

# Statins' benefits outweigh side-effects: science review

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The heart-protecting benefits of anti-cholesterol statins far outnumber the side-effects, a scientific review said Friday blaming shoddy research for scaring people and putting lives at risk.

Much of the evidence for [statins](#)' bad rap came from trials whose very design did not allow them to draw any conclusions, said the authors of the review seeking to "help doctors, patients and the public make informed decisions."

Their own analysis, the team wrote, showed that statins prevented many more heart attacks and strokes than they caused muscle problems or diabetes.

"We've had an underestimation of the benefits and a massive overestimation of the harms," said Rory Collins of the University of Oxford's Nuffield Department of Population Health, who co-authored the review in *The Lancet*.

"Consequently there is a serious cost to public health from making misleading claims about high side-effect rates that inappropriately dissuade people from taking statin therapy despite the proven benefits."

Statins have been used for about 30 years to bring down "bad" LDL cholesterol, which has been linked to a risk for heart and artery disease.

It is prescribed as "secondary prevention" for people already suffering

cardiovascular disease, but increasingly also as "[primary prevention](#)" for those at high risk due to [high blood pressure](#) or diabetes, for example.

As conflicting reports of statins' benefits and harms have hit the headlines in recent years, people prescribed them had stopped taking the drugs.

The new review showed that using statins to lower cholesterol would prevent "major cardiovascular events" in 1,000 out of 10,000 secondary prevention users over five years.

In people who take statins for primary prevention, 500 out of 10,000 would avoid a major event such as [heart attack](#), stroke or coronary bypass, said the authors.

## **The snag**

On the downside, five in 10,000 would develop myopathy—a muscle disease.

Five to ten would have a haemorrhagic stroke, which causes bleeding on the brain, and about 50-100 would develop diabetes.

However, Collins said the other type of stroke, caused by blood clots, was vastly reduce by statins—thus lowering the overall stroke risk.

The team had reviewed data from so-called randomised controlled trials, in which one group of people were given the real drug and another group a dummy "placebo" drug, without knowing who is getting what.

This is the only type of trial, the authors said, which can ascribe an effect to a drug being tested.

However, much of the evidence for statin risks came from "observational studies".

They are not designed to show a cause and effect, yet have ascribed to statins everything from memory loss, cataracts, liver disease, sleep disturbance, aggression, suicidal behaviour and erectile dysfunction—none of which were borne out by randomised controlled trials, said the team.

"We hope that the impact of publishing this comprehensive [scientific review](#) will be to correct the public record about the safety and efficacy of statins," *The Lancet* editor Richard Horton told journalists.

A daily 40-milligram statin dose costs about £2 (\$2.70, 2.6 euros) per month in Britain, where some two million people are prescribed statins for [secondary prevention](#) and four million for primary prevention.

This meant some 80,000 people in Britain alone will be spared a major cardiovascular event, said the reviewers, who received research funding from drug companies but insisted they were independent.

Other experts not involved in the study said it was a good summary of the risks and benefits.

"Statins have been unfairly demonised," Tim Chico, a cardiologist from the University of Sheffield, told the Science Media Centre.

"Statins can cause side effects, but the chance of developing these is low while the effects of suffering the heart attack that a statin might have prevented can be fatal or life-long."

**More information:** *The Lancet*, [www.thelancet.com/journals/lan ...](http://www.thelancet.com/journals/lan...)  
 [\(16\)31357-5/abstract](http://www.thelancet.com/journals/lan...)

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