



Pedestrians

CRASH STATISTICS FOR THE YEAR ENDED 31 DEC 2008

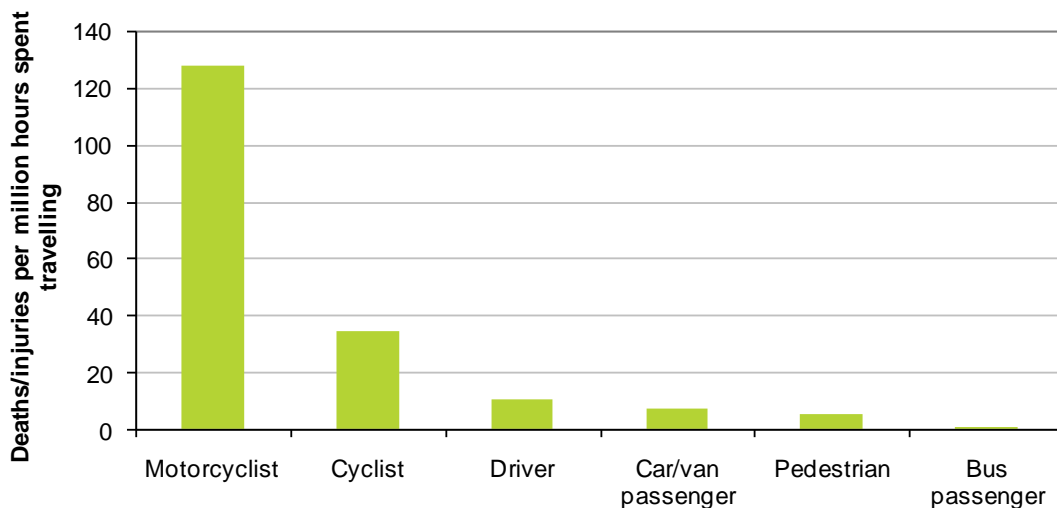
Prepared by Transport Monitoring, Ministry of Transport

CRASH FACTSHEET

2009

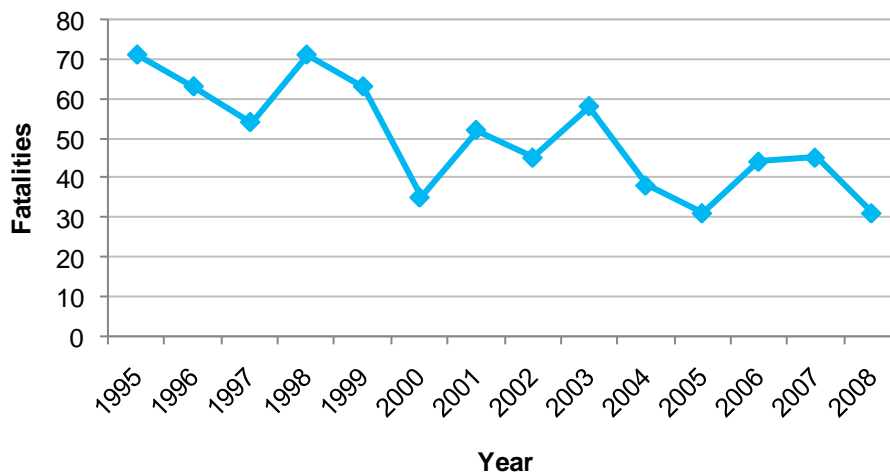
Walking is one of the safest modes of travel available. It carries the second lowest risk of being killed or injured per time unit travelled on New Zealand roads.

People killed or injured in motor vehicle crashes per million hours spent travelling, Jul 2003 - Jun 2008 (all ages)



Despite walking being one of the safest modes of travel, in 2008 31 pedestrians were killed, 261 pedestrians were seriously injured, and 678 pedestrians suffered minor injuries in police-reported crashes on New Zealand roads. The total social cost of police-reported crashes involving pedestrians was approximately \$342 million. This is about nine percent of the social cost associated with all fatal or injury crashes in 2008.

