

CHRONIC KIDNEY DISEASE (CKD) & eGFR

www.kidney.org.au
www.kidney.org.au/calculator

To access on-line learning:
www.kidney.primed.com.au



GFR IS THE BEST MEASURE OF KIDNEY FUNCTION

- GFR can be estimated (eGFR) from serum creatinine using prediction equations
- eGFR recommended to be automatically reported (using MDRD equation) with every request for serum creatinine in adults
- See calculator at <http://www.kidney.org.au/calculator>

INDICATIONS FOR REFERRAL TO A NEPHROLOGIST

- eGFR <30 mL/min/1.73m²
- Rapidly declining kidney function (≥15% in eGFR over 3 months irrespective of baseline level)
- Proteinuria >1g/24 hrs
- Glomerular haematuria
- Kidney disease and hypertension that proves difficult to control
- Diabetes and eGFR <60mL/min/1.73m²

CKD HIGH RISK GROUPS

Modifiable risk factors

- Smoking
- Diabetes
- High blood pressure

Non-modifiable risk factors

- Age over 50 years
- Family history of kidney disease
- Aboriginal or Torres Strait Islander heritage

LIMITATIONS OF eGFR

Clinical situations where eGFR results may be unreliable and/or misleading:

- Acute changes in kidney function (eg. acute kidney failure)
- Dialysis-dependent patients
- Exceptional dietary intake (eg. vegetarian diet, high protein diet, creatine supplements)
- Extremes of body size
- Diseases of skeletal muscle, paraplegia, those with high muscle mass and amputees
- Children under the age of 18 years
- Severe liver disease present
- eGFR values above 60mL/min/1.73m²

eGFR has not been validated or shown to have acceptable accuracy in:

- Aboriginal and Torres Strait Islander peoples
- Asian populations (including Japanese, Chinese and Vietnamese)
- Maori and Pacific Islander peoples
- Calculations for drug dosing

In these clinical situations listed, an alternative method of estimating kidney function should be performed.

eGFR ACTION PLAN

eGFR mL/min/1.73m ²	Description	Clinical action plan
≥ 60	No kidney damage or Stage 1 CKD (Kidney damage* with normal kidney function) or Stage 2 CKD (Kidney damage* with mild ↓ kidney function)	Further investigation for CKD may be indicated in those at increased risk (see over): <ul style="list-style-type: none">• Assessment of proteinuria• Urinalysis• Blood pressure Cardiovascular risk reduction (blood pressure, lipids, blood glucose, smoking, obesity, physical activity)
30–59	Stage 3 CKD: Moderate ↓ kidney function	As above, plus: <ul style="list-style-type: none">• Monitor eGFR 3 monthly• Avoid nephrotoxic drugs• Prescribe antiproteinuric drugs (angiotensin converting enzyme inhibitors and/or angiotensin receptor blockers) if appropriate• Address anaemia, acidosis and hyperparathyroidism• Ensure drug dosages appropriate for level of kidney function Consider referral to nephrologist
15–29	Stage 4 CKD: Severe ↓ kidney function	As above plus referral to nephrologist is usually indicated for preparation for dialysis (including access surgery, education) or transplantation
< 15	Stage 5 CKD: End-stage kidney failure	As above plus referral to nephrologist

* Imaging or biopsy abnormalities, or proteinuria/haematuria