

# Hydrotherapy

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## Symptoms in Rett syndrome

Apraxia and Ataxia, stiff joints (esp. knees, elbows, ankles, fingers), physiotherapy after scoliosis-surgery.

There are two types of Hydrotherapy:

- **Therapeutic swimming** is known as simple movements in water to find confidence in one's body, to lower anxiety and increase self-confidence. Not only about physical but also psychological disorders. A physiotherapist / aquatic therapist conducts it.[1]
- **"Water Cure" or "Bath Therapy"** is part of alternative medicine to use the water buoyancy to relieve physical pain [2]. A physiotherapist conducts it.

**Therapeutic swimming**—slow movements in water, where the patient is held and touched only in the way needed and wanted by the patient. The patient will learn to improve coordination and balance of the body. Success is quickly visible in a higher self-confidence. The effect of the buoyancy is to reduce the burden on the stiff joints, ligaments, and strained muscles. Therefore, it is sometimes possible for the Rett-patient to start gentle movements of the stiff extremities. [3]

It is well-known that most of the Rett-patients love to be in the water. Splashing means fun. After each action, a reaction follows. Laughing, smiling, and happiness makes it enjoyable for the Rett-patients.[4]



It should be noted that the water-temperature should be appropriate. Rett-patients are sensitive and often have a reduced blood-circulation in their lower extremities. A warm water temperature (32°C – 38°C) will encourage them also to relax and calm down.

## Methods

- Halliwick - Concept focuses on biophysical principles of motor control in water, in particular developing the sense of balance (equilibrioception) and core [5][6]
- Watsu – Water Shiatsu – combines elements of muscle stretching, joint mobilization and massage [7]
- Bad Ragaz Ring Method – the patient lies horizontally in the water, with support provided by rings or floats around the neck, arms, pelvis and legs. They are therapist assisted to improve neuromuscular function using patterns of movements. [8]
- AI-CHI – is a gentle method to improve mobility and to strengthen muscles and joints. Gentle exercises in warm water. [9]

**“Water Cure” or “Bath Therapy”** is the use of water (hot, cold, steam, icy) to relieve discomfort and promote physical well-being. It is part of medicine and alternative medicine. Method applied particularly in occupational therapy and physiotherapy to relieve pain in the joints.

‘The term encompasses a broad range of approaches and therapeutic methods that take advantage of the physical properties of water, such as temperature and pressure, for therapeutic purposes, to stimulate blood circulation and treat the symptoms of certain diseases’. [2]

In some cases, the patient sits/lies on a patient lift in a bath. The warm water temperature (35 – 38° C) may aid vasodilation, relaxation, and regulation of the blood circulation. Some tubs are equipped with underwater massage nozzles and even underwater spotlights. Submerging all or part of the body in water in the bath can involve several types of equipment: Full body immersion tanks (a “Hubbard tank” is a large size), or arm, hip, and leg whirlpool.[10]

For Rett-patients this position might be uncomfortable, depending on the joint contractions, but the bubbling warm water will make up for this.



## Alternative method

Kneipp – Principle of irritant reaction – temperature changes of cold/warm water alternating. Either sitting in a tub or a jet shower.

## Follow up

Therapeutic swimming is only possible in swimming pools with warm water (thermal bath), “Water Cure” Hydrotherapy can be offered possibly at home. Jacuzzi and whirl pool baths are available at a reasonable price, and sometimes offered in Hotels, Spa and Rehabilitation Centres.

## References

- [1] [https://de.wikipedia.org/wiki/Heilpaedagogisches\\_Schwimmen](https://de.wikipedia.org/wiki/Heilpaedagogisches_Schwimmen)
- [2] <https://en.wikipedia.org/wiki/Hydrotherapy>
- [3] Junger, W. Michael: Die Wasserspielwiese - Psychomotorik im Schwimmbad, Eigenverlag GesundheitsSeminare, Bremen, 1999
- [4] [http://www.rett-syndrom.at/rundbriefe.html#imTextObject\\_110\\_13\\_tab4](http://www.rett-syndrom.at/rundbriefe.html#imTextObject_110_13_tab4) "Etwas für Wasserratten: Schwimmtherapie Vanessa". Pic 1 and 2 private Peckary Stella © at Orthopädisches Kllinikum Zicksee, 7161 St. Andrä am Zicksee, Austria
- [5] <https://halliwick.org/> International Halliwick Conference of Swimming & Rehabilitation in Water
- [6] <https://www.rett.nl/over-de-vereniging/prettpraat/105-nieuwsbrief-april-2007.html>
- [8] [https://en.wikipedia.org/wiki/Bad\\_Ragaz\\_Ring\\_Method](https://en.wikipedia.org/wiki/Bad_Ragaz_Ring_Method)
- [7] <https://en.wikipedia.org/wiki/Watsu>
- [9] <https://shawellnessclinic.com/de/wasserbehandlungen/>
- [10] <https://en.adeli-center.com/neurorehabilitation/unique-rehabilitation-approach/treatment-programme/#tab-id-18> Pic 3 private Peckary Stella © at Adeli Medical Center Piestany, Slovakia