



# A New Trend in Disease Treatment: Hydrotherapy

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## ABSTRACT

Humans have utilised water for ages to relieve stress, cure pain, and treat a variety of illnesses. Ancient civilizations including the Romans, Greeks, Babylonians, Egyptians, Chinese, and Japanese used baths, and this is extensively recorded. Water workouts, water massage, sitz baths, cold water treatments, ice packs, saunas, mineral springs, hot springs, and hot tubs are all examples of hydrotherapy (also known as water therapy). The practise of hydrotherapy in physiotherapy has grown out of the scientific theory of hydrodynamics. Knowledge of human physiology and the physical characteristics of water Hydrotherapy had a positive impact on people's capacity to work, operate physically, have energy, sleep well, function cognitively, and participate in everyday life. More controlled research is required.

## INTRODUCTION

Humans have utilised water for ages to relieve stress, cure pain, and treat a variety of illnesses. Ancient civilizations including the Romans, Greeks, Babylonians, Egyptians, Chinese, and Japanese used baths, and this is extensively recorded. These forebears from long ago promoted the benefits of water for healing. Even now, we still use water as a therapeutic tool. Water is used in the practises of psychiatrists, physical therapists, massage therapists, and other experts for both therapeutic and recreational purposes. A natural option for massage therapists to grow their business and use methods that have been used for millennia is through hydrotherapy (aqua treatment).

The use of hydrotherapy dates back a very long period. Proto-Indian civilisation practised hydrotherapy as early as 2400 B.C. In as early as 1697, Sir John Floyer wrote a treatise on the application of hot and cold water hydrotherapy. While hydrotherapy has important uses in medical, it was also used to keep fit during World Wars I and II. In recent years, hydrotherapy has become an essential part of physical rehabilitation. Hydrotherapy may aid in muscular relaxation while simultaneously increasing tissue warmth and blood flow. The three hydrotherapy methods—neutropray, thermotherapy, and cryotherapy—are distinguished by the differing temperatures of the water. Thermohydrotherapy is the practise of using hot water to treat a body that is submerged in water.

The word "hydrotherapy" (from the Greek "hydro" meaning "water") refers to a procedure that employs water in any form or temperature to heal sickness and relieve pain. This method has been used since the fifth century B.C. The first person to mention the use of water for therapeutic reasons was the Greek physician Hippocrates, while ancient Egyptian and Roman cultures were also aware of its therapeutic benefits. History demonstrates that public baths were a crucial component of Roman colonies, and it is believed that Egyptians took baths in floral essences and fragrant oils. The use of sulfur-rich springs for the treatment of skin conditions and other illnesses saw a rebirth in the mediaeval ages. When the 18th century arrived, hydrotherapy was acknowledged as a medical professionals and the scientific method were frequently used.

the benefits of water in the treatment of disease. Numerous conditions, such as arthritis, stomach problems, sleep problems, stress, and depression, may be helped by hydrotherapy. Hydrotherapy is based on the idea that water contains therapeutic qualities that can treat a wide range of diseases and disorders. Ice, liquid, and steam water are all adaptable treatment methods because of their many forms.

#### Properties of Water

The properties of water are:

Colorless Odorless Tasteless

Water exists in three states:

Solid (does not flow) Liquid (flows freely)

Vapor (flows freely and fills all dimensions of is containers)

The fact that water exists in the three above states within a relatively narrow range of temperature enhances its therapeutic versatility. Water is readily accessible and can be applied by the massage therapist with very little expense. Water can absorb large amounts of heat and is an excellent conductor of heat.

In hydrotherapy, the environment of the body is changed by water at varying temperatures and by various mechanical means. In general, the physiological response of the body is directly proportional to the extent of

the environmental change. Physiological changes in the body produced by hydrotherapy are classified as thermal, mechanical, and chemical.

Thermal effects are produced by water at temperatures above or below that of the body. The greater the difference, the greater the physiologic effect.

Mechanical effects are produced by the impact of water touching the skin in whirlpools, sprays, douches, and friction. Medical professionals and the scientific method frequently used the benefits of water in the treatment of disease. Numerous conditions, such as arthritis, stomach problems, sleep problems, stress, and depression, may be helped by hydrotherapy. Hydrotherapy is based on the idea that water contains therapeutic qualities that can treat a wide range of diseases and disorders. Ice, liquid, and steam water are all adaptable treatment methods because of their many forms.

When water is consumed or used to irrigate a bodily cavity, chemical reactions occur.

