

The Lower–Risk Cannabis Use Guidelines (LRCUG)



Public Health
Agency of Canada

Agence de la santé
publique du Canada

camh



**CANADIAN RESEARCH
INITIATIVE IN
SUBSTANCE MISUSE**

The Canadian Research Initiative in
Substance Misuse is supported by the
Canadian Institutes of Health Research

All rights reserved © Centre for Addiction and Mental Health, 2019. These slides are based on the LRCUG, an evidence-based intervention project, are supported by the Canadian Research Initiative in Substance Misuse (CRISM) and the Public Health Agency of Canada (PHAC). This material may not be altered, adapted or copied without the express written permission of CAMH.

Original source: Fischer, B., Russell, C., Sabioni, P., van den Brink, W., Le Foll, B., Hall, W., Rehm, J., & Room, R.,(2017). Lower-Risk Cannabis Use Guidelines: A Comprehensive Update of Evidence and Recommendations. *American Journal of Public Health*, 107(8). DOI: 10.2105/AJPH.2017.303818.

Disponible en français

Overview

- 1 Background**
- 2 Lower-Risk Cannabis Use Guidelines (LRCUG): Recommendations**
- 3 Other Resources**

Background

Cannabis Use

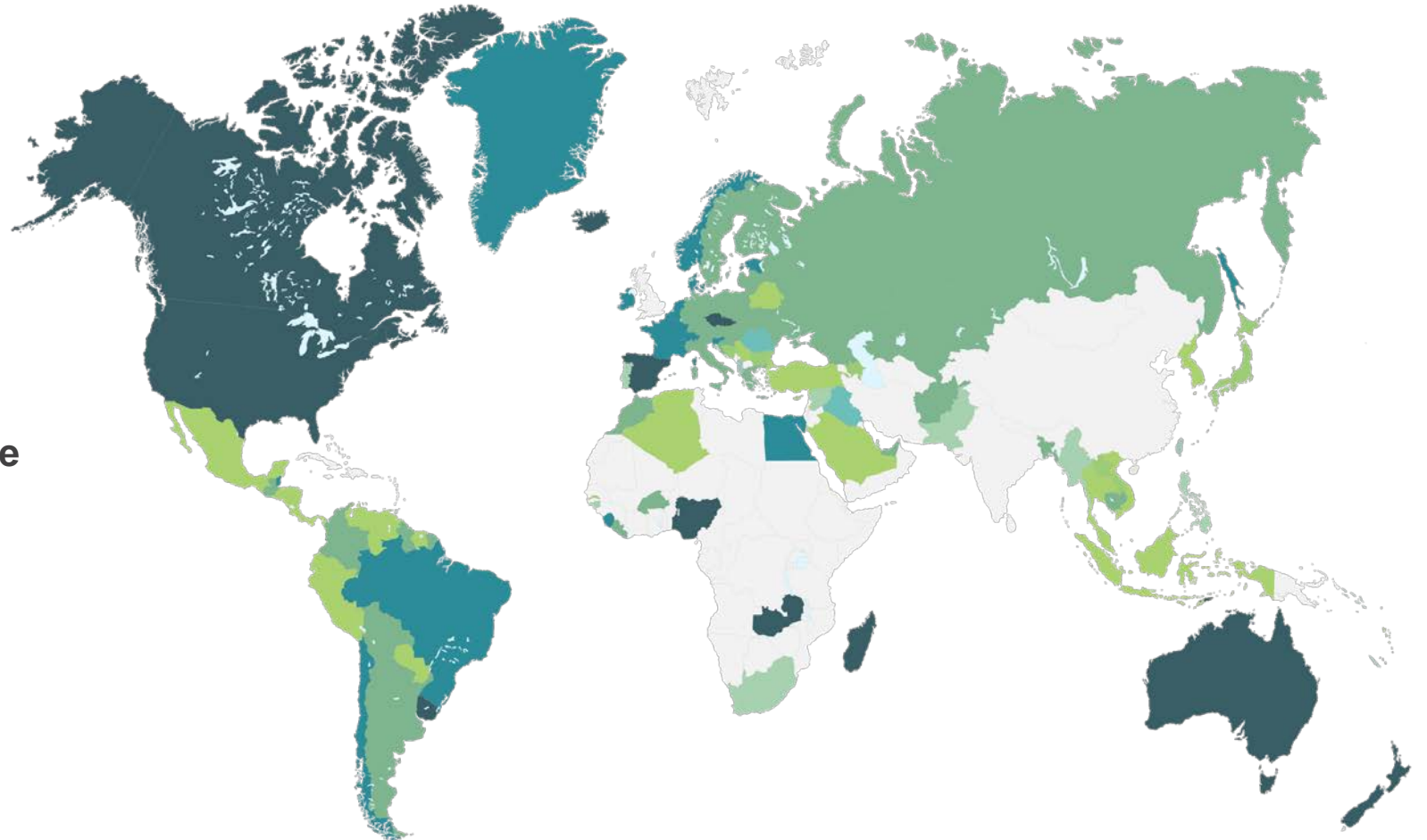
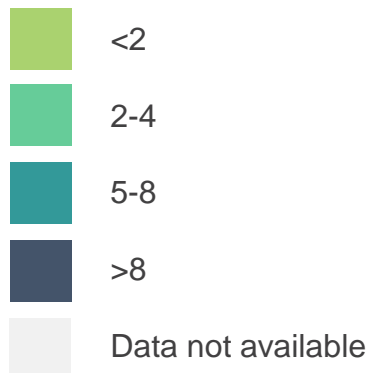
- Cannabis is widely used, with 125 to 200 million cannabis users globally.
- Canada has among the highest rates of cannabis use in the world, particularly among youth, along with the US and Australia.
- About one in seven (14.8 percent) Canadians aged 15+ reported using cannabis in the past year (Canadian Tobacco, Alcohol and Drugs Survey, 2017).

