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THIS STORY

Skin test found to detect heart disease

Simple measure can reveal risk in people without symptoms

By **JOHN FAUBER**
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Orlando, Fla. - A quick, inexpensive test that measures cholesterol in the skin without the need for drawing blood can detect heart disease in middle-aged people, according to a study presented Sunday by University of Wisconsin-Madison researchers.

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Because the test can be done in three minutes as part of a doctor's office visit, it could serve as an alternative to a more costly heart scan or stress test, exams that usually are not done by family doctors, said co-author James Stein, co-director of UW Health Preventive Cardiology.

"This moves the whole discussion about cardiovascular disease risk back to the doctor's office where it belongs," Stein said. "It's really more of an office-based test for atherosclerosis."

Unlike a traditional cholesterol test, which requires a blood sample and usually an overnight fast, the Prevu Skin Sterol Test measures cholesterol in the palm of the hand.

It is done by placing a thin foam pad on the skin and dropping a liquid enzyme and another substance into holes in the pad. The liquid will change color depending on the amount of sterol, a type of cholesterol, in the skin.

A hand-held color reader is used to measure the type of blue, which, in turn, correlates with the amount of cholesterol in the skin.

The test costs about \$25. The study results were presented Sunday at the

By The Numbers

Quotable

“ I can see this being like taking blood pressure in the office. ”
- Gerald Fletcher,
Mayo Clinic
cardiologist

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American College of Cardiology conference in Orlando, Fla.

Other cardiologists not associated with the test said it may provide additional useful information in assessing heart disease risk.

"I can see this being like taking blood pressure in the office," Mayo Clinic cardiologist Gerald Fletcher said. "I think that's a practical way to look at it."

But Fletcher said it's too early to tell whether the test will become commonplace.

Many tests available

Alex Schmermund, a German cardiologist, said one problem is that doctors and patient now have so many tests that can be used to predict heart disease risk.

"It (the skin test) competes with about two dozen other tests," said Schmermund, a researcher with University Clinic in Essen, Germany.

The test will need to be studied in a larger group of patients before it becomes widely accepted, he said.

Stein said the test is not designed to replace standard cholesterol testing, but to provide more information about the risk of heart disease in people who do not have symptoms.

As many as half of heart attacks occur in people who have normal cholesterol levels. That's partly because cholesterol in the blood does not always indicate how much cholesterol has built up inside the arteries of the heart, Stein said. Cholesterol in the skin correlates well with cholesterol inside arteries, he said.

To show that, the researchers compared the skin tests done on 81 middle-aged people who also received an ultrasound test to measure the thickness of their carotid artery, a well-established way to gauge atherosclerosis.

The skin test correlated very closely with the carotid ultrasound even after taking into account other risk predictors, such as age, blood pressure, blood sugar levels and HDL cholesterol, the good kind.

The study was funded by International Medical Innovations of Toronto, a division of McNeil Consumer Healthcare, Canada.

Stein acknowledged that the study needs to be replicated on a larger group of people. However, he said, the test may be able to help determine who needs a more expensive heart scan, carotid ultrasound or stress test and who does not.

Test can be early indicator

"I think this is something a doctor would consider before those more time intensive and expensive tests," he said. "If it (skin cholesterol) comes back really low or really high, you could be reassured or pushed to treat more aggressively."

The test already has undergone extensive study.

In 2003, researchers at the Cleveland Clinic reported that the skin test correlated with narrowing in heart arteries of 649 patients who had undergone coronary angiography.

In 2002, the Food and Drug Administration approved the test for use in heart attack patients or people suspected of having severe coronary artery disease.

Stein said he is planning a study of the test in 600 people who do not have known coronary artery disease, individuals who would be at low to intermediate risk of heart disease.

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