

**Are you just getting back into an exercise routine? Are you in good shape but want to push yourself to a higher physical fitness level? Here are excerpts (with my comments in italics) from a recent interview about 5 different supplements that may be just what you need to push your fitness to the next level.**

**Below are listed 5 supplements; tell if you think it is worth taking, why, and at what dose.**

**Dr. Wilson:**

**1. HMB (*hmb is a metabolite of Leucine and is very anabolic*)**

HMB works by speeding repair of damaged muscle, increasing fat loss and preventing muscle loss during extreme dieting, aerobic exercise, and aging. HMB consistently works in non-athletes because it's easy to damage their muscles. Studies in athletes using HIGH INTENSITY / HIGH VOLUME training show increases in muscle size and strength. Studies in athletes with inadequate training programs don't work for obvious reasons. So if you are untrained use it. If you are an athlete and your training program is legitimate and periodized, then I recommend it. For muscle mass, take at least 3 grams. For fat loss, WE DON'T KNOW the ideal dose, but 3-6 grams does work.

**2. EAAs (*stands for essential amino acids – branch chains are included*)**

The EAAs determine overall "protein quality." In fact, research shows that the EAAs alone stimulate as much protein synthesis (muscle building) as a whole protein. Diets low in EAAs result in lower gains in muscle mass and strength than diets high in EAAs. Supplementing with EAAs may be beneficial. One study by Paddon-Jones et al. found supplementing with an EAA supplement in between meals drastically increased protein synthesis throughout a day. I'd recommend 10-15 grams per serving. Foods highest in EAAs are meat, egg, and dairy products. Selection of these food choices (*along with Pro BCAA or XTR*) will result in greater gains.

**3. Leucine**

Leucine is the king of amino acids. In fact of the EAAs, leucine seems to be the actual TRIGGER for protein synthesis. My brother, Gabriel Wilson, and colleague, Layne Norton, have shown that choosing foods higher in leucine results in greater muscle mass. Two to three grams of leucine maximize protein synthesis. Meats contain about 8 % leucine, eggs about 9 %, and dairy about 10-12%. Athletes can base protein consumed each meal on its leucine content. For example whey (11 % leucine) and chicken (7.5 % leucine) would require about 18-26 and 27-35 grams, respectively, to maximize protein synthesis. (*Once again PRO BCAA or XTR contains Leucine and we also have straight Leucine powder as well- Leucine should not be taken by itself. It should be combined with other protein sources or if in a BCAA combination the studies show a 2:1:1 ratio is beneficial*)

#### 4. Glutamine

Glutamine is the most abundant free amino acid in our body. ***(60% of muscle tissue is made of Glutamine)*** Individuals who train ALL OUT (not those who bring cell phones to the gym and never squat) may benefit from it. Glutamine has been shown to decrease the incidence of reported infections and protects white blood cells (our immune cells) following exhaustive exercise. Additionally glutamine has been shown to increase muscle carbohydrate stores. Twenty-five grams a day during intense training cycles or when low carb dieting may be efficacious. ***(A superior form of glutamine is Glutamatrix. It contains L-glutamine, acyl-L-Glutamine and also glutamine peptides. This matrix will provide best absorption and therefore more benefit to broken down muscle tissue. )***

#### 5. Taurine

The finding that taurine levels decrease during exercise has led sports nutrition scientists to study the amino acid. Taurine may protect muscle against exercise induced DNA damage and protein breakdown. Moreover Dr. Zhang et al. found that 7 days of taurine supplementation increased V02max and prolonged time to exhaustion while cycling. While Jay Hoffman found a taurine containing supplement-increased resistance training performance, it is unclear what its effects are alone. However, we do know that taurine increases force of isolated muscle fibers. Although the optimal dose is unknown, 6 grams a day has been effective. ***(We have pure powdered Taurine that you can add to your pre or post shakes)***

Interview conducted by the ISSN  
**Dr. Jacob Wilson, Ph.D.**

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***We have all of these supplements (and more) available at Max Muscle Quad Cities stores and can help you apply them to your current workout strategy. If you are new to exercising regularly OR if you are stepping up your program OR if you are one of our elite athletes, come on in and see if we can help you step up your game with these nutritional tips. Many products may list some of these on the label, however, most of the time there is not enough to reach “therapeutic” levels. It is important to get the proper amounts at the proper times so you receive the benefits. Let us know what you are currently taking and we will tailor our recommendations to meet your current goals and supplement strategy.***

Sincerely,  
Scott Herkes – Owner – Max Muscle Quad Cities stores  
Certified Sports Nutrition Coach