

# **ABSTRACT**

## **Background**

The aim of the study was to evaluate the change of basic spirometric parameters (both their absolute values and relative in percentage of the predicted value) during breastfeeding and to determine the factors related to these changes.

## **Methods**

Spirometric parameters were measured with an Otthon spirometer and subsequently evaluated with ThorSoft computer software. Spirometry is one of the fast and non-invasive tests of lung function. Ten lactating women participated in the study and were subjected to spirometry four times during the postpartum period. The first examination took place 1 month after childbirth, the second examination 3 months after childbirth, the third examination 6 months after childbirth and the last examination 9 months after childbirth.

## **Results**

We found no statistically significant difference in the observed spirometric parameters, one-second vital capacity (FEV<sub>1</sub>), forced vital capacity (FVC), peak expiratory flow (PEF) and Tiffeneau index (FEV<sub>1</sub>/FVC) between the periods. In all periods studied, the values corresponded to the physiological range (85 – 115 % of the predicted value). From the Tiffeneau index values (over 80 %), the presence of airway obstruction in the investigated lactating women can be excluded. Correlation analysis showed positive and negative associations between the observed spirometric parameters and the intake of micronutrients in food supplements.

## **Conclusion**

During breastfeeding we did not show statistically significant difference in spirometric parameters. We found a relationship between spirometric parameters and micronutrient intake in food supplements.

**Key words:** spirometry, breastfeeding