

Recommendations to reduce cardiovascular risk in patients with diabetes published

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Patients with type 2 diabetes are more than twice as likely to develop cardiovascular disease (CVD) than their healthy peers. Advice to lower that risk is launched today in the 2023 European Society of Cardiology (ESC) Guidelines for the management of cardiovascular disease in patients with diabetes, published in *European Heart Journal*.

"Patients with type 2 diabetes have a two- to four-fold higher risk of coronary artery disease, stroke, [heart failure](#), atrial fibrillation and [peripheral artery disease](#) compared to those without type 2 diabetes and when CVD occurs, the prognosis is worse. For example, death due to [cardiovascular disease](#) is 50%–90% higher in patients with heart failure and diabetes compared to those with heart failure alone. It is therefore essential to have dedicated recommendations to guide the prevention and management of CVD in patients with diabetes. Interdisciplinary, patient-centered care is mandatory to reduce morbidity and mortality and to improve quality of life," said Guidelines task force chairperson Professor Nikolaus Marx of University Hospital Aachen, Germany.

It is estimated that 25%–40% of patients with CVD have undetected diabetes. Given that the presence of both conditions has a major impact on prognosis and treatment, the guidelines recommend systematic screening for diabetes in all patients with CVD. It is equally important to evaluate all patients with diabetes for the risk and presence of CVD. The guidelines introduce a novel score, called SCORE2-Diabetes, to estimate the 10-year risk of fatal and non-fatal myocardial infarction and stroke in patients with type 2 diabetes. The score integrates information on conventional CVD risk factors (age, smoking, blood pressure, cholesterol) with diabetes-specific information (age at diagnosis, blood sugar level, [kidney function](#)) to classify patients as low, moderate, high

or very high risk.

The guidelines recommend lifestyle changes for all patients with diabetes to reduce the likelihood of CVD. In obese patients with diabetes, weight reduction is one of the cornerstones of treatment, and the guidelines recommend [weight reduction](#) and daily exercise. All patients with diabetes should stop smoking and adopt a Mediterranean or [plant-based diet](#) high in unsaturated fat to lower cardiovascular risk. In addition, they should increase activity to 150 minutes of moderate intensity or 75 minutes of vigorous intensity exercise per week according to the concept "every step counts."

Recommendations for patients with diabetes and existing CVD have been revised following the results of large clinical trials. The guidelines now recommend SGLT2 inhibitors and/or GLP-1 receptor agonists to reduce the risk of heart attack and stroke in all patients with diabetes and CVD, independent of glucose control and concomitant glucose medication, and in addition to standard of care antiplatelet, antihypertensive and lipid-lowering therapies. "Just as the presence of type 2 diabetes informs the prescription of other cardioprotective therapies such as statins regardless of glycemic considerations, the same should now apply to prescribing SGLT2 inhibitors and/or GLP-1 receptor agonists," said Guidelines task force chairperson Professor Massimo Federici of the University of Rome Tor Vergata, Italy.

A special focus of the guidelines is managing heart failure in patients with diabetes. Those with diabetes have a two- to four-fold risk of developing heart failure compared to patients without diabetes and many are unaware that they have heart failure. The guidelines recommend systematic screening for heart failure signs and symptoms during each clinical encounter to allow early use of life-saving therapies. Based on data from large clinical trials, the guidelines recommend that patients with diabetes and [chronic heart failure](#) receive SGLT2 inhibitors to

reduce the likelihood of heart failure hospitalization or cardiovascular death.

Diabetes-induced kidney damage is a leading cause of chronic kidney disease globally. In patients with diabetes, chronic kidney disease is associated with a high risk of kidney failure and CVD. The guidelines recommend screening patients with diabetes for chronic kidney disease at least annually by measuring glomerular filtration rate and albumin levels in the urine. Patients with both type 2 diabetes and [chronic kidney disease](#) should receive an SGLT2 inhibitor and/or finerenone, since these agents reduce the risk of CVD and kidney failure on top of standard of care.

Each year with diabetes confers a 3% increase in the risk of atrial fibrillation, which raises the likelihood of stroke, heart failure and death. For the first time, the guidelines recommend opportunistic screening for [atrial fibrillation](#) by pulse taking or electrocardiogram (ECG) in patients with diabetes aged 65 years and above. Opportunistic screening is also advised in those below 65 years of age, particularly when other risk factors such as high blood pressure are present. Also new is a recommendation for regular [blood pressure](#) measurements in all patients with diabetes to detect and treat hypertension and reduce the risk of CVD.

Diabetes is a stronger risk factor for CVD in women compared with men. Data from large clinical trials do not indicate that women and men require different treatments, but women have been under-represented in trials and are less likely to receive recommended therapies. The [guidelines](#) recommend sex-balanced recruitment strategies for future clinical trials alongside pre-specified analyses addressing sex differences. The document states, "Most importantly, every effort should be made to ensure women receive equal health care opportunities in managing CVD in [diabetes](#)."

More information: Nikolaus Marx et al, 2023 ESC Guidelines for the management of cardiovascular disease in patients with diabetes, *European Heart Journal* (2023). [DOI: 10.1093/eurheartj/ehad192](https://doi.org/10.1093/eurheartj/ehad192)

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