



CHRONIC PAIN

Clinical Summary

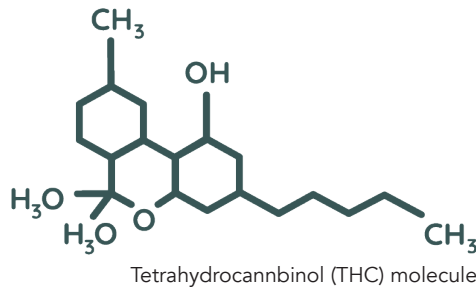
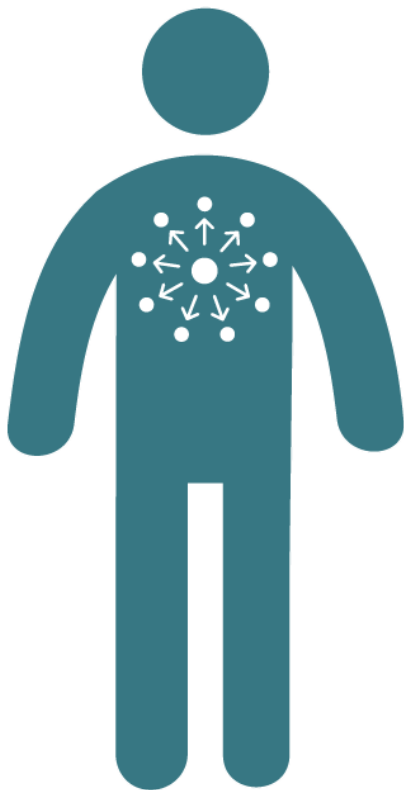


HARVEST
MEDICINE

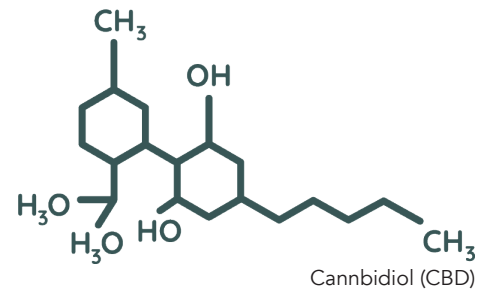
2021

Chronic Pain

Chronic pain is defined as pain that lasts or recurs for more than 3 months.¹ In 2019, one in four Canadians aged 15 or older had chronic pain, and economic costs associated with it (healthcare burden, loss of productivity, and absenteeism) were estimated to be \$40.4 billion.² Current treatment involves different modalities, such as drugs, physical therapy, and acupuncture.³ It is now hypothesized that cannabinoids such as tetrahydrocannabinol (Δ^9 THC) found in medical cannabis (MC) may be an effective treatment for pain as it suppresses inflammation and mitigates pain by activating cannabinoid receptors in the brain and spinal cord.⁴



The promising role of THC-based treatment in chronic pain is supported by clinical findings. A randomized controlled study compared the pain-relieving effects of 4 different strengths of THC (0, 2.5, 6.0, and 9.4%) in patients with chronic nerve pain that have not used cannabis during the year before the study.⁵ Patients reported lower average daily pain intensity on 9.4% THC than on 0% THC (difference=0.7), and higher strengths of THC were associated with improvement in sleep quality and mood disorders, such as anxiety and depression.⁵ In another study, adult patients with chronic non-cancer pain at 7 clinical centres across Canada were recruited and followed for 1 year.⁶ Those who used THC-based MC product (containing $12.5 \pm 1.5\%$) as part of pain management experienced a significant reduction in pain intensity over 1 year compared to the control group, who did not use MC.⁶ Also, cannabis users reported greater improvement in physical function at 6 months and 1 year.⁶



There is emerging evidence to show that cannabidiol (CBD), another cannabinoid commonly found in cannabis plants, may also be effective for pain relief. In a randomized controlled study, patients with advanced cancer and opioid-refractory pain were randomized into 4 groups to receive three different doses of nabiximol (a cannabis product that contains a combination of CBD and THC) or placebo.⁷ The results showed that low and medium doses of nabiximols significantly decreased the average daily pain and people receiving nabiximol treatments as a group achieved better pain relief compared to the placebo group.⁷



