



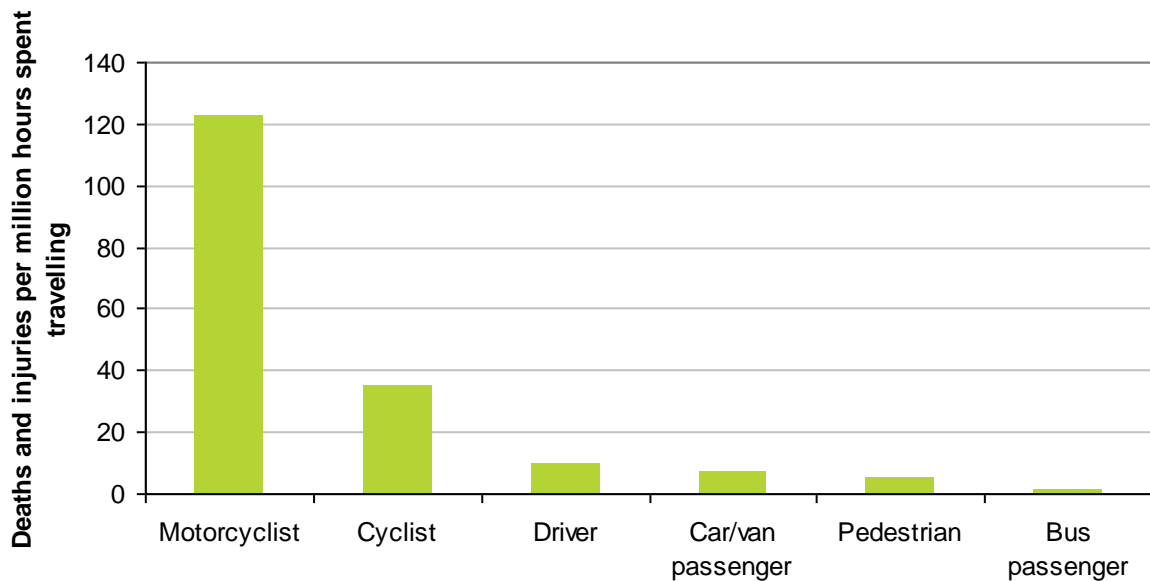
# Pedestrians

CRASH STATISTICS FOR THE YEAR ENDED 31 DEC 2007  
Prepared by Strategy and Sustainability, Ministry of Transport

CRASH FACTSHEET  
2008

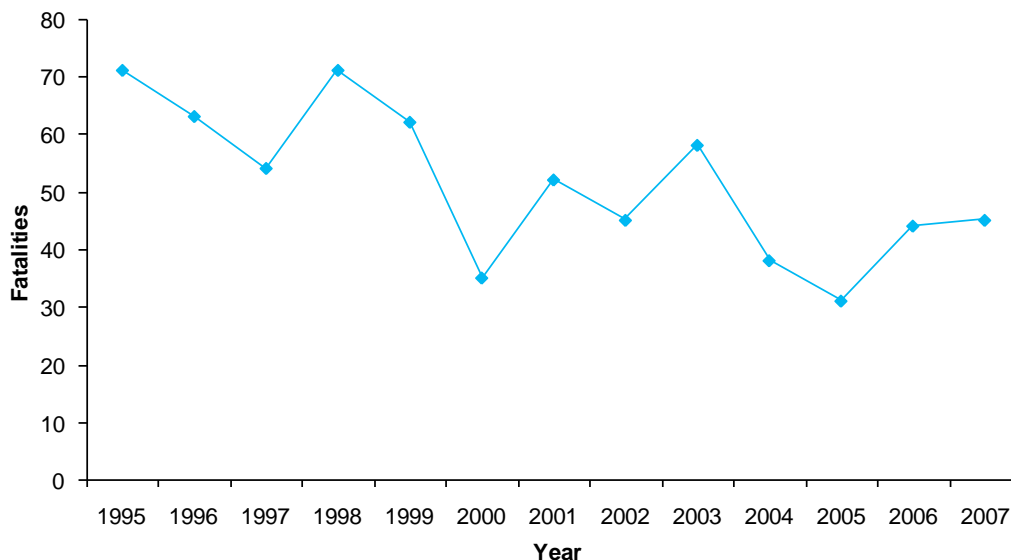
Walking is one of the safest modes of travel available. It carries the second lowest risk of being killed or injured per time unit travelled on New Zealand roads.

