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U.S. Department of Transportation
National Highway Traffic Safety Administration
NHTSA

Traffic Safety Facts
RESEARCH NOTE

# Seat Belt Use in 2023 – Overall Results

The national estimate of seat belt use by adult front-seat passengers in 2023 was 91.9 percent, a record high although not statistically different (at the 0.05 level) from 91.6 percent observed in 2022. The seat belt use rate estimate represents the percentage of occupants who are belted during an average daylight moment.

Figure 1 displays an increasing trend of seat belt use over a 15-year period, contrasted with the percentage of unrestrained passenger vehicle occupant fatalities during daytime.[1] The 2023 survey found one significant change in seat belt use from 2022 to 2023 for the Northeast region as shown in Table 1. Seat belt use continued to be higher in the west region compared to the other regions of the country (Figure 2). Seat belt use also continued to be higher in the States in which vehicles can be pulled over solely for occupants not using seat belts ("primary law States") compared to the States with weaker enforcement laws ("secondary law States") or no seat belt laws for adults although the difference has narrowed since 2020 (Figure 3).

The 2023 data collection occurred in early June immediately following the *Click It or Ticket* campaign. The number of occupants observed in the 2023 survey increased by 3 percent from 2022.

These results are from the National Occupant Protection Use Survey (NOPUS), the only survey that provides nationwide probability-based observed data on seat belt use in the United States. The NOPUS is conducted annually by NHTSA's National Center for Statistics and Analysis.

Figure 1. National Seat Belt Use Rate and Daytime Percentage of Unrestrained Passenger Vehicle Occupant Fatalities
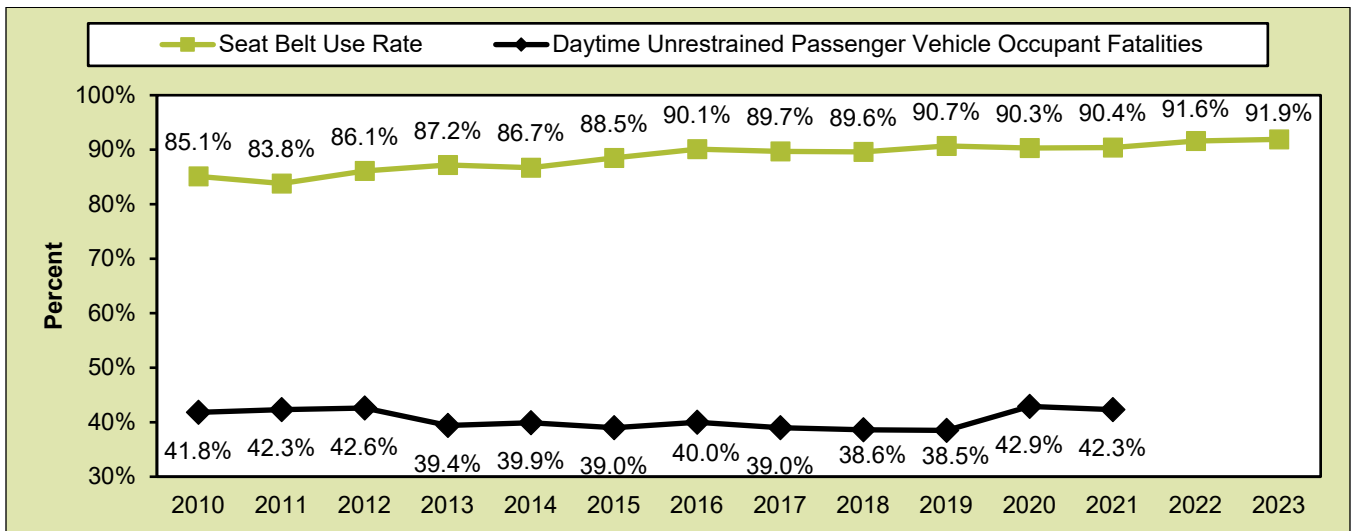
Source: NOPUS, FARS 2010-2020 Final File, FARS 2021 ARF

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[1] The FARS 2022 and 2023 data on the percentages of unrestrained passenger vehicle occupant fatalities during daytime will be available in early 2024 and early 2025.

