Update on Hypertension: The New 2025 Guideline is Here!

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Audience During Conference



2

Financial Disclosure and Mitigation

3

Under guidelines established under the Standards for Integrity and Independence in Accredited Continuing Education, disclosure must be made regarding relevant financial relationships with ineligible companies within the last 24 months.

Jeremy L. Johnson

I have no relevant financial relationships with ineligible companies to disclose.

Learning Objectives

4

At the completion of this activity, pharmacists will be able to:

1. Recognize new recommendations presented in the 2025 American Heart Association/American College of Cardiology (AHA/ACC) Hypertension Guidelines
2. Interpret changes from the 2017 AHA/ACC Hypertension Guidelines and how these will impact patient care
3. Apply principles of the 2025 AHA/ACC Hypertension Guidelines to patient care scenarios

Professional Practice Gap

5

As new evidence for the prevention, detection, and management of hypertension emerges in the form of clinical trial data and other trusted sources, national content experts compile, review, and determine new evidence-based recommendations to evolve patient care strategies. The American Heart Association and the American College of Cardiology last released hypertension guidelines in 2017. After 8 years, we now have a 2025 update. This presentation will introduce new recommendations and review changes from the previous recommendations so that participants may become familiar with the new guidelines and be able to apply them in practice, teaching, or counseling.

Reference

6

2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AGS/AMA/ASPC/NMA/PCNA/SGIM Guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/ American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2025;152:e1–e105. doi: 10.1161/CIR.0000000000001356

Cardiovascular Disease and Hypertension

7

Cardiovascular Disease Risk

8

- ↑ BP = ↑ CVD risk
- Increased chance of:
  - ASCVD
  - Heart failure
  - Atrial fibrillation
  - Stroke
  - Kidney disease
  - Dementia
  - All cause mortality

Complications of Uncontrolled HTN

9

- Target Organ Damage (TOD)
  - Heart
    - Left ventricular hypertrophy
    - Angina or prior MI
    - Prior coronary revascularization
    - Heart failure
  - Brain
    - Stroke
    - Transient Ischemic Attack
  - Chronic kidney disease
  - Retinopathy
  - Peripheral arterial disease



Hypertension Guideline Evolution

10

National Heart Lung and Blood Institute (NHLBI)

11

Hypertension

- Joint National Committee 1977
- JNC-7 (2003)



Hypertension

- JNC-8 Committee to join ACC/AHA
- Published in JAMA instead
  - 2014 HTN Guideline ("JNC-8")

Special Communication

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)

Paul A. James, MD; Suzanne Oparil, MD; Barry L. Carter, PharmD; William C. Cushman, MD; Cheryl Dennison-Himmelfarb, RN, ANP, PhD; Joel Handler, MD; Daniel T. Lackland, DrPH; Michael L. LeFevre, MD, MSPH; Thomas D. MacKenzie, MD, MSPH; Olugbenga Ogedegbe, MD, MPH, MS; Sidney C. Smith Jr, MD; Laura P. Svetkey, MD, MHS; Sandra J. Taler, MD; Raymond R. Townsend, MD; Jackson T. Wright Jr, MD, PhD; Andrew S. Narva, MD; Eduardo Ortiz, MD, MPH

Hypertension
ACC/AHA 2017

12

Whelton PK, et al.
2017 High Blood Pressure Clinical Practice Guideline

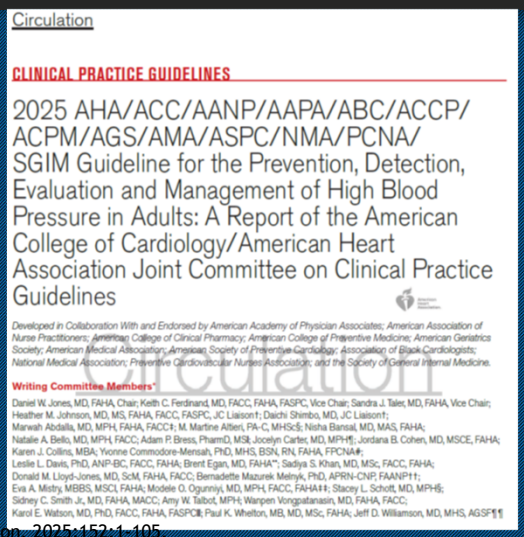
2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults

A Report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines

- Very similar to JNC-7, but updated
- Stronger evidence than "JNC-8"

Hypertension ACC/AHA 2025

13



Circulation

CLINICAL PRACTICE GUIDELINES

2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AGS/AMA/ASPC/NMA/PCNA/SGIM Guideline for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults: A Report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines

Developed in Collaboration With and Endorsed by American Academy of Physician Associates; American Association of Nurse Practitioners; American College of Clinical Pharmacy; American College of Preventive Medicine; American Geriatrics Society; American Medical Association; American Society of Preventive Cardiology; Association of Black Cardiologists; National Medical Association; Preventive Cardiovascular Nurses Association; and the Society of General Internal Medicine.

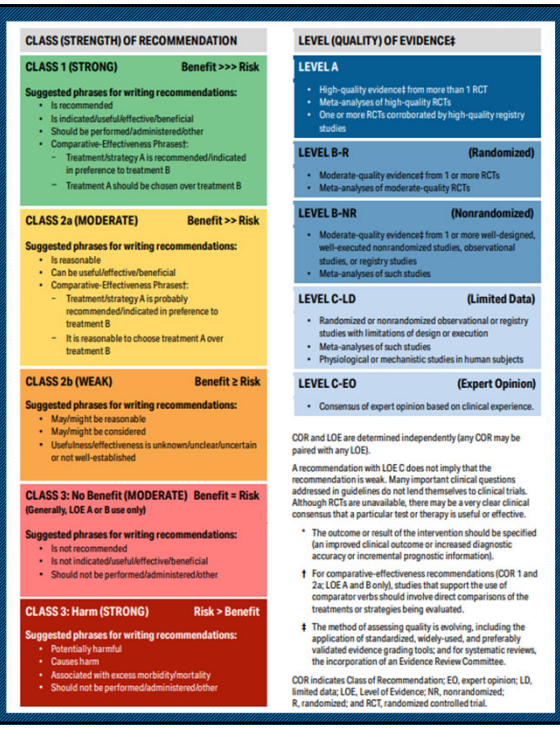
Writing Committee Members*

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Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Applying the ACC/AHA Class of Recommendation and Level of Evidence to Clinical Strategies, Interventions, Treatments, or Diagnostic Testing in Patient Care

14



CLASS (STRENGTH) OF RECOMMENDATION

CLASS 1 (STRONG) — **Benefit >>> Risk**

Suggested phrases for writing recommendations:
- Is recommended
- Is indicated/useful/effective/beneficial
- Should be performed/administered/dother
- Comparative-Effectiveness Phrases†:
  - Treatment/strategy A is recommended/indicated in preference to treatment B
  - Treatment A should be chosen over treatment B

CLASS 2a (MODERATE) — **Benefit >> Risk**

Suggested phrases for writing recommendations:
- Is reasonable
- Can be useful/effective/beneficial
- Comparative-Effectiveness Phrases†:
  - Treatment/strategy A is probably recommended/indicated in preference to treatment B
  - It is reasonable to choose treatment A over treatment B

CLASS 2b (WEAK) — **Benefit ≥ Risk**

Suggested phrases for writing recommendations:
- May/might be reasonable
- May/might be considered
- Usefulness/effectiveness is unknown/unclear/uncertain or not well-established

CLASS 3: No Benefit (MODERATE) — **Benefit = Risk**
(Generally, LOE A or B use only)

Suggested phrases for writing recommendations:
- Is not recommended
- Is not indicated/useful/effective/beneficial
- Should not be performed/administered/dother

CLASS 3: Harm (STRONG) — **Risk > Benefit**

Suggested phrases for writing recommendations:
- Potentially harmful
- Causes harm
- Associated with excess morbidity/mortality
- Should not be performed/administered/dother

LEVEL (QUALITY) OF EVIDENCE‡

LEVEL A
- High-quality evidence‡ from more than 1 RCT
- Meta-analyses of high-quality RCTs
- One or more RCTs corroborated by high-quality registry studies

LEVEL B-R (Randomized)
- Moderate-quality evidence‡ from 1 or more RCTs
- Meta-analyses of moderate-quality RCTs

LEVEL B-NR (Nonrandomized)
- Moderate-quality evidence‡ from 1 or more well-designed, well-executed nonrandomized studies, observational studies, or registry studies
- Meta-analyses of such studies

LEVEL C-LD (Limited Data)
- Randomized or nonrandomized observational or registry studies with limitations of design or execution
- Meta-analyses of such studies
- Physiological or mechanistic studies in human subjects

LEVEL C-EO (Expert Opinion)
- Consensus of expert opinion based on clinical experience.