Chronic Pain

Having considered efficacy, it is important to look at the safety profile of MC. While higher strengths of THC were associated with greater pain reduction, they were also associated with a greater number of side effects, the most common ones being headache, dry eyes, burning sensation, and dizziness.⁵ However, long-term follow-up of THC users revealed that it did not increase the risk of serious side effects.⁶

The World Health Organization (WHO) acknowledges that CBD is generally well tolerated, and although some side effects, such as liver disorders, fatigue, diarrhea, and drowsiness have been reported, they may be a result of interactions with patients' other medications.⁸

Specialty cannabis clinics are focused on helping patients navigate and choose the best cannabinoid-based treatment for their condition(s).

At Harvest Medicine, of the 19473 patients that received medical cannabis pain management treatment, 83.44% of the respondents self-reported that MC somewhat positively or very positively impacted quality of life (figure 1).⁹ With the recent decision by the World Health Organization to recognize chronic pain as a distinct medical condition and its earlier report establishing safety of CBD,^{2,8} it is expected that MC will play a larger role in pain management.

-Harvest Medicine 2021
& Kang, A., University of Toronto
Pharmacy Intern 2021

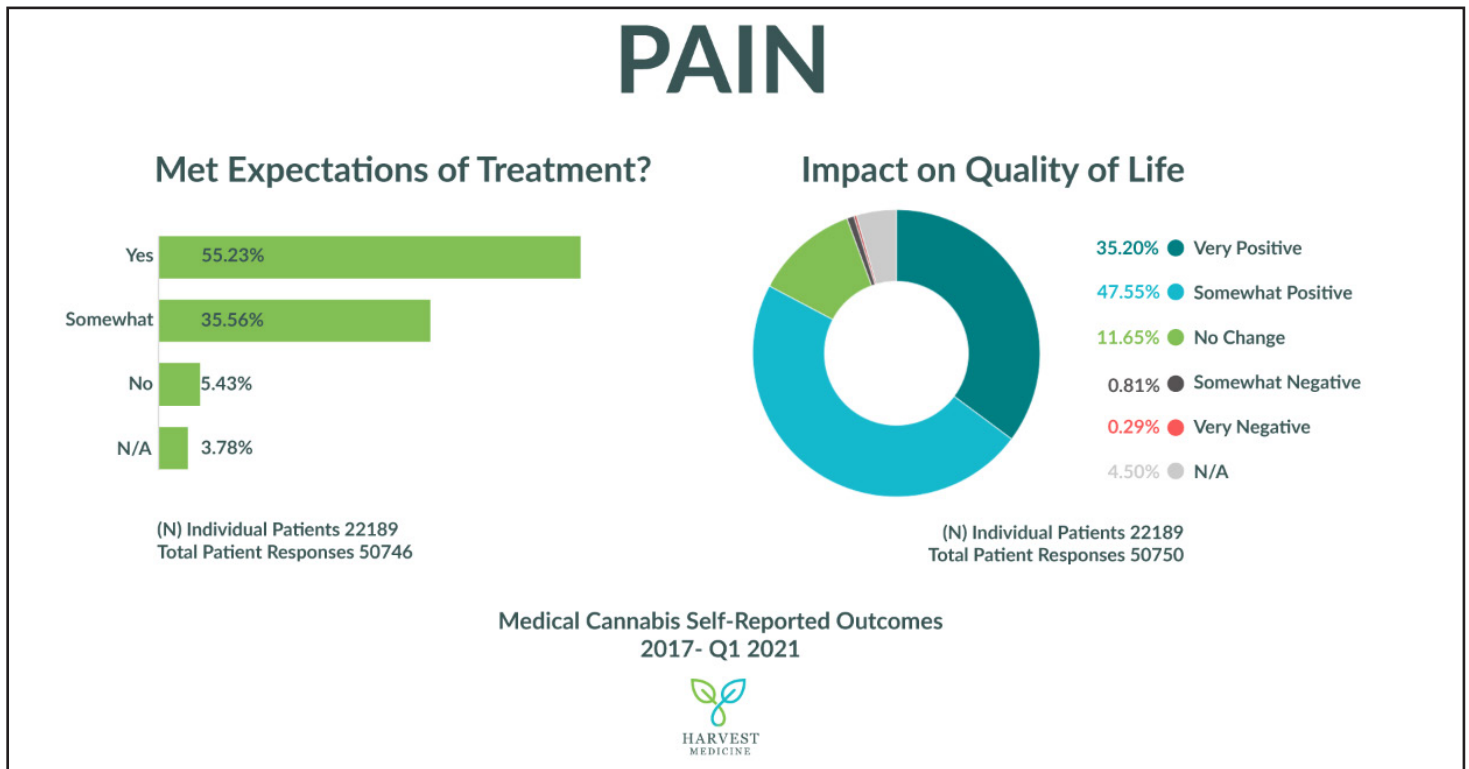


Figure 1 Harvest Medicine. (2021). Patient self-reported outcomes for pain⁸



HARVEST
MEDICINE

hmed.ca / 1-844-488-4633

References

1. Treede, R. D., Rief, W., Barke, A., Aziz, Q., Bennett, M. I., Benoliel, R., ... & Giamberardino, M. A. (2015). A classification of chronic pain for ICD-11. *Pain*, 156(6), 1003. [10.1097/j.pain.000000000000160](https://doi.org/10.1097/j.pain.000000000000160)
