



# Motorcyclists

CRASH STATISTICS FOR THE YEAR ENDED 31 DEC 2007

Prepared by Strategy and Sustainability, Ministry of Transport

## CRASH FACTSHEET

2008

In 2007, 41 motorcyclists<sup>1</sup> were killed and a further 1,336 were injured in road crashes. This was ten percent of all deaths and eight percent of all reported injuries on our roads.

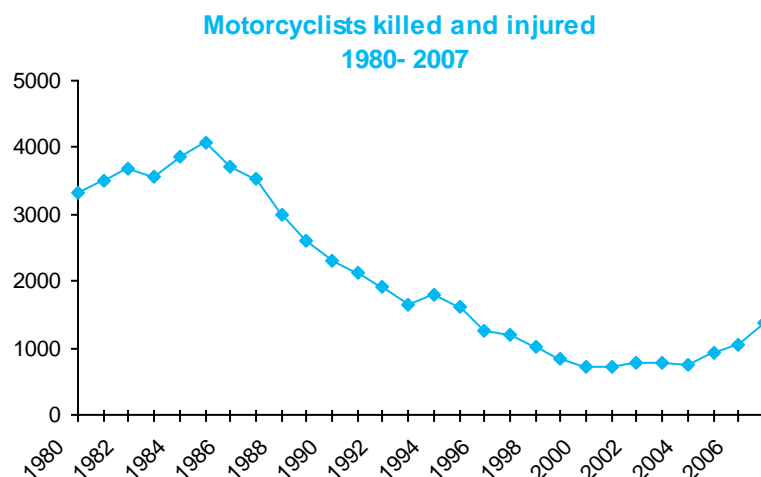
### Motorcyclists at increased risk

Motorcyclists face a number of risk factors that do not affect car drivers. The main risk factors are decreased stability and a much lower level of occupant protection than is provided by a car. In addition, a motorcycle is less visible to other road users than a car or a truck. These factors together give motorcycling a higher level of risk per kilometre travelled than other modes of transport.

Several studies have compared the risk of death and injury for a motorcyclist to that of a car driver.

- The New Zealand Travel Survey indicates that, on average, the risk of being involved in a fatal or injury crash is more than **18 times** higher for a motorcyclist than for a car driver over the same distance travelled (2003-2007 data)
- In 95 percent of fatal crashes involving motorcyclists, the motorcyclist or a pillion passenger was among those killed (2003-2007 data)
- A rider without a helmet is three times more likely to suffer severe brain damage than a rider with a helmet in the same type of crash<sup>2</sup>.

### Motorcyclist casualties are well below 1980s levels



The number of motorcyclist casualties dropped markedly during the 1990s. However, since 2000 there has been no further decrease and since 2005 the number has increased. The drop during the 1990s was particularly marked among the young – the number of 15-19 year old motorcyclists killed and injured each year is now about 13% of what it was in the early eighties. The average age of motorcycle casualties has risen over the last 25 years, from 22 in 1980 to 35 in 2007. This reflects a trend away from motorcycling among the young. Motorcyclists now make up only eight percent of all road users injured, compared to 21 percent in the early and mid-1980s.

<sup>1</sup> 'Motorcycles' as used here includes powercycles or mopeds.

