AQUAJOGGING: HIGH VALUE FITNESS PART III

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Aquajogging has become a popular alternative to land based running for athletes and fitness enthusiasts seeking a low impact training activity.

Running for the sake of running satisfies a primal need in humans.

Aquajogging provides the opportunity to enhance running form while working in a safe, resistance based, low impact, high energy environment.

It (aquajogging) works, ask Carl Lewis, Leroy Burrell, Ben Johnston, and Peter Fonseca (Canadian, Olympic marathoner).

It is very important to develop movement patterns in the water that closely resemble land based running form.

Many runners do not take the time to develop the correct movement patterns and fail to maximize the benefits of this low impact highly specific cross training activity.

There does appear to be some transfer of training effect in maximum oxygen consumption from deep water running and cycling to land based running although the transfer effects never exceeds the effects of running itself.

For an injured runner seeking to maintain fitness during a recovery period, deep water running and cycling offer greater specificity of training than swimming.

Part I and II of this ongoing series of articles on Aquajogging focused on the techniques of effective running form and methods to monitor intensity using the "Graded Wilder Exercise Test". This article will discuss orientation to equipment and specific training sessions that will maximize the benefits of water training, cross training and shallow water aquajogging.

The Orientation

There are several important aspects of the orientation process. The participants must first be oriented to the aquatic environment to ensure comfort and safety. This orientation involves establishing a comfort zone with respect to the way water affects the body while moving. Buoyancy, turbulence, hydrostatic pressure, resistance and thermal conductivity will affect movement and comfort level. Ensure participants know how to 'return to vertical' from a prone, supine or side lying position. This is often referred to "recovery" in lifesaving terms.

The second phase of orientation involves establishing comfort with the use of equipment. Adding equipment such as a buoyancy belt, hitch, aqua booties, or versa floats (supplemental buoyancy added to the belt) will alter the way the body moves in water. Once comfortable, participants have created a strong foundation from which to develop a successful Aquajogging experience.

Aquajogging

The Correct Fit

Athletes and fitness enthusiasts alike must be outfitted with the correct flotation in order to ensure comfort when Aquajogging. If the client is constantly struggling with the position of the flotation belt then proper running form and exercise intensity are compromised.

Fit the belt snugly around the waist to prevent the belt from sliding up upon entering the water and moving vigorously. Adjustments need to be made until a comfortable fit is attained. Herein lies a good reason to purchase your own flotation belt. There are many brands on the market. The Aquajogger was specifically designed for deep water running, although for some people, other belts may be more comfortable. The belt should not ride up during water exercise, it should remain in place.

* *The Aquajogger Belt comes in a variety of sizes and shapes. CALA also distributes a flotation belt which is a uniform thickness from front to back. Call CALA for more information on these products.*

The Specific Gravity Test

Once in the water, a 'specific gravity-centre of buoyancy test' is performed. The participant assumes a vertical position and then remains motionless. In this vertical posture, the water level should be just at or slightly above the shoulders. If the water is at chin level, breathing will be impaired and the individual who is "sinking" will generally compromise running form to keep the head above water. In this case extra flotation is required. Aquajogger provides Versa floats that can be added to the front or back of the belt in order to enhance floatability. Some people also choose to add flotation booties for extra buoyancy. These booties are only recommended for athletic, fit individuals who require the extra flotation. The booties are not meant to increase exercise intensity during Aquajogging.

Once the amount of flotation is appropriate, observe whether the body is tilting or turning around the centre of buoyancy. This is called a "torque or turning affect" and is the body attempting to line up its centre of gravity and centre of buoyancy in a perpendicular line. If the body is tilting or rotating, try changing the orientation by sliding the belt around the body, often to the point where the belt is positioned back to front. If this does not stop the turning or tilting, then try rearranging the Versa floats. From time to time, lack of strength in the postural muscles will contribute to lack of "verticality". Constant reminders to activate the abdominals, open the chest, lengthen the back and retract the chin may help to stabilize the body.

