

# Diabetes drug liraglutide linked to lower risk of cardiovascular events

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Real world data from a large Nordic study shows that use of liraglutide, a drug for type 2 diabetes, is associated with a lower risk of myocardial infarction, stroke or cardiovascular death. The study, led by researchers from Karolinska Institutet in Sweden, is published in *The Lancet Diabetes & Endocrinology*.

The number of [patients](#) with type 2 diabetes is increasing rapidly in the world. Cardiovascular disease is a serious complication of diabetes and represents a major cause of mortality in this patient group.

Liraglutide, a diabetes medication, became available for clinical use in 2009. This [drug](#) is a glucagon-like peptide 1 receptor agonist that lowers blood sugar and reduces body weight. A large clinical trial published previously showed that liraglutide reduced the risk of major cardiovascular events among patients with diabetes who had established [cardiovascular disease](#) or were at high cardiovascular risk. It has been unclear if these findings also translate to cardiovascular benefit in the broad patient population seen in routine clinical practice.

The current study was a collaborative project between researchers at Karolinska Institutet in Sweden, Statens Serum Institut in Denmark, NTNU in Norway and the Swedish National Diabetes Register. The researchers used several nationwide registers with information on [prescription drugs](#), diseases and other data from more than 46,000 patients in Sweden and Denmark, 2010-2016.

Around 23,000 patients initiating treatment with liraglutide were compared with the same number of patients initiating treatment with another [diabetes](#) drug, DPP4 inhibitors. The main outcome in the study was major cardiovascular events, defined as myocardial infarction, stroke, or [cardiovascular death](#).

The rate of major cardiovascular events was 14.0 per 1,000 person-years among patients using liraglutide and 15.4 per 1,000 among patients using DPP4 inhibitors, a statistically significant difference. This corresponded to 5 fewer major cardiovascular events per 1,000 patients followed up for 3 years.

Use of liraglutide was also associated with reduced risk of cardiovascular death and any cause of death. In a subgroup analysis, patients with a history of major cardiovascular disease appeared to benefit most from treatment with liraglutide, although this was not a statistically [significant difference](#) compared with patients without such history.

"Our study provides support for the cardiovascular effectiveness of liraglutide among a broader unselected group of patients, providing important confirmatory evidence from routine clinical practice. We believe it may be of interest to drug regulators, clinical guidelines, physicians, and patients," says last author Björn Pasternak, senior researcher at the Department of Medicine, Solna, Karolinska Institutet, and affiliated with Statens Serum Institut.

**More information:** "Use of liraglutide and risk of major cardiovascular events: a register-based cohort study in Denmark and Sweden". Henrik Svanström, Peter Ueda, Mads Melbye, Björn Eliasson, Ann-Marie Svensson, Stefan Franzén, Soffia Gudbjörnsdottir, Kristian Hveem, Christian Jonasson, Björn Pasternak. *The Lancet Diabetes & Endocrinology*, online 5 December 2018, [DOI: 10.1016/S2213-8587\(18\)30320-6](#)

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