

Nutrition and Exercise in Sarcopenia.

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Abstract

Sarcopenia is a debilitating condition that involves loss of muscle mass and function, which affects virtually everyone as they age, and can lead to frailty and ultimately disability. In growing recognition of the importance of both muscle strength and muscle mass relative to body size in contributing to functional decline, recent definitions have now incorporated grip strength and a correction for body mass as part of the key criteria that define sarcopenia. With this new definition, a much larger population of older adults are now at risk of sarcopenia. In the present article, we reviewed the literature for studies which tested the effects of diet or exercise interventions on changes in lean mass and/or functional outcomes in individuals with either sarcopenia and/or frailty and identified 19 clinical trials. There were a few key findings. First, dietary interventions involving protein supplementation improved functional and/or strength outcomes in a few trials; however, other dietary approaches were less effective. Exercise interventions and combined diet and exercise interventions produced consistent improvements in lower body muscle strength but had less consistent effects on walking speed and grip strength. Lifestyle interventions not involving calorie restriction generally did not induce significant changes in body composition. There were a limited number of trials in which participants with sarcopenia were specifically targeted, and thus there is an important need for more research to determine the appropriate types of intervention approaches for the high risk population of sarcopenic older adults.

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KEYWORDS: Obesity; activity; aging; fat; muscle; nutrition; protein; strength.

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