

# *briefing notes road safety issues*

## *Nelson City*

Land Transport New Zealand has prepared this road safety issues report. It is based on reported crash data and trends for the 2003–2007 period.

This report is the ninth road safety report for Nelson city. Most of the information, unless otherwise stated in this report, applies to both local roads and State highways.

The intent of the report is to highlight the key road safety issues and assist in identifying possible ways to reduce the number of road deaths and injuries in the city. More detailed information may be obtained from either Nelson City Council (local roads) or Transit NZ (State highways). Please refer to the last page for contact details.

The issues chosen for this report are drawn from either the most common crash types or those that appear over-represented when Nelson city is compared to similar local bodies or those with high social cost of crashes (relating mainly to high numbers of fatal and serious crashes).

We have also included a brief overview of crashes in the city for 2007.

Major road safety issues		2007 road trauma	
Nelson City		Casualties	Nelson City
Loss of control at bends		Deaths	1
Crossing/turning		Serious casualties	22
Rear-end/obstruction		Minor casualties	112
Alcohol			
Cyclists & Motorcyclists			
Nationally		Crashes	Nelson City
Speed		Fatal crashes	1
Alcohol		Serious injury crashes	18
Failure to give way		Minor injury crashes	88
Restraints		Non injury crashes	301

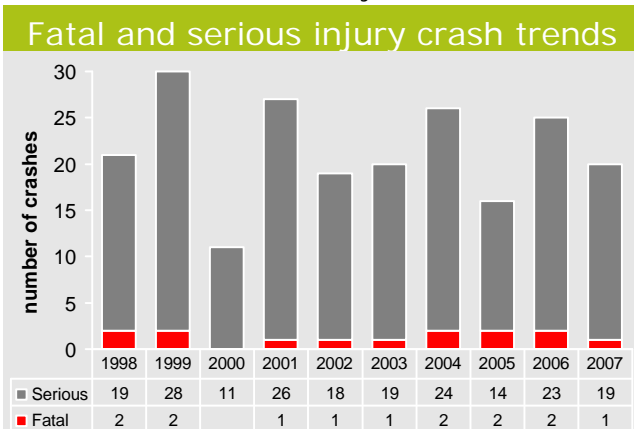
## Overview 2007

In 2007, in Nelson city, there were 107 injury crashes and 301 non-injury crashes reported by the New Zealand Police. Twenty three percent of the total injury crashes in the city were on State highways. The table below shows the number of injuries resulting from these crashes in the city.

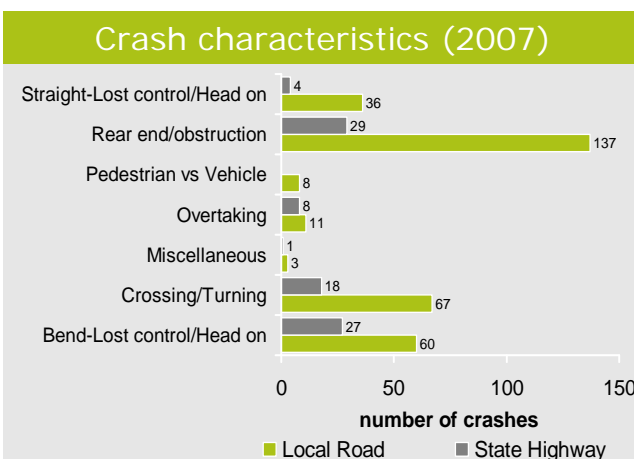
Casualties by injury type in 2007				
	Fatalities	Serious injuries	Minor injuries	Total
<b>Total</b>	<b>1</b>	<b>22</b>	<b>112</b>	<b>135</b>
Local roads Vs State highways				
Local	1	13	84	98
State Highway	0	9	28	37
Rural Vs Urban roads				
Rural <sup>1</sup>	0	9	22	31
Urban	1	13	90	104