Background

Globally, Canada has high levels of cannabis use.

Global prevalence of cannabis use for population aged 15-64 years

PREVALENCE (%) IN 2013



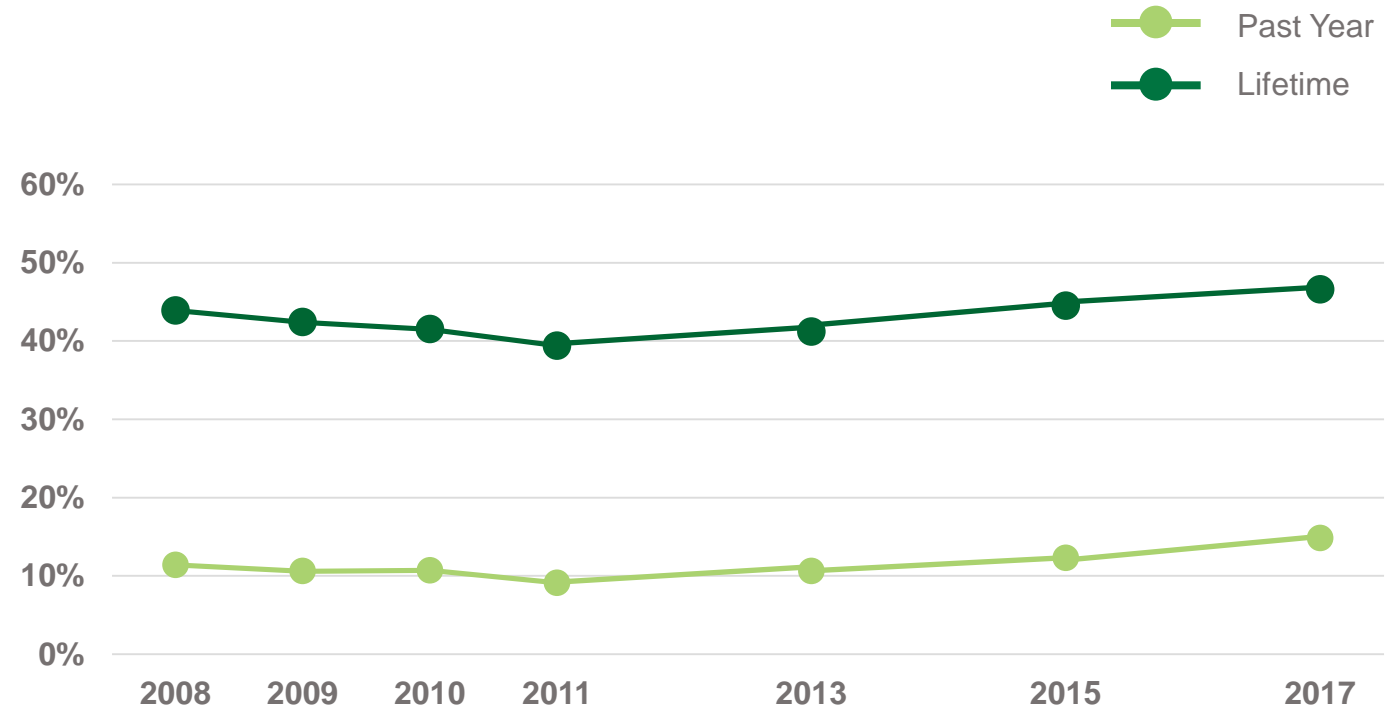
Source: World Drug Report 2015. United Nations Office on Drugs and Crime.

