

Tactical Athletes...

Naval Special Warfare Building More Resilient Warriors

By PAUL RAGUSA
Managing Editor

For Special Operations Command (SOCOM), providing training, equipment and resources that are at the tip of the spear is of utmost priority, as SOCOM tactical athletes are responsible for completing some of the most challenging missions in the military, under incredible physical and mental stress, in unimaginably hostile and unforgiving environments.

“Our mission is to provide optimum sports medicine, rehabilitative care and medical material support to all active-duty personnel of Naval Special Warfare Group One,” said Mark Rogow, who is the Sports Medicine program manager for Naval Special Warfare Group One (NSWG1), NAB Coronado, Calif. “We provide musculoskeletal support to those who sustain injuries of any kind by providing clinical evaluation, diagnosis, treatment and rehabilitation by a highly trained and specialized team of experts. The plan of care is designed to achieve the maximum level of function in a minimum amount of time, taking into account the safety of the individual and operational commitments of the NSW population.”

Rogow explained that a plan of care is individualized and performed in conjunction with other providers within the NSW medical system. “Each war fighter is treated and assessed at the earliest opportunity, and transitioned to the Human Performance specialists to implement an individualized training regimen through our ‘Bridge Program.’ This allows recovering tactical athletes to maintain and/or improve fitness, strength and resiliency of unaffected body regions while completing their treatment and recovery from musculoskeletal injury. This results in an expeditious return to full duty and peak fitness for NSW war fighters that directly enhances command readiness and mission capability.”

The Bridge Gym provides ample strength and cardio equipment for the NSW community to use at NAB Coronado.



The Tactical Athlete Program (TAP) is founded on the collegiate and professional sports training model with a strong reliance on sports medicine.



The Sports Medicine Clinic is part of the Tactical Athlete Program (TAP) and the Logistics Support Unit Medical Department “Within TAP, we work closely with our Human Performance staff, which consists of strength coaches, a performance dietician and a sports-psych professional. TAP is a SOCOM-funded program that provides the collegiate and professional sports medicine/human performance model across all of SpecOps.”

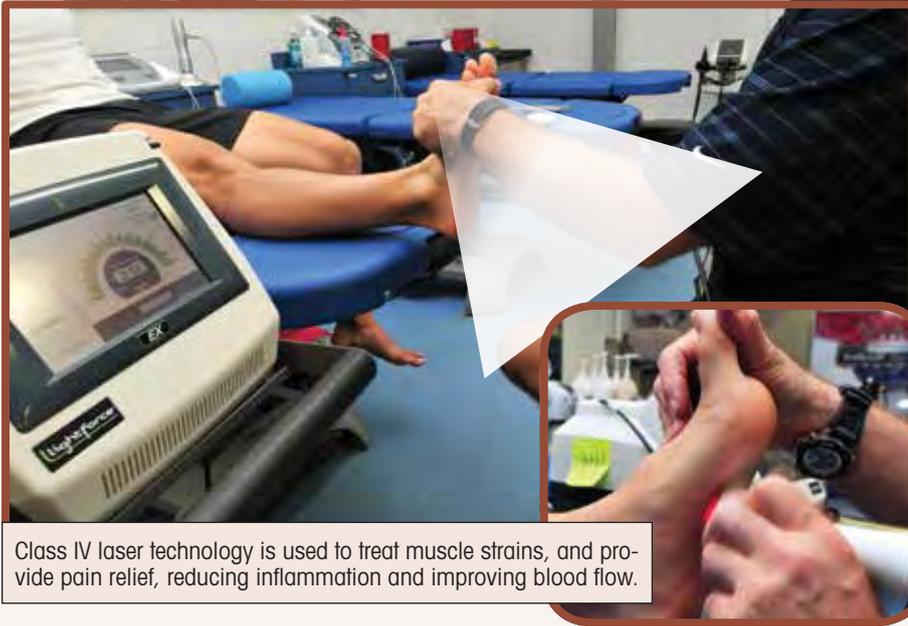
Naval Special Warfare Group One has a Sports Medicine Clinic and a Bridge Gym under the same roof, and both support all training and rehabilitation needs.

“The Bridge Gym is the link between rehabilitation and our human performance team,” Rogow explained. “So there is not only a continuity in the program, but also a smooth transition from rehab back to either their teams or our facilities, which is where we have our human performance staff, and our strength coaches. We are doing Bridge programming across NSW within TAP.”

