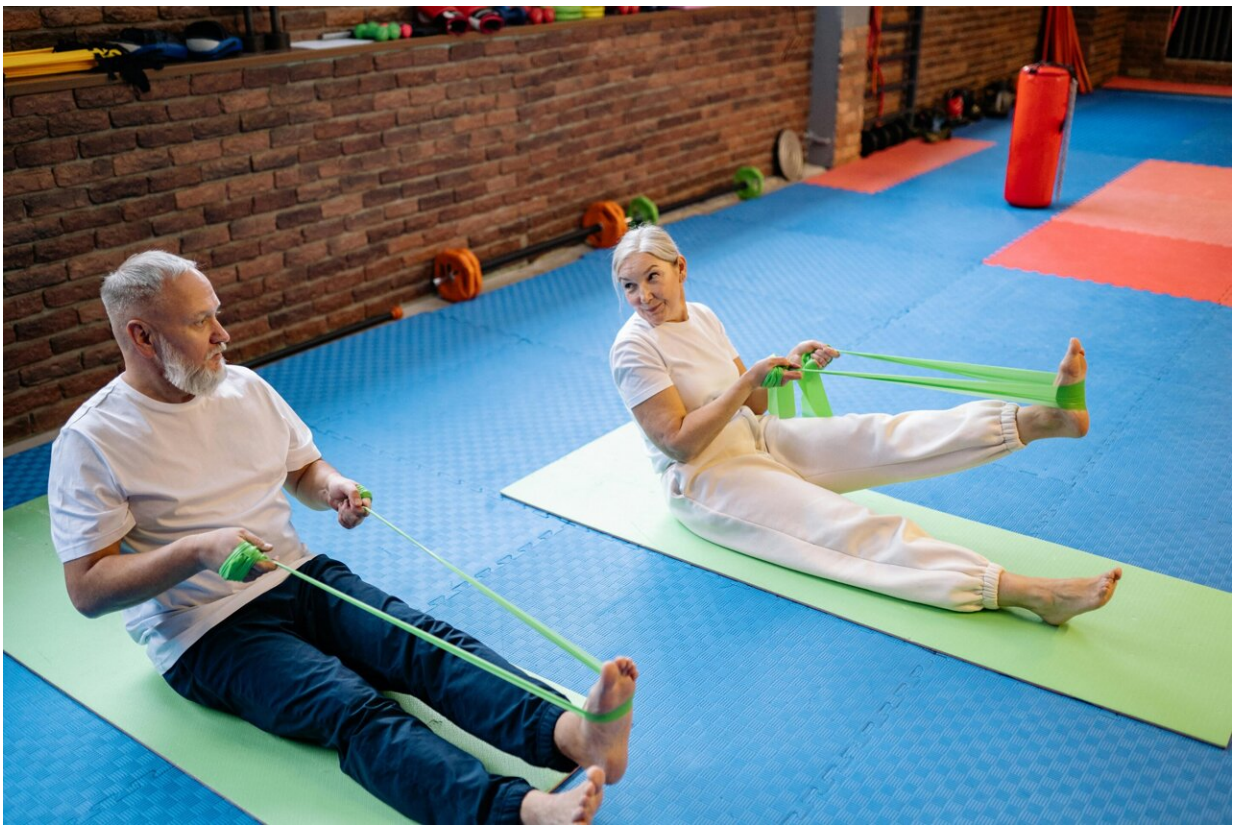
This simple muscle-saving duo may give aging bodies their best chance at staying strong

