

Traffic Safety Facts

Research Note

December 2005

DOT HS 809 969

Safety Belt Use in 2005 – Demographic Results

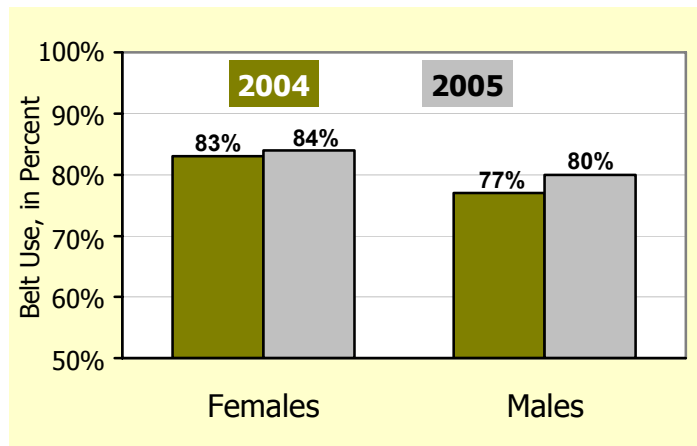
Donna Glassbrenner, Ph.D.

In 2005, safety belt use in the United States rose among males, from 77 percent in 2004 to 80 percent in 2005. This result is from the National Occupant Protection Use Survey (NOPUS), which provides the only probability-based observed data on safety 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 (NHTSA).

The 2005 survey also found the following:

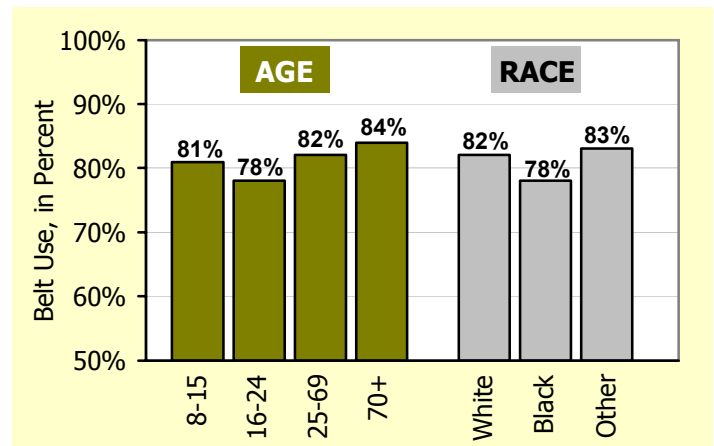
- Safety belt use continues to be higher in the front seat than in the rear seat, with 82 percent of front-seat occupants observed belted in the 2005 survey, compared to 68 percent of rear-seat occupants.
- Safety belt use in the rear seat is higher in States whose laws require it. In 2005, 76 percent of rear-seat motorists in States requiring rear seat belt use were belted, compared to 64 percent in other States and 68 percent overall.

Safety Belt Use by Gender



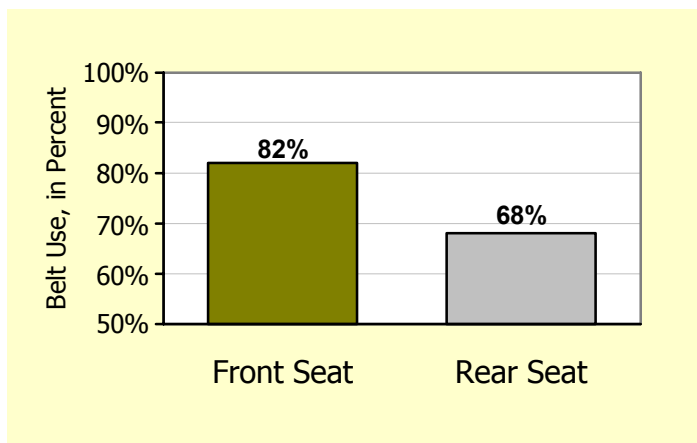
Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis, 2004-2005

