

„The effectiveness of intervention to increase physical activity in patients with cardiovascular diseases”

Abstract

Background. Regular physical activity should be the essence of treatment in patients with cardiovascular risk factors. I sought to determine the benefits of nurse led intervention to promote physical activity in sedentary older adults in primary care setting.

Methods. A group of 199 sedentary patients (mean age 62.7 ± 6.9 , 34.2% male) with at least one more cardiovascular risk factor was randomized 1:1 to receive nurse led tutorial on life-style modification including pedometer hand-out with a daily goal of at least 7000 steps and supporting phone calls (study group) or without a goal or calls (control group). Body weight (BW), resting heart rate (HR), systolic and diastolic blood pressure (SBP/DBP), total cholesterol (TC) and glucose were assessed at baseline and after 3 months.

Results. Thirty-five patients (17.6%) were lost to follow-up. Patients in the study group ($n=86$) achieved higher daily step count in comparison to the control group ($n=78$), 10648 ± 3098 vs. 3589 ± 2000 , $p < 0.0001$. In the study group there was an improvement of all analyzed parameters, except glucose, including BW (-2.5 ± 1.9 kg), SBP and DBP (-7.9 ± 7.6 mmHg and -6.2 ± 6.5 mmHg) and TC (-14.7 ± 30.4 mg%), all $p < 0.0001$. In the control group all parameters increased or remained unchanged. There was a good (for BW and its derivatives) moderate (for TC, SBP and DBP) and weak (for glucose and HR) inverse correlation between daily step count and delta of the analyzed parameters ($r = -0.72$ to -0.27 , all $p < 0.001$).

Conclusion. Nurse led intervention with pedometer, goal setting and supporting phone calls is an effective way to promote physical activity in sedentary older adults and leads to improvement of cardio-vascular risk factors in a 3 months time.

Key words: sedentary, older adults, pedometer, nurse intervention