

Talking to your patients about cannabis

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Presenter Disclosure

Relationships with commercial interests:

- Grants/Research Support: CanniMed
- Employee: Chief Medical Officer, Canopy Growth Corporation

Potential for conflict(s) of interest:

- Actively involved in research on cannabinoid and pain.
- Argued for a role for therapeutic considerations for cannabis (Clin Pharm Ther 2009, Task Force 2016)

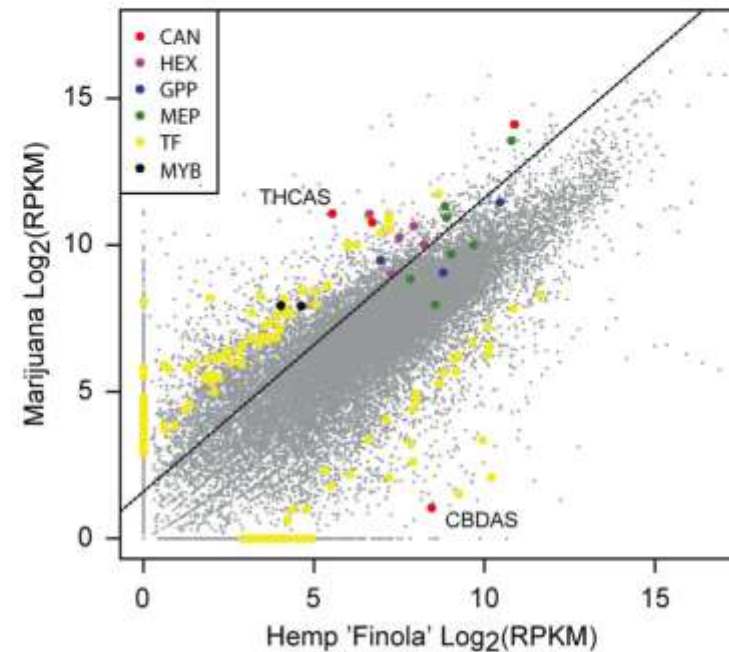
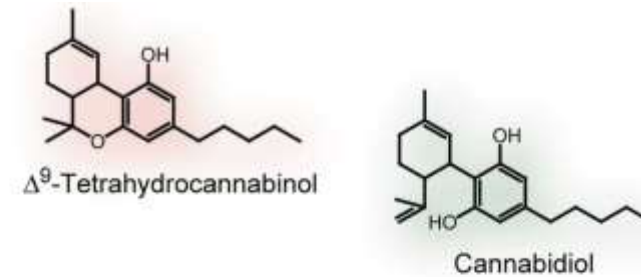
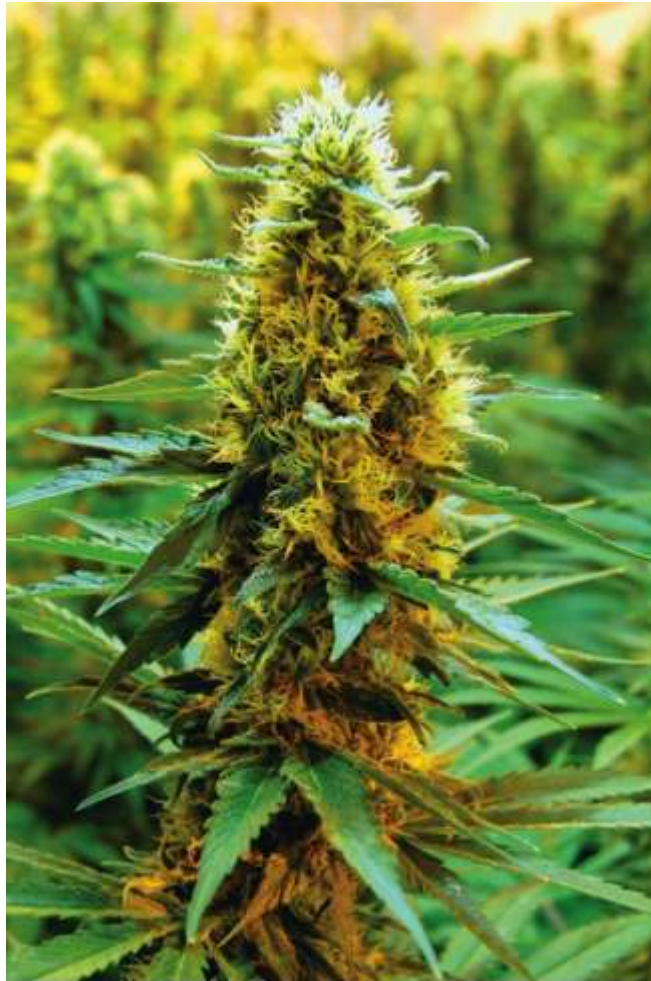
Mitigation of Potential Bias:

- Attempt at balanced presentation
- No reference to brand names or companies
- Acknowledge perception of therapeutic utility

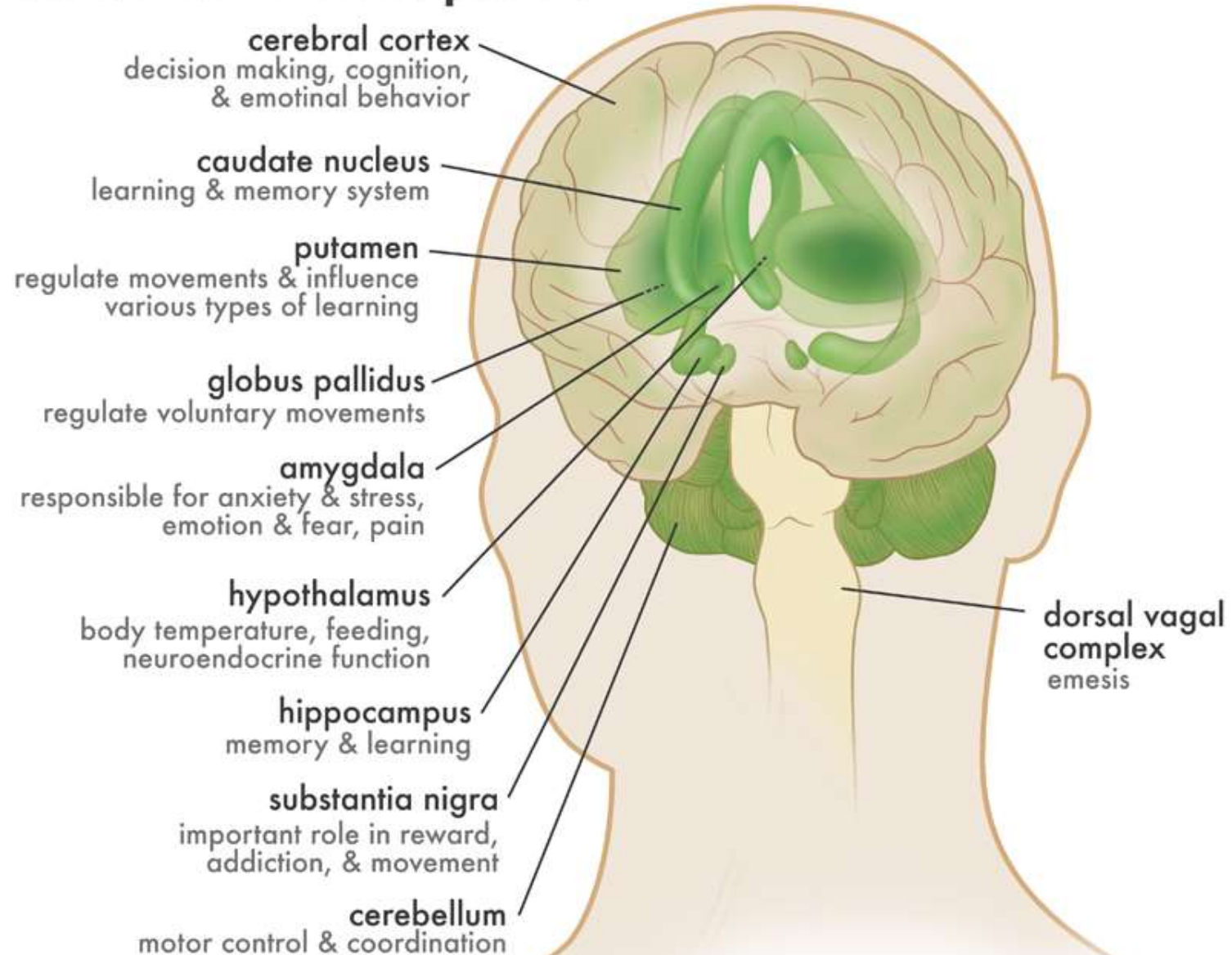
RESEARCH

Open Access

The draft genome and transcriptome of *Cannabis sativa*



Distribution of CB1 receptors