COR and LOE are determined independently (any COR may be paired with any LOE).

A recommendation with LOE C does not imply that the recommendation is weak. Many important clinical questions addressed in guidelines do not lend themselves to clinical trials. Although RCTs are unavailable, there may be a very clear clinical consensus that a particular test or therapy is useful or effective.

* The outcome or result of the intervention should be specified (an improved clinical outcome or increased diagnostic accuracy or incremental prognostic information).

† For comparative-effectiveness recommendations (COR 1 and 2a; LOE A and B only), studies that support the use of comparator verbs should involve direct comparisons of the treatments or strategies being evaluated.

‡ The method of assessing quality is evolving, including the application of standardized, widely-used, and preferably validated evidence grading tools; and for systematic reviews, the incorporation of an Evidence Review Committee.

COR indicates Class of Recommendation; EO, expert opinion; LD, limited data; LOE, Level of Evidence; NR, nonrandomized; R, randomized; and RCT, randomized controlled trial.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Definition and Classification of BP

15

Blood Pressure Category	Systolic BP		Diastolic BP
Normal	< 120 mmHg	and	< 80 mmHg
Elevated	120-129 mmHg	and	< 80 mmHg
HYPERTENSION			
Stage 1 HTN	130-139 mmHg	or	80-89 mmHg
Stage 2 HTN	≥ 140 mmHg	or	≥ 90 mmHg

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Evaluation and Diagnosis

16

ACC/AHA 2025 Blood Pressure Guideline

Checklist for Accurate Office BM Measurement

17

COR	RECOMMENDATIONS
1	When diagnosing and managing high BP in adults, standardized methods are recommended for the accurate measurement and documentation of in-office BP.
2a	When measuring in-office BP in adults, it is reasonable to use the oscillometric method with an automated device over the auscultatory method.



Office Blood Pressure Measurement

1. The patient should avoid caffeine, exercise, and smoking for at least 30 minutes before measurement. Ensure the patient has emptied their bladder.
2. Use a blood pressure device that has been validated for accuracy (validatebp.org).
3. Use the correct cuff size on a bare arm.
4. The patient's arm should be supported at heart level.
5. Have the patient relax, sitting in a chair (feet on floor, legs uncrossed, and back supported) for more than 5 minutes of rest.
6. Neither the patient nor the clinician should talk during the rest period or during the measurement. The patient should not be using their phone.
7. Blood pressure measurement should be taken in a temperature-controlled room.
8. Take 2 or more blood pressure measurements at least 1 minute apart. Average the readings, and provide the patient their blood pressure readings both verbally and in writing.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

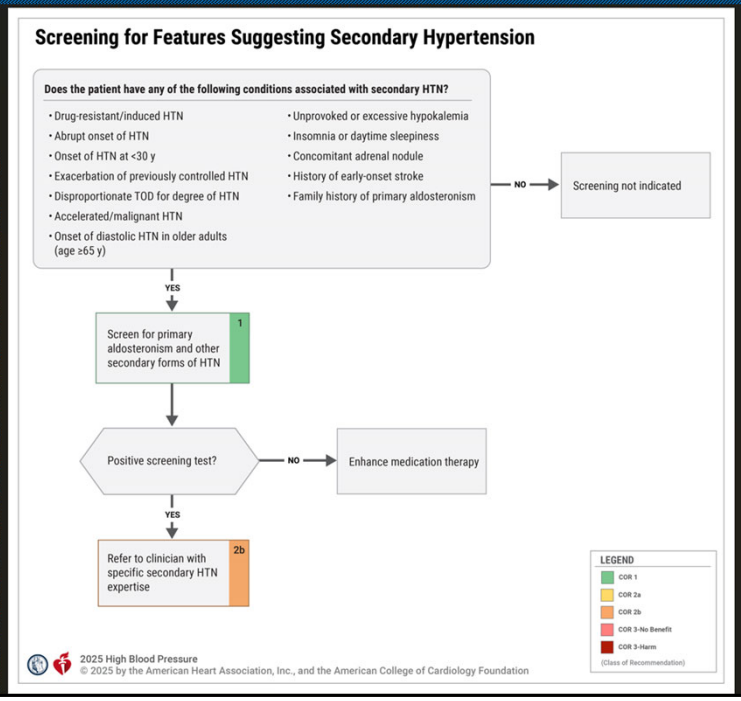
Home BP Monitoring

18

COR	RECOMMENDATIONS
1	In adults with suspected hypertension, out-of-office BP measurements by either ABPM or HBPM are recommended to confirm the diagnosis of hypertension.
1	In adults who are taking antihypertensive medication, HBPM is recommended for monitoring the titration of BP-lowering medication, along with co-interventions such as patient education, telehealth counseling, and clinical interventions.
3: No Benefit	In adults, the use of cuffless BP devices is not recommended for the diagnosis or management of high BP.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Screening for Secondary HTN



Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Secondary HTN (common causes)

20

COR	RECOMMENDATIONS
1	In adults with hypertension, screening for specific forms of secondary hypertension is recommended when clinical suspicion is present to increase rates of detection, diagnosis, and specific targeted therapy.
1	In adults with resistant hypertension, screening for primary aldosteronism is recommended regardless of whether hypokalemia is present to increase rates of detection, diagnosis, and specific targeted therapy.
2a	In adults who a positive screening test for a form of secondary hypertension, referral to clinician who has expertise in that form of hypertension is reasonable for diagnostic confirmation and treatment.

Table 10. Causes of Secondary Hypertension With Indications for Additional Testing and Diagnostic Screening Tests

	Prevalence	Indications for Additional Testing	Physical Examination Findings	Screening Tests	Confirmatory Tests
Common causes					
OSA[1-7]	25%-50%	Snoring, choking, gasping during sleep; daytime sleepiness; resistant hypertension	Obesity, large neck size (eg, >17 inches [men]; >16 inches [women], Mallampati class 3-4; loss of normal nocturnal BP fall	STOP-Bang Questionnaire[15]; Berlin Questionnaire[16]; overnight oximetry	Referral for polysomnography or home sleep apnea testing if no suspicion of nonrespiratory sleep disorders (eg, narcolepsy)
CKD[12,18]	14%	Diabetes, obstruction, hematuria; urinary frequency and nocturia; urinary incontinence, analgesic abuse; family history of polycystic kidney disease; elevated serum creatinine; abnormal urinalysis	Abdominal mass or large palpable kidneys (polycystic kidney disease); skin pallor	Electrolytes, including sodium, potassium, chloride, and bicarbonate, serum creatinine, urinalysis, urine microalbumin, serum cystatin C, renal ultrasound	Tests to evaluate cause of CKD
Primary aldosteronism[1-3,5,19]	5%-25%	Resistant hypertension; hypertension with hypokalemia (spontaneous or diuretic induced); hypertension and muscle cramps or weakness; hypertension and incidentally discovered adrenal mass; hypertension and obstructive sleep apnea; hypertension and family history of early-onset hypertension or stroke	Arrhythmias (with hypokalemia); especially AF	Electrolytes, including sodium and potassium, plasma aldosterone/renin activity ratio (correction of hypokalemia and withdrawal of MRA for 4-6 wks)	Oral sodium loading test (with 24-h urine aldosterone) or IV saline infusion test with plasma aldosterone at 4 h of infusion or captopril suppression test (in patients not on ACEi or ARB treatment), adrenal CT scan, adrenal vein sampling

