

The aim of this study was to compare the accuracy of a biaxial piezoelectric pedometer Omron HJ-720IT according to a position it was attached to on a body with a classic spring - levered pedometer Yamax SW-200, which was approved to be valid in previous studies. The Total of 57 probands (39 females and 18 males) participated in the study, which contains 3 parts. In the first part the pedometers were tested in a self – paced walking condition ("slow", "moderate" and "very brisk" walking) on a track of 135 m in length. The second part included four-minute sections of walking on a treadmill under controlled conditions at following speeds: 3.2, 4.8 , 6,4 and 7,5 km.h-1 and slopes: 0 %, 5 % and 10 % and two fifteen-minutes sections at 4km.h-1 with no inclination and 6 km.h-1 with 5 % slope. The third part was aimed to record artifacts while going by bus.

At no position at speed 4.8 km.h-1 the 1 % error was exceeded. The highest accuracy was achieved with Omron on a belt of(above) a SIAS. It is also reliable in counting of aerobic steps at this position. While going by bus it counted 3 steps/min at most at all positions.

Omron Pedometer HJ-720IT proved validity and reliability at various mounting positions under self-paced and prescribed walking conditions.

Keywords: pedometer, Omron, Yamax, physical activity, walking, step