

Dietary reference values for proteins

Reference values for protein intake

No. 2021/10e, The Hague, March 2, 2021

Executive summary

Health Council of the Netherlands



The Health Council of the Netherlands has derived new dietary reference values for protein intake for children and adults of various ages, including women who are pregnant and those who are breastfeeding. With regard to dietary reference values, a distinction is drawn between the average requirement, the population reference intake (which is derived from the average requirement), adequate intake, and the tolerable upper intake level. The nutrient requirement corresponds to the intake that prevents symptoms of deficiency, and that mitigates the risk of chronic disease as much as possible.

This advisory report is a partial advisory report within the scope of the evaluation of Dutch dietary reference values. The Health Council considers that harmonisation of reference values across the EU is preferable. Accordingly,

the Council's Committee on Nutrition has evaluated the extent to which the European Food Safety Authority's (EFSA) dietary reference values can be adopted. It also examined four other reports on dietary reference values that are useful for formulating healthy diets: The Dutch dietary reference values for protein of 2001, the reference values of protein of the WHO, the German-speaking countries and of the Nordic countries.

Dietary reference values are useful when formulating a prudent dietary pattern

The dietary reference values for protein are relevant to the Netherlands Nutrition Centre's public information on nutrition, for example. Furthermore, healthcare professionals such as dietitians and physicians can use these dietary reference values when advising individuals

about healthy dietary patterns or diets. Dietary reference values are also used to monitor nutrient adequacy in the Dutch population.

Protein is necessary for maintenance and growth

Proteins fulfil essential bodily functions. They are building materials for the body (such as muscles). They are also involved in the immune system, in the transport of substances within and between cells, and as enzymes. Protein is also a source of energy. A variety of factors need to be considered when determining the protein requirement. A key factor for all groups is the amount of protein needed to maintain a normal body composition. In addition, increased protein intake is indicated for growth in children and pregnant women, for example, or for the production of breast milk.



The EFSA's dietary reference values converted to the Dutch situation

The Committee has adopted the EFSA's dietary reference values for all groups which are specifically expressed as grams of protein per kilogram of body weight per day. These dietary reference values are usually converted into a protein requirement expressed as grams per day. Units known as 'reference weights' are used for this purpose. As the Dutch are taller (thus slightly heavier) than the average European, the reference weights used in the Committee's calculations differed from those used by the EFSA. Accordingly, for almost all groups, the protein requirement specifically expressed as grams per day is higher than the EFSA's values. In accordance with the EFSA's scientific opinion, the Committee has not set any tolerable upper intake levels. In the case of adults, the EFSA considers an intake of twice the recommended dietary allowance to be safe.

Limited changes and no higher dietary reference value for older adults

There are only marginal differences between the revised values and the currently applicable dietary reference values for protein in the Netherlands. The new dietary reference values (expressed as grams of protein per day) are generally slightly higher than the 2001 values. This is because the Dutch population has since become taller and, therefore, slightly heavier. The Committee conducted a separate examination of the dietary reference values for protein in adults aged 60 and above. This was because of the ongoing scientific debate on this issue, and the fact that some countries derived a higher dietary reference value for this group. The Committee conducted an analysis of intervention studies that were published up to and including April 2020. More than sixty percent of these studies showed that increased protein intake had no effect on lean body mass

(lean body mass is a measure of muscle mass). The same applies to increased protein intake in combination with increased physical exercise, in relation to muscle strength. Increased protein intake has likely no effect on muscle strength if there is no concomitant increase in physical exercise. Also, increased protein intake has likely no effect on physical function. Accordingly, the Committee takes the view that there is insufficient convincing evidence for a higher dietary reference value in older adults.



The Health Council of the Netherlands, established in 1902, is an independent scientific advisory body. Its remit is “to advise the government and Parliament on the current level of knowledge with respect to public health issues and health (services) research...” (Section 22, Health Act).

The Health Council receives most requests for advice from the Ministers of Health, Welfare and Sport, Infrastructure and Water Management, Social Affairs and Employment, and Agriculture, Nature and Food Quality. The Council can publish advisory reports on its own initiative. It usually does this in order to ask attention for developments or trends that are thought to be relevant to government policy.

Most Health Council reports are prepared by multidisciplinary committees of Dutch or, sometimes, foreign experts, appointed in a personal capacity. The reports are available to the public.

This publication can be downloaded from www.healthcouncil.nl.

Preferred citation:

Health Council of the Netherlands. Dietary reference values for proteins – reference values for protein intake.

The Hague: Health Council of the Netherlands, 2021; publication no. 2021/10e.

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