# **NeuronaStem**® Ultimate Multi-Vitamin Blend



#### PRODUCT BENEFITS

- Focused on modulating brain-derived neurotrophic factor (BDNF)
- Researched compounds for supporting memory
- Synaptic connections and neuroplasticity
  have been shown to be able to be positively
  impacted even later in life with BDNF, a focus of
  this formula.

NeuronaStem® has been carefully crafted by healthcare providers working in the field of cognitive decline reversal to provide the optimal combination of scientifically validated brainfocused nutrients to support neuroplasticity. A common challenge for practitioners working in the field is the necessity to use several different products to provide the spectrum of nutrients needed to support cognitive function.

NeuronaStem offers an elegant solution. As a single product, it delivers therapeutic doses of Whole Coffee Fruit extract, *Bacopa Moniera*, Magnesium Threonate (the only form that has been shown to cross the blood-brain barrier), and Citicoline.

# BRAIN-DERIVED NEUROTROPHIC FACTOR (BDNF) & NEURONASTEM

Our formula contains I00mg of Whole Coffee Fruit Extract which was found to increase blood levels of BDNF by an impressive 143% vs. baseline after 60 minutes.<sup>2</sup>

A second study confirmed that whole coffee fruit extract was able to increase blood levels of BDNF significantly more than placebo or a cup of coffee.



#### **BENEFITS:**

- Combination of important herbs and nutrients focused on overall brain function
- Brain-derived neurotrophic factor (BDNF), a focus of this formula, has been shown to support synaptic plasticity & long-term memory<sup>1</sup>
- Higher BDNF may protect against future development of Alzheimer's and/or Dementia<sup>1</sup>
- Comprehensive cognitive health formulation
- Fewer products / capsules needed for clinicians focused on cognitive decline
- Multiple mechanisms for cognitive function are addressed in this synergistic formula

## SUPPLEMENT FACTS

Serving size: 1 Capsule Servings per container: 90	Amount Per Serving	% Daily Value
Choline (from Cytidine Diphosphate (CDP) Choline Sodium Salt)	30 mg	5%
Bacopa Leaf Extract	250 mg	**
Citicoline (Cytidine Diphosphate (CDP) Choline Sodium Salt)	150 mg	**
Coffee Bean Extract	100 mg	**
** Daily Value not established.		

Other Ingredients: Gelatin (Capsule), Microcrystalline Cellulose.

#### **NeuronaStem**



NeuronaStem contains Magnesium L-Threonate (MgT), a unique form shown to increase brain levels of MgT.

MgT improved short-term memory by 18% and long-term memory by 100% in animal studies. This form of magnesium supports density of synaptic connections between brain cells and supports brain signaling pathways that are import- ant for cognitive health.<sup>4,5</sup>

NeuronaStem also contains Bacopa, an Ayurvedic herb used to support cognitive function, and choline, a nutrient that has been shown to play a key role in brain development, methylation, and positive epigenetic changes. Both bacopa and choline have been shown to support memory.<sup>67,8</sup>

#### **DIRECTIONS FOR USE**

Take 1 capsule 3 times per day, or as directed by your health care professional.

#### **STORAGE**

Store in a cool, dry place away from direct sunlight. Product from unopened containers that have been stored under recommended conditions (55-85° F / 13-29° C) may be used for up to 36 months.

## **WARNING**

Consult your health care professional before use if pregnant, nursing, taking medications, or for any use by minors. Do not use if safety seal is broken or missing. Keep out of reach of children.

