

ABSTRACT

Background

The aim of this work was to determine the resting energy expenditure (REE) of pregnant women using indirect calorimetry. Find connections with other monitored parameters and compare the result with similar studies.

Methods

The resting energy expenditure was calculated by oxygen consumption and carbon dioxide production by indirect calorimetry. Indirect calorimetry was performed under a canopy at rest in bed, without disturbing elements, and after 12 hours of fasting. The study involved 10 healthy pregnant women. The measurements during pregnancy were taken three times (21.–27., 31.–32., 36.–37. week).

Results

We found that resting energy expenditure increased with the length of pregnancy. The median of the REE on each examination was on the first measurement 1412 kcal/day, on the second measurement 1697 kcal/day, and the last measurement 1902 kcal/day. We found a statistically significant correlation of REE with body weight and REE with fat-free mass (FFM).

Conclusion

Pregnancy is a difficult process with many changes in a woman's body. The study confirmed an increase of the REE with a maximum at the end of pregnancy. The results show that the estimated values of the REE and the measured values of the REE were different.

Key words: Resting energy need, Pregnancy