

ESC Clinical Practice Guidelines for the **Management of Cardiovascular Disease in Patients with Diabetes:** **What Patients Need to Know**



What Are Clinical Practice Guidelines?

Clinical Practice Guidelines are written by a team of healthcare professionals and scientists, and are mainly intended for healthcare professionals. They provide diagnosis and treatment recommendations based on medical and scientific evidence to ensure that patients receive appropriate care.

This document is for patients, their families and caregivers, and is based on the longer European Society of Cardiology (ESC) Clinical Practice Guidelines for the management of cardiovascular disease in patients with diabetes.

What Will This Document Tell Me?

Patients with diabetes are at higher risk of developing cardiovascular disease and having cardiovascular events, such as heart attacks, than patients without diabetes.

This guide provides an overview of the latest evidence-based recommendations related to cardiovascular disease and diabetes. In particular, it should help you to understand:

- The different diseases that increase the risk of cardiovascular events in patients with diabetes
- The treatments that are recommended to reduce cardiovascular risk
- The lifestyle modifications that can help reduce cardiovascular risk

If you want to know more about any of the topics in this document, there are links to the appropriate sections in the [ESC Clinical Practice Guidelines for the management of cardiovascular disease in patients with diabetes](#).

If you would like more general information about keeping your heart healthy, you can visit: [healthy-heart.org/](https://www.healthy-heart.org/)

How Will This Document Help Me?

This document is intended to answer some questions that you may have and support you in conversations with your medical team. For example, we hope this document will give you knowledge and confidence when discussing treatments so you can share in the decision-making process.

If you are a healthcare professional, the ESC hopes that this document, translated into the language of your patients, will provide them and their caregivers with an understanding of the high risk of cardiovascular disease with diabetes and how this can be managed. Please share it widely with your patients and colleagues.

The Risk Of Cardiovascular Events Is High With Diabetes

Patients with diabetes have a higher risk of developing cardiovascular diseases, such as atherosclerotic cardiovascular disease and heart failure, compared with patients who do not have diabetes. In addition, patients with diabetes may develop severe damage to other organs such as the kidneys (chronic kidney disease) and this also increases the risk of cardiovascular events.

In patients with diabetes, detecting heart and kidney diseases is of critical importance to ensure that the most appropriate treatments and support are given to improve prognosis.

Diagnosis Of Cardiovascular Diseases And Diabetes

Based on the ESC Guidelines, all patients with diabetes should be checked for the symptoms or signs of atherosclerotic cardiovascular disease, for heart failure and for chronic kidney disease. Similarly, all patients with atherosclerotic cardiovascular disease should have a test to see if they have diabetes.

If you do not know already, you should ask your doctor or healthcare provider to assess your cardiovascular risk:

If you have diabetes, you should know if you have **atherosclerotic cardiovascular disease or heart failure**

- Your healthcare provider can check for symptoms or signs of atherosclerotic cardiovascular disease and heart failure

If you have diabetes, you should know if you have **chronic kidney disease**

- Your healthcare provider can check if your kidneys are working properly (measured by estimated glomerular filtration rate) and if there is any damage (measured by urine albumin/creatinine ratio)

If you have atherosclerotic cardiovascular disease, you should know if you have **diabetes**

- Your healthcare provider can check for diabetes e.g. using a blood test for fasting plasma glucose and HbA1c

If you have type 2 diabetes and no atherosclerotic cardiovascular disease or kidney disease, you should know if you are at **high risk of these diseases** in the future

- Your healthcare provider can check your 10-year cardiovascular risk using a scoring system called **SCORE2-Diabetes**. You may be given treatments to reduce levels of glucose and/or cholesterol depending on your estimated risk.

I have diabetes,
**have I got
atherosclerotic CVD?**

I have diabetes,
**have I got heart
failure?**

I have diabetes,
**have I got chronic
kidney disease?**

I have diabetes,
**what is my 10-year
cardiovascular risk?**

I have atherosclerotic
CVD, **have I got
diabetes?**

I have heart failure,
have I got diabetes?



Medications To Lower Cardiovascular Risk

The ESC Guidelines recommend certain heart-protective medications based on whether you have diabetes, atherosclerotic cardiovascular disease, heart failure and/or chronic kidney disease. These medications are added to your existing treatments, regardless of your glucose control or glucose-lowering therapies given for diabetes.

