



Chronic Kidney Disease

Emotional and
practical support

Chronic Kidney Disease

Chronic Kidney Disease (CKD) is a very general term used by health care professionals to indicate that our kidneys are damaged, diseased or not functioning correctly, and have been that way for a while. Although it is impossible to say exactly how many people have CKD, it is relatively common, and around one in eight people will develop CKD. It is much more common as we get older, with roughly **50% of all people over 75 having some degree of kidney disease**, and it occurs earlier and is also more common within Asian and African communities.

The word 'chronic' makes it sound extremely serious in every case, and while this is by nature an irreversible and incurable condition, many cases of CKD are mild or moderate and risks can be managed by patients and their GPs without ever visiting a hospital. In other cases, however, the condition can progress needing specialist input from the renal team and can be extremely serious. CKD can exist on its own, or in combination with other long-term conditions such as high blood pressure, diabetes or diseases that affect the blood vessels (vascular disease). It is impossible to predict with complete certainty how quickly or slowly kidney function will decline, but repeated monitoring over time can give us a good idea.

The major risk with CKD is that of developing problems affecting the heart and blood vessels such as heart attacks and strokes. That is why regular monitoring is important.

It is also important to be aware that having CKD puts people at an increased risk of developing Acute Kidney Injury (AKI).

AKI is a sudden decline in kidney function, often related to an acute illness or infection such as a urinary tract or chest infection. While most cases of AKI can be treated, kidney function does not always return to its previous level and can hasten decline of kidneys in the future.

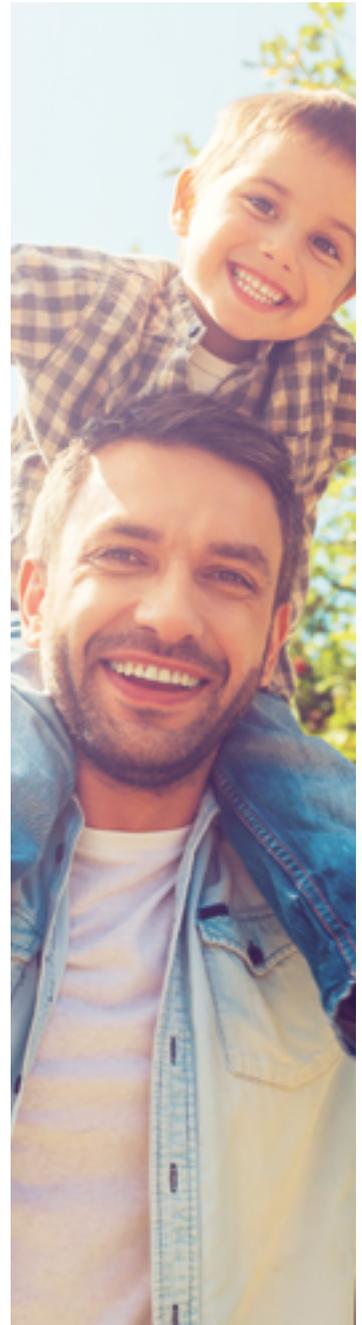


Understanding our kidneys

Most people have two kidneys (although one in 10,000 of us is born with only one kidney) and, if we are healthy our two kidneys work by filtering out waste products from the bloodstream which are passed out of the body as urine. Our kidneys help to control our blood pressure and they make a hormone which helps create red blood cells and stops anaemia. They also play a very important role in maintaining healthy bones. In addition, they keep a number of salts and chemicals at the right level in the body, such as sodium, potassium, phosphate and calcium. Any chemical imbalances can cause problems in other parts of the body and as kidney disease can interfere with medications it is important that patients seek advice from their GP or consultant.

Causes of CKD

Common causes of CKD in the UK include diabetes, high blood pressure, long-term infections, blockages such as kidney stones, certain medicines, complex inflammatory conditions as well as a number of genetic conditions such as polycystic kidney disease. In many cases CKD has several contributing causes and this is particularly true when CKD is caused by conditions that affect the blood vessels in the kidneys, such as diabetes, high blood pressure and high cholesterol as these often occur together. It is important to remember that the kidney ages along with other parts of the body, so sometimes CKD can be caused simply because the kidney is ageing naturally.



1 in 8

people will develop CKD

The symptoms of CKD

Most people will only develop symptoms related to CKD when their kidney function is poor and their disease is advanced (so most patients will never develop any symptoms at all). This is because kidneys can still work when they are damaged. However people should be wary about new and unprescribed medications because of the risks of Acute Kidney Injury and cardiovascular disease, and should seek advice from their doctors or pharmacists before buying them over the counter. Symptoms tend to be quite vague and are often attributed to other illnesses such as colds or the 'flu'. Some patients will feel symptoms such as tiredness, loss of appetite and the need to urinate frequently. Others may have itchy skin, swelling in the legs or headaches. It is important to remember that because kidney problems don't tend to cause many symptoms, your kidney function can get worse without you ever knowing. So regular testing is essential.

