



## **Hydrorevolution Power Training by Aqualogix™ & Aquastrength™** Featuring Jenni Lynn Patterson-LaCour & Katrien Lemahieu

This course takes the best practices in professional hands on education with an updated blend from Aqualogix and Aquastrength educational programs. Be one of the first fitness leaders to experience this must attend course that complements the Online Specialty Certificate Training Course. This session will introduce the comprehensive range of drag resistance equipment on the market that can be used for any of your clients; from rehab to sports/athletic performance to general fitness for group exercise, small group and one on one training.

- Learn the correct way to use all Aqualogix and Aquastrength equipment (Bells, Fins and Barbell).
- Experience the equipment and learn proper movements for a wide range of demographics.
- Effective cueing to execute movements with precision and maximize resistance and results.
- Learn how to integrate drag resistance equipment into your current practice, create new ideas while growing your business and client base.

### 1) Overall concept of this course

Hydrorevolution Power Training offers professionals of all levels: entrepreneurs, facility directors, therapists, group fitness instructors, trainers and more the financially opportunity to enhance and grow their business, but more importantly, their participants and clients to physically and mentally enhance their quality of life from this state-of-the-art equipment.

- Attract new members/clientele
- Create revenue for one on one/small group training, PT and group fitness classes.
- Offer advanced trainings for athletes and participants wanting extra power in their workouts
- Bring in sports teams for off season training and rehab
- Weight loss programs
- Take circuit training to another level
- Enhance participants, of all ages, in their overall total body strength and stamina

This course breaks down the small details of using the Aqualogix and Aquastrength equipment so that you can learn to cue and execute movements with precision and maximize the resistance. Beyond utilizing all 3 planes of motion, you will learn how to articulate each piece of drag so that participant's joints, such as the wrist and ankles, will have stability during exercise. Giving your clients the overall muscular strength to have stability, BEFORE mobility.

### 2) HydroRevolution and the equipment of Aqualogix & Aquastrength (variables and proper use)

Water is a three-dimensional medium, which means that water resists the movement of any object equally in any direction. This is why drag equipment is so important. Water, with drag equipment, allows for a much more functional approach to exercise.

The viscosity or drag forces create progression in all planes of movement providing resistance and initiating functional training. The viscosity or resistance increases reaction time and assists with balance in an upright position. This increased reaction time facilitates improvement in the motor program. The

flow of the water relates to hydrodynamic forces and with the Aqualogix and Aquastrength equipment, increases the resistance to movement because movement is more turbulent than streamlined. Even though we mostly move in one plane at a time, we need to be stable in the other two in order to have proper function. Water allows this three-dimensional resistance automatically. The equipment of both Aqualogix and Aquastrength therefore is totally different than the drag equipment we have ever seen before.

The unique feature that the Aqualogix system is based on Omni-resistant movement. The equipment provides natural, rotational movement in all directions creating turbulent flow that challenges the intensity of the exercise. This, in turn, provides a safe and effective manner to improve cardiovascular/cardiorespiratory fitness, as well as strength conditioning. The Omni-directional movement uses concentric contractions and virtually no eccentric contractions because you are working against the resistance of the water and not buoyancy. The shape of the bells is design with a pointy-head, to make the waters' flow unique. Fins are easy to take on and off for faster changes.

Aquastrength provides essential knowledge and applied practical experience to assist in creating dynamic, fun, and functional programs appropriate for all ages. The unique feature of the Aquastrength equipment is based on the principles of drag and viscosity plus surface area. The key function of aquatic resistance equipment is to slow down the movement of the exercise to allow time for maximum muscle fiber recruitment per each repetition. Most contractions with equipment are concentric in nature with all direction of movement. The bells of Aquastrength are 3D uniquely shaped and the fins have resistance blades in every direction.

It is possible to incorporate the Aquastrength and Aqualogix equipment for use in group exercise, personal training and even physical and recreational therapy. The equipment is useful because of its resistance drag options, which is also beneficial for rehab opportunities, working with special populations and definitely athletic training.

