

The practice of water aerobics with the elderly: Physical and psychological aspects



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ABSTRACT

This Chapter addresses the content on the practice of physical activities by the elderly in the aquatic environment, more specifically water aerobics. It will discuss the importance of water aerobics socially and physiologically for the elderly and its main benefits; from the prevention to the treatment of diseases that are linked to the aging phase. Worldwide, there is a notorious increase in the population aging process, so it is necessary to perpetuate good eating habits and physical activities, so that this phase is not associated with an increase in pathological conditions. Regarding these practices, water aerobics gives back to the elderly autonomy, self-esteem, greater social bond with new friendships during classes; In addition to physiological benefits such as; improvement of muscular endurance, increase of strength,



flexibility, improvement of physical skills and capacities, among others. In this Chapter we will also see that water aerobics brings in its practical proposal, the use of music and the diversity of materials, making it even more pleasurable, playful and special for the elderly. With all its differentials and facilities of execution and good adaptation by this public, this activity also helps to return more

quality of life to patients in the treatment of diseases such as ankylosing spondylitis and lymphedema. Therefore, it is concluded that the practice of water aerobics is an excellent alternative for health promotion, prevention and treatment of diseases in the elderly.

Keywords: Aging, Physical activity, Exercise.

1 INTRODUCTION

1.1 PHYSICAL ACTIVITY IN THE ELDERLY

Around the world, we are experiencing the growth of an aging population. This transformation in society elucidates the concern with quality of life, obtained, especially, by non-pharmacological tools, through the practice of systematic physical activities, healthy eating, leisure, among others. In 2010, there were 39 elderly people for every 100 young people, in 2040, it is estimated that there are 153 elderly people for every 100 young people. The country is not prepared for the needs generated by this aging population, with the challenges of adapting social security and the health system (Miranda; Mendes; Silva, 2016).

Throughout life, the elderly go through different physiological and social changes that make them vulnerable. Therefore, their life trajectory directly influences the aging process (Geib, 2012). According to the complexity of the health context and the services needed to maintain their health, there will also be a need to promote a healthier and more active lifestyle (Schenker, Da Costa, 2019).

According to the Statute of the Elderly, a person who is 60 (sixty) years of age or older is considered elderly (Brasil, 2009). This phase of life is accompanied by several changes, such as reduced visual and auditory ability, loss of ability and neurological functions such as reasoning and memory, as well as changes in aesthetic aspects (hair color, wrinkles) and decreased muscle strength, joint range and flexibility, factors that affect the mental health of the elderly and can lead to psychological diseases such as anxiety, depression and stress (Costa *et al.*, 2018).

Each elderly person goes through the aging process in a unique way, often associated with the disease process. Illness is usually linked to the awareness of the feeling of pain and physical disability (Linck *et al.*, 2008). Often, depending on the disease, the elderly still carry social stigmas that hinder their treatment, as is the case of depression, seen at various times as a "rich man's disease" and not as a health problem (Schenker, Da Costa, 2019).

Following the international recommendations for the health of the elderly, the systematic practice of physical exercise can attenuate and reduce depressive or anxiety symptoms. In addition to improving the ability to perform daily activities and maintaining their independence (Izquierdo *et al.*, 2021). Aquatic activities can be a key factor, as it is already possible to observe that an adequate low-



intensity aerobic training program in an aquatic environment favors the reduction of anxiety and depression scores, in addition to helping with oxidative stress in the body of the elderly (Silva *et al.*, 2019).

In addition to walking, adequate strength training, and pedaling, water aerobics is an excellent conditioning program for the elderly, which includes aerobic exercises and exercises for the development of localized muscular endurance, muscle strength, and flexibility (Barros; Ritti-Dias, 2010; Silva *et al.*, 2019).

Unlike water aerobics, hydrotherapy is also a physical exercise practice performed in the water, but only in heated pools. It is also an excellent ally for the treatment of diseases in the elderly and can be worked on as a way to prevent diseases and maintain health. Its recommendation ranges from muscle strengthening to the most severe cases of rehabilitation; trauma or cardiac treatments. Many group activity centers, gyms and clubs offer dynamic, cheerful and attractive water aerobics or hydrotherapy classes, providing great social interaction among the elderly. This interaction, in turn, generates excellent benefits in the mental health of the elderly (Xavier; Dati, 2021).

The interaction with new friendships, provided through the meeting of people with different needs and the human welcome mediated by the teacher during the water aerobics classes, favors precisely the psychological components that stimulate affective bonds. These bonds often take the elderly out of a state of loneliness due to a possible social distancing, reducing the risks of depression. In this way, water aerobics gives back to the elderly a new meaning to live, with much more autonomy and self-esteem (Da Silva, 2017; Souza; Simões, 2007).

1.2 WATER AEROBICS IN OLD AGE

Activities in the aquatic environment arose before Christ, from the time of Hippocrates in baths that helped in the treatment of diseases; through the Romans who used this practice for healing and recreational purposes. Therefore, it is understood that the use of water was intimately linked to mystical and religious issues (De Paula; De Paula, 1998).

