



Mended Hearts  
Europe

*GoToGuide*

# CHRONIC KIDNEY DISEASE AND CARDIOVASCULAR DISEASE





## GoToGuide: CHRONIC KIDNEY DISEASE AND CARDIOVASCULAR DISEASE

# INTRODUCTION

Whether you have just been diagnosed with kidney disease or have been living with it for some time, you may not know that it can increase your risk of developing cardiovascular disease (CVD), particularly heart disease. The reverse is also true – having heart disease can raise your risk of kidney disease. This happens because the heart and kidneys are closely connected: when one is affected, the other is often impacted too.

The purpose of this *Guide* is to help you and your loved ones understand both kidney disease and cardiovascular disease – how they are diagnosed, treated, and managed. It also explains how these two conditions are linked and how taking care of one can help prevent the other.

By learning more about your condition and following the *Seven Steps to Becoming an Empowered Patient*, you can work more effectively with your healthcare team and support network. Together, you can create a plan that fits your needs and helps you take an active role in managing your health.

## MY JOURNEY WITH HEART AND CHRONIC KIDNEY DISEASE

Glen, Mended Hearts volunteer and patient advocate.

### At the beginning:

“Hearing that I had kidney disease I did not think much of it, after all my heart was failing and that seemed much more important. However, over time I realized that these conditions are interconnected and that my kidney disease was just as important as heart disease. I needed someone to tell me to stop treating them like separate problems.

### Looking back:

“What I really wish is that there was more focus on cardio-renal health. When you have heart disease, the long-term risk to your kidneys needs to be front and center, not an afterthought. I look back and realize I needed a unified care plan. I would tell my younger self, or any patient: Make sure that your cardiologist and your nephrologist talk to each other regularly about your health condition.

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# The *Seven Steps* to Becoming an Empowered Patient:



## STEP 1 TAKE CONTROL

By using this *Guide*, you are taking control of your healthcare journey and embarking on the first step to becoming an empowered patient. Within this resource, you will find valuable information along with tools and resources to reduce your risk of heart and kidney disease.



## STEP 2 EDUCATE YOURSELF

Knowledge is power. For you to be truly empowered, it is important to understand what your diagnosis means. Talk to your healthcare providers about your condition and ask where you can find trustworthy information to learn more.



## STEP 3 KNOW YOUR RIGHTS

Many patients feel they are dependent on the system and simply need to do “what the doctor says”. While it is crucial to follow your treatment plan, you also need to be aware of, and assert, your rights as a patient when necessary.



## STEP 4 BE PART OF THE TEAM

You know yourself better than anyone else. Make sure to discuss any questions, issues or concerns with your healthcare team, communicate your needs clearly, and attend all your appointments.



## STEP 5 GET INFORMATION

If you need medications, surgery or a device, you can never ask too many questions. Your doctor is there to ensure you feel confident about your treatment plan, so do not hesitate to keep asking questions until you fully understand everything.



## STEP 6 VOICE YOUR OPINIONS

Your voice matters. Your needs, thoughts, and opinions are valued. Do not be afraid to speak up if you feel confused or uncomfortable about any decision.



## STEP 7 MAKE INFORMED DECISIONS

You might come across the term shared decision-making. It involves ongoing communication between you and your healthcare provider. Your preferences are important. Make sure you are part of the conversation about your heart and kidney conditions and participate in decisions about treatment options.



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## TAKE CONTROL

While it is true that chronic conditions may always be a part of your life, remember that they do not define who you are. You have the power to live your life in a way that supports your happiness and well-being, even when facing health challenges.

Taking charge of your health means working together with your healthcare team and playing an active role in your care. Many healthcare professionals today welcome and encourage patients to share their thoughts and preferences when making care decisions.

By reading this *Guide*, you are already taking an important step toward feeling more confident and in control of your health. Inside, you will find clear information about kidney and heart health, how the two are connected, and practical tips to help you stay as healthy as possible – both physically and emotionally.



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## EDUCATE YOURSELF

Once you decide to prioritize your health and well-being, the next important step is to educate yourself. Learning about your condition, its symptoms, diagnostic tests, and treatment options empowers you to make informed decisions about your care.

Education is crucial in becoming an empowered patient. At Mended Hearts Europe, our community of patients, along with their caregivers and loved ones, have seen first-hand that “knowledge is power”. By learning more about their conditions, they gain the tools to take an active role in their care and improve their well-being, both physically and emotionally.

Navigating all the available resources can be overwhelming, making it hard to know what is accurate. This *Guide* offers essential insights into kidney and heart disease and what you can do to stay as healthy as possible. By reading this, you are also one step closer to becoming an empowered patient.



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## FUNCTIONS OF THE HEART AND KIDNEYS

In adults, each kidney is about the size of a fist, and the heart is roughly the size of two fists. The kidneys sit at the back of the body, on either side of the spine just below the rib cage. The heart is located in the center of the chest, behind the breastbone (sternum) and between the lungs.

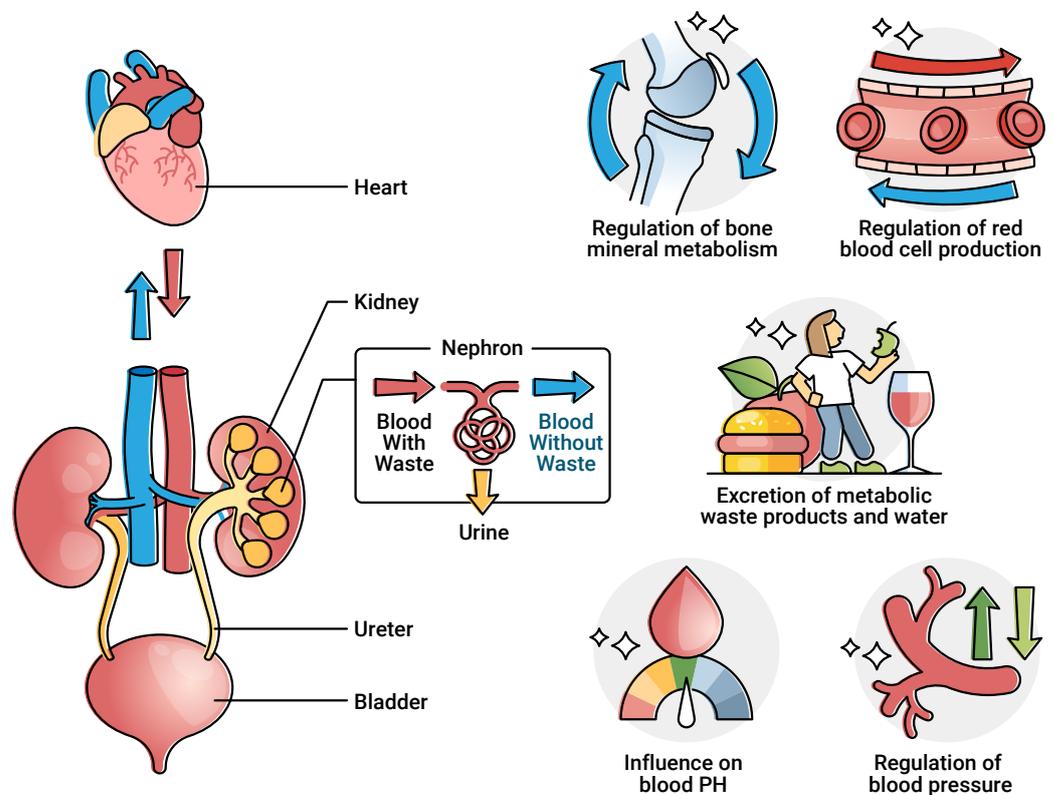
### Functions of the Kidneys:

Your kidneys are vital organs that perform many important tasks to keep your body in balance. They:

- ♥ Filter waste products, excess fluids, and toxins from the blood, which are then removed in the urine
- ♥ Help maintain the right amount of water in your body
- ♥ Keep your levels of electrolytes, minerals, and acids balanced
- ♥ Help regulate your blood pressure
- ♥ Support the production of red blood cells
- ♥ Contribute to healthy bones by managing key minerals and hormones

Each kidney contains about one million tiny filtering units called nephrons, which carry out most of this work.

### FUNCTIONS OF A KIDNEY





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## Functions of the Heart:

Your heart is a strong muscle that acts as a pump to move blood throughout your body. It performs vital functions including:

- ♥ Sending oxygen-rich blood to all your organs and tissues
- ♥ Pumping oxygen-poor blood to your lungs, where it picks up fresh oxygen
- ♥ Delivering nutrients and other essential substances through the bloodstream
- ♥ Helping remove waste products by sending them to the lungs and kidneys for elimination
- ♥ Working together with the blood vessels to regulate blood pressure

## WHAT IS CARDIOVASCULAR DISEASE?

Cardiovascular disease (CVD) is a general term for conditions affecting the heart and blood vessels. It often develops when fatty deposits, called plaque, build up inside the arteries – a process known as atherosclerosis. This buildup can reduce or block blood flow, leading to serious health problems.

The main types of CVD include:

- ♥ **Heart Failure:** a condition when the heart does not pump blood as effectively as it should to meet the body's needs. It is a serious condition, but it does not mean the heart has stopped working altogether.
- ♥ **Coronary artery disease:** when the arteries that supply blood to the heart become narrowed or blocked, which can lead to a heart attack.
- ♥ **Cerebrovascular disease:** affecting the blood vessels in the brain, which can lead to a stroke.
- ♥ **Peripheral artery disease:** when blood flow to the limbs, especially the legs, is reduced.
- ♥ **Other heart conditions:** such as arrhythmias, which are irregular heart rhythms, and heart valve problems are also risks for CKD.

