

WATER EXERCISE

The Other Wet World for Swimmers

by Amy Wu >>> Photos by David Balch

Anne Jackson, competitive swimmer, plunges into the pool at the City University of New York's John Jay College of Criminal Justice to begin her usual 4,000-yard workout.

Rather than launching into laps, she grabs onto the pool ledge and folds into a Yoga-styled "child's pose." She plants her feet on the flip-turn cross, and repetitively lunges back and forth. She picks up a

kickboard and swings it around like a lasso. OK, is this a swim workout or yoga class?

Amy Wu is a freelance writer based in Rochester, N.Y., and a member of the Rochester Area Masters swim team, part of Niagara Masters.

For the past three years, Jackson has been starting every workout with aqua exercises and interspersing them throughout her laps. To the typical competitive swimmer who is used to logging as many laps in as little time as possible, Jackson's habit might seem like a dawdle. But in fact, Jackson claims that the stretching and drills have helped her stroke and extended her glides. A John Jay swim team member who has also swum Masters, she has shaved off seconds in competition and finds herself finishing workouts with greater ease.

"I feel like I've been decreasing in time, seen better stroke performance, I feel like I am changing my stroke," says Jackson, who at first saw the exercises as just stretching. "I'm not just thinking about the time anymore, I'm thinking about the





Competitive swimmer and water exercise advocate **ANNE JACKSON** (right) with her coach and mentor, **DR. JANE KATZ** (left), professor and swimming coach at the City University of New York's John Jay College of Criminal Justice.

proficiency too," she notes.

It's little surprise that Jackson is such a fan of water exercise. Her coach is Jane Katz, one of the pioneers of mixing aqua exercises with swim workouts. A seasoned swimmer and member of the 1964 U.S. Synchronized Swimming Performance Team, Katz is one of a small but growing number of swim coaches who say that mixing water training with swim training builds stronger swimmers and also offers cross-training benefits.

Water exercise is broadly defined as regular exercise done inside a pool, with shallow-water and deep-water training subcategories. In many ways it is an exercise that is undefined. Is sculling or power kicking an exercise or a drill? Both, says Julie See, president and director of education at the Aquatics Exercise Association (AEA), a nonprofit educational group based in Nokomis, Fla. "I think you'll see a crossover and

[also] where you get the distinction from swimming to water aerobics," See says.

Although there are no definitive data or studies that prove its benefits to swimmers, those who have blended aqua exercise with swimming say they have built strength and flexibility. The end result is the best of both worlds, aqua exercise enthusiasts say: stronger more efficient swimmers who are also better all-around athletes.

"I strongly believe in cross-training such as deep-water running," says Karl Knopf of the International Sports Sciences Association. One of the earliest proponents of water exercise for athletes, Knopf says, "They won't get injured, they won't get stale."

Many of these coaches practice what they preach. Katz, 62, says water exercise alternated with swim workouts has helped her stay toned and sharp. In 2005, she placed first in her age

group (60-64) at the USMS One Mile Open Water Championship held in Bend, Ore.

"It's like maintenance," says Katz, who holds a doctorate of education in gerontology, and recently authored *Your Water Workout*, which includes instruction and water exercise programs that incorporate yoga, Pilates and Tai Chi.

Nonetheless, competitive swimmers who integrate water exercise into their fitness regimen remain a rarity, with some saying they don't see how it would benefit their swimming.

"The specificity that comes

for swimming comes from swimming," says Dave Radcliff, a Masters swimmer in Hillsboro, Ore. "The different things [water exercisers do] in deep water do not directly correlate in a motion you do when you swim."

No wonder water exercise instructors say it has been a struggle to shake up the routines of competitive swimmers. Mary Ann Pierce, a director of the Webster Aquatic Center in Rochester, N.Y., sees a clear divide in what she terms "horizontal swimmers" and "vertical swimmers." Her explanation: "Swimmers like to swim. You get into the water, and you get into your routine. Vertical swimmers like the camaraderie."

The center has even renamed certain classes to try to draw in more athletes. "We've tried 'Resistance Training' versus 'Aqua Yoga' to make it more masculine," Pierce says.

However, fitness and elite swimmers might want to consider the perks of advanced cross-training in the water. According to the AEA, water training beats dry land because it offers as good of a workout but is easier on the joints and soft tissue. The association points out that a body immersed to the waist bears roughly 50 percent of its

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WATER EXERCISE EQUIPMENT

Whether used in a class or during laps, here is some equipment that can help strengthen and tone.

