

Hydropower Water Workouts

What's New at Hydropower

Article Highlights:

- Season Wrap-Up
- Aquatic Therapy in Iraq
- Angie and Julie in Phoenix

Newsletter Highlights:

Hydro-Tone	2
Physical Laws	3
Marketing Ideas	4
Calander	4
Sponsors	5

We just finished up the first half of the year with a couple of very successful events in Aspen, CO and Rapid City, SD in June.

The Aspen event was very exciting. We had quite a few people just getting started in the industry mixed with some seasoned veterans of 10 years or more experience. It was also great to see people back for more learning after being at IAFC in May. It is this kind of enthusiasm that drives the industry forward. Keep up the great work.

Rapid City was another exciting event for different reasons. We had several new aquatics people just getting into teaching. This is always exciting to see. I really enjoy seeing the energy and enthusiasm from the new instructors. I really look forward to getting back to both places next year.

We are currently working to put together some new products to help instructors and trainers during the off season.

We are also in the beginning stages of working with the

US Army on developing some Aquatic Therapy protocols for a facility in Iraq to help treat soldiers. This is an exciting opportunity that we are very proud to be a part of.

Our schedule will pick up again in September when Angie Proctor and Julie See come into the Phoenix area for a two-day event with us. We are very happy and fortunate to finally have them here.

Stay updated and visit the website regularly for new programs.

Programming Ideas: Dealing with the Talkers

One concern that most instructors face at some point in their teaching career is how to deal with the talkers in class. This is a question I get at just about every event I go to.

One thing that we need to keep in mind is the aquatic environment is a very personable setting for working out. This makes it easy for socializing. The social aspect is a very important component of one's wellbeing. Knowing this, we may need to incorporate some participant interaction into our class.

This can be done in several different formats. The first is by having the participants walk around and meet 2-3 new people during the thermal warm-up. Another idea that works well with some classes is buddy/partner work. This can be a useful tool to help motivate certain participants. I have also found that scheduling class activities outside of the club is a great way to get a more social aspect. This gives the instructor a chance to take suggestions from the class to encourage group interaction.

One of my favorite tools to use during the class is traveling and direction

changes. Using either of these separately or together creates a class format that is not conducive to talking. In addition, it creates the ever needed variety to our classes that we are always looking for.

Another old favorite I will pull out is a change in cueing. I will go to a more non-verbal type cueing. This requires a greater concentration level on their part and as a result they cannot concentrate on a conversation and follow the class.

I hope this helps and wish you all good luck!

Strength Resistance Training using Drag Equipment in the Aquatic:

By Karen Kent, MS and Jamie Fowler, BS

Strength training is one part of a well-rounded fitness program. The American College of Sports Medicine states, "One should do strength training 2-3 days per week, as well as aerobic work 5-6 days a week, along with 2-3 days of flexibility work for your fitness prescription." As our lifestyles become more complicated with work, families, etc., we need fitness that is efficient and effective. For this purpose, we can turn to the water and look at drag resistance equipment to fill our exercise prescription.

Let us review the advantages of water exercise and how it can help fit the equation. Physiologically, water is considered to be the best environment for many populations because of its unique properties. In general, aquatic fitness programs can increase strength, improve posture, and change aspects of physiology through proper training. Some of the benefits of water include:

- Reduces impact forces while exercising
- "Unweights" the body; reduced gravity, buoyant medium
- Provides three dimensional resistance
- Provides mainly concentric muscular contraction
- Allows the joint to move along a natural path
- Helps control core body temperature
- Provides accommodating variable resistance
- Increases cardiovascular efficiency
- Allows for full range of motion
- Is time efficient
- Massages the body during exercise
- Promotes a natural relaxation response

The water's three dimensional resistance means the muscle can move an object equally along all planes of movement. Whether you move up and down or side to side, you have resistance. The purpose of aquatic resistance equipment is to amplify water resistance as much as possible. Specifically designed aquatic equipment that focuses on the property of drag, for example Hydro-Tone Bells and Boots, can deliver smooth, stable resistance along any path of motion. This is beneficial for time efficient training and rehabilitation.

