



Speeding

CRASH STATISTICS FOR THE YEAR ENDED 31 DEC 2008

Prepared by Transport Monitoring, Ministry of Transport

CRASH FACTSHEET

2009

In this fact sheet speeding is defined as **driving too fast for the conditions**¹. Within this definition speeding is considered in terms of “excess speed”, which refers to instances when vehicles travel in excess of the legally-declared speed limit, and “inappropriate speed” which refers to instances when vehicles travel at a speed which is unsuitable for the prevailing road and traffic conditions. The distinction is important because, while speed limits set speeds that it is illegal to exceed, it is up to the individual driver to decide what speed is appropriate for the conditions, within the set speed limit.

The faster you go, the more likely you are to crash and the greater your risk of serious injury or death. No matter what **causes** a crash, the driver's decision to travel at a certain speed directly affects the force of impact (and sometimes, whether there is an impact at all). Travelling too fast for the conditions ('speeding') puts you, your passengers and other road users at risk.

Probability of death at different impact speeds

| Collision type | Probability of death | | |
|------------------------------------------------------|----------------------|---------|----------|
| | 10% | 30% | 50% |
| Pedestrian struck by car | 30 km/h | 40 km/h | 45 km/h |
| Car driver in side-impact collision with another car | 50 km/h | 65 km/h | 75 km/h |
| Car driver in frontal impact with another car | 70 km/h | 95 km/h | 105 km/h |

The table above, based on a Monash University report², shows the fatality risk of three collision types. The first row shows the fatality risk to a pedestrian hit by a car, the second shows the fatality risk for the driver of a car in a side collision, and the last row shows the fatality risk for the driver of a car in a frontal collision. At 30 km/h pedestrians have about a 90 percent chance of surviving the impact of a motor vehicle, whereas if struck at about 45 km/h they have only a 50 percent chance of surviving.

As speed increases, there is an increase in the following factors and, in turn, an associated increase in the risk of crash involvement¹:

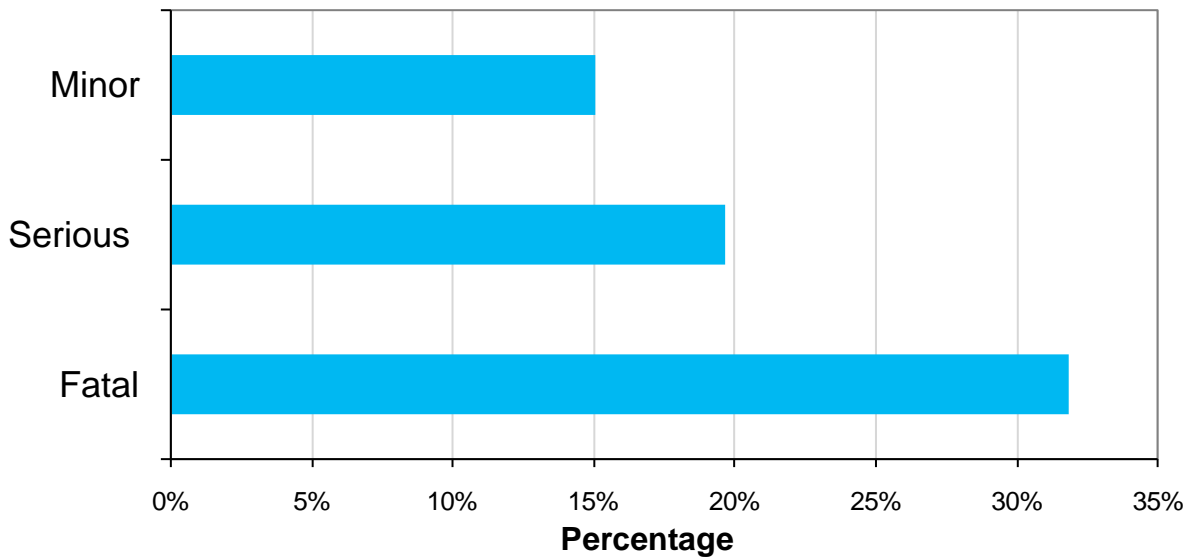
- Stopping distance – both the distance travelled during reaction time and the distance travelled after the brakes are applied
- The probability of exceeding the critical speed on a curve
- The chance of other road users misjudging how fast the speeding driver is travelling
- The probability of a rear-end crash if the driver has not accounted for the increased speed by increasing the following distance.

