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Sleep Newzzz

STRESS

3 Amazing Benefits of GABA

What you should know about a popular supplement for sleep, stress, and anxiety.

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Source: Deposit Photo

GABA is one of the supplements patients ask me about a lot, often with looks of confusion on their faces. I think the confusion comes from the fact that GABA is both a chemical produced within the body and a supplement that's made for ingestion. Unlike melatonin, which is also produced within the body and as a supplement, GABA isn't nearly as well known—nor has it received nearly the amount of scientific attention. Given the interest and popularity of GABA—and the importance of the body's own GABA for mood, and health—it's definitely worth spending some time talking about.

What is GABA?

Gamma-Aminobutyric acid is an amino acid produced naturally in the brain. GABA functions as a neurotransmitter, facilitating communication among brain cells. GABA's big role in the body is to reduce the activity of neurons in the brain and central nervous system, which in turn has a broad range of effects on the body and mind, including increased relaxation, reduced stress, a more calm, balanced mood, alleviation of pain, and a boost to sleep.

Many medications interact with GABA and GABA receptors in the brain, altering their function to achieve certain effects, typically relaxation, pain relief, stress and anxiety reduction, lower blood pressure, and improved sleep. Barbiturates, anesthetics, benzodiazepines, antidepressants, and anti-seizure medications are some of the medications that target GABA.

A number of natural supplements also affect GABA activity, to help relieve stress and anxiety, promote a balanced mood, and help with sleep. I've written about valerian and hops, magnesium, and L-theanine, all of which have an effect on the brain's GABA activity. Other natural supplements that may affect GABA activity include L-arginine, kava, passionflower, and American ginseng.

GABA is found naturally in varieties of green, black, and oolong tea, as well as in fermented foods including kefir, yogurt, and tempeh. Other foods contain GABA or may boost its production in the body, including whole grains, fava beans, soy, lentils, and other beans; nuts including walnuts, almonds, and sunflower seeds; fish including shrimp and halibut; citrus, tomatoes, berries, spinach, broccoli, potatoes, and cocoa.

GABA is also available as a supplement. GABA supplements are often used to treat high blood pressure, stress and anxiety, and sleep, as well as to stimulate the body's natural growth hormone, often by athletes.

How does GABA work?

stress, lowers anxiety, and creates a calmness of mood. GABA also plays an important role in regulating muscle tone. In combination with glutamate, the body's most important *excitatory* neurotransmitter, GABA is an important contributor to the body's overall mental and physical homeostasis, or balance.

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GABA plays a role in the healthy functioning of the body's immune and endocrine systems, as well as in the regulation of appetite and metabolism. There's also interesting emerging research about GABA's role in gut health and gastrointestinal function, where it may work to support motility, control inflammation and support immune system function, and help regulate hormone activity.

Low GABA activity in the body can result in:

- Anxiety.
- Chronic stress.
- Depression.
- Difficulty concentrating and memory problems.
- Muscle pain and headaches.
- Insomnia and other sleep problems.
- Low GABA activity is also associated with substance use disorders.

There is ongoing investigation and debate about how GABA supplements work in the body, and how their mechanisms of action may differ from the body's internally-produced GABA. Specifically, scientists have not reached consensus about whether, or how effectively, supplemental GABA crosses what's known as the blood-brain barrier — meaning, how well it moves from the bloodstream directly into the brain. There remains real need for additional research into the effects of supplemental GABA, including how it may affect the nervous system via the gut.

Below, I'll discuss what science tells us today about the potential effectiveness of GABA supplements for sleep and other conditions.

