FREQUENTLY ASKED QUESTIONS about pot and driving
THE VOICE OF PUBLIC HEALTH

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To enhance the health of people in Canada and to contribute to a healthier and more equitable world.

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**Introduction**

In 2005, the Canadian Public Health Association (CPHA), with funding from Health Canada’s Drug Strategy,* launched a Pot and Driving campaign to raise awareness among young Canadian drivers and passengers of the harms associated with cannabis-impaired driving. The campaign draws on insights given by key informants and the opinions of young Canadians who took part in focus groups held in several locations across the country. This FAQ has been updated to reflect recent evidence from relevant studies and surveys related to cannabis consumption in the context of driving.

The campaign materials include:
- A poster of airplane pilots smoking pot with the campaign message, “If it doesn’t make sense here, why would it make sense when you drive?”
- 10 questions for teens
- A discussion guide for adults to use with teenagers
- This Frequently Asked Questions backgrounder

**2018 Update**

In April 2017, the Government of Canada introduced Bill C-45, the *Cannabis Control Act*. Bill C-45 will amend the *Controlled Drugs and Substances Act*, the *Criminal Code* and other Acts to legalize and regulate the production, distribution, sale and possession of cannabis in Canada. It also aims to provide a public health framework to help reduce the negative health and social outcomes related to cannabis consumption while minimizing the serious negative effects resulting from the criminalization of cannabis possession. Bill C-46 was introduced at the same time to amend the *Criminal Code* to strengthen the existing laws around cannabis and other drug-impaired driving. This Act proposes to introduce more severe punishments for those who drive while under the influence of any drug, including cannabis, and allows law enforcement to conduct roadside intoxication tests. Provincial and territorial governments have also introduced new legislation to address the legalization of cannabis.

*The views expressed herein do not necessarily represent the views of Health Canada.*
DEFINITIONS

What do we mean by 'pot'?  
We use the word ‘pot’ in our materials to refer to any drug derived from the plant Cannabis sativa. Cannabis refers to various psychoactive preparations of the plant, including marijuana (made from the dried and crushed leaves and flower buds), hashish and hashish oil (made from the flower bud resin), and cannabis extracts (i.e., oils or wax). We chose ‘pot’ because it is short and easy to say; more importantly we chose it because CPHA’s 2005 focus group participants were unanimous in using it. Along with the word ‘weed’, ‘pot’ is the most common word used to refer to cannabis in both English and French Canada. Other common names for cannabis include: herb, ganja, grass, Mary Jane, and reefer.

What do we mean by ‘driving’?  
When we use the phrase ‘driving a vehicle’ we are referring to the use of any kind of motor vehicle, including cars, trucks, motorbikes, ATVs, planes, motorboats and snowmobiles. We generally use the word ‘driving’ to imply the use of both on- and off-road vehicles. We do not wish to suggest that off-road driving is less of a concern when it comes to drug consumption.

Why the term ‘pot and driving’?  
Phrases like alcohol-impaired driving, drunk-driving, drinking and driving, or driving under the influence of alcohol (DUIA) are well known. Equivalent terms referring to drug use and driving — including drug-impaired driving, drugged driving and driving under the influence of drugs (DUID) — are less well known, although that is changing. We have chosen to use more informal phrases such as driving high, mixing pot and driving, or simply pot and driving.

What is driving under the influence?  
If your ability to drive a motor vehicle is affected because you have taken a drug, a combination of drugs, or drugs and alcohol (which is also a drug, although it is usually referred to separately because of its legal status), you are driving under the influence. Sometimes, this is referred to drugged driving or drug-impaired driving. This includes adverse effects on driving from prescription drugs, illegal drugs, and over-the-counter medications.

What is THC?  
△9-Tetrahydrocannabinol, or THC, is among the class of chemicals in cannabis called cannabinoids. THC is the primary psychoactive compound responsible for the “high” or euphoric effects often sought by consumers. A psychoactive drug is one that alters brain function, resulting in temporary changes in perception, mood, consciousness, and behaviour.
1. Why a focus on pot and driving?