Thanks to earlier diagnosis, improved medical care, and improved awareness of risk factors, deaths from cardiovascular disease have fallen over the past 50 years.<sup>1</sup> However, heart attacks and strokes **remain the leading cause of death globally.**<sup>2</sup> In the European Union, CVD is responsible for about 1 in 3 deaths and affects an estimated 62 million people.<sup>3</sup>

Heart Failure  
GoToGuide



DOWNLOAD THE  
GUIDE [HERE](#)

What is a  
stroke?



[LEARN MORE HERE](#)



**HEART ATTACKS AND STROKES ARE STILL THE**

*leading cause  
of death worldwide.*

- 1 R. Jagannathan, S. A. Patel, M. K. Ali and K. M. V. Narayan, 'Global Updates on Cardiovascular Disease Mortality Trends and Attribution of Traditional Risk Factors', *Current Diabetes Reports*, 19 (2019), 44, <https://doi.org/10.1007/s11892-019-1161-2>
- 2 World Health Organization, *Cardiovascular diseases (CVDs)*, updated 31 July 2025, [https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))
- 3 Eurostat, 'Cardiovascular diseases statistics', *Statistics Explained* (European Commission), 21 November 2024, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Cardiovascular\\_diseases\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Cardiovascular_diseases_statistics)



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**IN THE EUROPEAN UNION, CARDIOVASCULAR DISEASE ACCOUNTS FOR ABOUT**  
*1 in 3 deaths* **AND AFFECTS AROUND**  
*62 million people.*

### WHAT IS CHRONIC KIDNEY DISEASE?

Chronic kidney disease (CKD) happens when the kidneys gradually lose their ability to function properly over months or years. This occurs when the nephrons – the small filtering units inside the kidneys, become damaged and stop working as they should.

As more nephrons are lost, the remaining ones work harder to keep the body in balance. Over time, this extra workload causes further strain, leading to a steady decline in overall kidney function. In later stages of CKD, the kidneys may no longer be able to filter waste and fluids effectively, and dialysis or a kidney transplant may be needed (explained later in this *guide*).

It is estimated that about one in ten adults in Europe has some degree of kidney disease, but most people are not aware of it.<sup>4</sup> Because CKD often develops silently and without symptoms in early stages, it is frequently underdiagnosed. In fact, in European countries, around two-thirds of people with CKD remain unaware of their condition.<sup>5</sup>



**CKD IS ONE OF THE FASTEST-GROWING CAUSES OF DEATH WORLDWIDE, AND IT IS EXPECTED TO BECOME**  
*the third leading cause of death*  
**IN SEVERAL EUROPEAN COUNTRIES BY 2050.<sup>6</sup>**



**WORLDWIDE, AROUND**  
*850 million people* **LIVE WITH CKD.**

**Getting treatment for kidney disease as soon as possible can make a big difference.** The earlier CKD is detected and managed, the better your chances of slowing its progression and preventing kidney failure.

People with CKD have a greater risk of developing CVD, especially heart disease. This connection goes both ways - CKD can lead to CVD, and CVD can cause CKD. In fact, **cardiovascular diseases are the leading cause of death among people with CKD.<sup>7</sup>**

4 H. M. Horton and M. Börsch-Supan, "High unawareness of kidney dysfunction in European older adults and the importance of early detection through comorbidities", PLoS ONE, 20 (2025), e0333578, <https://doi.org/10.1371/journal.pone.0333578>

5 *Ibid.*

6 Alberto Ortiz, Motoko Yanagita, Hideki Yokoi and Roser Torra, "Evolving strategies for early diagnosis, proactive prevention and treatment of CKD", Nephrology Dialysis Transplantation, 2025, doi:10.1093/ndt/gfaf151

7 Jankowski J, Floege J, Fliser D, Böhm M, Marx N. Cardiovascular Disease in Chronic Kidney Disease: Pathophysiological Insights and Therapeutic Options. Circulation. 2021 Mar 16;143(11):1157-1172. doi: 10.1161/CIRCULATIONAHA.120.050686.



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## *Kidney failure*

**IS THE LAST STAGE OF KIDNEY DISEASE.  
THE KIDNEYS DO NOT WORK ANYMORE,  
AND DIALYSIS OR TRANSPLANT ARE NEEDED.**

### **CAUSES OF CHRONIC KIDNEY DISEASE**

Several risk factors can increase the risk of developing chronic kidney disease (CKD). The most common causes in Europe are **diabetes** and **high blood pressure** (hypertension).<sup>8</sup> **Heart disease** can also cause kidney disease.

- ♥ **Diabetes** or diabetes mellitus occurs when there is too much glucose (blood sugar) in your blood. Over time, high blood sugar can damage your kidneys and heart. Diabetes is the leading cause of CKD worldwide – in Europe, about one in three people with diabetes will develop CKD if their condition is not well managed.<sup>9</sup>
- ♥ **High blood pressure** means the force of blood against your blood vessel walls is too strong. This can strain your kidneys and reduce their ability to filter waste properly. Globally, more than 80% of people with CKD also have high blood pressure.<sup>10</sup>
- ♥ **Heart disease.** Your heart's main job is to pump oxygen and nutrients throughout the body, including the kidneys. Heart problems, such as coronary artery disease (CAD), heart failure, or arrhythmias (irregular heart rhythms) – can sometimes lead to kidney damage.

**Other causes.** Less common causes include:

- ♥ **Family history:** If close relatives had kidney failure, your risk is higher.
- ♥ **Autoimmune conditions:** These occur when the immune system mistakenly attacks healthy organs. For example, lupus, an autoimmune disease, can damage the kidneys.
- ♥ **Kidney infections:** Repeated or severe infections can harm the nephrons.
- ♥ **Polycystic kidney disease:** An inherited condition that causes fluid-filled cysts in the kidneys and can lead to CKD or kidney failure.



## *Diabetes, high blood pressure and heart disease*

**ARE THE COMMON CAUSES OF CKD.**

- 
- 8 Ling Deng, Shujin Guo, Yuping Liu, Yaojia Zhou, Youren Liu, Xiaoxia Zheng, Xijie Yu & Ping Shuai, "Global, regional, and national burden of chronic kidney disease and its underlying etiologies from 1990 to 2021: A systematic analysis for the Global Burden of Disease Study 2021", *BMC Public Health*, 25 (2025), 636, <https://doi.org/10.1186/s12889-025-21851-z>
- 9 International Diabetes Federation, *Diabetes and Kidney Disease – 2023*, IDF Diabetes Atlas (2023), <https://diabetesatlas.org/resources/idf-diabetes-atlas-reports/diabetes-and-kidney-disease/>
- 10 John William McEvoy et al., "2024 ESC Guidelines for the management of elevated blood pressure and hypertension", *European Heart Journal*, 45.38 (2024), 3912–4018, <https://doi.org/10.1093/eurheartj/ehae178>



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## SIGNS AND SYMPTOMS

Kidney disease often develops quietly, and many people do not notice any symptoms until kidney function is significantly reduced.



**THIS IS WHY REGULAR TESTING IS SO IMPORTANT IF YOU HAVE A FAMILY HISTORY OF KIDNEY DISEASE, OR HEART DISEASE.**

### Symptoms of Kidney Disease:

You may notice some of the following:



**LOSS OF APPETITE**



**CHANGES IN URINATION**  
– urinating more or less than usual



**DECREASED MENTAL SHARPNESS OR CONCENTRATION**



**SLEEP PROBLEMS**



**DRY, ITCHY SKIN**



**MUSCLE CRAMPS**

### Symptoms shared by kidney disease and heart disease:

Because the heart and kidneys work closely together, some symptoms can overlap:



**CHEST PAIN OR DISCOMFORT**



**FATIGUE OR WEAKNESS**



**NAUSEA OR VOMITING**



**SHORTNESS OF BREATH, EITHER DURING PHYSICAL ACTIVITY OR WHEN LYING DOWN**



**SWELLING OF THE FEET AND ANKLES**



**NOT EVERYONE WILL EXPERIENCE ALL OF THESE SYMPTOMS. IF YOU NOTICE ANY OF THEM, TALK TO YOUR HEALTHCARE PROVIDER FOR TESTING AND GUIDANCE.**



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## DIAGNOSING KIDNEY AND CARDIOVASCULAR DISEASE

Your doctor can perform several simple tests to find out if you have chronic kidney disease (CKD) and how advanced it is. The results help determine your stage of kidney function and guide treatment.

When testing for possible CKD or CVD, your healthcare provider will likely start with a routine physical exam. This usually includes measuring weight, height, blood pressure, heart rate, breathing rate, and temperature, to get an overall picture of your health.

### TESTS USED TO DIAGNOSE KIDNEY DISEASE INCLUDE:

#### Blood tests and eGFR (estimated Glomerular Filtration Rate)

A blood test is one of the main ways to check how well your kidneys are working. It measures levels of waste products such as creatinine and urea in the blood.

- ♥ Creatinine is a waste product from muscle activity that healthy kidneys filter out.
- ♥ If creatinine levels are too high, it may mean your kidneys are not filtering properly.

From this blood test, your doctor can calculate your **estimated glomerular filtration rate (eGFR)**. This number shows how much blood your kidneys filter in one minute and helps classify CKD into five stages of kidney function.

Your eGFR result takes into account your creatinine level, age, sex, and body size to provide a more accurate estimate.



#### STAGE 1

eGFR is 90 – 100% - normal kidney function or very mild damage.



#### STAGE 2

eGFR is 60 – 89% - mild decrease in kidney function.



#### STAGE 3

eGFR is 30 – 59% - mild to moderate decrease in kidney function.



#### STAGE 4

eGFR is 15 – 29% - kidney function is severely decreased.



#### STAGE 5

eGFR is less than 15% - Kidney failure – dialysis or a transplant are necessary.