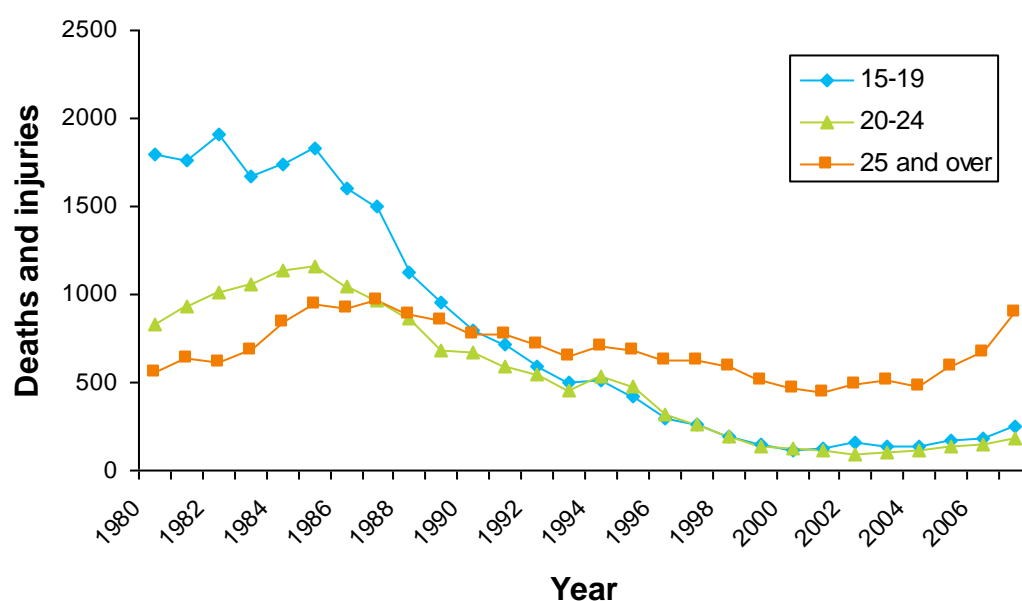
<sup>2</sup> National Highway Traffic Safety Administration (NHTSA) Motorcycle Helmet Use Laws fact sheet. April 2004.  
<http://www.nhtsa.dot.gov/people/injury/New-fact-sheet03/MotorcycleHelmet.pdf>

## Time series

**Deaths and injuries of motorcycle riders and pillion passengers, 1980-2007**

Year	Deaths				Injuries			
	Riders	Pillion passengers	Total	% road deaths	Riders	Pillion passengers	Total	% road injuries
1980	79	12	91	15%	2753	469	3222	20%
1981	104	12	116	17%	2945	432	3377	22%
1982	99	14	113	17%	3090	478	3568	22%
1983	98	10	108	17%	2970	481	3451	21%
1984	107	18	125	19%	3266	480	3746	21%
1985	118	14	132	18%	3413	527	3940	21%
1986	107	20	127	17%	3161	432	3593	19%
1987	130	14	144	18%	2945	444	3389	18%
1988	125	21	146	20%	2496	365	2861	16%
1989	122	19	141	19%	2153	303	2456	15%
1990	95	19	114	16%	1936	267	2203	12%
1991	64	14	78	12%	1841	217	2058	12%
1992	75	13	88	14%	1606	210	1816	11%
1993	74	6	80	13%	1402	159	1561	10%
1994	61	11	72	12%	1542	179	1721	10%
1995	66	12	78	13%	1379	160	1539	9%
1996	42	6	48	9%	1112	111	1223	8%
1997	52	4	56	10%	1039	103	1142	9%
1998	47	7	54	11%	862	107	969	8%
1999	39	3	42	8%	714	77	791	7%
2000	29	2	31	7%	646	51	697	6%
2001	34	1	35	8%	610	59	669	5%
2002	28	2	30	7%	696	48	744	5%
2003	27	1	28	6%	707	54	761	5%
2004	32	2	34	8%	669	52	721	5%
2005	33	3	36	9%	834	69	903	6%
2006	35	3	38	10%	947	70	1017	7%
2007	37	4	41	10%	1243	93	1336	8%

