



Traffic Safety Facts 2000

Motorcycles



In 2000, 2,862 motorcyclists were killed and an additional 58,000 were injured in traffic crashes in the United States — 15 percent more than the 2,483 motorcyclist fatalities and 16 percent more than the 50,000 motorcyclist injuries reported in 1999.

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.

Table 1. Motorcyclist Fatalities and Injuries and Fatality and Injury Rates, 1990-2000

Year	Fatalities	Registered Vehicles	Fatality Rate*	Vehicle Miles Traveled (millions)	Fatality Rate**
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	9,906	24.7
1994	2,320	3,756,555	6.2	10,240	22.7
1995	2,227	3,897,191	5.7	9,797	22.7
1996	2,161	3,871,599	5.6	9,920	21.8
1997	2,116	3,826,373	5.5	10,081	21.0
1998	2,294	3,879,450	5.9	10,260	22.4
1999	2,483	4,152,433	6.0	10,584	23.5
2000	2,862	—	—	—	—
Year	Injuries	Registered Vehicles	Injury Rate*	Vehicle Miles Traveled (millions)	Injury Rate**
1990	84,000	4,259,462	198	9,557	882
1991	80,000	4,177,365	193	9,178	876
1992	65,000	4,065,118	160	9,557	681
1993	59,000	3,977,856	149	9,906	600
1994	57,000	3,756,555	153	10,240	561
1995	57,000	3,897,191	147	9,797	587
1996	55,000	3,871,599	143	9,920	557
1997	53,000	3,826,373	137	10,081	526
1998	49,000	3,879,450	126	10,260	477
1999	50,000	4,152,433	120	10,584	472
2000	58,000	—	—	—	—

* Rate per 10,000 registered vehicles.

** Rate per 100 million vehicle miles traveled.

— = not available.

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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Table 2. Occupant Fatality Rates by Vehicle Type, 1989 and 1999

Fatality Rate	Motorcycles	Passenger Cars	Light Trucks
1989			
Per 10,000 Registered Vehicles	7.1	2.0	1.8
Per 100 Million Vehicle Miles Traveled	30.3	1.8	1.6
1999			
Per 10,000 Registered Vehicles	6.0	1.6	1.5
Per 100 Million Vehicle Miles Traveled	23.5	1.3	1.2
Percent Change, 1989-1999			
Per 10,000 Registered Vehicles	-15.0%	-20.0%	-17.0%
Per 100 Million Vehicle Miles Traveled	-22.0%	-28.0%	-25.0%

Note: 2000 registered vehicle and vehicle miles traveled data not available.

Motorcycles made up less than 2 percent of all registered vehicles in the United States in 1999 and accounted for only 0.4 percent of all vehicle miles traveled.

Per vehicle mile traveled in 1999, motorcyclists were about 18 times as likely as passenger car occupants to die in a motor vehicle traffic crash and 3 times as likely to be injured.

Per registered vehicle, the fatality rate for motorcyclists in 1999 was 3.6 times the fatality rate for passenger car occupants. The injury rate for passenger car occupants per registered vehicle was 1.4 times the injury rate for motorcyclists.

In 2000, motorcyclists accounted for 7 percent of total traffic fatalities, 8 percent of all occupant fatalities, and 2 percent of all occupants injured.

More than one-half (1,550) of all motorcycles involved in fatal crashes in 2000 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 2000, 27 percent of the motorcycles involved in fatal crashes collided with a fixed object, compared to 17 percent for passenger cars, 12 percent for light trucks, and 4 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 2000, 11 percent of the reported injury crashes involving motorcycles were fixed object crashes, compared to 9 percent for passenger cars, 7 percent for light trucks, and 4 percent for large trucks.

In 2000, there were 1,300 two-vehicle fatal crashes involving a motorcycle and another vehicle. In 35 percent (459) 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 328 crashes (25 percent).

“Per vehicle mile, motorcyclists are about 18 times as likely as passenger car occupants to die in a traffic crash.”

