

ABSTRACT

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Title of master thesis: Evaluation of the nutritional intake of selected minerals in pregnant women

Background: The diploma thesis deals with nutrition during pregnancy, focusing on mineral intake. During pregnancy, a woman's body goes through many physiological changes, including an increased need for certain nutrients that are essential for the proper development of the fetus and the health of the mother.

Aim of the thesis: The aim of this diploma thesis was to evaluate the intake of selected minerals in a group of healthy pregnant women, compare the values with their recommended daily allowance (RDA), determine whether their intake differs in individual periods of pregnancy, assess how important a role supplementation plays in mineral intake and determine the percentage of women who did not reach the RDA.

Methods: Thirteen healthy pregnant women with a physiological course of pregnancy, aged 24 to 34, were examined at the Laboratory of Clinical Physiology at the Faculty of Pharmacy, Charles University in Hradec Králové. During pregnancy, the examination was conducted three times: the first examination (G1) on average in the 24th gestational week (GW), the second (G2) on average in the 30th GW and the third (G3) on average in the 37th GW. In the G1 period, 7 women submitted completed questionnaires, and in the G2 and G3 periods, all 13 women participated. The study took place between 2022 and 2023. Part of the examination was an evaluation of the mineral intake based on a questionnaire in which the women recorded their food and fluid intake and physical activity over one week. Using NutriDan software and Microsoft Office Excel, mineral intake was assessed both without and with the inclusion of supplements and the results were statistically processed and compared with the recommended values.

Results: There was no statistically significant increase in the intake of any mineral between the different periods. The women reached the RDA of Sodium, Potassium, Magnesium, Phosphorus and Copper in all periods of pregnancy, even without supplementation. The majority of the women also reached the RDA of Calcium, Zinc, Fluoride and Iodine without supplements. On the contrary, most women failed the RDA of Selenium without supplementation, in the case of Iron not even one of the women succeeded.

Conclusion: From the results, it can be concluded that the intake of most minerals was sufficient even without the use of dietary supplements, but supplementation is important especially for Iron. It can also be recommended for Selenium.

Keywords: nutrition; minerals; recommended daily allowance; pregnancy