

Do statins increase the risk of diabetes?

Khaleej Times · 4 Nov 2022 · 13 · Jyoti Madhusoodanan

If you're among the tens of millions of Americans who could benefit from taking a cholesterol-lowering medication and yet don't take one, your hesitance may partly stem from worries about its side effects, said Dr Savitha Subramanian, an endocrinologist at the University of Washington School of Medicine in Seattle.



Statins, which help lower levels of LDL (or “bad” cholesterol) in the blood, can cause side effects such as headache, muscle pain, brain fog and fatigue. But one of the most worrisome among them for many people is the increased risk of developing Type 2 diabetes, in which the body fails to properly regulate and use sugar (or glucose) as fuel. While Type 2 diabetes is a real concern, Subramanian said, that doesn't mean you should automatically avoid statins. Here's why.

What are statins, and how do they work?

Statins have been used since the 1980s to treat and prevent heart disease by lowering cholesterol levels in the blood. Doctors recommend them to people who have had heart attacks or strokes and to those at risk of such conditions because they have high cholesterol.

While other lipid-lowering drugs exist, a majority of adults who need such medications take statins, which work by inhibiting liver enzymes that produce cholesterol. This prevents a buildup of fatty deposits in blood vessels that could eventually clog them and reduces inflam-

mation that occurs when arteries are blocked. Together, these actions lower a person's odds of heart disease.

What is the link to Type 2 diabetes?

Considering their anti-inflammatory effects, researchers in the early 2000s thought that statins might actually protect against diabetes. But in one trial published in 2008 in *The New England Journal of Medicine*, researchers found that older, healthy adults who were given 20 milligrams of rosuvastatin (Crestor) each day were more likely to develop diabetes after about two years than those who were given a placebo.

Before that study, "there was a sense that maybe statins would reduce the risk of diabetes," said Dr Jill Crandall, an endocrinologist at the Albert Einstein College of Medicine in New York. "In the end, we saw something completely different."

Several other analyses have confirmed the link between statins and diabetes risk, but the causes are still a mystery. So far, studies in animals and clinical trials in people have suggested that statins might make cells more resistant to insulin, a hormone that helps regulate glucose levels in blood. When this happens, blood sugar levels can rise so much that it increases the risk of Type 2 diabetes.

While all statins can have this effect, it is most commonly seen with "moderate to high intensity doses," Subramanian said, like 40 or 80 milligrams per day of atorvastatin (Lipitor), or 20 or 40 milligrams of rosuvastatin.

What does this mean for my own risk of diabetes?

Not everyone who takes a statin will develop diabetes, said Dr Marilyn Tan, an endocrinologist at the Stanford University School of Medicine in California. Of about 8,900 adults who took rosuvastatin in the 2008 trial, for instance, 270 developed diabetes; 216 of the same number who took a placebo also developed the condition. One review of studies from 2010 estimated that statin therapy was associated with a 9 per cent increased risk of diabetes.

But that doesn't apply to everyone. An otherwise healthy, younger person is at much lower risk for developing diabetes than someone who is older and has other risk factors, Tan said.

The risk also rises if you are prediabetic, a condition in which blood sugar levels are elevated. A statin might increase blood sugar levels enough to tip a person from prediabetes into diabetes, Crandall said.

"But the changes in blood sugar level are actually pretty modest," she added. "It doesn't mean you're at dramatically increased risk from diabetes or diabetes complications."

Even if you are taking statins, lifestyle choices such as being active and following a healthy diet can reduce the odds of developing diabetes, Tan said.

Still, fears of diabetes or other side effects can make people hesitant to use statins, Subramanian said. If you have concerns, discuss them with a health care provider who can help find the right statin and dosage for you, she said. While high-intensity statins might increase the risk of diabetes for some people, they're essential drugs for preventing heart disease, and their benefits far outweigh the risks.

"Statins have such a bad rap," Subramanian said. "But the risk of developing diabetes should not deter anybody from starting to take a statin."