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Medical cannabis

DRUG

WRITTEN BY: Mark A. Ware

LAST UPDATED: Oct 2, 2018

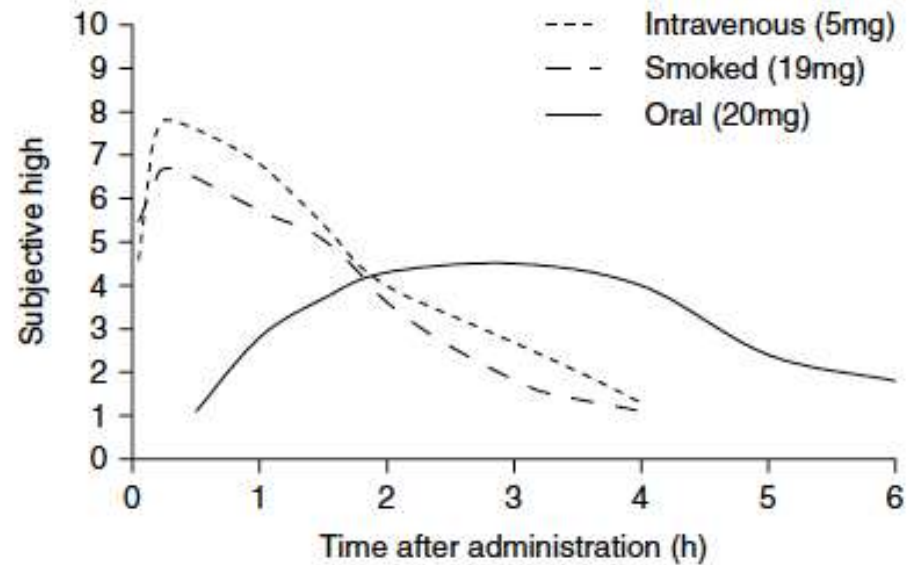
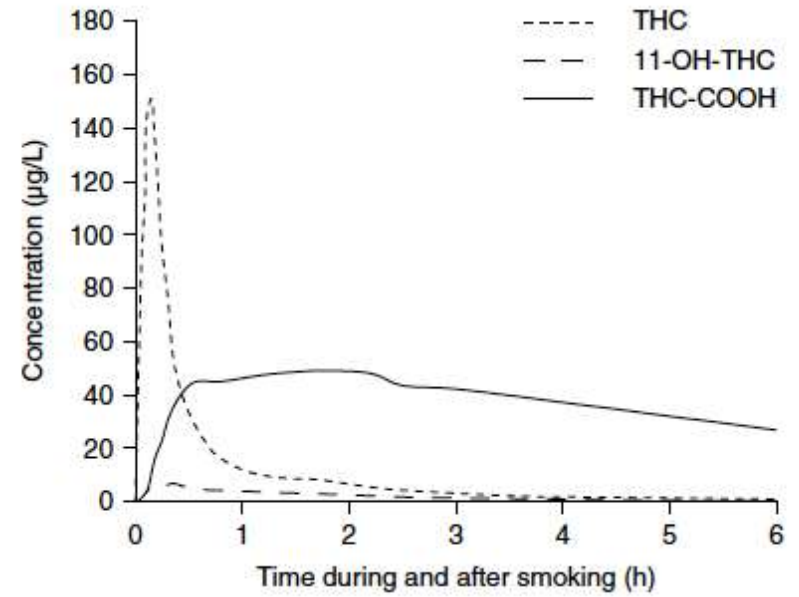
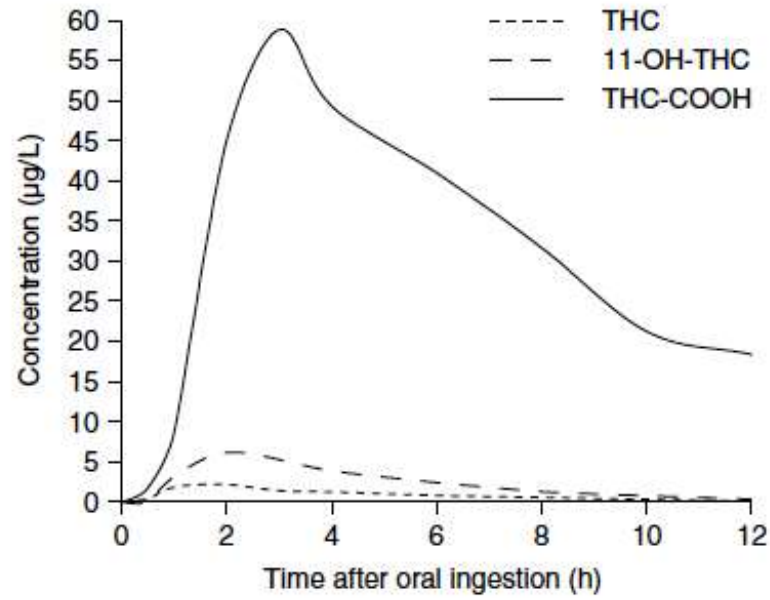
Alternative Title: medical marijuana

