

Carnosine



INGREDIENTS

Doctor's Best Carnosine supplies 500 mg of carnosine (L-carnosine), a versatile nutrient for supporting health from the level of individual cells up to the body as a whole. Discovered over a century ago by Russian neurochemists, carnosine is a naturally-occurring dipeptide (two amino acids bonded together). Carnosine is beta-alanine bonded with L-histidine (technically, L-beta-alanyl-L-histidine). Though most highly concentrated in the skeletal muscles, carnosine is also concentrated in the brain.¹⁻³

Carnosine protects cells in several ways, as suggested by numerous studies. It is a key buffer against acid produced during metabolism, helping to ensure a healthy acid-alkaline balance within the cell environment.^{3,4} Furthermore, carnosine is known to have the ability to neutralize “free radicals” and thereby protect cells from reactive oxygen radicals.^{4,5} It also helps protect against protein damage by methylglyoxal, a byproduct of energy generation.⁵

Carnosine has also been shown to inhibit the production of compounds called AGEs, or “advanced glycation end-products”. AGEs are compounds that are formed when proteins become oxidized by sugars, hence “glycated”. The presence and accumulation of AGEs is known to impact protein structure and function, both within and outside the cells. AGEs may contribute to accelerated aging.⁵⁻⁷ Carnitine may even support repair of damaged proteins.⁴ This array of versatile actions suggest carnosine helps support healthy aging.^{4,8}

BENEFITS

Fundamental Support for Healthy Brain Function*

In addition to preclinical animal studies that have demonstrated carnosine’s support for the brain and its ability to enhance memory and cognitive function with age,⁹⁻¹¹ preliminary clinical research also suggests carnosine supports other measures of healthy brain function.^{12,13}

A recent randomized, double blind, placebo-controlled trial suggested that carnosine can support healthy cognition.¹⁴ Twenty-five participants received either a placebo, or carnosine in increasing doses. Carnosine was initiated at 500 mg per day then increased to 1000 mg per day and further to 1500 mg per day at 4-week intervals.

At the end of these 12 weeks, one cognitive performance test indicated significant improvement from carnosine when compared to the placebo. Carnosine may also have improved bowel comfort in this trial.

In a 2012 randomized, double blind, placebo-controlled clinical trial that also focused on carnosine and brain health in a certain segment of the population, participants were given placebo or increasing levels of carnosine.¹⁵ They received 500 mg of carnosine per day in the first week; 1000 mg per day during the second week; 1500 mg per day in the third week; and 2000 mg begun in the fourth week and continued until the end of the 12-week trial. Executive functions, attention, vigilance, memory, and psychomotor speed were assessed at baseline, after 4 weeks, and after 12 weeks. Significant improvements in executive cognitive functions including reaction times, minimizing errors, and memory were demonstrated in the group that had received carnosine compared to those who received placebo.

Helps Protect Cells and Enzymes Against Damage*

Helps Promote Cell-Level Stress Tolerance*

High levels of carnosine in muscle were strongly associated with improved physical performance in a recent human trial.¹⁶ It was inferred that carnosine’s antioxidant potential may be partly responsible for this improvement in stress tolerance. Carnosine has been validated as an antioxidant in many experimental studies.¹⁷⁻²⁰

In a randomized, double blind, placebo-controlled trial, 30 participants prone to increased oxidative stress received either 2 grams of carnosine or placebo for 21 days. Polyamine compounds (putrescine, spermine, spermidine), which are important in many metabolic pathways, are normally abundant in the brain but become decreased under oxidative stress conditions.²¹ In this trial, carnosine significantly increased putrescine and spermine, when compared to placebo. Since the researchers were primarily interested in looking for effects on the brain, the support against oxidative processes led them to conclude that carnosine can help maintain healthy brain metabolism in some segments of the population.

Supplement Facts

Serving Size 2 veggie capsules
Servings per container 45 servings

	Amount per serving	% Daily Value
Carnosine (L-carnosine)	1000 mg	†

† Daily Value not established.

Other Ingredients: Modified cellulose (vegetarian capsule), microcrystalline cellulose, silicon dioxide.

Suggested Adult Use: Take 2 capsules daily, with food, or as recommended by a nutritionally-informed physician.

Non-GMO / Gluten Free / Soy Free / Vegan Store in a cool dry place.

* These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

SCIENTIFIC REFERENCES

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