

MIMI RODRIGUEZ ADAMI
C.P. 6265 - 00195 ROMA
e-mail: meradami@gmail.com

DEEP WATER DANCING

INTRODUCTION: Being land creatures, we are used to having to work constantly against the force of gravity. So much so, that most of our muscle imbalances are caused by the weakness of certain muscle groups in having to deal continuously with this ubiquitous force. In the water gym, instead of having to deal with the vertical forces of gravity there are other forces in which we must combat, both vertically and horizontally. Buoyancy, the vertical push upwards and drag, the force or resistance, which opposes all movements in the water. A workout in deep water with the use of floatation belts or vests to keep the client afloat supplies a double workout: one for muscle endurance since each movement in the water works against the resistance of the water and the other one for total stabilization of the body, starting with trunk stabilization, in an environment where there are no constants, only variables. We take advantage of our environment to perform movements, which are impossible to perform on land.

I. BASIC CONSIDERATIONS REGARDING TRAINING IN DEEP WATER

- A. The Principal of Archimedes - The loss of weight of a submerged body equals the weight of the fluid displaced by the body expressing what I call "the wonderbra effect" or the effect of buoyancy.
- B. The participant's body composition - The proportion between fat mass and lean mass of the individual will determine his/her level of buoyancy.
- C. The center of buoyancy - Usually located in the area of the lungs, the center of buoyancy can be affected by the body composition of the individual as well as the location of the majority of his/her subcutaneous fatty deposits.
- D. The center of gravity - Usually located in the hip area in women and in the center of the torso in men, the center of gravity changes constantly when the body is in movement based on the position of the arms and the legs as well as the position of the trunk itself. It is also affected by the muscle mass, location and density of the individual.
- E. The importance of neutral posture - For safety's sake it is important to maintain neutral alignment when training in deep water. The vertical alignment of the center of gravity with the center of buoyancy will ensure neutral alignment. Therefore, it is imperative to respect the vertical alignment between the mastoid process, the acromion process and the greater trochanter during deep water choreography. In designing exercise for deep water, time should be allowed for re-centering and re-alignment between movement patterns.
- F. Floatation equipment - There are various types of equipment that will maintain the body afloat. In some cases, these pieces of equipment will reposition the center of buoyancy in order to challenge neutral alignment in deep water. For example, floatation equipment attached to the feet or ankles will challenge the trunk stabilizing muscles to maintain neutral alignment. The positioning of the floatation equipment will also affect the choreography chosen for training in deep water.
- G. The speed of the music - While music speeds of 125-150 bpm used at water tempo or half water tempo are suggested for shallow water choreography, in deep water the music speed lessens to 125-135 bpm. This is due to the fact that the range of motion can and should be greater and that the participant will need more time to stabilize his/her trunk to maintain neutral alignment as well as his/her location in the pool with respect to the other participants.

3M's

Music
Movement
Motivation

II. POSTURE

- A. Position of the working leg** - The working leg should move in a full range of motion in the direction chosen for the choreography.
- B. Position of the stabilizing leg** - The stabilizing leg should be actively directed vertically towards the bottom of the pool at all times as it would be if one were exercising in shallow water, unless the choreography requires the active movement of this leg as well.
- C. Hand positions** - These will vary with the movement of the lower body and will be chosen to help stabilize the body, maintain neutral alignment and possibly maintain the position/location of the body in the pool.
- D. Trunk stabilization** - This is fundamental to all activity in water and especially in deep water since as mentioned before there are no constants, only variables. The strength of the movements with the limbs will be based on the strength of the core.

III. SAFETY

- A. Maintaining an erect posture** - In deep water in order to maintain dynamic and static balance, it is necessary to maintain neutral alignment. Therefore, the center of buoyancy and the center of gravity should be vertically aligned in order to maintain an erect posture.
- B. Potential back problems** - In the case of a lack of trunk stabilization or overcompensation by the back muscles for weak abdominals, there is a possibility of straining or over-contracting the muscles of the lumbar spine and the paravertebral muscles. This is to be avoided at all costs.
- C. Potential compensative movements** - These are the movements and the muscle contractions effected to compensate for muscle imbalances. Usually they are the cause of injury to the hypertonic muscles.
- D. The use of the upper limbs** - The upper limbs will either be working to help maintain neutral posture, to maintain the position and location of the participant in the deep water and to assist in traveling moves.
- E. Neuromuscular coordination** - In deep water, movements should be performed in opposition to develop balance and control.

