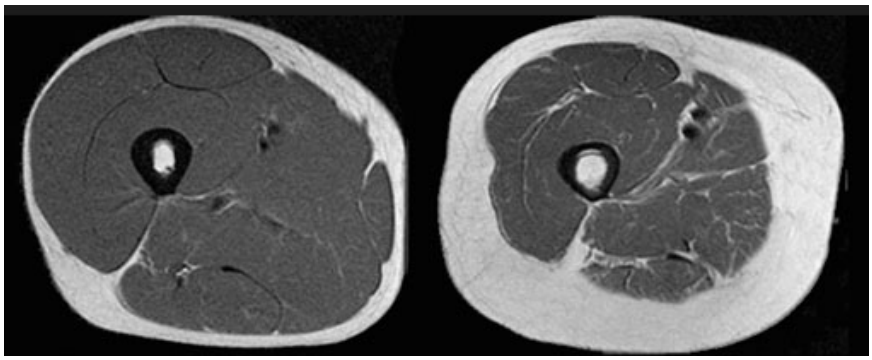
Sarcopenia

What is Sarcopenia?

Muscle mass and strength reach their peak in the early stages of adulthood, with a gradual decline seen thereafter. However, these declines in muscle mass and strength do not happen at the same time, with muscle strength often lost at a faster rate, at up to 3 times that of muscle mass.[1]

The term sarcopenia has Greek roots, using the words 'sarx' for flesh and 'penia' for loss. Sarcopenia is a disease which affects the muscles in older adults (those over 65 years) and is characterised by the loss of muscle mass, strength and/or function.[2] Although sarcopenia mainly affects older adults, it is important to note that it is not a part of the normal ageing process.



Healthy muscle vs sarcopenia

How Many People Does Sarcopenia Affect?

Sarcopenia can be present in up to 30% of adults over 65 years.[2] As in the case of many age-related diseases, the rates of sarcopenia increase with age, from 13% in those aged 60-70 to 50% in those whose age is over 80 years.[3] Given the ageing population worldwide, sarcopenia can present a large challenge and is expected to affect more people over time.

What Causes Sarcopenia?

Many of the causes of sarcopenia can be related to lifestyle and are modifiable including:[4]

- Poor diet / malnutrition
- Low physical activity
- Low vitamin D levels
- Inflammation
- Diabetes
- Abnormal thyroid function
- Fat getting into muscle

How is Sarcopenia Diagnosed?

The diagnosis of sarcopenia can be made using the following process:[2]

- Firstly, measure walking speed. A speed of <0.8 m/s indicates slowness and reduced function
- Then, assess handgrip strength, which is measured using a dynamometer or handheld device. Different cut-points exist for men and women
  Handgrip strength <30 kg for men and <20 kg for women indicate weakness.
- Finally, check your appendicular muscle mass (ie lean mass in arms and legs). This usually involves a DXA scan for body composition, although other methods such as bio-impedance analysis (BIA) have also been used

What are the consequences?

Sarcopenia has been linked to a variety of poor health outcomes including:[4]

- Increased hospitalisation
- Increased falls risk
- Increased fracture risk
- Disability
- Increased risk of early death

How Can I Prevent and Treat Sarcopenia?

At present, there is limited information regarding the prevention of sarcopenia. Generally, research has shown the benefits of a healthy lifestyle including a diet which contains adequate levels of protein and exercise which stresses the muscle. With regards to exercise, resistance training programs are most beneficial, particularly when combined with protein supplementation. Resistance training programs should target all major muscle groups, be multi-set and be performed at an intensity between 8-12 repetitions, 3 days per week and maintained for a prolonged time (>3 months).[5]

Increasing protein intake to between 1 and 1.5g/kg of body weight through dietary changes and/or supplementation have also been found to be useful in maintaining and improving muscle.[6] Vitamin D supplementation may also be required given its links to muscle function and falls risk.

Further Information and Links

https://aimss.org.au/
https://www.anzssfrmeeting.com.au/
http://aginginmotion.org/about-the-issue/

References

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