

Traffic Safety Facts

Research Note

Seat Belt Use in 2008 — Overall Results

Seat belt use in 2008 stood at 83 percent, a gain from 82 percent use 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. NOPUS is conducted annually by the National Center for Statistics and Analysis of the National Highway Traffic Safety Administration.

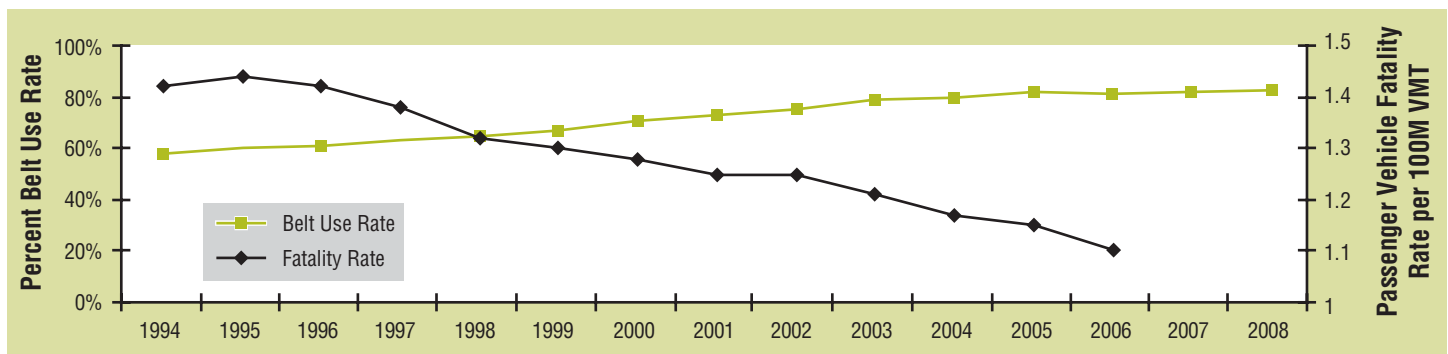
The 2008 survey also found the following:

- Seat belt use for occupants on expressways increased to 90 percent in 2008 (89% in 2007), and this increase is statistically significant.

- Seat belt use continued to be higher in States in which vehicle occupants can be pulled over solely for not using seat belts (“primary law” States) than those with weaker enforcement laws (“secondary law” States).

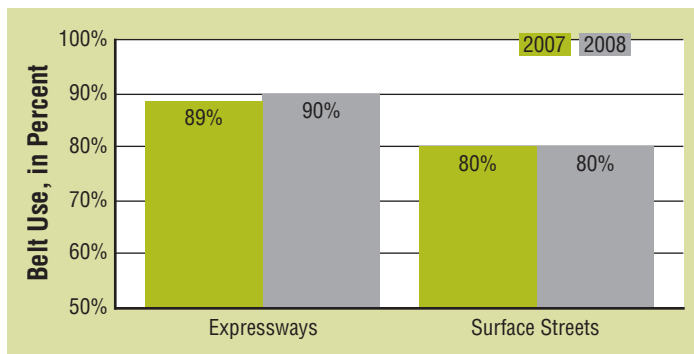
Seat belt use has risen steadily since NOPUS began collecting data in 1994, and this has been accompanied by a steady decline in passenger vehicle occupant fatalities per mile traveled.

Seat Belt Use versus Passenger Vehicle Occupant Fatality Rate, 1994–Present



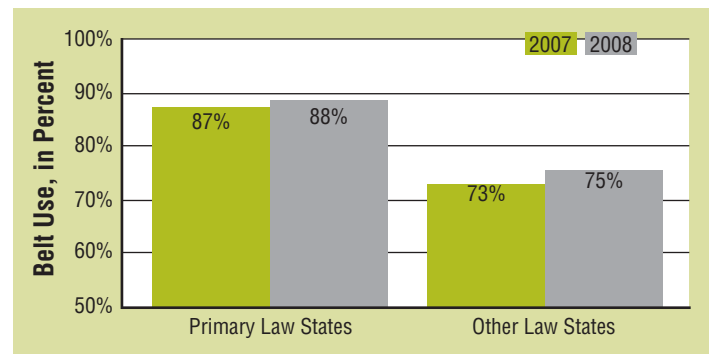
Source: NOPUS and FARS, NHTSA's National Center for Statistics and Analysis; FHWA

Seat Belt Use by Road Type



Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis, 2007, 2008

Seat Belt Use by Law Type



Source: National Occupant Protection Use Survey, NHTSA's National Center for Statistics and Analysis, 2007, 2008