IV. CHOSE MOVEMENTS SPECIFIC TO TRAINING IN DEEP WATER

- A. The basic aquafitness movements**
 - 1. Jog
 - 2. Kick
 - 3. Kneelift
 - 4. Stride
 - 5. Eggbeaters
 - 6. Pendulum
 - 7. Jumping Jacks
 - 8. Heathers
 - 9. Hopscotch
 - 10. Gazelles
- B. Modifying the basic movements to make them deep water specific.**
- C. Moving or staying in place?**

V. INTENSITY MODIFICATION

- A. INERTIA** - Increasing or decreasing the number of body parts in motion.
- B. ACCELERATION** - Increasing or decreasing the range of motion and the force applied to the execution of the movements.
- C. ACTION/REACTION** - Using a body part to assist a traveling move or to impede movement, for example when the arms are used to maintain the location of the participant in the water.
- D. LEVER LENGTH** - Increasing or decreasing the length of the lever will determine a difference in the intensity of the exercise.
- E. FRONTAL SURFACE AREA** - The amount of frontal surface area facing the direction of the movement will determine the intensity of the movement.
- F. TRAVELING** - On the basis of the law of inertia any starting, stopping or changing the direction of movements will determine an increase in the energy expenditure and consequently the intensity.
- G. TEMPO INCREASE** - Increasing the tempo without decreasing the range of motion will definitely determine an increase in the intensity. Tempo increase which causes a decrease in the range of motion may also determine an intensity increase, however it's efficiency should be determined based on the safety of the movement, the motor skills and fitness level of the participants as well as their exercise objectives.
- H. TURBULENCE** - The amount of turbulence in the water caused by the movements of the participants will increase the intensity of the movements due to the flow of the resistance (weight) of the water against the suspended participant, who will have to work harder to maintain alignment and move in a full range of motion.

V. THE WORKOUT

- A. WARM UP**
- B. CARDIOVASCULAR TRAINING**
- C. COOL DOWN AND STRETCHING IN DEEP WATER**

DEEP WATER DANCING

(Choreography notes)

Remember, your base position is an erect posture with the "support leg and foot" always pointing towards the bottom of the pool directly beneath you.

1st sequence:

- 1-16 Alternating knee lifts R-L-R extend leg forward; repeat other side.
- 1-16 Repeat
- 1-16 Alternating knee lifts R-L-R extend leg forward, circle (bicycle) R leg twice
- 1-16 Repeat other side.
- 1-32 Alternating knee lifts R-L-R extend leg forward, circle (bicycle) R leg twice; cross country ski (start with R leg back) 8 times
- 1-32 Repeat other side.

2nd sequence

- 1-16 Alternating lateral knee lifts R-L-R extend leg to the right; repeat other side.
- 1-16 Repeat.
- 1-16 Alternating lateral knee lifts R-L-R extend leg to the right, flex knee bringing foot in front of opposite leg, extend knee, flex knee bringing foot behind opposite leg, extend knee.
- 1-16 Repeat other side.
- 1-32 Alternating lateral knee lifts R-L-R extend leg to the right, flex knee bringing foot in front of opposite leg, extend knee, flex knee bringing foot behind opposite leg, extend knee. Perform 4 jumping jacks at water tempo.
- 1-32 Repeat other side.

3rd sequence

- 1-16 Jog water tempo R-L then 3 land tempo ending with both legs extended downward (R-L-R-together). Repeat other side.
- 1-16 Repeat.
- 1-16 Jog water tempo R-L then 3 land tempo ending with both legs extended downward, flex both legs backwards at knee (the mermaid's tail, remember?) twice at water tempo.
- 1-16 Repeat other side.
- 1-32 Jog water tempo R-L then 3 land tempo ending with both legs extended downward, flex both legs backwards at knee twice at water tempo; flex legs back at knee (1-2), flex thighs forward at hip (3-4), extend legs forward so you're in a sitting position (5-8); circumduct both legs to a fully abducted position, then 4 jumping jacks so that the feet point to the bottom of the pool ending with both legs extending downwards (1-8).
- 1-32 Repeat other side.

