

www.consumerlab.com/reviews/gamma-aminobutyric-acid-gaba-supplements-review/gaba/

# **GABA Supplements Review**

Does GABA Work As a Supplement?



Medically reviewed and edited by Tod Cooperman, M.D.

<u>Updated May 12, 2025</u> (i)



Watch the video

# **Summary**

- What does GABA do and do supplements work? GABA (gamma-aminobutyric acid) is a natural "inhibitory neurotransmitter," meaning it blocks impulses between the nerve cells, resulting in a calming effect. Many medications (such as gabapentin and certain benzodiazepines) prescribed for insomnia and restless legs syndrome, stress and anxiety, epilepsy, and other conditions, work by affecting GABA activity. However, taking GABA as supplement does not significantly increase GABA levels in the brain and has not been shown to provide much benefit for epilepsy, insomnia or stress, or cognitive performance, and the effects, if any, are temporary. GABA also affects processes that control blood pressure and muscle mass, so it has been evaluated for hypertension and muscle building (see What It Does).
- What dose of GABA is used? In clinical trials, GABA has typically been taken at a dose of 100 to 800 mg per day, although higher and lower doses have been used (see <u>Dosage</u>).
- What did CL's tests and review of GABA supplements show? In laboratory testing, all of the products were shown to provide their listed amounts of GABA without any significant contamination with heavy metals, such as lead. However, the cost to obtain 250 mg of GABA ranged widely, from just 1 cent to \$1.60, although higher cost does not mean higher quality or, necessarily, higher likelihood of benefit (see <a href="What CL Found">What CL Found</a> and <a href="How Products Were Evaluated">How Products Were Evaluated</a>).
- What is the best GABA supplement? Among 12 CL Approved products, CL selected <u>Top Picks</u> for low, medium, high, and very high-dose GABA representing good quality and value.
- How to take GABA? GABA should be taken with water and need not be taken with food. As any therapeutic effects appear to be temporary, take within one hour of expected benefit. As GABA may directly irritate the throat if taken as a liquid at high dosage, capsules may be preferred to dissolving tablets, liquids, and powders stirred in liquids (see ConsumerTips: How to Take).



GABA safety and side effects: At doses of 300 mg or more, mild side effects, such as abdominal discomfort, headache and
drowsiness, have been reported. As GABA may lower blood pressure, it may be unsafe to use with blood pressure-lowering drugs. The
long-term safety of GABA supplements remains uncertain (see <u>Concerns and Cautions</u>).

Products tested in 2023

# What It Is:

GABA (gamma-aminobutyric acid) is a natural "inhibitory neurotransmitter," meaning it blocks impulses between the nerve cells, resulting in a calming effect. GABA also affects processes that control blood pressure and muscle mass, so it has been evaluated for high blood pressure and building muscle.

Many medications (such as gabapentin (Horizant, Neurontin), benzodiazepines, such as diazepam (Valium) and others) prescribed for sleep disorders such as insomnia and <u>restless legs syndrome (RLS)</u>, stress and anxiety, epilepsy, and other conditions work by affecting GABA activity in the brain. However, as discussed below, taking an oral GABA supplement does not appear to increase GABA levels in the brain.

In addition to being produced naturally in the nervous system (from enzymatic conversion of the amino acid glutamate), GABA is also found in very small amounts in some plants and fermented foods (GABA in such foods is considered "natural" GABA). Foods containing this natural GABA have been marketed in Japan.

The GABA found in most supplements is synthesized by bacterial fermentation (often with glutamate added as a substrate) and is considered to be "biosynthetic" (trademarked as PharmaGABA or Pharma GABA from Pharma Foods International Japan). GABA can also be produced by chemical synthesis ("synthetic GABA"), but this is considered to be more costly than biosynthetic synthesis, so is likely not the source of GABA in most supplements.

### What It Does:

Despite the important role that GABA normally plays in the brain, taking GABA orally does not significantly increase GABA levels in the brain (it is not clear if can cross the blood-brain-barrier) (Hepsomali, Front Neurosci 2020). Consequently, it is not surprising that it has generally not been shown to provide much, if any, benefit for epilepsy, insomnia or stress. There is preliminary evidence that it may modestly lower systolic (but not diastolic) blood pressure and it may help increase muscle mass (but not strength) when taken along with protein supplementation.

# **Epilepsy**

In people with epilepsy, low brain levels of GABA have been associated with poor seizure control (Petroff, Ann Neurol 1996). For this reason, there has been interest in GABA to reduce seizures in people with this condition. However, a study among 12 people with epilepsy found that giving extremely high doses of GABA (0.8 grams/kg daily — equaling about 56 grams or 56,000 mg for an adult) did not reduce the number of seizures in most patients, although there was some benefit observed in four participants, all of whom were children (Boonstra, Front Psychol 2015). Based on this evidence, GABA supplementation is unlikely to be beneficial in adults, but it may have benefit in children, possibly due to the increased blood-brain barrier permeability to GABA in children. A clinical trial evaluating the efficacy of GABA in children with epilepsy is ongoing, but the study is not expected to be completed until December 2028.

#### Insomnia

It has been suggested that GABA may help induce and maintain sleep by blocking signals to nerve cells that promote arousal. However, there is limited evidence of benefit of GABA for inducing sleep, and no strong evidence of benefit for maintaining sleep.

