Speeding

You're driving the familiar route home from work on a beautiful Friday afternoon. After a difficult week you are anxious to get out of your car and meet up with your friends to unwind, but you are running a little bit late. You turn onto a residential street going 60km/h, despite the speed limit sign showing a 40km/h maximum. The speed you're going is over the speed limit, but still feels safe to you because you know these streets like the back of your hand. Suddenly, as you enter within a couple blocks of your house, a small child runs into the street chasing a ball. You slam on the brake pedal but you are going to fast to stop in time. You swerve to avoid a collision and end up running into – and over – a yield sign. The undercarriage of your car is damaged, but you know that things could have easily turned out much worse.

In a public opinion survey of Canadian knowledge of and attitudes towards vehicle safety features, TIRF found that a concerning 67.3% Canadians agree or strongly agree that vehicle safety improvements make being involved in a collision less likely, meaning that they can drive faster (TIRF 2012). In addition, 17.2% agreed or strongly agreed that they would drive the speed limit or faster if their vehicle had safety features, even though it was raining and they felt it might be risky to drive the speed limit. Only 11% agreed or strongly agreed that they would drive the speed limit or faster despite risky weather conditions if their vehicle did not have modern safety features.

These are concerning results, since having safety features does not make driving faster any safer; excessive speed actually has the opposite effect of seriously undermining the performance of those very features.

What is speeding?

In the Traffic Injury Research Foundation's (TIRF) annual Road Safety Monitor, speeding is defined as driving any amount over the posted speed limit or driving too fast for conditions. Excessive speeding typically means driving 25km/h or more above the posted speed limit (TIRF 2007).

Is driving a little faster than the speed limit still speeding?

Yes. Driving at speeds in excess of the posted limit at any time increases the risk of being involved in a serious collision. Small increases in speed translate to big increases in risk. For instance, an increase in speed of as little as 1% increases your risk of being involved in a crash by 4% (TIRF 2007). Similarly, small decreases in speed equal large decreases in crash risk.

Canadian survey respondents who were asked about speeding described speeding in three ways: technical, relative, and absolute (Transport Canada 2007). Technical speeding was defined as any time a driver accelerates past the speed limit. Relative speeding is measured according to variable factors like road conditions, weather conditions, and the behaviour of other drivers. Survey respondents who saw speeding in absolute terms defined speeding as driving a specific amount over the speed limit, for example, driving 20km/h over the speed limit. These three different ways of looking at speeding may cover up the fact that any increase in speed beyond the limit counts as speeding. Canadians were more likely to describe their own speeding in terms of "technical speeding", whereas the speeding of others was described in more dangerous terms (Transport Canada 2007).

How does speeding affect traffic safety?

Excessive speed is a common cause of crashes on Canadian roads. Every year, 800 Canadians die and another 3,000 are injured in collisions where speed was the major contributing factor. In Canada, speed is a contributing factor in up to 18% of crashes leading to serious injury or death. Overall, it is estimated that over 20% of collisions happen as a result of speeding (TIRF 2007).

Speed not only affects crash risk, but it is also directly related to crash severity. Driving at a higher rate of speed increases the total amount of kinetic energy, which in turn increases the risk of severe injury in the case of a collision. In addition, higher speeds make it more likely that the safety thresholds of the vehicle and safety devices will be exceeded in the event of

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a crash, limiting the protection available for vehicle passengers.

Are Canadians concerned about speeding?

Yes. Canadians seem to be aware of the dangers of driving at excessive speeds. When asked about their views on speeding and road safety, 68% of Canadians surveyed said that excessive speeding was a serious or very serious problem (TIRF 2007). A little more than half of Canadians surveyed (52%) feel that people are speeding excessively more today than five years ago, and 81% of respondents said that excessive speeding is likely to cause a crash. These attitudes towards speeding are consistent with research conducted on how speeding impacts crash risk.

What are the laws on speeding?

Exceeding the speed limit at any time is illegal and carries the possibility of penalty. The severity of the penalty increases with the number of km/h over the speed limit you were caught driving. In Ontario, types of punishments for speeding include a combination of demerit points, fines, insurance repercussions, and sometimes licence suspensions. Recent campaigns against street racing and stunt driving have spurred the implementation of a new category of punishment for the most severe speeding infractions; street racers face seven demerit points, up to $10,000 in fines, immediate vehicle impoundment, and licence suspension. However, any driver caught exceeding the speed limit will potentially face punitive action. For example, driving 20 km/h over the speed limit in Ontario – a speed considered on the low end of "speeding" according to absolute definitions – brings with it three demerit points, a $75.00 fine, and usually increased insurance rates for a number of years.

