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## Summary

Sarcopenia, the age-related loss of muscle mass and function, affects a significant portion of older adults globally. This condition leads to prolonged hospitalizations, frailty, and financial burdens for both patients and healthcare providers. High protein intake and quality are crucial in preventing and treating sarcopenia by promoting muscle growth. However, it remains unclear how plant-based proteins affect the body's metabolic pathways compared to dairy proteins.

This study investigates the anabolic responses to plant and animal protein-based meals in individuals with sarcopenia, using a stable isotope tracer approach. It aims to estimate the kinetics of essential and non-essential amino acids and guide future nutritional approaches for treating sarcopenia. We use a double-blind randomized controlled cross-over design assessing the effects of soy-based, pea-based, and whey-based protein meals. Our results will help to design optimal protein-based meals to improve the treatment and management of sarcopenia.

