

GABA

a natural answer for
★ Sleep, Stress & Pain

by Carol Jamison, NMD

GABA spelled out is gamma aminobutyric acid. GABA is a neurotransmitter, or a molecule that is made to carry information across the gap or synapse between one neuron and the next, thereby transmitting specific messages to our nervous system.¹ The message GABA sends our brain and body is “calm down”. Just to be clear GABA is not the same as the prescription medication Gabapentin.



Where do we get GABA?

Our bodies make GABA from glutamine which is an abundant amino acid that is important for proper acid/alkaline balance in the body, synthesis of RNA and DNA, promoting mental ability and maintenance of a healthy gastrointestinal tract.² The glutamine combines with the active vitamin B6 called pyridoxal phosphate under the influence of the enzyme L-glutamic acid decarboxylase (GAD). GABA cannot cross the blood-brain barrier, but it is found both in the brain and in the nervous system throughout the body.

What does GABA do?

GABA is known as the primary inhibitory neurotransmitter. This means GABA “chills out” the brain, like a brake pedal, by reducing overly excited nervous system messages. GABA can also neutralize extra norepinephrine and epinephrine (produced by the adrenal glands in response to stress).³



What are some GABA benefits?

I'll mention a few specific studies that show what GABA does for pain, sleep, fibromyalgia, stress, GI function and other conditions.

Pain. In one study done by the University of Michigan, it was found that GABA is low in the brains of people with fibromyalgia, which may explain why the nervous system reaction to pain is amplified. GABA in the central nervous system may dampen pain transmission. Glycine, another amino acid, (found in Fibro-Care™ as biglycinate), also has pain inhibitory effects so taking it with GABA could help treat pain.

Sleep. New studies show that a quarter of the adult population has primary insomnia, with no apparent cause. Most of those people have an increased activity of the hypothalamic-pituitary-adrenal axis, and increased sympathetic system, which is the very thing GABA is known to calm. Treating insomnia with GABA rather than sleeping pills, benzodiazepines and hypnotics is far safer, with fewer

side effects and no withdrawal symptoms.⁵ If you already take melatonin and/or 5-HTP for sleep, they are safe to take with GABA, but you may need a lower dose. Other herbs like passionflower, kava, skullcap and valerian root extract that are also calming can be taken with GABA, but again in a lower dose.

Fibromyalgia. Science is teaching doctors that fibromyalgia (FM), a condition of chronic generalized musculoskeletal pain, may actually be a disorder of the central nervous system's pain sensitization. Studies are linking GABA and the enzyme (GAD) that activates it to many of the symptoms people with FM suffer with. One study showed decreased GAD expression or activity caused the development of increased pain sensation, disrupted sleep, disturbance in mood (anxiety and depression) and muscle stiffness and rigidity. Another interesting finding of the study was that women have more trouble absorbing B6, the necessary co-factor for GAD to work, and FM is more commonly diagnosed in women. Factors other than being female and lower B6 absorption, are poor diet, tobacco use and alcohol intake. Things shown to increase GAD activity are a lower calorie diet and exercise.⁶

Stress. Another amazing finding about GABA besides improved relaxation and anxiety reduction is enhanced immunity under stressful conditions. This would be a great use for people with high stress jobs or lives who get sick the moment they finally start to relax on a break or vacation.⁷ GABA can also be good news for those with asthma due to the relaxing effect it has on smooth muscle in the airway.⁸



GI Function. I find it interesting that the human gastrointestinal (GI) tract is basically lined with receptors that respond to GABA as part of the enteric nervous system. This allows GABA to not only act as a neurotransmitter, but also to

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GABA *continued*

mediate gut functions such as intestinal movement (motility), stomach emptying, stomach acid secretions, esophageal sphincter relaxation and the sensation of colon pain. GABA could assist in calming irritable bowel syndrome, and if combined with glutamine, assist with healing the gut. If a person already has slow gut motility, he/she may not want to use GABA, due to its natural calming, slowing effects. Newer findings also suggest GABA receptors stop GI cancer growth.



Other Conditions. GABA can be taken to help the mentioned health issues and possibly more including ADD, epilepsy, hypertension, low sex drive, enlarged prostate and to promote growth hormone. GABA may be a more natural answer over medications like Valium, Librium and similar tranquilizers that change GABA in the brain but are also highly addictive. Therefore, it is not recommended to use GABA and these drugs together or an overdose may occur. Symptoms of too much GABA can be increased anxiety, shortness of breath, numbness around the mouth and tingling in the extremities, and possibly seizures. This can be avoided by never combining GABA supplement with tranquilizers, benzodiazepines or hypnotic medications

Is there a recommended dose?

Safe dosing for GABA is typically 100 to 200 mg up to 3 times a day, taking no more than 1,000 mg within a 4 hour period and no more than 3,000 mg within 24 hours. B6 should be taken with GABA, around 20 mg a day (with food). GABA can be used during the day or at night. For sleep issues an evening dose is best. For anxiety, I have patients take it in the morning. Some GABA supplements come in 500 mg strength so adjust the dose accordingly to stay under the 1000 mg per 4 hours and 3000 mg in 24 hours. Or simply take 500 mg at bedtime and once in the morning if needed.

Any other helpful suggestions?

A holistic (whole body) approach would be to also focus on healing the gastrointestinal system, since it is a huge part of the nervous system. Have a comprehensive check up to rule out underlying issues of anxiety, pain, depression, and insomnia that may be due to thyroid disorders, diabetes, adrenal and heart issues.

You could boost your GABA with food sources like kefir, a probiotic drink, and shrimp. Dr. Oz recommends swapping out soda and candy bars for oolong tea, and cherry tomatoes and hummus, which also naturally have GABA.



Don't forget a little exercise goes a long way to help your body relax. If you can take 2 minutes to meditate daily, your brain will say, "Thank you!"

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References omitted for space consideration, available upon request.



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