







The assessment of quality of life in patients with myocardial infarction and the importance of education in the secondary prevention of cardiovascular disease during a high intensity interval training protocol

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Introduction: Acute myocardial infarctions (AMI) are one of the leading causes of death in the developed world and patients experience numerous physical symptoms including fatigue, dyspnea, or chest pain which affect their physical, emotional, and social well-being with significant impairment in Quality of Life (QoL). The aim was to assess the improvement of QoL, if any, throughout the 12 weeks of individually-prescribed high intensity interval training (HIIT) training.

Patients and Methods: 16 ST-elevation myocardial infarction (STEMI) and non-ST-elevation myocardial infarction (NSTEMI) patients (age 58 ± 10 years; height 177 ± 9 cm; weight 86.8 ± 15.4 kg; VO_2 max 19 ± 5.3 ml min⁻¹kg⁻¹) underwent 12 weeks of supervised cycling HIIT (4x4 min at 85-95% of HRmax) 3 times per week. A questionnaire including Short Form-36 Health Survey (SF-36) was assessed prior to, at 4th, 8th and post 12 weeks of HIIT training. The Cardiovascular Disease Risk Factors Knowledge Level (CARRF-KL) Scale was used prior to the training intervention to assess patient's knowledge on CVD.

Results: Patients demonstrated statistically significant improvements ($P < 0.005$) in physical functioning (PF), physical role functioning (RP), emotional role functioning (RE), vitality (VT), mental health (MH), social role functioning (SF), bodily pain (BP), general health perceptions (GH) already after 4 weeks of training and this trend was maintained until the end of the 12-week block. In line with SF-36 findings, Peak VO_2 increased significantly by 8% (19.2 ± 5.1 vs 20.8 ± 5.0 ml min⁻¹ kg⁻¹, $P = .002$) across the group already after 4 weeks of training. The absolute improvement in VO_2 peak at the end of the 12-week training was 32% (19.2 ± 5.1 vs 25.5 ± 4.9 ml min⁻¹ kg⁻¹, $P < .001$).

Conclusion: Patients showed a low level of initial CVD-knowledge on the CARRF-KL scale. Regardless of that, significant improvements in patient-reported health status are in line with changes in functional capacity. We recommend that the rehabilitation intervention for the STEMI and NSTEMI patients include an exercise program aimed at improving functional capacity¹.

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LITERATURE

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