



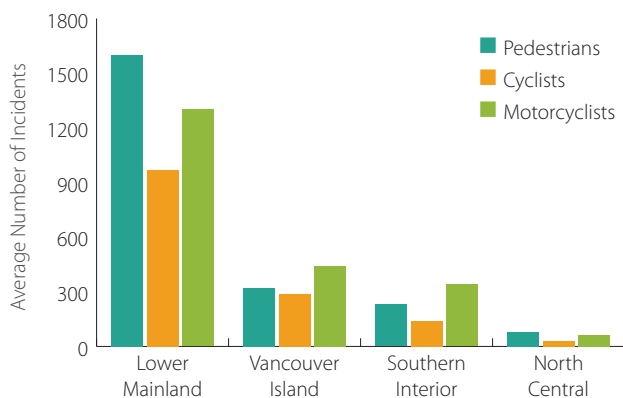
Rush Hour Dunsmuir Bike Lane (c) Paul Krueger CC 2.0

# Injury Insight

## Road Safety Among Vulnerable Road Users

Vulnerable road users—typically including pedestrians, cyclists and motorcyclists—suffer disproportionate adverse consequences from motor vehicle collisions.

Incidents by Region, BC, 5-Year Average, 2009-2013



ICBC's 2013 crash data for the North Central region is not yet fully available. BC and North Central totals for crash counts do not include a small number of incidents for November and December 2013.

*Motorcycle: Includes mopeds, limited speed motorcycles, scooters and trikes.*

Sources:

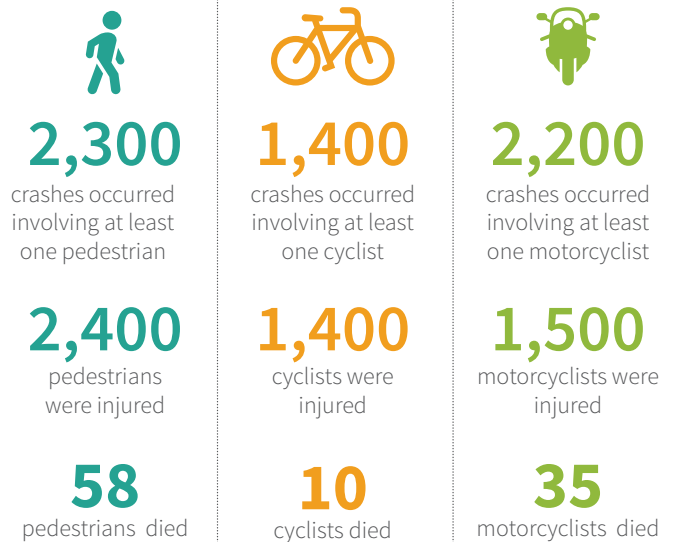
*Business Information Warehouse (as of March 31, 2014) for incidents and injured victim counts.*

*Police Traffic Accident System (as of July 31, 2013) for fatal victim counts.*

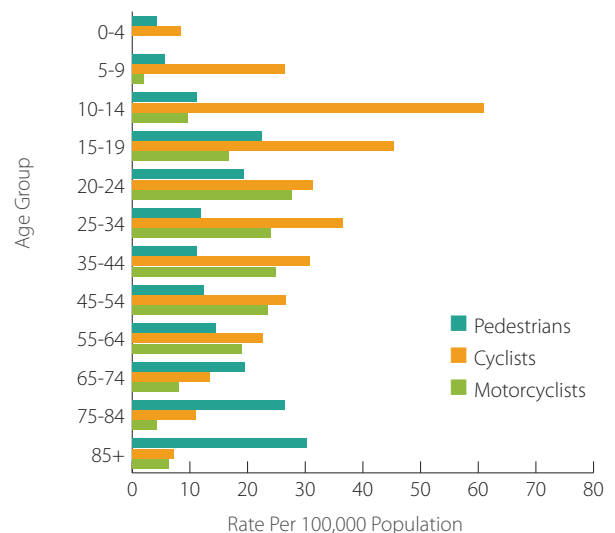
Hospitalizations among pedestrians more common in ages 15-24 and over age 65+, among cyclists more common in ages 10-14 and 15-19 and among motorcyclists increasing rates in older individuals.

In BC from 1996 to 2011, pedestrian fatalities were more prevalent during winter months, majority of cyclist fatalities occurred between June and September, with more than half of all cyclist collisions taking place at intersections, mostly occurring in daylight hours with a peak collision time from 3 p.m. to 6 p.m. The majority of motorcyclist fatalities occurred between May and September.

## 5 YEAR AVERAGE INCIDENTS FROM 2009-2013



Hospitalization Rates by Age for Pedestrians, Cyclists and Motorcyclists, 2006/07-2010/11



Note: Motorcyclist includes both driver and passenger.

Source: Discharge Abstract Database (DAD), Ministry of Health, BCIRPU Injury Data Online Tool, 2013.

