Statin treatment reduces the risk of cardiovascular disease in women

Embargo: 00:01 [UK time] , 11:01am [Sydney time] Friday 9 January, 2015.

A large international study showing conclusively that statin treatment reduces the risk of cardiovascular disease in women is published in The Lancet today.

It confirms that statins are beneficial not only to women who have already had a cardiovascular event such as a heart attack or stroke, but also in those who - whilst they have not yet got cardiovascular disease - are at an increased risk of such diseases.

Heart disease and stroke in women are significant global health problems. In Australia more than 11,500 women die of these two diseases every year, whilst in the UK the figure is about 60,000.

It has long been known that, by reducing low-density lipoprotein (LDL) cholesterol, statin medications prevent heart attacks and strokes in people at risk of these diseases. However women tend to develop cardiovascular disease later in life than do men, so have been under-represented in most statin trials. As a result, the benefits of statin therapy in women have been uncertain, especially in the absence of any previous history of cardiovascular disease.

The research assessed the effect of statins in 46,675 women and 127,474 men who had taken part in 27 clinical trials. It is the largest such database of statin trial data in the world.

Overall, statin treatment reduced the risk of a major vascular event (heart attack, stroke, need for coronary revascularisation stenting and bypass surgery, or cardiac death) by 21% for each 1 mmol/L reduction in LDL cholesterol achieved. The percentage risk reductions were similar in women and men, irrespective of any history of cardiovascular disease.

Such benefits from statin treatment translated into a significant reduction in the overall risk of death (9% risk reduction for each 1 mmol/L reduction in LDL-cholesterol) in both men and women.

Many women without a history of cardiovascular disease are at low risk of experiencing a major vascular event. This new analysis showed that even among the lowest risk group examined (less than 10% risk of such an event over 5 years), for every 1mmol/L LDL cholesterol reduction, 12 events would be avoided in men and 9 in women for every 1000 treated over five years, with the treatment benefits of statin therapy exceeding the known harms by nearly 20 fold in both sexes.

There has been a recent worldwide shift towards recommending treatment with statins to people without existing cardiovascular disease but with a sufficiently high risk of future disease. The results of this study will reassure doctors that these risk-based guidelines for treatment can be applied to men and women equally.

The study was an international meta-analysis conducted by the Cholesterol Treatment Trialists' Collaboration, a joint initiative coordinated between the NHMRC Clinical Trials Centre, University of Sydney, Australia and the Clinical Trial Service Unit & Epidemiological Studies Unit (CTSU), University of Oxford, United Kingdom, on behalf of academic researchers representing all major statin trials worldwide. The work is funded by the UK Medical Research Council (MRC), Australian National Health and Medical Research Council (NHMRC), British Heart Foundation (BHF), and the European Community Biomed Program.

Lead investigator, Professor Anthony Keech, Professor of Medicine, Cardiology and Epidemiology at the University of Sydney said: "These results resolve a major uncertainty about the value of treating women with statin therapy, and reinforce the need for recommendations to treat women to be included in national and international guidelines." His co-investigator Dr Jordan Fulcher, explained: "By combining the individual patient data from 27 major statin trials we have been able to address some of the outstanding questions that could not be answered by individual statin trials."

Co-investigator Professor Colin Baigent, MRC Scientist at the Clinical Trial Service Unit (CTSU), University of Oxford, said: “Heart attacks and stroke are major problems in women just as they are in men. Many women at increased risk of such disease could avoid them by taking a statin.”

Professor Peter Weissberg, Medical Director at the British Heart Foundation, which helped fund the study, said: “This analysis of the effects of statins on 174,000 patients, undertaken by combining results from 27 different trials, shows beyond any reasonable doubt that women gain the same benefits from statins as men.

“Far too few women realise they are at greater risk of dying from a heart attack than from breast cancer and this study should reassure them that, if advised by their doctor, they can reduce that risk by taking a statin.”

Professor Len Kritharides, Chair of the Cardiovascular Health Advisory Committee of the Heart Foundation of Australia , welcomed these new results as very important: “They show unequivocally that statins similarly benefit men and women in preventing heart attacks without evidence of serious harm. Importantly, the study also demonstrates that treatment with statins improves overall survival in men and women. These results should give great encouragement to patients and their doctors that lowering cholesterol with statins prevents cardiovascular disease.”

Media contacts:

UK

Andrew Trehearne

Mobile: +44789 404 2600, Office: +44 (0)1865 743960

Email: andrew.trehearne@ctsu.ox.ac.uk

Australia:

Kobi Print (Media and PR Advisor, University of Sydney)

Mobile: +61481012729, Office: +61 (2) 9036 7589

Email: kobi.print@sydney.edu.au