How many drivers speed?

Despite the fact that Canadians seem to be aware both of the illegality of speeding and the dangers it presents, a large majority of road users often see other drivers exceeding the speed limit. 80.4% of respondents – around 17.9 million drivers – claim to often or very often see other drivers exceeding the speed limit. This finding is consistent with previous polls, which report that speeding continues to be the more frequently observed aggressive driving behaviour (TIRF 2007).

The number of survey respondents who admit to speeding may vary across different studies because of how particular individuals define speeding. For example, if someone does not consider "technical speeding" to really be speeding, then she is less likely to report that she speeds frequently, even if she does. Transport Canada's 2007 analysis of self-reports on frequent speeding found that 58% of Canadian respondents admit to speeding on highways; 39% admit to speeding on two-lane highways and country roads; and 13% admit to speeding on residential streets. Comparing these results with the TIRF's results suggests that not all Canadians agree on what constitutes speeding. The difference in results may also point to a relevant rephrasing of a survey question, e.g., asking "How often do you exceed 100km/h on a highway?" instead of "How often do you drive faster than the speed limit?".

Who is most likely to speed?

Speeding is not isolated to any particular demographic. However, there are certain characteristics common to chronic, excessive speeders:

- Frequent speeders tend to be in the youngest age group (16-24 years) (TIRF 2007).
- Frequent speeders are more likely to be male (TIRF 2007).
- Drivers who speed frequently drive more kilometres per month than people who do not speed (TIRF 2007).
- Frequent speeders are likely to feel confident that they can maintain control of their vehicle: 32.3% of Canadians who admitted to speeding frequently said they were confident that they were still in control despite excessive speed, and 44.7% said they were very confident (TIRF 2007). All this despite the fact that 895,200 drivers who were speeding reported having to brake or steer to avoid a collision in the past month, the majority having to do so on multiple occasions (TIRF 2007).
- Frequent speeders tend to be less knowledgeable of the risks associated with excessive speed (TC 2007).
- Frequent speeders are more likely to engage in other dangerous driving behaviours like failing

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to wear the seatbelt and driving while under the influence of alcohol (TC 2007).

What effect does speed have on my ability to benefit from my safety features?

Despite the advanced engineering that goes into the development and production of current safety technology, speeding can have a considerable negative effect on the performance of vehicle safety features. In particular, excessive speed limits your ability to interact appropriately with your vehicle safety features by reducing the amount of time you have to react to potential hazards on the road.

Vehicle safety features depend heavily on you to provide the right kind of steering and braking input before and during their activation. The faster you are going, the less likely it is that you will be able to brake and steer safely, even with advanced safety features on your vehicle. Noticing a hazard that requires emergency braking two seconds before a collision will give you enough time to slam on the brakes and have your emergency brake assist technology help you stop if you are travelling at 50 km/h. However if you are going 65km/h, you can expect a collision (NHTSA 2007). You have a very important role to play in making your safety features work best. Speeding makes fulfilling this role much more difficult, and, in some cases, impossible.

What kinds of safety features does speeding directly affect?

In addition to making it more difficult for you to properly use your safety features, excessive speed can make it impossible for safety features to perform to the level for which they were designed. This is because safety technologies have both design and functional limitations that can be breached once you pass certain speed thresholds. For example, safety features like brake assist, ABS, and electronic brake-force distribution promise to help you brake more safely. However, speeding can make safe braking nearly impossible if an unexpected hazard presents itself. In this case, even if the braking technology works as it should, excessive speed may make a safe outcome extremely unlikely. Similarly, safety features like electronic stability control – one of the most talked-about and promising new safety features – may not be able to stabilize a car that, travelling at an excessive speed, was forced to swerve. No safety feature is immune to the undermining effects of speeding.

Finally, excessive speed can easily be the final determiner of whether you get in a serious crash when combined with other vehicle safety issues like poor vehicle maintenance. For example, the performance of your ABS setup is dependent in part on the condition of your brakes and tires. Tires and brakes that are worn down will impede your ABS and prevent it from working as well as it should. If you are travelling at a safe speed, you may still be able to get some small benefit from having ABS, despite the neglected state of the tires and brakes. However, excessive speed coupled with poorly maintained vehicle parts dramatically increases your risk of being involved in a collision that your vehicle safety technology would otherwise have been able to help you avoid.