Note: 1/ Rural - area with a speed limit of 80km/h or more

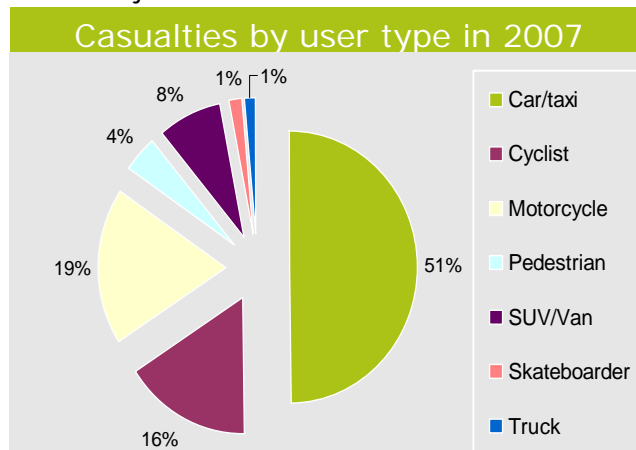
The total number of serious and fatal crashes have been fluctuating for the last ten years. However there has been little variation in the total number of all crashes in the last five years.



In 2007, rear end/obstruction was the main type of crash in the city followed by bend-lost control/head on and the crossing/turning crash types.



The highest number of casualties in 2007 were drivers and passengers of cars. Motorcyclists, cyclists and pedestrians account for approximately 40% of injuries in 2007.



Further information about all crashes in 2007 on:

#### Local roads

- Worst month: *August (11 percent)*
- Worst day of week: *Thursday (20 percent)*
- Wet road crashes: *14 percent*
- Night time crashes: *31 percent*
- Alcohol over limit (injury crashes): *16 percent*
- Too fast for conditions (injury crashes): *22 percent*
- Crashes at Intersection: *44 percent*
- Road factors: *5 percent*
- At fault or part fault male driver: *71 percent*
- Full NZ licence held by at fault or part fault (injury crashes) drivers: *49 percent*

#### State highways

- Worst month: *January (14 percent)*
- Worst day of week: *Friday (22 percent)*
- Wet road crashes: *26 percent*
- Night time crashes: *25 percent*
- Alcohol over limit (injury crashes): *24 percent*
- Too fast for conditions (injury crashes): *20 percent*
- Crashes at Intersection: *33 percent*
- Road factors: *17 percent*
- At fault or part fault male driver: *70 percent*
- Full NZ licence held by at fault or part fault (injury crashes) drivers: *78 percent*

### Social cost of crashes

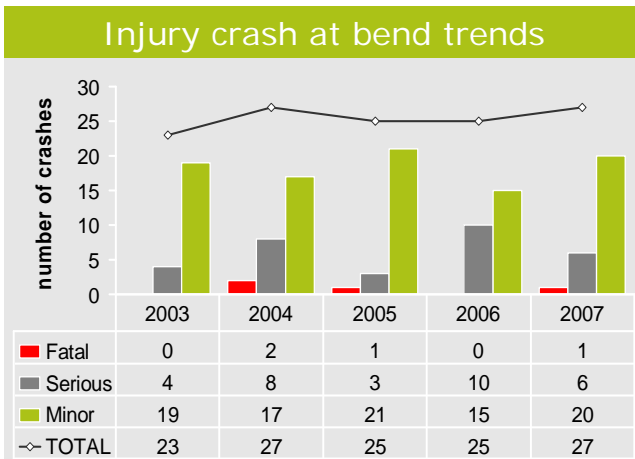
Local roads	\$ 19.42M
State highways	\$ 7.32M
<b>Total</b>	<b>\$ 26.76M</b>

NOTE: The estimated social cost includes loss of life or life quality, loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage.

## Loss of control at bends

During the five year period from 2003 to 2007, 21 percent of all crashes in Nelson city occurred at bends. These crashes resulted in 4 deaths, 32 serious injuries and 139 minor injuries. There were a further 297 non-injury crashes reported.

The number of fatal and serious injury crashes at bends have been fluctuating for the last five years, but total number of all injury crashes are quite steady.



The following table shows the split between crashes at bends on local roads and State highways (SH):

Loss of control	Local urban	Local rural	SH urban	SH rural
At bends	56%	3%	6%	34%

Most crashes at bends involved a driver losing control of their vehicle and running off the road or on occasions colliding with another vehicle.

The three most common roadside hazards struck in the city were *fences (18 percent)*, *over banks (13 percent)* and *trees (13 percent)* out of a total of 459 reported objects struck.

