



springsbio
SPRINGS BIOTECHNOLOGY CO., LTD.
春泉生技開發股份有限公司

Product Technical Information
Handbook V.1.1

Lohas Program

Sleep Well

Amino Acid



Springs Bio Co., Ltd.
Unified Business Code:
27656141
No. 78, Lide Street, Zhonghe
District, New Taipei City 235
TEL: 02-2228-8500
FAX: 02-2228-8528
<http://www.springsbio.com>

Lohas Program - Sleep Well	
Composition γ--aminobutyric acid (GABA), L-tryptophan, L-arginine, bilberry extract, L-cysteine, ionized calcium	
Capsule composition Gelatin, sodium lauryl sulfate, titanium dioxide, purified water, glycerin, Yellow No. 5, Yellow No. 4	
Content 500 mg, 60 capsules	
Advice on usage Two capsules a day, on an empty stomach or before a meal	
Primary Features and Purposes 1. Stabilizes deep sleep 2. Relieves pressure and anxiety 3. Reduces blood pressure and improves cardiovascular condition	
Precautions 1. Keep in a place away from direct exposure to sunlight and high temperatures or humidity. 2. Use in pregnant or lactating women and children under the age of 3 is not recommended. 3. Consult a doctor and healthcare professional prior to use in someone with special disease or on medication..	

Nutrition Facts		
Per serving	1 g (2 capsules)	
This package contains	30 servings	
	Per serving	Daily reference percentage per serving
Calories	3.6 Kcal	0 %
Protein	4 g	1 %
Fat	0 g	0 %
Saturated fat	0 g	0 %
Trans fat	0 g	*
Carbohydrates	0.5 g	0 %
Sugar	0 g	*
Na (sodium)	0 mg	0 %

γ -Aminobutyric Acid

γ -aminobutyric acid (GABA) is a non-essential amino acid yet naturally present in animals (primarily in the cerebellar cortex, retina, and cerebral neurological tissues), plants (legumes, Panax, and the seeds, roots, and stems of Chinese herbs); it is a type of neurotransmitter.

GABA is an inhibitive neurotransmitter at the joint of the central nervous system and the neurological system of vertebrates (around 20~50% of synapses rely on GABA as the transmitter); it is also one of the most important matters in the inhibition of human neurological signaling. Without it or with the GABA receptor on neurons degenerative or altered, chances of developing psychotic disorders increase, such as epilepsy, tardive dyskinesias, sleep disorders, alcoholism, and Huntington's disease, etc.

√ **Improves insomnia**

According to the survey announced by the Taiwan Society of Sleep Medicine, every 1 out of 10 people in Taiwan is affected by chronic insomnia (about 2.5 million people in total). Women, compared to men, have more severe symptoms of insomnia. Women aged 50 to 59, in particular, suffer from severe insomnia due to hormone secretion and emotional disorders such as anxiety. Scientists have found that animals are able to recover from fatigue and resume energy through sleep because sleep, deep or light, is proportional to the concentration of GABA generated in the brain. Natural GABA comes and goes freely. When people need to wake up, GABA secreted in the brain reduces and the concentration drops. GABA acts directly on the GABA receptor in brain cells; it enables access of chloride to the brain nerve and the effect kicks in within around an hour. This is why many tranquilizing and sedating health foods contain GABA or ingredients similar to GABA. GABA can modulate the sympathetic and parasympathetic nervous systems and reduce their excitement to make one calm and relaxed physically, exercising the effect of eliminating pressure

and boosting sleep.

√ **Remits tension and pressure**

Results of both animal experiments and clinical studies show that GABA is a safe and stabilizing tranquilizer. A high concentration of GABA in the brain helps remit many symptoms of psychiatric discomfort, such as psychiatric insecurity, anxiety, depression, low resistance to pressure, and insomnia, among others.

It is indicated in the report of the joint research conducted by the Coca Cola Tokyo Research Center, Farm Food, and Professor of Shizuoka University that drinking beverages containing 50 mg GABA obviously exercised the effect of reducing physical and psychological fatigue and boosting performance at work.

√ **Promotes brain activation**

GABA can facilitate multiple tasks performed in the brain, such as increasing acetylcholine, stimulating the vigorousness of the parasympathetic nervous system, promoting normal function of the brain, promoting the metabolism of oxygen or glucose in the brain tissue, increasing blood flows into the brain so that conditions such as headache, heaviness felt in the brain, fatigue, seeing stars, tinnitus, and deteriorated memory, consequences of cerebral arteriosclerosis, or brain trauma may be corrected. It can also remit menopausal symptoms or age-related insomnia, depression, dysautonomia or memory impairment.

√ **Brings down blood pressure**

GABA can drive the central nervous system by regulating blood vessels in the spine (blocking the transmission activity of peripheral nerves), facilitate vascular expansion, increase cerebral vascular blood flows and metabolism in the brain as well as the diuretic function, to inhibit elevation of blood pressure. It is proven in clinical studies that it can correct headache, tinnitus, and loss of appetite, among

other disorders caused by stroke or cerebral arteriosclerosis.