Where can I find more information about speeding?

Every year, the Traffic Injury Research Foundation (TIRF) publishes The Road Safety Monitor (RSM), a survey designed to gauge public opinion on a range of key road safety issues. In 2007, TIRF released an RSM on excessive speeding. Many of the facts, statistics, and research in this document are pulled from the RSM on excessive speeding. You can access this RSM, previous reports, and other TIRF publications on this website or by visiting the TIRF website at **www.tirf.ca**.

In addition, Transport Canada has conducted extensive research on speeding and Canadian attitudes towards excessive speed and countermeasures. A qualitative and quantitative study on driver attitudes to speeding and speed management was conducted by Transport Canada in 2007, from which facts and figures have also been pulled to inform this document. You can access this study and other publications concerning speed and road safety published by Transport Canada by visiting their website at **www.tc.gc.ca**.

References

Visit **www.brainonboard.ca/program_resources/references.php** for a full list of references.

Want to learn more?

Visit **www.brainonboard.ca** to learn more about vehicle safety features:

- Active Safety Features
- Passive Safety Features
- Driver Assistance Technologies
- Safety Technologies in Development

Driving instructors, road safety educators, car dealers and service providers can download and order program resources and materials through the Brain on Board website. **www.brainonboard.ca/program_resources/**.

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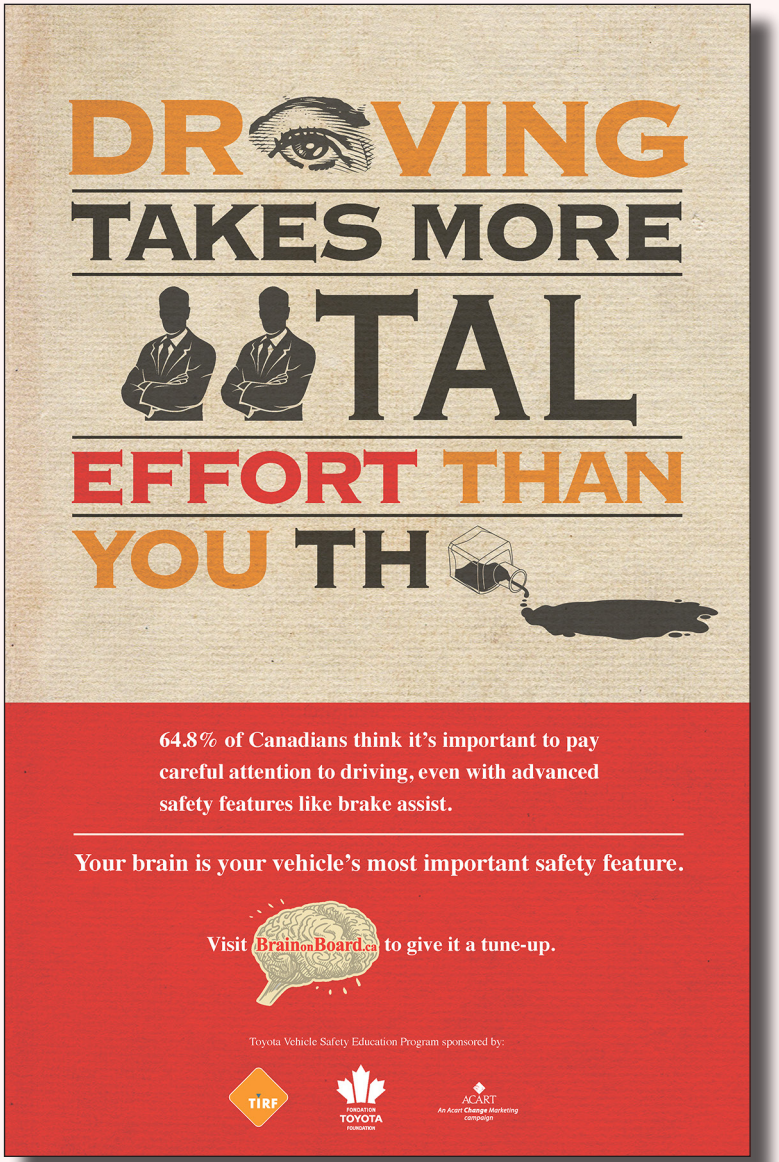

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