“Medical cannabis may be more accurately defined as the use of cannabis under **ongoing medical supervision**, with an **established diagnosis** of the target symptom-disease complex, **in conjunction** with, or in consideration of, other pharmacological and non-pharmacological approaches, and with the goal of reaching **pre-specified treatment outcomes**”

DRUG DISPOSITION

Clin Pharmacokinet 2003; 42 (4): 327-360
0312-6963/03/0004-0327/\$30.00/0

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Simplified guideline for prescribing medical cannabinoids in primary care

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Nicole Crisp RN MN NP-Adult Beverly Dockrill RN Ruth E. Dubin MD PhD FCFP DCAPM Ted Findlay DO CCFP FCFP
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► The guideline suggests that clinicians could consider medical cannabinoids for refractory neuropathic pain and refractory pain in palliative care, chemotherapy-induced nausea and vomiting, and spasticity in multiple sclerosis and spinal cord injury after reasonable trials of standard therapies have failed. If considering medical cannabinoids and criteria are met, the guideline recommends nabilone or nabiximols be tried first. Harms are generally more common than benefits are, and it is important to discuss the benefits and risks of medical cannabinoids with patients for whom they are being considered.

Prescription cannabinoids

Nabilone (0.25 - 1.0mg)

- Oral capsule
- Approved for **chemotherapy-induced nausea and vomiting**

Nabiximols (2.7mg THC + 2.5mg CBD)

- Oromucosal spray
- Approved in Canada for **multiple sclerosis-associated neuropathic pain, spasticity and advanced cancer pain**

Association of Cannabis With Cognitive Functioning in Adolescents and Young Adults

A Systematic Review and Meta-analysis

J. Cobb Scott, PhD; Samantha T. Slomiak, MD; Jason D. Jones, PhD; Adon F. G. Rosen, BS; Tyler M. Moore, PhD; Ruben C. Gur, PhD

JAMA Psychiatry. doi:10.1001/jamapsychiatry.2018.0335

Published online April 18, 2018.

CONCLUSIONS AND RELEVANCE Associations between cannabis use and cognitive functioning in cross-sectional studies of adolescents and young adults are small and may be of questionable clinical importance for most individuals. Furthermore, abstinence of longer than 72 hours diminishes cognitive deficits associated with cannabis use. Although other outcomes (eg, psychosis) were not examined in the included studies, results indicate that previous studies of cannabis in youth may have overstated the magnitude and persistence of cognitive deficits associated with use. Reported deficits may reflect residual effects from acute use or withdrawal. Future studies should examine individual differences in susceptibility to cannabis-associated cognitive dysfunction.



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*Your health and
safety... our priority.*

*Votre santé et votre
sécurité... notre priorité.*

Sample Medical Document for the Access to Cannabis for Medical Purposes Regulations

This document may be completed by the applicant's health care practitioner as defined in the Access to Cannabis for Medical Purposes Regulations (ACMPR). A health care practitioner includes medical practitioners and nurse practitioners. In order to be eligible to provide a medical document, the health care practitioner must have the applicant for the medical document under their professional treatment. Regardless of whether or not this form is used, the medical document must contain all of the required information, (see in particular s. 8 of the ACMPR).