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## Urine tests

A urine test can show if there are substances like albumin (a protein) in your urine. Normally, there should be little to no protein present in the urine. One common test is the **urine protein dipstick test**, which uses a thin plastic stick with chemical-sensitive pads that change color to indicate the presence and amount of protein in a urine sample.

Another useful test is the **urine albumin-to-creatinine ratio (uACR)**. This test measures the amount of albumin, and helps detect albuminuria or proteinuria – conditions where protein leaks into the urine. This test is typically more sensitive to early kidney damage than the eGFR and often serves as the initial indicator of kidney issues. Albuminuria is categorized into three stages using the uACR as follows:

- ♥ Stage A1 - Normal to Mildly Increased uACR (<30 mg/g or <3 mg/mmol)  
– indicates normal or minimal kidney damage.
- ♥ Stage A2 - Moderately Increased uACR (30–300 mg/g or 3-30 mg/mmol)  
– indicates early-stage kidney disease (microalbuminuria).
- ♥ Stage A3 - Severely Increased uACR (>300 mg/g or >30 mg/mmol)  
– indicates significant damage and a higher risk of progressing to kidney failure (macroalbuminuria).

## Ultrasound

Your doctor may use an ultrasound, a painless imaging test to evaluate the shape, size and structure of your kidneys. This can help identify structural abnormalities, blockages, or cysts.

## MRI or CT scan

If more detailed images are needed, your healthcare provider may recommend an MRI (magnetic resonance imaging) or CT (computed tomography) scan. These imaging tests can provide a more complete picture of your kidneys and surrounding structures.

## Kidney biopsy

In some cases, your doctor may recommend a kidney biopsy to understand the cause of your kidney problem. During this procedure – performed under local anesthesia – a long, thin needle is used to remove a small sample of kidney tissue. The sample is then examined under a microscope by a specialist to help identify the type and extent of kidney damage.

**If your healthcare provider suspects that you may also have heart disease in addition to kidney disease, they may refer you to a cardiologist (a heart specialist) for further testing and management.**



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## *Why early testing matters*



**CKD CAN DEVELOP QUIETLY, OFTEN WITHOUT SYMPTOMS. THAT IS WHY REGULAR CHECK-UPS ARE IMPORTANT – ESPECIALLY IF YOU HAVE DIABETES, HIGH BLOOD PRESSURE, OR A FAMILY HISTORY OF KIDNEY DISEASE.**

**DETECTING CHANGES EARLY ALLOWS YOU AND YOUR HEALTHCARE TEAM TO TAKE ACTION AND PROTECT YOUR KIDNEY FUNCTION.**

### **TESTS USED TO DIAGNOSE HEART CONDITIONS**

Depending on your symptoms and overall risk factors, your doctor may order one or more of the following tests.

- ♥ **Blood pressure check:** your healthcare provider will measure your blood pressure to see whether it is too high or too low. High blood pressure is one of the main risk factors for heart disease.
- ♥ **Listening to the heart:** Using a stethoscope your doctor can listen to your heart's rhythm, rate, and valve sounds. This helps detect irregular heartbeats or problems with how your heart valves open and close.
- ♥ **Blood tests:** Blood tests can measure levels of cholesterol, triglycerides, and other substances that may indicate damage to the heart muscle.
- ♥ **BNP test (short for B-type natriuretic peptide):** BNP is a hormone released into the blood by the ventricles (the lower muscular chambers of the heart) when they are overstretched. It helps reduce the workload of the heart. High BNP levels in the blood may indicate heart failure.
- ♥ **Electrocardiogram (EKG or ECG):** An ECG is a painless test that records your heart's electrical activity. Small sensors (usually on sticky pads) are attached to your skin to measure how regularly and efficiently your heart beats.
- ♥ **Echocardiogram (echo):** An ultrasound procedure that uses sound waves to create moving images of the heart, assessing its size, function, and valve condition.
- ♥ **Stress test:** Also called an exercise stress test or treadmill test, this measures how well your heart performs during various levels of physical activity. You will be asked to walk or run on a treadmill or pedal a stationary bike. This test helps reveal how your heart responds to exertion, and it is done in a healthcare facility where a healthcare professional will monitor you.
- ♥ **Other imaging tests:** Additional tests, such as an **ultrasound of the carotid arteries in your neck**, may be used to check for blockages that could increase your risk of a stroke or other complications.



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## THE LINK BETWEEN KIDNEY DISEASE AND CARDIOVASCULAR DISEASE

As mentioned earlier, the heart and kidneys work closely together to keep your body healthy. When the kidneys are not able to remove waste and extra fluid from the blood, the heart must work harder to pump blood throughout the body. Over time, this added strain can contribute to cardiovascular problems such as heart attack, heart failure, coronary artery disease, arrhythmias, and stroke.

Certain complications of kidney disease can directly increase the risk of developing cardiovascular disease. It is important to speak with your doctor about being tested for these complications so they can be treated early – helping to protect your heart and prevent further damage.

### Common complications in people with kidney disease

When the kidneys are not working properly, they can affect other systems in the body. Here are some complications that can increase the risk of cardiovascular problems:

- ♥ **Anemia:** This condition occurs when your body does not produce enough normal red blood cells. These cells contain hemoglobin, an iron-rich protein that transports oxygen from the lungs to the rest of the body. When oxygen levels are low, the organs and tissues have to work harder, which can increase the risk of heart attack, stroke, or other cardiovascular issues.
- ♥ **High blood pressure (hypertension):** Kidney disease can cause or worsen high blood pressure. When the kidneys cannot properly regulate the balance of salt and water in your body, the extra fluid increases blood volume and blood pressure. The kidneys may also release a protein called renin, which can further raise blood pressure. Over time, high blood pressure can lead to a heart attack, heart failure, or stroke – and it can also cause additional damage to the kidneys, creating a harmful cycle.
- ♥ **High homocysteine levels:** Homocysteine is an amino acid that helps the body to build other important molecules. Healthy kidneys help regulate how much of it stays in the blood. In CKD, homocysteine levels in the blood increase, which may damage blood vessels and raise the risk of heart attack and stroke.
- ♥ **Imbalance of calcium and phosphorus:** Calcium and phosphorus are essential minerals that help keep your bones healthy and strong. When kidney function declines, these minerals can build up in your blood instead of staying balanced. Too much calcium or phosphorus may cause damage to your arteries and increase your risk of heart attack or stroke.



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## TREATING AND MANAGING KIDNEY DISEASE AND CARDIOVASCULAR DISEASE

If you have chronic kidney disease but have not been diagnosed with heart disease or other cardiovascular conditions, it is important to talk to your doctor about strategies to protect your heart and blood vessels. Taking proactive steps can help reduce your risk of developing cardiovascular problems related to CKD. Together, you and your healthcare provider can discuss lifestyle changes, medications, and monitoring strategies to help keep your cardiovascular system healthy.

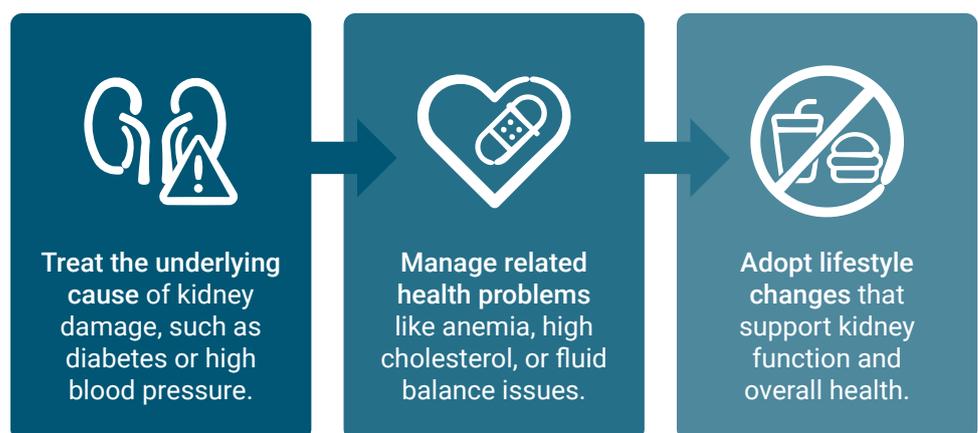
If you are living with cardiovascular disease but do not have kidney disease, making informed decisions about your health can also help protect your kidneys. Managing blood pressure, blood sugar, and cholesterol levels, and maintaining a healthy lifestyle, can lower your risk of developing CKD. By focusing on both prevention and management, you can safeguard the health of both your heart and kidneys.

For people living with both CKD and CVD, managing these conditions together can be more complex because they influence each other. Many treatments that benefit the heart can affect the kidneys – and vice versa – so finding the right balance is key. Certain medications may need to be adjusted or used with caution, especially in advanced stages of CKD, to avoid side effects or complications.

That is why an individualized treatment plan is so important. Your care may involve a team of specialists – including your primary healthcare provider, a cardiologist (heart specialist), a nephrologist (kidney specialist), and sometimes an endocrinologist (diabetes specialist). Working together, they can help tailor your treatment, closely monitor your progress, and support you in managing both conditions effectively and safely.

### TREATMENT OF CHRONIC KIDNEY DISEASE (CKD)

Although CKD cannot be cured and the damage to the kidneys is usually not reversible, starting treatment early can **slow the disease's progression** and **help manage symptoms**. The main goals of CKD treatment are to:





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## Managing the underlying cause

Treatment is tailored to address the specific condition causing CKD. For example, if diabetes or high blood pressure is the main cause, controlling blood sugar and blood pressure levels can help protect your kidneys from further damage.

## Managing related health problems

CKD often comes with other complications that can make the condition worse. Managing anemia, high blood pressure, or high cholesterol can improve how you feel and help prevent heart problems.

