

# A Pharmacist's Perspective on Medical Cannabis

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# Territory Acknowledgement

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We would like to acknowledge, with gratitude, the ancestral, traditional and unceded Aboriginal territories of the Musqueam People.



# Outline

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- What is medical cannabis?
- Efficacy of medical cannabis on selected medical conditions
- Safety of medical cannabis
- Types of preparations available for medical cannabis



# News Headlines

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**B.C. seniors' interest in cannabis flaring up since legalization**



**Ontario could be a cannabis tourism hotspot, market researcher suggests**



**B.C. cannabis grower to test cannabinoids on concussed NHL alums**



**Elderly man's heart attack is another warning about grey-market cannabis edibles**



# Definitions

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## **Non-medical cannabis or marijuana:**

- For recreational use
- Not ordered by a prescriber

## **Medical cannabis or marijuana:**

- Ordered by prescribers
- All forms of cannabis (oils, vaporizers, edibles, etc) are included



# Cannabis Context

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## Non-medical Cannabis

- Full legalization
  - 2 countries: Uruguay and Canada
  - US: 10 states and the District of Columbia
- Legalized possession, but not sale
  - 2 countries: Georgia and South Africa

## Medical Cannabis

- Legalized in 30 countries
- US: legalized in 33 states and the District of Columbia



# Legalization Timeline in Canada

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- 1999 – Medical cannabis legalized
  - 2016 – the Access to Cannabis for Medical Purposes Regulations (ACMPR)
- 2018 Oct – Non-medical cannabis – the Cannabis Act
  - BC: Cannabis Control and Licensing Act
- 2018 Sept – Access in pharmacies – Shoppers Drug Mart
  - Licensed producer for online sale of medical marijuana
  - Currently only available in Ontario



# Legalization in BC

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## **Non-Medical Cannabis**

- Legal age: 19
- Obtain from government-run stores and online website (BC Cannabis Stores)
- Up to 30 grams of public possession

## **Medical Cannabis**

- Must be ordered by a physician
- Follow federal regulations





# What is Cannabis?

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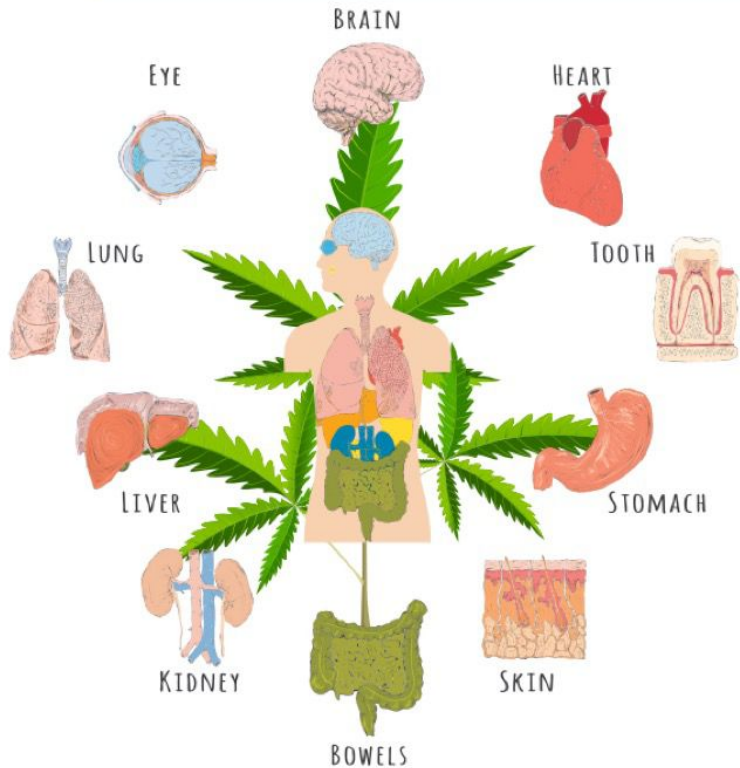
- Another name for marijuana, weed, pot
- Common subspecies: *Cannabis sativa* and *Cannabis indica*
- Works in the endocannabinoid system of the body



Indica vs sativa: <https://www.leafscience.com/2017/10/16/indica-vs-sativa-whats-difference/>



