

## SomniVive™ Overview

SomniVive™ is a sleep-specific cannabinoid matrix formulated to provide high-quality, restful sleep and to support healthy sleep architecture. Through a unique combination of sleep-supportive cannabinoids, Melatonin, 5HTP and GABA, SomniVive™ provides a robust set of sleep-promoting compounds, and is available in two delivery forms, tincture and gummy.

## SomniVive™ Tincture

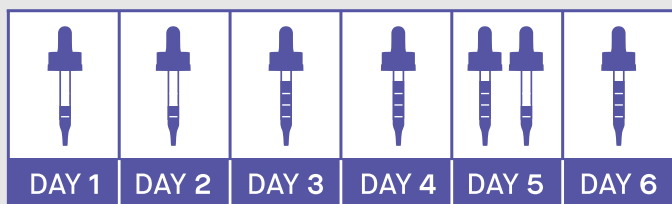
SomniVive™ Tincture features three cannabinoids that are well-documented for their sedative qualities and support the sleep physiology - cannabidiol (CBD), cannabinol (CBN), and tetrahydrocannabinol (THC). As a tincture, this product allows easy titration and dosing based on patient criteria and responsiveness.



**Supplement Facts**  
Serving Size: 1 dropperful (1mL)  
Servings Per Bottle: 30

Amount Per Serving	%DV
Calories 10	
Total Fat 1g	2%*
<b>Cannabis Sativa (Hemp) Extract</b>	
Cannabidiol (CBD)	25mg †
CBN	3mg †
Tetrahydrocannabinol (THC)	1mg †

\*Percent Daily Values (DV) are based on a 2,000 calorie diet.  
†Daily Value not established



## Dosing Guide


- For optimum results take 30 minutes before bed at a consistent time
- Use dropper and place under tongue. Hold in the mouth for up to one minute before swallowing for most direct absorption
- Start with 1/2 dropper for the first 2 days and monitor how you feel at that dose. Increase the amount to 1 full dropper for the next 2 days and monitor its effect. After these first 4 days, increase to 1 1/2 dropper for 1 day to assess which dose gives you the best desired outcome.

**NOTE:** higher doses may produce diminishing returns. If this occurs, move back to the dose that delivered the best outcome for you.

**Other Ingredients:** Medium-Chain Triglycerides (MCT) Oil, Peppermint Extract. Contains <0.3% THC.

## SomniVive+™ Gummies

SomniVive+™ Gummies are designed as a convenient alternative delivery system. Featuring the same unique cannabinoid blend as the tincture (minus the THC) and with additional active sleep aids including melatonin and 5-HTP, these gummies are ideal for supporting a restful sleep.



**Supplement Facts**  
Serving Size: 1 gummy  
Servings Per Bottle: 30

Amount Per Serving	% Daily Value
Calories 10	
Carbohydrates 3g	
Added Sugar 3g	6%*
Total Fat <1g	2%*
<b>Cannabis Sativa (Hemp) Extract (aerial parts)</b>	
Cannabidiol (CBD)	11mg †
Cannabidiol (CBD)	8mg †
Cannabinol (CBN)	2mg †
<b>5-Hydroxytryptophan (5-HTP)</b>	
100mg	†
<b>Gamma (γ)-Amino-butyric Acid (GABA)</b>	
100mg	†
<b>Melatonin</b>	
5mg	†

\*Percent Daily Values are based on a 2,000 calorie diet. †Daily Value not established

**Other Ingredients:** Tapioca Syrup, Cane Sugar, Purified Water, Pectin, Citric Acid, Natural Flavor, Natural Color, Trisodium Citrate, MCT Oil, Calcium Citrate.

