

Medications used to treat diabetes may trigger heart failure, study finds

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A comprehensive study examining clinical trials of more than 95,000 patients has found that glucose or sugar-lowering medications prescribed to patients with diabetes may pose an increased risk for the development of heart failure in these patients.

"Patients randomized to new or more intensive blood sugar-lowering drugs or strategies to manage diabetes showed an overall 14 per cent increased risk for [heart failure](#)," says Dr. Jacob Udell, the study's principal investigator, and cardiologist at the Peter Munk Cardiac Centre, University Health Network (UHN) and Women's College Hospital (WCH). "This increased risk was directly associated with the type of diabetes therapy that was chosen, with some drugs more likely to cause heart failure than others, compared with placebo or standard care," he says.

The results of the study were presented today at the American College of Cardiology's 64th Annual Scientific Session and published in the current issue of *The Lancet Diabetes and Endocrinology*.

"While some drugs showed an increased risk, other strategies tested, such as intensive weight loss to control blood sugar, showed a trend towards a lower risk for heart failure," says Dr. Michael Farkouh, senior author of the study and Chair, Peter Munk Centre of Excellence in Multinational Clinical Trials, where the study was conducted.

Overall, the study found that for every one kilogram of weight gain attributed to a sugar-lowering diabetes medication or strategy, there was an associated seven per cent increased risk of heart failure directly linked to that medication or strategy.

"The results of this study could prove to be the catalyst for how diabetes [patients](#) at risk for heart disease are managed moving forward," says Dr. Barry Rubin, Medical Director, Peter Munk Cardiac Centre, University Health Network (UHN). "As the number one global killer, and the second leading cause of death in Canada, the growing burden of heart disease is in many respects impacting patients, families and the healthcare system in ways that are unsustainable. Whatever proactive steps we can take to lessen the risk for development of the disease as illuminated in studies like this one, will yield far-reaching benefits in the future," he says.

The study reviewed and analyzed data from 14 trials involving 95,502 patients. Four per cent of patients suffered a heart failure event while being followed in the individual trials, while 9.8 per cent of patients in the study endured a major adverse cardiovascular event.

The relative increase in the risk of heart failure outweighed a five per cent reduction in heart attacks. The numbers show that for about every

200 patients treated, one additional hospital admission for heart failure was seen after an average of four years of follow-up.

Heart failure is a common occurrence for patients with type 2 [diabetes](#) and has a major impact on one's life expectancy and quality of life as well as representing a major driver of healthcare costs.

Provided by University Health Network

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