

# OCCUPANT PROTECTION

*Current research, best practice counter-measures and social media campaigns to assist in interventions with 15-24 year-olds.*

## NATIONAL RESEARCH

NHTSA's National Center for Statistics and Analysis (NCSA) Motor Vehicle Traffic Crash Data Resource Page: <https://crashstats.nhtsa.dot.gov>

### OCCUPANT PROTECTION IN PASSENGER VEHICLES

#### NHTSA's Traffic Safety Facts, 2015

Occupant protection discussed in this fact sheet includes seat belts, child safety seats, and frontal air bags in passenger vehicles. Passenger vehicles consist of passenger cars, pickup trucks, vans, and SUVs. Vehicle occupants are both drivers and passengers. In this fact sheet the 2015 information on passenger vehicle occupant protection is presented as follows:

- Overview
- Occupant Demographics:
  - o Age
  - o Gender
  - o Seating Position
- Passenger Vehicle Types
- Benefits of Restraint Use:
  - o Seat Belts
  - o Frontal Air Bags
  - o Child Restraints
  - o Lives Saved by Restraints
- State Belt Use
- Restraint Use Laws
- References

**RESOURCE:** <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812374>

### SEAT BELT USE IN 2017 – OVERALL RESULTS

#### NHTSA's Traffic Safety Facts, 2018

Seat belt use in 2017 was 89.7 percent, not statistically different at the 0.05 level from 90.1 percent in 2016. This result is 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 the National Center for Statistics and Analysis of the National Highway Traffic Safety Administration. Seat belt use has shown an increasing trend since 2000, accompanied by a steady decline in the percentage of unrestrained passenger vehicle (PV) occupant fatalities during the daytime (Figure 1).

**RESOURCE:** <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812465>

### OCCUPANT RESTRAINT USE IN 2016: RESULTS FROM THE NOPUS CONTROLLED INTERSECTION STUDY

#### NHTSA's Report, 2018

This report presents results from the 2016 National Occupant Protection Use Survey (NOPUS) Controlled Intersection Study, the only nationwide probability-based occupant restraint use survey. NHTSA's National Center for Statistics and Analysis conducts this survey annually. The 2016 NOPUS found that seat belt use continued to be higher for females (92.5%) than for males (88.2%). Seat belt use among female drivers increased from 90.7 percent in 2015 to 92.5 percent in 2016. Seat belt use in the rear seat (80.6%) was lower than in the front seat (90.1%).

**RESOURCE:** <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812463>

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## OCCUPANT RESTRAINT USE IN 2015: RESULTS FROM THE NOPUS CONTROLLED INTERSECTION STUDY

### NHTSA's Report, 2016

This report presents results from the 2015 National Occupant Protection Use Survey (NOPUS) Controlled Intersection Study. NOPUS is the only nationwide probability-based occupant restraint use survey. The National Center for Statistics and Analysis of the National Highway Traffic Safety Administration conducts this survey annually. The 2015 NOPUS found that seat belt use continued to be higher for females (90.7%) than for males (86.6%). Seat belt use among male drivers increased from 84.3 percent in 2014 to 86.6 percent in 2015. Seat belt use in the rear seat (74.8%) was lower than in the front seat (88.5%). Overall restraint use for children under 8 years old in 2015 was 89.8 percent compared to 90.9 percent in 2014.

**RESOURCE:** <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812451>

## LIVES SAVED IN 2016 BY RESTRAINT USE AND MINIMUM DRINKING AGE LAWS

### NHTSA's Traffic Safety Facts, 2017

NHTSA's National Center for Statistics and Analysis has been producing annual estimates of lives saved since 1975. Table 1 presents estimates of lives saved in 2016 by restraint use and as a result of minimum-drinking-age laws. The estimates are calculated using the effectiveness of each device or law. More information on the methodology of lives-saved estimates is available in two NHTSA publications, Lives Saved FAQs (NCSA, 2009), which answers 30 common questions about lives saved and includes references to many other reports on lives saved; and Lives Saved Calculations for Seat Belts and Frontal Air Bags (Glassbrenner & Starnes, 2009), which describes in detail the methodology of estimating lives saved by seat belts and frontal air bags.

**RESOURCE:** <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812454>

## RURAL AND URBAN DIFFERENCES IN PASSENGER-VEHICLE OCCUPANT DEATHS AND SEAT BELT USE AMON ADULTS

### CDC'S REPORT, 2014

NHTSA's National Center for Statistics and Analysis has been producing annual estimates of lives saved since 1975. Table 1 presents estimates of lives saved in 2015 by restraint use and as a result of minimum-drinking-age laws. The estimates are calculated using the effectiveness of each device or law. More information on the methodology of lives-saved estimates is available in two NHTSA publications: Lives Saved FAQs (NCSA, 2009) that answers 30 common questions about lives saved and includes references to many other reports on lives saved; and Lives Saved Calculations for Seat Belts and Frontal Air Bags (Glassbrenner & Starnes, 2009) that describes in detail the methodology of estimating lives saved by seat belts and frontal air bags.