A study in Korea among 40 middle-aged adults with at least one symptom of insomnia found that taking a fermented rice germ extract containing 300 mg of GABA once daily one hour before sleep for 4 weeks did *not* improve total sleep time, rapid-eye-movement (REM) sleep, sleep efficacy, or quality of sleep compared to placebo, although time to fall asleep was slightly improved (<u>Byun, J Clin Neurol 2018</u>). Similarly, a study in Japan among healthy people found that taking 100 mg of GABA (*PharmaGABA*, Pharma Foods International) 30 minutes before sleep shortened time to fall asleep by 5 minutes, but there was no significant improvement in sleep efficiency, frequency of nighttime awakenings, or REM sleep time compared to placebo (<u>Yamatsu, Food Sci Biotechnol 2016</u>).

The authors of a study in Brazil among 26 sedentary women (average age 44) who were overweight, concluded that taking that taking 200 mg of GABA once daily 30 minutes before bedtime for about 8 weeks "enhanced habitual sleep efficiency" — i.e., the ratio of time spent sleeping to total time spent in bed. However, the authors failed to show whether or not this was statistically significant compared to results among those given placebo. Participants in both the GABA and placebo groups participated in 50-minute exercise sessions three times weekly as part of the study. It is unclear from the study whether either group showed improvements in other sleep measures, including sleep quality, time to fall asleep, sleep duration, sleep disturbances, use of sleep medication or daytime dysfunction: These outcomes appear to have been evaluated, but the results were not reported. Participants in both groups showed modest improvements in depression scores compared to baseline but it was not reported if between-group differences were statistically significant (Guimarães, J Diet Suppl 2024).

### Restless legs syndrome (RLS)

Preliminary clinical research suggests that brain levels of GABA are similar in people with and without RLS, although there is some evidence linking higher or lower levels of GABA in certain parts of the brain (the thalamus and cerebellum, respectively) with increased severity of self-reported symptoms of RLS (Winkelman, Sleep Med 2014). Drugs that affect GABA activity in the brain (gabapentin (Neurontin), alprazolam (Xanax), diazepam (Valium), are sometimes prescribed to help reduce the symptoms of RLS. There do not appear to be any studies on the effects of GABA supplements on frequency or severity of symptoms in people with RLS.

# Stress and Anxiety

There is some evidence that taking GABA may improve certain markers of stress and anxiety (specifically alpha and beta brain waves seen in an electroencephalogram or EEG), but there is no strong evidence that taking GABA improves patient-reported aspects of mood during stressful situations.

A study in Japan among 13 healthy young adults (ages 21 to 35) found that taking a single dose of 100 mg of GABA (*PharmaGABA*, Pharma Foods International) prior to sitting quietly with eyes closed increased alpha brain waves (which are associated with calmness) and decreased beta brain waves (which tend to increase with agitation and anxiousness) compared to control (water), suggesting that GABA may help induce relaxation and reduce anxiety (<u>Abdou, Biofactors 2006</u>).

Another study among 63 adults (average age 25) found that mental stress testing (which consisted of two mental stress tasks conducted at four intervals over 90 minutes) decreased both alpha and beta brain waves throughout the testing. Taking 100 mg of GABA 10 minutes before participating in the testing lessened the decrease in alpha and beta brain waves compared to placebo. However, self-reported improvement in mood during testing was limited. Although taking GABA slightly attenuated the decrease in vigor-activity score during testing compared to placebo, there were no significant between-group differences in self-reported feelings of fatigue, relaxation, arousal, pressure or tension based on the Visual Analogue Scale (Yoto, Amino Acids 2012).

Health Canada permits GABA to be sold as a health product with the claim "Helps to temporarily promote relaxation" at a dosage of 50-3,000 milligrams per day, although it indicates that dosing should not to exceed 750 milligrams per single dose and products providing 300 mg or more GABA per day must include a statement advising the user to consult a health care provider for use beyond 4 weeks. (Natural Health Products Ingredients Database, Health Canada, 2021).

A review of clinical studies of GABA supplements and foods containing GABA concluded that "there is limited evidence for stress and very limited evidence for sleep benefits of oral GABA intake." (<u>Hepsomali, Front Neurosci 2020</u>)

# Cognitive function

GABA plays a role in many cognitive processes in the brain, including motor learning, control and response, and visual attention. Higher levels of GABA in the prefrontal cortex of the brain have also been linked to better memory performance in older adults at high risk for Alzheimer's disease (Murari, Cerebral Cortex Comm 2020). However, it's not clear that GABA, taken as a supplement, has substantial benefit. Clinical trials, all of which evaluated the effects of a single dose of GABA on cognitive function, have focused on young healthy adults, and results have been mixed.

Two small studies among university students (average age 19) found that a single, 800-mg dose of GABA (as a powder added to orange juice) taken 30 minutes before cognitive testing slightly improved certain measures of cognitive function, including reaction times to visual and auditory stimuli and temporal attention, but did not improve spatial attention, compared to placebo (<u>Steenbergen, Sci Rep 2015</u>; <u>Leonte, Brain Cogn 2018</u>).

However, a study among 48 university students (average age 22) found that a single, 800-mg dose of GABA, taken alone or in addition to 2,000 mg of L-tyrosine (an <u>amino acid sometimes promoted</u> for improving cognitive function) *worsened* performance on a test of cognitive flexibility (the ability to comprehend and respond to conflicting stimuli — i.e., reading the word "blue" that is printed in red ink) compared to placebo (<u>Lim, J Clin Med 2021</u>).

