2. MEDICAL REHABILITATION PROGRAMMES FOR MUSCULOSKELETAL DISORDERS IN PATIENTS WITH DIABETES MELLITUS

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Introduction. Background. Diabetes is a global burden and can have fatal consequences for human health and a significant impact on the health system economy. Diabetes is a metabolic disease that can cause severe complications and mortality if not treated effectively and quickly. Musculoskeletal disorders in patients with diabetes are a significant concern in the management of this chronic condition.

Aim of study. Objective of the study. Improving medical rehabilitation programmes for diabetes patients with musculoskeletal disorders, including the development and introduction of new high-tech methods of treatment and prevention of its complications.

Methods and materials. 35 selected scientific publications were analyzed from PubMed, Hinari, MedScape and Medline.

Results. Kinetotherapy is an important step in the rehabilitation of diabetic patients, the main beneficial effects include: improved glycemic control, increased insulin sensitivity with decreased insulin requirements in insulin-dependent patients, improved plasma lipoprotein profile and weight loss through reduced fat mass. Magnetolaser therapy influences the metabolic parameters of diabetes mellitus, contributing to lower blood glucose, lower hyperlipidaemia and improved microcirculation. Pulse frequency is 37-50 Hz, exposure is gradually increased from 2.5-3 to 7.5 minutes. The method is indicated for patients with micro and macroangiopathy of the lower extremities grade I-III, disorders of the microcirculatory system, spastic disorders and atonic vascular states. Electrostimulation helps prevent muscle atrophy, increase contractility, muscle tone and performance. Indications for electrostimulation programming: impaired glucose tolerance, metabolic syndrome, diabetes in the compensated stage, osteochondrosis, arthrosis.Ozone therapy is a non-invasive method with immunomodulatory, anti-inflammatory, antibacterial, antiviral, analgesic and antifungal effects. Intravenous ozone therapy in combination with physiotherapy reduced mean fasting blood glucose indices by 18.7%. A study of patients with type 1 diabetes who underwent exercise in combination with autologous bone marrow stem cell transplantation shows a significant decrease in mean HbA1C.

Conclusion. Medical rehabilitation programmes are an essential component in the comprehensive approach to diabetes and musculoskeletal conditions. A multidisciplinary, personalized and education-oriented approach that has a significant impact on patients' health and quality of life.

Keywords. Diabetes mellitus, rehabilitation, musculoskeletal disorders, glycaemia, immunomodulator, angiopathy, microcirculation, therapy.