



# Medical Management of Adults with Hypertension

The following guideline recommends diagnostic evaluation, education and pharmacologic treatment that support effective patient self-management.

Eligible Population	Key Components	Recommendation and Level of Evidence
<p>Adult patients ≥ 18 years of age. Not pregnant.</p> <p><b>Correct Blood Pressure Technique:</b></p> <ul style="list-style-type: none"> <li>- Resting 5 minutes in a chair with feet flat on the floor</li> <li>- Legs uncrossed</li> <li>- Back supported</li> <li>- Arm supported at heart level</li> <li>- Cuff on bare arm</li> <li>- Appropriate size cuff</li> <li>- Empty bladder</li> <li>- Do not have a conversation</li> </ul> <p>List of clinically validated devices- (<a href="http://www.validatebp.org">www.validatebp.org</a>)</p> <p>The new PREVENT (Predicting risk of cardiovascular disease events) risk calculator integrates factors like age, sex, cholesterol, kidney function, and ZIP code to provide a more personalized long-term cardiovascular risk estimate. <a href="https://professional.heart.org/en/guidelines-and-statements/prevent-calculator">https://professional.heart.org/en/guidelines-and-statements/prevent-calculator</a></p>	Initial assessment	<p>The objectives of the initial evaluation are to assess lifestyle, cardiovascular risk factors, concomitant disorders, reveal identifiable causes of hypertension and check for target organ damage and cardiovascular disease.</p> <p>Physical examination: 2 or more blood pressure measurements on 2 or more office visits using calibrated blood pressure device and <a href="#">correct technique</a>. Ideally confirm with <a href="#">at-home monitoring</a> or 24-hour ABPM. Blood pressure measurements should be separated by at least 2 minutes with the patient seated and standing, verification in contralateral arm, heart and lung exam, abdominal exam for bruits or aortic aneurysm, extremity pulses and neurological assessment <b>[D]</b>.</p> <p>Laboratory tests: basic metabolic profile urinalysis.</p>
	Patient education and nonpharmacologic interventions	<p>Lifestyle modification is to be tried for the first 6 months: weight reduction (BMI goal &lt; 25), reduction of dietary sodium to less than 2.4 gm/day, DASH diet <b>[A]</b> (i.e., diet high in fruits and vegetables, reduced saturated and total fat), aerobic physical activity ≥ 30 minutes most days of the week, tobacco avoidance, increased dietary potassium and calcium, moderation of alcohol consumption<sup>1</sup> <b>[A]</b>.</p> <p>Encourage out of office BP measures using validated equipment and technique with communication of results, frequent checks for accuracy, and lifestyle and medication adjustments. Home readings are often 5 mm Hg lower than office.</p>
	Goals of Therapy	<p>Goal, based on office-based readings: &lt;130/80 mm Hg if at risk (ASCVD, CKD, diabetes) and ambulatory. &lt;130/80 mm Hg if no risk factors.</p> <p>Caution: low diastolic or orthostatic symptoms may limit ability to control systolic. Use caution if diastolic is below 60. For diabetics, mortality increases if diastolic is below 70.</p>
	Pharmacologic interventions	<p>Hypertension, <b>Stage 1</b> (130/80-139/89) and at lower 10-year CVD risk defined by PREVENT of &lt;7.5%: use non-pharmacologic interventions. Can consider medication if continues over 130/80 after 6 months of lifestyle modification. Goal is 130/80.</p> <p>Hypertension, <b>Stage 1</b> (130/80-139/89) and at lower 10-year CVD risk defined by PREVENT of &lt;7.5%: monotherapy treatment; start with thiazide-type diuretic, ACE-I, ARB, DHP-CCB<sup>2</sup> for almost all patients <b>[A]</b>. Goal is 130/80.</p> <p>Hypertension, <b>Stage 2</b> (≥140/90): consider two-drug combination (thiazide plus ACE-I or DHP-CCB) or even a three drug combination. Also there is a new three-drug single-pill combination approved for hypertension containing telmisartan, amlodipine, and indapamide (approved as a Widaplik).</p> <p>In general, diuretics and DHP-CCB appear to be more effective as an initial treatment in African-Americans. ACE-I or ARB recommended in patients with CKD or heart failure. <b>[A]</b></p> <p>Beta-blockers are recommended in patients with ischemic heart disease or heart failure but otherwise not first line therapy.</p> <p>Intensify treatment until treatment goals are met; 3 or more drugs may be necessary for some patients to achieve goal BP. Multi-drug regimen at moderate dose is preferable to maximum dose monotherapy. Add mineralocorticoid antagonist (e.g., spironolactone) for resistant hypertension.</p> <p>Do not use ACE-I and ARB concurrently.</p> <p>Caution: NSAIDs may complicate management of hypertension and worsen renal function.</p>
Monitoring and adjustment of therapy <b>[D]</b>	<p>Adjust treatment based on home blood pressure readings. Ensure technique is appropriate and home readings correlate with in-office blood pressure readings with optimal technique. Take blood pressure monthly if adjusting medications.</p> <p>Hypertension, <b>Stage 1</b>: if therapy initiated, adjust medications within 2 months, then monthly until within goal.</p> <p>Hypertension, <b>Stage 2</b>: initiate therapy and recheck weekly or more often if indicated.</p> <p>Persistent hypertension with evidence of acute end organ damage may require hospital monitoring and treatment. Recheck at each visit using optimal technique.</p> <p>Check serum potassium, eGFR and urine albumin/creatinine ratio at least annually.</p>	

<sup>1</sup>Moderate alcohol consumption is generally defined as up to two drinks per day for men, one drink per day for women.

<sup>2</sup>ACE-I = angiotensin converting enzyme inhibitor, ARB = angiotensin receptor blocker, DHP-CCB = long-acting dihydropyridine calcium channel blocker (e.g. amlodipine, felodipine)

**Levels of Evidence for the most significant recommendations:** A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline represents core management steps. It is based on 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. J Am Coll Cardiol 2018;71:e127-e248; and Kidney Disease: Improving Global Outcomes (KDIGO) Blood Pressure Work Group. KDIGO Clinical Practice Guideline for the Management of Blood Pressure in Chronic Kidney Disease. Kidney inter., Suppl. 2012; 2:337–414. Individual patient considerations and advances in medical science may supersede or modify these recommendations. [JACC Journals](#) > [JACC](#) > [Archives](#) > [Vol. 86 No. 18](#) Societal Statement 15 August 2025 2025 High Blood Pressure Guideline-at-a-Glance.

**Approved by MQIC Medical Directors August 2009, 2011, 2013, 2015, 2017, 2018, 2019; June 2021; January 2024; November 2025**

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