People killed or injured in motor vehicle crashes per million hours spent travelling, Jul 2003 - Jun 2007 (all ages)



Despite walking being one of the safest modes of travel, in 2007 45 pedestrians were killed, 232 pedestrians were seriously injured, and 636 pedestrians suffered minor injuries in police-reported crashes on New Zealand roads. The total social cost of police-reported crashes involving pedestrians was approximately \$304 million. That is about nine percent of the social cost associated with all injury crashes in 2007.

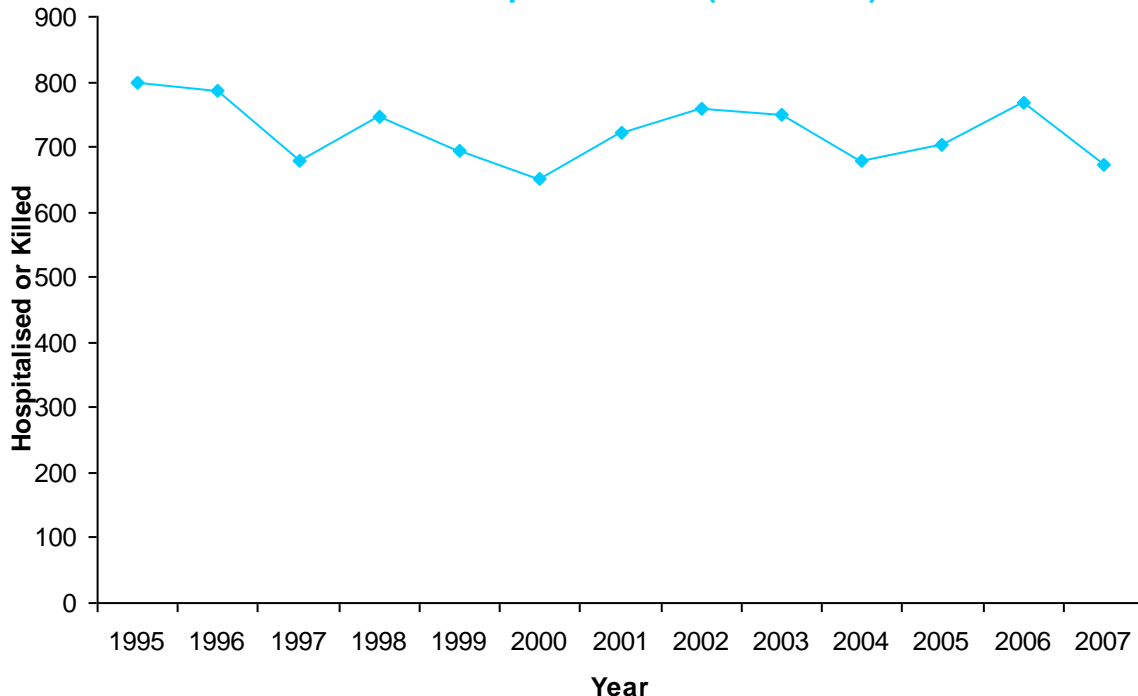
Pedestrian fatalities 1995-2007



## 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 hospitalised or killed from crashes involving motor vehicles on public roads (1995-2007)**



In 2003-2007 over 3,300 pedestrians required hospitalisation due to injuries received from crashes involving motor vehicles on public roads in New Zealand. On average about 671 pedestrians per year required hospitalisation. During the same period, 216 pedestrians were killed from crashes involving motor vehicles on public roads. That is an average of approximately 43 pedestrians killed each year.