Table 1. Seat Belt Use by Major Characteristics

Occupant Group[1]	2022		2023		2022-2023 Change		
	Belt Use[2]	95% Confidence Interval[3]	Belt Use[2]	95% Confidence Interval[3]	Change in Percentage Points	95% Confidence Interval[4]	p-Value[5]
All Occupants	91.6%	(90.0, 92.9)	91.9%	(90.6, 93.0)	0.3	(-1.4, 2.0)	0.73
Drivers	91.9%	(90.4, 93.2)	92.1%	(90.7, 93.3)	0.2	(-1.7, 2.0)	0.87
Right-Front Passengers	90.0%	(88.1, 91.6)	90.9%	(89.4, 92.3)	0.9	(-0.9, 2.7)	0.30
Occupants in States With[6]							
Primary Enforcement Laws	92.2%	(90.4, 93.7)	92.0%	(90.3, 93.5)	-0.2	(-2.4, 2.1)	0.88
Secondary/No Enforcement Laws	89.5%	(86.0, 92.3)	91.3%	(88.9, 93.2)	1.8	(-0.6, 4.1)	0.14
Occupants Traveling on							
Expressways	94.4%	(93.0, 95.6)	94.3%	(93.4, 95.1)	-0.1	(-1.7, 1.5)	0.91
Surface Streets	89.4%	(87.4, 91.2)	90.2%	(88.1, 91.9)	0.7	(-1.7, 3.1)	0.53
Occupants Traveling in							
Fast Traffic	93.3%	(91.7, 94.7)	93.6%	(92.7, 94.4)	0.3	(-1.4, 1.9)	0.73
Medium Speed Traffic	91.0%	(89.4, 92.4)	91.0%	(89.1, 92.6)	0.0	(-2.1, 2.1)	0.99
Slow Traffic	88.3%	(85.3, 90.7)	88.8%	(86.4, 90.9)	0.6	(-2.1, 3.2)	0.67
Occupants Traveling in							
Heavy Traffic	93.3%	(92.0, 94.4)	93.7%	(92.9, 94.4)	0.4	(-0.7, 1.4)	0.46
Moderately Dense Traffic	90.6%	(88.5, 92.3)	90.0%	(87.5, 92.0)	-0.6	(-3.8, 2.6)	0.72
Light Traffic	82.6%	(78.3, 86.2)	84.6%	(80.5, 87.9)	2.0	(-3.7, 7.7)	0.48
Occupants Traveling Through							
Not Clear Weather Conditions	94.3%	(92.5, 95.7)	93.8%	(92.4, 95.0)	-0.5	(-2.6, 1.6)	0.61
Clear Weather Conditions	91.2%	(89.6, 92.6)	91.7%	(90.4, 92.9)	0.5	(-1.3, 2.3)	0.59
Occupants in							
Passenger Cars	91.3%	(89.6, 92.8)	91.8%	(90.2, 93.1)	0.5	(-1.2, 2.1)	0.57
Vans and SUVs	93.7%	(92.5, 94.8)	93.9%	(93.0, 94.7)	0.2	(-1.2, 1.7)	0.78
Pickup Trucks	86.7%	(84.0, 88.9)	87.0%	(84.1, 89.4)	0.3	(-3.4, 3.9)	0.88
Occupants in							
Northeast	**91.1%**	**(89.2, 92.7)**	**93.0%**	**(91.9, 93.9)**	**1.8**	**(0.3, 3.4)**	**0.02**
Midwest	89.3%	(85.5, 92.3)	92.9%	(89.8, 95.2)	3.6	(-1.1, 8.3)	0.13
South	90.5%	(87.2, 93.0)	88.4%	(85.6, 90.8)	-2.1	(-5.4, 1.2)	0.21
West	96.2%	(94.8, 97.3)	96.5%	(95.6, 97.2)	0.2	(-0.6, 1.1)	0.56
Occupants in							
Urban Areas	92.0%	(90.6, 93.2)	92.3%	(91.2, 93.2)	0.3	(-0.9, 1.5)	0.62
Rural Areas	90.8%	(88.3, 92.9)	91.2%	(88.4, 93.3)	0.3	(-2.9, 3.6)	0.84