Once the equipment is properly fitted and the participant is comfortable, the familiarization sessions can begin. Part I and II of this series outlined the technique tips for correct running form which is an essential skill that must be learned, before introducing the specific training sessions. (CALA Wavelink - Spring Issue: March/April 2000 and Summer Issue: July/August 2000)

Specific Training Sessions

Running is a vital aspect of most sports activities. Running for the sake of running satisfies a primal need in humans. Reflect on your last experience with running that brought you physical and emotional joy. Aquajogging provides the opportunity to enhance running form while working in a safe, resistance based, low impact, high energy environment. Other physical benefits, include training the stabilizing muscles of the body core. Performing movements in water provides the ultimate in body balance.

When flexing at the shoulder joint, during the forward pendular arm action of running, the anterior deltoid, long head of the biceps, and pectorals are working, using a strong concentric muscle action. On the shoulder extension phase of the arm action, the posterior deltoid, long head of the triceps and trapezius muscles (to name a few) are worked in a strong concentric muscle action. With resistance of water, the work done increases substantially. The fuller the range of motion (within the guidelines of running arm action) and the faster the movement (while maintaining range of motion and proper form) the more effective the training will be for the shoulder, upper back and chest regions of the body. Naturally the four abdominal muscles and all the erector spinae muscles are acting isometrically to maintain the correct body posture for running. It is magic, more people need to be doing this! It works, ask Carl Lewis, Leroy Burrell, Ben Johnston, and Peter Fonseca (Canadian, Olympic marathoner), to name a few.

Running Economy Training

To train the body to be more efficient in the use of oxygen and fuel which drives the body, requires an intensity of 65 - 75% of max. (Remember that training heart rate in water is about 10% lower than on land due to the affect of hydrostatic pressure, buoyancy, turbulence and thermal conductivity.)

LSD (long slow distance) sessions allow the body to free the mind from stress and the mind to free the body from stress.

Low intensity training sessions will improve "running economy". These sessions involve continuous easy jogging at an RPE of 1.0 - 2.0 for 20 to 60 minutes duration. During this type of session, conversation is encouraged while exercising. The focus is on familiarization to deep water running and fine tuning the running form. This low level training is ideal for a low intensity "active recovery" workout between hard land based workouts. Also, if the participant is at the beginning phase of a running program, it is recommended that this low intensity aquajogging workout occurs three times per week for the first 4-6 weeks of the program.

Lactate Threshold Training

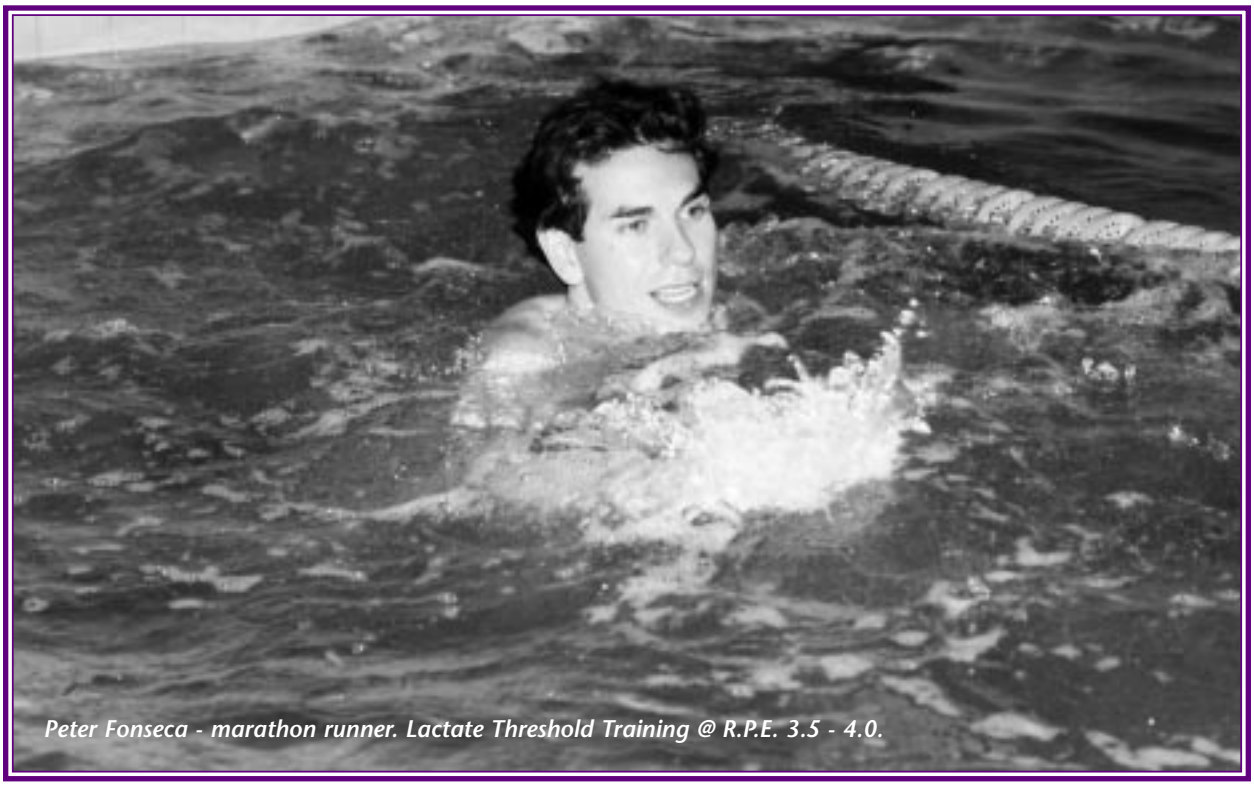
To train the ability of the body to tolerate, process and reuse lactic acid requires an intensity of 75 - 85% of maximum heart rate. This type of training will increase the lactate threshold, enabling fitness enthusiasts to effectively run hills or increase speed and effort at a certain point in a run or during any activity, without debilitating the body or "bonking" or feeling incredibly sore the following day.