## Time series

**Pedestrians killed and injured 1986-2007 (Police-reported crashes)**

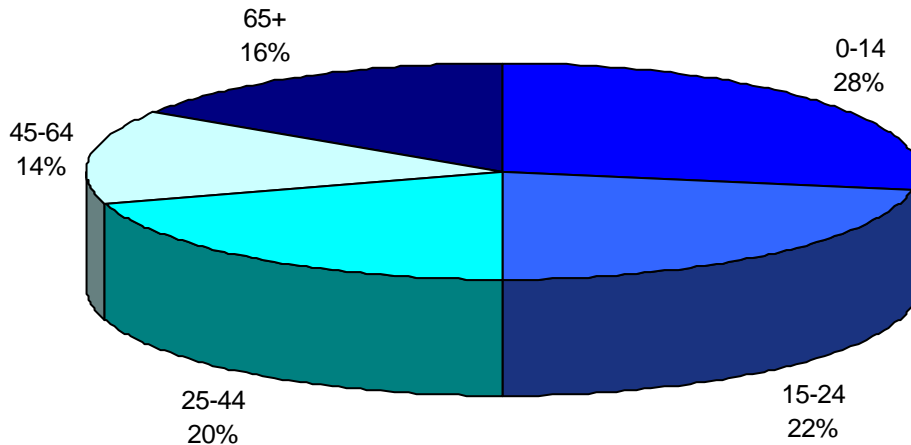
Year	Fatality		Injury	
	Number	% of all fatalities	Number	% of all injuries
1986	112	14.6%	1268	6.7%
1987	110	13.8%	1261	6.7%
1988	83	11.4%	1122	6.5%
1989	81	10.7%	1044	6.3%
1990	104	14.3%	1161	6.6%
1991	88	13.5%	1015	6.0%
1992	76	11.8%	1007	6.2%
1993	74	12.3%	949	6.3%
1994	54	9.3%	1063	6.4%
1995	71	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%

## Who gets injured?

### Hospitalisations

Children under 15 account for 28 percent of pedestrian hospitalisations.

#### Hospitalisations of pedestrians involved in motor vehicle crashes by age (2003 - 2007)

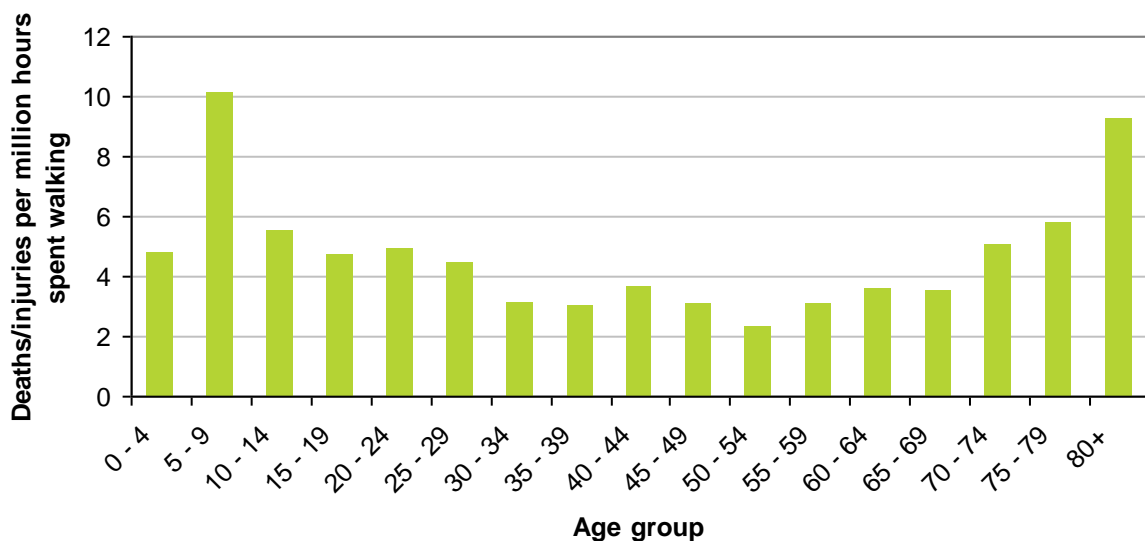


When the population of these age groups is considered, pedestrians aged 45-59 are at least risk of hospitalisation, with a rate of about eight hospitalisations per 100,000 people per year (population data from NZ census). Pedestrians aged less than 25 years old and over 70 years old are at the greatest risk of injury. In these age groups more than 15 pedestrians are hospitalised per 100,000 people each year.

### Police-reported casualties

If the number of hours spent walking (based on the On-going 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 issues of relative fragility, but they are also likely to be a growing and active group of pedestrians given predicted future demographic changes in New Zealand.

#### Pedestrians killed or injured in motor vehicle crashes per million hours spent walking (not fragility adjusted)



Source: Crash Analysis System; Ongoing NZ Household Travel Survey, Jul 2003 - Jun 2007

