Sarcopenia in older adults

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Our older Australians: worth caring for
Sarcopenia in older adults

BY TIMOTHY HENWOOD, JUSTIN KEOGH, MIKE CLIMSTEIN

Sarcopenia is a little acknowledged geriatric syndrome associated with significant health and personal burden (Janssen et al. 2004). Defined by an age associated loss in muscle mass and function (either muscle strength or physical performance), sarcopenia is a known precursor to later life disability (Cruz-Jentoft et al. 2010). Across the lifespan, an adult can expect a 35% loss in muscle size and 50% loss in muscle strength that will significantly reduce their capacity to undertake activities of daily living, and increase their risk of falls due to reduced balance capacity and core strength (Bean et al. 2002). Sarcopenia also significantly increases the loss of bone mineral density and risk from a fall. For older adults, the result of sarcopenia is loss of independence and institutionalisation. While osteoporosis and Alzheimer’s disease have received increased levels of attention, sarcopenia continues to go unrecognised as a significant debilitating geriatric syndrome. However, a number of mechanisms that lead to sarcopenia are modifiable through exercise, physical activity and nutritional regimes (Henwood et al. 2008). For nurses and clinicians, improved awareness of sarcopenia, and in particular activities that can reduce the prevalence among older clients, could have significant implications for carer and personal burden, and the associated health care expenses.

Resistance training may however be the most efficacious form of exercise as it increases muscle and bone mass, muscle strength and function better than other types of activities (Fiararone-Singh 2002).

The resistance exercises should target the primary muscles of the legs, trunk and arms and be performed for 1-3 sets of approximately 8-15 repetitions (Chodzko-Zajko et al. 2009). Initial sessions should start out at a moderate-low level of effort; with the loads lifted and difficulty of the exercises progressively increased over time (Chodzko-Zajko et al. 2009). As seen above, these exercises need not require large and expensive machines as body weight, Thera-bands (stretch cords) and dumbbells will generally be sufficient (Scott 2009).

Unfortunately, at present there does not appear to be many examples of sufficiently intense exercise programs including resistance training available in Australian aged care facilities (Ward 2011). The lack of such programs may reflect many factors including: high staff workloads; challenges in changing usual care practice; the degree of frailty of the residents; and relative lack of knowledge of staff on the benefits and risk of exercise for this population (McKenzie, Naccarella, and Thompson 2007).

We hope evidence presented in this article may encourage aged care nurses, managers and policy makers to initiate changes at the local, state and national level by liaising with clinical exercise professionals such as Exercise Sports Science Australia’s (ESSA) accredited exercise physiologists (AEP) to develop and coordinate such programs for older adults in residential aged care.

AEPs are tertiary trained, allied health care practitioners who specialise in exercise interventions for individuals both at risk and those with known pathologies (i.e. cardiopulmonary, metabolic, neuromuscular, or musculoskeletal). Skills include screening to determine the appropriateness of exercise, type(s) of exercise and exercise dose (frequency, intensity, duration). The prescription of individualised exercise interventions are based on evidence based practice/guidelines.

References


BY JUSTIN KEOGH, TIMOTHY HENWOOD AND MIKE CLIMSTEIN

Many older adults, especially those living in aged care experience a significant loss of muscle mass, and consequently decreased muscle strength and function, a process referred to as sarcopenia (Cruz-Jentoft et al. 2010).

Evidence indicates walking (MacRae et al. 1996), functional-based activity (Peri et al. 2008) and strength (resistance) training (Fiatarone-Singh 2002) are primary muscles of the legs, trunk and arms can be performed for 1-3 sets of approximately 8-15 repetitions (Chodzko-Zajko et al. 2009). Initial sessions should start out at a moderate-low level of effort; with the loads lifted and difficulty of the exercises progressively increased over time (Chodzko-Zajko et al. 2009). As seen above, these exercises need not require large and expensive machines as body weight, Thera-bands (stretch cords) and dumbbells will generally be sufficient (Scott 2009).

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