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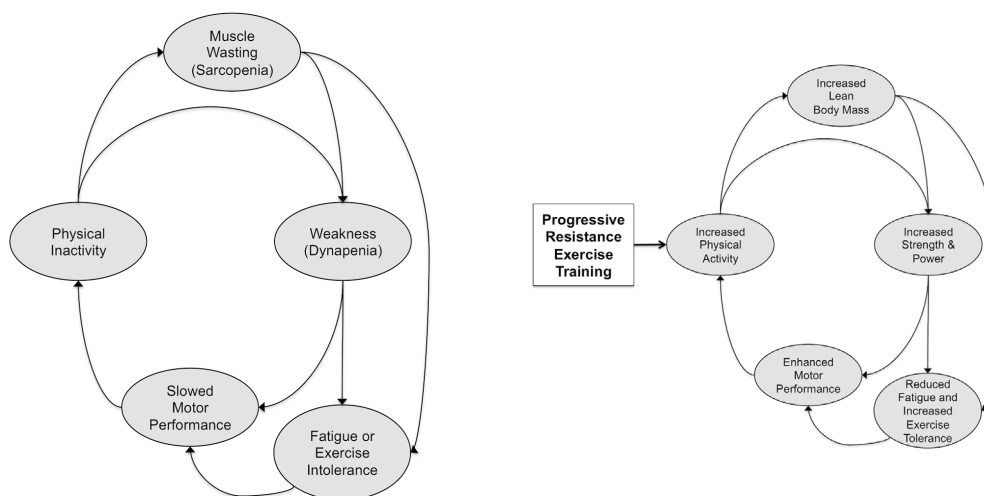
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Resistance exercise to prevent and manage sarcopenia and dynapenia

Timothy D Law, Leatha A Clark and Brian C Clark
Ohio Musculoskeletal and Neurological Institute-Ohio University, USA

For more than 20 centuries, the muscle wasting (sarcopenia) and weakness (dynapenia) that occurs with old age has been a predominant concern of mankind. Exercise has long been suggested as a treatment to combat sarcopenia and dynapenia, as it exerts effects on both the nervous and muscular systems that are critical to positive physiological and functional adaptations (e.g., enhanced muscle strength). For more than two decades, scientists have recognized the profound role that progressive resistance exercise training can have on increasing muscle strength, muscle size and functional capacity in older adults. In this review article, we discuss how resistance exercise training can be used in the management and prevention of sarcopenia and dynapenia. We first provide an overview of the evidence for this notion and highlight certain critical factors—namely exercise intensity, volume and progression—that are keys to optimize the resistance exercise prescription. We then highlight how many, if not most, of the commonly prescribed exercise programs for seniors are not the best practices, and subsequently present easy-to-read guidelines for a well-rounded resistance exercise training program designed for the management and prevention of sarcopenia and dynapenia, including example training programs for the beginner through the advanced senior resistance exerciser. These guidelines have been written for the academician as well as the student and health care provider across a variety of disciplines, including those in the long term care industry, such as wellness instructors or activity directors.



Biography

Timothy D Law is a Board Certified Physician with two decades of Clinical experience, and serves as the Medical Director of the Clinical and Translational Research Unit (CTRU) as well as Ohio Musculoskeletal and Neurological Institute (OMNI) at Ohio University and Science and Health in Artistic Performance (SHAPe) Clinic. During the first decade of his career, his primary focus was on Military Medicine and Acute Care. During the second decade of his career, he transitioned into administration as a Physician at WellPoint Inc. (the largest managed health care company in the Blue Cross and Blue Shield Association). He is a Medical Director of Acute Care for Hardin Memorial Health System (a 10-county regional hospital and health services system in Kentucky) and; CEO and practicing Physician at Vine Grove Family Medicine, PSC (primary care practice with 10,000 patients).

lawt@ohio.edu

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