



Photo: Sgt. Peter Tibbodeau



## VA research on

# POSTTRAUMATIC STRESS DISORDER (PTSD)

*In earlier wars, it was called “soldier’s heart,” “shell shock,” or “combat fatigue.” Today, clinicians recognize the issues described by each of these terms as a distinct medical condition called posttraumatic stress disorder, or PTSD.*

## ABOUT PTSD

- PTSD can occur after a traumatic event like combat, assault, or disaster. While stress is common after a trauma, for those with PTSD reactions such as reliving an event in their mind and feeling distant or angry do not go away over time, and can even get worse.
- While PTSD can affect people who have experienced a wide range of life-threatening events, in Veterans the condition is commonly associated with combat trauma. It has taken a significant toll on many war Veterans who currently use VA health care, including Iraq and Afghanistan Veterans. Military sexual assault or harassment can also lead to PTSD.
- The disorder can lead to distressing and persistent symptoms, including re-experiencing the trauma through flashbacks or nightmares, emotional numbness, insomnia, relationship problems, sudden anger, and drug and alcohol abuse. Recently, reckless and self-destructive behavior has been added as a PTSD symptom.

## VA RESEARCH ON PTSD: OVERVIEW

- VA has a continuing commitment to fund efforts to understand, prevent, and treat PTSD. The wide-ranging nature of current PTSD research includes studies of Veterans at large, subgroups of Veterans, families,

and couples. Veterans of all eras are included in these studies.

- Ongoing studies range from investigations of the genetic or biochemical foundations of the disorder to evaluations of new or existing treatments.
- VA’s [National Center for PTSD](#) (NCPTSD) is a world leader in research and education programs focusing on PTSD and other psychological and mental consequences of traumatic stress. It currently consists of seven VA academic centers of excellence across the United States, with headquarters in White River Junction, Vermont.
- VA’s [National PTSD Brain Bank](#) is a brain tissue repository that supports research on the causes, progression, and treatment of PTSD. The bank is responsible for tissue acquisition and preparation, diagnostic assessment, and storage. Most of the brains stored in the bank are from people once diagnosed with PTSD. Others are from donors who had major depressive disorders. Other brains are from healthy controls. The goal is to help to pinpoint how PTSD affects brain structure and function.
- In 2013, VA and the Department of Defense (DoD) announced that the two departments together were committing more than \$100 million to fund [two new](#)

[consortia](#) aimed at improving diagnosis and treatment of PTSD and mild traumatic brain injury. These organizations are bringing together leading scientists and researchers throughout the nation, and are part of VA and DoD’s response to an executive order to improve access to PTSD services for Veterans, service members, and military families.

## SELECTED MILESTONES AND MAJOR EVENTS

- 1989** – Created the [National Center for PTSD](#)
- 2007** – [Confirmed](#) the value of prolonged exposure therapy
- 2013** – Funded, along with the DoD, two [consortia](#) to improve treatment for PTSD and mTBI
- 2014** – [Found](#) that cognitive processing therapy by videoteleconferencing is as effective for PTSD as in-person therapy
- 2014** – [Found](#) that Veterans who sought and received care soon after their service had lower rates of PTSD than those who waited to get treatment
- 2016** - Announced the [PTSD Psychopharmacology Initiative](#) to foster work on identifying, testing, and confirming the most effective PTSD medications for Veterans

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**2016** - [Learned](#) that Veterans with PTSD had different patterns of brain activity than Veterans with mTBIs

**2017** - [Found](#) that prolonged exposure therapy could be delivered as effectively by videoconferencing as in person

**RECENT STUDIES: SELECTED HIGHLIGHTS**

**The dentate gyrus section of the hippocampus in the brain is significantly smaller in Veterans with PTSD** compared to those without, found a VA Boston Healthcare System study. Patients with more severe PTSD symptoms showed smaller dentate gyrus measurements. Smaller hippocampus volume has been shown by other studies to be a marker of PTSD; this study expands on these findings by identifying a specific area of the hippocampus affected. ([Journal of Psychiatric Research](#), December 2017)

**Coast Guard personnel had similar rates of PTSD and major depressive disorder as other military branches** in a study of 241 active duty Coast Guard members. Coast Guard members serving Boat Stations engage in stressful actions such as search and rescue. Fifteen percent of those studied had PTSD, while 8 percent had major depressive disorder, similar to rates seen in service members after combat deployment. Non-military trauma was

twice as common as military-related trauma in those with PTSD. ([Frontiers in Psychology](#), Sep. 14, 2017)

**Evidence is lacking on potential benefits of medical marijuana for PTSD**, according to a VA Portland Health Care System review. Despite medical marijuana being available in several states to treat PTSD, available research does not show any symptom improvement over nonuse. The researchers found only five studies, and the available evidence was deemed biased and insufficient. More research is needed before conclusions can be drawn on the usefulness of marijuana in treating PTSD. ([Annals of Internal Medicine](#), Sep. 5, 2017)

**Reckless and self-destructive behaviors are common among Veterans exposed to trauma** and may perpetuate PTSD symptoms by increasing exposure to new adverse events. VA Boston Healthcare System researchers found that Veterans who engaged in reckless behavior over a four year period had worse PTSD symptom severity than those who did not. Of 148 Veterans studied, 74 percent engaged in reckless behavior, with 63 percent engaging in multiple forms. Reckless behavior included risky alcohol/drug use, driving while intoxicated, gambling, and aggression. ([Journal of Traumatic Stress](#), June 2017)

**People with PTSD have significantly higher risk of dementia** than those without, and some psychotropic medications may increased this risk, according to University of Iowa and Iowa City VA Health Care System researchers. In a study of more than 400,000 Veterans, the researchers found that Veterans who took SSRIs, atypical antipsychotics, or novel antidepressants to treat their PTSD had higher risk of dementia than those with PTSD who did not take these medications. More research is needed to determine whether the medications increase dementia risk or are reflective of higher psychiatric symptoms that increase the risk. ([Journal of the American Geriatric Society](#), May 2017)

**A large genomic study revealed that PTSD has shared genetic risks with other psychological disorders.** Researchers studied the genomes of more than 20,000 people. They found that people at higher risk for PTSD were also at higher risk for schizophrenia. PTSD also shares genetic risk with bipolar disorder and major depressive disorder, although the connection is not as strong as it is to schizophrenia. ([Molecular Psychiatry](#), April 25, 2017)

**For more information on VA studies on PTSD and other key topics relating to Veterans' health, please visit [www.research.va.gov/topics](http://www.research.va.gov/topics)**

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