For optimal health, the body must maintain homeostasis, or a steady internal environment. To maintain the interior environment of the body within normal bounds, cell and tissue components must be replenished since they continually deteriorate. A crucial element in this procedure is water. The body seems to be a substantial thing, yet it is not. An typical adult's lean body mass ranges from 65 to 70% water, whereas an infant's body weight is around 70% water. Between intracellular and extracellular fluid, body water is dispersed. The body must continually adapt physiologically to external forces in order to maintain this equilibrium. The difference between the body's core temperature and

The hypothalamus, which is situated halfway between the cerebral hemispheres, regulates body temperature similarly to a thermostat in a house. The "set point" at which a heating system runs is a pleasant temperature. In the house, the furnace is turned on when the outside temperature drops, and it is turned off when the outside temperature rises. Small variations in body temperature are detected by the hypothalamus. Heat production and loss are regulated by the anterior and posterior hypothalamus, respectively.

When the "set point" for hypothalamic nerve cell temperature is exceeded, impulses are released to reduce body temperature. A couple of examples of heat loss processes include sweating and vasodilation (widening of blood vessels and inhibition of heat production). If the hypothalamus notices that the body temperature is lower below the "set point," signals are sent.

The massage therapist must be continually conscious of the water's temperature since severe heat or cold might hurt your client. Lower than 32 degrees or greater than 124 degrees for the water Fahrenheit can cause tissue damage. It is helpful to test the water with your fingertips, but more accurately, to use a thermometer.

### Benefits of Hydrotherapy

Increased blood flow from hydrotherapy includes increased immune system blood flow, the immune system, lessens swelling, repairs damaged tissue, enhances well-being, and energizes the body.

Injured tissue receives new nutrients and oxygen through hydrotherapy, which also aids in the disposal of waste. Alternately applying heat and cold to wounds speeds healing by enhancing blood vessel integrity and muscle tone. Peripheral (surface) blood arteries swell or dilate in response to heat. Blood is forced back to the organs by the contraction of peripheral blood arteries brought on by cold.

Water Cure Therapies:

Water cure in the therapeutic sense is a course of medical treatment by hydrotherapy. It can be classified as follows according to use of contents,

1. Enema therapy

- A) Ozone enema
- B) Bowel stimulating enema
- C) Disposable enema
- D) Barium enema
- E) Rectal corticosteroids
- F) Alcohol enema
- G) Pre-delivery enema
- H) Tobacco smoke enema
- I) Coffee enema

2. Gel therapy

- A) Hydro gel therapy
- B) Organo gel therapy
- C) Xerogel therapy

1. Enema therapy:

Enema is a Greek word that means "to inject." The process of administering liquids through the anus into the rectum and colon is known as an enema. The lower digestive tract rapidly expands as the amount of the liquid increases, frequently causing excruciating bloating, cramps, and strong peristalsis as well as a severe sense of urgency and total evacuation of the lower intestinal system. An enema has a speedier and more definite action than any laxative, and keeping one in for 10 to 15 minutes produces a more comprehensive outcome. It can be used in various alternative health therapies as well as the treatment of medical diseases including encopresis and constipation. They can also be used to deliver some prescription and illicit substances.

An improperly administered enema may result in internal bleeding, electrolyte imbalance (with repeated enemas), or tissue ruptures in the intestine or rectal area. The vagus nerve may be stimulated by the enema tube and fluid, which might result in an arrhythmia like bradycardia. Since the peristalsis of the intestine might cause an inflamed appendix to burst, enemas shouldn't be utilised in cases of unexplained abdominal discomfort. In those with

diverticulitis, ulcerative colitis, Crohn's disease, severe or internal haemorrhoids, or tumours in the rectum or colon, there are arguments both for and against colonic irrigation, and its use is not advised shortly after bowel surgery (unless prescribed by a healthcare professional).

Patients with heart disease or renal failure should refrain from routine treatments.

A) Ozone water therapy- Recent research has shown that ozone water is sometimes used in enemas, can immediately cause microscopic colitis.

b) Bowel-stimulating enema:

These procedures typically use water, which primarily acts as a mechanical stimulant, but they can also include the addition of baking soda (sodium bicarbonate) or mild hand soap to the water. In order to maximise the efficiency of the enema, buffered sodium phosphate solution pulls more water from the circulation into the colon, although this can be highly irritating to the colon and result in severe cramping.

