

Consuming protein supplements with meals may work better for weight control

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A new systematic review of available evidence appearing in *Nutrition Reviews* indicates that consuming protein supplements with meals may be more effective at promoting weight control than consuming supplements between meals in adults following a resistance training regimen.

It is well established that consuming dietary protein proximate to resistance-type exercise sessions promotes a positive net protein balance during post-exercise recovery. Protein supplements are available in ready-to-drink, powdered, and solid form and are marketed for different outcomes such as weight gain, weight loss, and weight management. However, for each outcome, the promoted timing of [protein intake](#) varies. Protein supplements designed to augment [weight gain](#) or support weight stability are promoted for consumption between meals. Protein supplements either with meals or as meal replacements are often recommended for ingestion to promote weight loss.

Consuming [protein supplements](#) between meals may decrease compensatory eating behaviors, thereby increasing energy intakes and body

weight. Conversely, adults undergoing a resistance training program and consuming protein supplements twice daily with meals may compensate for the protein supplement by decreasing their self-chosen diet. Consequently, the timing of [protein supplementation](#) may be of particular importance, depending on the desired body weight and body composition outcome.

The impact of timing the consumption of protein supplements relative to meals has not previously been evaluated systematically. In the newly published review of the literature, the researchers investigated whether the existing research studies support consuming protein supplements between meals, vs. with meals, to differentially change body composition in adults who initiate resistance training regimens.

Researchers here assessed 34 randomized controlled trials with 59 intervention groups. Of the intervention groups designated as consuming protein supplements with meals vs. between meals, 56% vs. 72% increased their body mass, 94% vs. 90% increased their lean mass, 87% vs. 59% reduced their [fat mass](#), and 100% vs. 84% increased the ratio of lean to fat mass over time, respectively.

With-meal ingestion of protein was defined as consumption of a dietary protein-rich supplement immediately after a meal, with a meal, or as a high-protein meal replacement. Between-meal ingestion of protein was defined as consumption of a dietary protein supplement predominantly either very near a workout or during another non mealtime.

The results from this systematic review provide novel information for people who choose to consume protein supplements as part of their dietary pattern to promote body mass gain or improve body composition through fat mass reduction. However, consuming protein supplements with meals, rather than between

meals, may be a more effective dietary strategy to improve [resistance training](#)-induced changes in [body composition](#) by reducing fat mass, which may be relevant for adults looking to improve their health status. Consuming protein supplements between [meals](#) may be more effective at increasing overall body mass.

More information: Joshua L Hudson et al, Effects of protein supplements consumed with meals, versus between meals, on resistance training–induced body composition changes in adults: a systematic review, *Nutrition Reviews* (2018). [DOI: 10.1093/nutrit/nuy012](https://doi.org/10.1093/nutrit/nuy012)

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