

# ABSTRACT

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**Title of master thesis:** Evaluation of spirometric parameters of pregnant women

## Background

The aim of the thesis is evaluation of the variances in spirometric parameters (both their absolute values and relative in percentage of the predicted value) at different stages of pregnancy and determination the factors related to these changes.

## Methods

The values of spirometric parameters were detected by measurement using the spirometer Otthon and then evaluated by software Thorsoft. Spirometric measurement is a non-invasive and simple measurement of lung function. In the study involving 10 pregnant women, the spirometric measurements were performed three times at different stages of pregnancy. The first measurement was in the 20th – 27th, the second in the 29th – 35th and the third in the 36th – 38th week of pregnancy.

## Results

We observed significant difference of peak expiratory flow in percentage of the predicted value, namely the decrease of 7 % during measurement in the 36th – 38th week of pregnancy compared to the values from measurement in the 29th – 35th week of pregnancy. Other monitored parameters did not significantly changed. Correlation analysis showed the interdependences for all monitored spirometric parameters with anthropometric parameters and baby's parameters (woman's weight, woman's amount of fat, woman's body surface area or baby's weight). The least associations were found in the 29th – 35th week of pregnancy. All correlation were positive.

## **Conclusions**

Except decrease of peak expiratory flow at the end of the third trimester we did not detected significantly change of other spirometric parameters during pregnancy. We found associations between spirometric parameters and parameters relating to pregnancy, specifically the parameters reflecting changes in body composition in woman during pregnancy.

**Key words:** spirometry, spirometric parameters, pregnancy