The Bridge Gym is home to the NSWG1 Bridge program, which is designed to augment the NSW operator’s overall



Special Ops Fitness



Class IV laser technology is used to treat muscle strains, and provide pain relief, reducing inflammation and improving blood flow.

conditioning, both following injury and/or surgical intervention, as well as supporting those personnel who have not suffered an injury, yet have a body part, joint or multiple areas of dysfunction and need assistance with improving their mobility, function, strength and/or stability.

“This program improves the efficiency of rehabilitation and recovery while making a significant impact on the individual’s performance and resiliency,” Rogow explained. “This program is a partnership between Tactical Athlete Center (TAC) Sports Medicine and TAC Human Performance. This program is designed to facilitate the SEALs rehabilitation by bridging the gap between Sports Medicine and the Human Performance Program, enhancing the recovery of the SEAL, and returning them to operations as quickly and safely as possible.”

All of the strength coaches on the Human Performance staff are required to have and maintain the National Strength and Conditioning Association’s C.S.C.S. (Certified Strength and Conditioning Specialist), and many strength coaches have other certifications affiliated with USA Weightlifting, Kettlebell, CrossFit, Functional Movement Screen (FMS) and others.

Human Performance staff provide fitness and FMS assessments, and the Sports Medicine team provides numerous movement assessments, which include, but are not limited to: Orthopedic Screen (a full-body musculoskeletal assessment), Selective Functional Movement Assessment (SFMA), Postural Restoration (PRI), Y-Balance Upper and Lower Body Assessment, as well as Gait, Balance and Jump testing with the OptoJump System.

“As part of our TAP program, we have on staff certified athletic trainers, physical therapists and strength coaches, and we all reach out to our peers to do our best to stay up on the latest technologies and best practices that are in the sports medicine community,” noted Rogow. “When it comes to training and education, our command has been outstanding in regard to supporting bringing in subject matter experts on a variety of topics and areas, from evaluation techniques to treatment and therapeutic exercise prescription to taping techniques. One thing that is fascinating about working with Special Warfare is that we have not met a professional out there who does not want to help our operators or active duty. That good will has

been a huge asset that I truly appreciate, and it positively impacts what we do and helps us achieve our overarching mission.”

THE ATHLETIC MODEL

The Sports Medicine and Human Performance programs at Coronado represent the new direction SOCOM has taken over the past decade in regard to training and healing these elite tactical athletes.

“The past decade of war has certainly impacted our NSW personnel, and it was with this in mind that leadership created programs with increased emphasis on resiliency,” noted Rogow. “So, in the last 10 years or so, the athletic model for training, which is based on proven sports medicine and human performance principles, has been creeping into their community

— and they deserve this kind of care, attention and preparation. Our government and taxpayers pay a lot of money toward their education, their training and maintaining them and their careers, so it is vitally important that we give them every opportunity to become more resilient, to become more efficient and to be able to, hopefully, rehabilitate faster if injuries do occur.”

Rogow pointed out that the same approach that has become a staple within professional sports and Division One, Two and Three Athletics, is now becoming the norm throughout SOCOM, and the results have been encouraging.

“From what I have seen the last three-plus years here at Coronado, I can tell this community, and the SEALs themselves, are incredibly appreciative of our time with them, and the experience that we bring to them, and that is not just on the sports medicine side, but on the human performance side, and with our performance dieticians, and we now have a sports-psych professional on board. These are all commonplace in professional and collegiate athletics, and now we have the opportunity to provide the very best to these tactical athletes here. We also give this same attention and experience to our enablers — those who help our operators on a daily basis, both at home and when forward deployed.”

Rogow said that over the last few years he has seen how this smarter approach to training and rehabilitation has positively impacted the NSW community, “especially from the standpoint that they can do it right here on base. They don’t have to go to downtown San Diego to the Naval Medical Center to get their care. They can come right in here, get the care they need, get their training or rehab in and then get back to work, saving them time and money, as well as allowing us to tailor the program to meet their specific needs — daily, weekly or according to their training cycle or operational demands.”

LEVERAGING TECHNOLOGY

Equipment and modalities in the Sports Medicine Clinic include numerous therapeutic and diagnostic modalities, as well as the latest in new assessment and treatment technology, including: LightForce Class IV Laser; HydroWorx Therapeutic

Pool with underwater treadmill; Alter-G treadmill; OptoGait (gait-analysis technology); Total Gym; Shuttle 2000; Keiser Iso-trainer; NeuroCom VSR Sport; Sci-Fit Upper Body Cycle; Viper Climber; Back System3; Game Ready/Quad 7 devices; and e-stim devices from Marc Pro, H-wave and InterX. Other items in the Sports Medicine Clinic include treatment tables, traction tables, Normatec compression units and a variety of rehab equipment to facilitate all phases of orthopedic rehabilitation.