Cannabis-impaired driving increases crash risk. Driving under the influence of alcohol and/or drugs continues to kill and injure more Canadians than any other crime.¹ A 2012 systematic review and meta-analysis of 9 scientific observational studies of motor vehicle accidents indicated that driving under the influence of cannabis can adversely affect safe driving and can double the risk of serious or fatal injury in a motor vehicle crash.²

Youth and young adults are consuming cannabis. Among Canadian youth aged 15 to 24, cannabis is the most commonly consumed illegal drug³ and has one of the highest rates (13%) of consumption in the world, second only to France (15%).³ The 2015 Canadian Tobacco, Alcohol and Drugs Survey (CTADS) reported that the overall rate of cannabis consumption in the past year was highest among youth aged 15-19 (20.6%) and young adults aged 20-24 (29.7%).⁴ In comparison to adults aged 25 and older, those aged 15-24 are more than twice as likely to have consumed cannabis in the past year (9.9% and 25.5%, respectively).⁵

Youth and young adults are driving under the influence of cannabis. Driving after consuming cannabis is more common than drinking and driving among young Canadian drivers.⁶,⁷ A national survey also found that young Canadians were most likely to report driving within two hours after consuming cannabis; these rates were highest among those aged 18-19 (8.3%), followed by youth aged 15-17 (6.4%).³ A roadside survey in Ontario reported cannabis to be the most common illegal substance consumed by young drivers,⁵ while in British Columbia, a roadside survey found 6.4% of drivers aged 16-24 tested positive for cannabis.⁸

A 2017 study led by the Canadian Centre on Substance Use and Addiction (CCSA) reported that young drivers aged 16-34 are overrepresented in cannabis-impaired driving fatalities, accounting for two thirds of cannabis-attributable motor vehicle deaths, injury, and property damage only collisions.⁹ Another study found that, among driver fatalities between 2000-2010, those aged 16-24 were more than two times as likely to test positive for cannabis in their system compared to adults (aged 35 and older).⁶

Youth misperceive the risks associated with cannabis-impaired driving. A national survey revealed that only 48% of Canadian youth (aged 16 to 19) realized the risks associated with cannabis consumption and driving, while 79% understood the risks of drinking and driving.¹⁰ High rates of cannabis consumption and driving could be in part due to the misperception among youth that cannabis does not impair driving skills.⁸ A 2012 study of Ontario students reported that the perceived risk of harms associated with cannabis consumption was decreasing among youth.¹¹ This is concerning, as there is believed to be an inverse relationship between the perception of risk and use: the more cannabis is perceived to be a low-risk substance, the greater the frequency of use.¹ This means that youth are more likely to consume cannabis if they do not perceive it to be risky.¹²

Unfavourable statistics and the knowledge gap of the associated risks highlight the need to educate young Canadians on the effects and the consequences of cannabis consumption and driving. While alcohol has been the subject of impaired-driving awareness efforts for several decades, more attention is needed on pot.

2. How does cannabis affect driving ability?

Observation, simulation and on-road driving studies demonstrate that cannabis consumption impairs a number of cognitive functions (e.g., reasoning, memory, attention, and language) that affect driving skills. The effects of cannabis on driving skills can
vary, depending on the potency of cannabis consumed, the experience of the driver, and frequency of consumption. However, even at low doses, it can affect the ability to drive safely, especially if combined with alcohol.22-14

Cannabis affects perception, short-term memory, information processing, decision-making and motor coordination, all of which affect the ability to drive safely.8

- It reduces the ability to stay within one lane and increases variation in following distances and speed.
- Cannabis consumption compromises the ability to pay attention and concentrate, impairing the ability to be aware of and react to numerous sources of information at once.
- As it delays reaction time, it reduces the ability of the driver to respond quickly to sudden changes on the road, especially during unexpected events (e.g., when a sudden stop is required).14,15

Some experienced cannabis consumers who drive under the influence may be aware of their state of impairment and use risk-reduction tactics in an attempt to compensate for their reduced driving abilities (e.g., driving slowly or increasing their following distance between cars).16 While these drivers have developed certain behaviours to adapt to their impairment, these adaptations do not eliminate the risks of driving under the influence of cannabis.

