

Canadian scientists discover cause of high cholesterol

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Canadian scientists have discovered that a protein called resistin, secreted by fat tissue, causes high levels of "bad" cholesterol (low-density lipoprotein or LDL), increasing the risk of heart disease.

The research, presented today at the Canadian Cardiovascular Congress, proves that resistin increases the production of LDL in human liver cells and also degrades LDL receptors in the liver. As a result, the liver is less able to clear "bad" cholesterol from the body. Resistin accelerates the accumulation of LDL in arteries, increasing the risk of [heart disease](#).

The research also shows that resistin adversely impacts the effects of statins, the main cholesterol-reducing drug used in the treatment and prevention of cardiovascular disease.

Dr. Shirya Rashid—senior author of the study and assistant professor in the department of medicine at McMaster University—notes that a staggering 40 per cent of people taking statins are resistant to their impact on lowering blood LDL.

"The bigger implication of our results is that high blood resistin levels may be the cause of the inability of statins to lower patients' LDL cholesterol," says Dr. Rashid.

She believes the discovery could lead to revolutionary new [therapeutic drugs](#), especially those that target and inhibit resistin and thereby increase the effectiveness of statins.

"The possibilities for improved therapy for the causes of cardiovascular disease are very important," says Heart and Stroke Foundation spokesperson Dr. Beth Abramson. "About 40 per cent of Canadians have high blood cholesterol levels: it's a significant health concern in Canada."

Dr. Abramson notes that the research reconfirms the importance of maintaining a healthy weight and [cholesterol level](#), two critical factors in the prevention of heart disease.

High blood [cholesterol](#) is a major risk factor for heart disease and stroke. It can lead to a buildup of plaque in the [artery walls](#) and narrowing of the arteries, causing a condition called atherosclerosis which can make it more difficult for blood to flow through the heart and body.

Being overweight also increases the likelihood of high blood pressure and diabetes, compounding the risks of heart disease and stroke.

"Fortunately, we know a great deal about heart disease prevention and how to reverse some of the risks," says Dr. Abramson. She urges Canadians to maintain their heart health through regular visits to their doctor, monitoring their weight and waist size, eating a variety of nutritious, low-fat foods and being physically active. "It's equally important to take your medications as directed by your physician to help further reduce risks."

Provided by Heart and Stroke Foundation of Canada

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