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Secondary HTN (less-common causes)

21

Drug or alcohol induced[11]	2%-20%
Renovascular hypertension[10]	0.1%-5%
Hypothyroidism[20]	<1%
Hyperthyroidism[20]	<1%
Pheochromocytoma/ paraganglioma[21,22]	<0.6%
Aortic coarctation (undiagnosed or repaired)[23]	0.1%
Cushing syndrome[24]	<0.1%
Primary hyperparathyroidism[20]	Rare
Congenital adrenal hyperplasia[20]	Rare
Mineralocorticoid excess syndromes other than primary aldosteronism[20]	Rare
Acromegaly[25]	Rare

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Blood Pressure Management

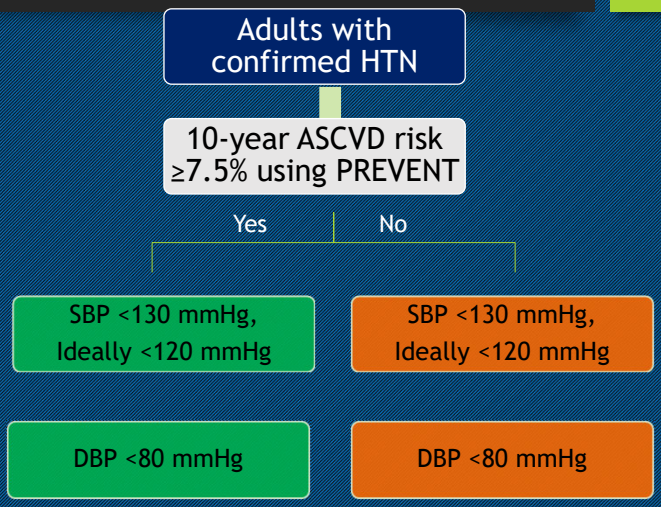
22

BP Goals

23

<130/80 mmHg

Reminder that
<120/80 mmHg is ideal



Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Lifestyle Modifications

24

Intervention	Target/Biomarker	Evidence-Based Goals	Approximate Mean Change in SBP (mm Hg)*	
			With Hypertension	Without Hypertension
Weight loss	Body weight or BMI	Aim for sustained ≥5% reduction in body weight or ≥3 kg/m² reduction in BMI; expect about 1 mm Hg reduction for every 1-kg reduction in body weight	-6 to -8	-3 to -5
Heart-healthy diet	DASH eating pattern	Consume a diet rich in fruits, vegetables, whole grains, and low-fat dairy products, with reduced content of saturated and total fat	-5 to -8	-3 to -7
Reduced intake of sodium	Dietary sodium intake, 24-hour urinary sodium	Optimal goal is <2,300 mg/day, but aim for an ideal limit of <1,500 mg/day	-6 to -8	-1 to -4

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Lifestyle Modifications

25

Use of salt substitute	Replace cooking/table salt (100% sodium chloride) with salt substitute (25%-30% potassium chloride, 65%-75% sodium chloride, and 0%-10% flavoring agents); 24-hour urinary sodium and potassium	Reduce dietary sodium intake as above	-5 to -7	-5
Enhanced intake of potassium	Dietary potassium intake; 24-hour urinary potassium	Aim for 3,500-5,000 mg/day, ideally by consumption of a diet rich in potassium, or alternative use of moderate-dose pharmacological potassium supplementation (<80 mmol)	-6	-3 to -6
Reduced alcohol intake	Alcohol consumption	Optimal goal is abstinence for all adults for best health outcomes; in patients who consume alcohol, aim for >50% reduction in daily intake to no more than 2 drinks/day in men or 1 drink/day in women	-4 to -6	-3

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Lifestyle Modifications

26

Exercise	Aerobic exercise	90-150 minutes/week 65%-75% heart rate reserve	-4 to -8	-2 to -7
	Dynamic resistance	90-150 minutes/week 50%-80% 1 rep maximum 6 exercises, 3 sets/exercise, 10 repetitions/set	-2 to -7	-2 to -5
	Isometric resistance	4 × 2 minutes (hand grip), 1 minute rest between exercises, 30%-40% maximum voluntary contraction, 3 sessions/week	-5 to -10	-4 to -6

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Lifestyle Modifications

27

Meditation	Transcendental meditation	Training by a professional, followed by 2 x 20 minute sessions/day while seated comfortably with eyes closed	-5 to -7	-5
Breathing control	Slowing respiration	Device-guided session to decrease respiration to <10 breaths/minute for 15 minutes/day	-5	-5

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Pharmacologic Therapy

28

- Use of risk-based approaches to guide initiation of drug therapy
  - BP thresholds
    - Stage 1 HTN
    - Stage 2 HTN
  - 10-year CVD Risk
    - Pooled Cohort Equation vs PREVENT equation
    - PREVENT is preferred in 2025 ACC/AHA BP Guideline
      - High risk threshold: 7.5%

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

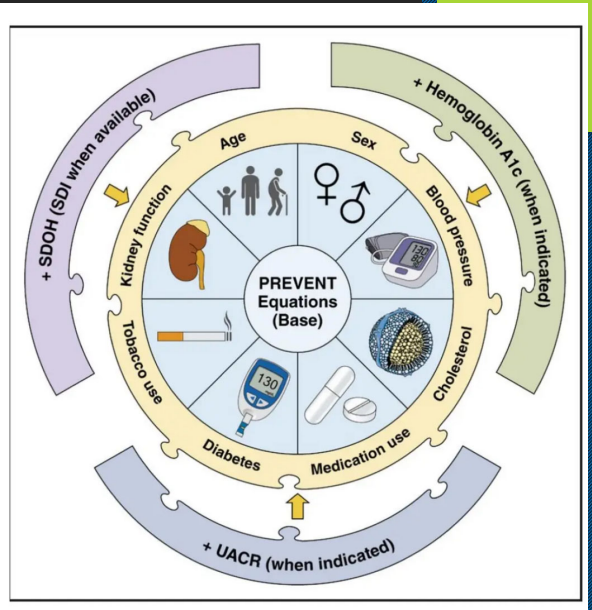
Table. Comparison of the Pooled Cohorts Equation and PREVENT Risk Equation

Feature	Pooled cohorts equation	PREVENT
Development year	2013	2023
Age range	40–79 y	30–79 y
Risk timeline	10-year only	10-year and 30-year
Data source period	1968–1990	1992–2017
Sample size	Historical cohorts	>6 million adults
Shared predictors (9)	Age, sex, smoking, systolic BP, total cholesterol, HDL cholesterol, diabetes, antihypertensive and statin medications	
PCE-only predictors (3)	Race (White, Black, other), LDL cholesterol, Diastolic BP	…
PREVENT-added variables (6)	…	Non-HDL cholesterol, eGFR, HbA1c (Optional: UACR, BMI, SDI/Zip code)
Outcomes predicted	ASCVD only (MI, coronary death, stroke)	Total CVD, ASCVD, Heart failure (separate assessments)
High risk threshold	≥10% 10-year ASCVD risk	≥7.5% 10-year total CVD risk
Key methodological advances	Replaced Framingham calculator	Race removal, CKM integration, social determinants, contemporary data, expanded age range, multiple outcomes

