

Individuals who utilize medical cannabis frequently report using cannabis to treat sleep problems.

Effects of cannabis on sleep

There is a strong positive association between sleep problems and cannabis use.

- Data from nationally representative surveys suggest that sleep problems are more common among individuals who regularly use cannabis, with nearly half of individuals with past-month cannabis use reporting some form of sleep problem.¹

Individuals who utilize medical cannabis frequently report using cannabis to treat sleep problems.

- In a large cohort study, insomnia was one of the most common co-occurring problems among those who used cannabis, with 80% reporting using cannabis specifically for insomnia in the past month.²
 - More than half of individuals who reported using cannabis for sleep problems continued to report difficulties falling asleep (53%) or staying asleep (54%) at least twice weekly despite using cannabis; 25% of these individuals reported still experiencing these problems almost nightly despite their use of cannabis.
 - Additionally, nearly two-thirds of these individuals reported their sleep problems



became worse when they would cut back or discontinue cannabis use.

- In a survey of 1,000 adults recruited after visiting a dispensary in Colorado, 74% reported taking cannabis to promote sleep. Among those who reported taking cannabis for sleep, 84% found it “very” or “extremely” helpful.³

The data supporting the potential efficacy of cannabis as a sleep aid are still very preliminary, and more studies are needed to determine if cannabis helps sleep among those with primary insomnia and, if so, under what conditions.

- A recent meta-analysis of cannabis for sleep found some suggestion that cannabis might improve sleep-related outcomes.⁴ However, these studies were typically focused on other primary conditions (e.g., multiple sclerosis,

Evidence of whether cannabis improves sleep-related outcomes is unclear.

posttraumatic stress disorder (PTSD), etc.) and sleep was a secondary outcome.

Clear empirical evidence is also lacking for the potential efficacy of different types of cannabis formulations on sleep outcomes.⁵

- The best studied psychoactive compounds in cannabis are delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD), although cannabis contains over 100 other psychoactive compounds. More research is needed to understand the potential dosing and combinations of different psychoactive compounds that are most closely linked to changes in sleep.⁵⁻⁷
- In clinical practice, individuals who use cannabis for different medical symptoms often report preferences for specific cannabis products, sometimes referred to as indica versus sativa, though symptom effects are likely influenced by the relative concentrations of THC to CBD in the product.^{8,9}
- Additionally, inconsistent and/or inaccurate labeling of the contents of different cannabis products can make it challenging for individuals to know the true content of the cannabis products that they obtain from a dispensary.^{10,11}

Subjectively, cannabis may help initiate sleep onset; however objective sleep monitoring suggests that the average time it takes a person to fall asleep and how often they wake during the night are generally increased with use of cannabis.¹²⁻¹⁴

- These studies involved the administration of experimental THC; it is not known the extent to which the results might differ when looking at other types of cannabis, including

with manipulations of potency and/or other cannabis components, such as cannabidiol (CBD).

Clinical considerations

Cannabis withdrawal

- One common feature of Cannabis Use Disorder (CUD) is withdrawal when the individual goes without cannabis for a period of time.¹⁵ Sleep problems are a common feature of cannabis withdrawal.¹⁶
- A cyclical pattern may emerge wherein a person experiencing sleep problems uses cannabis, subsequently finds their sleep problems are worse when they go without it, and responds with more cannabis use, increasing the likelihood of experiencing withdrawal.¹⁶ Individuals who continue to increase their cannabis use to manage sleep problems may develop other problems related to cannabis use, which may ultimately lead to the worsening of their initial sleep problems.¹⁷⁻¹⁹
- Only a few studies of relatively small samples have characterized the time course of general withdrawal symptoms in those with cannabis dependence. However, the available data indicate that sleep-related withdrawal symptoms begin within 1 day of cannabis abstinence, peak at day 2, and then tend to diminish to near baseline levels over approximately the next two weeks (though some sleep problems can be detected for over a month post-abstinence in some individuals).^{7,17,20,21} These symptoms include less total sleep time, lower sleep efficiency, and reduced REM sleep, which are most pronounced during the first two weeks of

abstinence and are positively correlated with the amount of cannabis used at baseline (i.e., those with more extensive baseline cannabis use have more sleep problems).²¹

- Clinicians should explain this withdrawal sleep symptom cycle to patients, so they do not inadvertently use cannabis to treat symptoms that are attributable to withdrawal.

Sleep problems are associated with worse substance-related outcomes:

- For adults with problematic cannabis use who are not receiving treatment, as many as 77% report resuming cannabis use, or increasing use of other substances such as alcohol or other prescription sedatives or hypnotics, to alleviate sleep disturbances exacerbated by brief cessations of cannabis use.²²
- For individuals seeking to discontinue cannabis, poor sleep prior to and during a cannabis quit attempt increases the likelihood of a relapse. Approximately 65% of individuals using cannabis identify poor sleep as a barrier to sustained abstinence and poor sleepers show greater cannabis use compared to good sleepers six months after a self-guided quit attempt.²³
- Discussing sleep expectations and management may improve outcomes for patients attempting to cease or decrease cannabis use as well as preventing escalating use in the first place.

Bottom Line

Many individuals report using cannabis to manage sleep problems, including insomnia, though evidence of whether cannabis improves sleep-related outcomes is unclear. Higher amounts of cannabis use may negatively impact the quality of sleep. In addition, the consistent use of cannabis can lead to CUD and/or withdrawal symptoms, including poor sleep, when the individual goes without cannabis. The proper evaluation of sleep problems, as well as connecting individuals with effective treatments for conditions like insomnia, could contribute to better sleep, as well as lessen the chance a person may develop problems related to cannabis use.

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