# Endocannabinoid System

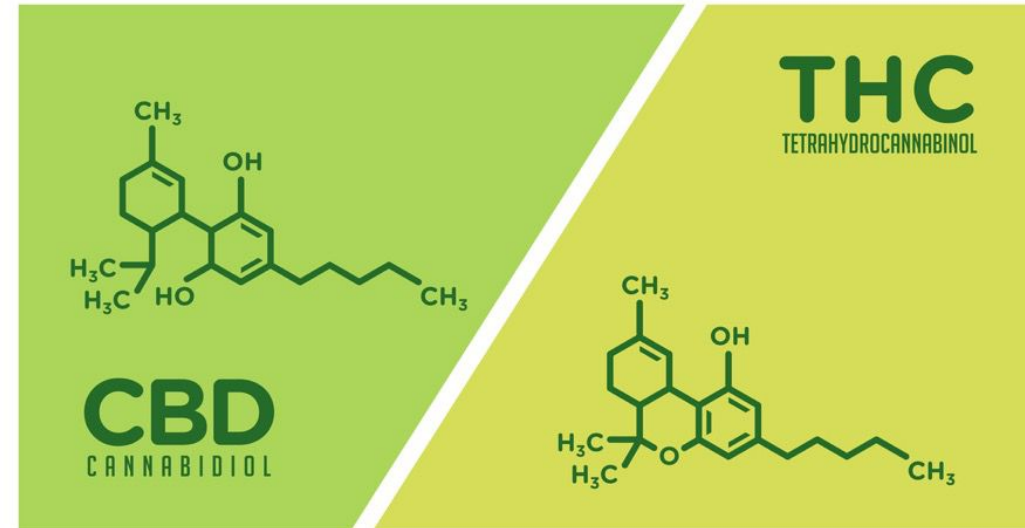


- A bodily system
- In all vertebrates
- Composed of cannabinoids
- 3 types of cannabinoids
  - Endocannabinoids (from our body)
  - Phytocannabinoids (from cannabis plants)
  - Synthetic cannabinoids (made in labs)



# Cannabinoid Components

- THC: Delta<sup>9</sup>-tetrahydrocannabinol
  - Psychoactive effects (“high”)
- CBD: cannabidiol
  - Non-psychoactive
  - Opposes psychoactive effects of THC
- Examples
  - Smoked (High THC, Low CBD)
  - Oral (high CBD, low THC)



CBD vs THC: <https://iwc8.com/wp-content/uploads/2018/07/cannabinol-CBD-and-Tetrahydrocannabinol-THC.jpg>



# Ratio of THC: CBD

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- The best THC:CBD ratio unknown
- Things for medical uses typically have more CBD

THC	CBD
<ul style="list-style-type: none"><li>• Pain</li><li>• Glaucoma</li><li>• Low appetite</li><li>• Spasticity</li><li>• Inflammation</li></ul>	<ul style="list-style-type: none"><li>• Seizure</li><li>• Pain</li><li>• Nausea</li><li>• Inflammation</li></ul>



# Checkpoint

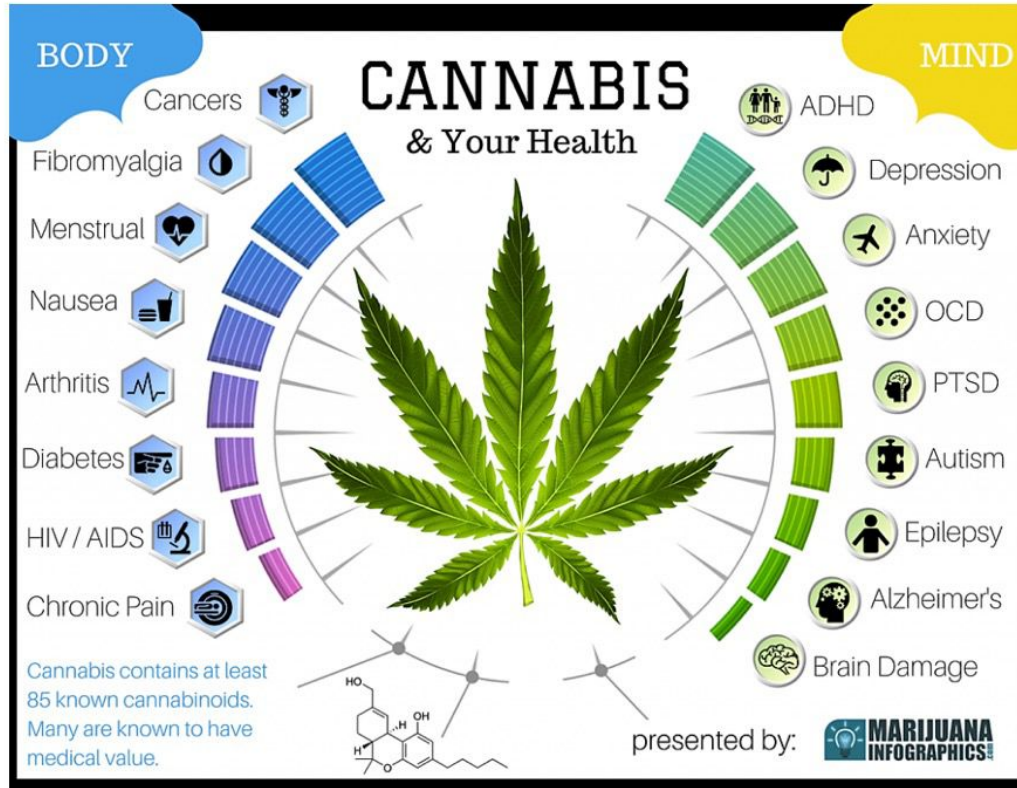
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# Efficacy of medicinal cannabis on selected medical conditions