PREVENT Risk Calculator

Includes traditional CVD risk factors and kidney function as predictors

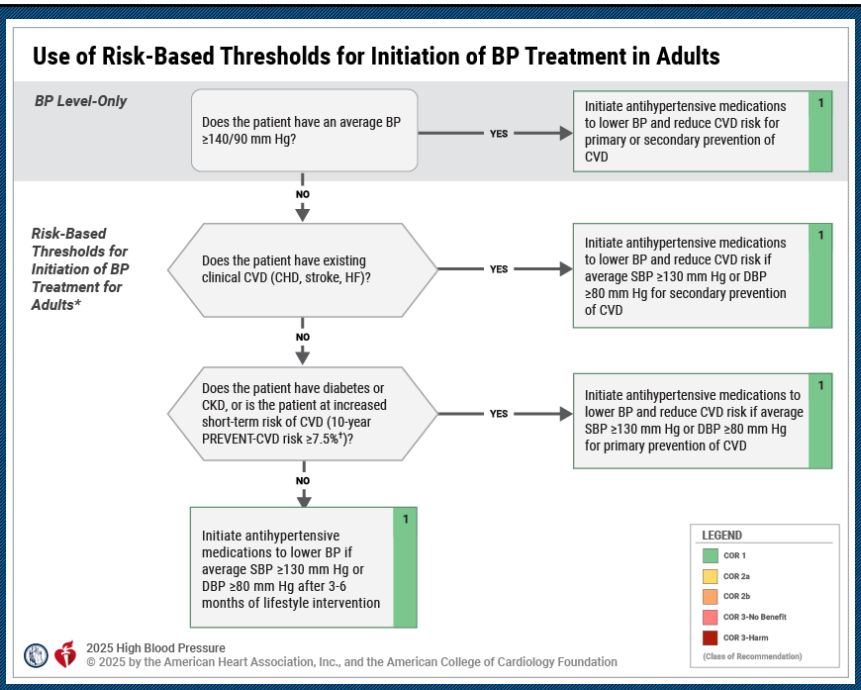
- Cardio-kidney-metabolic health
- Social deprivation index



PREVENT base and additional equations.

Circulation. 2023;148:1982-2004.

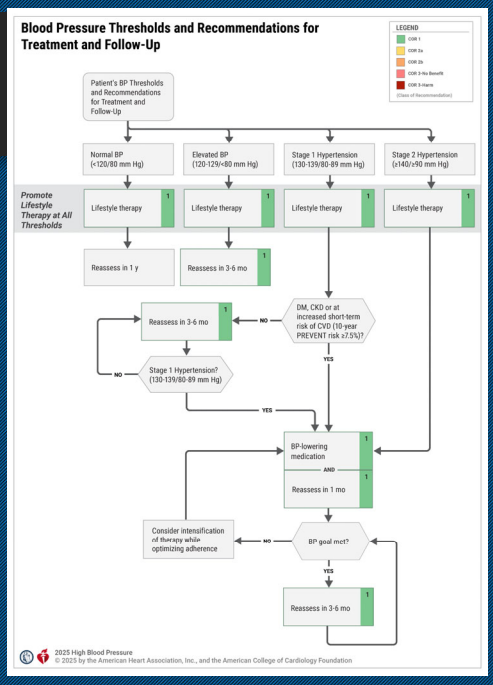
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Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

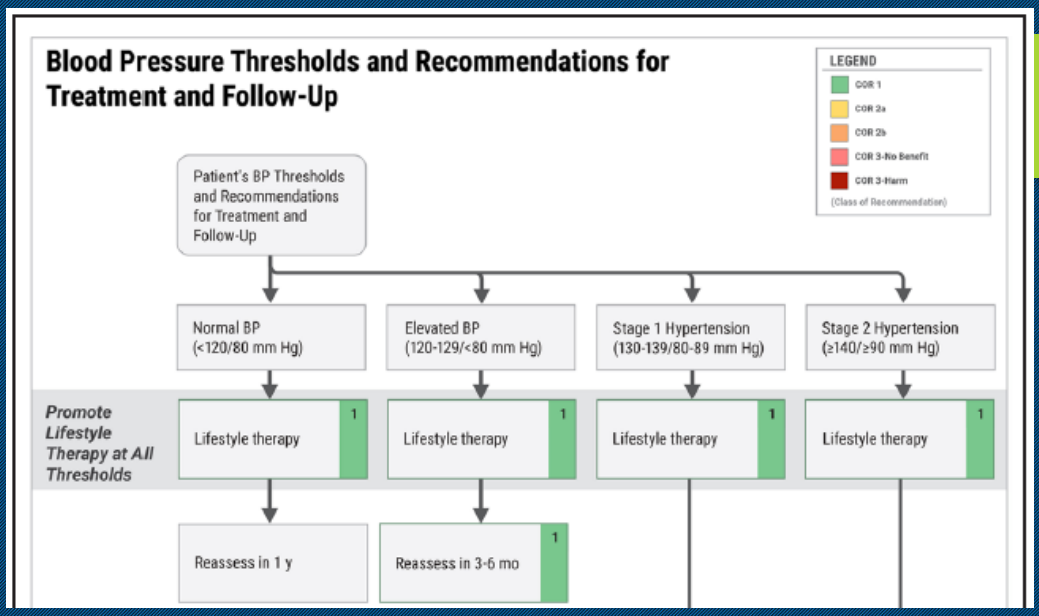
Treatment Algorithm

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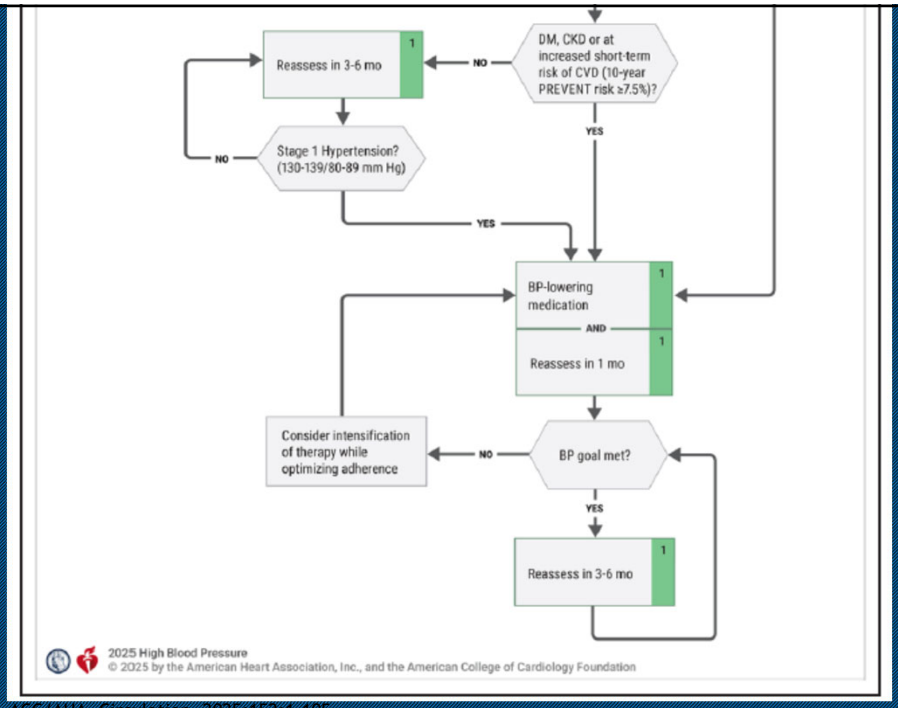
Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

32



Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

33



Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Simplified Algorithm

34

Stage 1 HTN Class 2a	Stage 2 HTN Class 1	Any stage HTN Class 3: Harm
Initiation of a **SINGLE** 1st line agent. Dosing titration and sequential addition of other drugs as needed.	Initiation of **TWO** 1st line agents of different classes. Ideally, in a single pill combination to improve adherence.	**DO NOT** combine ACEi, ARBs, and/or renin inhibitors.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Initial Drug Therapy for Primary HTN

35

For adults initiating antihypertensive therapy, 1st line therapy to prevent CVD includes:

- Thiazide diuretics
- Long-acting DHP Calcium Channel Blockers
- ACE inhibitors
  OR
- ARBs

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Management of BP Alongside Comorbidities

36

Comorbidities Influence Selection of Initial Agent: Diabetes

37

Greater than 80% of adults with Type 2 Diabetes have HTN.
Intensive BP goals are associated with improved CV outcomes.

