

Cannabinoids dosing for osteoarthritis

Sarah J. Miles,^a Miki Peer,^a Karim S. Ladha,^{b,c} and Hance Clarke^{a,b,*}

^aDepartment of Anesthesia and Pain Management, Toronto General Hospital, 200 Elizabeth Street (3EN-464), Toronto, Ontario, M5G 2C4, Canada

^bDepartment of Anesthesiology and Pain Medicine, University of Toronto, 123 Edward Street (12th Floor), Toronto, Ontario, M5G 1E2, Canada

^cDepartment of Anesthesia, St. Michael's Hospital, 30 Bond Street (6-001), Toronto, Ontario, M5B 1W8, Canada

We read with great interest Pramhas et al.'s randomized controlled trial (RCT) investigating the analgesic effect of oral, high-dose cannabidiol (CBD) in patients with painful knee osteoarthritis (OA).¹ This is a well-designed RCT that addresses many of the shortcomings of previous RCTs testing the effect of cannabinoids on chronic pain. Previously, the only published, peer-reviewed RCT on the effect of oral cannabinoids for osteoarthritis pain was a 12-week trial of a low dose of synthetic CBD (20–30 mg/day) in patients with hand osteoarthritis or psoriatic arthritis that found no significant difference from placebo for pain, sleep quality, anxiety, or depression.² While we applaud Pramhas et al. for their use of a higher CBD dose (600 mg/day), we have a concern about the use of a fixed high dose, as individual responses to cannabinoids depend on many factors (e.g., history of cannabis use, sex, concurrent medications, genetics) and consensus recommendations for cannabinoid dosing in chronic pain management are to “start-low go-slow”—particularly in older and/or multimorbid individuals—and to titrate cannabis products (to patients' desired effects).³ Nevertheless, this study is welcome given the scarcity of high-quality data on the efficacy of cannabinoids for pain management in conjunction with the high rates of medical cannabis use among people with arthritic pain. Future research must also examine the effectiveness of THC for OA related pain management, as the majority

of arthritic patients using medical cannabis consume some amount of THC⁴ and preclinical studies suggest promising effects.⁵

Contributors

All authors contributed to conceptualizing and drafting this letter.

Declaration of interests

H. Clarke and K. Ladha are funded by a Merit Awards from the Department of Anesthesiology and Pain Medicine at the University of Toronto.

M. Peer, S. Miles: no conflicts of interest exist.

References

- 1 Pramhas S, Thalhammer T, Terner S, et al. Oral cannabidiol (CBD) as add-on to paracetamol for painful chronic osteoarthritis of the knee: a randomized, double-blind, placebo-controlled clinical trial. *Lancet Reg Health Eur.* 2023;35:100777. <https://doi.org/10.1016/j.lanepe.2023.100777>.
- 2 Vela J, Dreyer L, Petersen KK, Arendt-Nielsen L, Duch KS, Kristensen S. Cannabidiol treatment in hand osteoarthritis and psoriatic arthritis: a randomized, double-blind, placebo-controlled trial. *Pain.* 2022;163(6):1206–1214. <https://doi.org/10.1097/j.pain.0000000000002466>.
- 3 Bhaskar A, Bell A, Boivin M, et al. Consensus recommendations on dosing and administration of medical cannabis to treat chronic pain: results of a modified Delphi process. *J Cannabis Res.* 2021;3(1):22. <https://doi.org/10.1186/s42238-021-00073-1>.
- 4 Boehnke KF, Martel MO, Smith T, et al. Medicinal cannabis use for rheumatic conditions in the US versus Canada: rationale for use and patient-health care provider interactions. *ACR Open Rheumatol.* 2023;5(9):443–453. <https://doi.org/10.1002/acr2.11592>.
- 5 Rockel J, Maglaviceanu A, Filippini H, et al. Oral delivery of delta-9-tetrahydrocannabinol provides symptom and disease modification using two models of knee osteoarthritis. In: *EULAR 2023 – European congress of rheumatology (Abstract)*. 2023.



The Lancet Regional Health - Europe 2024;38: 100850

Published Online xxx <https://doi.org/10.1016/j.lanepe.2024.100850>

DOIs of original articles: <https://doi.org/10.1016/j.lanepe.2024.100851>, <https://doi.org/10.1016/j.lanepe.2023.100777>

*Corresponding author. Pain Research Unit, Department of Anesthesia and Pain Management, Toronto General Hospital, Toronto, Ontario, M5G 2C4, Canada.

E-mail address: hance.clarke@uhn.ca (H. Clarke).

© 2024 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).