

An Aquatic Bag of Tricks:

Specialty Techniques for Water-Based Intervention

By Andrea Poteat Salzman, MS, PT

Interest in aquatic therapy has been booming for several years, but despite all the attention, little time has been spent focusing on specific techniques and their application. It's important for rehab professionals to be aware that not all things done in water are equally definable by the phrase "aquatic therapy." What that phrase does tell you is that the goal was rehabilitation and that the patient got wet. It tells you as much as if I documented a PT visit by describing the session as "dry-land intervention."

On land, we offer our patients the sum total of our knowledge as health care professionals. This knowledge manifests itself as specific interventions or as techniques. We don't do "Terra Firma Physical Therapy"; we do McKenzie extension work, muscle energy techniques, mechanical traction, or spinal stabilization.

In the water, this is no different. Today's professionals have a growing number of aquatic options from which to choose. These specialty techniques expand the therapist's proverbial bag of tricks and have application in acute, sub-acute, rehab, outpatient and extended care facilities. These specialty techniques include Aquatic Feldenkrais', Bad Ragaz Ring Method(2), Halliwick(2) and Watsu(2).

Aquatic Feldenkrais

World War II nuclear physicist Moshe Feldenkrais developed a series of techniques now known as Feldenkrais after he tore the cartilage in his knees playing soccer in the 1930s. Instead of fol-

lowing his physician's recommendation of bed rest, he began to experiment with small movements while lying in bed. He felt these movements mimicked the natural developmental movements seen in children.

Over time, he developed a series of movement patterns that required the body to move in strange combinations, patterns that would not be normal for an adult. It was his contention that he could recondition

his body's habitual, painful movement patterns by "starting over" as a newborn infant. This series of movements, which later became known as the Feldenkrais Method, allowed him to return to life without pain.

Sixty years later, Feldenkrais practitioner Debbie Ashton, MA, Knoxville, Tenn., placed his work in the water. She translated dozens of Feldenkrais "lessons" and dubbed them Fluid Moves. These Fluid Moves are subtle and force the patient to concentrate on better, not more, movement. They are usually performed with the

patient's back or side against the pool wall to enable him to receive feedback from touch receptors. The patient performs the moves slowly as the therapist gives verbal (and occasionally tactile) cues. The intent of these exercises is usually to promote greater flexibility and better body awareness.

Practitioner Credentials: Professionals may use Feldenkrais-type movements without special training, but may not advertise as



Watsu encourages relaxation and spinal flexion.



Nancy Kostura (left) and Barbara Eccles (right) practice a customized form of Watsu on a client at the Maryvale American Health Institute in Phoenix.



Today's professionals have a growing number of aquatic options from which to choose.

Feldenkrais practitioners unless registered by the Feldenkrais Guild. To become a practitioner, individuals attend intensive bouts of training (800 to 1,000 hours of didactic studies spread out over four years of field work integration) and then are registered with the Guild.

Suggested Patient Populations: Patients with balance or proprioceptive dysfunction (e.g., post-ACL reconstruction, frail elderly, s/p CVA or head injury). Chronic pain patients who need to be weaned from hands-on intervention. Patients with restricted extremity ROM (e.g., adhesive capsulitis, stiff knee syndrome).

Needed Equipment: Warm water pool (with walking lane) at about 86 to 94 degrees Fahrenheit, with water depth of 4 to 5 feet.

Bad Ragaz Ring Method

In 1957, the work of German physician Knupfer was brought to the thermal spas in Bad Ragaz, Switzerland (from which the technique's name was taken). Knupfer had developed exercises in which the patient was supported by rings or floats around his neck, arms, pelvis and knees while lying horizontal in the water. The doctor felt that the hydrodynamic and thermal properties of the water, combined with unique non-weight-bearing exercises, would promote excellent patient results. His exercises were later modified

and used to make a closed kinetic chain possible while floating supine in the water.

In these exercises, the therapist holds the patient at a "fixed point"; this is the point about which all movement will occur. As the therapist stabilizes the fixed point (e.g., the foot), the patient attempts to move that fixed point (e.g., by bringing the knee to the chest). Since the therapist prevents that movement, the patient's body moves instead—the knee bends and the buttocks glide back toward the feet. The closest land-based counterpart would be achieved by placing a patient on a sliding board with wheels.

The Bad Ragaz Ring Method (or Ring Method, as it is alternatively called) is used predominately for active and stabilization exercises. In recent times, therapists have begun using the trappings of the Ring Method (the use of floats to support the patient) to expedite passive stretching as well. Most Ring Method movement patterns used today originated in 1967, when Margaret Knott's proprioceptive neuromuscular facilitation (PNF) patterns were first integrated into the exercises. PNF patterns are spiral, diagonal movements meant to emulate functional movement patterns.

Practitioner Credentials: Health care providers who are already licensed or certified to perform one-on-one intervention with patients may integrate these techniques as they are learned. Although there is no other minimum prerequisite for performing these techniques, numerous Bad Ragaz courses throughout the country and in Europe enable therapists to master the intricate handling skills needed before using these skills with patients.

Suggested Patient Populations: Patients with poor spinal stabilization skills. Patients with neurological disorders (s/p CVA; spinal cord injury, incomplete; or head injury). Patients with weight-bearing restrictions for lower extremities who still need to work in a closed kinetic chain.

Needed Equipment: Warm water pool (at least 7-by-8-foot diameter) at 92 to 98 degrees Fahrenheit, with water depth of 3 to 4 feet. Cervical flotation collar. Buoyancy cuffs for ankles and wrists. Flotation belt for waist.

