CLINICAL PRACTICE GUIDELINE ADULT MEDICINE

HYPERTENSION

BACKGROUND

Hypertension is one of the most common diseases in this country. It is a major contributor to cardiovascular complications and death. The Eighth Joint National Committee (JNC 8) used evidence-based methods, developing Evidence Statements and recommendations for blood pressure (BP) treatment based on a systematic review of the literature in order to establish recommendations for clinicians, especially primary care clinicians.

Compared to JNC 7, JNC 8 raised the systolic treatment initiation threshold at age 60 from 140 to 150 mm Hg. In general the treatment threshold for diabetics is 140/90, not the lower 130/80 as in JNC 7. JNC 8 has broadened treatment options to four classes for nonblack patients and two classes for black patients. β-blockers are no longer recommended for initial therapy because they might afford less protection against stroke.

DIAGNOSIS

JNC 8 guidelines, define thresholds for pharmacological treatment, whereas the JNC 7 guidelines focused on the definitions of hypertension and pre-hypertension.[1]

TREATMENT & GOALS

Adapted from JNC 8 [1]

Population Based Recommendations	**Population & Initiation of Pharmacologic Treatment**	**Additional Comments** The letters A, B, C, or E following each recommendation represent the evidence level that supports each recommendation. Evidence level A is the strongest, ranging to E which is consensus based evidence.
Recommendation 1 *General population aged ≥60 years*	Initiate treatment to lower blood pressure (BP) at systolic blood pressure (SBP) ≥150 mm Hg or diastolic blood pressure (DBP) ≥90 mm Hg. Goal is SBP <150 mm Hg and DBP <90 mm Hg. (Strong Recommendation – Grade A	General population aged ≥60 years, if pharmacologic treatment results in lower SBP (e.g., <140 mm Hg) and treatment is well tolerated, without adverse effects on health or quality of life, treatment does not need to be adjusted. Expert Opinion – Grade E
Recommendation 2 *General population <60 years*	Initiate treatment to lower BP at DBP ≥90 mm Hg. Goal is DBP <90 mm Hg.	For ages 30-59 years, Strong Recommendation – Grade A; For ages 18-29 years, Expert Opinion – Grade E
Recommendation 3 *General population <60 years*	Initiate treatment to lower BP at SBP ≥140 mm Hg. Goal is SBP <140 mm Hg.	Expert Opinion – Grade E
Recommendation 4 *Population aged ≥18 years with chronic kidney disease (CKD)*	Initiate treatment to lower BP at SBP ≥140 mm Hg or DBP ≥90 mm Hg. Goal is SBP <140 mm Hg and goal DBP <90 mm Hg.	Expert Opinion – Grade E
Recommendation 5 *Population aged ≥18 years with diabetes*	Initiate treatment to lower BP at SBP ≥140 mm Hg or DBP ≥90 mm Hg. Goal SBP 120-125 mm Hg (automated) or 125-130 mm Hg (manual).	Expert Opinion – Grade E

Population Based Recommendations	Population & Initiation of Pharmacologic Treatment	Additional Comments The letters A, B, C, or E following each recommendation represent the evidence level that supports each recommendation. Evidence level A is the strongest, ranging to E which is consensus based evidence.
Recommendation 6 *Nonblack population, including those with diabetes*	Initial antihypertensive treatment should include a thiazide-type diuretic, calcium channel blocker (CCB), angiotensin-converting enzyme inhibitor (ACEI), or angiotensin receptor blocker (ARB).	Moderate Recommendation – Grade B
Recommendation 7 *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
Recommendation 8 *Population aged ≥18 years with CKD*	Initial (or add-on) antihypertensive treatment should include an ACEI or ARB to improve kidney outcomes. This applies to all CKD patients with hypertension regardless of race or diabetes status.	Moderate Recommendation – Grade B
Recommendation 9	The main objective of hypertension treatment is to attain and maintain goal BP. If goal BP is not reached within a month of treatment, increase the dose of the initial drug or add a second drug. The clinician should 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. Do not use an ACEI and an ARB together in the same patient. If goal BP cannot be reached using only the recommended categories because of a contraindication or the need to use more than 3 drugs to reach goal BP, antihypertensive drugs from other classes can be used. Referral to a hypertension specialist may be indicated for patients in whom goal BP cannot be attained using the above strategy or for the management of complicated patients for whom additional clinical consultation is needed.	Expert Opinion – Grade E

RECOMMENDATIONS

- Patient age >= 60 years achieve and maintain BP < 150/90; a goal of <140/90 mmHg *may* be appropriate for some patients. The choice between these goals depends on patient-specific factors like overall health, comorbid conditions, postural blood pressure changes, number of medications needed and individual values

- Patient age < 60 years achieve and maintain BP < 140/90

- Adjust SBP goal if patient has concurrent condition(s), such as diabetes and/or chronic kidney disease

- Amida Care supports the use of home blood pressure monitoring, consider its role in management

SOURCES

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3. Xie X, Atkins E, Lv J, et al. Effects of intensive blood pressure lowering on cardiovascular and renal outcomes: updated systematic review and meta-analysis. Lancet. 2016;387(10017):435. http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(15)00805-3/ppt

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All of the above sources were accessed on 12/15/2016.