

# CALA

Canadian Aquafitness Leaders Alliance Inc.

Handout

## To Wear Gloves or Not to Wear Gloves? That is the question – Read on, and you decide!



The CALA philosophy promotes water as the training tool. When water is pushed and pulled by the body, muscles are activated and energy is expended (translated = fat is burned).

The amount of force generated through movement determines the number of kilocalories of energy (amount of fat) consumed during a CALA class.

Sample classes offered by CALA certified instructors include General Aquafitness, Water Running, Aqua Kick Box, Diaper Aquafit, Aqua Africana, Aqua Cycle and/or Aqua Muscle.

Consider the energy you consume (eat) and the energy you expend (use up). Add the energy you require just to keep your body alive (called basal metabolic rate) and you will get a pretty good idea about whether you will gain fat, lose fat or maintain your body weight. This calculation is referred to as “Energy Balance”. If you “eat” more calories “burn” through activity, then you will gain fat – it is as simple as that.



The media does a good job of promoting the use of equipment as a quick fix to fitness – on land. It appears that water training is not far behind. In fact, fitness clubs use the ‘latest equipment’ to lure new members and retain clients. Repeated studies have shown that some equipment (such as most of the “Ab Trainers on the market) is ineffective. Aqua gloves, which have been around for some time now, are a classic example of equipment purported to increase energy expenditure and make the workout more effective. People don aqua gloves and often make the following comments:



- “The gloves really give me a great workout”.
- “With gloves on I must be burning more fat, it feels harder”.
- “I will get rid of the chicken fat in my upper arms, if I use these everyday”.
- “I really feel muscle soreness after my workout when I wear gloves”.
- “I am exhausted after using the gloves. This must be good for me”.

Why do participants continue to believe “it (exercise) must hurt” to do any good? After a land exercise session, there is some truth to the statement. Exercising on land involves working against gravity in a weight bearing environment. The body will feel something called “DOMS = Delayed Onset Muscle Soreness” after a land session. This translates to mean, the muscles are sore due to the effort expended and the kind of muscle activation that occurs during land based group exercise classes. On land, the advantage of buoyancy (taking the load off the joints) and turbulence massaging the body during the workout are missing.

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Exercising in water has the advantage of buoyancy and turbulence together with resistance. Exercising in a group Aquafitness class can be very effective, without the resultant muscle soreness.

This lack of muscle soreness is problematic in some aspects. Participants used to feeling sore, may perceive that exercise in water is a waste of time, because they do not usually feel sore after a water session. The science behind all of this is rather complex. Water training involves *balanced* muscle work – when you push the water forward with your leg or arm, you will work the front of the hip, thigh or shoulder, when you pull the water back with your leg or arm, you will work the back of the hip, thigh or shoulder. This is called “double positive muscle activation”. When one muscle works, the opposing muscle releases tension and you have a balance in muscle work. This release of tension allows the resting muscle to flush out waste products and fill with blood to deliver oxygen and fuel to the muscle. Simply stated,




***“Aquafitness is all gain, no pain”.***

General aquafitness classes include people of all ages. CALA leaders report the following age range 14 to 95 years. These participants represent a cross section of fitness levels and physical abilities. Participants include people with joint disorders or replacements, pre/post natal woman, those with heart problems and neuromuscular disorders (Multiple Sclerosis, Muscular Dystrophy, Post Polio, Parkinson’s). In the same class are people free of disability – avid marathon runners, tennis players, golfers, skiers and the ‘likes’.




CALA leaders are trained to offer options to make the movement easier or harder. These options involve changes in the speed of motion, range of motion and surface area. Changing the surface area will alter the amount of effort expended. Surface area options include changing the hand position (from slicing the water to pushing the water with a flat hand ‘like a paddle’); the foot position (from flexed to pointed) or the length of the lever (straightening or bending the limbs).

So what happens when people wear aqua gloves? Close observation of regular participants performing movements with aqua gloves shows the following:

-  Hands flop as the wrist are unable to remain firm and locked due to the added resistance.










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-  Range of motion (the distance the limb travels) is decreased and therefore the work done and energy expended (calories burned) is decreased.
-  Keeping time to the music is next to impossible even if a moderate range of motion is attempted.
-  Faces are flushed and breathing patterns indicate anaerobic work rather than aerobic work is occurring frequently.

