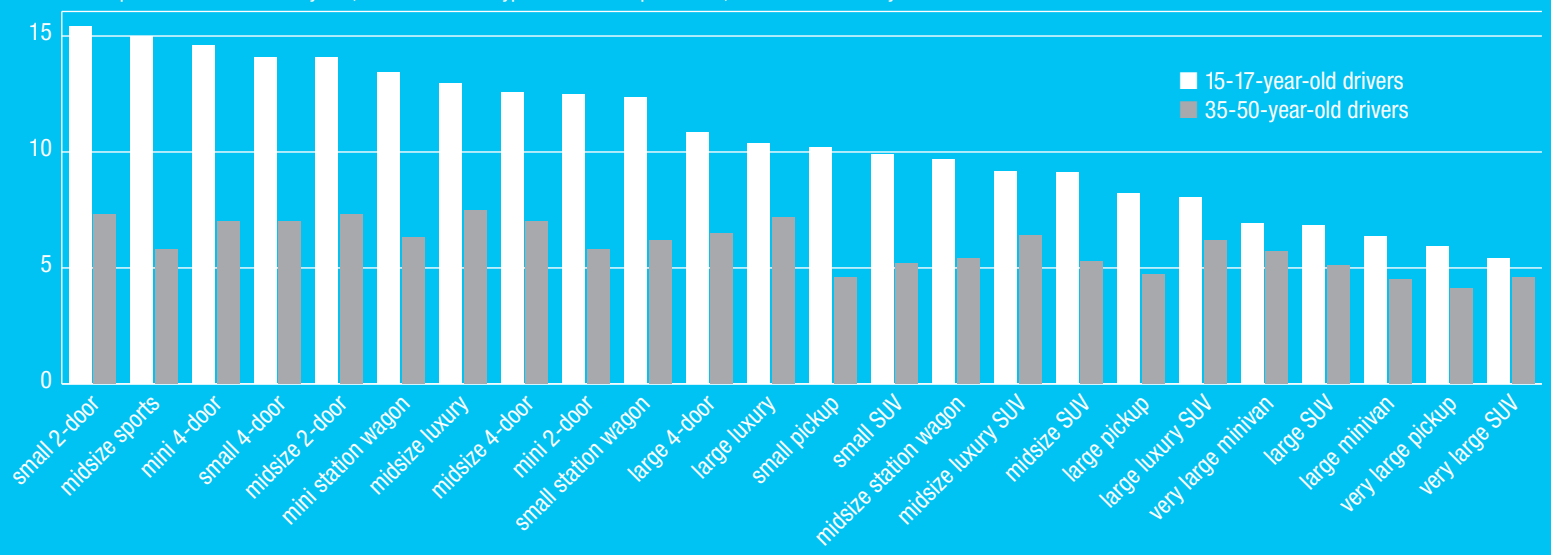
The cars teens drive

Teenagers are likely to drive many of the vehicles that are most dangerous for them. In a national phone survey conducted for IIHS of

Insurance data analysis

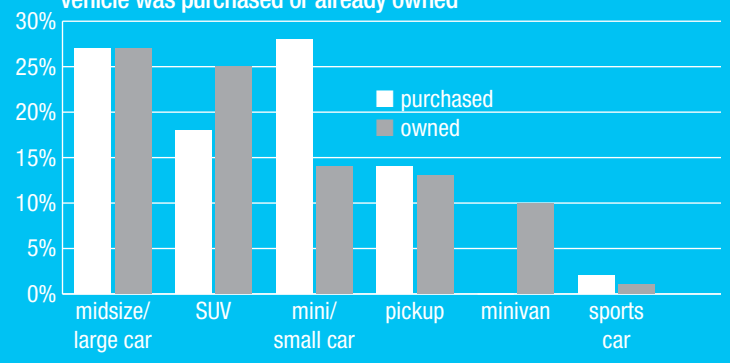
Collision claim frequency for 15-17-year-old and 35-50-year-old drivers by vehicle size and class, 2000-13 model years

Claims per 100 insured vehicle years; excludes vehicle types with teen exposure <5,000 insured vehicle years

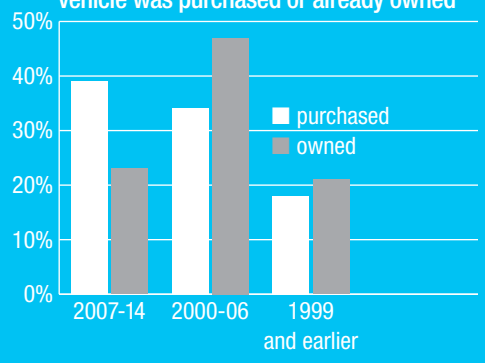


Survey of parents of teen drivers

Type and size of teens' vehicles by whether vehicle was purchased or already owned



Model year of teens' vehicles by whether vehicle was purchased or already owned



The chart above shows how much more likely a vehicle with a teenage rated driver is to have a collision claim than a vehicle with an adult rated driver. The charts at left show the types and ages of vehicles teenagers drive.

500 parents of teen drivers, minicars or small cars were the most popular type of vehicle to buy for a teen, with 28 percent of those who purchased a vehicle for their teenager buying from this category. A little more than half of newly purchased vehicles were from the 2006 model year or earlier. That's a problem because older vehicles are much less likely to have safety features such as electronic stability control (ESC) and side airbags.

Forty-three percent of parents said the vehicle their child drives was purchased around the time the teenager began driving, while 57 percent said it was a vehicle the family had owned previously. Teenagers who drove a vehicle that the family already owned were even more likely to drive an older vehicle: Two-thirds of those parents said the vehicle was from 2006 or earlier.

A separate IIHS study shows that teenagers killed in crashes are more likely than adults to have been behind the wheel of small vehicles and older vehicles. Among fatally injured drivers ages 15-17 during 2008-12, 29 percent were in minicars or small cars, while 20 percent of fatally injured drivers ages 35-50 were. Eighty-two percent of the young teen drivers were in vehicles that were at least 6 years old, compared with 77 percent of those in the adult group.

"It's understandable that many parents don't trust their children with an expensive new vehicle, so they give them an old car or buy the cheapest new car they can find," says Anne McCartt, the Institute's senior vice president for research. "What they probably don't realize is that they are compromising their teenagers' safety in the process."

Among survey respondents, safety ranked highest among the reasons for choosing a particular vehicle. Most parents knew that a midsize or larger vehicle was safer than a small one, but their knowledge about which safety features to seek out wasn't very current. When asked what safety features they insisted on for their teen driver, people most frequently mentioned frontal airbags and safety belts. Only 5 percent of respondents mentioned ESC.

For copies of "Young teen crash risk by vehicle type" by HLDI, "Vehicle choices for teenage drivers: a national survey of parents" by A.H. Eichelberger et al., and "Type, size, and age of vehicles driven by teenage drivers killed in crashes during 2008-2012" by A.T. McCartt and E.R. Teoh, email publications@iihs.org. ■

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The **Insurance Institute for Highway Safety** is an independent, nonprofit scientific and educational organization dedicated to reducing the losses — deaths, injuries and property damage — from crashes on the nation's roads.

The **Highway Loss Data Institute** shares and supports this mission through scientific studies of insurance data representing the human and economic losses resulting from the ownership and operation of different types of vehicles and by publishing insurance loss results by vehicle make and model.

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