L-Tyrosine

LUMINspired HEALTH

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*

Each **L-Tyrosine** *capsule contains 400 mg of L-tyrosine, a conditionally essential amino acid the body can convert to the neurotransmitters dopamine, epinephrine, and norepinephrine. These neurotransmitters are found to increase mental alertness and focus and also preserve normal memory under stressful conditions. N-acetyl-Lcysteine is present to support glutathione production, antioxidant activity, and neuronal protection.**

All Inspired Health LLC Formulas Meet or Exceed cGMP Quality Standards

Discussion

Tyrosine, or 4-hydroxyphenylalanine, a proteogenic, non-essential 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. Taken as a supplement, tyrosine does not have to compete with other amino acids and, 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 hormone. Additionally, it is necessary for 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 hydoxy 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 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.**

Manufactured for: Inspired Health LLC. 550 SW
ndustrial Way, Building 2, Suite 100, Bend, OR 97702

L-Tyrosine

Supplement Facts

Serving Size: 3 Capsules
Servings Per Container: 40

	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.

References

1. Growdon JH. Effects of oral L-tyrosine administration on CSF tyrosine and homovanillic acid levels in patients with Parkinson's disease. *Life Sci*. 1982 Mar 8;30(10):827-32. [PMID: 6175872]
2. O'Brien C, et al. Dietary tyrosine benefits cognitive and psychomotor performance during body cooling. *Physiol Behav*. 2007 Feb 28;90(2-3):301-7. *Epub* 2006 Oct 31. [PMID: 17078981]
3. Palinkas LA. Mental and cognitive performance in the cold. *Int J Circumpolar Health*. 2001 Aug;60(3):430-9. [PMID: 11590885]
4. Deijen JB, Orlebeke JF. Effect of tyrosine on cognitive function and blood pressure under stress. *Brain Res Bull*. 1994;33(3):319-23. [PMID: 8293316]
5. Magill RA, et al. Effects of tyrosine, phentermine, caffeine D-amphetamine, and placebo on cognitive and motor performance deficits during sleep deprivation. *Nutr Neurosci*. 2003 Aug;6(4):237-46. [PMID: 12887140]
6. Rose DP, Cramp DG. Reduction of Plasma Tyrosine by Oral Contraceptives and Oestrogens: A Possible Consequence of Tyrosine Aminotransferase Induction, *Clin Chim Acta*, 1970;29:49-53. [PMID: 5500691]
7. Lee M, et al. Effects of hydrogen sulfide-releasing L-DOPA derivatives on glial activation: potential for treating Parkinson's disease. *Biol Chem*. 2010 Jun 4;285(23):17318-28. *Epub* 2010 Apr 5. [PMID: 20368333]
8. Clark J, et al. Oral N-acetyl-cysteine attenuates loss of dopaminergic terminals in alpha-synuclein overexpressing mice. *PLoS One*. 2010 Aug 23;5(8). pii: e12333.[PMID: 20808797]

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.

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