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Greater Protein Intakes are Associated with Improved Body Composition in Women

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Description:

Dietary protein intake has a strong theoretical link to muscle quality. Recent literature supports increased protein intake as a method for preserving muscle mass during periods of weight loss and to slow loss of muscle with aging. As such greater protein intake throughout the lifespan may be related to better body composition through the preservation of lean body mass during aging. Quality of protein, protein timing both during the day, and at what point in the lifespan, along with key sources of protein/nutrient-dense foods will be discussed, along with a recent study conducted at NDSU.

Body composition was examined via dual-energy X-ray absorptiometry, grip strength was assessed using a hand grip dynamometer, and physical activity was measured by accelerometry. Dietary intakes were estimated via three-day food diaries.

Controlling for weight, higher grip strength, more physical activity and greater protein intake predicted higher lean mass and less body fat percentage among a sample of women. We theorize that greater protein intakes preserve lean body mass which results in improved body composition. More specifically, 1 g per day more in dietary protein is predicted to decrease body fat percentage by 0.092% when controlling for all other lifestyle factors.

Objectives:

Describe when more protein is needed during the lifespan, how much, and from what sources.
Describe the synergistic role of exercise and dietary-protein feeding to counteract sarcopenia.