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THE MULTIFUNCTIONALITY OF AQUATIC EXERCISE: MEDICINE, TRAINING, FITNESS, AND REHABILITATION

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The modality of Aquatic exercise (practiced in shallow water or deep water), also known as Water Aerobics, can be defined as a set of exercises performed in water, predominantly in the vertical position, with or without the use of music and with or without the use of additional equipment. Over the past 30 years, there has been a significant increase in the availability of water aerobics/exercise programs and interest in scientific research in this area, both in the realm of prevention, through programs promoting improved physical fitness, as well as in sports training (physical conditioning and in phases of athlete regeneration/recovery) and also in rehabilitation/hydrotherapy programs.

Although lacking specific guidelines for its prescription, the modality of Water Aerobics has become part of medical prescriptions, being one of the most recommended activities by healthcare professionals in the context of non-pharmacological treatment for various chronic diseases (Dai et al., 2023; Doyenart et al., 2023; Heidari et al., 2023; Scheer et al., 2023; Xu et al., 2022). There is scientific evidence of its positive effects on improving aerobic fitness, strength, flexibility (Borreani et al., 2014; Mercer et al., 2014; Silvers et al., 2014; Yoo et al., 2013), body composition (Zhu et al., 2023), balance, ability to perform daily activities, relief of symptoms of musculoskeletal diseases (Xu et al., 2022, 2023), health-related quality of life, and mental health (especially in cases of mild depression, anxiety, and self-esteem) (Doyenart et al., 2023; Tang et al., 2022).

The buoyancy force, opposite to the action of gravity, reduces the mechanical load on the body, minimizing the impact of movements on the axial axis, which is especially advantageous for groups such as pregnant women, obese individuals, or those with musculoskeletal pain (Alberton et al., 2015). Additionally, hydrostatic pressure improves peripheral circulation and acts on pain receptors, which combined with the muscle relaxation provided by buoyancy and water temperature, contributes to pain control and reduction of edema and swelling (Yazigi et al., 2013).

In an era where "Exercise is Medicine" and the "Feel Good factor" are considered important pillars for exercise practice and health promotion, it is essential to conduct more studies with controlled protocols to validate water aerobics programs and methodologies, as well as to investigate the acute effects of different patterns of water exercises in various conditions, such as exercise cadence, depth, water temperature, additional equipment, and different populations.

This edition of the RIAA (International Journal of Aquatic Activity) aims to contribute to the promotion and dissemination of scientific research in the field of water aerobics, aiming to valorize this practice and provide stronger support for its prescription in quality professional practice.

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