Occupant Group[1]	2022		2023		2022-2023 Change		
	Belt Use[2]	95% Confidence Interval[3]	Belt Use[2]	95% Confidence Interval[3]	Change in Percentage Points	95% Confidence Interval[4]	p-Value[5]
Occupants Traveling During							
Weekdays	91.5%	(89.9, 92.9)	91.6%	(90.2, 92.7)	0.1	(-1.7, 1.8)	0.94
Weekday Rush Hours	91.3%	(89.6, 92.8)	91.8%	(90.3, 93.0)	0.4	(-1.3, 2.2)	0.61
Weekday Non-Rush Hours	91.6%	(89.7, 93.2)	91.4%	(89.8, 92.7)	-0.3	(-2.2, 1.6)	0.76
Weekends	91.7%	(89.8, 93.3)	92.5%	(90.6, 94.1)	0.8	(-1.4, 3.0)	0.47

[1] Drivers and right-front passengers of all observed passenger vehicles
[2] Shoulder belt use observed from 7 a.m. to 6 p.m.
[3] The Wilson confidence interval has the form: $\left\{ (2n_{EFF}p + t^2) \pm t\sqrt{(t^2 + 4n_{EFF}pq)}/2(n_{EFF} + t^2) \right\}$, where p is the estimated percentage of belt use, $n_{EFF} = n/DEFF$ is the effective sample size (where n is the sample size and $DEFF$ is the design effect), $t \equiv t_{1-\alpha/2}(df)$, is a multiplier from the t-distribution with df degrees of freedom, and $q = 1 - p$. For percentages, these endpoints are multiplied by 100.
[4] The regular symmetric interval was used for the estimated change in percentage point, which is in the form: $p \pm t_{1-\alpha/2}(df)\sqrt{v(p)}$, where p is the estimated change in percentage point, $v(p)$ is its estimated variance, and $t_{1-\alpha/2}(df)$ is a multiplier from the t-distribution with df degrees of freedom.
[5] A p-value of 0.05 or less indicates that there is a statistically significant difference (at the alpha = 0.05 level) between the year-over-year estimates for the group in question, **indicated with bold type.**
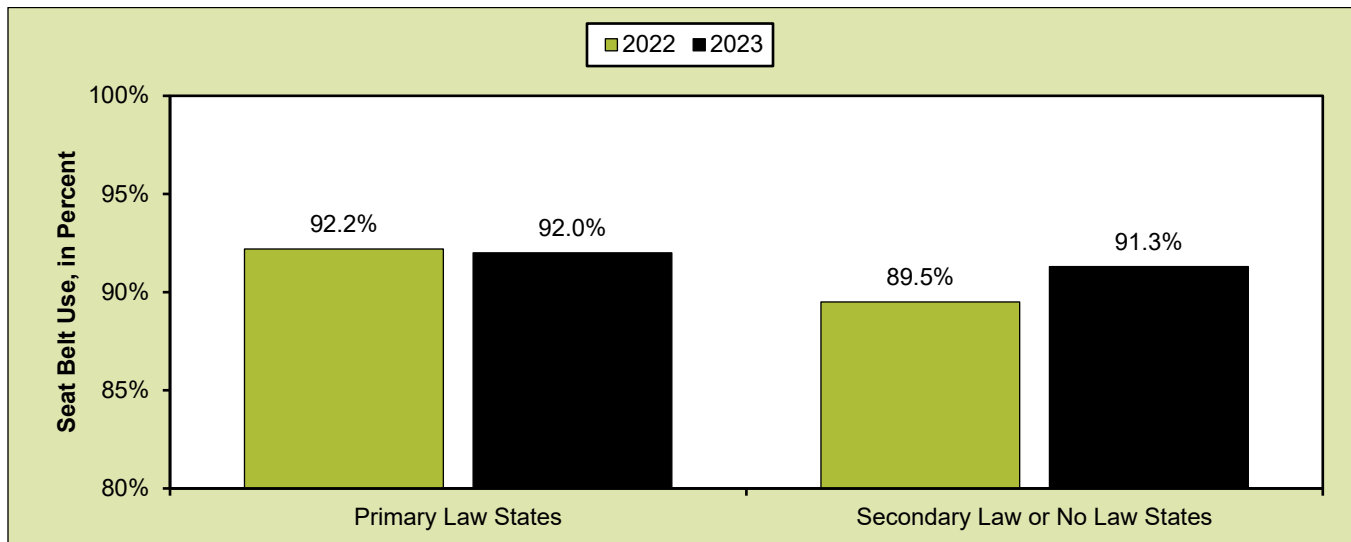[6] Use rates reflect the laws in effect at the time data were collected.
Data Source: NOPUS, NCSA, 2022, 2023

