

Traffic Safety Facts 1993

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



Motorcycles

In 1993, 2,444 motorcyclists were killed in traffic crashes in the United States—2 percent more than the 2,395 motorcyclist fatalities reported in 1992.

More than 96,000 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 registered vehicle has decreased by more than 50 percent since 1966 (6.1 and 12.7 fatalities per registered vehicle in 1993 and 1966, respectively) and the fatality rate per 100 million vehicle miles traveled has declined by nearly 75 percent (25.1 and 99.8 in 1992 and 1966, respectively).

“For motorcyclists, the fatality rate per registered vehicle has decreased by more than 50 percent since 1966.”

Table 1. Motorcyclist Fatalities and Fatality Rates, 1983-1993

Year	Fatalities	Registered Vehicles	Fatality Rate *	Vehicle Miles Traveled (millions)	Fatality Rate **
1983	4,265	5,585,112	7.6	8,760	48.7
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	9,526	25.1
1993	2,444	4,001,000	6.1	NA	NA

* Rate per 10,000 registered vehicles.

** Rate per 100 million vehicle miles traveled.

NA = not available.

Note: 1993 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 1993, 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.

More than half of all motorcycles involved in fatal crashes in 1993 collided with another motor vehicle in transport. In two-vehicle crashes, 78 percent of the motorcycles involved were impacted in the front. Only 4 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 1993, 30 percent of the reported fatal crashes involving motorcycles were fixed object crashes, compared to 22 percent for passenger cars, 19 percent for light trucks, and 6 percent for large trucks.

In 1993, there were 1,187 two-vehicle fatal crashes involving a motorcycle and another vehicle. In 34 percent (403) 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 323 crashes (27 percent).

For 77 percent of the motorcycle operators involved in fatal crashes in 1993, 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 (46 percent) of all motorcyclist fatalities in 1993 resulted from crashes in seven states: 310 in California, 197 in Florida, 151 in Texas, 134 in Ohio, 115 in New York, 115 in Illinois, and 112 in Pennsylvania.

Licensing

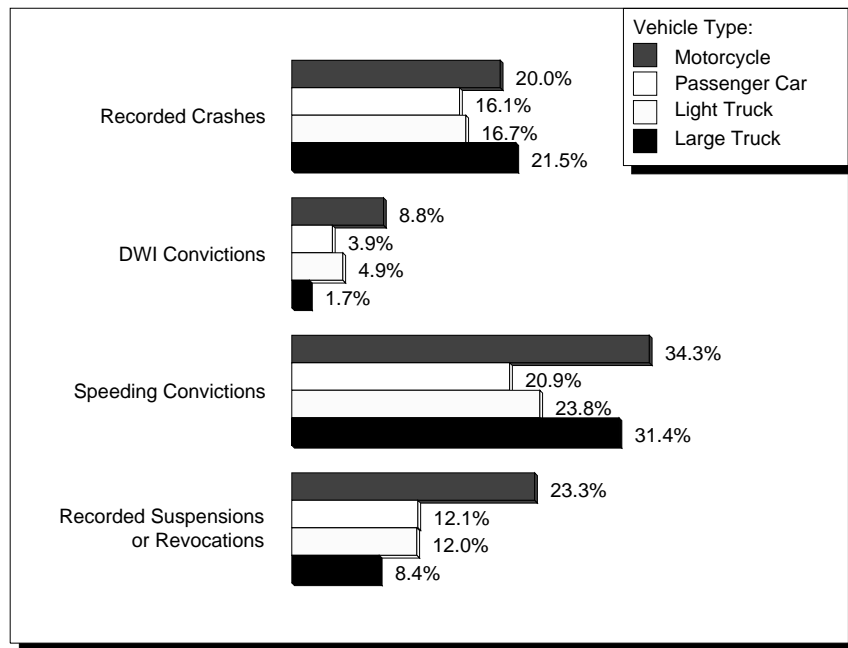
More than one out of five motorcycle operators (20.7 percent) involved in fatal crashes in 1993 were operating the vehicle with an invalid license at the time of the collision, while only 8 percent of drivers of passenger vehicles in fatal crashes did not have a valid license.