In 2008, speeding was a contributing factor in 111 fatal crashes, 415 serious injury crashes and 1,311 minor injury crashes. These crashes resulted in 127 deaths, 569 serious injuries and 2,060 minor injuries. The total social cost of crashes involving drivers speeding was about \$875 million, which is approximately a quarter of the social cost associated with all injury crashes.

¹ Down with Speed <http://www.transport.govt.nz/research/Documents/ACC672-Down-with-speed.pdf>

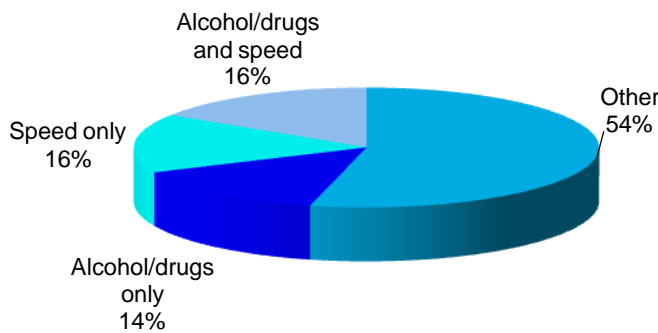
² The Impact of Lowered Speed Limits in Urban and Metropolitan Areas – Monash University Accident Research Centre report 276.

Percentage of crashes with driving too fast for the conditions cited as a contributing factor (2004 - 2008)



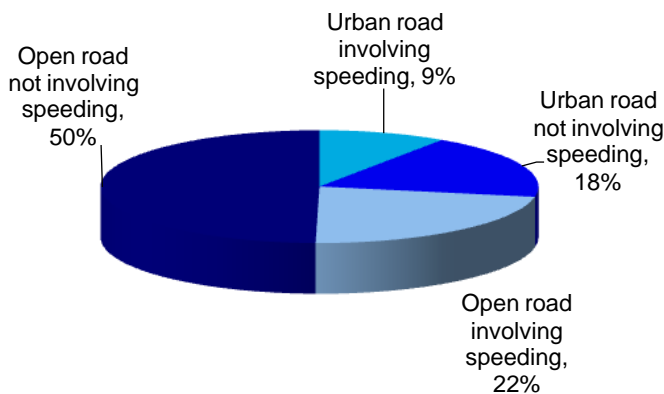
As crash severity increases, so does the contribution of drivers speeding. In New Zealand, for the years 2006 to 2008, driver speed was a factor in 32 percent of fatal crashes, 20 percent of serious injury crashes and 15 percent of minor injury crashes.

Speed and alcohol/drugs in fatal crashes (2006 - 2008)



As shown in the graph, the combination of speeding and alcohol/drugs contributed to 16 percent of fatal crashes. Speeding alone contributed to 16 percent, and alcohol/drugs alone to 14 percent, of fatal crashes. So speeding and/or alcohol/drugs are contributing factors in 46 percent of all fatal crashes.

Urban and open road fatal crashes (2006 - 2008)



Twenty-two percent of all fatal crashes are open road crashes that involve speeding as a contributing factor. A further nine percent are urban crashes in which speeding is a factor. The contribution of speeding to fatal crashes is similar for both open road and urban crashes. Speeding was a contributing factor in 34 percent of urban fatal crashes and 31 percent of open road fatal crashes.

Percentages may not add to 100% due to rounding.

Who dies?

