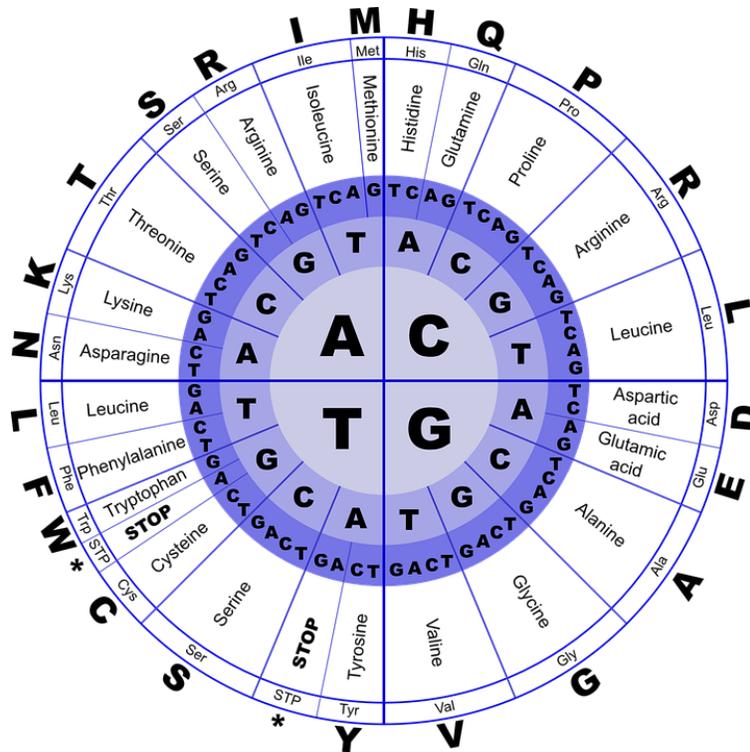


The Truth About BCAA's

Christian Martinez PTS PN1 NASM VCS



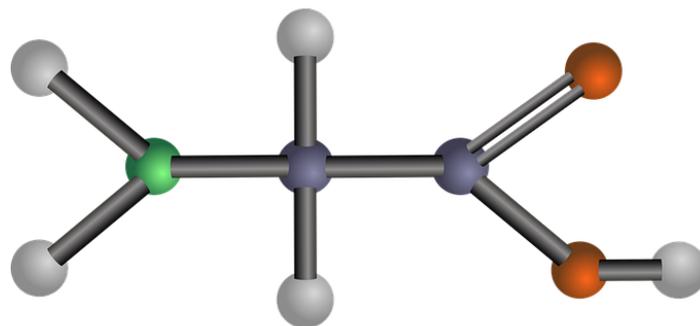
What Are BCAA's

When we ingest foods containing proteins, they are broken down by our bodies into amino acids. Amino acids are molecules that are used in protein synthesis (creating protein) and a number of other vital bodily processes. Many of these can be synthesized from the body, those that cannot are known as Essential Amino Acids. Of this group, there are 3 amino acids. These 3 amino acids are known as Branched-Chain Amino Acids, due to their structural makeup. To understand how amino acids aid in muscle protein synthesis, it's important to have an

understanding of how the body creates muscle mass.

Our bodies are in a constant state of turnover; our cells are being created, destroyed, and recycled all the time. The muscle protein synthesis/degradation cycle is no different. Our muscles are in a constant state of flux, which is to say that they are constantly breaking down and being rebuilt. When muscle protein synthesis is greater than muscle protein degradation, it's known as anabolism. When muscle protein synthesis is lower than muscle protein degradation, it's known as catabolism. So in order to build muscle, we want to put our bodies into a state of anabolism. The Muscle Protein Cycle uses up EAA's, as not all of the EAA's can be recycled during the process, resulting in a constant need for EAA's to maintain and increase muscle protein synthesis. By this reasoning, supplementing BCAAs should help, and certainly should not hurt, right? Unfortunately this isn't the case. In research done in the Journal of the international society of sports nutrition, intravenous supplementing of BCAA's reduced the concentration of EAA's in the blood, and catabolism was induced (R.R.Wolfe, (2017). This is due to the fact that if only BCAA's are ingested, muscle protein breakdown is the only way to synthesize the remaining EAA's needed for muscle protein synthesis.

Therefore, by ingesting BCAA's, we are putting our bodies in a state of catabolism, (muscle protein breakdown > muscle protein synthesis). Unfortunately, supplementing BCAAs is based on a false theory that they will induce anabolism.



What Can You Do To Induce Anabolism?

Eating foods high in protein and taking protein shakes are a great way to get a nearly full spectrum of EEA's and NEAA's (non essential amino acids).

The bottom line? You don't need to supplement with BCAA's, and they actually may hinder your gains (you can, however Supplement with all of the EAA's and you're probably in the clear).

Christian Martinez

*Certified Personal Training Specialist
and Nutrition Coach*

BA, PTS, PN1, NASM VCS



References

Wolfe, R.R. Branched-chain amino acids and muscle protein synthesis in humans: myth or reality?. *J Int Soc Sports Nutr* 14, 30 (2017).

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