

Army Rehab / Fitness Goes Aquatic

Paula P. Godes, DPT

“To care for him who shall have borne the battle, and for his widow and his orphan.”
Abraham Lincoln, 16th president of the United States, on the importance of caring for the nation’s war veterans.

Water is the primary component of the human body. Muscle, skin and organs are over 70% water. We can’t live without it for more than a couple of days. We monitor changes in body water composition, concentrations of ions and hydration levels to give us clues to disease processes. It is vital to everything we are, and everything we do. So why not exercise in it? Sgt. 1st Class Vincent Fanning (Ret) would ask the same question to the Army.

Fanning was one of the first platoon sergeants for the Warrior Transition Unit (WTU) at Fort Dix, New Jersey. Fort Dix averages 200-300 National Guard and Reserve soldiers at any one time going through the transition process of soldier to citizen, or back to duty-most likely another tour to Iraq. All have various make and manner of injuries, many from explosions, debilitating back pain, shattered knees and ankles, traumatic brain injury, and a host of underlying post-traumatic stress.

At a loss on how to care for and train these soldiers, someone mentioned putting the soldiers in the water. Fanning was then instructed to attend an aquatics conference presented by the gurus of aquatic rehab, The Aquatic Therapy & Rehab Institute (ATRI). He went, albeit begrudgingly. *Exercise in the water? Are you kidding?* he thought. We all have the image of grandma and her blue-haired friends splashing around with brightly colored caps on their heads. No self-respecting soldier was going to buy it.

“I was afraid it was going to be about synchronized swimming,” Fanning later joked. What Fanning learned, however, is this is *not* your Grandma’s water aerobics class. It was work. Fanning discovered the benefits of moving in water and the healing properties water can provide in a semi-weightless environment. He discovered that exercising in water produces improved fitness levels, weight loss, and cardiovascular training effects.

Fanning was hooked. He realized one has better range of motion in the water. Stiff joints and muscles lengthen out, loosen up and reach ranges they strain to reach on land. Then there's the buoyancy factor. Standing in the pool up to the naval, one weighs 60% less than on land. All of a sudden, painful squats are easy; those young knees with accelerated early-onset arthritis from too much pounding and years of running and marching, can bend and lunge without pain. Fanning became aquatic exercise's biggest believer. In a short year from his first conference, he developed an aquatic fitness program for the WTU soldiers, inadvertently "rehabbed" them, a realm normally reserved for the therapy experts, and saved many military careers.

Fanning is a Fiber Optics Specialist with no advanced fitness or medical training. However, he did what few people have the courage to do when given a task outside their comfort zone. He learned. He read everything he could. He networked with those in the field who could provide guidance. *I ate, slept and drank this stuff*, he told me, when I asked how he learned so much in a short period of time. He would read six hours a day, then get in the water and figure out what worked. He had, after all, a mission. He had hundreds of soldiers under his watch who were broken in body, but not in spirit. He gave them hope and support that only soldiers can sometimes do for one another.

Staff Sgt. Jesse White is one of those soldiers who benefited from Fanning's three-days-a-week water fitness program. White had just returned from Iraq, ankle shattered from an unforeseen roadside bomb blast. The only thing holding his foot in place seemed to be his skin. The incredible instability required multiple plates and screws and a confirmation from the surgeon that it would be a very long time before he walked again. But he did walk. Sooner than anyone expected.

The water did more than heal their physical wounds. The group sessions and camaraderie in the pool helped with the emotional trauma, sense of loss, maybe some regret for many soldiers. Water's fluid and all encompassing quality provides a supportive environment. We floated in water prior to our birth - it only seems natural we return to it to feel whole again.

Fanning may not have known at the time how soldiers would benefit from his program, but they did. The character Ray in *Field of Dreams*, a movie about the fulfillment of dreams despite previous choices or circumstances in life, kept hearing a voice whisper, *“If you build it, they will come.”* Like Ray, Sergeant Fanning also had a vision, a dream, a calling. Fanning did not have a manual handed to him, he created one. And slowly, one by one, then four, then 20...then hundreds...they came, and they got better.

Now, White has taken over the mission that Fanning started, along with another aquatic convert, Sgt. Kimberly Worster. White- a mechanic, and Worster - a carpenter, have also been to the ATRI conferences and learned the value of aquatic exercise. White and Worster are so impressive in their passion, knowledge and creativity, they’ve been asked to present at the ATRI Aquatic Therapy Symposium. Quite an accomplishment for two soldiers without half an alphabet of letters after their names.

So when Sgt. 1st Class Engelbert Indo, a patient receiving aquatic physical therapy, asked me to present an aquatic fitness class for his platoon, I didn’t hesitate to call the three experts. As a physical therapist, I know the research that supports exercise in the water. But soldiers need to hear it from soldiers, and especially a soldier who made an almost miraculous recovery from water rehab, such as White.

The demonstration was arranged for a Friday morning at the indoor pool on Fort Belvoir, Virginia. The 27 soldiers of the Fort Meyer’s Headquarters Command Battalion start trickling around the pool area, slightly intimidated, glancing occasionally at the vast, still water. Running, sit-ups and push-ups are all very familiar to these soldiers, but asking them to get in a pool in their physical training shorts and shirt was like asking them to step in a vat of acid. *They hesitantly climb in the pool, stand in the waist-high water, arms crossed, shivering a little until Fanning takes center stage. He starts with a warm-up of walking, but focuses on the core muscles that stabilize the spine with every movement. “Engage your core muscles!” he reminds them. He has them walk forward and backward, feeling the resistance as the water pushes against them, reminding them not to “cheat” by leaning into the resistance. “Bring it! Bring it!” he barks, the soldiers try to maintain proper alignment as the water resistance increases with*

their speed. After several laps of this, the soldiers are visibly working harder than they thought they would in the water. Fanning teases, “Anyone feeling chest pains? No? O.K., keep going.”