For every 100 drivers or riders killed in road crashes in which speeding is a contributing factor, 59 of their passengers and another 20 road users die with them.

| Deaths in crashes in which speeding was a contributing factor (2006-2008) | | | | |
|---------------------------------------------------------------------------|------------------------|----------------------------------------|------------------|--------------------------|
| Age | Speed involved drivers | Passengers with speed-involved drivers | Other road users | Percentage of all deaths |
| 0-14 | 3 | 7 | 4 | 19% |
| 15-19 | 36 | 53 | 2 | 50% |
| 20-24 | 44 | 23 | 7 | 44% |
| 25-29 | 27 | 15 | 2 | 52% |
| 30-39 | 42 | 10 | 5 | 34% |
| 40-49 | 33 | 6 | 6 | 30% |
| 50-59 | 17 | 5 | 4 | 25% |
| 60+ | 10 | 7 | 12 | 12% |
| Unknown | 5 | 1 | 1 | 44% |
| Total | 217 | 127 | 43 | 33% |

Time series

Crashes and casualties with speeding as a contributing factor

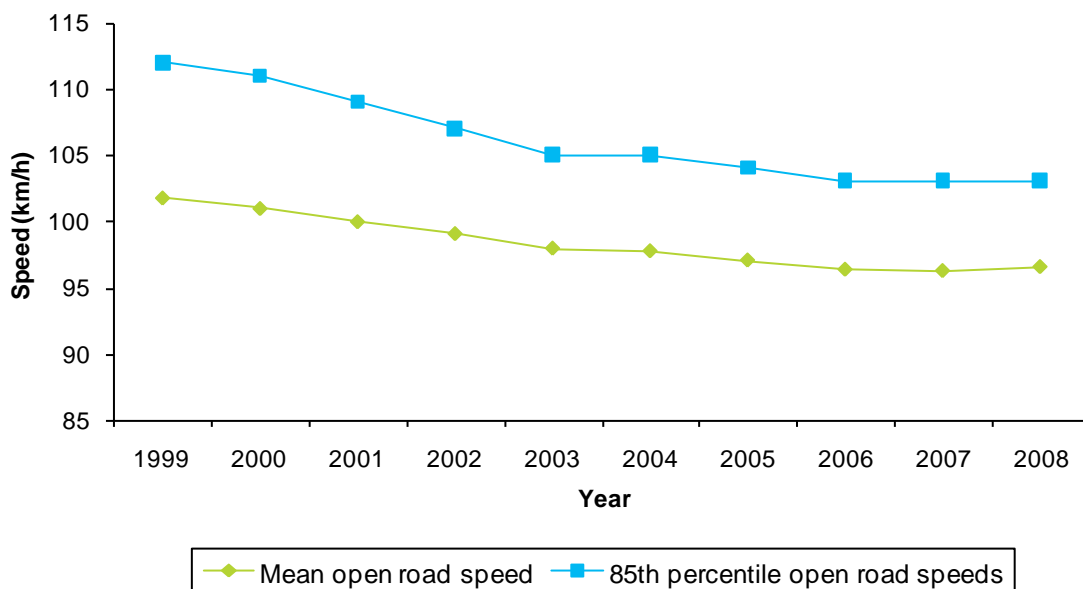
| Year | Crashes involving speed | | | | Casualties from crashes involving speed | | | |
|------|-------------------------|-----|--------|-----|-----------------------------------------|-----|----------|-----|
| | Fatal | | Injury | | Deaths | | Injuries | |
| | Number | % | Number | % | Number | % | Number | % |
| 1986 | 192 | 29% | 2024 | 16% | 224 | 29% | 3544 | 19% |
| 1987 | 251 | 37% | 2253 | 18% | 292 | 37% | 3904 | 21% |
| 1988 | 231 | 37% | 2204 | 19% | 267 | 37% | 3650 | 21% |
| 1989 | 257 | 40% | 2146 | 19% | 311 | 41% | 3624 | 22% |
| 1990 | 224 | 35% | 2041 | 17% | 265 | 36% | 3422 | 19% |
| 1991 | 190 | 34% | 2108 | 18% | 225 | 35% | 3383 | 20% |
| 1992 | 195 | 36% | 1918 | 17% | 241 | 37% | 3164 | 20% |
| 1993 | 192 | 37% | 1712 | 16% | 228 | 38% | 2801 | 19% |
| 1994 | 191 | 39% | 1816 | 16% | 228 | 39% | 2982 | 18% |
| 1995 | 182 | 36% | 1827 | 16% | 221 | 38% | 2988 | 18% |
| 1996 | 153 | 34% | 1684 | 17% | 177 | 34% | 2806 | 19% |
| 1997 | 137 | 29% | 1461 | 16% | 162 | 30% | 2508 | 19% |
| 1998 | 140 | 32% | 1415 | 17% | 162 | 32% | 2427 | 20% |
| 1999 | 124 | 29% | 1180 | 15% | 153 | 30% | 2095 | 18% |
| 2000 | 87 | 23% | 1122 | 15% | 102 | 22% | 1923 | 18% |
| 2001 | 123 | 31% | 1298 | 15% | 141 | 31% | 2197 | 18% |
| 2002 | 108 | 30% | 1431 | 15% | 126 | 31% | 2339 | 17% |
| 2003 | 140 | 35% | 1644 | 16% | 167 | 36% | 2601 | 18% |
| 2004 | 138 | 37% | 1632 | 16% | 172 | 39% | 2624 | 19% |
| 2005 | 113 | 33% | 1700 | 16% | 132 | 33% | 2677 | 19% |
| 2006 | 108 | 31% | 1734 | 16% | 127 | 32% | 2746 | 18% |
| 2007 | 117 | 31% | 1905 | 16% | 133 | 32% | 2949 | 18% |
| 2008 | 111 | 34% | 1726 | 15% | 127 | 35% | 2629 | 17% |