Benefits of GABA

For sleep: The body's own GABA activity is important for sleep. GABA enables the body and mind to relax and fall asleep, and to sleep soundly throughout the night. Low GABA activity is linked to insomnia and disrupted sleep. In one study, GABA levels in people with insomnia were almost 30 percent lower than in people without the sleep disorder. And these low GABA levels also corresponded to more restless, wakeful sleep. Sleep medications including those with zolpidem (Ambien and others) and eszopiclone (Lunesta and others) target the body's GABA system to increase sedation and sleep. Research indicates that one negative side effect of these sleep medications — hallucinations — may result from their alterations to GABA activity.

quality and increase sleep time. Given the importance of GABA to the body's sleep patterns, more research into the effects of GABA supplements on sleep is sorely needed.

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For stress and anxiety: As a natural chemical the body produces, GABA's primary role is to diminish the activity of neurons in the brain and central nervous system, which puts the body in a greater state of relaxation and alleviates stress and anxiety. Supplemental GABA may benefit sleep by aiding relaxation and providing relief from anxiety and stress. There remains debate among researchers about supplemental GABA's effectiveness in reducing anxiety and stress because of longstanding questions over supplemental GABA's ability to enter the brain from the bloodstream. (It's important to note that GABA, in supplement form, may have other ways of relaxing the body, including possibly through GABA's activity in the gut microbiome.)

While the scientific debate goes on, some studies have shown GABA to be effective in lowering anxiety and boosting relaxation. One small study of 13 adults showed GABA to be effective as a relaxant and anxiety reliever, with slowed brain waves seen within an hour of taking the supplement. This study also found that a boost to the immune system also occurred with GABA, suggesting supplemental GABA may enhance immunity in people undergoing mental stress.

Another larger study investigated the effects of 100 milligrams of GABA among a group of people who'd recently undertaken a stressful mental task. Scientists measured a slowing down of brain waves in people who'd taken GABA, pointing to an alleviation of mental stress. Another study tested the effects of GABA in people who were about to take a stressful math test. Those who ate chocolate infused with GABA rebounded more quickly from test-related stress, including stress-lowering changes to heart-rate variability.

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For high blood pressure: GABA supplements are sometimes used by people as a natural way to lower blood pressure. There is evidence indicating that GABA may work to reduce high blood pressure. In one study of people with borderline high blood pressure, 12 weeks of use of the supplement chlorella, a type of algae rich in GABA, significantly lowered blood pressure. In addition to being important on its own, maintaining healthy blood pressure can also help protect your sleep. A natural drop in blood pressure at night is one part of the body's progression into sleep. High blood pressure can be a sign of hyperarousal, a state of physical alertness and vigilance that can make it difficult to fall asleep and stay asleep. Poor sleep and sleep disorders, particularly sleep apnea, contribute to high blood pressure, and can lead to the kind of hypertension that is difficult to treat.

medication and supplement routine. This is not medical advice, but it is information you can use as a conversation starter with your physician.

Dosing

The following doses are based on amounts that have been investigated in scientific studies. In general, it is recommended that users begin with the lowest suggested dose, and gradually increase as needed.

- For sleep, stress and anxiety: 100-200 mg and higher doses, in scientific studies. Individual dosing and length of use will vary.
- For high blood pressure: 10-20 mg, in scientific studies.

Possible side effects

GABA oral supplements are generally well tolerated by healthy adults. Some people may experience negative side effects, including:

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- Gastric distress.
- Nausea.
- Diminished appetite.
- Constipation.
- Burning throat.
- Drowsiness and fatigue.
- Muscle weakness.
- Shortness of breath, at very high doses.

Interactions

These are commonly used medications and supplements that have scientifically-identified interactions with GABA. People who take these or any other medications and supplements should consult with a physician before beginning to use GABA as a supplement.

Interactions with medications

- High blood pressure medications. GABA can lower blood pressure. If you take GABA in addition to taking blood pressure medication, your blood pressure may drop too low.
- Antidepressant medications. People taking antidepressants should consult with their physician before taking GABA.

