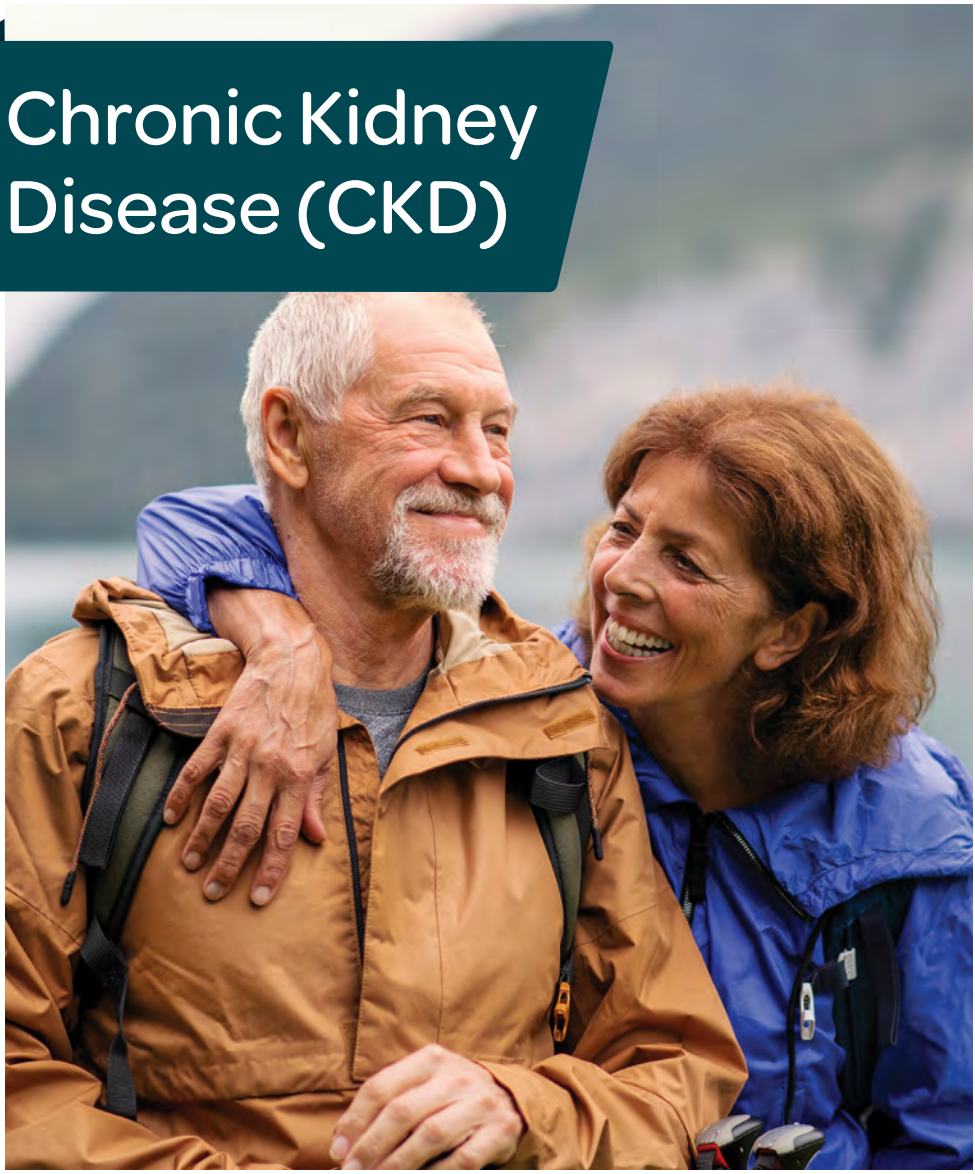
Chronic Kidney Disease (CKD)



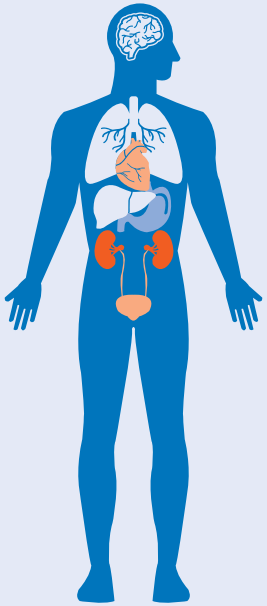
Kidney Care UK

THE RENAL ASSOCIATION
founded 1950

Working together for better patient information

Chronic kidney disease (CKD) is a long-term condition where the kidneys work less well than they should. This leaflet gives more information about CKD, its treatments and what to expect.

