

Going Beyond Muscle Building with Whey Protein

In addition to building muscle and boosting antioxidant levels in healthy people, whey protein might be the best supplement today for liver and immune health!



What is whey protein?

Whey protein is a pure, natural, high-quality protein from cow's milk. It is a rich source of all of the essential amino acids needed on a daily basis by the body. In its purest form, as whey protein isolate, it contains little to no fat, lactose, or cholesterol. Whey protein has one of the highest protein digestibility-corrected amino acid scores (PDCAAS; a measure of protein bioavailability) and is more rapidly digested than other proteins, such as casein (another milk protein).

SO MUCH MORE FROM WHEY

When you get to the topic of whey protein, you receive much more than simply increased muscle mass—for those seeking immune or liver health support in particular, the whey protein story gets especially exciting.

It's well documented that whey supplementation and proper exercise helps the body to lose fat and retain or build lean muscle. The latest study was published in the August 4, 2009, online edition of *Clinical Nutrition*, which involved patients with recent hip fractures. It showed that whey increases insulin-like growth factor (IGF-I) by nearly 30 percent in elderly hip fracture patients. IGF-I is necessary for stimulating muscle and bone growth and repair and is associated with human growth hormone levels.

WHEY BESTS SOY AND CASEIN PROTEINS IN RECENT STUDY

So many new studies have come out in support of whey protein over other protein sources. One of the

most exciting recent studies matched whey against casein and soy isolate, two other common sources of protein. Whey left its competitors in the dust.

The September 2009 *Journal of Applied Physiology* compared whey with soy and casein and found it to be far superior for muscle synthesis. The study took place at McMaster University and was designed to compare the acute response of mixed muscle protein synthesis (MPS) to rapidly absorbed protein powders both at rest and after exercise. Three groups of healthy young men performed leg resistance exercise followed by the consumption of a drink containing whey protein, casein or soy protein isolate.

The differences were enormous. Amazingly, the MPS after consumption of whey was approximately 93 percent greater than casein and approximately 18 percent greater than soy. "A similar result was observed after exercise (whey > soy > casein); MPS following whey consumption was approximately 122 percent greater than casein and 31 percent greater than soy. MPS was also greater with soy consumption at rest (64 percent) and following resistance exercise (69 percent) compared with casein."

STRENGTHENING IMMUNE HEALTH

Shoppers may not realize that whey is rich in immunoglobulins, protein molecules called bioactive peptides, that play a role in your body's immune defense. Whey has a fabulous ability to raise antioxidant activity throughout the body. This is important for all of us but especially for select population groups, as we will share in a moment.

Glutathione (GSH), one of the body's primary antioxidants, protects your liver and other organs; it also helps your white blood cells to proliferate and

to do their job. A few select supplements have been shown to elevate glutathione levels. Whey, however, might be best of all, as reported in the February 2001 issue of the *European Journal of Nutrition*, "Supplementation with whey proteins persistently increased plasma glutathione levels in patients..." In September 2007, the *International Journal of Food Science and Nutrition*, reported that among 18 healthy men and 18 healthy women over a two-week period, "Whey protein supplementation of 45 g/day for 2 weeks can increase lymphocyte GSH by 24 percent."

ATTENTION, LIVER HEALTH PATIENTS—MORE GOOD ANTIOXIDANT NEWS!

The June 2009 issue of the *Journal of Gastroenterology and Hepatology* reports that whey is critical for liver health patients. Many people have fatty inflammatory liver disease due to obesity, diabetes, environmental toxicity, alcohol abuse, or use of street and prescription drugs.

In an open-labeled clinical trial, 38 patients (18 male, 20 female) were given a daily dose of 20 grams whey protein isolate for 12 weeks. Researchers found that overall liver health improved with a significant reduction in previously elevated levels of liver enzymes coming to the conclusion, "Plasma glutathione and total antioxidant capacity increased significantly at the end of study... The results indicate that oral supplementation of cysteine-rich whey protein isolate leads to improvements in liver biochemistries, increased plasma GSH, total antioxidant capacity and reduced hepatic macrovesicular steatosis in NASH [nonalcoholic steatohepatitis] patients."

VERY GOOD FOR YOUR HEART

The July 2009 issue of *Nutrition Journal* reports whey protein is also a source of bioactive peptides and helps improve the vascular endothelial response of healthy individuals by supporting nitric oxide production, which helps to relax blood vessels. This could help people to maintain healthy blood pressure.

These great studies are just the beginning of the vast health benefits from whey. It truly is a super food. So how do you get the best?

HOW TO FIND A QUALITY WHEY SUPPLEMENT

Finding a quality whey supplement doesn't have to be difficult. Metabolic Response Modifiers (MRM) has made it their mission to produce the highest-quality supplements on earth.

First, let's look at their standards. They combine ultra-filtered, low temperature processed whey pro-

tein concentrate with crossflow microfiltered whey protein isolate. These specialized processing systems provide a High Biological Value (HBV) whey supplement in the form of short and long chain peptides to increase protein retention. Their whey is remarkably high in branched chain amino acids (BCAAs), including leucine, the most necessary for maintaining metabolic rate (energy) especially during dieting or periods in between meals. In addition, so many protein supplements either don't taste very good or use artificial flavors or sweeteners among other additives. MRM's products come by their great taste using quality, all-natural ingredients with no added sugar. They offer pure whey in vanilla and chocolate. You get to pick and choose which formulas serves your needs—and this is where their approach becomes so unique.



HERE ARE THEIR TWO LATEST:

Fruit-N-Whey™ delivers over 3,500 ORAC units per serving of natural potent antioxidants, plus BCAA-rich whey protein in a delicious mix great for the blender or shaker.

The Oxygen Radical Absorbance Capacity (ORAC) assay demonstrates the total antioxidant power of a sample, with the U.S. Department of Agriculture recommending a daily intake between 3,000 and 5,000 units.

Everyday stress, environmental pollutants, natural metabolic processes and exercise generate different types of free radicals. MRM's BeneFruit Blend combines the vitality of 10 fruits all known to be packed with an assortment of antioxidants to provide a broad spectrum of antioxidant protection.

Flax-N-Whey should also be worked into the mix because it provides both whey and omega-3 fatty acids. The key ingredient, Flax3™, contains a gently processed, solublized flax meal combined with an ultra-refined stabilized source of marine omega-3 fatty acids to deliver a robust matrix of 36 mg of EPA and DHA combined with 540 mg of ALA from flax per serving. Flax3 contains large amounts of phytoestrogens, known as lignans, which provide tremendous estrogen balancing support. This is a great supplement since everyone should be obtaining omega-3s from both marine and terrestrial sources such as flax.

Making whey protein part of your diet is a great way to maintain your overall antioxidant levels and health while building lean muscle and maintaining good circulatory and heart function—all of this from a most amazing supplement. ■

Resources

All MRM formulas are available at health food stores, natural product supermarkets, and from natural pharmacies. To find a store near you or for more information, please call 1-800-948-6296, or visit www.mrm-usa.com.