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**ACUTE EFFECTS OF ESSENTIAL AMINO ACID GEL-BASED AND WHEY PROTEIN SUPPLEMENTS ON APPETITE AND ENERGY INTAKE IN OLDER WOMEN**

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**Key points**
- Current daily protein recommendations of 0.8 g per kg of body mass are inadequate for addressing sarcopenia.
- A lack of muscle anabolic response in older people could be potentially overcome by consumption of larger amounts of protein, and/or essential amino acids (EAAs), including leucine in particular.
- Protein deficiencies tend to be larger in women than in men.
- Older individuals tend to receive only ~10 g of protein at breakfast.
- Need for consumption of at least 0.4 g per kg of body mass (i.e. ~25-30 g) of high quality protein per meal.

**Challenge:** Lack of appetite and satiating effects of protein

**Solution:** Eat more protein in a day and within a meal

**Older women (69.2 ± 2.7 years of age, body mass of 60.8 ± 7.1 kg, and height of 163.1 ± 3.0 cm) completed three trials in a randomised, crossover design.**

**Supplementation protocol**

- Participants
- Participants were randomly assigned to complete three trials in a randomised, crossover design
- Participants were instructed to consume an ad libitum (ALB) breakfast
- Participants were instructed to consume an ad libitum (ALB) breakfast plus supplements

**Results**

- Energy intake including energy from supplements and the breakfast
- Whey protein (WP), essential amino acid gel (GEL), control (CON), ad libitum breakfast (ALB), shaded area represents energy from supplements (SUPPL)
- PPY (a) and insulin (b) concentrations over the 60-minute period CON (▼), WP (●) and GEL (○). Values are mean (SEM), n=10.
- Time-averaged AUC for PPY was significantly different between trials (P<0.001), with WP higher than CON (P=0.009) and GEL (P=0.012).

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