Statins and Blood Sugar



Can Statins Increase Blood Sugar?

- Yes. Statins slightly raise blood sugar levels (A1C and fasting glucose levels). This can happen in both people with and without diabetes.
- However, not all statins have the same effect on blood sugar.

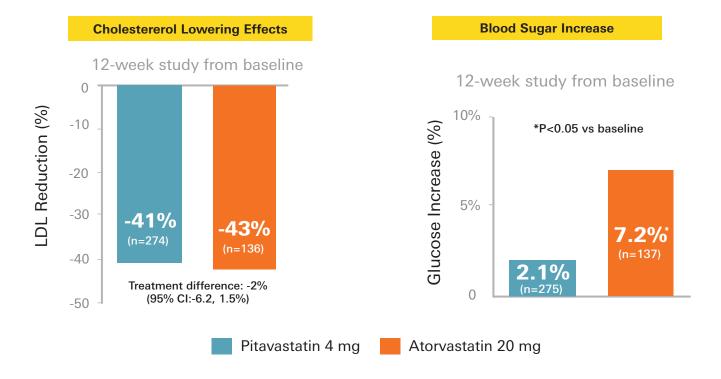
Pitavastatin (ZYPITAMAG®) vs. Atorvastatin (LIPITOR®)

A study compared pitavastatin to atorvastatin in people with type 2 diabetes and high cholesterol.¹

- Cholesterol-lowering effects: Both statins effectively lowered cholesterol. 4mg of pitavastatin lowered cholesterol (41%) similarly to 20mg of atorvastatin (43%).
- Blood sugar effects

Pitavastatin: Had minimal impact on blood sugar levels (2.1%).

Atorvastatin: Significantly increased blood sugar levels (7.2%) compared to baseline.



This document is intended for educational purposes. We suggest bringing this information with you to discuss with your healthcare provider at your next visit.

References

1 Gumprecht J et al. Diabetes, Obesity and Metabolism. 2011;13:1047-1055

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How Statins Affect Glucose Levels



Statins and Blood Sugar in People with Diabetes

- People with type 2 diabetes taking statins may experience a slight increase in blood sugar levels.
- Pitavastatin lowers blood sugar levels compared to other statins

A 2018 study² reviewed 23 clinical trials to see how different statins affect blood sugar in people with type 2 diabetes. This study found that the "moderate-intensity pitavastatin" was linked to lower blood sugar levels (A1C and fasting blood sugar) compared to statins like atorvastatin and rosuvastatin.

If you have type 2 diabetes and your cholesterol is high (above 70 mg/dL), current guidelines recommend starting you on a moderate or high-intensity statin between the ages of 40 and 75. This is because diabetes significantly increases the risk of heart disease, and statins can help lower that risk.

Statins and Blood Sugar in People without Diabetes

- Statins like **rosuvastatin and atorvastatin** may slightly increase blood sugar levels and insulin resistance in people with normal blood sugar and insulin sensitivity.
- Other statins, such as **simvastatin**, **pravastatin**, **and pitavastatin**, may have less impact on blood sugar or even improve insulin sensitivity.

A recent 2023 study³ analyzed data from 67 studies to understand how statins affect blood sugar (A1C) and insulin resistance (HOMA-IR) in people without diabetes.

For individuals with normal HbA1c levels (less than 6.5%), rosuvastatin and atorvastatin significantly increased A1C levels. Simvastatin, pravastatin, and pitavastatin did not show a significant increase.

Among people with normal insulin actions, rosuvastatin, simvastatin, and atorvastatin significantly increased the HOMA-IR index, indicating increased insulin resistance. Pravastatin reduced this parameter, and pitavastatin showed a slight improvement.

KEY TAKEAWAYS

- If you have type 2 diabetes, pitavastatin might be a suitable option for you.
- Statins tend to increase blood glucose and insulin resistance in individuals without diabetes. However, pitavastatin and pravastatin may have lesser of an effect than other statins.

References

2 Cui JY et al. Journal of Clinical Pharmacy and Therapeutics. 2018;43(4):556-570. 3 Alvarez-Jimenez L. et a. European Journal of Pharmacology. 2023;947:175672.



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ZYPITAMAG is a third-generation statin that lowers cholesterol by up to 45%.

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ZYPITAMAG bypasses this enzyme family and is instead mainly processed by a less busy enzyme family. This leads to a reduced potential for certain interactions with other medications.

Key Features:

- Available in 2 mg and 4 mg
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- Compatible with grapefruit juice (unlike some other statins)

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