4th sequence

- 1-16 Alternating knee lifts R-L-R extend leg out, the knee points diagonally outward and leg is in external rotation, touch opposite hand to medial part of foot; repeat other side.
- 1-16 Repeat.
- 1-16 Alternating knee lifts R-L-R extend leg out, the knee points diagonally outward and leg is in external rotation, touch opposite hand to medial part of foot; pull the extended leg downwards, to touch the front of the other foot (which is pointing to the bottom of the pool), raise and extend the leg again in another "heather" or "developpé" and pull it back down to touch the other foot again.
- 1-16 Repeat other side.
- 1-32 Repeat right side adding another "heather" or "developpé" but this time with the leg extended to the side turn the body in the opposite direction (a quarter turn to the left), pull the leg down, forward and up and perform another quarter turn for a total of 4 quarter turns or 16 beats.
- 1-32 Repeat opposite leg.

5th sequence

- 1-16 Alternating hopscotches (turned out leg curls) R-L-R extend leg out to the side, touching the opposite foot behind the body; repeat other side.

- 1-16 Repeat.
- 1-16 Alternating hopscotches R-L-R extend leg out to the side touching the opposite foot behind the body; pull the extended leg downwards, to touch the heel of the other foot, which is pointing to the bottom of the pool), raise and extend the leg again in another "heather" or "developpé" and pull it back down to touch the other foot again and extend in another "developpé".
- 1-16 Repeat.
- 1-16 Alternating hopscotches R-L-R extend leg out to the side touching the opposite foot behind the body; pull the extended leg downwards, to touch the heel of the other foot, which is pointing to the bottom of the pool), raise and extend the leg again in another "heather" or "developpé" and pull it back down to touch the other foot again and extend in another "developpé". Lower the extended leg until the foot points directly downwards and, at the same time, flex the opposite knee and raise the foot behind the new support leg, extending the new working leg in a developpé. Repeat alternating sides for a total of 4 times.
- 1-16 Repeat other side.

6th Sequence

- 1-16 Alternating knee lifts R-L-R extend leg across the midline, twisting the body at the waist. The knee points diagonally across the body; repeat other side. Arms are abducted with palms facing upwards.
- 1-16 Repeat.
- 1-16 Alternating knee lifts R-L-R extend leg across the midline, twisting the body at the waist. The knee points diagonally across the body; arms are abducted with palms facing upwards. Perform 4 alternating low (quad) leg kicks.
- 1-16 Repeat other side.
- 1-32 Alternating knee lifts R-L-R extend leg across the midline, twisting the body at the waist. The knee points diagonally across the body; arms are abducted with palms facing upwards. Perform 4 alternating low (quad) leg kicks. Continue alternating the legs but in 8 high kicks stressing the downward movement to work the glutes.
- 1-32 Repeat other side.

7th sequence

- 1-32 Jacks extending both legs out and bringing the arms and legs into a tucked position for a "Back Break".
- 1-16 Repeat above jacks four times
- 1-16 Repeat four jacks abducting and adducting extended legs.
- 1-32 Jacks abducting (water tempo 1-2) then in(3)-out(4)-in(5)-out(6)-in (7-8); Repeat four times
- 1-16 Jacks abducting (water tempo 1-2) then in-out-in (3-4); repeat four times
- 1-16 Fast jacks in 8 times (1-8); abducting jacks 8 times (1-8)
- 1-32 Jacks abducting (water tempo 1-2) then in(3)-out(4)-in(5)-out(6)-in (7-8); Repeat four times

At this point whenever you feel it appropriate for your participants, stick in a "Back Break"

8th sequence

- 1-32 Facing R, high kick R (1-4), L(5-8), then R-L-R and turn body 180° so R leg is now behind body (1-8), then repeat with same leg facing L (1-16)
- 1-32 Pulling R leg in and facing forwards, kick R leg out to the R on the frontal plane 8 times and pulling with the arms so that the body moves towards the L.
- 1-16 Alternating low kick R/L leg diagonally across the body four times.
- 1-16 Double low kick R as above (1-4), repeat L (5-8), repeat R (1-4), low kick L (5-6), low kick R (7-8).

