Traffic Safety Facts 1996

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

Motorcycles

NHTSA
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In 1996, 2,160 motorcyclists were killed and an additional 56,000 were injured in traffic crashes in the United States — 3 percent less than the 2,227 motorcyclist fatalities and 2 percent less than the 57,000 motorcyclist injuries reported in 1995.

More than 100,000 motorcyclists have died in traffic crashes since the enactment of the Highway Safety and National Traffic and Motor Vehicle Safety Act of 1966.

"NHTSA estimates that helmets saved 490 motorcyclists' lives in 1996, and that 279 more could have been saved if all motorcyclists had worn helmets."

Table 1. Motorcyclist Fatalities and Injuries and Fatality and Injury Rates, 1986-1996

Year	Fatalities	Registered Vehicles	Fatality Rate *	Vehicle Miles Traveled (millions)	Fatality Rate **
1986	4,566	5,262,322	8.7	9,397	48.6
1987	4,036	4,917,131	8.2	9,506	42.5
1988	3,662	4,584,284	8.0	10,024	36.5
1989	3,141	4,433,915	7.1	10,371	30.3
1990	3,244	4,259,462	7.6	9,557	33.9
1991	2,806	4,177,037	6.7	9,178	30.6
1992	2,395	4,065,118	5.9	9,557	25.1
1993	2,449	3,977,856	6.2	9,906	24.7
1994	2,320	3,756,553	6.2	10,240	22.7
1995	2,227	3,767,029	5.9	9,797	22.7
1996	2,160	--	--	--	--

Year	Injuries	Registered Vehicles	Injury Rate *	Vehicle Miles Traveled (millions)	Injury Rate **
1988	105,000	4,584,284	229	10,024	1,064
1989	83,000	4,433,915	188	10,371	1,049
1990	84,000	4,259,462	198	9,557	882
1991	80,000	4,177,037	193	9,178	876
1992	65,000	4,065,118	160	9,557	681
1993	59,000	3,977,856	148	9,906	596
1994	57,000	3,756,553	152	10,240	557
1995	57,000	3,767,029	151	9,797	582
1996	56,000	--	--	--	--

* Rate per 10,000 registered vehicles.
** Rate per 100 million vehicle miles traveled.
-- = not available.
Note: Injury data for the years 1993-1995 have been revised by NHTSA.
Sources: Vehicle miles traveled and registered vehicles — Federal Highway Administration. Traffic deaths — Fatality Analysis Reporting System (FARS), NHTSA. Traffic injuries — General Estimates System (GES), NHTSA.

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For motorcyclists, the 1995 fatality rate per 10,000 registered vehicles was nearly 30 percent lower than the 1985 rate (5.9 and 8.4 in 1995 and 1985, respectively), compared with a decrease of 10 percent for passenger car occupants over the same period (1.8 and 2.0 fatalities per 10,000 registered vehicles in 1995 and 1985, respectively). The fatality rate for motorcyclists per 100 million vehicle miles traveled declined by 55 percent (from 50.2 in 1985 to 22.7 in 1995), compared with a 26 percent decrease (from 1.9 to 1.4) in the corresponding fatality rate for passenger car occupants (1996 registered vehicle and vehicle miles traveled data not available).

Motorcycles made up 2 percent of all registered vehicles in the United States in 1995 and accounted for only 0.4 percent of all vehicle miles traveled.

Per vehicle mile traveled in 1995, motorcyclists were about 16 times as likely as passenger car occupants to die in a motor vehicle traffic crash and about 4 times as likely to be injured.

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Per registered vehicle, the fatality rate for motorcyclists in 1995 was 3.1 times the fatality rate for passenger car occupants, and the injury rate was 1.3 times the injury rate for passenger car occupants.

In 1996, motorcyclists were involved in only 1 percent of all police-reported traffic crashes, but they accounted for 5 percent of total traffic fatalities, 6 percent of all occupant fatalities, and 2 percent of all occupants injured.

More than one-half (1,184) of all motorcycles involved in fatal crashes in 1996 collided with another motor vehicle in transport. In two-vehicle crashes, 76 percent of the motorcycles involved were impacted in the front. Only 5 percent were struck in the rear.

Motorcycles are more likely to be involved in a fatal collision with a fixed object than are other vehicles. In 1996, 28 percent of the reported fatal crashes involving motorcycles were fixed object crashes, compared to 23 percent for passenger cars, 18 percent for light trucks, and 6 percent for large trucks.