In 1995, Yasuhiko et al. found that hypertensive mice ingesting GABA-tea on a daily basis at a dose of 4 mg GABA for 4 weeks had a blood pressure level reduced to only 176 ± 4 mmHg, 30 mmHg lower as compared to that in the control group.

The intracellular or extracellular study (2001) conducted by the Tea Research Institute of Chinese Academy of Agricultural Sciences has also proven that GABA is capable of inhibiting angiotension-converting enzyme (ACE) to accordingly exercise the effect of bring down the blood pressure.

L-Tryptophan

Tryptophan is one of the 20 kinds of natural amino acids and is an essential amino acid for the human body. It cannot be synthesized in the human body and has to be ingested from foods. Its content in animal or botanical foods, however, is the least.

5-Hydroxytryptophan first and then serotonin is generated. Around 40 million cells in the human brain are under the direct or indirect influence of serotonin. Long-term tryptophan deficiency can give rise to conditions such as insomnia, anxiety, and suicide.

Foods that contain tryptophan include the following:

1. Animal: fish (tuna), meat (pork, chicken, eggs, turkey), dairy products (milk, yogurt, cream, cheese).

2. Botanical: legumes and nuts (almonds, walnuts, pistachios). Among the legumes, soya beans and tofu are rich in tryptophan and bananas are the fruit containing the most tryptophan. As far as nuts are concerned, on the other hand, sunflower seeds, sesame, and pumpkin seeds are preferred choices. Whole grains, too (millet, buckwheat kernel, black sesame, oatmeal), they are rich not only in Tryptophan but also Vitamin B complex.

√ **Extends duration of sleep**

Tryptophan can obviously increase slow wave sleep (SWS), also known as deep sleep, reduce rapid eye movement (REM), and decrease the frequency of waking up

in the middle of the night; it can extend the duration of sleep and adjust appetite.

√ **Improves depression**

Nicotinic acid from Vitamin B6 and tryptophan will interact with serotonin (neurotransmitter) physiologically and slow down neurological activities to accordingly help relax emotionally (anti-depression) and remit the condition of Parkinson's disease.

L-Arginine

For healthy adults, arginine is a non-essential amino acid; for growing people, however, the amount synthesized internally is insufficient to meet the physical demand. Without arginine, growth is inhibited and hence it is a semi-essential amino acid. When traumatized or under pressure, arginine inside the body drops significantly, making it conditionally essential amino acid at a time like this. Supplementing arginine hence helps abate dissimulation inside the body and boost immunity.

Arginine is present in foods that are rich in protein. The animal sources include dairy products, beef, pork, chicken and seafood while botanical sources are wheat, nuts, seeds, among others.

Arginine is the precursor to the synthesis of NO, ornithine, proline, glutamine, polyamines, creatine, agmatine, and protein. It plays an important role in nutrition and physiological metabolism.

Synthesis of Nitric Oxide (NO)

Most of the physiological features of arginine originate from the action of NO. NO is a cell signaling molecule. It is generated from arginine going through several different types of nitric oxide synthases (NOSs). It exercises different functions depending on where it is generated:

- When it is generated in the endothelium of the blood vessel, it relaxes the

smooth muscle and accordingly dilates the blood vessel. «Therefore, it can bring down high blood pressure - when applied to the corpus cavernosum penis, on the other hand, it boosts penile erection.

- When it is generated at the synapse, it serves as the neurotransmitter and is related to learning and memory in the brain.
- When it is generated in macrophages, it can damage tumor cells, kill them, or inhibit their growth.

√ **Helps with sleep**

Neurons in the brain and neurons containing nitric oxide synthase can inhibit neurological deionization by generating nitric oxide and form a steady-state sleep pons to accordingly boost sleep.

Advice on usage

Indication

- People with sleep disorder
- People who tend to feel anxious

Suggested dosage

Two to four capsules a day, on an empty stomach or before a meal. Taking more does not help.

- **To stabilize deep sleep:** It is advised to take 2 capsules 30 minutes prior to sleep.
- **To reduce pressure and anxiety:** It is advised to take 1 capsule in the morning and in the evening, respectively.

Contraindications and Side Effects

1. Arginine is safe for most people at the suggested dosage; nausea, abdominal pain, diarrhea, and allergy, among other side effects, however, might occur under rare circumstances.
2. Administration is prohibited for the two weeks before and after surgery in order to prevent against hypotension.
3. Tryptophan is likely to increase the effects of SSRI drugs and symptoms of the serotonin syndrome.
4. Concomitant intake with high-protein foods is not recommended as it might compromise absorption in the brain and in the intestines.

Precautions

1. Keep in a place away from direct exposure to sunlight and high temperatures or humidity.
2. Use in pregnant or lactating women and children under the age of 3 is not

recommended.

3. Consult a doctor and healthcare professional prior to use in someone with special disease or on medication.