“We maintain an inventory of sports medicine-related splints, braces, equipment, taping supplies and other consumables to enhance and support our patients and our mission,” said Rogow. “These devices allow us to reduce pain, inflammation, swelling and increase joint range of motion, strength, power and overall function.”

The Class IV laser technology is used for “treating muscle strains, and providing pain relief, reducing inflammation and improving blood flow,” noted Rogow. “We have professional therapists who oversee the therapy, and we have been getting some great results using that technology. We are using light energy, so it is important that we follow all safety guidelines when we use it.”

Vibration technology is also used in a number of ways. “We can use it to help improve balance and proprioception, but we also use it to help improve flexibility, so the vibration platforms also function as stretching stations,” explained Rogow. “Typically, it would take someone 10-15 minutes to warm up and get loose, which can now be accomplished in 5-8 minutes. We can also use the vibration platforms to train and condition and do exercises, both lower and upper body, with the thought that by doing it on the vibration platform, we are recruiting more muscle to perform that exercise or movement pattern. For example, using a foam roller with the vibration technology is one of the best modalities to reduce muscle spasm.”

Another important area of focus is gait assessment, and Rogow and his team are harnessing the latest technology to help SOCOM operators in real time.

“The gait-analysis technology allows us to get a footprint, if you will, of our operator’s gait pattern, and it does it in real time, so they can see, and we can see, what their normal walking and running gait is like, and they can make adjustments as they/we see imbalances on the screen. So, it is identifying asymmetries, differences between left to right in regard to stride length. Am I striding out more with my right or my left? Am I keeping my left foot down longer than my right foot — are all my cylinders working efficiently? Probably not, in some capacity, especially if I have or am recovering from injury or pain, as an injury to the ankle, hip, knee, leg, back or even shoulder can affect a person’s gait. So we can help them improve their gait in real time, and through repetition and muscle memory, they can then transfer that to the ground, and to their

everyday function. What is great is that they pick up on it so quickly, so they are getting valuable real-time information and they are reducing their pain.”

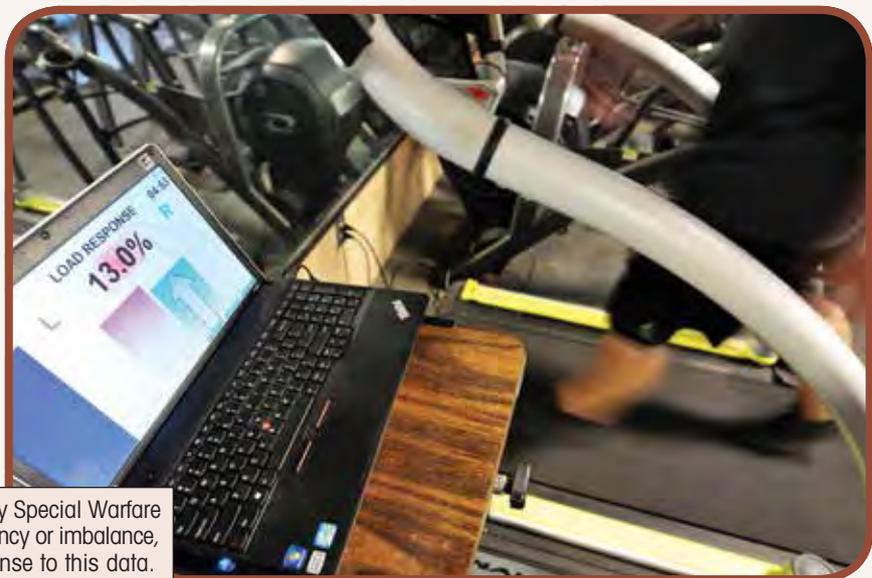
Rogow pointed out that by compensating for an injury — by slightly limping or changing one’s gait — one can create stress somewhere else, which slows down the whole rehab process of getting them back up to full function. “We can use this technology over a 10-meter span, for example, and test vertical jump and broad jump, and evaluate their gait over a 10-meter distance. And, we can do that with them wearing all of their equipment, which can weigh upwards of 45, 50 and 60-plus pounds, so we can simulate what it is like for them downrange.”

Other advanced technology being used at the clinic includes the Alter-G anti-gravity treadmill, which is used a lot by those who are rehabbing injuries — knees, lower back, ankles, for example. “It is also used by those who are trying to reduce the impact on their body during training, such as those who are involved in marathons or ultra marathons and triathlons, and it is a great alternative for those looking to get in their running and conditioning, while decreasing the stress on their joints.”