#### REFERENCE LIST

- Weinstein, Galit, et al. "Serum Brain-Derived Neurotrophic Factor and Risk of Dementia: The Framingham Heart Study." Alzheimer's & Dementia, vol. 9, no. 4, 2013, doi: I 0.1016/j.jalz.2013.05.443.
- Reyes-Izquierdo, Tania, et al. "Modulatory Effect of Coffee Fruit Extract on Plasma Levels of Brain-Derived Neuro- trophic Factor in Healthy Subjects." British Journal of Nutrition, vol. I I 0, no. 03, 2013, pp. 420-425., doi: I 0.10 I 7/ s0007 I I 4512005338.
- Reyes-Izquierdo, Tania, et al. "Stimulatory Effect of Whole Coffee Fruit Concentrate Powder on Plasma Levels of Total and Exosomal Brain-Derived Neurotrophic Factor in Healthy Subjects: An Acute WithinSubject Clinical Study." Food and Nutrition Sciences, vol. 04, no. 09, 2013, pp. 984-990., doi: I 0.4236/ fns.2013.49127.
- Slutsky, Inna, et al. "Enhancement of Learning and Memory by Elevating Brain Magnesium." Neuron, vol. 65, no. 2, 20 I 0, pp. 165-177., doi: I 0.10 I 6/j.neuron.2009.12.026.
- Wang, Jun, et al. "Magnesium L-Threonate Prevents and Restores Memory Deficits Associated with Neuropathic Pain by Inhibition of TNF-A." Pain Physician, vol. 16, no. 5, Sept. 2013, pp. E563-E575.
- Bekdash, Rola Aldana. "Choline and the Brain: An Epigenetic Perspective." Advances in Neurobiology, vol. 12, 2016, pp. 381-399. EBSCOhost, doi: I 0.1007/978-3-319-28383-8\_2 I.
- Zeisel, Steven H. "Nutritional Importance of Choline for Brain Development." Journal of the American College of Nutrition, vol. 23, no. 6 Suppl, Dec. 2004, pp. 621 S-626S, doi: I 0.1080/07315724.2004. I 0719433.
- Promsuban, Charkriya, et al. "Bacopa Monnieri Extract Enhances Learning-Dependent Hippocampal LongTerm Synaptic Potentiation." Neuroreport, vol. 28, no. 16, 08 Nov. 2017, pp. I 031-1035. EBSCOhost, doi: I 0.1097 / WNR.00000000000000862.
- Barbagallo, M., and L. Dominguez. "Magnesium and Aging." Current Pharmaceutical Design, vol. 16, no. 7, 20 I 0, pp. 832-839., doi: I 0.2174/ 138161210790883679.
- Rude, Robert K., et al. "Skeletal and Hormonal Effects of Magnesium Deficiency." Journal of the American College of Nutrition, vol. 28, no. 2, 2009, pp. 131-141., doi: I 0.1080/07315724.2009. I 0719764.
- Abumaria, N., et al. "Effects of Elevation of Brain Magnesium on Fear Conditioning, Fear Extinction, and Synaptic Plasticity in the Infralimbic Prefrontal Cortex and Lateral Amygdala." Journal of Neuroscience, vol. 31, no. 42, 2011, pp. 14871-14881., doi:10.1523/jneurosci.3782-11.2011.
- Hellhammer, J., et al. "Effects of Soy Lecithin Phosphatidic Acid and Phosphatidylserine Complex (PAS) on the Endocrine and Psychological Responses to Mental Stress." Stress, vol. 7, no. 2, 2004, pp. I 19-126., doi: I 0.1080/I 0253890410001728379.
- Suzuki, Satoru, et al. "Oral Administration of Soybean Lecithin Transphosphatidylated Phosphatidylserine Improves Memory Impairment in Aged Rats." The Journal of Nutrition, vol. 131, no. II, 200 I, pp. 2951-2956., doi: I 0.1093/jn/131.11.2951.
- Zanotti, A, et al. "Chronic Phosphatidylserine Treatment Improves Spatial Memory and Passive Avoidance in Aged Rats." Psychopharmacology, vol. 99, no. 3, 1989, pp. 316-321., doi: I 0.1007/bf00445550.
- Engel, Rolf R., et al. "Double-Blind Cross-over Study of Phosphatidylserine vs. Placebo in Patients with Early Dementia of the Alzheimer Type." European Neuropsychopharmacology, vol. 2, no. 2, 1992, pp. 149-155., doi: I 0.10 I 6/0924-977x(92)90025-4.
- Moreno, M De Jesus Moreno. "Cognitive Improvement in Mild to Moderate Alzheimer's Dementia after Treatment with the Acetylcholine Precursor Choline Alfoscerate: A Multicenter, Double-Blind, Randomized, Placebo-Controlled Trial." Clinical Therapeutics, vol. 25, no. I, 2003, pp. 178-193., doi: I 0.1016/sO I 49-2918(03)90023-3.