Note: The Police Traffic Crash Report form was modified in 2001. The speeding ("too fast for conditions") data since this change are not strictly comparable to earlier data.

Mean speeds

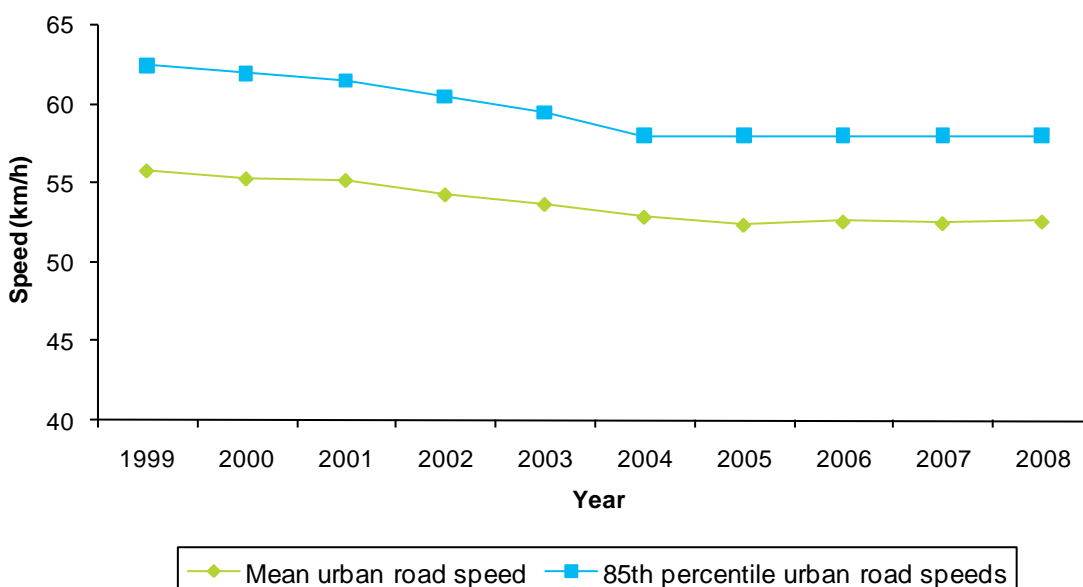
The following graphs show the results of speed surveys that monitor free speeds of vehicles in both 100 km/h speed limit areas and urban 50 km/h areas. Free speeds are those attained when the vehicle is unimpeded by the presence of other vehicles (i.e. there is some distance between a vehicle travelling at a free speed and the vehicle in front of it) or by environmental features such as traffic lights, intersections, hills, corners or road works. By monitoring the speeds of unimpeded vehicles this survey measures driver choice of speed. This measure provides information on the effectiveness of speed management measures and valuable information for developing safety policies.

