



ROLE OF HYDROTHERAPY TO RELIEF THE ATHLETICS PAIN AND INCREASE PERFORMANCE

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Abstract

Hydrotherapy is the therapeutic use of the water to reduce pain and this is a treatment of various conditions. The purpose of this research is to discuss the role of hydrotherapy to Rehabilitate the injured athlete or to increase the performance of any athlete. This is a therapeutic approach that involves the use of water for pain relief and treatment. It involves techniques such as hot baths, cold compresses, whirlpools and aquatic exercises to improve circulation, reduce muscle tension and promote relaxation like arthritis, injuries and chronic pain management. This is also used as a cardiovascular exercise to improve overall fitness and health, to increase the range and strength of joints and muscles. Some hydrotherapy program are in a group setting and some are individually conducted moving in water can be easy than moving in land. The buoyancy of the water as well the warmth of the hydrotherapy pool, helps to decrease muscle stiffness, spasm and pain. The buoyancy effect of water provides a gravity Eliminating Environment which improves movement of affected limbs. Hence Hydrotherapy is one of the best therapy through which athlete can increase his performance so this study will be helpful to athlete to understand the importance of Hydrotherapy. It is also fantastic for arthritic conditions and is now being used to treat animals as well as humans, with phenomenal effects.

Key Words:-Hydrotherapy, Hot baths, Cold compresses, Whirlpools, Aquatic exercises

Introduction

Hydrotherapy is the therapeutic use of the water to reduce pain and this is a treatment of various conditions. In Hydrotherapy can be included for the people like, exercises, good treatment with water, and massages. This treatment gives relaxation to the body and the purpose of this therapy to give rehabilitation of the people. This treatment is especially used for various reasons some major are injuries or conditions affect mobility.

Definition of Hydrotherapy

Hydrotherapy is derived from the Greek word “Hydro” meaning water, and “Therapia” meaning healing. It means water healing. It is controlled aquatic exercise in heated sanitized water. Any treatment in water. Hydrotherapy is the medicinal use of water for positive health benefits. These health benefits come from the mechanical and thermal effects of water interacting with the body. It includes the use of physical water properties, specifically temperature and pressure, and sometimes the delivery of minerals or herbal treatments to manipulate the body’s flow of blood, the endocrine system and associated neural systems in order to treat the symptoms of certain diseases.

History of Hydrotherapy

The oldest recorded use of Hydrotherapy can be traced back to ancient Egypt, where royalty bathed in large, warm pools of water mixed with oils and flowers. Whether or not people embarked upon this activity to enjoy health benefits or merely as an indulgent luxury are not certain, but given the advanced nature of the culture at the time, many believe that the Egyptians understood the inherent medicinal value of water as a healing agent. Other experts believe that Hydrotherapy got its start even earlier in Asia. In India, Japan and China, natural hot springs rich in minerals were often used to cleanse the body and soul of its impurities, and how far back that practice reached is hard to estimate. During the reign of the Greek empire, minerals were added to warm baths to help alleviate symptoms of common maladies and sickness. The Romans borrowed from these practices and expanded upon them, becoming famous for the large communal bathhouses they built for the enjoyment and health of their citizens. After the fall of Rome and during the Middle Ages, the practice of Hydrotherapy seemed to disappear, but it was “rediscovered” and popularized in Europe during the Victorian Era, particularly in the 18th and 19th centuries. The father of modern Hydrotherapy is believed by many to be Vincent Priessnitz, an Austrian farmer born in the 1700’s who prescribed combinations of “water, food & air” in place of traditional medicine as cures for common ailments. Word of his treatments and their successes traveled quickly, and because they were cheap and treatment administered by health professionals.

Most early forms of Hydrotherapy in Europe involved the use of cold water, particularly in the treatment of diseases that led to high fevers, as cold water was instrumental in bringing about relief from otherwise harmful high body temperatures. But there were some hot treatments that became popular at the time, as well. Borrowed from “Turkish Baths”, hot Hydrotherapy treatment was introduced by David Urquhart into England after he returned from a trip to the East where he had enjoyed the beneficial therapeutic effects of hot mineral baths.