### Main characteristics of loss of control crashes at bends

Crash characteristic	Percentage of crashes
Single vehicle	73%
Alcohol (injury crashes)	28%
Too fast for the conditions (injury crashes)	48%
Road factors	21%
Poor handling (injury crashes)	31%
Rural road	37%
Wet road	31%
Night time	46%

Further information about all crashes at bends in the city for the period 2003-2007 on:

#### Local roads

- 2 deaths, 16 serious injuries and 64 minor injuries
- Worst month: *October (11 percent)*
- Worst day of week: *Sunday (21 percent)*
- Wet road crashes: *22 percent*
- Night time crashes: *22 percent*
- With alcohol over limit (injury crashes): *53 percent*
- Most common injury crash factors: *too fast (58 percent)* followed by *alcohol (39 percent)*
- At fault male driver (injury crashes): *90 percent*
- Full NZ licence at fault drivers (injury crashes): *36 percent*
- Most common at fault drivers' age group (injury crashes): *15 to 19 years old*

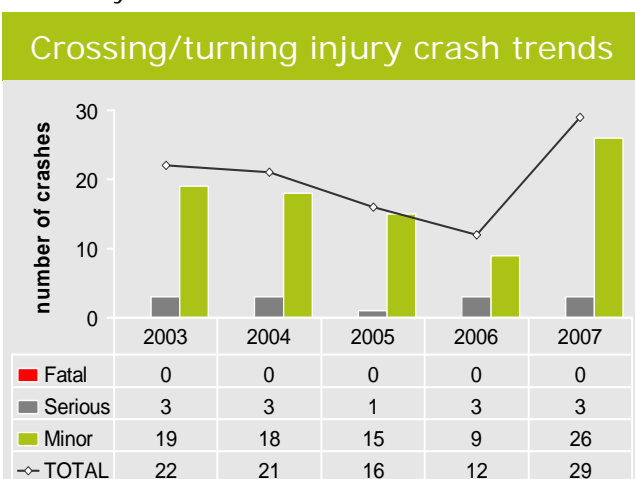
#### State highways

- 2 deaths, 16 serious injuries and 75 minor injuries
- Worst month: *December (15 percent)*
- Worst day of week: *Sunday (19 percent)*
- Wet road crashes: *44 percent*
- Night time crashes: *37 percent*
- With alcohol over limit (injury crashes): *16 percent*
- Most common injury crash factors: *too fast (38 percent)* followed by *poor handling (30 percent)*
- At fault male driver (injury crashes): *71 percent*
- Full NZ licence at fault drivers (injury crashes): *60 percent*
- Most common at fault drivers' age group (injury crashes): *15-19 years old*

## Crossing/turning

During the five year period from 2003 to 2007, there were 373 crashes involving crossing/turning movement at intersections and 76 crashes at driveways. These crashes resulted in 32 serious injuries and 163 minor injuries.

The number of crossing/turning crashes gradually reduced from 2003 to 2006, but has increased significantly in 2007. The number of the injury crashes in 2007 was the highest recorded in the last five years.



The table below shows the locations of the intersections with the high number of crashes in the City between 2003 and 2007.

Intersection name	Total crashes 2003 - 2007	Injury crashes 2003 - 2007	Total crashes in 2007
Waimea Road/ Motueka Street	32	16	7
Haven Rd/Halifax St	15	7	3
Main Rd Stoke/ Waimea Road	15	7	3
Halifax St/Paru Paru Road	14	6	3
Nile St/Tasman St	11	5	0
SH 6/ Hay Street	7	5	1

Crashes at T (tee) junctions in urban area were the most common intersection crash type, followed by X (cross) junctions crashes.

Junction Type	Rural	Urban
T (tee)	15	130
Driveways	4	73
X (cross)	3	124
Y	0	7
Roundabout	2	62
Unknown		7
Multi Join	0	2

The most common crash movement is a vehicle failing to give way while turning right across the traffic from a side road or driveway (36 percent). The second is where a vehicle turns right across on coming traffic (25 percent).

Intersections present drivers with one of their biggest driving challenges. High percentage (70 percent) of full licence holders are at fault in *crossing/turning* movement.