Consequence of the patient's anus's occasional seepage, which can dirty underwear for up to 24 hours. Equal parts of milk and molasses heated to just above body temperature are often used as an enema solution because they are both particular intestinal mucosa irritants and serve to promote peristalsis when administered in extremely dilute solutions.

C) Disposable enema: Cleansing the lower bowel prior to a surgical procedure such as sigmoidoscopy or colonoscopy. Because of speed and supposed convenience, enemas used for this purpose are commonly the more costly, sodium phosphate variety – often called a disposable enema. A more pleasant experience preparing for testing procedures can usually be obtained with gently-administered baking soda enemas; cleansing the lower bowel for colonoscopy and other bowel studies can be effectively achieved with water-based, or water

with baking soda, enema administration.

In Asian countries, particularly in Japan, commercially available disposable enemas typically contain glycerin (at concentrations varying from 30-50%) or sodium chloride. They are not lubricated and the amount of liquid contained in them may vary, although most contain about

20-40 ml of diluted glycerin. For home use, disposable enema bottles (reusable rubber/vinyl bags/bulbs) are common to be used. Marketed disposable products are disposable bags (connected to disposable tubing, can commonly be used for many months or years without significant deterioration), closed top syringes (to relieve aches and pains via gentle heat administrations to parts of the body), clysters syringes (for symptoms of constipation). Many self-given enemas used at home are the packaged, disposable, sodium phosphate solutions in single-use bottles sold under a variety of brand names, or in generic formats. In medical or hospital environments, reusable enema equipment is now rare because of the expense of disinfecting a water-based solution. For a single-patient stay of short duration, an inexpensive disposable enema bag can be used for

several days or weeks, using a simple rinse out procedure after each enema administration. The difficulty comes from the longer time period (and expense) required of nursing aides to give a gentle, water-based enema to a patient, as compared to the very few minutes, it takes the same nursing aide to give the more irritating, cold, packaged sodium phosphate unit.

D) Barium enema: It is used as a contrast substance in the radiological imaging of the bowel. The enema may contain barium sulfate powder or a water-soluble contrast agent. Barium enemas are sometimes the only practical way to view the colon in a relatively safe remaining barium with additional water, baking soda, or saline enemas helps restore normal colon activity without complications of constipation from the administration of the barium sulfate.

E) Rectal corticosteroids: These are sometimes used to treat mild or moderate ulcerative colitis. They also may be used along with systemic (oral or injection) corticosteroids or other medicines to treat severe disease or mild to moderate disease that has spread too far to be treated effectively by medicine inserted into the rectum alone.

F) Alcohol enema: People who wish to become intoxicated faster use an alcohol enema as a method to instill alcohol into the bloodstream, absorbed through the membranes of the colon. Only a small amount is needed as the intestine absorbs the alcohol more quickly than the stomach. Deaths have resulted due to alcohol poisoning via enema.

G) Pre-delivery enema: In certain countries (the United States), it was thought a good idea to cleanse the bowel for pregnant women were given enemas prior to labor to reduce the risk of feces being passed during contractions. Under some controversial discussion, predelivery enemas were also given to women to speed delivery by inducing contractions. Nowadays it was abandoned because obstetricians commonly give Pitocin to induce labor<sup>1</sup>.

H) Tobacco smoke enema: Now obsolete, it was used for resuscitating victims of drowning during the 18th century.

I) Coffee enema: These are administered in Gerson therapy.

The main medical usages of enemas are:

A) As a bowel stimulant, similar to a laxative – the main difference being that laxatives are commonly thought of as orally administered while enemas are administered directly into the rectum, and thereafter, into the colon. When the enema injection into the rectum is complete, and after a set "holding time", the patient expels feces along with the enema in the bedpan or toilet.

B) Enemas may also be used to relieve constipation and fecal impaction, although, in the USA and some other parts of the world, their use has been replaced in most professional health-care settings by oral laxatives and laxative suppositories. In-home use of enemas for constipation and alternative health purposes is somewhat harder to measure.

C) Bowel stimulating enemas usually consist of water, which works primarily as a mechanical stimulant, or they may be made up of water with baking soda (sodium bicarbonate) or water with a mild hand soap dissolved in it. Buffered sodium phosphate solution draws additional water from the bloodstream into the colon to increase the effectiveness of the enema, but can be rather irritating to the colon, causing intense cramping or griping. Mineral oil functions as a lubricant and stool softener, but often has the side effect of sporadic seepage from the patient's anus which can soil undergarments for up to 24 hrs. Glycerol is a specific bowel mucosa irritant and when introduced in very dilute solution serves to induce peristalsis.