3. Who consumes cannabis and drives under the influence?

Several student surveys of drug use in Canada have found that rates of cannabis consumption increase with age/grade, and use is highest among males. For example, in 2014-15, 1.2% of grade 7 youth reported past-year cannabis use, 19.2% of grade 10 youth, and 33.0% of grade 12 youth.17 The 2014-15 Student Alcohol and Drug Use national student survey reported that 5% of youth in grade 7-12 had driven within two hours of consuming cannabis, and 15% of grade 7-12 students had been a passenger of a driver who had consumed cannabis within two hours.18

The 2011 Student Alcohol and Drug Use national student survey reported that, depending on province/territory, 3-8% of grade 7 students consumed cannabis in the past year. This rate increased with grade as 30-53% of grade 12 students indicated they had consumed cannabis in the past year. Depending on the province/territory, 14-21% of students in Grade 12 reported driving within an hour of using cannabis.19

The 2015 Ontario Student Drug Use and Health Survey (OSDUHS) reported that male drivers in grades 10-12 (11.6%) were more likely to report consuming cannabis and driving than females (7.6%); this was also higher than consuming alcohol and driving.20 In Nova Scotia, the 2012 Student Drug Use Survey indicated that 21.4% of grade 12 students drove within one hour of consuming cannabis, although there was no difference in these rates between male and female students.8 A 2015 report by the Centre for Addiction and Mental Health reported that 7.5% of young drivers aged 18-29 indicated driving within one hour after consuming cannabis, compared to 1.8% in older age groups (30+ years old). It also indicated that males were 16 times more likely than women to report driving within one hour of consuming cannabis.20

According to 2003-13 data from the Victoria Healthy Youth Survey, youth aged 12-18 who self-reported as a frequent users (consuming more than once per week) were more likely than occasional users (consuming at most once per week) and abstainers (used no cannabis in past 12 months) to report they had driven high or been a passenger of a driver who had consumed cannabis in the past 30 days (80%, 28%, and 13%, respectively).21 Also, among the frequent users, males were more likely to report that, in the past 30 days, they had driven high/been a passenger of a driver...
who was high.\textsuperscript{21} Overall, it is young, male, frequent cannabis consumers who are most likely to drive high. More research is needed, however, on the frequency of cannabis consumption and driving behaviours.

### 4. Why focus on youth?

The 2012 Canadian Community Health Survey (CCHS) indicates that 29.2\% of 15-24 year-olds reported having consumed cannabis in the past year, with males having a higher prevalence (34.6\%, compared to females 23.4\%).\textsuperscript{27} According to the 2014-15 Canadian Student Tobacco Alcohol and Drugs survey, the average age of initiation was 14.2 years.\textsuperscript{22}

During the 2005 consultations, CPHA spoke to several groups of young Canadians 15-25 years of age about their experiences with pot and driving. Generally, older participants were convinced that driving high was not a problem and said they were unlikely to change their minds about doing it. Participants who were not yet driving or were anticipating learning how to drive appeared to be more open to the suggestion that mixing pot and driving, like mixing alcohol and driving, could put them and their passengers at risk. Thus, this campaign is focused on Canadians 14-18 years of age. Recently, other focus groups\textsuperscript{*} conducted by CCSA with youth (aged 14-19) found that youth classified cannabis-impaired driving to be safer, or less dangerous, than alcohol-impaired driving, partly because they did not associate the feelings of being high (calm, happy, and relaxed) with risky behaviours that could impair driving skills.\textsuperscript{23}

### 5. Who is likely to be a passenger of a driver who has consumed cannabis?

The risks of driving while high apply not only to the driver, but extend to the passenger(s) as well. Canadian youth aged 15-24 years are more likely to report being a passenger of a driver who had consumed cannabis within the last two hours (almost 16\%) than being the driver themselves (6-8\%).\textsuperscript{24,25} A national student drug use survey reported that the likelihood of being a passenger of a driver who has consumed drugs (including cannabis) increases with school grade,\textsuperscript{19} while another report indicated this decreases after high school age.\textsuperscript{26} Focus groups with youth (aged 14-19) also indicated that young Canadians believe it is less dangerous to be a passenger of a driver who is impaired after consuming cannabis than to be the passenger of a driver who is impaired after consuming alcohol.\textsuperscript{23}

