A new study has found that women with PTSD were about 80 percent more likely to develop dementia than women who did not have PTSD, and women with depression were about 70 percent more likely to develop dementia than women who did not have depression.

Female military veterans who have traumatic brain injury (TBI), post-traumatic stress disorder (PTSD), or depression long after their service may be more likely to later develop dementia than female veterans without those conditions, according to a study published in the December 12, 2018, online issue of Neurology, the medical journal of the American Academy of Neurology.

Previous studies have shown that male veterans with these conditions may be at higher risk of dementia, but few studies have included female veterans, said study first author Kristine Yaffe, MD, a professor of psychiatry, neurology, and epidemiology at the University of California, San Francisco, the Roy and Marie Scola Endowed Chair, and Department of Psychiatry Vice Chair for the UCSF Weill Institute for Neurosciences.

Understanding how these conditions affect women is critical as more women join the military, more women take on combat roles and since women may be at greater risk for these
conditions. It’s estimated that almost one in three veterans deployed for Operations Enduring Freedom and Iraqi Freedom have one of these conditions.

Kristine Yaffe, MD [2]

The study involved 109,140 female veterans with an average age of 69 who received care at a Veterans Health Administration medical center and had at least one follow-up visit. Participants’ medical records were reviewed to determine who had a diagnosis of traumatic brain injury (TBI), post-traumatic stress disorder (PTSD), or depression at the start of the study.

A total of 81,135 women had none of the conditions; 20,410 had depression only; 1,363 had PTSD only; 488 had TBI only; and 5,044 had more than one condition.

None of the participants had dementia at the start of the study. During the average of four years of follow-up, 4,125 of the women, or 4 percent, developed dementia.

The study found that women with PTSD were about 80 percent more likely to develop dementia than women who did not have PTSD. Women with depression were about 70 percent more likely to develop dementia than women who did not have depression.

Women with traumatic brain injury were about 50 percent more likely to develop dementia than women who did not have traumatic brain injury. The risk of dementia was doubled for women with more than one of these conditions, compared to women who did not have any of the conditions.

These results were calculated after researchers adjusted for other factors that could affect the risk of dementia, such as high blood pressure, diabetes, and alcohol abuse. The results were similar to what previous studies have found in male veterans.

Of the women with none of the conditions, 3.4 percent developed dementia, compared to 5.2
percent of the women with depression, 3.9 percent of the women with PTSD, 5.7 percent of the women with TBI, and 3.9 percent of the women with more than one condition.

These results highlight the need for increased screening for TBI, PTSD, and depression, particularly among female veterans, as well as the potential role for treatment for these conditions to reduce dementia risk, Yaffe said.

Yaffe noted that the study does not determine that these conditions cause an increase in dementia; it shows an association.

A limitation of the study is that researchers used medical diagnoses codes to determine who had depression, PTSD, TBI, and dementia, and it is possible that women with less severe symptoms of these disorders did not receive diagnoses and were not counted.

The study was supported by the U.S. Department of Defense and the National Institute on Aging. Additional authors of the study were Deborah E. Barnes, PhD [4], and Shira Maguen, PhD [5], of the UCSF Department of Psychiatry and the San Francisco VA Health Care System, and Sandy J. Lwi, PhD; Tina D. Hoang, MPH; Feng Xia, MPH; and Carrie B. Peltz, PhD, of the San Francisco VA Health Care System.

Read the study

- Neurology: Military-related risk factors in female veterans and risk of dementia [1]

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About UCSF Psychiatry

The UCSF Department of Psychiatry [6], UCSF Langley Porter Psychiatric Hospital and Clinics [7], and the Langley Porter Psychiatric Institute are among the nation's foremost resources in the fields of child, adolescent, adult, and geriatric mental health. Together they constitute one of the largest departments in the UCSF School of Medicine and the UCSF Weill Institute for Neurosciences, with a mission focused on research (basic, translational, clinical), teaching, patient care, and public service.

UCSF Psychiatry conducts its clinical, educational and research efforts at a variety of locations in Northern California, including UCSF campuses at Parnassus Heights, Mission Bay and Laurel Heights, UCSF Medical Center, UCSF Benioff Children's Hospitals, Zuckerberg San Francisco General Hospital and Trauma Center, the San Francisco VA Health Care System, and UCSF Fresno.

About the UCSF Weill Institute for Neurosciences

The UCSF Weill Institute for Neurosciences [8], established by the extraordinary generosity of Joan and Sanford I. "Sandy" Weill, brings together world-class researchers with top-ranked physicians to solve some of the most complex challenges in the human brain.

The UCSF Weill Institute leverages UCSF?s unrivaled bench-to-bedside excellence in the neurosciences. It unites three UCSF departments?Neurology, Psychiatry, and Neurological Surgery?that are highly esteemed for both patient care and research, as well as the Neuroscience Graduate Program, a cross-disciplinary alliance of nearly 100 UCSF faculty members from 15 basic-science departments, as well as the UCSF Institute for...
Neurodegenerative Diseases, a multidisciplinary research center focused on finding effective treatments for Alzheimer’s disease, frontotemporal dementia, Parkinson’s disease, and other neurodegenerative disorders.

About UCSF

UC San Francisco (UCSF) [9] is a leading university dedicated to promoting health worldwide through advanced biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care. It includes top-ranked graduate schools of dentistry, medicine, nursing and pharmacy; a graduate division with nationally renowned programs in basic, biomedical, translational and population sciences; and a preeminent biomedical research enterprise.

It also includes UCSF Health [10], which comprises three top-ranked hospitals ? UCSF Medical Center and UCSF Benioff Children’s Hospitals in San Francisco [11] and Oakland [12] ? as well as Langley Porter Psychiatric Hospital and Clinics, UCSF Benioff Children’s Physicians, and the UCSF Faculty Practice. UCSF Health has affiliations with hospitals and health organizations throughout the Bay Area. UCSF faculty also provide all physician care at the public Zuckerberg San Francisco General Hospital and Trauma Center, and the San Francisco VA Medical Center. The UCSF Fresno Medical Education Program is a major branch of the University of California, San Francisco’s School of Medicine.

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