The blood pressure (BP) goal for an individual is set by utilizing a combination of factors including scientific evidence, clinical judgment, and patient tolerance. For most people, the goal is <140 and <90; however, lower targets may be appropriate for some populations such as African-Americans, the elderly, or patients with LV hypertrophy, systolic or diastolic LV dysfunction, diabetes mellitus or chronic kidney disease. Lifestyle modifications (LM) should be initiated in all patients with hypertension (HTN) and they should be assessed for target organ damage and existing cardiovascular disease. Self-monitoring is encouraged for most patients throughout their care, and requesting and reviewing readings from home and community settings can help the provider assist the patient in achieving and maintaining good control. For patients with hypertension in combination with certain clinical conditions, specific medications should be considered first-line treatments.

**Suggested Medications for Treatment of Hypertension in Presence of Certain Medical Conditions**

- Coronary artery disease/Post MI: BB, ACEI
- Systolic heart failure: ACEI or ARB, BB, ALDO ANTAG, thiazide
- Diastolic heart failure: ACEI or ARB, BB, thiazide
- Diabetes: ACEI or ARB, thiazide, BB, CCB
- Kidney disease: ACEI or ARB
- Stroke or TIA: thiazide, ACEI

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**Modification Recommendation**

**Approximate SBP Reduction (Range)**

<table>
<thead>
<tr>
<th>Modification</th>
<th>Recommendation</th>
<th>Approximate SBP Reduction (Range)**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reduce weight</strong></td>
<td>Maintain normal body weight (body mass index 18.5–24.9 kg/m²)</td>
<td>5–20 mm Hg/10 kg</td>
</tr>
<tr>
<td><strong>Adopt DASH*5 eating plan</strong></td>
<td>Consume a diet rich in fruits, vegetables, and low-fat dairy products with a reduced content of saturated and total fat</td>
<td>8–14 mm Hg</td>
</tr>
<tr>
<td><strong>Lower sodium intake6</strong></td>
<td>a. Consume no more than 2,400 mg of sodium/day; b. Further reduction of sodium intake to 1,500 mg/day is desirable, since it is associated with even greater reduction in BP; and c. Reduce sodium intake by at least 1,000 mg/day since that will lower BP, even if the desired daily sodium intake is not achieved</td>
<td>2–8 mm Hg</td>
</tr>
<tr>
<td><strong>Physical activity</strong></td>
<td>Engage in regular aerobic physical activity such as brisk walking (at least 30 min per day, most days of the week)</td>
<td>4–9 mm Hg</td>
</tr>
<tr>
<td><strong>Moderation of alcohol consumption</strong></td>
<td>Limit consumption to no more than 2 drinks (e.g., 24 oz beer, 10 oz wine, or 3 oz 80-proof whiskey) per day in most men, and to no more than 1 drink per day in women and lighter weight persons</td>
<td>2–4 mm Hg</td>
</tr>
</tbody>
</table>

* DASH, dietary approaches to stop hypertension
** The effects of implementing these modifications are dose and time dependent, and could be greater for some individuals

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**Systolic 140–159 or diastolic 90–99 (Stage 1 hypertension)**

- Lifestyle modifications
- Consider adding thiazide
- Recheck and review readings in 3 months*1

**Systolic >160 or diastolic >100 (Stage 2 hypertension)**

- Two drugs preferred:
  - Lifestyle modifications and
  - Thiazide and ACEI, ARB, or CCB
  - Or consider ACEI and CCB

- Recheck and review readings in 2–4 weeks*2

**BP at Goal?**

- **NO**
  - Consider adding thiazide
  - If currently on BP med(s), titrate and/or add drug from different class
  - Recheck and review readings in 2–4 weeks*2

- **YES**
  - Thiazide for most patients or ACEI, ARB, CCB, or combo
  - Encourage self-monitoring and adherence to meds
  - Advise patient to alert office if he/she notes BP elevation or side effects
  - Continue office visits as clinically appropriate
  - Recheck and review readings in 2–4 weeks*2

**BP at Goal?**

- **NO**
  - Optimize dosage(s) or add medications
  - Address adherence, advise on self-monitoring, and request readings from home and other settings
  - Consider secondary causes
  - Recheck and review readings in 2–4 weeks*2

- **YES**
  - Encourage self-monitoring and adherence to meds
  - Advise patient to alert office if he/she notes BP elevation or side effects
  - Continue office visits as clinically appropriate

**Recheck interval should be based on patient’s risk of adverse outcomes.**

This algorithm should not be used to counter the treating healthcare provider’s best clinical judgment.

**Abbreviations:**

ACEI, angiotensin-converting-enzyme inhibitor; ALDO ANTAG, aldosterone antagonist; ARB, angiotensin II receptor blocker; BB, β-blocker; BP, blood pressure; CCB, calcium channel blocker; HTN, hypertension; MI, myocardial infarction; SBP, systolic blood pressure; TIA, transient ischemic attack

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