Seat Belt Use by Major Characteristics

Occupant 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 Occupants	82%		83%		1	49%
Drivers	83%	100%	84%	100%	1	55%
Right-Front Passengers	81%	100%	81%	100%	0	23%
Occupants in States With ⁵						
Primary Enforcement Laws	87%	100%	88%	100%	1	80%
Secondary Enforcement Laws	73%	100%	75%	100%	2	73%
Occupants on						
Expressways	89%	100%	90%	100%	1	97%
Surface Streets	80%	100%	80%	100%	0	14%
Occupants Traveling in						
Fast Traffic	86%	100%	87%	100%	1	31%
Medium-Speed Traffic	82%	59%	83%	55%	1	39%
Slow Traffic	78%	99%	79%	100%	1	17%
Occupants Traveling in						
Heavy Traffic	84%	60%	97%	100%	13	92%
Moderately Dense Traffic	81%	62%	85%	68%	4	42%
Light Traffic	82%	58%	83%	85%	1	42%
Occupants Traveling Through						
Light Precipitation	81%	72%	81%	75%	0	1%
Light Fog	82%	51%	80%	62%	-2	16%
Clear Weather Conditions	83%	71%	83%	76%	0	59%
Occupants in						
Passenger Cars	84%	100%	84%	98%	0	23%
Vans and SUVs	86%	100%	86%	100%	0	25%
Pickup Trucks	72%	100%	74%	100%	2	64%
Occupants in the						
Northeast	78%	94%	79%	93%	1	26%
Midwest	79%	94%	79%	96%	0	10%
South	80%	82%	81%	86%	1	40%
West	93%	100%	93%	100%	0	18%
Occupants in						
Urban Areas	84%	68%	84%	71%	0	23%
Suburban Areas	85%	100%	85%	99%	0	44%
Rural Areas	78%	100%	79%	100%	1	21%
Occupants Traveling During						
Weekdays	82%	98%	83%	66%	1	72%
Weekday Rush Hours	83%	97%	84%	90%	1	50%
Weekday Non-Rush Hours	81%	97%	82%	90%	1	73%
Weekends	84%	98%	83%	66%	-1	49%

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 7 a.m. and 6 p.m.

³ The level of statistical confidence that use in the occupant group (e.g., occupants in urban areas) is higher or lower than use in the corresponding complementary occupant group (e.g., occupants in suburban and rural areas). 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.

⁵ Use rates reflect the laws in effect at the time data were collected.

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 (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 passenger vehicle occupants in this country are buckling up.

Sites, Vehicles, and Occupants Observed

Numbers of	2007	2008
Sites Observed	1,878	1,865
Vehicles Observed	133,000	116,000
Occupants Observed ¹	169,000	147,000

¹ Drivers and right-front passengers only.

The survey data is collected by sending trained observers to probabilistically sampled roadways, who observe passenger vehicles between the hours of 7 a.m. and 6 p.m. Observations are made either while standing at the roadside or, in the case of expressways, while riding in a vehicle in traffic. Observers do not stop vehicles or interview occupants, so that NOPUS captures the untainted behavior of 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.

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 2007 and 2008 are identified in the table “Seat belt Use by Major Characteristics” by having a result that is 90 percent or greater in the table’s column 7. Statistical confidence levels that use in a given occupant group, e.g., occupants in the Midwest, is higher or lower than in the complementary occupant group, e.g., occupants in the Northeast, South, and West, are provided in columns 3 and 5. Such comparisons are made within categories, such as road type, delineated by changes in row shading in the table. The exception to this is the grouping “Occupants Traveling During ...,” in which weekdays are compared to weekends, and weekday rush hour to weekday non-rush hour.

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 were obtained from the old observation sites only.

Data collection, estimation, and variance estimation for 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.

States With Primary Enforcement Seat Belt Laws¹

Alabama	Alaska	California
Connecticut	Delaware	District of Columbia
Georgia	Hawaii	Illinois
Indiana	Iowa	Kentucky
Louisiana	Maine	Maryland
Michigan	Mississippi	New Jersey
New Mexico	New York	North Carolina
Oklahoma	Oregon	South Carolina
Tennessee	Texas	Washington

¹ States with laws in effect as of June 30, 2008.

Definitions

Under NOPUS observation protocols, a driver or right-front passenger is considered “belted” if a shoulder belt appears to be across the front of the body.

A jurisdiction that can enforce traffic laws, such as a State or the District of Columbia, has a “primary enforcement law” if occupants can be ticketed simply for not using their seat belts. Under a “secondary enforcement law” occupants must be stopped for another violation, such as an expired license tag, before being cited for seat belt nonuse. In June 2008, primary laws were in effect in 26 States and the District of Columbia, 23 States had secondary laws, and 1 State (New Hampshire) effectively has no belt law. (In New Hampshire, it is legal for occupants over age 18 to ride unbelted.) Maine’s primary enforcement seat belt law took effect on September 17, 2007, but no tickets were written for violations until April 1, 2008.

“Expressways” are defined to be roadways with limited access, while “surface streets” comprise all other roadways. “Rush hour” is defined to comprise the time periods 7–9:30 a.m. and 3:30–6 p.m.

A roadway is defined to have “fast traffic” if during the observation period the average speed of passenger vehicles that passed the observer(s) exceeded 50 mph, with “medium-speed traffic” defined as 31–50 mph and “slow traffic” defined as 30 mph or slower.

A roadway is defined to have “heavy traffic” if the average number of vehicles per lane mile on the roadway during the observation period exceeded 45, with “moderately dense traffic” defined as 26–45 vehicles per lane mile and “light traffic” having at most 25 vehicles per lane mile.

The survey uses the following definitions of geographic regions, which are defined in terms of the States contained in the regions below:

Northeast: CT, MA, ME, NH, NJ, NY, PA, RI, VT

Midwest: IA, KS, IL, IN, MI, MN, MO, ND, NE, OH, SD, WI

South: AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV

West: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

For More Information

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Additional data and information on the survey design and analysis procedures will be available in upcoming publica-

tions to be posted at the Web site www-nrd.nhtsa.dot.gov/CMSWeb/index.aspx in 2009.

Research has found that lap/shoulder seat belts, when used, reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. In 2006 alone, seat belts saved an estimated 15,383 lives (Traffic Safety Facts: 2006 Data, NHTSA, DOT HS 810807). For more information on the campaign by NHTSA and the States to increase seat belt use, see www.nhtsa.dot.gov/link/ciot.htm.

NOPUS also observes other types of restraints, such as child restraints and motorcycle helmets, 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 notes in the series, such as "Motorcycle Helmet Use in 2008 — Overall Results," for the latest data on these topics.



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