

# Mental health may play big role in recovery after a heart attack

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Young and middle-aged adults who reported severe psychological distress—such as depression or anxiety—after suffering a heart attack were more than twice as likely to suffer a second cardiac event within five years compared with those experiencing only mild distress, according to a study presented at the American College of Cardiology's 70th Annual Scientific Session.

The study is the first to comprehensively assess how mental health influences the outlook for younger [heart attack](#) survivors, according to the researchers. The researchers also tracked [inflammatory markers](#) that appear to have a role in increasing cardiovascular risk among people experiencing distress. The findings align with previous studies focusing on older adults, bolstering the evidence for mental health as an integral part of a person's recovery after a [heart attack](#).

"Our findings suggest that cardiologists should consider the value of regular psychological assessments, especially among [younger patients](#)," said Mariana Garcia, MD, a cardiology fellow at

Emory University in Atlanta and the study's lead author. "Equally importantly, they should explore treatment modalities for ameliorating [psychological distress](#) in [young patients](#) after a heart attack, such as meditation, relaxation techniques and holistic approaches, in addition to traditional medical therapy and cardiac rehabilitation."

The researchers analyzed health outcomes in 283 heart attack survivors between the ages of 18 and 61, with an average age of 51 years. Study participants completed a series of validated questionnaires measuring depression, anxiety, anger, perceived stress and posttraumatic stress disorder within six months of their heart attack. Based on these questionnaires, the researchers established a composite score of psychological distress for each participant and grouped patients based on experiences of mild, moderate and high distress.

Within five years after their heart attack, 80 of the 283 patients suffered a subsequent heart attack or stroke, were hospitalized for heart failure or died from cardiovascular causes. These outcomes occurred in nearly half (47%) of patients experiencing high distress compared to 22% of those experiencing mild distress.

Previous studies suggest inflammation is one mechanism through which psychological distress may lead to heart problems. In the new study, patients who experienced high distress were also found to have higher levels of two inflammatory markers—interleukin-6 and monocyte chemoattract protein-1—in their blood during rest and after mental stress. These markers, which increase during times of mental stress, are known to be associated with plaque buildup in the arteries and adverse cardiac events.

"It is thought that those who have had a heart attack may be particularly vulnerable to plaque rupture as a result of these inflammatory

mechanisms at play," Garcia said. "The association we found was independent of known cardiovascular risk factors and suggests mechanisms involving systemic inflammation in response to stress may be implicated in the likelihood of a subsequent cardiac event." Sunday, May 16, at 3:45 p.m. ET / 19:45 UTC. Provided by American College of Cardiology

The researchers also found that patients with high distress were more often Black, female and from a disadvantaged socioeconomic background and were more likely to smoke or have diabetes or high blood pressure.

"This finding highlights the importance of socioeconomic status in regard to higher distress and raises important questions about the role of race, sex and other factors," Garcia said.

The researchers plan to further investigate how socioeconomic and demographic factors may influence mental health among people who suffer a heart attack at a young age. Recent studies have suggested younger adults, especially women, account for an increasing proportion of the heart attacks occurring each year in the U.S., Garcia said, underscoring the importance of improving outcomes in this population.

"Outreach to the community has led to increased awareness of traditional heart disease risk factors and focus on things like diet and exercise, but many people, particularly younger people, may not be aware of the importance of [mental health](#)," Garcia said. "Our study offers a strong message to people recovering from a heart attack that ameliorating psychological distress is equally important."

Garcia cautioned that causation cannot be proven with an observational study and noted the possibility of recall bias among people with more severe disease, since psychological [distress](#) was self-reported in this study. While the study's sample size was relatively small, it did demonstrate a robust association using a prospective design.

**More information:** Garcia will present the study, "Psychological Distress and Risk of Adverse Cardiovascular Outcomes in Young and Middle-Aged Survivors of Myocardial Infarction," on

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