



## GABA with L-Theanine



### Supplement Facts

Serving Size: 2 mL (4 Pumps) Amount % Daily  
Servings Per Container: 25 Per Serving Value

GABA (Gamma Amino Butyric Acid)	250mg	**
L-Theanine	100mg	**
Phosphatidylcholine (from purified sunflower seed lecithin)	134mg	**

\*\*Daily Value not established

**Other Ingredients:** Water, glycerin, ethanol, vitamin E (as tocopherol and natural mixed tocopherols)

Chronic stress has, unfortunately, become commonplace in our modern-day society. Chronic stress induces a profound shift in the nervous system, skewing the body towards a heightened sympathetic “fight-or-flight” response and a dampened parasympathetic “rest-and-digest” response.

**Liposomal GABA with L-Theanine** combines a highly bioavailable form of GABA, the body’s primary inhibitory neurotransmitter, with the green tea-based compound L-theanine for optimal parasympathetic nervous system support, helping your patients achieve calm and relaxation amidst our frenetic world.

### SOOTHE AND PROTECT THE MIND WITH BIOAVAILABLE GABA

**GABA (gamma-aminobutyric acid)** is produced by neurons in the brain and the gastrointestinal tract, and functions as the body’s principal inhibitory neurotransmitter.<sup>1,2</sup> GABA balances the autonomic nervous system, inhibiting the sympathetic “fight-or-flight” response and enhancing the parasympathetic “rest-and-digest” response. Many pharmacological agents, including benzodiazepines, exert anxiolytic, analgesic, anticonvulsant, and sedative effects by modulating GABA receptor activity and increasing GABA availability.<sup>3,4</sup>

Chronic stress induces an imbalance in excitatory and inhibitory neurotransmission, reducing GABA signaling and creating a vicious cycle of anxiety.<sup>5</sup> GABA signaling may also decrease with age, leading to cognitive impairment.<sup>6</sup> Supplemental GABA has been found to reduce stress and improve heart rate variability, a measure of autonomic nervous system balance.<sup>7</sup> It also alleviates anxiety and improves sleep quality.<sup>8</sup> Fascinatingly, GABA-loaded liposomes may also represent a promising therapy for the treatment of neurological diseases, such as Alzheimer’s disease.<sup>9</sup>

### L-THEANINE: A POTENT ANTI-STRESS INGREDIENT IN GREEN TEA

**L-Theanine** is an amino acid analogue derived from L-glutamate and L-glutamine that is found in high amounts in green tea. Clinical research indicates that L-theanine offers potent anti-stress effects, without causing drowsiness, and supports a positive mood and relaxation.<sup>10,11</sup> In fact, L-theanine is proposed to be the reason why green tea-drinking monks experience such extraordinary calm and focus!

Research indicates that L-theanine exerts these effects by increasing alpha-wave activity in the brain, inhibiting excitatory glutamate neurotransmission, and modulating levels of serotonin, dopamine, and GABA in the central nervous system.<sup>12,13,14</sup>

More recently, L-theanine has been revealed to have potent neuroprotective properties. It boosts levels of brain-derived neurotrophic factor (BDNF) and enhances long-term potentiation, a strengthening of neuronal synapses based on recent activity that is critical in learning and memory.<sup>15,16</sup>

### BENEFITS & APPLICATIONS:

- Alleviates stress and anxiety<sup>7,8,10,14</sup>
- Supports a healthy mood<sup>11</sup>
- Neuroprotective – May protect the brain from age- and stress-related dysfunction<sup>6</sup>
- Promotes restorative sleep<sup>16</sup>

## GABA AND L-THEANINE: BETTER TOGETHER

When it comes to inducing calm and relaxation, GABA and L-theanine work synergistically together. The compounds swiftly balance parasympathetic nervous system activity, supporting deep rest and relaxation. In fact, research has found that the synergistic combination of GABA and L-theanine dramatically decreases sleep latency while increasing deep, restorative non-REM (NREM) sleep.<sup>17</sup>

### WHY LIPOSOMAL DELIVERY?

The bioavailability of L-theanine is limited to approximately 47 to 54 percent in ingested capsules and green and black tea, making high doses of L-theanine necessary to achieve therapeutic benefits.<sup>13,12</sup> Furthermore, conventional oral forms of GABA do not readily cross the blood-brain barrier.<sup>8</sup> Quicksilver Scientific's advanced liposomal delivery system offers an elegant solution to these problems, significantly enhancing the bioavailability of GABA and L-theanine and producing quick and powerful calming effects.

**Quicksilver Delivery Systems**<sup>®</sup> improves upon liposomal and emulsification technology with smaller, more stable particles made from the highest-grade ingredients available. In addition to exceptional absorption rates, these tiny liposomal and nanoemulsified particles enhance the lymphatic circulation of nutrients and intracellular delivery.<sup>18,19</sup> The phospholipids, inherent in the liposomal and nanoemulsified formats, nourish cell membranes, promoting enhanced absorption of nutrients.

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References available at [quicksilverscientific.com/gabareferences](https://quicksilverscientific.com/gabareferences)

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