# Hypertension

Some research suggests that GABA may slightly lower systolic blood pressure in people with mild hypertension, although the exact mechanism of this effect is unclear.

One study among 39 people with mild hypertension found that taking a fermented milk product providing 10 mg of GABA daily for 12 weeks reduced systolic blood pressure by roughly 14 mmHg compared to placebo, but there was no significant between-group difference in diastolic blood pressure (<a href="Inoue, Eur J Clin Nutr 2003">Inoue, Eur J Clin Nutr 2003</a>). Similarly, a study among 80 people with high blood pressure or borderline hypertension found that taking a chlorella supplement providing 20 mg of GABA twice daily for 12 weeks modestly reduced systolic blood pressure compared to placebo, with greater reduction seen in patients with borderline hypertension compared to high-normal blood pressure, but there was no significant improvement in diastolic blood pressure (<a href="Shimada, Clin Exp Hypertens 2009">Shimada, Clin Exp Hypertens 2009</a>).

### Muscle building

GABA seems to increase blood levels of growth hormone, which may help promote protein synthesis. Because of this effect, GABA has been evaluated for enhancing muscle mass increases in people participating in resistance training. However, evidence of benefit is modest, at best.

One study in resistance-trained men found that taking 3 grams (3,000 mg) of GABA prior to exercise increased human growth hormone levels at rest by 400% and after exercise by 200% (<u>Powers, Med Sci Sports Exerc 2008</u>).

A study among 21 healthy men found that taking 100 mg of GABA along with 10 grams of whey protein once daily (either 15 minutes after training or before sleep on non-exercise days) for 12 weeks increased whole body fat-free mass compared to taking whey protein alone, but there was no significant between-group difference in upper or lower-body strength, weight, body mass index, or fat mass. Interestingly, men taking GABA + whey protein showed increased resting blood concentrations of growth hormone after 4 and 8 weeks (but not 12 weeks) compared to baseline, but this increase was not significant compared to the group taking whey protein only (Sakashita, J Clin Med Res 2019).

A study among 26 sedentary women with obesity (average age 44) showed that taking 200 mg of GABA once daily, 30 minutes before bedtime, for 12 weeks while participating in aerobic and strength training for 150 minutes weekly did *not* significantly affect growth hormone levels, nor did it improve handgrip strength, core strength (based on number of sit-ups that could be done in one minute), body composition, or resting blood pressure and heart rate compared to placebo (<u>Pires, Clin Nutr ESPEN 2025</u>).

# **Quality Concerns and Tests Performed:**

No U.S. government agency is responsible for routinely testing GABA supplements for their contents or quality. For this Review, ConsumerLab.com purchased and evaluated GABA supplements sold in the U.S. and Canada to determine whether they contained the amounts of GABA stated on their labels. All products were tested for potential contamination with lead, cadmium, arsenic and mercury. In addition, all regular tablets were tested to determine if they would properly disintegrate. (See <a href="How Products Were Evaluated">How Products Were Evaluated</a> for information on testing methods and passing score.)

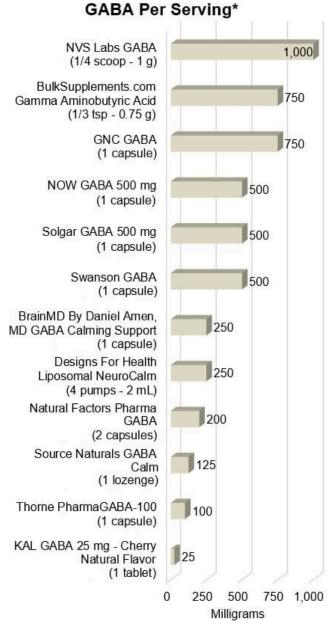
# What CL Found:

All 10 of the GABA supplements ConsumerLab.com selected for review passed testing for the listed amount of GABA and heavy metal contamination, as did two products that underwent the same testing and review and were Approved through ConsumerLab.com's voluntary Quality Certification Program.

With that said, there is a great amount of diversity among products in terms of dose and cost -- as discussed below.

#### Wide range of dosage strengths

It's important to know the dose of GABA that you want, because, as shown below, amounts of GABA in the suggested serving of each product ranged 40-fold from just 25 mg per tablet of KAL GABA 25 to 1,000 mg in ¼ scoop of NVS Labs GABA. As discussed in the ConsumerTips section, clinical studies with GABA have used daily doses of about 10 to 20 mg for effects on blood pressure, but typically 100 to 800 mg or more for other uses, such as reducing stress, and improving rest or cognition.



\* Based on confirmed listed amount.

#### Cost

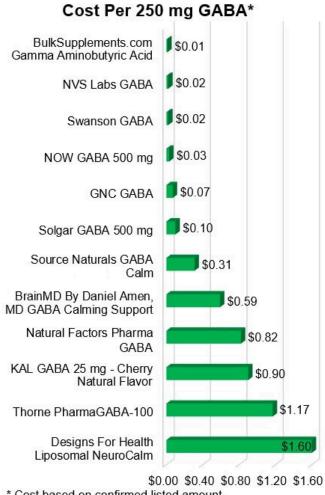
There were *major* differences in cost among the GABA supplements: The cost to obtain 250 mg of GABA ranged from only 1 cent to \$1.60, as shown in the graph below.

