

# INTEGRATIVE HEALTHCARE FOR THE MILITARY: A SAMUELI INSTITUTE/DEPARTMENT OF DEFENSE PARTNERSHIP

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**W**hen you walk into the National Intrepid Center of Excellence (NICoE) in Bethesda, MD, it quickly becomes clear that the U.S. military has embraced and recognized the value of holistic whole person approach to care. NICoE is a 72,000-sq ft, state-of-the-art facility that opened in 2010 that is dedicated to advancing clinical care, diagnosis, research, and treatment for service members with traumatic brain injury (TBI) and psychological health conditions. Funded through private donations and now transferred to the Department of Defense (DoD), the Center offers a comprehensive program for service members who have suffered TBIs in a true healing physical environment—built through the use of Evidence-Based Design principles—and a coordinated approach to care. Patients and families spend two weeks of high-tech and high-touch assessment and treatment that includes conventional treatment such as occupational therapy; virtual reality simulations; speech and hearing rehabilitation; and complementary therapies such as acupuncture, music, and art therapy. “We not only have things like acupuncture, but we try to take care of the spiritual, the physical, and the emotional psychological health of the people that we serve, and the families as well,” says Rear Admiral Thomas E. Beeman, deputy commander for NICoE.<sup>1</sup>

So, why should we be paying attention to the military’s interest in integrative medicine?

For one, it is not surprising that the military has incorporated and adopted new ideas, cutting-edge research, and even experimented with new techniques. In the 20th and 21st centuries, military medicine has been able to make a greater impact on patient care, says retired Col. Stephen Craig, MI, USA, professor of Medical History at Uniformed Services University of Health Sciences, because of the lessons from modern warfare and the types of injuries being suffered. For example, specialties such as maxillofacial surgery gained advances after World War I, and psychiatry matured as a result of the increased awareness and acknowledgment of the mental trauma caused by combat. The military is a true laboratory for social engineering, and many of the risks they have taken have proven to be valuable to advancing medicine, says Craig. The findings from the research conducted at NICoE, for example, will be widely disseminated, says its director, James Kelly, MD.<sup>1</sup>

Second, the bottom line for the military is to identify safe and effective treatments that can be implemented on a widespread basis within the current military infrastructure.<sup>2</sup> There is a pragmatism and openness that allows, in some cases, for using methods or treatments that will help get the “mission accomplished” so long as they are not harmful to the patient. This includes modalities such as acupuncture, yoga, homeopathy, and mind–body techniques.

This is where the Samuelli Institute comes in. For the last decade, the Institute, a nonprofit research organization dedicated to exploring the science of healing, has been making the case, through rigorous research, for the military in integrative therapies. Founded by philanthropists Henry and Susan Samuelli and led by Wayne Jonas, MD, a retired Army physician and former head of the National Institutes of Health (NIH) Office of Alterna-

tive Medicine, the Institute has conducted dozens of research projects ranging from acupuncture to mind body therapies to nutrition and wellness for the DoD. It began in 2001, when the DoD’s Defense Advanced Research Projects Agency (DARPA) asked the Institute to evaluate research done by Jacques Benveniste, a French immunologist, in which he asserted the ability of water to retain a “memory” of substances previously dissolved in it to arbitrary dilution. Benveniste had stated that this memory could be digitized, transmitted, and reinserted into another sample of water, which would contain the same active qualities.<sup>3</sup> The Institute’s researchers were not able to demonstrate these biological effects, says Jonas, but what was more interesting about this project was the emergence of a “social management” process for doing research in controversial areas, bringing together investigators who come in with biases on both sides of the issue. This was the first time a conflict management process was used in science to test a hypothesis. Jonas delivered the results of this social experiment to the DoD, which has since supported the development of using balanced methodologies to bring together disparate opinions that would otherwise not be investigated.

Under the leadership of Joan Walter, currently the Institute’s COO, the Center for Military Medical Research at the Institute focused on chronic pain relief, post-traumatic stress disorder (PTSD), TBI, and performance optimization in combat. “All three are areas of utmost importance in the armed forces,” Walter says. “And all three are areas where, they know and we know, the military is actively seeking adequate solutions.”

By 2009, Lt. Gen. Eric Schoomaker, Army surgeon general and U.S. Army Medical Command commander, had chartered the Army Pain Management Task Force (PMTF) to assess U.S. Army Medical Com-

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mand's, or MEDCOM's, comprehensive pain management strategy. By 2010, the Task Force's recommendations were beginning to be implemented—one phase included the expansion of nonmedication pain management modalities.

