

## Estimated Glomerular Filtration Rate (eGFR)

The Australian Creatinine Consensus Working Group 2005 recommends that an estimated GFR be calculated with every serum/plasma creatinine test performed on patients 18 years or older to detect asymptomatic renal disease. The eGFR value is calculated by the CKD-EPI equation. For further information, see: <http://www.kidney.org.au>.

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### eGFR result $\geq 60$ mL/min/1.73 m<sup>2</sup>

Stage 1: Normal or increased GFR

Stage 2: Mildly reduced GFR

- Further investigation for CKD may be indicated in those at increased risk due to hypertension, smoking, diabetes, or family history of kidney disease.
- Aboriginal and Torres Strait Islander people: assessment of proteinuria, urinalysis, blood pressure, cardiovascular risk reduction.

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### eGFR result 30–60 mL/min/1.73 m<sup>2</sup>

Stage 3: Moderately reduced GFR, moderate kidney failure

- Monitor eGFR progression every 3 months.  
Treat kidney and cardiovascular risks: blood pressure, cholesterol, blood sugar, smoking, and obesity.
- Antiproteinuria drugs: Angiotensin converting enzyme inhibitors and/or angiotensin receptor blockers, if appropriate.
- Avoid nephrotoxic drugs.
- Address anaemia, acidosis, and hyperparathyroidism.
- Referral to a nephrologist is often not required.

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### eGFR result 15–30 mL/min/1.73 m<sup>2</sup>

Stage 4: Severely decreased GFR, severe kidney failure

- Treatment as above, plus referral to a nephrologist is usually required for preparation for dialysis (e.g. access to surgery, education) or transplant.

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### eGFR result $< 15$ mL/min/1.73 m<sup>2</sup>

Stage 5: End-stage kidney failure

- Treatment as above, plus referral to a nephrologist.

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## Limitations of eGFR

The eGFR is known to be unreliable and/or misleading for:

- Patients under 18 years of age.
- Rapidly changing renal function or patients already on dialysis.
- Exceptional dietary intake (e.g. vegan, creatine supplements).
- Extremes of body size.
- Variations in skeletal muscle (e.g. paraplegia, amputees).
- Severe liver disease.

Furthermore, the CKD-EPI eGFR has not been validated in pregnancy or in the following racial groups:

- Aboriginal or Torres Strait Islander.
- Asian (including Japanese, Chinese, or Vietnamese).
- Maori or Pacific Islander.

The CKD-EPI eGFR is not recommended for drug-dose calculations; the Cockcroft-Gault equation should continue to be used for this purpose (supply the patient's weight in kilograms and request a GFR calculated by Cockcroft-Gault.)