



WATER AEROBICS PITFALLS— CONTRAINDICATIONS AND WHY PLUS POOR PRACTICES AND WHY

By C. H. Krafft

There are several contraindicated exercises and general pitfalls that instructors may not be aware of that keep reoccurring in the industry. Most of the time it is because of instructor has not received adequate training or has seen something on the internet that is contraindicated but because anyone can throw anything on the internet with false claims or no background, people are mislead to think it is safe or okay. This article will clarify the concern, the physiological reason for the concern, and what adaptations are appropriate.

Here is a list of what will be covered in this article.

1. Warming up with equipment.
2. Traveling only in the forward direction.
3. Deep water classes with no floatation.
4. Arms out of the water for “heart rate”.

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Special points of interest:

- * SEND IN AN ARTICLE AND RECEIVE A FREE HOMESTUDY.
- * Changes in member benefits for 2016 and the new form.

COMPANY UPDATES

Membership changes in 2016.

Instead of 10% off of home studies, reference materials, CEC articles, or workshops. You would get 3 \$15 vouchers to use. You will be able to combine them if you want \$45 off of a workshop, home study, or reference material. You would pay the regular price on anything after you have used your vouchers for that year. Instead of a newsletter with CEC articles or choreography corners, you will receive an e-mail with a full class routine. 8

routines a year 2 each quarter—1 deep, 1 shallow, 1 senior, and 1 equipment based, 1 sport, 1 prenatal, 1 high intensity and 1 water dance. You are getting 1 today as part of this issue

COST CUTTING MEASURES-

To keep from increasing prices the fax line and toll free line (888 number) have been discontinued. Almost no one faxes anymore so that cost was unnecessary.

Most people call from cell phones with

unlimited long distance. If they call the toll free number from a cell we get charged unnecessarily.

Return of AEA CEC's in 2016!!!

Rebecca Jacobsmeyer is going to be a grandmother again. Triplets last time....Twins this time. 5 grandkids under 1 and 1/2 years old. Good thing she's in shape!!!

5. Twisting movements with impact.
6. Short lever only fast movements for the majority of the class.
7. Arms or legs popping in and out of the water.
8. Excessive use of equipment in the arms/hands (i.e. more that 10 min. at a time.)
9. Fast movements with drag equipment in the hands or on the feet.
10. Excessive use of equipment to the front of the body only.
11. Shortening or eliminating warm-ups and cooldowns especially the stretches.



I. Equipment use during a warm-up.

WHY—The purpose of the warm-up is to prepare the body for exercise, not to immediately perform strength exercises and drive the heart rate up too fast. It would be like telling someone to go in the weight room and start lifting with no warm-up or pick up 6-8 lb. dumbbells and start exercises without warming up the shoulders and arms. This can lead to tendonitis, decrease in flexibility, and other injuries. Participants need 5-10 min of big rhythmic movements to increase the blood flow, allow the Krebs' cycle to activate, slowly increase heart rate, increase the muscle temperature to prepare it for more vigorous activity. **Holding onto and using equipment in the warm-up increases the blood pressure through gripping the equipment and puts stress and tension on the shoulders before you have warmed them up and increased their flexibility. Most participants don't perform long lever full range of movement with no equipment correctly and it is only worse with equipment which causes them to use short tight small movements. The risk of strains and injuries is much higher.**

The only equipment appropriate to have in a warm-up is belts, noodles or cuffs for floatation for deep water aerobics.

II. Traveling in the forward direction only(or predominately).

WHY-Traveling forward for most or all of the class promotes muscular imbalance and poor posture. As opposed to air which has very little drag on the body, water has significant resistance when traveling. Participants should travel in the water, the calorie burn is 200-250 more calories per hour than staying stationary. **However, only traveling forward in shallow water over strengthens hip flexors, quads, abs, chest, and calf. In deep water, it over strengthens glutes, hamstrings, abs, chest, calf, and rear delt. Anytime you over develop one muscle group over the other you cause joint instabilities and increase the wear and tear on the joint. You increase the risk of tendonitis and decrease flexibility.** Traveling forward against resistance will emphasize the muscles that cause people to lean forward promoting poor posture.

Traveling forward, backward and sideways will promote muscular balance, prevent injuries, and promote better posture. Even in water running classes, use of all directions of travel is recommended.



