



# What's Speed Got to Do With It?

## **Driver Speed:**

Children are more likely to be struck by a car in areas with higher speed limits.<sup>1</sup> In fact, there is a direct correlation between an increase in vehicle speeds and the increase of the risk of injury. A pedestrian struck by a car traveling at 50 km/hr is eight times more likely to be killed than a pedestrian struck at 30 km/hr. and even small reductions in speed can be significant. For each 1.6 km/hr reduction in average speed, collision frequency is reduced by five per cent. Reducing vehicle speed has been proven to be effective in preventing crashes and reducing the severity of injuries.<sup>2</sup> At a speed of 30km/hr, vehicles and pedestrians are able to co-exist with relative safety, which means that drivers have sufficient time to stop for pedestrians, and pedestrians can make better crossing decisions.

## **Changing attitudes and behaviours:**

Pedestrian safety is each driver's responsibility. Children's physical and mental capacities are still developing well into their teens and they are often unable to make safe judgments about pedestrian safety. Drivers must be prepared for children to act like children.

Unfortunately, speeding is common in Canada. According to the Traffic Injury Research Foundation, about 2.7 million Canadians admit to habitually driving well over the speed limit; 2 million admit to frequently accelerating to get through a traffic light and about 670,000 say they take risks while driving, just for the fun of it.<sup>3</sup> And it is significant that drivers are unable to accurately assess their own speed while they are driving and, as a consequence, make few adjustments in the presence of children.<sup>4</sup>

Mechanisms that alert speeding drivers can be very useful and according to Transport Canada 72 per cent of Canadian drivers endorse roadside warning signs to tell them when they are speeding.<sup>5</sup> In addition, a combination of speed cameras and fines can enforce speed limits in residential areas and school zones. One study illustrated that when these strategies are in place, the number of vehicles traveling more than 10 km/hr over the speed limit actually dropped by 70 per cent.<sup>6</sup> Speed limit reductions in countries such as South Africa, Belgium, Finland, France, Germany, New Zealand, United Kingdom and the United States, have demonstrated that when a speed limit was reduced, there was a decline in road crashes ranging from eight to 40 per cent.<sup>7</sup>

## **Changing environments - traffic calming**

Environmental or physical characteristics can either encourage or discourage speeding and can greatly influence the frequency and severity of pedestrian-related crashes. A Danish study found that traffic calming reduced pedestrian injuries by as much as 60 per cent.<sup>8</sup> Traditional traffic calming approaches include introducing speed bumps, road narrowing, or adding pedestrian islands or curb extensions (bulbouts).

Recent studies have revealed other interesting elements to traffic calming. For example, trees reduce speed. Research demonstrates that trees have a remarkable ability to calm



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traffic and may significantly reduce crashes and injuries on urban roads. They also shield the pedestrian realm from moving traffic while clearly defining the roadway edge. Interestingly, tree-lined streets can also help drivers to visually assess, and consequently adjust, their speed.<sup>9</sup> Needless to say, trees also enhance the pedestrian experience and improve air quality.

It is also important to note that an increase in the number of pedestrians results in fewer pedestrian injuries. This is because when motorists see people out and about, they adjust their driving behaviour by slowing down – perhaps unconsciously.<sup>10</sup> Due to growing concerns about air quality and climate change in general, we may see a renewed enthusiasm for walking over driving, leading to an increase in pedestrian numbers, which in turn will improve safety.

Many communities across Canada are looking at methods to slow down the traffic that travels through their residential neighborhoods, either by advocating for posted speed limit changes, initiating strategies to target driver behavior (i.e. Pace Car), or by implementing physical changes. All these approaches help to create a new awareness of the impact of speed, the importance of being mindful of pedestrians, and being conscious of one's own driving habits.

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<sup>1</sup> Roberts I., Norton R., Jackson R., Dunn R., Hassall I. Effect of environmental factors on risk of injury of child pedestrians by motor vehicles: A case-control study. *Injury Prevention* 1995 Jan; 310:91-94.

<sup>2</sup> Pasanen E., Salminen H. Driving speeds and pedestrian safety in the city of Helsinki, *Traffic Injury and Control* 1993; 34 (6):308-310.

<sup>3</sup> Traffic Injury Research Foundation. The Road Safety Monitor 2006: Aggressive Driving <[www.trafficinjuryresearch.com](http://www.trafficinjuryresearch.com)> (accessed February 2008).

<sup>4</sup> Harre N. Discrepancy between actual and estimated speeds of drivers in the presence of child pedestrians. *Injury Prevention* 2003; (9): 38-41.

<sup>5</sup> Transport Canada. Driver Attitude to Speeding Management: A Quantitative and Qualitative Study – Final Report. 2007 Nov.

<sup>6</sup> Retting R.A., Farmer C.M., McCartt A.T. Evaluation of automated speed enforcement in Montgomery County, Maryland, Insurance Institute for Highway Safety 2008 Jan.

<sup>7</sup> Speed Management: A road safety manual for decision-makers and practitioners. Geneva Global Road Safety Partnership 2008 p. 78.

<sup>8</sup> The David and Lucile Packard Foundation. *The Future of Children*. Spring/Summer 2000; (10). No. 1.

<sup>9</sup> Dumbaugh E. Safe Streets, Livable Streets. *Journal of American Planning Association* 2005; (71).No. 3.

<sup>10</sup> Jacobsen L. Safety in numbers: More walkers and bicyclists, safer walking and bicycling. *Injury Prevention* 2003; (9):205-209.