

## **Abstract**

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**Title:** The effect of regularly applied Nordic walking on selected cardiorespiratory parameters in adults after heart valve surgery.

**Aim:** The aim of this work was to analyze the effect of six months of Nordic walking intervention on selected cardiorespiratory parameters in adults after heart valve surgery.

**Methods:** The study included ten individuals (mean age 62 years) who were at least five years apart after heart valve surgery. Blood pressure (BP) was measured using a pulsed wrist tonometer, blood oxygen saturation (BOS) and heart rate (HR) were measured using a pulse oximeter, and the ejection fraction of the heart (EF) was evaluated echocardiographically. Nordic walking training units took place once a week for 6 months. During this intervention, the level of training gradually increased both in distance and elevation of the terrain.

**Results:** In all probands there was an average reduction in systolic blood pressure during exercise by an average of 10,3 mmHg and a reduction in heart rate during exercise by an average of 24 beats per minute. The resting ejection fraction increased by an average of 5,5% after six month intervention. These changes were statistically significant ( $p < 0,01$ ). The results of the work point to the benefits of Nordic walking for cardiac patients.

**Keywords:** heart, blood pressure, ejection fraction, training, physical activity