

Scientists identify new marker for heart disease

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A new study from the Libin Cardiovascular Institute at the University of Calgary's Faculty of Medicine is shedding light on an underlying cause of heart disease.

Published research led by UCalgary's Dr. Todd Anderson and his colleagues at four sites across Canada finds that endothelial dysfunction (blood vessel lining) can predict who is at risk for developing [coronary heart disease](#). By identifying this new marker in patients doctors may be able to intervene early to prevent the progression of heart disease.

"The study has demonstrated that in addition to traditional [cardiovascular risk factors](#), measures of blood vessel function are predictive of who goes on to develop cardiovascular complications," says Anderson who is the study's principal investigator, and director of the Libin Cardiovascular Institute of Alberta.

The observational study followed 1574 healthy firefighters over a period of ten years. At the beginning of the study each firefighter had an ultrasound of his brachial artery in the arm to measure blood vessel function and was then followed every six months for the 10 year period. Over the course of the study some of the study participants had cardiovascular events such as heart attacks and this allowed the research team to see what measurements correlated.

"The information obtained by these simple tests improves our ability to detect, among healthy individuals, those who will go on to have vascular

events, with more precision and reliability than if we just tallied their traditional risk factors, as most clinicians do now," says Dr. Francois Charbonneau, a co-investigator and also from the University of Calgary's Faculty of Medicine and a member of the Libin Institute. "More research is required to see if these tests can be used in the population at large."

Wayne Morris is one of the firefighters who enrolled in the study. He's now 60-years-old, was followed by the researchers for the last decade and luckily had no [cardiac events](#). "I enrolled in the project. I felt this was an extremely worthwhile study. Any study that will help the health professionals better predict who is at greater risk could be a life saver for people," he says.

Coronary artery diseases remain a major cause of death and disability in North America and can lead to heart attacks and congestive heart failure.

More information: The study was published in the January 4th issue of *Circulation*, a journal of the American Heart Association.

Provided by University of Calgary

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