ANATOMY & PHYSIOTHERAPY
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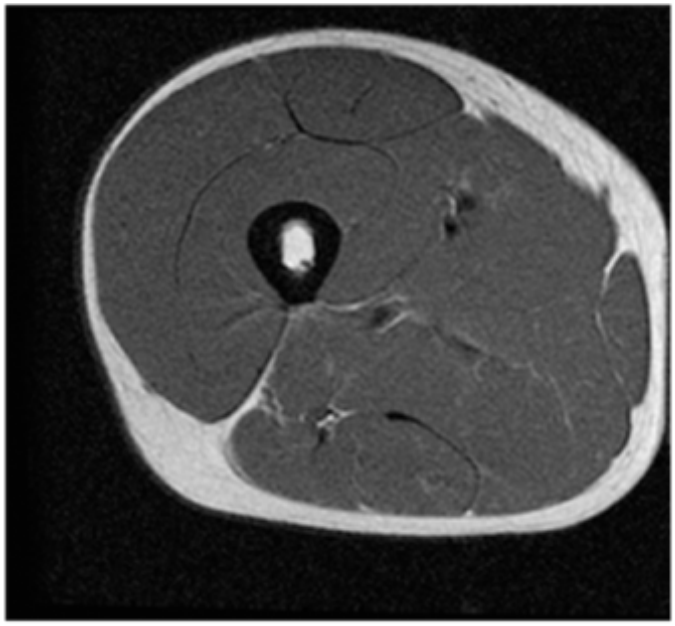

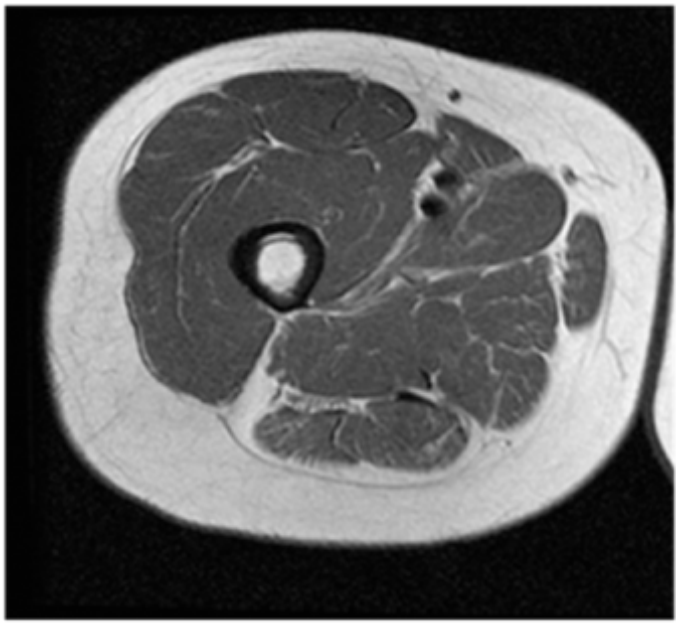

Aging & Chronic Diseases

Sarcopenia and physical activity

...a meta-analysis investigating the protective ability of physical activity against sarcopenia

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Although diseases related to the aging process are problematic themselves, they rarely occur in isolation and the effects of one may spark the onset of another.

As such ailments progress, the importance of physical activity (PA) remains high, with previous research confirming that regular PA is essential for healthy aging. Specifically, PA plays a substantial role in lowering the risk of cardiac and vascular diseases, obesity, type 2 diabetes, osteoporosis, osteoarthritis, and COPD.

Although PA may have an indirect impact on some health aspects, it has a direct impact on muscle quality and quantity. Sarcopenia is the progressive decrease in muscle mass and strength during aging, assessed by bio-impedance, CT/MRI, DXA scan, and clinically by gait speed, grip strength and mid-upper arm muscle circumference.

Physical inactivity induces sarcopenia, and physical training has been shown to increase muscle mass and -strength even in old age. Resistance training is generally considered to be the best countermeasure for preventing sarcopenia.

Sarcopenia diagnostics were based on body composition measurements. Participants were between the ages of 60 to 106, living in the community (23 articles), nursing home (1) and hospital (1).

PA was mostly quantified using a self-report questionnaire and included regular housework, gardening, occupational activity involving the carrying of light or heavy objects. Leisure included walking, slow swimming, playing doubles tennis, volleyball, and vigorous exercise such as running, climbing, fast cycling, fast swimming, football, basketball, rope jumping, squash, and singles tennis.

The effect of PA (OR 0,46 for males, 0,65 for females, 95% CI) was significant and increased with intensity of and duration of exercise. The effect was stronger for males, and PA reduced the risk of developing sarcopenia with 50%.

The results support the recommendation of the American College of Sports Medicine (ACSM) and the American Heart Association (AHA) that regular PA, including occupational activity, aerobic sport activity, and muscle-strengthening activity, is essential for healthy aging.

Future research should focus on the desired minimum intensity (in METs), the role of exercise and body composition earlier in life and the most effective types of exercise.