

Fact sheet

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# Estimated Glomerular Filtration Rate (eGFR)

## What is eGFR?

eGFR stands for 'estimated Glomerular Filtration Rate.' The glomerular filtration rate measures how well your kidneys filter the wastes from your blood and is the best overall measure of kidney function. It helps to determine if there is any kidney damage. If the filtration rate is low, the kidneys are not working properly. Normal filtration rate in young adults is about 90–100 millilitres every minute .

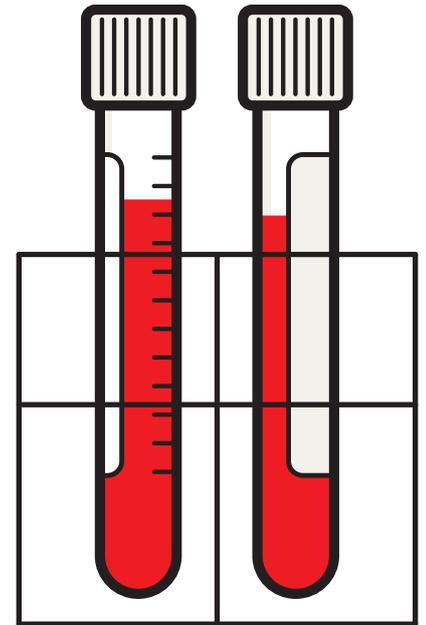
It is difficult to calculate the exact rate at which your kidneys are working so a special formula has been developed to estimate your GFR (eGFR). This formula uses your age, gender and the level of creatinine in your blood to estimate your GFR.

Creatinine is a waste product made by the muscles. It is usually removed from the blood by the kidneys before passing out in the urine. When the kidneys aren't working well, more creatinine stays in the blood.

If your doctor orders a blood test to learn more about your kidney function, creatinine will be measured and an eGFR result is usually provided automatically by the pathology laboratory. It is not reported in children aged less than 18 years, if you are known to be pregnant or if there are other reasons for the result being invalid.

Your eGFR result helps your doctor to determine how well your kidneys are working. Your doctor may also test for other signs and conditions, including albumin in your urine (albuminuria), blood in the urine (haematuria), high blood pressure and diabetes. This helps to decide if you have chronic or longer term conditions causing kidney disease.

For more information see fact sheets *Albuminuria*, *Blood in the Urine* and *Heart Disease and Chronic Kidney Disease*.



## What does my eGFR result look like?

Your eGFR is reported in millilitres per minute which is written as mL/min/1.73m<sup>2</sup> (the "1.73m<sup>2</sup>" indicates a result expressed relative to body surface area). A normal GFR in a young adult is greater than

90 mL/min/1.73m<sup>2</sup>. eGFR results of 90 or greater may be shown on a pathology report as the actual value or as eGFR ≥ 90 mL/min/1.73m<sup>2</sup>, depending on the preference of the pathology laboratory. If your eGFR is

less than 90, the actual value will be shown. For example, a result of 105 may be shown as 105 mL/min/1.73m<sup>2</sup> or as ≥ 90 mL/min/1.73m<sup>2</sup>. A result of 67 would be shown as 67 mL/min/1.73m<sup>2</sup>.

The symbol ≥ means 'greater than or equal to'.

## What if my eGFR is above 60?

If your result is over 60 mL/min/1.73m<sup>2</sup>, your kidney function is normal or close to normal. Current kidney damage is excluded unless other tests for kidney damage are abnormal.

For example, your doctor may also perform some tests on your urine to check for signs of kidney damage. These tests are typically looking for blood in the urine, or protein in the urine. If these are abnormal you may still be diagnosed with chronic kidney disease (CKD) if these last for more than three months, even if your eGFR is above 60 mL/min/1.73m<sup>2</sup>.

If your eGFR is above 60 mL/min/1.73m<sup>2</sup> and there are no signs of kidney damage, your doctor may still decide to monitor your kidney function and/or discuss healthy lifestyle choices.

## What if my eGFR is below 60?

A value below 60 mL/min/1.73m<sup>2</sup> suggests some loss of kidney function. To confirm this, your doctor will most likely repeat the blood test. Monitoring changes to your eGFR also tells your doctor how fast or slowly your condition is progressing.

To be diagnosed with CKD you must have a GFR less than 60 mL/min/1.73m<sup>2</sup> for more than three months, or some other signs of kidney damage (such as albuminuria, haematuria, or abnormal kidney ultrasound or kidney biopsy results).

## Stages of chronic kidney disease

Kidney function can be classified into stages depending on your eGFR.

<b>Stage 1</b>	A normal eGFR greater than or equal to 90 mL/min/1.73m <sup>2</sup>
<b>Stage 2</b>	Slightly decreased eGFR between 60–89 mL/min/1.73m <sup>2</sup> <i>If your kidney function is at stage 1 or 2, you only have CKD if you have albuminuria, haematuria, a pathological abnormality or a structural abnormality.</i>
<b>Stage 3a</b>	Mild–moderate decrease in eGFR between 45–59 mL/min/1.73m <sup>2</sup>
<b>Stage 3b</b>	Moderate–severe decrease in eGFR between 30–44 mL/min/1.73m <sup>2</sup>
<b>Stage 4</b>	Severe decrease in eGFR between 15–29 mL/min/1.73m <sup>2</sup>
<b>Stage 5</b>	Kidney failure as eGFR decreases to less than 15 mL/min/1.73m <sup>2</sup> or dialysis is started

Your eGFR and albuminuria results are combined to provide an overall picture of how well your kidneys are working. Your doctor uses this information to decide which treatment is best for you. Treatment also depends on the cause of your kidney damage. Controlling diabetes and high blood pressure can help to slow or prevent further kidney damage. It also reduces the risk of other health problems, such as heart attacks and strokes.

See the *Chronic Kidney Disease* fact sheet for more information.

## Who is more at risk of chronic kidney disease?

You are at increased risk of chronic kidney disease if you:

- have high blood pressure
- have diabetes
- have established heart problems (heart failure or past heart attack) and/or had a stroke
- have a family history of kidney failure
- are obese (body mass index greater than or equal to 30)
- are a smoker
- are 60 years or older
- are of Aboriginal or Torres Strait Islander origin
- have had history of acute kidney injury

For more information about kidney or urinary health, please contact our free call Kidney Health Information Service (KHIS) on 1800 454 363.

Or visit our website [kidney.org.au](http://kidney.org.au) to access free health literature.

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.

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