Hypertension Guidelines 2017

(American College of Cardiology and the American Heart Association)

In 1977, the 1st comprehensive guideline for detection, evaluation, and management of high BP was published, under the sponsorship of the National Heart, Lung, and Blood Institute (NHLBI). In subsequent years, a series of Joint National Committee (JNC) BP guidelines were published. The present guideline updates prior JNC reports.

A comprehensive guideline for diagnosis, prevention, evaluation, treatment and strategies to improve control rates during hypertension treatment.

What's New in the Definition of High Blood Pressure?

As per the new classification of hypertension, the difference lies in the BP category by replacing prehypertension stage with the term Elevated BP and changing the definition of Stage 1 and Stage 2 hypertension

SBP/DBP (mm Hg)	JNC 7/8 (2014)	ACC/ AHA (2017)
< 120 & < 80	Normal BP	Normal BP
120-129 & < 80	Prehypertension	Elevated BP
130-139 or 80-89	Prehypertension	Stage 1 Hypertension
140-159 or 90-99	Stage 1 Hypertension	Stage 2 Hypertension
≥160 or ≥ 100	Stage 2 Hypertension	

*Adults with SBP and DBP in 2 categories should be designated to the higher BP category.
BP indicates blood pressure (based on an average of ≥2 careful readings obtained on ≥2 occasions). DBP, diastolic blood pressure; and SBP systolic blood pressure.

Aiming for BP Target - History Repeats but Partly

In ACC/AHA Hypertension 2017 guidelines, intensification of the BP targets are done which is partly similar to JNC 7 recommendations but more stringent as compared to JNC 8 recommendations

Hypertensive patients	JNC 7 Target BP goal to be achieved (SBP/DBP mmHg)	JNC 8 Target BP goal to be achieved (SBP/DBP mmHg)	ACC/AHA Target BP goal to be achieved (SBP/DBP mmHg)
Elderly	< 140/90 (Age ≥ 60 yrs)	<150/90 (Age ≥ 60 yrs)	< 130* (Age ≥ 65 yrs)
Adults	< 140/90 (Age < 60 yrs)	< 140/90 (Age < 60 yrs)	<130/80 (with/without clinical CVD or 10-year ASCVD risk ≥10%)
Coronary Heart Disease	<130/80	< 140/90	<130/80
Diabetes			
CKD			

*Both SBP and DBP increase linearly up to the fifth or sixth decade of life, after which DBP gradually decreases while SBP continues to rise. Thus, isolated systolic hypertension is the predominant form of hypertension in older persons.

Treatment Recommendation: Is It Different?

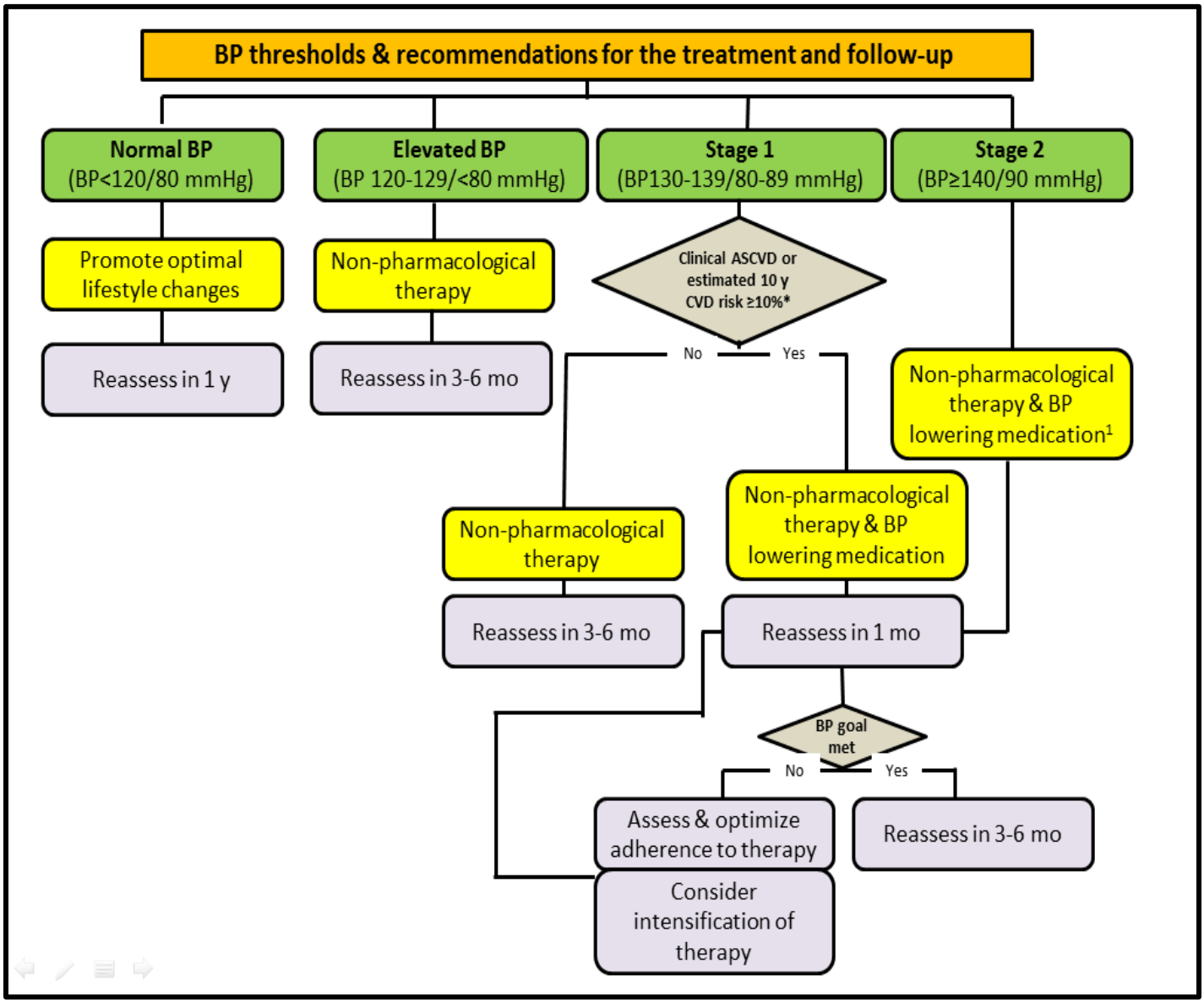
In ACC/AHA Hypertension 2017 guidelines, screening for and management of other modifiable CVD risk factors are recommended as many adult patients with hypertension have CVD risk factors; the table below provides a list of such modifiable and relatively fixed risk factors