Figure 2. Seat Belt Use by Region

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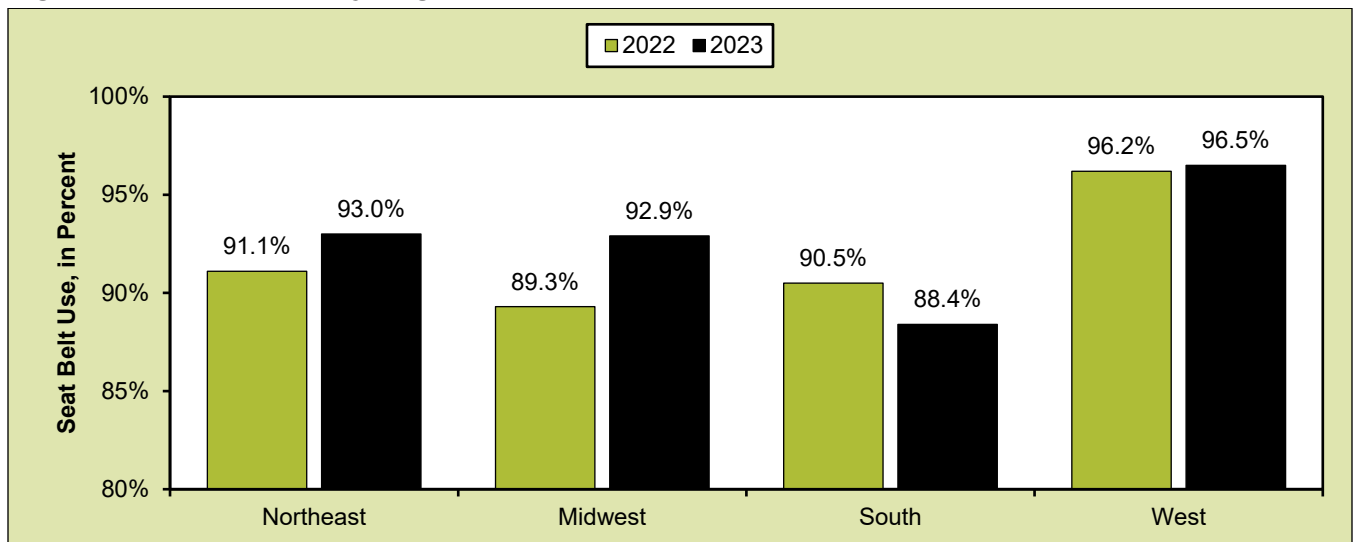
Source: NOPUS

Figure 3. Seat Belt Use by Law Type

Source: NOPUS

Survey Methodology

NOPUS is the only nationwide probability-based observational survey of seat belt use in the United States. The survey observes seat belt use as it actually occurs at randomly selected roadway sites and thus provides the best tracking of the extent to which passenger vehicle occupants in the United States are buckling up.

The survey data is collected by sending trained observers to probabilistically sampled roadways, who observe passenger vehicles from 7 a.m. to 6 p.m. Observations are made either while standing at the roadside or, in the case of expressways while riding in a vehicle in the traffic. In order to capture the true behavior of passenger vehicle occupants, the NOPUS observers do not stop vehicles or interview occupants. The 2023 NOPUS data was collected from June 5 to June 24, 2023, while the 2022 NOPUS data were collected from June 6 to June 24, 2022.

The NOPUS uses a complex, multistage probability sample, statistical data editing, imputation of unknown values, and complex estimation procedures. Table 2 shows the observed sample sizes of the 2023 NOPUS Moving Traffic Survey. A total of 122,828 occupants were observed in the 100,893 vehicles, both of which are 3 percent more than the 2022 sample.

