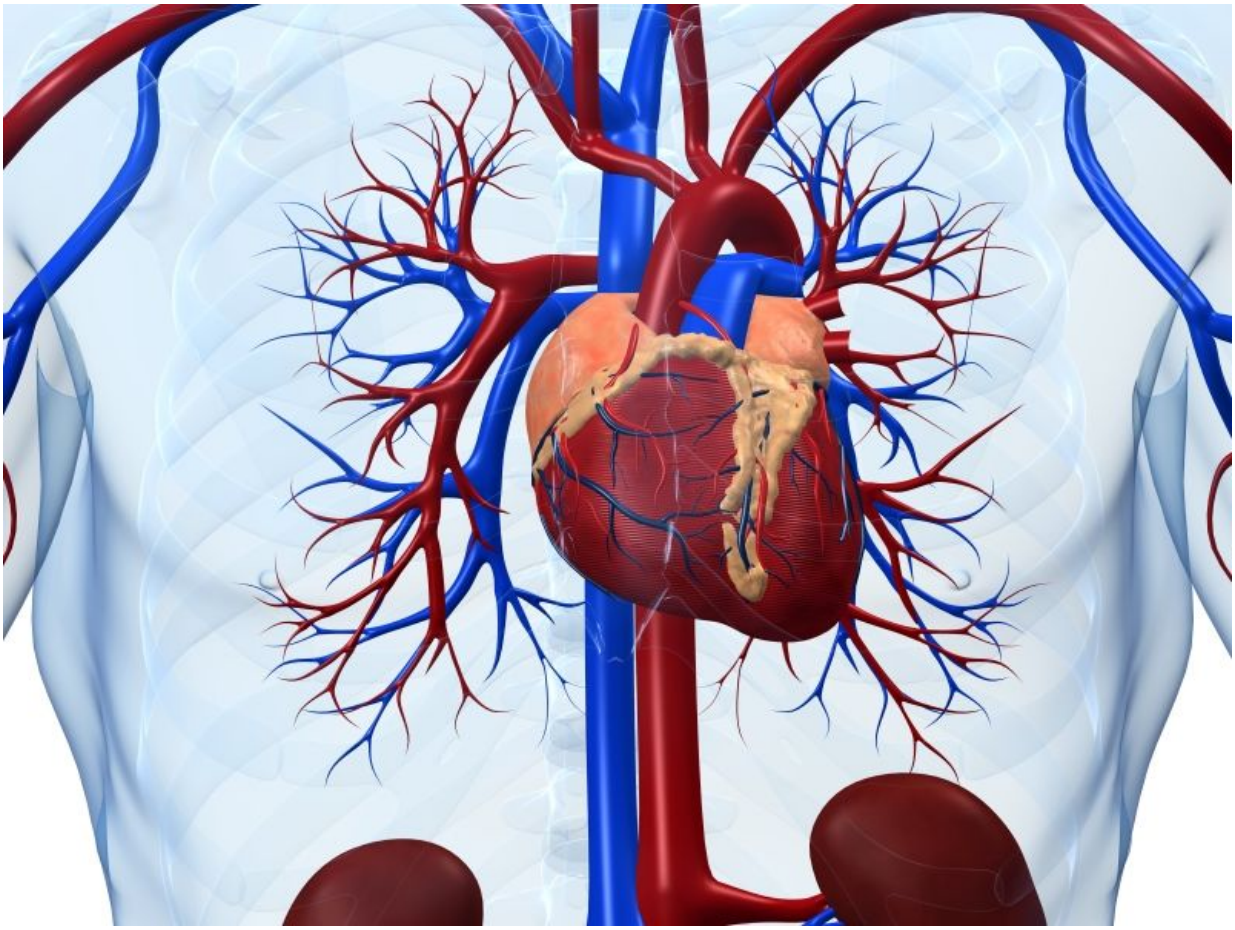
Mental stress tied to abnormal left atrial electrophysiology

July 27 2017



(HealthDay)—Acute mental stress is associated with abnormal left atrial

electrophysiology, according to a study published online July 20 in the *Journal of Cardiovascular Electrophysiology*.

Wesley T. O'Neal, M.D., M.P.H., from the Emory University School of Medicine in Atlanta, and colleagues examined whether acute mental stress results in abnormal left atrial electrophysiology in 422 patients with stable coronary heart disease. Patients underwent mental stress testing with a speech task. P-wave terminal force in lead V_1 ($PTFV_1$) was defined as the duration times the value of the depth of the downward deflection of the P-wave in lead V_1 measured on digital electrocardiograms (ECGs). $PTFV_1 \leq -4{,}000$ μV/ms defined electrocardiographic left atrial abnormality. Mean $PTFV_1$ values were compared during stress and recovery with those at rest.

The researchers found that $PTFV_1$ became more negative during mental stress compared with rest (mean change, −348; 95 percent confidence interval, −515 to −182; P

"Acute mental stress alters left atrial electrophysiology, suggesting that stressful situations promote adverse transient electrical changes to provide the necessary substrate for atrial fibrillation," the authors write.

More information: Abstract
Full Text (subscription or payment may be required)