Almost half (45 percent) of all motorcyclist fatalities in 2000 resulted from crashes in seven states: 276 in California, 259 in Florida, 227 in Texas, 149 in Pennsylvania, 126 in Illinois, 126 in Ohio, and 119 in New York.

In 2000, 38 percent of all motorcyclists involved in fatal crashes were speeding, approximately twice the rate for drivers of passenger cars or light trucks. The percentage of alcohol involvement was about 50 percent higher for motorcyclists than for drivers of passenger vehicles.

Licensing

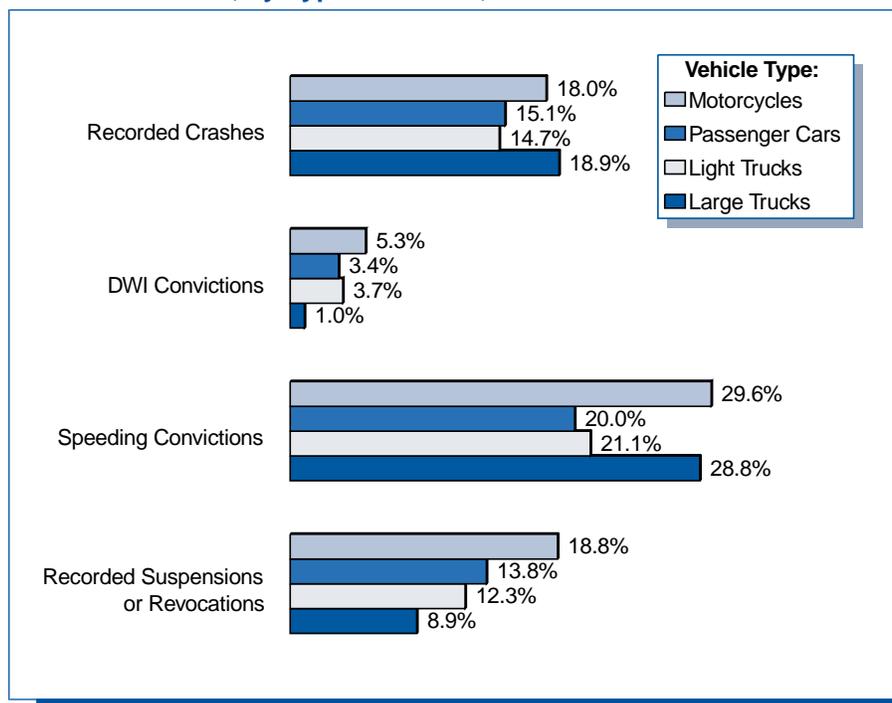
Nearly one out of seven motorcycle operators (15 percent) involved in fatal crashes in 2000 were operating the vehicle with an invalid license at the time of the collision, while only 12 percent of drivers of passenger vehicles in fatal crashes did not have a valid license.

Motorcycle operators involved in fatal traffic crashes were 1.4 times as likely as passenger vehicle drivers to have a previous license suspension or revocation (19 percent and 13 percent, respectively).

More than 5 percent of the motorcycle operators involved in fatal crashes in 2000 had at least one previous conviction for driving while intoxicated on their driver records, compared to less than 4 percent of passenger vehicle drivers.

“Nearly one out of seven motorcycle operators in fatal crashes in 2000 were operating the vehicle with an invalid license.”

Figure 1. Previous Driving Records of Drivers Involved in Fatal Traffic Crashes, by Type of Vehicle, 2000



Alcohol

Motorcycle operators involved in fatal crashes in 2000 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 27 percent for motorcycles, 20 percent for light trucks, 19 percent for passenger cars, and 1 percent for large trucks.