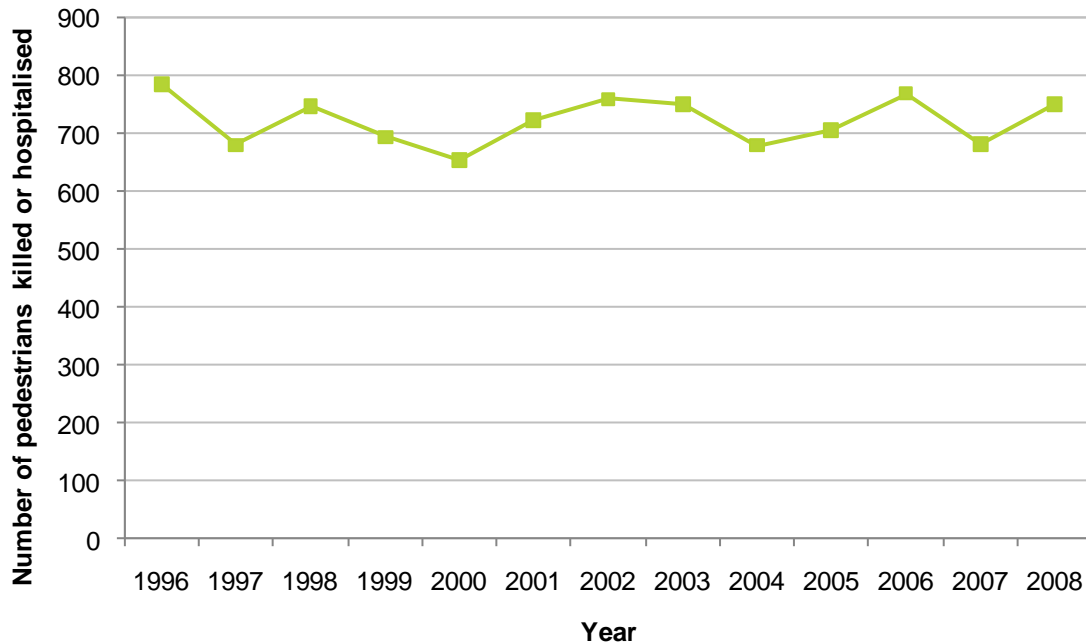
Pedestrian fatalities 1995 - 2008



Hospitalisations

Not all pedestrian injuries are reported to the police. Therefore hospitalisation data from the Ministry of Health can provide a more complete picture of the number of pedestrians injured in crashes involving motor vehicles.

Pedestrians killed or hospitalised from crashes involving motor vehicles (1996 - 2008)



In 2004-2008 nearly 3,400 pedestrians required hospitalisation due to injuries received from crashes involving motor vehicles on public roads in New Zealand. On average about 678 pedestrians per year required hospitalisation. During the same period, 189 pedestrians were killed from crashes involving motor vehicles on public roads. This is an average of about 38 pedestrians killed each year.

Time series

Pedestrians killed and injured 1986-2008 (Police-reported crashes)

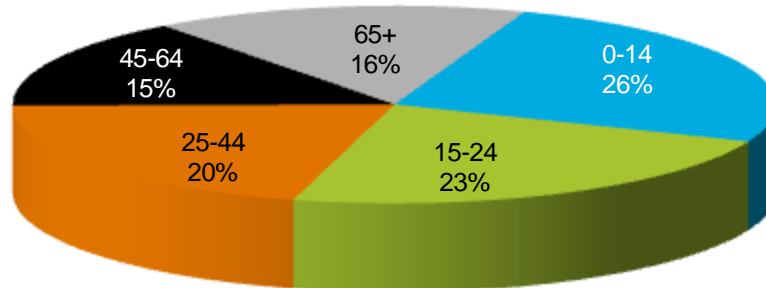
Year	Fatality		Injury	
	Number	% of all fatalities	Number	% of all injuries
1986	112	14.6%	1268	6.7%
1987	110	13.8%	1261	6.7%
1988	83	11.4%	1122	6.5%
1989	81	10.7%	1044	6.3%
1990	104	14.3%	1161	6.6%
1991	88	13.5%	1015	6.0%
1992	76	11.8%	1007	6.2%
1993	74	12.3%	949	6.3%
1994	54	9.3%	1063	6.4%
1995	71	12.2%	1053	6.2%
1996	63	12.3%	969	6.5%
1997	54	10.0%	925	6.9%
1998	71	14.2%	930	7.5%
1999	63	12.4%	895	7.5%
2000	35	7.6%	953	8.7%
2001	52	11.4%	986	8.0%
2002	45	11.1%	1065	7.7%
2003	58	12.6%	1058	7.4%
2004	38	8.7%	999	7.2%
2005	31	7.7%	943	6.5%
2006	44	11.3%	960	6.3%
2007	45	10.7%	868	5.4%
2008	31	8.5%	939	6.2%

