

## Epilepsy and Cannabis

### To Obtain Medical Cannabis<sup>i</sup>

- Authorization from a health care practitioner is required
- Three options to access:
  - Register with a licensed producer
  - Register with Health Canada to produce limited amount for personal medical use
  - Designate someone to produce on your behalf
- Upon successful registration, a certificate from Health Canada will be issued

### Cost<sup>ii</sup>

- Varies depending on:
  - Strain and level of Tetrahydrocannabinol (THC) and Cannabidiol (CBD)
  - Oil versus dried plant
  - Financial need determined by healthcare provider
- Most health insurance plans do not cover the purchase of cannabis products. However, some producers do offer compassionate pricing programs that subsidize costs based on financial and medical need. A referral form may be required.
- [Social Assistance Coverage](#)
- [Tax Expense](#)
- [Additional cost information](#)

### What is CBD?

- CBD is a type of chemical found in cannabis plants, called cannabinoids (chemicals that react with receptors within the body of the consumer)<sup>iii</sup>

- CBD is non psychoactive in nature
- CBD does not alter the mind or behaviour or produce a "high"

### How does CBD Work?

- CBD may be effective in the treatment of epilepsy through the action of degrading the endocannabinoid called anandamide. Anandamide is a chemical that is thought to play a role in seizures, as it has the potential to excite neurons; therefore, inducing the seizure<sup>iv</sup>
- In other words, by acting against this chemical, CBD is thought to prevent the firing of neurons that send someone into a seizure.<sup>v</sup>

### Considerations

#### 1. Drug Interactions

- There are some drug-to-drug interactions (including anti seizure medications) that have been revealed during the studies of epilepsy syndromes. Ask your neurologist/epileptologist about interactions.

#### 2. Potential Short-Term Effects

*This list contains side effects for BOTH CBD and THC – always check with your physician to determine which effects apply to you based on the product you are using.*

- May impair the ability to drive safely or operate machinery
- May impair thinking, concentration, memory, and decision making
- May affect mental health
- GI disturbance (e.g. diarrhea)

#### 3. Potential Long-Term Effects

*This list contains side effects for BOTH CBD and THC – always check with your physician to determine which effects apply to you based on the product you are taking.*

- May harm your lungs making it difficult to breathe (if product is smoked)
- May affect mental health
  - Addiction
  - Cannabis use disorder
  - Problematic cannabis use
  - Worsening anxiety and/or depression

#### 4. Contraindications<sup>vi vii</sup>

- If you are pregnant or breastfeeding
- History of addiction
- Family history of mental health disorders
- Under the age of 25 when the brain is fully developed (unless otherwise authorized by your child's paediatric neurologist/epileptologist)

#### Common Adverse Effects of THC<sup>xvi</sup>

Low – Moderate Dose	Moderate – High Dose
Tiredness	Excessive Sweating
Forgetfulness	Increased Heart Rate
Nausea	Anxiety
Dizziness	Paranoia

#### A Perspective from Dr. Karen Leslie, Staff Physician in Adolescent Medicine, and Connie Cameron, Professional Practice Coordinator Nursing Practice, at SickKids<sup>ix</sup>

- Complex substance containing over one hundred cannabinoids, the most commonly known, tetrahydrocannabinol (THC) and cannabidiol (CBD)
- THC causes the “high”
- CBD has shown the most promise for medical purposes and is currently being studied for the relief of symptoms and management of several medical conditions including epilepsy, anxiety, cancer, osteoarthritis, chronic pain, and many others – the majority of studies focused on adults

- There is currently limited scientific evidence of the effectiveness of medical cannabis to manage symptom relief for children and youth
- Cannabis is a controlled substance and is not an approved pharmaceutical in Canada; however, some patients may seek authorization to legally use it under the Access to Cannabis for Medical Purposes Regulation (ACMPR)
- Medical cannabis can be consumed in a variety of different forms, including smoking, vaping, eating, or consuming through oil preparations
- Children and youth often use cannabis oil, which contains very low to no THC and greater levels of CBD
- Anecdotal reports indicate that patients and caregivers attribute significant symptom relief to the use of medical cannabis
- In some cases, patients with severe epilepsy have seen a reduction in seizure activity, significantly improving their quality of life

For more information about laws and regulations in your area, please consult:

<https://www.canada.ca/en/health-canada/services/drugs-medication/cannabis/laws-regulations/provinces-territories.html>

## References

- <sup>i</sup> <https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/understanding-new-access-to-cannabis-for-medical-purposes-regulations.html#a5>
- <sup>ii</sup> Pricing Policy - Medical Marijuana in Manitoba. Delta 9 Cannabis. (2017, November 16). <https://medical.delta9.ca/pricing-policy/>.
- <sup>iii</sup> Campbell, C. T., Phillips, M. S., & Manasco, K. (2017). Cannabinoids in Pediatrics. *The journal of pediatric pharmacology and therapeutics : JPPT : the official journal of PPAG*, 22(3), 176–185. <https://doi.org/10.5863/1551-6776-22.3.176>
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- <sup>v</sup> Devinsky, O., et al. (2014). Cannabidiol: pharmacology and potential therapeutic role in epilepsy and other neuropsychiatric disorders. *Epilepsia*, 55(6), 791–802. <https://doi.org/10.1111/epi.12631>
- <sup>vi</sup> Gunn JK, Rosales CB, Center KE, Nuñez A, Gibson SJ, Christ C, Ehiri JE (2016). Prenatal exposure to cannabis and maternal and child health outcomes: a systematic review and meta-analysis. *BMJ Open*. 2016 Apr 5;6(4):e009986. doi: 10.1136/bmjopen-2015-009986.
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- <sup>ix</sup> *Conversations about cannabis in Canada*. SickKids. (n.d.). <https://www.sickkids.ca/en/news/archive/2018/conversations-about-cannabis-in-canada/>.