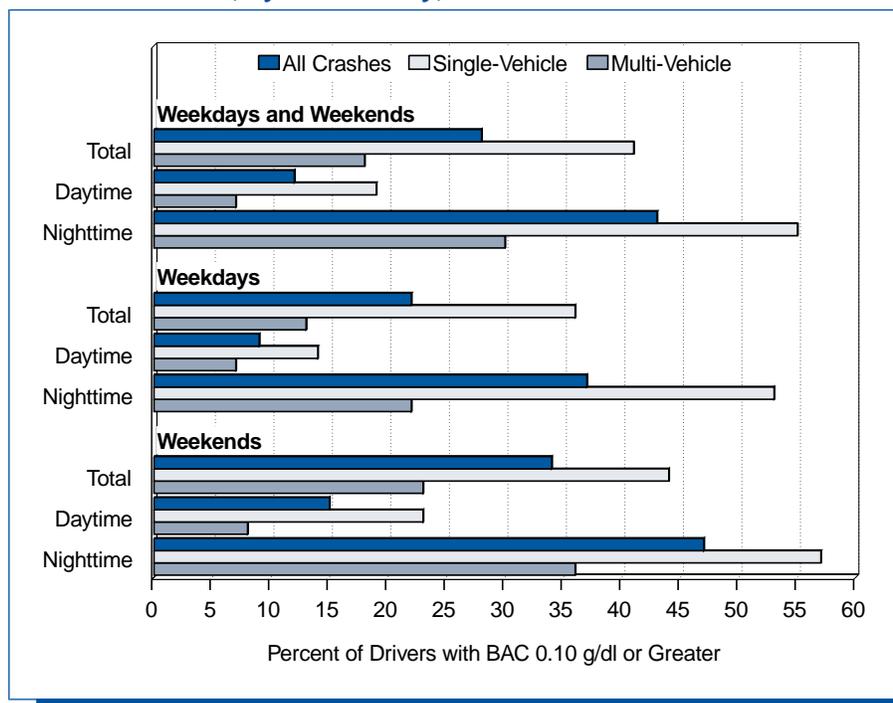
In 2000, 28 percent of all fatally injured motorcycle operators were intoxicated (BAC 0.10 g/dl or greater). An additional 11 percent had lower alcohol levels (BAC 0.01 to 0.09 g/dl). The intoxication rate was highest for fatally injured operators between 40 to 44 years old (42 percent), followed by ages 35 and 39 (39 percent) and ages 45 to 49 (34 percent).

Almost half (41 percent) of the 1,203 motorcycle operators who died in single-vehicle crashes in 2000 were intoxicated. Almost three-fifths (57 percent) of those killed in single-vehicle crashes on weekend nights were intoxicated.

Motorcycle operators killed in traffic crashes at night were nearly 4 times as likely to be intoxicated as those killed during the day (43 percent and 12 percent, respectively).

The reported helmet use rate for intoxicated motorcycle operators killed in traffic crashes was 41 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, 2000



“Almost half of the motorcycle operators who died in single-vehicle crashes in 2000 were intoxicated.”

“In 2000, motorcycle operators in fatal crashes had higher intoxication rates than any other type of driver.”

Helmets

NHTSA estimates that helmets saved the lives of 631 motorcyclists in 2000. If all motorcyclists had worn helmets, an additional 382 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.)

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 67 percent in 1998.

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 2000 were 55 percent for operators and 48 percent for passengers, the same as in 1999.

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.

In 2000, 20 states, the District of Columbia, and Puerto Rico required helmet use by all motorcycle operators and passengers. In another 27 states, only persons under a specific age, usually 18, were required to wear helmets. Three states had no laws requiring helmet use.