Motorcycles are also more likely to be involved in an injury collision with a fixed object than are other vehicles. In 1996, 15 percent of the reported injury crashes involving motorcycles were fixed object crashes, compared to 8 percent for passenger cars, 8 percent for light trucks, and 5 percent for large trucks.

In 1996, there were 1,048 two-vehicle fatal crashes involving a motorcycle and another vehicle. In 35 percent (363) of these crashes the other vehicle was turning left while the motorcycle was going straight, passing, or overtaking the vehicle. Both vehicles were going straight in 302 crashes (29 percent).

Almost half (43 percent) of all motorcyclist fatalities in 1996 resulted from crashes in seven states: 232 in California, 160 in Florida, 117 in Ohio, 115 in Texas, 109 in Illinois, 98 in Pennsylvania, and 95 in New York.

In 1996, 42 percent of all motorcyclists involved in fatal crashes were speeding, nearly twice the rate for drivers of passenger cars or light trucks. The percentage of alcohol involvement was 50 percent higher for motorcyclists than for drivers of passenger vehicles.

Licensing

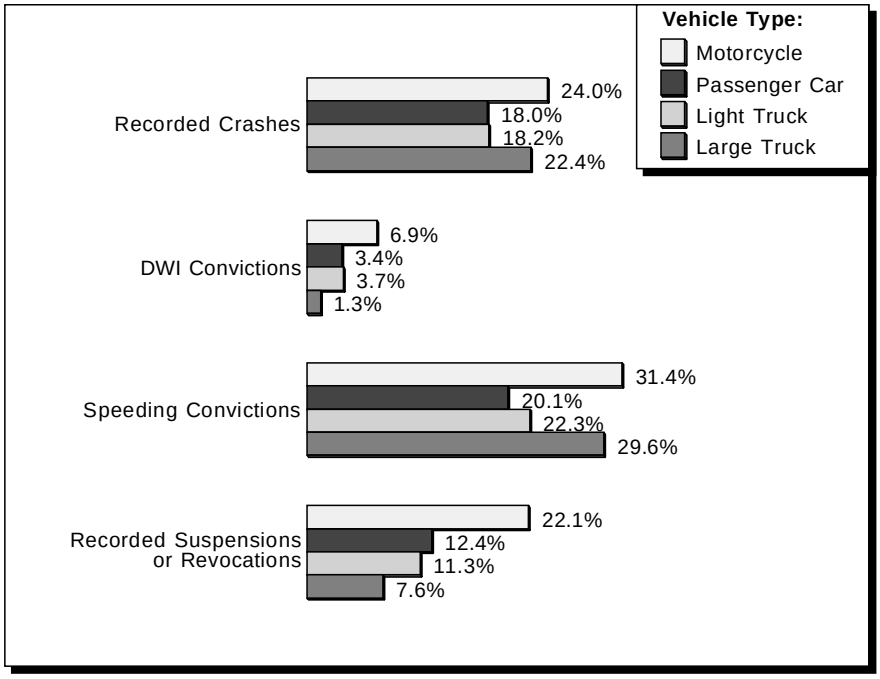
One out of five motorcycle operators (20 percent) involved in fatal crashes in 1996 were operating the vehicle with an invalid license at the time of the collision, while only 12 percent of drivers of passenger vehicles in fatal crashes did not have a valid license.

"One out of five motorcycle operators in fatal crashes in 1996 were operating the vehicle with an invalid license."

Motorcycle operators involved in fatal traffic crashes were nearly twice as likely as passenger vehicle drivers to have a previous license suspension or revocation (22 percent and 12 percent, respectively).

Almost 7 percent of the motorcycle operators involved in fatal crashes in 1996 had at least one previous conviction for driving while intoxicated on their driver records, compared to less than 4 percent of passenger car drivers.

Figure 1. Previous Driving Records of Drivers Involved in Fatal Traffic Crashes, by Type of Vehicle, 1996



Alcohol

Motorcycle operators involved in fatal crashes in 1996 had higher intoxication rates, with blood alcohol concentrations (BAC) of 0.10 grams per deciliter (g/dl) or greater, than any other type of motor vehicle driver. Intoxication rates for vehicle operators involved in fatal crashes were 30.3 percent for motorcycles, 21.9 percent for light trucks, 18.8 percent for passenger cars, and 1.4 percent for large trucks.

"Almost half of the motorcycle operators who died in single-vehicle crashes in 1996 were intoxicated."

In 1996, 31.0 percent of all fatally injured motorcycle operators were intoxicated (BAC 0.10 g/dl or greater). An additional 11.5 percent had lower alcohol levels (BAC 0.01 to 0.09 g/dl). The intoxication rate was highest for fatally injured operators between 40 and 44 years old (43.0 percent), followed by ages 35 to 39 (41.9 percent), and ages 30 to 34 (41.7 percent).

