

Popular diabetes drugs do not increase thyroid cancer risk, study suggests

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Drugs known as GLP-1 analogs have become increasingly popular to treat diabetes and obesity, but there have been concerns that they might increase the risk of thyroid cancer. Now an extensive Scandinavian study

led by researchers at Karolinska Institutet has found no evidence of such a link. The study is published in *The BMJ*.

GLP-1 receptor agonists, also known as GLP-1 analogs, reduce blood sugar levels and appetite. They are widely used in the treatment of type 2 diabetes and obesity, with their clinical use steadily increasing. Earlier studies and adverse event data have suggested that these drugs could be associated with an increased risk of thyroid tumors. However, due to limitations in data and methodology, clear conclusions could not be drawn, leading to uncertainty about this potential side effect.

"Many people take these medicines, so it is important to study potential risks associated with them," says Björn Pasternak, principal researcher at the Department of Medicine, Solna, at Karolinska Institutet in Sweden. "Our study covers a broad group of patients and provides strong support that GLP-1 analogs are not associated with an increased risk of thyroid cancer."

The researchers analyzed national register data from Denmark, Norway, and Sweden of about 145,000 patients treated with GLP-1 analogs, mainly liraglutide or semaglutide, and 290,000 patients treated with another diabetes drug (DPP4 inhibitors). The risk of thyroid cancer was compared between the groups over an average follow-up period of just under four years.

GLP-1 treatment was not associated with an increased risk of thyroid cancer. The results were consistent also when compared to a third diabetes medication group (SGLT2 inhibitors).

"We cannot rule out that the risk of certain subtypes of thyroid cancer is increased in smaller patient groups that we could not study here, for example in people with a high congenital risk of medullary [thyroid cancer](#) who are advised against using these drugs," says Peter Ueda,

assistant professor at the Department of Medicine, Solna, at Karolinska Institutet.

The ongoing research program at Karolinska Institutet investigates the effects and potential side effects of newer [diabetes](#) medications such as GLP-1 analogs and SGLT2 inhibitors. These medications are now being used to treat broader patient groups, including those with obesity, [heart failure](#), and kidney failure.

"We know from randomized [clinical trials](#) that they have positive effects, but clinical reality is different with patients varying in disease severity, comorbidities, and adherence to treatment recommendations," says Pasternak. "It's therefore essential to investigate how these medicines perform in everyday clinical settings."

More information: Björn Pasternak, Glucagon-like peptide 1 receptor agonist use and risk of thyroid cancer: Scandinavian cohort study, *The BMJ* (2024). [DOI: 10.1136/bmj-2023-078225](https://doi.org/10.1136/bmj-2023-078225)

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