What do your kidneys do?



Most people have two kidneys

They are about the size of your clenched fist, they each weigh around 150g and are shaped like kidney beans.

They sit in your lower back under the bottom ribs

They filter your blood every minute of the day

Your blood goes through your kidneys 40 times a day. There are 140 miles of tubes and a million filters in your kidneys.

They are the hardest working organs in your body

They use 25% of the blood from every heartbeat.

Kidneys make urine (wee)

They control the amount of salt and water in your body, making around 2 litres of urine each day

They remove waste products from your blood by passing them out in your urine

Kidneys produce hormones and red blood cells

They regulate your blood pressure

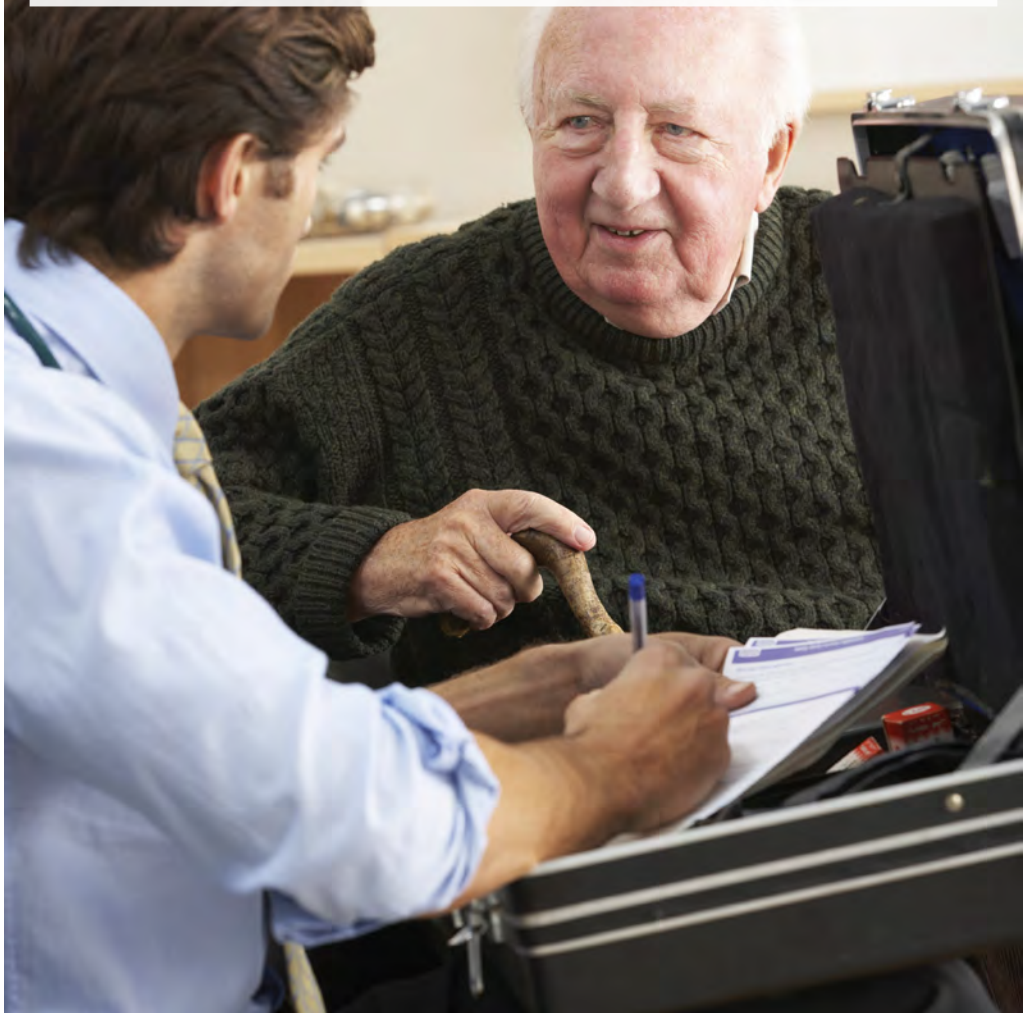
They help to keep your bones healthy by balancing the levels of important minerals in your body