The lowest-cost products were powders (*BulkSupplements.com* and *NVS Labs*) and some capsules (*Swanson, NOW,* and *GNC*), that generally provide only GABA (*NOW* also contains vitamin B6).

More expensive capsules were "calming" formulas that contained additional ingredients: Source Naturals GABA Calm (125 mg of GABA per capsule with glycine, N-acetyl-L-tyrosine, and taurine) and BrainMD GABA Calming Support (250 mg of GABA per capsule with vitamin B6, lemon balm extract, L-theanine, and magnesium); however, we are not aware of clinical trials with these combinations to demonstrate a calming effect, and there is no clear evidence that any one of these ingredients reduces stress or related symptoms — although vitamin B6 deficiency has been associated with stress responses in women, and there is preliminary evidence that L-theanine reduces stress response.

The most expensive sources of GABA included two products that listed "Pharma GABA" as their source of GABA. Pharma GABA is a trademarked GABA ingredient produced by bacterial fermentation -- although it is quite possible that the GABA in other products is also produced with this method. These two products, *Natural Factors* and *Thorne*, each provide 100 mg of Pharma GABA per capsule, but

Natural Factors is 30% less expensive than Thorne. The other expensive sources of GABA were special formulations of GABA such as a liposomal liquid (Designs for Health) or dissolving tablets (KAL and Source Naturals) — although it is not known if these provide any better uptake of GABA into the body or into the brain. Note that while KAL is a relatively expensive source of GABA, it is the only low-dose product in the Review and the cost per dissolving tablet (25 mg of GABA) is not particularly high (9 cents).



### \* Cost based on confirmed listed amount.

### **Taste**

We tasted all of the products that were not capsules. In general, the two dissolving tablets tasted fine, but we preferred KAL, which dissolved quickly and had a cherry flavor, while Source Naturals dissolved slowly and had a somewhat chalky taste. The liquid spray from Designs for Health had an unpleasant chemical taste and irritated the throat. The two powders had no perceptible taste when mixed in water (1/4 teaspoon in 4 fl. oz. of water) but the powders themselves had a very slight sweetness and citrus flavor — although GABA powders should not be consumed directly as powders as they may irritate the throat.

# Top Pick:

As all of the tested products provided their listed amounts of GABA without notable contamination from heavy metals, and it is unknown if any particular GABA form, formula, or formulation provides better absorption, bioavailability, penetration of the blood-brainbarrier, or efficacy, than others, our choice of Top Picks came down to dosage, cost, and safety.

Our Top Picks among GABA supplements, for the reasons explained below, are:

• Low-dose: KAL GABA 25 mg

Although the GABA from this product is probably not absorbed in the mouth, but in the gut, if you want an easy-to-take low dose of GABA, these small, quick-dissolving tablets each provide 25 mg for 9 cents and have a pleasant taste. Just be aware that they contain some sugar alcohols (mannitol and sorbitol) which may cause a little gas. Low doses of GABA may help slightly lower systolic blood pressure but they do not lower diastolic pressure and are lower in dose than what is typically taken for stress, rest, or cognition.

<u>Moderate-dose</u>: Natural Factors Stress-Relax Pharma GABA (100 mg per capsule) and Brain MD Calming Support (250 mg per capsule).

We found moderate-dose products to be much more expensive than high-dose products, likely because they contain a branded form of GABA (Pharma GABA), as found in *Natural Factors*, or have additional ingredients or are special formulations. But none of these differences are of proven benefit in terms of effectiveness for stress or sleep. Among these moderate-dose products we have *two Top Picks*. The first is *Natural Factors Stress-Relax Pharma GABA*, which provides 100 mg of GABA (as Pharma GABA) for 33 cents (\$19.59 for 60 capsules), which is 30% lower in cost than *Thorne's* 100-mg capsule of Pharma GABA. If you want a higher dose, *BrainMD GABA Calming Support* provides 250 mg per capsule and includes a large dose of vitamin B6 (471% of the Daily Value), as well as small amounts of lemon balm extract, L-theanine, and magnesium. *Brain MD* costs 59 cents per capsule (\$53.25 for 90 capsules), making it somewhat less expensive per milligram of GABA than *Natural Factors*.

Source Naturals dissolving tablets (or lozenges) are also less expensive than Natural Factors, providing 125 mg per tablet for just 16 cents, but the tablets dissolve slowly, have a somewhat chalky taste, and include sorbitol and mannitol, which can cause gas. We also did not care for Designs for Health Liposomal NeuroCalm liquid (250 mg of GABA per 4 pumps), as we found it to have an unpleasant chemical taste and was slightly irritating to throat.

High-dose: Swanson GABA (500 mg/capsule for 4 cents)

Interestingly, the highest dose products were much less expensive than lower dose products. These include capsules from *Swanson* and *NOW* (each 500 mg per capsule) and *GNC* (750 mg per capsule). Among these, *Swanson GABA* is lowest in cost – just 4 cents per capsule – and is our *Top Pick*. However, as side effects (although mild) have been reported with doses of even 300 mg, it would seem prudent to first try a lower dose of GABA. To save money, if you are comfortable with <u>opening capsules</u> (you can just twist the two sides apart), you can lower the dose of these capsule by pouring off some of the powdered contents and then twisting the half-shells back together. For example, if you empty half the powder, you should get a dose of approximately 250 mg GABA – and you'll still have spent only 4 cents.

