

# Doubling the daily allowance of protein intake with diet and exercise protects muscle loss

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A new report appearing in the September issue of *The FASEB Journal* challenges the long-held adage that significant muscle loss is unavoidable when losing weight through exercise and diet. In the report, scientists show that consuming twice the recommended daily allowance (RDA) of protein while adhering to a diet and exercise plan prevents the loss of muscle mass and promotes fat loss. Tripling the RDA of protein, however, failed to provide additional benefits.

"It is our hope that the findings from this well-controlled study will be discussed and cited by the Institute of Medicine for the updated Dietary Reference Intakes on [protein](#)," said Stefan M. Pasiakos, Ph.D., a researcher involved in the work from the Military Nutrition Division at the U.S. Army Research Institute of Environmental Medicine in Natick, MA. "We believe that the RDA for protein should be based on a level to optimize health, as well as prevent deficiencies, and our data demonstrate a potential inadequacy of the current RDA for sparing muscle mass during weight loss, which may affect a significant portion of the population."

To make this discovery, Pasiakos and colleagues assigned young men and women controlled diets for 31 days that provided [dietary protein](#) at three different levels: 1) the U.S. RDA, 2) twice the U.S. RDA, and 3) three times the U.S. RDA. Volunteers were given adequate total calories to maintain constant body weight for the first 10 days to allow their

metabolism to adapt to the dietary [protein level](#), and then for the following three weeks, weight loss was induced by restricting the total calories and increasing daily exercise sufficiently to elicit an average two-pound weight loss per week. All meals were prepared and administered by research staff and exercise was highly controlled. Body composition and measurements of [muscle protein](#) metabolism were performed at the end of both the stable weight maintenance and weight loss phases of the study. Results of this study demonstrated that there are limits to the protective effect of extra protein. As such, these data suggest an optimal, and perhaps maximal, level of protein for young, active adults who may undergo short-term periods of intentional or unintentional weight loss.

"This study essentially confirms what body builders have shown us for a long time—a high protein diet helps prevent [muscle loss](#) when trying to lose fat," said Gerald Weissmann, M.D., Editor-in-Chief of *The FASEB Journal*. "Although eating a well balanced diet is still necessary for health and weight maintenance, upping one's protein intake when dieting might be a useful tool in the short term."

**More information:** Stefan M. Pasiakos, Jay J. Cao, Lee M. Margolis, Edward R. Sauter, Leah D. Whigham, James P. McClung, Jennifer C. Rood, John W. Carbone, Gerald F. Combs, Jr., and Andrew J. Young. Effects of high-protein diets on fat-free mass and muscle protein synthesis following weight loss: a randomized controlled trial. *FASEB J* September 2013 27:3837-3847, [DOI: 10.1096/fj.13-230227](https://doi.org/10.1096/fj.13-230227)

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