

Sleep Apnea

Sleep apnea is a medical disorder characterized by frequent interruptions in breathing of up to 10 seconds or more during sleep. The condition is associated with numerous physiological disorders, including fatigue, headaches, high blood pressure, irregular heartbeat, heart attack, and stroke. Though sleep apnea often goes undiagnosed, it is estimated that approximately four percent of men and two percent of women ages 30 to 60 years old suffer from the disease.

Limited data shows that cannabinoids may hold promise in addressing sleep apnea. Writing in the June 2002 issue of the journal of the *American Academy of Sleep Medicine*, researchers at the University of Illinois (at Chicago) Department of Medicine reported “potent suppression” of sleep-related apnea in rats administered either exogenous or endogenous cannabinoids.¹ Another animal trial reported that injected doses of synthetic THC mitigated apnea and augmented upper airway muscles in rats.²

In clinical settings, the administration of dronabinol has been shown to mitigate apnea in adults. Writing in the journal *Frontiers in Psychiatry* in 2013, investigators concluded that THC administration significantly mitigated symptoms of the disorder in patients with Obstructive Sleep Apnea over a three-week period. “Dronabinol treatment may be a viable alternative or adjunctive therapy in selected patients with OSA,” authors concluded.³

A 2018 clinical trial of 73 subjects with moderate to severe obstructive sleep apnea reported that the administration of dronabinol prior to bedtime reduced symptom severity and improved subjective sleepiness.⁴

In 2017, Minnesota regulators added obstructive sleep apnea as a qualifying condition for which physicians may recommend medical cannabis treatment.⁵

A recent review of the literature concluded: “Novel studies investigating cannabinoids and obstructive sleep apnea suggest that synthetic cannabinoids such as nabilone and dronabinol may have short-term benefit for sleep apnea due to their modulatory effects on serotonin-mediated apneas. CBD may hold promise for REM sleep behavior disorder and excessive daytime sleepiness, while nabilone may reduce nightmares associated with PTSD and may improve sleep among patients with chronic pain. Research on cannabis and sleep is in its infancy and has yielded mixed results. Additional controlled and longitudinal research is critical to advance our understanding of research and clinical implications.”⁶

Clinical trials investigating the use of cannabinoids in the management of obstructive sleep apnea are underway, as are trials to assess their use for other sleep-related disorders, like insomnia.⁷ Nonetheless, despite “promising preliminary evidence,” experts at this time generally agree “that there is insufficient evidence to support routine clinical use of cannabinoid therapies for the treatment of any sleep disorder.”⁸

REFERENCES

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³ Prasad et al. 2013. [Proof of concept trial of dronabinol in obstructive sleep apnea.](#) *Frontiers in Psychiatry* [open access journal].

⁴ Carley et al. 2018. [Pharmacotherapy of apnea by cannabimimetic enhancement, the PACE clinical trial: effects of](#)

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⁵ Kevin Takakuwa. 2018. Stop the attack on Minnesota's courageous stance to allow its residents to sleep safely. *Journal of Clinical Sleep Medicine* 14 [open access journal].

⁶ Babson et al. 2017. Cannabis, cannabinoids, and sleep: A review of the literature. *Current Psychiatry Reports* 19: 23.

⁷ Kaul et al. 2021. Effects of cannabinoids on sleep and their therapeutic potential for sleep disorders. *Neurotherapeutics* 18: 217-227.

⁸ Suraev et al. 2020. Cannabinoid therapies in the management of sleep disorders: A systematic review of preclinical and clinical studies. *Sleep Medicine Reviews* 53 [online ahead of print].