NeuroScience®

# Kavinace® OS


## Ingredients target complete cellular health needed to bring occasional sleeplessness into balance in a formula reported to benefit both healthy sleep onset and optimal sleep efficiency[1,2]*

**Patient Profile**

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

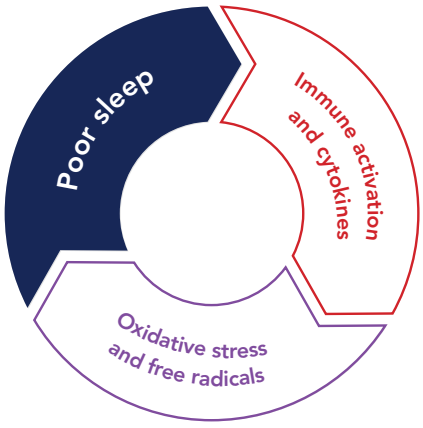
## Key Ingredients

| | |
|---|---|
| L-theanine | ■ Amino acid that acts as a glutamate receptor antagonist, shown to **reduce stress**[4]*<br>■ Modulates the immune response by regulating the secretion of **INF-y, IL-2 and IL-10**, cytokines shown to increase after strenuous activity and **display sleep regulating properties**[20-23] |
| Astaxanthin | ■ 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]*<br>■ Shown to **improve sleep onset** when taken with zinc[6]* |
| Magnesium (as magnesium bisglycinate chelate) | ■ Cofactor for multiple mechanisms in the body including the **production of serotonin** and acting as a **GABA agonist**[7]* |
| Zinc (as zinc bisglycinate chelate) | ■ Essential micronutrient cofactor for the antioxidant enzyme **superoxide dismutase (SOD)**[8]*<br>■ Zinc deficiency is directly associated with increased biomarkers of oxidative stress and inflammatory cytokines[9] |
| Melatonin | ■ **Antioxidant** and hormone important for the **regulation of the sleep-wake cycle**[10]*<br>■ Melatonin restores the **circadian rhythm dependent activity of mast cells**, important for the allergic and inflammatory cascade and immune response to pathogens[19] |

## 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 antioxidants[13]
- During bedtime hours, accumulated free radicals can stimulate the immune system with the adaptive immune system at its most active[12]
- Poor sleep has been shown to increase oxidative stress markers, perpetuating the Immune-Sleep Cycle[13-15]

### 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

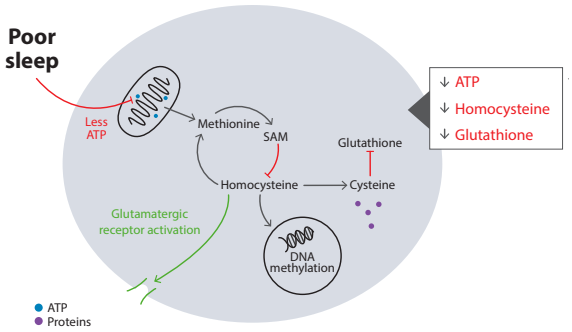
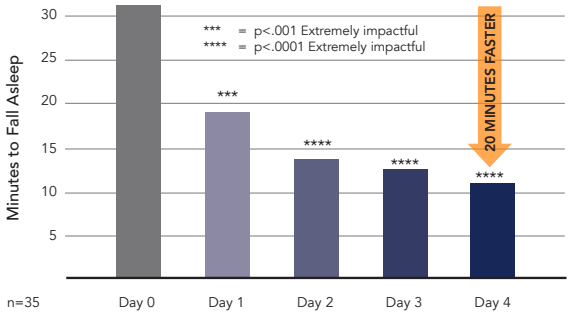



Figure 2. Kavinace OS Decreases Sleep Latency




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

### Metabolic changes worsen the Immune-Sleep Cycle, perpetuating more sleepless nights[1]

- Decreased antioxidant capacity increases susceptibility to negative effects of free radicals and oxidative stress[1]
- Oxidative stress modulates immune regulators like Nf-kB[16]
- Wake promoting substances (hormones and neurotransmitters) respond to immune activation and further disrupt sleep[11, 15]

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

## Researched ingredient blend, proven results*

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

- **Fall asleep quickly.** Reductions in sleep latency were reported after the first serving of Kavinace OS, with ongoing improvement through day four[2]
- **Sleep better.** Improvement in sleep efficiency, or total sleep time relative to time in bed, was reported after one serving of Kavinace OS[2]*

### Kavinace 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 and microbes

Suggested Use: Take 2 capsules at bedtime or as directed by your healthcare provider.

**Supplement Facts**

Serving Size: 2 Capsules
Servings Per Container: 30

| Amount Per Serving | | % Daily Value |
|---|---|---|
| Magnesium (as magnesium bisglycinate chelate) | 25 mg | 6% |
| Zinc (as zinc bisglycinate chelate) | 15 mg | 136% |
| Selenium (as selenomethionine) | 200 mcg | 364% |
| Melatonin | 5 mg | † |
| **Proprietary Blend** L-theanine, Trans-resveratrol *(Polygonum cuspidatum)* (root), and Astaxanthin *(Haematococcus pluvialis).* | 214 mg | † |

† Daily Value not established.

Other ingredients: Vegetable capsule (hypromellose, water), organic rice concentrate, microcrystalline cellulose, dicalcium phosphate, citric acid, and glycine.

NeuroScience®

| Item Number | Available Sizes | Serving Size |
|---|---|---|
| 20053 | 60 capsule | 2 Capsules |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