Who gets injured?

Hospitalisations

Children under 15 account for 26 percent of pedestrian hospitalisations.

Hospitalisations of pedestrians involved in motor vehicle crashes by age (2004 - 2008)

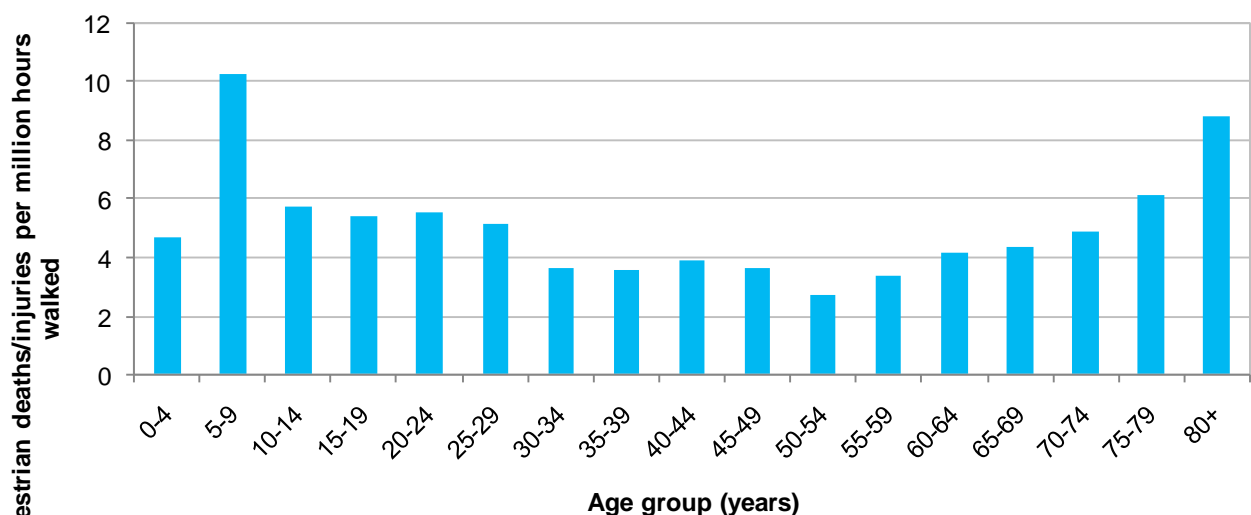


When the population of these age groups is considered, pedestrians aged 45-64 are at least risk of hospitalisation, with a rate of about twenty-six hospitalisations per 100,000 people per year (population data from Statistics New Zealand). Pedestrians aged less than 25 years old and those over 65 years old are at the greatest risk of injury. In these age groups around 20-25 pedestrians are hospitalised per 100,000 people each year.

Police-reported casualties

If the number of hours spent walking (based on the Ongoing Household Travel Survey) for different age groups is taken into account, children (particularly those aged 5-9 years) and older pedestrians (80 and above) appear to be the 'at-risk' groups. Older pedestrians as a potential 'at-risk' group will be influenced by their relative fragility, but they are also likely to be a growing and active group of pedestrians given the predicted future demographic changes in New Zealand.

