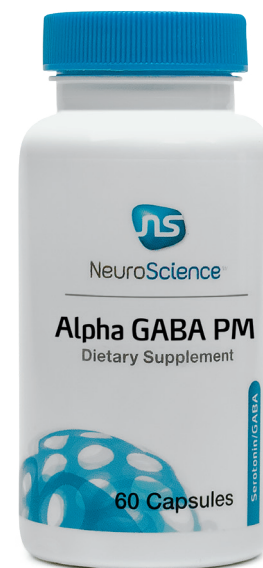


## Alpha GABA PM

Researched blend of botanicals and 400 mg of L-theanine shown to induce calming brain waves and naturally improve sleep during times of stress\*

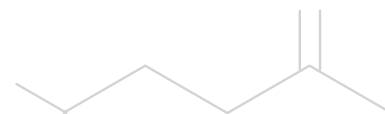


- ✓ High dose L-theanine
- ✓ Proven botanical blend
- ✓ Reduced valerian root odor
- ✓ Comprehensive formula

### Key Ingredients

L-theanine	<ul style="list-style-type: none"> <li>■ Amino acid that acts as a glutamate receptor antagonist<sup>1*</sup></li> <li>■ L-theanine has been linked to the generation of <b>alpha brain waves</b>, indicating a state of <b>relaxation</b><sup>2*</sup></li> </ul>
Melatonin	<ul style="list-style-type: none"> <li>■ Hormone important for the regulation of the sleep-wake cycle<sup>3*</sup></li> <li>■ Supplementation with melatonin has been shown to <b>improve the onset of sleep</b><sup>4*</sup></li> </ul>
Valerian ( <i>Valeriana officinalis</i> ) root extract (Valerenic acids 0.8%) (Micro-encapsulated)	<ul style="list-style-type: none"> <li>■ Both <i>in vitro</i> and <i>in vivo</i> studies demonstrate valerian extracts <b>modulate GABA-A receptors</b><sup>5,8*</sup></li> <li>■ Micro-encapsulation reduces valerian root odors</li> </ul>
Lemon balm ( <i>Melissa officinalis</i> ) leaf extract	<ul style="list-style-type: none"> <li>■ Botanical shown to inhibit the enzyme GABA transaminase <i>in vitro</i>, which may increase levels of GABA in the brain<sup>9*</sup></li> <li>■ Utilizes proprietary extract extensively researched to <b>reduce stress</b><sup>10,11</sup></li> </ul>
5-HTP (from <i>Griffonia simplicifolia</i> seed extract)	<ul style="list-style-type: none"> <li>■ 5-hydroxytryptophan (5-HTP) crosses the blood-brain barrier and is a precursor to serotonin and melatonin<sup>12</sup></li> <li>■ Serotonin is important for <b>regulating mood</b> and <b>sleep-wake function</b><sup>13</sup></li> </ul>

### The Science

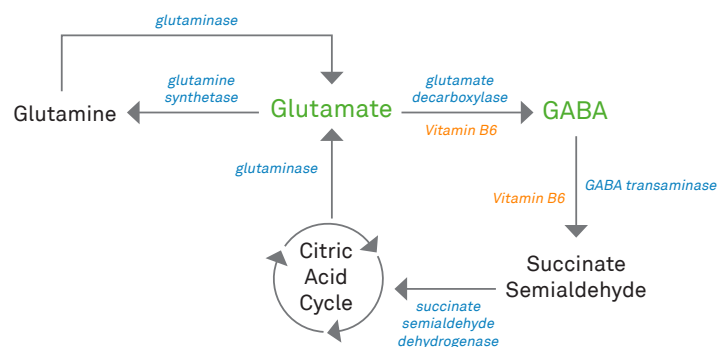


#### GABA

GABA is the primary inhibitory neurotransmitter in the brain<sup>14</sup>

- GABA is important for **calm** and **sleep**<sup>15,16</sup>

#### GABA Pathway

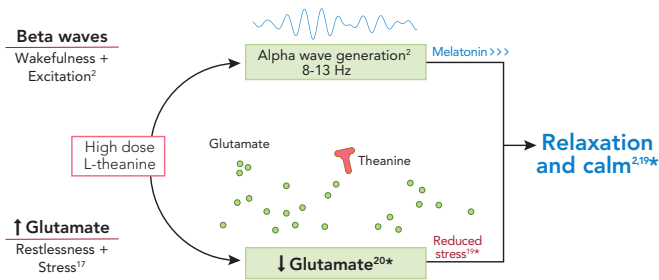


Green = Biomarker  
Blue = Enzyme  
Orange = Cofactor

\*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 ALPHA GABA PM

Figure 1. Alpha Waves, L-theanine, and Stress



## High-dose L-theanine as a new approach

Alpha brain waves are naturally generated when an individual is calm and relaxed<sup>2</sup>

- In a placebo-controlled study, impactful amounts of L-theanine were shown to induce the generation of alpha brain waves in groups both with and without stress (Figure 1.)<sup>2\*</sup>
- Melatonin has been shown to rapidly increase alpha brain waves<sup>18\*</sup>

In a randomized, double-blind, placebo-controlled study, L-theanine intake led to significantly reduced stress<sup>19\*</sup>

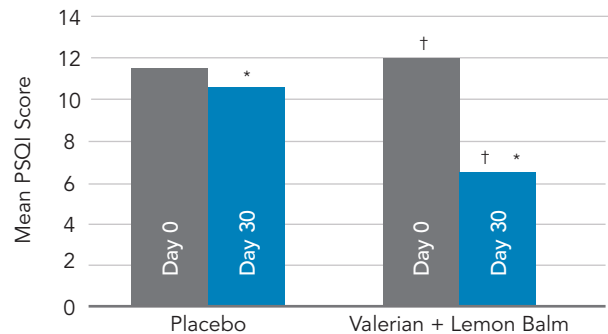
- L-theanine binds to receptors, blocking the attachment of glutamate, and at doses of 250 mg or more, lowers glutamate levels (Figure 1.)<sup>1,20\*</sup>

Alpha GABA PM contains 400 mg of L-theanine and 3 mg of melatonin per serving to effectively calm the mind for sleep<sup>1,2,4\*\*</sup>

Figure 2. A Pivotal Partnership

Low PSQI score = better sleep

\* p<0.05  
† p<0.001



## Proven sleep botanicals

In a randomized, triple-blind, placebo-controlled, 30 day study, valerian and lemon balm extracts together significantly improved quality of sleep as measured by the Pittsburgh Sleep Quality Index (PSQI) (Figure 2.)<sup>21\*</sup>

- Alpha GABA PM contains a blend of botanical extracts identical to the above study to naturally improve quality of sleep<sup>21\*</sup>

A combination of valerian root and lemon balm was shown to significantly increase brain concentrations of GABA *in vivo*<sup>22\*</sup>

- Proprietary extracting technique of whole lemon balm leaf provides improved mechanism capability
- Valerian and lemon balm are naturally GABAergic botanicals<sup>21,22\*</sup>

Alpha GABA PM contains proprietary whole lemon balm leaf extract and micro-encapsulated valerian root to improve onset and quality of sleep<sup>21,22\*</sup>



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