Further information about crossing/turning related all crashes in Nelson city for the period 2003 to 2007 on:

### Local roads

- 23 serious injuries and 135 minor injuries
- Worst month: *May* (11 percent),
- Worst day of week: *Thursday* (19 percent)
- Wet road crashes: 17 percent
- Night time crashes: 20 percent
- With alcohol over limit (injury crashes): 2 percent
- Most common injury crash factors: *failed to give way/stop* (91 percent) followed by *poor observation* (70 percent)
- Road factors: 5 percent
- At fault male driver (injury crashes): 47 percent
- Full NZ licence at fault drivers (injury crashes): 68 percent
- Most common at fault drivers' age group (injury crashes): 15 to 19 years old

### State highways

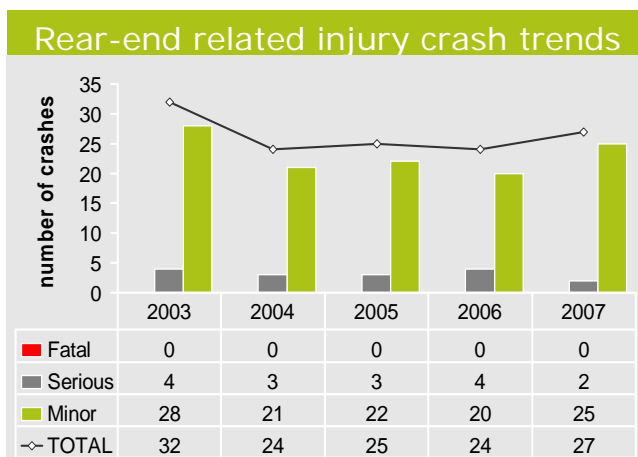
- 9 serious injuries and 28 minor injuries
- Worst month: *January* (14 percent)
- Worst day of week: *Wednesday* and *Friday* (19 percent)
- Wet road crashes: 14 percent
- Night time crashes: 17 percent
- With alcohol over limit (injury crashes): 4 percent
- Most common injury crash factors: *failed to give way/stop* (89 percent) followed by *poor observation* (74 percent)
- Road factors: 9 percent
- At fault male driver (injury crashes): 76 percent
- Full NZ licence at fault drivers (injury crashes): 79 percent
- Most common at fault drivers' age group (injury crashes): 70+ years old

## Rear-end crashes

Rear-end and obstruction type crashes were the most common crash type in Nelson city representing 41 percent of all injury and non-injury crashes both in 2007 and over the last five years (2003-2007).

Between 2003 and 2007, there were 16 serious injury, 116 minor injury and 698 non-injury rear-end/obstruction crashes recorded in Nelson city. These crashes resulted in 16 serious injuries and 136 minor injuries.

Total injury rear-end related crash numbers after moderate reduction after 2003 has been quite steady for last four years.



The five most common crashes in this category are:

- collision with the end of a queue of traffic
- collision with a parked vehicle
- collision with a U turning vehicle
- collision with a slower vehicle
- collision with a vehicle waiting to make a right turn

Driver factors play a significant part in crashes of this type. The number of crashes involving poor observation, which includes drivers failing to notice other traffic in front slowing, has increased in recent years. Unsafe following distances is also commonly recorded as a contributing factor and increased in 2007.

Rear-end and obstruction crashes are more commonly a route rather than site specific problem.

Further information about rear-end crashes in Nelson city between 2003 and 2007 on:

### Local roads

- 12 serious injuries and 101 minor injuries
- Worst month: *June (10 percent)*
- Worst day of week: *Thursday (17 percent)*
- Wet road crashes: *11 percent*
- Night time crashes: *28 percent*
- Crashes at Intersection: *21 percent*
- Road factors: *3 percent*
- With alcohol over limit (Injury crashes): *7 percent*
- Most common injury crash factors: *poor observation (77 percent)* followed by *incorrect lane position (17 percent)*
- At fault male driver (injury crashes): *60 percent*
- Full NZ licence at fault drivers (injury crashes): *63 percent*
- Most common at fault drivers' age group (injury crashes): *15 to 19 years old*

### State highways

- 4 serious injuries and 35 minor injuries
- Worst month: *May (12 percent)*
- Worst day of week: *Friday (21 percent)*
- Wet road crashes: *21 percent*
- Night time crashes: *17 percent*
- Crashes at Intersection: *26 percent*
- Road factors: *3 percent*
- With alcohol over limit (injury crashes): *9 percent*
- Most common injury crash factors: *poor observation (81 percent)* followed by *incorrect lane position (31 percent)*
- At fault male driver (injury crashes): *75 percent*
- Full NZ licence at fault drivers (injury crashes): *75 percent*
- Most common at fault drivers' age group (injury crashes): *30 to 39 years old*

## Alcohol

Alcohol affects the way people drive. Studies show that the risk of being involved in a crash increases rapidly as a driver's blood alcohol level rises. A driver over the legal limit (80mg of alcohol per 100ml of blood) is three times more likely to be involved in a crash than a sober driver.