**Suggested Use:** Take one gummy before bed. Consult your pharmacist or provider for guidance.

## Cannabinoids and Sleep

Emerging evidence suggests the role of the endocannabinoid system in regulating circadian rhythm and the sleep-wake cycle, highlighting a potential target for intervention and the development of new, novel treatments.<sup>1</sup>

Available data indicate that the endocannabinoid system (ECS) maintains and promotes the sleep state through the activity of endocannabinoids on CB1 and CB2 receptors.<sup>2</sup> For example, anandamide and 2-AG promote sleep via activation of the CB1 cannabinoid receptor while CB1 receptors in the pons and basal forebrain may be consequential in sleep induction through the interplay and activation of cholinergic neurons.<sup>2,3</sup> Neurons in the pons and hypothalamus, areas in the brain involved in autonomic nervous system activity and homeostatic function where the ECS is integral, regulate rapid-eye movement (REM) sleep.

Exogenous administration of cannabinoids, including three of the most prominent cannabinoids, delta-9-tetrahydrocannabinol (THC), cannabidiol (CBD), and cannabinol (CBN), has been shown to promote aspects of sleep architecture and the wake/sleep cycle.<sup>4</sup> THC, CBD, and CBN serve as ligands in activating CB1 and CB2 receptors, with evidence supporting their sleep-promoting properties.<sup>4,5,6</sup> All three cannabinoids exhibit strong evidence in insomnia and sleep disorders, decreasing sleep latency, increasing sleep consolidation, reducing sleep onset latency (SOL), increasing total sleep time, and decreasing wake after sleep onset.<sup>7</sup>

Research into the combined therapeutic potential of these three cannabinoids in insomnia has garnered beneficial clinical insights. In a randomized crossover trial, two weeks of nightly administration of a cannabinoid extract containing THC, CBD, and CBN was well tolerated and improved insomnia symptoms and sleep quality in individuals with chronic insomnia symptoms.<sup>8</sup>

### Melatonin

Melatonin is coveted for its health-promoting benefits and remains an effective intervention for supporting sleep physiology. As a metabolite of serotonin produced by the pineal gland, melatonin is highly harmonized with the habitual hours of sleep. The daily onset of melatonin secretion correlates well with the start of nocturnal sleepiness, and melatonin plays a fundamental role in sleep initiation and maintenance.

The physiological effects of melatonin on sleep result from the activation of high-affinity, G protein-coupled receptors, referred to as MT1 and MT2. MT1 and MT2 receptors have specific roles in the modulation of sleep. The activation of the MT1 receptor is mainly implicated in regulating rapid eye movement (REM) sleep, whereas the MT2 receptor selectively increases non-REM (NREM) sleep. As a result, selective MT ligands could have regulatory potential for sleep. While MT2 agonists or partial agonists are indicated for NREM-related sleep, MT1 agonists or partial agonists are designated for REM-related sleep disturbances.<sup>9</sup> Exogenous administration of melatonin supports circadian rhythm through activation of the MT1 and MT2 receptors, promoting restfulness and the sleep/wake cycle.<sup>10</sup> Meta-analyses show that melatonin treatment induces sleep initiation, significantly reduces sleep onset latency, increases sleep efficiency, and extends total sleep duration.<sup>11,12,13</sup>

### 5-HTP (5-Hydroxytryptophan)

An amino acid, 5-HTP has a primary function as a precursor to the neurotransmitters melatonin and serotonin. These neurotransmitters are often commonly associated with their role in sleep quality and mood. Sleep studies using 5-HTP have shown that it significantly increase REM sleep while also reducing sleep latency and episodes of waking during the night.<sup>14</sup>

As 5-HTP is well absorbed from an oral dose, with about 70 percent ending up in the bloodstream, it easily crosses the blood-brain barrier and effectively increases central nervous system synthesis of serotonin.<sup>15</sup>

## GABA (Gamma-aminobutyric acid)

As an inhibitory neurotransmitter, GABA plays a crucial role in the regulation of sleep. It helps to calm the brain and reduce neuronal excitability, making it easier to fall asleep and stay asleep. In addition to promoting sleep, GABA has been shown to have other beneficial effects on sleep quality. Studies have found that GABA supplementation can increase sleep time, improve sleep efficiency, and reduce the amount of time it takes to fall asleep.<sup>16,17</sup>

SomniVive™ is a trademark of Ananda Hemp, Inc.

### References:

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