

PheniTropics™

Natural Sleep Aids Promoting the Relaxation Response

Biotics Research Corporation has developed a suite of proprietary formulas called **PheniTropics™**, designed to support the overall relaxation response and the circadian rhythms as they relate to sleep. **PheniTropics™** supply healthy levels of GABA, enhance the relaxation response and support the sleep/wake cycle by optimizing neurotransmitter health.

Neurotransmitters are required for everything from signaling the heart and lungs to function, to enabling the body to sleep so regeneration and repair can occur. Unfortunately, neurotransmitter balance can be easily disrupted by a number of factors including genetics, immune function, diet, stress, and general chemical exposure. This imbalance can result in less-than-optimal neurotransmitter function, which can lead to restlessness or impaired sleep quality.

Quality sleep is critical to a healthy life and optimal body function. More and more studies show how sleep deprivation is linked to a host of physiologic dysfunctions, including cognitive performance,⁽¹⁾ increased risk of heart disease and diabetes,⁽²⁾ hormonal imbalances,⁽³⁾ immune system dysfunctions, obesity,⁽⁴⁾ depression and anxiety,⁽⁵⁾ and even vitamin D deficiency.⁽⁶⁾ In one study, deep sleep was shown to be a requirement for maintaining suitable learning efficiency.⁽⁷⁾

Each of the **PheniTropic™** formulas contains Phenibut (beta-phenyl-gamma-aminobutyric acid), a derivative of gamma amino butyric acid (GABA) that acts at GABA(B) receptors and does have some effect on GABA(A)

receptors as well.⁽⁸⁾ GABA is a primary inhibitory neurotransmitter, which means it inhibits excitatory neurotransmitters in the brain, and is used at the great majority of fast inhibitory synapses in virtually every part of the brain. A number of sedatives act by enhancing the effects of GABA.⁽⁹⁾ One of the “feel good” brain neurotransmitters, which include serotonin, dopamine and norepinephrine, GABA is commonly referred to as the “anti-anxiety neurotransmitter”.

Reduced activity in GABA systems has been found in mood disorders, anxiety disorders and epilepsy.^(10,11,12) Sleep disorders can also be a complication of anxiety.⁽¹³⁾

Some Symptoms of GABA/Serotonin Deficiency Include:

- Anxiety, feeling fearful, general anxiety disorder or GAD
- Panic attacks
- Persistent worrying thoughts
- Inability to relax
- Mood disorders
- Sleeplessness due to an “anxious mind” or inability to “switch off the mind”

Future Neurol. 2006 Sep; 1(5): 631–636. doi: 10.2217/14796708.1.5.631

Unfortunately, exogenous GABA does not penetrate the blood-brain barrier; it is synthesized in the brain.⁽¹⁴⁾ Phenibut’s molecular structure, however, allows the



(800) 231-5777

6801 Biotics Research Drive • Rosenberg, TX 77471
biotics@bioticsresearch.com • www.bioticsresearch.com

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compound to more easily cross the blood-brain barrier with the addition of a phenyl ring.⁽¹⁵⁾ It works by binding GABA receptors, which elicits tranquilizing effects, reduction of stress and anxiety, and the improvement of occasional sleeplessness.⁽¹⁶⁾ Phenibut also increases dopamine levels.⁽¹⁶⁾

Due to its derivation from GABA, Phenibut appears to have no negative side effects other than the potential for increased sleepiness in some individuals, which is considered a positive side effect when wanting to regulate the sleep cycle.⁽¹⁶⁾