Very-high dose and variable dose: BulkSupplements.com Gamma Aminobutyric Acid

The GABA powders are an inexpensive source of GABA, and the least expensive powder was *BulkSupplements.com Gamma Aminobutyric Acid (GABA)*. A 750 mg serving (listed as 1/3 teaspoon, although ConsumerLab found the weight in 1/3 teaspoon to be closer to 900 mg) costs only 3 cents (\$22.96 for a 500-gram pouch). **Caution:** As GABA is a weak acid, it can irritate the throat, so, don't swallow the powder itself, but dilute it in water. In fact, even in water, a high dose (1,000 mg or more per day) may irritate the throat, so you may prefer to take capsules, such as *Swanson*'s, instead.

# **Test Results by Product:**

Listed alphabetically below -- grouped as capsules/tablets (including one lozenge) or powders/liquids -- are the test results for 12 GABA

supplements. ConsumerLab.com selected 10 of these products, and two (indicated with CL flasks) were tested at the request of their distributors through CL's voluntary <u>Quality Certification Program</u> and are included for having passed testing.

Shown for each product, in the 2<sup>nd</sup> column, is the labeled amount and form of GABA per labeled serving and the daily serving size. A checkmark indicates that we found the listed amount within an acceptable margin. The third column shows if a product passed or failed tests for heavy metal contamination, as well as noting the suggested daily servings on the label, pill size, and taste description. The calculated cost to obtain 250 mg of GABA is provided in the 4<sup>th</sup> column along with price information. Notable features regarding allergens and significant amounts of other active ingredients are noted in the 5<sup>th</sup> column, and the full list of ingredients for each product is shown in the final column.

Approval Status  Product Name  GABA  Suggested	Heavy Metals  Directions	Cost Per Suggested	Notable Features	Full List of Ingredients Per
Serving	Pill Size	Serving [Cost Per 250 mg of GABA] Price		Serving

22/25, 8:32 AM		GABA Supp	olements Review & To	p Pick - ConsumerLab.com	1
r	1 vegan	Heavy Metals: Pass	\$0.59/vegan	Vitamin B6 8 mg,	1 vegan capsule
APPROVED	capsule		capsule	magnesium 33 mg,	Vitamin B6 (as pyridoxine
K		Adults, take 1 to 6		lemon balm extract	HCl and pyridoxal-5-
2	GABA: 250	capsules daily with	[\$0.59]	50 mg & L-theanine	phosphate) 8 mg,
Top Pick	mg <b>√</b>	water, between		33 mg per vegan	Magnesium (as glycinate
r.	(Found:	meals. Dosing for	\$53.25/90 vegan	capsule	and malate) 33 mg, GABA
for moderate-dose	257.7 mg)	children should be	capsules		(Gamma-Amino Butyric
BrainMD By Daniel Amen,		directed by a		Dairy Free. Gluten	Acid) 250 mg, Lemon Balm
MD GABA Calming		nutritionally		Free. Sugar Free. Corn	Extract (Melissa officinalis,
Support		informed physician.		Free. Soy Free. No	leaf) 50 mg, L-Theanine 33
WEST TOOK SELECTION SELECT				Artificial Coloring. Nut	mg.
1 sales Man		Large vegan		Free. Egg Free. Yeast	
BRAIN DIRECTED NUTRITION  TO TOIN THE		capsule		Free. No Artificial	Other Ingredients: Vegetable
GABA CALMING				Flavoring.	cellulose
SUPPORT  Calm for the  Overactive Mind*  Overactive Mind*  Overactive Mind*  Overactive Mind*  Overactive Mind*					Additional Information
					1 vegan capsule
Dist. by BrainMD					Vitamin B6 (as pyridoxine
					HCl and pyridoxal-5-
					phosphate) 8 mg,
					Magnesium (as glycinate
					and malate) 33 mg, GABA
					(Gamma-Amino Butyric
					Acid) 250 mg, Lemon
					Balm Extract ( <i>Melissa</i>
					officinalis, leaf) 50 mg, L-
					Theanine 33 mg.
					Other Ingredients:
					Vegetable cellulose
					(vegetarian capsule),
					microcrystalline cellulose,
					magnesium stearate,
					silicon dioxide.

