



THORNE[®]
R E S E A R C H



PharmaGABA-PRO™

nature's calming neurotransmitter

GABA regulates anxiety and nervousness by calming excitatory neurotransmitter activity

Low levels of GABA are associated with anxiety, insomnia, depression, and seizures

Increased GABA levels improve mental focus and relaxation, without drowsiness

In at least one study, natural PharmaGABA-PRO decreased signs of stress; synthetic GABA did not

Stress is a normal part of life. Job pressures, family contention, financial insecurity, traffic, and time management are just a few of the stressors we are faced with on a daily basis. For some people, the effects can be overwhelming, leading to feelings of nervousness, anxiety, and insomnia. In addition, chronic stress can exert detrimental physiological effects on the cardiovascular, immune, and neuroendocrine systems.

Gamma-aminobutyric acid (GABA) is a major neurotransmitter widely distributed throughout the central nervous system. Because too much excitation can lead to irritability, restlessness, insomnia, seizures, and movement disorders, it must be balanced with inhibition. GABA – the most important inhibitory neurotransmitter in the brain – provides this inhibition, acting like a “brake” during times of runaway stress. Medications for anxiety, such as benzodiazepines, stimulate GABA receptors and induce relaxation. Either low GABA levels or decreased GABA function in the brain is associated with several psychiatric and neurological disorders, including anxiety, depression, insomnia, and epilepsy. Studies indicate GABA can improve relaxation and enhance sleep.

A Unique, Natural GABA Formulation

PharmaGABA-PRO is a natural form of GABA, manufactured from *Lactobacillus hilgardii* (the bacteria used to ferment vegetables in the preparation of the traditional Korean dish, kimchi). Natural **PharmaGABA-PRO** contains 100 mg GABA per capsule.

The Science Behind PharmaGABA-PRO

Clinical studies have shown that natural PharmaGABA increases the production of alpha-brain waves, creating a profound sense of physical relaxation while maintaining mental focus. In contrast, stress-related beta-waves are decreased.

A small pilot study conducted at the University of Shizuoka in Japan enrolled 13 healthy volunteers, seven males and six females, ages 21-35. EEG tracings were recorded before and after each of three administrations of 200 mL distilled water: (1) only distilled water; (2) distilled water containing 100 mg PharmaGABA; and (3) distilled water containing 200 mg L-theanine (an amino acid from green tea known to increase alpha-brain waves). Tests of the three administrations were separated by seven-day intervals. EEG recordings were made before administration, then at 0, 30, and 60 minutes after each administration for five-minute recording sessions. Alpha and beta waves were calculated as a percentage and pre- and post-administration values were compared. Alpha-to-beta ratios were calculated as a ratio between alpha and beta percentage values. GABA produced significant effects on both increasing alpha waves (Figure 1) and decreasing beta waves, resulting in a highly significant increase in the alpha-to-beta wave ratio.¹

In addition to changes in brain waves, PharmaGABA has been shown to produce relaxation as evidenced by reduced pupil diameter, heart rate, and markers of stress – salivary cortisol and chromagranin A. In a head-to-head, double-blind trial of natural PharmaGABA versus synthetic GABA, the synthetic GABA did not demonstrate these effects.

A study on healthy male athletes using PharmaGABA added to a beverage showed a reduction in stress markers during and after exercise.

