

## Course: **Aquatic Therapy: Water Specific Therapy and Clinical Ai Chi**

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| Where?      | <b>Sint Maarten, in the Caribbean</b><br>The White and Yellow Cross Care Foundation, St. John's Estate Road 6, Cul-de-Sac             |
| When ?      | Tuesday 3 – Tuesday May 10, 2022*<br>*half a day on the 5 <sup>th</sup> and 10 <sup>th</sup> and Sunday 8 <sup>th</sup> is a free day |
| Language    | English   |
| Website     | <a href="https://www.wyccf.org">https://www.wyccf.org</a>   |
| Contact     | Bregje Boetekees, Operations Manager WYCCF, <a href="mailto:bboetekees@whiteyellowcross.org">bboetekees@whiteyellowcross.org</a>      |
| Tuition     | between USD 600 and 900 (depending on the number of participants)   |
| KNGF        | accreditation is requested (at the Dutch Association of Physiotherapy)  |
| Hours       | the study load is approximately 80 hours, of which 60 contact hours   |
| Lecturer    | Johan Lambeck: <a href="http://www.linkedin.com/pub/johan-lambeck/25/9/43a">http://www.linkedin.com/pub/johan-lambeck/25/9/43a</a>    |
| Certificate | after examination, by the Association IATF, Switzerland   |

### **Motivation?**

There are still 8 spots left for this course on St. Maarten. The course will be held in the brand-new rehabilitation pool of the White & Yellow Cross Care Foundation. The pool is an outdoor pool, which is very pleasant in May with an average temperature of 30 degrees Celsius. Besides the course, you will have the chance to explore the island with its 37 white sand beaches, beautiful hikes, active and cultural activities, as well as a huge variety of restaurants and nightlife. Are you interested in this educational tropical trip? Then sign up quickly.



### **White & Yellow Cross Care Foundation**

The White & Yellow Cross Care Foundation is a large care provider on Sint Maarten and consists of 3 departments. Sister Basilia Center specializes in care for persons with an intellectual disability, District Nursing provides a variety of home health services. Lastly, the St. Martin's Home offers the following care products: elderly care, nursing home care, psychogeriatric daycare, physical rehabilitation, and hospice care.



### **Description:**

Guidelines and recommendations are clear: the treatment of disorders of the neuromusculoskeletal system in general should be active, and even of moderate to high intensity. This can be done in a group, and especially individually, in case patient-specific functional goals have been formulated. This individual setting can be provided by hands-on aquatic therapy. This requires specialized skills and depends on a good clinical reasoning process that ultimately results in an intervention strategy with adequate tactics. These are the specific concepts such as Water Specific Therapy (WST) or Clinical Ai Chi (CAC).

Clinical questions in WST could be "can metacentric effects be used to train central stability in an ataxic patient", "how can depth be used to facilitate a reactive hip strategy in a Parkinson patient" or "can turbulence be used to train a lateral step strategy in a hemiplegic patient"?

WST is THE concept for aquatic therapy worldwide, with over 50 published articles. WST covers the entire ICF spectrum and is embedded in the Dynamic Systems Model, including one of the most important topics in rehabilitation: fall prevention. It is a therapy with elements of the Halliwick 10-point program swimming method (by James McMillan).

The first 6 Halliwick points are used to teach a patient to dare to fall and stand up. These points relate to "pool self-efficacy" as a basis for further WST activities, making use of the properties of the water. These are e.g. the use of flow (turbulence), transmission waves and metacentric effects (force couples due to changes in gravity and buoyancy).

Interestingly, the combined approach of WST and original Halliwick group activities fits perfectly into the contemporary framework of neuroprotective motor-cognitive gamification: a combination of massed practice and environmental enrichment in which e.g. executive functions are challenged and neuroinflammation is addressed. Also (an)aerobic principles can be included: training of muscle power, sensorimotor agility or cardiovascular endurance.

Clinical Ai Chi (CAC) is a postural activity in which displacements of the center of gravity, reaching with arms, carrying weight of legs and continuous concentric-eccentric contractions are features, usually related to static and dynamic balance control, e.g. to prevent falls

Clinical questions could be: "can CAC be adapted to facilitate hip strategies in patients with chronic low back pain", or "can CAC be used to improve functional reaching in a young adult with diplegia"?

Meanwhile, applications for lymphedema in breast cancer, using mindful principles with a focus on proprioceptive discrimination or enabling the Default Mode Network have been developed.

At the end of this course, participants will be able to:

- describe the fluid mechanics principles of WST
- Relate aquatic therapy to evidence-based practice
- Recognize balance problems of able-bodied and disabled people
- Apply the WST and CAC exercises and activities for the neuromusculoskeletal patient population in all domains of ICF
- use the correct rules of motor learning and tissue training in water to design a treatment program
- Generate ideas for neuroprotection and executive functions
- use the WST-ICF assessment
- describe the physiological effects of water on fascia, as well as its therapeutic applications (influencing fascial viscoelasticity, resilience)
- perform basic Ai Chi katas
- Apply CAC and WST in fall prevention