Pedestrian deaths and injuries in motor vehicle crashes per million hours spent walking (not fragility corrected)



Source: Crash Analysis System , Ongoing NZ Household Travel Survey July 2003 - June 2008

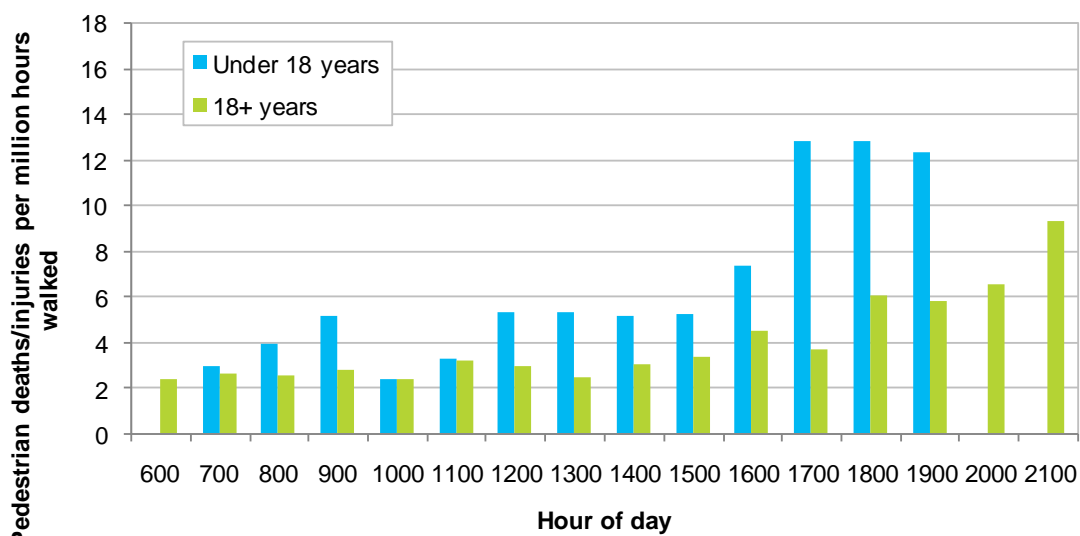
Male pedestrians

- 57 percent of all hospitalised pedestrians, and 54 percent of pedestrians involved in police-reported injury crashes, are male.

When and where do injuries occur?

If the number of reported pedestrian injuries (2003-2007) is adjusted by the time spent walking (based on the Ongoing Household Travel Survey) for time of day, children (under 18 years) are found to be at the highest risk in the early evening (5-8pm). For adults, the risk of injury per hour spent walking is spread more evenly across different hours of the day, with an increase towards the later part of the evening.

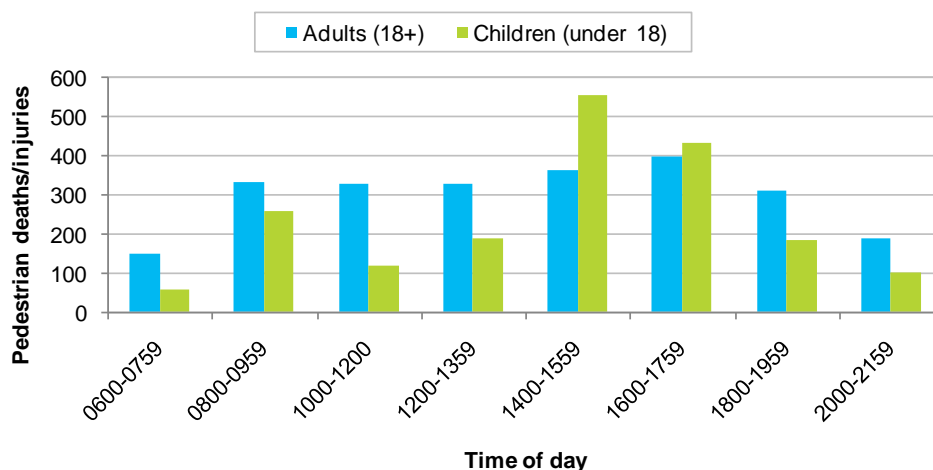
Pedestrian deaths/injuries in motor vehicle crashes per million hours walked (July 2003 - June 2008)



Note: Values have not been calculated between 2200 and 0600 and for children for 0600 and 2000-2100 as the number of trips was too small to provide reliable estimates.

