

# BOTANICALM PM



## CLINICAL APPLICATIONS

- Supports Restorative Sleep
- Helps Induce Relaxation
- Supports Positive Mood

## SLEEP SUPPORT

Botanicalm PM is formulated to induce the relaxation needed to support better sleep for those experiencing temporary sleeplessness. The formula is especially suited to help those with difficulty falling asleep due to restlessness. Botanicalm PM includes valerian root, a well-known herb used to help with sleep-related issues and to produce a state of relaxation. Passionflower and jujube have been used historically to produce a state of relaxation, and have been used in those with overstimulation and scattered thoughts. L-theanine, an amino acid found in green tea, supports resilience to stress by increasing alpha brain wave activity. Two capsules of Botanicalm PM include 450 mg valerian root extract, 200 mg jujube seed extract, 150 mg passionflower extract, 150 mg L-theanine and 100 mg hops strobile extract.

### Overview

Busy and stressful lifestyles can cause sleep patterns to become disrupted, leading to over-stimulation and restlessness. Gamma-aminobutyric acid (GABA) is the brain's primary neurotransmitter which helps to counteract stress by promoting a sense of relaxation. In the evening, GABA activity should increase in the brain, triggering the sleep cycle. The ingredients in Botanicalm PM work in synergy to support GABA activity and allow for optimal relaxation. While other therapies with a similar mechanism may cause dependency when used over an extended period of time, the natural ingredients in Botanicalm PM are non-habit-forming.

### Valerian Root Extract†

Valerian root extract is perhaps the most studied botanical for inducing sleep. Valerenic acid, an active component in valerian

root, has spasmolytic or muscle relaxant properties. It has been found to both inhibit the reuptake of and stimulate the release of GABA in the central nervous system (CNS).<sup>1,2</sup> In addition, other components within valerian have been found to bind to GABA receptors.<sup>3</sup> Randomized trials consistently show significant benefits to supplementing valerian over placebo.<sup>4</sup> One randomized, double-blind, placebo-controlled trial comparing 600 mg/day of valerian extract given with another therapy for six weeks showed valerian root extract to be equally effective in supporting sleeplessness as a traditional approach.<sup>5</sup>

### Passionflower Extract†

The aerial portions of passionflower are best known for their historic use as a relaxing and calming herb. Numerous flavonoid components function as active ingredients<sup>6</sup> by binding to the GABA receptor.<sup>7,8</sup> Passionflower extract has compared favorably with other therapies with similar mechanisms of easing feelings of overstimulation and scattered thoughts, with fewer side effects.<sup>9</sup> A randomized, placebo-controlled trial of 60 people, aged 25-55 years and scheduled for spinal anesthesia, showed those given passionflower experienced a greater sense of calmness before being given anesthesia.<sup>10</sup> Passionflower has also been shown to offer sleep benefits for adults with fluctuations in sleep quality.<sup>11</sup>

### L-Theanine†

L-theanine is an amino acid found in green tea, and is considered a relaxant (although not a sedative) when used alone. The Food and Drug Administration has approved several health claims for L-theanine including: stress reduction, relaxation without drowsiness, decreased nervousness from common

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

fatigue, and reduced nervous irritability. L-theanine has been shown to significantly increase alpha brain wave activity which correlates with a perceived state of relaxation.<sup>12</sup>

### Jujube Extract†

Wild jujube seed has been historically used in traditional Chinese medicine as a sedative herb. It has been shown to reduce stress, conserve energy and promote sleep. It is useful for those with symptoms of nervous exhaustion, fatigue, irritability and the inability to sleep.<sup>13</sup> (Note: Most research on the active components [jujubosides A and B] for sedative and CNS function has been performed in China and are written in Chinese).<sup>14-17</sup>

### Hops Strobile Extract†

The hops plant, *Humulus lupulus*, is a perennial climbing vine that has been used for centuries for its relaxing properties, among other health benefits. Only the female hops, which produce flowers known as strobiles, are used for medicinal purposes. The active ingredients in hops include a volatile oil, valerianic acid, tannins and flavonoids. European studies have examined the effects of hops in combination with other sleep-supporting botanicals. In a pilot study that included 30 subjects with mild-to-moderate sleep challenges, a preparation combining 500 mg of valerian extract with 120 mg hops was given to subjects 30 minutes before bedtime. The hops-valerian preparation was found to improve sleep quality by decreasing sleep latency and wake time throughout the night.<sup>18</sup>

### Directions

2 capsules one hour before sleep or as recommended by your health care professional.

### Does Not Contain

Gluten, yeast, artificial colors and flavors.

### Cautions

Do not consume this product if you are pregnant or nursing. Consult your physician for further information.

