Screening for kidney disease in people with diabetes

Over time, hyperglycaemia causes damage to the kidneys, causing albumin excretion into urine (albuminuria). Early stages of kidney disease are asymptomatic so people with diabetes should have their kidney function screened at least once per year.

Screening tests include:

- albumin/creatinine ratio in a spot urine sample
- eGFR using serum creatinine

eGFR categories			Persistent albuminuria categories		
			Normal (A1)	Microalbuminuria (A2)	Macroalbuminuria (A3)
		eGFR (ml/min/ 1.73 m^2)	<30 mg/g <3 mg/mmol	30–300 mg/g 3–30 mg/mmol	>300 mg/g >30 mg/mmol
G1	Normal or high	≥90			
G2	Mildly decreased	60–89			
G3a	Mildly to moderately decreased	45–59			
G3b	Moderately decreased	30–44			
G4	Severely decreased	15–29			
G5	Kidney failure	<15			

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Two occasions of eGFR <60 ml/min/1.73 m^2 and/or micro- or macroalbuminuria indicate diagnosis of DKD

- Very high risk of disease progression
- High risk of disease progression
- Moderate risk of disease progression
- Low risk of disease progression (if no other markers of DKD)

People with diabetes may need **medication dosage adjustment** if their kidney function declines.

Metformin treatment should be stopped if eGFR is <30 ml/min/1.73 m^2

No dose adjustment is required for **gliclazide** or **glipizide**. **Glimepiride** should be started conservatively at 1 mg daily in people with CKD stages 3, 4 and 5 (without dialysis).

No dose adjustments are required for **insulin**.

eGFR, estimated glomerular filtration rate; CKD, chronic kidney disease; DKD, diabetic kidney disease.