

WHEY PROTEIN



Whey Protein for Active Lifestyles

Searching for a protein source that fuels a healthy, active lifestyle?

Try adding whey protein to your diet. This high-quality protein source naturally comes from dairy and provides all of the essential amino acids needed by the body.

Whey protein may benefit your lifestyle because it can help you:

- **Maintain a Healthy Weight:** A reduced calorie, higher protein diet including whey protein may improve the quality of weight loss by helping you lose more fat and/or maintain more lean muscle.^{1,2,3}
- **Curb Hunger:** Calorie for calorie, whey protein can help you feel fuller longer than carbohydrates or fats.^{4,5,6,7}
- **Get Lean:** Consuming whey protein and performing resistance exercise regularly can help build more lean muscle than resistance training alone or resistance training combined with carbohydrate consumption.^{8,9,10}
- **Enhance Recovery:** Consuming whey protein after exercise helps to build and repair muscle.^{8,11}
- **Reduce Muscle Loss:** Emerging research shows older Americans may be able to reduce the age-related decline of muscle mass by engaging in resistance training and consuming higher than the Recommended Dietary Allowance (RDA) for protein.^{12,13}

BCAA & LEUCINE CONTENT OF FOOD INGREDIENTS

	Leucine	BCAA
Whey protein isolate	14%	26%
Casein	10%	23%
Milk protein	10%	21%
Egg protein	9%	20%
Soy protein isolate	8%	18%
Wheat protein	7%	15%

Values reflect percentage of amino acids per gram of protein. Source: USDA Food Composition Tables. Modified from Layman, DK. J Nutr 2003;133:261S-67S.

Why Whey Protein?

Whey protein is one of the best sources of the branched-chain amino acid (BCAA) leucine. Leucine is unique in that it acts as a nutrient signal to initiate protein synthesis in muscle. Most amino acids are first metabolized in the liver and then the muscle tissue. However, BCAAs, like leucine, can be metabolized directly by the muscle, bypassing the liver. As a result, individuals who exercise regularly may benefit from diets higher in leucine to help speed the rebuilding of muscle after working out.^{14,15}



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Adding Whey Protein is Easy:

Whey protein can be found in many energy bars and drink mixes, and is now available in some yogurts. Look for “whey protein” (isolate, concentrate, or hydrolyzed) near the beginning of the ingredient list. Whey protein powder, which is available in a variety of flavors, can also make increasing your protein intake fast and easy.

- Add ½ - 1 scoop of whey protein powder to milk, yogurt, pudding, oatmeal, milk shakes, smoothies, or cocoa.
- Add 2 or more scoops to bread, cookie, pancake, and muffin mixes or soups, chili, mashed potatoes, pasta, eggs, meatloaf, gravies, and sauces.

How Much Protein?

Most people need at least 0.4 grams of protein for every pound of body weight to meet basic protein requirements. If you regularly engage in exercise, you may benefit from up to twice this amount.¹⁶ To find out how much protein you should be getting, visit www.nationaldairycouncil.org/wheyprotein and click on the downloadable worksheet, *Assessing Your Daily Protein Intake*.



What if I'm Sensitive to Lactose or Gluten?

- If you are sensitive to lactose (the natural sugar found in milk products), you may be able to tolerate whey protein isolate, which contains very little lactose. The amount of lactose in whey protein concentrate is higher. As always, it is important to contact the manufacturer as lactose content can vary by product.
- Whey protein does not contain gluten or wheat protein. However, whey protein bars and beverages often contain added wheat-based ingredients, so be sure to check the ingredient list.

Visit www.nationaldairycouncil.org/wheyprotein for more science, tips, meal plans, and recipes featuring whey protein.

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- ⁵ Smeets AJ, et al. Energy expenditure, satiety, and plasma ghrelin, glucagon-like peptide 1, and peptide tyrosine-tyrosine concentrations following a single high-protein lunch. *J Nutr*. 2008; 138(4): 698-702.
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- ⁷ Halton TL and Hu FB. The effects of high protein diets on thermogenesis, satiety and weight loss: A critical review. *J Am Coll Nutr*. 2004; 23: 373.
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- ⁹ Burke DG, et al. The effect of whey protein supplementation with and without creatine monohydrate combined with resistance training on lean tissue mass and muscle strength. *Int J Sport Nutr Exerc Metab*. 2001; 11(3): 349-64.
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- ¹² Paddon-Jones D, et al. Role of dietary protein in the sarcopenia of aging. *Am J Clin Nutr*. 2008; 87(suppl): 1562S-6S.
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- ¹⁴ Norton LE and Layman DK. Leucine regulates translation initiation of protein synthesis in skeletal muscle after exercise. *J Nutr*. 2006; 136: 533S-7S.
- ¹⁵ Layman DK. The role of leucine in weight loss diets and glucose homeostasis. *J Nutr*. 2003; 133: 261S-67S.
- ¹⁶ Position of the American Dietetic Association, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance. *J Am Diet Assoc*. 2009; 109: 509-27.