Because the NOPUS sites were selected probabilistically, we can test the statistical significance of the results. Statistically significant changes in seat belt use between 2022 to 2023 are identified in Table 1 by a *p*-value that is 0.05 or less in the table's far-right column.

Table 2. Sites, Vehicles, and Occupants* Observed

Numbers of	2022	2023	Percentage Change
Sites Observed	1,865	1,869	0.21%
Vehicles Observed	98,322	100,893	2.61%
Occupants Observed*	119,411	122,828	2.86%

*Drivers and right-front passengers only

Data collection, estimation, and variance estimation for the NOPUS are conducted by Westat, Inc., under the direction of NHTSA's National Center for Statistics and Analysis under Federal contract number 693JJ918D000001.

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 "secondary enforcement" laws, vehicles must be stopped for another violation, such as an expired license tag, before an occupant can be cited for seat belt nonuse. As of May 31, 2023, primary laws were in effect in 34 States and the District of Columbia, 15 States had secondary laws, and 1 State (New Hampshire) effectively has no adult seat belt law. In New Hampshire, it is legal for occupants over age 18 to ride unbelted (Highway Loss Data Institute, 2023).

The following States below had "primary enforcement" seat belt laws effect as of May 31, 2023.

AL, AK, AR, CA, CT, DE, DC, FL, GA, HI, IL, IN, IA, KS, KY, LA, ME, MD, MI, MN, MS, NJ, NM, NY, NC, OK, OR, RI, SC, TN, TX, UT, WA, WV, WI

"Expressways" are defined to be roadways with limited access, while "surface streets" comprise all other roadways.

A roadway is defined to have "fast traffic" if during the observation period the average speed of passenger vehicles that pass the observer exceeds 50 mph, with "medium-speed traffic" defined as 31 to 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 on the roadway during the observation period is greater than 5 per lane per mile, with "moderately dense traffic" defined as greater than 1 but less than or equal to 5 vehicles per lane per mile, and "light traffic" as less than or equal to 1 vehicle per lane per mile.

As of 2018 "Not Clear Weather Conditions" includes sites where light precipitation or light fog is present.

The survey uses the following definitions of geographic regions, defined by the States 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

Urban and Rural area classifications are based on Census's 2010 urban area classification. Urban areas are comprised of Urban (Census-identified Urbanized Areas of 50,000 or more people) or suburban (Census-identified Urban Clusters of at least 2,500 and less than 50,000 people). Rural areas are not designated as Urban Areas or Urban Clusters.

"Weekday Rush hours" are defined to be 7 a.m. to 9:30 a.m. and 3:30 to 6 p.m. on weekdays, while "Weekday Non-Rush Hours" comprise all other weekday hours (9:30 a.m. to 3:30 p.m.).

Seat belt use rates reflect the State laws in effect at the time of data collection.

References

Highway Loss Data Institute. (2023, October). *Seat belt and child seat laws by State* (Web page). Insurance Institute for Highway Safety. Available at www.iihs.org/topics/seat-belts/seat-belt-law-table

National Center for Statistics and Analysis. (2019, March). *Lives saved in 2017 by restraint use and minimum-drinking-age laws* (Traffic Safety Facts CrashStats. Report No. DOT HS 812 683). National Highway Traffic Safety Administration. https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812683

For More Information

For questions regarding the information presented in this document, please contact ncsaweb@dot.gov.

Additional data and information on the survey design and analysis procedures will be available in upcoming publications to be posted at the website https://crashstats.nhtsa.dot.gov/#/.

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 2017 the use of seat belts in passenger vehicles saved an estimated 14,955 lives of occupants 5 and older (National Center for Statistics and Analysis, 2019). For more information on the campaign by NHTSA and the States to increase seat belt use, see www.nhtsa.gov/CIOT.

The 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 refer to the upcoming research notes and technical reports in the series, such as *Motorcycle Helmet Use in 2023–Overall Results*, for the latest data on these topics.

Suggested APA format citation for this document:

National Center for Statistics and Analysis. (2024, February). *Seat belt use in 2023 – overall results* (Traffic Safety Facts Research Note. Report No. DOT HS 813 543). National Highway Traffic Safety Administration.

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This research note and other general information on highway traffic safety may be found at: https://crashstats.nhtsa.dot.gov/.