

Statin use not justified for healthy people with high cholesterol, researcher claims

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About 40 million adults in the United States regularly take statins to lower their cholesterol levels and reduce their risk of heart disease and stroke, according to American Heart Association data from 2020.

However, many of them don't stand to benefit from these drugs based on new research from David Diamond, a neuroscientist and cardiovascular disease researcher in the Department of Psychology at the University of South Florida.

Diamond and his co-authors reviewed literature from medical trials involving patients taking either a statin or placebo. They then narrowed their review to look at study participants with elevated levels of low-density lipoprotein-cholesterol (LDL), the so-called "bad cholesterol," which can be reduced with a statin. Some individuals with high LDL also had high triglycerides (fat in the blood) and low high-density lipoprotein (HDL), the "good cholesterol," which put them at the highest risk of having a heart attack.

But others with high LDL were very different. They had low triglycerides and high HDL, which meant they were healthier. People with optimal triglycerides and HDL levels typically exercise, have [low blood pressure](#) and low blood sugar, and are at a low risk of a heart attack.

Diamond and his co-authors asked two questions: If people are at a low risk of a heart attack based on having optimal triglycerides and HDL, but they also have high LDL, does that raise their risk? Further, would these people benefit from lowering their LDL with a statin?

Their findings, published in the journal *Current Opinion in Endocrinology, Diabetes and Obesity*, showed LDL alone has "a very weak association" with heart disease and stroke. Their review went further, showing that when people with high LDL and optimal triglycerides and HDL were given a statin, there was no benefit.

Diamond put the findings into a diet and lifestyle context.

"People who are not overweight, have [low blood sugar](#), exercise and are on a low-carb diet typically have optimal triglycerides and HDL, and sometimes they have high LDL," he said. "Our findings show that the people who have this healthy combination of diet and lifestyle, as well as high LDL, showed no benefit from taking a statin."

The authors say their review also challenges the long-held contention that low-carb diets, which are often high in saturated (animal) fat, contribute to heart disease. That contention has persisted for nearly 50 years, dating to when cardiologist Robert Atkins was challenged about the potential dangers of his high-fat Atkins diet before a U.S. Senate Subcommittee on Nutrition and Human Needs in 1973.

"High blood pressure, obesity, smoking and high blood sugar are the primary drivers of heart disease," Diamond said. "Cholesterol is an innocent bystander, and saturated fat in the diet has been undeservedly demonized."

Diamond acknowledges that his research is controversial and has resulted in strong support, along with criticism from some within the [medical community](#) who have challenged his views on LDL and statins. He cautions that it is intended to raise awareness and should not be considered medical advice.

Diamond's interest in the association between LDL cholesterol and the

risk of heart disease and stroke is personal.

About 25 years ago, he was overweight and diagnosed with high triglycerides and low HDL, a potentially lethal combination. His doctor told him he was at high risk of developing heart disease and prescribed a statin to lower his LDL cholesterol. Instead of taking the medication, Diamond began his study of diet and heart disease.

"I learned my problem was that I ate too many carbs—bread, potatoes and sugar," Diamond said. "I've been able to get my weight under control and reduce my risk of heart disease with a low-carb diet. In the process, I've become aware of the obsession with linking cholesterol to heart disease."

Diamond has since published more than a dozen papers on flaws in the consensus that cholesterol causes heart disease. His latest paper included a review of the medical literature linking statins to numerous adverse effects, including the development of diabetes, damage to muscles and kidneys and impaired brain functioning.

"Certain statins have been linked to [cognitive impairment](#) because they interfere with the brain's ability to produce cholesterol, which is essential for the creation of new brain connections and to form memories," Diamond said.

According to Diamond, people who are overweight and have diabetes may benefit from taking a statin because, in addition to lowering LDL, the drugs block excess clotting and inflammation, two known risk factors of heart disease.

However, for those who prefer to take medication rather than make diet and lifestyle changes, Diamond has a message: "People who take a statin might not appreciate that they're a little less likely to have a [heart attack](#)

or stroke, but the adverse effects of the [statin](#) may cause them harm."

Co-authors for the study were Brigham Young University Professor Ben Bikman and Paul Mason, a physician in New South Wales, Australia.

More information: David M. Diamond et al, Statin therapy is not warranted for a person with high LDL-cholesterol on a low-carbohydrate diet, *Current Opinion in Endocrinology, Diabetes & Obesity* (2022). [DOI: 10.1097/MED.0000000000000764](#)

Provided by University of South Florida

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