† These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

## Supplement Facts <sup>V2</sup>

Serving Size 2 Capsules

Servings Per Container 15 & 30

2 capsules contain	Amount Per Serving	% Daily Value
Valerian Root Extract (Standardized to contain 0.8% Valerenic Acids)	450 mg	*
Jujube Seed Extract (Standardized to contain 2% Triterpene Saponins)	200 mg	*
L-Theanine	150 mg	*
Passionflower Extract (Aerial Portion) (Standardized to contain 3.5% Flavonoids)	150 mg	*
Hops Strobile Extract	100 mg	*

\* Daily Value not established

ID# 521030 30 Capsules

ID# 521060 60 Capsules

### References

1. Ebadi, M. Pharmacodynamic Basis of Herbal Medicine. Valerian for Sleep disorders. CRC Press pp. 670-681.
2. Santos MS, Ferreira F et al. Synaptosomal GABA release as influenced by valerian root extract--involvement of the GABA carrier. *Arch Int Pharmacodyn Ther.* 1994; 327(2):220-31.
3. Benke D, Barberis A, Kopp S, et al. GABA A receptors as in vivo substrate for the anxiolytic action of valerianic acid, a major constituent of valerian root extracts, *Neuropharmacology.* 2009 Jan;56(1):174-181.
4. Kemper K. Valerian Monograph. The Longwood Herbal Task Force. Found online at: [www.mcp.edu/herbal/valerian/valerian.pdf](http://www.mcp.edu/herbal/valerian/valerian.pdf).
5. Ziegler G, Ploch M, Miettinen-Baumann A, Collet W. Efficacy and tolerability of valerian extract LI 156 compared with oxazepam in the treatment of non-organic insomnia—a randomized, double-blind, comparative clinical study. *Eur J Med Res.* 2002 Nov 25;7(11):480-6.
6. Dhawan K, Kumar S, Sharma A. Anti-anxiety studies on extracts of *Passiflora incarnata* Linnaeus. *J Ethnopharmacol.* 2001 Dec;78(2-3):165-70.

7. Salgueiro JB, Ardenghi P et al. Anxiolytic natural and synthetic flavonoid ligands of the central benzodiazepine receptor have no effect on memory tasks in rats. *Pharmacol Biochem Behav.* 1997 Dec;58(4):887-91.
8. Paladini AC, Marder M et al. Flavonoids and the central nervous system: from forgotten factors to potent anxiolytic compounds. *J Pharm Pharmacol.* 1999 May;51(5):519-26.
9. Akhondzadeh S et al. Passionflower in the treatment of generalized anxiety: a pilot double-blind randomized controlled trial with oxazepam. *J Clin Pharm Ther.* 2001 Oct;26(5):363-7.
10. Aslanargun P, Cuvas O, Dikmen B, Aslan E, Yuksel MU. *Passiflora incarnata* Linneaus as an anxiolytic before spinal anesthesia. *J Anesth.* 2012 Feb;26(1):39-44. Epub 2011 Nov 3.
11. Ngan A, Conduit R. A double-blind, placebo-controlled investigation of the effects of *Passiflora incarnata* (passionflower) herbal tea on subjective sleep quality. *Phytother Res.* 2011 Aug;25(8):1153-9. Epub 2011 Feb 3.
12. Nobre AC, Rao A, Owen GN. L-theanine, a natural constituent in tea, and its effect on mental state. *Asia Pac J Clin Nutri.* 2008;17(S1):167-168.
13. Draco Herbs Website: [www.dracoherbs.com/wildjube2.htm](http://www.dracoherbs.com/wildjube2.htm)
14. Feng ZY et al. [Sedative and anticonvulsant effect of jujuboside A]. *Zhejiang Da Xue Xue Bao Yi Xue Ban.* 2002 Apr;31(2):103-106.
15. Shou C, Feng Z, Wang J, Zheng X. The inhibitory effects of jujuboside A on rat hippocampus in vivo and in vitro. *Planta Med.* 2002 Sep;68(9):799-803.
16. Shou CH, Wang J, Zheng XX, Guo DW. Inhibitory effect of jujuboside A on penicillin sodium induced hyperactivity in rat hippocampal CA1 area in vitro. *Acta Pharmacol Sin.* 2001 Nov;22(11):986-90.
17. Wu SX, Zhang JX, Xu T, Li LF, Zhao SY, Lan MY. [Effects of seeds, leaves and fruits of *Ziziphus spinosa* and jujuboside A on central nervous system function] *Zhongguo Zhong Yao Za Zhi.* 1993 Nov;18(11):685-7, 703-4.
18. Fussel A, Wolf A, Brattstrom A. Effect of a fixed valerian-Hop extract combination (Ze 91019) on sleep polygraphy in patients with non-organic insomnia: a pilot study. *Eur J Med Res.* 2000 18;5(9):383-90.