

# Alpha GABA<sup>™</sup>

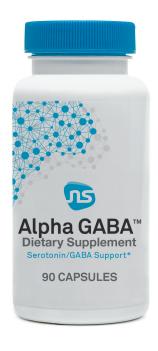
Ingredients to promote calm during times of anxiousness while supporting a healthy response to stress, day or night\*

#### Patient Profile<sup>†</sup>

- Need to "downshift" from feeling mentally engaged\*
- Feelings of anxiousness, seeking to restore relaxation and calm\*
- Desire for help balancing stress\*

## Key Ingredients

L-theanine	<ul> <li>Amino acid that acts as a glutamate receptor antagonist for balanced activity<sup>1*</sup></li> <li>L-theanine has been linked to the generation of alpha brain waves, indicating a state of restored relaxation<sup>2*</sup></li> </ul>
Ashwagandha (Withania somnifera)	<ul> <li>Patented ashwagandha leaf and root extract that provides the highest amount of withanolides on the market (&gt;10% withanolides)</li> <li>Research and multiple data sets indicate Sensoril reduced stress and anxiousness<sup>3*</sup></li> </ul>
Passionflower (Passiflora incarnata)	<ul> <li>Botanical shown to bind to the GABA site of GABA-A receptors for healthy activity<sup>4*</sup></li> <li>Activation of GABA-A receptors are essential for downregulating the hypothalamic-pituitary-adrenal (HPA) axis<sup>5*</sup></li> </ul>
Lemon balm (Melissa officinalis)	<ul> <li>Botanical shown to inhibit the enzyme GABA transaminase to restore balance, which may increase healthy levels of GABA in the brain<sup>6*</sup></li> </ul>
L-taurine	<ul> <li>Neuroprotective amino acid that provides antioxidant protection<sup>7,8*</sup></li> <li>Demonstrates healthy GABA-A agonist activity<sup>9*</sup></li> </ul>



### The Science

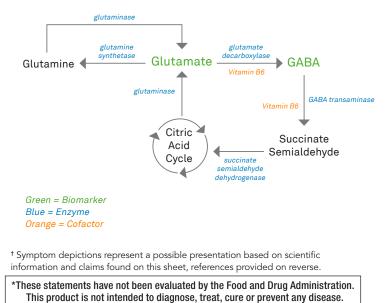
**GABA** is the primary inhibitory neurotransmitter in the brain<sup>10</sup>

GABA is important for **calm** and **sleep**<sup>11,12</sup>

Glutamate is the primary excitatory neurotransmitter in the brain<sup>13</sup>

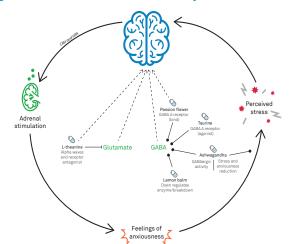
 Glutamatergic signaling underlies mechanisms related to anxiousness and stress<sup>14</sup>

### **GABA Pathway**



# MORE SCIENCE BEHIND ALPHA GABA

#### Figure 1. Stress and Anxiousness, A Cycle to Balance



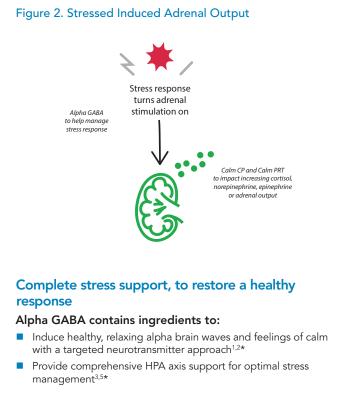
#### Stress processing and balancing the symptom cycle

#### Stress, GABA, and the HPA axis

- GABA signaling inhibits corticotropin-releasing hormone (CRH) and glutamate signaling stimulates CRH<sup>15</sup>
- Stress increases CRH secretion, stimulating the hypothalamic pituitary adrenal (HPA) axis and adrenal gland production of cortisol and the catecholamines<sup>15</sup>
- Chronic stress causes neuroplastic changes in the paraventricular nucleus, decreasing GABA receptor expression and increasing glutamate receptor expression, perpetuating the stress response<sup>5</sup>

Alpha GABA provides a multi-faceted approach to stress management with ingredients to balance symptoms of anxiousness while supporting a healthy stress response<sup>3,5\*</sup>

2. 3.



#### Support the circadian rhythm for patients already feeling the "fight or flight" response by adding:

Calm CP or Cortisol targeted blend\*<sup>16\*</sup> Elevated bedtime activity can disrupt sleep and is associated with increased abdominal fat<sup>17\*</sup>

Manage norepinephrine activity<sup>18\*</sup> Elevated norepinephrine activity can perpetuate stress, anxiousness, and fatigue<sup>19,20\*</sup>

Calm PRT



ЛŚ	NeuroScience®

Item Number	Available Sizes	Serving Size
20057	90 Capsules	3 Capsules

Kakuda T, et al. Biosci Biotechnol Biochem. 2002;66(12):2683-86. Juneja L, et al. Trends Food Sci Tech. 1999;10:199-204. Auddy B, et al. JANA. 2008;11(1):50-6. Appel K, et al. Phytother Res. 2012;56():383-43. Herman J, et al. Prog Brain Res. 2008;170:353-64. Awad R, et al. Phytother Res. 2009;370:353-64. Kumari N, et al. Adv Exp Med Biol. 2013;775:19-27. Shimada K, et al. Adv Exp Med Biol. 2015;803:581-96. Kletke O, et al. PLOS Chen. 2013;8(4):e61733. Petroff O. Neuroscientist. 2002;8(6):562-73.

- 4. 5. 6. 7.
- 10.



### Stress disrupting sleep?

Consider Alpha GABA PM with a similar blend targeted for bedtime instead.

- 12. 13. 14. 15. 16. 17.
- Mohler H. Neuropharmacol. 2012;62(1):42-53. Saper C, et al. Nature. 2005;437(7063):1257-63. Meldrum BS. J Nutr. 2000;130(4S Suppl):10075-15S. Bermudo-Soriano C, et al. Pharmacol Biochem Behav. 2012;100:752-774. Levy B and Tasker J. Front Cell Neurosci. 2012;6(24):1-13. Calm CP Data on file. 2012. NeuroScience, Inc., Osceola, WI 54020. Abraham S, et al. Obesity (Silver Spring). 2013;21(1):E105-17. Calm PRT Data on file. 2006. NeuroScience, Inc., Osceola, WI 54020. Meerio P, et al. Sleep Med Rev. 2008;12:197-210. Mehta R, et al. Neuropharm. 2016;14:28-40.

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\*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.