UK Kidney Association

Albuminuria quick reference

Albuminuria is the presence of albumin in the urine. Testing for albumin in the urine is the most accurate way to determine if people have proteinuria. Albuminuria is present in up to 9% of the adult population.

Albuminuria is measured by albumin:creatinine ratio (ACR) done on a spot urine test. Getting a urine sample is the priority: for a first test, any urine sample that can be tested the same day will do. Do not wait for an early morning sample. Urine dipsticks are not sensitive enough to detect albuminuria, and a negative dipstick does not rule it out.

High ACR is independently associated with risk of end-stage kidney disease, cardiovascular disease, and all-cause mortality, and is used to identify patients who need tighter blood pressure control, ACEi/ARB, SGLT2 inhibitors, nsMRA (finerenone), and referral.

ACR testing should be regarded as of equal importance to eGFR. Both should be done annually in people at risk of kidney disease and more frequently in some patients with established chronic kidney disease (CKD).

ACR at a glance	
First test	Laboratory ACR (not a dipstick) on any urine sample that can be tested the same day – do not wait for an early morning sample
ACR 3-30 mg/mmol (A2)	'High albuminuria' or 'moderately increased' – clinically important
ACR ≥30 mg/mmol (A3)	'Very high albuminuria' or 'severely increased'
Confirming a result	Repeat ACR 3-70 mg/mmol on an early morning urine sample. No repeat needed if ≥70 mg/mmol
Discuss with a kidney specialist	ACR >70 mg/mmol (unless due to diabetes and already treated), ACR >30 mg/mmol with haematuria, or KFRE 5-year risk >5%

Who to test

ACR and eGFR should be done at least annually in patients with

- Diabetes
- Hypertension
- Previous acute kidney injury (AKI)
- Cardiovascular disease (ischaemic heart disease, chronic heart failure, peripheral vascular disease, or cerebral vascular disease)
- Structural kidney disease, e.g. kidney stones or prostatic hypertrophy,
- Multisystem diseases with potential kidney involvement (e.g. systemic lupus erythematosus [SLE]).
- Family history of end-stage kidney disease or proteinuria.
- Incidental findings of haematuria or proteinuria on urine diptest.

How often to test

Recommended frequency of ACR and eGFR testing per year in patients with or at risk of CKD

GFR category (ml/min/1.73m²)	ACR categories (mg/mmol), description and range		
	<3 (A1)	3-30 (A2)	>30 (A3)
≥90	≤1	1	≥1
60-89	≤1	1	≥1
45-59	1	1	2
30-44	≤2	2	≥2
15-29	2	2	3
<15	4	≥4	≥4

Shading shows risk of adverse outcomes: green low, yellow moderate, orange high, red very high.

Treatment

High ACR means increased risk of kidney failure and cardiovascular disease, so treatment aims for **kidney and cardiovascular protection**, including lipid-lowering therapy in line with NICE NG238.
Offer an ACE inhibitor or ARB, titrated to the highest tolerated licensed dose, if:

- Diabetes and ACR ≥3 mg/mmol
- Hypertension and ACR ≥30 mg/mmol
- ACR ≥70 mg/mmol, with or without hypertension (and refer for specialist assessment)

Add an SGLT2 inhibitor (dapagliflozin or empagliflozin) to an ACE inhibitor or ARB if:

- Type 2 diabetes and eGFR ≥20 (NICE NG28, 2026)
- No diabetes and eGFR 20 to <45
- No diabetes, eGFR 45-90 and ACR ≥22.6 mg/mmol (NICE TA1075, TA942)

Add finerenone if type 2 diabetes, eGFR 25-59 and persistent ACR ≥3 mg/mmol, on an optimised ACE inhibitor/ARB and SGLT2 inhibitor.

Further information

- For a first test, use any urine sample that can be tested the same day – getting a sample is the priority, so do not wait for an early morning sample.
- An early morning sample is more accurate and should be used if confirmation needed.
- Significant changes are 30% or more.
- If only a PCR is available, PCR x0.7 gives a rough approximate ACR. ACR is more accurate below ACR 70 mg/mmol (≈PCR 100 mg/mmol).

More on this topic and other CKD information

Explore The UK CKD Guide for further resources on this and other areas of chronic kidney disease: The UK CKD Guide – UK Kidney Association

Scan the QR code to open it on your phone.