22/23, 0.32 AW		ОЛВА Оцрр	deficited fleview & fe	p Fick - ConsumerLab.com	
3	1 capsule	Heavy Metals: Pass	\$0.22/capsule	No Sugar, No Artificial	1 capsule
APPROVED				Colors, No Artificial	gamma-Aminobutyric Acid
r	GABA: 750	Take one to three	[\$0.07]	Flavors, Sodium Free,	750 mg.
GNC GABA <u>™</u> *	mg <b>√</b>	capsules daily.		No Wheat, Gluten Free,	
	(Found:		\$19.99/90	No Corn, No Soy, No	Other Ingredients: Gelatin.
	747.8 mg)	Large capsule	capsules	Dairy.	
GNC GABA					
gemma-Aminobutyric Acid  kriste receptor critical for brain function*					
750mg					
90 CAPSULES 90 SERVINGS DIETARI SIPREIER					
Dist. by General Nutrition					
Corporation					
·			40.00/		
3	1 micro	Heavy Metals: Pass	\$0.09/micro	Vegetarian.	1 micro tablet
APPROVED	tablet		tablet		GABA (Gamma Amino
<b>C</b>		Dissolve one	[the ea]		Butyric Acid) 25 mg.
3	GABA: 25	ActivMelt™ micro	[\$0.90]		
Top Pick	mg <b>√</b>	tablet on the tongue			Other Ingredients: Mannitol
K	(Found:	daily, preferably with			Starch Complex (from non-
for low-dose	25.5 mg)	a meal.	micro tablet		GMO corn), Cellulose,
KAL® GABA 25 mg -					Natural Cherry Flavor with
Cherry Natural Flavor		Medium micro			Other Natural Flavors,
		tablet			Sorbitol, Magnesium
					Stearate, Citric Acid, Stevia
Same (MAI) 1932		Taste: Thin, white,			(leaf extract), Malic Acid,
GABA		round tablet with a			Silica and Polysaccharides
Name of the second seco		slight sweet and			(from non-GMO soy).
ACT Med 12 octo MED nector services		cherry flavor that			
Mfd. by Nutraceutical		dissolves quickly in			
Corp.		the mouth.			

		O, 12, 1 0 upp	, , , , , , , , , , , , , , , , , , ,		
2	2 vegetarian	Heavy Metals: Pass	\$0.65/2	Contains no artificial	2 vegetarian capsules
APPROVED	capsules		vegetarian	colors, preservatives,	Pharma GABA® Gamma-
K		1 - 2 capsules 3	capsules	or sweeteners; no	Aminobutyric Acid 200 mg.
K	GABA: 200	times per day or as		dairy, sugar, wheat,	
Top Pick	mg <b>√</b> (as	directed by a health	[\$0.82]	gluten, soy, egg, fish,	Other Ingredients: Rice
K	Pharma	professional.		shellfish, animal	powder, vegetarian capsule
for moderate-dose	GABA)		\$19.59/60	products, salt, tree	(carbohydrate gum
Natural Factors® Pharma	(Found: 206	Large vegetarian	vegetarian	nuts, or GMOs.	[cellulose], purified water),
GABA®	mg)	capsule	capsules	Suitable for	magnesium stearate
Pharma GABA' FAST ACTING 100 mg 60 Vegetarian Capadia REALATION & MISTAL ICON				vegetarians/ vegans.	(vegetable grade), silica.
Mfd. by Natural Factor					
Canada					
3	1 veg	Heavy Metals: Pass	\$0.06/veg	Vitamin B-6 2 mg per	1 veg capsule
APPROVED	capsule		capsule	veg capsule	Vitamin B-6 (from
K		Take 1 capsule 2 to			Pyridoxine HCl) 2 mg, GABA
NOW® GABA 500 mg	GABA: 500	3 times daily as	[\$0.03]	Kosher. Non-GMO.	(Gamma-Aminobutyric Acid)
	mg <b>√</b>	needed, preferably			500 mg.
	(Found:	with juice or water	\$12.99/200 veg	Precaution: Not	
Man now	567.2 mg)	on an empty	capsules	manufactured with	Other Ingredients:
GABA		stomach.		wheat, gluten, soy,	Hypromellose (cellulose
500 mg  Neurotransmitter Support  Gamma-Aminobusyic Add				corn, milk, egg, fish,	capsule), Rice Flour, Silicon
With Vitamin 8-6. 200 Veg Capsulet A Owny Suppassed Vegetron/Negr		Large veg capsule		shellfish or tree nut	Dioxide and Stearic Acid
Diet by NOW Foods				ingredients. Produced	(vegetable source).
Dist. by NOW Foods				in a GMP facility that	
				processes other	
				ingredients containing	
				these allergens.	
	I	I	I.	I	

2/25, 8:32 AM		GABA Supp	olements Review & To	p Pick - ConsumerLab.com	1
3	1 vegetable	Heavy Metals: Pass	\$0.19/vegetable	Certified Gluten free	1 vegetable capsule
APPROVED	capsule		capsule	GFCO.org® seal.	GABA (gamma aminobutyric
K		As a dietary		Kosher Suitable for	acid) 500 mg.
Solgar® GABA 500 mg	GABA: 500	supplement for	[\$0.10]	Vegetarians. Free Of:	
<u>∕</u> A.s	mg <b>√</b>	adults, take one (1)		Gluten, Wheat, Dairy,	Other Ingredients: Dicalcium
	(Found: 484	vegetable capsule	\$18.74/100	Soy, Yeast, Sugar,	Phosphate, Vegetable
- Comment of the Comm	mg)	up to two times	vegetable	Sodium, Artificial	Cellulose, Microcrystalline
Eines Strate		daily, between	capsule	Flavor, Sweetener and	Cellulose, Vegetable
GABA 500 MG		meals, or as		Color.	Magnesium Stearate, Silica.
NIRVOUS SYSTEM SUPPORT*  CADTIN, Non-GOO SITTABLE FOR YICLASS  2		directed by a			
DIFFARY SUPPLEMENT		healthcare			
Mfd. by Solgar, Inc.		practitioner.			
Mid. by Solgal, IIIC.					
		Large vegetable			
		capsule			
3	1 lozenge	Heavy Metals: Pass	\$0.16/lozenge	Magnesium 5 mg,	1 lozenge
APPROVED				glycine 50 mg, N-	Magnesium (as magnesium
ĸ	GABA: 125	1 lozenge, 1 to 3	[\$0.31]	acetyl L-tyrosine 25	amino acid complex) 5 mg,
Source Naturals® GABA	mg <b>√</b>	times daily. For best		mg & taurine 20 mg	GABA (gamma-
Calm®	(Found:	results, allow to	\$18.89/120	per lozenge	aminobutryic acid) 125 mg,
	137.3 mg)	dissolve in the	lozenges		Glycine 50 mg, N-Acetyl L-
		mouth before		Precaution: Warning:	Tyrosine 25 mg, Taurine 20
SOURCE NATURALS!		swallowing.		Contains tyrosine. Not	mg.
SERENE SCIENCE				to be used with MAO	
GABA CAIM®		Medium lozenge		inhibitor drugs.	Other Ingredients: Sorbitol,
CALM MIND CRANGE FLAVOR					mannitol, stearic acid,
Diet by Course Netwole		Taste: Thick, white,			modified cellulose gum,
Dist. by Source Naturals,		round tablet with a			natural orange flavor, and
Inc.		slight sweet and			magnesium stearate.
		sour chalky taste			
		that dissolves slowly			
		in the mouth.			

