Secondary sarcopenia: Medical conditions increase muscle loss and need for specialized nutrition

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Sarcopenia – a novel concept for an old problem

"Muscle loss steals the freedom of the old,,
Irvin Rosenberg 1989

Initially focus on ageing and older people

- Muscle mass decreases by
  - 30-50% from 20 to 80 y
  - 1-2%/y after 50 y
- Selective typ II fibre atrophy
- Muscle strength ↓ by
  - 15% / 10 y between 50 and 70 y
  - 30% / 10 y thereafter

Sarcopenia is a syndrome characterized by progressive loss of muscle mass and strength with a risk of adverse outcomes

Cruz-Jentoft et al. Age Aging 2010;39:412-23
What is sarcopenia?

3.2.2. Sarcopenia

Sarcopenia is a syndrome of its own characterized by the progressive and generalised loss of skeletal muscle mass, strength and function (performance) with a consequent risk of adverse outcomes [20–22]. Whilst often a phenomenon of the ageing processes (primary sarcopenia) preceding the onset of frailty (see below), it may also result from pathogenic mechanisms (secondary sarcopenia) [20] that are disease-related, activity-related (e.g. disuse) or nutrition-related (e.g. protein deficiency).

**Classification of sarcopenia - EWGSOP**

*Primary sarcopenia* (or age-related) when there is no evident cause but ageing itself

*Secondary sarcopenia* when one or more causes are identified:

- **Activity-related sarcopenia**
  - bed rest, sedentarism, deconditioning, non-gravity

- **Disease-related sarcopenia**
  - advanced organ failure (heart, respiratory, liver, renal, brain, intestinal), inflammatory disease, malignancy, endocrine disease

- **Nutrition-related sarcopenia**