Abstract
Aim: The aim of this study is to observe and describe blood pressure response (BP) to dynamic exercise during the clinical exercise testing on a cycle ergometr in young healthy adults. Methods: Forty subjects (18 men and 22 women) aged 20-29 years took part in this study. All of them completed the laboratory combined maximal exercise testing. The initial workload of 1 W/kg body weight was followed by the next stages with 0,5 W/kg workload increase every 3 minutes. There was the ramp continuous workload increase at the last stage up to a maximum. Blood pressure was monitored by the auscultatory non-automted mercury-free sphygmomanometer, cardiac activity and heart rate were monitored by ECG. Results: Single average rises of systolic blood pressure (SBP) are lower with every workload increase of 0,5 W/kg. In the group of subjects, that completed the highest workload stage (3 W/kg) before continuing the „ramping-up“ phase up to maximum, this trend was most obvious. The average rise of SBP does not exceed 30 mm Hg at workload increase of 1 W/kg. The average SBP at the maximum was 199 ± 13,5 mm Hg for men and 186 ± 10,9 mm Hg for women. Maximum SBP does not correlate with the maximum workload according to our results. Exercise SBP is lower in women than in men at all exercise stages. Conclusion: Our results showed that the exercise SBP rise is not linear and that the curve flattens with the workload increase.