

UNDER THE MICROSCOPE

TAKING A PURELY SCIENTIFIC LOOK AT THE BEST PRODUCTS IN THE WORLD OF SPORTS SUPPLEMENTS

BY JIM STOPPANI

We examine the critical active ingredients in various sports supplements. We award high marks to those with existing supportive data, real-world results and innovation in formulation. Here we put the ultimate all-in-one power formula **MUSCLEFORM V-MASS™ XTREME** under the microscope.

HIGH-QUALITY PROTEIN BLEND

consisting of whey protein isolate, soy protein isolate and milk protein provides a multitude of benefits from a multitude of protein sources. Whey protein isolate provides V-Mass™ Xtreme a fast-digesting protein source that will get its amino acids to your muscles in a hurry to quickly stimulate muscle protein synthesis. Whey is also rich in branched-chain amino acids (BCAAs), which further enhance muscle protein synthesis and therefore muscle growth. While soy protein isolate is also fairly fast digesting, it's real benefits come from the fact that it has been shown to boost nitric oxide levels, increase growth hormone release, and aid muscle recovery following workouts. And if there is still any doubt about its effects on testosterone and oestrogen levels, let us confirm that the latest research concludes that soya does NOT decrease

testosterone or raise oestrogen levels in men. Milk protein is 80% casein and 20% whey. This means it supplies a good dose of the very slow-digesting protein casein. Its slow digestion rate has been shown to decrease muscle breakdown and keep muscle protein synthesis turned on for longer.

Research confirms that when you combine casein with whey, especially around workouts, muscle growth is significantly greater than just whey alone.

GRADE: ★★★★★

REASON: Combining these three protein sources creates the most anabolic protein that you can take. Research concludes that combining proteins before and after workouts produces the best gains in muscle hypertrophy and strength.

HIGH-QUALITY CARBOHYDRATE BLEND

that includes complex carbohydrates, such as waxy maize starch and maltodextrin, as well as the simple carbohydrate dextrose, not only provides an energy source, but is also important for stimulating muscle growth. Although protein provides the building blocks for muscle, carbohydrates also play a critical role in building muscle. For starters, muscles must have ample levels of glycogen,

the storage form of carbohydrates, before muscle cells will expend energy on building muscle. Glycogen also acts to pull water into the muscle cell, which increases the volume of the muscle cell. The greater volume places a stretch on the muscle cell membrane and that instigates the process of muscle protein synthesis, which leads to long-term muscle growth. And around workouts, getting in a good dose of carbohydrates, such as that in V-Mass™ Xtreme, will aid recovery and boost muscle growth by replenishing the depleted muscle glycogen levels and spiking insulin. Insulin is an anabolic hormone that not only pushes more glucose and amino acids into the muscle cells, but also kickstarts the process of muscle protein synthesis.

GRADE: ★★★★★

REASON: A variety of carb sources has been shown to be the best way to optimise muscle recovery and muscle growth.

L-GLUTAMINE may be categorised as a nonessential amino acid, but it is essential for anyone who work outs. Having ample glutamine levels in muscle helps to maintain higher levels of branched-chain amino acids (BCAAs), which are the most critical for muscle growth. Research also shows that glutamine boosts growth hormone levels, which further enhances muscle growth and strength. It has even been found to increase calorie expenditure during exercise and at rest to help encourage fat loss. In addition to all this, glutamine is used as a major energy source by the immune system. It helps to keep the immune system functioning optimally, which helps to prevent you from getting sick and missing workouts. Clinical research has discovered that those who regularly workout have depleted levels of glutamine, making them more susceptible to colds and illnesses, as well as compromised

muscle recovery. That is why it is critical for those who train to supplement with glutamine.

GRADE: ★★★★★

REASON: Glutamine is a well-researched amino acid with confirmed benefits for muscle growth, health, and fat loss. Getting glutamine in an all-in-one formula such as V-Mass™ Xtreme is an easy way to ensure that you are not compromising your recovery and ability to build muscle and strength.

D-RIBOSE is actually a sugar, but not the kind of sugar that you normally think of. This is a sugar that makes up the backbone of Ribonucleic Acid (RNA), which is critical for muscle protein synthesis, and makes up part of the adenosine triphosphate (ATP) molecule. ATP is the energy currency that all cells use. It is absolutely critical for muscle contractions, such as during workouts. Therefore, it makes sense that to make adequate amounts of ATP for energy during workouts, you need to have plenty of ribose available. Research confirms that ribose supplementation enhances ATP production, and therefore energy levels.

GRADE: ★★★★★

REASON: Although research shows that D-ribose can enhance ATP production in muscle, not enough studies have yet confirmed that this results in improved endurance.

CREAPURE is a form of creatine monohydrate that is documented to be the purest form available. Creatine monohydrate is the most studied form of creatine on the market today. Out of the hundreds of studies done proving creatine's ability to boost muscle size and strength, as well as provide a host of health benefits, the majority of them were done using creatine monohydrate. In addition to aiding muscle growth and performance in the gym, creatine has been shown to

provide numerous health benefits, such as improved brain function, better heart health, increased life span, and even protection of the skin from sun damage.

GRADE: ★★★★★

REASON: Creatine has hundreds of research studies, as well as decades of positive anecdotal reports, confirming its effectiveness and safety.

BETA-HYDROXYBETA-METHYLBU-TYRATE (HMB)

is a supplement that came on the scene several years ago with a lot of hype. That hype was due to several studies showing that this metabolite of the amino acid leucine increased muscle growth in untrained lifters. However, HMB fell out of favour with bodybuilders when research showed that the results were less than impressive in experienced lifters. We contend that HMB is still effective even in highly trained lifters. The main way that HMB works is by decreasing muscle breakdown instigated from intense training. The research that was done in trained lifters was simply not intense enough for HMB to offer any benefit. The dosing of HMB was also likely not high enough for trained lifters. By getting a good dose of HMB in an all-in-one protein powder like V-Mass™ Xtreme, you get ample amounts of HMB throughout the day, which can benefit muscle growth, especially during periods of intense training.

GRADE: ★★★★★

REASON: Although the research on HMB is equivocal, the anecdotal reports in experienced lifters who are training intensely and taking ample amounts of HMB are very positive. **M&F**



THE RATINGS

- ★★★★★ Outstanding scientific research on humans available
- ★★★★ Solid research available; anecdotally effective
- ★★★ Not much human research available but premise is sound