Safety Belt Use by Age and Race



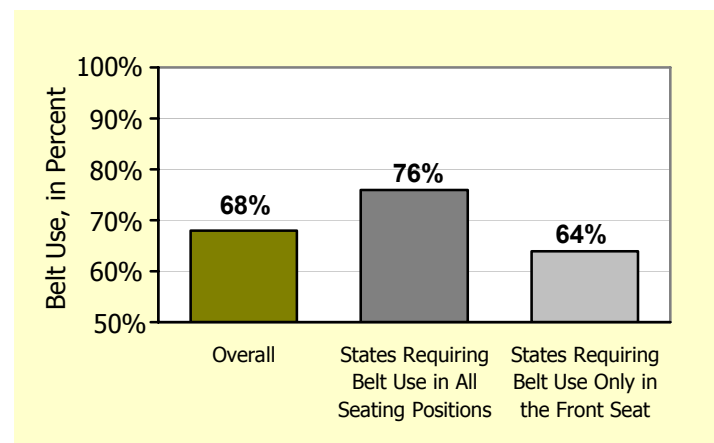
Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis, 2005

Safety Belt Use by Seating Position



Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis, 2005

Rear Seat Safety Belt Use by Law Type



Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis, 2005

Safety Belt Use by Demographic and Other Characteristics

Motorist Group ¹	2004		2005		2004-2005 Change		
	Belt Use ²	Significantly High or Low Rates ³	Belt Use ²	Significantly High or Low Rates ³	Change in Percentage Points	Confidence in a Change in Use ⁴	Conversion Rate ⁵
All Motorists	80%		82%		2	89%	10%
Males	77%	L	80%	L	3	96%	14%
Females	83%	H	84%	H	1	43%	4%
Motorists Who Appear to Be							
Ages 8-15	84%		81%		-3	69%	-20%
Ages 16-24	77%		78%	L	1	44%	6%
Ages 25-69	79%		82%		3	89%	14%
Ages 70 and Older	88%	H	84%		-4	74%	-28%
Motorists Who Appear to Be							
White	80%		82%		2	90%	12%
Black	80%		78%		-2	56%	-8%
Members of Other Races	79%		83%		4	83%	19%
Drivers With							
No Passengers	78%	L	81%	L	3	90%	13%
At Least One Passenger	83%	H	85%	H	2	73%	9%
Drivers With							
No Passengers	78%	L	81%	L	3	90%	13%
Passengers All Under Age 8	87%		84%		-3	68%	-23%
Passengers All Ages 8 and Older	83%		85%		2	85%	11%
Some Passengers Under Age 8 and Some Age 8 or Older	85%		85%		0	6%	1%
Drivers Ages 16-24 With							
No Passengers	80%		82%		2	61%	12%
Passengers All Ages 16-24	79%		80%		1	9%	2%
At Least One Passenger Not Age 16-24	86%		84%		-2	35%	-11%
Motorists Ages 16-24 When							
All Occupants Are Ages 16-24	78%		80%		2	48%	8%
At Least One Occupant Is Not Age 16-24	52%		78%		26	75%	54%

¹ Drivers and right-front passengers of passenger vehicles with no commercial or government markings.

² Use of shoulder belts observed between the hours of 8 a.m. and 6 p.m.

³ Rates flagged with an "H" or "L" are statistically high or low in their category at a 90 percent confidence level.

⁴ The degree of statistical confidence that the 2005 use rate is different from the 2004 rate.

⁵ The "conversion rate" is the percentage reduction in belt nonuse. This is based on unrounded use rates.

⁶ Use rates reflect the law in effect at the time data was collected.

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

Safety Belt Use in the Rear Seat, by Major Characteristics

Motorist Group ¹	2004		2005		2004–2005 Change		
	Belt Use ²	Significantly High or Low Rates ³	Belt Use ²	Significantly High or Low Rates ³	Change in Percentage Points	Confidence in a Change in Use ⁴	Conversion Rate ⁵
All Motorists	47%		68%		21	78%	40%
Males	47%		65%		18	71%	34%
Females	46%		70%		24	81%	45%
Motorists Who Appear to Be							
Ages 8-15	70%		73%		3	52%	8%
Ages 16-24	NA		59%	L	NA		
Ages 25-69	59%		67%		8	89%	21%
Ages 70 and Up	70%		84%	H	14	74%	48%
Motorists Who Appear to Be							
White	46%		73%	H	27	77%	49%
Black	46%		57%		11	68%	19%
Members of Other Races	52%		64%		12	90%	25%
Motorists In States With Laws Requiring Belts Be Used							
In All Seating Positions	72%		76%	H	4	59%	13%
In the Front Seat Only	NA		64%	L	NA		

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 the hours of 8 a.m. and 6 p.m.