Patient's Given Name and Surname _____

Patient's Date of Birth (DD/MM/YYYY) _____

Daily quantity of dried marihuana to be used by the patient: _____ g/day

The period of use is _____ day(s) _____ week(s) _____ month(s).

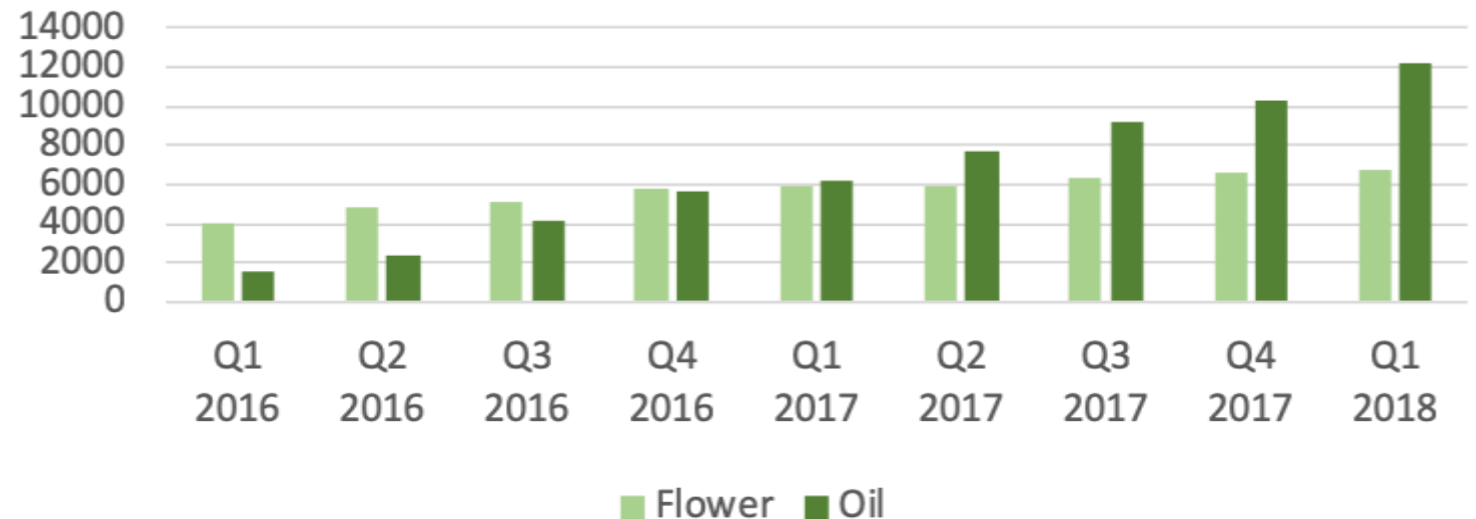
NOTE: The period of use cannot exceed one year

Oh, Canada

- Cannabis production

- 132 licensed producers
- >330,000 patients
 - Increasing 10% per month
- Dried cannabis
 - Average amount authorized 2.4g/day
 - Average amount purchased 0.75g/day

Cannabis sales to patients 2016-18 (kgs)



Rapid synthesis: Examining the impact of decriminalizing or legalizing cannabis for recreational use

Waddell K, Wilson MG. Hamilton, Canada: McMaster Health Forum/Michael G. DeGroot
Centre for Medicinal Cannabis Research, 31 July 2017.

- 43 documents including five systematic reviews, six non-systematic literature reviews, one program evaluation, and 31 primary studies
- Authors found a **reduction in the perception of risk** of epidemiological harms, and an **increase in the adult use of cannabis**.
- Mixed effects were found with regards to the impact of cannabis on using other substances, with findings indicating a **substitutive or additive effect for the use of alcohol**, largely depending on the construction of the cannabis legislation.
- **Reduction in mortality from opioid overdoses** among states in the U.S. that have legalized medicinal cannabis,
- **Reduction in the rates of suicide** following legalization of medicinal cannabis.
- **Increased cannabis-induced visits to the emergency room**
- **Greater number of telephone calls to poison control centres** following children's accidental ingestion of cannabis