Hydrotherapy came to the United States from Europe in the mid-19th century. The first medicinal Hydrotherapy clinic was thought to have opened in 1844 in New York City and later moved to Massachusetts. It wasn’t long before similar operations opened in other cities, as the use of Hydrotherapy and specifically hot and cold baths became a vogue practice, particularly among the wealthy elite. Hydrotherapy spawned a tourism trade, where different locations became renowned for their adeptness at

curing different ailments. People would travel to different locations seeking cures for various maladies, and would also travel to different locations depending on the time of the year, easy to do at home; they became very popular in Europe during his lifetime. Later, A Bavarian Priest named Sebastian Knapp furthered Priessnitz's work and developed systematic and controlled applications of Hydrotherapy for support and in combination with medicinal treatments delivered by doctors. It was the first time in modern history where Hydrotherapy was used as a medicinal treatment.

In the 1940's, the use of "whirlpools" – or whirling water movement produced by jets of water powered by mechanical pumps – was introduced and Hydrotherapy took a giant leap forward. With the addition of pressure and water movement, the health benefits of Hydrotherapy were increased and concurrently, the medical community scientifically documented some of the positive changes Hydrotherapy initiates in our bodies. Now popularly known as "spas", "whirlpools" and by the brand name "Jacuzzis", the installation of Hydrotherapy-enabled bathtubs are a popular choice among consumers who want to enjoy the many health benefits of Hydrotherapy on a daily basis. The Physical Effects of Hydrotherapy on the Body Hydrotherapy uses water to deliver temperature and pressure changes to the body. These changes are sensed by the body via nerve endings in the skin and muscle, and result in neural "reflex effects" that are controlled by the brain and spinal chord. The most important of these reflex effects are vasodilatation and vasoconstriction, which are the terms used to describe the relaxation and tensing of the blood vessels in the body. These physical changes in the blood vessels cause changes in the rate of blood flow and in the metabolic functions that are linked to the rate of blood flow. Thermal Hydrotherapy Hot and cold water act in different ways on the body. Besides the obvious tactile sensory effect, there are other "hidden" changes that take place in your body as a result of its interaction with hot or cold water.

Hot Water Hydrotherapy

In a reflexive response to external heat, your body initiates changes that help keep the body cool, including dilating blood vessels to increase the blood flow through them, diverting blood flow to the extremities and to the skin's surface, penning the pores of the skin, activating sweat glands and relaxing muscles. Over short durations, a hot bath will cause organs of the endocrine system to become less active, particularly the adrenal gland, and can decrease blood pressure. This results in a relaxed, less stressful state and helps calm the nervous system.

Hot Water Hydrotherapy Benefits

Generally, hot water Hydrotherapy is the most popular home Hydrotherapy remedy, not only because it is the most enjoyable form of Hydrotherapy from a comfort perspective, but also because it stimulates nerve reflexes that result in the calming of the lungs, heart, stomach and endocrine system. It is often used to relax patients, promote blood flow, aid in the healing process, tone the body, stimulate the immune system, and alleviate the pain or discomfort associated with deep muscle, joint or connective tissue ailments, injuries or abnormalities. Increased blood flow has important effects on your body, including:

- 1) more efficient oxygenation of tissues, thereby helping injuries heal faster, and
- 2) more efficient removal of toxins from tissue, which helps prevent or ease injuries and increases tissue resiliency.

As a result, hot water Hydrotherapy is used to achieve many health benefits, the most popular of which are outlined below.

Fight infection and injury

By increasing the rate of blood flow in the body, hot water Hydrotherapy increases circulation of the immune system's white blood cells, enabling the immune system to work faster and more efficiently. A hot soak increases the production of endorphins in the body as well. Endorphins are the body's "pain killers" and are associated with feelings of elation or happiness. Endorphins also stimulate the immune system, alleviate pain, and help tissues heal faster.

Help clear respiratory infections

The inhalation of steam, particularly those medicated with compounds like menthol, alleviates the constriction of swollen lung canals and air sacs, allowing fluids and mucus to move out of the lungs more readily, and oxygen into the lungs more efficiently. When your body fights lung infections, they move the 'remains' of organisms it has killed (and your spent white blood cells) out of your body via mucus, so clearing mucus and fluid out of your lungs is important in helping your body clear an infection as quickly as possible.

Prevent headaches

When blood vessels dilate, the physical space our blood has to fill in our bodies increases, and therefore overall systemic blood pressure decreases. Headaches are often brought about by high pressure in the arteries of the skull, so lower blood pressure helps prevent this from happening. In addition, stress is often a culprit of constricted blood flow to the brain, which can also lead to headaches. Since hot water Hydrotherapy treatments help alleviate stress, they can also limit the onset of stress-induced headaches as well.