They help to make the red blood cells that carry oxygen around the body

What is CKD?

Chronic kidney disease means that your kidneys do not work as well as they should. They can't remove waste products from your body. Damage to the kidney's filter system can also allow blood and protein to leak into the urine. This is not always visible but can be found with a urine test.

The term 'chronic' means that it is a long-term condition. It does not necessarily mean your kidney damage is severe as many cases of CKD are mild and can be managed with help from your GP and without hospital involvement.



How is CKD diagnosed?

- Most people are diagnosed by a blood and urine test. You may have these tests as part of a routine check-up or because you are at risk of developing CKD
- Once you are diagnosed your doctor will work out what stage of CKD you have. This is done by measuring the amount of **creatinine,** a waste product which builds up in kidney disease. Your doctors can use this to estimate how well your kidneys are working. You may hear this referred to as your estimated glomerular filtration rate (e-GFR). It is based on how quickly your kidneys are cleaning your blood and is measured in milliliters per minute

Stage of Chronic Kidney Disease	Description	e-GFR Level
One	Kidney function remains normal but urine findings suggest kidney disease	90 ml/min or more
Two	Slightly reduced kidney function with urine findings suggesting kidney disease	60 to 89 ml/min
Three	Moderately reduced kidney function	30 to 59 ml/min
Four	Severely reduced kidney function	15 to 29 ml/min
Five	Very severe or end-stage kidney failure	Less than 15 ml/ min or on dialysis

- Most people with CKD stages one to three can manage the condition themselves with their GP and do not need any specialist input from kidney doctors.
- CKD can slowly get worse over time, although for the majority of people it remains stable and only a very small number of people will need renal replacement therapy such as dialysis. It is unusual for kidney function to improve dramatically once your kidneys have been damaged but it does depend on the cause of the problem.

Is it common?

Yes. Around 10% of people in the UK have CKD. In people over the age of 80 this increases to 20%. Usually this is mild and it may not become severe. The vast majority of patients with CKD do not have any symptoms and do not need specialist input.

Who gets CKD?

Anyone can get CKD. It can affect children and adults of any age. Some people are born with it and some develop it as they get older. It can run in some families and is more common in people from Asian or African backgrounds.

What can increase the risk of developing CKD?

There are lots of causes of CKD. The most common causes include:

- Diabetes
- Heart disease
- High blood pressure (hypertension)
- Inflammation within the kidneys (glomerulonephritis)
- Blockages to the flow of urine such as prostate problems or cancers in the bladder
- Certain medications such as non-steroidal anti-inflammatory drugs (NSAIDs) which include ibuprofen (Brufen or Nurofen) or diclofenac (Voltarol) among others
- Family history of kidney disease which may include inherited diseases.

Your doctor will try to find out what has caused CKD in your case. For the majority of people, your GP will look after you but some people will need to see a kidney specialist and have further tests. It is not always possible to find out what has caused the damage.

What are the symptoms of CKD?

Most people do not have symptoms related to CKD. Even when your kidneys are damaged, they can still work well enough to prevent you having any symptoms. You can be born with just the one kidney and remain healthy.

You may still produce normal amounts of urine, even if you have CKD, but your kidneys are unable to remove the toxins from your body that they need to in order to keep you healthy. It is the quality rather than quantity of urine that you produce that matters!

