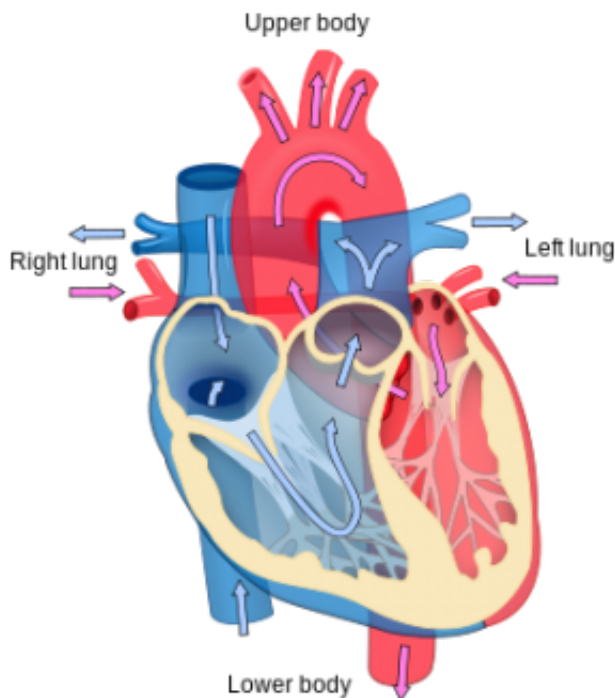


Treating more adults with statins would be cost-effective way to boost heart health

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Heart diagram. Credit: Wikipedia

A new study from Harvard T.H. Chan School of Public Health researchers has found that it would be cost-effective to treat 48-67% of all adults aged 40-75 in the U.S. with cholesterol-lowering statins. By expanding the current recommended treatment guidelines and boosting the percentage of adults taking statins, an additional 161,560 cardiovascular-related events could be averted, according to the

researchers.

"The new cholesterol [treatment guidelines](#) have been controversial, so our goal for this study was to use the best available evidence to quantify the tradeoffs in health benefits, risks, and costs of expanding statin treatment. We found that the new [guidelines](#) represent good value for money spent on healthcare, and that more lenient treatment thresholds might be justifiable on cost-effectiveness grounds even accounting for side-effects such as diabetes and myalgia," said Ankur Pandya, assistant professor of health decision science at Harvard Chan School and lead author of the study.

The study appears online July 14, 2015 in the *Journal of the American Medical Association*.

The percentage of Americans taking statins has jumped in recent years—as of 2012, 26% of all adults over age 40 were taking them, according to the U.S. Centers for Disease Control and Prevention (CDC)—and so has controversy surrounding their use. In November 2013, the American Heart Association (AHA) and the American College of Cardiology (ACC) recommended that statins be prescribed for people with a 7.5% or greater risk of heart attack or stroke over a 10-year period, including many with no existing cardiovascular issues. Previous guidelines had advised statin use only if the risk was 10-20% or higher.

After the 2013 recommendations were issued, proponents of expanding statin use said there was strong evidence that they reduce risk of heart attack and stroke; critics said the risks were overestimated, that healthy adults would be overtreated, and that more people would be at increased risk for negative side effects, such as memory loss, type 2 diabetes, and muscle damage.

The researchers did a cost-effectiveness analysis of the ACC-AHA

guidelines to find the optimal value for the 10-year CVD risk threshold. They used a measure known as the quality-adjusted life-year (QALY)—a measure of the burden of a disease in terms of both the quality and the quantity of life lived. QALYs are frequently used to assess the monetary value of using particular medical interventions; they are based on the number of years of "quality" life that would be gained by such interventions. In the U.S. today, health economists typically consider \$100,000/QALY and \$150,000/QALY reasonable in terms of what the public is willing to pay for [health](#) gains.

The researchers found that the current 10-year cardiovascular disease (CVD) risk threshold (7.5%) was acceptable in terms of cost-effectiveness (\$37,000/QALY), but that more lenient treatment thresholds of 4.0% or 3.0% would be optimal under criteria of

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