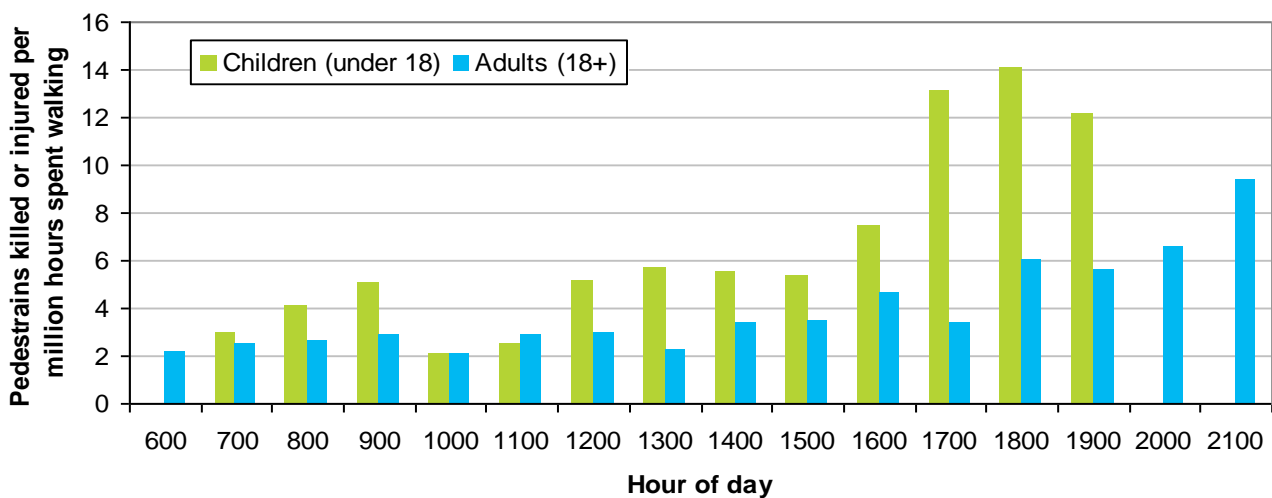
## Male pedestrians

- 58 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 On-going 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.

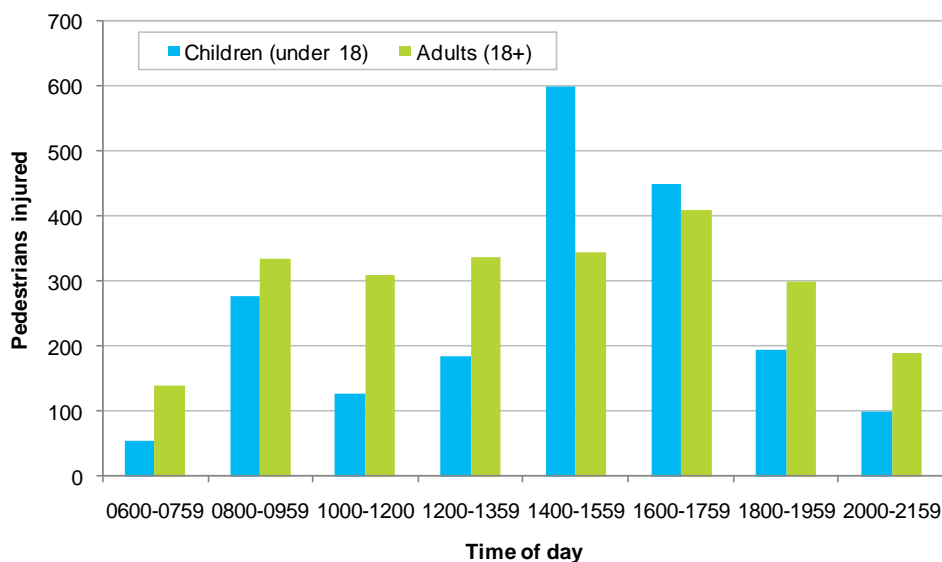
### Pedestrians killed or injured in motor vehicle crashes per million hours spent walking (Jul 2003 - Jun 2007)



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.