III. Deep water classes with no floatation.

WHY-Except for people who have enough body fat to be able to float in an upright position without moving their arms and legs with their shoulders above the water can even consider not using a belt. **Patrons who take deep water aerobics thinking**

they are getting a better workout by not using flotation, perform most of the class in extremely poor form. They are unable to perform many of the movements with long extended levers in an upright position. The dog paddle position with short sculling movements with the head forward and the neck compromised becomes the basic position they assume to stay afloat. They will be unable to perform many of the exercises and movements without poor posture or changing the exercise to stay afloat.

When doing short bursts of suspended in a shallow water class as an interval, it is okay to not use floatation. The concept is not to stay in that position to long and to choose moves the patrons can do in proper form.



IV. Arms out of the water for “heart rate”.

WHY—Some instructors and patrons think holding your arms out of the water especially shoulder height and above and using them in an aerobic manner with the aerobic leg movements increases the heart rate and the intensity of the workout. This is completely incorrect. The arms would get more muscular workout and burn more calories in the water. The air has very little resistance. The heart rate increase has nothing to do with exercise intensity. Holding the arms are heart level and above creates a backpressure of blood on the heart from the amount of blood held above the heart. This falsely elevates the heart rate by back pressure on the heart which is not recommended. Holding your breath also increases your heart rate without increasing intensity, but that is not recommended either. Therefore, the arms should be kept in the water and used for resistance to increase the exercise intensity by actual work.



Arms can be out of the water for stretches, slow controlled joint range of movement exercises, for a muscular strengthening exercises with a band or land hand weight that has resistance against the movement, held (i.e. not moving aerobically up and down or front and back) above the surface to make a jump harder or a deep water flutter kick harder because there is more mass above the surface to work against, and for brief “flair” moves in Aqua Zumba®.

V. Twisting movements with impact.

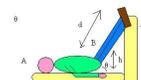
WHY— Big jumps twisting the back and landing in a twisted position is detrimental to the discs between the vertebrae in the spine. The disc are being sheared and twisted and then compressed on the landing between the vertebrae. This can cause ruptured or bulging discs overtime.

As long as the patron has no back injuries, twisting without impact for shallow and deep, twisting in water yoga or Tai Chi, the twist in a water kickboxing, and moguls side to side without the twist are okay.



VI. Fast short lever movement for the majority of the class.

WHY—Shortens the muscle tissue promoting injuries and tendonitis, back issues.....!!! Patrons are already tight from their jobs and lifestyle. They desperately need long lever full range of movement to help correct body mechanics. Tight hip flexors, hamstrings, or hip rotators can cause low back pain and misaligned hips. Patrons need to be able to swing the straight leg behind the body to stretch the hip flexor. They need to be able to straight leg kick to the front for the hamstrings. They need straight leg pendulums and jack to open the hips laterally. They need big straight arm open hand movements for the biceps, triceps, shoulders, and FOREARMS. Teach patrons to open up and use big movements.



These fast movements are okay for short intervals and to work on speed, but are not for the majority of the class.

VII. Arms or legs popping in and out of the water.

WHY— Arms or legs popping in and out of the water where there is significant surface area being dragged in and out causes a snapping on the connective tissue and hyperextension. With straight or bent arm jumping jacks, straight arm cross country skis, straight leg kicks, or stomp kicks; if the limb breaks the surface it is going from high

resistance to low resistance and back. This is like have a band snap while doing and exercise on the joint and connective tissue. It can cause the joint to hyperextend and the snapping can either cause tendonitis or sprains/strains on the connective tissue.

Movements that slice into and out of the water like swimming strokes where the finger tips or toes are leading the limb into the water with minimal surface area do not produce the same snapping effect. Think like a high diver— minimal splash straight into the water.



VIII. Excessive use of equipment (i.e. more than 10 min.)

WHY-OVERUSE OF GRIP AND SHOULDERS. The buoys are 4-8lb of resistance when under the water. The trap muscles are working continuously to hold the shoulders down against this resistance. The hand must grip the buoys or bands continuously to hold onto them. **The equipment manufacturers also recommend no more than 5-10 minutes at a time. Patrons need a break from a constant grip to avoid elbow tendonitis and carpal tunnel syndrome. Most patrons already have neck and shoulder issues and aggravating them by having them under constant tension for a prolonged period of time can be detrimental.** Also over emphasizing movements to the front of the body with the buoys can cause further posture problems.