**Motorcycle deaths and injuries by age group**

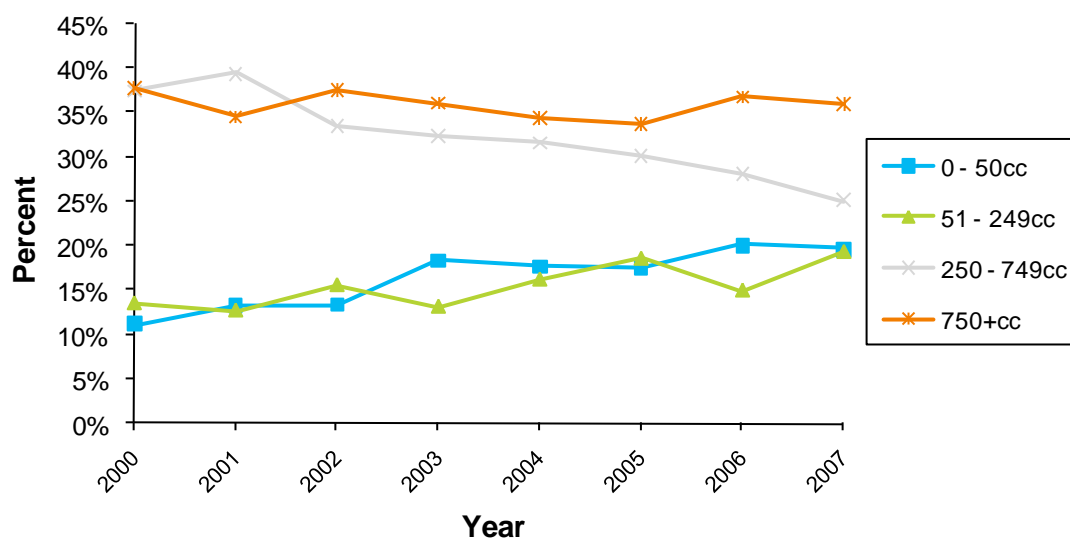


### Motorcyclists killed and injured - selected age groups

	15-19 years		20-24 years		25-29 years		30-39 years		40 years and over	
	Deaths	Injuries	Deaths	Injuries	Deaths	Injuries	Deaths	Injuries	Deaths	Injuries
1980	35	1764	33	800	11	242	8	150	1	146
1981	50	1711	38	895	8	263	10	184	6	160
1982	37	1870	44	962	17	258	12	175	2	152
1983	46	1622	35	1017	8	330	7	186	9	146
1984	46	1693	50	1085	15	397	10	248	3	163
1985	41	1786	48	1106	21	451	13	272	9	179
1986	39	1567	51	991	15	383	14	291	4	210
1987	48	1447	47	914	17	455	23	280	8	185
1988	31	1098	52	813	27	401	19	266	13	163
1989	41	919	38	639	22	355	21	286	11	157
1990	26	769	43	622	17	315	20	254	6	165
1991	21	693	22	571	12	288	11	302	11	148
1992	23	568	29	517	9	244	10	267	15	166
1993	15	484	29	428	18	220	8	232	7	161
1994	7	500	16	519	10	235	18	250	16	172
1995	12	404	21	451	14	226	16	248	9	172
1996	16	277	11	304	7	212	4	212	8	177
1997	8	256	12	245	11	186	12	234	9	178
1998	3	188	14	178	14	160	9	216	12	185
1999	3	145	4	138	7	114	16	185	10	174
2000	3	112	4	117	7	111	8	155	9	174
2001	6	119	4	104	4	81	5	159	14	184
2002	4	151	4	90	4	86	10	169	8	212
2003	3	138	1	106	6	72	8	180	10	231
2004	4	133	5	105	2	73	5	141	17	236
2005	6	165	3	133	3	81	7	186	13	299
2006	3	183	5	148	2	92	15	209	13	343
2007	2	251	5	174	1	121	15	238	17	504

Note: columns do not necessarily add up to the totals due to unknown ages for some riders.

### Percentage of crash involved bikes by cc rating 2000 - 2007



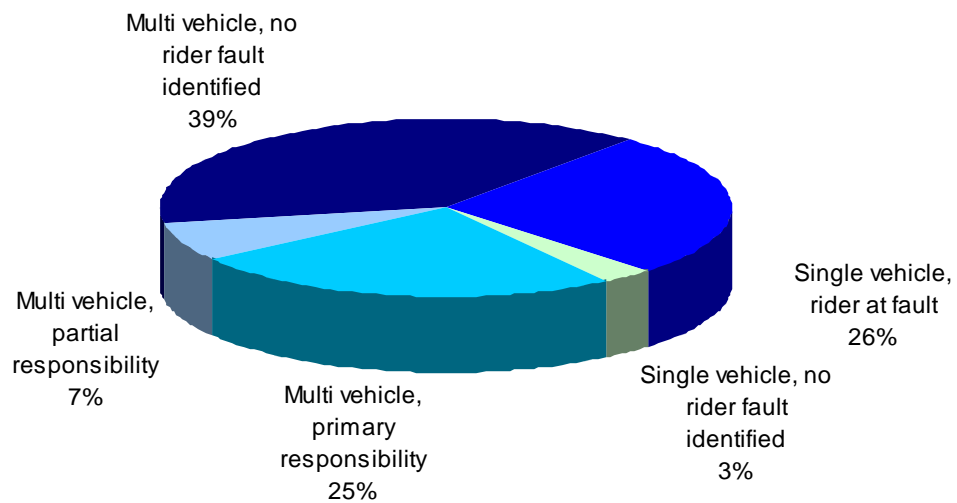
Engine size, in cubic centimetres (cc), is currently not recorded for between 10 and 15 percent of crash-involved motorcycles. The graph above is based only on those motorcycles with recorded engine sizes.

