

Research Articles

In addition to YouTube video, below are research studies from Pubmed on CBN by topic for your reference:

Data and Research are in preliminary stages and are not recognized as a standard of treatment for your condition. Please do not apply it to your medical condition. Please speak to your doctor before taking any cannabis medicine. These studies are for reference only.

What is CBN?

Maioli, C., Mattoteia, D., Amin, H. I., Minassi, A., & Caprioglio, D. (2022). Cannabinol: History, Syntheses, and Biological Profile of the Greatest “Minor” Cannabinoid. *Plants*, 11(21), 2896. <https://doi.org/10.3390/plants11212896>

Does CBN reduce inflammation?

De Petrocellis L, Ligresti A, Moriello AS, Allarà M, Bisogno T, Petrosino S, Stott CG, Di Marzo V. Effects of cannabinoids and cannabinoid-enriched Cannabis extracts on TRP channels and endocannabinoid metabolic enzymes. *Br J Pharmacol*. 2011 Aug;163(7):1479-94. doi: 10.1111/j.1476-5381.2010.01166.x. PMID: 21175579; PMCID: PMC3165957.

CBN and Glaucoma

CBN promotes neuroprotection, normalizes Intraocular pressures in the eye, for glaucoma.

Somvanshi RK, Zou S, Kadhim S, Padania S, Hsu E, Kumar U. Cannabinol modulates neuroprotection and intraocular pressure: A potential multi-target therapeutic intervention for glaucoma. *Biochim Biophys Acta Mol Basis Dis*. 2022 Mar 1;1868(3):166325. doi: 10.1016/j.bbadis.2021.166325. Epub 2021 Dec 16. PMID: 34921975.

CBN and Neuroprotectant

Liang Z, Soriano-Castell D, Kepchia D, Duggan BM, Currais A, Schubert D, Maher P. Cannabinol inhibits oxytosis/ferroptosis by directly targeting mitochondria independently of cannabinoid receptors. *Free Radic Biol Med*. 2022 Feb 20;180:33-51. doi: 10.1016/j.freeradbiomed.2022.01.001. Epub 2022 Jan 6. Erratum in: *Free Radic Biol Med*. 2022 May 1;184:16. PMID: 34999187; PMCID: PMC8840979.

CBN and Antioxidant Action

Dawidowicz AL, Olszowy-Tomczyk M, Typek R. CBG, CBD, Δ^9 -THC, CBN, CBGA, CBDA and Δ^9 -THCA as antioxidant agents and their intervention abilities in antioxidant action.

Fitoterapia. 2021 Jul;152:104915. doi: 10.1016/j.fitote.2021.104915. Epub 2021 May 6. PMID: 33964342.

CBN and Bone Growth

Scutt A, Williamson EM. Cannabinoids stimulate fibroblastic colony formation by bone marrow cells indirectly via CB2 receptors. *Calcif Tissue Int.* 2007 Jan;80(1):50-9. doi: 10.1007/s00223-006-0171-7. Epub 2007 Jan 4. PMID: 17205329.

Cannabinoids in cannabis, CBD, THC, CBG, CBN

Figure 1. The structures of the “big four” phytocannabinoids [Δ^9 -THC (1a), CBD (2a), CBG (3a) and CBC (4a)] and their acidic precursors (1b–4b), CBN (5a) and its acidic form CBNA (5b).

Cannabis and drug interactions

Nasrin S, Watson CJW, Perez-Paramo YX, Lazarus P. Cannabinoid Metabolites as Inhibitors of Major Hepatic CYP450 Enzymes, with Implications for Cannabis-Drug Interactions. *Drug Metab Dispos.* 2021 Dec;49(12):1070-1080. doi: 10.1124/dmd.121.000442. Epub 2021 Sep 7. PMID: 34493602.

Qian Y, Gurley BJ, Markowitz JS. The Potential for Pharmacokinetic Interactions Between Cannabis Products and Conventional Medications. *J Clin Psychopharmacol.* 2019 Sep/Oct;39(5):462-471. doi: 10.1097/JCP.0000000000001089. PMID: 31433338.

History of Cannabis and Cannabinoids

Salami, S. A., Martinelli, F., Giovino, A., Bachari, A., Arad, N., & Mantri, N. (2020). It Is Our Turn to Get Cannabis High: Put Cannabinoids in Food and Health Baskets. *Molecules*, 25(18), 4036. <https://doi.org/10.3390/molecules25184036>

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