Motorcycle operators involved in fatal traffic crashes were nearly twice as likely as passenger vehicle drivers to have a previous license suspension or revocation (23 percent and 12 percent, respectively).

Almost 9 percent of the motorcycle operators involved in fatal crashes in 1993 had at least one previous conviction for driving while intoxicated on their driver records, compared to less than 4 percent of passenger car drivers.

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

Figure 1. Previous Driving Records of Drivers Involved in Fatal Traffic Crashes, by Type of Vehicle, 1993



“Motorcyclists in fatal crashes were twice as likely as passenger car drivers to have a previous license suspension.”

Alcohol

Motorcycle operators involved in fatal crashes in 1993 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 32.9 percent for motorcycles, 24.9 percent for light trucks, 20.7 percent for passenger cars, and 1.7 percent for large trucks.

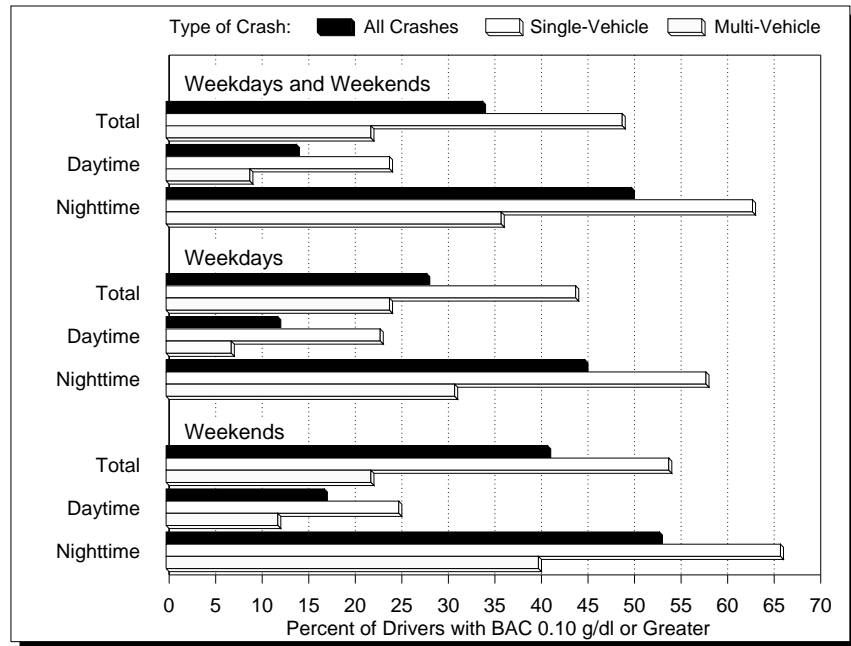
In 1993, 34.2 percent of all fatally injured motorcycle operators were intoxicated (BAC 0.10 g/dl or greater). An additional 11.2 percent had lower alcohol levels (BAC 0.01 to 0.09 g/dl). The intoxication rate was highest for fatally injured operators between 35 and 39 years old (48.4 percent), followed by those between 30 and 34 years old (44.6 percent), and was somewhat lower for ages 25 to 29 (36.2 percent).

Almost half (49 percent) of the 972 motorcycle operators who died in single-vehicle crashes in 1993 were intoxicated. Two-thirds (66 percent) of those killed on weekend nights were intoxicated.

Motorcycle operators killed in traffic crashes at night were about 4 times as likely to be intoxicated as those killed during the day (50 percent and 14 percent, respectively).

The reported helmet use rate for intoxicated motorcycle operators killed in traffic crashes was 53 percent, compared with 63 percent for those who were sober.

Figure 2. Intoxication Rates for Motorcycle Operators Killed in Traffic Crashes, by Time of Day, 1993



“Almost half of the motorcycle operators who died in single-vehicle crashes in 1993 were intoxicated”

Helmets

NHTSA estimates that helmets saved the lives of 572 motorcyclists in 1993. If all motorcyclists had worn helmets, an additional 303 lives could have been saved.

