Traffic Safety Facts 1994

Motorcycles

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

NHTSA
People Saving People
On the Road for a Healthier Future

In 1994, 2,304 motorcyclists were killed in traffic crashes in the United States—6 percent less than the 2,449 motorcyclist fatalities reported in 1993.

More than 98,000 motorcyclists have died in traffic crashes since the enactment of the Highway Safety and National Traffic and Motor Vehicle Safety Act of 1966.

For motorcyclists, the fatality rate per 10,000 registered vehicles has decreased by more than 8 percent since 1975 (5.9 and 6.4 in 1994 and 1975, respectively), compared with a decrease of 44 percent for passenger car occupants over the same period (1.5 and 2.7 fatalities per 10,000 registered vehicles in 1994 and 1975, respectively). The fatality rate for motorcyclists per 100 million vehicle miles traveled has declined by nearly 56 percent (from 56.7 in 1975 to 24.8 in 1993), compared with a 48 percent decrease (from 2.5 to 1.3) in the corresponding fatality rate for passenger car occupants.

"NHTSA estimates that helmets saved 527 motorcyclists' lives in 1994, and that 294 more could have been saved if all motorcyclists had worn helmets."

Table 1. Motorcyclist Fatalities and Fatality Rates, 1984-1994

Year	Fatalities	Registered Vehicles	Fatality Rate *	Vehicle Miles Traveled (millions)	Fatality Rate **
1984	4,608	5,479,822	8.4	8,784	52.5
1985	4,564	5,444,404	8.4	9,086	50.2
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	4,177,365	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	9,889	24.8
1994	2,304	3,932,000	5.9	NA	--

* Rate per 10,000 registered vehicles.
** Rate per 100 million vehicle miles traveled.
NA = not available.
Note: 1994 Registered Vehicles are estimates.
Sources: Vehicle miles traveled and registered vehicles—Federal Highway Administration.
Traffic deaths—Fatal Accident Reporting System (FARS), NHTSA.

Motorcycles make up 2 percent of all registered vehicles in the United States and account for only 0.4 percent of all vehicle miles traveled. Motorcyclists were involved in only 1 percent of all police-reported traffic crashes in 1994, but they accounted for 7 percent of all occupant fatalities and 6 percent of total traffic fatalities.

Per vehicle mile traveled, motorcyclists are about 20 times as likely as passenger car occupants to die in a motor vehicle traffic crash.

Per registered vehicle, the fatality rate for motorcyclists is 4 times the fatality rate for passenger car occupants.

About one-half of all motorcycles involved in fatal crashes in 1994 collided with another motor vehicle in transport. In two-vehicle crashes, 79 percent of the motorcycles involved were impacted in the front. Only 6 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 1994, 28 percent of the reported fatal crashes involving motorcycles were fixed object crashes, compared to 22 percent for passenger cars, 18 percent for light trucks, and 7 percent for large trucks.

In 1994, there were 1,102 two-vehicle fatal crashes involving a motorcycle and another vehicle. In 35 percent (383) 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 281 crashes (25 percent).

"Per vehicle mile, motorcyclists are about 20 times as likely as passenger car occupants to die in a traffic crash."

For 76 percent of the motorcycle operators involved in fatal crashes in 1994, police reported one or more errors or other factors related to the operator's behavior. The factor most often noted for motorcycle operators involved in fatal crashes was "driving too fast for conditions."

Almost half (45 percent) of all motorcyclist fatalities in 1994 resulted from crashes in seven states: 295 in California, 172 in Florida, 148 in Illinois, 124 in Texas, 112 in Pennsylvania, 106 in Ohio, and 86 in New York.

