

# HAVING DEPRESSION AND HEART DISEASE COULD DOUBLE DEATH RISK

**A** new study has examined the risk of premature death in patients having been diagnosed with both depression and coronary artery disease.

Coronary artery disease (CAD) is the most widespread form of heart disease. And recently, more and more studies have been pointing to the effect of psychological distress or depression on the risk of mortality among patients with CAD.

Now, a team of researchers at Intermountain Medical Center Heart Institute in Salt Lake City, Utah, have conducted a large-scale study to investigate the link between being diagnosed with CAD and afterward receiving a diagnosis of depression.

The team was led by Heidi May, Ph.D., a cardiovascular epidemiologist at Intermountain Medical Center Heart Institute, and the findings were published in the *European Heart Journal: Quality of Care & Clinical Outcomes*.

## Studying depression in CAD patients

Dr. May and team examined a total of 24,137 patients with CAD, as diagnosed by an angiography. Using the International Classification of Diseases codes - a standard diagnostic tool - the researchers determined whether or not the patients had depression.

They then used Cox hazard regression models to adjust for the different periods of time that had elapsed between being diagnosed with CAD and being diagnosed with depression. These lengths of time differed from patient to patient.

Overall, 3,646 (15 percent) of the patients received a diagnosis of depression during CAD follow-up. These patients tended to be younger and female, compared with their depression-free counterparts. They were also more likely to have diabetes and to have been previously diagnosed with depression.

Additionally, they were less likely to develop a myocardial infarction, or heart attack, during follow-up.

Of all the patients diagnosed with depression, 27 percent received their diagnosis within a year of the CAD diagnosis, 24 percent within 1 to 3 years after the heart disease diagnosis, almost 15 percent between 3 and 5 years, and almost 37 percent more than 5 years after the heart event occurred.



*While the mechanism behind the association is unknown, a new study finds that depression after being diagnosed with coronary artery disease doubles the risk of mortality.*

## Depression doubles risk of death

Having adjusted for all of these factors, the researchers found that “post-CAD depression was the strongest predictor of death.”

***In fact, being diagnosed with depression at any point after receiving a CAD diagnosis raised the risk of dying prematurely by twofold.***

Even among patients who had no history of depression diagnosis, this correlation was just as strong.

Furthermore, the correlation persisted regardless of whether depression occurred right after being diagnosed with CAD or years later.

“We’ve completed several depression-related studies and been looking at this connection for many years,” says Dr. May. “The data just keeps building on itself, showing that if you have heart disease and depression and it’s not appropriately treated in a timely fashion, it’s not a good thing for your long-term well-being.”

Although this is an observational study that cannot explain causality, the lead author of the study ventures a hypothesis, saying, “We know people with depression

tend to be less compliant with medication on average and probably, in general, aren't following healthier diets or exercise regimens."

"They tend to do a poorer job of doing things that are prescribed than people without depression. That certainly doesn't mean you're depressed, so you're going to be less compliant, but in general, they tend to follow those behaviors."

Another possible explanation, the researcher says, may involve the physiological changes that tend to happen as a result of depression.

In fact, **studies** have pointed to a wide range of symptoms that sometimes accompany depression, indicating that this psychological disorder and its bodily symptoms are deeply connected on a biological level.

Finally, Dr. May urges clinicians to continue to test for depression and treat it where necessary, even years after the patient has been diagnosed with heart disease.



**"I hope the takeaway is this: it doesn't matter how long it's been since the patient was diagnosed with coronary artery disease. Continued screening for depression needs to occur.. After one year, it doesn't mean they're out of the woods."**

*Heidi May, PhD*