

Study links depression to arterial stiffness during stress

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(Medical Xpress)—According to a study by researchers at Emory's Rollins School of Public Health, symptoms of depression are associated with an increase in arterial stiffness induced by mental stress. Arterial stiffness indicates a reduced capability of an artery to expand and contract in response to blood pressure change. It is an important indicator of future cardiovascular events and has been shown to worsen during stressful conditions.

The Emory team studied 81 young and middle-aged patients who had a recent heart attack. All subjects underwent an acute emotional stress task in addition to a standard exercise stress test. The researchers measured [arterial stiffness](#) with a Pulse Wave Velocity system, at rest and 60 minutes after stress, and calculated stress-induced changes in arterial

stiffness.

Depressive symptoms significantly increased arterial stiffness induced by [mental stress](#), but had no effect on arterial stiffness with exercise. These results were not explained by differences in [cardiovascular risk factors](#) or heart disease severity.

"Depression may cause worsened arterial stiffness with [stressful conditions](#), but not with exercise," says lead author Pratik Pimple, MBBS, from Emory's Rollins School of Public Health.

"These findings may help explain why depression is linked to adverse cardiovascular outcomes," adds Viola Vaccarino, MD, PhD, the study director and the Wilton Looney Chair of Cardiovascular Research in the Department of Epidemiology at Rollins.

Provided by Emory University

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