BP Goal
Use antihypertensive medication(s) for BP >130/80 mmHg
Class 1

Initial Management
All 1st line agents are effective. Thiazides, CCB, ACEi and ARB
Class 1

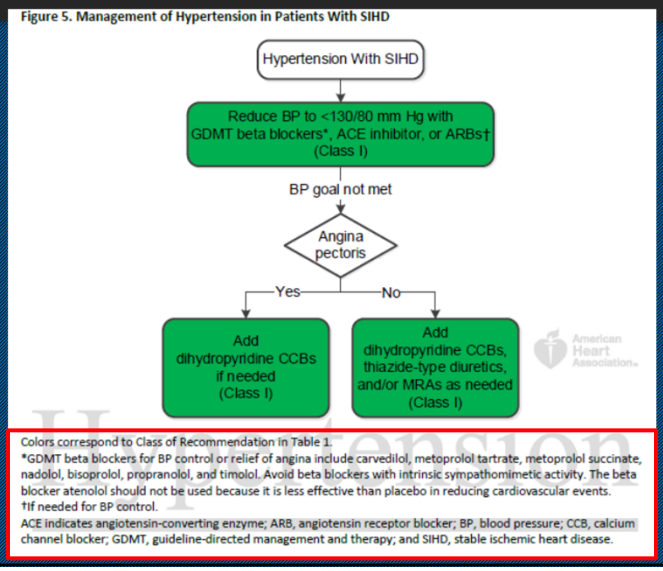
Special Considerations: CKD
- If eGFR <60 mL/min/1.73m2 or moderate to severe albuminuria >30 mg/g: **ACEi or ARB recommended**
- If mild albuminuria (<30 mg/g), ACEi or ARB can delay progression of DM-related kidney disease.

Class 1

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Stable Ischemic Heart Disease Not addressed in 2025 ACC/AHA BP Guideline

38



Post MI or angina: Think **BB** or ACEi

Whelton PK, ACC/AHA. Hypertension. 2017;71(19):1-167

"Prevention" of Heart Failure in Patients with Hypertension

39

Recommendations for the Prevention of HF in Adults With Hypertension

References that support the recommendations are summarized in the evidence table.

COR	LOE	Recommendations
1	B-R	1. In adults with hypertension, treating SBP to <130 mm Hg is recommended to lower the risk of developing HF.
1	B-NR	2. In adults with hypertension, treating DBP to <80 mm Hg is recommended to lower the risk of developing HF.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Heart Failure BP Management not addressed in 2025

40

HFrEF:
AVOID
Verapamil
Diltiazem

9.2.1. Heart Failure With Reduced Ejection Fraction

Recommendations for Treatment of Hypertension in Patients With HFrEF

References that support recommendations are summarized in Online Data Supplement 34.

COR	LOE	Recommendation
I	C-EO	1. Adults with HFrEF and hypertension should be prescribed GDMT (2) titrated to attain a BP of less than 130/80 mm Hg.
III: No Benefit	B-R	2. Nondihydropyridine CCBs are not recommended in the treatment of hypertension in adults with HFrEF (1).

9.2.2. Heart Failure With Preserved Ejection Fraction

Recommendations for Treatment of Hypertension in Patients With HFpEF

References that support recommendations are summarized in Online Data Supplements 35 and 36.

COR	LOE	Recommendations
I	C-EO	1. In adults with HFpEF who present with symptoms of volume overload, diuretics should be prescribed to control hypertension.
I	C-LD	2. Adults with HFpEF and persistent hypertension after management of volume overload should be prescribed ACE inhibitors or ARBs and beta blockers titrated to attain SBP of less than 130 mm Hg (1-6).

Heart Failure: Think
ACEi or BB

Specific BB for HF:
Metoprolol succinate
Bisoprolol
Carvedilol

Whelton PK, ACC/AHA. Hypertension. 2017;71(19):1-167

CKD
2025 ACC/AHA BP Guideline

41

Recommendations for Hypertension Treatment in Patients With Chronic Kidney Disease

References that support recommendations are summarized in the evidence table.

COR	LOE	Recommendations
1	A	1. For adults with hypertension and CKD as identified by eGFR <60 mL/min/1.73m² or albuminuria ≥30 mg albumin/g creatinine, treatment should target an SBP goal of <130 mm Hg to decrease all-cause mortality.
1	B-R	2. For adults with hypertension and CKD as identified by eGFR <60 mL/min/1.73m² with albuminuria of ≥30 mg/g, RAASi (either with ACEi or ARB but not both) is recommended to decrease CVD and delay progression of kidney disease.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Obesity and Metabolic Syndrome
2025 ACC/AHA BP Guideline

42

Recommendations for Obesity and Metabolic Syndrome

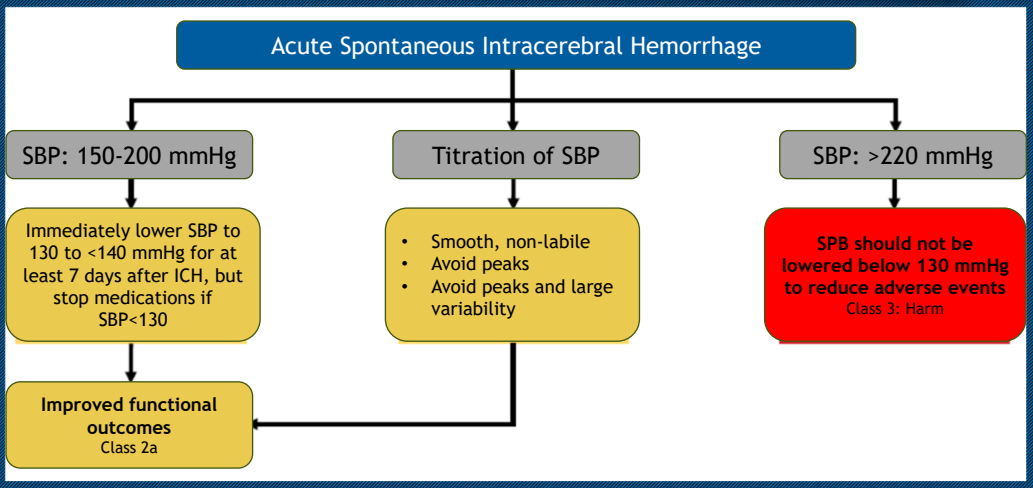
Referenced studies that support the recommendations are summarized in the evidence table.

COR	LOE	Recommendations
2b	B-R	1. In adults with hypertension who also have overweight or obesity with a BMI ≥27 kg/m², incretin mimetics (eg, GLP-1RA) when used for weight management may be effective as an adjunct to lower BP.
2b	B-R	2. In adults with hypertension who have obesity with a BMI ≥35.0 kg/m², bariatric surgery (when considered for weight loss) in combination with behavioral interventions and antihypertensive therapies may be effective at lowering BP.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Acute Intracerebral Hemorrhage and HTN

43



Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Acute Ischemic Stroke

44

Recommendations for Acute Ischemic Stroke

References that support recommendations are summarized in the evidence table.

COR	LOE	Recommendations
1	C-LD	1. In patients with acute ischemic stroke, hypotension and hypovolemia should be corrected to maintain systemic perfusion levels necessary to support organ function.
1	B-NR	2. Patients who have elevated BP and are otherwise eligible for treatment with IV thrombolytics should have their BP lowered to SBP <185 mm Hg and DBP <110 mm Hg before IV thrombolytic therapy is initiated and should be maintained below 180/105 mm Hg for at least the first 24 hours after initiating thrombolytic therapy to avoid complications.
2a	B-NR	3. In patients who undergo endovascular treatment, it is reasonable to maintain the BP at ≤180/105 mm Hg during and for 24 hours after the procedure to improve long-term functional outcomes and prevent death.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Acute Ischemic Stroke cont.