## Factors Associated with Collisions with Pedestrians:

- Inattentive driver
- Driver failing to yield to right of way
- Driver error/confusion
- Pedestrian error/confusion/distracted
- Alcohol
- Crossing-against-the-signal or with no signal
- No marked crosswalk
- Midblock-crossing
- Inadequate play areas for children, hence children playing on roadways
- High volumes of traffic in residential neighbourhoods
- Speed over 30 km/hr in residential neighbourhoods
- Dense curb-side parking in residential neighbourhoods
- Lack of parental supervision

## Best Practices for Preventing Pedestrian Collisions:

- Wide, well-lit and well-maintained sidewalks
- Slower vehicle speeds (e.g. 32 km/h in residential areas)
- Zebra crosswalks, clearly marked
- Pedestrian activated crossing signals
- Pedestrian refuge islands for crossing wide streets
- Right-turning islands
- Safe walkways (particularly for seniors)
- Better road signage, paying particular attention to school zones
- Auto-free pedestrian zones
- Sidewalks on both sides of all streets
- Intersection modifications
- Speed bumps
- Traffic circles
- Banning the parking of vehicles near pedestrian crossings and in the vicinity of schools and playgrounds
- Erecting barriers near schools, i.e. between the footpath and the highway
- Creating 'residential zones' where children can move about and play
- Wearing bright clothing, lights and reflectors to improve visibility



Street Feet (c) Dana, CC 2.0

## Factors Associated with Collisions with Cyclists:

- Inattention
- Driving on the wrong side of the road
- Failing to yield to right of way
- Cyclist error/confusion
- Ignoring traffic control device
- Driver error/confusion
- Improper turns
- Sunlight glare (as reported)



## Best Practices for Preventing Cyclist Collisions:

- Helmet use
- Bicycle lights
- Wearing reflective materials
- Bike routes
- Bike lanes
- Bike paths
- Cycle tracks at roundabouts
- Street lighting
- Paved surfaces
- Low-angled grades
- Bicycle boxes at intersections
- Bicycle signal lights

## Factors Associated with Collisions with Motorcyclists:

- Speed
- Inattentive drivers
- Driver error/confusion
- Alcohol
- Wild animals
- Failing to yield to right of way
- Improper turning
- Following too closely
- Size and capacity of motorcycles that permit driving at high speeds

## Best Practices for Preventing Motorcyclist Collisions:

- Wearing inflatable air jackets and good protective clothing
- Wearing helmets that meet recognized safety standards
- Increasing the minimum age for a motorcycle license
- Implementing power-to-weight restrictions for new riders (e.g. 650 cc plus 125 kw/tonne ratio)
- Requiring all new riders to observe conditions of a Graduated License Program even if they already have a car license
- Requiring "currency" of riding to maintain a license (addresses problem of older rider starting to ride again after 20 years of not riding)

BCIRPU conducted a review epidemiology of motorcycle injuries among men, using data from the BC Trauma Registry to examine differences in trends between older and younger men, examine differences in outcomes and risk factors between older and younger men. Results showed increasing rates of motorcycle injury in older men, not mirrored in younger men or in women, and with no similar increase in hospitalizations for falls or motor vehicle crashes. The length of stay in the hospital was greater for older riders who were also more likely to sustain a thorax injury and upper extremity injury than younger male motorcyclists

### Possible reasons for this increase:

- Overall increase in motorcycle use in the population; increasing average age of riders participating in training.
- Older male motorcyclists are more likely to use higher-powered motorcycles
- Less experience riding motorcycles either as new or returning riders

- Experience decline in physical and cognitive abilities and unaware of these deficits
- Differences in hospital admission decisions

### Recent amendments to motorcycle provisions include:

- Motorcycle drivers and passengers are required to wear helmets that meet recognized safety standards.
- Drivers are responsible for ensuring passengers under 16 meet helmet and seating requirements.
- Police are allowed to inspect helmets and seize those that do not meet prescribed standards.
- New seating requirements are added for passengers to keep their feet firmly planted on the foot pegs or floorboards of the motorcycle.
- Regulation-making powers be created to specify the classes of motorcycles that a class of persons, such as new riders, may drive, and to prescribe standards and specifications for motorcycle safety helmets.



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## NEW RESEARCH



### Rise in injury rates for older male motorcyclists: An emerging medical and public health concern

BC Medical Journal, October 2014 Issue

[Go to article »](#)



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## RESOURCES

- 🔗 [www.cyclingbc.net](http://www.cyclingbc.net)
- 🔗 [www.richmond.ca/cycling](http://www.richmond.ca/cycling)
- 🔗 [www.thinkfirst.ca/chapters/in\\_bc.aspx](http://www.thinkfirst.ca/chapters/in_bc.aspx)
- 🔗 [parachutecanada.org/resources](http://parachutecanada.org/resources)
- 🔗 ICBC: Be a Safe Pedestrian
- 🔗 ICBC: Motorcycle Safety for Riders & Drivers

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