

Abstrakt

Title of thesis:

Assesment of physical activity and energy expenditure with the Actigraph GT1M accelerometer.

Aim of the thesis:

Purpose of thesis is verification of validity and reliability of mechanical motion detector – Actigraph GT1M uniaxial accelerometer.

Methods:

Thesis with a view to research:

A) Validity of Actigraph GT1M:

- measurement of the numer of steps (verification for various types of locomotion, in various speeds or frequence of steps)
- estimate of energy expenditure – regarding on the analyse of relation between sum acceleration and speeds

B) Inter-instrumentel reliability of Actigraph GT1M

Results:

Regarding choosen criterion is accelerometer valid metod for calculation of the number of steps and estimate energy expenditure based on sum of acceleration. Relation between reached datas of energy expenditure, using two accelerometers at the same time, indicated different values from each device. Relation between reached datas of amount of steps, using two accelerometers at the same time, indicated almost no different values from each device.

Key words: Accelerometer – energy expenditure – pedometer – validity – reliability – steps.