May 20 2026, by Sanjukta Mondal



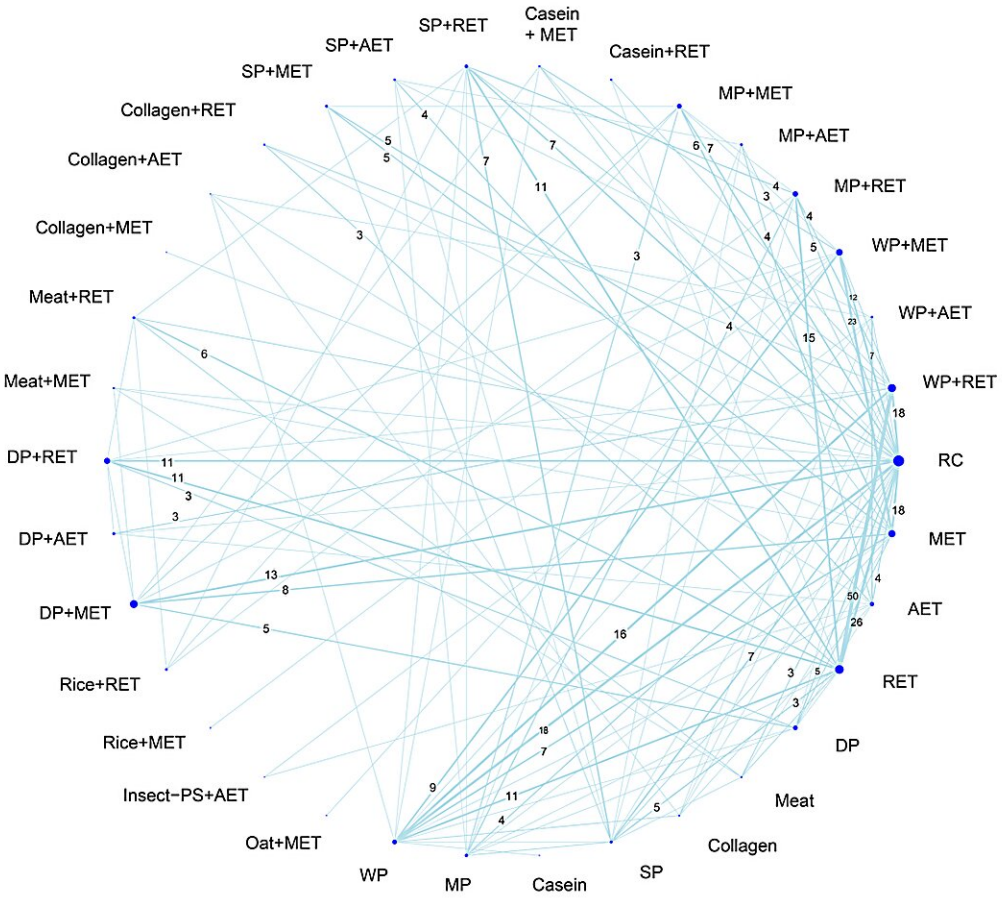
Combining protein intake with regular resistance training can help preserve mobility and muscle strength. Credit: Yan Krukau / Pexels

Watching older family members slowly grow weaker with age is

something most of us dread, but have come to accept as inevitable. While a loss of muscle strength—sarcopenia—is a natural part of aging, scientists have found that certain tweaks to diet and exercise may help improve muscle strength and mass. To figure out what works best, a recent study has reviewed a large body of existing research to identify the optimal combination of protein supplements and exercise for seniors experiencing muscle loss.

After reviewing dozens of randomized controlled trials involving over 20,000 older adults, the researchers found that including a whey protein supplement in one's diet and resistance training in one's exercise routine was the most effective regimen for increasing muscle mass and leg strength. This combination was not only good for building muscle and leg strength, but also for improving walking speed in older adults.

The findings are published in *Nutrients*.



Network evidence geometry for muscle mass outcome. Credit: *Nutrients* (2026). DOI: 10.3390/nu18091409

In search of the power couple

As the global population ages, sarcopenia-driven age-related muscle loss, affecting both muscle mass and structure, is becoming increasingly common. It is estimated that about 8% to 13% of healthy older adults are living with sarcopenia, and the numbers rise to up to 51% among those in care facilities.

