

PEARL HARBOR'S SMART CENTER RETURNS THE FLEET TO READINESS

Military service is a physically demanding occupation; service members are continually at risk for various kinds of injuries. Time that injured Sailors and Marines spend away from their jobs affects military readiness and impacts the Navy mission of national defense.



Work tasks requiring awkward postures for long periods may bring about musculoskeletal injuries.

Musculoskeletal injuries, especially involving the legs, ankles, and feet, are among Sailors' and Marines' most common non-battle injuries. Work tasks and other physically demanding activities that require a person to maintain an awkward posture for long periods of time can stress and fatigue the muscles, tendons, and ligaments that are required to hold that posture.

Frequent, long periods of maintaining such postures may bring about musculoskeletal injuries, a name given to a category of disabilities that usually involves muscle weakness and discomfort. The discomfort of a musculoskeletal injury often improves after discontinuing the activity that has brought about the injury and getting medical treatment for it.

Musculoskeletal injuries account for up to 40% of all sick call visits on board Navy ships. Treating military personnel for musculoskeletal injuries is comparable to treating professional athletes, so military medicine instituted the Sports Medicine and Rehabilitation Therapy (SMART) concept, establishing centers committed to *Return to Readiness Programs*. The SMART approach to diagnosis, treatment, and reconditioning of occupational and non-occupational musculoskeletal injuries utilizes athletic trainers, physicians and podiatrists who have been trained in sports medicine and physical therapy to rehabilitate injured military service personnel and to expedite their return to work. Prior to opening of these SMART Centers, sailors and marines



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sometimes had to wait to be diagnosed by a medical expert on musculoskeletal injuries and to be sent to physical therapy for treatment.

The SMART Center at Branch Medical Clinic Pearl Harbor, Hawaii, is the Navy's first pierside center of its kind - located within 1,000 yards of the pier, which provides easy access for shipboard personnel. The SMART Center brings the rehabilitation team together in a medical facility provided by Commander, Navy Region, Hawaii and replaces conventional treatment of musculoskeletal injuries with a multi-disciplinary approach that allows the injured Sailor or Marine to be medically evaluated, diagnosed, and treated. The injured person works with a team consisting of a sports medicine physician, physical therapist, and



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physical therapy technicians to develop and implement a treatment plan that focuses on recovery and return to duty. The team educates the patient about his or her injury and provides the injured person with demonstrations of the exercises necessary to get back to full duty. Using contemporary sports medicine treatment methods, the sports medicine doctor or physical therapist

places the patient in a daily treatment program for his or her specific musculoskeletal injury while maintaining the patient's cardiovascular fitness.

Combining treatment of the injury with preserving overall physical fitness expedites return to full duty without risking further injury.



Timely diagnosis and treatment helps to reduce pain and expedites treatment.

Primary Care Managers (routine health providers) send their injured Sailors and Marines to the SMART Center for medical evaluation and treatment without waiting for appointments. Timely

diagnosis and treatment helps to reduce pain and expedites treatment by decreasing swelling and stiffness of the injured area. The benefit is an accelerated return of range of motion, strength endurance, and power. Sports medicine specialists interview, examine, and evaluate each patient to determine the type and extent of the musculoskeletal injury. After the diagnosis is

confirmed by the Primary Care Manager or Sports Medicine Physician, the injured individual is paired with a physical therapist or a physical therapy trainer, who assists the physical therapist to help improve mobility, relieve pain, and prevent or limit permanent physical disabilities of injured patients.



Sports medicine specialists interview, examine, and evaluate patients.

Reconditioning therapy and training starts with specific therapeutic interventions designed to reduce pain and inflammation and enhance mobility and healing. The sports medicine doctor and physical therapist tailor a treatment plan for each patient's specific needs and abilities. The team approach includes education of the injured person on the specifics of his or her injury, personal treatment plan, and avoiding future injury. Active patient involvement is a key element of the SMART Center concept. The responsibility for following the



Patients are educated about their injuries and provided with demonstrations of treatment exercises.

treatment plan rests with the injured person. The patient is required by the team to demonstrate proficiency in stretching, strengthening, and endurance exercises that are designed by the team to accelerate the healing process. The individual advances through progressive exercises that correspond to the stages of healing. Though the patient spends time in the SMART Center exercising and working on reconditioning, he or she must also spend a significant amount of time exercising independently in order to have more than minimal improvement. This approach contributes appreciably to the success of reconditioning treatment.

The final phase of rehabilitation concentrates on returning the injured person to duty. During this limited duty status, where the patient's injury prevents performance of full military duties, the Primary Care Manager focuses on physical activities the individual *can*

safely perform as well as physical limitations and activities to avoid. With this focus on rehabilitation to duty, the Sailor or Marine maintains aerobic conditioning, strength, and endurance throughout the rehabilitation process to expedite returning to full duty status. For example, a leg injury may

temporarily prevent a person from running, so swimming or bicycling may be a suitable substitute aerobic activity. The goal of rehabilitating the patient is a return to as good or better physical condition than prior to injury.

Active duty members don't have to be injured to benefit from the SMART Center. In addition to the extensive rehabilitation of injured Sailors and Marines, the SMART Center extends injury prevention services to the Fleet. The Pearl Harbor SMART Center provides fundamental injury-prevention training to Sailors and Marines to help them avoid work-related and recreational injuries. Examples of classes include *Fitness/Injury Prevention, Stretching and Flexibility, and Training to Run.*



SMART Center patients are encouraged to “take charge” of their injuries for faster reconditioning and return to duty

Pearl Harbor's SMART Center also partners with the Navy Exchange to educate active duty members on how to select athletic footwear that will help prevent musculoskeletal injuries. The SMART Center maintains a display of the athletic footwear that the local Navy Exchange has in stock. The SMART Center physical therapist and sports medicine physician can determine the wearer's *foot type* (e.g., flat footed, high arched) and make recommendations on a proper athletic shoe based on foot type, size, and intended use.

In fiscal year 2000, approximately 42% of medical releases of Navy active duty members from military service were due to musculoskeletal injuries. The Navy Medical Department's SMART Center concept is a key element in preventing injuries and rehabilitating injured Sailors and Marines for return to active duty. Since the Pearl Harbor SMART Center opened in July 2002, it has successfully returned 78% of its patients to active duty status within 30 days of the patient's first SMART Center consultation. Prior to establishment of the SMART Center, this process often took more than 90 days. The obvious tangible benefits to the Center's success are the reduction in time for injured Sailors and Marines to get treatment for musculoskeletal injuries, reduction in lost man hours through a speedy return to duty, and prevention of future injuries through education.

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