

Beta-Alanine: Jack up your ventilatory threshold

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In the zany world of sports supplements, there are the ‘real deal’ supplements like creatine and the essential amino acids, and then a list of pretenders like bull testes, ferulic acid, and god-knows-what else. I’d like to introduce you to perhaps the ‘latest’ in a short line of ‘real deal’ supplements. What is it? Sugar plus water? Ha! Nice try. It’s, drumroll please...Beta-Alanine!

So how does beta-alanine work? By buffering the build-up of what us science types call ‘hydrogen ions’ or H⁺.

For instance, have you ever felt that nasty burn at the end of a 400 meter sprint? Or at the last rep of leg extensions? That is a build up of H⁺. Because acidic buildup occurs in all types of activity, in all muscle fiber types, and beta-alanine can buffer it, it makes sense that by supplementing with beta-alanine, your workouts become better, more intense, with the end result you being bigger, faster, and stronger.

How Does it Work?

Beta-alanine is used to make something called carnosine. It is actually carnosine, in your muscles, that acts as a buffer. Carnosine is a dipeptide (i.e. two amino acids bound together) found primarily in fast-twitch muscle. With higher carnosine levels in muscle, however, you prevent the drop in pH. With H⁺ buffered, you continue to squeeze out reps, continue to run at a high intensity, or you simply lift heavier weights for more reps.

How Well Does it Work?

Dr. Jeff Stout, one of the leading researchers in the field of sports supplements, recently tested the effects of beta-alanine. He examined the effects of beta-alanine supplementation on physical working capacity at fatigue threshold (PWCFT) in untrained young men. Subjects consumed either 1.6g of beta-alanine or sugar placebo four times per day for six days, then 3.2 grams per day for 22 days. What happened? The results revealed a significantly greater increase in PWCFT of 14.5%. Or in plain English. That’s better performance!! A greater work capacity must equal more reps and more sets in a given workout. There are other studies coming out on this new cool amino acid. Meanwhile, you ought to give it a shot and see what it does for you.

How to Use it.

According to Dr. Stout, “it appears the most effective way to take beta-alanine is to ingest six grams daily, in divided 4 to 8 doses, for at least two weeks to see its first effect.” The minimal dose seems to be in the 3 gram range. But why take it in divided dose throughout the day? One, there is a slight flushing / tingling effect with high doses (at or greater than 1.6 grams) called paraesthesia. This is resolved by taking smaller doses 8 times per day instead of 4 or by mixing it with food. Most people,

however, are not bothered by paraesthesia. The second reason for taking multiple doses is to ensure a constant presence of beta-alanine which helps drive it into the muscle cell where it synthesizes into carnosine.

So there you have it. Add beta-alanine to your list of 'must have' supplements.

Side Bar – What's the difference between beta-Alanine and L-alanine?

Beta-Alanine

- **beta-Alanine** is the only naturally occurring beta [amino acid](#); however, it is not used in the [biosynthesis](#) of any major [proteins](#) or [enzymes](#).
- Also known as: 3-aminopropionic acid.
- It may improve performance by increasing ventilatory threshold (sometimes called lactate threshold) and muscular endurance.

L-Alanine

- L-Alanine (Ala) is a non-essential [α-amino acid](#).
- L-alanine is one of the 20 amino acids most widely used in [protein synthesis](#), second to [leucine](#)
 - D-alanine occurs in bacterial cell walls and in some peptide antibiotics.
- Also known as: 2-aminopropanoic acid

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