Proteins and their importance in older people

SPRINTT
Sarcopenia & Physical fRailty IN older people: multi-componenT Treatment strategies

What are proteins?

Proteins are substances that are found in many foods. Proteins can be found throughout the body and together with carbohydrates (sugars) and fats they are needed to live. They are important to eat as they help the body to build new muscles. Proteins are made of small components: the amino acids.

Our body can produce some of the amino acids, but not all of them. The amino acids that our body can't produce, are called "essential amino acids". The "essential amino acids" are:

- Phenylalanine
- Threonine
- Leucine
- Isoleucine
- Lysine
- Methionine
- Tryptophan
- Valine

Our body needs sufficient levels of the "essential amino acids" to produce new proteins. Eating food that contains these essential amino acids is a necessity for health. Examples of such foods are white and red meat, fish, vegetables, seeds, dried fruits, milk or other dairy products.

Consequences of insufficient protein intake

If you don't eat enough food that contains these essential amino acids your muscles will decline and you will lose strength and muscle mass. This is accompanied by a higher risk of complications like an increased risk of falling and breaking bones and a loss of autonomy.

Other consequences are e.g.:

- Fatigue
- Slimming
- Increased risk of infections
- Moodiness
- Bones, muscles and joints pain
- Difficulty in wound healing and ease of bleeding
- Difficulty in concentration

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"The research leading to these results has received support from the Innovative Medicines Initiative Joint Undertaking under Grant Agreement n.115621, resources of which are composed of financial contribution from the European Union's Seventh Framework Programme (FP7 / 2007-2013) and EFPIA companies' in kind contribution"

Tips

With aging, the body is less able to process proteins. That is why older people should try to eat and drink more proteins than younger people. However, for some people with certain conditions or diseases, e.g. renal impairment, eating and drinking too much protein may cause damage in the body. It is important to divide the intake of proteins over different meals like breakfast, mid-morning snack, lunch, afternoon snack, and dinner. The table below shows an example of what healthy older people can eat to get sufficient proteins at lunch

The PROT-AGE study group developed recommendations for optimal dietary protein intake in older people

Healthy older adults should consume 1.0 to 1.2 grams (g) of proteins per kilogram (kg) body weight per day. For a man of 70 kg this corresponds to 84 g of proteins daily

For older people with acute or chronic diseases the daily amount of protein increases up to 1.5 g proteins. For a man of 70 kg this corresponds to 105 g of proteins per day

People with severe injury or illness or with marked malnutrition are recommended to take 2.0 g of proteins per kg body weight. For a man of 70 kg this means a daily intake of 140 g of proteins

Example of proteins at lunch, in a healthy older person

Example n.1

MAIN COURSE

- Lean pork meat, 150 g (29 g of proteins) **OR** sausage, 150 g (25 g of proteins) **OR** fish, e.g. saithe, 150 g (27 g of proteins)
- Potatoes, boiled or roasted, 200 g (4 g of proteins) **OR** rice, 50 g (4 g of proteins) **OR** pasta, 80 g (9 g of proteins)
- Salad, 50 g (0.5 g of proteins) **OR** vegetables, 200 g (3.5 g of proteins)

DESSERT

- Fruit (1 g of proteins) **OR** yoghurt with fruit, 150 g (4.5 g of proteins) **OR** pudding, 150 g (4.5 g of proteins)

Example n.2

FIRST DISH

- Semolina pasta 80 g (8.72 g of proteins), **AND** grated parmesan 5 g (1.68 g of proteins)

SECOND DISH

- Veal fillet 70 g (14.14 g of proteins), **OR** Lean cheese 100 g (14.70 g of proteins), **OR** Fillet of sea bream 70 g (14.49 g of proteins), **AND** Vegetables 200 g (3.50 g of proteins)
- Olive oil 25 g (0 proteins)

FRUIT

- One medium size fruit 250 g (1.70 g of proteins)

In order to have a balanced and healthy diet tailor made for you and your diseases (like diabetes, cardiac problems, renal impairment, chronic obstructive pulmonary disease) and to know how many proteins you need to eat, please contact your medical doctor and dietician

A correct protein intake is useful to keep muscles healthy, functioning and active. However, this should always be combined with a sufficient amount of physical activity