

The Benefits of Whey Protein:

Physical Performance

Whey protein has long been considered the "Gold Standard" of protein for serious athletes who work hard to develop and sustain a lean, strong and well-defined physique. Research studies support this belief. Athletes need more protein in their diet, often as much as twice the recommended daily allowance. The protein they choose makes a difference and here are several reasons why whey protein is a preferred choice for athletes of all types.

- Whey protein is a naturally complete protein, meaning that it contains all of the essential amino acids required in the daily diet. It has the ideal combination of amino acids to help improve body composition and enhance athletic performance.
- Whey protein is a rich source of branched chain amino acids (BCAAs), containing the highest known levels of any natural food source. BCAAs are important for athletes since unlike the other essential amino acids, they are metabolized directly into muscle tissue and are the first ones used during periods of exercise and resistance training. Whey protein provides the body with BCAAs to replenish depleted levels and start repairing and rebuilding lean muscle tissue.
- Whey protein is an excellent source of the essential amino acid, leucine. Leucine is important for athletes as it plays a key role in promoting muscle protein synthesis and muscle growth. Research has shown that individuals who exercise benefit from diets high in leucine and have more lean muscle tissue and less body fat compared to individuals whose diet contains lower levels of leucine. Whey protein isolate has approximately 50% more leucine than soy protein isolate.
- Whey protein is a soluble, easy to digest protein and is efficiently absorbed into the body. It is often referred to as a "fast" protein for its ability to quickly provide nourishment to muscles.
- Whey protein helps athletes maintain a healthy immune system by increasing the levels of glutathione in the body. Glutathione is an anti-oxidant required for a healthy immune system and exercise and resistance training may reduce glutathione levels. Whey protein helps keep athletes healthy and strong to perform their best.

Weight Management

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 whey protein often helps make a positive difference. Here are some of the reasons why.

- The body requires more energy to digest protein than other foods (thermic effect) and as a result you burn more calories after a protein meal.
- Whey protein isolate is pure protein with little to no fat or carbohydrates. It is a perfect complement to any low carbohydrate or low glycemic index diet plan.
- Recent studies by Dr. Donald Layman, a professor at the University of Illinois, have highlighted the role of the essential amino acid leucine in improving body composition. High quality whey protein is rich in leucine to help preserve lean muscle tissue while promoting fat loss. Whey protein contains more leucine than milk protein, egg protein and soy protein.
- Protein helps to stabilize blood glucose levels by slowing the absorption of glucose into the bloodstream. This in turn reduces hunger by lowering insulin levels and making it easier for the body to burn fat.
- Whey protein contains bioactive components that help stimulate the release of two appetite-suppressing hormones: cholecystokinin (CCK) and glucagon-like peptide-1 (GLP-1). In support of this, a new study found that whey protein had a greater impact on

satiety than casein, the other protein in milk. Adding whey protein to a mid-day snack or beverage provides healthy energy and may help control food intake at the next meal.

Cancer

Cancer patients undergoing radiation or chemotherapy often have difficulty in meeting their daily nutritional requirements due to nausea and lack of appetite. This may lead to weight loss, muscle loss and protein calorie malnutrition. Whey protein is an excellent protein choice for cancer patients as it is very easy to digest and very gentle to the system. Whey protein may be added to a wide variety of foods and beverages to increase the protein content without affecting taste.

As with serious athletes, cancer patients often have reduced glutathione levels and a weakened immune system. Numerous studies have shown that whey protein, rich in the amino acid cysteine, provides an extra boost to the immune system by raising glutathione levels. This may help reduce the risk of infection and improve the responsiveness of the immune system. In support of this, at the 2003 Annual Meeting of the American Cancer Society, research was presented showing that women with the highest levels of plasma cysteine had a 56% reduction in the risk of breast cancer compared to individuals with the lowest levels of plasma cysteine.

Whey protein has been shown through animal and in vitro studies to inhibit the growth of several types of cancer tumors. Dr. Thomas Badger, head of the Arkansas Children's Nutrition Center in Little Rock, found that feeding rats whey protein resulted in their developing 50% fewer tumors than rats fed casein. The rats fed whey protein also developed fewer tumors than rats fed soy protein and the tumors took longer to develop.

Cardiovascular Health

In 2001 heart disease was the leading cause of death in the United States for both men and women. With the average life expectancy rising each year, it becomes increasingly important to adopt a nutritious diet and regular exercise program to help maintain a healthy cardiovascular system. Whey protein should be part of that nutritious diet.

Hypertension (high blood pressure) is one of the leading causes of heart disease and stroke. Exciting new research has shown that whey protein may help in the battle against hypertension. Both human clinical and animal studies found that a hydrolyzed whey protein isolate assisted in reducing the blood pressure of borderline hypertensive individuals.

Elevated cholesterol is another factor associated with heart disease and whey protein has been shown to reduce cholesterol in a number of animal and clinical studies. Certain bioactive components in whey protein may be responsible for the cholesterol reduction however additional research is needed in this area.