

## Hydrotherapy: A Review

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### ABSTRACT

Hydrotherapy is used in relieving pain such as headaches, back pain and muscle pain, and inflammation associated with arthritis. The treatment is also used to improve blood circulation and to tone the skin and muscles. It also helps elevate one's moods hence used for managing stress and anxiety. Hydrotherapy is commonly used to treat stroke, brain and muscle injuries. Hydrotherapy techniques may also be used before or after surgery procedure to replace the hip, joints and other broken limbs.

**Keywords:** Hydrotherapy, kniepp system, colon hydrotherapy, balneotherapy.

### INTRODUCTION

Hydrotherapy is a word that has been used to describe a wide range of activities of which most pertain to therapeutic and exercise activities carried out in heated pools. More recently, traditional medicine have recognized hydrotherapy as a physiotherapy treatment carried out in water where the properties of water are utilized to achieve specific therapeutic goals. The water supports your body weight and aids buoyancy, whilst the warmth can allow muscles to relax and ease joint pain. It can also help promote relaxation, decrease stress on joints, increase movement and stimulate circulation. Hydrotherapy is one of the basic methods of treatment widely used in the system of natural medicine, which is also called as water therapy, aquatic therapy, pool therapy, and balneotherapy<sup>1</sup>.

### WATER THERAPY

Hydrotherapy, or water therapy, is the application of water to initiate cure. All three forms of water (liquid, steam, ice) can be used therapeutically. Advantages to hydrotherapy are:<sup>4</sup>

- ✓ It is almost always available.
- ✓ It is easy to learn and perform.
- ✓ It is painless and has no ill side effects.
- ✓ It is inexpensive and can be done at home.

The goals of hydrotherapy are to improve the circulation and quality of blood. This is important because blood delivers nutrients to and removes wastes from tissues and organs. If circulation is poor or slow, healing nutrients cannot be delivered and toxins cannot be removed, which causes degeneration of the tissues and organs. By improving the quality of blood, more nutrients are available for cells to use and toxins are managed more efficiently. General therapeutic uses of hydrotherapy include:

- ✓ Pain and swelling of injuries
- ✓ Fever
- ✓ Elimination of toxins
- ✓ Antispasmodic
- ✓ Constipation
- ✓ Improve immune function

Alternating hot and cold (contrast hydrotherapy) is a common hydrotherapy treatment. The hot application expands blood vessels, filling them with blood, and the cold application constricts the blood vessels, forcing the blood to move on to other parts of the body. Hot and cold water can be applied to any part of the body that is inflamed, congested, or injured. Treatment normally consists of applying a hot cloth for 3 minutes then a cold cloth for 30 seconds, alternating 3 times in a row. The treatment can be done several times a day.<sup>4</sup>

The amount of time the hot and cold is applied may vary (e.g., 5 minutes hot, 1 minute cold) as long as the cold application is of shorter duration than the hot. It is also important to end the treatment with the cold application. The hot application should be pleasantly hot.

### Caution

Do not apply water that is hot enough to burn.

- ✓ People have different tolerance levels for hot water on different parts of their body.
- ✓ Tolerance levels can change from treatment to treatment, depending on emotional state, degree of injury or illness, and body temperature.
- ✓ Water works on the body reflexively. This means that when water is applied to one part of the body, other parts of the body are also stimulated by an arterial (blood vessel) reflex or spinal cord reflex.
- ✓ Hydrotherapy takes advantage of this reflexive action. For example, if the left foot is fractured and in a cast, an alternating hot and cold treatment can be performed on the right foot. Because of the reflexive action, the left foot obtains the benefits of the hydrotherapy treatment even though it was done on the right foot. This principle is also used when a hot and cold treatment is applied to the feet to treat the throat or sinuses.

### CLASSIFICATION AND TYPES OF HYDROTHERAPY

Hydrotherapy is generally categorized into two types.

#### External Hydrotherapy

This type involves the application of water or ice to the body or immersion of the body in water whereas temperature-based hydrotherapy involves various effects of cold or hot water on the skin and underlying tissues. Hot water helps relaxes muscles and causes sweating, and is very helpful to treat poor circulation, sore muscles, arthritis, and rheumatism by using the combination of aromatherapy. Cold water hydrotherapy helps in stimulating underlying muscles and blood flow in the skin. Treatments based on temperature include the application of cold or moist heat to particular parts of the body. Treatment with moist heat is called fomentation, and is helpful for conditions such as flu, arthritis, or chest cold whereas cold compresses or ice packs help with headaches, dental surgery, or sprains. Body packs are

helpful for detoxification and to calm psychiatric patients.<sup>5</sup>

#### Internal Hydrotherapy

Internal hydrotherapy includes colonic irrigation and enemas. Steam baths are a type of internal hydrotherapy. Colonic irrigation is an enema which is used for cleansing the entire bowel. It is believed to cure a number of digestive problems. Douching is another form of internal hydrotherapy, which directs a stream of water into the vagina for cleansing purposes. This is generally not the recommended form of therapy.<sup>7</sup>



#### MECHANISM OF HYDROTHERAPY

Hydrotherapy acts through the nervous system. Like medications, it acts on the brain centers and their extensions, and then through the reflex areas. Function is stimulated or reduced by means of temperatures used and the length of their application. Friction accompanying the application of hydrotherapy also adds to and prolongs its effectiveness.