## Lifestyle changes

Healthy habits make a real difference. Eating a balanced diet, staying physically active, maintaining a healthy weight, and avoiding tobacco and excessive alcohol can all help slow CKD progression and improve quality of life.

There are currently no specific medications to cure kidney disease, but many treatments can help protect your kidneys and manage related conditions. These include medications that:

- ♥ **Control blood pressure and cholesterol levels**
- ♥ **Manage diabetes**
- ♥ **Support heart health:** which in turn helps your kidneys get the oxygen and nutrients they need

In recent years, newer medications have been developed that benefit both the heart and kidneys, offering added protection for people living with CKD.

High cholesterol  
GoToGuide +

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## Medication safety and kidney function

Because the kidneys help in the elimination of medicines from the body, CKD can change how the body handles medications. When kidney function declines, drugs may build up in the bloodstream and cause side effects. For this reason, your healthcare provider will carefully review and adjust your medication doses to make sure they remain safe and effective.

Regular monitoring and open communication with your care team are key to staying safe and feeling your best while managing CKD.

### MEDICATIONS YOU MAY BE PRESCRIBED<sup>11</sup>

People living with CKD are often prescribed medications to treat conditions commonly linked to kidney disease, such as high blood pressure, diabetes, or cardiovascular disease. Although these medicines are not specifically designed to treat CKD, they help slow kidney damage, protect the heart, and reduce the risk of further health problems.



**PATIENTS WITH CKD USUALLY TAKE MULTIPLE MEDICATIONS DAILY TO MANAGE THEIR CONDITION AND SLOW DOWN THE DAMAGE TO THEIR KIDNEYS. THE TYPES AND DOSAGES OF THESE MEDICATIONS MAY VARY OVER TIME.**

Below are some of the most common types of medications used.

♥ **SGLT2 inhibitors:** These medicines help lower blood sugar by preventing the kidneys from reabsorbing glucose, allowing the extra sugar to leave the body through urine. Although first developed for **type 2 diabetes**, they are now also recommended for people with **CKD** or **heart failure**—even if they do *not* have diabetes.

SGLT2 inhibitors can also help lower blood pressure and support weight loss.

♥ **Mineralocorticoid receptor antagonists (MRAs):** MRAs block the hormone aldosterone, which helps remove excess salt and water through urine. This can lower blood pressure and reduce fluid buildup.

In Europe, one nonsteroidal MRA is approved for reducing the risk of worsening kidney disease, kidney failure, and cardiovascular events in adults with CKD caused by type 2 diabetes.

♥ **Diabetes medications:** If diabetes is the cause of your kidney disease, controlling your blood sugar is essential. Treatments may include oral medications or insulin. Managing diabetes well can help protect both your kidneys and your heart.

♥ **Beta-blockers:** Medicines that lower blood pressure by blocking the effects of the hormones epinephrine (adrenaline) and norepinephrine (noradrenaline). This slows the heart rate and helps the heart pump with less force, reducing strain on both the heart and kidneys.

<sup>11</sup> Kidney Disease: Improving Global Outcomes (KDIGO) CKD Work Group, "KDIGO 2024 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease," *Kidney International*, 105 (2024), 4S: S117–S314, <https://doi.org/10.1016/j.kint.2023.10.018>



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♥ **ACE inhibitors (Angiotensin-converting enzyme inhibitors):** ACE inhibitors help relax and widen blood vessels, lowering blood pressure and making it easier for the heart to pump blood. They also help the kidneys remove excess water and may slow CKD progression.

♥ **ARBs (Angiotensin receptor blockers):** ARBs work in a similar way to ACE inhibitors by widening blood vessels and lowering blood pressure.

♥ **Diuretics:** Sometimes called “water pills,” diuretics help remove extra fluid from the body and reduce swelling in the feet and ankles. They can also help control blood pressure and ease symptoms of heart failure.

♥ **Statins:** Many people with CKD have high levels of LDL (“bad”) cholesterol, which increases the risk of cardiovascular disease. Statins lower LDL-C levels and also help stabilise plaque in the arteries.

People with CKD and high blood pressure may be prescribed a statin even if their cholesterol is normal, because their CVD risk is higher.

♥ **Medications for anemia:** CKD can reduce the body’s ability to make red blood cells. You may be prescribed a man-made form of erythropoietin (a hormone the kidneys normally produce) to stimulate red blood cell production. Iron supplements may also be necessary.

♥ **Potassium binders:** When the kidneys cannot remove enough potassium, levels can rise in the blood and affect the heart. Potassium binders help remove extra potassium and keep levels safe.

♥ **Vitamins and supplements:** CKD can affect bone health and nutrient levels. Your doctor may recommend calcium and vitamin D, as well as other supplements such as vitamin C or B-complex vitamins, depending on your needs.

Talk with your doctor regularly to adjust your treatment as needed so you can feel your best.



**NEVER STOP TAKING YOUR MEDICATIONS WITHOUT CHECKING WITH YOUR DOCTOR OR HEALTHCARE TEAM FIRST.**

Top Ten Medication Tips



DOWNLOAD THE TIPS [HERE](#)

## Medication Tips

Insights from members of Mended Hearts Europe have provided valuable advice on effectively managing medications. You can download their Top 10 Tips from this page. Additionally, here are some more suggestions:

♥ **Fill your prescriptions on time:** Be sure to get your prescriptions refilled before you run out. If automatic refills are an option in your country, consider requesting them. In addition, investigate the possibility of having your prescriptions delivered to your home by mail, if available.

♥ **Follow instructions:** There are instructions on medications labels and accompanying information regarding when and how often to take them, as well as any precautions to observe. If you do not understand the instructions, promptly call your doctor or pharmacist for clarification.

♥ **Adhere to your medications:** Do not stop taking your medications without consulting your doctor first. If you experience side effects, discuss with your healthcare team the appropriate course of action.



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♥ **Create your own routine:** Creating your own daily routine can make it easier to stick to your treatment. Try taking your medications at the same time each day and linking them to something you already do—like brushing your teeth or having breakfast. A steady routine can help you stay on track without even thinking about it.

♥ **Prepare when traveling:** When traveling, pack all your medications and include a few extra doses in case of unexpected delays. When flying, keep your medications with you, and never place them in a checked bag. If you will be away for an extended period of time, ask your doctor or pharmacist about getting a multi-month refill. Moreover, be aware that medications availability may differ from country to country.

♥ **European Union cross-border prescriptions:** According to European Union (EU) regulations, a prescription from a doctor in one EU country is valid in all other EU countries and the European Economic Area (EEA) – as long as it contains specific information. If you are planning an extended trip, discuss this with your healthcare provider. However, be aware that certain medications may not be authorized for sale or available in another country, even within the EU.<sup>12</sup>

♥ **Fake medications:** Fake medicines can be contaminated or mislabeled. Do not take the chance; instead of improving your health, they can harm you. Whenever feasible, stick to your usual pharmacy, and never buy medicines from unknown websites or marketplaces.

♥ **Non-prescription medications:** Talk to your healthcare provider before initiating any over-the-counter medications (such as vitamins, or cough or cold remedies). Some of these products may contain ingredients that could interact with your prescribed medications. Remember, just because a medicine does not require a prescription does not mean it is harmless.

**Along the way, you will come across plenty of tips and advice about managing your disease. Try them out, and keep what works best for you—your journey is unique.**



<sup>12</sup> European Commission, 'Presenting a Prescription in Another EU Country', Your Europe, last updated 24 December 2024, [https://europa.eu/youreurope/citizens/health/prescription-medicine-abroad/prescriptions/index\\_en.htm](https://europa.eu/youreurope/citizens/health/prescription-medicine-abroad/prescriptions/index_en.htm).



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## DEVICES, PROCEDURES AND SURGERY

When chronic kidney disease reaches its **final stage** (also called **kidney failure**), the kidneys can no longer remove waste and extra fluid from the body. At this point, patients need **dialysis** or a **kidney transplant** to replace the kidneys' function.

### Hemodialysis

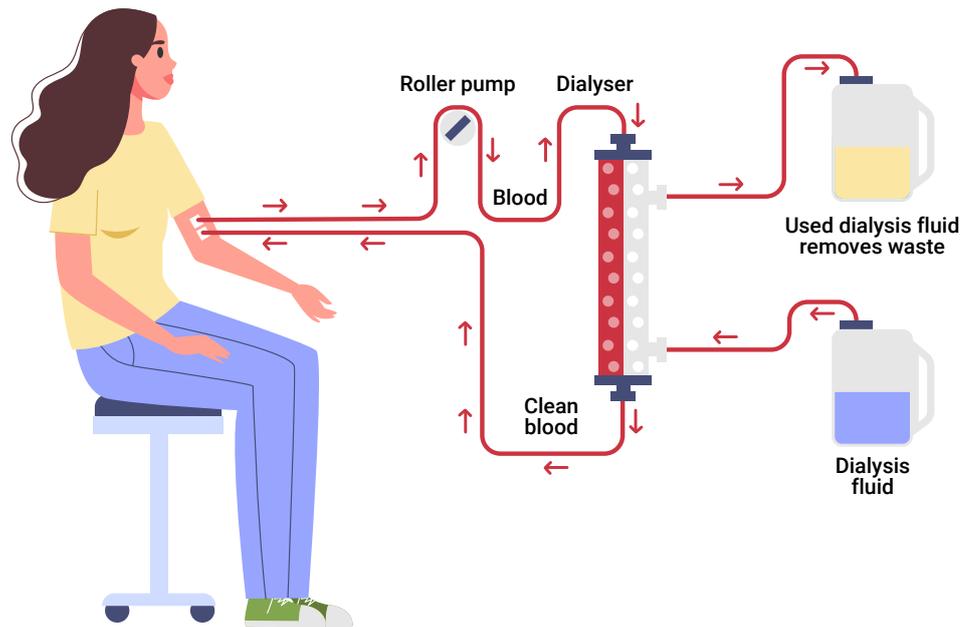
Hemodialysis filters your blood using a machine called a **hemodialyzer**. This machine removes waste and extra fluid when your kidneys can no longer do so.

