
Acupuncture in the Submarine Force: Underwater Pain Management

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In response to the National Defense Authorization Act (NDAA, [2010](#)) and the Assistant Secretary of Defense for Health Affairs (ASD HA, [2011](#)) call to action to improve access to standardized comprehensive pain management for all beneficiaries in the Armed Forces, BUMED developed the Navy Comprehensive Pain Management Program (NCPMP). The NCPMP is mirrored after a program started by the Air Force that created a tiered training for acupuncture based on the research done by Dr. Niemtzw. NCPMP established evidence-based Complementary and Alternative Medicine (CAM) capabilities, to include acupuncture, throughout Navy Medicine. One CAM technique that is widely used is Battlefield (BFA) and Auricular Acupuncture (AA), also known as Auriculotherapy.

For over 2,500 years, Auriculotherapy has been utilized by Chinese culture to diagnose and treat physical and psychosomatic concerns by inserting needles into specific trigger points in the ear. Battlefield Acupuncture was created by Dr. Richard Niemtzw while on active duty in the U.S. Air Force in 2001. Dr. Niemtzw discovered that a very specific sequence of needles inserted into the ears would provide rapid and highly effective relief of nearly all types of pain and he adapted the treatment for military use including deployed environments (Niemtzow, Belard, & Nogier, [2015](#)). The results of his studies on Auriculotherapy in the military illuminated the positive effects of acupuncture, specifically on service members that were treatment resistant to more conventional Western medicine interventions for pain management. Patients in one of his studies conducted on airmen and dependents in 2003 showed significant improvements in pain and scores on Quality of Life measures at the end of the 4-week study (Niemtzow et al., [2008](#)). It is important to note that this modality is non-duty-limiting for the majority of military communities; however special attention should be placed on the flight community as this may affect flight status temporarily.

Within all areas of military medicine, non-pharmacologic and non-opioid pain therapies should be considered as first-line treatment for mild to moderate pain, which can include Auriculotherapy (DHA-PI 6025.33, [2020](#)). Specific populations within the Armed Forces that are more prone to higher rates of injury, such as Submariners, have benefited from this intervention. Vertical ladder wells, tight passageways, compact port holes, and cramped living quarters are catalysts for many pain related injuries or strain on the body as a submariner. Given the shipboard environment and space restrictions, it is understandable that the most commonly reported injuries in the Subma-

rine Force are musculoskeletal (Thomas et al., [2001](#)). Results from a study on medical evacuations aboard submarines completed by Naval Submarine Medical Research Laboratory (NSMRL), Naval Submarine Base New London from 2012-2020 showed that most medical evacuations (MEDEVAC) were for musculoskeletal, and other physical injuries (Hughes, Maguire, Nordness, & Field, [2024](#)). Of the 1,283 MEDEVACs over the course of the 8-year study, 18.4% were caused by physical injuries with the most common being sprains and strains, and blunt trauma. Demographically, junior sailors with less experience on board represented the majority of the psychiatric MEDEVACs, and senior enlisted sailors represented 18.3% of medical versus 5.5% of psychiatric-related evacuations. Engineering department, which is located in the aft or most rear of the submarine, represented 21.7% of medical MEDEVACs. This is unsurprising as the engineering area of the submarine is relatively smaller, more cramped space, than the rest of the submarine, and houses the majority of the machinery that is integral for propulsion and generating power for the entire boat.

Since becoming credentialed in BFA, the common presentation and complaint from submariners have been neck, back, and hamstring pain or injuries. Many of these injuries were re-occurring and had been previously treated through Physical Therapy or other treatment modalities; none of which were treated using BFA. The submariner clients treated with BFA by this writer reported remarkable improvement in pain symptoms. 25% of submariners that were treated by this writer showed a 2 to 3-point improvement on scores on the Defense and Veterans Pain Rating Scale (DVPRS) following their first treatment. Those that continued to follow-up for BFA regularly, showed a 3 or more point improvement on the associated pain scales. If more submariners, and military members, were offered BFA to treat pain symptoms it could very likely have a direct positive impact on mission and operational force readiness, and if offered shipboard may decrease MEDEVAC rates.

This intervention, although not widely advertised, is used in many areas of military medicine to include behavioral health clinics. Most military providers, including non-medical and non-privileged providers, can receive training in BFA and AA (BUMEDINST 6320.100, [2013](#)). Non-medical providers include mental health providers, and non-privileged providers include Corpsman, Medics, and Independent Duty Corpsman. This additional credential is rare for a mental health provider to obtain, and provides another level of clinical expertise in a niche area. Training for BFA can be obtained via completing the Auricular Ac-

upuncture course on JKO (Joint Knowledge Online), and obtaining a proctor (BFA/AA credentialed provider) for clinical supervision.

Author Note

The views expressed in this article are those of the author and do not necessarily reflect those of the Department of the Navy, Navy Medicine, the Defense Health Agency, Commander, Naval Submarine Forces, Department of Defense or the U.S. Government. Please direct questions about this article to Samantha Giangrande, PsyD, ABPP @ sjgiangrande@gmail.com.

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