Canada's Lower-Risk Cannabis Use Guidelines (LRCUG)



CANADIAN RESEARCH
INITIATIVE IN
SUBSTANCE MISUSE

INITIATIVE CANADIENNE
DE RECHERCHE
EN ABUS DE SUBSTANCE



[Evidence Brief]

An evidence-based tool to guide choices and improve the health of Canadians who use cannabis



Reference

Fischer, B., Russell, C., Sabioni, P., van den Brink, W., Le Foll, B., Hall, W., Rahm, J. & Room, R. (2017). Lower-Risk Cannabis Use Guidelines (LRCUG): An evidence-based update. *American Journal of Public Health*, 107(8). DOI: 10.2195/AJPH.2017.303818.

Endorsements

The LRCUG have been endorsed by the following organizations:



Council of Chief Medical Officers of Health (In principle)

Acknowledgment

The Lower-Risk Cannabis Use Guidelines (LRCUG) are an evidence-based intervention initiative by the Canadian Research Initiative in Substance Misuse (CRISM), funded by the Canadian Institutes of Health Research (CIHR).

A briefer version of the LRCUG, mainly aimed at people who use cannabis, is available at camh.ca.

Cannabis use and health

Cannabis use is common, especially among adolescents and young adults. There are well-documented risks from cannabis use to both immediate and long-term health. The main risks include cognitive, psychomotor and memory impairments; hallucinations and impaired perception; impaired driving and injuries (including fatalities); mental health problems (including psychosis); dependence; pulmonary/bronchial problems; and reproductive problems.

Why Lower-Risk Cannabis Use Guidelines?

Cannabis has been illegal for decades, but Canada is moving toward legalizing and regulating use and supply. The main goals of this policy are to protect public health and public safety. Towards that end, education, prevention and guidance on cannabis use and health are key elements for reducing cannabis use-related harms and problems in the population. Extensive data show that cannabis use has inherent health risks, but users can make choices as to how and what they use to modify their own risks. The main objective of Canada's Lower-Risk Cannabis Use Guidelines (LRCUG) is to provide science-based recommendations to enable people to reduce their health risks associated with cannabis use, similar to the intent of health-oriented guidelines for low-risk drinking, nutrition or sexual behavior.

How were the LRCUG developed?

The scientific version of the Lower-Risk Cannabis Use Guidelines was published in the *American Journal of Public Health* in 2017 (see "Reference" on back), where all data and sources can be found. The original LRCUG had been tabled in 2011; the current version has been updated by an international team of addiction and health experts.

Who are the LRCUG for?

The LRCUG are a health education and prevention tool for:

- anyone who is considering using cannabis or has made the choice to use, as well as their family, friends and peers.
- any professional, organization or government aiming to improve the health of Canadians who use cannabis through evidence-based information and education.

FAST FACTS

- Canada has among the highest cannabis use rates in the world.
- Fatal and non-fatal injuries from motor-vehicle accidents, as well as dependence and other mental health problems, are the most common cannabis-related harms negatively impacting public health.
- About 1 in 5 people seeking substance use treatment have cannabis-related problems.

Abstinence

As with any risky behaviour, the safest way to reduce risks is to avoid the behaviour altogether. The same is true for cannabis use.

- **Recommendation 1**

The most effective way to avoid any risks of cannabis use is to abstain from use. Those who decide to use need to recognize that they incur risks of a variety of – acute and/or long-term – adverse health and social outcomes. These risks will vary in their likelihood and severity with user characteristics, use patterns and product qualities, and so may not be the same from user to user or use episode to another.

Age of initial use

- **Recommendation 2**

Early initiation of cannabis use (i.e., most clearly that which begins before age 16) is associated with multiple subsequent adverse health and social effects in young adult life. These effects are particularly pronounced in early-onset users who also engage in intensive/frequent use. This may be in part because frequent cannabis use affects the developing brain. Prevention messages should emphasize that, the later cannabis use is initiated, the lower the risks will be for adverse effects on the user's general health and welfare throughout later life.

Choice of cannabis products

- **Recommendation 3**

High THC-content products are generally associated with higher risks for various (acute and chronic) mental and behavioural problem outcomes. Users should know the nature and composition of the cannabis products that they use, and ideally use cannabis products with low THC content. Given the evidence of CBD's attenuating effects on some THC-related outcomes, it is advisable to use cannabis containing high CBD:THC ratios.

