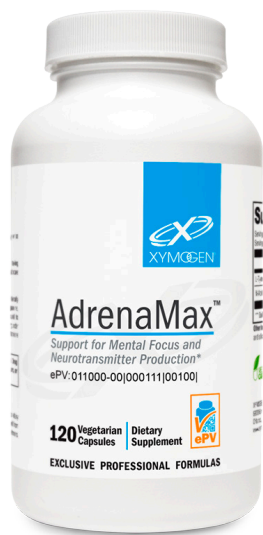


AdrenaMax™

Support for Mental Focus and Neurotransmitter Production*



Available in 120 capsules

Discussion

Tyrosine, or 4-hydroxyphenylalanine, a proteogenic, nonessential amino acid that can be synthesized in the body from phenylalanine is converted into dopamine, epinephrine, and norepinephrine. Although present in foods such as dairy, eggs, soy, peanuts, sesame, seaweed, avocados, bananas, poultry, lima beans, and others, tyrosine, when consumed in food, must compete for absorption with the other amino acids present. When taken as a supplement, tyrosine does not have to compete with other amino acids; therefore, its full benefits can be realized.*

Stress conditions, such as a cold environment, psychological stress, sleep deprivation, and strenuous, prolonged athletic activity, appear to reduce the body's ability to convert phenylalanine to tyrosine. This underproduction may manifest itself as poor memory and performance. Tyrosine, as a precursor for catecholamine synthesis, presumably augments brain catecholamine levels and improves working memory under stress. Tyrosine also supports adrenal and pituitary function and may increase thyroid hormones. Additionally, it is necessary for the production of the skin pigment, melanin. Oral contraceptives may cause a decline in tyrosine plasma levels, possibly because estrogen can increase glucocorticoid levels. This, in turn, elevates levels of tyrosine aminotransferase, which degrades tyrosine in the liver.*

Although increased dopamine may be beneficial in some circumstances, excessive synthesis of this neurotransmitter generates hydroxyl radicals that stress glutathione levels. N-acetyl cysteine (NAC), a derivative of the amino acid L-cysteine, is the precursor to glutathione and helps augment the body's reserve of this important antioxidant. It has been included in this formula primarily to protect the neurons against dopamine toxicity. However, NAC also lessens the load on the methylation cycle, thereby decreasing the load on the THB cycle and promoting the conversion of tyrosine to dopamine.*

Only a percentage of the tyrosine consumed will make it into the brain for conversion to catecholamines. The rest will be picked up for

Clinical Applications

- » Maintain Healthy Levels of Dopamine, Norepinephrine, and Epinephrine*
- » Supports Memory Under Stressful Conditions*
- » Supports Mental Focus and Alertness*
- » Supports Individuals With Polymorphism in Dopamine Receptors*
- » Supports Healthy Mood*

*AdrenaMax™ contains L-tyrosine, a conditionally essential amino acid the body can convert to the neurotransmitters dopamine, epinephrine, and norepinephrine, which are found to increase mental alertness and focus as well as preserve normal memory under stressful conditions. N-acetyl-L-cysteine supports glutathione production, antioxidant activity, and neuronal protection.**

structural protein usage, etc. The only component that needs to be balanced with a glutathione precursor is the portion of tyrosine that is converted into catecholamines. For this reason, less NAC than tyrosine is present.*

*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.

AdrenaMax™ Supplement Facts

Serving Size: 3 Capsules

	Amount Per Serving	%Daily Value
L-Tyrosine	1.2 g	**
N-Acetyl-L-Cysteine	400 mg	**

** Daily Value not established.

Other Ingredients: Capsule (hypromellose and water), stearic acid, magnesium stearate, and silica.**DIRECTIONS:** Take one to three capsules one to three times per day, or as directed by your healthcare professional.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

STORAGE: Keep closed in a cool, dry place out of reach of children.**FORMULATED TO EXCLUDE:** Wheat, gluten, corn, yeast, soy, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, sesame, ingredients derived from genetically modified organisms (GMOs), artificial colors, and artificial sweeteners.**References**

1. Growdon JH. *Life Sci.* 1982;30(10):827-832. doi:10.1016/0024-3205(82)90596-3
2. O'Brien C, Mahoney C, Tharion W, et al. *Physiol Behav.* 2007;90(2-3):301-307. doi:10.1016/j.physbeh.2006.09.027
3. Palinkas LA. *Int J Circumpolar Health.* 2001;60(3):430-439.
4. Deijen JB, Orlebeke JF. *Brain Res Bull.* 1994;33(3):319-323. doi:10.1016/0361-9230(94)90200-3
5. Magill RA, Waters WF, Bray GA, et al. *Nutr Neurosci.* 2003;6(4):237-246. doi:10.1080/1028415031000120552
6. Rose DP, Cramp DG. *Clin Chim Acta.* 1970;29:49-53. doi:10.1016/0009-8981(70)90219-6
7. Lee M, Tazzari V, Guistarini D, et al. *Chem.* 2010;285(23):17318-17328. doi:10.1074/jbc.M110.115261
8. Clark J, et al. *PLoS One.* 2010;5(8):e12333. doi:10.1371/journal.pone.0012333

All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

*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.

© XYMOGEN
DRS-223
Rev. 06/10/24

