

Research Round-Up: The *Incredible* Benefits of High-Quality Protein

Muscle Maintenance

Older adults gradually lose muscle mass and strength as part of the aging process. This loss of muscle, known as sarcopenia, can lead to weakness, frailty and a higher risk of falls and injury. But research suggests that getting adequate dietary protein can help prevent or slow sarcopenia. A study of older men and women found that those who ate the most protein-rich foods lost approximately 40 percent less muscle mass over three years compared to those who ate the least amount of protein.¹ Research shows that 25-30 grams of high-quality protein per meal may be optimal to maintain healthy muscles and bones for adults.^{2,3}



Better Blood Sugar Level Maintenance

High-quality protein provides steady and sustained energy because it does not cause a surge in blood sugar or insulin levels,



Weight Loss

When people on a calorie-restricted diet ate protein foods for breakfast, like eggs, they reported that their appetite was satisfied longer.⁶ Also, eating an egg breakfast versus a bagel breakfast helped dieters lose more weight.⁷ In addition, a decreased ratio of dietary carbohydrate to protein may improve blood lipid profiles during weight loss.⁸

Energy for the Day

Several studies have demonstrated the cognitive benefits of eating breakfast, such as improved memory recall time, improved grades and higher test scores.¹⁰ In a recent study, eating eggs for breakfast helped dieters feel more energetic than those who ate a bagel breakfast of equal calories.¹¹



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which can lead to a rebound effect or energy "crash" as levels drop.^{4,5}

Weight Maintenance

Following weight loss, adults who consumed diets higher in protein were better able to manage their weight than adults on a lower protein diet. In fact, the group that consumed a diet with a greater percent of total calories from protein had smaller waist circumferences and were better able to maintain weight loss.⁹

¹ Houston DK, et al. Dietary protein intake is associated with lean mass change in older, community-dwelling adults: the Health, Aging, and Body Composition (Health ABC) Study. *Am J Clin Nutr*. 2008; 87(1):150-155.

² Paddon-Jones D, Rasmussen BB: Dietary protein recommendations and the prevention of sarcopenia. *Curr Opin Clin Nutr Metab Care* 2009; 12:86-90.

³ Rasmussen BB, Tipton KD, Miller SL, Wolf SE, Wolfe RR: An oral essential amino acid-carbohydrate supplement enhances muscle protein anabolism after resistance exercise. *J Appl Physiol* 2000; 88:386-392.

⁴ Layman DK et al. Egg protein as a source of power, strength and energy. *Nutrition Today* 2009; 44(1): 43-48.

⁵ Layman DK. Protein quantity and quality at levels above RDA improves adult weight loss. *J Am Coll Nutr*. 2004(6): 6315-6365.

⁶ Leidy HJ, et al. Increased dietary protein consumed at breakfast leads to an initial and sustained feeling of fullness during energy restriction compared to other meal times. *BJN*, published online September 2, 2008.

⁷ Vander Wal JS, et al. Egg breakfast enhances weight loss. *Int J of Obesity*. 2008; 32:1545 - 1551.

⁸ Layman DK et al. A reduced ratio of dietary carbohydrate to protein improves body composition and blood lipid profiles during weight loss in adult women. *JN*. 2003; 133: 405-410.

⁹ Lejeune MPGM, et al. Additional protein intake limits weight regain after weight loss in humans. *British J Nutr*. 2005; 93:281-289.

¹⁰ Pollitt E, et al. Fasting and cognition in well- and undernourished school children: a review of three experimental studies. *AJCN*. 1998; 67:7795-7845.

¹¹ Vander Wal JS, et al. Egg breakfast enhances weight loss. *Int J of Obesity*. 2008; 32:1545 - 1551.