To prepare for hemodialysis, your doctor will create a **vascular access** (usually in your arm) through a minor surgical procedure.

Hemodialysis can be done:

- ♥ in a **hospital**,
- ♥ in a **dialysis center**, or
- ♥ at **home**, if appropriate.

Treatments are usually scheduled **three times a week**, with each session lasting about **four hours**, though your schedule may be adjusted based on your individual needs.





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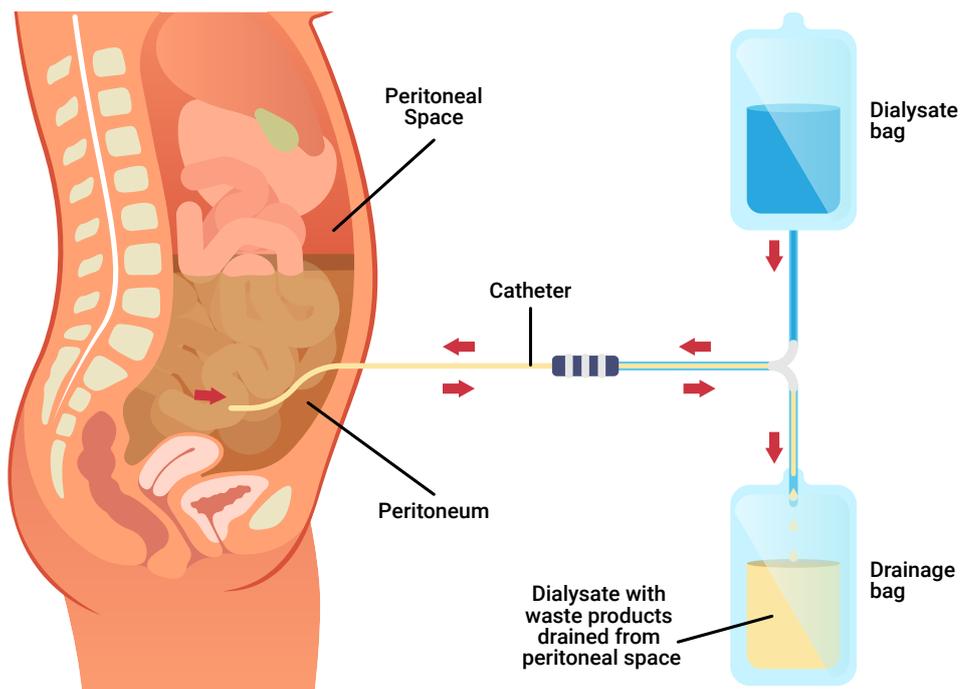
## Peritoneal dialysis

Peritoneal dialysis uses the lining of your abdomen (the **peritoneum**) to filter your blood. A soft tube called a **catheter** is placed surgically into your abdomen and stays there.

A special dialysis solution flows into your abdomen through the catheter. The peritoneum filters waste and extra fluid into this solution. After several hours, the used solution is drained out and replaced with fresh solution. Each cycle is called an exchange. Peritoneal dialysis can be done at home, at work, or even while traveling.

There are two types of peritoneal dialysis:

- ♥ Continuous Ambulatory Peritoneal Dialysis (CAPD): This type involves 3 to 5 exchanges per day, each taking about 30–40 minutes. CAPD is not suitable for everyone, as it requires good manual dexterity, the ability to perform the exchanges safely, or a trusted caregiver who can help.
- ♥ Automated Peritoneal Dialysis (APD): APD is done overnight with the help of a machine that pumps the dialysis solution into the abdomen while you sleep. The solution stays in the abdomen and is later drained automatically into a bag.



## Kidney Transplant

A kidney transplant may be recommended if the kidneys are close to failing completely. During this surgery, your failing kidney is replaced with a **healthy kidney from a donor**, who may be living or deceased.

A kidney transplant can offer many people a better quality of life compared to long-term dialysis, but it also requires a careful evaluation to determine if it is the right option. After the transplant, you will need to take medicines long-term to prevent your body from rejecting the new kidney. Like any treatment, a transplant can come with its own complications, and the medicines used to protect the new kidney can also cause side effects.



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## HEART DEVICES AND PROCEDURES FOR PEOPLE WITH CKD AND CVD

For people living with both chronic kidney disease and cardiovascular disease, certain heart devices may be recommended to help manage serious heart rhythm problems or advanced heart failure. Supporting heart function can also help protect kidney health, since the two organs are closely connected.

♥ **Pacemaker:** A pacemaker is a small device placed under the skin in the chest to help the heart maintain a steady, regular rhythm. It is commonly used to treat arrhythmias (irregular heartbeats). Implanting a pacemaker requires a minor surgical procedure, often performed on an outpatient basis.

♥ **Implantable cardiac defibrillator (ICD):** An ICD is similar to a pacemaker but is designed for people at risk of life-threatening arrhythmia. When it detects a dangerous heart rhythm, it delivers a quick electrical shock to restore a normal heartbeat.

Many modern ICDs also include pacemaker functions. Implanting an ICD is a procedure very similar to placing a pacemaker.

♥ **Cardiac resynchronization therapy (CRT):** CRT uses a specialized type of pacemaker—often called a **biventricular pacemaker**—to help the heart's lower chambers (**ventricles**) beat in sync. This improves how efficiently the heart pumps blood.

CRT devices can also be combined with an ICD for people who need both rhythm support and protection from dangerous arrhythmias.

♥ **Left ventricular assist device (LVAD):** An LVAD is a mechanical pump that helps the left ventricle move blood to the rest of the body. LVADs are typically used for people with severe heart failure, or as a support device while waiting for a heart transplant.

Implanting an LVAD requires open-heart surgery, and patients need careful follow-up afterward.

♥ **Heart and kidney transplant:** In very advanced cases where both the heart and kidneys are failing, some patients may be evaluated for a combined heart and kidney transplant. This is a complex decision that requires careful assessment and discussion with your healthcare team.



**IF YOU HAVE BOTH CKD AND CVD, IT IS IMPORTANT TO TALK WITH YOUR HEALTHCARE PROVIDER ABOUT**

*treatments that support both your heart and kidneys.*

**SOME MEDICATIONS OR PROCEDURES MAY HELP ONE CONDITION BUT PLACE STRAIN ON THE OTHER, SO YOUR CARE TEAM WILL WORK WITH YOU TO FIND THE SAFEST AND MOST EFFECTIVE OPTIONS.**



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## KNOW YOUR RIGHTS

Even empowered patients may feel hesitant to ask questions or express concerns, but it is essential to do so. Your health is on the line, and you are the best person to manage it in a way that suits you. As a patient, you have rights that should be respected.

You have the right to:

- ♥ Be treated as part of the team
- ♥ Ask questions and receive answers
- ♥ Have your concerns heard
- ♥ Have easy access to notes and medical records  
(this may vary by country – check local regulations)
- ♥ Get another opinion
- ♥ Suggest alternatives
- ♥ Feel confident in your healthcare team
- ♥ Change your mind
- ♥ Appeal decisions if you disagree
- ♥ Ask about your rights to medical leave and workplace protections related to your condition. (Note that these regulations may change by country)
- ♥ Know your rights and insist they are respected



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# BE PART OF THE TEAM

Being an empowered patient means recognizing that you are an essential member of your healthcare team. This can feel unfamiliar at first. While your healthcare providers bring medical expertise, you bring something just as important: your experiences, your daily routines, your preferences, and your personal goals. You know your life better than anyone else.

## Your Role Matters

Gone are the days when patients simply followed instructions without question. Today, healthcare providers *want* you to be involved. When you play an active role in your care, you are more likely to:

- ♥ Understand your condition and treatment options
- ♥ Follow your treatment plan
- ♥ Take medications correctly
- ♥ Make lifestyle changes that support your health
- ♥ Speak up when something is not working

Active involvement makes your care **more personal, more effective, and more aligned with what truly matters to you.**

You do not need medical training to participate in your care. Being part of the team simply means:

- ✓ **Asking questions** until something makes sense
- ✓ **Sharing your opinions** and preferences
- ✓ **Speaking up** when something does not feel right
- ✓ **Discussing your goals** and what you hope to achieve
- ✓ **Letting your healthcare team know** what you need to feel supported

Your healthcare team is there to **support and guide you**, not to make decisions for you. By combining their medical knowledge with your personal insight, you can make the best possible choices for your health.



**REMEMBER:**

**YOU ARE NOT JUST A PATIENT,**

**YOU ARE *a key member of the team.***



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## GET INFORMATION

You have already completed Step 2 by educating yourself, yet there is additional information required from your healthcare professionals to effectively manage your condition. Hence, Step 5 in becoming an empowered patient is to make sure you understand everything you can about your disease – not just its general aspects, but also how it specifically impacts you and what actions you can take in response.

Consider these suggestions for questions you may want to ask your doctor – ensure you inquire about any concerns you may have as well. Writing them down in advance will help you remember them. Bring them along to your appointments and do not hesitate to contact your healthcare providers for clarifications between visits. And if you think of new questions afterward, be sure to jot them down and take them with you to your next visit.

