

Traffic Safety Facts

2005 Data



DOT HS 810 621

Occupant Protection

Restraint Use

In 2006, NHTSA conducted the National Occupant Protection Use Survey (NOPUS). The overall observed shoulder belt use rate was 82 percent in 2005, compared to 80 percent observed in 2004, 79 percent in 2003, 75 percent in 2002, 73 percent in 2001, 71 percent in 2000, and 67 percent in 1999. In 1994, the overall observed shoulder belt use rate was 58 percent.

Table 1 shows safety belt use rates in the States, the District of Columbia, and Puerto Rico. The results were obtained by observing traffic on roads at selected observation sites. Where rates are missing from the table, States did not submit rates to NHTSA. For more information on State safety belt use rates, see D. Glassbrenner, *Safety Belt Use in 2005 – Use Rates in the States and Territories*, NHTSA Research Note , DOT HS 809 970 (March 2006).

“In 2005, 66 percent of the passenger vehicle occupants 25 to 34 years old killed in traffic crashes were not using restraints – the highest percentage for any age group.”

Table 1
Safety Belt Use Rates by State, 2004 and 2005

Jurisdiction	2004	2005	Jurisdiction	2004	2005
Alabama	80.0%	81.8%	Montana	80.9%	80.0%
Alaska	76.7%	78.4%	Nebraska	79.2%	79.2%
Arizona	95.3%	94.2%	Nevada	86.6%	94.8%
Arkansas	64.2%	68.3%	New Hampshire	NA	NA
California	90.4%	92.5%	New Jersey	82.0%	86.0%
Colorado	79.3%	79.2%	New Mexico	89.7%	89.5%
Connecticut	82.9%	81.6%	New York	85.0%	85.0%
Delaware	82.3%	83.8%	North Carolina	86.1%	86.7%
Dist. Of Columbia	87.1%	88.8%	North Dakota	67.4%	76.3%
Florida	76.3%	73.9%	Ohio	74.1%	78.7%
Georgia	86.7%	89.9%	Oklahoma	80.3%	83.1%
Hawaii	95.1%	95.3%	Oregon	92.6%	93.3%
Idaho	74.0%	76.0%	Pennsylvania	81.8%	83.3%
Illinois	83.0%	86.0%	Rhode Island	76.2%	74.7%
Indiana	83.4%	81.2%	South Carolina	65.7%	69.7%
Iowa	86.4%	87.1%	South Dakota	69.4%	68.8%
Kansas	68.3%	69.0%	Tennessee	72.0%	74.4%
Kentucky	66.0%	66.7%	Texas	83.2%	89.9%
Louisiana	75.0%	77.7%	Utah	85.7%	86.9%
Maine	72.3%	75.8%	Vermont	79.9%	84.7%
Maryland	89.0%	91.1%	Virginia	79.9%	80.4%
Massachusetts	63.3%	64.8%	Washington	94.2%	95.2%
Michigan	90.5%	92.9%	West Virginia	75.8%	84.9%
Minnesota	82.1%	83.9%	Wisconsin	72.4%	73.3%
Mississippi	63.2%	60.8%	Wyoming	70.1%	NA
Missouri	75.9%	77.4%	Puerto Rico	90.1%	92.5%

Source: Rates in States and Territories are from surveys conducted in accordance with Section 157, Title 23, U.S. Code.
NA = not available.



Occupant Fatalities by Age and Restraint Use

In 2005, 31,415 occupants of passenger vehicles (passenger cars, light trucks, vans, and SUVs) were killed in motor vehicle traffic crashes, 72 percent of the 43,443 traffic fatalities reported for the year.

Of the 31,415 passenger vehicle occupant fatalities in 2005, restraint use was unknown for 2,229 (7%). Of the 29,186 passenger vehicle occupant fatalities for which restraint use was known, 16,172 (55%) were unrestrained. Of the 4,722 passenger vehicle occupant fatalities 25 to 34 years old for which restraint was known, 3,135 (66%) were unrestrained - the highest percentage of any age group. Of the 3,363 passenger vehicle occupant fatalities among 21- to 24-year-olds for which restraint use was known, 2,199 (65%) were unrestrained, which was the second highest percentage for any age group.