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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. NCSA information can also be obtained by telephone or by fax-on-demand 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/nca>. 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 3. 2000 Motorcyclist Fatalities and 1999 Fatality Rates by State

State	2000			1999	
	Total Traffic Fatalities	Motorcyclist Fatalities	Percent of Total	Registered Vehicles (thousands)	Motorcyclist Fatalities per 10,000 Registered Vehicles
Alabama ^a	995	43	4.3	49	6.5
Alaska ^b	103	6	5.8	15	6.0
Arizona ^b	1,036	90	8.7	145	5.0
Arkansas ^b	652	27	4.1	22	10.1
California ^a	3,753	276	7.4	420	5.6
Colorado ^k	681	73	10.7	95	6.3
Connecticut ^b	342	50	14.6	54	7.1
Delaware ^c	123	5	4.1	11	6.5
District of Columbia ^a	49	8	16.3	1	26.9
Florida ^d	2,999	259	8.6	236	7.6
Georgia ^a	1,541	61	4.0	87	6.8
Hawaii ^b	131	18	13.7	19	8.8
Idaho ^b	276	18	6.5	41	3.2
Illinois ^k	1,418	126	8.9	217	4.8
Indiana ^b	875	70	8.0	109	6.1
Iowa ^k	445	32	7.2	125	2.4
Kansas ^b	461	21	4.6	50	3.0
Kentucky ^e	820	38	4.6	42	10.0
Louisiana ^f	937	57	6.1	43	9.3
Maine ^g	169	18	10.7	31	5.2
Maryland ^a	588	50	8.5	46	9.6
Massachusetts ^a	433	33	7.6	103	3.4
Michigan ^a	1,382	86	6.2	168	4.9
Minnesota ^b	625	37	5.9	127	2.4
Mississippi ^a	949	22	2.3	32	5.6
Missouri ^a	1,157	44	3.8	57	6.5
Montana ^b	237	13	5.5	22	6.8
Nebraska ^a	276	3	1.1	20	4.1
Nevada ^a	323	21	6.5	23	7.2
New Hampshire ^b	126	27	21.4	48	6.7
New Jersey ^a	731	56	7.7	106	4.0
New Mexico ^b	430	26	6.0	31	7.5
New York ^a	1,458	119	8.2	144	7.9
North Carolina ^a	1,472	91	6.2	79	13.5
North Dakota ^b	86	4	4.7	16	1.8
Ohio ^h	1,351	126	9.3	241	5.0
Oklahoma ^b	652	25	3.8	53	6.2
Oregon ^a	451	37	8.2	67	2.7
Pennsylvania ^a	1,520	149	9.8	201	5.5
Rhode Island ⁱ	80	12	15.0	19	6.2
South Carolina ^b	1,065	57	5.4	47	13.9
South Dakota ^b	173	20	11.6	26	3.9
Tennessee ^a	1,306	70	5.4	63	9.4
Texas ^j	3,769	227	6.0	169	10.8
Utah ^b	373	24	6.4	25	9.3
Vermont ^a	79	6	7.6	18	4.0
Virginia ^a	930	43	4.6	57	6.6
Washington ^a	632	37	5.9	107	3.5
West Virginia ^a	410	17	4.1	19	12.3
Wisconsin ^b	799	78	9.8	193	3.4
Wyoming ^b	152	6	3.9	16	5.7
U.S. Total	41,821	2,862	6.8	4,152	6.0
Puerto Rico ^a	566	51	9.0	21	16.3

Status of state motorcycle helmet use requirements (as of December 2000): ^aRequired for all riders. ^bRequired for riders under 18 years old. ^cRequired for riders under 19 years old; helmets must be in possession of other riders, but use is not required. ^dRequired for riders under 21 years old and those without \$10,000 medical insurance that will cover injuries from a motorcycle crash. ^eRequired for riders under 21 years old, riders operating with instruction permit, and novices (first-year operators). ^fRequired for riders under 18 years old and those without \$10,000 medical insurance; proof of insurance policy must be shown to law enforcement officer upon request. ^gRequired for riders under 15 years old, novices, and holders of learner's permits. ^hRequired for riders under 18 years old; novices must wear helmets. ⁱRequired for riders under 21 years old; novices must wear helmets. ^jRequired for riders 20 and under and those who have not completed a rider training course or who do not have \$10,000 medical insurance coverage. ^kNo helmet use requirement.

Notes: 2000 registered vehicle data not available. Totals may not equal sum of components due to independent rounding.
Source: Registered vehicles — FHWA.