Halliwick

In London, England, around 1951 James McMillan began an effort to teach severely disabled girls to swim. He had no medical training and thus met with great opposition. By 1952, a national Halliwick teaching organization was created. The basic tenets of that organization formed the concepts we now know as the Halliwick Method (named for the school). McMillan taught these basic tenets and expanded their application from swimming to rehabilitation by teaching both a basic and advanced course throughout Europe.

The Halliwick Method has the following purposes: to teach people how to maintain balance control in the water and to teach them to swim. The tenets of the Basic Halliwick Course are written as a "Ten-Point Program," which, if followed in order, is designed to enable the student to learn to swim. McMillan suggested that these steps would best be mastered through the use of games. Each patient is paired with an instructor and treatment occurs within a group format (ideally) consisting of five patient-instructor pairs. No flotation devices are used in order to allow the disabled patient to be "barrier-free" in water.

The Ten-Point Program is divided into four phases. Phase One addresses mental adaptation to being in water. Phase Two deals with the patient's ability to restore balance from all positions in the water. Phase Three concentrates on teaching the patient to master inhibition of unwanted movement and to remain stable in the water. Phase Four teaches the patient to move (swim) from that stabilized position.

Therapists who have been exposed only to the Basic Halliwick

course often feel it has nothing to offer their patients, because they are not interested in teaching swimming skills. The Advanced Halliwick Course takes these basic purposes and expands them to meet the needs of therapists who work in an aquatic medium. In his advanced work, McMillan developed a "Logical Approach to Exercise in Water," which therapists find extremely helpful in orchestrating a concrete treatment approach to patient dysfunction.

Practitioner Credentials: Practitioners may assist with the Halliwick Method without credentials. In fact, McMillan enlisted volunteers, including high school girls, therapists, parents and service organizations. Today, the Halliwick Method still makes use of volunteers to allow a one-to-one ratio between patient and "instructor." However, McMillan felt strongly that "misuse or careless application can mean that well-intended therapy fades into merely tender loving care." Thus, he taught both Basic and Advanced Halliwick courses for health care providers.

Suggested Patient Populations: Patients with developmental disorders. Patients unable to ambulate or exercise on land. Advanced Halliwick: Patients with spinal pain, s/p cua or head injury.

Needed Equipment: Swimming or therapy pool with swimming lanes and room for at least five patient-instructor pairs (each pair requires about 5 square feet of room).

Watsu

Watsu was developed by Harold Dull, a bodyworker and poet, in 1980 in Middletown, Calif. BIRTHED from a mixture of Zen shiatsu and its creator's natural affinity for water, the term Watsu was coined from the phrase "watershiatsu." Watsu is performed in a warm water pool and is a wholly passive technique. The patient is usually cradled in the provider's arms (beginning in a fetal position), while stretches and other bodywork is performed. As Watsu I students, individuals learn a set pattern of movements known as the "Transition Flow." When the student returns for a second 50-hour class (Watsu II), the focus shifts to performing bodywork in each holding position of the Transition Flow. In 1998, a third course will be required to become a Watsu practitioner.

An Aquatic Bag of Tricks:



Courtesy Bob Rabbit



Deanna Schroll

The Halliwick Method (top) encourages strength training through balance. The Bad Ragaz ring method uses rings or floats to support the patient.


When Watsu was developed, it was not a therapeutic technique, at least not as health care providers think of the term. It was created by Dull as a method for healthy people to work with other healthy people, not for health care professionals to provide a service to patients. Since Watsu was created out of this wellness model and not a medical model, there have been many barriers to legitimizing its use among health care providers. Fortunately, since many professionals are recognizing the potential value of Watsu-type work for patients, these issues are starting to be addressed by Dull and others.

Practitioner Credentials: Practitioners may use Watsu-type movements without special training, but may not advertise as Watsu practitioners unless registered by the Worldwide Aquatic Bodywork Association (WABA). To become a practitioner, therapists attend three bouts of training (150 hours of lecture and labpracticals). WABA makes it clear that obtaining its Watsu certification does not, in itself, constitute legal permission to perform hands-on health care. Individuals who wish to practice Watsu as a therapeutic intervention must already be licensed or certified as a health care provider.

Suggested Patient Populations: Patients with restricted ROM of spine or extremities. Patients exhibiting high tone or spasticity. Patients with a predominant symptom of pain. Note: Because Watsu is passive, it should be used only to break the pain cycle and then discontinued in order to

prevent patient reliance on one-to-one intervention.

Needed Equipment: Warm water pool (at least lo-by-lo-foot diameter) at 93 to 98 degrees Fahrenheit, with a water depth of 4 to 5 feet and no steps. "Woggle" or "noodle" to put under patient knees if patient is larger than provider.

As aquatic therapy becomes more popular, more treatment techniques will be developed. There have been many notable additions just in the last several years, such as ai chi (tai chi in the water). As therapy facilities begin to integrate these specialty techniques into their care, they need to be careful about basing entire interventions on these theories. This should not prevent therapists from delighting in the techniques; in fact, this should propel therapists who find these methods helpful clinically to propose solid clinical research questions about their effectiveness. 

References

1. Ashton D. *Feldenkrais on Land and Water* (audio- and videotapes). Knoxville, Tenn.: Well Being; 1996 To order, phone 888/935-6287.
2. Ruoti RG, Morris DM, Cole AJ. *Aquatic Rehabilitation*. Philadelphia: Lippincott-Raven; 1997. Chapters on Bad Ragaz (Garrett G), Halliwick (Cunningham J) and Watsu (Dull H). To order, phone 800/777-2295.

Andrea Poteat Salzman, MS, PT, owns the Aquatic Resources Network, a clearinghouse on aquatic therapy information and related fields. Contact ARN, 1092 West Outer Drive, Oak Ridge, TN 37830; 423/220-0367; e-mail: ARNetwork@aol.com; Web site:

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