



## RATIONAL NUTRITION IS THE BASIS OF RECOVERY PROCESSES IN OLD AGE

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Article history:	Abstract:
<b>Received:</b> October 30 <sup>th</sup> 2024 <b>Accepted:</b> November 28 <sup>th</sup> 2024	Aging of the body is a complex process characterized by a weakening of oxidative processes in the body and associated energy potentials and a decrease in the function of vital organs. Rational nutrition in old age (gerodietetics) is an important factor in the preservation and restoration of vital body processes. The article provides the basic principles of nutrition for elderly and elderly people
<b>Keywords:</b> Gerontology, Geriatrics, Restorative Nutrition, Old Age, Gerodietetics	

### INTRODUCTION

Aging of the body is a complex and contradictory process, characterized by a weakening of oxidative processes in tissues and associated energy potentials, a simultaneous increase in the intensity of glycolysis, an increase in the coupling of oxidation and phosphorylation, an increase in the activity of some respiratory enzymes, a decrease in the function of a number of endocrine glands, etc. (6,9,13,)

With aging, the body mobilizes its reserves to maintain many processes at the required level, therefore there is a certain decrease in its "reliability", and the reserve of its "vice" decreases. It becomes more vulnerable to damaging factors. (10)

Normal physiological elders develop slowly and are characterized by the preservation of certain mental and physical strength, performance, and interest in the environment. At the same time, atrophic changes gradually develop in the body, which contribute to a uniform decrease in its functional and reactive capabilities. Physiologically "normal" elderhood occurs, according to scientists, at an age exceeding 100-120 years. However, such a natural completion of the life process is shaved due to various diseases or is due to random reasons. (8)

Pathological aging is associated with numerous disorders in the body that occur as a result of various diseases suffered during life and exposure to various harmful factors, often characterized by uneven dysfunction of any one system: nervous, cardiovascular, endocrine, etc. (11,12,8)

Rational nutrition in old age (herodietetics) is an important factor in the prevention of pathological deposits and the basis for the restoration of vital processes during aging. The basics of gerodietetics presented below must be taken into account when organizing therapeutic nutrition for elderly and elderly people, i.e. in the practice of geriatrics – treatment of diseases in old age. (3,4,5)

The body's energy requirement in old age decreases due to a decrease in the intensity of metabolic processes and limited physical activity. On average, the energy value of the diet at 60-69 years old and 70-80 years old is 80 and 70%, respectively, of that at 20-40 years old. Some older people are prone to overeating. The aging body is especially sensitive to excess nutrition, which not only leads to obesity, but more strongly than at a young age predisposes to atherosclerosis, hypertension, coronary heart disease, diabetes mellitus, cholelithiasis and urolithiasis, gout, etc., and ultimately contributes to premature aging. (11.8) On average, the energy value of the daily diet for elderly men and women should be 9, respectively. 6 and 8.8 MJ (2300 and 2100 kcal), and for old ones - 8.4 and 8 MJ (2000 and 1900 kcal).

In old age, the intensity of self-renewal of proteins decreases, which determines a decrease in the need for proteins. However, insufficient protein intake aggravates age-related changes in metabolism and, more quickly than at a young age, leads to various manifestations of protein deficiency in the body. The daily requirement for protein is on average 70 and 65 g for elderly men and women, respectively, and 60 and 57 g, respectively, for old men. Animal proteins should account for 50-55% of the total amount of protein. Low-fat dairy fish products and non-fish seafood are desirable as sources of animal proteins. Animal and poultry meat is moderately limited. Excessive intake of proteins negatively affects the aging body, causes excessive stress on the liver and kidneys, and contributes to the development of atherosclerosis. (2.4)

The fat content in the diet should not exceed an average of 75 and 70 g per day for elderly men and women, respectively, and after 75 years - 70 years and 65 g. Sources of animal fats, especially refractory ones, in particular meat and fatty sausages, are subject to restrictions. Milk fats, which are easily digestible and contain lecithin and fat-soluble vitamins, can account



for up to 1/3 of all dietary fats. At least 1/3 of the fats should be vegetable oils, which contain more substances important for older people such as phosphatides, sitosterol, vitamin E, as well as vegetable oils in their natural form (in salads, vinaigrettes, cereals), and not after heat treatment. Fatty acids from vegetable oils have a positive effect on metabolism, particularly cholesterol-free, in the aging body. (4.5)

The content of carbohydrates in the diet should be on average 340 and 310 g for elderly men and women, respectively, for old people - 290 and 275 g. As sources of carbohydrates, products rich in starch and dietary fiber (fiber, pectin, etc.) are preferred: bread from wholemeal and bran flour, whole grain cereals, vegetables, fruits, berries. Dietary fiber is necessary to stimulate the motor function of the gastrointestinal tract and bile secretion, since constipation and congestion in the gallbladder are common in older people. Dietary fiber promotes the ease of digestibility of carbohydrates, especially sugar, confectionery products, and sweet drinks. Their content should not exceed 15% of all carbohydrates, and if there is a tendency to obesity - 10%. (1,4,7)

In old age, it is possible that the body may be oversaturated with certain minerals, or they may be deficient. For example, calcium salts are deposited in the walls of blood vessels, joints and other tissues. If there is a deficiency of calcium in food or an excess of nutrients, its absorption deteriorates and calcium is removed from the bones. This, especially against the background of a lack of proteins, can lead to senile osteoporosis. The body's need of elderly and old people for calcium is -0.8 g, and for phosphorus -1.2 g. It is advisable to increase the amount of magnesium to 0.5-0.6 g. per day, given its antispastic effect, ability to stimulate intestinal motility and bile secretion, and normalize cholesterol metabolism. If the potassium content in the diet is sufficiently high (3-4 g per day), the amount of sodium chloride should be moderately limited - up to 10 g per day, mainly by reducing the consumption of salty foods. This is of particular importance if you are prone to high blood pressure.

With physiological aging, the metabolism of a number of vitamins changes, but these changes do not indicate an increased need for vitamins. However, some older and older people experience vitamin deficiency due to poor nutrition or impaired absorption of vitamins. (4.7)

It is necessary to focus on providing vitamins from their natural sources – food products. This does not exclude additional fortification, in particular vitamin C in the winter-spring period, as well as periodic intake

of multivitamin preparations (decamevit, undeavit, etc.) in small doses - 1 tablet per day.

## **CONCLUSION**

Basic principles of nutrition for practically healthy elderly and old people: 1) strict compliance of the energy value of the food ration with the actual energy consumption; 2) anti-sclerotic orientation of nutrition by changing the chemical composition of the diet and enriching it with products - sources of anti-sclerotic substances; 3) variety of food products to ensure optimal and balanced content of all essential nutritional factors in the diet; 4) the use of foods and dishes that are fairly easy to digest, in combination with products that moderately stimulate the secretory and motor functions of the digestive organs; 5) strict adherence to a diet with a more uniform distribution of food into individual meals compared to young people; 6) individualization of nutrition, taking into account metabolism and the state of individual organs and systems. The basic principles of the diet of elderly and old people are regular meals, the exclusion of long intervals between them, and the exclusion of large meals. This ensures normal digestion and prevents overstrain of all body systems that ensure the absorption of nutrients.

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