

Traffic Safety Facts

Research Note

DOT HS 811 133

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Seat Belt Use in Rear Seats in 2008

Seat belt use in rear seats in the United States stood at 74 percent in 2008, statistically unchanged from 76 percent in 2007. This result is from the National Occupant Protection Use Survey (NOPUS), which provides the only nationwide probability-based observed data on seat belt use in the United States. The NOPUS is conducted annually by the National Center for Statistics and Analysis of the National Highway Traffic Safety Administration.

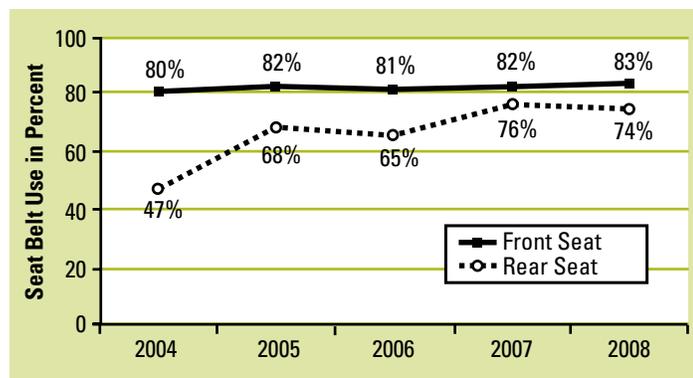
The 2008 survey also found the following:

- Seat belt use continued to be lower in the rear seat than in the front seat.
- Seat belt use in rear seats continued to be higher among States with laws requiring belt use in all seating positions.

For more details about seat belt use in the rear seat, see the table on page 2 of this Research Note.

Seat belt use in front seats nationwide was 83 percent in 2008, a slight gain from the 2007 use rate of 82 percent. For detailed information of the seat belt use in front seats in 2008, please consult the companion publications "Seat Belt Use in 2008 - Overall Results" and "Seat Belt Use in 2008 - Demographic Results," which are available at <http://www-nrd.nhtsa.dot.gov/CMSWeb/index.aspx>.

Seat Belt Use by Seating Position

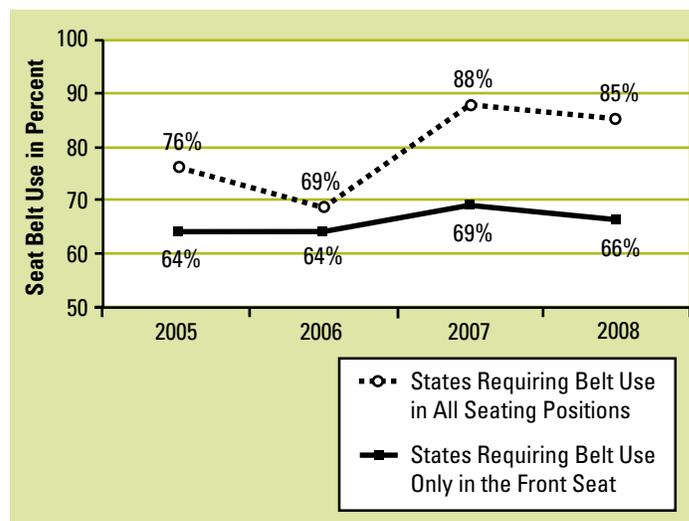


Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis

Survey Methodology

The NOPUS is the only nationwide probability-based observational survey of seat belt use in the United States. The survey observes usage as it actually occurs at a random selection of roadway sites, and so provides the best tracking of the extent to which vehicle occupants in this country are buckling up.

Seat Belt Use in Rear Seats by Year and Law Type



Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis

Sites, Vehicles, and Occupants Observed

Numbers of	2007	2008	Percentage Change
Sites Observed	1,534	1,504	-2%
Vehicles Observed	58,216	55,199	-5%
Occupants Observed	81,646	79,286	-3%
Rear Seat	7,140	7,842	10%
Rear-Seat Occupants Age 8+	3,845	3,933	2%

The survey data is collected by sending trained observers to probabilistically sampled intersections controlled by stop signs or stoplights, where vehicle occupants are observed from the roadside. Data is collected between 7 a.m. and 6 p.m. Only stopped vehicles are observed to permit time to collect the variety of information required by the survey, including

Seat Belt Use in the Rear Seat of Passenger Vehicles, by Major Characteristics

Passenger Group ¹	2007		2008		2007-2008 Change	
	Belt Use ²	Confidence That Use Is High or Low in Group ³	Belt Use ²	Confidence That Use Is High or Low in Group ³	Change in Percentage Points	Confidence in a Change in Use ⁴
All Passengers	76%		74%		-2	62%
Males	74%	99%	71%	100%	-3	58%
Females	79%	99%	77%	100%	-2	48%
Passengers Who Appear to Be						
Age 8-15	84%	100%	80%	100%	-4	69%
Age 16-24	72%	99%	69%	97%	-3	41%
Age 25-69	70%	100%	71%	91%	1	22%
Age 70 and Older	86%	98%	74%	52%	-12	81%
Passengers Who Appear to Be						
White	80%	99%	77%	100%	-3	77%
Black	60%	100%	58%	100%	-2	22%
Members of Other Races	75%	63%	70%	88%	-5	65%
Passengers in States With Laws Requiring Belts Be Used						
In All Seating Positions	88%	100%	85%	100%	-3	54%
In the Front Seat Only	69%	100%	66%	100%	-3	71%

¹ Up to two passengers observed in the second row of seats in passenger vehicles with no commercial or government markings.

