

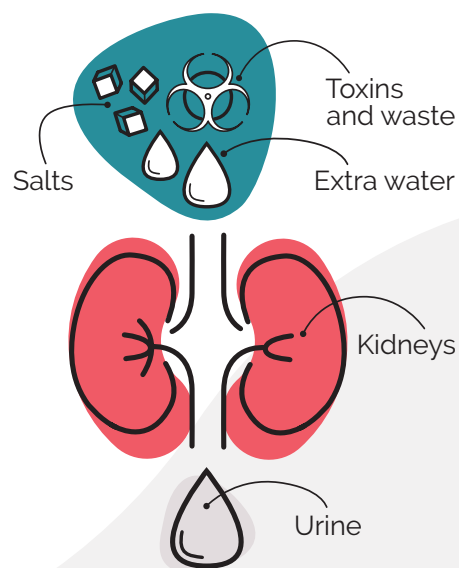
# What is Chronic Kidney Disease (CKD)?

## What do kidneys do?

Kidneys are the unsung heroes of your body. Most people are born with two kidneys. Each kidney is about the size of a fist, bean shaped and located under the rib cage on either side of your spine (backbone).

### How healthy kidneys work:

- Inside each kidney there are about one million tiny units, called nephrons.
- Nephrons filter the blood and remove extra fluid and waste products.
- The extra fluid and waste collect in the bladder before leaving the body as urine (wee).
- The clean blood continues to circulate around your body.

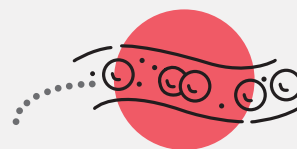


In people with kidney disease, the nephrons no longer filter the blood as well as they should.

### Besides filtering blood, kidneys play an important role in:



Controlling blood pressure



Keeping a healthy number of red blood cells



Keeping your bones strong and healthy

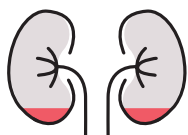


Balancing the amount of salt, and other minerals in the body

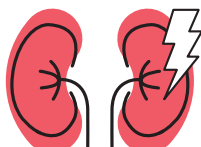


## What is CKD?

- In people with chronic kidney disease, or CKD for short, the kidneys no longer filter the blood as well as they should and/or leak albumin (a type of protein) into your urine, which is a sign of kidney damage.
- CKD is called a progressive disease. This means that it often gets worse over time. If CKD is found early, positive lifestyle changes can improve kidney health. Some medications may also be helpful in slowing the progression of CKD.



Reduced kidney function  
(less than 60% working)  
for 3 months or longer



Signs of kidney damage  
(e.g. albumin in your urine)  
for 3 months or longer



**Chronic  
Kidney  
Disease**

## How do you know if you have CKD?

- CKD is often called a “silent disease” because most people only feel sick when their kidneys have nearly stopped working.
- The first signs of kidney disease can be very general and easy to miss.
- The only way to keep an eye on the health of your kidneys is to get a **Kidney Health Check**.



## What is a Kidney Health Check?

A **Kidney Health Check** is quick and simple. You can have a Kidney Health Check at your local health centre, often as part of a regular check-up. It includes:



A **blood pressure check** to see if you have high blood pressure. High blood pressure can damage your kidneys and kidney disease can cause your blood pressure to increase.

A **urine test** to see how much albumin (protein) is present in your urine. Albumin in your urine is a sign of damage or scarring in the kidneys. This test is called urine-albumin creatinine ratio (uACR).

A **blood test** to check your kidney function. This test will measure how well your kidneys are filtering your blood and is called estimated glomerular filtration rate (eGFR).