Give the hand and shoulder use a break, switch to the legs and do alternating sets within a class. Teach them how to use the water resistance with just their arms. Then you can get the upper body effectively returning to the buoys after the shoulders and hands have gotten a break of several minutes.



IX. Fast movements with drag equipment on hands or feet.

WHY-The yanking and pulling with the drag equipment at higher speed over stretches ligaments and tendons, increase injury to connective tissue, increase chance of the development of arthritis. Okay this one can get tricky. Boxing with buoys or land hand weights at the surface causes the yanking problem on wrists, elbows and shoulders. Jogging and punching down in the water with floating buoys does not. Jogging and punching down with land hand weights causes the yanking. Jogging with floaty foot cuffs on the legs does not yank the knee joints. Jogging with land leg weights, fins, drag equipment or high surface area equipment does yank on the knee and hip joints. Answer the question of whether the equipment in the motion it is being used alternates pulling the joint out and then jamming it back in. If it has a constant force into the joint it does not overstretch and destabilize the joint. Floating equipment always pushes up so in up down movements it does not overstretch stretch the joint. Weighted equipment is a problem in both up down and horizontal movements because of gravity and momentum. Slow and controlled movements do not cause the overstretching and yanking issues.

Overstretched ligaments and tendons do not go back to their original length when they heal. They are overstretched for life. Destabilized joints have a greater chance of developing arthritis.



X. Excessive use of equipment in front of the body.

WHY- Using buoys in front of the body emphasizes down and in rotation of the shoulders and chest muscles emphasizing the muscle imbalances that cause kyphosis and shoulder rotator injuries. It is the natural and most common position to use the buoys. Jogging and pushing to the front or down. Instructors need to do more palm forward opening movements and arms behind the body to keep from over strengthening chest and internal shoulder rotator muscles. Tight internal shoulder rotators are the most common cause of the external shoulder rotators getting injured, frozen shoulder, and loss of range of movement of the shoulder.



XI. Shortening warm-ups and cooldowns especially the stretching.

WHY-OVERUSE INJURY PREVENTION. Just as the warm-up is to prepare the body for exercise, warm-up the muscle tissue and make it more flexible for exercise, allow the Krebs cycle to activate, the cool-down is to slow the Krebs cycle, redistribute the blood, return the muscles to their natural length, eliminate lactic acid build up, and help



with the prevention of tendonitis by preventing shortening of the tissues and joint mobility issues. The final stretches and not for increasing flexibility but for preventing overuse injuries to the muscles and connective tissues.

CEC Article 3, 2015 Questions (3 CEC's) - C. H. Krafft

Submit answers with \$15. Passing score is 80%. Checks payable to A-PAI, 547 WCR 18, Longmont, CO 80504.

1. List the 11 Common issues and the WHY in bold and underlined that was in each section.

2. T or F Good Swimmers can do deep water classes without flotation.

3. T or F For an increased upper body workout you can use buoys the majority of the class.

4. When can you twist?

5. When can you have your hands out of the water?

6. When can you have your arms go in and out of the water?

7. T or F For shorter classes you can shorten the cool down by just slowing down and drop the static stretches.

8. T or F For advanced water kickboxing classes you can add buoys to increase the intensity.

9. T or F If a patron shows up late they should be encouraged to jump in and make up for lost time.

10. T or F A new piece of water equipment is now available on-line. It floats but is also has fins to add resistance for a great leg workout. It shows water running and sprints. It is okay to do what the manufacturer recommend for any piece for equipment.

11. T or F Deep water twisting in not recommended.

12. T or F For water running classes, instructor should keep to forward motion in the bent elbow correct running form throughout the class.

13. T or F The internet is a great way to get new ideas and exercises.



Upcoming 2016 Calendar— In Progress

February dates to be announced—Loveland, CO - Core Water Cert - Chilson Recreation Center

March 5 Ballwin, MO— Progressive Resistance Toning, Deep at Any Depth, and Straight Up High Intensity Workshops- Meramac Bluffs Lutheran Senior Services

April , Lakewood, CO—Core Water Cert. Workshops to be determined. Carmody Recreation Center

Fall , Longmont, CO—Land and Water Cert and Workshops to be determined. Longmont Recreation Center