Col. Kevin T. Galloway, chief of staff and member of the PMTF, said that much of the push for integrative medicine services has come from soldiers and other military medicine beneficiaries who have had experiences with alternative care methods and vouch these methods do work in situations such as pain management. "While we have people within Army Medicine who have embraced integrative modalities such as acupuncture and yoga, the majority of the noise in our system is brought about by our patients," Galloway said. "(They) come to us saying, 'This works for me. How can I get it?'"<sup>4</sup>

To support the DoD's research needs and desires of its leadership and service members, the Institute is currently engaged in three key areas of investigation specific to military medicine and healthcare: acupuncture, mind-body therapies for stress management, and nutrition. Here are some examples of ongoing recent research projects.

## MIND-BODY THERAPIES FOR STRESS MANAGEMENT

### Integrative Restoration (iRest<sup>®</sup>) for Military Healthcare Providers

This pilot study, developed and tailored for healthcare providers who treat and care for traumatically injured service members, was conducted to assess interest, feasibility, and logistics of an Integrative Restoration (iRest<sup>®</sup>) Yoga Nidra intervention—a research-based transformative practice of deep relaxation and meditative inquiry. Participants attended six one-hour weekly sessions and practiced at home once a week. Outcome measures included stress, sleep disturbance, resilience, burnout, and compassion satisfaction. Overall, 14 participants completed the study (74%). The majority were female (80%) and nursing providers (85%). Although the results indicated a significant decrease in stress measures but no significant change in resilience or sleep from before to after the iRest intervention, all measures trended in the desired directions—a promising sign for a small pilot study. These encouraging data have resulted in a fol-

low-on randomized control study that began recruitment in 2011.

## NUTRITION

### Optimizing Omega-3

In October 2009, the Institute joined the NIH, the National Institute on Alcohol Abuse and Alcoholism (NIAAA), and DARPA in an international conference examining the role of omega-3 fatty acids on brain health, including the implications of this dietary substance on PTSD, TBI, and suicide. This conference highlighted the importance of omega-3 fatty acids on these and other health outcomes and stimulated the DoD to explore ways to increase Americans' average consumption. Several projects were launched after this meeting including the need for educational programs on omega-3 intake, the possible use of omega-3 supplements for certain populations at risk for these conditions, and modification of the diet of the animals whose byproducts provide the most readily available foods to consumers. Partnering with several food industry organizations, NIH, NIAAA, Natick Labs, the Pennington Institute, and other organizations, the Samuelli Institute is analyzing the feasibility of modifying food sources to increase their omega-3 content. The DoD is particularly interested in how increasing omega-3 fatty acids in the diet can improve brain function and resilience of soldiers.

## ACUPUNCTURE

### Auricular Stimulation Procedure for Pain

The Institute has investigated whether a simple ear acupuncture procedure—used in conjunction with standard medical care—delivered to wounded Service Members during aeromedical evacuation, might help alleviate pain. Five semipermanent needles were placed in each ear just before flight and pain scores recorded at intervals during and at the end of the flight—needles were removed upon landing. Patient and provider satisfaction scores and medication use were measured. Results of this feasibility study, the first to test the use of acupuncture for injured troops in transit, showed that the acupuncture procedure did not interfere with the normal evacuation process, may benefit some service members to augment current pain treatment during flights, and justifies that further research is warranted.

## Comparative Effectiveness Study to Evaluate Two Acupuncture Methods for the Treatment of Headaches Associated with TBI

This ongoing study is attempting to understand the speed and extent of the impact of healing prompted by two acupuncture approaches—auricular acupuncture and traditional Chinese acupuncture compared with usual medical care for treatment of headaches and the comorbidities of war-related Trauma Stress response in active duty military personnel with mild to moderate TBI. The study will also provide insights to guide future implementation of acupuncture in the military.<sup>2</sup>

Alaine Duncan, LAc, the lead acupuncturist and codesigner of the TBI headache study, says soldiers truly value the opportunity to experience nondrug approaches to restoring their lives and health. There is a greater consciousness, especially among the younger soldiers, of not wanting to become addicted to narcotics, she says, and what better way to get them back on a healthy path and return them to their best selves.

We could not agree more.

## REFERENCES

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