### 3) The Properties of Water intensifies with the use of the equipment

The water is a very versatile and forgiving exercise medium, but don't assume that this means participants will be able to safely perform movements exactly as instructed or intended. When planning your classes, consider the participants, the purpose of the movement, the purpose of the class, the proper use of the equipment and the modifications or options you will need to offer. All movements, combinations, intensities, drills, and formats should be rehearsed and evaluated for safety and effectiveness before incorporating them into your class. Some of the movements, especially with this resistance equipment, may involve greater consideration. These are, for example, very fast movements, high impact exercises, exercises with high ROM combined with speed and combined exercises, that create high stress on joints. Always have modifications with you to change if needed.

Working in the three planes of motion (frontal, sagittal and transverse plane) will provide the typical moves from aquatic fitness. Stationary work and working uni-lateral will provide exercises for example, rehab opportunities (think about endo- exorotation in a split stance position for shoulder rehab) but will also incorporate huge core-work. Incorporating exercises that combine all planes (working 3D or Compound exercises) will bring new opportunities and training possibilities.

### 4) Set up for different class populations and practical do's and don'ts

Research has shown that progressive resistance training is an effective way to increase bone mineral density in older adults and women, as well as to maintain bone mineral density for men (McMillan et al. 2017). Individuals with Osteoporosis will have specific exercise guidelines depending upon general fitness level, the level of bone loss and the anatomical region that is affected.

- The use of drag equipment may be appropriate for some individuals with arthritis but should be incorporated gradually as tolerated. The 2-hour pain rule helps to self-monitor intensity. If the individual experiences additional joint pain that lasts for 2 hours or more after exercise, he/she should reduce exercise intensity or duration of the next class. (AEA)
- Aquatic studies show that hip and lumbar spine respond best to the ground reaction forces, so impact exercise is important; the wrist and upper limb are more responsive to strength training (AEA 2018). *Drag equipment offers an effective option to improve upper body strength in the aquatic environment.*

If you are working with clients or participants who require specialized considerations, you should seek additional resources, education, and training to assist you in developing safe and effective programming. (AEA)

- Top risk factors:
  - Muscle weakness & lack of muscular power
  - Gait deficit
  - Balance inefficiency
- Tips:
  - Strengthen hip muscles
  - Enhance power
  - Target gait patterns
  - Include balance drills

Implementing Interval, HIIT & Circuit Formatting can be modified to accommodate any level of participant. These types of training also offer a wide range of fitness benefits including cardiovascular endurance, muscular stamina and strength, as well as weight loss.

When adding drag equipment to your training formats, keep in mind the participants' ability levels, the presence of any injuries or medical conditions that require modifications, as well as the resistance level of the equipment.

- Coordination & Balance Challenge:
  - Upper/Lower Body:
    - Unilateral – one side performing movement
    - Bilateral - both sides performing same movement
    - Bilateral Reciprocal – both sides performing opposite movements
  - Stance:
    - Narrow
    - Split
    - Tandem
  - Functional Training
    - Stepping up curbs
    - Reaching up on shelf
    - Getting out of a chair/car
    - Picking up objects

Although we might not think about using the Hydrorevolution equipment on the elderly, they still love to work out well (especially in the last years), and they can easily change pace, speed and ROM to change intensity. If they learn how to work at certain levels, they know they respond well at, they can do workouts with this equipment for sure. In fact; evidence has shown that working at levels up to 80% is possible (shorter duration) and provides better outcome and has benefits beyond what they thought of reaching... Results will come in the next years, to proof that even elderly can still grow in physical aspects if wanted. If we want to maintain the levels, that is possible too. The elderly NOW compared to

the elderly 20 years ago are different... they are stronger, fitter, have more money... but need to see results!

For optimal results, athletic training typically is designed around the concept of periodization, which involves cycling various training aspects during a specific period of time. You would consider the sport, the position played on the team, the energy systems most utilized, the training season, etc.

