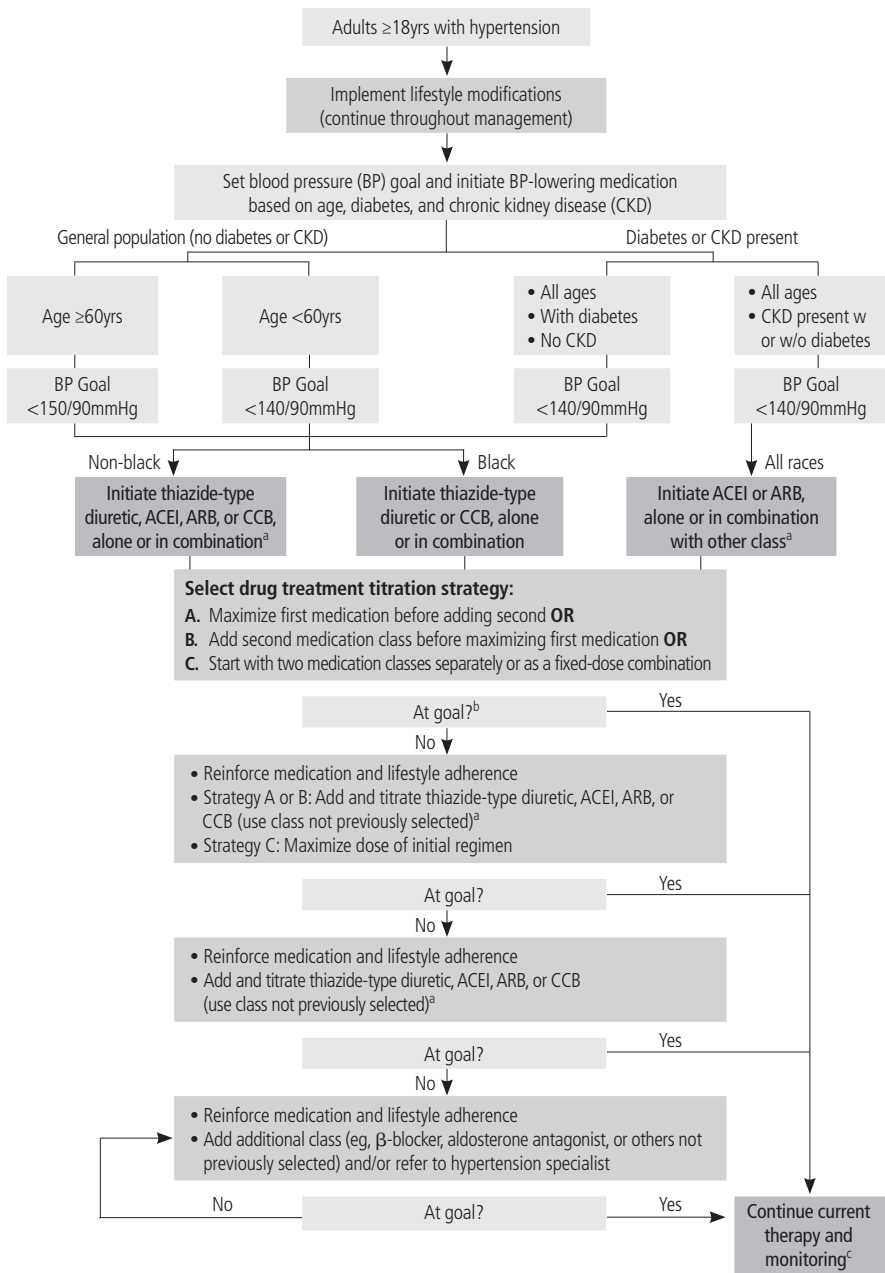


# HYPERTENSION TREATMENT ALGORITHM



(continued)

# HYPERTENSION TREATMENT ALGORITHM

## FIRST LINE THERAPY FOR COMPELLING INDICATIONS

Compelling indication	First-line Therapy
Heart failure	ACEI, ARB, angiotensin receptor-neprilysin inhibitor, mineralocorticoid receptor antagonist, diuretic, BB (carvedilol, metoprolol succinate, bisoprolol)
Post myocardial infarction	BB <sup>d</sup> (carvedilol, metoprolol, nadolol, bisoprolol, propranolol, timolol), ACEI, ARB
Diabetes	Thiazide diuretic, ACEI, ARB, CCB
Chronic kidney disease (CKD)	ACEI, ARB
Secondary stroke prevention	Thiazide diuretic, ACEI, ARB

## LIFESTYLE MODIFICATIONS

Modification	Recommendation	Approximate SBP reduction
Weight loss	Aim for at least a 1kg reduction in body weight; best goal is ideal body weight	1mmHg/kg of weight loss
DASH diet (Dietary Approaches to Stop Hypertension)	Adopt a diet rich in fruits, vegetables, whole grains, and low-fat dairy products with reduced content of saturated and total fat	3–11mmHg
Sodium reduction	Reduce dietary sodium intake by at least 1000mg/day; optimal goal is <1500mg/day	2–6mmHg
Potassium supplementation	Increase dietary potassium intake to 3500–5000mg/day. Four to five servings of fruits and vegetables will usually provide 1500–>3000mg of potassium	2–5mmHg
Physical activity	Increase physical activity:	
	• Aerobic exercise: 90–150mins/wk	2–8mmHg
	• Dynamic resistance: 90–150mins/wk (6 exercises, 3 sets/exercise, 10 repetitions/set)	2–4mmHg
	• Isometric resistance: 3 sessions/wk for 8–10wks (4 x 2min hand grips, 1min rest in between)	4–5mmHg
Reduced alcohol consumption	Limit to no more than 2 drinks/day in men and 1 drink/day in women (1 drink = 12oz beer, 5oz wine, 1.5oz distilled spirit)	3–4mmHg
Tobacco Cessation	Provide behavioral interventions. May need to consider pharmacotherapy for cessation	—

## STRATEGIES TO IMPROVE TREATMENT ADHERENCE

- Clinician empathy increases patient trust, motivation and adherence to therapy
- Clinicians should consider patients' cultural beliefs and individual attitudes in formulating a treatment plan
- Simplifying medication regimens:
  - Dosing to once daily rather than multiple times per day may improve adherence
  - Use of fixed-dose combination agents rather than individual drug components

## NOTES

**Key:** CVD = cardiovascular disease; ARB = angiotensin II receptor blocker; ACEI = angiotensin converting enzyme inhibitor; BB = beta blocker; CCB = calcium channel blocker

<sup>a</sup> Avoid combination of ACEIs and ARBs.

<sup>b</sup> Wait 1 month before titrating.

<sup>c</sup> If BP goal not maintained, re-enter the algorithm where appropriate; individualize.

<sup>d</sup> Avoid atenolol or BB with intrinsic sympathomimetic activity.

## REFERENCES

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