Muscle mass and physical function in ageing: the effects of physical activity and healthy diet

av

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Akademisk avhandling

Avhandling för medicine doktorsexamen i idrottsvetenskap inriktning fysiologi/medicin, som kommer att försvaras offentligt fredag den 17 april 2020 kl. 13.15, Hörsal G, Örebro universitet, Örebro

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Abstract


Ageing is associated with a gradual deterioration in physical function, accompanied by a decrease in muscle mass, leading to loss of independency. In this respect, physical activity and healthy diet represent key lifestyle factors with potential to delay onset of age-related physical disability. The overall aim of the present thesis was to explore the effects of physical activity behaviours in general and resistance training (RT) in particular, with or without addition of a healthy diet (HD), on muscle mass and physical function in older community-dwelling women. A main finding was that physical activity of at least moderate intensity at old age infers beneficial effects on physical function, even in individuals with a previously sedentary lifestyle. Additionally, engagement in exercise-related activities during middle age years is linked to better physical function and higher muscle mass at old age, regardless of present physical activity level. This thesis further highlights that in older women RT combined with HD rich in omega-3 polyunsaturated fatty acids elicits significant gains in muscle mass, whereas no corresponding gain was induced by RT alone. Likewise, larger improvements in muscle strength and physical function were evident in response to combined effects by RT and HD compared to RT alone. Taken together, findings from this thesis support public health efforts aiming to promote physical activity of at least moderate intensity together with a healthy diet rich in omega-3 polyunsaturated fatty acids in order to combat age-related decline in muscle mass and physical function.

Keywords: Healthy ageing, Sarcopenia, Dynapenia, Functional capacity, Resistance training, Omega-3 fatty acids, Muscle mass, Body fat

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