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for dairy nutrition and health

Sarcopenia

Definition, guidelines and prevention



In 2010, the European Working Group on Sarcopenia in Older People (EWGSOP) published a sarcopenia definition that was widely used worldwide. Since this publication a lot of research has been done on the various aspects of sarcopenia, but many of the findings are not yet applied in practice. Therefore, EWGSOP2 developed a new definition and guidelines for the diagnosis of sarcopenia in 2018, using the newest evidence.¹

Definition of sarcopenia

Low muscle strength → sarcopenia is probable

+ **Low muscle quantity or quality** → diagnosis confirmed

+ **Low physical performance** → severe sarcopenia

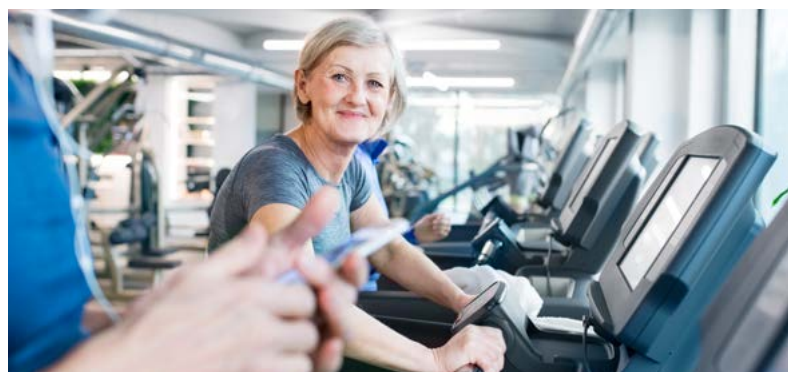
Sarcopenia is probable when a person has low muscle strength. The diagnosis is confirmed by the presence of low muscle mass or quality. If low physical performance is observed in addition to low muscle strength and low muscle quantity/quality, sarcopenia is considered severe.

Recommendations for older adults (> 65 years) for maintaining healthy muscles^{2,3}