45

2b	C-LD	4. In patients with BP of ≥220/120 mm Hg who did not receive IV thrombolytic or endovascular treatment and have no comorbid conditions requiring acute antihypertensive treatment, it might be reasonable to lower BP by 15% during the first 24 hours after onset of stroke to improve outcomes.
3: No Benefit	A	5. In patients with BP <220/120 mm Hg who do not receive IV thrombolysis or endovascular treatment and do not have a comorbid condition requiring urgent antihypertensive treatment, initiating or reinitiating treatment of hypertension within the first 48 to 72 hours after an acute ischemic stroke is not effective to prevent death or disability.
3:Harm	A	6. In patients undergoing successful brain reperfusion with endovascular treatment for a large vessel occlusion, lowering SBP <140 mm Hg within the first 24 to 72 hours after reperfusion can worsen long-term functional outcome.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Secondary Stroke Prevention

46

Recommendations for Secondary Stroke Prevention

References that support recommendations are summarized in the evidence table.

COR	LOE	Recommendations
1	A	1. In patients with hypertension who have experienced an ischemic stroke, transient ischemic attack (TIA), or ICH, treatment with a thiazide-type diuretic, ACEi, or ARB is recommended for lowering BP and reducing recurrent stroke and ICH risk.
1	B-R	2. In patients with hypertension who have experienced an ischemic stroke, TIA, or ICH, an office SBP/DBP goal of <130/80 mm Hg is recommended to reduce the risk of recurrent stroke, ICH, and other vascular events.
2a	B-R	3. In patients with no history of hypertension who have experienced an ischemic stroke, TIA, or ICH and have an average office SBP/DBP of ≥130/80 mm Hg, antihypertensive medication treatment can be beneficial to reduce the risk of recurrent stroke, ICH, and other vascular events.

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Management of BP in Special Populations

47

Race

48

- Race is no longer a factor in medication selection
- 2017 ACC/AHA BP Guideline
  - Black patients with HTN should be treated with thiazide diuretics and CCB
- 2025 ACC/AHA BP Guideline
  - No mention of preferred medications due to race
  - Intentionally removed
  - Said to be a social issue vs genetic issue

Whelton PK, ACC/AHA. Hypertension. 2017;71(19):1-167

HTN and Pregnancy

49

Individuals with hypertension who are planning a pregnancy or become pregnant

- Labetalol and extended-release nifedipine are preferred to minimize fetal risk and treat HTN — Class 1
- Should be counseled about the benefits of low-dose ASA 81mg/d, to reduce risk of preeclampsia — Class 1
- Should NOT be treated with atenolol, ACEi, ARB, direct renin inhibitors, nitroprusside, or MRAs to avoid fetal harm — Class 3: Harm

Pregnant individuals

- With BP ≥160/110 mmHg confirmed on repeat measurement within 15 minutes, lower BP to <160/110 within 30-60 minutes to prevent AE — Class 1
- With chronic HTN, treat to achieve BP<140/90 mmHg to prevent maternal and perinatal morbidity and mortality — Class 1

Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Resistant HTN

Confirm treatment resistance with 1 of the following:
- Office BP ≥130/80 mm Hg and on ≥3 antihypertensives
  - Combination of ACEi or ARB + CCB + thiazide-like diuretics preferred
- Office BP <130/80 mm Hg but requires ≥4 antihypertensives
  - Combination of ACEi or ARB + CCB + thiazide-like diuretics preferred

Exclude pseudoresistance
- Ensure accurate office BP measurements
- Assess for medication nonadherence with prescribed regimen
- Obtain home, work, or ambulatory BP readings to exclude white-coat effect

Identify and reverse contributing lifestyle factors*

Discontinue or minimize interfering substances†

Screen for secondary causes of hypertension‡

Pharmacological treatment
- Maximize diuretic therapy
  - Replace thiazide-type diuretics with chlorthalidone 12.5-25 mg qd or indapamide 1.25-2.5 mg qd
- Add spironolactone (25-50 mg qd) or equivalent dosage of eplerenone (25-50 mg BID) if eGFR ≥45
- Use chlorthalidone or loop diuretics in patients with CKD stage 4 or greater
- Add agents with different MOA
  - BB, central sympatholytic drugs, or nondihydropyridine CCB for elevated heart rate
- Add potent vasodilators
  - eg, aprocitentan, hydralazine, or minoxidil only if already on BB (or bradycardic) and loop diuretic

Refer to specialist:
- For known or suspected secondary cause(s) of hypertension
- If BP remains uncontrolled >6 months of treatment

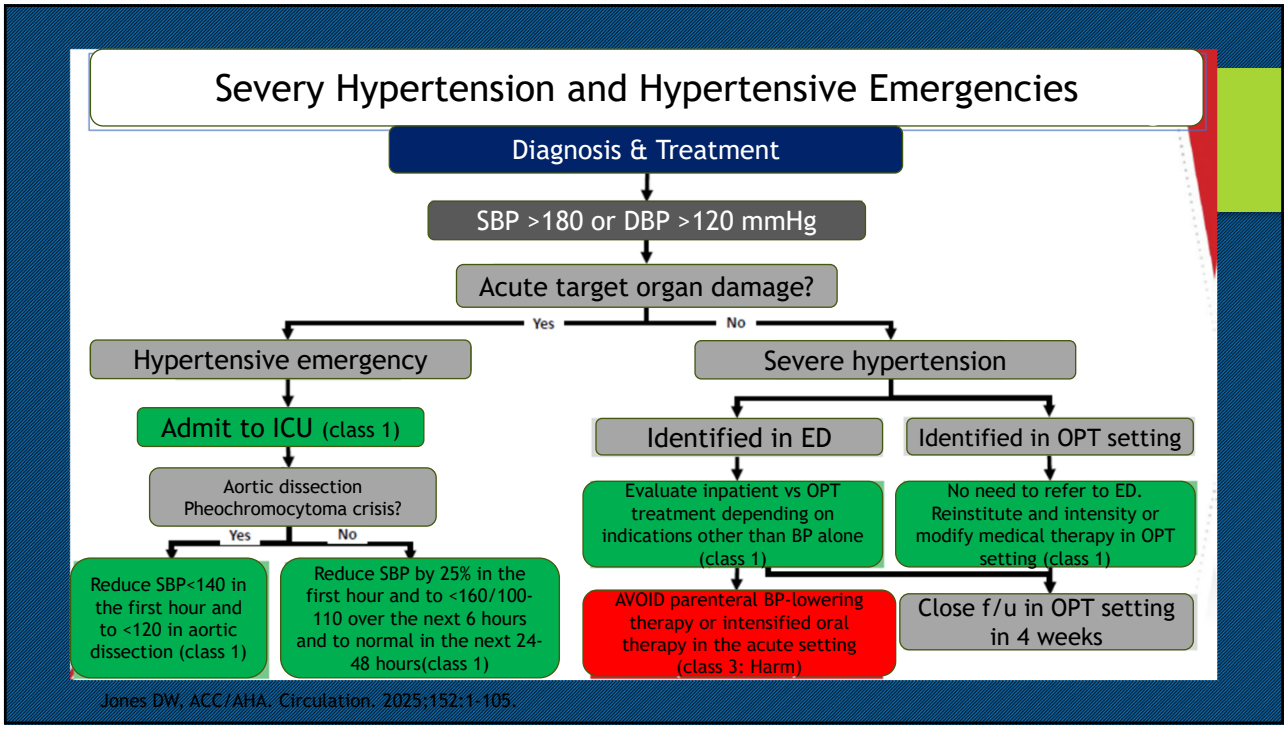
Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