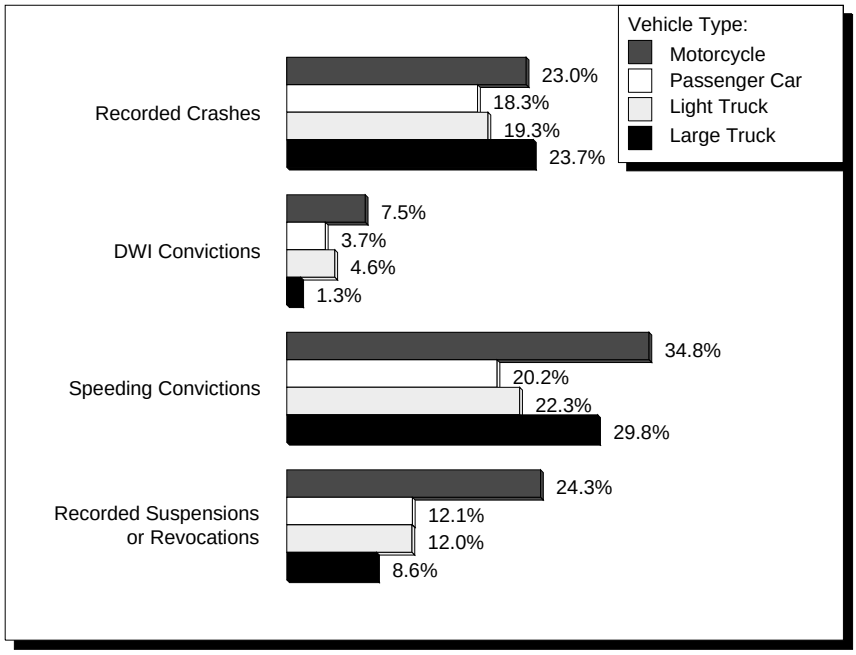
Licensing

More than one out of five motorcycle operators (22 percent) involved in fatal crashes in 1994 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.

Motorcycle operators involved in fatal traffic crashes were twice as likely as passenger vehicle drivers to have a previous license suspension or revocation (24 percent and 12 percent, respectively).

Almost 8 percent of the motorcycle operators involved in fatal crashes in 1994 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, 1994



"In 1994, motorcycle operators in fatal crashes had higher intoxication rates than any other type of driver."

Alcohol

Motorcycle operators involved in fatal crashes in 1994 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 28.9 percent for motorcycles, 22.9 percent for light trucks, 19.4 percent for passenger cars, and 1.4 percent for large trucks.

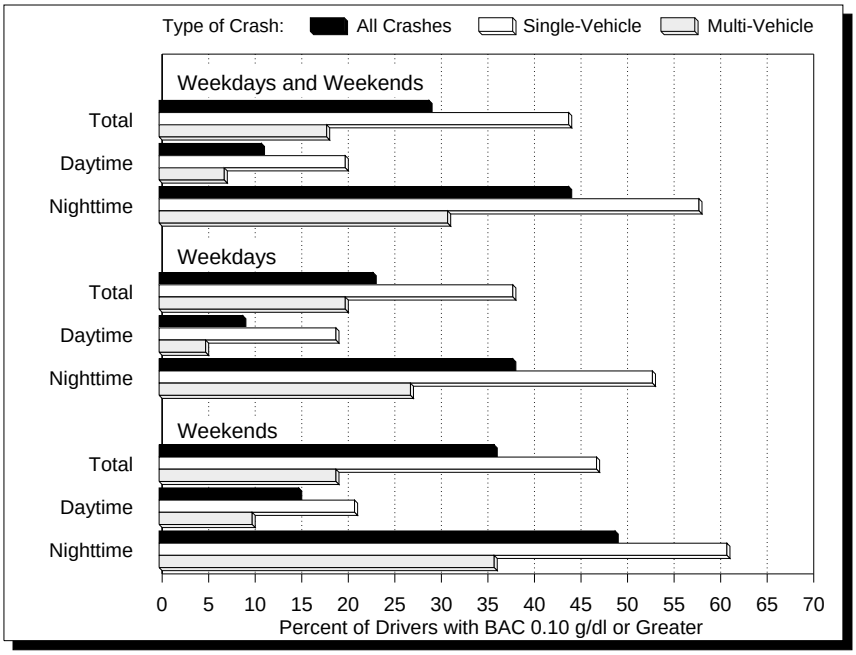
In 1994, 29.4 percent of all fatally injured motorcycle operators were intoxicated (BAC 0.10 g/dl or greater). An additional 11.2 percent had lower alcohol levels (BAC 0.01 to 0.09 g/dl). The intoxication rate was highest for fatally injured operators between 35 and 39 years old (42.0 percent), followed by those between 30 and 34 years old (40.7 percent), and was somewhat lower for ages 25 to 29 (36.5 percent).

Almost half (44 percent) of the 910 motorcycle operators who died in single-vehicle crashes in 1994 were intoxicated. Three-fifths (61 percent) of those killed on weekend nights were intoxicated.

Motorcycle operators killed in traffic crashes at night were 4 times as likely to be intoxicated as those killed during the day (44 percent and 11 percent, respectively).

