

Mental Stress can lead to heart related death

"You almost gave me a heart attack!" Can emotional stress really cause heart attacks or even worse, lead to death? Researchers from the Psychophysiological Investigations of Myocardial Ischemia (PIMI) study set out to examine that very question. Mental stress has long been associated with coronary heart disease (CHD) and its complications. Previous research has demonstrated a greater than 2-fold increase in subsequent cardiac events, such as heart attack, in patients who suffer from heart dysfunction in the setting of mental stress. However, no studies had demonstrated an increased risk of death.

Chronic mental stress characterized by depression, lack of social support, or hostility have all been tied to an increased rate of heart disease.

The current study examines 196 patients from the PIMI study who had known CHD. Participants had an exercise bicycle stress test and a psychological stress test. The later involved asking participants to speak for 5 minutes on an assigned topic while being observed and critically evaluated. The topic required role-playing relating to a difficult scenario in which a close relative was being mistreated in a nursing home. Participants were then followed for five years during which time 17 had died.

Several variables were then examined to see which specific findings during the psychological stress test may have predicted a participant's death. One variable seemed to stand out. The researchers found that impaired blood flow leading to abnormal heart wall contraction identified participants who were at close to a 3-fold relative increase in risk of death.

The authors concluded that the presence of mental-stress induced heart abnormalities, specifically evidence of impaired blood flow to heart muscle, predicts subsequent death.

Perhaps a better understanding of the mechanisms responsible for mental stress-induced heart abnormalities could lead to therapeutic interventions to modify this potentially life threatening heart-stress response.

Title: Mental Stress-Induced Ischemia and All-Cause Mortality in Patients with Coronary Artery Disease

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