



# ▶ **Health effects of cannabis on adults over 55**

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CANNABIS RESOURCE SERIES



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### **BRIEFS AVAILABLE IN THIS SERIES:**

- ▶ How to read and understand a cannabis product label
- ▶ Health effects of cannabis on adults over 55
- ▶ Growing cannabis at home safely
- ▶ Cannabis accessories for inhalation: minimizing your risk when smoking, vaping and dabbing
- ▶ Is cannabis safe to use? Facts for youth aged 13–17 years.
- ▶ Is cannabis safe to use? Facts for young adults aged 18–25 years.
- ▶ Does cannabis use increase the risk of developing psychosis or schizophrenia?
- ▶ Is cannabis safe during preconception, pregnancy and breastfeeding?
- ▶ Is cannabis addictive?

### **PURPOSE:**

This document provides key messages and information about the risks and health effects of cannabis use for adults over 55. It is intended to provide source material for the general public as well as for public education and awareness activities. Information and key messages can be re-purposed as appropriate into materials, including brochures, posters, etc.

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This document outlines some important facts to consider for adults over 55, when deciding whether to use cannabis. If you choose to use cannabis, you should always buy it from the legal market because cannabis products from the illegal market are not subject to the same quality controls. It may therefore expose consumers to unnecessary health risks.

Because cannabis products are much stronger today and come in a greater variety of forms and ways to consume, regardless of your previous experience, you should “start low, go slow”.

- ▶ Exercise caution and start with the lowest amount of THC and CBD available.
- ▶ Space out inhalations of smoked or vaped cannabis, bites of edible cannabis (or sips of edible cannabis beverages) or drops of oral oils or tinctures to lower the chance of side effects.

All legal cannabis products are clearly labelled with their THC and CBD levels. Refer to [How to read and understand a cannabis product label](#) for more information.

If you experience any of the following serious side effects right after using cannabis, stop using cannabis and contact your health care professional:

- ▶ seizure
- ▶ paranoia
- ▶ chest pain
- ▶ hallucinations
- ▶ severe headache
- ▶ shortness of breath
- ▶ loss of consciousness
- ▶ rapid or irregular heart beat
- ▶ trouble seeing in one or both eyes
- ▶ numbness or weakness in any part of your body
- ▶ confusion, trouble speaking, difficulty understanding speech

[Report any adverse reactions to cannabis](#) or [submit a report on cannabis](#) for concerns about the quality of cannabis products.



## Why using cannabis can be riskier for adults over 55

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Your body's ability to process drugs and substances changes as you age. Adults over 55 may be more sensitive to cannabis and have a higher risk of having side effects. This is especially true when they have certain medical conditions.<sup>1</sup> For example, you shouldn't use cannabis if you have serious:

- ▶ liver disease
- ▶ kidney disease
- ▶ heart or blood vessel disease

Using cannabis while taking prescription or non-prescription health products can increase the risks of side effects. Such products include:

- ▶ biological drugs
- ▶ pharmaceutical drugs
- ▶ natural health products
- ▶ radiopharmaceutical drugs

Talk to your health care professional first if you're thinking of using cannabis for medical or non-medical purposes.

## How to help minimize your risk

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Below are important factors to consider to help minimize your risk of experiencing [side effects from cannabis](#).

### **Choose cannabis products with lower amounts of THC and equal or higher amounts of CBD.<sup>2</sup>**

THC causes the intoxicating effects of cannabis. CBD isn't intoxicating and may reduce some of the effects of THC. However, CBD does have effects on your brain and body.

Choose legal products with lower THC amounts:

- ▶ edible cannabis, capsules, softgels, or lozenges with 2.5 mg THC or less per unit
- ▶ dried cannabis with 100 mg/g (10%) THC per unit, or the lowest you can find
- ▶ vape liquids with the lowest THC percentage or mg/g you can find
- ▶ oils or tinctures with the lowest amount of THC you can find

## Wait to see how your body reacts before using more

- ▶ If you're eating or drinking cannabis, you may need to wait longer to feel the effects. It can take up to 4 hours after ingestion to feel the full effects. This may happen when ingesting capsules, softgels, tinctures, oils, or edible cannabis, including beverages.
- ▶ Be cautious when inhaling cannabis extracts, as these products usually have a much higher concentration of THC than dried cannabis.

## Avoid mixing cannabis with other substances

Avoid using cannabis with tobacco, alcohol or other substances. Using them together can increase the risk of side effects.

Learn more about Common [interactions with other substances](#).

