



BCAAs

What Is It?

The branched chain amino acids (BCAAs) are leucine, isoleucine, and valine. These essential amino acids provide nutritional support for athletes and individuals seeking optimal lean muscle mass. Branched chain amino acids are unique in that they are not metabolized by the liver.*

Uses For BCAAs

Promotes Healthy Muscle Mass: BCAAs may play a role in athletic support by promoting muscle nitrogen, enhancing alanine and glutamine production, decreasing lactate production and boosting energy while attenuating protein breakdown. These actions help to sustain muscle work capacity and recovery. Studies have reported that post-exercise protein intake helps to enhance the repair of muscle protein. Additionally, some research has suggested that BCAAs may moderate the progression of central nervous system fatigue during exercise, supporting mental performance.*

What Is The Source?

Isoleucine and valine are produced from corn dextrose fermentation. Leucine is originally extracted from protein and is extensively processed and purified.

Recommendations

Pure Encapsulations recommends 1200-3000 mg per day, in divided doses, between meals.

Are There Any Potential Side Effects Or Precautions?

If pregnant or lactating, consult your physician before taking this product. Until more research is conducted, individuals with ALS, a history of depression, or kidney or liver disease should consult a doctor before supplementing with BCAAs.

Are There Any Potential Drug Interactions?

At this time, there are no known adverse reactions when taken in conjunction with medications.

References:

1. MacLean DA, Graham TE, Saltin B. Stimulation of muscle ammonia production during exercise following branched-chain amino acid supplementation in humans. *J Physiol (Lond)* 1996 Jun 15;493 (Pt 3):909-922.
2. MacLean DA, Graham TE, Saltin B. Branched-chain amino acids augment ammonia metabolism while attenuating protein breakdown during exercise. *Am J Physiol* 1994 Dec;267(6 Pt 1):E1010-E1022.
3. Davis JM, Alderson NL, Welsh RS. Serotonin and central nervous system fatigue: nutritional considerations. *Am J Clin Nutr* 2000;72 (suppl):573S-8S.
4. Newsholme EA, Blomstrand E, Ekblom B. Physical and mental fatigue: metabolic mechanisms and importance of plasma amino acids. *Br Med Bull* 1992;48(3):477-95.
5. Okita M, Watanabe A, Nagashima H. Treatment of liver cirrhosis with branched chain amino acid-supplemented diet. *Gastroenterol Jpn* 1981;16(4):389-392.
6. Blomstrand E, Hassmen P, Ekblom B, Newsholme EA. Administration of branched-chain amino acids during sustained exercise—effects on performance and on plasma concentration of some amino acids. *Eur J Appl Physiol* 1991;63(2):83-88.
7. Blomstrand E, Saltin B. BCAA intake affects protein metabolism in muscle after but not during exercise in humans. *Am J Physiol Endocrinol Metab* 2001 Aug;281(2):E365-74.
8. Healthnotes Clinical Essentials. Copyright 2003. Healthnotes, Inc.

(continued)

BCAA capsules

each vegetable capsule contains



branched chain amino acids (free-form) 600 mg.
providing:
 l-leucine 300 mg.
 l-isoleucine 150 mg.
 l-valine..... 150 mg.

2-4 capsules per day, in divided doses, between meals.

BCAA powder

each supplied scoop contains

branched chain amino acids (free-form)3,000 mg.
providing:
 l-leucine1,500 mg.
 isoleucine750 mg.
 l-valine750 mg.

1/2-1 scoop per day, mixed with 10 oz. of water or juice.