“In 2005, 68 percent of the pickup truck drivers killed in traffic crashes were not using restraints.”

In 2005 there were a total of 361 passenger vehicle occupant fatalities among children under age 4. Of the 344 fatalities in this age group for which restraint use was known, 110 (32%) were unrestrained. Of the 304 fatalities among children 4 to 7 years old for which restraint use was known, 136 (45%) were unrestrained.

Table 2

Passenger Vehicle Occupants Killed, by Age and Restraint Use, 2005

Age (Years)	Restraint Used		Restraint Not Used		Restraint Use Unknown		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
<4	234	65	110	30	17	5	361	100
4-7	168	51	136	41	24	7	328	100
8-12	169	45	172	46	33	9	374	100
13-15	173	31	322	58	59	11	554	100
16-20	1,751	36	2,783	57	365	7	4,899	100
21-24	1,164	32	2,199	60	284	8	3,647	100
25-34	1,587	31	3,135	61	397	8	5,119	100
35-44	1,549	36	2,433	57	284	7	4,266	100
45-54	1,625	42	2,004	52	256	7	3,885	100
55-64	1,404	50	1,238	44	174	6	2,816	100
65-74	1,233	58	769	36	126	6	2,128	100
75+	1,934	65	835	28	195	7	2,964	100
Unknown	23	31	36	49	15	20	74	100
Total	13,014	41	16,172	51	2,229	7	31,415	100

Driver and Occupant Fatalities by Vehicle Type and Restraint Use

A total of 21,946 passenger vehicle drivers were killed in traffic crashes in 2005. Among the 20,450 passenger vehicle driver fatalities for which restraint use was known, 68 percent (2,952) of the drivers of pickup trucks killed were unrestrained, compared to 62 percent (1,857) for SUVs, 49 percent (528) for vans, and 48 percent (5,789) for passenger cars.

A total of 9,469 occupants of passenger vehicles were killed in traffic crashes in 2005. Among the 8,736 passenger vehicle fatalities for which restraint use was known, 71 percent (944) of the passengers in pickup trucks were unrestrained, compared to 65 percent (1,001) for SUVs, 60 percent (502) for vans, and 51 percent (2,578) for passenger cars.

Table 3
Drivers and Passengers Killed, by Passenger Vehicle Type and Restraint Use, 2005

Type of Passenger Vehicle	Restraint Used		Restraint Not Used		Restraint Use Unknown		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Drivers Killed								
Passenger Cars	6,239	48	5,789	45	919	7	12,947	100
Pickup Trucks	1,377	30	2,952	63	320	7	4,649	100
Sport Utility Vehicles	1,139	36	1,857	59	156	5	3,152	100
Vans	553	47	528	45	100	8	1,181	100
Other Light Trucks	2	12	14	82	1	6	17	100
Total	9,310	42	11,140	51	1,496	7	21,946	100
Passengers Killed								
Passenger Cars	2,451	45	2,578	47	464	8	5,493	100
Pickup Trucks	377	27	944	68	68	5	1,389	100
Sport Utility Vehicles	544	33	1,001	60	110	7	1,655	100
Vans	331	36	502	54	91	10	924	100
Other Light Trucks	1	13	7	88	0	0	8	100
Total	3,704	39	5,032	53	733	8	9,469	100

“Safety belts, when used, reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent.”

Safety Belt Use and Benefits

Research has found that lap/shoulder safety 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. For light truck occupants, safety belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent.

