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VA research on

COMPLEMENTARY AND INTEGRATIVE HEALTH (CIH)

VA researchers are conducting studies to determine which CIH approaches are safe and effective, and for which conditions and populations they work best.

ABOUT CIH

• CIH consists of products and practices that are not currently part of mainstream, conventional medical practice.

• CIH emphasizes patient empowerment, self-activation, preventive self-care, and wellness, often in conjunction with traditional medical treatment or in other alternative treatment settings. These approaches may be considered complementary (i.e., used in place of or along with standard medical care). Integrative medicine refers to care that blends both mainstream and alternative practices.

• The boundaries between CIH and conventional medicine are not absolute, although most CIH approaches fall into one of two subgroups: natural products (e.g., herbs, vitamins and minerals, and probiotics) and mind and body practices (e.g., yoga, meditation, massage therapy, acupuncture, and relaxation techniques).

• More than 30 percent of American adults and about 12 percent of children use health care approaches developed outside of mainstream conventional medicine, according to the National Center for Complementary and Integrative Health.

• In VA, CIH approaches are most commonly used to improve Veterans' mental health, manage pain, and promote general wellness. More specifically, these approaches are often used to treat PTSD, depression, back pain, headache, arthritis, fibromyalgia (long-term pain throughout the body), and substance abuse.

VA RESEARCH ON CIH: OVERVIEW

• One of the greatest challenges in CIH is critically examining the effectiveness of approaches that have not been rigorously tested through formal research. VA researchers remain committed to addressing these scientific gaps.

• VA is studying a wide variety of CIH approaches. Researchers are studying natural products, such as using probiotics to treat Gulf War illness, fecal transplants for *C. difficile* infections, and fish oil to slow the progression of Alzheimer's disease. Others are researching how mind and body practices such as meditation, yoga, and exercise can be used to treat conditions ranging from PTSD and depression to diabetes and chronic pain.

• One of the exciting CIH initiatives being undertaken in VA involves participation in the NIH-DOD-VA Pain Management Collaboratory (PMC). Launched in 2017, PMC is investing $81 million over six years to fund research projects that will develop, implement, and test nondrug approaches for pain and related conditions in military personnel and Veterans.

SELECTED MILESTONES AND MAJOR EVENTS

2006 - Demonstrated that glucosamine and chondroitin sulfate, taken either alone or in combination, do not reduce pain effectively in patients with osteoarthritis of the knee

2011 - Reported that 90 percent of VA facilities offered CIH therapies, or referred Veterans to licensed practitioners

2014 - Found that vitamin E, an inexpensive treatment, can significantly delay functional decline among patients with mild to moderate Alzheimer's disease

2015 - Learned that mindfulness therapy may be more effective than standard group therapy in treating PTSD

2017 - Determined, along with other researchers, that meditation can reduce the risk of cardiovascular disease

2017 - Partnered with other federal agencies to fund $81 million in new research on non-drug treatment of pain for military personnel and Veterans

2017 - Observed that yoga may help back pain and reduce reliance on opioids

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RECENT STUDIES: SELECTED HIGHLIGHTS

Curcumin may lead to better cognition and mood for patients with Gulf War illness, according to a Central Texas Veterans Health Care System study. Curcumin is a key compound in the spice turmeric. In the study, rats with simulated GWI treated with curcumin had better cognitive and mood function than those receiving a placebo, and also showed better growth and development of nerve tissues and less inflammation. (*Brain, Behavior, and Immunity*, March 2018)

Increased physical activity improves cognition in breast cancer survivors, found a study featuring a VA San Diego Healthcare System researcher. Patients who had been diagnosed with breast cancer within the past two years and underwent a 12-week exercise program had significantly improved processing speed, compared with those not in the exercise program. This effect was not seen in patients who were more than two years post-surgery. (*Cancer*, Jan. 1, 2018)

Fecal transplants reduced hospitalizations and improved cognition in patients with cirrhosis and hepatic encephalopathy. Researchers at the Hunter Holmes McGuire VA Medical Center transferred stool from a healthy donor to cirrhosis patients with hepatic encephalopathy, a brain disorder that is a common complication of liver disease. The transplants improved brain functioning, reduced confusion, and reduced hospitalization. The small study demonstrated that even in very sick patients with liver disease, fecal transplants can be safe and may improve brain functioning. (*Hepatology*, December 2017)

Yoga improved health outcomes for Veterans with low back pain, in a VA San Diego Healthcare System study. Participants attended twice-weekly yoga classes for 12 weeks, along with home practice. Yoga participants had less pain intensity both immediately and six months after the classes, and scored lower on a disability measure six months later, compared with those not taking the yoga classes. Yoga improved health outcomes for Veterans even though the study group had fewer resources, worse health, and more challenges attending classes than similar groups from non-Veteran studies. (*American Journal of Preventative Medicine*, November 2017)

Researchers at the VA Iowa City Health Care System found that menhaden (fish) oil can improve and sometimes even reverse nerve damage in the eyes of diabetic rats. The effects were even more profound when fish oil was combined with α-lipoic acid, an antioxidant found in the body, and enalapril, a blood pressure medicine. The authors believe the approach may be effective for treating other vascular and neural complications of type 2 diabetes as well. (*Cornea*, June 2017)

A mantram repetition program significantly decreased insomnia and PTSD symptoms in Veterans. The VA San Diego Healthcare System study taught Veterans with PTSD mantram techniques in a group setting over eight weeks, and encouraged them to practice in their day-to-day lives. Mantram therapy involves silently repeating a personally significant word or phrase to redirect the attention and deal with stress. The results show that mantram meditation could provide an easy and manageable way to deal with insomnia and other PTSD symptoms. (*Advances in Nursing Science*, April/June 2017)

A large international study including VA researchers from Indianapolis may have found how electroacupuncture eases pain and promotes tissue repair. Acupuncture is an ancient Chinese technique wherein the skin is pricked with needles at specific points to alleviate pain and treat various conditions. In electroacupuncture, the needles carry a mild electrical current. The team found that electroacupuncture triggers the release of mesenchymal stem cells into the blood stream. These stem cells are linked to a range of healing effects, such as the release of proteins that quell inflammation, and of the body's own natural opioids. (*Stem Cells*, May 2017)

For more information on VA studies on complementary and integrative health, and other key topics relating to Veterans' health, please visit www.research.va.gov/topics

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