A 2014 review conducted by CCSA identified characteristics that may increase the risk of being a passenger of a driver who has used cannabis (or alcohol or other drugs). Some of these risk factors include: lower socio-economic status, risk-taking behaviour, driving off-road vehicles and impulsivity. The role of gender is not clear,\textsuperscript{25} although the 2015 OSDUHS found no differences between the likelihood of a male or female riding as a passenger of a driver who has consumed drugs (including cannabis).\textsuperscript{17}

Being a passenger of a driver who is high can cause an already dangerous situation to become more dangerous, especially if the passenger is also impaired. For example, a passenger can distract the driver or encourage risk-taking behaviour on the road. Among drivers 24 years old and younger, passenger presence in a vehicle has been associated with at-fault fatal crashes, specifically when there are two or more passengers.\textsuperscript{27}

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\textsuperscript{*} 20 focus groups were conducted in six cities across Canada. A total of 77 youth between 14-19 years old participated.
6. How long after consuming cannabis are driving skills affected?

Evidence indicates that cognitive and motor abilities required to drive safely are negatively affected for up to three hours after consuming cannabis. There are, however, a number of individual factors that can influence impairment. For example, the dosage or amount consumed, the frequency of use (history or pattern of consumption of cannabis), the type of strain and potency, sensitivity and tolerance, body composition (i.e., fatty tissue), and co-consumption with prescription medication or alcohol can impact the duration and intensity of impairment. An individual’s health status and family health history can also impact risks associated with cannabis consumption.

The method of consumption will influence the duration and timing of impairment. For example, when cannabis is smoked, THC quickly enters the bloodstream, resulting in feelings of “being high” within minutes. Some evidence indicates that driving abilities are maximally impaired for approximately one hour after the initiation of smoking cannabis, while other evidence indicates the effects of THC generally wear off between two and four hours after smoking.

In comparison, the “high” felt from cannabis-infused edibles can take longer to peak (up to four hours) and last for a longer duration of time (up to 10 hours). Because of the time lapse between consumption and experiencing the effects, individuals can over-consume. After dabbing, or consuming hash oil, the effects can be felt more quickly as these are more potent, containing much higher levels (up to 60-80%) of THC, the psychoactive ingredient. As stated above, because the effects of smoking THC gradually wear off over two to four hours, or longer when it is ingested, it is recommended to wait at least six hours before driving after smoking cannabis and at least eight hours after ingesting it.

7. Does the dose influence the risk?

Consuming high doses of cannabis is an established motor vehicle crash risk factor, and the risks greatly increase when consumption is paired with even small amounts of alcohol. There is also evidence that indicates that consumption of even small amounts of cannabis consumption is associated with an increased crash risk.

As with alcohol, there is evidence of a dose-related relationship between cannabis and impairment of the skills needed for safe driving. Unlike alcohol, cannabis THC concentrations can vary significantly, and there is a degree of variability in the effects on impairment between consumers. This has made it challenging to establish the exact relationship between dose and risk. However, higher doses of cannabis can result in the consumer feeling anxious, scared and paranoid, which are risks to driving safely. Generally, it is advised to “start low and go slow” if consuming.

8. What about a hangover?

There is less known about the residual effects (a hangover) from cannabis on driving. While there are limited studies and much of the evidence is anecdotal from consumers, symptoms characterizing a ‘weed hangover’ or ‘burnout’ are a lack of saliva, feeling fatigued, having brain fog, a headache, nausea, and dry or red eyes. These symptoms could also be indicative of being high. To be safe, it is best to wait until these symptoms have subsided before driving. The limited studies suggest that, as with alcohol, a hangover from cannabis is usually related to overconsumption. To avoid overconsuming, people should be cautious when consuming products that have a higher THC concentration or take a longer time to peak, like edibles.

While additional research is required to understand the residual effects of cannabis as it relates to driving, anecdotally, the 2005 focus group participants...
indicated that ‘burnout’ is an issue for driving. Some participants even suggested they felt safer driving high than driving while experiencing a cannabis hangover.