People with high blood alcohol levels are more likely to be injured or killed in a crash than sober drivers in the same crash.

In 2007, alcohol-affected drivers contributed to 34 percent of all fatal crashes and 15 percent of all injury crashes in New Zealand.

In Nelson city, alcohol was a factor in 18 percent of all injury crashes in 2007 which is higher than the national average and higher than the last five year city average of 12 percent.

There were 57 alcohol-related injury and 127 non-injury crashes reported in the last five years. These crashes have resulted in 2 deaths, 10 serious and 65 minor injuries.

After slight reduction of alcohol related injury crashes between 2004 and 2006, the number of the crashes has increased sharply in 2007 to 19 which is the highest in the last five years.

### Alcohol related injury crash trends



The locations of alcohol related crashes in Nelson city are varied. The crashes are distributed within the city centre, and main routes through the city, particularly around intersections. Junctions on the state highway Queen Elizabeth II Drive through Wakefield Quay and the route Tahunanui Drive through Whakatu Drive feature. As does the route along Waimea Road from Nelson to Richmond.

Alcohol related crashes mostly occurred at night on both local roads and State highways.

Very few at fault drivers, especially on local roads, involved in alcohol related injury crashes were full NZ driver licence holders. This is a matter of concern.

Further information about alcohol related crashes in the City between 2003 and 2007 on:

### Local roads

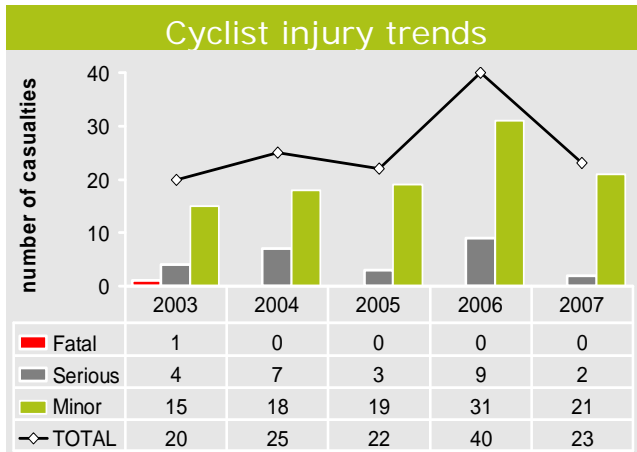
- 1 death, 6 serious injuries and 48 minor injuries
- Worst months: *October* and *November* (12 percent each)
- Worst day of week: *Sunday* (26 percent)
- Wet road crashes: 21 percent
- Night time crashes: 84 percent
- Crashes at intersection: 37 percent
- Excessive speed (injury crashes): 53 percent
- Most common injury crash factors: *poor observation* (23 percent) followed by *poor handling* (18 percent)
- Road factors: 3 percent
- At fault male driver (injury crashes): 89 percent
- Full NZ licence at fault drivers (injury crashes): 24 percent
- Most common at fault drivers' age group (injury crashes): 15 to 19 years old

### State highways

- 1 death, 4 serious injuries and 17 minor injuries
- Worst month: *December* (19 percent)
- Worst day of week: *Saturday* (29 percent)
- Wet road crashes: 23 percent
- Night time crashes: 87 percent
- Crashes at intersection: 32 percent
- Excessive speed (injury crashes): 41 percent
- Most common injury crash factors: *failed fatigue* (24 percent) followed by *poor observation* and *poor handling* (18 percent each)
- Road factors: 6 percent
- At fault male driver (injury crashes): 88 percent
- Full NZ licence at fault drivers (injury crashes): 47 percent
- Most common at fault drivers' age group (injury crashes): 15 to 19 years old

