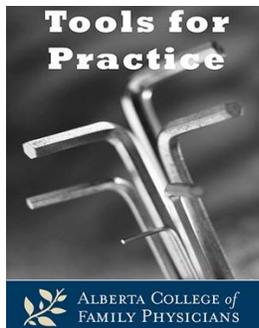


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## **Blazing Through the Evidence on THC Versus CBD Combinations in Medical Cannabinoids.**

**Clinical Question: Do tetrahydrocannabinol (THC), cannabidiol (CBD), or the THC/CBD combination yield differing benefits or harms?**

**Bottom Line: From four randomized controlled trials (RCT), one found THC/CBD superior to THC but this was inconsistent within study and with other studies. Adverse events are prevalent in THC/CBD and individual components. While some early poor-quality research in healthy users suggest CBD may attenuate some psychiatric effects of THC, better research in real patients is needed to verify any benefits of specific components.**

### **Evidence:**

Identified four RCTs comparing THC, CBD, or combined.

- RCT: 243 terminal cancer and weight loss patients, comparing THC/CBD versus THC versus placebo over six weeks.<sup>1</sup>
  - THC/CBD versus THC: No statistical difference in appetite or adverse events.
- RCT: 177 refractory cancer pain patients on strong opioids (~270 mg morphine), comparing THC/CBD versus THC versus placebo over two weeks.<sup>2</sup>
  - ≥30% pain reduction: 38% THC/CBD versus 21% THC, Number Needed to Treat=6.
    - No difference for ≥10% or ≥50% pain reduction.
  - Adverse events: No difference with THC/CBD versus THC.
- RCT: 48 brachial nerve injury patients, comparing THC/CBD versus THC versus placebo over two weeks.<sup>3</sup>
  - Baseline pain 7.5/10: Both THC/CBD and THC groups reduced pain ~1.3 points, statistically significantly more than 0.6 with placebo.
  - Adverse events not significantly different between THC/CBD and THC.
- 'N of 1' RCT: 24 chronic pain patients who benefitted from THC/CBD, compared THC/CBD versus THC versus CBD versus placebo over eight weeks.<sup>4</sup>
  - Patients reporting equal/better pain management versus original THC/CBD.
    - 38% THC/CBD, 33% THC, 17% CBD: Not statistically different.

**Context:**

- RCT 120 Dravet syndrome pediatric patients: CBD reduced seizure frequency ~22% over placebo at 14 weeks.<sup>5</sup>
  - Adverse events include somnolence (Number Needed to Harm (NNH)=4), diarrhea (NNH=5), and appetite loss (NNH=5).
  - Recent RCT of lennox-gastaut (seizure) syndrome adults found similar.<sup>6</sup>
- Canadian guideline recommends cannabinoids only in refractory neuropathic pain, palliative cancer pain, chemotherapy-associated nausea/vomiting, and spasticity.<sup>7</sup>
- One guideline recommends low THC or high CBD:THC ratios to diminish THC adverse events.<sup>8</sup>
  - Largely based on small studies of healthy volunteers (some with other drug use history) examining MRI or short-term scale changes.

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