

## The Emerging Role of Cannabis as an Anti-Nociceptive Agent in the Treatment of Chronic Back Pain

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**Abstract :** Lower back pain is a significant cause of disability worldwide and associated with great implications in terms of the well-being of affected individuals and society as a whole due to its undeniable socio-economic impact. With its prevalence on the increase as a result of an aging global population, the need for novel forms of pain management is ever paramount. This review aims to provide further insight into current research regarding a role for the endocannabinoid signaling pathway as a target in the treatment of chronic pain, with particular emphasis on its potential use as part of the treatment of lower back pain. Potential advantages and limitations of cannabis-based medicines over other forms of analgesia currently licensed for medical use are discussed in addition to areas that require ongoing consideration and research. To evaluate the efficacy of cannabis-based medicines in chronic pain, studies pertaining to the role of medical cannabis in chronic disease were reviewed. Standard searches of PubMed, Google Scholar and Web of Science databases were undertaken with peer-reviewed journal articles reviewed based on the indication for pain management, cannabis treatment modality used and study outcomes. Multiple studies suggest an emerging role for cannabis-based medicines as therapeutic agents in the treatment of chronic back pain. A potential synergistic effect has also been purported if these medicines are co-administered with opiate analgesia due to the similarity of the opiate and endocannabinoid signaling pathways. However, whilst recent changes to legislation in the United Kingdom mean that cannabis is now licensed for medicinal use on NHS prescription for a number of chronic health conditions, concerns remain as to the efficacy and safety of cannabis-based medicines. Research is lacking into both their side effect profiles and the long-term effects of cannabis use. Legal and ethical considerations to the use of these products in standardized medical practice also persist due to the notoriety of cannabis as a drug of abuse. Despite this, cannabis is beginning to gain traction as an alternative or even complementary drug to opiates, with some preclinical studies showing opiate-sparing effects. Whilst there is a paucity of clinical trials in this field, there is scope for cannabinoids to be successful anti-nociceptive agents in managing chronic back pain. The ultimate aim would be to utilize cannabis-based medicines as alternative or complementary therapies, thereby reducing opiate over-reliance and providing hope to individuals who have exhausted all other forms of standard treatment.

**Keywords :** endocannabinoids, cannabis-based medicines, chronic pain, lower back pain

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