

PTSD linked to increase risk in heart disease

June 1 2011, by Deborah Braconnier



(Medical Xpress) -- New research by Dr. Ramin Ebrahimi and his team from the Greater Los Angeles Veterans Administration Medical Center was published in *The American Journal of Cardiology* and shows a link between post-traumatic stress disorder (PTSD) and a higher risk of heart disease.

Ebrahimi and his team looked at 637 military veterans that were suspected of having heart disease and screened them for signs of PTSD and [coronary artery disease](#). The average age of the participants was 60 years old and the majority of them were men. Of the 637 individuals, 88 of them also suffered from PTSD.

They conducted calcium scans of the participant's hearts and found that

the majority of them had some plaque buildup in the arteries. More than 75 percent of the veterans with PTSD showed narrowed arteries while it they were seen in only 59 percent of those that did not. The participants were followed for three and a half years and during that time, 10 percent of the veterans without PTSD had died while it was 17 percent of those with PTSD. In cases where the plaque buildup was comparable between those with and without PTSD, those that suffered with PTSD had a higher rate of death.

While they are still unclear as to what the direct link is between PTSD and physical health, they believe that it is possible that the stress hormones influence the increased risk of heart disease. They believe that screening for heart disease in patients with PTSD is essential.

While [PTSD](#) is best known for its connection to soldiers and those who have been in combat situations, it also affects individuals who have been raped, attacked in some form or have survived natural disasters such as a hurricane or tornado.

More information: Post-traumatic Stress Disorder, Coronary Atherosclerosis, and Mortality, *The American Journal of Cardiology*, [doi:10.1016/j.amjcard.2011.02.340](https://doi.org/10.1016/j.amjcard.2011.02.340)

Abstract

Post-traumatic stress disorder (PTSD) is associated with increased risk of multiple medical problems including myocardial infarction. However, a direct link between PTSD and atherosclerotic coronary artery disease (CAD) has not been made. Coronary artery calcium (CAC) score is an excellent method to detect atherosclerosis. This study investigated the association of PTSD to atherosclerotic CAD and mortality. Six hundred thirty-seven veterans without known CAD (61 ± 9 years of age, 12.2% women) underwent CAC scanning for clinical indications and their psychological health status (PTSD vs non-PTSD) was evaluated. In

subjects with PTSD, CAC was more prevalent than in the non-PTSD cohort (76.1% vs 59%, $p = 0.001$) and their CAC scores were significantly higher in each Framingham risk score category compared to the non-PTSD group. Multivariable generalized linear regression analysis identified PTSD as an independent predictor of presence and extent of atherosclerotic CAD ($p < 0.001$ compared to subjects without PTSD and CAC score equal to 0). With a CAC score equal to 0, risk of death was not different between subjects with and without PTSD (RR 1.04, 95% CI 0.67 to 6.82, $p = 0.4$). Risk of death in each CAC category was higher in subjects with PTSD compared to matched subjects without PTSD (RRs 1.23 for CAC scores 1 to 100, 1.51 for CAC scores 101 to 400, and 1.81 for CAC scores ≥ 400 , $p < 0.001$).

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