

# Measures of inflammation in blood tests may help predict risk of disease and death

November 28 2016

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A new study looking at deaths from cancer, cardiovascular disease and all causes suggests that an inflammatory marker detected in blood tests in middle-aged adults can better predict the risk of death compared with another similar biomarker. The study is published in *CMAJ (Canadian Medical Association Journal)*.

These findings can be useful in the developing area of personalized medicine.

"Omics technologies are exciting, as they allow the concurrent assessment of many biomarkers, some of which may turn out to be important to detect preclinical states of diseases or be markers of future disease," states Prof. Archana Singh-Manoux, Inserm (France) and University College London (UK).

Inflammatory markers are known to be associated with cancer, [chronic heart disease](#) and other serious health conditions. However, the marker that is most useful in predicting these diseases continues to be debated.

The authors looked at markers of inflammation such as interleukin-6 (IL-6), C-reactive protein (CRP) and  $\alpha$ 1-acid glycoprotein (AGP); the latter was found in a recent metabolomics study to be a strong predictor of death within 5 years. The CMAJ study included data collected between 1997 and 1999 on 6545 men and women aged 45-69 years. Participants were followed to 2015 to determine if they had died.

"When a recent metabolomics study highlighted the importance of AGP, our question was how relevant is this marker when compared to other known inflammatory markers. The novelty of our approach lies in being able to assess risk of mortality in the short- and long-term. Our findings show IL-6, which is already known to be important to heart disease, to do better than AGP."

"Research on biomarkers is progressing fast, and it is important to undertake checks like in the one in our study, to shape future research on biomarkers," states Prof. Singh-Manoux.

In a related commentary, Dr. Paul Ridker, Center for Cardiovascular Disease Prevention, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts, writes, "biomarker discovery is crucial for thinking about new treatment targets. With regard to AGP, CRP and IL-6, what remains uncertain is whether reducing inflammation can reduce cardiovascular event rates."

**More information:** *CMAJ*,  
[www.cmaj.ca/lookup/doi/10.1503/cmaj.160313](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.160313)  
*CMAJ*, [www.cmaj.ca/lookup/doi/10.1503/cmaj.161033](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.161033)

Provided by Canadian Medical Association Journal

Citation: Measures of inflammation in blood tests may help predict risk of disease and death (2016, November 28) retrieved 27 April 2024 from  
<https://medicalxpress.com/news/2016-11-inflammation-blood-disease-death.html>

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