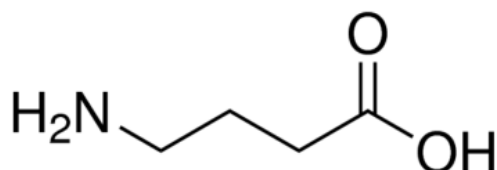


GABA 750 mg

TECHNICAL SUMMARY

GABA (Gamma-Aminobutyric Acid) is a non-protein amino acid that is naturally produced in the body.* GABA is the brain's main inhibitory neurotransmitter and healthy levels are associated with a relaxed mood.* GABA also plays a central role in regulating intercellular communication and normal cognition.*

Structure formula:



Chemical name: γ-Aminobutyric acid

Allergen and Additive Disclosure: Not manufactured with wheat, gluten, soy, milk, egg, fish, shellfish, or tree nut ingredients. Produced in a GMP facility that processes other ingredients containing these allergens.

Delivery Form: Veg Capsules

ROLE AS NUTRIENT/FUNCTION

GABA is a major inhibitory neurotransmitter. It functions via GABA receptors present at the surface of nervous cells at the receiving end of nerve impulses.* It helps regulate brain excitability more specifically via GABA_A receptors.*

NATUROKINETICS®

Liberation: The disintegration of the vegetable capsule using a USP-testing method of disintegration occurs between zero and 60 minutes.

Absorption: Laboratory data suggest that GABA can be taken up by the intestinal cells via amino acid transporters shared with other similar amino acids (such as beta-alanine). After oral ingestion of 2 g GABA, in healthy volunteers, GABA is rapidly absorbed with a maximum plasma concentration of 688 ng/mL attained in 1.5 hours. (Figure 1)

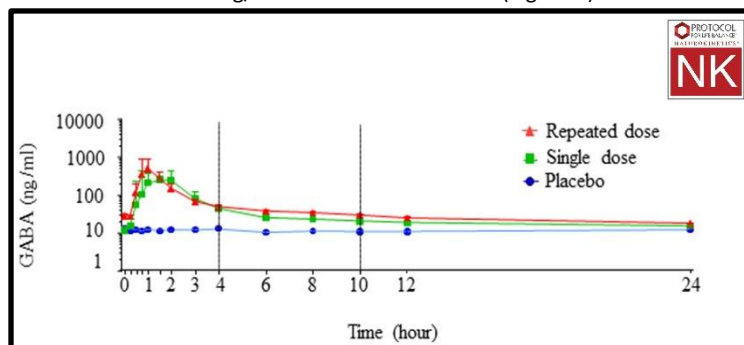


Figure 1: Concentration-time profiles for GABA. Red line: 2 g three times daily for 7 days. Green line: single dose (2g) in 12 healthy volunteers.

Distribution: Much controversy remains regarding GABA's ability to cross the blood-brain barrier (BBB). Data from animal experiments suggest that

Supplement Facts

Serving Size 1 Veg Capsule

Amount Per Serving

GABA (Gamma-Aminobutyric Acid)	750 mg*
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* Daily Value not established.

Other ingredients: Cellulose (capsule), Silica and Magnesium Stearate (vegetable source).

- **Calming Neurotransmitter***

SUGGESTED USAGE: Take 1 capsule 1 to 3 times daily, or as directed by your healthcare practitioner.

GABA can cross the BBB and that the permeability of the BBB to GABA varies with age. However, other laboratory experiments suggest that GABA concentration in the brain is tightly regulated, casting doubts on the ability for oral supplementation to have a meaningful clinical impact on the central nervous system. More recently, clinical data from studies on healthy individuals indirectly suggest that after oral ingestion, GABA is able to reach the central nervous system.

Metabolism: At the cellular level GABA is catabolized by GABA transaminases and other enzymes (GABA shunt) resulting in the formation of succinate that is used in the citric acid cycle. Within the citric acid cycle, succinate contributes to the formation of alpha-ketoglutarate which is used for the formation of glutamate, which is a precursor to endogenously produced GABA.

Elimination: After oral ingestion, GABA has a 5-hour half-life. In a clinical study, 6 g GABA per day for 7 days resulted in no GABA accumulation in plasma. GABA is recycled through the citric acid cycle and GABA shunt via a highly complex and regulated system.

CLINICAL VALIDATION

GABA supplementation and its impact on nervous system function has been researched extensively in clinical settings.

- **Central nervous system relaxation support.*** In a placebo-controlled clinical trial with 13 healthy volunteers between the ages of 21 and 35, a single oral administration of 100 mg of GABA resulted in statistically significant increase in the ratio of α waves on the EEG 30 and 60 min following GABA administration ($p < 0.05$ as compared to control); and statistically significant decrease in β waves ($p < 0.05$ as compared to control) measured at the same periods; both indicating significant shift toward a relaxed state.*

SAFETY INFORMATION

Tolerability: GABA is generally well tolerated, in a clinical study evaluating the safety of GABA supplementation in healthy volunteers, 6 g GABA daily

for 7 days was accompanied with a harmless, temporary tingling sensation on the skin and throat in some individuals as well as headaches.

Contraindications: No known contraindications.

INTERACTIONS

Drug Interactions: Theoretically, concurrent use of GABA with drugs that lower blood pressure might increase risk of hypotension.

Supplement Interactions: None known.

Interaction with Lab Tests: In some individuals, GABA supplementation is accompanied with transitory ALT and AST increase.

STORAGE

Store in a cool, dry place.