Severe Hypertension and Hypertensive Emergency

51

New Terminology

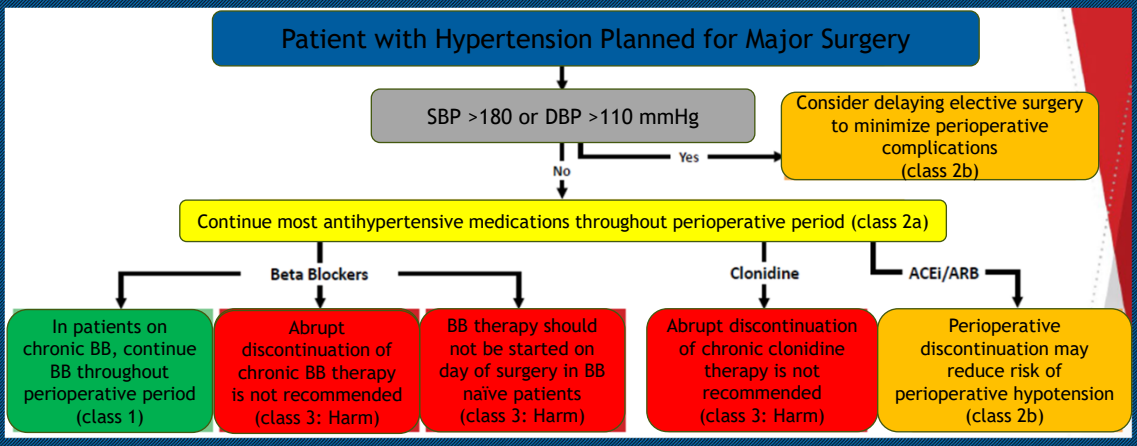
Hypertensive Urgency = Severe Hypertension



Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

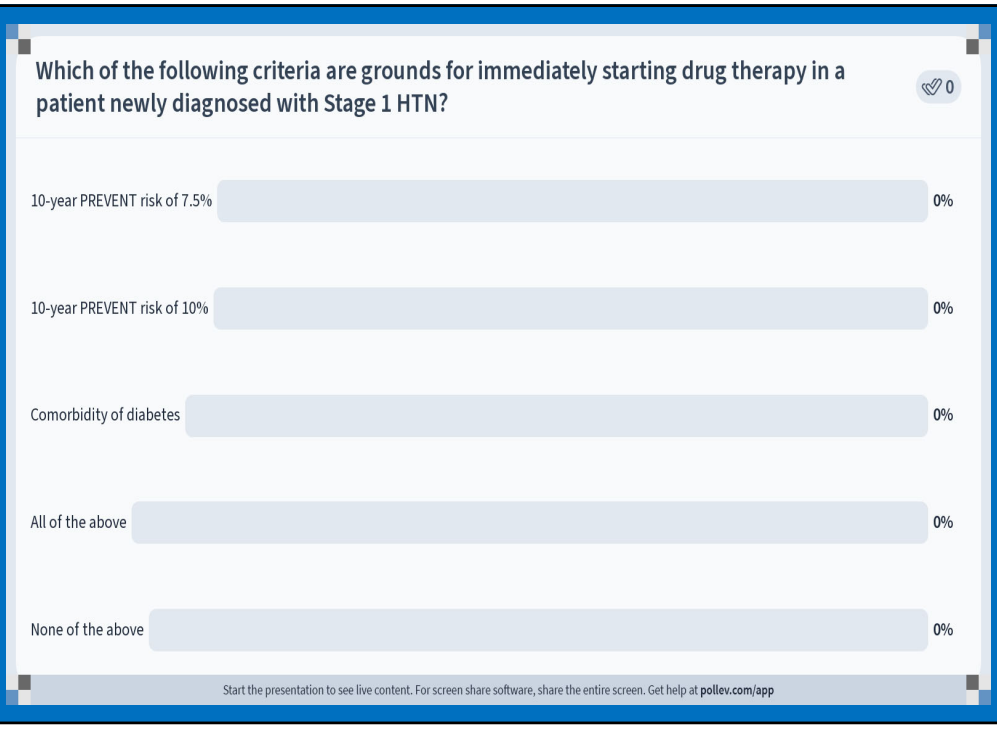
Patients Scheduled for Surgical Procedures

53

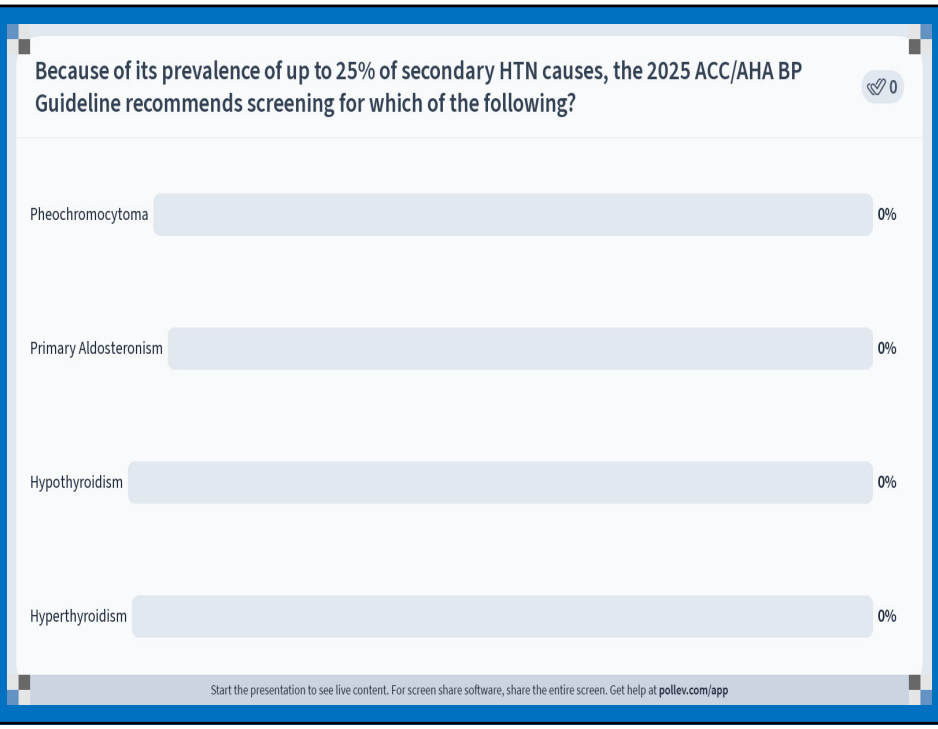


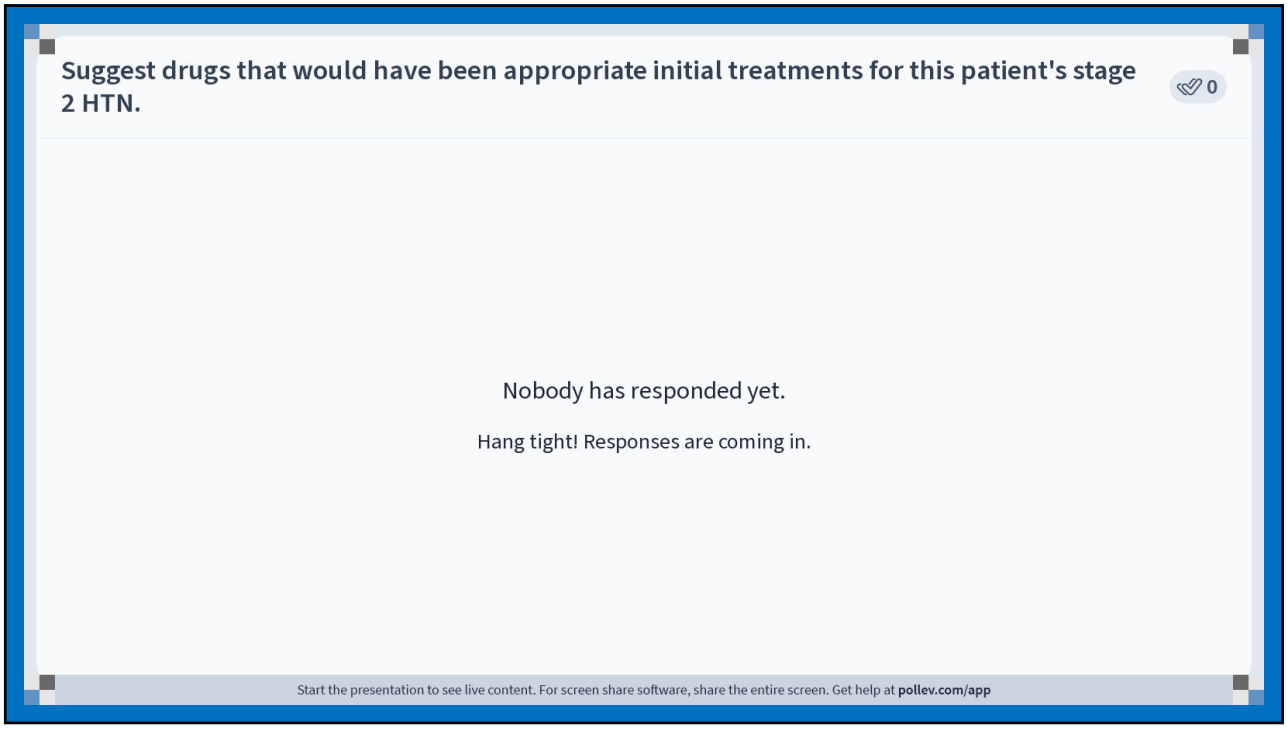
Jones DW, ACC/AHA. Circulation. 2025;152:1-105.