Background

Cannabis use has remained steady over the past decade.

Lifetime & past year prevalence of cannabis use among Canadians ages 15+ years

- Source: Canadian Alcohol and Drug Use Monitoring Survey (CADUMS; 2008-2011) and Canadian Tobacco, Alcohol, and Drugs Survey (CTADS; 2013, 2015, 2017)

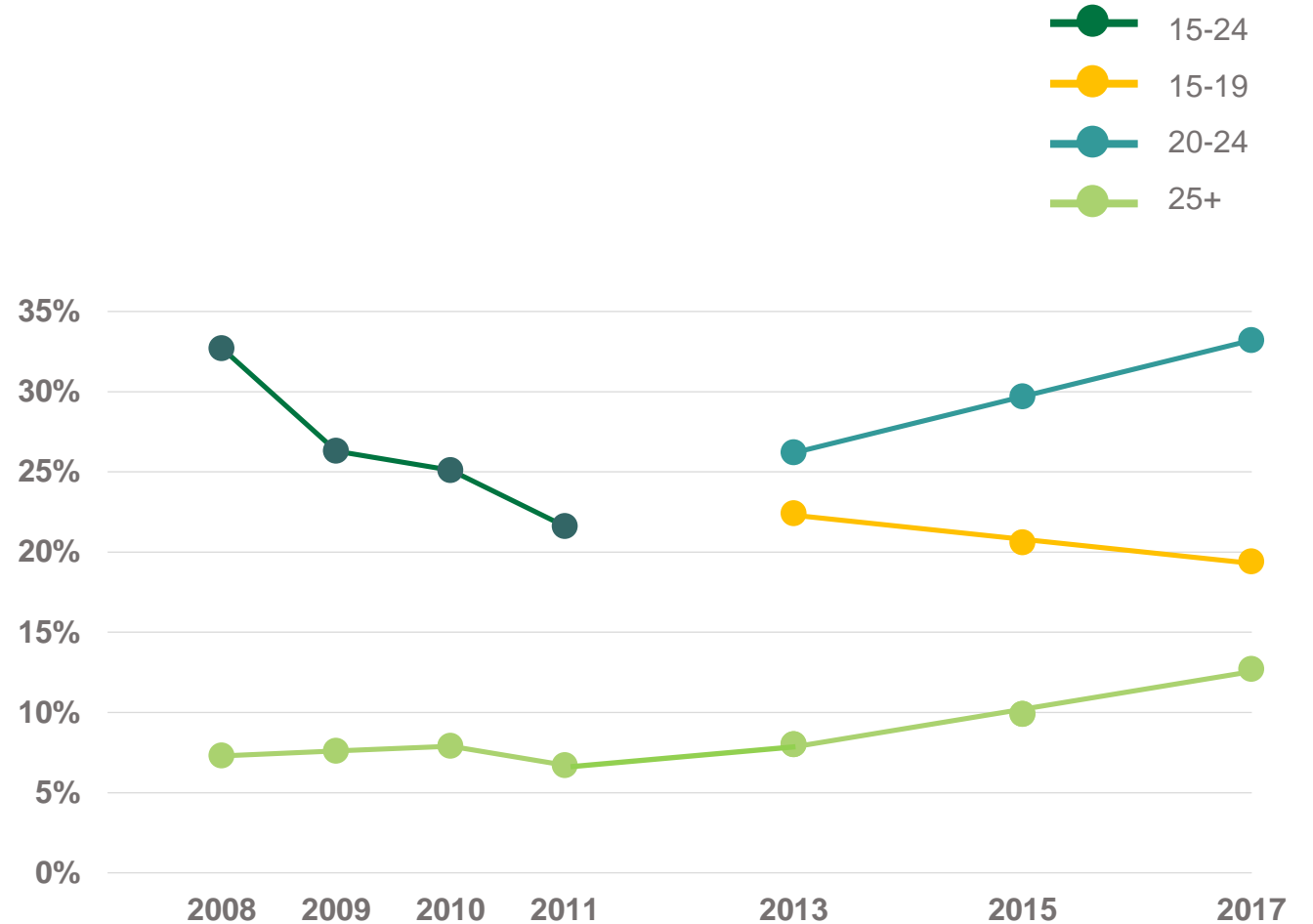


Background

Cannabis use trends differently, depending on age.

Past year prevalence of cannabis use among Canadians, by age group

- Age groupings differed in 2008-2011 and 2013-2017 surveys
- Source: Canadian Alcohol and Drug Use Monitoring Survey (CADUMS; 2008-2011) and Canadian Tobacco, Alcohol, and Drugs Survey (CTADS; 2013, 2015, 2017)