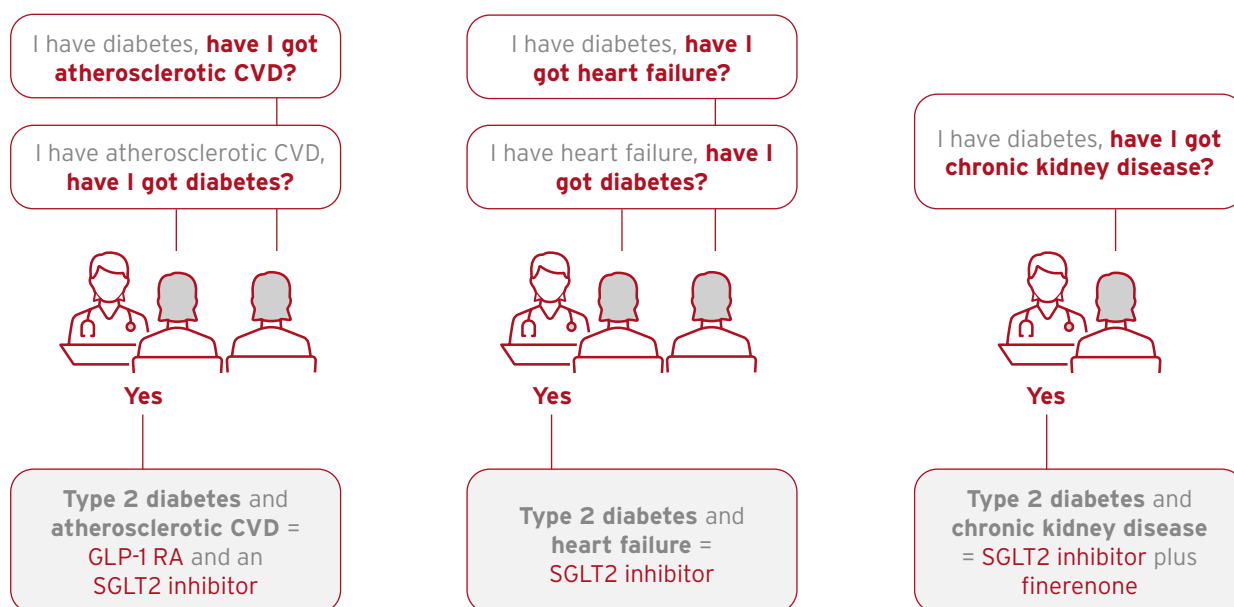
If you have **type 2 diabetes and atherosclerotic cardiovascular disease**, it is recommended that you receive both a **GLP-1 RA** and an **SGLT2 inhibitor** with proven cardiovascular benefit to reduce cardiovascular risk

If you have **type 2 diabetes and heart failure**, it is recommended that you receive an **SGLT2 inhibitor** with proven cardiovascular benefit to reduce hospital stays due to worsening heart failure

- You should receive an SGLT2 inhibitor regardless of the type of heart failure that you have

If you have **type 2 diabetes and chronic kidney disease**, it is recommended that you receive an **SGLT2 inhibitor** to reduce the cardiovascular and kidney failure risk

- To further reduce the risk, **finerenone** is also recommended if you have **chronic kidney disease**



GLP-1 RA = glucagon-like peptide-1 receptor agonist

SGLT2 inhibitor = sodium-glucose co-transporter-2 inhibitor

These treatments are added to your existing medication and are not related to glucose control.

SGLT2 inhibitors, GLP-1 RAs and finerenone are not approved for patients with type 1 diabetes. The guidelines mention that this is an important knowledge gap since patients with type 1 diabetes need to know if these medications can help them too.

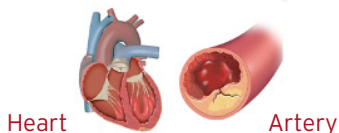
Central Illustration



Presentation

The disease the patient has already

Cardiovascular disease



Heart

Artery

Type 2 diabetes mellitus



Pancreas



Evaluation

The diseases the doctor checks for

Type 2 diabetes

Cardiovascular disease

Chronic kidney disease

Confirmed

Confirmed

Confirmed



Diagnosis

The confirmed diseases

Cardiovascular disease and type 2 diabetes

Type 2 diabetes and atherosclerotic cardiovascular disease

Type 2 diabetes and heart failure

Type 2 diabetes and chronic kidney disease



Treatment

The medication the patient should receive

GLP-1 RA

SGLT2 inhibitor

SGLT2 inhibitor

SGLT2 inhibitor

Finerenone

All medications are added to existing treatments and are not related to glucose control

Therapeutic Lifestyle Modification

The ESC Guidelines recommend lifestyle changes as another type of therapy to reduce cardiovascular risk in patients with diabetes including:

- **Weight control** - reduction in weight is recommended when necessary
- **Increasing physical activity and exercise** - any increase in steps per day will help your physical and mental wellbeing
- **Smoking cessation** - stopping smoking is a key way to reduce cardiovascular risk in all people
- **Controlling cardiovascular risk factors** - lowering high levels of blood pressure and cholesterol is recommended in patients with or without diabetes

Making lifestyle changes should not delay starting recommended medications.