**RESOURCE:** <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812319>

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## CALIFORNIA RESEARCH

The California Office of Traffic Safety Research Publications and Reports:

<https://www.ots.ca.gov/media-and-research/publications-and-reports/>

Transportation Injury Mapping System: <https://tims.berkeley.edu/>

### BUCKLE UP: RESTRAINT USE IN CALIFORNIA

#### CDC's Fact Sheet, 2014

This fact sheet provides a snapshot of motor vehicle occupant deaths and seat belt use and an overview of proven strategies for increasing the use of seat belts, car seats, and booster seats. The information can help local public health decisionmakers and community partners see gaps and identify relevant strategies to encourage people to buckle up.

**RESOURCE:** [https://www.cdc.gov/motorvehiclesafety/pdf/seatbelts/restraint\\_use\\_in\\_ca.pdf](https://www.cdc.gov/motorvehiclesafety/pdf/seatbelts/restraint_use_in_ca.pdf)

### SPRING 2018 SEATBELT USAGE REPORT

#### OTS

2018 is the second year under the revised, resampling guidelines for collecting restraint usage data in California. Under these guidelines, the seat belt survey uses a fatality-based sampling method and includes all roads for sampling. This fatality-based sampling method means that counties with more traffic fatalities have a greater chance of being included in the survey than do counties where fatalities are low. This approach is required by NHTSA. The data included in this report are for the Spring "pre-test" portion of the survey and a Summer "post-test" will also be collected. The results from these two surveys will be combined to provide an overall 2018 usage rate for the required NHTSA report. There were no causes for delays in data collection which occurred in April and May (preMemorial Day). The Spring data was collected at 94 locations across fourteen California counties providing a representative sampling of the entire state. In all 16,969 occupants were observed, but belt use could not be determined for 86 (0.5%) occupants (normally due to dark windows or car speed). Consequently, the survey results contained in this report are based on 16,883 observations. In Spring 2018, the combined usage rate was 96.07%. For comparison, the previous five Spring surveys reported usage rates of 96.47%, 96.15%, 97.16%, 97.10%, and 97.67% in 2013.

**RESOURCE:** <https://www.ots.ca.gov/wp-content/uploads/sites/67/2018/11/2018-Spring-OTS-Report-Updated.pdf>

### SUMMER 2018 SEATBELT USAGE REPORT

#### OTS

2018 is the second year under the revised, resampling guidelines for collecting restraint usage data in California. Under these guidelines, the seat belt survey uses a fatality-based sampling method and includes all roads for sampling. The data included in this report are for the Summer "post-test" portion of the 2018 survey. A Spring "pre-test" was collected as well and the results from these two surveys will be combined for the overall 2018 usage rate for NHTSA. There were no causes for delays in data collection. The collection occurred between August and September. The Summer data was collected at 204 sites across California. In all 37,557 occupants were observed, but belt use could not be determined for 713 (1.9%) occupants (normally due to dark windows or car speed). Consequently, the survey results were based on 36,844 observations. In

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Summer 2018, the combined (i.e., for drivers and front seat passengers) usage rate was 95.99%. This compares to 96.24% in 2017, 96.45% in 2016, and 97.32% in 2015. These results show a gradual decrease in the usage rate over recent years. The accompanying report provides a further detailed breakdown of restraint usage.

**RESOURCE:** <https://www.ots.ca.gov/wp-content/uploads/sites/67/2018/11/2018-OTS-Restraint-Usage-Summer-Report.pdf>

## TRAFFIC SAFETY FACTS – SEAT BELT USE

### BERKELEY SAFETREC & OTS, SUMMER 2018

Restraint devices such as seat belts are a key element of motor vehicle occupant protection systems. According to the National Occupant Protection Use Survey (NOPUS), in 2016 there was a 90.1 percent front seat belt use rate for the nation as a whole, a 1.8 percent increase over the 88.5 percent reported in 2015. Front seat belt use was slightly higher among women (92.5 percent) compared with men (88.2 percent). Front passengers were more likely to use seat belts (90.1 percent) than rear seat occupants (80.6 percent). One strong determinant of seat belt use is the presence of a seat belt use law—states with a seat belt law that applied to all vehicle occupants had a rear seat belt use rate of 83.9 percent compared with 75.7 percent in states requiring front seat belt use only. In the United States, there were 10,428 unrestrained passenger vehicle occupants killed in traffic collisions in 2016, a 4.6 percent increase from 9,968 in 2015.

**RESOURCE:** [https://www.ots.ca.gov/wp-content/uploads/sites/67/2018/09/UC\\_Berkeley\\_SafeTREC\\_Seat\\_Belt\\_Use.pdf](https://www.ots.ca.gov/wp-content/uploads/sites/67/2018/09/UC_Berkeley_SafeTREC_Seat_Belt_Use.pdf)