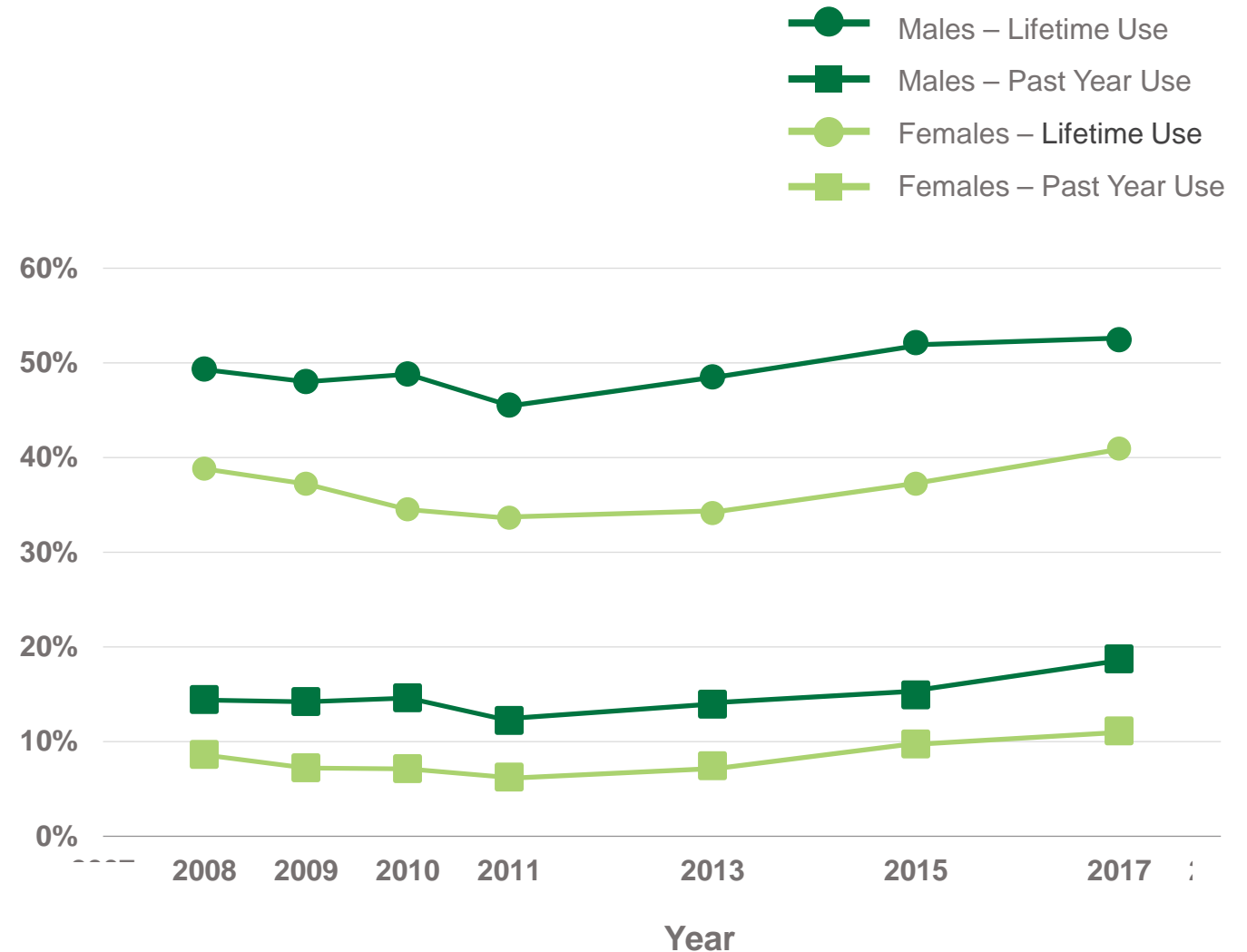


Background

Females consume cannabis less than males, but overall trends in use have been steady over 10 years.

Lifetime & past year cannabis use among Canadians, by sex

- Source: Canadian Alcohol and Drug Use Monitoring Survey (CADUMS; 2008-2011) and Canadian Tobacco, Alcohol, and Drugs Survey (CTADS; 2013, 2015, 2017)



Background

Cannabis Use & Health Risks

Cannabis use is associated with risks for several short- and long-term adverse health outcomes, including:

- hallucinations, perception/memory impairment, loss of psychomotor control
- mental health problems, including psychosis
- cannabis use disorder (including dependence)
- Injuries/collisions, including those from impaired driving
- respiratory problems
- reproductive/newborn health problems

These outcomes are not given consequences of cannabis use, but may occur among those who use cannabis in higher-risk ways.

Lower Risk Cannabis Use Guidelines (LRCUG)

- The **Lower-Risk Cannabis Use Guidelines** are a tool aiming to reduce cannabis-related health risks among those who use or are considering cannabis use.
- The LRCUG are based on the idea that health risks can be reduced through informed, evidence-based choices related to cannabis use.
- The LRCUG are based on a systematic review of the scientific evidence to identify key modifiable risk factors that influence cannabis use-related health risks.
- A team of scientific experts reviewed and quality-graded the evidence, and translated findings into recommendations based on expert consensus methods.
- The current LRCUG were published in the *American Journal of Public Health* (2017).

LCRUG: **The Recommendations**

Abstinence

THE EVIDENCE

- Anyone who uses cannabis may incur a variety of short- and/or long-term risks related to both health and social outcomes.
- The likelihood and severity of these risks will vary based on individual characteristics, the product used, and patterns of use.
- The risks may not be the same from person to person, or one episode of use to another.