## When should I have my kidney health checked?

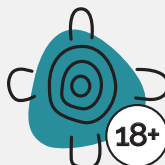
Your doctor should offer you a **Kidney Health Check** **once a year** if one or more of the following apply to you:



Diabetes



High blood pressure



First Nations Australian aged 18 and over

Your doctor should offer you a **Kidney Health Check** **every two years** if one or more of the following apply to you:



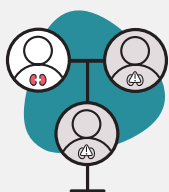
Current or past smoker/vaper



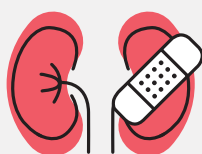
Very overweight or obese



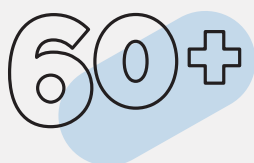
Had a stroke, heart attack or have heart failure



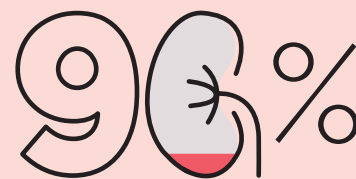
Family history of kidney failure, dialysis, or kidney transplant



History of acute kidney injury



Non-Indigenous Australian aged 60 and over



of kidney function can be lost without experiencing any symptoms

## How is CKD diagnosed?

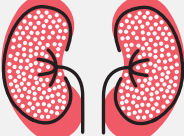
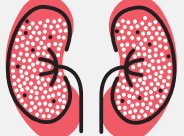
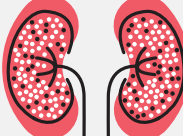
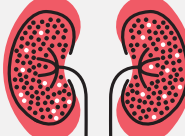
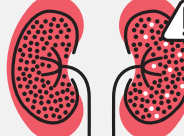
To diagnose CKD, your doctor will assess the results from your Kidney Health Check, that is your blood and urine test, and blood pressure check. Some people may need to have additional tests to find out the type of kidney disease, including:

- Kidney biopsy
- Computed Tomography (CT) scan
- Ultrasound scan.



## What are the stages of CKD?

There are five stages of CKD. Your healthcare team will be able to tell you your stage of CKD.

				
Healthy kidney	Stage 1 - 2	Stage 3	Stage 4	Stage 5
Over 60% working	Over 60% working	30-59% working	15-29% working	Less than 15% working
<b>eGFR &gt; 60</b>	<b>eGFR &gt; 60</b>	<b>eGFR 30-59</b>	<b>eGFR 15-29</b>	<b>eGFR &lt; 15</b>
no kidney damage*	kidney damage* present	kidney damage* may be present	kidney damage* may be present	kidney failure

\* Kidney damage can show as any of the following: albumin in the urine (albuminuria), blood in the urine (haematuria), or abnormal results on tests such as ultrasound or kidney biopsy.

### Stage 1 - 2 CKD

- In stages 1 - 2 CKD, the kidneys are functioning normally, but there are signs of kidney damage.
- Most people don't notice any symptoms during these earlier stages of kidney disease.
- Taking action to slow the progression of kidney disease can lower your risk of kidney failure and developing heart disease.

### Stage 3 - 4 CKD

- In stages 3 - 4 CKD, your kidney function will have declined to below normal levels and the amount of waste or toxins in your blood rises.
- There may be signs of kidney damage, e.g, albumin in your urine. This further increases the risk of heart disease and kidney failure.
- You may begin to feel unwell and/or tired.
- You may notice changes in the number of times you pass urine, as well as swelling of your ankles.
- Your blood pressure may increase, which is common as kidney function declines.
- Some people will start to see signs of kidney bone disease and anaemia.

### Stage 5 - Kidney Failure

- In stage 5 CKD, your kidney function has declined to a point where you may need to consider treatments for kidney failure, such as dialysis or kidney transplant.
- You may notice changes in the amount of urine you pass.
- High blood pressure is nearly always present.
- You are more likely to feel unwell, and experience other complications of kidney disease, such as anaemia, fatigue, and itching.
- Even with the best treatment, kidney disease may progress to stage 5 (kidney failure).



## Living with CKD

If you are living with CKD, actively managing your condition is important and can have positive effects on your emotional and physical well-being.

### Things you can do to help manage your kidney disease:

- Visit your doctor regularly to check how your kidneys are doing.
- Ensure you complete any tests that are required.
- Take medicines as agreed with your doctor.
- Keep your blood pressure below your target levels.
- Manage your sugar levels if you have diabetes.
- Talk to your doctor about your heart health.
- Make kidney-friendly choices, including:



**say 'no'** to smoking/vaping.



eat a **healthy diet** including vegetables, fruit, wholegrains, and protein (e.g. lean meats, fish and plant protein).



be **physically active** on most days of the week.



