

# INSURANCE INSTITUTE FOR HIGHWAY SAFETY

## NEWS RELEASE

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### HEAD RESTRAINTS ARE MUCH BETTER THAN THEY USED TO BE; MOST OF THEM STILL NEED TO BE ADJUSTED TO PROTECT THE NECK

ARLINGTON, VA — The designs of head restraints in an increasing number of passenger vehicles are improving so that many occupants are better protected from whiplash injury in rear-end crashes. The Insurance Institute for Highway Safety began rating the

geometry of head restraints in 1995, finding only 3 percent of vehicles had good head restraints while those in 82 percent of new passenger vehicles were poor. Now these proportions have changed — in the 2003 model year 45 percent of passenger vehicles had head restraints rated good (see attached ratings). At the same time, the percentage of 2003 model vehicles with poor restraints had dropped to 10.

"It used to be that unless you were short you'd have trouble finding a vehicle with head restraints that extended high enough to protect you. Now automakers are making improvements so that in many vehicles even taller people can position the head restraints where they need to be to protect the neck from being injured in a rear-end crash," says Institute chief operating officer Adrian Lund.

#### IMPROVEMENTS IN HEAD RESTRAINTS: PERCENTAGE OF HEAD RESTRAINTS RATED GOOD VS. POOR, BASED ON GEOMETRY, BY MODEL YEAR

##### Rated **GOOD**:

1995 models:	3%
1997 models:	4%
1999 models:	10%
2001 models:	29%
2003 models:	45%

##### Rated **POOR**:

1995 models:	82%
1997 models:	70%
1999 models:	40%
2001 models:	22%
2003 models:	10%

A well-designed restraint, in concert with the seatback, can reduce the risk of whiplash injury by reducing the differential motion of an occupant's head and torso in a rear-end crash. The necessary first step toward accomplishing this is a head restraint

— MORE —

that's positioned high and as close to the back of the head as possible. Head restraints with poor geometry cannot be positioned this way for many occupants, so they cannot begin to prevent whiplash injuries.

**Occupants need to adjust head restraints:** Even as automakers improve head restraint geometry, many motorists aren't reaping the full benefits. The restraints in about four of every five passenger vehicles have to be manually adjusted upward to protect many occupants. But such restraints often aren't adjusted. They're left in the lowest position, where they cannot provide many occupants with any protection against whiplash in rear-end crashes.

**PERCENTAGE OF HEAD RESTRAINTS  
POSITIONED AT OR ABOVE DRIVERS' EARS**

**Overall: 60%**

**By restraint type:**

83% adjustable restraint (adjusted upward)  
48% adjustable restraint (unadjusted)  
63% fixed head restraint

**By gender of occupant:**

44% men  
76% women

**By vehicle type:**

61% cars and minivans  
61% SUVs  
45% pickup trucks

Institute researchers observed the positions of driver head restraints in more than 7,000 passenger vehicles at intersections in the Washington, D.C., and Charlottesville, Virginia, areas. When the restraints were positioned at or above drivers' ears, they were assumed to be high enough to protect the neck from whiplash in rear impacts. Across both locations, 60 percent of the observed head restraints of all types were high enough to provide protection. Among the adjustable designs that had been left in the unadjusted (lowest) position, fewer than half (48 percent) reached drivers' ears.

Seventy-eight percent of the observed head restraints were adjustable designs, and among these about one in three had been adjusted upward. This week the Spinal Injury Foundation is launching "Save Your Neck," a campaign to encourage motorists to adjust their head restraints properly. The campaign will involve sites at which head restraint adjustments will be checked. For more information, including a list of sites, go to [www.spinalinjuryfoundation.org/save\\_your\\_neck\\_sites.htm](http://www.spinalinjuryfoundation.org/save_your_neck_sites.htm).

**Federal government lags behind:** "Federal safety requirements for head restraints are the same today as when head restraints first were mandated in 1969. Automakers are improving head restraints, but it could have happened sooner with better requirements," Lund points out. "The federal standard was weak to begin with when it first took effect almost 35 years ago, and now it's woefully inadequate. It lags way behind requirements in Europe. As long ago as 1974 the National Highway Traffic Safety Administration did propose upgrading the standard but then let the matter drop. The agency later began the rulemaking process over again and proposed a substantial upgrade in 2001, but once again the task hasn't been completed. More than two years have elapsed since the last proposal for upgrading this standard, and there's no final rule. It keeps being put off and then put off again. Where is it?"

