

Health: STUDY: CARDIAC ARREST Heart monitor exposes relapse risk

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Canadian researchers have discovered a simple way to determine when a heart-attack patient is at the greatest risk of suffering another cardiac arrest or even death.

By looking at the body's nervous system in combination with the heart's electrical process, doctors may now be able to better target treatments and test new therapies for heart-attack survivors.

"Before we had no way to reliably identify who might benefit from these therapies and who to select," explained study co-author Derek Exner, a professor at the University of Calgary's Libin Cardiovascular Institute of Alberta.

"This test has given us that initial step. It allows us to say your risk is low, there's nothing to worry about, or your risk is high, but let's see if these therapies work." The study, published in the latest issue of *Journal of the American College of Cardiology*, followed 322 patients for an average of four years. Each patient had either suffered a heart attack or had some kind of abnormality in the heart's pumping function.

Patients were asked to wear portable heart monitors for a period of 24 hours about a month after their episode and then again at about the three-month mark.

The gadget measured the heart's electrical system because the damage done by the heart attack can lead to future disturbances in the organ's rhythm.

It also gathered information about whether the body's nervous system was on high alert, something the patient may not even realize, a condition that could lead to a serious arrhythmia or worse.

The researchers found that when those two factors were considered in combination, 20 per cent of patients were deemed to be at high risk of another episode.

When physicians used just one test - currently the standard procedure - only 10 per cent of patients were deemed to be in possible jeopardy.

Still, the authors say patients shouldn't panic in light of the study's findings.

"Most people who survive a heart attack do very well, but there are a small number of people who get into big trouble with dangerous heart rhythms or dying suddenly," Dr. Exner said.

Traditional therapies include surgery, aspirin, beta blockers, ACE inhibitors and cholesterol drugs known as statins. But next year, studies will be launched to assess whether an implantable defibrillator that automatically detects abnormal heart rhythms and brings the heart back to normal within a few seconds could also reduce the risk for patients in the danger zone.

Without immediate medical assistance, an individual's survival rate after a heart attack is about one in 20. Bruce Cuncannon happily counts himself a guinea pig. Soon after the refrigerator contractor from southern Alberta, now 54, suffered a heart attack six years ago, he agreed to join the study.

Mr. Cuncannon wasn't sure what was happening to him at first, but knew enough to get his son to drive him to the hospital. Once there, he went into cardiac arrest.

Before that episode, he had no history of heart problems - and neither did anyone in his family - but after joining the study he found out that he was in the high-risk camp for another attack or death.

After spells of wooziness and fainting, three years ago he was fitted with an implantable defibrillator that bulges slightly from his chest and is helping keep his ticker in shape.

"If they can find out something on me, great," Mr. Cuncannon said of participating in the study, "but also that it helps everyone else down the line." Dr. Exner doesn't expect this two-in-one testing regime will be given to patients right away, but he hopes it could become routine in a few years.

The research was conducted in co-operation with the University of Alberta, Canadian Institutes of Health Research and a number of heart health and advocacy groups.