Ejection from the vehicle is one of the most injurious events that can happen to a person in a crash. In fatal crashes in 2005, 75 percent of passenger vehicle occupants who were totally ejected from the vehicle were killed. Safety belts are effective in preventing total ejections: only 1 percent of the occupants reported to have been using restraints were total ejected, compared with 30 percent of the unrestrained occupants

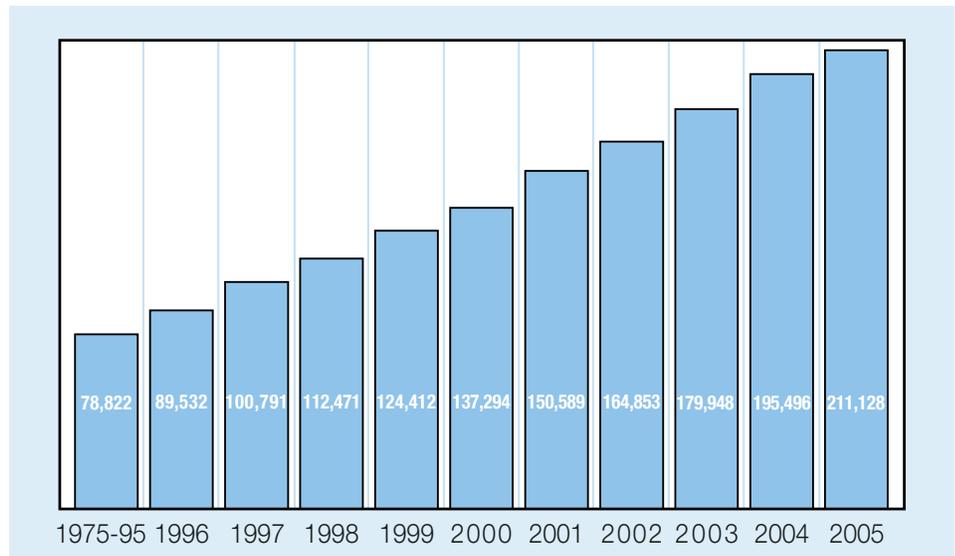
Lives Saved by Safety Belts

Among passenger vehicle occupants over age 4, safety belts saved an estimated 15,632 lives in 2005. If all passenger vehicle occupants over age 4 had worn safety belts, 20,960 lives (that is, an additional 5,328) could have been saved in 2005.

In 2002, NHTSA refined its method of estimating lives saved by safety belts and air bags. The new method, including an explanation of the changes made, will be published in an upcoming NHTSA Technical Report.

“From 1975 through 2005, an estimated 211,128 lives were saved by safety belts.”

Figure 1
Cumulative Estimated Number of Lives Saved by Safety Belt Use, 1975-2005

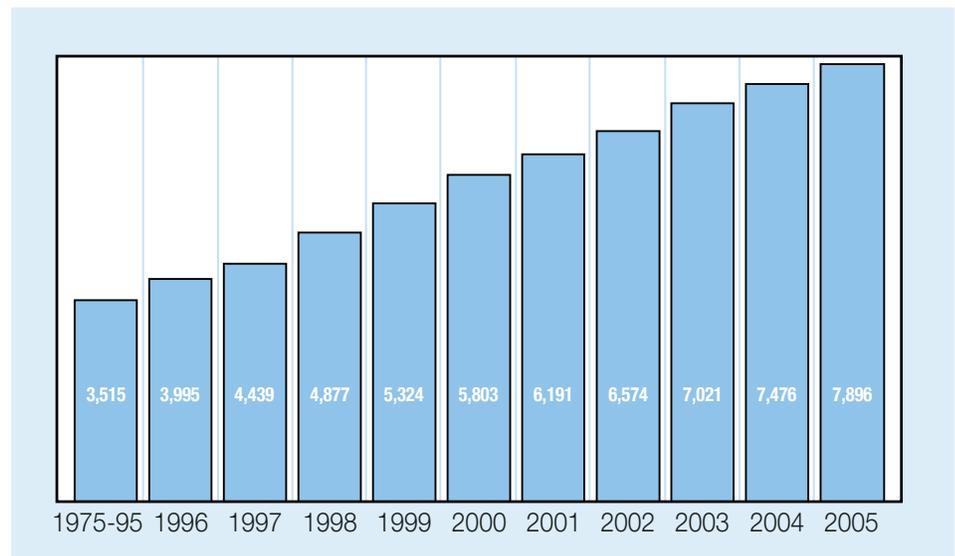


Child Restraint Use and Benefits

Research on the effectiveness of child safety seats has found them to reduce fatal injury by 71 percent for infants (less than 1 year old) and by 54 percent for toddlers (1-4 years old) in passenger cars. For infants and toddlers in light trucks, the corresponding reductions are 58 percent and 59 percent, respectively.

