

Anti-Diabetes Drugs May Reduce the Risk of Colorectal Cancer

People with diabetes who took GLP-1 receptor agonists had a lower risk of colorectal cancer compared with those prescribed other drugs.

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People with obesity are at increased risk for many chronic health problems. These include type 2 diabetes and heart disease. Obesity also increases the risk of many common cancers, including colorectal cancer.

Doctors often prescribe medications for people with type 2 diabetes. These include metformin, insulin, and other drugs that help manage blood glucose (blood sugar) levels to reduce long-term complications of diabetes.

Over the last two decades, a class of antidiabetic drugs called GLP-1 receptor agonists (GLP-1RAs) has become available for use by people with type 2 diabetes. These drugs—which include Ozempic, Trulicity, Wegovy, and Zepbound—not only help control blood glucose but can also promote weight loss. They reduce appetite both by their impact on the brain and by slowing movement of food through the digestive tract.

Researchers have wondered if these drugs could reduce the risk of other diseases in people with type 2 diabetes. In a new study, funded in part by NIH, a research team led by Drs. Rong Xu and Nathan Berger from Case Western Reserve University and the Case Comprehensive Cancer Center looked at this question for colorectal cancer.

The researchers examined the medical records of more than 1.2 million people with type 2 diabetes who were prescribed antidiabetic medications between 2005 and 2019. The team identified newly diagnosed colorectal cancer cases over a follow-up period of up to 15 years. They then compared the risk of developing colorectal cancer among people who were taking seven different types of antidiabetic drugs.

To compare the drugs, the team matched people between groups by known risk factors for colorectal cancer, other pre-existing medical conditions, age, sex, race, and socioeconomic status. Thousands of such matches were made between each of the drugs. The results were published on December 7, 2023, in [JAMA Oncology](#).

The team found that, overall, people with type 2 diabetes who took GLP-1RAs had a lower risk of developing colorectal cancer than those taking the other medications. Those taking GLP-1RAs had a 44% lower risk of developing colorectal cancer than those who took insulin. They had a 25% lower risk than those who took metformin.

This reduced risk was seen whether or not people had obesity or overweight. Among people with excess weight, GLP-1RA users had an even stronger reduction in colorectal cancer risk. This group had a 50% lower risk of developing colorectal cancer than those who took insulin, and a 42% lower risk than those who took metformin.

A smaller but significant reduction in colorectal cancer risk was also seen with the use of GLP-1RAs compared to other antidiabetic drugs for people with obesity or overweight.

“[This] research is critically important for reducing incidence of colorectal cancer in patients with diabetes, with or without overweight and obesity,” Berger says.

These findings suggest that GLP-1RAs could be protective against colorectal cancer in people who have type 2 diabetes, regardless of weight. More research is needed to confirm these observations, to determine whether GLP-1RAs can reduce the risk of other types of cancer associated with obesity, and to understand their mechanisms of action.

This [research summary](#) was published by the National Institutes of Health on January 9, 2024.