

## Cholesterol lowering drugs may cut risk of lethal prostate cancer

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New research led by Queen's University Belfast has found that men who are on statins, medicine used to lower blood cholesterol, may have a reduced risk of developing a more lethal form of prostate cancer. The study was carried out by researchers at Queen's University Belfast, Trinity College Dublin and the Dana-Farber/Harvard Cancer Center.

Statins are drugs that are often used to help lower cholesterol levels and can reduce the risk of heart attack, stroke and heart disease. Previous studies have suggested that statins could have a role in slowing down the growth of different types of cancers. This research specifically looked at ways statins might affect prostate cancer.

The researchers discovered that there were no differences in the overall rates of prostate cancer among men who were prescribed statins. However, men who had taken statin medicines had a 24% reduced risk of developing a more lethal type of prostate cancer when compared to men who were not.

Lead author Dr Emma Allott, from the Centre for Cancer Research and Cell Biology and the Institute for Global Food Security at Queen's University Belfast, said: "Some prostate cancers are slow growing and will not affect the man over the course of his lifetime, but others are aggressive and often deadly. My work is to understand the biology driving these different types of prostate cancer in order to reduce the number of men who develop this lethal form of the disease.

"By studying a large group of men who had been monitored for 24 years, we were able to see the link between statin use and the prevention of lethal prostate cancer. We then looked at tissue samples from some of these men to try and understand why the statin use was having this impact.

"Although the findings are at an early stage, we were able to see that statin use may affect inflammation and immunity levels in the prostates of some men as well as having an effect on the characteristics of the tumour itself. Our findings are in agreement with some of the known biology of statins but are the first to observe these effects in prostate cancer."

The research was funded by an international research fellowship awarded to Dr Allott by the Irish Cancer Society. Dr Allott

worked in collaboration with colleagues in Ireland, Northern Ireland and the US to analyse data from a study funded by the U.S. National Cancer Institute.

Dr Robert O'Connor, Head of Research at the Irish Cancer Society, said: "Dr Allott is part of the next generation of prostate cancer research leaders, whose work is making a significant contribution to our knowledge and understanding of this challenging disease. While we are not recommending that men start taking statins unless prescribed to do so, this study provides us with building blocks to further explore how statins could be used to combat aggressive prostate cancer in the future."