- ♥ What caused my kidney disease?
- ♥ What stage of kidney disease do I have?
- ♥ What medications can help manage my kidney disease, and what are their risks and benefits?
- ♥ How can I slow the progression or lower my risk of developing heart disease or other cardiovascular problems? (*for patients with CKD*)
- ♥ How can I lower my risk of developing kidney disease or slow its progression? (*for patients with CVD*)
- ♥ Are there medications that are safe and appropriate for someone like me with both kidney disease and heart disease?
- ♥ What changes should I make to my diet or physical activity routine?
- ♥ If my kidneys are not removing water properly, should my fluid intake be adjusted?
- ♥ If my fluid intake is restricted, what alternatives do I have to feel hydrated?
- ♥ Where can I find reliable, trustworthy resources about CKD and CVD?
- ♥ What signs or symptoms should I watch for that mean I should call or seek emergency care?
- ♥ Will I eventually need dialysis?
- ♥ How can I connect with other patients for support and guidance on living with kidney disease and heart disease?

Tips to  
finding  
trustworthy  
resources



DOWNLOAD  
THE TIPS [HERE](#)



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# VOICE YOUR OPINION

You have recognized the importance of being an integral part of the team in Step 4. Step 6 in becoming an empowered patient is to learn how to be comfortable expressing your opinion within that team.

Speaking up for yourself can be challenging, especially when you disagree with your doctor. However, as a valued member of the team, you are encouraged to voice your opinion respectfully. You should not feel like you are bothering them or being a difficult patient. Remember – your input is essential because you are the one living with the disease. Your needs, preferences and concerns matter.

## Top 10 tips from patients about communicating with your healthcare provider

- 1** Be clear about your health goals and specific about what you want to know.
- 2** Do not hesitate to keep asking questions until you understand.
- 3** Learn about your condition so you are better prepared.
- 4** Choose the right healthcare professional for you and consider seeking a second opinion if needed.
- 5** Ask about the best way to communicate with your healthcare professional.
- 6** Keep a list of questions and bring it along to your appointments.
- 7** Request resources and educational materials from your healthcare provider so you can learn more.
- 8** Remember, you are the expert on your own health – share your thoughts and opinions openly.
- 9** Bring someone with you to appointments for an extra set of ears.
- 10** Do not wait for your next appointment to raise questions or concerns – reach out when something is on your mind. Your healthcare team, including your doctor, nurses, nurse practitioners, or physician assistants, can help between visits.



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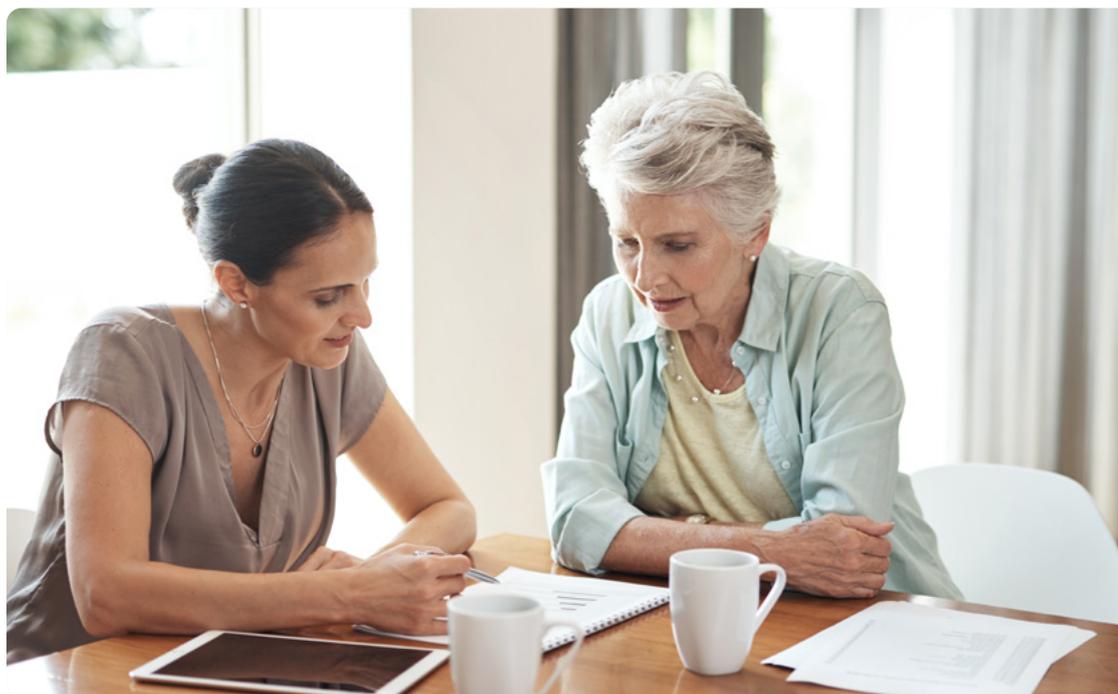
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## MAKE INFORMED DECISIONS

The final step in becoming an empowered patient is putting everything together and making informed decisions that are right for you. By educating yourself, embracing teamwork, and becoming comfortable with the idea that your opinions matter, you gain a sense of control. When you are empowered, you can make informed choices about your healthcare. When you and your care team agree on the treatment plan, you are more likely to adhere to it.

When you are living with kidney disease, cardiovascular disease, or both, you will face important decisions about how to stay as healthy as possible. Managing two chronic conditions at the same time can feel overwhelming, but you are not alone. In the next section, you will find practical information and realistic ideas that can fit into your daily life. These tools can help you make informed choices, support your well-being, and feel more confident in managing your health.

This section outlines **actionable steps and lifestyle changes** to help you reduce risks and live as well as possible with either or both conditions.



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## LIVING WITH KIDNEY DISEASE AND CARDIOVASCULAR DISEASE

Cardiovascular diseases cause approximately **10,000 deaths every day** in the WHO European Region.<sup>13</sup> They are the **leading cause of death and disability in Europe**, responsible for nearly half of all deaths—many from sudden events such as **heart attacks or strokes**.<sup>14</sup>

Chronic kidney disease is also a major global health concern. It is one of the **fastest-growing causes of death worldwide** and is projected to become the **third leading cause of death** in several European countries by 2050.<sup>15</sup>

Managing even one of these conditions can be difficult – managing **both** can feel especially overwhelming. If you currently have only one of these diseases, a key goal is to **prevent the other**. Prevention is often simpler and more effective than treatment.

If you are living with **both CKD and CVD**, it is important to remember that changes in diet, exercise, medications, and treatment plans must consider **both the heart and the kidneys**. What benefits one organ may place strain on the other, which is why careful, coordinated care is essential.

It is completely understandable to feel challenged or confused when managing two chronic conditions at the same time. The good news is that there are practical steps you can take to improve your health, support both organs, and feel better physically and emotionally.

13 World Health Organization, *Cardiovascular diseases (CVDs)*, updated 31 July 2025, [https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-\(cvds\)](https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds))

14 *Ibid.*

15 Alberto Ortiz, Motoko Yanagita, Hideki Yokoi and Roser Torra, 'Evolving strategies for early diagnosis, proactive prevention and treatment of CKD', *Nephrology Dialysis Transplantation*, 2025, doi:10.1093/ndt/gfaf151



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Please record your health goals here:



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## 1. Ask yourself the right questions

The first step in making good decisions for your health is to ask yourself the right questions. Knowing your cholesterol levels, blood pressure, and other measures of your heart and kidney health will help you understand what you may need to change to stay well. Understanding your current health status means being aware of the following:

### ♥ What are my Risk Factors?

You have already learned more about kidney and cardiovascular disease; now it is time to think about what puts *you* personally at risk. Some risk factors relate to your lifestyle—such as your diet, physical activity, stress levels, sleep, and whether you smoke. Others may be linked to your genetics. If you have not already, ask family members about any history of heart or kidney disease. This information can help you and your doctor decide whether genetic testing or additional monitoring might be helpful.

### ♥ What are my Numbers?

It is important to know key health numbers like your cholesterol levels, blood pressure, blood glucose (sugar), and kidney-related results such as your eGFR (estimated Glomerular Filtration Rate), and uACR (urine albumin to creatinine ratio). Keeping these numbers in a healthy range is essential when you have CKD, CVD, or both.

### ♥ What are my Symptoms?

Pay attention to any symptoms you have, even if they do not seem related to your heart or kidneys. Write them down. Note whether symptoms get better, worse, or change over time. Also keep track of new symptoms or any that disappear. Share this information with your doctor at each appointment—or sooner if needed. Watching your symptoms closely can help keep you out of the hospital and support better decision-making. If your symptoms become worse, you should contact your doctor or healthcare team.

### Doctor or healthcare professional I should contact:

Name: \_\_\_\_\_

Phone number: \_\_\_\_\_

Email: \_\_\_\_\_

Preferred way to contact my doctor or healthcare team:

Phone     Text     Email

Online health portal: \_\_\_\_\_

If you use an online health portal on your computer, laptop, phone or device, be sure to keep the login and password in a safe and secure place.



**UNDERSTANDING YOUR RISK FACTORS, YOUR NUMBERS, AND YOUR SYMPTOMS GIVES YOU THE POWER TO MAKE INFORMED DECISIONS ABOUT YOUR HEALTH.**



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## 2. Follow your treatment plan

You have hopefully developed a good treatment strategy together with your healthcare team. This approach may include dietary adjustments, physical activity routines, medications and in some cases, medical devices. It is very important to follow your treatment plan and discuss any needed changes with your doctor.

Your treatment regimen might also require symptom monitoring or tracking certain metrics like sodium, fluid intake or other things. Your healthcare provider may recommend specific apps or provide alternative methods if you do not have access to a smartphone or device.

In addition to planning your treatment, make sure to talk with your healthcare professional about how often you should have check-ups. Regular follow-up appointments are key to monitoring your progress and adjusting your care if needed.

Keep in mind that your plan should be tailored to your needs. If you notice any side effects with your medications, if you have questions or concerns, or if something does not feel right or is making you feel worse, call your doctor or healthcare professional right away so you can make any needed adjustments. It is common to revise a treatment strategy as necessary, particularly if your health does not seem to be improving or if certain aspects of the plan are not effective for you.

