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Aqua Fitness as one of the methods of prevention of hip osteoarthritis

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Abstract

Aqua fitness training is one of the most effective methods for improving physical health and reducing pain in orthopedic patients. This training due to the extensive number of modules can be used at any age regardless of gender. Aquafitness due to the environment in which it takes place gives great effects in the treatment of osteoarthritis, especially in combination with other physiotherapeutic treatments and kinesitherapy.

Introduction

Osteoarthritis is an increasing problem nowadays. Some authors call it even a civilization disease because it affects more and more people after the sixth decade of life. It is estimated that about 8 million people suffer from this disease, of which 40% is a degenerative disease of the hip joints. In Poland, the number of affected is about 2 million people, which is 17% of the Polish population (US 12%). After the age of 75, degeneration of the joints affects already 80% of people and are the cause of severe pain and reduced fitness. Its most common causes are: hip dysplasia, diabetes, obesity, valgus and rheumatic hip and hypermobility in the joint.

Risk factors

The predisposing factor for occurring degeneration in the hip joints is usually

advanced age. This disease affects both women and men and predispositions to it are manifested by people with dark complexion [1, 9, 11].

Water environment

In the water environment, many factors affect the human body, including water resistance, which relieves joints and contributes to the increase of the range of mobility. The water resistance can be regulated by increasing the speed of movement or using accessories. Another factor that affects the human body in water is the buoyancy force, which contributes to the feeling of lightness in the water - making the movements easier and smoother. A great influence on the human body in water also has a temperature (that is selected according to the exercise specification, usually reaches a value of 28-30 degrees), water viscosity and hydrostatic pressure [2, 4, 6].

Aqua fitness training

Training in water is a form of rehabilitation that allows you to quickly reduce weight. It is associated with a greater release of heat from the body, and as a consequence, metabolism is accelerated. It also allows for faster removal of harmful substances from the blood [2, 4, 6].

Aquafitness training consists of several modules that are suitable for a wide range of patients. This training is intended for both women and men. Recommended especially for people suffering from arthritis, osteoporosis, for people after minor operations for faster recovery [2, 4, 11].

This training allows you to increase the condition of the whole body and improve coordination, flexibility, strength and endurance. It allows reduction of swelling and regulation of blood flow to limbs [3, 4, 11].

The Aquafitness training includes: Aqua Jogging, Aqua Cycling, Aqua Aerobic, Aqua Pool Boxing Bag and relaxation modules including: Aqua Yoga, Aqua Pilates, Aqua Relax, Aqua Watsu, Aqua Areobic.

Physical activity, which moved from gymnastics on the hall directly into the aquatic environment. Its main task is to perform specific exercises by the participants to the rhythm of the music. Simple choreographies based on dancing [2, 4, 6].

Aqua Jogging

Aqua Jogging is a form of exercises based on the basics of aerobic training. The elements of running training are used in it. It can be performed both in deep water and in shallow water [2, 4].

Aqua Cycling

This training is carried out using bicycles in a water environment. It is used by people in which traditional bicycle training is not recommended.

Aqua Pool Boxing Bag

Training based on martial arts. It uses a tube overlay attached to the bottom of the pool. These overlays imitate training bags on which exercises are used, i.e.: kicks, jumps, whole body rotations [4, 6].

Aqua Yoga

Yoga in the water is a form of relaxation which aims to reduce muscle tension and brings rest to the whole body. It also helps to make the body more flexible and to increase the balance [2, 4, 6].

Aqua Watsu

Watsu is a rehabilitation method used in the aquatic environment. It uses elements of mobilization and stretching. An important element of this method is the right temperature of water, which should oscillate between 34-38 degrees [2, 4].

Contraindications

Exercises of this type are contraindicated in people with large injuries to the nervous system, in people suffering from schizophrenia, neuroses, acute and subacute myocarditis, endocarditis and pericarditis, bronchitis, pneumonia, acute inflammatory bowel and stomach [3, 5, 8, 9, 11].

Physical therapy

Physical procedures depend to a large extent on the stage of disease development. Nowadays, it is said about the early period - which reaches its range up to 2 years, in the heavy period - from 2 to 10 years and in the late period, which lasts over 10 years. Comprehensive rehabilitation regardless of the patient's condition is based on reducing pain, preventing contractures, maintaining adequate range of motion, lowering muscle tone and improving local blood supply [3, 5, 9, 10]. In the early stage of the disease therapeutic properties of UV radiation are used, which helps to improve blood circulation and soften skin elasticity. In the initial stage, a Sollux a Bioptron lamps are also used. In the next stage of the disease, cold treatments are recommended: cryotherapy and treatments using electrotherapy: Iontophoresis, IF currents, Trabert current. Ultrasounds can also be used, which help reduce pain and inhibit inflammatory processes. An important element is also balneotherapy, where natural peloids are used, including here: Fango and mud wraps [5, 9, 11].

Summary

Aquafitness training is one of the most effective methods for improving physical health and reducing pain in orthopedic patients. This training due to the extensive number of modules can be used at any age regardless of gender. Aquafitness due to the environment in which it takes place gives great effects in the treatment of osteoarthritis, especially in combination with other physiotherapeutic treatments and kinesitherapy.

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