Hydrotherapy works on the healing properties of its thermal and mechanical effects. Hydrotherapy makes use of the body's reaction to the pressure exerted by the water, to hot and cold stimuli, to the sensation of the water itself, to the protracted application of heat. Nerves help the sensation of the skin deeper into the body, it is then vital in stimulating the immune system, improving circulation and digestion, influencing the production of stress hormones, lessening the body's sensitivity to pain and encouraging the flow of blood.

In general, heat helps to soothe and quiet the body, and to slow down the activity of internal organs. Cold is used to rejuvenate and stimulate, increasing internal activity within the body. If an individual is experiencing anxiety or tense muscles, heat is recommended in the

shower or bath. For stressed out and tired feeling, it is recommended to take a warm shower or bath followed by a short cold shower to help stimulate the body and mind.

Pain or stress may lead to chemical changes in the body that can cause increased pulse rate and blood pressure. Regular hydrotherapy treatments help in reducing these symptoms by relieving and relaxing the swollen joints and slowing down the process of stress reaction. This helps to unwind and relax and helps to deal with pain easily.<sup>5,6</sup>

## TYPES OF HYDROTHERAPY TECHNIQUES

### Kneipp system

This technique was developed by Sebastian Kneipp and involves the use of cold and hot water on the skin. The technique is done in a Kneipp bath which helps to improve the immune system. Treatments classified under the Kneipp system include positive physiological, consensual, segmental and immune system. Additionally, it helps in relieving muscle tension and trauma.

### Hydro-massage

It involves use of warm water, which applies chemical, mechanical and thermal massage to the body. This helps to improving circulation of blood, relieving pain and tension while relaxing the muscle. Hydro-massage relieves pain in the soft tissues and muscles caused by injuries from sports and arthritis. It is also used to treat insomnia, tendinitis, and multiple sclerosis. In addition, hydro-massage is also used to relieve and manage stress.

### Colon hydrotherapy

It is a technique that involves infusing warm water into the rectum. The technique is painless and helps in washing out old and built-up waste in the colon. Colon therapy aims at improving the overall health of the digestive system. Note that, water used in colon hydrotherapy doesnot contains any drug, chemical or herb.<sup>5,6</sup>

## COMMON HYDROTHERAPY TECHNIQUES

### Baths & Showers

Baths and showers can be healthy and healing. A hot bath or shower can encourage relaxation, reduce stress, and flush out toxins. Adding essential oils or herbs to the bath can enhance the therapeutic benefits.

### Cold foot bath

Here the feet are immersed in cold water (up to the ankles) for around one minute. Cold foot

baths provide relief to tired feet. It is also found to be effective against insomnia, headaches, sprains and varicose veins.

### Heating Compress

The heating compress is an application of a cold compress to an area that is initially cooled by the water and then warmed by the influx of blood to the area. It is an effective therapy for sore throat, cold, flu, and sinus congestion when it is administered to the throat or feet. When the feet are treated, it is also known as warming socks or wet socks treatment.

### Hip or Sitz Bath

With this treatment, only the hips are soaked in cold or warm plain water or saline solution to treat vaginal discharge, uterus cramps, hemorrhoids, inflammation, constipation, prostate problems and other abdominal problems. It is more labor intensive than other hydrotherapy treatments but it powerfully affects the pelvic and abdominal organs.

### Steam bath

Steam baths are used to treat bronchitis, asthma, skin problems, pain and allergies.

### Steam inhalation

Here water is boiled in a large pot. Steam inhalation provides relief from sinus infection and nasal congestion. People with high blood pressure should avoid steam inhalation.

### Full immersion bath

Here the person is immersed in water (up to shoulder level) for around 20 minutes. The temperature of the water is maintained at around 90 degrees Fahrenheit. The water may be plain or it may contain herbs, salts or oils. This form of hydrotherapy produces relaxation.<sup>[6, 7, 8]</sup>

## USES OF HYDROTHERAPY

The uses of hydrotherapy include:

### For Pain Relief

Hydrotherapy has proved to be a highly effective type of natural therapy which works by stimulating the endorphins which in turn help to alleviate tension and control pain.