D) Other types of enema solutions are also used, including equal parts of milk and molasses heated together too slightly above normal body temperature. In the past, castile soap was a common additive in an enema, but it has largely fallen out of use because of its irritating action in the rectum and because of the risk of chemical colitis as well as the ready availability of other enema preparations that are perhaps more effective than soap in stimulating a bowel movement. At the opposite end of the spectrum, an isotonic saline solution is least irritating to the rectum and colon, having a neutral concentration gradient. This neither draws electrolytes from the body as can happen with plain water, nor draws water into the colon, as will occur with phosphates. Thus, a salt water solution can be used when a longer period of retention is desired, such as to soften an impaction.

E) Cleansing the lower bowel prior to a surgical procedure such as sigmoidoscopy or colonoscopy. Because of speed and supposed convenience, enemas used for this purpose are commonly the more costly, sodium phosphate variety – often called a disposable enema. A more pleasant experience preparing for testing procedures can usually be obtained with gently-administered baking soda enemas; cleansing the lower bowel for colonoscopy and other bowel studies can be effectively achieved with water-based, or water with baking soda, enema administration.

F) The administration of substances into the bloodstream. This may be done in situations where it is undesirable or impossible to deliver a medication by mouth, such as antiemetics given to reduce nausea (though not many antiemetics are delivered by enema). Additionally, several anti-angiogenic agents, which work better without digestion, can be safely administered via a gentle enema. Medicines for cancer, for arthritis, and for age-related

digestive tract. Interestingly, some water-based enemas are also used as a relieving agent for irritable bowel syndrome, using cayenne pepper to squelch irritation in the colon and rectal area. Finally, an enema may also be used for hydration purposes. See also route of administration.

G) Emergency blood expansion. Emergency pre-hospital treatment of hemorrhage requires immediate fluid replacement therapy. In mass casualty, remote or rural settings, the lack of sterile fluids, intravenous equipment or the knowledge to use them might limit the treatment options available. In such situations proctoclysis remains an easy, safe and effective way to provide fluid replacement. It does not require sterile fluids, special equipment or complex training, and it is useful when alternative routes are not readily available.

H) The topical administration of medications into the rectum, such as corticosteroids and mesalazine used in the treatment of inflammatory bowel disease. Administration by enema avoids having the medication pass through the entire gastrointestinal tract, therefore simplifying the delivery of the medication to the affected area and limiting the amount that is absorbed into the bloodstream.

I) General anesthetic agents for surgical purposes are sometimes administered by way of an enema. Occasionally, anesthetic agents are used rectally to reduce medically induced vomiting during and after surgical procedures, in an attempt to avoid aspiration of stomach contents.

J) A barium enema is used as a contrast substance in the radiological imaging of the bowel. The enema may contain barium sulfate powder or a water-soluble contrast agent. Barium enemas are sometimes the only practical way to view the colon in a relatively safe manner. Following barium enema administration, patients often find that flushing the remaining barium with additional water, baking soda, or saline enemas helps restore normal colon activity without complications of constipation from the administration of the barium sulfate.

K) Rectal corticosteroid enemas are sometimes used to treat mild or moderate ulcerative colitis. They also may be used along with systemic (oral or injection) corticosteroids or other medicines to treat severe disease or mild to moderate disease that has spread too far to be treated effectively by medicine inserted into the rectum alone.

## 2. Gel therapy:

Thomas Graham, a Scottish scientist, invented the term gel in the 19th century by taking a cue from gelatin. It is a solid, jelly-like substance with a variety of characteristics, from soft and fragile to strong and durable. Gels are described as a highly diluted cross-linked system that, in steady state, shows no flow. Gels are primarily liquid by weight, but because of a three-dimensional cross-linked network inside the liquid, they act like solids. Gel, as defined by IUPAC, is any fluid that has a colloidal network or polymer network that has been extended across its whole volume. A gel has a limited yield stress that is often rather tiny. Or a can of gel (ii) a polymer network that is created when chains of polymer molecules physically assemble, as a result of hydrogen bonding, crystallisation, helix formation, complexation, etc.; these regions of local order serve as the network connection points.

