

An apple a day keeps the doctor away: 150 year old proverb stands the test of time, say researchers

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Prescribing an apple a day to all adults aged 50 and over would prevent or delay around 8,500 vascular deaths such as heart attacks and strokes every year in the UK – similar to giving statins to everyone over 50 years who is not already taking them - according to a study in the Christmas edition of the *BMJ*.

The researchers conclude that the 150 year old public health message: "An apple a day keeps the doctor away" is able to match more widespread use of [modern medicine](#), and is likely to have fewer side effects. The research takes into account people who are already appropriately taking statins to reduce their risk of vascular disease and therefore the authors stress that no-one currently taking statins should stop, although by all means eat more apples.

In the United Kingdom, [lifestyle changes](#) are the recommended first step to prevent heart disease. However, trial data suggest that statins can reduce the risk of vascular events, irrespective of a person's underlying risk of cardiovascular disease. As such, calls are being made for greater use of statins at a population level, particularly for people aged 50 years and over.

Using mathematical models a team of researchers at the University of Oxford set out to test how a 150 year old proverb might compare with the more widespread use of statins in the UK population. They analysed

the effect on the most common causes of vascular mortality of prescribing either a statin a day to those not already taking one or an apple a day to everyone aged over 50 years in the UK.

The researchers assumed a 70% compliance rate and that overall calorie intake remained constant.

They estimate that 5.2 million people are currently eligible for statin treatment in the UK and that 17.6 million people who are not currently taking statins would be offered them if they became recommended as a primary prevention measure for everyone over 50.

They calculate that offering a daily statin to 17.6 million more adults would reduce the annual number of vascular deaths by 9,400, while offering a daily apple to 70% of the total UK population aged over 50 years (22 million people) would avert 8,500 vascular deaths.

However, side-effects from statins mean that prescribing statins to everyone over the age of 50 is predicted to lead to over a thousand extra cases of muscle disease (myopathy) and over ten thousand extra diagnoses of diabetes.

Additional modelling showed a further 3% reduction in the annual number of vascular deaths when either apples or statins were prescribed to everybody aged over 30. However the number of adverse events is predicted to double.

"This study shows that small dietary changes as well as increased use of statins at a population level may significantly reduce vascular mortality in the UK," say the authors.

"This research adds weight to calls for the increased use of drugs for primary prevention of cardiovascular disease, as well as for persevering

with policies aimed at improving the nutritional quality of UK diets," they conclude.

Dr Adam Briggs of the BHF Health Promotion Research Group at Oxford University said: "The Victorians had it about right when they came up with their brilliantly clear and simple public health advice: "An [apple](#) a day keeps the doctor away". It just shows how effective small changes in diet can be, and that both drugs and healthier living can make a real difference in preventing heart disease and stroke.

While no-one currently prescribed [statins](#) should replace them for apples, we could all benefit from simply eating more fruit."

Provided by British Medical Journal

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