## Intro Discussion

What do people usually associate with exercise in the pool?

SCAN FOR LECTURE SLIDES

# Aqua Fitness for Personal Trainers (On Land)

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## Who Am I?

**Education & Work**

KIPS

TIME2TRAIN

- BS Kinesiology, CSU Long Beach
- MS Applied Exercise Science, Concordia Chicago
- PhD(c) Health & Human Performance, Concordia Chicago
- Former – NESTA, NCCPT, KettleBell Concepts, & Smart Fitness
- 18+ years as Personal Trainer/Group Fitness Instructor
- Owner of KIPS & Time 2 Train Fitness
- Consultant - Fitness 1440 Corporate, Bodyblade, ADEX Clubs, FitnessFest & Balance

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## Objective

1) Learn *some* of the fundamental principles of exercising in the pool.

2) Be capable of implementing safe training practices for your clients.

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## Why do I wish I had discovered training clients in the pool sooner?

- When I began training in 2009…
- Can be used for recovery, strength training, or CV
- Another rendered session per week = more sessions per month and more PT sales.
- Creating fun training environments that clients can look forward to

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## Why is aqua fitness for everyone?

- Not just for active agers
- Athletes, General Population, Adolescents
- "Acute HR reaction during TABATA sequences showed that the maximal values of subject reach 95% HR reserve" (Ryzkova et al., 2018)
- It's an enjoyable workout that can burn calories, teach fundamentals, and challenge any population.

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## Pool Benefits

- Joint Friendly
- Cardiovascular Training
- Strength Training
- Efficient
- Improve Blood Flow Circulation

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## How Does Research Portray Water Aerobics?

- "Physiological response and adaptation to WA exercise tends to suggest that WA is best suited for individuals with low initial working capacities and should be considered as an alternative mode of exercise for those who may not be able to participate in more traditional fitness activities" (Eckerson & Anderson, 1992).
- Same study stated that "water exercise produced HRs of 70 to 77% and oxygen uptakes of 51 to 57% of maximal values achieved on the treadmill"

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## How Does Research Portray Water Aerobics?

- "...the deeper the water, the less the physiological demand" & "water environment the movements become rather slow, making WA less demanding and traumatic than a similar practiced on land" (Benelli et al., 2004)
- This study used "standardized exercises" in on-land, shallow, and deep waters. The stress curve of the ViPR Flagpole + Marching exercise is most likely the direct opposite of what's cited in this study. The deeper the water, the higher the demand on the lower extremities due to the increase in resistance provided by the water.
  - Exercise dependent

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## Key Concept - Buoyancy

- Archimedes' principle of buoyancy states that a body partially or fully immersed in a fluid will experience an upward thrust of that fluid that is equal to the weight of the fluid the body displaces. Buoyancy and specific gravity are closely related in that a body with a specific gravity of less than 1 will float because the weight of the water it displaces is more than the weight of the full body.
  - Gravity is not acting on the body as much, and therefore, you are not eccentrically loading at the same rate as on land.

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## Key Concept - Resistance

- On land, you can move through space more easily cause it's just air, but if you were to try to move in the pool, it would become more difficult due to the resistance caused by the water.
- The pool provides 12-14% more resistance than air (Harvard Health, 2024), offering a unique bodyweight training experience and elevating the use of equipment in the pool. Basic movements with your arms and legs will have resistance, making bodyweight training impactful.
- Resistance in both directions
- An environment that is constantly being manipulated

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## Key Concept - Hydrostatic Pressure

- The increase in blood flow returning to the heart, due to the pressure on the vessel walls, has been equalized.
- It can be increased when limbs are under water.
- Consider a car trying to climb a hill; it needs to work harder to overcome the slope. If you were to put your shoulders under the water level and perform exercises, you don't have the same amount of gravity as on land, and now there is an improved flow to the region. This can be beneficial for those with limited ROM or those who just want a different stimulus.

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## Safety & Professionalism

- ☐ Deck surface temp
- ☐ Will you need extra towels or mats
- ☐ Slippery when wet
- ☐ If doing circuit training inside/outside the pool, you will need to be cautious of the surface
- ☐ Instructor mat to avoid slips and falls
- ☐ Sunscreen (if applicable)
- ☐ It is important to be courteous to other pool users

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## Prepping Your Client

- ☐ Appropriate Clothing
- ☐ Especially when doing HIIT & jumping exercises
- ☐ Extra time for session
- ☐ Time in the locker room before and after
- ☐ Planning and prep
- ☐ Clients will become more winded from hydrostatic pressure
- ☐ New experience

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## Recommended Equipment

- Water Shoes
- Towel
- Water
- Mat
- Timer

## Key Takeaway

- You don't need a special certification to do a session in the pool.
  - Be confident!
  - Practice!
- Equipment and exercises is your own mix!



# Questions

**Free Resources with KIPS:**

- **KIPS Podcast**
- **Fitness Builder+**
- **YouTube**

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## Exercise Demos

- **ViPR Pro**
  - Hand Grips
  - Pre-Position Flag Breathing (A)
  - Reaching for the Sky (A)
  - Side Lunge Lift (A)
  - Glute Shift Knee Lift (A)
  - Side Lunge + Arrow Reach (M)
  - Side Squat Reach Back (M)
  - Breakdowns (MC)
  - Rotational Jump with Hold (MC)
  - Side Block Reverse Lunges (MC)
  - Loaded Squat Jump (MC)
  - Hinge Side Swing -> Bazooka (MC)
  - Block + Reach (MC)
  - Side Block Shuffle (MC)
  - Odd Position Marching (MC)
    - Shuffle
  - ALT Lunge + Shoulder Block (S)
  - Lunge Arc (S)
  - Side Lunge Salute (S)
  - Hinge + Step + Clean (P)
  - Thread the Needle + Step + Cylinder Catch
  - Single Leg Box Pattern (S)
  - Side Step + Single Arm Press (S)