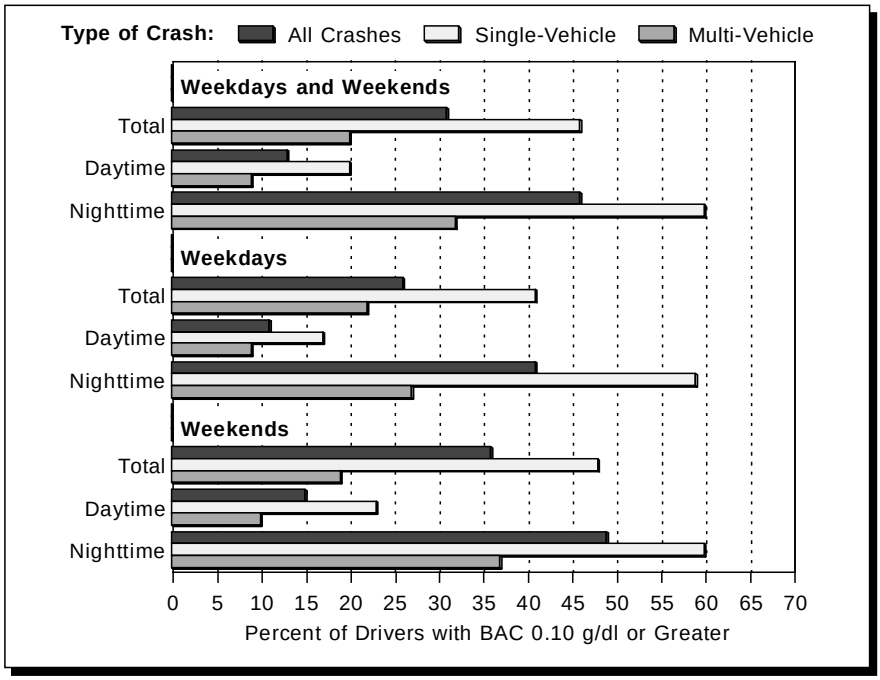
Almost half (46 percent) of the 852 motorcycle operators who died in single-vehicle crashes in 1996 were intoxicated. Three-fifths (60 percent) of those killed on weekend nights were intoxicated.

Motorcycle operators killed in traffic crashes at night were 3.6 times as likely to be intoxicated as those killed during the day (46 percent and 13 percent, respectively).

"In 1996, motorcycle operators in fatal crashes had higher intoxication rates than any other type of driver."

The reported helmet use rate for intoxicated motorcycle operators killed in traffic crashes was 51 percent, compared with 60 percent for those who were sober.

Figure 2. Intoxication Rates for Motorcycle Operators Killed in Traffic Crashes, by Time of Day, 1996



Helmets

NHTSA estimates that helmets saved the lives of 490 motorcyclists in 1996. If all motorcyclists had worn helmets, an additional 279 lives could have been saved.

Helmets are estimated to be 29 percent effective in preventing fatal injuries to motorcyclists.

Helmets cannot protect the rider from most types of bodily injuries. However, a recent NHTSA study showed that motorcycle helmets are 67 percent effective in preventing brain injuries. (Source: *1996 Crash Outcome Data Evaluation System (CODES): Report to Congress on Benefits of Safety Belts and Motorcycle Helmets*.)

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According to NHTSA's National Occupant Protection Use Survey, a nationally representative observational survey of motorcycle helmet, safety belt, and child safety seat use, helmet use was 64 percent in 1996. According to previous NHTSA surveys, helmet use was reported to be essentially 100 percent at sites with helmet use laws governing all motorcycle riders, as compared to 34 to 54 percent at sites with no helmet use laws or laws limited to minors.

Reported helmet use rates for fatally injured motorcyclists in 1996 were 57 percent for operators and 45 percent for passengers, compared with 57 percent and 44 percent, respectively, in 1995.

All motorcycle helmets sold in the United States are required to meet Federal Motor Vehicle Safety Standard 218, the performance standard which establishes the minimum level of protection helmets must afford each user.

Currently, 25 states, the District of Columbia, and Puerto Rico require helmet use by all motorcycle operators and passengers. In another 22 states, only persons under a specific age, usually 18, are required to wear helmets. Three states have no laws requiring helmet use.

NHTSA estimates that $10.4 billion was saved from 1984 through 1996 because of the use of motorcycle helmets. An additional $9.2 billion would have been saved if all motorcyclists had worn helmets.

