

Sleepless in 2024: A Novel Way to Support RESTorative Sleep in Patients

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Sleep is one of the most critical and frequently overlooked aspects of health. It's so important that animal research has shown that total sleep deprivation leads to death.¹

Furthermore, almost 40% of adults fall asleep inadvertently during the day at least once a month,² suggesting that much of the population is not receiving RESTorative sleep.

Yet, the connection between poor sleep quantity and quality and health-related symptoms in patients is not always made despite the fact that one-third of U.S. adults report sleeping less than the recommended amount of seven or more hours per night.^{3,4} The reality is that sleep loss is a widespread problem among patients that may interfere with wellness protocols.

In this article, I'll address the health consequences and causes of poor sleep and a novel dietary supplement called TruEase PM that provides an effective and safe solution for resolving sleepless nights.

The Health Consequences of Sleep Deprivation

Not getting enough sleep or not sleeping deeply, can lead to mental and physical repercussions.

Mental Health Consequences

- Poor decision-making skills
- Trouble problem solving
- Problems with emotional control and behavior
- Depression
- Suicide
- Risk-taking behavior
- Lack of attention and focus

Physical Health Consequences

- Heart disease
- Kidney disease
- High blood pressure
- Diabetes
- Stroke
- Obesity

Good-quality sleep supports the health of the heart and blood vessels. It also balances the hormones involved in hunger like ghrelin and leptin and not getting enough sleep can lead to

increased hunger. Sleep controls blood sugar levels by helping to regulate the body's insulin metabolism. Furthermore, sleep supports immunity, and lack of sleep can impair the body's defenses.

Common Reasons Why People Can't Sleep

So why is sleep deficiency such a common problem? A number of factors play into either not being able to sleep or not getting restful sleep. These include:

- **Stress** and impaired adrenals can lead to the inability to fall asleep. Sleep deficiency itself can also promote stress due to the activation of the hypothalamic-pituitary-adrenal (HPA) axis, resulting in increased circulating levels of cortisol.⁵ It becomes a vicious circle where stress causes sleep loss and the resulting lack of sleep leads to more stress.
- **Aging** is associated with a decline in sleep duration and quality. This can involve nighttime sleep deficiency and excessive daytime sleepiness.⁶
- **Pain** is a common cause of sleep deficiency. More than half of all chronic pain patients suffer from sleep disorders.⁷
- **A drop in melatonin** results in problems sleeping. This decline can occur either due to exposure to light at night or the lower melatonin levels produced during aging.^{8,9}
- **Altered circadian rhythm**, usually from working night shifts, is another culprit behind sleep deficiency and quality.⁸
- **Endocannabinoid tone** is involved in sleep quality and quantity. Emerging evidence indicates that the endocannabinoid system plays a role in regulating the circadian sleep-wake cycle.¹⁰

A Superior-Quality Sleep Supplement for a Restful Night's Slumber

Patients seeking a good night's sleep now have an effective means to enhance their sleep quality and quantity. TruEase PM provides a patent-protected formulation delivering the unmatched therapeutic benefits of cannabidiol (CBD), beta-caryophyllene (BCP), and melatonin powered by the clinically proven VESIsorb® delivery system for maximum absorption and bioavailability.

Cannabidiol (CBD) With Enhanced Bioavailability

Research has shown that CBD benefits sleep in a number of ways including:

- 1) Improving sleep quality,
- 2) Reducing occasional stress to promote healthy sleep, and

3) supporting a healthy pain response.

In one study, people who received 160 mg CBD slept more and awakened less during the night compared with the placebo.¹¹ Researchers found similar results when investigating the effects of CBD in 103 patients.¹² In this study, CBD improved sleep quality in 66.7% of participants.

CBD works through the endocannabinoid system, which is involved in your body's own internal clock to promote restful sleep.¹³ It also calms the central nervous system.¹²

There's also a lot of good research in humans showing that CBD can soothe stress. For example, in a double-blind study, 57 healthy males were given oral CBD at doses of 150 mg, 300 mg, or 600 mg or a placebo prior to a public speaking test.¹⁴ Compared with the placebo, 300 mg of CBD caused a significant decline in stress during the speech. In another study, 600 mg of CBD before a public speaking test significantly reduced stress, cognitive impairment, and discomfort in speech performance.¹⁵

Furthermore, research has shown CBD may support a healthy and normal pain response. In one study, 53% of 97 patients reduced or eliminated opioid use within eight weeks after beginning supplementation with CBD-rich hemp extract.¹⁶ Nearly all the patients who used CBD had improved quality of life including improved sleep quality. CBD may also lead to healthy pain responses in nerves.¹⁷

CBD needs to be absorbed well in order to work effectively. Normally, CBD has limited oral bioavailability because it's fat-soluble and has extensive first-pass metabolism. CBD absorption also can vary among different individuals. To overcome these obstacles, the CBD in TruEase PM uses a technology called VESIsorb[®] shown to improve absorption and bioavailability. A human study found CBD using VESIsorb[®] technology was 4.4 times more bioavailable than CBD not using the technology.¹⁸

Beta-caryophyllene

BCP is a terpene directly responsible for the activation of one of the two primary receptors in the endocannabinoid system. It is common in nature and found in many herbs, and it has FDA generally regarded as safe (GRAS) status.

BCP promotes a healthy inflammatory and pain response.¹⁹ Oils like lavender that contain BCP are usually known for their ability to support sleep duration. When combined with these oils, BCP has a soothing effect that can promote relaxation and sleep.²⁰ Absorption of BCP using VESIsorb[®] technology has been shown to significantly enhance its absorption.²¹

Melatonin

Melatonin supplementation can support a healthy circadian rhythm, especially during times of melatonin depletion like during aging or when exposed to light at night. In older adults, research

shows that 5 mg of melatonin significantly improved sleep efficiency during the day and night, primarily by lengthening the duration of stage 2 non-rapid eye movement sleep and slightly reducing the amount of wakefulness during the night.²²

According to the Mayo Clinic, melatonin may be beneficial for:²³

- Circadian rhythm sleep disorders in the blind
- Delayed sleep phase (delayed sleep-wake phase sleep disorder)
- Reducing the time it takes to fall asleep, especially in older adults
- Jet lag, including improved alertness and daytime sleepiness
- Shift work disorder

Conclusion

Lack of sleep is a common complaint among patients and may even be an obstacle to the effectiveness of wellness protocols. A highly effective sleep formula known as TruEase PM utilizes a bioavailability-enhancing technology called VESIsorb® as a delivery system for CBD, BCP, and melatonin, three nutrients that can provide our patients with a RESTorative night's sleep and the renewed health and energy that goes along with it.

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