# 'Perfect storm' of stress, depression may raise risk of death, heart attack for heart patients 

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The combination of stress and heavy depression can significantly increase heart patient's risk of death or heart attack, according to new research in Circulation: Cardiovascular Quality and Outcomes, an American Heart Association journal.

The study examined the effect of high stress levels and high depressive symptoms among nearly 5,000 heart patients. Researchers concluded that risk is amplified when both conditions are present, thus validating the concept of a "psychosocial perfect storm."
"The increase in risk accompanying high stress and high depressive symptoms was robust and consistent across demographics, medical history, medication use and health risk behaviors," said Carmela Alcántara, Ph.D., lead author of the study and associate research scientist at Columbia University Medical Center for Behavioral Cardiovascular Health in New York.

Study participants included 4,487 coronary heart disease patients, 45 years and older, enrolled in the REasons for Geographic and Racial Differences in Stroke (REGARDS) study.

During in-home examinations and selfadministered questionnaires from 2003-07, participants were asked how often during the past week they felt depressed, lonely or sad, or had crying spells. To determine stress levels, participants were asked how often during the past month they felt they were unable to control important things in their lives, felt overwhelmed, felt confidence in their ability to handle personal problems and felt things were going their way.

About 6 percent reported both high stress and high depression.

During an average six-year follow-up, 1,337 deaths or heart attacks occurred. Short-term risk of death or heart attack increased 48 percent for those in the high stress-high depressive symptoms group compared with those in the low stress-low depressive symptoms group.

The elevated risk was most strongly associated with death rather than heart attack; additional result suggest the deaths may have been cardiovascularrelated, but more research is needed, researchers said. The risk was significant only during the first two-and-half years from the initial home visit, and wasn't significant for those experiencing either high stress or high depressive symptoms alone, but not both at the same time.

Study findings may challenge traditional research paradigms that only focus on depression and its impact on patients with heart disease, Alcántara said. Behavioral interventions also should be considered to help heart disease patients manage both stress and depression better.

Provided by American Heart Association

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