

## What SAC's Aqua Fit Classes Can Do for You!

Aqua Aerobics was originally developed to give those suffering from Arthritis a place they could exercise, regaining strength, mobility and cardio-pulmonary health in a supportive environment. Since then aqua aerobics has changed into many different type of aquatic exercise, like SAC's Aqua Fit classes, serving populations from pre-op, rehab and post rehab to elite athletes.

There are 3 important benefits unique to aquatic exercise:

- **Buoyancy**
- **Dynamic Viscosity**
- **Hydrostatic Pressure**

**Buoyancy** of water creates a supportive environment. To be buoyant is the floating feeling people get when in water. This property of water helps relieve a great deal of joint compression in those with compromised joints. Especially if suspended by a flotation belt, the body below the waist will experience a freer range of motion and more potential for powerful movement than those same affected joints on land. The spine is supported by water, allowing for better posture. Buoyancy also allows for a movement to be controlled at a slower pace. For those who have lost some of their movement skills, say, how they walk has been affected, buoyancy allows delay in the stride action so mindful attention can be paid to each single element of the stride. This allows people to correct dysfunctional stride patterns, institute new, correct patterns and enjoy walking again.

**Dynamic Viscosity** simply means - the more pressure applied to water (say with the flat of your hand) the more resistance felt. Unlike swimming, which strives to reduce drag – the resistance of a body part moving through water - aquatic exercise harnesses and uses more or lesser amounts of drag to vary the intensity of an exercise. Water is 790 times more viscous (thick) than air. Since the resistance felt in water increases with the amount of power applied, there is about 4- 42 times the resistance of the same exercise in air. So, instead of having to change weight plates, the water exerciser changes the size of the surface area used and applies varying amounts of power against the water to change the “weight” of water. A little bit about how muscles work: concentric contractions shorten a muscle, eccentric contractions lengthen a muscle. Since every movement is resisted in water, the muscles (without equipment) are in a state of concentric contraction. Because the eccentric contraction of a muscle is what often causes more pain after working out with weights, water creates an environment for more gain with less pain.

**Hydrostatic Pressure** refers to the surrounding pressure applied to the body as it is immersed in water. The deeper a body part is submerged, the more pressure it experiences from the water. This special property of water has many beneficial effects. Cardiac perfusion, or circulation of blood throughout the heart muscle, is aided. So, if the heart has been injured, the part of the heart left functioning works more efficiently. In a study from Japan on water immersion therapy for patients with heart conditions, one of the beneficial results was that enlarged hearts reduced in size, back towards normal. Since the feet and legs experience more water pressure than the upper body in chest deep water, the return of blood from the feet and legs to the heart is assisted, creating better circulation in the lower legs and feet. This pressure also helps relieve swelling (edema) of the lower legs and feet and has been used as a treatment for pregnant women who experience this uncomfortable condition. Hydrostatic pressure improves the function of the kidneys, also reducing edema. Because of hydrostatic pressure, both blood pressure and heart rate are lowered. This provides a superior workout environment for those with high blood pressure, and those who need to keep their heart rate down, as they can exercise more vigorously in water than on land.

If you are a newcomer to exercise, water is a comfortable, supportive environment to begin your journey to better health. Wherever you are on your travel to a healthier you, there are many exciting, beneficial reasons to include Aqua Fit classes in your exercise regimen!

There are far more benefits to aquatic exercise than could be listed in this newsletter. To find out more, come and join me in SAC's Aqua Fit classes!

**In 2004 the author, Anastasia Encarnacion, developed the 'continuum of care' aquatic program for the Caliente Springs Physical Therapy group. Held in our indoor 90o therapy pool, these classes are offered M-F mornings for varying ability levels. Formerly known as Aqua Aerobics with Anastasia, these classes are now held under the name of Aqua Fit. Anastasia is also the Arthritis Foundation classes instructor. She is certified in many land and water exercise modalities by NASM, ATRI, AEA, SCW and the Arthritis Foundation.**