

The Effects of Whey Protein on Body Composition: A Meta-Analysis of Randomized Controlled Trials

A meta-analysis¹ published in the March/April 2014 issue of the *Journal of the American College of Nutrition* adds further evidence to the growing body of literature supporting the benefits of whey protein for weight maintenance and lean body mass. Through a comprehensive literature search, study authors examined the effect of whey protein—either as an addition to the diet or replacement for other calories coming from different protein sources or carbohydrates—with or without resistance exercise, on body weight and body composition in randomized controlled trials conducted in generally healthy adult study populations.

The authors concluded that the current body of literature supports the use of whey protein to improve body composition, either as a supplement combined with resistance exercise or as part of a weight-loss or weight-maintenance diet. The beneficial effects of whey protein on body composition are most pronounced when consumed along with resistance exercise and an overall healthy diet that compensates for the additional calories from supplementation.

KEY FINDINGS

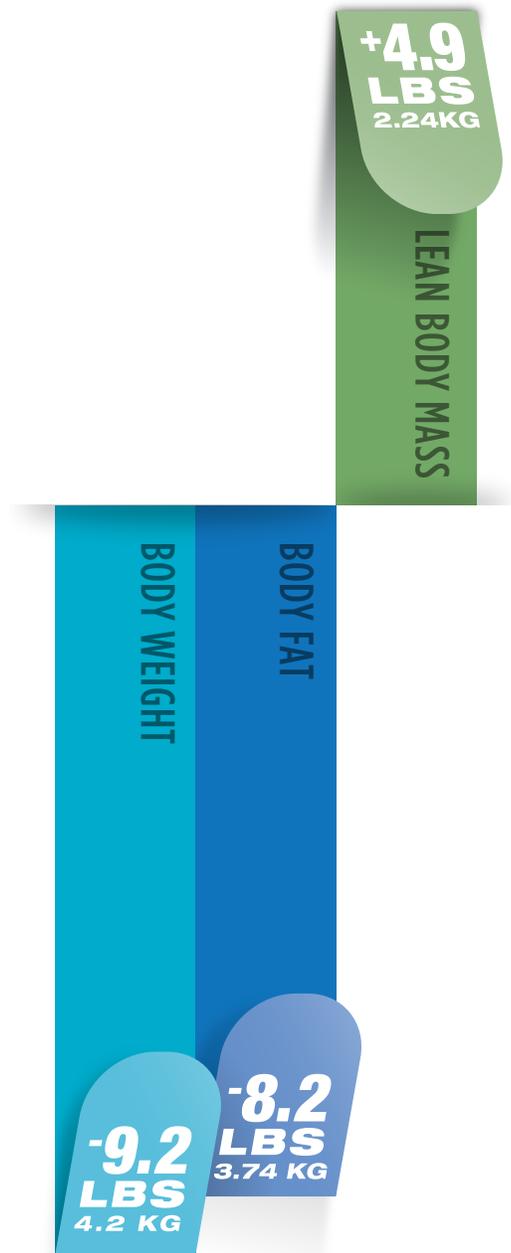
- Fourteen randomized control trials were included as part of the meta-analysis, with a total of 626 adult participants
 - Five studies examined the effects of whey protein as a replacement for other sources of calories
 - Nine studies examined the effects of whey protein as a supplement
- Collectively, the evidence from randomized controlled trials supports a modest beneficial effect of whey protein on body weight and composition, either as a supplement combined with resistance exercise or as part of a weight-loss or weight-maintenance diet.

WHEY PROTEIN AS A REPLACEMENT FOR OTHER SOURCES OF CALORIES

- When the effects of whey protein, particularly as a dietary replacement, on body weight and composition were evaluated, statistically significant decreases in body weight and body fat were observed, indicating the possible importance of utilizing whey protein as part of a meal replacement program.
- Body weight significantly decreased 4.2 kg (9.2 lbs) from baseline to trial end when whey protein iso-calorically replaced another protein source or carbohydrate.
- Body fat significantly decreased 3.74 kg (8.2 lbs) from baseline to trial end when whey protein iso-calorically replaced another protein source or carbohydrate.

WHEY PROTEIN AS A SUPPLEMENT

- When the effects of resistance exercise plus whey protein as a supplement added to the diet were evaluated, statistically significant increases in lean body mass were observed, indicating the possible importance of utilizing whey protein as part of an exercise regimen.
- Lean body mass significantly increased by 2.24 kg (4.9 lbs), on average, among studies that included a resistance exercise component along with whey protein provision.



1 Miller PE, Alexander DD, Perez V. Effects of Whey Protein on Body Composition: A Meta-Analysis of Randomized Controlled Trials. *Am J Clin Nutr.* 2014; 33 (2): 163-175.

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