

Women with diabetes less likely to receive comprehensive cardiovascular prevention than men, study finds

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Women with type 2 diabetes and cardiovascular disease (CVD), or at high risk of developing CVD, are less likely to reach recommended treatment targets than men, according to an international study involving almost 10,000 patients with type 2 diabetes, being presented at the Annual Meeting of the European Association for the Study of Diabetes (EASD), held online this year (27 Sept-1 Oct). Nevertheless, women were less likely to experience adverse CVD outcomes apart from stroke.

The authors say that a better understanding of gender disparities is needed to improve the implementation of recommended care for the prevention of [cardiovascular disease](#) in women with type 2 [diabetes](#).

"Despite evidence of the benefits for managing cardiovascular risk factors (such as [lowering blood pressure](#) and [cholesterol levels](#)) in people with type 2 diabetes, an unacceptable proportion of affected

women are not reaching recommended treatment targets", says lead author Giulia Ferrannini, MD, from the Karolinska Institutet, Stockholm, Sweden. "Cardiovascular disease is the leading killer of women, but it has never been more preventable and treatable. The reasons why women are not receiving the same standard of treatment as men are complex and require further investigation so that women with type 2 diabetes can be treated more effectively."

CVD is the main cause of illness, poor quality of life and death in individuals with type 2 diabetes. Previous studies have suggested that type 2 diabetes is associated with a higher risk of fatal coronary heart disease, stroke and death in women than men. To find out more, researchers investigated whether there are gender differences in risk factor management and outcomes of patients with type 2 diabetes, who had either a previous cardiovascular event or cardiovascular risk factors.

They analyzed data from 9,901 adults (46%, 4,589 women; average age 66 years) taking part in the REWIND trial—a multicentre, randomized, placebo-controlled trial in 24 countries involving adults with type 2 diabetes with a wide range of cardiovascular risk—and followed for an average of 5.4 years. Significantly fewer women than men had a history of CVD (20% vs 41%).

The researchers analyzed use of cardioprotective therapies and the achievement of guideline-recommended treatment targets at the start of the study and after two years. They also analyzed the risk of individual cardiovascular outcomes including fatal/nonfatal stroke, fatal/nonfatal heart attack, cardiovascular death, death from any cause, and severe heart failure, after adjusting for several factors that could have influenced the results

(including age, lipid levels, and [blood pressure](#).

Provided by Diabetologia

Although the majority of women and men met treatment targets for blood pressure and [low-density lipoprotein](#) (LDL, or bad) cholesterol at the start of the study, women were less likely to receive recommended medications, like ACE inhibitors or angiotensin receptor blockers (ARBs) for blood pressure (80% vs 83%), and statins for cholesterol-lowering (73% vs 81%). Over 2 years follow-up, women remained less likely than men to achieve LDL cholesterol treatment goals, regardless of whether they had previously had a cardiovascular event.

Nevertheless, in the REWIND trial, women were less likely than men to experience adverse cardiovascular outcomes except stroke—including a 46% reduced risk of heart attack and death from any cause and a 38% lower risk of being hospitalized for heart failure.

The authors note that the analysis was exploratory in nature and its interpretation may be limited because treatment approaches differ across geographies and by the types of cardiovascular disease. They also note that risk factor management in a cardiovascular trial may overestimate the use of cardioprotective medications compared to general clinical practice.

According to Dr. Ferrannini, "Even in a trial like REWIND where most people were adequately treated for their [cardiovascular risk factors](#), women with type 2 diabetes were less likely to reach recommended treatment targets than men and were prescribed fewer cardioprotective drugs. Despite this, women remain at an advantage, having a lower risk for future cardiovascular events compared to their male counterparts, except for stroke; this is possibly due to gender differences in the pathophysiology of disease. However, it is important to consider all gender disparities that exist in the real-world setting that prevent [women](#) with diabetes to keep such advantage, including time to diagnosis, use of invasive revascularization procedures, and use of guideline-recommended treatments. Women with type 2 diabetes are at high cardiovascular risk and should not be neglected in its comprehensive management."

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