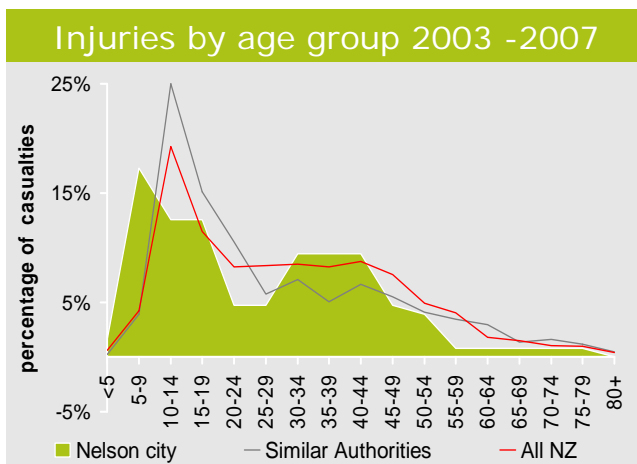
## Cyclists

Cyclists injured in Nelson city, account for 20 percent of all injuries and 13 percent of fatalities in the last five years. The total number of cyclists injured has been fairly steady for last five years except for the unusually high number in 2006, which could be due to high reporting rate in that year.



Most (96 percent) cycling crashes occurred on urban roads, 63 percent at intersections and 84 percent during daylight hours.

Injured cyclists are not spread evenly across all age groups. Forty three percent of the injured cyclists were between 10 year to 24 year of age followed by 28 percent in 35 to 49 year age group.



The high crash locations/routes (on the basis of injury crashes) for cyclist crashes in the city are shown in the table below:

### High cyclist crash locations/routes

SH6 route through Nelson city
Main routes & intersection generally in Nelson city
Grove Street route and Trafagular Street area
Waimea road and intersection on this route
Vanguard Street route

Further information about cyclist injury crashes between 2003 and 2007 on:

#### Local roads

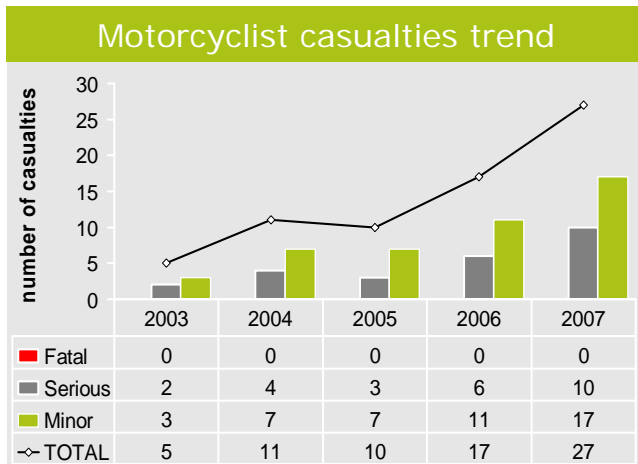
- 21 serious injuries and 86 minor injuries
- Worst month: *March (18 crashes)*
- Worst day of week: *Tuesday (28 crashes)*
- Most common injury crash factors: *poor observation (71 percent)* followed by *failure to give way /stop (53 percent)*
- Crashes at intersection: *62 percent*
- Wet road crashes: *14 percent*
- Night time crashes: *17 percent*

#### State highways

- 1 death, 4 serious injuries and 18 minor injuries
- Worst month: *November (6 crashes)*
- Worst day of week: *Friday (6 crashes)*
- Most common injury crash factors: *poor observation (86 percent)* followed by *failure to give way /stop (50 percent)*
- Crashes at intersection: *64 percent*
- Wet road crashes: *12 percent*
- Night time crashes: *12 percent*

## Motorcyclists

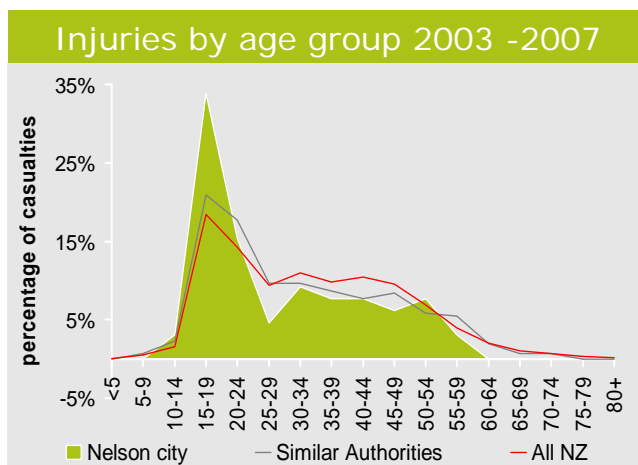
Motorcyclists in Nelson City make up 10 percent of all injuries in the last five year period. The number of total injuries in 2007 is the highest in the last five years and the trend in both serious and minor injuries is upwards.