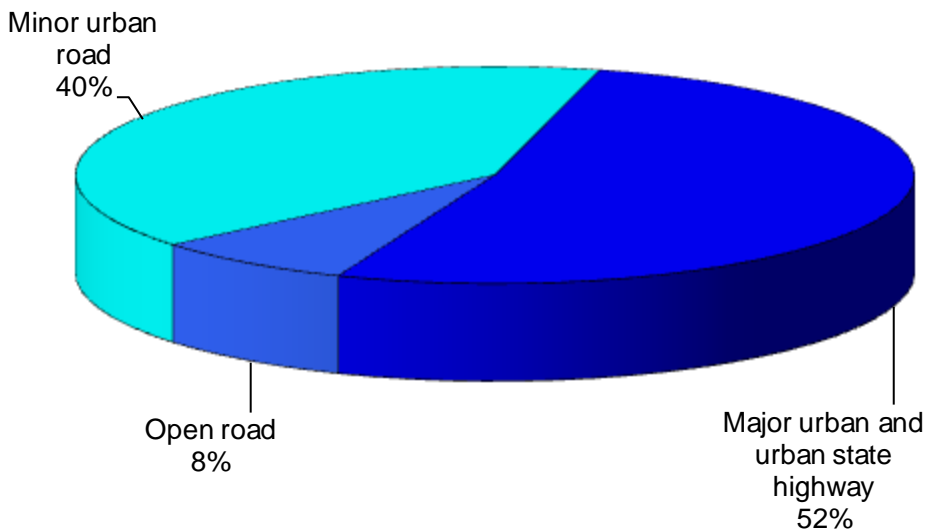
The graph below shows the absolute number of pedestrians injured in crashes involving motor vehicles for 2003-2007. This graph looks quite different to the risk graph above, and shows that the highest numbers of child pedestrians are injured between 2-4pm, and that adult pedestrians are injured in relatively stable numbers from 8am until 6pm, when the absolute numbers of adult injured pedestrians begin to drop off.

### Pedestrians injured in motor vehicle crashes by time of day (2003 – 2007)



Approximately nine out of ten reported casualties (2003-2007) for pedestrians occur on urban roads (roads with a speed limit of 70km/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 (2003 – 2007)

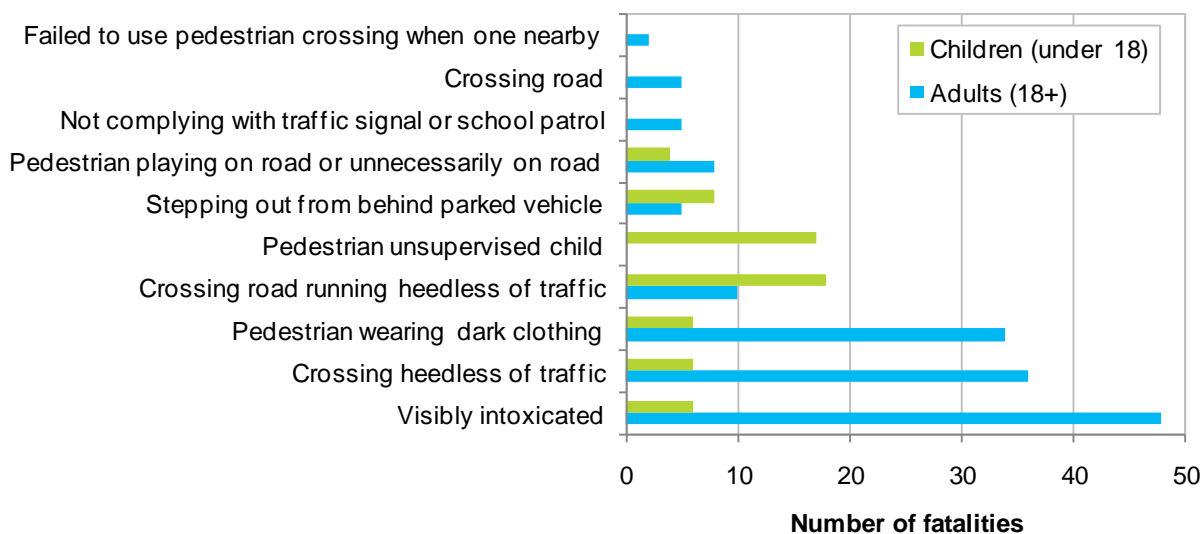


The majority (over 85%) of reported pedestrian casualties on urban roads (2003-2007) occurred when the pedestrian involved was crossing the road. Around two-thirds of these casualties occurred when the pedestrian was crossing the road in an unprotected area (for example, not at a pedestrian crossing 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 (2003 – 2007)



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

Two specific crash movements accounted for over 60 percent of all motor vehicle crashes involving a pedestrian reported to the Police in 2003-2007.

 <p>LEFT SIDE</p>	Pedestrian crossing road	40%	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 55 percent of all crashes resulting in the injury of pedestrians for 2003-2007. 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 police-reported pedestrian casualties during 2003-2007 were reported as being visibly intoxicated, and this rose to 12% for pedestrians over 18. These intoxicated pedestrians accounted for 55 fatalities (25% of all pedestrian fatalities), 133 serious injuries (10%), and 230 minor injuries (7%).

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 of 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 pedestrian 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 risks 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.

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). "Pedestrians" was prepared by Strategy and Sustainability, Ministry of Transport, July 2008.