

# Researchers discover new risk factor for cardiovascular disease, and a way to control it

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A team of international researchers – including scientists from the McGill University Health Centre (MUHC) and McGill University – have discovered that having high levels of particular protein puts patients at increased risk of developing cardiovascular disease. The results of the study were so conclusive that the clinical trial had to be stopped before its scheduled completion date.

Researchers associated with the international JUPITER Project have demonstrated that high levels of high-sensitivity C-reactive protein (hs-CRP) leads to increased risk of cardiovascular disease. This risk decreases by up to 44% if the patients are treated with statin medications.

Dr. Jacques Genest, of the Research Institute of the MUHC and McGill's Faculty of Medicine led the Canadian component of the JUPITER clinical study, which was initiated by Dr. Paul Ridker of the Harvard University Faculty of Medicine.

"The risk of cardiovascular disease due to increased hs-CRP levels has been greatly underestimated until now," according to Dr Genest. "Our results show that this is an extremely important indicator that doctors will have to consider in the future."

"We hope that this study will prompt a review of current clinical practices, especially in terms of screening and prevention in adults," he added. "However, we still need to do more research to establish specific standards."

The JUPITER study included 17,802 patients from 27 different countries. All had normal levels of cholesterol (LDL-c) and high levels of hs-CRP, and according to current standards, were not considered "at risk" for cardiovascular events, and were therefore not receiving any treatment. During

the study, participants received a daily dose of the statin drug rosuvastatin, and its consequences were striking: a 44% decrease in the risk of cardiovascular disease and a 21% decrease in mortality.

"These results definitely surpassed our predictions," said Dr. Genest. "We had to stop the study before its scheduled completion, as the benefit of the treatment for the selected patients was so great that we needed to present our findings to the medical community as soon as possible."

Since statins have a cholesterol-lowering effect, they are currently used to prevent cardiovascular disease in patients who are at-risk due to high LDL-c levels. But cardiovascular disease is also caused by vascular inflammation, which is marked by levels of hs-CRP. This study shows that statins indeed act on both cholesterol and inflammation, an effect that has long been suspected but not proven.

Source: McGill University

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