Testing for CKD

Blood and urine tests are used to identify patients with CKD. The need for other tests depends on which kidney conditions are suspected and might include a scan of the kidneys or a biopsy.



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The five stages of CKD

The most common test for CKD is a blood test called GFR (Glomerular Filtration Rate). This estimates the amount of blood that is filtered in your kidneys over a period of time and measures a chemical called creatinine – a waste product produced by muscles which is cleared by the kidneys.

If your kidneys are not working properly the GFR will go down. They will also lose function as you get older. A GFR of over 60 (about 60% of kidney function) may be within a normal range for you unless it is combined with other complications, such as high levels of protein or a genetic condition. Doctors and nurses also measure the amount of protein in your urine (albuminuria) as this is also an indication of kidney disease and reducing the amount of protein in the urine can help slow kidney disease. If protein levels in the urine are not controlled this will hasten the decline of kidney function.

Anyone in Stages 1–3 has 'mildly to moderately' reduced kidney function and this can usually be managed in the community. Where the GFR rate is borderline, a diagnosis of CKD may need to be confirmed with a further blood test. People are classified as having CKD when their GFR is below 60 i.e. Stages 3–5.

Stage (also referred to as G1-G5)	GFR*	Description	Treatment
1	90+	Normal kidney function, but urine findings, structural abnormalities or genetic traits suggest kidney disease	Observation, control of blood pressure
2	60–89	Mildly reduced kidney function and other findings (as in Stage 1) point to kidney disease	Observation, control of blood pressure and risk factors
3a	45–59	Moderately reduced kidney function	Observation, control of blood pressure and risk factors
3b	30–44	Moderately reduced kidney function	Observation, control of blood pressure and risk factors
4	15–29	Severely reduced kidney function	Planning for end stage kidney failure. Management of CKD complications such as anaemia
5	<15	Very severely reduced kidney function, called end stage kidney failure	Planning for end stage kidney failure

The 10% of CKD patients who are at Stages 4 and 5 have ‘severely’ or ‘very severely’ reduced kidney function. Stage 5 is sometimes called end stage kidney failure and this means that the kidneys can no longer maintain wellbeing. This is the stage at which dialysis treatment or a kidney transplant may be required.



Albuminuria stage	Urine protein level	Description	Treatment
A1	<3	Normal urine protein levels	No specific treatment needed
A2	3–30	Abnormally high urine protein levels	Specific blood pressure medicines if appropriate
A3	>30	High urine protein levels	Specific blood pressure medicines if appropriate

Treatment for CKD at Stages 1–3

There are five main aims of treatment when CKD is mild to moderate:



Slowing down the progression of CKD

The most important treatment to prevent or delay the progression of CKD, whatever the underlying cause, is to keep blood pressure well controlled, usually to below 130/80 mm Hg.



Treating the underlying cause

If the cause of CKD is diabetes, for example, then it is important to establish good glucose control. Anyone with high blood pressure will need careful blood pressure management and if recurring kidney infections are the underlying cause, antibiotics may help.



Reducing the levels of protein in the urine (albuminuria)

Two specific types of blood pressure medications are also very good at lowering protein lost in the urine. They are ACE inhibitors (ACE-Is) and Angiotensin receptor blockers (ARBs). You need a kidney function test within two weeks of starting one of these medications, or if the dose is adjusted, as they can occasionally make your kidney function worse or push up the potassium levels in your blood. If this happens, then the medicine will need to be temporarily stopped or dose adjusted.



Reducing the risk of developing cardiovascular disease

Adults with CKD have an increased risk of developing cardiovascular diseases such as heart disease, stroke and vascular disease. Many patients may be asked to make changes to lifestyle habits such as stopping smoking, eating more healthily, checking weight, cutting back on alcohol and taking exercise.



Relieving symptoms

If CKD becomes more severe, treatment may be needed to help with the other symptoms that it causes. For example, anaemia caused by CKD can be treated with iron and erythropoietin (a hormone normally made by the kidneys). Patients may be advised about how much fluid to drink and how much salt to take, as well as having other dietary advice to help control levels of calcium and potassium in the body.

Treating CKD at Stages 4 and 5

Once CKD reaches **Stages 4 and 5**, patients will be referred to a kidney unit under the care of a kidney specialist and multi-disciplinary team of health professionals who will discuss possible options, including dialysis and a kidney transplant.



Kidney Care UK has a separate leaflet:
Kidney failure: What choices do I have?
for those reaching end stage kidney failure.

**Kidney Care UK is the leading
kidney patient support charity**



**Kidney Care UK provides support, advice,
counselling and financial help for kidney
patients and their families.**

We fund the improvement of renal equipment, services and specialist staff. We also invest in research and help to influence government and NHS policy. To access our full range of services, please use the contact details below.

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