Choice of cannabis products

- **Recommendation 4**

Recent reviews on synthetic cannabinoids indicate markedly more acute and severe adverse health effects from the use of these products (including instances of death). The use of these products should be avoided.

Cannabis use methods and practices

- **Recommendation 5**

Regular inhalation of combusted cannabis adversely affects respiratory health outcomes. While alternative delivery methods come with their own risks, it is generally preferable to avoid routes of administration that involve smoking combusted cannabis material, e.g., by using vaporizers or edibles. Use of edibles eliminates respiratory risks, but the delayed onset of psychoactive effect may result in the use of larger than intended doses and subsequently increased (mainly acute, e.g., from impairment) adverse effects.

Cannabis use methods and practices

- **Recommendation 6**

Users should avoid practices such as “deep-inhalation,” breath-holding, or the Valsalva maneuver to increase psychoactive ingredient absorption when smoking cannabis, as these practices disproportionately increase the intake of toxic material into the pulmonary system.

Frequency and intensity of use

- **Recommendation 7**

Frequent or intensive (e.g., daily or near-daily) cannabis use is strongly associated with higher risks of experiencing adverse health and social outcomes related to cannabis use. Users should be aware and vigilant to keep their own cannabis use—and that of friends, peers or fellow users—occasional (e.g., use only on one day/week, weekend use only, etc.) at most.

Cannabis use and driving

- **Recommendation 8**

Driving while impaired from cannabis is associated with an increased risk of involvement in motor-vehicle accidents. It is recommended that users categorically refrain from driving (or operating other machinery or mobility devices) for at least 6 hours after using cannabis. This wait time may need to be longer, depending on the user and the properties of the specific cannabis product used. Besides these behavioural recommendations, users are bound by locally applicable legal limits concerning cannabis impairment and driving. The use of both cannabis and alcohol results in multiply increased impairment and risks for driving, and categorically should be avoided.

Cannabis use and recreational users:

Tatiana Ogourtsova PhD OT(c)
Nicol Korner-Bitensky PhD OT

Table 2: Correlation between UFOV driving-related performance and perceived driving ability and safety (n = 45)

Timing and perception	VAS measure; correlation coefficient	
	UFOV-2	UFOV-3
No cannabis use		
Perceived driving ability	$r = 0.13, p = 0.4$	$r = 0.18, p = 0.2$
Perceived driving safety	$r = 0.06, p = 0.7$	$r = 0.18, p = 0.2$
At 1 h after cannabis use		
Perceived driving ability	$r = -0.12, p = 0.4$	$r = -0.09, p = 0.5$
Perceived driving safety	$r = -0.11, p = 0.4$	$r = -0.12, p = 0.4$
At 3 h after cannabis use		
Perceived driving ability	$r = 0.08, p = 0.6$	$r = -0.006, p > 0.9$
Perceived driving safety	$r = 0.11, p = 0.5$	$r = 0.02, p = 0.8$
At 5 h after cannabis use		
Perceived driving ability	$r = -0.40, p = 0.006$	$r = -0.005, p > 0.9$
Perceived driving safety	$r = -0.38, p = 0.009$	$r = -0.05, p = 0.7$

Note: r = Pearson correlation coefficient, UFOV = useful field of view, UFOV-2 = complex divided-attention task, UFOV-3 = complex selective-attention task with distractions, VAS = visual analogue scale.

Special-risk populations

- **Recommendation 9**

There are some populations at probable higher risk for cannabis-related adverse effects who should refrain from using cannabis. These include: individuals with predisposition for, or a first-degree family history of, psychosis and substance use disorders, as well as pregnant women (primarily to avoid adverse effects on the fetus or newborn). These recommendations, in part, are based on precautionary principles.

Combining risks or risk behaviours

- **Recommendation 10**

While data are sparse, it is likely that the combination of some of the risk behaviours listed above will magnify the risk of adverse outcomes from cannabis use. For example, early-onset use involving frequent use of high-potency cannabis is likely to disproportionately increase the risks of experiencing acute and/or chronic problems. Preventing these combined high-risk patterns of use should be avoided by the user and a policy focus.