



VA research on **PAIN MANAGEMENT**

Pain is one of the most common reasons Americans consult a physician. Joint and back pain and other musculoskeletal ailments are the most common diagnoses among Veterans of the wars in Iraq and Afghanistan.

ABOUT PAIN MANAGEMENT

- According to [NIH](#), 65.6 percent of Veterans reported having pain over a three month period, with 9.1 having severe pain. Severe pain was 40 percent greater in Veterans than non-Veterans, especially among those who served in recent conflicts.
- Chronic pain can cause disability, loss of work productivity, and increased health care costs.
- Unrelieved and persistent chronic pain contributes to depression, anxiety, poor sleep patterns, decreased quality of life, and substance use disorders.
- Medication is the most common treatment for both acute and chronic pain. For patients interested in treatments other than or in addition to medication, complementary and integrative medicine—such as acupuncture and yoga—is a popular option.

VA RESEARCH ON PAIN MANAGEMENT: OVERVIEW

- VA researchers are working to develop new approaches to alleviate Veterans' pain, which may result from spinal cord injury, burns, amputations, traumatic brain injury, cancer, or musculoskeletal conditions. Some types of chronic pain, such as the

nerve pain experienced by many people with spinal cord injury, are very difficult to treat.

- The [Center for Neuroscience and Regeneration Research](#), a collaboration between VA and its partners, conducts biomedical research that contributes to the scientific understanding of pain, especially nerve pain. The center is dedicated to molecular and cell-based discoveries on nervous system function.
- VA's [Pain, Research, Informatics, Medical Comorbidities, and Education \(PRIME\) Center](#), part of the VA Connecticut Healthcare System, conducts research to improve pain care and sponsors education activities for Veterans and clinical staff.
- The [Chronic Pain Rehabilitation Program](#) at the James A. Haley Veterans Hospital in Tampa, Florida, is a nationally known center for chronic pain research, treatment, and education. The CPRP offers inpatient and outpatient rehabilitation programs to help Veterans manage their chronic pain conditions.
- The [Center for Health Equity Research and Promotion \(CHERP\)](#) is a VA HSR&D Center of Innovation whose mission is to advance the quality and equity of health care for vulnerable Veteran Populations. CHERP is examining the associations of socio-

economic status and geographic residence with pain management in Veterans.

- The [Pain Management and Patient Aligned Care CREATE](#) has three goals: to enhance Veterans' access to pain care, to use health information technology to promote better pain care for Veterans, and to build sustainable improvements in pain care.
- VA's [Stepped Care Model for Pain Management](#) gives clinicians the ability to assess and treat pain within a primary care setting, while enabling them to use other treatment options including specialized care and multidisciplinary approaches. The model is designed to ensure VA clinicians are fully trained in pain management techniques, that pain assessment is performed consistently throughout VA, and that Veterans receive prompt and appropriate treatment.

SELECTED MILESTONES AND MAJOR EVENTS

- 1988** - Established a [chronic pain rehabilitation program](#) in Tampa to help Veterans with chronic pain cope with their conditions
- 1988** - Distributed the first national [pain management strategy](#), which established pain management as a national VA priority

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2003 - Mandated, in a VA [directive](#), that all patients be systematically screened for the presence and intensity of pain

2009 - Established the [stepped care model for pain management](#) as VA's nationwide standard of pain care

2014 - [Announced](#), along with NIH, a five-year, \$21.7 million quality-improvement initiative to explore non-drug approaches to managing pain and related health conditions

2015 - [Found](#) that ion channels—specialized proteins in the membrane of brain cells—are heavily implicated in the biological mechanisms that generate and sustain neuropathic pain

2016 - [Established](#) a musculoskeletal diagnosis cohort to characterize variation in pain, comorbidities, treatment and outcomes among more than 5 million patients

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

RECENT STUDIES: SELECTED HIGHLIGHTS

• **Cerebral white matter structure is disrupted in Gulf War Veterans with chronic musculoskeletal pain**, found a

William S. Middleton Memorial Veterans Hospital study. White matter integrity was connected to intensity of pain and mood symptoms. Widespread white matter microstructure damage across brain regions may alter pain processing and modulation in chronic pain, conclude the researchers. ([Pain](#), December 2017)

• **Yoga improved health outcomes for Veterans with chronic low back pain.** The VA San Diego Healthcare System study had Veterans practice yoga twice weekly for 12 weeks. Those practicing yoga improved more on pain intensity after 12 weeks and six months than those who did not. ([American Journal of Preventative Medicine](#), November 2017)

• **Chiropractic care improved low back pain for female Veterans**, in a VA Western New York Healthcare System study. After an average of eight chiropractic visits, women in the study saw a 27 percent improvement of their back pain. The results show that chiropractic care may be of value in contributing to the pain management needs of this unique patient population. ([Journal of Manipulative and Physiological Therapeutics](#), October 2017)

• **Transcranial direct current stimulation lowered pain in patients with knee osteoarthritis.** A team including

a VA South Central MIRECC researcher treated 40 patients with electrical stimulation applied to the brain via exterior electrodes. After five daily sessions, patients said they had less knee pain, and the pain reduction lasted up to three weeks. ([Brain Stimulation](#), Sep.-Oct. 2017)

• **Interactive voice-response cognitive behavioral therapy is as effective as in-person therapy to reduce chronic pain**, according to a study by VA researchers from several centers. Patients treated with the interactive voice-response therapy received a self-help manual and weekly prerecorded therapist feedback based on their reported activity, coping skill practice, and pain outcomes. Both remote and in-person patients had similar levels of pain reduction. ([JAMA Internal Medicine](#), June 1, 2017)

• **The medication gabapentin appears to be ineffective at relieving low back pain**, found VA San Diego Healthcare System researchers. Although gabapentin is often prescribed for chronic low back pain, study participants taking gabapentin did not have more pain reduction than those receiving a placebo. There was also no difference in pain improvement between participants with radiating and nonradiating pain. ([Pain](#), July 2016)

Severe pain was 40 percent greater in Veterans than non-Veterans, especially among those who served in recent conflicts.

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