

281. Part 1 - Chronic kidney disease (CKD) in adults briefing

This briefing looks at the assessment and management of CKD in line with the NICE guideline on this topic [NG203]. The NICE guidance has a strong focus on early identification, accurate diagnosis and tailored monitoring in order to minimise the associated morbidity and mortality.

CKD is a reduction in kidney function or structural damage (or both) present for more than 90 days, with associated health implications. This may cause fluid and electrolyte imbalance, and leakage of protein and/or blood into the urine, resulting in proteinuria and haematuria. CKD should be classified using a combination of estimated glomerular filtration rate (eGFR) and urinary albumin creatinine ratio (ACR).^{1,2}

Key recommendations

- Ensure glomerular filtration rate (GFR) is monitored at least annually in people prescribed drugs known to be nephrotoxic such as oral non-steroidal anti-inflammatory drugs (long term chronic use of NSAIDs), calcineurin inhibitors (for example, ciclosporin or tacrolimus) and lithium.
- Offer testing for CKD using eGFRcreatinine (eGFR measurement based on serum creatinine) and urine albumin to creatinine ratio (ACR) to people with risk factors.
- Monitor for the development or progression of CKD for at least three years after acute kidney injury even if eGFR has returned to baseline.
- CKD should be classified using a combination of eGFR and urinary ACR.
- Systems should be in place to inform people of their diagnosis, in order to support shared decision-making, self-management and enable people to make informed choices.
- Patients should be offered tailored education and information about their condition, the associated complications and the risk of progression.
- The frequency of monitoring (eGFRcreatinine and ACR) should be agreed with the person with, or at risk of, CKD; taking into consideration individual clinical circumstances and bearing in mind that CKD is not progressive in many people.
- Ensure people with risk factors associated with CKD progression are supported to optimise their health.
- Do not offer a combination of renin-angiotensin system antagonists (ACE inhibitor, ARB or direct renin inhibitor therapy) to adults with CKD.
- Use caution and monitor the effects on GFR when treating people with CKD with nephrotoxic drugs over prolonged periods of time. Regular review of the ongoing need and reassessment of the risk versus the benefit is appropriate.

Table 1: Classification of CKD using eGFR and ACR categories (reproduced from NICE NG203)¹

	ACR category A1: normal to mildly increased (less than 3mg/mmol)	ACR category A2: moderately increased (3 to 30mg/mmol)	ACR category A3: severely increased (over 30mg/mmol)
GFR category G1: normal and high (90 ml/min/1.73m ² or over)	Low risk No CKD if there are no other markers of kidney damage	Moderate risk	High risk
GFR category G2: mild reduction related to normal range for a young adult (60 to 89ml/min/1.73m ²)	Low risk No CKD if there are no other markers of kidney damage	Moderate risk	High risk
GFR category G3a: mild to moderate reduction (45 to 59ml/min/1.73m ²)	Moderate risk	High risk	Very high risk
GFR category G3b: moderate to severe reduction (30 to 44 ml/min/1.73m ²)	High risk	Very high risk	Very high risk
GFR category G4: severe reduction (15 to 29 ml/min/1.73m ²)	Very high risk	Very high risk	Very high risk
GFR category G5: kidney failure (under 15 ml/min/1.73m ²)	Very high risk	Very high risk	Very high risk

Some examples of classifications would be:



- A person with an eGFR of 25ml/min/1.73m² and an ACR of 15 mg/mmol has CKD G4A2.
- A person with an eGFR of 50ml/min/1.73m² and an ACR of 35 mg/mmol has CKD G3aA3.
- An eGFR of less than 15ml/min/1.73m² (GFR category G5) has kidney failure.

The NICE guideline on the assessment and management of CKD [NG203] recommends working with people with risk factors associated with CKD progression to optimise their health. Risk factors for progression are:¹

- Cardiovascular disease
- Proteinuria
- Previous episode of acute kidney injury
- Hypertension
- Diabetes
- Smoking
- African, African-Caribbean or Asian family origin
- Chronic use of oral NSAIDs
- Untreated urinary outflow tract obstruction.

References

1. NICE. Chronic kidney disease: assessment and management. NICE guideline [NG203]. Published August 2021, last updated 24 November 2021. <https://www.nice.org.uk/guidance/ng203>
2. Clinical Knowledge Summaries. Chronic kidney disease. Last revised in August 2021. <https://cks.nice.org.uk/chronic-kidney-disease>

Additional resources available	 Bulletin	https://www.prescqipp.info/our-resources/bulletins/bulletin-281-implementing-nice-guidance-in-ckd-and-aki/
	 Tools	

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