9. Can medical cannabis also affect driving?

Under the Access to Cannabis for Medical Purposes Regulations, Canadians with a prescription from a doctor can legally grow their own cannabis or obtain medical cannabis from a Health Canada-authorized licensed producer.

For some specific medical conditions, clinical studies suggest that cannabis can provide beneficial or therapeutic effects, depending on the cannabidiol (CBD) and THC concentrations.\textsuperscript{1,35} For example, there can be therapeutic benefits for adults with certain types of chronic pain.\textsuperscript{1} Despite the therapeutic benefits of medical cannabis, it can still affect cognitive abilities impairing a person's ability to drive safely.\textsuperscript{36} This is the same reason why some prescription drugs come with warnings not to drive or operate heavy equipment while taking them.

10. How does cannabis compare with alcohol as a threat to road safety?

In Canada, driving under the influence of alcohol is widely regarded as both dangerous and socially unacceptable. The evidence to date supports the claim that alcohol is still one of the largest contributors to the risk of crash injury or death, and driving under the influence of alcohol and/or drugs continues to kill and injure more Canadians than any other crime.\textsuperscript{1}

Cannabis is second to alcohol as the substance found among injured or fatally injured drivers. However, when alcohol consumption is combined with cannabis, the crash risks are greater than impaired driving from either substance alone.\textsuperscript{32} While evidence indicates that driving under the influence of cannabis can double the risk of serious or fatal injury in a motor vehicle crash, the crash risk associated with alcohol is better understood. For example, the blood alcohol concentration (BAC) of 0.8 g/100 mL is associated with 2.69 times greater crash risk, which is higher among younger drivers (aged 35 and younger).\textsuperscript{2} This evidence has contributed to the enforcement of laws that set a criminal threshold for drunk-driving impairment at a BAC of 0.8 g/100 mL in many Canadian jurisdictions.

Also, a driver who is driving under the influence of alcohol, compared to one driving under the influence of cannabis, appears very differently in terms of their driving behaviour. For example, a drunk driver may take on more risks and drive at speeds over the limit, whereas a driver who is high may drive at reduced speeds with greater variability.\textsuperscript{1}

11. What about public safety messaging?

Public safety messaging has played an important role in changing attitudes about alcohol-impaired driving. The federal government has committed to public education and awareness on the harms associated with driving after consuming cannabis. Youth are strongly encouraged not to drive under the influence of cannabis, especially since they are often new drivers, and because the minimum age set by the federal government will be 18 for consuming, purchasing or possessing cannabis once legal. Public Safety Canada is also engaging with provinces and territories to train frontline officers to be able to identify cannabis-impaired (and other drug-impaired) drivers, and to build a stronger law enforcement capacity. For example, Bill C-46 (see question 12) would authorize new tools for police to better detect drivers who have consumed cannabis (or other drugs), like roadside drug screening devices. It is important to be aware of your province or territory's cannabis-
related driving laws as these may differ across Canada, ranging from, for example, a graduated driving system to a zero tolerance approach.

Public safety messaging also extends to the home. The 2005 focus group participants indicated that parents could be a deterrent if for no other reason than they usually control the keys to the car. Focus group participants believed that it is tougher to fool parents: “When I’m driving high I’m more afraid of my mom because cops have no way of telling. Whereas if my mum says ‘you’re high’, I’m not going to say ‘I’m not’, because I know she’s not going to believe me”. Parents also have a role in modeling safe consumption and driving behaviours at home.

12. What does Canadian law say about cannabis and driving?

It is illegal to drive under the influence of alcohol, cannabis, or other drugs. However, focus groups with youth suggest that they are often uninformed of the legal consequences that can result from cannabis-impaired driving, and have minimal concern for experiencing the potential ramifications themselves. It is important that youth understand the penalties that they could encounter if they drive while high. For example, having a criminal record could affect future school acceptance and employment.

