

Risks of cycling, walking and driving put in context

Opinion: Constructive discussion needed

BY KAY TESCHKE AND JOHN CARSLY, SPECIAL TO THE VANCOUVER SUN JULY 8, 2013



The benefits of cycling or walking outweigh the risks of death or injury from accidents, two health experts argue.

We read with interest The Vancouver Sun article “It may be time to start talking about licensing bikes” and the subsequent letters to the editor. We agree that an open and constructive discussion of cycling issues is needed. We are writing to provide a more complete public health context, since there may be misconceptions.

We address three issues related to modes of transport: the burden (or number) of injuries; the risk (or rate) of injuries; and other potential risks and benefits of various modes.

The burden of deaths and head injuries

The editorial suggests that “cycling remains the biggest cause of traumatic brain injury for all other forms of recreational activity among young people.” By this, we presume the authors meant the single most important recreational cause of traumatic head injuries. In Canada, cycling accounts for 10 per cent of head injury hospitalizations in kids. Of course, this includes mountain biking, the most risky cycling activity. We think that cycling as discussed in the article is better compared with other modes of transportation.

The most recent B.C. Traffic Accident Reports (2005 to 2007) indicate that, on average each year, there were 31 children (up to age 19) who had head injuries when cycling, 60 when walking, and 703 when in a car, SUV, van or truck. Unfortunately, this data only include crashes with motor vehicles, so it does miss some cycling and walking injuries.

Deaths are often considered a better comparison measure, since they almost always involve crashes with motor vehicles, are reliably recorded, and are the most devastating type of injury. So how do deaths compare between modes? British Columbia Motor Vehicle Branch data for the same years indicate there were 10 deaths a year on average (all age groups) when cycling, 70 when walking, and 300 when driving.

Thus, bicycling had the lowest “burden” of deaths and head injuries of the three transportation modes.

The numbers of deaths and head injuries indicate that all modes of transportation deserve public health attention.

Death rates shows cyclists, pedestrians more vulnerable

The burden of death and injury reported above does not tell us whether one mode of transportation is safer or riskier than another. For example, more trips are taken by car and more distance travelled. So when deciding what mode of transportation to use, it is important to consider the death rate, not just the raw numbers.

A recent analysis compared the fatality rate by mode of travel in B.C. There were 14 deaths per 100 million trips for bicycling, 15 for walking and 10 for driving – remarkably similar. Per 100 million kilometres travelled, there were three deaths for bicycling, seven for walking and one for driving. Using distance rather than trips shows that cyclists and pedestrians are more vulnerable road users.

Are these risks high? One way to think about this is the number of trips for one death to happen: one car occupant dies every 10 million trips and one pedestrian or cyclist dies every seven million trips.

Other risks and benefits of transportation modes

In addition to injuries, transportation contributes in other ways to the risk of death. These are also vital to consider when choosing a mode of transportation.

Motor vehicle travel increases time spent sitting and produces air pollution, and these are associated with increased mortality from chronic diseases. Both walking and bicycling are active modes of travel.

The physical activity they entail reduces the risk of developing many chronic diseases, including heart disease, diabetes, certain cancers, and dementia. Many studies have compared these benefits to the injury risks. All have found that the benefits greatly outweigh the risks. The benefits of walking and cycling (lower risk of death from chronic diseases) are 10 to 100 times higher than the risk of death from injuries.

This wonderful health benefit of active modes of travel is the reason public health experts around the world and in B.C. want to make it easy for as many people as possible to choose walking or cycling for at least some of their daily trips.

A multi-faceted approach modelled on countries that have achieved higher rates of active travel would include, first and foremost, reduced vehicular speed (to lower injuries for all travel modes), protected bicycling infrastructure that makes cycling feel as comfortable as walking on a sidewalk, and education programs in schools to teach cycling and road skills at an early age. An emphasis on encouragement, rather than punishment, seems most appropriate for travel modes that have such large net health benefits.

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