22/23, 0.32 AIVI		CABA Gupp	dements review & 10	p Fick - Consumercab.com	1
3	1 capsule	Heavy Metals: Pass	\$0.04/capsule	None.	1 capsule
APPROVED					GABA (gamma-aminobutyric
K	GABA: 500	Take one capsule	[\$0.02]		acid) 500 mg.
3	mg <b>√</b>	per day with water.			
Top Pick	(Found:		\$4.29/100		Other Ingredients: Gelatin,
K	578.7 mg)	Large capsule	capsules		magnesium stearate.
for high-dose					
Swanson® GABA					
SWANSON  GABA  Supports Relaxation  May arrange man profited  Tables Auto-Clarke T. 1000 Carelle  Tabl					
Dist. by Swanson Health					
Products					
3	1 capsule	Heavy Metals: Pass	\$0.47/capsule	None.	1 capsule
APPROVED					Gamma-Aminobutyric Acid
K	GABA: 100	Take 1 capsule one	[\$1.17]		(GABA) 100 mg.
Thorne® PharmaGABA-	mg <b>√</b> (as	to three times daily			
100	Pharma	or as recommended	\$28.00/60		Other Ingredients:
	GABA)	by your health-care	capsules		Microcrystalline Cellulose,
	(Found:	practitioner.			Hypromellose (derived from
	111.3 mg)				cellulose) capsule,
		Large capsule			Magnesium Citrate, Calcium
PharmaGABA-100 DISTARY SUPPLEMENT BES					Laurate.
Mfd. by Thorne Research					
GABA Powders & Liquid:	I.	1	1	1	1

22/25, 8:32 AM		GABA Supp	iements Review & To	p Pick - ConsumerLab.con	n
3	1/3 tsp [750	Heavy Metals: Pass	\$0.03 per 1/3 tsp	Free of: Added Sugar,	1/3 tsp
APPROVED	mg]			Soy, Dairy, Yeast,	Gamma Aminobutyric Acid
r		Take 750 mg (about	[\$0.01]	Gluten, Additives.	750 mg.
2	GABA: 750	1/3 tsp) once or			
Top Pick	mg <b>√</b>	twice daily, or as	\$22.96/17.6 oz		Other Ingredients: None.
K	(Found:	directed by a	[500 g] pouch		
for very-high dose and	744.8 mg)	physician.	(approx. 667		
variable dose			servings)		
BulkSupplements.com®		Taste: White,			
Gamma Aminobutyric		powdery crystals			
Acid (GABA)		with a slightly sweet			
		and citrus taste, but			
(a) (b) (b)		no taste as 1/4			
		teaspoon dissolved			
		in 4 fl. oz. of water.			
BHIA					
SUPPLEMENTS COM CREAN & PURE BULK SUPPLEMENTS					
Dist. by					
BulkSupplements.com					
			A		
3	4 pumps [2	Heavy Metals: Pass	\$1.60/4 pumps	L-Theanine 100 mg	4 pumps
APPROVED	mL]		[A]	per 4 pumps	gamma-Aminobutyric acid
K		Take 2 mL (approx.	[\$1.60]		(GABA) 250 mg, L-Theanine
but unpleasant taste	GABA: 250	4 pumps) and hold	400.05/4.7.5	Does not contain	100 mg.
Designs For Health®	mg <b>√</b>	in mouth for 30	\$39.95/1.7 fl oz	gluten, fairy, soy	
Liposomal NeuroCalm™	(Found:	seconds before	[50 mL] bottle	protein, or GMOs.	Other Ingredients: Water,
	281.9 mg)	swallowing or as	(approx. 25		glycerine, ethanol,
		directed by your	servings)		phospholipids (from
		health-care			sunflower lecithin),
ch		practitioner.			tocofersolan, natural mixed
LIPOSOMAL NEURO CALM **OLY TROMOVIL AND E CALM		Tanta Olan linuid			tocopherols.
AND THE ANNE		Taste: Clear liquid			
Dist. by Designs for		with an unpleasant, chemical taste			
Health, Inc.		somewhat like			
ricaitii, iiic.		rubbing alcohol but			
		slightly bitter sweet.  Irritates the throat.			
		imtates the throat.			

