I’m Back, I’m Wounded, Now What?
Rehabilitating and Reconditioning our Wounded Warriors

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War and training for war has produced thousands of injuries and deaths. Injuries may occur in training, combat, or support services. While many envision the wounded warrior as an amputee that they may have seen in a television commercial, the wounded warrior can take on many appearances. Wars that have occurred since 2003 (Operation New Dawn [OND], Operation Iraqi Freedom [OIF] and Operation Enduring Freedom [OEF]) have produced thousands of injuries and deaths. Based on the US Military Casualty Statistics, deaths and wounded in action (WIA) are as follows:¹

OIF: 4,408 deaths/31, 922 WIA
OEF: 1892 deaths/15, 380 WIA
OND: 66 deaths/301 WIA

Of those wounded in action, there have been 178, 876 incidents of traumatic brain injury (TBI) and 88, 719 cases of post-traumatic stress (PTSD) reported.² Some of the symptoms of TBI and PTSD have been undiagnosed based on the desire to continue job responsibilities in the field and misunderstanding that symptoms may indicate a problem. The most common level of TBI is mild, but there are significant number of moderate to severe injuries. With the improvements in protective gear for the military, increased rates of TBI are seen that would have resulted in deaths in previous wars.

With the improvements in protective gear for the military, increased rates of TBI are seen that would have resulted in deaths in previous wars. Cases of PTSD could have occurred from deployment or something that has occurred since return or related to deployment. All cases are not considered directly related to combat.

One marine that I worked with in the pool said he didn’t realize he had any problems until he returned home and attempted to plant a garden. He (continued on page 7)
reported that his balance was so poor that he had to use two rakes to stand up in the garden. At that time, he sought medical attention and was diagnosed with TBI.

Wounded Warriors is a term found in diverse contexts. It may mean an organization that supports injured warriors, it may mean a local group that supports the families of fallen warriors, and it may be a combination of things. Wounded Warriors programs and projects are found all over the country by many different names. For the purpose of this article, Wounded Warriors refers to individuals who have received injuries or developed illnesses during military service that affect their independence. While most of the injuries are combat or combat-training related, not all are.

As a recreational therapist specializing in aquatic therapy, I have seen the gamut of injuries. Amputations, extremity fractures, soft tissue damage, multiple traumas and surgeries, vision loss, in addition to a swim team that competes in Warrior Games. Aquatic therapy intervention provides a medium that the most disabled and the least disabled can benefit from.

Participants are individually assessed by a medical team and referred to appropriate programs. Once assigned to aquatic therapy, participants are provided with an individualized plan to support their level of independence. For some individuals, Ai Chi, a series of slow moving, flowing movements of the arms and legs coordinated with diaphragmatic breathing, can be performed in shoulder depth water. Improvements can be seen in balance, flexibility, mobility and strength.

Extremity weakness and need for core balance may be addressed with Bad Ragaz, closed kinetic chain exercises performed while floating in a supine position with flotation at neck, hips and ankles, if needed. Bad Ragaz is designed to be used for active and stabilization exercises for strength and coordination. For the more advanced participant, equipment is introduced to challenge balance, provide more resistance, or support stabilization of the core.

Swim skills are taught or challenged if an individual demonstrates interest in swimming for fitness or competition. Swim team practices incorporate a wide variety of sprints, distance events, and strengthening to support swim team competition. Open water events occur in the ocean nearby.

For some participants, weight bearing status affects the level of water they can participate in. With a diving tank available, a wide variety of deep water challenges can be provided. Deep water provides for a non-weight bearing environment that is used for individuals with weight-bearing precautions and chronic pain issues. It also provides for challenging aerobic activities (core strengthening and water running) for individuals in the reconditioning phase who are working towards improved cardiorespiratory endurance and weight loss.

A new pool is forthcoming that will provide for warmer water and underwater treadmills to expand the program capabilities. The current pool is cooler, which (continued on next page)
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facilitates interventions that involve a faster pace of activities. The new pool will be a better start for new wounded, ill, and injured individuals to begin an aquatic exercise program. It allows for slower movements without becoming chilled. It provides for more relaxation and comfort when beginning this phase of rehabilitation.

The benefits of aquatic therapy are endless with this population. The buoyancy of the water provides for both an assistive and resistive exercise environment without adding weights. The hydrostatic pressure assists with the reduction of edema while aiding in pain relief. Invigorating workouts can occur for those that use supportive devices on land or who do not have the stamina for exercise.

Warriors see quicker progress in the pool because they can move with the support of the water without many of the barriers they have on land. This progress motivates and encourages even the most impaired participant.

One participant I worked with for the first time was at 50% weight bearing when he arrived at the pool on crutches with a bullet torn lower leg. He had survived a battle field injury, multiple surgeries, and was still in excruciating pain. He was highly motivated and had done everything he was supposed to do, yet he was still battling this injury. He was fearful of the water because he was fearful that it would bring about more pain. He reluctantly entered the pool by hobbiling down the stairs. He was at waist deep which supported his weight bearing status. Once his foot was on the pool floor and he didn’t feel the pain that he had felt on the deck, his face came alive with hope. He completed all exercises put before him with enthusiasm and didn’t want to leave the pool when his session was complete. He stayed in the pool for much longer struggling through lap swimming and deep water endurance activities because he could finally move his whole body without pain. This individual went on to complete in Warrior Games in competitive swimming and despite more surgery, kept returning to the pool. The last time I saw him, he was able to walk without a cane and with a very slight limp, which was a huge accomplishment for the injury he had endured. He had also changed his mind from getting out of the military to staying in and pursuing other areas.

Another participant was able to overcome an extreme fear of the water when he witnessed his buddy drown in combat.

He became an accomplished competitive swimmer. Many lost weight, improved endurance, and reduced pain and were able to return to some form of duty. Those who got out of the military verbalized great admiration for the pool and the therapy that brought them back to independence.

The properties of water and the variety of challenges that can be provided in a pool environment lend aquatic therapy to being the perfect partner for rehabilitation and reconditioning of the wounded warrior. The changes that can be seen are inspiring to each participant and those that provide the service.

Support wounded warriors in any way you can. There are organizations all over the country that lend their hand to supporting our injured service men and women. Be a part of the recovery!

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REFERENCES