

## Veterans With PTSD May Be at Higher Risk for Heart Disease

More hardening of the arteries, higher death rate in vets with the disorder, researchers find

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WEDNESDAY, Nov. 17 (HealthDay News) -- Veterans suffering from post-traumatic stress disorder, or PTSD, appear to be at higher risk for heart disease.

For the first time, researchers have linked PTSD with severe atherosclerosis (hardening of the arteries), as measured by levels of calcium deposits in the arteries.

The condition "is emerging as a significant risk factor," said Dr. Ramin Ebrahimi, co-principal investigator of a study on the issue presented Wednesday at the annual meeting of the American Heart Association in Chicago.

The authors are hoping that these and other, similar findings will prompt doctors, particularly primary care physicians, to more carefully screen patients for PTSD and, if needed, follow up aggressively with screening and treatment.

Post-traumatic stress disorder -- triggered by experiencing an event that causes intense fear, helplessness or horror -- can include flashbacks, emotional numbing, overwhelming guilt and shame, being easily startled, and difficulty maintaining close relationships.

"When you go to a doctor, they ask questions about diabetes, high blood pressure and cholesterol," said Ebrahimi, who is a research scientist at the Greater Los Angeles Veterans Administration Center. "The goal would be for PTSD to become part of routine screening [for heart disease risk factors]."

Although PTSD is commonly associated with war veterans, it's now also widely linked to people who have survived traumatic events, such as rape, a severe accident or an earthquake, flood or other natural disaster.

The authors reviewed electronic medical records of 286,194 veterans, most of them male with an average age 63, who had been seen at Veterans Administration medical centers in southern California and Nevada. Some of the veterans had last been on active duty as far back as the Korean War.

Researchers also had access to coronary artery calcium CT scan images for 637 of the patients, which showed that those with PTSD had more calcium built up in their arteries -- a risk factor for heart disease -- and more cases of atherosclerosis.

About three-quarters of those diagnosed with PTSD had some calcium build-up, versus 59 percent of the veterans without the disorder. As a group, the veterans with PTSD had more severe disease of their arteries, with an average coronary artery calcification score of 448, compared to a score of 332 in the veterans without PTSD -- a significantly higher reading.

This is the first time atherosclerosis has been identified as a possible reason for elevated heart disease in people with PTSD, the authors stated.

Veterans with PTSD were also more likely than their counterparts to die from all causes.

During an average follow-up of almost 10 years, and after adjusting for age, gender, and common risks for heart disease, the researchers discovered that veterans diagnosed with PTSD had 2.41 times the rate of death from all causes, compared to veterans without PTSD.

In fact, PTSD was diagnosed in only 10.6 percent of all the veterans studied, but nearly 30 percent of those who died had PTSD, the results showed.

Among the veterans with a calcium build-up in their arteries, those with PTSD had a 48 percent increased risk of death overall and a 41 percent increased risk of dying from cardiovascular disease, compared to their peers without the disorder.

The authors suspect that PTSD may lead to more severe atherosclerosis because of the release of various stress hormones (epinephrine, norepinephrine, cortisol) associated with the fight-or-flight response characteristics of the disorder.

"That may be injuring the arterial wall," explained Dr. Naser Ahmadi, the study's co-principal investigator and a research scientist with the Greater Los Angeles Veterans Administration Medical Center.

It should be noted that the study did not prove a cause-and-effect, however. And since it was presented at a meeting, the data and conclusions should be viewed as preliminary until published in a peer-reviewed journal.

Dr. Robert Eckel, past president of the American Heart Association and professor of medicine at the University of Colorado, Denver, feels that the specific mechanism is still unclear: Why exactly is PTSD linked to atherosclerosis?

"There's not a clear mechanism. It could be blood pressure, cholesterol, different diets. Do people with PTSD eat more fast food? Are they less physically active? Are they smokers?" Eckel said.

A next step might be to compare people with PTSD with people who have other psychiatric conditions such as depression or schizophrenia, Eckel added.

"This is the tip of the iceberg," he said. "We need more surveillance with radar to see under the tip."

### More information

The National Center for PTSD has more on [this condition](#).

*SOURCES: Naser Ahmadi, M.D., research scientist, Greater Los Angeles Veterans Administration Medical Center; Ramin Ebrahimi, M.D., clinical professor, University of California, Los Angeles, and director of interventional cardiology and co-director, Cardiac Catheterization Lab, Greater Los Angeles VA; Robert Eckel, M.D., professor of medicine, University of Colorado Denver and past president, American Heart Association; Nov. 17, 2010, presentation, American Heart Association annual meeting, Chicago*

