

AKWA Awareness June/July 2010



Aquatic Exercise Myths Set Straight!

By Lori Templeman

This is the second in a series of commonly asked questions regarding vertical aquatic exercise. These articles are designed to help clarify misinformation common to the aquatic fitness industry.

Topic #2: Does aquatic fitness provide an adequate environment for effective strength and resistance training?

The benefits and limitations of strength and resistance training in the water have been common questions from aquatic exercise participants. Confusion exists with the different types of equipment and how to use them most effectively. Some express that aquatic resistance training does not provide enough challenge because the equipment is not large or “heavy” enough. Others wonder why they are not sore after their workouts. This article presents the different types of equipment, some common misconceptions, plus the pros and cons of aquatic strength training.

An aquatic exercise class can be effective at building strength and endurance just by using your body to work against the resistance of the water. A variety of equipment has been created to enhance your experience and increase challenge as you become more conditioned. This involves using force and energy to move the equipment through the water while stabilizing against it. Buoyant and drag equipment are the most common types.

Buoyant Equipment

Buoyant equipment typically floats and is mostly made of foam. Examples include noodles, dumbbells, ankle cuffs and kickboards. The dumbbells and cuffs are often referred to as “hand weights” or “ankle weights”. When the noodle or dumbbell is submerged it *feels* heavy, creating the *weighted* association. However, weight barely comes into the buoyant equation, because foam is very light!

Instead of weight, the challenge is measured by the amount of resistance felt when pressing the foam down toward the bottom of the pool. The larger the equipment, the more resistance you will feel. No direct comparison can be made between resistance and weight. Actual weighted dumbbells and ankle straps can be used in the water for a different mode of training.

Buoyant Equipment Pros:

- With a single movement, typically only one muscle group is targeted at a time. This allows for both concentric and eccentric muscle contractions to take place, just like on land. The eccentric contraction is where the muscle lengthens, but this is typically what causes muscle soreness.
- Foam equipment can assist with suspended movements off the bottom of the pool for short periods of time. This flotation lets us explore positions hard to accomplish on land.
- Buoyant equipment can be used as flotation and support for participants working on stability and balance.

Buoyant Equipment Cons:

- Some muscle groups are difficult to train without putting your body into very odd or challenging positions.
- Anytime this equipment is submerged the shoulders are “loaded” with resistance and tend to elevate (shrug toward the ears) when fatigued. Constant gripping may also cause tension in the wrists. It is important to take breaks between sets to give your shoulders and grip a rest.

Drag Equipment

Drag equipment is typically made of plastic or fabric and includes gloves, paddles, or fins attached at the arms or legs. Like buoyant equipment the challenge increases with size and design. Moving a larger object through the water requires more effort than a smaller one. Another way to increase challenge is applying more force and power into your movements. Core muscles (abs and back) need to be active and stabilizing at all times.

Drag Equipment Pros:

1. Resistance is felt in all directions when it is submerged, promoting balance in our muscle groups.
2. The load on shoulders is diminished with drag equipment, allowing for longer periods of use and more comfortable gripping.

Drag Equipment Cons:

- Like buoyant equipment, the size will top out. A piece of plastic can only get so large before it is impossible to stabilize effectively.
- You need to add force and apply yourself to get the most out of the resistance.

The resistance created with aquatic equipment is largely controlled by the amount of force you apply. Two people working with the same type of equipment can be challenged differently. From gentle range of motion to working muscles to fatigue, aquatic equipment can be useful for all levels from rehab to sports training.

With water exercise, participants do not typically experience the same amount of muscle soreness as with a land program. This is partly due to a lack of eccentric muscle contractions, which are known to cause soreness. With drag equipment, there is limited eccentric muscle action as both muscles of the pair are working against resistance. This does not mean your muscles have not been conditioned or you did not work hard enough. Our bodies respond differently during and after an aquatic workout. Consider your lack of soreness and easier recovery to be a bonus!

The Verdict:

If your fitness goal is to increase muscle size and maximize your strength potential, a weight-bearing program on land may be more beneficial. However, cross training in the pool does challenge core stabilization and strength gains can be made. Combining land and aquatic training techniques will provide a more complete program. A variety of workout techniques and equipment will help you meet your fitness goals and increase your quality of life.

ABOUT THE AUTHOR

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