

Supplement Project – Part 1

Name:

Topic: Beta Alanine Supplementation in Athletes

Popular Claims

- Beta Alanine supplementation will boost carnosine levels in body and muscle tissue.
- Increases the amount of force your body can produce at high intensity.
- Increases your ability to perform high intensity exercise and the duration of your exercise.
- Increase your aerobic capacity and ability to use oxygen during exercise.
- Delays muscle fatigue in older individuals.
- Improve muscle endurance, especially during high intensity exercise.
- Reducing or delaying build up of lactate in muscle tissue during exercise, thus reducing acidosis during exercise.
- Lowering the impression of fatigue during endurance exercise.
- Possible increase in muscle mass without increasing or decreasing fat mass.
- General, but significant, increase in muscle mass.

Article 1 Title: Beta-Alanine Fights Fatigue

Author: Will Block

Summary: Will Block begins by discussing common causes of fatigue, specifically age, physical activity, and stress. Physical fatigue can be broken down into three categories: age-related, activity-related, and stress related. There are some known ways of fighting fatigue, such as building up muscle mass to support your body longer each day or taking supplements to reduce inflammation such as omega-3 and fish oils. A recent study showed that supplementing with beta-alanine, specifically in older adults, can significantly delay the onset of muscle fatigue. It does this by increasing muscle carnosine levels, which helps keep muscle pH low, thus delaying muscle fatigue. Some doctors are recommending beta-alanine supplementation to those over 60 years old to help increase muscle mass, improve their daily living activities, and reduce fatigue.

Qualifications of the Author: Will Block is an author and researcher in the field of life extension and enhancement, including the enhancements offered through nutrition.

Article 2 Title: Beta-Alanine - Bad Ass Supplement

Author: Jacob M. Wilson and Gabriel J. Wilson

Summary:

This article breaks down the benefits of beta-alanine for three classes of physically active people: resistance training athletes, sprint and endurance athletes, and bodybuilders. For resistance training, beta-alanine doesn't appear to increase muscle mass, but for training relying on the oxidative phosphorylation energy system it can increase muscle endurance. For sprint and endurance athletes, it can similarly delay muscle fatigue. Lastly, for bodybuilders it appears to greatly increase exercise capacity, especially because many bodybuilders are middle aged adults that lack enough carnosine in their muscles. The article mentions that the typical researched doses are between 1.6 and 6.4 grams per day, although for some people that amount may cause some side effects such as paresthesia, a flushing or reddening of certain areas of the skin. Researchers are still trying to find an optimal dose for performance while avoiding the unwanted flushing side effects.

Qualifications of the Author: Both Jacob Wilson and Gabriel Wilson are Certified Strength and Conditioning Specialists. They both have college degrees in areas of study including nutrition and exercise science.

Article 3 Title: Beta-Alanine Benefits

Author: Gerald Keister

Summary: This article is a very basic overview of what beta-alanine is and some of its functions in the body. It explains that beta-alanine is a non-essential amino acid meaning that it is naturally found in the body. Food sources of beta-alanine are usually meat products such as chicken, beef, pork, and fish. It describes beta-alanine's number one job is to encourage carnosine levels, which act as a buffering agent to keep muscle pH low and delaying muscular fatigue. With supplementation, beta-alanine has been found to enhance both aerobic and anaerobic endurance, as well as promote increases in muscle mass and overall exercise capacity during resistance training. The article states that researchers recommend taking 3.2-6.4 grams per day to increase lean muscle mass and improve performance.

Qualifications of the Author: Gerald Keister is a medical writer and has been published in several medical journals. Keister also has written educational programs for doctors and health-care organizations.

List of References***Sources of claims and articles**

1. Block, W. (2009, January) Beta-Alanine Fights Fatigue. Retrieved from
<http://www.life-enhancement.com/magazine/article/2050-beta-alanine-fights-fatigue>
2. Wilson, J.M., & Wilson, G.J. (2010, October 13th) Beta-Alanine - Bad Ass
Supplement. Retrieved from <http://www.ironmanmagazine.com/beta-alanine-bad-ass-supplement/>
3. Keister, G. (2015, June 12th) Beta Alanine Benefits. Retrieved from
<http://www.livestrong.com/article/110657-beta-alanine-benefits/>
4. *** Include any articles you used for claims if they are different from the 3 articles
you summarized. You do not need to fill out all 10 references. None of these should
be peer reviewed journal articles (save those for Part 2).
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