

Picture 3 • *Example of exercise that can be performed at home. Sit with your back straight far from back of the chair. Bring arms back and grab the back of the chair. Wear the chest up and forward until that does not feel a tension in the chest. Keep the position for 10-20 seconds.



*We thank Later Life Training Ltd for the use of the images.

What can you do to fight sarcopenia?

Exercise: It is known that physical activity in older people is associated with a better physical and mental health. Physical inactivity is the main contributing factor to the progression of sarcopenia. Aerobic exercises are useful. These exercises use your large muscle groups is rhythmic in nature and increases your heart rate. Examples are walking, climbing stairs or doing daily household activities. It should be performed for at least 10 minutes, three times per day.

Strength and balance exercise are also useful to counteract sarcopenia e.g. arm curl with resistance band, arm curl using heavier weight, tai-chi, or stand on one foot.

Diet: Food intake decreases by approximately 25% between 40 and 70 years of age, putting older people at risk of having inadequate nutrient intake.

- ▶ Malnutrition, in particular not getting enough proteins, is an important factor contributing to sarcopenia. In fact, muscle accounts for a high percentage of body proteins and an adequate consumption of proteins is necessary for maintaining the amount of skeletal muscle. Proteins are composed of small molecules called amino acids. In the end, proteins in the foods provide the amino acids that are needed for the production of proteins that are needed to build skeletal muscle.
- ▶ Some studies have shown that vitamin D and antioxidants (i.e. agents that can prevent or delay cell or tissue damage) are also useful to counteract sarcopenia, but further studies are needed to confirm these results.



Sarcopenia



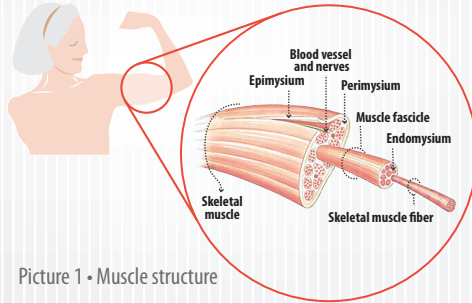
What is sarcopenia?

The noun “sarcopenia” derives from two Greek words: “sarx” (flesh, i.e. the human body) and “penia” (loss or paucity), and in English means “loss of flesh”. This term is used to describe the loss of skeletal muscles (the muscles connecting bones and joints) and strength associated with aging. Sarcopenia is quite common among older adults, and occurs generally more frequent in older women than men of the same age. It is most often found in people older than 80 years.



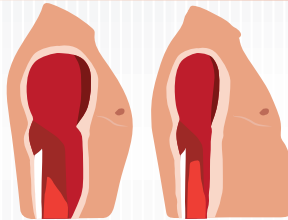
What causes sarcopenia?

Skeletal muscle is made up of two main types of fibers. Type 1 helps to maintain posture and supports the skeleton, while type 2 is involved in short and intense muscle contraction. The age-related loss of human skeletal muscle is due to a decrease in the size and number of both type of fibers, although the loss of type 2 fibers tends to start earlier.



Picture 1 • Muscle structure

Many factors influence the loss of skeletal muscle. One of the main factors is that as people age, they often become less active. Other causes are related to tissue damage that come with aging. Skeletal muscle loss is one of the causes of a drop in muscle strength in older people. Between the ages of 20 and 70 years there is a natural loss of muscle strength by 20 to 40%, while by the age of 90, the loss may increase to more than 50% (Picture 2).



Picture 2 • Muscle decline with aging. On the left there is a 40 years man arm, while on the right a 75 years man arm.

What are the consequences of sarcopenia?

Sarcopenia has many negative consequences in older people: loss of ability to carry out daily activities, loss of independence, falls, frailty (see description below), disability, ill health and even instead risk of death. Sarcopenia represents an important risk factor for frailty.

Frailty is characterized by decline in mobility, disability, repeated falls, multiple and various injuries, loss of independence, nursing home admission, multiple emergency visits and hospitalization, poor general quality of life and ultimately death.



Is sarcopenia preventable?

Regular physical activity and an adequate nutrition can prevent or slow down sarcopenia. It is also important to identify and to detect this condition at the earliest stages. An early diagnosis, commitment, mutual trust and a shared decision made by the health specialist and the patient is most likely to provide a successful treatment.

