Hypertension Treatment Algorithm

Adapted from JNC-8¹ and Distributed by the Clinicians Group of the Capitol Region Right Care Initiative

Adult aged ≥18 years with hypertension

Implement lifestyle interventions (continue throughout management).

Set blood pressure goal and initiate blood pressure lowering—medication based on age, race, diabetes, and chronic kidney disease (CKD)

- Age ≥60 years
  - Blood pressure goal
    - SBP < 150 mm Hg
    - DBP < 90 mm Hg
  - Nonblack**
    - Initiate thiazide-type diuretic or ACEI or ARB or CCB, alone or in combination
  - Black**
    - Initiate thiazide-type diuretic or CCB, alone or in combination

- Age <60 years
  - Blood pressure goal
    - SBP < 140 mm Hg
    - DBP < 90 mm Hg
  - All ages
    - Diabetes present
      - No CKD
        - Blood pressure goal
          - SBP < 140 mm Hg
          - DBP < 90 mm Hg
          - Initiate thiazide-type diuretic or CCB, alone or in combination
    - All ages CKD present with or without Diabetes
      - Blood pressure goal
        - SBP < 140 mm Hg
        - DBP < 90 mm Hg
        - Initiate ACEI or ARB, alone or in combination with other drug class

Select a drug treatment titration strategy

A. Maximize first medication before adding second or
B. Add second medication before reaching maximum dose of first medication or
C. Start with 2 medication classes separately or as fixed-dose combination.

Adapted from Eighth Joint National Committee Evidence-Based Guidelines:


*While the Eighth Joint National Committee currently uses a goal of <150/90 for adults age 60 and older, this recommendation is undergoing discussion and refinement by multiple national organizations (AHA, ACC, CDC, etc.) based on evolving evidence. (Go, et al, 2014; Bangalore, et al, 2014)²³

**In the general black population, including those with diabetes, initial antihypertensive treatment should include a thiazide-type diuretic or CCB. (For general black population: Moderate Recommendation – Grade B; for black patients with diabetes: Weak Recommendation – Grade C)³

SBP indicates systolic blood pressure; DBP, diastolic blood pressure; ACEI, angiotensin-converting enzyme; ARB, angiotensin receptor blocker; and CCB, calcium channel blocker.
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At goal blood pressure? Yes

Reinforce medication and lifestyle adherence.
For strategies A and B, add and titrate thiazide-type diuretic or ACEI or ARB or CCB (use medication class not previously selected and avoid combined use of ACEI and ARB).
For strategy C, titrate doses of initial medications to maximum.

At goal blood pressure? Yes

Reinforce medication and lifestyle adherence.
Add and titrate thiazide-type diuretic or ACEI or ARB or CCB (use medication class not previously selected and avoid combined use of ACEI and ARB).

At goal blood pressure? Yes

Reinforce medication and lifestyle adherence.
Add additional medication class (eg, β-blocker, aldosterone antagonist, or others) and/or refer to physician with expertise in hypertension management.

At goal blood pressure? No

At goal blood pressure? No

Continue current treatment and monitoring\(^*\)

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\(^*\) Recheck for goal within one month per JNC-8 Recommendation 9

\(^\dagger\) If blood pressure fails to be maintained at goal, re-enter the algorithm where appropriate based on the current individual therapeutic plan.