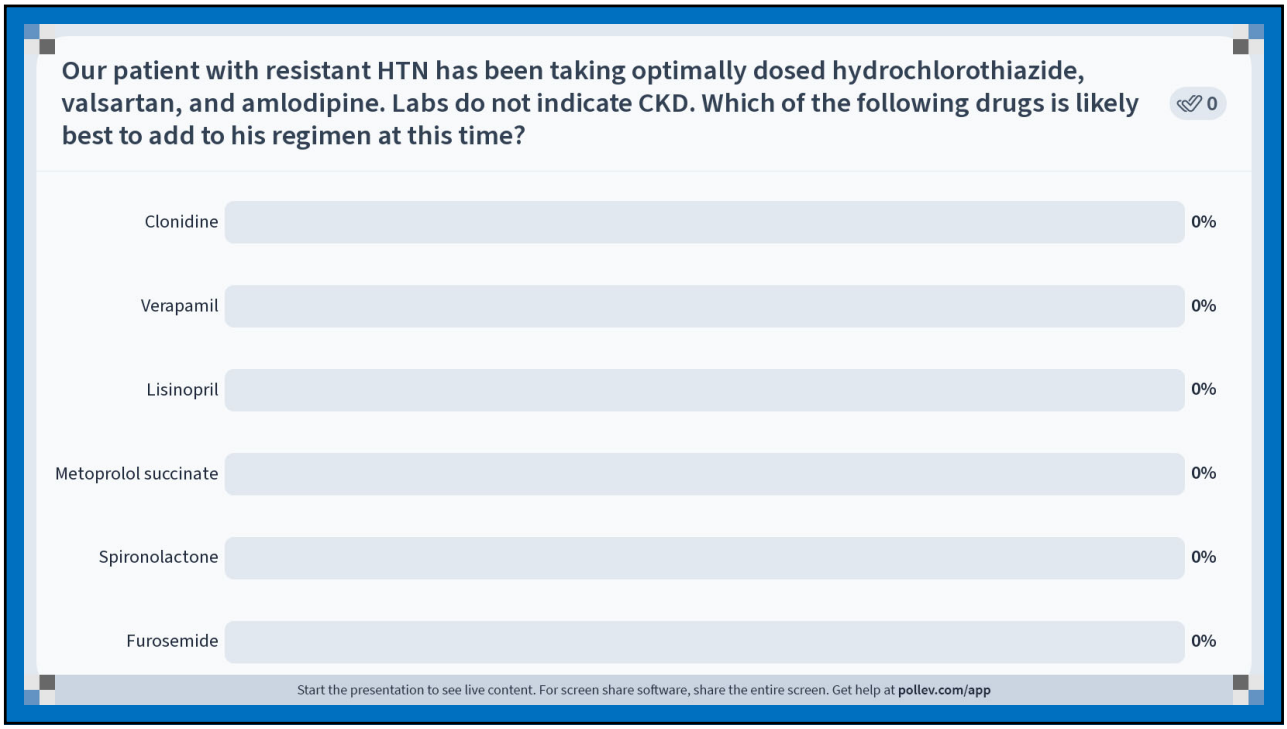
A 25-year-old man with no significant PMH is diagnosed with Stage 1 HTN. He has smoked a pack of cigarettes each day for the past 10 years and has significant barriers to care based on social determinants of health. His 10-year PREVENT risk is 8.5%.



The 25-year-old man's BP was initially improperly assessed. With proper techniques and repeat BP readings, he is diagnosed with new onset stage 2 HTN. He is started on two appropriate first-line agents to lower BP. After titration and failure to attain goal BP, a 3rd appropriate agent is added and fails to gain control. His CMP is unremarkable including normal K^+. Before adding a 4th agent to his resistant HTN, considerations are given to possible causes of secondary HTN.







Conclusion and Clinical Pearls

58

- The overarching blood pressure treatment goal is <130/80 mmHg for all adults.
- Multidisciplinary team-based care is effective in assessing and addressing patient access to medications and other structural barriers to support individual patient needs and thereby reduce barriers to achieving hypertension control.
- For all adults, lifestyle modifications are strongly recommended to prevent or treat elevated blood pressure and hypertension.
- Stage 1 HTN with DM or CKD = start drug therapy
- Stage 1 HTN with 10-year PREVENT risk ≥7.5% = start drug therapy
- Stage 1 HTN with 10-year PREVENT risk <7.5% = TLC x 3-6 months
- Severe hypertension in nonpregnant individuals, defined as blood pressure >180/120 mm Hg, without evidence of acute target organ damage, should be evaluated and treated in the outpatient setting.

Additional Resources

59

- AHA Guideline Hub: Hub – 2025 High Blood Pressure Guideline Resources. Website and links below:
- https://professional.heart.org/en/guidelines-statements/2025-ahaaccaanpaapaabcaccpacpmagsamaaspcnmapcnasgim-guideline-for-thehyp0000000000000249
- 2019 CVD Primary Prevention Guideline
- 2024 Renal Denervation for the Treatment of Hypertension
- 2023 Implementation Strategies to Improve Blood Pressure Control in the United States
- 2023 Cardiovascular Kidney Metabolic Health: A Presidential Advisory From the AHA
- 2022 Life's Essential Eight: Updating and Enhancing the American Heart Association's Cardiovascular Health Construct
- 2021 Medication Adherence and Blood Pressure Control
- 2021 Hypertension in Pregnancy: Diagnosis, Blood Pressure Goals, and Pharmacotherapy
- 2020 Self-Measured Blood Pressure Monitoring at Home
- 2019 Measurement of Blood Pressure in Humans
- 2019 AHA/ACC Clinical Performance and Quality Measures for Adults With High Blood Pressure
- 2018 Resistant Hypertension: Detection, Evaluation, and Management

References

60

- 2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AGS/AMA/ASPC/ NMA/PCNA/SGIM Guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/ American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2025;152:e1–e105. doi: 10.1161/CIR.0000000000001356
- Akinrimisi, O., Aguilar Nunez, F., Oribabor, J., Rojulpote, C., Shah, T., Reyna, G.G., Bezanson, J. L., & Antman, E. M. (2025). AHA Clinical Update; Adapted from: [PowerPoint slides]. Retrieved from the 2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/AMA/ASPC/NMA/PCNA/SGIM Guideline for the Prevention, Detection, Evaluation and Management of High Blood Pressure in Adults.
- This slide set is adapted from the 2025 AHA/ACC/AANP/AAPA/ABC/ACCP/ACPM/ AGS/AMA/ASPC/NMA/PCNA/SGIM Guideline for the Prevention, Detection, Evaluation, and Management of High Blood Pressure in Adults. Published ahead of print August 14, 2025, available at: Circulation. https://www.ahajournals.org/doi/10.1161/CIR.0000000000001356 And Journal of the American College of Cardiology, published online ahead of print August 14, 2025. J Am Coll Cardiol. https://www.jacc.org/doi/10.1016/j.jacc.2025.05.007

Update on Hypertension: The New 2025 Guideline is Here!

OSHP Fall Meeting
St. Anthony Hospital
October 17, 2025

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