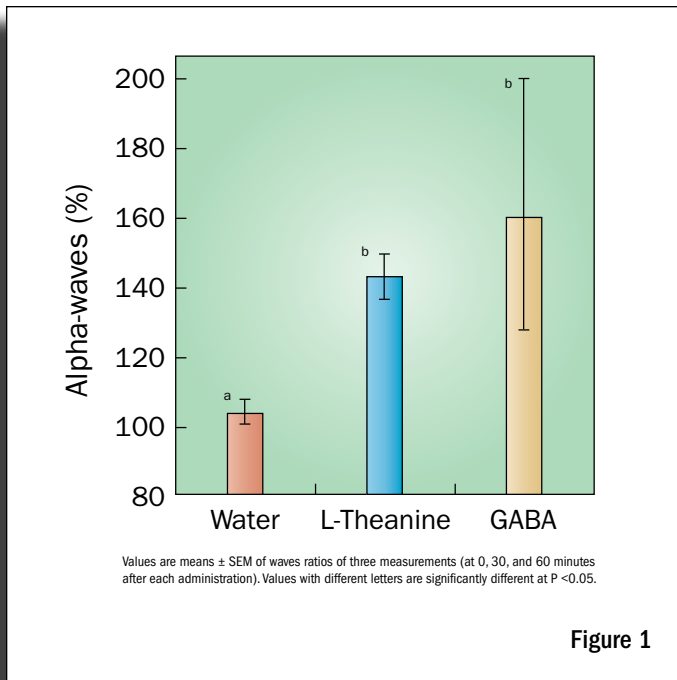


Figure 1

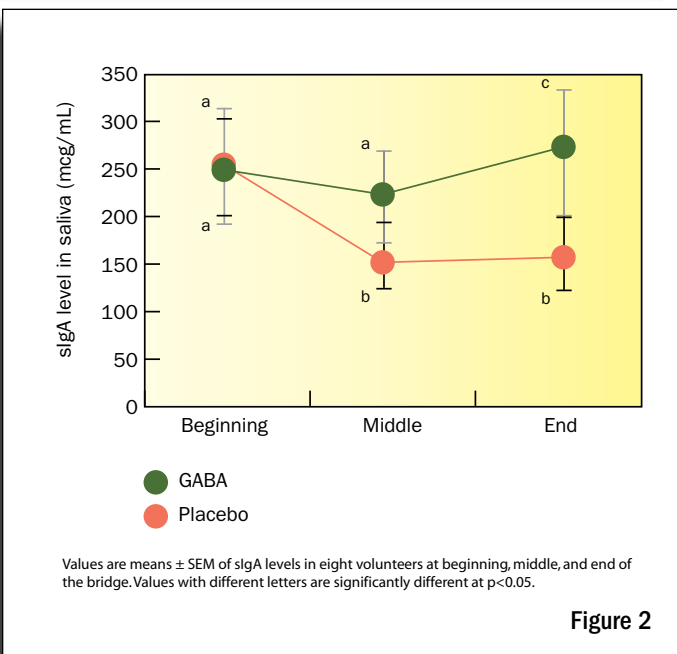


Figure 2

KEY REFERENCES:

1. Abdoua AM, Higashiguchia S, Horiea K, et al. Relaxation and immunity enhancement effects of Gamma-aminobutyric acid (GABA) administration in humans. *BioFactors* 2006;26:201-208.
2. Gamma-Aminobutyric Acid (GABA) Monograph. *Altern Med Rev* 2007;12(3).

Who Should Use PharmaGABA-PRO?

Anyone feeling overwhelmed or
over-committed

Anyone coping with mental,
emotional, or physical stress

Individuals with anxiety or other
nervous disorders

People suffering from insomnia
or poor sleep quality

Athletes engaging in strenuous
workouts (that tend to elevate
cortisol levels and depress
immunity)

Additional clinical studies with PharmaGABA yield further evidence of its anti-stress activity. Secretory IgA (sIgA) is an important antibody in saliva that helps fight infection. Typically, during times of stress salivary sIgA levels drop. In one study, subjects with acrophobia (fear of heights) traversed a long walking suspension bridge that spanned a 150-foot high canyon. Salivary sIgA levels decreased when subjects were given a placebo; however, when they were given PharmaGABA, salivary sIgA levels were maintained half-way across the bridge and actually increased upon completion of the crossing (Figure 2).

How to Use PharmaGABA-PRO

Dosage Recommendation: **PharmaGABA-PRO** can be used for situational stress, pervasive feelings of anxiety, or as a sleep enhancer. The typical dosage is 100-200 mg up to three times daily. As a general guideline, it is recommended to take no more than 600 mg within a six-hour period and no more than 1,200 mg within a 24-hour period.

Side Effects and Contraindications: GABA-enhancing medications, such as benzodiazepines (Valium®, Xanax®, etc.), have significant side effects including drowsiness, dizziness, rebound anxiety, and dependence/withdrawal syndrome. On the other hand, natural **PharmaGABA-PRO** is gentle and non-addictive with virtually no side effects.

Pregnancy: A woman who is pregnant, or might become pregnant, should not take **PharmaGABA-PRO**.

Children: Not recommended for children under age six years, unless prescribed by a health care practitioner.

Supplement Facts

Serving Size: One Capsule

Each Capsule Contains:	% DV
Gamma-aminobutyric acid**	100 mg. *

* Daily Value (DV) not established.

Other Ingredients: Hypromellose (derived from cellulose) capsule.
Cellulose, Silicon Dioxide, Magnesium Citrate/Laurate.

** From PharmaGABA™

PharmaGABA-PRO™

60 Vegetarian Capsules
Code: SP652
Dosage: 1-2 capsules bid - tid

PharmaGABA-PRO™, a more effective, non-synthetic, naturally fermented form of GABA.

PharmaGABA™ is a trademark of Pharma Foods International.

PharmaGABA-PRO™

feeling overwhelmed? two capsules prior to approaching a stressful situation can really make a difference!



This unique, natural GABA product is a great alternative for patients suffering from feelings of nervousness, anxiety, and stress.

Try PharmaGABA-PRO™
... today!

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www.pharmaGABAonline.com



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