**Does it work?**





# Limited to Moderate Evidence

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- Multiple sclerosis (spasticity)
- Neuropathic pain
- Chemotherapy-induced nausea and vomiting
- Palliative cancer pain



# Inconclusive/Insufficient Evidence

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- Anxiety
- Cancer-related anorexia or cachexia
- Crohn's disease
- Movement disorders
- Dementia
- Fibromyalgia
- Glaucoma
- HIV-related anorexia
- Post-traumatic stress disorder (PTSD)
- Tourette syndrome
- Traumatic brain injury





# Dosing

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- Not scientifically established
- Dosing is individualized and titrated (maximize therapeutic effects and minimizing side effects)
- Have someone by your side when consuming cannabis for the first time
  - Should start at low dose and stop if experiencing side effects
- Most people use up to 3 grams (~1-3 grams) of dried cannabis per day (oral and/or inhaled)
- 2.5-3 mg (and lower) of THC doses: beneficial with minimal psychoactivity



# Checkpoint

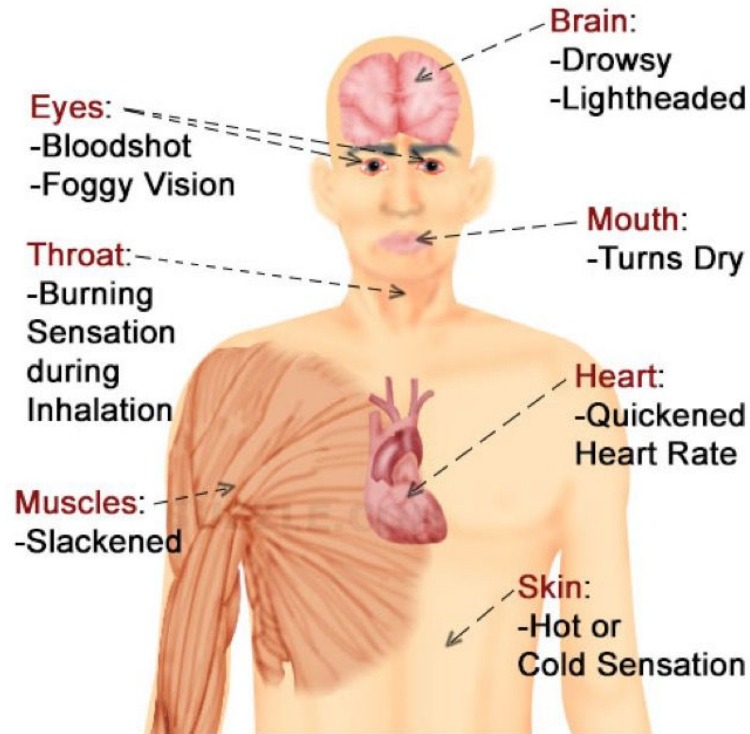
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# Safety of medical cannabis



## ■ Common adverse effects

- Dizziness
- Drowsiness
- Increased heart rate
- Decreased blood pressure
- Anxiety
- Paranoia
- Hallucination

Effect on the body: <https://opinionfront.com/different-types-of-weed-their-effects>



# Long-term effects

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- Lung diseases (?)
- Cancer (?)
- Lower hormone production (?)
- Cognitive impairment
- Psychiatric disorders