Open road speed 1999 - 2008



Note: 85th percentile speed means 15 percent of the vehicles surveyed were travelling faster than this speed.

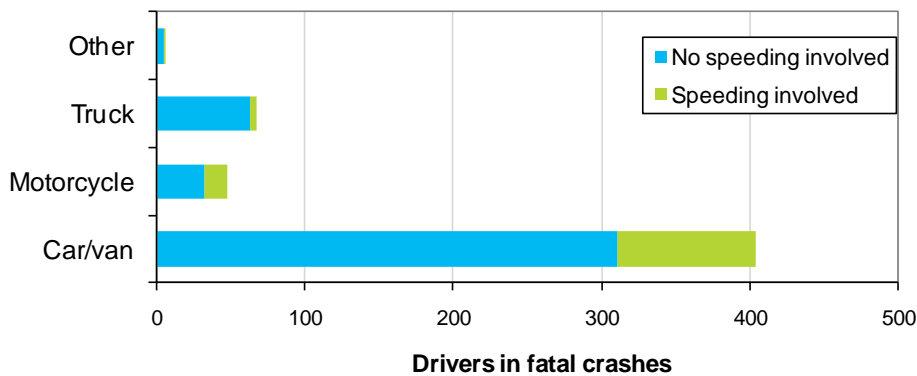
Urban road speed 1999-2008



Note: 85th percentile speed means 15 percent of the vehicles surveyed were travelling faster than this speed.

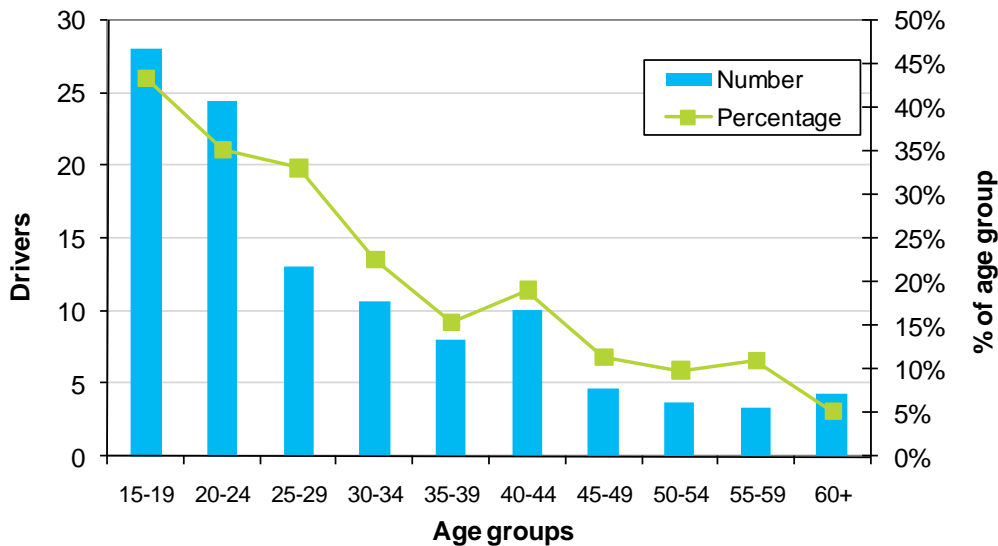
Drivers involved in fatal crashes

Drivers involved in fatal crashes by vehicle type (annual average 2006 - 2008)



From 2006 to 2008, speeding was a contributing factor in fatal crashes for 23 percent of car and van drivers, 33 percent of motorcyclists and seven percent of truck drivers. No bus or taxi drivers were involved in fatal crashes which had speeding as a contributing factor.