When working with drag equipment, the harder you push the more the water resists your efforts; so you start at zero when at rest and rapidly climb as speed is increased. No matter how weak or strong the aquatic exerciser, a water program can provide the proper resistance to optimize the conditioning effect. Drag is the force resisting the body's movement in water. The components of drag include small waves, called eddies, that create turbulence as one moves aquatic drag equipment through the water. The faster the movement, the larger the eddies and the more resistance created. A second component is the friction of the water against the skin or a piece of equipment by virtue of it being in the water. Again as movement occurs and the surface area increases, so does friction. The third component is tail suction, which is described as the inability of water to fill in behind moving objects that are not sufficiently aqua-dynamic (i.e. bells and boots.) Therefore the body must "pull along" a certain amount of water as it moves, adding to the resistance.

In addition, the equation used by physicists who deal with fluid dynamics relates the resistance to flow. A two-time increase in the dimension of a tube will increase the flow of liquid four times. This is called Poiseuille's Law, where the coefficient of drag increases with speed. Water can act as a training aid as well as a resistive force. When using additional drag equipment, one can see and feel how powerful this medium really can be.

Exercising with three-dimensional aquatic drag equipment is not only an excellent way to put intense training into an exercise prescription, but also is a safe and effective option for aging baby boomers. Bone density is increased by stressing the bone along with muscle hypertrophy (increased size of muscle fibers) to insure lean body mass and healthy bones. Well-defined muscles are certainly more attractive than fat, and body composition will change as strength is developed. Drag equipment is an optimal choice for many aquatic populations because it accommodates variable intensity and is consistently effective.

One method of high-intensity training is in a shallow water setting with 45-second intervals of work followed by active recovery segments of at least 1 minute. This program requires intense effort (up to 90 percent of max against the water) with 1-3 sets of 10-20 repetitions for a good exhaustive workout. This can be accomplished by using the same progressive resistance principles as land weights. Three to four days of training per week should be employed with adequate rest and variability to prevent injury.

Water strength training with drag equipment is for anyone. Care in teaching and education is a key factor for a good program. Time is precious and this work option is efficient. Have fun and be creative. Your clients will love it.

Karen Kent, BS, MS, with twenty-five years of experience, currently teaches cutting edge water exercise classes as well as land-based fitness programs. Her undergraduate background is in Physical Education, Elementary Education, and Recreation, with a specialty in the water. Graduate level studies in Exercise Science with emphasis on aging populations, cardiac rehabilitation, disease prevention, and health maintenance gives her the depth to create such programming. She is a trainer for Hydro-Tone Exercise Systems for AEA and ACE approved continuing education.

Jamie E Fowler, BS, AEA Certified as an Aquatic Instructor and Personal Trainer, has been in the aquatic environment for over 15 years. As the owner of WET N FIT, inc the classes created by Jamie cover all types of athletes, general population, as well as rehabilitation participants. Jamie is a trainer for Hydro-Tone Exercise Systems for AEA and Ace approved continuing education.

Industry Trends: Utilizing the Physical Laws

One of the greatest tools we have as instructors is our knowledge. And, some of the most useful knowledge that we possess for choreography is the ability of how to utilize these five basic principles. Once we understand and master these, we have the basics to create unlimited choreography for any fitness level.

We are going to take a look at the following physical laws:

1. Newton's Law of Inertia,
2. Newton's Law of Acceleration,
3. Newton's Law of Action/Reaction,
4. Law of Levers,
5. Frontal Surface Area.

The first one I want to start with is the Law of Inertia which states that an object remains at rest or in a state of uniform motion unless it is acted upon by some external force. When we are talking about inertia in the water, we are referring to inertia with:

1. The body's limbs,
2. The body as a whole,
3. The water.

The key word to remember with inertia is "change". So, we are referring to any change in movement of the limbs, body, or water. The more changes we have, the more times we have to overcome inertia. Therefore, the more intense in activity will be. An example of this would be doing 16 jumping jacks and then 16 cross country skis. To increase the intensity, you could do 8 jacks, 8 skis, 8 jacks, and 8 skis. This is an increase in intensity using inertia with the limbs. Since we changed for often, we overcame inertia more and therefore increased the intensity. We could further increase the intensity by adding quarter turns to each jack and ski. That would be an example of inertia with the body. If we wanted to use inertia with the water to increase the intensity, we could have everyone in class jog forward. This would get the water flowing in one direction. If we suddenly stop and jog backwards, we would be going against the current until the flow of water changed and started following us again. So, all you need to remember for inertia is change of the limbs, body, or water direction.

