Aqua, what?

Aqua, what? Exercising in water is actually not new. It is popular overseas. Aquatic exercise is suitable for the general population, special populations, de-conditioned and well-conditioned.

It seems inconceivable that any mode of exercise could be appropriate for both the de-conditioned and well-conditioned. De-conditioned and "special populations" need "soft" workouts. Special populations include older adults, people recovering from surgery or injury, pregnant women, the obese, the sedentary, and the people with chronic conditions such as arthritis, asthma and osteoporosis. On the other hand, the well-conditioned population needs a challenging workout.

Aquatic exercise is able to serve both ends of the spectrum because of water's buoyancy and resistance. The buoyancy makes the workout easier for special populations and the resistance makes the workout more difficult for the very fit.

Benefits of Aqua

1) A 60-minute workout in the water **can burn between 350-500 calories.**

2) Water **recruits more muscle fibers** and provides around 12 times the resistance of air, (resistance is the drag and weight of the water) which increases exponentially as movement power increases. It is therefore the perfect medium for strengthening muscles.

3) Aqua **saves wear and tear on muscles and reduces stress on joints** as water diminishes the effect of gravity. When exercises are submerged to chest level, the gravitational pull on the body is reduced by around 85%. Exercises involving weight-bearing and joint movements that would not be possible on land can therefore be achieved in water. Water also decreases the perception of body weight, which makes exercises feel able to accomplish more. Likewise, water decreases joint compression forces, allowing people to exercise more frequently and for a longer duration with less biomechanical stress.

4) Aqua **improves balance and coordination** as moving through water requires co-contraction of the abdominal and back muscles and, therefore, teaches central stabilization.

5) Exercise in the water can also have **a positive effect on osteoporosis and bone density.** It was once thought that heavy impact was necessary to maintain bone density. It is now understood that working against resistance is what is required. It can be the impact of the floor, lifting weights or moving with force through the water.

6) The massage effect of water **increases circulation and promotes relaxation.**

7) There is **little or no post exercise stiffness after a water workout** (possibly due to the lack of eccentric muscle contractions).

8) Hydrostatic pressure **decreases joint pain and swelling, increases circulation to deep muscle groups, and assists in stabilizing unstable joints.**

9) Although heart rates will be about 10 beats slower per minute in an aqua class than for the same intensity workout on land, studies have shown that aqua still puts sufficient demand on the heart and circulatory system to improve their efficiency. The lower heart rate is not from lack of intensity but from factors such as cooler environment, the hydrostatic pressure and the reduced gravity force. Participants can therefore **exercise at a higher intensity with a lower heart rate.**

10) The heart pumps **10% to 20% more blood per beat** when the body is submerged in water - this is equivalent in effect to the pumping capacity of the heart of a peak performance athlete.

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1. Selling the Benefits of Aqua by Nicole Dacich, Reg FL, AQ / Network Vol.10 No.4 / Oct 97
2. Extreme Aquatics by Ruth Sova, M.S. / Fitness Management Magazine Vol. 14 No.5 pp. 32-34 / Apr 98