## Cannabis has gotten stronger over time

Cannabis products are stronger today than they were decades ago.<sup>3,4</sup>

- ▶ Dried cannabis
  - On average, dried cannabis contains **4 times more THC** today than it did in the mid-1980s and early 1990s
  - Based on US data, the average THC content in illegal dried cannabis was:
    - about 3% between 1984 and 1992
    - about 14% in 2019
  - Today, the THC concentration in dried cannabis often averages above 15%, and up to 30%
- ▶ Cannabis extracts
  - Some cannabis extracts may contain up to **30 times more THC** than dried cannabis from the mid-1980s and early 1990s
  - Some cannabis extracts for inhalation can have THC concentrations of up to 90%<sup>5</sup>

## Your response to cannabis can vary

If you're over 55, cannabis can have added health risks, even if you're an experienced consumer or using for medical purposes. Side effects may depend on many factors like:

- ▶ your sex<sup>6,7</sup>
- ▶ your previous experience with cannabis
- ▶ the amounts of [THC and CBD](#) in the product and how much of the product you consume
- ▶ how you use cannabis (for example, eating, drinking, smoking or vaping)
- ▶ your consumption of food, alcohol, and health products or other drugs and substances
- ▶ the type of cannabis used (for example, cannabis extracts or dried cannabis)

Both THC **and** CBD can have side effects. It's important to understand the amounts of THC and CBD in your product to help avoid or reduce the risk of side effects.

## Health effects

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Below are some of the more well-known effects of cannabis on the body and brain. Adults over 55 may feel some of these more strongly because of:

- ▶ age-related changes in the way the body responds to drugs
- ▶ pre-existing health conditions
- ▶ use of medications
- ▶ use of other health products with cannabis

Visit [Health effects of cannabis](#) to learn more about the general effects of cannabis.

### Brain

THC can cause these effects on your brain:

- ▶ anxiety
- ▶ drowsiness
- ▶ hallucinations
- ▶ paranoia
- ▶ confusion
- ▶ misperceptions
- ▶ disorganized thoughts
- ▶ loss of coordination that can cause falls, accidents or injuries
- ▶ impairments in memory, attention and performance in complex and demanding tasks

### Heart

THC can increase your heart rate shortly after use. The higher the THC content, the higher the potential increase. An increased heart rate can:

- ▶ put extra stress on the heart
- ▶ be uncomfortable and can provoke anxiety
- ▶ be more dangerous for those who have heart disease

In some people with cardiovascular or cerebrovascular disease, cannabis may increase the risk of having a heart attack or stroke.

## Blood pressure

Cannabis can lower your blood pressure, especially when you change positions from lying down or sitting to standing up. Symptoms of low blood pressure include:

- ▶ fainting
- ▶ dizziness
- ▶ blurred vision
- ▶ light-headedness

These symptoms may increase the risk of falls and injuries by causing dizziness or problems with coordination and balance. The risk of falls or injuries can increase if you use cannabis with other health products or alcohol.

## Kidneys

The kidneys play a role in removing THC and CBD from the body. It's unknown how having kidney disease impacts the effects of cannabis.

## Liver

The liver helps eliminate drugs or substances from the body. Age can cause some changes in liver function and adults over 55 are more likely to be taking multiple medications. This means that cannabis and medications can stay longer in the body and increase their risk of interaction which can result in side effects. Long-term oral use of cannabis containing higher amounts of CBD (more than 240 mg a day) may also lead to liver problems. As well, using cannabis daily can increase the severity and the progression of fatty liver disease and liver fibrosis for people with chronic hepatitis C.

Contact your health care professional if you experience these side effects right after using cannabis as they may be serious:

- ▶ fever
- ▶ nausea
- ▶ vomiting
- ▶ loss of appetite
- ▶ unusual darkening of the urine
- ▶ pain or discomfort in the right upper stomach area
- ▶ jaundice (yellowing of the skin or the whites of the eyes)

## Eyes

While further research is needed to better understand the effects of THC and CBD on the eyes, limited evidence suggests CBD may cause increased pressure inside the eyes. This effect could damage the eyes with repeated use over time. If you have glaucoma, be cautious when using cannabis products, especially those containing CBD.

## Blood sugar and diabetes

If you have type 1 diabetes and use cannabis, you may have an increased risk of developing side effects, including diabetic ketoacidosis. This can be fatal if untreated.

Contact your health care professional right away if:

- ▶ you're vomiting and can't tolerate food or liquid
- ▶ your blood sugar is higher or lower than your usual level and isn't responsive to routine treatments at home, such as the use of insulin for type 1 diabetes

## Common interactions with other substances

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Using prescription, non-prescription or natural health products with cannabis may increase the risks of interactions between these drugs/substances and the risks of side effects. Adults over 55 should be aware that cannabis may interact with:

- ▶ alcohol
- ▶ tobacco and nicotine
- ▶ illegal drugs or substances, such as cocaine
- ▶ health products for:
  - pain (such as tranquilizers, muscle relaxants)
  - seizures
  - infections
  - heartburn
  - bladder problems
  - heart and blood conditions
- ▶ allergy and cold medications
- ▶ St-John's Wort
- ▶ sedative-hypnotics
- ▶ antidepressants
- ▶ antipsychotics
- ▶ mood stabilizing medications
- ▶ immunosuppressants (medications used to prevent certain activity of the immune system, such as after an organ transplant)

