New analysis proves protein supplements provide significant benefits for weight lifters

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Robert Morton, lead author on the study and a PhD student in the Exercise Metabolism Research Group with Stuart Phillips, professor of Kinesiology at McMaster University. Credit: McMaster University

The debate is over. Dietary protein supplements significantly improve muscle strength and size when taken by healthy adults who lift weights, a determination reached by McMaster scientists who analyzed dozens of

research studies.

But the effects are not as big as some supplement companies would have you believe, cautions the senior author on the paper, Stuart Phillips, a professor of kinesiology at McMaster University.

The study, published online in the *British Journal of Sports Medicine*, also suggests the benefits of protein supplements increase with resistance training experience but become less effective with older adults, pointing to a need for greater supplementation to reach optimal results as we age.

But there is a limit to the amount of protein that is beneficial, plateauing at roughly 1.6 grams of dietary protein per kilogram of bodyweight per day.

The study is the largest meta-analysis of its kind and researchers say the study provides clarity after conflicting results from previous studies.

"There have been mixed messages sent to clinicians, dieticians, and ultimately practitioners about the efficacy of protein supplementation," says Robert Morton, lead author on the study and a PhD student in the Exercise Metabolism Research Group at McMaster. "This meta-analysis puts that debate to rest."

Researchers combed through thousands of studies searching for specific criteria, including randomized controlled trials, human participants and study durations of at least six weeks. In all, they analyzed 49 high-quality individual studies with 1863 participants.

In addition to muscle mass and strength gains, they also found that: the effectiveness of protein supplementation during weight training is equal in women, not affected by the protein source-a whey protein supplement versus a steak, for example-nor the time of day the protein is taken, such

as at regular meal times versus post-workout. One thing the researchers noted was that with increasing age there was a reduced effectiveness of protein supplementation.

"Protein intake is critical for muscle health and there is mounting research that suggests the recommended dietary allowance, of 0.8 g protein per kg per days, is too low," says Morton. "We will see more and more research, especially as our populations age, challenging that number."

Provided by McMaster University