CALA leaders are taught to use a combination of verbal and visual cues while teaching, to ensure participants are performing exercises safely and effectively. These cues include:




-  Giving permission for participants to move at a tempo or speed, suitable for them. Move on the tempo of the music, move on half the tempo, move on quarter the tempo, or move at your own speed!
-  Maintain firm and strong wrists during all exercises. Avoid flopping the wrists, or you may feel wrist pain after a few sessions.
-  Strive for full range of motion, reaching to your full capacity within a zone of comfort.
-  Keep your back long and strong. With correct posture the movements are safer and more effective and the overall feeling of exercising is more positive.
-  Keep your shoulders relaxed and chin retracted comfortably. Avoid poking the chin forward or hunching the shoulders to keep stress away from the neck and shoulder region.
-  Maintain activated or strong abdominals. Activate all four abdominal muscles to create a strong stable torso. This cue has nothing to do with the stomach. The stomach is a bag that holds food – you cannot tighten or flatten your stomach – this is misleading and impossible.
-  Keep your chest open to allow the lungs to fill completely.
-  Keep the hips in neutral. Avoid ‘overarching’ or ‘over tucking’ the pelvis.
-  During the warm up and aerobic workout and the stretch phase, work at a pace that allows you to ‘work within your breath’, rather than gasping for air.


**The key to effective and safe exercise is education through leadership - connecting the mind thinking to the body moving and the spirit feeling.** Proof is in “doing it yourself”. Following are a series of steps you can take to learn how to move effectively and burn lots of calories (if that is your goal) while exercising in water. You will need to get into the water and “try it”, and then you will “get it”.

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Try the following:

 **Start:** Perform some full range of motion movements (moving the limbs as far as possible in your zone of comfort). For example, start doing a moderate intensity 'cross country ski' – legs moving forward and backward. Add upper body activity: move arms forward and back, passing close to the legs while moving through a full range of motion. Move such that when your left leg is forward, your right arm is forward, and vice versa. This is called 'oppositional action'. *Attend to the sensations of the movement – how hard does it feel to do this movement? Note how does your body feel?*

 **Next:** Modify the speed of motion: change the tempo from quarter tempo (very slow) to half tempo (a little faster). Continue to perform the exercise 'properly' (long back, open chest, relaxed shoulders, activated abs, full to moderate range of motion, firm wrist, long arm...) Pay close attention to your hand position. While keeping a full range of motion, and adequate speed of motion, to elevate your heart rate and burn calories, what do you notice about your hand position?



**Results:** Most people will discover they naturally selected the 'slice' or 'fist' hand position during the movement. They find that using a flat hand position, even without aqua gloves, causes them to:

1. Slow down thus decreasing the energy used and the calories burned and to get out of synch with the music or,
2. Decrease range of motion substantially which is not healthy for joints or conditioning of the muscles or,
3. Flop the hands at the wrist, which may lead to chronic pain at the wrist if left unchecked over an extended period of time.

**The question remains:** To use the Aqua gloves or not? Why use the aqua gloves in a regular aquafitness class, if the hands are in a slice or fist position most of the time. The gloves do not increase the surface area or the resistance if the hands are 'slicing' or 'fisting' through the water. Needless to say, after getting in the water and trying the exercise as noted, most people opt to remove the aqua gloves. Remember, it is important to keep range of motion as large as possible, in the zone of comfort, during movement to condition the muscles and keep the joints healthy.

**There are exceptions:** In the case of a 'high level athlete' who has the appropriate physical capabilities (strength, muscular and cardiovascular endurance, coordination,



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and body core stability) to perform the movements safely and effectively (at the desired speed and range of motion), aqua gloves may assist to overload the muscles for a training effect.

**Making the case for safety:** Aqua gloves are not bad or unsafe. On the contrary, gloves can serve to augment a program for very fit and strong individuals. However, use of the aqua gloves which results in 'unmindful' exercise and 'sloppy' body movements is just 'not on'!

*Why spend money on equipment* that is not being used properly, could cause injury and needs to be replaced frequently due to the ravages of pool chemicals? If participants want to use the aqua gloves, then specific classes must be designed with slower music, to ensure full range of motion, with a flat hand.



It is important for our leaders to be educated on how to use the aqua gloves effectively and safely without false promises and expectations so that they are able to pass this valuable information to their participants. Classes must be specifically designed for product.

**In conclusion:** Why not use the water and the body to train effectively? Educate participants about how to work through the water to burn calories, get fit and feel better. Connect the mind thinking, the body doing and the spirit feeling!