Nationally motorcycling fatalities dropped from a high of 20 percent of all fatalities in 1988 to just 6 in 2003. Since then there has been a significant increase in motorcycle registrations and this has reversed the downward trend. In 2007 motorcyclists accounted for 11 percent of road fatalities in New Zealand.

Most (86 percent) motorcycling crashes in Nelson City happened on urban roads. Nearly two thirds of the motorcycling crashes (63 percent) happened away from intersections.

Young motorcyclists of 15 to 24 years of age are the most commonly injured group (49 percent). This is higher than national and similar authorities' averages.



We also see that 38 of the motorcyclists (38 percent) injured during this five-year period were 30 to 54 years of age.

The high crash locations/routes for motorcycle crashes in the city are shown in the following table:

High motorcyclist crash locations/ routes
SH6 route through the Whangamoia Ranges
SH6 route through Nelson city
Nelson South Intersections generally
Main routes and intersection generally in Nelson city
Vanguard Street route

Further information regarding 2003 to 2007 motorcycling crashes in the city:

### Local roads

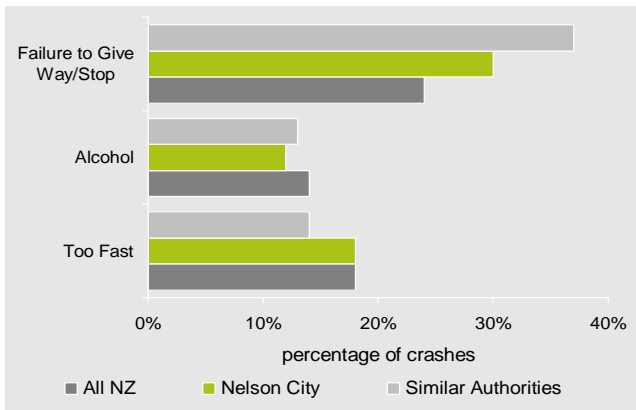
- 18 serious injuries and 38 minor injuries
- Worst month: *November (10 crashes)*
- Worst day of week: *Monday (14 crashes)*
- Most common injury crash factors: *Poor observation(46 percent)* followed by *failure to giveaway/stop (42 percent)*
- Wet road crashes: *8 percent*
- Night time crashes: *18 percent*
- With alcohol over limit (injury crashes): *4 percent*
- Crashes at intersection: *38 percent*

### State highways

- 7 serious injury and 7 minor injuries
- Worst month: *April (4 crashes)*
- Worst days of week: *Wednesday, Thursday and Saturday (4 crashes each)*
- Most common injury crash factors: *Failure to giveaway/stop (46 percent)* and *poor observation(38 percent)*
- Wet road crashes: *11 percent*
- Night time crashes: *17 percent*
- With alcohol over limit (injury crashes): *15 percent*
- Crashes at intersection: *33 percent*



## National issues



### Speed

In Nelson City, *too fast* was recorded in 18 percent of injury crashes in the last five years, resulting in 2 deaths and 136 injuries. *Speed* as a factor in crashes is increasing in the city.

Sixty-six percent of *speed*-related crashes involved *loss of control / heads-on at bends*. *Alcohol* and *poor handling* were the driver factors most often associated with *speed* crashes. Male drivers aged under 25 years old were most involved in these crashes.

### Alcohol

In Nelson City, *alcohol* was involved in 12 percent of injury crashes in the last five years, resulting in 2 deaths and 84 other injuries. The number of injury crashes involving alcohol is increasing.

Eighty-six percent of *alcohol* crashes were in urban areas. Sixty-two percent of these involved *Loss of control/head on* crashes. Travelling *too fast* and *poor observation* were the main factors often associated with *alcohol*.

### Failure to give way

In Nelson City, *failure to give way or stop* was reported in 30 percent of all reported injury crashes for the last five years resulting in a total of 186 injuries. Most (93 percent) of these are *crossing/turning* manoeuvres, often associated with failure to look for other parties. Fifty-two percent of at fault drivers in these crashes were males.

### Restraints

The Ministry of Transport conducts surveys of restraint use. According to 2007 survey results restraint rate in Nelson City for front seat and rear seat are 98 percent and 88 percent respectively (while corresponding national rates are 95 percent and 87 percent). The results are obtainable from the Ministry of Transport website.

<http://www.transport.govt.nz/belts-index/>

## Contacts

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