CVD risk factors	
Modifiable Risk Factors*	**Relatively Fixed Risk Factors†**
• Current cigarette smoking, secondhand smoking • Diabetes mellitus • Dyslipidemia/hypercholesterolemia • Overweight/obesity • Physical inactivity/low fitness • Unhealthy diet	• CKD • Family history • Increased age • Low socioeconomic/educational status • Male sex • Obstructive sleep apnea • Psychosocial stress

*Factors that can be changed and, if changed, may reduce CVD risk.

†Factors that are difficult to change (CKD, low socioeconomic/educational status, obstructive sleep apnea, cannot be changed (family history, increased age, male sex), or, if changed through the use of current intervention techniques, may not reduce CVD risk (psychosocial stress).

Blood Pressure (BP) Thresholds and Recommendations for Treatment



*Note that patients with DM or CKD are automatically placed in the high-risk category. For initiation of RAS inhibitor or diuretic therapy, assess blood tests for electrolytes and renal function 2 to 4 weeks after initiating therapy.

[1]Consider initiation of pharmacological therapy for stage 2 hypertension with 2 antihypertensive agents of different classes. Patients with stage 2 hypertension and BP ≥160/100 mm Hg should be promptly treated, carefully monitored, and subject to upward medication dose adjustment as necessary to control BP.

Treatment of High BP – ACC/AHA 2017 Hypertension Guidelines

SBP (mm Hg)	DBP (mm Hg)	Condition	Recommended Treatment	Preferred Treatment
< 120	< 80	N/A	Healthy lifestyle	-
120-129	<80	N/A	Non – Pharmacological therapy	Weight loss, diet control, physical activity, limit sodium intake and alcohol & consider potassium supplementation
130-139	80-89	No CVD and 10 year ASCVD risk < 10%	Non – Pharmacological therapy	Weight loss, diet control, physical activity, limit sodium intake and alcohol & consider potassium supplementation
		Clinical CVD or 10 year ASCVD risk ≥ 10%	Antihypertensive drug therapy (plus Non – Pharmacological therapy)	For initiation of antihypertensive drug therapy, first-line agents include thiazide diuretics, CCBs, and ACE inhibitors or ARBs.
≥ 130	≥ 80	Diabetes or CKD	Antihypertensive drug therapy (plus Non – Pharmacological therapy)	Diabetes: Diuretics, ACE inhibitors, ARBs, and CCBs (ACE inhibitors or ARBs in presence of albuminuria)
				CKD: ACE inhibitors or ARBs
≥ 130		Age: ≥ 65 years	Antihypertensive drug therapy (plus Non – Pharmacological therapy)	For initiation of antihypertensive drug therapy, first-line agents include thiazide diuretics, CCBs, and ACE inhibitors or ARBs.
≥ 140	≥ 90	N/A	Antihypertensive drug therapy (plus Non – Pharmacological therapy)	Consider initiation of pharmacological therapy for stage 2 hypertension with 2 antihypertensive agents of different classes.

To know your ASCVD risk score, click on the link below

http://tools.acc.org/ASCVD-Risk-Estimator-Plus/#!/calculate/estimate/

Comparing JNC 8 & ACC/AHA 2017

Conditions	JNC 8	ACC/AHA 2017
Stage 1 Hypertension	**Stage 1: (140-159/ 90-99 mmHg)** **Initial Therapy:** Thiazide-type diuretic or CCB, or ACEI or ARB.	**Stage 1: (130-139/80-89 mmHg)** **Initial Therapy:** Thiazide-type diuretic or CCB, or ACEI or ARB.
Stage 2 Hypertension	**Stage 2: (≥160/ ≥100 mmHg)** Consider initiation of pharmacological therapy for stage 2 hypertension with 2 antihypertensive agents of different classes.	**Stage 2: (≥140/ ≥90 mmHg)** Consider initiation of pharmacological therapy for stage 2 hypertension with 2 antihypertensive agents of different classes.

Kindly note that BP thresholds for initiating the treatment as well as the BP goals are different in the JNC 8 and ACC/AHA guidelines. The ACC/AHA guidelines have more stringent BP thresholds. Please refer to the BP thresholds and goals mentioned earlier.

ACC/AHA 2017 Hypertension guideline is an evidence-based review from the following bodies

THE AMERICAN GERIATRICS SOCIETY
Dedicated to the Health of Older Americans

For any scientific queries on above topic

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