Newton's Law of Acceleration states that the acceleration of an object as produced by a net force is directly proportional to the magnitude of the net force, in the same direction as the net force, and inversely proportional to the mass of the object. The key word we want to remember here is "force". We want to apply more force to the movements. A common misconception that I see out there is that acceleration refers to speed. Speed and acceleration are two different concepts. Speed relies on a change in tempo. Acceleration uses more force at the same tempo. Think of telling your class to "push through the water more" or "lift the knees higher". Much of the success of using the Law of Acceleration falls on the instructor's ability to cue and motivate the class. So, remember to think "force" of movement and not speed of movement with acceleration.

Newton's Law of Action/Reaction states that for every action, there is an equal and opposite reaction. Our key words to remember with this one is "assisting and impeding" limb movements. This means that we can alter the intensity of our workout by using either arm or

leg movements that are either assisting or impeding our movement. Usually this is going to be accomplished while traveling through the water. Although do not get caught up in thinking that is the only way we can use the law. We can also have the arms and legs working against each other while stay in one location. This can be seen by doing a jumping jack with the arms going out as the legs come together and then the legs going out as the arms come together in front of your pelvis. With this type of a jumping jack, the arms and legs are working against one another or impeding the movement to increase the intensity. So, as you can see, you do not have to be moving. If we are traveling through the water and want to use this law, we would pick arm or leg movements that would either assist in the movement or hinder the movement by slowing us down. So, for the Law of Action/Reaction, remember "assisting and impeding" limb movements.

The fourth law I want to talk about is the Law of Levers. This one is a lot easier to understand and utilize as an instructor. It basically states that force applied at right angles to the lever, multiplied by the force arm equals weight times weight arm. In translation, the longer the lever, the more force it takes to move it. So, our key words here will be "short and long" levers. We can alter the intensity of a movement by simply changing from a short lever to a long lever, or vice versa. One thing to keep in mind is that the movement needs to remain at the same joint to insure the intensity change at the joint and muscles as opposed to changing the muscle group all together. So, for levers, just remember "short and long" and movement is consistent at the same joint.

This brings us to the fifth and final physical law, frontal surface area. Frontal surface area states that we can alter the intensity of a movement by changing the size of the body's surface area against the resistance of the water while the body travels through the water. The key word to remember here is "traveling". You must have the whole or part of the body traveling through the water in order for frontal surface area to be a factor. The larger the surface area pressing against the water, the more force it will take to allow that surface to travel through the water. So, for frontal surface area, remember "traveling".

Remember that by just applying this knowledge, we open the door to an unlimited number of variations of the same moves that we use everyday in our classes. We now can create new ways to do them at various intensity levels. Also, keep in mind that we can increase and decrease the intensity with these laws. This is a powerful tool that we have at our fingertips. Once we master how to manipulate the intensity level by using these laws, we can then start to unlock our full potential as an instructor.

Good luck and I hope all of you have as much fun with these laws as I do.

Marketing Ideas: Subbing

“Subbing a class should be something that is looked forward to as a way to improve and increase your business.”

This month we are going to talk about one of the least thought of forms of marketing that costs only your time and guarantees you to make money. That would be substitute teaching.

What better way for you to get in front of an audience and display your talents. Although subbing classes can be one of the most emotionally draining parts of teaching for some instructors, it really should not be.

One thing to keep in mind when subbing the class is that you are a stranger in their class. You have to walk in a little cocky and confident in your ability to teach. The participants may or may not know who you are. If they don't, this is your chance to show them what you can do. You are marketing your self to that class as an instructor that knows what they are doing and able to give them a good challenging class. I have a seen and personally experienced job offers before leaving the facility after subbing a class. How nice would it be to sub a class and end up with a permanent job teaching? This is an example of successful marketing by subbing a class.