The Sports Medicine Clinic also recently added a NeuroCom system, which will be used in the near future to assess and treat those who are suffering from balance and proprioception issues as a result of a traumatic brain injury (TBI) or other injury. Staff members also help NSW personnel with improving their balance and proprioception using interactive games through the Wii and the Monitored Rehab Systems (The Cube) from CDM Sport.

In addition to the equipment in the Sports Medicine Clinic, NSWG1 uses the Bridge Gym, which houses cardio, strength and other exercise equipment, including VersaClimbers, Concept2 rowing machines and SkiErg, Woodway Force Treadmills, Cybex Arc Trainers, Life Fitness ellipticals, treadmills and cable crossovers, stair-climbers, Keiser Functional Trainers, TRX, Jacobs Ladder, Power Lift Squat Racks, Sorinex GHD, True Fitness Stretch Station, and PowerPlate and VibePlate vibration platforms.

Smaller pieces of equipment, such as dumbbells, kettlebells, sleds, agility and speed equipment, for example, are



Gait-analysis technology allows trainers and Navy Special Warfare (NSW) personnel to see in real time areas of deficiency or imbalance, and provide a corrective plan of action in response to this data.

Special Ops Fitness

purchased from a variety of suppliers, some of which include Rogue Fitness, MEDCO, Patterson Medical, Power Systems and Perform Better.

“As proud and thankful as we are to have these incredibly valuable modalities and pieces of equipment, they cannot overshadow the quality of our personnel and the amount of time our personnel spend enhancing their craft,” Rogow pointed out. “We devote a lot of time and resources to advance our evaluation skills, manual therapy techniques, knowledge and understanding of injury, collecting and producing evidence-based research geared to enhancing both rehabilitation, as well as pre-habilitation. We, and our command, value people more than hardware; so by our command supporting our education and training, as well as many of our program initiatives, it has been this support that has been critical to our continued success.”



A new hydrotherapy pool with built-in treadmill was installed recently, providing an ideal modality for rehabbing injuries and strengthening the body in a low-impact setting.

HYDROTHERAPY

Another key area of focus is hydrotherapy, and a new HydroWorx InstaFit therapeutic pool with underwater treadmill was recently installed at the Sports Medicine Clinic.

“It has taken over two years to make this dream a reality, and we anticipate the pool to be up and running within the next month,” said Rogow. “One of the reasons we are looking forward to using the hydrotherapy pool is so we can initiate treatment and intervention sooner with many different types of acute injuries, post-op patients and chronic pain patients. With the underwater treadmill, we will be able go forward or backwards or sideways, as well as do rotational movements, so we are looking forward to increasing our capability here with hydrotherapy.”

Qualified staff members, including physical therapists, athletic trainers and strength coaches, will be responsible for the supervision and direction of the usage and therapeutic exercise within the pool. Rogow said that his experience in professional and collegiate athletics has taught him that hydrotherapy “is an incredible modality for so many athletes ... pre-hab, post-surgical, chronic pain, acute injury, recovery and much more.”

He continued, “It helps to improve total body fitness, strength, endurance or isolated joint work to maintain or improve range of motion, kinesthetic awareness and even improve resiliency and confidence with particular movements and exercises. Its capabilities are vast, and the list of exercises patients can handle are only limited by your imagination.”

DEPLOYED SUPPORT

Providing support for those who are deploying is a major responsibility for both Sports Medicine and Human Performance staff, and Rogow said that one of the goals moving forward is “increasing our umbrella to provide better musculoskeletal/sports medicine support away from our command, where we train, at our ancillary commands and where we deploy.”

Currently, Human Performance and Sports Medicine staff members meet with all deploying personnel who are interested in getting an individualized program.

The Human Performance staff orders and puts together a Fly-Away Kit for platoons and troops that request one. What Rogow called the “nuts and bolts of the conditioning program,” the items and equipment in the kit include, but are not limited to, a Concept2 Rower, medicine balls, slam balls, jump ropes, weightlifting bars, bumper plates, metal weights, collars, kettlebells, TRX, stretch bands, rumble and foam rollers, lacrosse balls, mini-bands, stretch straps, adjustable bench, squat stand, dumbbell set, gymnastic rings, Power Lift rack and pull-up bar.

“Although we have some outstanding, state-of-the-art equipment on our base, the bulk of our conditioning programs and education is centered around the equipment that will be deploying with our personnel,” said Rogow. “Our leadership has been a critical component in helping us achieve the success that we have had here.”

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—GRF