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Motorcycle Crashes

Motorcycles are by their nature far less crashworthy than closed vehicles. They are also less visible to other drivers and pedestrians and less stable than four-wheel vehicles. Operating a motorcycle requires a different combination of physical and mental skills than those used in driving four-wheel vehicles. Motorcyclists and their passengers are more vulnerable to the hazards of weather and road conditions than drivers in closed vehicles.

In 2013 motorcycle fatalities fell 6.4 percent to 4,668 from 4,986 in 2012. In 2012, 60 out of every 100,000 registered motorcycles was involved in a fatal crash, compared with only 14 out of every 100,000 passenger cars, according to the National Highway Traffic Safety Administration [1] (NHTSA [1]). Motorcyclists were about 26 times more likely than passenger car occupants to die in a crash per vehicle mile traveled in 2012 and five times more likely to be injured, according to NHTSA. Note: statistics on fatal motorcycle crashes are also available from the Insurance Institute for Highway Safety [2]).

MOTORCYCLE HELMET USE, 1996-2014 (1)

Year	Percent	Year	Percent
1996	64%	2008	63%
1998	67	2009	67
2000	71	2010	54
2002	58	2011	66
2004	58	2012	60
2005	48	2013	60
2006	51	2014	64
2007	58		

(1) Based on surveys of motorcyclists using helmets meeting Department of Transportation standards. Surveys conducted in October for 1994-2000 and in June thereafter.

Source: U.S. Department of Transportation, National Occupant Protection Use Survey, National Highway Traffic Safety Administration's National Center for Statistics and Analysis.

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MOTORCYCLIST FATALITIES AND FATALITY RATES, 2003-2012

Year	Fatalities	Registered motorcycles	Fatality rate per 100,000 registered vehicles	Vehicle miles traveled (millions)	Fatality rate per 100 million vehicle miles traveled
2003	3,714	5,370,035	69.16	9,576	38.78
2004	4,028	5,767,934	69.83	10,122	39.79
2005	4,576	6,227,146	73.48	10,454	43.77
2006	4,837	6,678,958	72.42	12,049	40.14
2007	5,174	7,138,476	72.48	21,396	24.18
2008	5,312	7,752,926	68.52	20,811	25.52
2009	4,469	7,929,724	56.36	20,822	21.46
2010	4,518	8,009,503	56.41	18,513	24.40
2011	4,630	8,437,502	54.87	18,542	24.97
2012	4,957	8,454,939	58.63	21,298	23.27

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration; Federal Highway Administration.

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MOTORCYCLIST INJURIES AND INJURY RATES, 2003-2012

Year	Injuries	Registered motorcycles	Injury rate per 100,000 registered motorcycles	Vehicle miles traveled (millions)	Injury rate per 100 million vehicle miles traveled
2003	67,000	5,370,035	1,250	9,576	701
2004	76,000	5,767,934	1,324	10,122	755
2005	87,000	6,227,146	1,402	10,454	835
2006	88,000	6,678,958	1,312	12,049	727
2007	103,000	7,138,476	1,443	21,396	481
2008	96,000	7,752,926	1,238	20,811	461
2009	90,000	7,929,724	1,130	20,822	430
2010	82,000	8,009,503	1,024	18,513	443
2011	81,000	8,437,502	965	18,542	439
2012	93,000	8,454,939	1,099	21,298	436

NA=Data not available.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration; Federal Highway Administration.

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OCCUPANT FATALITY RATES BY VEHICLE TYPE, 2003 AND 2012

Fatality rate	Motorcycles	Light trucks	Passenger cars
2003			
Per 100,000 registered vehicles	69.83	14.75	14.98
Per 100 million vehicle miles traveled	39.79	1.20	1.22
2012			
Per 100,000 registered vehicles	58.63	7.92	9.66
Per 100 million vehicle miles traveled	23.27	0.73	0.89
Percent change, 2003-2012			
Per 100,000 registered vehicles	-16.0%	-46.3%	-35.5%
Per 100 million vehicle miles traveled	-41.5	-39.2	-27.0

