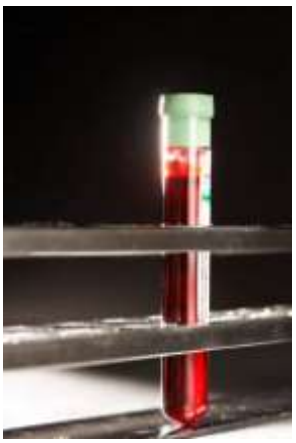
eGFR – ESTIMATED GLOMERULAR FILTRATION RATE

WHAT IS eGFR?

The estimated Glomerular Filtration Rate (eGFR) is a value indicating how well your kidneys filter waste from your blood as well as helping to identify the presence of kidney damage. It is also the best measure of kidney function. The higher the filtration rate, the better the kidneys are working. Normal filtration rate is about 90-100 millilitres per minute, or 100 mL/min.



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. This formula uses your age, gender and the level of a waste product called creatinine in your blood to estimate your GFR. Creatinine is usually removed from the blood by the kidneys before passing out in the urine. When kidney function is reduced, more creatinine remains in the blood.

If your doctor orders a blood test to learn more about your kidney function, an eGFR result is usually provided automatically by the pathology laboratory.

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 kidney disease. For more information see fact sheets '*Albuminuria/Proteinuria*', '*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 and is shown as mL/min/1.73m^2. A normal GFR is greater than 90 mL/min/1.73m^2. eGFR results of 90 or greater may be shown as the actual value or they may be reported as eGFR $\geq$ 90 mL/min/1.73m^2, 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^2 or as $\geq$ 90 mL/min/1.73m^2. A result of 67 would be shown as 67 mL/min/1.73m^2.

WHAT IF MY eGFR IS ABOVE 60?

If your result is over 60 mL/min/1.73m^2, your kidney function is normal or close to normal. You may still have some kidney damage or be at risk of kidney disease and require ongoing monitoring, particularly if you have one or more high risk factors. Your doctor may also perform some tests on your urine to check for signs of kidney damage such as blood in the urine (haematuria) or protein in the urine (albuminuria). Even if your eGFR is above 60 mL/min/1.73m^2, you may be diagnosed with chronic kidney disease (CKD) if you have signs of kidney damage, and these last for more than three months. If 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^2, 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^2 for more than three months, or some other signs of kidney damage (such as albuminuria, haematuria, or abnormal kidney ultrasound or kidney biopsy results).

WHAT ARE THE STAGES OF CHRONIC KIDNEY DISEASE?

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

Stage 1:	A normal GFR greater than or equal to 90 mL/min/1.73m^2
Stage 2:	Slightly decreased GFR between 60-89 mL/min/1.73m^2 *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.*
Stage 3a:	Mild-moderate decrease in GFR between 45-59 mL/min/1.73m^2
Stage 3b:	Moderate-severe decrease in GFR between 30-44 mL/min/1.73m^2
Stage 4:	Severe decrease in GFR between 15-29 mL/min/1.73m^2
Stage 5:	Kidney failure as GFR decreases to less than 15 mL/min/1.73m^2 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.

DO YOU NEED MORE INFORMATION?

For more information about healthy kidneys or this topic, please contact Kidney Health Australia: Kidney Information Line (freecall) on 1800 4 543 639 or visit website www.kidney.org.au

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