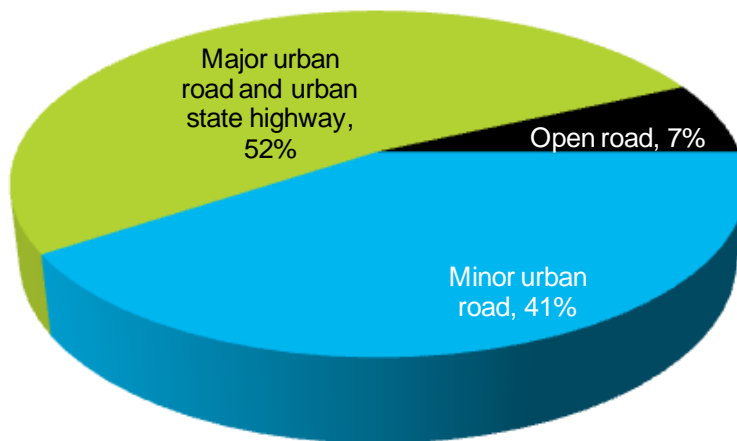
The graph on the next page shows the absolute number of pedestrians injured in crashes involving motor vehicles for 2004-2008. This looks quite different to the risk graph above, and shows that the highest numbers of child pedestrians are injured between 2-4pm, and that adult pedestrians are injured in relatively stable numbers from 8am until 6pm, when the absolute numbers of injured adult pedestrians begin to drop off.

Pedestrians killed or injured in motor vehicle crashes by time of day (2004 - 2008)



More than nine in every ten reported pedestrian casualties (2004-2008) occur on urban roads (those with a speed limit of 70 km/h or less). Furthermore, over half of all pedestrian casualties occur on major urban roads (typically busy arterials), rather than on the minor urban roads that mainly provide access to abutting properties.

Police reported pedestrian casualties by road type (2004 - 2008)

