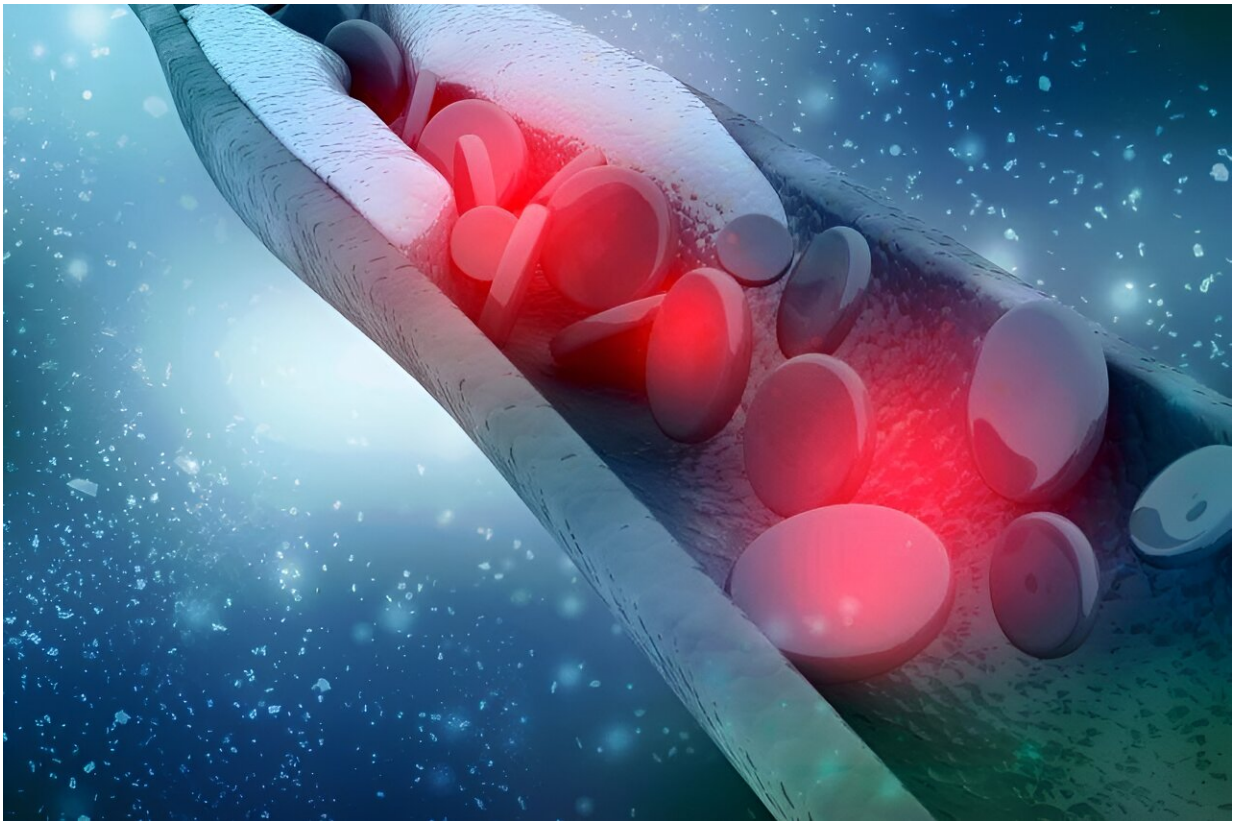


PTSD symptoms linked to higher carotid atherosclerosis in women

November 3 2023, by Elana Gotkine



For midlife women, posttraumatic stress disorder (PTSD) symptoms are associated with higher carotid atherosclerosis and with greater brain small vessel disease and poorer cognitive performance among *APOE* $\epsilon 4$

carriers, according to a study published online Nov. 2 in *JAMA Network Open*.

Rebecca C. Thurston, Ph.D., from the University of Pittsburgh, and colleagues examined whether PTSD symptoms among midlife women are associated with carotid intima media thickness (IMT), brain white matter hyperintensity volume (WMHV), and cognitive performance in a cross-sectional study.

Participants included 274 community-based women ages 45 to 67 years (64 were *APOE* ϵ 4 carriers) who completed questionnaires (PTSD Checklist-Civilian Version), physical measures, phlebotomy, neuropsychological testing, a carotid ultrasonographic examination, and 3-Tesla brain magnetic resonance imaging.

The researchers observed an association for higher PTSD symptoms with greater carotid IMT (multivariable $\beta = 0.07$). There was significant variation noted by *APOE* ϵ 4 status in the association of PTSD symptoms with neurocognitive outcomes.

In multivariable models, PTSD symptoms were associated with greater whole-brain WMHV, periventricular WMHV, deep WMHV, and frontal WMHV ($\beta = 0.96, 0.90, 1.21$, and 1.25 , respectively) among women with *APOE* ϵ 4, as well as poorer cognition, specifically attention and working memory, semantic fluency, perceptual speed, and processing speed ($\beta = -3.37, -6.01, -12.73$, and -11.05 , respectively).

"Our findings point to an at-risk population that may warrant [early intervention](#) and prevention efforts to reduce cardiovascular and neurocognitive risk at midlife and beyond," the authors write.

More information: Rebecca C. Thurston et al, Posttraumatic Stress Disorder Symptoms and Cardiovascular and Brain Health in Women,

JAMA Network Open (2023). [DOI: 10.1001/jamanetworkopen.2023.41388](https://doi.org/10.1001/jamanetworkopen.2023.41388)

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