1

RECOMMENDATION #1

The most effective way to avoid the risks of cannabis use is to abstain from use.

Age of Initial Use

THE EVIDENCE

- Cannabis users who start young, especially before the age of 16, and who use cannabis more intensely, are more likely to develop mental health or substance use problems, or to experience injuries later in life.
- A contributing factor may be the impact of cannabis use on brain development, which is not completed until the mid-20s.
- The younger the age of initiating cannabis use, the greater the likelihood of developing problems.

2

RECOMMENDATION #2

Delaying cannabis use, at least until after adolescence, will reduce the likelihood or severity of adverse health outcomes.

Choice of Cannabis Products

THE EVIDENCE

- Cannabis products vary greatly, including tetrahydrocannabinol (THC) content, its main psychoactive ingredient. Higher THC potency is related to higher risk of adverse health outcomes (e.g. psychosis, dependence).
- Average THC concentrations have been increasing to 20-25% or more in recent decades. Cannabis extracts or concentrates typically contain much higher THC levels.
- Cannabidiol (CBD), another cannabis component, counteracts some of THC's effects.
- Current research evidence does not pinpoint a specific level of THC that could be categorized safe or unsafe.

3

RECOMMENDATION #3

Use products with low THC and high CBD:THC ratios.

Choice of Cannabis Products

THE EVIDENCE

- Synthetic cannabinoids are a relatively new, and illegal, class of products. They have a distinct pharmacology and toxicology than natural cannabis products, including generally more severe psychoactive impacts and health risks that may lead to accidental death.

4

RECOMMENDATION #4

The use of synthetic cannabis products, such as K2 or Spice, should be avoided.

Methods & Practices

THE EVIDENCE

- Persistent smoking of burnt cannabis can result in respiratory problems, possibly including lung cancer.
- Alternative inhalation methods are vaporizers or e-cigarette devices. Ingested or “edible” products avoid inhalation, but their delayed onset of psychoactive effects may lead people to take higher doses.
- If accompanied by adequate product labeling, packaging and warnings, edibles may offer the safest method of cannabis use.
- No method of use is entirely risk-free.

5

RECOMMENDATION #5

Avoid smoking burnt cannabis and choose safer inhalation methods including vaporizers, e-cigarette devices and ingestible products.

Methods & Practices

THE EVIDENCE

- Breath-holding or deep inhalation practices are intended to increase the absorption of psychoactive components and effects of cannabis.
- However, these practices increase the intake of toxic materials and can heighten respiratory health risks.
- These effects are further amplified when cannabis and tobacco are smoked together.

6

RECOMMENDATION #6

If cannabis is smoked, avoid harmful smoking practices such as inhaling deeply or breath-holding.

Frequency & Intensity of Use

THE EVIDENCE

- The frequency and intensity of cannabis use are among the strongest and most consistent predictors of severe and/or long-term cannabis-related health problems.
- These problems can include:
 - changes in brain development or functioning (especially at a younger age)
 - mental health problems or dependence
 - impaired driving and related injuries
 - educational outcomes and suicidality.

7

RECOMMENDATION #7

Avoid frequent or intensive use, and limit consumption to occasional use, such as only one day a week or on weekends, or less.

Cannabis Use & Driving

THE EVIDENCE

- Cannabis impairs cognition, attention, reaction and psychomotor control.
- The risk of a collision, including injury or death, is two- to three-times higher among cannabis-impaired drivers compared to those who aren't impaired. Alcohol impairment further increases this risk.
- Acute impairments from cannabis set in shortly after use and persist for at least 6 hours, but they vary depending on the individual and the product used.

8

RECOMMENDATION #8

Do not drive or operate other machinery for at least 6 hours after using cannabis. Combining cannabis with alcohol increases impairment and should be avoided.