### For Circulation

Hydrobath has an extraordinary and almost miraculous ability to improve circulation by providing nourishment and oxygen to entire cells and tissues.

**For Immunity**

Conventional detoxing leads to a stronger immune system, which is able to manage controlling infections, bacteria and viruses. This also helps to overcome minor infections ranging from the common cold right up to deadly diseases.

**Stress**

Hydrotherapy helps in breaking stress cycle of everyday life and treat stress-related illnesses, which can cause a variety of psychological and physical problems like digestive complaints, high blood pressure, anxiety attacks, depression, headaches, and insomnia.

**Complexion**

Hydro bath helps in regulating body's temperature by improving efficiency of perspiration glands. This releases the toxins from the body leading to a healthy glowing complexion and also helps reduce fluid retention and even have a remarkable effect on other ailments such as cellulite.

**Arthritis**

Hydrotherapy helps in treating arthritis by submerging into water either to soak or to exercise. This procedure is very helpful to treat stiffness and joint pains.

**Back Pain**

Alternate hot and cold compresses are applied to the painful area for acute back pain. The hot compress will increase blood flow to the area and relax the muscles while the cold compress helps reduce inflammation. Chronic backaches may be benefited from alternating hot and cold showers.

**Hydrotherapy for Acne**

Treatments like hot and cold wet compresses and colon hydrotherapy are proposed to cure acne.

**Insomnia**

Hydrotherapy helps to run the blood back to the external areas and away from the head. Insomnia is caused by too much blood in the brain. Applying hot foot baths, cold-water pack, alternate hot and cold showers is really effective.

**Joint Pain**

Whirlpools, Jacuzzis, and hot tubs helps in treating muscle and joint pain and to regain muscle strength.

**Headaches**

Hydrotherapy in the form of moist compresses is very useful for headaches.

**Colonic Hydrotherapy for Stomach Problems**

Hydrotherapy is very effective in relieving stomach problems. Colonic hydrotherapy is very helpful when treating patients with irritable bowel syndrome, digestive problems, indigestion and constipation.

**Sciatica**

Hydrotherapy has proved to counteract the bodily reactions caused by sciatica and reduce pain or ache by using its hot tub therapy. The body becomes weightless relieving it off the constant pull of gravity when submerged in a hot tub.

**Hydrotherapy for Sleep Disorders**

Hot bath is very helpful to cure sleep disorders as it effects more accurately if taken before going to bed. The warm water from this bath raises body temperature and helps to sleep easily. Staying in a hot bath for more time is not recommended as this could lead to the risk of overheating.<sup>[2, 3]</sup>

**CONCLUSION**

Hydrotherapy treatments are used by both allopathic and complementary medicine to treat a wide variety of discomforts and disorders. Hydrotherapy is commonly used to treat stroke, brain and muscle injuries. The low-impact nature of hydrotherapy makes it one of the most successful treatments for bones and muscles. Hydrotherapy stimulates the release of endorphins acting as a natural pain reliever which will further reduce muscle soreness. Water birth involves giving birth in a tub of warm water now a popular trend in most developed nations. Hydrotherapy is used in relieving pain such as headaches, back pain and muscle pain, and inflammation associated with arthritis. Being immersed in warm or hot water raises the body temperature, increasing blood flow around the circulatory system and so alleviating pain. The improved circulation will in turn help to heal injured tissues and rehabilitate damaged muscles or joints. It also helps elevate one's moods hence used for managing stress and anxiety. This is a therapeutic whole body treatment that involves moving and exercising in water that means doing physiotherapy in pool.

**REFERENCES**

1. Fleming SA and Gutknecht NC. Gutknecht. Naturopathy and the Primary Care Practice. Prim Care. 2010;37:119–36.
2. Davison, Peter G, Loiselle, Frederick B, Nickerson and Duncan. "Survey on current hydrotherapy use among North American Burn centres". Journal of burn care & research. 2010;31(3):393–399.
3. <https://en.m.wikipedia.org/wiki/Hydrotherapy>
4. [www.indiamedico.com/hydrotherapy](http://www.indiamedico.com/hydrotherapy)
5. [www.hydroreference.com/hydrotherapy](http://www.hydroreference.com/hydrotherapy)
6. [www.kwphysio.ie/hydrotherapy/](http://www.kwphysio.ie/hydrotherapy/)
7. <http://www.healthcommunities.com/hydrotherapy/alternativemedicine/about-water-therapy>
8. [www.thenaturalpathclinic.org/packages/](http://www.thenaturalpathclinic.org/packages/)
9. [www.naturaltherapypages.com.au/hydrotherapy/](http://www.naturaltherapypages.com.au/hydrotherapy/)