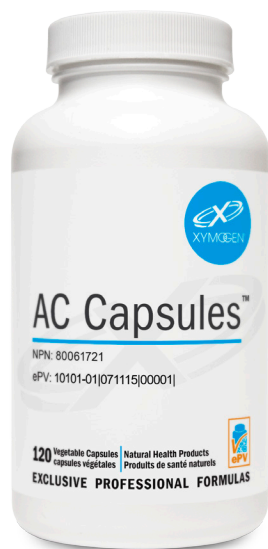


AC Capsules™



- Helps promote healthy glucose metabolism
- Source of amino acids involved in muscle protein synthesis
- Helps support healthy mood balance

Available in 120 vegetable capsules

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 turn 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]}

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AC Capsules™

Medicinal Ingredients (per vegetable capsule)

5-HTP (Griffonia simplicifolia, seed, synthetic).....	18.75 mg
Chromium (Chromium nicotinate glycinate, synthetic).....	15 mcg
L-Glutamine (L-Glutamine, synthetic).....	93.75 mg
L-Tyrosine (L-Tyrosine, synthetic).....	187.5 mg
L-phenylalanine (DL-Phenylalanine, synthetic).....	250 mg
Vitamin B6 (Pyridoxine hydrochloride, synthetic).....	9.375 mg
Vitamin C (Ascorbic Acid, synthetic).....	125 mg

Non-Medicinal Ingredients

Hypromellose, stearic acid, rice flour, magnesium stearate, medium-chain triglycerides, and silicon dioxide.

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
2. Cangiano C Effects of oral 5-hydroxy-tryptophan on energy intake and macronutrient selection in non-insulin dependent diabetic patients. *Int J Obes Relat Metab Disord* 1998 Jul;22(7):648-544
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-Nutrient Solution. *Simon & Schuster*, NY 1998 p169
8. Rogers, L., Pelton, R. Quarterly Journal of Studies of Alcohol, 1957;18(4):581-87 in Atkins, R. Dr. Atkins Vita-Nutrient Solution. *Simon & Schuster*, NY 1998 p169
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]

Additional references available upon request

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