

MARIJUANA AND CHRONIC PAIN: EFFICACY, BARRIERS, AND OTHER CONSIDERATIONS

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Introduction

Chronic pain is an increasingly prevalent and debilitating condition stemming from the interconnection of social determinants of health and a myriad of underlying medical pathologies. This complexity poses significant challenges for both diagnosis and treatment. Conventional pharmacological approaches to chronic pain management often exhibit limitations in efficacy and are often associated with numerous adverse effects.

Materials & Methods

The journal articles included in this abstract were attained via a literature search of the database. Key words used that were entered for article selection included medical marijuana, chronic pain, cannabis, and neuronal processing

Data

In recent years, there has been a growing interest in exploring the therapeutic benefits of marijuana as an alternative or adjunctive therapy for chronic pain management. This review aims to summarize and evaluate the existing body of research regarding the clinical efficacy and safety of marijuana for the management of chronic pain through analysis of clinical studies conducted in regards to various conditions, including neuropathic, inflammatory, and nociceptive pain. Emerging evidence suggests that marijuana-based treatments may offer pain relief by influencing various neurobiological pathways, including inhibition of neurotransmitter release, reduction of neuronal excitability, and attenuation of neuroinflammatory responses. Safety concerns and potential adverse effects of marijuana use for chronic pain management are also critically assessed in this review. While marijuana shows promise as an analgesic agent, its psychoactive properties, risk of addiction, and cognitive side effects necessitate careful consideration prior to recommending its widespread adoption in healthcare. Additionally, it is important to recognize other factors and considerations pertaining to the implementation of marijuana as a viable standard practice, including its interconnection with medical legislation, finance and public opinion.

Current scientific evidence suggests that marijuana may hold promise as a therapeutic option for managing chronic pain. Recent work by researchers such as Deshpande and colleagues describes multiple studies related to the use of medical marijuana for chronic pain (table 1), however, further rigorous and large-scale clinical trials are necessary to establish a baseline framework for considerations including optimal dosages, administration methods, and long-term safety profiles. As society continues to evolve its acceptance of marijuana, a balanced and realistic approach is required to best utilize its benefits, while mitigating potential risks. As clinicians, it is critically important that we ensure that patients with chronic pain receive the most effective and appropriate treatment modalities available.

Table 1.

Characteristics of the 6 studies in this review that examined the use of medical marijuana for CNCP

STUDY	COUNTRY	FUNDING SOURCE	STUDY DESIGN	QUALITY ASSESSMENT ^a
Abrams et al, ¹⁵ 2007	US	Center for Medicinal Cannabis Research	Randomized, double-blind trial	3 (High)
Corey-Bloom et al, ¹¹ 2012	US	Center for Medicinal Cannabis Research	Randomized, double-blind, placebo-controlled, crossover trial	2 (Low)
Ellis et al, ¹³ 2009	US	Center for Medicinal Cannabis Research	Randomized, double-blind, placebo-controlled, crossover trial	3 (High)
Ware et al, ¹² 2010	Canada	Canadian Institutes of Health Research	Randomized, double-blind, placebo-controlled, crossover trial	3 (High)
Wilsey et al, ⁹ 2013	US	National Institutes of Health	Randomized, double-blind, placebo-controlled, crossover trial	3 (High)
Wilsey et al, ¹⁴ 2008	US	Center for Medicinal Cannabis Research	Randomized, double-blind, placebo-controlled, crossover trial	3 (High)

CNCP—chronic noncancer pain, US—United States.

References

- (1) Jensen, Bjorn, et al. "Medical marijuana and chronic pain: a review of basic science and clinical evidence." Current pain and headache reports 19 (2015): 1-9.
- (2) Deshpande, Amol, et al. "Efficacy and adverse effects of medical marijuana for chronic noncancer pain: systematic review of randomized controlled trials." Canadian Family Physician 61.8 (2015): e372-e381.
- (3) Häuser, W., F. Petzke, and M. A. Fitzcharles. "Efficacy, tolerability and safety of cannabis-based medicines for chronic pain management—An overview of systematic reviews." European Journal of Pain 22.3 (2018): 455-470.
- (4) Maher, Dermot P., et al. "Cannabis for the treatment of chronic pain in the era of an opioid epidemic: a symposium-based review of sociomedical science." Pain Medicine 20.11 (2019): 2311-2323.