

# Study shows heart calcium scan predictive of diabetes-related death from cardiovascular disease

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People with Type 2 diabetes have two to four times the risk of cardiovascular disease compared to people without the disease. The best way for doctors to predict which diabetes patients are at the greatest risk for heart disease is to use a coronary artery calcium (CAC) test in addition to the most commonly used assessment tool, according to researchers at Wake Forest Baptist Medical Center.

Current medical guidelines recommend treating all [diabetes patients](#) as high risk, but the Wake Forest Baptist study found that CAC can identify diabetes patients who are at very high risk for developing potentially fatal cardiovascular disease, as well as those who are at low risk.

"Our observations challenge accepted medical knowledge that all people with diabetes have the same risk. CAC is key in predicting the specific risk level," said Donald Bowden, Ph.D., professor of biochemistry at Wake Forest Baptist and senior author of the study, which is published online in the December issue of the journal [Diabetes Care](#).

"People at very high risk are 11 times more likely to die from cardiovascular diseases as compared to those at low risk. Diagnosing a more precise [risk level](#) should help doctors provide more effective treatments and hopefully improve outcomes," he said.

The community-based Diabetes Heart Study was designed to determine if CAC provided additional information about cardiovascular disease and mortality beyond the Framingham Risk Score, the most commonly used assessment tool. A total of 1,123 people with [Type 2 diabetes](#) between 34 to 86 years old were followed for an average of 7.4 years. The study participants were recruited from clinics in western North Carolina and reflect a cross section of families with diabetes-affected members in the region.

CAC uses a CT scan to detect calcium build-up in the arteries of the heart. According to Bowden, the cost of the test is relatively low and the [radiation exposure](#) is about half of what someone would get in a year "by just walking around."

"Based on our study, we think that CAC should be added to the Framingham tool as the standard of care for all people with diabetes," Bowden said.

Provided by Wake Forest University Baptist Medical Center

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