With or without federal action, head restraints already are being improved — and geometry isn't the only aspect that's getting better. Some automakers are designing advanced head restraints that actively position themselves closer to occupants' heads or adjust seat stiffness to control torso movement in rear-end crashes. Some of these designs have been found to reduce neck injuries in real-world crashes.

**End 3-page release on head restraints; 2-page attachment: head restraint ratings  
VNR on Thursday, 9/25/03, 1-1:30 p.m. EDT; fed in rotation; (C) Telstar 5/Trans. 19**

**Internet: [www.highwaysafety.org](http://www.highwaysafety.org)**

## HEAD RESTRAINT RATINGS

### 2003 MODEL CARS

Acura CL/TL/RL	poor
Acura NSX	acceptable
Acura RSX	good / acceptable
Audi A4/S4	good / acceptable
Audi A6	good
Audi A8	marginal
Audi Allroad	good
Audi TT Roadster	good
Audi TT Quattro	acceptable
BMW 3 series	acceptable
BMW 5 series	good
BMW 7 series	good
BMW M3	marginal
BMW Mini Cooper	good
BMW Z4	good
Buick Century	marginal / poor
Buick LeSabre	good (active)
Buick Park Avenue	poor
Buick Regal	poor
Cadillac CTS	acceptable
Cadillac DeVille	marginal
Cadillac Seville	poor
Chevrolet Astro	poor
Chevrolet Cavalier	poor
Chevrolet Corvette	acceptable / marginal
Chevrolet Impala	marginal / poor
Chevrolet Malibu	marginal / poor
Chevrolet Monte Carlo	marginal
Chevrolet Venture	acceptable
Chrysler 300M	acceptable
Chrysler Concorde	acceptable / marginal
Chrysler PT Cruiser	good
Chrysler Sebring	good / marginal
Chrysler Town & Country	acceptable / poor
Chrysler Voyager	marginal / poor
Dodge Grand Caravan	good / acceptable
Dodge Intrepid	good / acceptable
Dodge Neon	good / acceptable
Dodge Stratus	good / acceptable
Dodge Stratus R / T 2dr	poor
Dodge Viper	good
Ford Crown Victoria	good
Ford Escort ZX2	poor
Ford Focus	good
Ford Mustang	acceptable / poor
Ford Taurus	acceptable
Ford Thunderbird	poor
Ford Windstar	good / marginal
GMC Safari	poor
Honda Accord	good / acceptable
Honda Accord 2dr	acceptable
Honda Civic	good / marginal
Honda Insight	poor
Honda Odyssey	marginal
Honda S2000	acceptable
Hyundai Accent	acceptable
Hyundai Elantra	good / acceptable
Hyundai Sonata	acceptable
Hyundai Tiburon	good
Hyundai XG350	acceptable

Infiniti G35	good (active)
Infiniti I35	good (active)
Infiniti M45	good (active)
Infiniti Q45	good (active)
Jaguar S-Type	good
Jaguar VDP / XJR	acceptable
Jaguar XJ8	acceptable
Jaguar XK8	marginal
Jaguar X-Type	acceptable / marginal
Kia Optima	acceptable
Kia Rio	acceptable
Kia Sedona	good / acceptable
Kia Spectra	good
Lexus ES 300	acceptable
Lexus GS 300	good
Lexus GS 430	good
Lexus IS 300	good
Lexus LS 430	good
Lexus SC 430	good
Lincoln LS	good
Lincoln Town Car	acceptable
Mazda 6	good / acceptable
Mazda Miata	acceptable / marginal
Mazda MPV	marginal / poor
Mazda Protege	acceptable / marginal
Mazda Protege 5	acceptable
Mercedes C class	good
Mercedes CLK class	good
Mercedes E class	good
Mercedes S class	good
Mercedes SL class	acceptable
Mercedes SLK class	marginal
Mercury Grand Marquis	acceptable
Mercury Sable	acceptable
Mini Cooper	good
Mitsubishi Diamante	poor
Mitsubishi Eclipse	marginal / poor
Mitsubishi Galant	marginal
Mitsubishi Lancer	good
Nissan 350Z	acceptable
Nissan Altima	acceptable / marginal
Nissan Maxima	good (active)
Nissan Sentra	acceptable / poor
Oldsmobile Alero	marginal
Oldsmobile Aurora	good (active)
Oldsmobile Silhouette	marginal
Pontiac Bonneville	good (active)
Pontiac Grand Am	acceptable
Pontiac Grand Prix	marginal
Pontiac Montana	acceptable / marginal
Pontiac Sunfire	poor
Pontiac Vibe	acceptable
Porsche 911	acceptable
Porsche Boxster	acceptable

LIST CONTINUES ON FOLLOWING PAGE

### NOTES

SPLIT RATINGS (e.g., good / acceptable): head restraint designs vary among seat types. ACTIVE HEAD RESTRAINTS are designed to move closer to the backs of occupants' heads in some rear impacts. These designs automatically earn good ratings. Such ratings will be assigned until dynamic rating procedures are introduced.