Symptoms may only be noticeable with more advanced kidney disease. These include:

- Generally feeling ill, lack of interest in everyday activities and loss of concentration
- Tiredness, low energy levels
- Muscle weakness
- Finding it difficult to breathe (due to a build-up of fluid in the lungs)
- Difficulty sleeping at night (insomnia)
- Passing urine more often at night
- Feeling sick
- Headaches
- Itching
- Aching bones
- Muscle cramps

However – many people do not have any symptoms

Why does it matter if I have CKD if I don't have any symptoms?

Although you may not have any symptoms from CKD, kidney damage can still affect your health. CKD can increase your chance of having high blood pressure, heart disease or a stroke. It is therefore important that you are reviewed regularly by either your GP or your kidney doctor.

Having CKD gives you have a higher risk of developing acute kidney injury (AKI). This is a sudden drop in kidney function, often due to an illness or infection. AKI can usually be treated very effectively but it can cause a permanent reduction in your kidney function.

What will my kidney doctor do if I am found to have CKD?

At the first visit, your specialist kidney doctor will try and find out the cause of your CKD. After that visit, each time you go you will have your weight and blood pressure measured and a sample of your urine will be checked for signs of blood, protein or infection. You will have a blood test to measure your kidney function and check for signs of anaemia, bone health and blood acidity levels. You will then speak to the doctor about your symptoms and discuss which treatments are available.

What will the doctors do then?

1. Find out the cause of your CKD and treat it if possible
2. Work with you to make important choices on how to manage your condition
3. Discuss possible lifestyle changes and medication that may relieve symptoms and slow the CKD progression
4. Assess and reduce your risk of heart disease and strokes
5. Try to relieve any symptoms
6. Treat any complications such as anaemia and mineral changes

What treatment is available?

If your kidney function is stable and mild you will normally be referred back to your GP. You should have yearly check-ups to make sure everything is okay but may not need any specific treatment.

You may receive treatment for some of the symptoms of kidney disease, including anaemia, fluid retention and treatment to keep your bones healthy.

If you are approaching the later stages of CKD you should start to be given information about the possible treatments available.

These include kidney transplantation, dialysis and conservative management.

There are big decisions to be made, and support and advice will be given to you by all the professionals in the kidney unit to help you decide what you want to do.

What can I do to help myself?

- **If you smoke, stop.** Ask for help in stopping if you need to. There are lots of treatments to help.

- Try to control your blood pressure. Take any blood pressure medications regularly and as directed by your doctor. Reduce the amount of salt in your diet to less than 6g (one teaspoon) per day. You can find advice on how to reduce your salt intake on **www.foodswitch.co.uk.**

- Take regular exercise

- Maintain a healthy weight. If you are overweight, have diabetes or advanced kidney disease, and need advice on your diet, ask your GP about the services available in your area. They may refer you to a dietitian for specialist advice.

- Eat a healthy and balanced diet, with support from your GP and dietician where this is available.

- Avoid anti-inflammatory medicine such as ibuprofen as they can make kidney disease worse. Ask your pharmacist each time you are given a new medicine to check that it is okay for you to take with your reduced kidney function

- If you are unwell you may need to temporarily stop taking certain medications. This is particularly important if you take blood pressure medications. Please discuss this with your GP, pharmacist or kidney specialist.

Do not stop your medication without taking medical advice.

Where can I find out more information?

Talk to your dialysis team if you would like more information on home HD. They can guide you through the training and exact requirements based on your specific situation. They may also be able to put you in touch with a current home HD patient so you can discuss how it works for them.

- Kidney Care UK: About Kidney Health - www.kidneycareuk.org/about-kidney-health
- Kidney Care UK: Kidney Kitchen – www.kidneykitchen.org
- NHS: CKD - www.nhs.uk/conditions/kidney-disease
- Patient View - www.patientview.org – online access to your health records. Ask your hospital for details about how to join

Contact us

Kidney Care UK

3 The Windmills, St Mary's Close, Turk Street, Alton GU34 1EF

www.kidneycareuk.org

01420 541424

kidneycareuk.org

@kidneycareuk

@kidneycareuk

In partnership with:

THE RENAL ASSOCIATION founded 1950

Brandon House Building 201a, Southmead Road, Bristol, BS34 7RR