## Motorcycle size

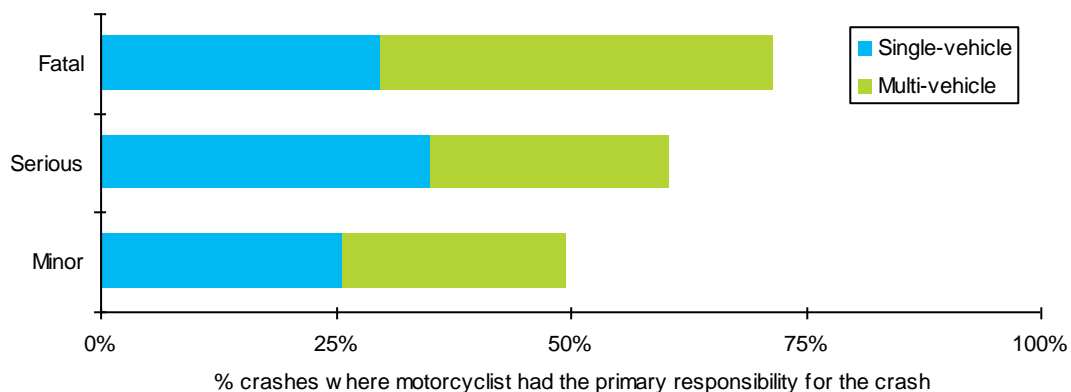
A higher proportion of crashes involving large bikes (500 cc or bigger) result in death rather than injury – riders of large motorcycles make up 32 percent of all casualties but 52 percent of deaths. This is, at least partly, a result of riding patterns. Small motorcycles and scooters tend to be used for 'around-town' riding, where speeds are low, whereas large bikes spend a much greater proportion of time on the open road and travelling at higher speeds. For bikes of 500 cc or bigger, over half (56%) of all reported injury crashes are on the open road. This compares to only 8 percent for small bikes with an engine size under 125 cc and nearly a third (30%) for bikes with engine sizes of 125-499 cc.

## Who was at fault?

### Motorcyclist fault in crashes 2003-2007

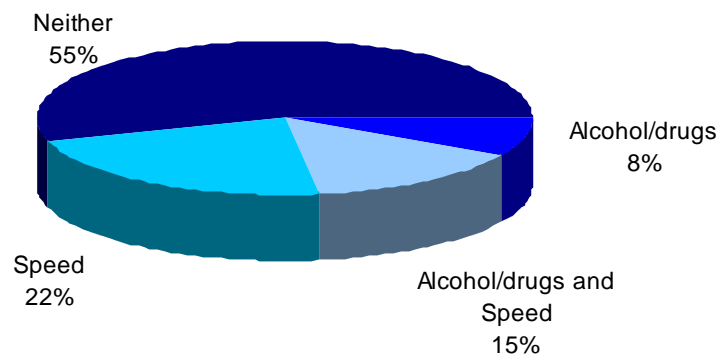


### Percentage of motorcycle crashes in which a motorcyclist had the primary responsibility for the crash 2003- 2007



For more serious crashes, the motorcyclist was more likely to have the primary responsibility for the crash. The motorcycle rider had the primary responsibility for nearly three-quarters of fatal motorcycle crashes, but the comparable figure for minor injury crashes was about half (50%).

### Alcohol/drug and speed involvement in fatal motorcycle crashes 2003- 2007



Twenty-three percent of motorcyclists involved in fatal crashes were affected by alcohol/drugs. Thirty-seven percent of motorcycle riders involved in fatal crashes were travelling too fast for the conditions. Forty-five percent of all motorcycle riders involved in fatal crashes were travelling too fast for the conditions or affected by alcohol/drugs, or both.

