

Kavinace® OS

Target the cellular consequences of sleeplessness with a formulation proven to significantly improve both sleep onset and efficiency after the first dose^{1,2*}

Patient Profile

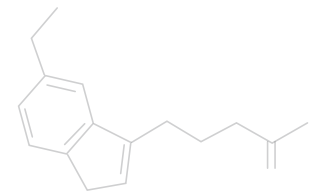
- Requires quick relief from sleeplessness
- Needs help falling asleep
- Unhealthy lifestyle habits
- Known or suspected immune activity



Key Ingredients

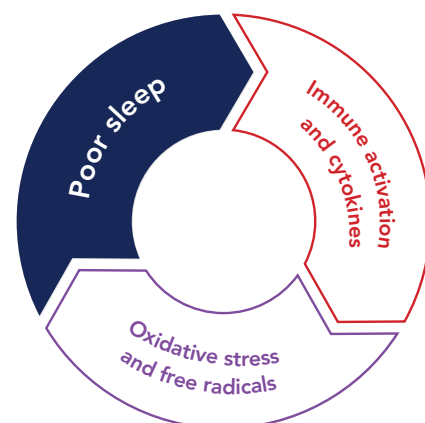
<p>L-theanine</p>	<ul style="list-style-type: none"> ■ Amino acid that acts as a glutamate receptor antagonist^{3*} ■ In a double-blind, placebo-controlled study, L-theanine was shown to significantly reduce stress^{4*}
<p>Astaxanthin</p>	<ul style="list-style-type: none"> ■ Carotenoid that can have inhibitory effects on macrophage activity, IL-1 and IL-6 expression, and Nf-kB phosphorylation, impacting chronic and acute immune responses^{17,18*} ■ Shown to significantly improve sleep onset when taken with zinc^{6*}
<p>Magnesium (as magnesium bisglycinate chelate)</p>	<ul style="list-style-type: none"> ■ Cofactor for multiple mechanisms in the body including the production of serotonin and acting as a GABA agonist^{7*}
<p>Zinc (as zinc bisglycinate chelate)</p>	<ul style="list-style-type: none"> ■ Essential micronutrient cofactor for the antioxidant enzyme superoxide dismutase (SOD)^{8*} ■ Zinc deficiency is directly associated with increased biomarkers of oxidative stress and inflammatory cytokines⁹
<p>Melatonin</p>	<ul style="list-style-type: none"> ■ Antioxidant and hormone important for the regulation of the sleep-wake cycle^{10*}

The Science



- The nervous system works with the immune system to regulate the sleep-wake cycle and the immune response^{11,12}
- During daytime activity, the immune system generates free radicals and depletes antioxidants¹³
- During bedtime hours, accumulated free radicals can stimulate the immune system with the adaptive immune system at its most active¹²
- Poor sleep has been shown to increase oxidative stress markers, perpetuating the Immune-Sleep Cycle¹³⁻¹⁵

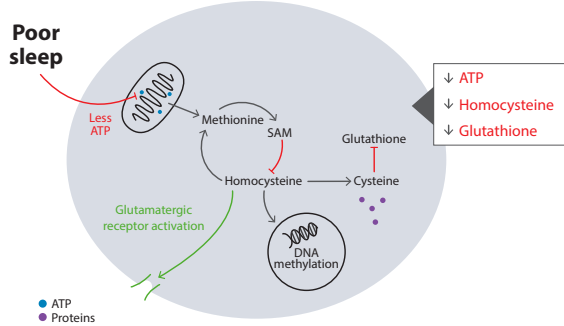
The Immune-Sleep Cycle



*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.

MORE SCIENCE BEHIND KAVINACE® OS

Figure 1. Cellular Impact of Sleep Deprivation



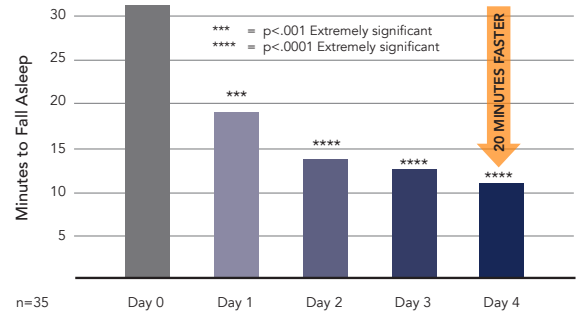
One night of poor sleep changes cellular metabolic function (Figure 1.)¹

Metabolic changes worsen the Immune-Sleep Cycle, perpetuating more sleepless nights¹

- Decreased antioxidant capacity increases susceptibility to negative effects of free radicals and oxidative stress¹
- Oxidative stress modulates immune regulators like Nf-kB¹⁶
- Wake promoting substances (hormones and neurotransmitters) respond to immune activation and further disrupt sleep^{11, 15}