**avoid processed foods** and drinks high in fat, sugar and salt, e.g. biscuits and soft drinks.



**prioritise sleep**, aim for 7 - 9 hours/night.



### Things your doctor may do to help with your kidney health:

- Blood tests to check your overall, kidney and heart health, and sugar levels.
- Offer advice on positive lifestyle changes.
- Prescribe medications that can help to slow down the progression of CKD.
- Coordinate visits to other healthcare professionals for specialist advice, e.g., dietitian or exercise physician.
- Refer you to a specialist kidney doctor, if necessary.
- Make recommendations in relation to your general health, e.g., vaccinations.

**Ask your healthcare team questions so that you understand what will help and hurt your kidneys.**

## What is Chronic Kidney Disease (CKD)?



### Things to remember:

- ✓ You can lose **90%** of your kidney function with no symptoms.
- ✓ CKD is detected by having a **Kidney Health Check**, which includes a blood and urine test and blood pressure check.
- ✓ There are things that can slow the progression of your chronic kidney disease, including positive lifestyle changes and medications.

## What does that word mean?

**Albumin** – A protein in your blood that helps to maintain blood volume and blood pressure.

**Albuminuria** – Occurs when albumin is present in the urine. There are filters in the kidneys that prevent large molecules, such as albumin, from passing through. If these filters are damaged, albumin passes from the blood into the urine.

**Albumin: creatinine ratio (ACR)** – A test used to see how much albumin leaks into your urine when your kidneys are damaged.

**Anaemia** – When there are only a small number of red blood cells in your blood, or your blood cells are not working properly. Red blood cells carry oxygen, so if you have anaemia, you can feel unwell.

**Biopsy** – A small piece of tissue is removed for testing and examination under a microscope.

**Blood pressure** – The pressure of the blood in the arteries as it is pumped around the body by the heart.

**Computed tomography** – An imaging procedure that uses special x-ray equipment to create a series of detailed pictures or scans of areas inside your body.

**Diabetes** – A chronic disease caused by problems with the production and/or action of insulin in the body which helps control blood sugar levels.

**Dialysis** – A treatment for kidney failure that removes waste products and excess fluid from your blood by filtering your blood through a special membrane.

**Estimated glomerular filtration rate (eGFR)** – An estimation of glomerular filtration rate (GFR). GFR is the best measure of kidney function and helps to determine the stage of kidney disease. It shows how well your kidneys are cleaning your blood.

**Kidney transplant** – A treatment for kidney failure. During a kidney transplant, a kidney is removed from the body of one person (the donor) and put into the body of the person with kidney failure.

**Ultrasound scan** – An imaging procedure that uses sound waves to show structures and functions inside your body.



**Free Kidney Helpline 1800 454 363**  
**kidney.org.au**

If you have a hearing or speech impairment, contact the National Relay Service on 1800 555 677 or [relayservice.com.au](http://relayservice.com.au). Have them connect you to the Free Kidney Helpline - 1800 454 363



**WANT TO  
LEARN MORE?**

Kidney Health 4 Life is a health and wellbeing program equipping people, and those that care for them, with the knowledge and resources to take more active management of their kidney health or kidney disease.



**Join Kidney Health 4 Life  
by scanning the QR code**

This is intended as a general introduction to this topic and is not meant to substitute for your doctor's or health professional's advice. All care is taken to ensure that the information is relevant to the reader and applicable to each state in Australia. It should be noted that Kidney Health Australia recognises that each person's experience is individual and that variations do occur in treatment and management due to personal circumstances, the health professional and the state one lives in. Should you require further information always consult your doctor or health professional.

© Kidney Health Australia

This publication is copyright. Apart from any use as permitted under the Copyright Act 1968, no part may be reproduced without written permission from Kidney Health Australia. Requests and enquiries concerning production and rights should be directed to Kidney Health Australia, PO Box 9993, Melbourne VIC 3001 or via email to [primary.care@kidney.org.au](mailto:primary.care@kidney.org.au)