I a covalent polymer network, such as one produced by nonlinear polymerization or the cross-linking of polymer chains;

If the areas of local order are thermally reversible, the resulting swelling network may be referred to as a thermoreversible gel; (iii) a polymer network produced through glassy connection sites, such as one based on block copolymers. The resulting swollen network may also be referred to as a thermoreversible gel if the junction points are glassy domains that are thermally reversible; (iv) mesophases such as soap gels, phospholipids, and clays; (v) particulate disordered structures, such as a flocculent precipitate typically composed of particles with large geometrical anisotropy, such as in V2O5 gels and globular

Hydro gel therapy:

A hydrogel with water as the swell agent, a colloidal network, and a polymer network as its network component is known as an aqua gel. A hydrogel is a network of hydrophilic polymer chains; it can occasionally be seen as a colloidal gel with water serving as the dispersion medium. They can contain over 99.9% water in natural or synthetic polymers, making them extremely absorbent. Due to their high water content, they also have a degree of elasticity that is extremely close to that of real tissue. In addition to mucus, the vitreous fluid of the eye, cartilage, tendons, and blood clots are also examples of hydrogels found naturally in the body. The body's soft tissue is different from the hard tissue, which is made of minerals, because of its viscoelastic nature.

1. Currently used as scaffolds in tissue engineering. When used as scaffolds, hydrogels may contain human cells to repair tissue.
2. Hydro gel-coated wells have been used for cell culture.
3. Environmentally sensitive hydrogels which are also known as 'Smart Gels' or 'Intelligent Gels'. These hydrogels have the ability to sense changes in pH, temperature, or the concentration of metabolite and release their load as result of such a change.
4. As sustained-release drug delivery systems.
5. Provide absorption, desloughing and debriding of necrotic and fibrotic tissue.
6. Hydrogels that are responsive to specific molecules, such as glucose or antigens, can be used as biosensors.
7. Used in disposable diapers where they absorb urine, or in sanitary napkins
8. Contact lenses (silicone hydrogels, polyacrylamides, polymacon)
9. EEG and ECG medical electrodes using hydrogels composed of cross-linked polymers (polyethylene oxide, polyAMPS and polyvinylpyrrolidone)
10. Water gel explosives
11. Rectal drug delivery and diagnosis
12. Encapsulation of quantum dots, breast implants and in glue.
13. Now used in granules for holding soil moisture in arid areas. Dressings for healing of burn or other hard-to-heal wounds. Wound gels are excellent for helping to create or maintain a moist environment.
15. Reservoirs in topical drug delivery particularly for ionic drugs, delivered by iontophoresis.
16. For nucleus pulposus replacement, cartilage replacement, and synthetic tissue models.

17. In fiber optics communications, a soft gel resembling "hair gel" in viscosity is used to fill the plastic tubes containing the fibers.

These have common ingredients e.g. polyvinyl alcohol, sodium polyacrylate, acrylate polymers and copolymers with an abundance of hydrophilic groups and natural hydrogel materials are being investigated for tissue engineering; these materials include agarose, methylcellulose, hyaluronan, and other naturally derived polymers.

A) Organo gel therapy: An organo-gel is a non-crystalline, non-glassy thermoreversible (thermoplastic) solid material composed of a liquid organic phase entrapped in a three- dimensionally cross-linked network. The liquid can be, for example, an organic solvent, mineral oil, or vegetable oil. The solubility and particle dimensions of the structuring are important characteristics for the elastic properties and firmness of the organogel. Often, these systems are based on self-assembly of the structuring molecules. These have potential for use in a number of applications, such as in pharmaceuticals, cosmetics, art conservation and food. An example of formation of an undesired thermoreversible network is the occurrence of wax crystallization in petroleum.

B) Xero-gels: A xerogel is a solid formed from a gel by drying with unhindered shrinkage. Xerogels usually retain high porosity (15–50%) and enormous surface area (150–900 m<sup>2</sup>/g), along with very small pore size (1–10 nm). When solvent removal occurs under supercritical conditions, the network does not shrink and a highly porous, low-density material known as an aerogel is produced. Heat treatment of a xerogel at elevated temperature produces viscous sintering (shrinkage of the xerogel due to a small amount of viscous flow) and effectively transforms the porous gel into a dense glass. Many gels display thixotropy – they become fluid when agitated, but re-solidify when resting. In general, gels are apparently solid, jelly- like materials. Some species of animals secrete gels that are effective in parasite control. For example, the long-finned pilot whale secretes an enzymatic gel that rests on the outer surface of this animal and helps prevent other organisms from establishing colonies on the surface of these whales' bodies.

C) Aero gel- Virtually when air/gas is to be used as an extender fluid, the system is called aerogels with very low density, high specific surface areas, and excellent thermal insulation properties .