For more information:

Information on motorcycle traffic fatalities is available from the National Center for Statistics and Analysis, NRD-31, 400 Seventh Street, S.W., Washington, D.C. 20590. Telephone inquiries should be addressed to Ms. Louann Hall at 1-800-934-8517. FAX messages should be sent to (202) 366-7078. General information on highway traffic safety can be accessed by Internet users at http://www.nhtsa.dot.gov/people/ncsa. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Auto Safety Hotline at 1-800-424-9393.

Table 2. 1996 Motorcyclist Fatalities and 1995 Fatality Rates by State

State	1996			1995	
	Total Traffic Fatalities	Motorcyclist Fatalities	Percent of Total	Registered Vehicles (thousands)	Motorcyclist Fatalities per 10,000 Registered Vehicles
Alabama[a]	1,143	31	2.7	41	8.0
Alaska[b]	80	6	7.5	13	2.3
Arizona[b]	993	69	6.9	68	9.6
Arkansas[a]	615	25	4.1	13	13.1
California[a]	3,989	232	5.8	537	4.8
Colorado[c]	617	50	8.1	96	4.7
Connecticut[b]	310	32	10.3	48	6.9
Delaware[d]	116	10	8.6	9	6.7
District of Columbia[a]	62	4	6.5	1	60.0
Florida[a]	2,753	160	5.8	177	10.2
Georgia[a]	1,574	47	3.0	57	7.7
Hawaii[b]	148	20	13.5	12	17.5
Idaho[b]	258	12	4.7	33	5.5
Illinois[c]	1,477	109	7.4	188	5.4
Indiana[b]	984	62	6.3	97	6.7
Iowa[c]	465	17	3.7	115	3.7
Kansas[b]	491	19	3.9	45	3.1
Kentucky[a]	841	28	3.3	34	6.8
Louisiana[a]	781	28	3.6	36	7.8
Maine[e]	169	15	8.9	28	4.6
Maryland[a]	608	25	4.1	38	6.8
Massachusetts[a]	417	34	8.2	66	4.2
Michigan[a]	1,505	61	4.1	113	7.3
Minnesota[b]	576	42	7.3	130	2.8
Mississippi[a]	811	10	1.2	29	5.2
Missouri[a]	1,149	35	3.0	57	7.0
Montana[b]	200	9	4.5	20	8.0
Nebraska[a]	293	6	2.0	21	2.9
Nevada[a]	348	19	5.5	20	11.5
New Hampshire[b]	134	22	16.4	33	4.8
New Jersey[a]	818	52	6.4	86	4.0
New Mexico[b]	481	26	5.4	33	10.0
New York[a]	1,564	95	6.1	175	5.3
North Carolina[a]	1,493	72	4.8	64	11.9
North Dakota[b]	85	5	5.9	17	3.5
Ohio[f]	1,395	117	8.4	224	4.8
Oklahoma[b]	772	25	3.2	54	7.4
Oregon[a]	524	28	5.3	60	3.7
Pennsylvania[a]	1,469	98	6.7	169	5.0
Rhode Island[g]	69	3	4.3	16	3.8
South Carolina[b]	930	54	5.8	35	14.3
South Dakota[b]	175	9	5.1	26	5.4
Tennessee[a]	1,239	50	4.0	58	8.3
Texas[a]	3,741	115	3.1	131	9.8
Utah[b]	321	21	6.5	22	5.0
Vermont[a]	88	3	3.4	16	5.0
Virginia[a]	875	36	4.1	58	6.0
Washington[a]	712	41	5.8	97	3.8
West Virginia[a]	345	10	2.9	17	15.3
Wisconsin[b]	761	52	6.8	151	3.2
Wyoming[b]	143	9	6.3	16	4.4
U.S. Total	**41,907**	**2,160**	**5.2**	**3,700**	**6.0**
Puerto Rico	601	26	4.3	--	--

Status of state motorcycle helmet use requirements (as of July 1996): [a]Required for all riders. [b]Required for riders under 18 years old. [c]No helmet use requirement. [d]Required for riders under 19 years old; helmets must be in possession of other riders, but use is not required. [e]Required for riders under 15 years old, novices (first-year operators), and holders of learner's permits. [f]Required for riders under 18 years old and novices. [g]Required for riders under 21 years old and novices.
Notes: 1996 registered vehicle data not available. Totals may not equal sum of components due to independent rounding.
Sources: Fatalities — Fatality Analysis Reporting System, NHTSA. Registered vehicles — FHWA.