	1	- 11			
3	1/4 scoop	Heavy Metals: Pass	\$0.07 per 1/4	None.	1/4 scoop
APPROVED	[1,000 mg]		scoop		Gamma-Aminobutyric Acid
r.		Take 1,000 mg (1/4			(nonGMO) 1,000 mg.
NVS Labs® GABA	GABA:	scoops) 1 to 3 times	[\$0.02]		
2000	1,000 mg <b>√</b>	per day preferably			Other Ingredients: None.
	(Found: 977	on an empty	\$16.95/8.8 oz		
	mg)	stomach, or as	[250 g] jar		
GABA		directed by your	(approx. 250		
The state of the s		qualified health	servings)		
BETTER TO THE STATE OF THE STAT		consultant.			
Di 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Dist. by NutriVitaShop		Taste: White,			
		powdery crystals			
		with a slightly sweet			
		and citrus taste, but			
		no taste as 1/4			
		teaspoon dissolved			
		in 4 fl. oz. of water.			
I .	1	1	1	I .	I .

Unless otherwise noted, information about the products listed above is based on the samples purchased by ConsumerLab.com (CL) for this Product Review. The samples are from a single lot of the respective product. Be aware that there may lot-to-lot variation in products, particularly natural products. Manufacturers may change ingredients and label information at any time, so be sure to check labels carefully when evaluating the product you use or buy as it may be different from the product we tested. Manufacturers may also change ingredient suppliers, which can affect product quality. Pricing can change over time and vary based on retailer, promotions, and other factors.

The information contained in this report is based on the compilation and review of information from product labeling and analytic testing. CL applies what it believes to be the most appropriate testing methods and standards. The information in this report does not reflect the opinion or recommendation of CL, its officers or employees. CL cannot assure the accuracy of information.

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Products tested in 2023

# ConsumerTips™:

#### Dosage:

Clinical studies with GABA have used a wide range of dosage strength, as described in the What It Does section: About 10 to 20 mg of GABA daily for effects on blood pressure, 100 mg for effects on muscle, 100 to 800 mg for effects on stress, 800 mg for effects on cognition, and 3,000 mg for effects on growth hormone. However, as noted earlier, the extent of these effects has been very limited. One study of GABA for treating epilepsy involved giving tens of thousands of milligrams daily (about 56,000 mg for adults, and less for children), but was not effective and such a high dose does not seem advisable.

Health Canada permits GABA to be sold as a supplement with the claim "Helps to temporarily promote relaxation" at a dose of 50 to 3,000 mg per day; not to exceed 750 milligrams per day, although products providing 300 mg or more GABA per day must include statements advising the user to consult a health care provider for use beyond 4 weeks (Natural Health Products Ingredients Database, Health Canada, 2021).

#### How to take:

GABA should be taken with water or another beverage and need not be taken with food. It is water-soluble and rapidly absorbed from the gut. A 100-mg dose (of Pharma GABA) taken with water was found to raise normal levels of GABA in the blood by about 35% within 30 minutes – and then levels fall, possibly explaining why its effects appear to be short-term (<u>Yamatsu, Food Sci Biotechnol 2016</u>). GABA should be taken within an hour before desired effects.

As GABA is mildly acidic, it can irritate the throat if a high dose is taken in a form in that puts GABA in contact with the throat, such as a liquid or an orally dissolving tablet. For this reason, it may best to take GABA as a capsule if taking a high daily dose (over 1,000 mg per day), as long as you don't have trouble swallowing capsules, since a stuck capsule could release its ingredients and injure the esophagus.

### **Concerns and Cautions:**

Most studies have shown GABA to be safe when used in doses of 10 to 300 mg daily, short-term (i.e., 12 weeks or less), although mild side effects, such as **abdominal discomfort**, **headache**, and **drowsiness** have been reported at 300 mg (<u>Byun, J Clin Neurol 2018</u>). As noted above, when taken in a form in which GABA is in contact with the throat, it may irritate the throat. The safety of long-term supplementation with GABA is not known.

Because GABA may lower blood pressure, it may be unsafe to use with **blood pressure-lowering drugs** (e.g., thiazide diuretics, calcium channel blockers, ACE inhibitors, angiotensin II receptor antagonists (ARBs), beta blockers, etc.).

Health Canada requires that GABA products state that they are not to be used with alcohol and that a user should consult with a health care provider prior to use if pregnant or breastfeeding (<u>Natural Health Products Ingredients Database</u>, <u>Health Canada</u>, 2021).

Although antidepressants called **SSRIs** (selective serotonin reuptake inhibitors), which include citalopram and fluoxetine, can increase concentrations of GABA *in the brain* (Sanacora, Am J Psychiatry 2002; Bhagwagar, Am J Psychiatry 2004), GABA from supplements does not affect brain levels, and there does not appear to be any evidence of an interaction between SSRIs and GABA supplements. However, to be safe, people taking any antidepressants should talk with their doctor before starting GABA supplementation.

#### + 21 sources

Information on this site is provided for informational purposes only. It is not an endorsement of any product nor is it meant to substitute for the advice provided by physicians or other healthcare professionals. The information contained herein should not be used for diagnosing or treating a health problem or disease. Consumers should inform their healthcare providers of the dietary supplements they take.

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