

The aim of the thesis was to compare the methods most frequently used to determine the amount of body fat in overweight persons. Two bioelectrical impedance analyses using the analyzer Nutriguard-M and Inbody 3.0 and the skinfold test using the calliper Best were compared with a reference method (underwater weighting). The objective was to evaluate the validity of the mentioned methods and to decide which one is the most appropriate. In the first part of the thesis the background of obesity and body composition analysis is described. In the second part measured values are evaluated. The study included 18 overweight persons (6 men, 12 women), mean age $46,1 \pm 15,8$ years, mean BMI $28,2 \pm 2,5$ kg / m². No significant differences were found among mean values of BF% obtained by Inbody 3.0 and the skinfold test. But the values measured by Nutriguard-M with tetra-polar electrodes arrangement were found significant ($p < 0,05$).