The uniquely formulated blend of Kavince OS comprehensively intervenes at every portion of the Immune-Sleep Cycle*

Figure 2. Kavince OS Decreases Sleep Latency



Researched ingredient blend, proven results*

Study participants were prescreened for poor sleep (PSQI), received one serving of Kavince OS at bedtime for seven days, and submitted a daily sleep diary

- **Fall asleep quickly.** Extremely significant reductions in sleep latency were reported after the first dose of Kavince OS, with ongoing improvement through day four²
- **Sleep better.** Significant improvement in sleep efficiency, or total sleep time relative to time in bed, was reported after one dose of Kavince OS^{2*}

Kavince OS provides quick relief from sleeplessness at the symptom and cellular level*

NeuroScience supplements undergo rigorous, product specific third-party testing to guarantee label claims of each ingredient and the absence of heavy metals, pesticides, residual solvents, and microbes

Capsules

Suggested Use: Take 2 capsules at bedtime or as directed by your healthcare provider. Do not exceed suggested use

Amount Per Serving	% Daily Value
Magnesium 25 mg	6%
Zinc (as zinc bisglycinate chelate) 15 mg	136%
Selenium (as selenomethionine) 200 mcg	364%
Melatonin 5 mg	†
Proprietary Blend 214 mg	†

† Daily Value not established.
Other ingredients: Vegetable capsule (hypromellose, water), organic rice concentrate, microcrystalline cellulose, dicalcium phosphate, citric acid, and glycine.

Emulsion

Suggested Use: Take 1 tablespoon (15 mL) at bedtime or as directed by your healthcare provider. Do not exceed suggested use.

Amount Per Serving	% Daily Value*
Calories 84	
Total Fat 8 g	12%
Saturated fat 0 g	0%
Polyunsaturated fat 4 g	†
Monounsaturated fat 4 g	†
Cholesterol 0 mg	0%
Total Carbohydrate 3 g	1%
Total Sugars 0 g	†
Protein 1.5 g	
Vitamin E (as D-alpha tocopherol) 9 IU	30%
Magnesium (as magnesium bisglycinate chelate) 25 mg	6%
Zinc (as zinc bisglycinate chelate) 15 mg	100%
Selenium (as selenomethionine) 200 mcg	286%
Melatonin 5 mg	†
Proprietary Blend 214 mg	†

* Percent Daily Values are based on a 2,000 calorie diet.
† Daily Value not established.
Ingredients: Sunflower oil*, Almond butter* (100% almonds), Purified water, Glycerin (vegetable source), Natural flavors, Organic cocoa powder, and Potassium bicarbonate.
L20054KAVOSE8.01

+ Emulsion Exclusive Benefits

During digestion, nutrients are packaged into micelles to be efficiently absorbed, but malabsorption issues disrupt this natural process¹⁷⁻¹⁹

- ✓ NeuroCelle™ technology pre-packages ingredients into micelles for essential digestion and absorption
- ✓ Based in non-GMO sunflower oil and non-GMO almond butter
- ✓ Flavored with organic, fair trade cocoa and zero added sugars



Item Number	Available Sizes	Serving Size
20053	60 capsule	2 Capsules
20054	8 fl oz	1 Tablespoon (15mL)

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2. Data on file. 2019. NeuroScience, Osceola, WI 54020.
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4. Kimura K, et al. Biol Psychol. 2007;74(1):39-45.
5. Wu H, et al. Mar Drugs. 2015;13(9):5750-66.
6. Saito H, et al. Mol Nutr Food Res. 2017;61(5):1600882.
7. Schwalfenberg G, et al. Scientifica. 2017;4179326.

8. Nedd S, et al. J Mol Biol. 2014;426(24):4112-4124.
9. Prasad AS and Bao B. Antioxidants (Basel). 2019 Jun 6;8(6). pii:E164.
10. Pandi-Perumal S, et al. Prog Neurobiol. 2008;85(3):225-53.
11. Pongratz G and Straub R. Arthritis Res Ther. 2014;16:504.
12. Cermakian N, et al. Chronobiol Int. 2013 Aug;30(7):870-88.
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14. Bryant P, et al. Nat Rev Immunol. 2004;4:457-67.
15. Luyster FS, et al. Sleep. 2012;35(6):727-34.
16. Lugrin et al. 2014; Hussain et al. 2016; Liu et al. 2017.
17. Lee S, et al. Astaxan Inhib Nitric. 2003; 16(1):97- 105.
18. Kishimoto Y, et al. Eur J Nutr (2010) 49: 119

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