## Additional resources

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- ▶ [Cannabis: Lower your risks](#)
- ▶ [Consumer information: Cannabis](#)
- ▶ [Canada's lower-risk cannabis use guidelines](#)
- ▶ [Cannabis for medical purposes under the Cannabis Act](#)
- ▶ [Information on the use of cannabis for medical purposes](#)
- ▶ [What you need to know if you choose to consume cannabis](#)
- ▶ [Cannabis: Inhaling versus ingesting \(infographic\)](#) (Canadian centre on substance use and addiction)



Other materials in the cannabis resource series:

- ▶ [How to read and understand a cannabis product label](#)
- ▶ [Is cannabis addictive?](#)
- ▶ [Is cannabis safe to use? Facts for youth aged 13–17 years.](#)
- ▶ [Is cannabis safe to use? Facts for young adults aged 18–25 years.](#)
- ▶ [Is cannabis safe during preconception, pregnancy and breastfeeding?](#)
- ▶ [Does cannabis use increase the risk of developing psychosis or schizophrenia?](#)

## References

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For more information about health effects of cannabis on adults over 55, consult the references below.

### Brain

- ▶ [Information for health care professionals: Cannabis \(marihuana, marijuana\) and the cannabinoids](#)

### Heart

- ▶ [Information for health care professionals: Cannabis \(marihuana, marijuana\) and the cannabinoids](#)
- ▶ [Changes in  \$\Delta^9\$ -tetrahydrocannabinol \(THC\) and cannabidiol \(CBD\) concentrations in cannabis over time: systematic review and meta analysis](#)
- ▶ [A comprehensive review of cannabis potency in the USA in the last decade](#)
- ▶ [The impact of marijuana on the cardiovascular system: a review of the most common cardiovascular events associated with marijuana use](#)

## Blood pressure

- ▶ [What is the current knowledge about the cardiovascular risk for users of cannabis-based products? A systematic review](#)
- ▶ [Recreational marijuana use and acute ischemic stroke: a population-based analysis of hospitalized patients in the United States](#)

## Kidneys

- ▶ [Middle cerebral artery velocity during upright posture after marijuana smoking](#)
- ▶ [Cannabis is associated with blood pressure reduction in older adults—A 24-hours ambulatory blood pressure monitoring study](#)

## Liver

- ▶ [A review of cannabis in chronic kidney disease symptom management](#)
- ▶ [The nephrologist's guide to cannabis and cannabinoids](#)
- ▶ [Daily cannabis use: a novel risk factor of steatosis severity in patients with chronic hepatitis C](#)

## Eyes

- ▶ [Influence of cannabis use on severity of hepatitis C disease](#)

## Blood sugar and diabetes

- ▶ [Cannabidiol and Abnormal Liver Chemistries in Healthy Adults: Results of a Phase I Clinical Trial](#)

# Endnotes

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- <sup>1</sup> Abramovici, H., Lamour, S., Mammen, G. (2018). Information for health care professionals: Cannabis (marihuana, marijuana) and the cannabinoids. Health Canada.
- <sup>2</sup> Freeman, A. M., Petrilli, K., Lees, R., Hindocha, C., Mokrysz, C., Curran, H. V., ... & Freeman, T. P. (2019). How does cannabidiol (CBD) influence the acute effects of  $\Delta^9$ -tetrahydrocannabinol (THC) in humans? A systematic review. *Neuroscience & Biobehavioral Reviews*, 107, 696–712.
- <sup>3</sup> Miller, S., Daily, L., Leishman, E., Bradshaw, H., & Straiker, A. (2018).  $\Delta^9$ -Tetrahydrocannabinol and cannabidiol differentially regulate intraocular pressure. *Investigative ophthalmology & visual science*, 59(15), 5904–5911.
- <sup>4</sup> Kinney, G. L., Akturk, H. K., Taylor, D. D., Foster, N. C., & Shah, V. N. (2020). Cannabis use is associated with increased risk for diabetic ketoacidosis in adults with type 1 diabetes: findings from the T1D exchange clinic registry. *Diabetes Care*, 43(1), 247–249.
- <sup>5</sup> Cash, M. C., Cunnane, K., Fan, C., & Romero-Sandoval, E. A. (2020). Mapping cannabis potency in medical and recreational programs in the United States. *PLoS one*, 15(3), e0230167.
- <sup>6</sup> Sholler, D. J., Strickland, J. C., Spindle, T. R., Weerts, E. M., & Vandrey, R. (2020). Sex differences in the acute effects of oral and vaporized cannabis among healthy adults. *Addiction biology*, e12968.
- <sup>7</sup> Calakos, K. C., Bhatt, S., Foster, D. W., & Cosgrove, K. P. (2017). Mechanisms underlying sex differences in cannabis use. *Current addiction reports*, 4(4), 439–453.