You know, incredibly sore... like when you have to walk backwards up the stairs, the day after completing your first marathon.

Medium intensity training sessions will improve lactate threshold. This medium intensity session involves training with specific periods of work (repetition) followed by a limited period of rest (recovery). Repetitions will vary in number, duration, and intensity depending on the training or rehabilitation objectives. Try bursts of activity for 3 to 5 minutes at an RPE level of 3.0 - 4.0. Take a 30 to 60 second recovery period between each interval to catch your breath. Repeat 6 to 10 times depending on your present fitness level. Total recommended workout time is 30 to 45 minutes.

V02max Training

To train the body to deliver oxygen more effectively at high levels of activity with quick, relatively painless recovery, requires aquajogging at 85 - 99% of maximum heart rate.



Peter Fonseca - marathon runner. Lactate Threshold Training @ R.P.E. 3.5 - 4.0.

Maintenance of running form is essential at all levels of training. It is more difficult to keep good form at very high intensity, but must be done for maximum training results.

High intensity training sessions involve short, hard intervals ranging from 30 seconds to 2 minutes in duration at an RPE of 4.0 - 5.0. The recovery period is 15 to 60 seconds. Repeat 15 to 20 times for a total workout time of 25 to 35 minutes. Only try this high intensity session if you are in good physical condition. One of these workouts each week is sufficient. Build a base by doing low and medium intensity sessions over a 4 to 8 week period before inserting this high intensity session into a program.

Naturally, before beginning any training program it is absolutely essential to get the 'go ahead' from your doctor. Let the doctor know the training you are planning to do and then it can be determined whether or not this type of training is recommended.

As usual, include a warm up before and after each aquajogging session. More on warm ups and stretch cool downs in a future Aquajogging article.

Water is a kind and gentle training environment from an impact point of view. Once orientation to the equipment and good running form is established in the pool, plus techniques for monitoring heart rate, RPE and cadence are perfected, water running can be a valuable tool for preventing injuries, rehabilitating and/or improving fitness and the ability to run. Using various training formats will enable Aquajoggers to meet specific training goals to improve running economy; lactate threshold and/or VO2max.

A list of references was included with Part I and II.

CALA and Aquajogger are looking forward to booking a course at your facility.

UPCOMING COURSES:

• OTTAWA, OCTOBER 29, 2000, hosted by the YM-YWCA of Ottawa.

To register or for inquiries: Call CALA at 1-888-751-9823 or email: cala@interlog.com