Under the Criminal Code of Canada, cannabis-impaired driving is illegal, and drivers who are impaired by cannabis (and/or other drugs) are subject to the same penalties as those driving under the influence of alcohol. Section 253 states that: “Everyone commits an offence who operates a motor vehicle or operates or assists in the operation of an aircraft or railway equipment or has the care or control of a motor vehicle, vessel, aircraft or railway equipment, whether it is in motion or not, (a) while the person’s ability to operate the vehicle, vessel, aircraft or railway equipment is impaired by alcohol or a drug.” This also applies to all-terrain vehicles, regardless if the vehicle is driven on public or private property.

13. Can law enforcement officers identify and charge drivers who are under the influence of cannabis?

A growing number of Canadian officers are trained to recognize the specific traits of cannabis-impaired drivers, such as the presence of cannabis odour (on the driver or in the vehicle), trouble concentrating, reddened eyes and dilated pupils. When a driver displays one or more of these signs, an officer has reasonable grounds to demand the driver perform the Standardized Field Sobriety Test (SFST). Usually, this is done at the side of the road and involves a series of tests to determine sobriety. The driver, however, could also be charged without completing this test based on the officer’s observations. If the officer has reasonable grounds to believe that the driver is impaired following the test, s/he can demand that the driver undergo an evaluation by a Drug Recognition Expert (DRE) (an officer certified in the Drug Evaluation and Classification program) and provide a sample of bodily fluid to confirm findings. The DRE determines if the driver is impaired, and if so, from which category or combination of drugs. If the results indicate impairment, the driver can face criminal charges of impaired driving, similar to those for driving under the influence of alcohol. Failure or refusal to comply with a law enforcement officer’s demands can also result in charges.

Unlike alcohol breathalyzer tests, the presence of cannabis (and other drugs) is detected by testing bodily fluids such as urine, saliva or blood. Oral fluid tests can detect recent drug use while blood testing provides greater accuracy of drug concentration levels.
Because cannabis is fat soluble, it metabolizes differently from alcohol and can remain in the body for a longer period of time depending on the individual. This makes cannabis consumption and impairment more difficult to measure, and for this reason, it is the focus of current research.

14. What changes were proposed in April 2017 relating to cannabis possession and use and how will this affect laws and law enforcement related to driving under the influence of cannabis?

Bill C-45, the Cannabis Control Act, will legalize and regulate the production, distribution, sale and possession of cannabis for adults. While the Act defines the minimum age of consumption as 18 years, provinces and territories can set a higher age of legality. Bill C-45 continues to rely upon the criminal legal system in its attempts to restrict underage access to cannabis.

The proposed date for enactment is Fall 2018, but until then, cannabis remains listed as a Schedule II drug under the Controlled Drug and Substances Act. This means that growing, possessing, distributing and selling cannabis is still illegal, with the exception of medical cannabis.

Until Bill C-45 comes into effect, penalties could result in a criminal record that may include a term of imprisonment not exceeding five years for possession and a mandatory minimum penalty of one year for production and trafficking.

Bill C-46 was introduced at the same time as Bill C-45 to strengthen the existing laws around cannabis-impaired driving. The changes introduced under Bill C-46 include a new “legal limit” for impaired driving. It would strengthen the existing drug-impaired driving regulations under the Criminal Code and allow for new methods to detect cannabis-impaired drivers. For example, if an officer lawfully suspects a driver has consumed cannabis (or other drugs) at a roadside stop or screen, they can demand that the driver provide an oral fluid sample. If positive, a blood sample and evaluation by a DRE could follow.

New, stricter penalties have been proposed depending on the levels of THC in the blood within two hours of driving, and if cannabis (and other drugs) have been consumed with alcohol. These penalties could range from monetary fines (e.g., the presence of 2 nanograms [ng] but less than 5 ng of THC could result in a maximum fine of up to $1,000), to imprisonment (e.g., penalties for repeat offenders range from 30 days up to a maximum 10 years with a dangerous offender application, and lifetime imprisonment for dangerous driving resulting in death).

As with Bill C-45, the proposed date for enactment of Bill C-46 is Fall 2018. Until then, penalties for drug-impaired driving remain similar to those of alcohol-impaired driving and could result in license suspension, monetary fines, a criminal record, and/or imprisonment.

It is illegal – a criminal offense – to drive while impaired by cannabis (and/or other drugs). It will remain illegal if Bills C-45 and C-46 come into effect.
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