“From 1975 through 2005, an estimated 7,896 lives were saved by child restraints.”

Figure 2
Cumulative Estimated Number of Lives Saved by Child Restraints, 1975-2005



Lives Saved by Child Safety Seats

Among children under age 5, an estimated 420 lives were saved in 2005 by child restraint use. Of these 420 lives saved, 382 were associated with the use of child safety seats and 38 with the use of adult safety belts.

At 100-percent child safety seat use for children under 5, an estimated 518 lives (that is, an additional 98) could have been saved in 2005.

Over the period 1975 through 2005, an estimated 7,896 lives were saved by child restraints (child safety seats or adults safety belts).

Air Bag Use and Benefits

Air bags, combined with lap/shoulder safety belts, offer the most effective safety protection available today for passenger vehicle occupants.

Recent NHTSA analyses indicate a fatality-reducing effectiveness for air bags of 14 percent when no safety belt was used and 11 percent when a safety belt was used in conjunction with air bags.

It is estimated that, as of 2005, more than 160 million air-bag-equipped passenger vehicles were on the road, including 146 million with dual air bags.

Air bags are supplemental protection and are not designed to deploy in all crashes. Most are designed to inflate in a moderate-to-severe frontal crash.

Some crashes at lower speeds may result in injuries, but generally not the serious injuries that air bags are designed to prevent. For this and other reasons, lap/shoulder belts should always be used, even in vehicles with air bags.

Children in rear-facing child safety seats should not be placed in the front seat of vehicles equipped with passenger-side air bags. The impact of a deploying air bag striking a rear-facing child safety seat could result in injury to the child.

“Air bags, combined with lap/shoulder safety belts, offer the most effective safety protection available today for passenger vehicle occupants.”

“Between 1987 and 2005, 19,659 lives were saved by air bags.”

Lives Saved by Air Bags

In 2005, an estimated 2,741 lives were saved by air bags. From 1987 to 2005, a total of 19,659 lives were saved.

Table 4
Estimated Number of Lives Saved by Restraint Systems, 1975-2005

Restraint Type	1975-95	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Safety Belts	78,822	10,710	11,259	11,680	11,941	12,882	13,295	14,264	15,095	15,548	15,632
Child Restraints	3,515	480	444	438	447	479	388	383	447	455	420
Air Bags	1,266	783	973	1,208	1,491	1,716	1,978	2,324	2,519	2,660	2,741

In 2002, NHTSA revised its method for calculating lives saved by air bags. The estimates in Table 4 reflect this revision.