Now, that is marketing and selling yourself successfully to a class in one hour.

Also, I have gone in to sub classes at facilities and left with new personal training client contact numbers. This in turn led to 2 more clients. So, again by subbing one class, I got three new personal training clients. That was some of the best marketing I could have hoped for.

One of the things to remember when doing any type of marketing is to try to maximize the return on investment for the marketing. Subbing classes is the ideal way to do it. One, you get paid for doing it. Second, you are in front of your target audience. Third, you have everyone's full attention to demonstrate your skills and how you are able to help them reach their target goals.

As you can see, subbing a class should be something that is looked forward to as a way to improve and increase your business. So next time someone asks you to sub a class, you should get excited and start imagining the doors that that one class can open for you.

Certification and Workshop Calendar of Events

For a list and up to date information on events, please visit our web site at www.hydropowerwaterworkouts.com

Upcoming Events

**September 10-11, 2004
Gilbert, AZ**

**September 18-19, 2004
Gillette, WY**

**October 2-3, 2004
Claremont, CA**

Upcoming Events

**October 8-10, 2004
Bellevue, Washington
AEA Regional Conference**

We are still looking to add dates for the fall. Please contact us to get your facility added.



Sponsors

Hydropower Water Workouts

3913 N. 103rd Drive
Avondale, AZ 85323

PHONE:
(602) 751-5178

FAX:
(623) 872-6379

E-MAIL:
gregpeterson@hydropower
waterworkouts.com



All of our sponsors provide us with pricing below their normal retail prices.

Hydropower Water Workouts also uses the equipment from each company for various programs.

About Hydropower Water Workouts...

Hydropower Water Workouts was founded in 1994. When Hydropower first began, the sole purpose was to give everyone the opportunity to enjoy the benefits of a healthier, more active, more enjoyable lifestyle through the comfort and safety of aquatic fitness.

Since that time, Hydropower has expanded to include facility management and programming. Hydropower is also involved in consulting with facilities, fitness professionals and fitness enthusiasts. In 1996, Hydropower relocated from College Station, TX to Phoenix, Arizona. After relocating to The Valley of the Sun, Hydropower expanded once again. Hydropower now dedicates a large portion of its resources to continuing education classes for fitness professionals and the development of a stronger, more credible aquatic fitness industry through education and networking.

Greg Peterson is the founder and owner of Hydropower Water Workouts. He has a B.S. in Kinesiology from Texas A&M University. Greg is a certified personal trainer through AEA, ACE and NASM. He is a certified Fitness Instructor through AEA. Greg has been leading aquatic fitness classes for over 13 years. Over the last 13 years, he has gained considerable experience while teaching to every imaginable population and class format. He has accumulated over 7500 hours of teaching experience. Greg has also been personal training individuals in the pool and on land for over 13 years. His clientele has included everyone from the physically and/or mentally challenged to the elite athlete.

Greg is an Aquatic Training Specialist with the Aquatic Exercise Association, Inc. He has been a Provider for AEA since 1997 and a presenter at the International Aquatic Fitness Conference. Greg is a CEC provider for AEA, ACE and AFAA. His unique

approach to class formatting and choreography has been shared with 1000's of individuals across the country and around the world. He also has a no nonsense approach to personal training that helps trainers of all levels expand their knowledge and programming capabilities.

Greg also won the US Water Fitness Association National Water Aerobic Championship in 1994 and placed 2nd in the International competition in 1995. Greg has been published in an international fitness magazine numerous times and co-authored the AEA Aquatic Personal Training Certification Manual. He was a regular guest on the morning news show talking about aquatic fitness in the mid 90's in central Texas and featured on the morning show in Phoenix in '97. Greg has been in newspapers ranging from the *Bryan/College Station Eagle* to the *New York Times* in regards to aquatic training/programming and land-based personal training.

We're on the Web!

See us at:

www.hydropowerwaterworkouts.com