Interactions with other supplements

- Herbs and supplements that may lower blood pressure. Because GABA may lower your blood pressure, if you take GABA along with other herbs or supplements that also may lower blood pressure, the combination may lead to your blood pressure dropping too low. Herbs and supplements that lower blood pressure include, but are not limited to:
 - Cocoa.
 - Alpha-linolenic acid.
 - Blond psyllium, and other fiber supplements.
 - Cod liver oil.
 - Magnesium.
 - Calcium.
 - Potassium.
 - Folic acid.
 - Coenzyme Q10.
 - L-arginine.
 - Garlic.
 - Omega-3 fatty acids.
- Cocoa.
- Alpha-linolenic acid.
- Blond psyllium, and other fiber supplements.
- Cod liver oil.
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- Calcium.
- Potassium.
- Folic acid.
- Coenzyme Q10.
- L-arginine.
- Garlic.
- Omega-3 fatty acids.

I've seen patients experience relief from anxiety, reduced stress, and improved sleep via the relaxing impact of supplemental GABA. I don't think we've seen nearly enough research to have a sufficient understanding of how GABA supplements might affect stress, mood, and sleep, or other ways GABA as a supplement may benefit emotional, cognitive, and physical health. As we learn more—which I hope we do, soon—I'll be sure to update you.

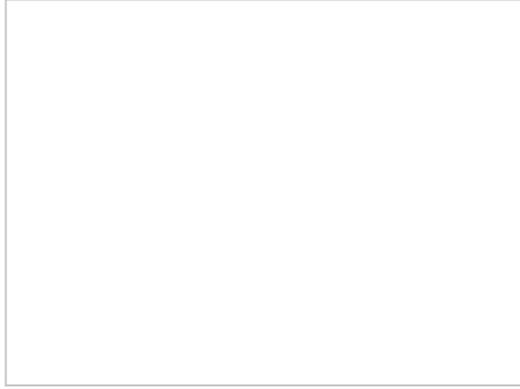


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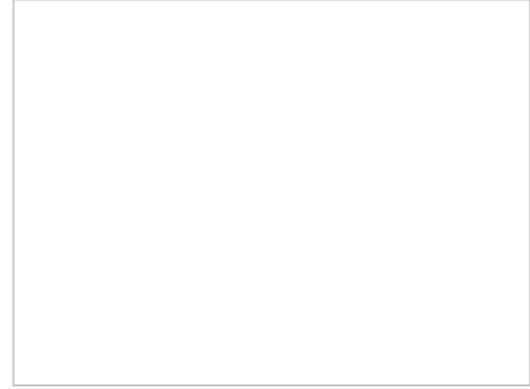
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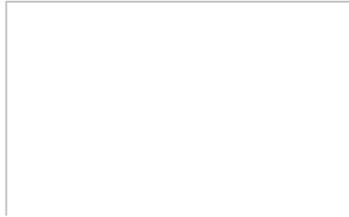
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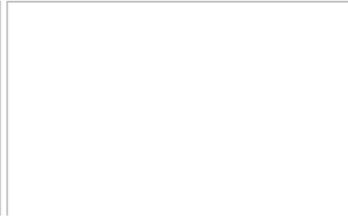
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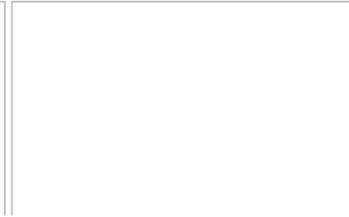
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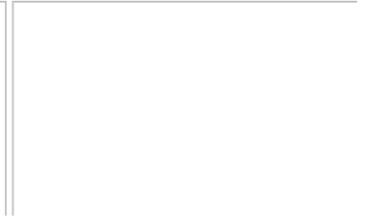
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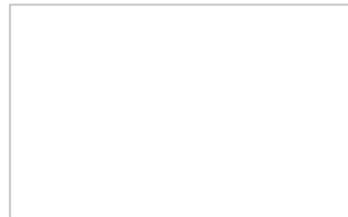
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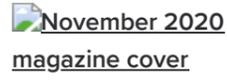
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