2. The Canadian Pain Task Force (2020). Working Together to Better Understand, Prevent, and Manage Chronic Pain: What We Heard. Health Canada. Retrieved January 4, 2021 from <https://www.canada.ca/en/health-canada/corporate/about-health-canada/public-engagement/external-advisory-bodies/canadian-pain-task-force/report-2020.html>
3. American Society of Anesthesiologists Task Force on Chronic Pain Management. (2010). Practice guidelines for chronic pain management: an updated report by the American Society of Anesthesiologists Task Force on Chronic Pain Management and the American Society of Regional Anesthesia and Pain Medicine. *Anesthesiology*, 112(4), 810. [10.1097/ALN.0b013e3181c43103](https://doi.org/10.1097/ALN.0b013e3181c43103)
4. Hill, K. P., Palastro, M. D., Johnson, B., & Ditre, J. W. (2017). Cannabis and pain: a clinical review. *Cannabis and cannabinoid research*, 2(1), 96-104. [10.1089/can.2017.0017](https://doi.org/10.1089/can.2017.0017)
5. Ware, M. A., Wang, T., Shapiro, S., Robinson, A., Ducruet, T., Huynh, T., ... & Collet, J. P. (2010). Smoked cannabis for chronic neuropathic pain: a randomized controlled trial. *Cmaj*, 182(14), E694-E701. <https://doi.org/10.1503/cmaj.091414>
6. Ware, M. A., Wang, T., Shapiro, S., Collet, J. P., Boulanger, A., Esdaile, J. M., ... & O'Connell, C. (2015). Cannabis for the management of pain: assessment of safety study (COMPASS). *The Journal of Pain*, 16(12), 1233-1242. [10.1016/j.jpain.2015.07.014](https://doi.org/10.1016/j.jpain.2015.07.014)
7. Boyaji, S., Merkow, J., Elman, R. N. M., Kaye, A. D., Yong, R. J., & Urman, R. D. (2020). The role of cannabidiol (CBD) in chronic pain management: an assessment of current evidence. *Current Pain and Headache Reports*, 24(2), 4. [10.1007/s11916-020-0835-4](https://doi.org/10.1007/s11916-020-0835-4)
8. World Health Organization (2017). Cannabidiol (CBD) Pre-Review Report. World Health Organization. Retrieved from https://www.who.int/medicines/access/controlled-substances/5.2_CBD.pdf
9. Harvest Medicine. (2021). Pain patient self-reported outcomes. Update retrieved, May 2021, from <https://hmed.ca/patient-outcomes/>