Other Important Information

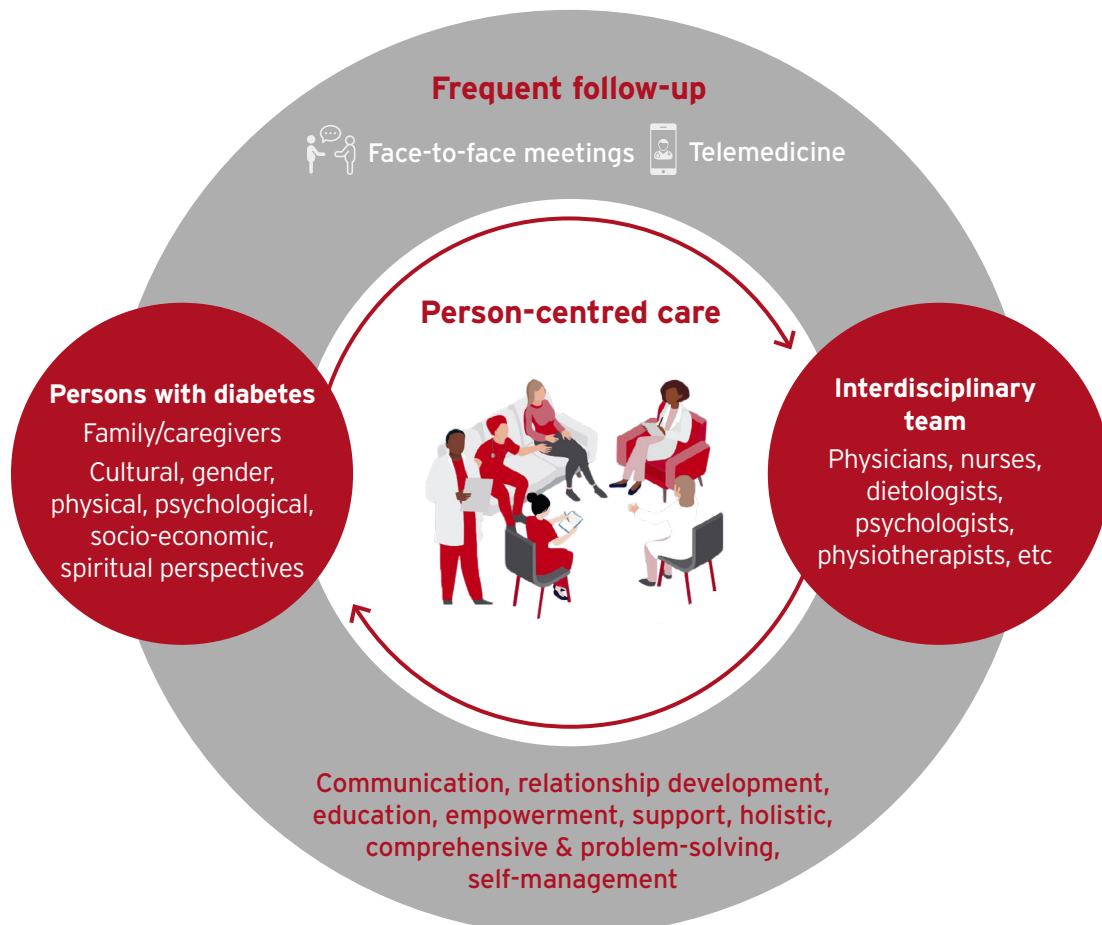
Some parts of the management of cardiovascular diseases are similar in patients with type 1 diabetes or type 2 diabetes and in patients without diabetes.

Your doctor or healthcare provider should regularly check for an abnormal heart rhythm, such as atrial fibrillation, by taking your pulse or doing an “ECG” to measure the electrical activity of the heart.

Your doctor or healthcare provider should also regularly check if there are any problems with the blood supply to your legs (your “ankle-brachial index”) to see if you have lower-extremity artery disease.

Remember, if you have any questions, you can ask your doctor or healthcare provider.

Effective communication with your doctor or healthcare provider helps you to receive “person-centred care” - this means working together to get the right recommended treatments and the right support for you as an individual to reduce your cardiovascular risk, improve your prognosis and improve your quality of life.



This guide for patients is a simplified version of the ESC Clinical Practice Guidelines for the management of cardiovascular disease in patients with diabetes. The full guidelines are available in English on the ESC website (escardio.org/Guidelines/Clinical-Practice-Guidelines/CVD-and-Diabetes-Guidelines); your healthcare provider will be familiar with its content and recommendations. Online translator tools may be able to translate the text and present it in an alternative language, with limitations.

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Disclaimer

This material was adapted from the ESC Guidelines for the management of cardiovascular disease in patients with diabetes (European Heart Journal 2023 - doi: 10.1093/eurheartj/ehad192) as published on 25 August 2023.

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