The word Hydrogymnastics originated from the Greek, which means "gymnastics in the water" and its practice in a planned way with well-defined objectives took place in Germany, seeking to serve a group of people with advanced age who needed to practice a safe physical activity, without risks or joint injuries and provide them with well-being (De Paula; De Paula, 1998). The main advantage found in the practice of Water Aerobics is the safety that your patient has to exercise, since it is an activity in which the incidence of impacts is much lower compared to activities performed outside the water. Thus, there are numerous benefits acquired for the health of the elderly practitioner of water aerobics (Costa *et al.*, 2018).



Among the various benefits that water aerobics or hydrotherapy can provide to the elderly, Xavier and Dati (2021, p. 45) highlight some of the most relevant ones in their study, such as:

Increased or maintained range of motion (flexibility); Pain reduction; Increased strength, especially of the muscle groups involved in the affected joint; Promotion of relaxation and relief of muscle spasm; Work on the functional ability of gait; Performing functions that cannot be performed on the ground or are performed with difficulty; Improvement in coordination and postural correction, establishing healthy postural habits; Proprioceptive training; Improvement in respiratory and cardiovascular capacity; Maintain the range of motion and muscle strength of the unaffected joints; Restore self-confidence and independence, improve morale and self-image; Socialization and recreation.

The differential of water aerobics compared to other physical activities is, in addition to the use of music, a diversity of materials such as dumbbells, poles, floats, among others. Thus, the classes become lighter and more joyful, motivating the elderly and consequently reducing stress, due to the properties they have to the waters. As a result, this modality becomes more common in this audience, due to buoyancy, reducing impacts and body weight (Silva, 2021)

As seen, the exercises performed during water aerobics classes can provide several benefits according to the objectives proposed by their practice to the elderly. Thus, it is observed that this activity presents itself as an excellent tool for physical exercise, rehabilitation, relaxation and attention to physical and mental health in this population (Souza, 2017).

Regarding the benefits, water aerobics is a physical activity with no health risks. Thus, this activity helps to delay physical and mental aging, improves physical fitness and capacities, reduces anxiety and stress levels, promotes healthy sleep habits, maintains healthy blood circulation, and has therapeutic healing effects (Santos; Vilela, 2020).

Taking into account the natural aging process, neuromuscular changes occur that generate a low tolerance to physical exercise in the elderly. There will, therefore, be an increase in functional dependence; predisposition to risk of falls; Fractures; hospitalizations and mortality, in addition to limiting their activities of daily living and loss of autonomy (Macedo; Gazzola; Nahas, 2008; Campbell, Buchner, 1997). Water aerobics, as well as other physical exercise practices, when performed in a planned manner, mitigate all these decline processes observed during aging, promoting an improvement in the quality of life of the elderly (Merquiades *et al.*, 2009; Farinatti, 2008).

1.3 WATER AEROBICS IN THE PREVENTION AND TREATMENT OF DISEASES

In the prevention and treatment of diseases, water activities seem to effectively help improve the quality of life of the elderly. In a recent systematic review, it was possible to observe a significant improvement in motor disabilities in elderly patients with Parkinson's disease when submitted to regular aquatic activities, such as water aerobics, especially when compared to elderly people who did



not have any type of intervention, in addition to attenuating greater benefits in balance and muscle strength compared to land exercises in this population (Cugusi *et al.*, 2019).

On the other hand, although the prescription of physical activities is responsible for observing the intrinsic and extrinsic principles of the individual, there are some recommendations that can be generalized, such as the sequencing of activities, in addition to the physiological determinants of transference, ambulation and chronic condition of the elderly, regardless of whether this activity is performed in an aquatic environment or not (Izquierdo *et al.*, 2021).

In connective tissue inflammations, such as ankylosing spondylitis, water aerobics appears to have positive effects in improving the reduction of disease activity with the relief of pain intensity (Liang *et al.*, 2021). In patients with lymphedema, despite positively favoring the improvement of lymphatic drainage, more studies are needed to define specific protocols with water aerobics for this disease (Maccarone *et al.*, 2023).

2 FINAL THOUGHTS

The practice of water aerobics slows down the main bodily changes that are part of the normal course of the aging process. It can be concluded that the elderly should be aware of the particularities of water aerobics to take advantage of all the advantages it offers for the physical activity program in the age of age. Undoubtedly, this pleasant way of exercising has already captivated, whether for its physical results or for its psychological and social well-being, many fans.

It is essential that people become aware that the practice of physical activities combat and help in the treatment of various diseases, prevents the appearance of new pathologies associated with age and allows the degenerative effects of individuals over sixty years of age to be slow. The study reveals that the regular practice of water aerobics allows the achievement of a qualitatively healthier life.

After all, tackling this issue is urgent, as the country has an increasing rate in the percentage of elderly people, which means that the demand for specialized services increases in the same proportion and requires planning on the part of current social public policies.

It is important to make the elderly aware that the incorporation of movement into life based on the inclusion of the fact in the routine means a new direction to existence, it is taken care of with oneself, for this reason, it enables quality of life as a real concept.



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