

AQUAEVIDENCE:

An intensive course:

The Evidence Base for Aquatic Therapy in Persons with Disabilities



June 29 to July 12, 2008

Faculty of Kinesiology and
Rehabilitation Sciences

Katholieke Universiteit Leuven

Leuven, Belgium



Activity in water or aquatic therapy¹ has decided advantages for persons with health-related problems resulting in impairments, activity limitations, and participation restrictions (WHO, 2001). Water based activity is said to aid in the relief of pain and muscle spasm, maintain or increase range of motion, strengthen and re-educate weak and/or paralyzed muscles, improve circulation, lung function, and speech, and preserve and improve balance, co-ordination and posture (Cole & Becker, 2003). While aquatic therapy is particularly popular in dealing with e.g. Rheumatism and Orthopaedic problems (Fransen, 2007), therapeutic activity in water is also offered for persons with Stroke, SCI, MS, Parkinson and CP (Daly & Lambeck, 2007).

Recreational as well as therapeutic activities are equally at home in water and all ages take part. A water based program provides excellent variety to an exercise program (Gowens & deHueck, 2007). Aquatic facilities exist at or are used by numerous health care centres, major books have been published on rehabilitation in water and numerous courses are offered on "philosophies" of aquatic rehabilitation such as Halliwick, Bad Ragaz Ring Method, and Watsu. Nevertheless, in a 40 year review of rehabilitation literature on the use of aquatic therapy for children and adolescents with neuromuscular and musculoskeletal diagnoses, Getz et al. (2006) state that most of the available articles are case reports and other descriptions of clinical practice with the notable exception of Rheumatology and Orthopaedics, (Geytenbeek 2002).

Aquatic therapy includes a large hands-on component, especially in neurological and paediatric rehabilitation. In these populations treatment is varied and complex, and aquatic therapy is usually only a minor component. Nonetheless, this might have an important place in long term rehabilitation where the effect of any treatment is smaller in measurable terms. Quantifying the effect of aquatic therapy has, as a consequence, not gained sufficient attention.

¹ **Aquatic therapy:** *Movement or exercise in an Aquatic (water) environment with an intended therapeutic outcome (systematic exercise therapy during immersion in water resulting in a therapeutic outcome through stimulation of short and long-term adaptive (physiological) mechanisms in persons with a deranged biological system).*

Water has an attraction of its own and swimming itself is a popular activity inducing self management and adherence. In the age of evidence based practice it seems appropriate to ask the question "What exactly is the outcome of systematic aquatic therapy for persons with disabilities?" Does aquatic therapy improve function, prevent regression of function? Might the persons who can perform little other activity independently "feel better" resulting in an increased quality of life despite no quantifiable physical changes?

Teaching strategy

In this 2 week intensive course the evidence base (Sackett et al, 2000) for aquatic therapy in **Cardiovascular, Neuromuscular, Rheumatologic and Orthopaedic diseases and disabilities** will be reviewed. Emphasis will be given to both geriatric and paediatric populations. The program will include the following points:

1. Concepts and goals setting in aquatic therapy in the population in question
2. Systematic Reviewing:
 - a. Designing a search strategy: defining Population, Intervention, Comparisons and Outcome measures based on ICF terminology
 - b. Where to search: Pedro, Cochrane,...
 - c. Critical Appraisal Systems: Delphi, SIGN,...
 - d. Reporting results: Students will give an oral presentation of their preliminary findings at the end of the two week course (peer instruction).
 - e. Student (groups) will be expected to make a written report of their findings post course that can potentially lead to publication
3. The economic (cost/benefit) implications of aquatic therapy.

Knowledge and competences acquired

Knowledge:

The course participant will have a good quality overview of the research base for aquatic therapy in the goal populations.

Competence:

The participant will be able to:

- Perform a systematic review of a research article and classify the evidence.

- Consult in a treatment team on the advisability of the use of aquatic therapy for individuals from diverse populations.