² Use of shoulder belts observed between 7 a.m. and 6 p.m.

³ The level of statistical confidence that use in the passenger group (e.g., passengers who appear to be White) is higher or lower than use in the corresponding complementary passenger groups (e.g., combined passengers who appear to be Black or members of other races). Confidence levels that meet or exceed 90 percent are formatted in boldface type. Confidence levels are rounded to the nearest percentage point, and so levels reported as "100 percent" confidence are between 99.5 percent and 100.0 percent.

⁴ The degree of statistical confidence that the 2008 use rate is different from the 2007 rate. Confidence levels that meet or exceed 90 percent are formatted in boldface type.

Source: National Occupant Protection Use Survey, National Highway Traffic Safety Administration, National Center for Statistics and Analysis

subjective assessments of vehicle occupants' age and race. Observers collect data on the driver, right-front passenger, and up to two passengers in the second row of seats. Observers do not interview vehicle occupants, so that the NOPUS can capture the untainted behavior of vehicle occupants. The 2008 NOPUS data was collected between June 2 and June 22, while the 2007 data was collected between June 4 and June 25, 2007.

Although the data was collected solely from vehicles stopped at intersections controlled by stop signs or stoplights, the estimates in this publication concerning seat belt use in the front seat reflect use by vehicle occupants *in transit* on *all types of roadways*. This is accomplished by making adjustments using data from another portion of the survey that observes belt use in vehicles in transit on general roadways.

Because the NOPUS sites were chosen through probabilistic means, we can analyze the statistical significance of its results. Statistically significant changes in belt use between 2007 and 2008 are identified in the table "Seat Belt Use in the Rear Seat of Passenger Vehicles, by Major Characteristics" by having a result that is 90 percent or greater in the table's

column 7. Statistical confidence levels that seat belt use in a given passenger group, e.g., passengers who appear to be White, is higher or lower than in the complementary passenger groups, e.g., combined passengers who appear to be Black or members of other races, are provided in columns 3 and 5. Such comparisons are made within categories delineated by changes in row shading in the table.

The NOPUS uses a complex multistage probability sample, statistical data editing, imputation of unknown values, and complex estimation and variance estimation procedures. The 2008 NOPUS continued the transition to the newly designed sample of observation sites, which was implemented in 2006. The 2008 results reflect the partial incorporation of a set of observation sites from the new design (about 60%) and a set of the observation sites from the old design (about 40%). Data from 2005 and prior years was obtained from the old observation sites only.

Data collection, estimation, and variance estimation for the NOPUS are conducted by Westat, Inc., under the direction of the National Center for Statistics and Analysis in NHTSA under Federal contract number DTNH22-07-D-00057.

Definitions

Vehicle occupants observed in the survey were counted as “belted” if they appeared to have a shoulder belt across the front of the body. NOPUS does not observe the use of lap belts because these restraints cannot be reliably observed from the roadside.

Not all vehicles on the road today have shoulder belts in the rear seats. Based on the 2007 vehicle registration data from the National Vehicle Population Profile, R.L. Polk & Co., we estimate that 88 percent of passenger vehicles on the road have shoulder belts in the rear outboard seating positions. In the 12 percent of vehicles with only lap belts in the rear outboard seats, all rear-seat vehicle occupants would be counted by NOPUS as not using shoulder belts, regardless of whether they are using lap belts. Consequently the NOPUS rear-seat shoulder belt use estimates reflect both the degree to which vehicle occupants use restraints and the prevalence of shoulder belts in these seating positions.

Please also note rear-seat occupants might be underestimated in NOPUS because NOPUS only observes up to two passengers in the second row of seats and none in the third row and beyond.

States With Laws Requiring That Seat Belts Be Used in All Seating Positions¹

Alaska	California	Delaware
District of Columbia	Idaho	Indiana
Kentucky	Maine	Massachusetts
Montana	Nevada	New Mexico
North Carolina	Oregon	Rhode Island
South Carolina	Utah	Vermont
Washington	Wisconsin	Wyoming

¹States with laws in effect as of June 30, 2008, requiring people 18 and older to use seat belts in all seating positions. Also includes the District of Columbia. The rear-seatbelt use laws in Indiana and Maine took effect on July 1, 2007, and September 20, 2007, respectively. In no other States did such laws take effect during the period June 30, 2007–June 30, 2008.

The racial categories “Black,” “White,” and “Other Races” appearing in the table reflect subjective characterizations by roadside observers regarding the race of vehicle occupants. Likewise observers’ recorded the age group (8-15 years; 16-24 years; 25-69 years; and 70 years or older) that best fit their visual assessment of each observed occupant.

At the time the 2008 survey was conducted, 20 States and the District of Columbia required all vehicle occupants 18 and older to use seat belts when riding in the rear seat.

For More Information

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Detailed analyses of the data in this publication, as well as additional data and information on the survey design and analysis procedures, will be available in upcoming publications to be posted at the Web site <http://www-nrd.nhtsa.dot.gov/CMSWeb/index.aspx> in 2009.

For more information on the campaign by NHTSA and the States to increase seat belt use, see <http://www.nhtsa.gov/portal/site/nhtsa/menuitem.ce4a601cdf97fc239d-17110cba046a0>.

The NOPUS also observes other types of restraints, such as motorcycle helmets and child restraints, and observes driver electronic device use. This publication is part of a series that presents overall results from the survey on these topics. Please see other members of the series such as “Motorcycle Helmet Use in 2008 – Overall Results” for the latest data on these topics.



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