

## **Research Findings Relating to Cannabidiol (CBD) and Sleep Disorders**

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This article is based upon published scientific findings.

However, please note that the information provided in this article does not constitute medical advice.

According to the Centers for Disease Control and Prevention, over 35% of adults in the United States of America (US) are reported to have a short sleep duration of less than seven hours per night. The American Sleep Association state that people in this age range should receive between seven and nine hours of sleep per night to ensure adequate rest. Quite shockingly, this association estimates that 50-70 million US adults suffer from insufficient sleep, insomnia or another sleep disorder. Considering how integral sleep is to overall health, it is alarming how prevalent sleep disorders are across all ethnic, gender and age groups in the US. What complicates matters for people with sleep disorders is that conventional prescription and over-the-counter (OTC) medications have mixed effectiveness and many potential side effects. The list of prescription sleep aid medications includes antidepressants, benzodiazepines, gamma-aminobutyric acid (GABA) medications and anti-psychotics, all of which have negative side effects and the potential for dangerous drug interactions. The OTC medications commonly used to address sleep disorders including antihistamines, melatonin and valerian carry less risks but are often considered ineffective and adverse effects still exist (Vigil et al., 2018).

Research shows that cannabidiol (CBD) has a broad range of potential therapeutic benefit as it relates to sleep. Preliminary research suggests that CBD may be a treatment option for insomnia, REM sleep behavior disorder and excessive daytime sleepiness (Babson, Sottile & Morabito, 2017). REM sleep behavior disorder is a condition that causes people to act out physically while in the dreaming rapid eye movement (REM) sleep phase. Based upon these findings, it has been suggested that CBD may help to improve REM sleep abnormalities in those afflicted with post-traumatic stress disorder (PTSD). However, there is no research to support this hypothesis as of yet.

A recent study sought to characterize the reasons why people use CBD. Findings showed that after pain and anxiety, insomnia and other sleep disorders were of the most common reasons for CBD use (Corroon & Phillips, 2018).

Carlini and Cunha's study (as cited in Linares et al., 2018) found that study participants with insomnia experienced "an increase in total sleep time and less frequent awakenings" when given 160mg CBD per day (p. 2). The same study found that serving sizes of 40mg, 80mg, or 160mg CBD did not result in "hangover effects" when compared to a benzodiazepine called nitrazepam, which is often prescribed to insomniac patients. Subjects that received 160mg CBD "reported having slept significantly more than those receiving placebo" (Carlini & Cunha, 1981, para. 1). Additionally, the volunteers reported that the CBD appeared to impact dream recall, which reflects a possible reduction in time spent in REM sleep, the stage of sleep associated with dreaming.

A recent placebo-controlled study published in 2018 sought to investigate what effects CBD has on sleep-wake cycles. An anxiolytic dose of 300mg CBD was administered to twenty-seven healthy volunteers before bed. The effects of the CBD were assessed using polysomnography exams together with cognitive and subjective measures. Polysomnography exams are commonly referred to as sleep studies and they record several indicators of sleep, including brain waves, oxygen levels, heart rate, breathing, eye movement and leg movement. The results showed that the high serving size of CBD did not negatively affect cognitive functioning and attention levels were preserved in the morning (Linares et al., 2018). This indicates that CBD can be safely administered without affecting the subjects "vigilance state overall, such that the patients may safely conduct every-day tasks, like for example driving" (Linares et al., 2018, p. 5). Subjective measures found that the subjects did not feel sedated or uncomfortable when taking CBD and they did not describe feelings of cognitive impairment. The authors concluded that when the CBD was administered to the healthy study participants, it did not act to interfere with sleep cycles nor did it alter normal sleep architecture (Linares et al., 2018).

A Zuardi et al., study (as cited in Linares et al., 2018) described that CBD may be biphasic, that is it offers two phases. At lower serving sizes, CBD is stimulating and offers feelings of alertness while reducing daytime sleepiness. When taken in higher serving sizes, CBD offers mild sedative effects.

Quality sleep is paramount to maintaining both mental and physical health. The body of research related to CBD and sleep is in its infancy. More longitudinal research is needed to fully understand all of the effects that CBD has on sleep.

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