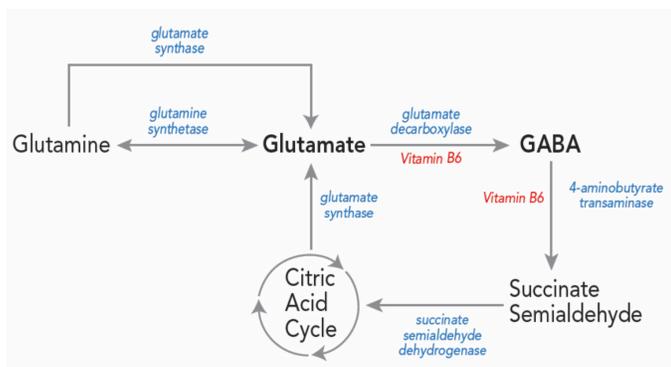
PheniTropic™ contains Phenibut, which has been shown to have a calming effect and may assist in instances of stress, anxiety and even occasional sleeplessness.

PheniTropic™ PM contains a proprietary blend of Phenibut and Taurine, with the addition of vitamin B6, to support quality sleep and the relaxation response.

PheniTropic™ Ultra PM contains a combination of key nutrients with a proprietary blend of botanicals and neurotransmitter precursors, designed to support the sleep/wake cycle, while promoting GABAergic and serotonergic activities associated with feelings of calm, satisfaction and improvement of mood. The addition of melatonin, vitamin B6, 5-HTP and passionflower provide the extra support for a deeper sleep.

Vitamin B6:

Vitamin B6 acts as a cofactor in the conversion reaction of glutamate, a principal excitatory neurotransmitter to GABA, a principal inhibitory neurotransmitter. Inadequate levels of vitamin B6 may result in lower levels of GABA. The added vitamin B6 in **PheniTropic™ PM** and **PheniTropic™ Ultra PM** provides the necessary cofactor in this key conversion reaction.^(17,18)



Taurine:

Taurine, an amino acid, works to regulate water and mineral levels in the blood. A natural substance that can be found in animal meat, fish and milk products, taurine may stimulate GABA activity by activating GABA receptors. In one study, the relationship between GABA and taurine concentrations suggests that the presence of taurine helps activate GABA_A1 receptors.⁽¹⁹⁾ In addition, taurine has been found to produce an anxiolytic effect and may act as a modulator or anti-anxiety agent in the central nervous system by activating the glycine receptor.^(20,21,22)

Melatonin:

Melatonin, a pineal hormone, plays an important role in the regulation of the circadian sleep/wake cycle, and mood. Melatonin release from the pineal gland is tightly synchronized with the habitual hours of sleep. Exogenous melatonin use has been found to support healthy sleep patterns in menopausal women with frequent nocturnal and early morning awakenings.⁽²³⁾

Melatonin also exhibits antioxidant activity by its ability to scavenge free radicals and stimulate antioxidant enzymes. As a result, melatonin has been found to play a neuroprotective role in traumatic brain injuries.⁽²⁴⁾

5-HTP:

Serotonin is considered a calming neurotransmitter, and is associated with mood and sleep.⁽²⁵⁾ 5-HTP can be used as a serotonin precursor, helping raise levels of endogenous serotonin. In addition to the production of serotonin, which has been positively associated with regulation of sleep, the sleep architecture can be controlled by the regulation of GABA(A) receptor and GABA content with the addition of 5-HTP. In other words, 5-HTP works synergistically with GABA by modulating both GABAergic and serotonergic signaling.⁽²⁶⁾

Passionflower:

Herbal compounds are now being used to reduce anxiety and increase sedation. Passiflora incarnata is one such herbal compound, having demonstrated significant anti-anxiety effects. It inhibits monoamine oxidase (MAO) activity to reduce depression, stress, anxiety, impaired sleep quality and restlessness. Passiflora incarnata reduces anxiety and improves sleep processes through stimulating the GABA system without side effects.^(27,28)

Passionflower contains several active constituents, including the flavonoids apigenin, luteolin, quercetin, kaempferol and vitexin, and has calming, anxiolytic, and antispasmodic aspects.⁽²⁹⁾

PheniTropic™ formulas are free of common allergens. They do not contain corn, dairy, salt, soy, sugar, gluten or any artificial flavors or colorings.