Repeat entire 7th sequence with L leg facing L.

Back Break

8th sequence

- 1-32 Jacks abducting (water tempo 1-2) then in(3)-out(4)-in(5)-out(6)-in (7-8) crossing ankles; Repeat four times
- 1-32 Stride extending R leg forward (water tempo 1-2) then in(3)-out(4)-in(5)-out(6)-in (7-8) crossing ankles; Repeat four times

- 1-32 Alternating stride (water tempo, start with R leg forward)*
- 1-32 Alternating double stride (half water tempo, start with R leg forward)
- 1-32 Alternating stride uniting feet under body (half water tempo, start with R leg forward)
- 1-32 Stride R forward (1-2), L (3), R (4); Stride L forward (5-6), R(7), L (8); Repeat four times.
- 1-32 Stride R,L,R turn 90° to the L; repeat four times till you're facing forwards
- 1-16 Stride R,L,R turn 180° to the L; repeat to face forward
- 1-16 Stride R turn 180° L; stride R turn 180° L to face forward; cross R leg over L and turn 360°
Repeat entire sequence from * starting with L leg forward.

Back Break

8th sequence.

- 1-16 Holding left leg straight pointing downwards, kick right heel forward twice (1-2), backwards twice (3-4), forward twice (5-6), backward twice (7-8), forward twice (1-2), to the side twice (3-4) and kicking from back to front turn 360° (5-6-7-8) so you wind up facing forwards.
- 1-16 Repeat other side.
- 1-32 Repeat both sides (as many times as it takes the group to get the movement and have fun with the turns. Once they've got it down and are strong enough to get the turns on tempo you may have them try out the following. If not just skip it and go on to the next sequence)
- 1-32 Holding left leg straight pointing downwards, kick right heel forward twice (1-2), backwards twice (3-4), forward once (5), side once (6), cross the right leg behind the left leg and turn 360° (7-8); add 4 jumping jacks to tucks.
- 1-32 Repeat other side.

Back Break

9th sequence.

- 1-16 Push both legs diagonally to the right then return to tuck position (1-2), push both legs diagonally to the left then return to tuck position (3-4), push both legs diagonally to the right twice and return to the tuck position (5-6-7-8); remaining in this position and with the right hip near the surface of the water cycle around in a full circle.
- 1-16 Repeat other side.
- 1-32 Push both legs diagonally to the right then return to tuck position (1-2), push both legs diagonally to the left then return to tuck position (3-4), push both legs diagonally to the right twice and return to the tuck position (5-6-7-8); remaining in this position and with the right hip near the surface of the water cycle around in a full circle. With the right hip near the surface, stay in a side-lying position and flutter kick towards the left with the left arm extended for 16 counts.
- 1-32 Repeat other side.
- 1-64 Push both legs diagonally to the right then return to tuck position (1-2), push both legs diagonally to the left then return to tuck position (3-4), push both legs diagonally to the right twice and return to the tuck position (5-6-7-8); remaining in this position and with the right hip near the surface of the water cycle around in a full circle. With the right hip near the surface, stay in a side-lying position and flutter kick towards the left with the left arm extended for 16 counts. Pushing with the right leg on the left, lower both legs by pulling with the obliques until both legs point to the bottom of the pool (1-4), let them rise on the other side through the force of inertia (5-8). Repeat alternating sides for a total of 4 times (32 beats total).
- 1-64 Repeat to the other side.

Back Break

10th sequence.

- 1-16 Open leg jog touching right foot to right hand on right side of body (1-2) and likewise on the left (3-4), flexing the obliques - (be careful to protect the low back)
- 1-16 Open leg jog touching right foot to right hand on right side of body and crossing left leg in front of right leg and kicking right.
- 1-32 Repeat using action-reaction and the arms to push toward the left.
- 1-16 Kick right over left and left over right.
- 1-16 Double kick right over left, left over right, right over left, single kick left over right and right over left.
- 1-96 Repeat on other side.

Back break to cool down.