Lastly, always consult your doctor before making any changes to your medications or physical activity routine.



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**My treatment plan is:**

*Note: If your plan includes medications, we have a separate medication tracker for you to use. Simply name the medications here, and you will be able to fill in more detail in the medication tracker.*



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### 3. Manage any needed dietary changes

What you eat – and what you choose to avoid – can make a big difference in supporting both kidney and heart health. Eating healthy is always beneficial. A balanced, nutritious diet can support your heart, boost your energy levels, and help reduce fatigue. For those struggling with excess weight, healthy eating can also support gradual and sustainable weight loss.

Always follow the advice of your doctor or healthcare provider when it comes to what food to eat and which to limit or avoid. Some foods might interfere with your medications, so it is important to know exactly what they are and whether you need to avoid those completely or just reduce how much you consume. Make sure your doctor or healthcare provider reviews and approves your dietary plan.

It can be discouraging to limit favorite foods and beverages that do not fit into your healthy eating plan. But remember – you do not have to change everything overnight. In most cases, there are plenty of helpful resources and heart-friendly alternatives that can still be enjoyable and satisfying.

Below are some general guidelines for healthy eating, but keep in mind that not all recommendations apply to everyone with kidney disease or heart disease. It is important to talk with your healthcare provider before making any changes to your diet.



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♥ **Eat to help your heart:** Along with limiting certain foods, it is just as important to eat more of the foods that protect your heart. Fresh or frozen fruits and vegetables are both great options. Aim to include whole grains (like oats, brown rice, or whole-wheat bread), nuts, and legumes (such as beans, chickpeas, or lentils) in your meals regularly. These foods provide fibre, healthy fats, and nutrients that can help lower cholesterol and improve your overall heart health.



♥ **Watch your salt (sodium):** Most people with CVD and/or CKD need to limit how much salt (sodium) they consume. Too much sodium can raise blood pressure and can cause fluid retention and swelling. Unless your healthcare provider has given you specific target, aim for the World Health Organization's recommendation of less than 2,000 milligrams (mg) of sodium per day<sup>16</sup>, which equals about 5 grams of salt.

Packaged and processed foods – such as canned, frozen, or boxed items – often contain much more sodium than fresh foods you prepare at home. Talk to your healthcare provider about how much sodium is safe for you, as your needs may differ from general guidelines.

In general, choosing fresh foods, avoiding packaged products, and selecting low-sodium or sodium-free options can help keep your sodium intake under control. Here are some salt-smart tips:

- ♥ Eat fewer packaged, canned, or restaurant foods.
- ♥ Avoid microwave meals and frozen vegetables in sauces.
- ♥ Look for labels that say “no salt added” or “low sodium”.
- ♥ Use fewer condiments like ketchup, mustard, and soy sauce and find low-sodium versions.
- ♥ Flavour meals with garlic, onion, herbs, spices, or lemon juice.
- ♥ Cut the salt in recipes by half.



♥ **Protein: Avoid too much (or too little):** Protein is found in foods like meat, chicken, fish, beans, nuts, cheese, and yogurt. The amount of protein you need depends on your CKD stage and whether or not you are on dialysis.

♥ **Early-stage CKD (Stage 1 / G1):** Most people do not need to limit protein beyond the usual recommendation of about 0.8 grams per kilogram of body weight.

♥ **Stage 2 and higher (not on dialysis):** Your healthcare team may recommend **reducing your daily protein intake**. Too much protein can make the kidneys work harder, which may speed up kidney damage.

♥ **People on dialysis:** Dialysis removes waste from your blood – but it also removes protein (especially during peritoneal dialysis). For this reason, people on dialysis often need **more protein**, not less.

**A registered dietitian can help determine the right amount of protein for your specific needs.**

<sup>16</sup> World Health Organization (WHO), Salt reduction, <https://www.who.int/news-room/fact-sheets/detail/salt-reduction>.



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- ♥ **Limit unhealthy fats:** Your body needs some fat, but eating too much of the wrong kinds can harm heart health and raise cholesterol levels.

**Healthier fats (good choices):**

- ♥ Monounsaturated and polyunsaturated fats
- ♥ Found in: olive, canola, sunflower, soy, and corn oils; nuts; seeds; avocados; and oily fish
- ♥ Lean meat, poultry, and low-fat or fat-free dairy products are also good options (check labels for sodium)

**Fats to limit:**

- ♥ **Saturated fats** (red meat, butter, cheese, ice cream, coconut oil, palm oil)

**Fats to avoid:**

- ♥ **Trans fats** (Often found in packaged or processed foods)
- ♥ Many manufacturers have removed trans fats, but checking labels is still important



- ♥ **Potassium intake:** Managing potassium is especially important for people with CKD. When the kidneys do not work well, **potassium can build up in the blood**, which increases the risk of **dangerous heart rhythm problems**.

However, some medications — including certain **diuretics** (“**water pills**”) — can cause your body to lose too much potassium. In those cases, you may actually need more potassium.

Because **both high and low potassium levels can cause arrhythmias**, your healthcare provider will give you personalized guidance based on your kidney function, medications, and overall health.

Potassium levels vary across foods. For example:

- ♥ **Lower-potassium options:** white rice, white pasta, apples, peaches
- ♥ **Higher-potassium options:** whole-grain products, oranges, bananas, and certain vegetables

Your care team or dietitian can help you choose foods that match your potassium goals.



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♥ **Be aware of foods high in phosphorus:** When kidney function declines, phosphorus can build up in the blood. Too much phosphorus can:

- ♥ Pull calcium from your bones, making them weak
- ♥ Cause itchy skin
- ♥ Lead to joint pain

Your healthcare provider or nutritionist can help you understand which foods are high in phosphorus and which ones you may need to limit or avoid.



♥ **Avoid alcohol:** Alcohol consumption does not have any health benefits, so it is best to limit or avoid alcoholic drinks altogether. Be sure to consult your healthcare provider for personalized advice on how alcohol may affect your health.

### MEAL PREP TIPS FROM OUR MEMBERS

Managing a new diet can feel overwhelming at first. Start by listing your goals and focusing on the most important steps. As you develop new, healthier habits, you can gradually take on more. Throughout the process, continue to follow any dietary or fluid guidelines your doctor has given you.

- ♥ Plan your meals for the week ahead.
- ♥ Cook your own meals, prepare some extra food and freeze it. Restaurant and take-out portions tend to be large and are often high in sodium.
- ♥ Avoid eating store-bought microwave meals that are high in salt.
- ♥ Use measuring cups and spoons to help you follow portion sizes recommended by your doctor or dietitian.
- ♥ Cut back on frying. Instead, try baking, grilling, roasting, broiling, steaming, and/or cooking food in liquid (poaching).
- ♥ Try to eat a “rainbow” of different fruits and vegetables to get the nutritional benefits of each.
- ♥ Use a smaller plate. A luncheon-sized plate (about 23 cm or 9 inches) can help control portions – it also helps your brain feel satisfied with less food.
- ♥ Avoid foods that are pickled, brined, cured or barbecued. These tend to be high in sodium.
- ♥ Ask for support. Involve friends or family in your healthy goals. Preparing and sharing meals together can make the changes feel easier – and more enjoyable.



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## HOW TO READ THE NUTRITION INFORMATION ON PREPACKED FOOD

All prepackaged food sold in the EU requires a nutrition information label that informs consumers about its energy and nutrient content.<sup>17</sup> This label, known as a Nutrition Declaration, must include:

**Energy value:** this indicates the amount of energy you will get from the food, and it is measured in kilojoules (kJ) and kilocalories (kcal – often referred to as “calories”). Calories consumed should be in balance with the ones burned.

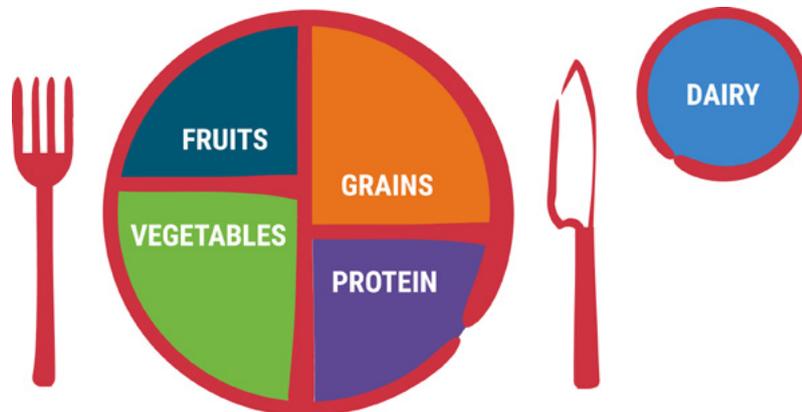
**Fat:** this shows the total grams of fat in the food, including both healthy fats and saturated fats, which are considered less healthy.

**Carbohydrates:** this represents the total amount of carbohydrates, including sugars, in the food.

**Proteins:** this indicates the amount of protein (essential for building and repairing tissues) in the food, in grams.

**Salt:** this shows the amount of salt in the food, in grams. Talk to your doctor to determine your recommended daily salt intake.