Not recommended for:

- Children
- Pregnant or lactating women
- Those with liver insufficiency/failure or ulcerative lesions of the GI tract

Always consult with your healthcare practitioner prior to use. Not to be combined with alcohol, sedatives, antidepressants (MAOIs) or stimulants.

PheniTropic™ is available in 60-count (#7892) or 120-count bottles (#7893).

Supplement Facts		
Serving Size: 1 Capsule		
	Amount Per Serving	% Daily Value
Phenibut (4-amino-3-phenylbutyric acid HCl)	300 mg	*
* Daily Value not established		

Other ingredients: Capsule shell (gelatin and water), microcrystalline cellulose and medium chain triglycerides.

This product is gluten, dairy and GMO free.

RECOMMENDATION: One (1) capsule one (1) to two (2) times each day as a dietary supplement or as otherwise directed by a healthcare professional.

CAUTION: Not recommended for children, pregnant or lactating women. Do not mix with alcohol, sedatives or stimulants. Those taking antidepressants, suffering from liver insufficiency/failure or ulcerative lesions of the GI tract should consult with their physician.

KEEP OUT OF REACH OF CHILDREN

Store in a cool, dry area.
Sealed with an imprinted safety seal for your protection.

Product # 7892 Rev. 04/18

PheniTropic™ PM is available in a 60-count bottle (#7894).

Supplement Facts		
Serving Size: 2 Capsules		
Servings Per Container: 30		
	Amount Per Serving	% Daily Value
Vitamin B6 (as pyridoxal-5-phosphate)	3.4 mg	200%
Proprietary Blend	1,000 mg	
Phenibut (4-amino-3-phenylbutyric acid HCl)*, Taurine*		
* Daily Value not established		

Other ingredients: Vegetarian capsule shell (modified cellulose), microcrystalline cellulose, medium chain triglycerides and magnesium stearate.

This product is gluten, dairy and GMO free.

RECOMMENDATION: Two (2) capsules before bed as a dietary supplement or as otherwise directed by a healthcare professional. Use only before sleep.

CAUTION: Not recommended for children, pregnant or lactating women. Do not mix with alcohol, sedatives or stimulants. Those taking antidepressants, suffering from liver insufficiency/failure or ulcerative lesions of the GI tract should consult with their physician.

KEEP OUT OF REACH OF CHILDREN

Store in a cool, dry area. Sealed with an imprinted safety seal for your protection.
Product # 7894 Rev. 04/18

PheniTropic™ Ultra PM is available in a 30-count bottle (#7896).

Supplement Facts		
Serving Size: 1 Capsule		
	Amount Per Serving	% Daily Value
Vitamin B6 (as pyridoxal-5-phosphate)	5 mg	294%
Melatonin	3 mg	*
Proprietary Blend	650 mg	
Phenibut (4-amino-3-phenylbutyric acid HCl)*, 5-HTP (L-5-Hydroxy-Tryptophan)*, Passionflower (Passiflora incarnata) (aerial part)*		
* Daily Value not established		

Other ingredients: Vegetarian capsule shell (modified cellulose), microcrystalline cellulose, medium chain triglycerides and magnesium stearate.

This product is gluten, dairy and GMO free.

RECOMMENDATION: One (1) capsule before bed as a dietary supplement or as otherwise directed by a healthcare professional. Use only before sleep.

CAUTION: Not recommended for children, pregnant or lactating women. Do not mix with alcohol, sedatives or stimulants. Those taking antidepressants, suffering from liver insufficiency/failure or ulcerative lesions of the GI tract should consult with their physician.

KEEP OUT OF REACH OF CHILDREN

Store in a cool, dry area. Sealed with an imprinted safety seal for your protection.
Product # 7896 Rev. 04/18

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(800) 231-5777

6801 Biotics Research Drive • Rosenberg, TX 77471
biotics@bioticsresearch.com • www.bioticsresearch.com

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