Treat circulatory problems, especially in the limbs

When blood vessels dilate, as they do during hot water Hydrotherapy treatment, circulation and blood flow is increased, particularly to soft tissue like muscles. This is especially helpful in people who suffer from circulation problems, especially to the limbs and extremities. People who suffer from cold hands and feet will find that many times hot Hydrotherapy doesn't only provide an immediate relief, but that it continues to help even hours after the initial soaking period.

Cold Water Hydrotherapy

Cold water or ice has, in essence, an opposite effect on the body than hot water. Cold water and ice causes the body to try and conserve heat. As a result, blood vessels in the body constrict, decreasing the amount of blood that flows through them. Blood flow is diverted from the extremities to the core of the body and to internal organs, to help keep them warm and operating correctly. The pores of the skin close, sweat glands shut down, muscles tense, and some endocrine system organs, like the adrenal gland, become more active. Over short durations, cold water makes a person more alert and makes them feel less tired as the body activates these neural networks that work to create heat and raise blood pressure in response to the cold.

Cold Water Hydrotherapy Benefits

Cold water Hydrotherapy is not as popular a home remedy as hot water Hydrotherapy, mostly because it can be somewhat uncomfortable, but its regenerative and beneficial health effects are just as powerful as those experienced with hot water. Generally, cold water Hydrotherapy is used to invigorate patients who may feel sleepy, weak or mentally tired and to increase internal organ functions by diverting blood flow to the internal organs from the extremities. It also slows the heart rate and may cause slight elevations in blood pressure.

Alleviate depression

Because a short soak in cold water stimulates the endocrine system, cold water Hydrotherapy can help alleviate certain types of depression. Cold water helps a person feel more active and mentally alert, and can help people cope with feelings of sadness or tiredness.

Treat headaches

Headaches that are the result of an abnormal flow of blood within the blood vessels of the head can sometimes be successfully treated with a cold-water Hydrotherapy session. Vasoconstriction and the diversion of blood from the extremities to the core of the body will change the amount of blood flowing to the brain, relieving certain types of headaches.

Treat varicose veins

Varicose veins are the result of a buildup of blood in the veins that increases the pressure in them, pushing them towards the surface of the skin, and stretching them, so they end up getting larger and holding more blood. When treated with cold water Hydrotherapy, veins in the leg constrict, forcing blood out of them. In addition, arteries in the leg constrict as well, meaning less blood is flowing through the tissues into the veins. The cold also helps “numb” pain caused by varicose veins and provides relief from the discomfort they cause.

Raise low blood pressure

Cold water Hydrotherapy can be used to combat circulatory problems, particularly in the internal organs. Since immersion of cold water constricts capillaries on the skin and diverts blood flow towards the core of the body, it also helps increase blood flow to important internal organs, like the liver, heart and lungs.

Hydrotherapy Precautions

While Hydrotherapy has many potentially beneficial health effects, too much heat or cold can affect health adversely. In addition, people with certain types of diseases and health problems should avoid Hydrotherapy or embark upon Hydrotherapy treatments only under the direct supervision of a physician. In all cases, before starting a Hydrotherapy regiment, it is important you discuss your Hydrotherapy plans with your doctor, and follow his/her advice and direction.

REVIEW OF LITERATURE

Ahmed Kamil Allawi (2022), explored that a physical rehabilitation approach on the torn hamstrings of the back muscles and its effects on the degree of the pain and some physical abilities of football players. The hamstring tendon injury is a common injury in football, and if it is not treated, rehabilitation and returned to its pre-injury condition and full recovery. This research aim to explore the physical rehabilitation program me for hamstring tendon and the results of the researcher. In this research sampling method has been used. The physical arisen prepared by the researcher in his rehabilitation approach had a effects and the variable of the research and the return of the injured to play and competition.

Soleyman Ansari et...al (2014), discussed effects of aquatic exercises training on pain, symptoms, motor performance and quality of life of older with knee osteoarthritis. This study's aim to know the effects of aquatic exercise training on the knee pain and its symptoms. In this research the means and standard deviance has been used with randomly assigned to aquatic exercise therapy and control group.

CONCLUSION:-

Hydrotherapy is an extremely powerful tool that is a really beneficial treatment method, particularly soon after injury. It is widely supported by research to be a great way for people with injuries to progress quickly with land-based exercises, more so than if they just did land-based exercises on their own. It is also fantastic for arthritic conditions and is now being used to treat animals as well as humans, with phenomenal effects.

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