#### 5) Circuit: working in stations versus working in-group (interval)

FITT-principles: Frequency – Intensity – Time – Type  
BUT! Keep it FUNctional for better awareness and good execution

As the Hydrorevolution Program is set up for both group classes and one on one training, there are many options on how you execute the group training.

Working in stations means that people / participants need to travel through the water, to get to the next station. For pools with a slope or with different depths, that might be an issue and doing intervals without travel can be a solution. An option is to exchange the equipment to each other (like switching barbell to bells during the rest-period of the circuit). Another solution is to put down the equipment to the side of the pool.

EXTRA: you can choose to do 4 stations (or 4 intervals without travelling to different stations) for strength, then leave the equipment and have a cardio break in between. Another example would be using the bells in different ways in a regular interval, without having to go to another part of the pool. (Example providing 4 different exercises).

#### ◆ Example: Circuit Training with endurance in speed and strength as goal:

Main objectives:

- 1) Warm up
- 2) Balance & strength
- 3) Caps training (coordination, agility, power and speed)
- 4) Cardiovascular work
- 5) Dynamic cool down

The practical part is only one of the many possibilities HydroRevolution brings to the pools... but we want you to feel it, experience it and OWN it!

- SEGMENT 1: Warm Up

Start with HydroRevolution Fins and perform basic moves of the lower body for aquatic fitness: bounce, walk, jog, kick, ski, jack, jumps and twist. Implement the 7 “Foundational Movements”: pushing, pulling, hinging, squatting, twisting/rotating, lunging and walking/running. Arm patterns (such as push pull, flex, extend, circling...) will be added for joy, upper body strength training and balance support. No choreography here! Just a structured freestyle plan for introduction to the new words used.

- SEGMENT 2: HydroRevolution Circuit (Total of 38 minutes in a class setting)

**Total of 3 rounds** of 1.5-minute work, 30 seconds rest;  
After each round, there is a cardio break down of 1.5 minutes  
The stations are divided in:

- UB SP (Upper body sagittal plane) with bells

- COROT (core rotations) with barbell
- UB FP (upper body frontal plane) with bells
- 3D compound exercises with bells
  - **AS – Aquastrength**
  - **AL - Aqualogix**

It's helpful to set up graphics on side of the pool to show the exercises performed.

In the cardio break the primary goal is training the lower body and balance. To make it easy to remember, start in sagittal plane, then frontal plane and in round 3, finish in transverse plane.

Overall: (30 minutes for all 3 rounds)

Round 1, 2 & 3: 4 stations: 1.5 minutes each, 30 seconds change/go center (8 minutes total)

Cardio breaks: 1.5 minutes, 30 sec to go to station (2 minutes total)

Exercises:

ROUND 1: Agility

\* Station 1: UB SP

Arm swings, both arms together or alternating. Start in narrow stance and change (to one) leg stance for variation.

\* Station 2: COROT (Barbell)

Kayak pushes & pulls. Start in wide stance and go to narrow stance for variation.

\* Station 3: UB FP

Arm swings, both arms together or alternating. Start with split stance and change (to one) leg stance for variation.

\* Station 4: 3D

Ronde de Jambe with legs and circling arms

Cardio Break #1: Sagittal plane movements: Jog, Walk, Taps, Kick, Ski

ROUND 2: Power & Speed

\* Station 1: UB SP

Arm swings, both arms together or alternating. Start in split stance and change to tandem or one leg stance for variation.

\* Station 2: COROT (Barbell)

Figure 8's with long lever barbell. Narrow or split stance for variation

\* Station 3: UB FP

Side punches, push down with long lever and switch to other side. More reps for more power.

\* Station 4: 3D

Soccer kicks with bell chops

Cardio Break #2: Frontal plane movements: Jog, Walk, Taps, Jack, Kicks & Jump

ROUND 3: GO MAX!

