

*[NOTE: Some sentiments contained within "What We're Reading" articles may not strictly conform with Simple Again's nutritional outlook. We read articles containing opposing information all the time and derive our nutritional philosophies from the latest science, the opinions of experts worldwide and our anecdotal experiences in the field. We keep an open mind and a strong affinity for fact-based evidence to help make the world of nutrition "Simple Again" for you.]*

## 10 Evidence-Based Health Benefits of Whey Protein



Whey protein is among the best studied supplements in the world, and for good reason. It has a very high nutritional value, and scientific studies have revealed numerous health benefits. Here are 10 health benefits of whey protein that are supported by human studies.

### 1. Whey is an Excellent Source of High-Quality Protein

Whey protein is the protein fraction of whey, which is a liquid that separates from milk during cheese production. It is a complete, high-quality protein, containing all of the essential amino acids. In addition, it is very digestible, absorbed from the gut quickly compared to other types of protein.

These qualities make it one of the best dietary sources of protein available. There are three main types of whey protein powder, concentrate (WPC), isolate (WPI), and hydrolysate (WPH). Concentrate is the most common type, and is also the cheapest. As a dietary supplement, whey protein is widely popular among bodybuilders, athletes, and others who want additional protein in their diet.

### 2. Whey Protein Promotes Muscle Growth

Muscle mass naturally declines with age. This usually leads to fat gain and raises the risk of many chronic diseases. However, this adverse change in body composition can be partly slowed, prevented, or reversed with a combination of strength training and adequate diet. Strength training coupled with the consumption of high-protein foods or protein supplements has been shown to be an effective preventive strategy. Particularly effective are high-quality protein sources, such as whey, which is rich in a branched-chain amino acid called leucine. Leucine is the most growth-promoting (anabolic) of the amino acids. For this reason, whey protein is effective for the prevention of age-related muscle loss, as well as for improved strength and a better-looking body. For muscle growth, whey protein has been shown to be slightly better compared to other types of protein, such as casein or soy. However, unless your diet is already lacking in protein, supplements probably won't make a big difference.

### **3. Whey Protein May Lower Blood Pressure**

Abnormally high blood pressure (hypertension) is one of the leading risk factors for heart disease. Numerous studies have linked the consumption of dairy products with reduced blood pressure. This effect has been attributed to a family of bioactive peptides in dairy, so-called “angiotensin-converting-enzyme inhibitors” (ACE-inhibitors). In whey proteins, the ACE-inhibitors are called lactokinins. Several animal studies have demonstrated their beneficial effects on blood pressure. A limited number of human studies have investigated the effect of whey proteins on blood pressure, and many experts consider the evidence to be inconclusive.

One study in overweight individuals showed that whey protein supplementation, 54 g/day for 12 weeks, lowered systolic blood pressure by 4%. Other milk proteins (casein) had similar effects. This is supported by another study that found significant effects when participants were given whey protein concentrate (22 g/day) for 6 weeks. However, blood pressure decreased only in those that had high or slightly elevated blood pressure to begin with. No significant effects on blood pressure were detected in a study that used much lower amounts of whey protein (less than 3.25 g/day) mixed in a milk drink.

### **4. Whey Protein May Help Treat Type 2 Diabetes**

Type 2 diabetes is a chronic disease characterized by high blood sugar and impaired function of insulin. Insulin is a hormone that is supposed to stimulate the uptake of blood sugar into cells, keeping it within healthy limits. Whey protein has been found to be effective at moderating blood sugar, increasing both the levels of insulin and the sensitivity to its effects. When compared with other sources of protein, such as egg white or fish, whey protein seems to have the upper hand. These properties of whey protein may even be comparable to those of diabetic drugs, such as sulfonylurea. As a result, whey protein can be effectively used as a supplementary treatment for type 2 diabetes. Taking a whey protein supplement before or with a high-carb meal has been shown to moderate blood sugar in both healthy people and type 2 diabetics.

### **5. Whey Protein May Help Reduce Inflammation**

Inflammation is part of the body’s response to damage. Short-term inflammation is beneficial, but under certain circumstances it may become chronic. Chronic inflammation can be harmful, and is a risk factor for many diseases. It may reflect underlying health problems or bad lifestyle habits. A large review study found that high doses of whey protein supplements significantly reduced C-reactive protein (CRP), a key marker of inflammation in the body.

### **6. Whey Protein May Be Beneficial for Inflammatory Bowel Disease**

Inflammatory bowel disease is a condition characterized by chronic inflammation in the lining of the digestive tract. It is a collective term for Crohn’s disease and ulcerative colitis. In both rodents and humans, whey protein supplementation has been found to have beneficial effects on inflammatory bowel disease. However, the available evidence is weak and further studies are needed before any strong claims can be made.

### **7. Whey Protein May Enhance the Body’s Antioxidant Defenses**

Antioxidants are substances that act against oxidation in the body, reducing oxidative stress and cutting the risk of various chronic diseases. One of the most important antioxidants in humans is glutathione. Unlike most antioxidants we get from the diet, glutathione is produced by the body. In the body, glutathione production depends on the supply of several amino acids, such as cysteine, which is sometimes of limited supply. For this

reason, high-cysteine foods, such as whey protein, may boost the body's natural antioxidant defenses. A number of studies in both humans and rodents have found that whey proteins may reduce oxidative stress and increase levels of glutathione.

## **8. Whey Protein May Have Beneficial Effects on Blood Fats**

High cholesterol, especially LDL cholesterol, is a risk factor for heart disease. In one study in overweight individuals, 54 grams of whey protein per day, for 12 weeks, led to a significant reduction in total and LDL (the "bad") cholesterol. Other studies did not find similar effects on blood cholesterol, but the lack of effect might be due to differences in study design. Further studies are needed before any conclusions can be made.

## **9. Whey Protein is Highly Satiating (Filling), Which May Help Reduce Hunger**

Satiety is a term used to describe the feeling of fullness we experience after eating a meal. It is the opposite of appetite and hunger, and should suppress cravings for food and the desire to eat. Some foods are more satiating than others, an effect which is partly mediated by their macronutrient (protein, carb, fat) composition. Protein is by far the most filling of the three macronutrients. However, not all proteins have the same effect on satiety. Whey protein appears to be more satiating than other types of protein, such as casein and soy. These properties make it particularly useful for those who need to eat fewer calories and lose weight.

## **10. Whey Protein Can Help You Lose Weight**

Increased consumption of protein is a well-known weight loss strategy.

Eating more protein may promote fat loss by:

- Suppressing appetite, leading to reduced calorie intake.
- Boosting metabolism, helping you burn more calories.
- Helping to maintain muscle mass when losing weight.

Whey protein has been shown to be particularly effective, and may have a superior effect on fat burning and satiety compared to other protein types.

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