

Abstract

Vitamin D and calcium are essential for the health of the elderly population. Due to the changes that occur in the body during aging, it is necessary to monitor the intake of these micronutrients and, if necessary, to supplement or substitute them appropriately.

This thesis focuses on prevention of vitamin D and calcium deficiency in old age. The theoretical part explains the function of vitamin D and calcium in the human body, their metabolism, sources and problems of deficiency or excess. There is information about diseases related to the deficiency, especially osteoporosis and sarcopenia.

The practical part has two sections. The first analyses the data from the SPRINTT trial. Data related to vitamin D, calcium, their supplementation and sarcopenia, as a disease associated with vitamin D deficiency, were used. The second section analyzes the data from a questionnaire survey in nursing homes, which obtained information about the health of seniors, the frequency of consumption of selected foods and vitamin D and calcium supplementation.

Using data from the SPRINTT, it was found that 55 % of men and 40 % of women had the values of sarcopenia. 11 % of the participants had vitamin D deficiency. The data from the questionnaire found that only 51 % of respondents over the age of 70 supplemented with vitamin D. More than 30 % of respondents stated that they did not consume milk. Only 50 % of those who tolerated neither milk nor dairy products supplemented calcium with drugs or supplements.

The conclusions from the both parts confirm the importance of prevention of vitamin D and calcium deficiency as a means of mitigating the consequences of some age-related diseases. An important tool may be a nutritional intervention, supported by drug supplementation of missing substances.