Helmets are estimated to be 29 percent effective in preventing motorcyclist fatalities.

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 1993 were 59 percent for operators and 42 percent for passengers, compared with 55 percent and 46 percent, respectively, in 1992.

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, 1993

State	Total Traffic Fatalities	Registered Vehicles (thousands)	Motorcyclist Fatalities	Percent of Total	Motorcyclist Fatalities per 10,000 Registered Vehicles
Alabama ^a	1,042	42	32	3.1	7.6
Alaska ^b	118	12	3	2.5	2.5
Arizona ^b	801	68	66	8.2	9.7
Arkansas ^a	583	14	21	3.6	15.0
California ^a	4,163	610	310	7.4	5.1
Colorado ^c	559	89	48	8.6	5.4
Connecticut ^b	342	48	44	12.9	9.2
Delaware ^d	111	10	8	7.2	8.0
District of Columbia ^a	57	2	2	3.5	10.0
Florida ^a	2,635	192	197	7.5	10.3
Georgia ^a	1,394	83	52	3.7	6.3
Hawaii ^b	134	24	26	19.4	10.8
Idaho ^b	227	34	23	10.1	6.8
Illinois ^c	1,392	212	115	8.3	5.4
Indiana ^b	889	94	48	5.4	5.1
Iowa ^c	459	149	38	8.3	2.6
Kansas ^b	428	52	20	4.7	3.8
Kentucky ^a	871	36	36	4.1	10.0
Louisiana ^a	879	38	29	3.3	7.6
Maine ^e	185	28	10	5.4	3.6
Maryland ^a	665	51	44	6.6	8.6
Massachusetts ^a	475	65	44	9.3	6.8
Michigan ^a	1,408	144	58	4.1	4.0
Minnesota ^b	538	102	34	6.3	3.3
Mississippi ^a	813	28	12	1.5	4.3
Missouri ^a	947	59	30	3.2	5.1
Montana ^b	195	23	20	10.3	8.7
Nebraska ^a	254	19	6	2.4	3.2
Nevada ^a	263	20	15	5.7	7.5
New Hampshire ^b	121	33	16	13.2	4.8
New Jersey ^a	788	103	40	5.1	3.9
New Mexico ^b	431	30	29	6.7	9.7
New York ^a	1,781	190	115	6.5	6.1
North Carolina ^a	1,389	60	86	6.2	14.3
North Dakota ^b	89	18	7	7.9	3.9
Ohio ^f	1,482	225	134	9.0	6.0
Oklahoma ^b	671	55	34	5.1	6.2
Oregon ^a	524	62	28	5.3	4.5
Pennsylvania ^a	1,529	167	112	7.3	6.7
Rhode Island ^g	74	20	9	12.2	4.5
South Carolina ^b	846	32	57	6.7	17.8
South Dakota ^b	140	22	12	8.6	5.5
Tennessee ^a	1,171	76	61	5.2	8.0
Texas ^a	3,037	152	151	5.0	9.9
Utah ^b	303	24	15	5.0	6.3
Vermont ^a	110	16	13	11.8	8.1
Virginia ^a	878	57	32	3.6	5.6
Washington ^a	661	105	37	5.6	3.5
West Virginia ^a	429	19	19	4.4	10.0
Wisconsin ^b	714	172	40	5.6	2.3
Wyoming ^b	120	15	6	5.0	4.0
U.S. Total	40,115	4,001	2,444	6.1	6.1
Puerto Rico	600	NA	30	5.0	NA

Status of state motorcycle helmet use requirements (as of July 1993): ^aRequired for all riders. ^bRequired for riders under 18 years old. ^cNo helmet use requirement. ^dRequired for riders under 19 years old; helmets must be in possession of other riders, but use is not required. ^eRequired for riders under 15 years old, novices (first-year operators), and holders of learner's permits. ^fRequired for riders under 18 years old and novices. ^gRequired 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.