

PARTICIPANT/INSTRUCTOR HANDOUT

DON'T BE A DUMBBELL!

By Judy Laughton (Leaders please copy for your participants)

Recently I have noticed a disturbing trend toward the increased use of dumbbells and buoyant aids in aquafit classes, although dumbbells have been around our facility for 16 years. In the past, some leaders have used dumbbells in moderation with specific instruction for their use.

What concerns me now is that some of my participants, who are all seniors (60+), want to use the dumbbells throughout an entire class. They say they like to "work hard.... and do my own thing". They choose to jog in deep water using the aids for the entire 45 minutes. With 25 to 30 people in each class, it is impossible to monitor how safely the dumbbells are used.



My main concern is the effect the use of dumbbells has on participants' joints and their bodies. Aging joints (meaning anyone over 45 years old) do not take well to the stress and overuse dumbbells create. Continual use for 45 minutes taxes some muscles and neglects others. A biceps curl with a dumbbell means the muscle works in an unbalanced way throughout the two phases of the movement. The triceps muscles do the work in the down or straightening phase and the dumbbell



returns to the surface during the biceps phase with little or no effort spent because of the buoyancy, because the dumbbell tends to bob to the surface, the trapezius muscles, neck and upper back are put in constant contraction for 45 minutes.



An average woman past menopause can lose up to 15 percent of bone cells within 15 years after menopause. About seven percent of this can be in the vertebrae of the spine. The added stress of pushing down a buoyant aid is likely to increase the risk of small bone fractures in the cervical and thoracic vertebrae. An average woman over 50 years old unaware of any possible bone loss may be putting herself at the same risk as one who has been diagnosed with osteoporosis. Further, it is worrisome that women who have osteoporosis often use the aids throughout classes thinking they are helping themselves. In my classes, I see several women with cervical curvatures who think the dumbbells are the answer to becoming strong. Some of the women report their wrists and hands are sore from the use of the dumbbells. Excluding those suffering from Rheumatoid or Osteoarthritis, it could be dangerous for anyone over 50 to use dumbbells. Further, some participants with neck problems want to use dumbbells continuously during the class, and it is obvious these participants are using the buoyant aids elsewhere. With over 100 types of arthritis under the arthritis umbrella, do instructors know every participant well enough to promote the use of buoyant aids in a large class?

Because of my thoughts on this subject, dumbbell use in my classes is limited. Participants who say they like them because it is a "hard workout" are told that shoveling snow is also hard but can be dangerous unless done safely and properly. Hard is not necessarily better. When an injury occurs (and it will happen at some point), they will be sidelined from their chosen activity for an indefinite period.

It is best that dumbbells be limited to small groups where proper instructions are given and exercise monitored. Personal training and circuits are perfect places for the use of dumbbells as long as the use is restricted to a short period and with specific instructions.



Leading seniors' classes is what I love most. When I started teaching aquafitness I was young and now consider myself to be one of them, a senior. For 27 years, I have been teaching various fitness classes and have been in aquafitness for almost 17 years. I am an original CALA member and a former nurse. I began teaching arthritis, back, and rehab classes before it was trendy. My concern for safety, however, rests not only with the older age groups but also with participants of all ages. A good portion of aquafitness participants are attracted to water exercise because of physical problems and injuries. I believe we owe them a responsibility to deliver an injury-free zone, which will not irritate existing conditions.

Doctors have as their motto "Do no harm." I believe we as aquafitness instructors have an enormous responsibility to follow this principle. Why is our liquid weight room so good? The magical and healing powers are the reason. Instead of dumbbells, we need to use what the healing powers of water have to offer. By introducing buoyancy for resistance, we remove the reasons we are in the water. Weights and buoyant aids should be saved for land classes where monitoring of use may be easier than in a large pool.

How can we do it?

- Using water resistance and turbulence - water is 1000x the resistance of air.
- Speed of movement creates more turbulence and more resistance.
- Increasing the surface area of the body to present a greater area and increase the resistance.
- Vary resistance by changing hand and foot positions.

- Multidirectional resistance - resistance is always in the opposite direction to the movement of the water.
- Muscle balance resistance - take advantage of the combination of concentric contractions for two muscle groups in the same movement i.e. biceps, triceps 'flexions'.
- Resistance of the water prevents jerky motions and reduces the risk of injury.
- Energy expenditure: achieve a workout as intense as on land.

Movements are slower in the water and, therefore, done in a controlled fashion. Water provides an opportunity to increase range of motion and strength with the same movement.



For those who wish to use equipment, suggest the use of household sponges of varying size (small, medium and large). These provide a broader surface than one's hand but are safer than dumbbells as they absorb water. Sponges are also easier on the wrists and they are soft. For many years, breast cancer classes have used sponges to provide added resistance for the upper body. For breast cancer survivors it is essential to exercise the arms well on the affected side to lessen the incidence of lymph edema (swelling), which may result from the surgery.

Water is forgiving but let us not push the limits by introducing something that puts our participants at risk. The healing powers of water can do wonders. Why not start now and embrace 'water power' and its magic?



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