Registration

A maximum of 25 students will be admitted to the course with priority given to students from the participating Universities. When sufficient space is available other students (or professionals) can be admitted. Academic credit can be arranged for the course itself and the post course paper. The selection of partner students is made by the home University.

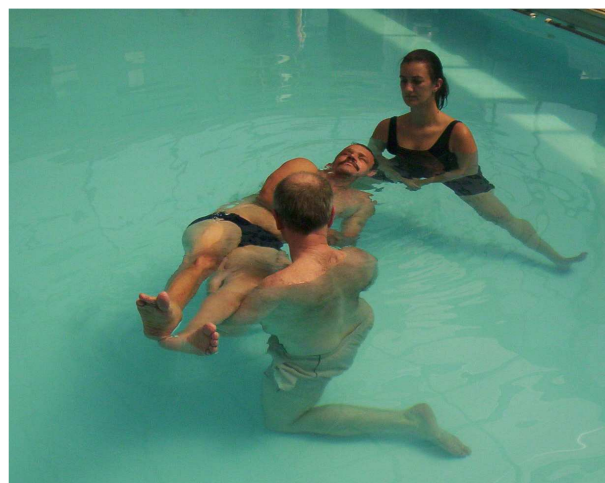
Course Organisation

Participant profile:

Allied Health professionals who are completing the final degree needed to enter the profession and those specialized in AT. Each student will be assigned a mentor. The lectures and all activities will take place in English.

Participant preparation:

Participants will need to be knowledgeable in the content of the book "Systematic reviews to support evidence-based medicine" (Khan et al, 2003, the Royal Society of Medicine Press). Additional reading assignments will be given related to this book, the guest lectures and as preparation for the Clinical Appraisal Topics exercise. Students will be asked early on to demonstrate knowledge of preparatory materials.



The course period 13 (10 full) days:

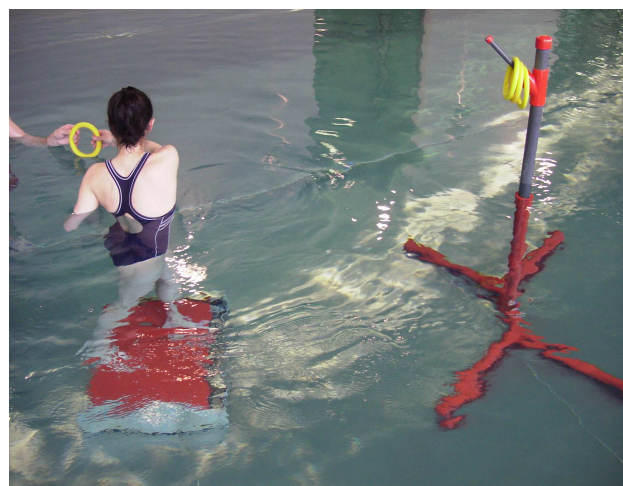
The course will be divided into mini-modules each dealing with one population. During each module presenter(s) will handle the points in the strategy above. Time will be devoted to organisation and a refresher of the Cochrane systematic literature review strategy and overview of research methodological techniques. Practical sessions in water with actual patients will be part of each module and make up about 20% of the course. Group student presentations will be made during the final days of the course.

Post course and evaluation:

The participant will make a written report of their review using author's guidelines from an international journal. The participants own presentations will also be evaluated.

Fees

Students from the partner Universities will be asked to provide a fee of 200 Euro. These students receive a substantial travel allowance to and from Belgium, full room in double or triple accommodations for the entire period of the course and full board on class days. Other students pay a fee of 1000 Euro. This includes insurance, registration as a guest student in Leuven, room, lunch and supper on most days and the field trip.



Participating Universities & contact persons

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In Collaboration with

Klinik Valens, Switzerland:
Urs Gamper,

The opening lecture will be presented by
Miri Getz PhD
Kibbutzim College of Education, Tel-Aviv,
Israel Sport Center for the Disabled, Ramat-Gan, Israel
**Aquatic Interventions in Pediatrics from practice
based evidence to evidence based practice**

More information can be obtained from the local contact person or the coordinator:
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