

Hydrotherapy in physiotherapy

Magdalena Łukaszczyk-Capowska III.r Fizjoterapia JNM Rok akademicki 2024/25 01.2025 Hydrotherapy, also known as hydrotherapy, is a form of physical therapy that uses the physical and chemical properties of water for treatment and rehabilitation.

Basic mechanisms of hydrotherapy:

-Water temperature: Affects the dilation or narrowing of blood vessels.

-Buoyancy: Reduces stress on joints, allowing movement without pain.

-Hydrostatic pressure: Improves blood and lymph circulation.

-Water resistance: Strengthens muscles during rehabilitation exercises



Types of hydrotherapy treatments

1. **Full and partial baths** include)

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-Whirlpool baths -Water jets massage the body, improving circulation and relaxing muscles.

- **Pearl baths** - They have a relaxing effect and improve microcirculation through air bubble massage.

- **Brine baths** - Used in the treatment of dermatological, respiratory and rheumatic diseases thanks to their mineral properties.

2. Water Showers:

-Scottish showers- Alternating hot and cold water showers that improve circulation, stimulate the immune system, and energize the body.

-**Spot showers-** A concentrated stream of water used to massage selected parts of the body, effective in the treatment of muscle pain. **3. Water packs:**Applied to specific areas of the body to reduce pain, swelling or inflammation.

4. Steam saunas: High temperature and steam are conducive to relaxing the body's detoxification muscles and improving the condition of the skin. The sauna is recommended for respiratory diseases, neuroses and chronic muscle pain.

5. Treatments with the use of

hydrokinetotherapy: Exercises in water, e.g. aqua aerobics, especially recommended for rehabilitation after orthopedic injuries and for patients with neurological diseases.

The importance of temperature in hydrotherapy

Thermal treatments (36-40 °C):

-They relax muscles and reduce tension.

- Improve blood circulation.

- Recommended for rheumatic pain and chronic muscle tension.

Cold treatments (10-20 °C)

- They have an anti-inflammatory effect.
- Reduce swelling.
- They stimulate circulation and increase the body's immunity.

Alternating temperatures are intended to improve the elasticity of blood vessels and blood supply to tissues.

TEMPERATURE GUIDELINES		
DESCRIPTION	°C	HOW IT FEELS
COLD	13-18 °	TOLERABLE, SOME DISCOMFORT
COOL	18-27	MIGHT CAUSE GOOSEBUMPS
TEPID	27-34	SLIGHTLY COOLER THAN YOUR SKIN
WARM OR NEUTRAL	34-36	COMFY
нот	37-41	TOLERABLE, Some Redness
VERY HOT	41-43	TOLERABLE FOR SHORT PERIODS
EXTREME TEMPERATURES SHOULD ALWAYS BE USED WITH CAUTION www.tara-rmt.com		

Introduction to Hydrotherapy and Contrast Treatments



Aquatic Therapy (Hydrotherapy)

Hydrotherapy can be described as aerobic and resisted exercises performed in warm water. It uses the physical properties of water to modify many land-based exercises as well as employing unique exercises which can only be performed in the pool.

Some examples of conditions that we can treat through hydrotherapy at Continuum Physiotherapy are:

- Chronic low back pain
- Falls and balance prevention
- Osteoarthritis
- Stroke rehabilitation
- Multiple sclerosis
- Post surgical rehabilitation
- General fitness and quality of life improvements

How do I get involved?



Application of hydrotherapy

Hydrotherapy is particularly effective in the treatment of:

- -Rheumatic diseases
- -Orthopedic injuries (fractures, sprains)
- -Neurological diseases
- (multiple sclerosis, strokes, Parkinson's disease)
- -Respiratory diseases (asthma)
- -Mental disorders (neurosis, anxiety, depression)
- -Obesity and diabetes

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Preparation for hydrotherapy

Before starting hydrotherapy treatments, it is necessary to properly prepare the patient and follow safety rules.

<u>1. Assessment of the patient's health.</u>

- Exclusion of contraindications

- Establishing individual indications and therapeutic goals

2. Physical preparation.

- <u>-</u> Body hygiene
- Muscle warm-up or body cooling.

<u>3. Safety during treatments.</u>

- Monitoring water temperature and duration of treatments

- Providing safety for patients with limited mobility or other disorders

- Hydration - fluid replenishment before and after the treatment

4. Recommendations after the treatment.

- Avoiding sudden changes in temperature
- Rest and relaxation to optimize therapeutic effects

Benefits of hydrotherapy -Effects on the body

Hydrotherapy offers a wide range of health benefits that result from the effects of water on the body.

<u>1. Improves circulation</u>: water stimulates blood flow, which improves the transport of oxygen and nutrients to the tissues and helps to remove toxins and improve metabolism.

<u>2. Reduces pain and muscle tension</u>: the action of warm water relaxes muscles, reduces joint stiffness and has an analgesic effect.

