NT Balance

FUNCTIONAL NUTRIENTS®

Clinical Applications

- Nutritional Support for Carbohydrate, Alcohol & Drug Cravings*
- Supports Healthy Weight (by reducing carbohydrate cravings)*
- Improve Sense of Wellbeing and Energy*
- Supports Healthy Serotonin Levels*

NT Balance *contains key amino acids to support the biosynthesis of neurotransmitters involved in appetite control, carbohydrate or fat cravings, and mood. Chromium is present to support healthy glucose metabolism and support food intake regulation.**

All Personalized Medical Solutions Formulas Meet or Exceed cGMP Quality Standards

Discussion

5-Hydroxytryptophan ("5-HTP") `is a naturally-occurring amino acid precursor to serotonin. Numerous studies during the '90s, including those randomized, double-blind, and placebo-controlled, confirmed the safety and efficacy of 5-HTP in reducing appetite and food intake in obese healthy and non-insulin-dependent diabetic individuals.[1,2,3] A 2006 study in mice concluded, "5-HTP-induced anorexia may be mediated by facilitation of leptin secretion."[4] Vitamins B6 and C are important cofactors in the 5-HTP to serotonin pathway. Among the several serotonin receptors thus identified, the 5HT2C receptors are suspected in control of food intake. Mice without this receptor exhibit increased food intake and become obese.*[5]

DL-Phenylalanine (DLPA) is a combination of the d- and the l- forms of this essential amino acid. Phenylalanine suppresses appetite by regulating the release of cholecystokinin, which in turns signals satiety in the brain. D-phenylalanine increases endorphins, while L-phenylalanine is an amphetamine-like stimulatory compound. DLPA has been found to elevate mood, curb appetite and reduce pain.*

L-Tyrosine, an essential amino acid is needed for conversion into the catecholamine neurotransmitters stress depletes: dopamine, norepinephrine, and epinephrine. It is also a precursor for thyroxine. Doctors use tyrosine as a mood elevator, to increase alertness after sleep deprivation and as an appetite suppressant; although support for the latter appears anecdotal.*[6]

L-Glutamine, well–recognized for gut and immune support, has also been espoused to reduce carbohydrate cravings and support alcohol withdrawal, although the mechanism of action for these benefits is not known.*[7,8]

Chromium, as chromium picolinate is widely used to optimize insulin function; thereby preventing swings in blood glucose levels that may be responsible for carbohydrate cravings. The mineral in the form present was indeed demonstrated to reduce carbohydrate cravings in a double-blind, placebo-controlled study.*[9,10]

***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.**

Personalized Medical Solutions
22525 SE 64th Place Ste 200 Issaquah, WA 98027
Report any adverse reactions to 425-391-3376

NT Balance

Supplement Facts

Serving Size: 4 Capsules
Servings Per Container: 30

	Amount Per Serving	%Daily Value
Vitamin C (ascorbic acid)	500 mg	556%
Vitamin B6 (as pyridoxine HCl)	37.5 mg	2206%
Chromium (as chromium nicotinate glycinate chelate)[S1]	60 mcg	171%
DL-Phenylalanine	1 g	**
L-Tyrosine	750 mg	**
L-Glutamine	375 mg	**
5-HTP (5-hydroxytryptophan)(from *Griffonia simplicifolia*)(seed)	75 mg	**

** Daily Value not established.

Other Ingredients: Capsule (hypromellose and water), stearic acid, magnesium stearate, medium-chain triglyceride oil, and silica.

S1. TRAACS® and the Albion Gold Medallion® are registered trademarks of Albion Laboratories, Inc.

Directions

Take four capsules before breakfast and four capsules before lunch, or as directed by your healthcare professional.

Consult your healthcare professional prior to use if you have, or suspect you have, a medical condition or are taking prescription drugs for depression, migraines, Parkinson's disease, or psychiatric disorders. Not for use by children. Do not use if tamper seal is damaged.

Formulated To Exclude

Wheat, gluten, yeast, soy, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.

References

1. Cangiano C, et al. Eating behavior and adherence to dietary prescriptions in obese adult subjects treated with 5-hydroxytryptophan. *Am J Clin Nutr* 1992 Nov;56(5):863-7
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3. Amamoto T, Sarai K. On the tryptophan-serotonin metabolism in manic-depressive disorders. Changes in plasma 5-HT and 5-HIAA levels and urinary 5-HIAA excretion following oral loading of L-5HTP in patients with depression. *Hiroshima J Med Sci*. 1976 Sep;25(2-3):135-40 [PMID: 1088369]
4. Yamada J, Sugimoto Y, Ujikawa M. Involvement of leptin in hypophagia induced by the serotonin precursor 5-hydroxytryptophan (5-HTP) in mice. *Biol Pharm Bull*. 2006 Mar;29(3):557-9 [PMID: 16508167]
5. Rogers PJ, Blundell JE. Reanalysis of the effects of phenylalanine, alanine, and aspartame on food intake in human subjects. *Physiol Behav*. 1994 Aug;56(2):247-50 [PMID: 7938234]
6. http://web.indstate.edu/thcme/mwking/aminoacidderivatives.html {accessed 09 July 07}
7. Goodwin, F. APA Psychiatric News, Dec 5, 1986 in Atkins, R. Dr. Atkins Vita-Nutient Solution. Simon & Schuster, NY 1998 p169
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9. Broadhurst CL, Domenico P. Clinical studies on chromium picolinate supplementation in diabetes mellitus--a review. *Diabetes Technol Ther*. 2006 Dec;8(6):677-87 [PMID: 17109600]
10. Docherty JP, et al. A double-blind, placebo-controlled, exploratory trial of chromium picolinate in atypical depression: effect on carbohydrate craving. *J Psychiatr Pract*. 2005 Sep;11(5):302-14 [PMID: 16184071]

Cautions

Do not take if you are, or suspect you are, pregnant or if you are lactating.

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