All variation here is changing tempos and acceleration in the move (with same ROM)

\* Station 1: UB SP

Cross country ski and arm swings

\* Station 2: COROT (Barbell)

Cauldrons in figure 8

\* Station 3: UB FP

Jacks with arms up and down, front and back

\* Station 4: 3D

Twisting with arm rotation swings

Cardio Break #3: Transverse plane movements: Diagonal Jog & Walks with Crosses, Taps, Kicks, Twists & Jumps

\* NOTE: It does not matter which station is taken first. Just make sure that there are 4 groups that are (almost) even in number. Give them a color or team-name, so they don't forget.

- SEGMENT 3: Warm Down

Focus on breathing: Ai Chi movements: uplifting, enclosing, shifting and side trunk swings

Upper body stretches: wide stance rotations in the shoulders while doing side trunk swings, shifting body weight with shoulder shrugs and rotations, narrow stance transverse shoulder hugs and pec stretch back, transverse (symmetric) and sagittal (alternating) arms swings

Lower body stretches: Warrior one, bring back arm in front, back leg knee up, stretch out in the back (stand on one leg if possible then to warrior 3), bring knee back up, (repeat a few times if needed or wanted) and put foot down and repeat to other side.

Hip Stretches: knee turns open and bring back center, low and high, short / long lever.

Rotational stretches: transverse arms swings with opposing leg lunges (needs core stability) Mental stretch: head tilting and hip hinges, plantar and dorsal flexion with breathing.

◆ Example: Super Circuit – Instructor Guided

Ex #1 – Narrow Stance w/ Bicep/Tricep (Elbow flexion & extension)

Ex #2 – ABductors/Reverse Jack Jumps

Ex #3 – Wide stance – Chess Press (Transverse shoulder abduction & adduction)

Ex #4 – ADDuctors/Ballet jumps

Ex #5 – Narrow Stance w/ Breaststroke arms – leaning back & lead w/ back of hand

Ex #6 – Grounded R Split Stance w/ Transverse arms @ 90degrees Rotating (ROT)

Ex #7 – Scissor switch kicks/jumps (Ski in 3's for modification)

Ex #8 – SWITCH LEAD LEG, Grounded L Split Stance - Transv arms @ 90 ROT

Ex #9 - Scissor switch kicks/jumps (Ski in 3's for modification)

Ex #10 – SKI w/ Rotation arms @ 90degrees (Brace abdominals & keep hips/shoulders square)

Ex # 11 – Finale: Pops & Tuck Jumps ( Power JJ w/ Tucks, Level II as modification)

#### 6) Exercise explanation with individual goals

The HydroRevolution program is built around these basic moves, with a focus on using tools and methods that promote functional movement patterns.

Pushing

Pulling

Hinging

Squatting

Twisting/Rotating

Lunging

Walking/Running

By combining these foundational movements with the water's unique properties and Aqualogix and Aquastrength equipment, we can balance muscle groups and movement patterns efficiently to ensure a fit and functional body. Most exercises in this program are multi-planar. Most functional movements occur in more than one plane and water is a three-dimensional medium, so we want to target our exercises in a similar manner.

We can enhance function of many popular aquatic fitness exercises, such as jumping jacks and cross-country skis, with the addition of this specific equipment. Individual goals can be power, strength, endurance, speedy strength, speedy endurance, power endurance, agility, but also working towards ADLs, sport-specific training and so on.