Drivers in fatal crashes involving speed by age group (annual average 2006 - 2008)



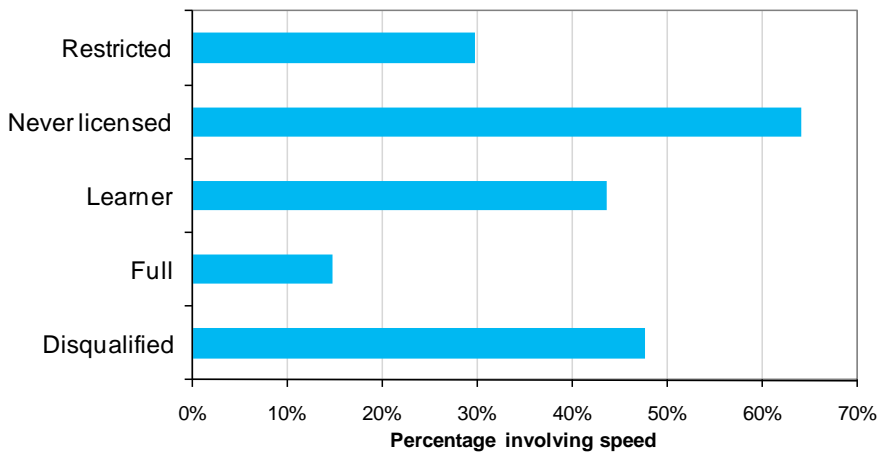
Drivers in fatal crashes involving speeding 2006-2008

| Age | Males | | Females | | Total | |
|--------------|------------|------------|-----------|------------|------------|------------|
| | Number | % | Number | % | Number | % |
| 15-19 | 69 | 50% | 15 | 27% | 84 | 43% |
| 20-24 | 59 | 38% | 14 | 26% | 73 | 35% |
| 25-29 | 34 | 38% | 5 | 17% | 39 | 33% |
| 30-34 | 27 | 24% | 5 | 17% | 32 | 23% |
| 35-39 | 22 | 18% | 2 | 6% | 24 | 15% |
| 40-44 | 24 | 20% | 6 | 18% | 30 | 19% |
| 45-49 | 10 | 10% | 4 | 15% | 14 | 11% |
| 50-54 | 7 | 8% | 4 | 17% | 11 | 10% |
| 55-59 | 8 | 12% | 2 | 8% | 10 | 11% |
| 60+ | 11 | 6% | 2 | 3% | 13 | 5% |
| Total | 280 | 23% | 61 | 16% | 341 | 22% |

Note: Rows and columns do not add up to the totals because the age or sex of some drivers was not recorded.

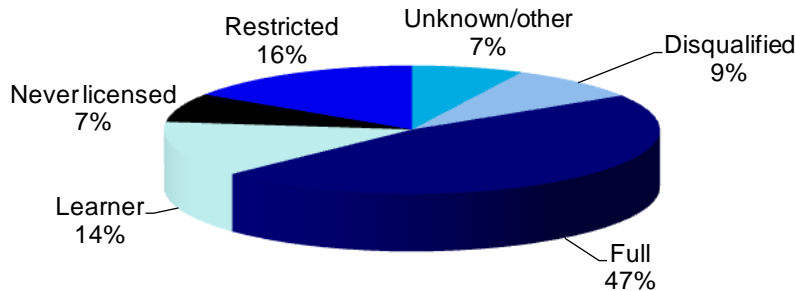
The 15-19 year old age group had the greatest number of drivers in fatal crashes involving speeding. In this age group 43 percent of the drivers in fatal crashes had speed involvement. Males generally have a higher proportion of involvement in speed-related crashes.

Percentage of drivers in fatal crashes who were speeding, by licence type (2006 - 2008)



Disqualified and never licensed drivers in fatal crashes are much more likely to be speeding (46% and 64%, respectively) than drivers with a full licence (15%). Together, disqualified and never licensed drivers comprise 16 percent of all drivers in speed-related fatal crashes. Drivers with restricted or learner licences are more likely to be in speed-involved fatal crashes than those with full licences. However, this group falls into the younger age categories where speeding is a big contributor to fatal crashes, and this accounts for some of the difference.

