



SARCOPENIA

Maintenance of muscle mass of the elderly thanks to protein-rich diet

Sarcopenia describes the progressive loss of muscle mass and strength with advancing age and the resulting functional limitations of the elderly. In consequence, this leads to an increase in falls and associated injuries. The loss of muscle mass and strength usually occurs gradually, and the weight loss is compensated for by increasing fat mass, which means that it is not noticeable for quite some time despite increasing progression.

CAUSE OF SARKOPENIA

The causes of muscular breakdown are found in hormonal changes (growth hormones, cortisol levels), chronic diseases, chronic low-grade inflammation, the breakdown of motor neurons in the spinal cord and the body's dwindling ability to neutralise oxidative stress. In addition, protein intake is often restricted in old age due to lack of appetite, reduced energy output and other consequences of altered daily structures. And as explained above, a reduced protein metabolism has a cumulative effect over time.

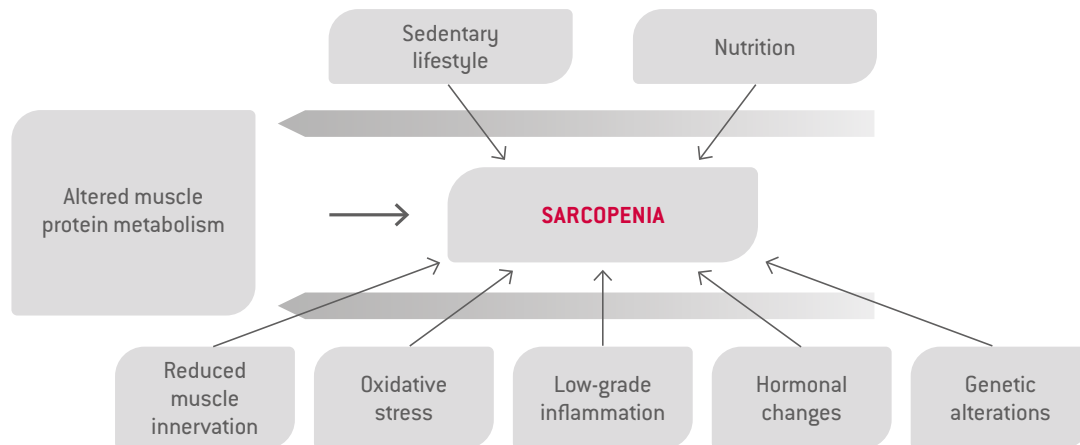


Figure 1: Causes of sarcopenia according to Daniel Buess and Reto W. Kressig [2013]

ALMOST ONE IN TWO SENIOR CITIZENS AFFECTED

Studies show that in Europe and the USA, between 30-50% of people over 80 are affected by age-related sarcopenia. The loss of muscle mass and strength is accompanied by a loss of type II muscle fibres, which are mainly responsible for the movement behaviour of older people. If the formation of these fibres is slowed down and the breakdown accelerated, this inevitably leads to a further restriction in daily activity and thus to an acceleration of this degenerative process.

MEANS OF INTERVENTION

While a protein-rich diet has become established among young people thanks to its numerous benefits (health consciousness, media, body cult, etc.), older people often lack sensitivity. Protein-rich products are still mostly offered in connection with sporting activities, which means that older generations feel only partially addressed. Strength training and the targeted intake of L-leucine-rich protein supplements are proven and tested measures to prevent or at least greatly delay the progression of muscle loss.

Grace to its special composition, **SENIOR PROTEIN** from Sponser Sport Food is particularly recommendable. According to research findings, the targeted intake of **HMB**, an L-leucine metabolite, also appears to have a positive effect on sarcopenia.

Likewise an increasingly known and recommended dietary intervention is the supplementation with creatine.

CREATINE SUPPLEMENTATION IN THE ELDERLY



WHAT WE KNOW *

- ✓ Increases muscle creatine content
- ✓ Augments the effect of training on muscle function
- ✓ Augments the effect of training on lean mass
- ✓ Has little (or no) effect when taken alone (without training)
- ✓ Is safe

*in healthy older individuals

WHAT WE DON'T KNOW

- ✓ On it benefit frail individuals?
- ✓ On age blunt response to supplementation?
- ✓ Can it augment the influence of other «anabolic» dietary strategies?
- ✓ Can it interact with drugs that impact muscle metabolism?

Figure 2: Overview of the state of knowledge about the influence of creatine supplementation on muscle mass and function in older adults according to Dolan Eimear et al. [2019].

Here, creatine supplementation in combination with resistance exercise appears to enhance the muscles' adaptive response to the training stimulus. The main causes are thought to be the higher training intensity and optimised recovery.

CONCLUSION

Nutritional interventions should be considered and applied in the context of a holistic approach to therapy for optimal effectiveness. The combination of targeted strength training with adequate protein intake seems particularly promising against sarcopenia. However, this poses a challenge for senior citizens for various reasons. Reduced appetite is a major reason. Furthermore, meals are generally too carbohydrate-rich. Breakfast in particular, which traditionally consists of jam rolls and coffee with milk, offers great potential for optimization and should be specifically enriched with protein-rich supplementary foods.



SENIOR PROTEIN

Easily digestible whey protein isolate. Enriched with L-leucine, collagen hydrolysates, HMB and vitamin D3.



PROTEIN DRINK

Tasty ready-to-drink bottle, based on whey or milk protein. Very convenient on the go, for example to take to the training centre as a post-workout meal.



HMB & CREATINE SYNERGY

Combines creatine and HMB, both of which are particularly suitable for seniors. To add to protein supplements, foods or beverages.

Literature on request
© 2021 Sponser Sport Food AG