

Are you trying to lose weight or build more muscle—or do both? Are you trying to help shift your body's fat-to-lean muscle ratio? How about going through chemotherapy? Indeed, if you answered yes to any of these questions, you are definitely a candidate for a quality protein supplement.

## RESEARCH SHEDS LIGHT ON Why Protein-rich Diets Aid Weight Loss

It's true that as people age and sometimes even lose weight, their body composition shifts from muscle to fat—but it doesn't have to be this way. The right intake of quality protein can shift this balance back in favor of building muscle. In addition, research from the University of Illinois shows that a moderately high protein diet may be best for losing weight. One of the very best protein sources today is whey. In fact, the more we learn about this amazing protein source obtained from dairy, the more excited we have become over its prospects for maintaining healthy weight and musculature for everybody—from athletes to weekend warriors and even senior citizens.



a placebo beverage 20 minutes before breakfast and 20 minutes before dinner. Both groups lost a significant amount of weight. But the whey fraction group “lost significantly more body fat and showed a greater preservation of lean muscle compared to subjects consuming the control beverage....The results have practical significance.”

Indeed, these findings are confirmed by the clinical work of researcher Donald K. Layman, professor of nutrition in the Department of Food Science and Human Nutrition at the University of Illinois at Urbana-Champaign (and published in the February 2003 issue of the *Journal of Nutrition*). His team's findings suggest that eating more high-quality protein will increase the amount of leucine in the diet, helping a person maintain muscle mass and reduce body fat during weight loss. Maintaining muscle during weight loss efforts is essential because it helps the body burn more calories. Whey protein, by the way, contains more leucine than milk, egg, or soy protein.

In Layman's study, both diet groups lost a similar amount of weight, about 16 pounds, but the leucine-rich group lost more body fat and less muscle mass than the control group. Those who followed the high-protein diet lost two pounds more of body fat, yet maintained one pound more muscle mass than the control group.

### THE WHEY TO LOSE WEIGHT

*Don't think just any protein source will do.*

#### A WHEY OF LIFE

Consider the following health headline from the March 2008 online issue of *Nutrition & Metabolism*: “A whey-protein supplement increases fat loss and spares lean muscle in obese subjects: a randomized human clinical study.”

A whey fraction high in the essential amino acid leucine (which must be obtained from dietary sources), bioactive peptides and milk calcium was used as a dietary supplement to enhance weight loss. Subjects were put on a low-calorie diet and consumed the whey fraction or

Whey might be even better than meat protein. A June 2004 study from the *Journal of Nutrition* showed that whey protein is more effective than red meat in reducing body weight gain and—for anybody with blood sugar imbalances—increasing insulin sensitivity. Researchers from Australia's University of Adelaide and the Commonwealth Scientific and Industrial Research Organization (also based in Adelaide) put obese rats on high-protein diets emphasizing either whey protein concentrate or red meat for six weeks. The high dietary protein from either diet in fact reduced energy intake and visceral, subcutaneous and carcass fat; however, increasing the dietary density of whey protein, but not of red meat, reduced body weight gain by 4 percent and plasma insulin concentration by 40 percent. The whey-based diet increased insulin sensitivity compared to meat protein.

Whey protein also contains two unique bioactive peptides that, in turn, stimulate release of two appetite-suppressing hormones: cholecystokinin

(CCK) and glucagon-like peptide-1 (GLP-1). Studies support the notion that whey protein provides greater dietary satiety than casein, the other dairy protein. Anybody for a whey protein shake to quell midday munchies?

Studies show that achieving and maintaining a healthy weight can add years to your life and help prevent weight-related complications, including diabetes, cancer, and heart disease. Diet plays a key role in any weight-management program, and adding a quality protein often helps make a positive difference.

Why are we talking about protein supplements? Well, once past age 35 to 40, the body has a tendency to replace muscle with fat. The right protein supplement can help improve lean muscle-to-fat ratio, and we've discovered some of the best, most natural and synthetic-free products today, thanks to Metabolic Response Modifiers (MRM).