#### 7) Practical Application

- Regression and options for progression/possible variations for all fitness levels  
Using AS Fins & Bells: CC with alternating diagonal punches (Transverse)
  - Progression = Increase lever length, add acceleration, rebounding, Level II and add travel forward and back as well as side to side
  - Regression = Slow the movement/tempo down, apply less force and increase ROM
    - **Cue: Continue to coach & cue for ALIGNMENT & safety. (Form over speed!)**
- Review the key recommended exercises for upper and lower body training for Aqualogix (**AL**) and Aquastrength (**AS**) drag resistance equipment.
  - Lower Body – Using AL Fins on ankles
    - Alternating High Knee Run & Heel Kick
    - Speed Skater
    - Ankle Reach
    - Single leg circles forward & back
    - Single leg Stepper/Bicycle
    - Single leg Frog/Breaststroke leg & reverse motion for Abduction
    - Lateral leg lifts & Pendulums (Cue to lengthen upper body to reach out to the side)
  - Upper Body - Using AL Bells
    - \* Split Stance w/ Chest & Back Fly (Transverse Shoulder Abduction/Adduction)
      - \* Add Cross Over punch in Transverse
      - \* Add internal/external forearm rotation with cross over
    - \* Wide Stance w/ Alternating Boxing Jabs
      - \* Unilateral (4R/4L)
    - \* Normal Stance w/ Bilateral Shoulder Flexion/Extension
      - \* Bilateral Reciprocal

- \* Unilateral (4R/4L)
- \* Add Split Stance
- \* AL Fins on WRISTS: Narrow Stance w/ Bilateral Elbow Flexion/Extension
  - \* Hand position: Slice, fist or open hand (from least to most resistance)
  - \* Bilateral Reciprocal
  - \* Add Split Stance
- Combined Training (lower and upper body) – Using AS Bells & Fins
  - ½ WT CC w/ Alternating Push/Pull arms
    - Add Diagonal crossing push/pull arms
    - Add Rebounding
  - Power Swing (Shoulder Flex/Ext) w/ ½ WT Straight Leg Lift - Alternating
  - Diagonal Lunge Back w/ Alternating Push/Pull (SAME leg as arm)
  - T Jack Fly
    - Level II
    - Add Speed
    - Accelerate in one direction – Transverse Shoulder Adduction/Abduction
  - Single Leg Circles (DROP one bell) w/ Arm Circles (Opposite arm of leg)
    - Change Direction of the Circle
    - Change Size of the Circle
- Core Specific – Using AS Fins
  - Leg Circles – Change direction, speed & size
  - Rond de Jambe (Ballet)
  - Figure 8s
  - Double Knee Tuck
  - Moguls
  - ADD Single AS Bell
    - Bell Pass Swing – Narrow Stance: Transverse shoulder Add/ABd passing bell hand to hand
      - Add Single Leg stance
      - Add variation in passing (2R/2L)
    - Core Rotation – Normal Stance: Minimize hip/spine rotation)
      - Add Narrow/single leg stance
  - Using TWO AS Bells
    - Bell Chop – Wide Stance: Diagonal Shoulder Flex/Ext – Arm crosses body from the shoulder, down to the hip and then back up at a diagonal (Internal rotation pushing down and external rotation coming back up)
      - Add Tandem Stance – switch lead leg
- Barbell Specific
  - Kayak Push/Pull – Wide Stance barbell horizontal
    - Push – Circle backwards; Pull – Circle forward
    - Try push/pull on one side @ a time
  - Figure 8 – Wide Stance barbell vertical (Think about initiating from the hips)
    - Change direction
    - Switch hands (top/bottom)
  - Caldron – Wide Stance barbell vertical
    - Change direction
    - Switch hands (top/bottom)
  - Bull Fighter Walk – Hold Barbell out to one side (horizontal) and walk straight forward & backwards without letting barbell move

- Switch sides
  - Barbell Press & Squat – Normal stance w/ shoulder wide grip, horizontal
    - Push Barbell away as you squat & Pull Barbell IN as you stand up
      - Add Step Back w/ every push
      - Add Diagonal push w/ step back (without hip rotation)
      - Add Rotational push to opposite side
- Explore how to incorporate the equipment into Main Segment (conditioning phase) of exercise sessions.