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

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MOTORCYCLISTS KILLED BY TIME OF DAY AND DAY OF WEEK, 2012

Time of day	Day of week Weekday Number	Percent	Weekend Number	Percent	Total Number	Percent
Motorcycle riders killed						
Midnight to 3 am	176	6.8%	272	11.6%	448	9.0%
3 am to 6 am	107	4.1	88	3.8	195	3.9
6 am to 9 am	213	8.2	61	2.6	274	5.5
9 am to noon	227	8.7	197	8.4	424	8.6
Noon to 3 pm	428	16.5	343	14.6	771	15.6
3 pm to 6 pm	670	25.8	476	20.3	1,146	23.1
6 pm to 9 pm	426	16.4	534	22.8	960	19.4
9 pm to midnight	341	13.1	360	15.4	701	14.1
Unknown	12	0.5	14	0.6	38	0.8
Total	**2,600**	**100.0%**	**2,345**	**100.0%**	**4,957**	**100.0%**
Motorcycle riders injured						
Midnight to 3 am	1,365	2.4%	2,276	6.1%	3,641	3.9%
3 am to 6 am	1,071	1.9	732	2.0	1,803	1.9
6 am to 9 am	4,848	8.7	931	2.5	5,779	6.2
9 am to noon	6,365	11.4	5,267	14.2	11,633	12.5
Noon to 3 pm	11,011	19.7	7,669	20.7	18,680	20.1
3 pm to 6 pm	16,896	30.2	6,739	18.2	23,634	25.4
6 pm to 9 pm	10,463	18.7	7,924	21.4	18,387	19.8
9 pm to midnight	3,865	6.9	5,478	14.8	9,343	10.1
Total	**55,884**	**100.0%**	**37,016**	**100.0%**	**92,900**	**100.0%**

Source: Insurance Institute for Highway Safety.

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VEHICLES INVOLVED IN CRASHES BY VEHICLE TYPE AND CRASH SEVERITY, 2012

Vehicle type	Crash severity Fatal Number	Percent	Injury Number	Percent	Property damage only Number	Percent
Passenger car	18,092	39.6%	1,683,000	57.0%	3,875,000	56.1%
Light truck	17,254	37.8	1,087,000	36.8	2,706,000	39.2
Large truck	3,802	8.3	77,000	2.6	253,000	3.7
Motorcycle	5,080	11.1%	89,000	3.0%	18,000	0.3%
Bus	251	0.5	12,000	0.4	42,000	0.6
Other	507	1.1	7,000	0.2	8,000	0.1
Total	**45,637 (1)**	**100.0%**	**2,955,000**	**100.0%**	**6,902,000**	**100.0%**

(1) Includes 651 vehicles of unknown type involved in fatal crashes.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

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PERSONS KILLED IN TOTAL AND ALCOHOL-IMPAIRED CRASHES BY PERSON TYPE, 2012

Person type	Total killed	Alcohol-impaired driving fatalities (1) Number	Percent of total killed
Vehicle occupants			
Driver	16,769	5,993	36%
Passenger	6,061	1,917	32
Unknown occupant	82	6	7
Total	**22,912**	**7,916**	**35%**
Motorcyclists	**4,957**	**1,596**	**32%**
Nonoccupants			
Pedestrian	4,743	688	14
Pedalcyclist	726	89	12
Other/unknown	223	33	15
Total	**5,692**	**810**	**14%**
Total	**33,561**	**10,322**	**31%**

(1) Alcohol-impaired driving crashes are crashes that involve at least one driver or a motorcycle operator with a blood alcohol concentration of 0.08 percent or above, the legal definition of drunk driving.

Source: U.S. Department of Transportation, National Highway Traffic Safety Administration.

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DRIVERS IN FATAL CRASHES BY BLOOD ALCOHOL CONCENTRATION (BAC) AND VEHICLE TYPE, 2003-2012 (1)

	Passenger car				Light truck				Large t
		Percent				Percent			
Year	Total	BAC = 0.01+	BAC = 0.08+	Total		BAC = 0.01+	BAC = 0.08+	Total	
2003	26,422	26%	22%		22,172	25%	22%		4
2004	25,568	27	23		22,367	25	21		4
2005	25,046	28	24		22,879	25	22		4
2006	24,162	27	23		22,307	28	24		4
2007	22,765	27	23		21,719	27	23		4
2008	20,379	27	23		19,095	26	23		4
2009	18,344	27	23		17,878	27	23		3
2010	17,710	27	24		17,385	25	22		3
2011	17,401	27	24		16,706	25	21		3
2012	17,992	26	23		17,131	25	22		3

(1) NHTSA estimates alcohol involvement when alcohol test results are unknown.

Source: U.S. Department of Transportation, National Highway Safety Administration.

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