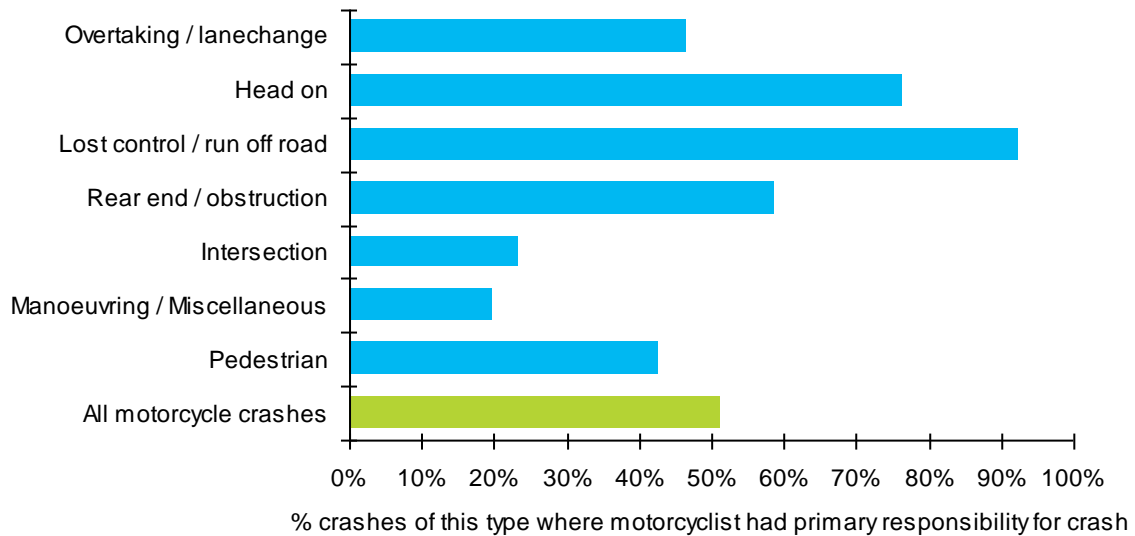
### Types of crash

Type of crash by speed limit area and crash severity 2003-2007

Movement type	Speed limit area				All motorcycle crashes			
	Rural		Urban		Fatal		Injury	
	Fatal	Injury	Fatal	Injury	Number	%	Number	%
Overtaking/lane change	10	143	3	149	13	7%	292	7%
Head on	43	159	2	94	45	26%	253	6%
Lost control/run off road	35	745	17	535	52	30%	1280	29%
Rear end/obstruction	5	155	6	259	11	6%	414	9%
Intersection	27	254	15	1502	42	24%	1756	39%
Manoeuvring/miscellaneous	3	56	5	339	8	5%	395	9%
Pedestrian	1	6	3	62	4	2%	68	2%
<b>Total</b>	<b>124</b>	<b>1518</b>	<b>51</b>	<b>2940</b>	<b>175</b>	<b>100%</b>	<b>4458</b>	<b>100%</b>

The rider losing control of the vehicle is a major feature in motorcycle crashes. As well as those shown in the “Lost control/run off road” category in the table above, over one-third of head-on crashes result from a rider losing control of the motorcycle.