#### A. Cardiorespiratory

- Cadence Run & Heel Lifts: 8 high knee run & 8 heel lifts
- Tire Run: 8 Run out Left side & 8 Run out Right side
- Push/Pull Down Legs: Alternating Straight leg lifts with alternating shoulder flexion/extension (stand tall & use arms to assist pulling straight leg down)
- Clock Jacks: Jacks with diagonal jack legs with bounce center (Think of a box)

#### B. Muscular Strength/Toning

- Split Stance: Shoulder Abduction/Adduction (Switch lead leg)
- Split Stance: Rows w/ knee repeaters (lifting front knee during row pull back – switch lead legs)
- Alternating Soccer Kicks w/ alternating row (pull back) arms
- Baseball Swing (Emphasize in ONE direction & then switch after 4-8 reps)
- Wide Stance: Side Ropes (Bells close in front of body)
- Wall Taps w/ hip rotation: Rotate Right & tap the wall, touch down to floor & then rotate Left & tap the wall, touch down...

#### C. Stability and Mobility

- Curtsy Lunge w/ Diagonal Kick: Alternate sides or hold on each leg for 4-8 reps
- Oyster: Bent knee transverse hip abduction into curtsy pull back & up (keep bent knee) Repeat 4-8 reps on each leg
- Warrior III (Single leg w/ hip extension) w/ Rope arms - Transverse shoulder abduction/adduction arms opening & closing w/ waving rope hands. Try one arm at a time – opposite arm of standing leg.
- Normal Stance: Diagonal Arm Swing – Diagonal shoulder extension crossing from shoulder towards hip & back up, switch arms. Internal & external forearm rotation.

#### D. Coordination (Fins on ankles only)

- Triangle Step – Switch lead leg/direction
- Jumping Jacks w/ Shoulder flexion, transverse abduction/adduction & shoulder extension (Arm pattern w/ JJ legs)
- Single Leg Bicycle – Switch directions & legs
- Pendulum – add crossing leg in front & back of the body (Unilateral & Bilateral)

#### E. Speed, Agility, Power

- Hops (Fins Only): Start hop Right, Front, Center, Left, Front & Center, repeat other direction
- Switch Kicks: Alternating Karate Kicks emphasizing heel pushing down (hip extension)
- 4 Shuffles w/ 2 dual punches – add tuck jump to punch
- Shuffle legs w/ Bilateral transverse shoulder abduction/adduction (soft elbows)
- Barbell Flips – Reverse directions & grip
- Barbell: CC Pull Over – Square hips & brace abdominals. Emphasize one direction & switch sides

Course Developed by:  
**Hydrorevolution Power Training by Aqualogix™ & Aquastrength™**  
Developed by: Jenni Lynn Patterson-LaCour & Katrien Lemahieu

Jenni Lynn Patterson-LaCour  
[JenniLynn@JenniLynnFitness.com](mailto:JenniLynn@JenniLynnFitness.com)  
[www.JenniLynnFitness.com](http://www.JenniLynnFitness.com)  
@JenniLynnFitness  
Facebook: S'WET by Jenni Lynn Fitness

**Jenni Lynn Patterson-LaCour, AEA ATS**, NSCA- CPT and continuing education provider for AEA, AFAA and ACE. She has been working one on one with clients, as well as teaching aquatic fitness classes in New York City for over a decade. She loves to incorporate kickboxing, H.I.I.T., Synchronized swimming, Pilates, and strength training in the pool. She truly believes the perception of water fitness can be transformed and soon ALL ages and genders will be working out together in the pool!

Katrien Lemahieu  
[info@kataqua.nl](mailto:info@kataqua.nl)  
[www.kataqua.nl](http://www.kataqua.nl)

**Katrien Lemahieu, ATRIC**, has 20-plus years of experience in aquatics and has been a presenter worldwide since 2005. She studied physical education and holds a degree in Special Movement Education with an emphasis in Motoric Remedial Teaching and a focus on pediatrics. She is an AEA ITS and is CEO of two educational institutes for aquatics: Kataqua for aquatic fitness and ProOZo for swimming. She holds 2 Aqua Emma awards and received the ATRI Tsunami Spirit Award in June 2018. She is the organizer of the European Aquatic Fitness Conference (EAFC), one of the biggest conferences in Europe.