

Nutrition role in prophylaxis of age-related illnesses

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Abstract

Literature was reviewed and the data obtained by the author on the nutrition role in prophylaxis of age-related illnesses were presented. Death-rate from cardio-vascular, oncological and neurodegenerative diseases in elderly age is only by one third predetermined genetically, but basically depends on external factors. The analysis of non-uniform distribution of women's mammary gland cancer in different countries has revealed two major factors of environment effect on the health of elderly people. Presence of the gradient North-South is caused by the influence of illumination at night, and as a consequence by the reduction of the melatonin content and the infringement of daily rhythms the inhabitants of high latitudes suffer from. Presence of the gradient West-East is caused by the character of nutrition of the population of the Western Europe Northern America, which is characterized by high caloric content and the substantial consumption of animal proteins and fats with food. Recently two basic mechanisms of action of food components causing the reduction of risk of occurrence of elderly age diseases have been revealed: 1) reduction of the level of sexual hormones in the organisms of elderly people due to the reduction of their production; acceleration of removing them from an organism, as well as suppression of their action on the target organs. Such action is exerted by food fibres and phytohormones (flavonoids and ligands). 2) Suppression of oxidizing stress due to the binding of free radicals, stimulation enzyme genes expression of the antioxidant system of the organism, as well as binding the metals with transitive valency. Such action is demonstrated by antioxidants (vitamins, carotinoids, polyphenols).