Over time, this gradual decline reduces strength and mobility, increasing

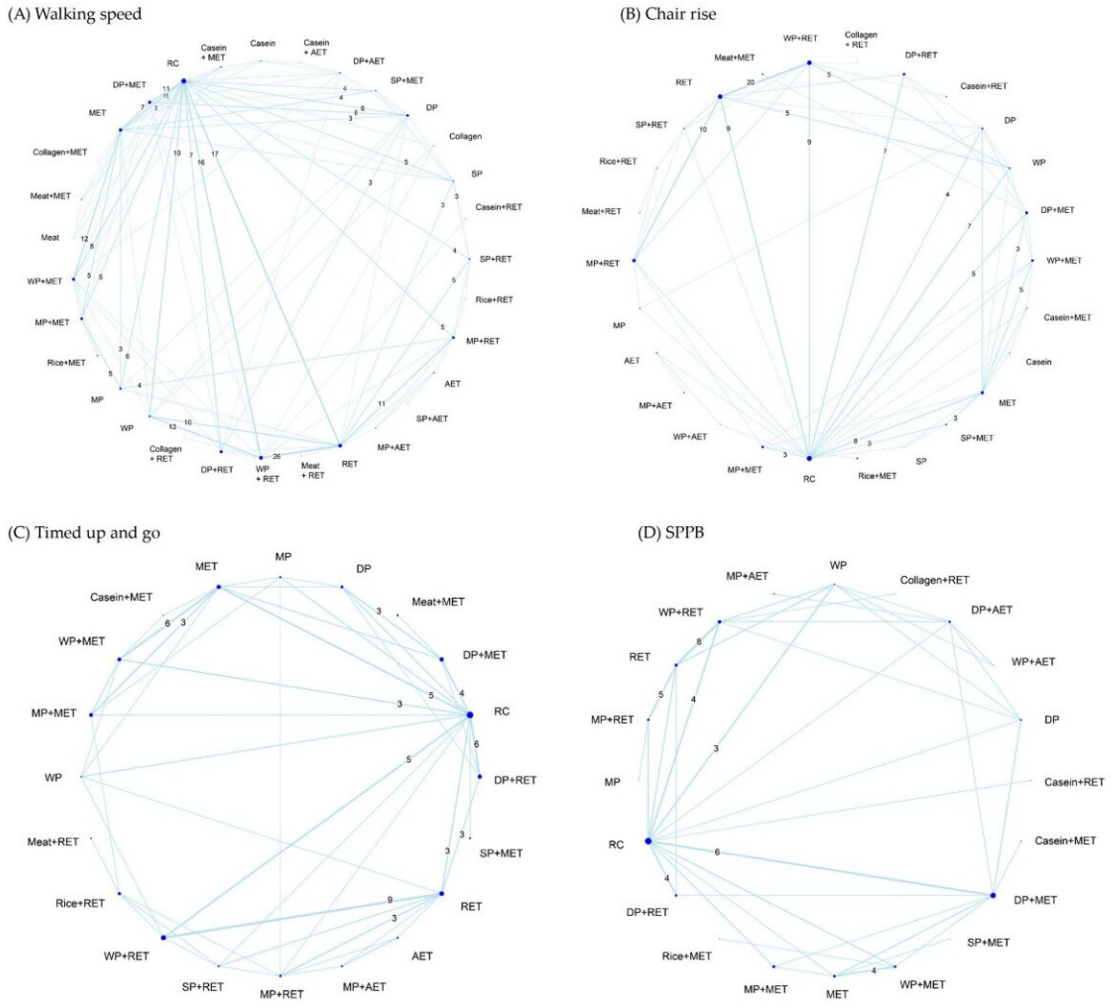
the risk of frailty and disability in older adults. Studies suggest that one key factor behind this is a reduced muscle protein synthesis response, known as myogenesis, where the body becomes less efficient at building and repairing muscle.

Every cell in our body relies on protein to function properly—whether it's carrying out essential processes, repairing damage, or building new cells. Muscle health works in a similar way. It depends on muscle turnover, which relies on how quickly and easily protein synthesis kicks in after we eat, likely influenced by both the amount of protein consumed and the type of protein source.

This study collected data from 235 high-quality clinical trials involving a total of 20,980 older adults. It compared 10 different protein sources, including whey, soy, oat, milk, collagen and meat. The findings indicated that getting enough protein acts as a key trigger for the body to build muscle.

However, not all proteins had the same effect. Animal-based proteins were generally found to be more effective for building muscle than plant-based ones. This was largely due to their higher content of leucine—an amino acid that plays a key role in stimulating muscle growth—as well as their faster digestion. Among them, whey protein stood out, supporting muscle building more effectively than other sources.

Since nutrition alone is not enough to address muscle loss, the researchers examined three main types of exercise used to treat sarcopenia in older adults: resistance training (RET), aerobic training (AET), and multicomponent training (MET). Testing various combinations of protein sources and exercise types, the researchers found that RET, using bands and weights, paired with whey protein, was the most effective for directly stimulating muscle growth and building raw strength.



Network evidence geometry for (A) walking speed, (B) chair rise, (C) timed up and go, and (D) Short Physical Performance Battery scores. Credit: *Nutrients* (2026). DOI: 10.3390/nu18091409

However, for overall mobility and daily functioning, a mixed routine combining two or more exercise types—such as weightlifting, balance training, and walking—proved to be the clear winner.

The team also found that higher protein doses and longer intervention

periods lead to better outcomes, with the effects being most prominent in men and younger seniors.

The findings make evident how small changes in diet and exercise can help address a condition that slowly robs millions of older adults of their strength and independence. Insights from this study, along with future clinical trials testing this proposed combination of protein source and exercise, could help shape clearer guidelines for preventing and treating sarcopenia in aging populations.

More information: Che-Li Lin et al, Explore the Optimal Treatment Regimen Across Combinations of Variate Protein Sources and Exercise Modalities and Its Associated Factors in Older Adults: A Network Meta-Analysis and Meta-Regression of Randomized Controlled Trials, *Nutrients* (2026). DOI: 10.3390/nu18091409

© 2026 Science X Network

Citation: This simple muscle-saving duo may give aging bodies their best chance at staying strong (2026, May 20) retrieved 16 October 2026 from https://sciencex.com/news/2026-05-simple-muscle-duo-aging-bodies.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.