Table 5
Passenger Vehicle Occupants Killed by State and Restraint Use, 2005

State	Restraint Use						Total Occupants Killed	
	Restraint Used		No Restraint Used		Restraint Use Unknown			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Alabama	359	38	552	58	40	4	951	100
Alaska	27	50	22	41	5	9	54	100
Arizona	228	35	351	54	73	11	652	100
Arkansas	147	29	309	61	54	11	510	100
California	1,604	55	970	34	319	11	2,893	100
Colorado	188	42	250	56	6	1	444	100
Connecticut	72	39	87	47	25	14	184	100
Delaware	41	43	52	54	3	3	96	100
Dist of Columbia	8	36	13	59	1	5	22	100
Florida	863	39	1,262	57	102	5	2,227	100
Georgia	516	38	669	50	156	12	1,341	100
Hawaii	29	42	30	43	10	14	69	100
Idaho	94	42	126	56	5	2	225	100
Illinois	427	44	449	46	92	10	968	100
Indiana	295	41	333	47	83	12	711	100
Iowa	164	46	139	39	51	14	354	100
Kansas	103	30	211	62	28	8	342	100
Kentucky	273	35	508	65	2	0	783	100
Louisiana	245	35	372	52	92	13	709	100
Maine	48	36	64	47	23	17	135	100
Maryland	205	52	178	45	14	4	397	100
Massachusetts	84	28	171	57	43	14	298	100
Michigan	452	55	270	33	93	11	815	100
Minnesota	184	43	211	49	33	8	428	100
Mississippi	207	26	574	73	1	0	782	100
Missouri	313	31	614	60	92	9	1,019	100
Montana	52	26	143	72	4	2	199	100
Nebraska	68	28	145	60	28	12	241	100
Nevada	122	43	139	49	22	8	283	100
New Hampshire	31	29	72	68	3	3	106	100
New Jersey	250	51	222	46	15	3	487	100
New Mexico	175	48	183	50	7	2	365	100
New York	408	49	329	39	102	12	839	100
North Carolina	519	46	522	46	95	8	1,136	100
North Dakota	22	23	66	70	6	6	94	100
Ohio	421	42	585	58	2	0	1,008	100
Oklahoma	249	39	377	60	5	1	631	100
Oregon	228	63	109	30	24	7	361	100
Pennsylvania	372	32	641	55	158	13	1,171	100
Rhode Island	20	34	37	64	1	2	58	100
South Carolina	251	30	547	65	44	5	842	100
South Dakota	33	24	93	67	13	9	139	100
Tennessee	362	36	567	56	81	8	1,010	100
Texas	1,285	51	1,190	47	51	2	2,526	100
Utah	99	44	123	55	1	0	223	100
Vermont	24	45	26	49	3	6	53	100
Virginia	241	33	449	62	35	5	725	100
Washington	238	51	206	44	20	4	464	100
West Virginia	104	36	171	60	12	4	287	100
Wisconsin	220	35	358	57	50	8	628	100
Wyoming	44	34	85	65	1	1	130	100
U.S. Total	13,014	41	16,172	51	2,229	7	31,415	100
Puerto Rico	88	42	124	58	0	0	212	100

Restraint Use Laws

The U.S. Department of Transportation's July 1984 rulemaking on automatic occupant protection began a wave of legislative action that resulted in the enactment of safety belt use laws in many States. The goal of those laws is to promote belt use and thereby reduce deaths and injuries in motor vehicle crashes.

The first mandatory belt use law was enacted in the State of New York in 1984. Adult belt use laws are in effect in 49 States and the District of Columbia. The laws differ from State to State, according to the type and age of the vehicle, occupant seating position, etc.

In 24 of the States with belt use laws, the law specifies secondary enforcement. That is, police officers are permitted to write a citation only after a vehicle is stopped for some other traffic infraction. Twenty-five States and the District of Columbia had laws that allowed primary enforcement, enabling officers to stop vehicles and write citations whenever they observe violations of the belt law.

A 1995 NHTSA study, *Safety Belt Use Laws: An Evaluation of Primary Enforcement and Other Provisions*, indicates that States with primary enforcement safety belt laws achieved significantly higher belt use than did those with secondary enforcement laws. The analysis suggests that belt use among fatally injured occupants was at least 15 percent higher in States with primary enforcement laws.

The first mandatory child restraint use law was implemented in the State of Tennessee in 1978. Since 1985, all 50 States and the District of Columbia have had child restraint use laws in effect. These laws also cover various segments of the population.

For more information:

Information on occupant protection is available from the National Center for Statistics and Analysis, NPO-101, 400 Seventh Street SW., Washington, DC 20590. NCSA information can also be obtained by telephone or by fax-on-demand at 800-934-8517. Fax messages should be sent to 202-366-7078. General information on highway traffic safety can be accessed by Internet users at www.nhtsa.dot.gov/people/nca. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Vehicle Safety Hotline at 888-327-4236.

Other fact sheets available from the National Center for Statistics and Analysis are *Overview*, *Alcohol*, *Bicyclists and Other Cyclists* (formerly titled *Pedalcyclists*), *Children*, *Large Trucks*, *Motorcycles*, *Older Population*, *Pedestrians*, *School Transportation-Related Crashes*, *Speeding*, *State Alcohol Estimates*, *State Traffic Data*, and *Young Drivers*. Detailed data on motor vehicle traffic crashes are published annually in *Traffic Safety Facts: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System*. The fact sheets and annual Traffic Safety Facts report can be accessed online at www.nhtsa.dot.gov/people/nca.