<u>3. Supports post-injury rehabilitation:</u> water exercises allow for the gradual recovery of mobility without the risk of overload.

MEDICAL NEWS TODAY

Possible Effects on the Body Cold Shower vs. Hot Shower

Cold shower vs. hot shower: What are the benefits

Contraindications for Hydrotherapy in Physiotherapy

Severe cardiovascular conditions:

Uncontrolled hypertension (high blood pressure). Severe heart failure or acute cardiac conditions. Recent heart attack or unstable angina.

Acute respiratory disorders:

Severe asthma or chronic obstructive pulmonary disease (COPD) during exacerbation.

Acute respiratory infections or conditions causing breathing difficulties.

Infectious diseases:

Skin infections, open wounds, or any contagious conditions that could spread in water.

Any systemic infection or fever.

Severe skin conditions:

Egzem, psoriasis, or dermatitis that is not managed or controlled.

Open sores or wounds that may worsen in water or become infected.

Uncontrolled seizures:

Patients with a history of uncontrolled seizures or epilepsy without proper management.

Contraindications for Hydrotherapy in Physiotherapy

- Pregnancy (in certain conditions):
 - Pregnant women with complications such as preeclampsia or high-risk pregnancy should avoid hydrotherapy.
 - Early pregnancy (first trimester) for some forms of hydrotherapy.
- Acute musculoskeletal injuries:
 - In the case of fresh fractures, severe sprains, or strains that require rest and immobilization.
- Severe cognitive impairments:
 - Patients who do not have the mental capacity to follow safety protocols or instructions in the water.
- Hypothermia or hyperthermia:
 - Conditions where the patient has temperature regulation issues, such as uncontrolled fever or a history of hypothermia.
- Severe renal or liver conditions:
 - Acute kidney failure, dialysis, or liver failure may increase the risk of complications when using hydrotherapy.
- Vascular conditions:
 - Deep vein thrombosis (DVT) or other blood clotting disorders without proper medical clearance.
- Allergies to chemicals:
 - Sensitivity to chlorine, bromine, or other chemicals commonly used in pool water.

Reimbursemet for hydrotherapy treatments

Some hydrotherapy treatments may be reimbursed by the National Health Fund (NFZ) or other insurance programs depending on the patient's medical indications.

<u>Hydroterapia - Uzdrowisko Krakó</u> <u>w Swoszowice</u>

Kapiele lecznicze – Pomorskie Centrum Re umatologiczne

Reimbursable treatments:

-Whirlpool baths for lower and upper limbs.

-Water exercises

-Scottish showers and underwater massages

Non-reimbursed treatments

-Brine and pearl baths - often available only as private services, although there are exceptions.

-Steam saunas - considered wellness treatments, not medical

-Summary

Hydrotherapy is a comprehensive method of treatment and rehabilitation that:

- Uses the physical and chemical properties of water to improve health.

- Is effective in treating neurological, orthopedic, cardiovascular and metabolic diseases.

- Supports relaxation, improves circulation and reduces pain.

- Can be used as a reimbursed therapy or as a complementary treatment to private rehabilitation.

Hydrotherapy is an important element of physiotherapy, combining history with modern methods of treatment and health support.

Vocabulary

- Buoyancy- Pławność
- Hydrostatic pressure- Ciśnienie hydrostatyczne
- Hydrokinetotherapy- Hydrokinetoterapia
- Anti-inflammatory- Przeciwzapalny
- **Obstructive pulmonary disease-** Obturacyjna choroba płuc
- Preeclampsia- Stan przedrzucawkowy
- National Health Fund-Narodowy fundusz zdrowia
- Microcirculation- Mikrokrążenie
- Mental capacity- Zdolność umysłowa
- Disorders- Zaburzenia
- Inflammation- Zapalenie

Bibliography

- Becker, B. E., & Cole, A. J. (2011). Comprehensive Aquatic Therapy. Washington: Washington State University Press.
- Hall, J., & Brody, L. T. (2018). Therapeutic Exercise: Moving Toward Function. Philadelphia: Lippincott Williams & Wilkins.
- Cameron, M. H. (2021). Physical Agents in Rehabilitation: An Evidence-Based Approach to Practice. St. Louis: Elsevier Health Sciences.
- Bender, T., Karagülle, Z., Balint, P. V., Gutenbrunner, C., & Bálint, G. P. (2005). Hydrotherapy, balneotherapy, and spa treatment in pain management. Rheumatology International, 25(3), 220–224.
- Becker, B. E. (2009). Aquatic therapy: Scientific foundations and clinical rehabilitation applications. PM&R, 1(9), 859–872.
- Verhagen, A. P., Cardoso, J. R., & Bierma-Zeinstra, S. M. A. (2012). Aquatic exercise for musculoskeletal conditions. Cochrane Database of Systematic Reviews, 2012(2)

Thank you very much for your attention