³ Rates flagged with an "H" or "L" are statistically high or low in their category at a 90 percent confidence level.

⁴ The degree of statistical confidence that the 2005 use rate is different from the 2004 rate.

⁵ The "conversion rate" is the percentage reduction in belt nonuse. This is based on unrounded use rates.

⁶ Use rates reflect the law in effect at the time data was collected.

NA: Data not sufficient to produce a reliable estimate.

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

Survey Methodology

The National Occupant Protection Use Survey is the only probability-based observational survey of safety 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 motorists in this country are buckling up.

The survey data is collected by sending trained observers to probabilistically sampled intersections controlled by a stop sign or stoplight, where motorists are observed from the roadside. Data is collected between the hours of 8 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 subjective assessments of motorists' 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 motorists, so that the NOPUS can capture the untainted behavior of motorists. The 2005 NOPUS data was collected between June 6 and June 25, while the 2004 data was collected between June 7 and July 11, 2004, excluding the period of July 2 – 5.

Although the data was collected solely from vehicles stopped at intersections controlled by a stop sign or stoplight, the estimates in this publication concerning safety belt use in the front seat reflect use by motorists *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 increases in belt use between 2004 and 2005 are identified in the tables of safety belt use estimates by having a result that is 90 percent or greater in column 7. Significantly high and low levels of belt use, such as the lower use among 16- to 24-year-old motorists than in other age groups in 2005, are identified by H's and L's in columns 3 and 5. Such comparisons are made within categories, such as racial groups, delineated by changes in row shading in the tables.

The NOPUS uses a complex multistage probability sample, statistical data editing, imputation of unknown values, and complex estimation and variance estimation procedures. See the NHTSA Technical Report referenced below for more information on these procedures.

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 DTNH22-00-D-07001.

Definitions

Motorists 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 seat. Based on vehicle registration data from the National Vehicle Population Profile, R.L. Polk & Co., we estimate that 81 percent of passenger vehicles on the road today have shoulder belts in the rear outboard seating positions. In the 19 percent of vehicles with only lap belts in the rear outboard seats, all rear-seat motorists 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 motorists use restraints and the prevalence of shoulder belts in these seating positions.

Sites, Vehicles, and Motorists Observed

Numbers of	2004	2005	Percentage Change
Sites Observed	1,200	1,200	0%
Vehicles Observed	38,000	43,000	13%
Occupants Observed	52,000	58,000	12%
Front Seat	49,000	55,000	12%
Rear Seat	3,000	3,000	0%

States With Laws Requiring Safety Belts Be Used in All Seating Positions¹

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

¹States with laws in effect as of June 30, 2005, requiring people 18 and older to use safety belts in all seating positions. Also includes DC. In no other States did such laws take effect during the period June 30, 2004 – June 30, 2005.

The racial categories “Black,” “White,” and “Other Races” appearing in the tables reflect subjective characterizations by roadside observers regarding the race of motorists. 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 motorist.

At the time the 2005 survey was conducted, 18 States and the District of Columbia required all motorists 18 and older to use safety belts when riding in the rear seat.

The “conversion rate” is the percentage reduction in belt nonuse. This rate roughly reflects the percentage of belt nonusers in 2004 who were “converted” to using belts in 2005.

For More Information

For detailed analyses of the data in this publication, as well as additional data and information on the survey design and analysis procedures, see the upcoming publication, “Safety Belt Use in 2005 – Demographic Analysis”, expected to be available at the Web site www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/AvailInf.html in the spring of 2006.

For more information on the campaign by NHTSA and the States to increase safety belt use, see www.buckleupamerica.org.

The NOPUS also observes other types of restraints, such as child restraints and motorcycle helmets, and observes driver cell phone 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 2005 – Overall Results,” and the corresponding NHTSA Technical Report, “Motorcycle Helmet Use in 2005–Analysis,” for the latest data on these topics.