Saab 9-3	good (active)
Saab 9-5	good (active)
Saturn Ion	good / acceptable
Saturn LS	poor
Saturn LW	poor
Subaru Impreza	acceptable
Subaru Legacy / Outback	acceptable
Suzuki Aerio	good
Toyota Avalon	acceptable
Toyota Camry	good / acceptable
Toyota Camry Solara	acceptable
Toyota Celica	good
Toyota Corolla	good / acceptable
Toyota Echo	good
Toyota Matrix	good / acceptable
Toyota MR2	good
Toyota Prius	good
Toyota Sienna	marginal
Volkswagen Eurovan	marginal
Volkswagen Golf	good / poor
Volkswagen Jetta	acceptable / marginal
Volkswagen New Beetle	good / marginal
Volkswagen New Beetle conv	acceptable
Volkswagen Passat	marginal
Volvo C70	good
Volvo S40 / V40	good
Volvo S60 / S80	good
Volvo V70	good

### 2003 MODEL SUVs

Acura MDX	good
BMW X5	acceptable
Buick Rendezvous	acceptable / marginal
Cadillac Escalade	marginal
Chevrolet Blazer	acceptable / poor
Chevrolet Suburban	poor
Chevrolet Tahoe	poor
Chevrolet Tracker	good / acceptable
Chevrolet TrailBlazer	acceptable
Dodge Durango	poor
Ford Escape	good / acceptable
Ford Excursion	poor
Ford Expedition	good / acceptable
Ford Explorer	acceptable / marginal
GMC Envoy	acceptable
GMC Envoy XL	marginal
GMC Yukon	poor
GMC Yukon XL	acceptable / marginal
Honda CR-V	good
Honda Element	acceptable
Honda Pilot	acceptable / marginal
Hyundai Santa Fe	good
Infiniti FX35 / 45	good (active)
Infiniti QX4	good (active)
Isuzu Ascender	marginal
Isuzu Axiom	acceptable / marginal
Isuzu Rodeo	acceptable / marginal
Isuzu Rodeo Sport	marginal

Jeep Grand Cherokee	marginal / poor
Jeep Liberty	good / acceptable
Jeep Wrangler	marginal
Kia Sorento	good / acceptable
Land Rover Discovery Series II	marginal
Land Rover Freelander	acceptable / poor
Land Rover Range Rover	acceptable
Lexus GX 470	acceptable
Lexus LX 470	good
Lexus RX 300	good
Lincoln Aviator	acceptable
Lincoln Navigator	good
Mazda Tribute	good
Mercedes G class	good
Mercedes M class	good
Mercury Mountaineer	acceptable
Mitsubishi Montero	acceptable
Mitsubishi Montero Sport	marginal
Mitsubishi Outlander	good
Nissan Murano	good (active)
Nissan Pathfinder	marginal / poor
Nissan Xterra	acceptable / marginal
Oldsmobile Bravada	marginal
Pontiac Aztek	acceptable / marginal
Saturn VUE	good
Subaru Forester	good (active)
Suzuki Grand Vitara	good
Suzuki Grand Vitara XL-7	good
Toyota 4Runner	good / acceptable
Toyota Highlander	good
Toyota Land Cruiser	good
Toyota RAV-4	good
Toyota Sequoia	good
Volvo XC90	good

### 2003 MODEL PICKUP TRUCKS

Cadillac Escalade EXT	marginal
Chevrolet Avalanche	acceptable / marginal
Chevrolet S10 / T10	good / poor
Chevrolet Silverado 1500	marginal / poor
Chevrolet Silverado 2500	marginal / poor
Chevrolet Silverado 3500	marginal
Dodge Dakota	acceptable / poor
Dodge Ram 1500	acceptable / marginal
Dodge Ram 2500	acceptable
Dodge Ram 3500	poor
Ford Explorer Sport Trac	poor
Ford F-150	marginal / poor
Ford F-250	acceptable / poor
Ford F-350	acceptable
Ford Ranger	marginal / poor
GMC Sierra 1500	acceptable / poor
GMC Sierra 2500	good / acceptable
GMC Sierra 3500	acceptable
GMC Sonoma	good / acceptable
Mazda B series	poor
Nissan Frontier	marginal
Subaru Baja	marginal
Toyota Tacoma	poor
Toyota Tundra	good / acceptable