Special Risk Populations

THE EVIDENCE

- Studies have identified subgroups of people with higher or distinct risks for cannabis-related health problems.
- A substantial proportion of cannabis-related psychosis, and possibly other mental health problems (including cannabis dependence), occur among those with a personal or family history of such problems.
- Cannabis use in pregnancy can increase the risk of adverse neonatal health outcomes, including low birthweight and growth reduction.

9

RECOMMENDATION #9

People with a personal or family history of psychosis or substance use disorders, as well as pregnant women, should avoid cannabis use.

Combining Risks or Risky Behaviour

THE EVIDENCE

- While data are limited, combining any of the higher-risk behaviours described in these guidelines is likely to further increase the risks of adverse health outcomes from cannabis use.
- For example, early-onset use involving frequent consumption of high-potency cannabis is likely to disproportionately increase a person's risks of experiencing acute and/or chronic problems.

10

RECOMMENDATION #10

Avoid combining any of the risk factors related to cannabis use. Multiple high-risk behaviours will amplify the likelihood or severity of adverse outcomes.

Summary

Based on the available scientific evidence, the key areas of risk reduction promising the largest impact for individual cannabis consumers and public health are:

- Delaying cannabis use, at least until after adolescence.
- Avoiding frequent or regular use, and limiting consumption to occasional use at most.
- Avoiding high potency and high-risk cannabis products.
- Not driving while impaired by cannabis.

Cautions & Conclusion

- The Lower-Risk Cannabis Use Guidelines can only be effective if they are disseminated and communicated effectively, which also requires tailoring the way content is delivered to different target audiences.
- The LRCUG are not a clinical guideline or substitute for treatment.
- People who are experiencing problems related to their cannabis use should seek the help of a qualified health professional.

Other LRCUG Resources*

LRCUG Evidence Brief

A 4-page [evidence summary](#), mainly for health professionals

LRCUG Poster & Postcard: Cannabis and your health

[A poster and postcard](#) presenting the LRCUG's recommendations, in summary form.

LRCUG Brochure: 10 ways to reduce risks to your health when using cannabis

A [brochure](#) for cannabis consumers.

FAQ

[Frequently asked questions](#) about the LRCUG

Youth Booklet: The Blunt Truth

A [youth version](#) developed by youth. at CAMH's McCain Centre for Child, Youth and Families.

*All materials are available in English and French

Endorsements

The LRCUG have been endorsed by the following Canadian organizations. The LRCUG have also been endorsed by the Provincial Governments of Ontario and Quebec.



Mental Health
Commission
of Canada

Commission de
la santé mentale
du Canada

CANADIAN
NURSES
ASSOCIATION



ASSOCIATION DES
INFIRMIÈRES ET
INFIRMIERS DU CANADA®



CANADIAN
PUBLIC HEALTH
ASSOCIATION

ASSOCIATION
CANADIENNE DE
SANTÉ PUBLIQUE

ASSOCIATION
MÉDICALE
CANADIENNE



CANADIAN
MEDICAL
ASSOCIATION



Canadian Society of Addiction Medicine
La Société Médicale Canadienne sur l'Addiction



Canadian Mental
Health Association
Mental health for all

Association canadienne
pour la santé mentale
La santé mentale pour tous



CANADIAN
PHARMACISTS
ASSOCIATION

ASSOCIATION DES
PHARMACIENS
DU CANADA



Canadian Centre
on Substance Use
and Addiction

Evidence. Engagement. Impact.

Centre canadien sur
les dépendances et
l'usage de substances

Données. Engagement. Résultats.

camh

Council of Chief Medical Officers of Health (CCMOH)

Reference

Fischer, B., Russell, C., Sabioni, P., van den Brink, W., Le Foll, B., Hall, W., Rehm, J. & Room, R. (2017). [Lower-Risk Cannabis Use Guidelines: A Comprehensive Update of Evidence and Recommendations](#). American Journal of Public Health, 107(8). DOI: 10.2105/AJPH.2017.303818.

Acknowledgement

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).