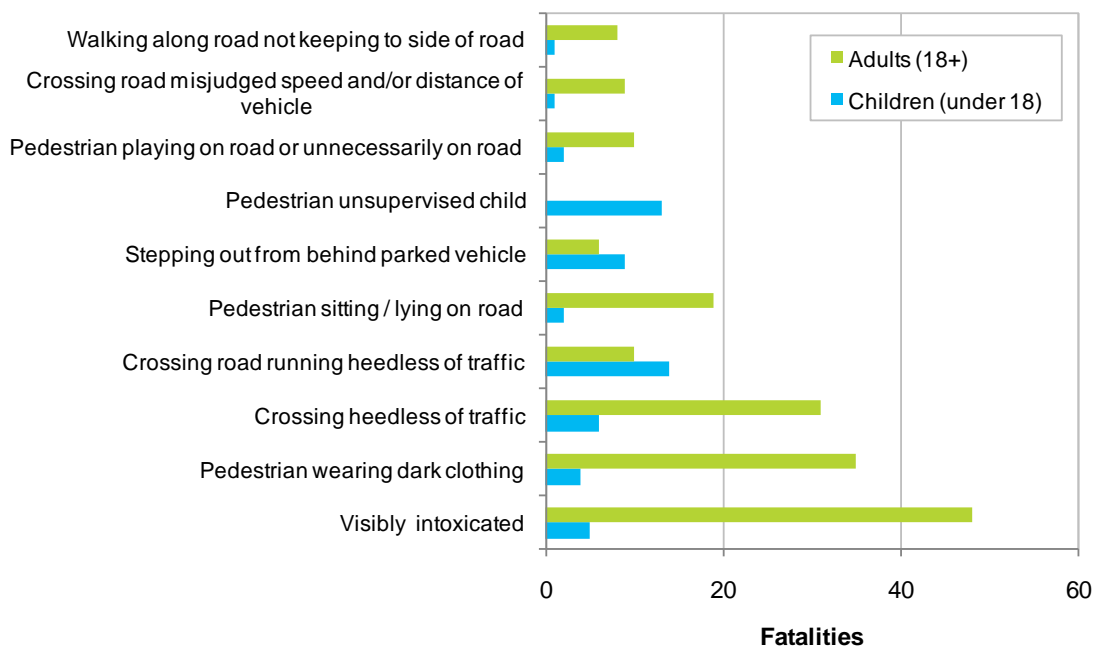


The majority (over 85%) of reported pedestrian casualties on urban roads (2004-2008) occurred when the pedestrian involved was crossing the road. Around two-thirds of these casualties occurred when the pedestrian was crossing the road in an unprotected area (for example, not at a pedestrian crossing or traffic lights).

Pedestrian factors



The most frequent factors associated with pedestrian fatalities are crossing the road heedless of traffic, being visibly intoxicated, and/or wearing dark clothing. Being unsupervised around roadways and running into the road heedless of traffic are also common pedestrian factors for those under the age of 18.

Ten most frequent pedestrian factors contributing to a fatal crash 2004 - 2008



Note: more than one of these factors could be attributed to any individual crash.

Two specific crash movements accounted for nearly 60 percent of all motor vehicle crashes, involving a pedestrian, reported to the Police in 2004-2008.

 <p>LEFT SIDE</p>	Pedestrian crossing road	38%	This type of crash involves the pedestrian being struck while crossing from the left side of the road.
 <p>RIGHT SIDE</p>	Pedestrian crossing road	21%	This type of crash involves the pedestrian being struck while crossing from the right side of the road.

Who was at fault?

Pedestrians were at fault in approximately 53 percent of all crashes resulting in the injury of pedestrians for 2004-2008. Fault is assigned to a pedestrian only if the driver of the vehicle involved was not found to have the primary fault for the crash.

Alcohol/drugs

Approximately eight percent of all police-reported pedestrian casualties during 2004-2008 were reported as being visibly intoxicated, and this rose to 12% for pedestrians aged over 18. These intoxicated pedestrians accounted for 54 fatalities (29% of all pedestrian fatalities), 129 serious injuries (10%), and 220 minor injuries (6%).

The risk of a pedestrian being involved in a crash exponentially increases with increasing blood alcohol concentration (BAC), in a similar way to the increase in crash risk for a driver. However, the risk of crash involvement for pedestrians begins to increase at higher levels of BAC than for drivers. This indicates that it is considerably safer to drink and walk than it is to drink and drive.

It is difficult to develop countermeasures to prevent excessive drinking and walking. However, any changes to the infrastructure that increase the safety of pedestrians in general are also likely to increase safety for intoxicated pedestrians.

Speed

The faster drivers are going, the more difficult it is to avoid hitting a pedestrian in their path. An alert driver travelling at 50 km/h will travel 37 metres after reaction/braking before coming to a complete stop. The same driver travelling at 100 km/h will move five metres further than this before even reacting and, once braking has started, will travel a further 69 metres before coming to a complete stop.

The speed at which pedestrians are struck is vitally important in determining how seriously they will be injured. Pedestrians struck at 32 km/h have a 95 percent chance of survival. If they are struck at 48 km/h their survival chance decreases to 55 percent. Finally, once the impact speed reaches 70 km/h, the survival chance is virtually zero. The risk which speed poses to more vulnerable pedestrians, such as the elderly and children, are likely to be even higher, due to their natural fragility and the most likely point of impact of the vehicle.

Skateboarders and Wheeled Pedestrians

Other road users with similar fragility characteristics to pedestrians are skateboarders and wheeled pedestrians, such as mobility scooter users, wheelchair users and people on push scooters. Between 2004 and 2008, two skateboarders and 10 wheeled pedestrians were killed in motor vehicle crashes, and 64 skateboarders and 106 wheeled pedestrians were injured in police-reported motor vehicle 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. For more information about road safety, visit the Ministry of Transport website at www.transport.govt.nz.

"Pedestrians" was prepared by Transport Monitoring, Ministry of Transport, November 2009.