Nutrition Facts	
Per 100 g	
<b>Energy</b>	<b>485 KJ / 117 kcal</b>
<b>Fat</b>	<b>8 g</b>
Of which Saturates	<b>3,7 g</b>
<b>Carbohydrate</b>	<b>9 g</b>
Of which Sugars	<b>8 g</b>
<b>Protein</b>	<b>1,4 g</b>
<b>Salt</b>	<b>0,02 g</b>
<b>Vitamin C</b>	<b>14,81 mg 19% RI*</b>
Salt content is exclusively due to the presence of naturally occurring sodium.	
*Reference intake of an average adult (8 400 KJ / 2 000 kcal)	
<b>INGREDIENTS:</b> Mandarin Oranges (37.9%), Light Whipping Cream (Milk), Pears (12.4%), Peaches (7.7%), Thompson Seedless Grapes (7.6%), Apple (7.5%), Banana (5.9%), English Walnuts (Tree Nuts)	



## CHOOSE YOUR PLATE

A balanced diet includes a variety of foods such as fruits, vegetables, whole grains, nuts, and lean proteins. It should be low in saturated and trans fats, sugars, and salt, while high in fiber.<sup>18</sup> Portion control is also vital to align calorie intake with energy needs. For personalized guidance, it is beneficial to consult with a nutritionist or dietician who can help tailor a meal plan suited to individual factors like height, weight, and overall health goals.

17 European Commission, 'Nutrition Declaration – EU Labelling Rules', Your Europe, [https://europa.eu/youreurope/business/product-requirements/food-labelling/nutrition-declaration/index\\_en.htm](https://europa.eu/youreurope/business/product-requirements/food-labelling/nutrition-declaration/index_en.htm).

18 World Health Organization, 'Healthy Diet', WHO Fact Sheets, 29 April 2020, <https://www.who.int/news-room/fact-sheets/detail/healthy-diet>.



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#### 4. Get regular physical activity

Being active is just as important as eating a healthy diet for your heart and kidney health. Becoming more active—even in small ways—can help you feel better both physically and emotionally. Regular movement can boost your energy, lift your mood, and support your health.

It is not about doing a lot—it is about doing what works for you. You can stay active at home or outdoors. If you are looking for more structure, explore local exercise classes, community centers, or fitness programs—many offer discounts for older adults or those on a limited budget. If you prefer to stay home, there are many free, low-impact exercise videos available online that you can follow at your own pace.

It is important to talk to your doctor or healthcare provider before starting any activity. Together, you can create a plan that fits your needs, abilities, and preferences. You may have some limits or restrictions—but that does not mean you cannot stay active. The key is to find something that feels doable and enjoyable. When you enjoy what you are doing, you are more likely to stick with it.

And do not forget to reward yourself after each small win. Enjoy a relaxing cup of tea, listen to your favorite music, watch a show you love, or spend time in the fresh air. These little moments of joy can make a big difference in keeping you motivated and feeling good.

Always consult your doctor before starting any physical activity program.

Top 10  
exercise tips



[DOWNLOAD  
THE TIPS HERE](#)



**THE IMPORTANT THING IS TO MOVE MORE IN WAYS YOU ENJOY. WHEN YOU LIKE WHAT YOU ARE DOING, YOU ARE MORE LIKELY TO MAKE IT A LASTING HABIT.**



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Healthy Habit Tracker (+)  
[DOWNLOAD THE FORM HERE](#)

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Medication Tracker (+)  
[DOWNLOAD THE FORM HERE](#)

- ♥ **Reduce stress:** One of the added benefits of regular physical activity and exercise is that often it can help lower stress levels – which may support your health in many ways. Try gentle exercises, deep breathing, stretching and other activities that help release tension in both your body and mind.
- ♥ **Healthy Habit Tracker:** At Mended Hearts, we have created a simple and easy-to-use Healthy Habit Tracker to support you as you build healthy routines. It is designed to help you start making small changes to your eating and activity habits – and to feel stronger and confident over time.

You choose the habits you want to focus on and track them using the form provided. Once you feel those habits have become part of your routine, you can select new ones to work on. It is a helpful way to stay motivated and on track with your goals.



## 5. Take medication as prescribed



Patients with CKD and CVD might benefit from taking medication. If your doctor prescribes medicine, make sure you understand what you are taking, when to take it, what it is for, possible side effects, and which side effects should prompt a call to your prescribing physician.

- ♥ **Medication Tracker:** Use this medication tracker to keep a clear record of your medicines – not just when to take them, but also what each one is for and any possible side effects. If you take more than one medicine, you can print one for each medication and keep them together to bring to your medical appointments.



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## 6. Make additional lifestyle adjustments

Adopting healthy lifestyle habits can significantly help you reduce your risk of complications from CKD and CVD.

- ♥ **Stop Smoking:** Smoking – and even exposure to second-hand smoke – greatly increases the risk of CVD and CKD, as well as stroke, lung conditions and cancer. Chewing tobacco and vaping are also harmful. The good news? Quitting brings immediate benefits: it can improve your blood pressure, breathing, and heart rate. Talk to your doctor about support options, including programs and groups that can help you take the first step toward a smoke-free life.



**SMOKERS WHO QUIT START TO IMPROVE THEIR CARDIOVASCULAR HEALTH AND REDUCE THEIR RISK FOR HEART DISEASE AND STROKE IMMEDIATELY, AND THE EXTENT OF THE REDUCTION INCREASES OVER TIME.**

Explore smoking cessation programs with your healthcare provider and look for support from support groups or individuals who have successfully quit.

- ♥ **Reduce or Manage Stress:** Stress is a common challenge for many people living with chronic diseases, especially if they have two, like CKD and CVD. While some stress is normal, excessive stress raises blood pressure, complicates breathing, and accelerates heart rate. Unhealthy coping mechanisms like overeating, drinking or smoking should be avoided. Instead, find healthy ways to relax and manage stress, such as meditation, or spending some time outside. If stress and anxiety persist, seek help from a healthcare provider for therapist or support group referrals.



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- ♥ **Get Enough Sleep:** Many people do not realise how strongly sleep is connected to both kidney and heart health. Not getting enough sleep can actually cause CKD or CVD to progress more quickly.

There are several reasons why people with CKD or CVD may struggle with sleep. Symptoms of the disease can cause discomfort or worry, and some medications may interfere with restful sleep. **Obstructive sleep apnea**—a condition in which breathing repeatedly stops and starts during sleep—is also more common in people with CKD or CVD than in the general population.

Poor sleep has real health effects. When you do not get enough rest:

- ♥ Blood pressure increases, raising the risk of both CKD and CVD.
- ♥ Blood sugar becomes harder to control, especially for people with diabetes.
- ♥ You may feel more fatigued, stressed, and less able to manage daily life.

Just like healthy eating, exercise, and stress reduction, **good sleep** can help lower your risk of complications and improve your quality of life.

Aim for **7 to 8 hours** of sleep each night. Helpful tips include:

- ♥ Establish a relaxing bedtime routine.
- ♥ Turn off electronics at least one hour before bed.
- ♥ If you can, get a comfortable mattress and keep your room cool and quiet.
- ♥ Avoid heavy meals and alcohol close to bedtime.
- ♥ Try to keep a consistent sleep schedule, going to bed and waking up around the same time each day.

If these steps are not improving your sleep, talk to your doctor. There may be other approaches or treatments that can help.

If you have a sleep disorder—such as sleep apnea, insomnia, or narcolepsy—it is especially important to treat it. Sleep disorders can raise blood pressure and increase the risk of kidney and heart disease. Some medications for narcolepsy are also high in sodium, which can be harmful for people with CKD. Your medical team can help you find a safe and effective plan so you can get the rest you need and protect your health.



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## 7. Look after your emotional well-being

Living with CKD, CVD, or both can be stressful – and it is normal to feel worried, sad, or even overwhelmed at times. Many people with long-term conditions experience anxiety or depression. These feelings are not just “in your head” – they can affect your energy, sleep, appetite, and even how well you manage your treatment plan.

Depression and anxiety can also make it harder to stick to healthy routines like taking medicines, following a heart-healthy diet, or staying active. Over time, this can increase the risk of complications or needing to go back into hospital.

That is why looking after your mental health is just as important as caring for your heart and kidneys. If you are struggling with low mood, constant worry, or a loss of interest in things you normally enjoy, talk to your healthcare provider.

There are many ways to get support and feel better emotionally – from counselling or support groups, to gentle exercise, which can boost mood and physical health.



**ASKING FOR HELP IS NOT A SIGN OF WEAKNESS.**

**IT IS AN IMPORTANT PART OF LIVING WELL WITH CARDIOVASCULAR AND KIDNEY DISEASE.**



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## 8. Get connected

Connecting with others who have a similar diagnosis can provide emotional support and help you stay on track with your health goals. Peer support reduces feelings of isolation and has shown to decrease doctor visits and hospitalizations.<sup>19</sup>

- ♥ **Peer Support** – Getting emotional support from another CKD and CVD patient can help you feel less scared and alone. Peer support benefits both your emotional and physical health. Consider joining a national peer support group or seek support by phone or online.
- ♥ **Supporting Others** – If possible, get involved in a community dedicated to helping others. Participating in a local support group where you can both give and receive support can greatly enhance your sense of well-being. Volunteering can also boost your mood. By sharing your experiences with your disease, you can help others facing the same challenges. Connecting with others is an essential part of the healing process.



## Explore more GoToGuides

Find other trusted, patient-friendly resources designed to support you at different stages, from diagnosis to living well day to day.

[READ IT ONLINE HERE.](#)

## ABOUT MENDED HEARTS EUROPE

Mended Hearts Europe (MHE) is a non-profit organization dedicated to fostering hope and enhancing the lives of cardiovascular disease patients of all ages, their families, and caregivers. Through ongoing peer-to-peer support, patient education, and advocacy, its mission is to build a community characterised by resilience, care, and collective strength in overcoming challenges. Headquartered in Geneva, Switzerland, MHE marks the expansion of The Mended Hearts, Inc. (MHI) into Europe.

<sup>19</sup> Nesta, The Power of Peer Support: What We Have Learned from the Centre for Social Action Innovation Fund (London: Nesta, 2016), <https://www.nesta.org.uk/report/the-power-of-peer-support/>.



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