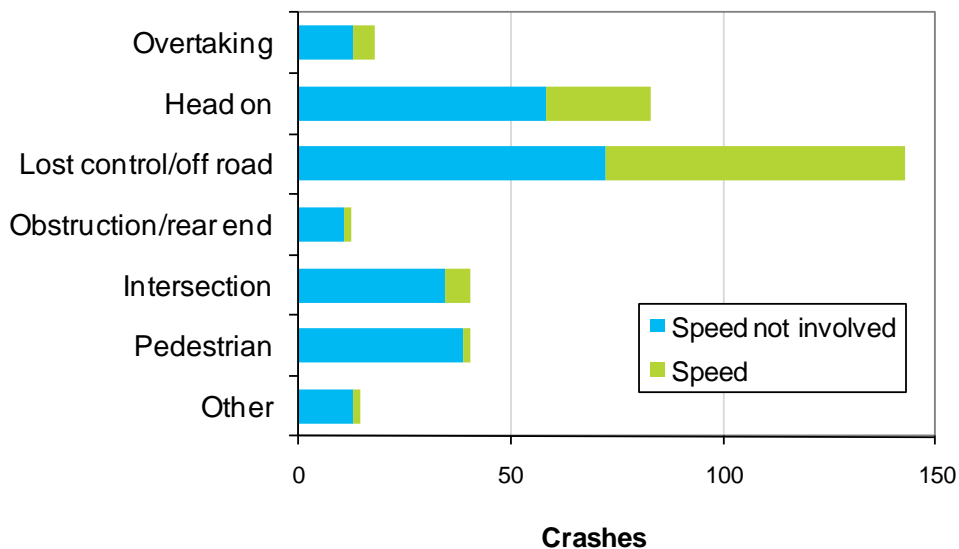
Licence status of speeding drivers in fatal crashes (2006 - 2008)



Note: Unknown/other includes drivers with an expired, unknown or wrong licence class. Disqualified includes drivers who have been forbidden to drive.

Types of crash

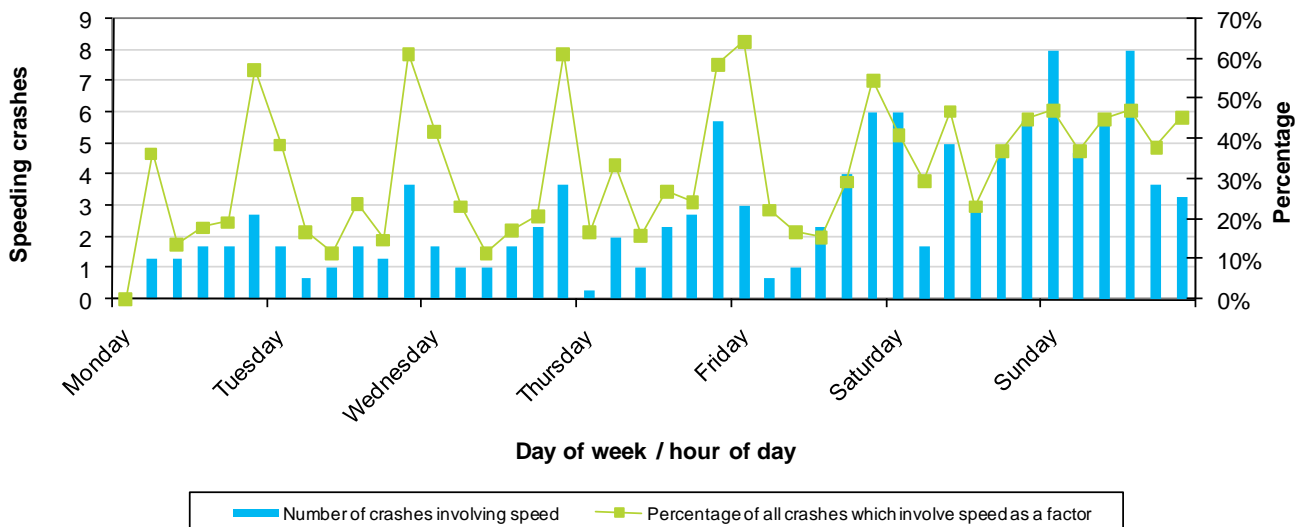
Types of fatal crashes where speeding was a factor (annual average 2006 - 2008)



Loss-of-control and head-on crashes are the most common types of fatal crash involving speeding. Over four-fifths of the fatal crashes in which speed was a factor fall into these categories.