Next, they perform squats, the platoon’s First Sergeant calling cadence as they pump out 50 repetitions. *How do your knees feel?* Fanning implores. *Could you do that many on land?* Some of the older soldiers shake their heads “no”, amazed at the ability to perform so many repetitions on knees that have seen better days. Fanning splits the group in two, sending half to the deep end with Staff Sgt. White, the other half remaining in place.

Like the opening act of a concert introducing the main event, Fanning points to Worster on deck and introduces the next segment by bellowing, “*SGT Worster, MAKE IT HAPPEN!*” Without missing a beat, Worster starts tossing out foam dumbbells to her group. She takes the group through a variety of upper body exercises with equipment light enough to balance on the end of two fingers, but pushing them against the resistance of the water feels like pushing a small Volkswagen. She also has them perform a version of the push-up; the soldiers push the dumbbells straight underneath them while floating on their stomachs. The buoyancy of the dumbbells keeps them afloat, but the triceps are screaming from pushing down on something that wants to float.

Staff Sgt. Charlesetta Anderson, a non-swimmer, is enjoying the workout. Later she responded, *“I really liked it. Since I don’t swim, I would have never tried this by myself. I especially liked the upper body workout. I can only do so many push-ups on land, but here, I can keep going.”*

At the deep end, Staff Sgt. White has an entirely different focus. He’s working the lower body, burning the thigh muscles and elevating the heart rate with an exercise that can only be described as a fight against yourself. Tubing is wrapped around a stationary pole, flippers in place on the feet. The soldiers push away from the wall, hold the tubing in each hand, and kick with full force. The goal is to kick as far away from the wall as the tubing will allow, and keep kicking. One minute of this has most of the soldiers heaving. Legs shaking as if finishing a sprint, one soldier leans against the wall to catch his breath where I’m sitting. *“Was that hard?”*

I asked. He looked at me, unable to catch his breath to respond, but the expression on his face says it all. It sure was. The groups switch and the exercises are repeated.

After almost 90 minutes, the workout is done. Sgt. 1st Class Indo, still recovering from a leg injury, pushes himself hard, and is sprawled spread-eagle on the pool deck, too tired to remove the flippers. The few non-swimmers in the group are beaming. They are thrilled with their accomplishment. The Battalion Commander, Lt. Col. Wayne Green, was surprised at the level of intensity the water workout provided. *I learned a lot about the control of my body today, but what I learned more was the way these folks learned to find a different way to exercise for those who might say 'I can't' because I'm hurt*, Green stated. He also commends the soldiers in his group who don't swim, but put on a belt and got in the deep water, attesting to their willingness to overcome their fears. He ended by saying to Fanning, White and Worster, *"I want to thank you for thinking in a different way, and caring for those wounded soldiers. Thank you for all the good you're going to do."*

A different way.

But with anything that is different, there are obstacles. The biggest obstacle is lack of equipment. Fanning, White and Worster purchased all the equipment for the WTU program at Fort Dix with their own money. I was astounded that three enlisted soldiers would spend their own limited funds to purchase close to \$2,000 of aquatic equipment and instructional aides. When I asked them why they would do that, they simply shrugged and said, "Because the soldiers need it."

Another obstacle is awareness and support from the chain of command. Those unfamiliar with the rehabilitative as well as fitness benefits that water exercise provides may see it as "pampering," states Fanning. But those who have tried it know differently.

As a physical therapist, I often educate my patients on the benefits of "cross-training," which is choosing an alternative activity to give over-used and repetitively abused joints a break from the same compressive forces day after day. One of the best things to do is get in a pool and learn deep-water jogging...no pounding and one heck of a workout. After all, you're moving your legs

against water with 800 times the resistance of air. One day a week in a pool could potentially help prevent the overuse injuries I so often see in my office.

Army soldiers are older, staying in longer, and 90% of active-duty soldiers have at least one overseas deployment under their belt, more often, two, three and four rotations. Their musculoskeletal injuries are increased or exacerbated by the nearly 60-pounds of body armor and gear they must carry. When they come back, most are in pain.

“It’s not a replacement to the current Army physical training program, but an augmentation to it,” Fanning emphasizes. After the demonstration, White and Worster drive back to New Jersey to continue their mission of helping soldiers return back to the Army or the community with better mobility and strength. Fanning, now recently retired, still has the dream that every military installation, platoon sergeant and fitness leader receive the instruction and resources to provide the same type of alternative training for their soldiers.

If you build it, (they) will come.

Fanning, White and Worster built it. The question now, can the Army embrace a different way of training their soldiers? Quite frankly, I hope they do. I’m not worried about job security as a physical therapist; I’ll have plenty to keep me busy. It would be nice to actually prevent the need to see me. If they’re not seeing me, that means they’re physically mobile, pain-free and doing the job the Army requires. Isn’t that worth the initial inertia it will take to overcome the status quo and do something a different way?

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