Pros of hydrotherapy:

1. It is useful in techniques such as massage and yoga performed in water.
2. It is useful internally which involves drinking water or receiving fluids through an intravenous (IV) infusion.
3. Water heat from steam works well to relieve muscle aches.
4. By cold-water therapy treats depression patients by immersing the body in water, applying a whole-body wrap, and administering a cold shower that lowers brain temperature to improve symptoms of depression.

5. Effective for rehabilitation after orthopedic and spinal surgery which have resulted in chronic pain to relax muscle tension and reduce swollen joints.

6. It stimulates endorphins which will help to control the pain and alleviate tension.

7. The use of hot whirlpool baths with massaging jets to reduce the duration and severity of back pain when used alongside conventional medicine.

8. Useful in stress relief related to high blood pressure, headaches, insomnia, depression etc.

9. Used as Colonic Hydrotherapy, particularly helpful in Irritable Bowel Syndrome (IBS).

10. Water temperature helps to normalize the bowel as well as flushing out any unwanted toxins.

11. The treatment can also be useful during dieting periods, fasting, detoxifying and liver flushes as well as treating specific issues such as asthma, bloating, indigestion, bowel complaints and skin problems.

Benefits of common forms of Hydrotherapy:

Hot water or cold water treatment: Where the whole body or a part of the body should be immersed in the water and body parts like the arm, hip or leg or even full body can be treated individually. Cold water treatments work well in the treatment of depression and improve the recovery time.

Mechanical pumps: Can be used to drive water in and out of the tank and it can be heated with the aid of heating coils. Hot tub bath or spa treatment shows immediate results on the body of an individual and it helps in providing relief from pain.

Essential oils and aromatherapy: Oils too can be used as a part of hydrotherapy and these oils can be utilized to provide the desired massage to the body. Coconut Oil for Hair and

Sitz bath, mineral bath and hot spring bath: can be used in various kinds of treatments which provide better circulation of the blood to various organs of the body. It also helps in providing immunity to the body and heals the tissues affected due to wear and tear of various body parts. It is also recommended for providing energy to the body.

Constitutional hydrotherapy: Can be deployed as an effective treatment in the cases of respiratory tract infections, inflammation and arthritis and in cases where the muscles have gone stiff due to fibroids. It also helps patients suffering from diabetes and low blood pressure. It works wonders in the case of depression and intense headaches.

Water Massage: Is one of the techniques for relaxation. Several different types of massages use oil as a medium between the therapist and the person, but this massage uses water and its density as a medium. For example Hot Stone Massages (hot stones are used manually as tools to massage the body), Scalp Massage, Aqua massage /dry hydrotherapy (which includes an enclosed table which does not allow the water to touch the patient. It works by charging jets of water up in opposition to the bottom of the table surface, where a patient is lying. A

bar is moved alongside the flat length of the table, taking the water's force from one end to the other end of the body).

Miscellaneous: Aromatherapy Herbal Treatment Benefits, Aromatherapy Fanning, Aromatherapy Herbal Cosmetic, Throat Infection Remedies, Orthopedic Massage Therapy, Thai Massage Therapy, Therapeutic Massage, Trigger Point Therapy, Sports Massage Therapy, Shiatsu Massage Therapy (foot, facial, back), Baby Massage Therapy, Deep Tissue Massage Therapy, Pregnancy Massage Therapy, Energy Healing Therapy, Myotherapy, Neuromuscular Massage Therapy, Abdominal Massage, Acupressure Massage, Ayurvedic Massage ( Head, Face, Back), Lymphatic Massage, Reiki Meditation, Frozen Shoulder Massage, Zero Balancing Massage Therapy, Breath Therapy, Push Therapy, Somatic Movement Therapy, Structural Energetic Therapy, Thalassotherapy, Vibration Healing Massage Therapy, Vortex Healing, Watsu Massage, Bamboo Massage, Panchakarma etc.

### Application of Hydrotherapy

Hydrotherapy can be applied with water and the addition of herbs, shampoos, salt pastes, and other ingredients. Some therapists combine these treatments with a massage, while others use

### Sitz Bath

A sitz bath is a warm, partial bath that extends from the pelvic area to the navel. The legs stay outside of the bath thanks to the design of the bath room. If a tonic or stimulating effect is intended, the water is heated to a temperature between 90 and 102 degrees Fahrenheit for three to eight minutes. Twenty to forty-five minutes should be added to the period for a sedative and soothing effect. Salt or alum can be added to the water. Prior to the sitz bath, make sure to ask the patient to urinate. To promote better circulation, the feet can be submerged in a tank of water that is warmer than the sitz bath. A dry sheet must be placed over the customer to protect him or her.