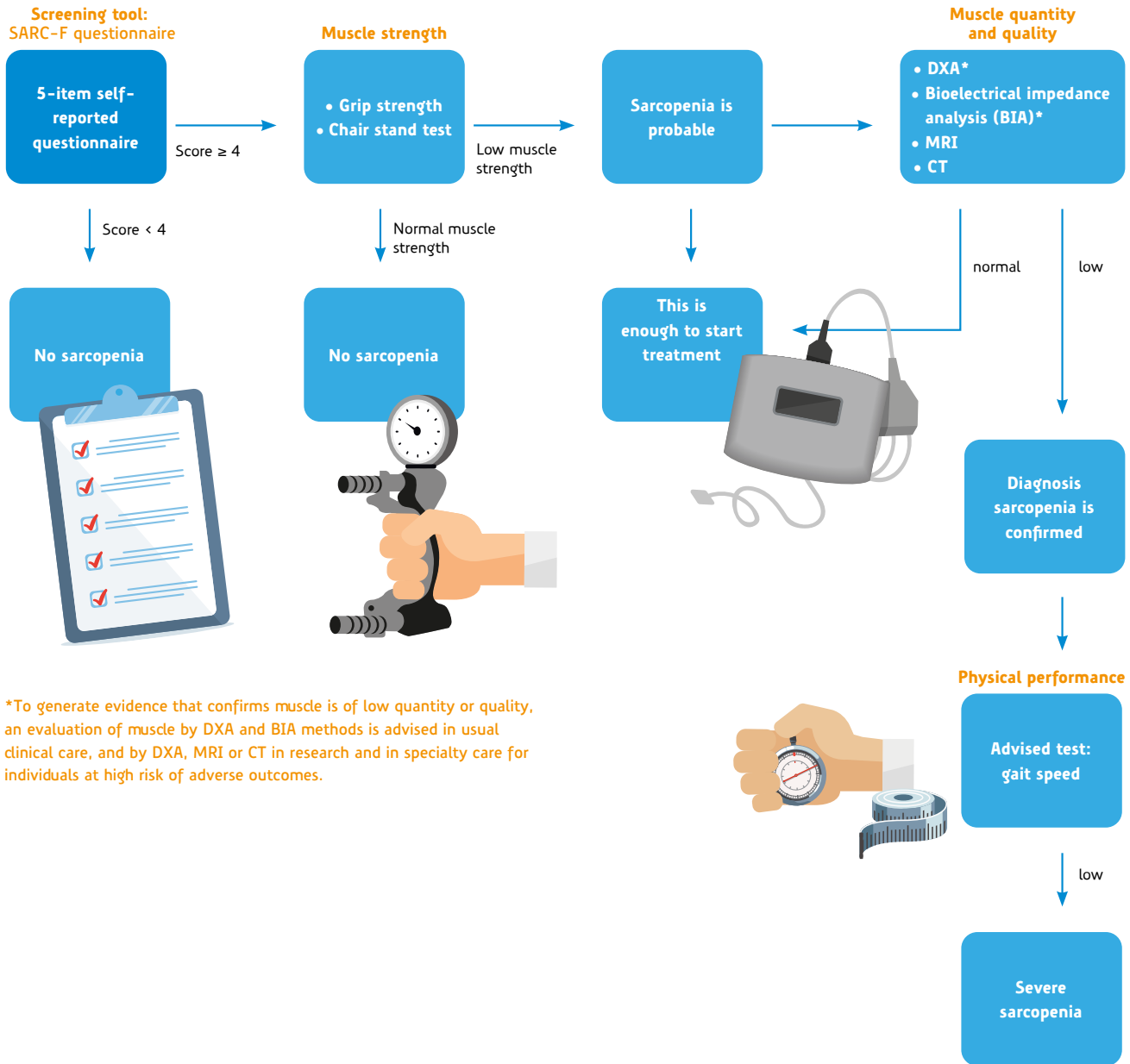
- For healthy ageing, it is important to eat a healthy diet according to national guidelines and to be physically active. Regular exercise and an adequate protein intake can help in maintaining muscle strength and muscle function.
- Therefore, older adults are advised to be physically active on a daily basis, for as long as possible. The greatest effect is achieved by combining resistance training with adequate protein intake.
- The recommended amount of protein for older adults per meal or after training is 25 to 30 grams of high quality protein, containing at least 3 grams of leucine (an essential amino acid).
- For healthy ageing, a daily amount of 1.0 to 1.2 gram of protein per kg body weight is recommended.
- Malnourished elderly and older people who are at risk of becoming malnourished because they are (chronically) ill are advised to take 1.2 to 1.5 gram of protein per kg bodyweight per day.

SARC-F questionnaire⁴

Component	Question	Scoring
Strength	How much difficulty do you have in lifting and carrying 10 pounds?	None = 0 Some = 1 A lot or unable = 2
Assistance in walking	How much difficulty do you have walking across a room?	None = 0 Some = 1 A lot, use aids, or unable = 2
Rise from a chair	How much difficulty do you have transferring from a chair or bed?	None = 0 Some = 1 A lot or unable without help = 2
Climb stairs	How much difficulty do you have climbing a flight of 10 stairs?	None = 0 Some = 1 A lot or unable = 2
Falls	How many times have you fallen the past year?	None = 0 1 – 3 falls = 1 4 or more falls = 2
Total score		Score of ≥ 4: high risk for sarcopenia



How to diagnose?



*To generate evidence that confirms muscle is of low quantity or quality, an evaluation of muscle by DXA and BIA methods is advised in usual clinical care, and by DXA, MRI or CT in research and in specialty care for individuals at high risk of adverse outcomes.

Cut-off points

Test	Sarcopenia cut-off point
Muscle strength	
Grip strength	< 27 kg (m), < 16 kg (f)
Chair stand test (5x)	> 15 s
Muscle quantity	
Appendicular skeletal muscle mass	< 20 kg (m), < 15 kg (f)
Appendicular skeletal muscle mass/height ²	< 7.0 kg/m ² (m) , < 5.5 kg/m ² (f)
Physical performance	
Gait speed	≤ 0.8 m/s



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Version February 2020