- **Arm and ankle cuffs:** Help build lower-body strength; function similarly to a hydro belt.
- **Flotation belts:** Also called buoyancy belts or hydro belts, they are often used for deep-water running and help with flexibility and posture.
- **Hand buoys:** Barbell look-alikes that come in a variety of sizes and help tone the upper body when used underwater.
- **Noodle:** Brightly colored cylinders that can be used for a variety of exercises including sit-ups.
- **Paddles:** Available in a variety of shapes and sizes to help condition and build strength.
- **Resistance gloves or mitts:** Designed to help build upper body muscle; durable and portable.
- **Stretch bands:** Help increase flexibility in the water; portable and also work for dry land training.
- **Water shoes:** Specially made sneakers that help create added resistance when worn during a swim.

Sources: Aquatics Exercise Association (www.aewave.com); HYDRO-FIT Inc., maker of aquatic gear (www.hydrofit.com); AQX Sports, maker of aquatic footwear (www.aqxsports.com); and interviews.

body weight. It also strengthens and tones because water—at 800 times the density of air—adds at least 12 to 14 percent more resistance than experienced on land. Water also allows for a more comfortable, and sometimes more lengthy, exercise session because it cools the body and prevents overheating.

“I am such a big proponent of cross training, whether it’s two different modalities in the pool, or land to water,” says AEA’s See. “I just think it’s so vital to keep the body challenged in different ways,” she notes.

“Muscle doesn’t know where the resistance is coming from,” points out Knopf, who teaches water exercise at Foothill College in Los Altos Hills, Calif. He also

notes that aqua exercise can ease the chances of common swimming injuries such as rotator cuff damage. Nevertheless, its impact also depends on the water depth, speed of movement, how hard one works, the length of the one’s limbs, and water and air temperature.

Although the stereotype of water exercise being for the “less athletic types” remains, change is slowly occurring. “I’m seeing some triathletes [at classes] now,” says Nancy Klein-Freid, who has taught water exercise since 1976 and currently is with the Cooper Fitness Center in Dallas.

Experts point out that water exercise has morphed into a multitude of types and levels

such as cardio-pumping and calorie-shedding classes that include deep-water jogging, aqua stride, butts and guts, aqua Pilates and even aquatic kick boxing. At Chelsea Piers Sports Center in Manhattan, there is even a class called “Findorphin,” a workout of kicking with fins set to music. “Release endorphins while you kick your legs, strengthen your core and center your breath with this kickin’, zero-impact, high-end aerobic workout,” the club web site invites.

Traditional water exercise classes are on the rise too. According to the International Health, Racquet & Sportsclub Association, a Boston-based trade group representing 6,500 health and racket clubs in more than 67 countries, about 30 percent of its member clubs offer some sort of aquatic program, and the number of people doing water exercise is growing. In 2004, 1.2 million Americans participated in a water exercise class compared to 947,000 in 1999.

Water exercise has its roots in 18th and 19th century spas, where taking hot or cold water “cures” was popular, Katz says. It has also been used to rehabilitate injured horses and train professional athletes including runners and football players. Lynda Huey, a former track star and coach, has often used water exercise to rehabilitate top athletes.

Swimmers who have made water exercise a part of their training also report positive changes. William Beardsley Jr., a triathlete and fitness swimmer, started blending vertical kicking and deep-water jogging with his usual 5,000- to 7,000-yard workouts late last year to strengthen his legs. Beardsley, of Orchard Park, N.Y., stuck with the routine and noticed positive changes within two months. He says he was able to do backstroke turns with swifter and more extended dolphin kicks. He also noticed that he was able to swim longer dis-

tances with greater ease. Water exercise expert Knopf says that this improvement makes sense because vertical kicking helps with streamline.

“When I started it, I struggled,” says Beardsley, noting it was hard to break up his laps with something new. “Eventually your kick should get strong enough where you should be able to hold arms over your head—‘Hey, I can do this now.’”

Competitive swimmer Jackson says that the in-water training has given her a better feel for certain swimming movements. One of her favorite drills in hanging onto the bar on the starting block, and twisting side to side to get a better feel of the rotating movement so frequently used in freestyle.

Other swimmers have seen a surge in their overall fitness. Brad Linn, a 25-year-old swim coach in upstate New York, started teaching aqua cycling classes last year.

