NUTRICIA
LIFE-TRANSFORMING NUTRITION

SARCOPENIA

WHAT?

Sarcopenia is a muscle disease characterized by the **progressive loss of muscle mass and strength**, and its **severity** measured by **low levels of physical performance**[1].

WHO?

Prevalence of sarcopenia in older adults

Up to **13%** in community[2]

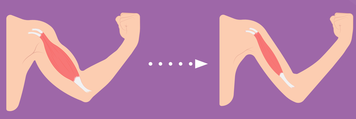
Up to **37%** in hospital[3]

Up to **76%** in rehabilitation[4,5]

WHY?

Causes

- With **age**, factors such as **nutrition and physical exercise** become less effective in stimulating muscle protein synthesis
- This process is known as anabolic resistance[6] and results in muscle mass loss[1]



- **This weakened response** to anabolic stimuli (nutrition and physical exercise) is worsened by **malnutrition** and **disease**[1]

IMPACT?

Muscle function and performance[7,8]

Mobility[7,8]

Independence and Quality of Life[7,8]

Risk of falls and fractures[7,8]

Hospital admissions and Length of Stay (LOS)[9]

Mortality[10]

5x more likely to have increased hospital costs upon admission with sarcopenia[11,12]

HOW TO MANAGE AND TREAT?

- Nutritional interventions to effectively manage sarcopenia (muscle-targeted nutritional interventions) should focus on[13]:
  - → Protein quality - ensure provision of high-quality protein (e.g. whey), containing 2.8g leucine per serving to optimise muscle protein synthesis[14]
  - → Protein quantity - ensure an effective dose of approx. 20g high quality protein, ideally after exercise, and a total daily protein intake of 1.2-1.5g/kg in at risk groups[15]
  - → Optimization of vitamin D status
- A multi-disciplinary approach involving appropriate muscle-targeted nutritional interventions and physical exercise (resistance training) is considered optimal for patients with sarcopenia[15]

REFERENCES

1. Cruz-Jentoft, et al. Age Ageing. 2019;48:16-31.
2. Morley, et al. J Cachexia Sarcopenia Muscle. 2014;5:253-9.
3. Ligthart-Melis, et al. JAMDA. 2020;21:1216-1228.
4. Verstraeten, et al. Clin Nutr. 2021;40:4090-4096.
5. Wojzischke, et al. Eur Geriatr Med. 2020;11:195-207.
6. Breen, et al. Nutrition & Metabolism. 2011;8:68-79.
7. Cruz-Jentoft, et al. Lancet. 2019;393:2636-46.
8. Beaudart, et al. PLoS One. 2017;12:e0169548.
9. Anani, et al. Clin. Med. 2020;9:2659.
10. Scheerman, et al. J Am Med Dir Assoc. 2021;22:816-820.e2.
11. Antunes, et al. Nutr Diet. 2017;74:46-50.
12. Sousa, et al. Eur J Clin Nutr. 2016;70:1046-51.
13. Morley, et al. J Am Med Dir Assoc. 2010;11:391-396.
14. Dent, et al. J Nutr Health Aging. 2018;22:1148-61.
15. Bauer, et al. J Am Med Dir Assoc. 2013;14:542-59.

NUTRICIA
LIFE-TRANSFORMING NUTRITION