

Chronic pain is common and often hard to treat. Pain is also the most frequently cited indication for medical cannabis use.

Efficacy of cannabis for chronic pain

The data presented here are updated from a [living systematic review](#) published in December 2020.¹

- An oromucosal spray with comparable amounts of THC and CBD is the most studied formulation. It was associated with a small reduction in pain severity, a small improvement in functional status, and a large increase in dizziness and sedation (low to moderate strength evidence).²
 - On average, participants used about 25 mg THC a day in these studies.
- Synthetic formulations of THC were associated with moderate reductions in pain severity, a large increase in dizziness, and a moderate increase in sedation (low strength evidence).
 - The average THC dose ranged from 2 mg to 25 mg a day in these studies.
- Most studies included patients with neuropathic pain. The effects of cannabis for people with other forms of chronic pain (such as low back pain or arthritis) have not been well studied.
- Whole-plant and CBD-predominant formulations remain essentially unstudied.

Clinical considerations

- Most of the information we have about cannabis and its effects on chronic pain comes from studies of patients with neuropathic pain. Results of these trials may not be generalizable to other chronic pain conditions with different mechanisms, such as musculoskeletal pain.
- On average, cannabis formulations available in dispensaries (or from people who grow their own cannabis) tend to have a high ratio of THC to CBD and may be more potent than formulations evaluated in studies.
- Typically, treatment of chronic pain continues for many months or years. We currently have no evidence examining the long-term (beyond 6 month) effects of cannabis for chronic pain.
- A substantial proportion of people who use cannabis daily or nearly daily

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develop cannabis withdrawal symptoms after stopping use. These symptoms, which include insomnia, anxiety, and irritability, can be severe enough to affect functional status. More than half of patients using cannabis for chronic pain experience one or more of these symptoms.^{3,4}

- Cannabis use disorder may develop in 10% to 30% of individuals who use cannabis regularly.^{5,6} Emerging evidence suggests nonmedical cannabis use and cannabis use disorder may be more common among those with chronic pain than those without chronic pain. There is more to be learned about the frequency, severity, and risk factors for cannabis use disorder in patients who use cannabis exclusively for medical treatment of chronic pain.⁷

Bottom line

Some patients with chronic neuropathic pain may experience small to moderate pain relief with cannabis. The best studied cannabis formulation contains roughly equal amounts of THC and CBD. Well-recognized short-term side effects of cannabis such as dizziness are common, but generally mild. Longer term adverse effects such as cannabis use disorder and cannabis withdrawal syndrome are concerns. The balance of benefits and harms from long-term use of cannabis for chronic pain is unclear.

References

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