Mental Stress Tougher on Women's Heart Health

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Mental or emotional stress might be worse on the heart health of women than it is on men, according to a Penn State College of Medicine study reported by ScienceDaily.

For the study, researchers followed 17 healthy men and women, measuring their resting heart rates, blood pressure and coronary vascular conductance—an ultrasound measurement of blood flow through the blood vessels supplying oxygen to the heart. In order to produce mental stress, scientists gave participants three minutes to solve math problems in their heads while subjecting them to harassment. At the end of the testing period, researchers measured participants' heart rate, blood pressure and vascular conductance again.

Findings showed men and women had similar test results at the start of the experiment, and the heart rates and blood pressure of both sexes increased after they were mentally stressed. But scientists noted that the men had increased blood flow through the blood vessels after stress-indicating that more oxygenated blood was being sent to supply the heart-while the women showed no such increase.

This could make women more susceptible than men to heart trouble when under mental or emotional stress, said lead author Chester A. Ray, PhD. He added that this runs counter to the effects of physical stress, which previous studies showed causes heart trouble more in men more than women.

"Stress reduction is important for anyone, regardless of gender," Ray said, "but this study shines a light on how stress differently affects the hearts of women, potentially putting them at greater risk of a coronary event."

Ray added that further research could find the biological mechanisms responsible for these heart disease differences, leading to new prevention and treatment methods targeted at heart disease in women.

Click here for more about the different ways stress impacts men and women.

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