His popular class is one example of water exercise that is attracting athletes. During the class, participants peddle Hydriders, sleek stainless steel stationary bikes that stand in shallow water. Linn leads participants through 30 minutes of fast cycling, followed by a warm-down of pushups and sit-ups on the bike handles.

Spinning in the water has helped the budding triathlete in his running and cycling too. “My pedal stroke is a lot better and I am able to develop a better cadence,” Linn says, adding that it has also helped his endurance with racquetball. “I found that I’m not winded by aerobic capacity.”

The one downside to exercising in the water is that it is easier to cheat, Linn acknowledges. “You get out of it what you put into it,” he notes.

There are different ways to cross-train with water exercise. Taking classes such as aqua spinning on non-swimming days is one way. For competitive athletes, helpful workouts would include deep-water running,

Katz likes to build water exercises into workout sets. For example, her swimmers will do a set, and then stop to do vertical kicking for about 30 seconds, then start another set and spice it up with some stretching. Sometimes she’ll launch into drills that sharpen specific strokes, such as arm movements with paddles on, or walking across the pool.

Pilates to flex and strengthen muscles and aqua spinning.

Or, simply weave water exercise into a swim workout. Katz likes to build water exercises into workout sets. For example, her swimmers will do a set, and then stop to do vertical kicking for about 30 seconds, then start another set and spice it up with some stretching. Sometimes she'll launch into drills that sharpen specific strokes, such as arm movements with paddles on, or walking across the pool. Some exercises are hybrids of popular swim drills, such as hanging onto the wall and power kicking for 30 seconds.

Although there are now a variety of aqua exercise accessories on the market, Katz says basic swim equipment such as kickboards, paddles and pull buoys easily do double-duty as water exercise gear.

Some coaches incorporate exercises that they know will be of specific benefit to swimmers. In Beaverton, Ore., Jon Clark, a Masters coach for the Tualatin Hills Barracudas, blends vertical kicking with weekly workouts. For 10 minutes, Clark tells his swimmers to kick in the water with their arms in the air or holding a pull buoy.

"It's just one aspect of conditioning and trying to maintain your muscle tone," says club member Radcliff, who has been swimming Masters since 1995. And while he's still not completely sold on water exercise for swimmers, he concedes that it's "nice to have some variety in a workout and it keeps the whole team together in one place."

Indeed there are no rules in water exercise. Instructor Klein-Freid uses a variety of equipment in her classes such as noodles, aqua balls, bands and resistance cuffs while other instructors use equipment readily on hand: kickboards, fins and pull buoys.

However, this doesn't mean that dry land exercise has lost its value. Land training provides a gravity pull that strengthens



bones, notes Knopf, who recommends that swimmers continually vary their cross-training routines. "If you're only in the water, then you never get any bone density exercises," he says.

In Colorado Springs, Sue Nelson, USA Swimming's aquatic programs specialist, says that she and her colleagues are stepping up efforts to promote the benefits of water exercise. Nelson and her staff help their members build aquatic facilities to encompass total aquatic programming. Two years ago USA Swimming developed a new department that focuses on educating members on aquatic programming, including water exercise.

"We have swim coaches taking those classes," says Nelson, noting that a number of them are younger coaches.

In the end, the real hurdle for water exercise's future with competitive swimmers is psychological. "People don't like change," Nelson says. "Somehow you've just got to make that crossover." <<<

FOR MORE INFORMATION

Check out these resources at your nearest library, bookstore or online:

- **Your Water Workout**, by Dr. Jane Katz, Broadway Books, 2003.
- **Water Workouts**, second ed., by Dr. Karl Knopf, Hunter Textbooks, 1992.
- **Water exercise: 78 Safe and Effective Exercises for Fitness and Therapy**, by Martha White, Human Kinetics Publishers, 1995.
- **The Complete Waterpower Workout Book**, by Lynda Huey and Robert Forster, Random House, 1993.
- www.waterwellnessworkouts.com (a resource for water exercises)
- www.aquaaerobics.com (education programs and workshops)
- www.atri.org (continuing education and workshops)
- www.waterworkout.com (comprehensive site that includes information on exercises and equipment)
- www.aewave.com (Aquatics Exercise Association)
- www.uswfa.com (United States Water Fitness Association)
- www.webgal.com/aquatome/aquafit.html (online library of links to water exercise-related books)
- www.healthatoz.com/healthatoz/Atoz/hl/fit/card/water.jsp (a comprehensive web site on the ABCs of water exercise)