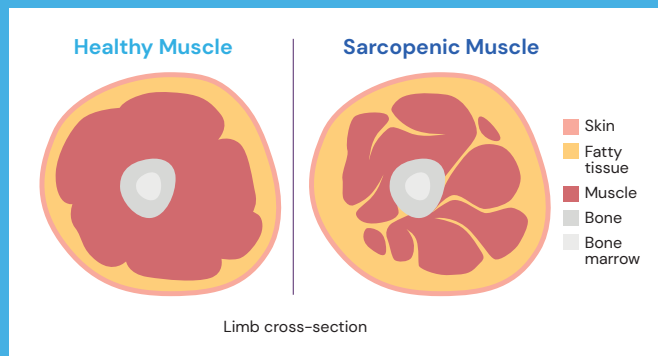


DSM targeted medical nutrition solution to support optimal mobility



Muscle loss is a natural part of the aging process, thought to start around the age of 30 when the balance between muscle growth and break down shifts more towards the latter. While age-associated muscle loss is normal, sarcopenia is “a progressive and generalized skeletal muscle disorder that involves the accelerated loss of muscle mass and function”^{1,2,3,4}



Sarcopenia is recognised as a disease by the World Health Organization (WHO).⁵ Preserving muscle health and decreasing the risk of muscle loss is therefore becoming increasingly relevant as the number of sarcopenia cases rise worldwide.

Major clinical problems and health concerns for the loss of muscle strength and bone health are:^{6,7}

- Reduced mobility, frailty, increased falls and fractures
- Impact on independence and quality of life
- Increase in healthcare cost

Nutritional solutions that include protein, vitamin D, calcium and leucine stimulate muscle protein synthesis. They support muscle strength and bone health, which in turn enhances mobility. Proper dietary management in combination with exercise can support the mobility of individuals.⁸



Aging population will **double** by 2050⁹



45% prevalence in sarcopenia in APAC¹⁰



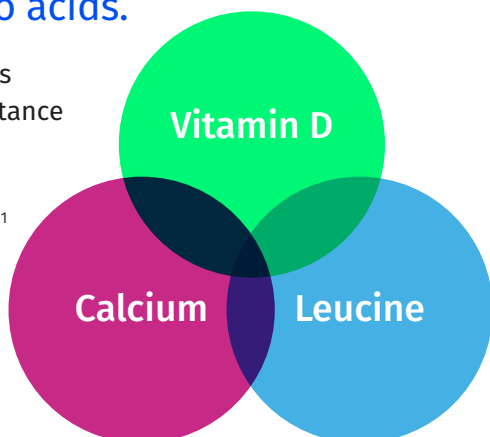
Sarcopenia direct healthcare cost of **\$18.5 billion** in the U.S. alone¹¹



Loss of mobility among the **top five health concerns** for adults¹²

DSM premix solutions contain full range of vitamins, minerals and amino acids.

Key ingredients of great importance for muscle strength and bone health:^{10,11}



Value-added services and partnership

- Access to expert formulation advice, fast prototyping that reduces complexity, saving you valuable time and resources in product environment.
- Powerful co-branding and trademark licensing opportunities e.g. Quali®-Blends logo.



DSM, your ideal partner for customized medical nutrition solutions

- Purpose-led, science-backed; our medical nutrition experts take a rigorous evidence-based approach to deliver effective solutions
- Consumer-centric; we use insights from our proprietary researches to develop innovative condition-specific concepts that meet the special needs of different elderly and patient groups
- Deep know-how; superior operations and largest premix footprint help streamline your business and accelerate go-to-market.

DSM Medical Nutrition APAC

380+ medical nutrition formulations

35+ specialist teams

4 premix plants
(Malaysia, Singapore, India and New Zealand)

References:

- 1 Cruz-Jentoft AJ et al. Sarcopenia: revised European consensus on definition and diagnosis. Age Ageing, vol. 48, no. 1, pg. 16-31, 2019.
- 2 Dodds R and Sayer AA. Sarcopenia and frailty: new challenges for clinical practice. Clin Med., vol. 16, no. 5, pg. 455-458, 2016.
- 3 Clegg A et al. Frailty in elderly people. The Lancet, vol. 381, no. 9868, pg. 752-762, 2013.
- 4 Ogawa et al. Sarcopenia and muscle functions at various stages of Alzheimer Disease. Front Neurol., 10.3389/fneur.2018.00710, 2018. 752-762, 2013.
- 5 Dent E et al. International clinical practice guidelines for sarcopenia (ICFSR): screening, diagnosis and management. J Nutr Health Aging, vol. 22, no. 10, pg. 1148-1161, 2018.
- 6 Tsekoura M et al. Sarcopenia and its impact on quality of life. Adv Exp Med Biol., vol. 987, pg. 213-218, 2017.
- 7 Beaudart C et al. Sarcopenia: burden and challenges for public health. Arch Public Health, pg. 72-45, 2014.
- 8 Kortebein P et al. Functional impact of 10 days of bed rest in healthy older adults. J Gerontol A Biol Sci Med Sci., vol. 63, no. 10, pg. 1076-1081, 2008.
- 9 World Health Organization. Ageing and Health, 2022.
- 10 Chen LK, Liu LK, Woo J, et al. Sarcopenia in Asia: consensus report of the Asian working group for sarcopenia. J Am Med Dir Assoc. 2014;15(2):95-101.
- 11 Janssen et al. J Am Geriatr Soc, 2004.
- 12 Ipsos. DSM Global Health Concerns Study, 2023.

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