Do Men With More Muscle Need More Protein?

By ACSH Staff — August 22, 2016

Muscle requires more energy, there is no secret about it. For that reason, the same calorie intake combined with more muscle will reduce fat. 20 pounds of muscle replacing 20 pounds of fat has benefits that don’t show up on scales.

But do more of those calories need to be in protein? Bodybuilders swear by it, but is it real or a myth? Or are their requirements exceptional?

A group from Scotland’s University for Sporting Excellence found no difference in the muscle growth response to protein after a full-body resistance training workout between more muscular and smaller participants. Except when it came to specific exercises.

The study split young, resistance-trained males into two groups; those with lower lean body mass (<less than 65 kilograms) and higher lean body mass, 70 kilograms and higher. Each volunteer participated in two trials where they consumed protein after resistance exercise. In one trial participants consumed 20 grams of whey protein and in the second, they consumed 40 grams of whey protein after exercise. Scientists measured the muscle’s ability to grow at an increased rate with metabolic tracers and muscle biopsies.

Consuming 40 grams of protein after exercise was more effective at stimulating muscle growth than 20 grams across. So why the confusion?
Kevin Tipton, Professor of Sport, Health and Exercise Science in the Faculty of Health Sciences and Sport, said, “There is a widely-held assumption that larger athletes need more protein, with nutrition recommendations often given in direct relation to body mass. In our study, participants completed a bout of whole-body resistance exercise, where earlier studies - on which protein recommendations are based - examined the response to leg-only exercise. This difference suggests the amount of muscle worked in a single session has a bigger impact on the amount of protein needed afterwards, than the amount of muscle in the body.”

If you're just doing legs and weights, more protein may not matter, but if the exercise is whole-body resistance exercise, more is better.

Citation: Lindsay S. Macnaughton, Sophie L. Wardle, Oliver C. Witard, Chris McGrory, D. Lee Hamilton, Stewart Jeromson, Clare E. Lawrence, Gareth A. Wallis & Kevin D. Tipton, 'The response of muscle protein synthesis following whole-body resistance exercise is greater following 40g than 20g of ingested whey protein', Physiol Rep, 4 (15), 2016, e12893; doi: 10.14814/phy2.12893