### Swedish Shampoo and Turkish Shampoo

The Swedish Shampoo entails brushing the body in a circular or linear motion with warm, soapy water. Pour a bucket of water that has been heated to 105 degrees Fahrenheit over the patient's skin once the shampooing is finished. Then take a warm shower after that.

Turkish shampoos are comparable to Swedish shampoos, with the exception that the last pail of water is 90 degrees Fahrenheit colder.

### Salt Rub or Salt Glow

The application of moist salt to the skin is known as a salt glow or salt rub. Exfoliating the skin with salt shines has a tonic and invigorating impact. Freshly shaved skin, abrasions, wounds, or skin rashes are contraindications. There is vigorous friction used to apply the moist salt mixture. Due to the negative consequences of harm to superficial blood vessels, application must be gentle and should be avoided on reddish

or thin skin. Additionally, sensitive spots and bony prominences should be avoided. After finishing, take note of the skin's state. For this therapy, some spas have tables that are specifically made, while others have rooms that are made for salt glows. The customer can stand or lie down on a table. Swedish shampoos, salt that sparkles. The majority of hydrotherapy applications may be begun without a significant investment of cash, and they can be a useful complement to the massage therapist's services. The massage therapist must be completely versed with the technique before working on their first client, just like it is with any other massage modality.

### Cryotherapy

Cryotherapy, or applying cold, is another well-liked kind of water therapy. Ice Therapy may be utilised in the home or in the therapist's office and is secure and affordable.

Depending on how long ice is left on the skin, different physiologic consequences result. The region goes through vasoconstriction, or decreased blood flow, during the first nine to sixteen minutes. Local edoema is lessened, the skin appears pale, and hematoma development is under control. Vasodilation happens if the ice treatment is kept up for additional four to six minutes.

Vasoconstriction will resume in a few minutes. It will take between 15 and 30 minutes to complete the cycle. The hunting response is characterised by this pattern of vasoconstriction, vasodilation, and vasoconstriction. Blood is drawn by the alternating reaction.

### Hydrotherapy during labor and birth

Studies from across the world have documented more than 31,000 underwater births, and over 6% of American women enjoy the pain-relieving benefits of water immersion hydrotherapy during labour and/or delivery. [23] In midwifery and midwife-led collaborative practises in the United States, the use of water immersion hydrotherapy tends to be greater, ranging from 15% to 64% during labour and 9% to 31% during delivery.

For the early stage of labour, immersion hydrotherapy has a solid track record of effectiveness and safety. The sole known benefit of immersion hydrotherapy during labour is pain reduction, although it may also speed cervical dilatation, treat labour dystocia, and increase postpartum moms' pleasure with delivery.

### CONCLUSION

Hydrotherapy, which includes hot tubs, cold water treatments, ice packs, saunas, mineral springs, hot springs, sitz baths, wet towel applications, water workouts, and water massage, is the term for the medical use of water. Spas' hydrotherapy immersion waters may be infused with aromatic oils or herbs, or they may be rich in particular minerals. There are several varieties of hydrotherapy. Since extremes of heat or cold can be harmful to certain people, it is crucial to apply the right kind of therapy.

Using water in any form or temperature to cure sickness and relieve pain is known as hydrotherapy. Medical professionals often used hydrotherapy, which was acknowledged as a scientific technique, to cure patients' illnesses by employing water's natural healing abilities. advantages of hydrotherapy water immersion treatment Spa waters may be infused with herbs or fragrant oils, or they may be rich in certain minerals.

There are several varieties of hydrotherapy. Since extremes of heat or cold can be harmful to certain people, it is crucial to apply the right kind of therapy.

Using water in any form or temperature to cure sickness and relieve pain is known as hydrotherapy. Medical professionals often used hydrotherapy, which was acknowledged as a scientific technique, to cure patients' illnesses by employing water's natural healing abilities. Hydrotherapy had a positive impact on people's capacity to work, operate physically, have energy, sleep well, function cognitively, and participate in everyday life. More controlled research is required. The hydrotherapy teachers had a crucial part in instructing, which needs to be promoted. Since the beginning of recorded history, hydrotherapy has been used as a kind of medicine in several civilizations. Hydrotherapy helps with relaxation, cleaning, detoxification, and better healing effects, just like massage. Together, massage and hydrotherapy are more effective than each treatment when performed alone.

