Weight-loss jabs linked to lower cancer risk compared with insulin—new study

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Obesity increases the risk of developing a number of cancers, so it stands to reason that drugs that reduce body weight should also reduce the risk of developing these cancers.
Researchers in the US wanted to know if weight-loss drugs known as GLP-1 agonists reduced the risk of people getting any of the 13 cancers associated with obesity. Their results were recently published in *JAMA Network Open*.

GLP-1 is a hormone produced by your gut after eating a meal that signals you are full. GLP-1 drugs deliver synthetic GLP-1, which is much longer lasting than the GLP-1 produced by the body. Recent versions of these drugs include Ozempic (used to treat type 2 diabetes) and Wegovy (used for weight loss). But the drugs used in the study would have been older versions, such as liraglutide (Victoza) and dulaglutide (Trulicity).

The researchers in the new study analyzed the health records of more than 1.6 million people with type 2 diabetes. They compared people who were prescribed GLP-1 drugs with those who were prescribed insulin (the standard treatment for type 2 diabetes) and tried to match the patients as closely as possible to avoid "bias" (systematic errors in the sample data).

They found that people who were treated with any GLP-1 drug between 2005 and 2018 were less likely to be diagnosed with ten out of the 13 cancers associated with obesity than those who were taking insulin.

The risk of cancers including liver cancer, pancreatic cancer, cancer of the intestine (colorectal cancer) and endometrial cancer was significantly reduced compared with insulin treatment. The risk of breast cancer, thyroid cancer and stomach cancer was not reduced, but neither was it increased. The study did not report how much body weight was lost with GLP-1 drugs.

The study also compared the risk of cancers between GLP-1 drugs and another common drug to treat diabetes, metformin. The results showed
that GLP-1 drugs didn't reduce cancer risk any more than metformin (metformin has known cancer risk reduction properties). The risk of kidney cancer was, in fact, increased with GLP-1 drugs compared with metformin.

It is important to note that Ozempic was only approved in the US in 2017 and Wegovy in 2021. This suggests that these drugs might only have been used by a few people included in the analysis, given that the study period was 2005-18.

Cause and effect yet to be proved

The study definitively shows that people prescribed GLP-1 drugs had a lower rate of ten specific obesity-related cancers compared with people prescribed insulin for type 2 diabetes. However, it cannot prove that the drugs caused this reduction in risk.

To prove this, a "prospective randomized study" using GLP-1 drugs compared to placebo needs to be conducted. This is where participants are randomly assigned to receive either a GLP-1 drug or insulin/metformin, and then followed for several years to see who develops cancer, and what type.

Other factors that were not considered in the new study, such as the date of diagnosis of type 2 diabetes, could also be responsible for the findings.

Insulin is usually prescribed to patients with more advanced forms of diabetes and a longer duration of diabetes. It cannot be concluded that GLP-1 drugs reduce the risk of cancer compared with no treatment. Also, it cannot draw any conclusion about Ozempic and Wegovy, given that Ozempic was only approved a year before the study ended, and Wegovy was not approved by the time the study concluded.
Since the older GLP-1 drugs (Victoza and Trulicity), are much less effective in reducing body weight than Ozempic and Wegovy, the effect of the latter drugs might be different.

Overall, the study has done an important job of pointing to a possible reduction of obesity-related cancers in people using GLP-1 drugs compared with insulin. Future studies, though, should try to prove causality, and the newer GLP-1 drugs, such as Ozempic and Wegovy, should be used.

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