

## **ABSTRACT**

The diploma thesis deals with the issue of nutritional intake of lipophilic vitamins in pregnant women. The objective of the thesis is to analyze the intake of lipophilic vitamins in a selected group of Czech pregnant women within the three observed periods of pregnancy. Subsequently to compare these values with the recommended intakes, which are valid in the Czech Republic, and propose a possible optimization of intake.

From February 2021 to January 2022 was evaluated the nutritional intake a total of 24 Czech pregnant women from Hradec Králové, at the age range 24–37 years, within the three observed periods of pregnancy. Pregnant women handed over filled in questionnaires every week, which recorded their daily intake of food and liquids, including their amount. Subsequently, the filled-in questionnaires were evaluated by the NutriDan nutrition program and the results were statistically processed by the Microsoft Excel program. The obtained values of daily intakes of pregnant women were compared with the recommended daily intakes of lipophilic vitamins, which are valid in the Czech Republic.

The crucial finding of the thesis is that the intakes of lipophilic vitamins in observed pregnant women are not statistically significantly different between individual days of the week or between individual periods of pregnancy. In the case of the recommended daily intake, came the observed pregnant women closest to them in the intake of carotenoids and vitamin E. Conversely, the lowest recommended daily intakes were achieved for vitamin A and vitamin D.

Czech pregnant women should take more lipophilic vitamins in their food, especially vitamin D, and with caution also vitamin A, which tends to be taken in insufficient amounts. Due to features of lipophilic vitamins accumulating in tissues, from the point of view of short-term insufficient intake, the observed women should not be at risk of undesirable manifestations. As part of the correct course of pregnancy and development of the fetus is appropriate to optimize intakes of vitamins.

**Keywords:** pregnancy, nutrition, lipophilic vitamins, recommended daily intake.