### Percentage of motorcycle crashes where the motorcyclist had the primary responsibility for the crash 2003-2007

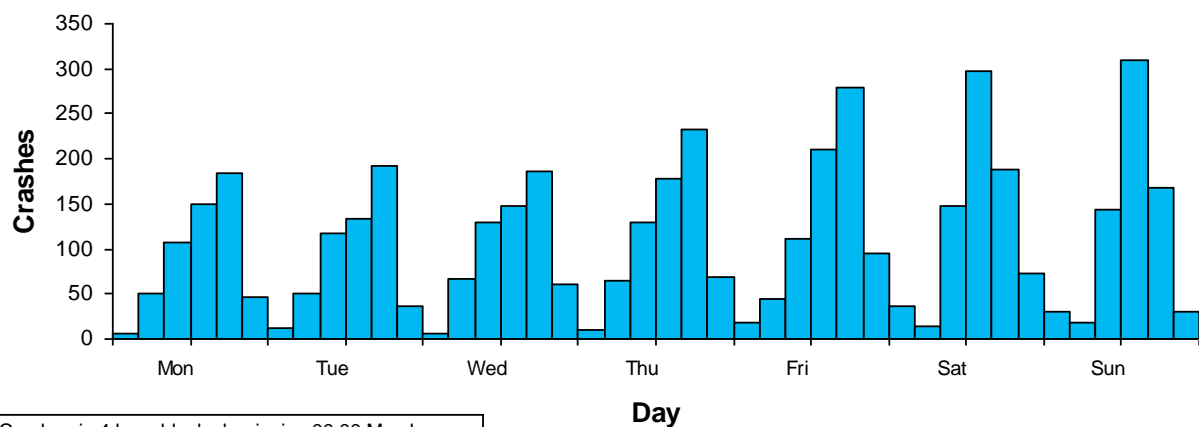


Specific crash movements that account for more than ten percent of all reported motorcycle crashes.

	Right turn against	13%	In this type of crash it is most common that the other vehicle turns across the path of the motorcyclist. The motorcyclist has the primary responsibility in only eight percent of these crashes.
	Lost control turning right	12%	These are single-vehicle crashes in which the motorcycle rider loses control on a right-hand bend. Loss of control on left-hand bends accounts for a further eight percent of crashes and loss of control on the straight for a further eight percent.
	Crossing vehicle turning	10%	In this type of crash it is most common for another vehicle to pull out and turn across the path of the motorcyclist. The motorcyclist has the primary responsibility in only 12 percent of these crashes.

### When do crashes happen?

#### Fatal and injury motorcycle crashes (2003-2007)



The peak times for motorcycle crashes are between 12 noon and 4 pm on Saturdays and Sundays and between 4 pm and 8 pm, Monday to Friday.

## Where do crashes happen?

### Urban roads (speed limit of 70km/h or less) and open roads 2003 – 2007

Type of road	Fatal crashes	Injury crashes	Total crashes
Urban	51	2,940	2,991
Open road	124	1,518	1,642
Total	175	4,461	4,636

(Note: Rows do not always add to the total as the speed limit is not always recorded)

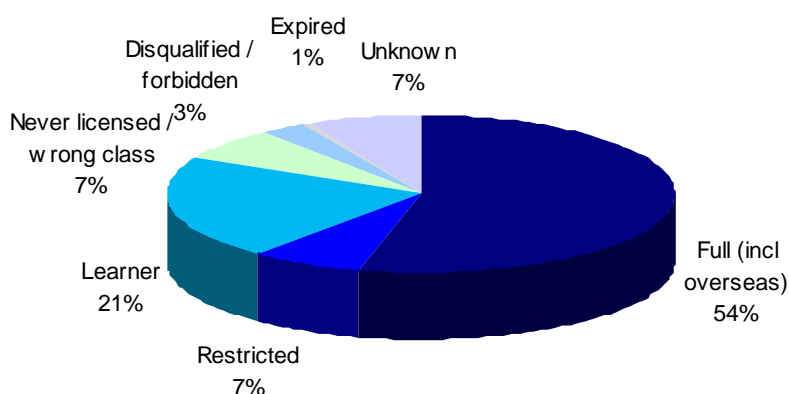
Two-thirds of all motorcycle injury accidents occur on **urban** (restricted speed) roads, but well over two-thirds of fatal crashes are on the **open** road.

### Most casualties are male

- 83 percent of all injured motorcyclists, and 90 percent of motorcyclist deaths, are males.

## Licence status of motorcyclists in crashes

Licence status of riders in crashes, 2003 - 2007



Despite the rule that learner and restricted licence holders are not permitted to ride motorcycles of greater than 250 cc engine capacity, ten percent of riders on learner licences, and 19 percent of riders on restricted licences, were riding bikes of over 250 cc at the time of their crashes.

For further information on crash statistics see *Motor Vehicle Crashes in New Zealand*, the annual statistical statement produced by the Ministry of Transport. This publication is available in secondary school libraries and many public libraries. Enquiries relating to crash statistics may be directed to the Ministry of Transport, PO Box 3175, Wellington, or by email on [info@transport.govt.nz](mailto:info@transport.govt.nz). For more information about road safety, visit the Ministry of Transport website at [www.transport.govt.nz](http://www.transport.govt.nz). "Motorcycles" was prepared by Strategy and Sustainability, Ministry of Transport, July 2008.