
Statins Reduce Hospital Admission for Heart Failure



A meta-analysis of 17 statin trials involving over 100,000 patients shows that statin treatment led to a 10 percent significant reduction in hospital admission for heart failure over an average of four years treatment. The study, reported at the European Atherosclerosis Society Congress, is also published online in *The European Heart Journal*.

"While it has been assumed that statins reduce the development of heart failure simply because they reduce heart attacks, to our surprise this had not been definitively shown before," said lead author Dr. David Preiss, Institute of Cardiovascular and Medical Sciences, University of Glasgow, UK. "The results of this meta-analysis clearly show a modest, but significant benefit, reducing hospital admission for heart failure by 10 percent which is clinically important."

Researchers at the University of Glasgow collaborated with colleagues from Europe, USA and Asia to evaluate unpublished data from 132,568 subjects included in 17 statin trials, followed for an average of 4.3 years. The trials were conducted in patients with and without coronary disease, and each trial enrolled more than 1,000 subjects followed up for more than one year. Three end points were of interest: a first non-fatal hospital admission for heart failure, heart failure death and a composite of both endpoints.

The researchers reported these key findings:

- A 10 percent reduction in first heart failure hospital admission (overall, 200 patients with heart disease would need to be treated over five years to prevent one hospital admission).
- An eight percent reduction in the composite end point, which was driven by the effect of statin treatment on heart failure hospital admission.
- There were insufficient data to show that statin treatment could reduce heart failure death.

"The 10 percent reduction in hospital admission for heart failure could easily be an underestimate of the true effect, given that the trials were only four years duration on average, and the data only related to first heart failure events," Dr. Preiss noted. "With emerging data showing accrual of benefit from statins in the long-term, the 10 percent reduction is just the beginning of benefit from statin therapy. Additionally, if all heart failure admissions were taken into account, we suspect that the benefit would be much larger."

Notably, the benefit of statins on heart failure hospital admission was not fully explained by a reduction in heart attacks. Moreover, similar reductions in heart failure hospital admissions were observed regardless of whether patients experienced a heart attack or not before developing heart failure (13 and 9 percent reductions in risk, respectively).

According to Dr. Preiss: "It is probable that statins decrease the degree of ischaemia that occurs before a heart attack, leading to a decrease in the number of people with other ischaemic events and reducing the chronic impact on the heart. However, an unrecognised pleiotropic effect cannot yet be excluded and further study of the potential mechanism(s) is needed."

Heart failure develops when the heart is unable to maintain adequate blood flow to meet the needs of the body. Signs and symptoms include leg swelling, tiredness and shortness of breath, usually worse on exercise.

The main cause is coronary artery disease. Typically, as the condition progresses, there are more frequent admissions to hospital and increasing costs associated with treatment. Currently, in the UK, heart failure affects 900,000 people and accounts for almost two percent of the National Health Service (NHS) budget.

Source: [University of Glasgow](#)

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