



March 3rd to 6th Euganean Thermae and Padua, Italy

PADUA DAYS ON MUSCLE AND MOBILITY MEDICINE 2026

ABSTRACT N. 090

EUROPEAN MEDICAL THERMALISM AND THE WORLD FEDERATION OF HYDROTHERAPY AND CLIMATOTHERAPY (FEMTEC)

HYDROKINESIOTHERAPY IN THE TREATMENT AND PREVENTION OF CHRONIC RESPIRATORY DISEASE

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The relevance of this study is due to the fact that bronchial asthma is one of the most common respiratory diseases. It requires expensive ongoing treatment and hospitalization in 24-hour inpatient facilities due to exacerbations, and there have also been fatal cases associated with the disease (1, 2). The primary objective of the treatment of bronchial asthma is the achievement and maintenance of control over its symptoms over an extended period, with the aim of minimizing the risks of future exacerbations of bronchial asthma, fixed obstruction and undesirable side effects from the therapy (2). Additionally, the treatment is intended to enable the patients to maintain their daily activity, working capacity and enhance their quality of life (3). We have developed a method for the pool that imitates the technique of Nordic walking, using special devices for support on the water surface, and studied it. The method was carried out in sodium chloride-bromine-boric mineral water up to 40 g/m³ and consisted of three exercises. Aim was to study effectiveness and safety of the developed hydrokinesiotherapy technique in patients with bronchial asthma, We Has developed a method of aquatic training for 10 patients with bronchial asthma, consisting of a series of exercises performed in a swimming pool

with bromine chloride sodium brine diluted to a concentration of 40 g/dm³. The proposed method was applied to 8 patients. The results were evaluated using a body composition analyzer (InBody S10, InBody.Co, South Korea), a spirometer (SpiroConnect, MedChip, UK), a cardiopulmonary test (Quark CPET diagnostic complex, COSMED, Italy), a 6-minute walk test, the Asthma Control Test (ACT), and the 5-QL-D quality of life test (EuroQol, 1990). Statistically significant changes were noted in improved control of asthma symptoms (ACT questionnaire), external respiratory function (increase in Forced Vital Capacity (FVC) Forced Expiratory Volume in one second (FEV1) and Tiffeneau test), and increased exercise tolerance (6-MWT and cardiopulmonary test). A decrease in body mass index, a decrease in fat mass, an increase in skeletal muscle mass, and an improvement in the patient's quality of life (5-QL-DL) were noted. Furthermore, no cases of bronchospasm attacks were observed in any of the subjects either immediately or 5 minutes after exercising. In conclusion, the developed complex of aquatic exercises has been shown to facilitate effective and safe improvements in the physical condition of patients diagnosed with bronchial asthma, thereby enhancing their quality of life.

Keywords: chronic obstructive pulmonary disease, health resort treatment, hydrokinesiotherapy.



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Figure 1. Elements of hydrokinesitherapy for bronchial asthma.