Numerous diseases, such as arthritis, gastrointestinal problems, sleep problems, stress, and depression, may be helped by hydrotherapy. Hydrotherapy is based on the idea that water contains therapeutic qualities that can treat a wide range of diseases and disorders. Ice, liquid, and steam water are all adaptable treatment methods because of their many forms.

## REFERENCES

1. Biel, A. Trail Guide to the Body. Books of Discovery. 1997
2. Champion, M (1990) Adult Hydrotherapy, a practical approach. Oxford Heinaman Books.
3. Kamenetz HL (1963) History of American spas and hydrotherapy. In: Licht S, ed. Medical Hydrology. Waverly Press, Baltimore, pp 160-183.
4. Krizek V (1963) History of balneotherapy. In: Licht S, ed. Textbook of Medical Hydrology. Waverly Press, Baltimore, pp 132-149.
5. Moor F, Peterson S, Manwell E, Noble M, Muench G (1964) Manual of hydrotherapy and massage. Pacific Press Publishing Association, Idaho, pp 1-29.
6. Petrofsky JS, Laymon M; Assessment of muscle temperature after water immersion and hot and cold packs in man Submitted Physical Therapy (2001) 1-12.
7. Hinkle, C. Fundamentals of Anatomy and Movement. Mosby. 1997. 120-129
8. Shevchuk NA, Adapted Cold Shower as a Potential Treatment for Depression, Med Hypotheses, Nov 9, 2007.
9. Gita Chaurasia, Amruta Patil and Shweta Dighe; a review on therapeutic aspects of hydrotherapy IJPSR, 2015; Vol. 6(7): 2713-2722.
10. Bruera E, Pruvost M, Schoeller T, Montegjo, G and Watanabe, S: Proctoclysis for Hydration of Terminally Ill Cancer Patients. Jour Pain Symptom Management; 15, 4:216–9.
11. Eliakim R, Rachmilewitz D Cohen and Petricia ZA: Ozone Enema, A Model of Microscopic Colitis in Rats. Digestive Diseases and Sciences; 46, 11: 2515–20.
12. Richard GJ, Edward SW, Metanomski W, Jaroslav KM, Hess RS and Tatsuki K: Compendium of Polymer Terminology and Nomenclature, edition 2, 2009: 464.
13. Pure and Applied Chemistry 83, 12, 2011: 2229–2259.

14. Richard G. J, Edward SW, Metanomski, Jaroslav K, Michael H, Robert S, Tatsuki K: Compendium of Polymer Terminology and Nomenclature, 2009.
15. Terech P: Low-molecular weight organogelators. in: Robb I.D. Specialist surfactants. Glasgow: Blackie Academic and Professional; 208–268.
16. Kumar, R and Katare, OP: Lecithin organogels as a potential phospholipid-structured system for topical drug delivery: A review. AAPS Pharm Sci Tech 2005; 6, 2: E 298–310.
17. Visintin RFG, Lapasin R, Vignati E, D'Antona P, Lockhart TP: Rheological behavior and structural interpretation of waxy crude oil gels. Langmuir 2005; 21, 14: 6240–9.
18. Salvo, S. Massage Therapy Principles and Practices. W.B. Saunders. 1997.
19. O'Rourke, M. Hydrotherapy and Heliotherapy. Educating Hands. 1995.
20. Moor, F. Manual of Hydrotherapy and Massage. Mosby. 1997.
21. Gould, B. Pathophysiology for the Health-Related Professions. W. B. Saunders. 1997.
22. Fritz, S. Mosby's Fundamentals of Therapeutic Massage. Mosby. 1995
23. Nutter, E, Meyer S, Shaw-Battista J, Marowitz A. (in press). Waterbirth: An integrative analysis of peer reviewed literature. Journal of Midwifery & Women's Health
24. Cohen J. Integrating water into maternity care. Midwifery Today Childbirth Educ.1996;Fall(39):36.
25. Rosenthal M. Warm-water immersion in labor and birth. Female Patient. 1991; 16: 44-50.
26. Church L. Water birth: one birthing center's observations. J Nurse Midwifery. 1989; 34(4):165-70.
27. Cluett E, Pickering R, Getliffe K, St. George-Saunders N. Randomised controlled trial of labouring in water compared with standard of augmentation for management of dystocia in first stage of labour. BMJ. 2004; 328(7435): 314.
28. Cluett E, Burns E. Immersion in water in labour and birth. Cochrane Database Syst Rev. 2009;2:CD000111

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