

Blood Pressure Management in CKD

BP measurement technique, lifestyle interventions, RASi therapy and BP targets in non-dialysis CKD, kidney transplant recipients, and children with CKD.

FORMAT 12 GRADE recommendations. RASi = renin-angiotensin-system inhibitor; ACEi/ARB = ACE inhibitor/angiotensin receptor blocker.

1 BP Measurement

STATEMENT	STRENGTH
Rec 1.1 – Standardized office BP measurement preferred over routine office BP for managing high BP	Strong Moderate
Rec 1.2 – Use out-of-office BP (ABPM or HBPM) to complement standardized office readings	Conditional Moderate
Automated office BP (attended or unattended) may be preferred; oscillometric devices remain valid in atrial fibrillation despite reduced diastolic accuracy.	

2 Lifestyle Interventions (Non-Dialysis CKD)

STATEMENT	STRENGTH
Rec 2.1.1 – Target sodium intake < 2 g/d (< 90 mmol/d, < 5 g NaCl/d) in patients with high BP and CKD	Conditional Low
Rec 2.2.1 – Moderate-intensity physical activity ≥150 min/wk cumulative, or to cardiovascular/physical tolerance	Conditional Low
Sodium restriction usually inappropriate in salt-wasting nephropathy. DASH-type diets/potassium-rich salt substitutes may be unsafe in advanced CKD or impaired potassium excretion.	

3 BP Target & RASi Therapy (Non-Dialysis CKD)

STATEMENT	STRENGTH
Rec 3.1.1 – Target SBP < 120 mm Hg when tolerated, using standardized office BP measurement	Conditional Moderate
Rec 3.2.1 – Start RASi (ACEi or ARB) for high BP, CKD, and severely increased albuminuria (G1–G4, A3), no diabetes	Strong Moderate
Rec 3.2.2 – Start RASi for high BP, CKD, and moderately increased albuminuria (G1–G4, A2), no diabetes	Conditional Low
Rec 3.2.3 – Start RASi for high BP, CKD, and moderately-to-severely increased albuminuria (A2/A3) with diabetes	Strong Moderate
Rec 3.3.1 – Avoid combining ACEi, ARB, and direct renin inhibitor together, with or without diabetes	Strong Moderate
Applying < 120 mm Hg to non-standardized readings is potentially hazardous. Offer less-intensive therapy with very limited life expectancy or symptomatic postural hypotension.	

4 Kidney Transplant Recipients

STATEMENT	STRENGTH
Rec 4.1 – Dihydropyridine calcium channel blocker or ARB as first-line antihypertensive agent	Strong Low
Target BP < 130/80 mm Hg using standardized office BP measurement.	

5 Children With CKD

STATEMENT	STRENGTH
Rec 5.1 – Lower 24-h mean arterial pressure by ABPM to ≤50th percentile for age, sex, and height	Conditional Low
Monitor with ABPM annually and standardized office BP q3–6mo. If ABPM unavailable, target office SBP < 90th percentile. ACEi/ARB first-line – lowers proteinuria; watch for hyperkalemia and fetal risk.	

6 RASi – Practical Titration & Monitoring

ITEM	DETAIL
Dosing	Titrate to the highest approved, tolerated dose – proven benefit was achieved at these doses in trials
Monitoring	Check BP, serum creatinine, and potassium within 2–4 wk of initiation or dose increase
Hyperkalemia	Manage with potassium-lowering measures rather than reducing/stopping RASi where possible
Creatinine rise	Continue therapy unless creatinine rises > 30% within 4 wk of initiation or a dose increase
Reduce/stop if	Symptomatic hypotension, uncontrolled hyperkalemia despite treatment, or to relieve uremic symptoms at eGFR < 15
No albuminuria	Reasonable to treat with RASi even without albuminuria, with or without diabetes
MRAs	Effective for refractory hypertension but may cause hyperkalemia or reversible eGFR decline, particularly at low eGFR