The reported helmet use rate for intoxicated motorcycle operators killed in traffic crashes was 53 percent, compared with 61 percent for those who were sober.

Figure 2. Intoxication Rates for Motorcycle Operators Killed in Traffic Crashes, by Time of Day, 1994



"Almost half of the motorcycle operators who died in single-vehicle crashes in 1994 were intoxicated"

Helmets

NHTSA estimates that helmets saved the lives of 527 motorcyclists in 1994. If all motorcyclists had worn helmets, an additional 294 lives could have been saved.

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

In NHTSA's latest survey (November 1991), 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 1994 were 55 percent for operators and 51 percent for passengers, compared with 59 percent and 43 percent, respectively, in 1993.

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 (202) 366-4198. FAX messages should be sent to (202) 366-7078. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Auto Safety Hotline at 1-800-424-9393.

"Serving the Highway Safety Community by the Numbers"

Table 2. Motorcyclist Fatalities and Fatality Rates by State, 1994

State	Total Traffic Fatalities	Registered Vehicles (thousands)	Motorcyclist Fatalities	Percent of Total	Motorcyclist Fatalities per 10,000 Registered Vehicles
Alabama[a]	1,083	38	31	2.9	8.2
Alaska[b]	85	12	2	2.4	1.7
Arizona[b]	903	73	66	7.3	9.0
Arkansas[a]	610	12	25	4.1	20.8
California[a]	4,226	556	295	7.0	5.3
Colorado[c]	585	88	47	8.0	5.3
Connecticut[b]	310	37	32	10.3	8.6
Delaware[d]	112	2	6	5.4	30.0
District of Columbia[a]	69	10	2	2.9	2.0
Florida[a]	2,687	189	172	6.4	9.1
Georgia[a]	1,426	55	55	3.9	10.0
Hawaii[b]	122	24	29	23.8	12.1
Idaho[b]	249	32	6	2.4	1.9
Illinois[c]	1,554	201	148	9.5	7.4
Indiana[b]	974	96	59	6.1	6.1
Iowa[c]	478	149	30	6.3	2.0
Kansas[b]	442	53	20	4.5	3.8
Kentucky[a]	778	32	33	4.2	10.3
Louisiana[a]	838	36	28	3.3	7.8
Maine[e]	188	33	17	9.0	5.2
Maryland[a]	651	40	27	4.1	6.7
Massachusetts[a]	440	68	30	6.8	4.4
Michigan[a]	1,419	137	71	5.0	5.2
Minnesota[b]	644	126	47	7.3	3.7
Mississippi[a]	791	28	16	2.0	5.7
Missouri[a]	1,089	57	41	3.8	7.2
Montana[b]	202	21	13	6.4	6.2
Nebraska[a]	271	19	9	3.3	4.7
Nevada[a]	294	20	20	6.8	10.0
New Hampshire[b]	119	36	12	10.1	3.3
New Jersey[a]	761	59	32	4.2	5.4
New Mexico[b]	447	33	21	4.7	6.4
New York[a]	1,658	195	86	5.2	4.4
North Carolina[a]	1,431	64	68	4.8	10.6
North Dakota[b]	88	17	2	2.3	1.2
Ohio[f]	1,371	233	106	7.7	4.5
Oklahoma[b]	687	54	31	4.5	5.7
Oregon[a]	490	60	22	4.5	3.7
Pennsylvania[a]	1,441	172	112	7.8	6.5
Rhode Island[g]	63	19	7	11.1	3.7
South Carolina[b]	847	35	50	5.9	14.3
South Dakota[b]	154	26	19	12.3	7.3
Tennessee[a]	1,214	85	59	4.9	6.9
Texas[a]	3,186	132	124	3.9	9.4
Utah[b]	342	22	19	5.6	8.6
Vermont[a]	77	15	3	3.9	2.0
Virginia[a]	930	62	32	3.4	5.2
Washington[a]	638	109	35	5.5	3.2
West Virginia[a]	356	20	21	5.9	10.5
Wisconsin[b]	712	198	58	8.1	2.9
Wyoming[b]	144	11	8	5.6	7.3
U.S. Total	**40,676**	**3,932**	**2,304**	**5.7**	**5.9**
Puerto Rico	598	NA	32	5.4	NA

Status of state motorcycle helmet use requirements (as of July 1994): [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.

Note: Totals may not equal sum of components due to independent rounding.

Sources: Fatalities—Fatal Accident Reporting System, NHTSA. Registered vehicles—FHWA.