JNC8 Recommendations: Changes in Diagnosis and Treatment of Hypertension

In 2014 the Joint National Committee released their article (Eight Annual Report) on treatment of hypertension. They took a rigorous, evidence-based approach to recommend treatment thresholds, goals, and medications in the management of hypertension in adults. We have summarized the recommendations made in order to facilitate your incorporation of these into your practice. A clinical decision algorithm is also posted here for your reference.

**Threshold to Treat Criteria:** The threshold of blood pressure for patients older than 60 years is now 150/90 mm Hg for treatment. For patients under 60 years, the treatment goal is less than 140/90 mm Hg. For patients who have kidney disease and diabetes, the treatment goal is 140/90 mm Hg.

**Changes in Treatment Criteria:** In the general nonblack population thiazide diuretics, calcium-channel blocker, or angiotensin-converting enzyme (ACE) inhibitors or angiotensin receptor blockers (ARBs) are considered first line. Beta blockers continue not to be recommended.

In the general black population, thiazides or calcium-channel blockers are recommended as first line, and ACE inhibitors and ARBs are not advised. In the kidney disease population, an ACE inhibitor or ARB is recommended.

**Follow up Recommendations:** For patients who don’t reach goal BP within a month of treatment, increase the dose of the initial drug or add a second drug from one of the classes in recommendation 6 (thiazide-type diuretic, CCB, ACEI, or ARB). Continue to assess BP and adjust the treatment regimen until goal BP is reached. If goal BP cannot be reached with 2 drugs, add and titrate a third drug from the list provided. Do not use an ACEI and an ARB together in the same patient.
2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults: Report From the Panel Members Appointed to the Eighth Joint National Committee (JNC 8)

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, diabetes, and chronic kidney disease (CKD).

General population (no diabetes or CKD) vs. Diabetes or CKD present

Age ≥60 years

Blood pressure goal
SBP <150 mm Hg
DBP <90 mm Hg

Initiate thiazide-type diuretic or ACEI or ARB or CCB, alone or in combination.

Nonblack

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.

At goal blood pressure?
No
Reinforce medication and lifestyle adherence.

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?
No
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).

Yes

At goal blood pressure?
No
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.

No

At goal blood pressure?
Yes

Continue current treatment and monitoring.

At goal blood pressure?
No
Reinforce medication and lifestyle adherence.

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.

Black

Blood pressure goal
SBP <140 mm Hg
DBP <90 mm Hg

Initiate ACEI or ARB, alone or in combination with other drug class.

All races

Blood pressure goal
SBP <140 mm Hg
DBP <90 mm Hg

Initiate ACEI or ARB, alone or in combination with other drug class.