When do crashes involving speeding occur?

Fatal crashes with drivers speeding as a factor by time of day and day of week
(annual average 2006 - 2008)



Note: A week is divided into 4-hour blocks, beginning 0000-0359 Monday, with days labelled at 0000 hours.

| Fatal crashes involving speeding by time of day and day of week (2006-2008) | | | | | | |
|--------------------------------------------------------------------------------|-----------------|-----|---------------------|-----|-------------------|-----|
| Day | Day (0600-1759) | | Evening (1800-2159) | | Night (2200-0559) | |
| | Number | % | Number | % | Number | % |
| Monday | 15 | 18% | 7 | 37% | 10 | 45% |
| Tuesday | 11 | 16% | 7 | 33% | 12 | 41% |
| Wednesday | 14 | 17% | 7 | 30% | 10 | 50% |
| Thursday | 19 | 24% | 12 | 44% | 17 | 55% |
| Friday | 14 | 16% | 14 | 42% | 33 | 48% |
| Saturday | 36 | 36% | 13 | 33% | 42 | 47% |
| Sunday | 31 | 33% | .6 | 33% | 3 | 30% |
| Total | 140 | 23% | 66 | 37% | 127 | 47% |

Note: On the day shown night begins at 2200 and finishes the following day at 0559.

At night, Tuesday to Saturday, a greater proportion of fatal crashes involve speed than at other times.

Seatbelts

Drivers in speed-related crashes are less likely to wear seatbelts than drivers in crashes in which speed is not a factor. For the car and van drivers killed between 2006 and 2008, at least 33 percent of those who were in a speed-related fatal crash were not restrained at the time of the crash. This compares to 16 percent for drivers in fatal crashes that did not involve speed (restraint use was not recorded for about ten percent of the drivers killed, so the level of restraint use could be even lower than indicated).

The recent history of speed-related legislation

- In 1967 driving at an “unreasonably slow speed” became a traffic offence.
- In 1971 the Speeding Infringement System was introduced.
- On the 4th of December 1973 the maximum open road speed limit was reduced from 55 mph to 50 mph (80 km/h) as part of fuel conservation measures.
- In 1975 speed limit and road signs were changed over to the metric system.
- On the 1st of July 1985 the open road speed limit was increased from 80 km/h to 100 km/h for all vehicles except heavy motor vehicles (speed limit now 90 km/h), articulated vehicles (90 km/h) and vehicles towing trailers (80 km/h).
- In 1989 a new schedule of infringement fees was introduced, including increased fees for speeding infringements.
- In October 1993 speed cameras were introduced.
- On the 1st of March 1999 a new provision of the Land Transport Act came into force, allowing roadside suspension for driving at 50 km/h or more above the posted speed limit.
- In 2001 the Land Transport (Road Safety Enforcement) Amendment Act 2001 removed legal impediments to the operation of urban speed cameras.
- In 2003 the Land Transport (Unauthorised Street and Drag Racing) Amendment Act created offences for street racing, wheel spinning and pouring slippery substances on the road to allow wheel spinning. Offenders can have their vehicles impounded for 28 days.
- On the 25th of February 2003 the Setting of Speed Limits Rule was signed, to come into force on a date to be determined by the Minister.
- On the 16th of January 2006 a new provision of the Land Transport Act came into force allowing roadside suspension for driving at 40 km/h or more above the posted speed limit.

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.

For additional detailed information about speed see *Down with Speed!*

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. For more information about road safety, visit the Ministry of Transport website at www.transport.govt.nz.

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