All Natural Whey from MRM represents a whole new genre of protein that holds the very highest biological value, meaning it rates number one in digestion, absorption, utilization, and retention. All Natural Whey is also highly concentrated in essential amino acids, half of which are "branched chain" amino acids (BCAA). All Natural Whey can benefit those with a wide variety of health concerns ranging from the exceptionally healthy athlete, to those trying to maintain lean muscle mass. All Natural Whey is also fortified with L-glutamine, which has been shown clinically to naturally stimulate the release of growth hormones and act as a building block for one of



the body's most important water-soluble antioxidants, glutathione. One reason MRM's All Natural Whey and Egg White Protein are the leading brands today in the country is that they are truly all natural and not filled with the additives, preservatives, artificial flavorings and sweeteners that you will find in some of the warehouse box stores and as sold by the mass market, inferior-quality discounters. ■

## Resources

MRM's cutting-edge supplements are available nationwide at health food stores and natural product supermarkets. MRM is one of the top nutrition companies, recognized for combining value and quality. For more information or to find a store near you, call 800-948-6296, or visit at [www.mrm-usa.com](http://www.mrm-usa.com).

## Three Essential Food Categories with Optimal Ingredients

**PROTEIN** MRM's unique protein complex provides all the essential amino acids to enhance lean muscle growth. Natural Protein Optimizer™ is a special combination of ultra-filtered, low-temperature-processed whey protein concentrate, calcium caseinate, and egg white protein concentrate. Natural Protein Optimizer provides optimal amounts of essential amino acids that growing muscles crave, especially BCAAs, glutamine and arginine. MRM emphasizes the amount of protein per serving since it is the most prominent macronutrient proven to increase lean muscle mass.

**CARBS** All Natural Gainer contains a unique carbohydrate complex consisting of glucose polymers (95 percent sugar-free) and "low glycemic index" fructose. This preferable combination of carbohydrates provides calories that are less prone to increase "body fat" while offering a long-lasting source of energy. Additionally, MRM has added trehalose, an even slower-release energy substrate that renders little to no effect on insulin with maximum effect on energy and minimal fat storage.

**FATS** Although fat is a highly concentrated source of energy (double that of protein and carbohydrates), MRM's Opti-Fat™ blend was precisely chosen for its ability to be metabolized quickly for energy while offering unique benefits to the heart and cell membrane. Opti-Fat is an all-natural fat complex that includes medium-chain triglycerides (MCTs), sunflower oil and omega-3 fatty acids docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA). MCTs are well known for their ability to be metabolized quickly into energy, sparing protein for building lean tissue. DHA and EPA are long-chain omega-3 fatty acids which are mostly deficient in the standard American diet. DHA, specifically, has been widely acclaimed for its structural benefits in brain development and cognition during adolescence and maintaining mental acuity in the elderly.

So if you need to add calories to your daily diet, be sure to use All Natural Gainer. It's free from artificial sweeteners, colors and additives, and has an extremely low-glycemic value for diabetics.



## What About Incredible Egg Whites?

Many nutrition experts recommend that you change up your protein sources. In addition, some people must use non-dairy protein. In such cases, try egg white protein, especially the new superior-tasting and mixing MRM formula.

Egg white is among the most valuable protein sources because of its combination of essential amino acids and sulfur-containing proteins, all of which can be used by the body for natural, healthy muscle maintenance. In addition, egg whites are high in protein and contain no cholesterol, fats, or carbohydrates. Egg white protein is really quite amazing.

Egg is the largest biological cell known which originates from one cell division and is composed of various important chemical substances that form the basis of life. Eggs are an important source of nutrients, contain-

ing all of the proteins, lipids, vitamins, minerals and growth factors required by the developing embryo, as well as a number of defense factors to protect against bacterial and viral infection. Several biological activities have now been associated with egg components, including novel antimicrobial activities, anti-adhesive properties, immunomodulatory, anti-cancer, and anti-hypertensive activities, and antioxidant properties. According to the American Egg Board site, "Eggs provide the highest quality protein found in any food because they provide all of the essential amino acids our bodies need in a near-perfect pattern....The high-quality protein in eggs helps you to feel full longer and stay energized, which contributes to maintaining a



healthy weight. In fact, research shows that eggs eaten at the start of the day can reduce daily calorie intake, prevent snacking between meals and keep you satisfied on those busy days when mealtime is delayed."

Research indicates that high-quality protein may help active adults build muscle strength and middle-aged and aging adults prevent muscle loss. Consuming eggs following exercise is a great way to get the most benefits from exercise by encouraging muscle tissue repair and growth.

MRM's All Natural Egg White Protein is very low in sodium, rich in potassium, and probably the best-tasting egg white protein source today.