

Hypertension Management Protocol

Calcium Channel Blocker at First-line Treatment

Screen all adults

Step 1

If BP ≥ 140 or ≥ 90 ¹

Start amlodipine 5 mg²

Step 2

Review after 4 weeks. If still ≥ 140 or ≥ 90

Increase to amlodipine 10 mg²

Step 3

Review after 4 weeks. If still ≥ 140 or ≥ 90

Add telmisartan 40mg³

Step 4

Review after 4 weeks. If still ≥ 140 or ≥ 90

Increase to telmisartan 80mg³

Step 5

Review after 4 weeks. If still ≥ 140 or ≥ 90

Add chlorthalidone 12.5 mg^{3,4}

Step 6

Review after 4 weeks. If still ≥ 140 or ≥ 90

Increase to chlorthalidone 25 mg^{3,5}

Step 7

Review after 4 weeks. If still ≥ 140 or ≥ 90

Check that patient has been taking drugs regularly and correctly. If this is the case, refer patient to a specialist.

Provision for Specific Patients

- Manage diabetes as indicated by national protocol
- Aim for BP target of $<130/80$ for people with diabetes or otherwise at high risk
- Start statin and aspirin in people with prior heart attack or ischemic stroke
- Start beta blocker in people with heart attack in past 3 years
- Consider statin in people at high risk

Advice for lifestyle modification for all patients



Stop all tobacco use, avoid second-hand tobacco smoke, and avoid unhealthy alcohol intake.



Increase physical activity to equivalent of brisk walk 150 minutes per week. If overweight, lose weight.



Eat a heart-healthy diet:

- Eat less than 1 teaspoon of salt per day
- Eat ≥ 5 servings of vegetables/fruit per day
- Use healthy oils
- Eat nuts, legumes, whole grains and foods rich in potassium
- Limit red meat to once or twice a week at most
- Eat fish or other food rich in omega 3 fatty acids at least twice a week
- Avoid added sugar

- ¹ If $\geq 160/100$, start same day and consider initiating 10 mg of amlodipine daily. If SBP 140–159 or DBP 90–99, check on a different day and if still elevated, start.
- ² Smaller, fragile patients should be started on 2.5 mg per day. Alternatively, amlodipine can be replaced with a thiazide diuretic (e.g., chlorthalidone 12.5, indapamide 1.25 mg, or indapamide SR 1.5 mg; if neither chlorthalidone nor indapamide is available, hydrochlorothiazide 25 mg) or a once-daily Angiotensin receptor blocker (ARB) (e.g., telmisartan 40 mg or losartan 50 mg) or once daily Angiotensin converting enzyme inhibitor (ACE-I) (e.g., lisinopril 20 mg, ramipril 5 mg, perindopril 4 mg). **ACE-I and ARB should NOT be given to women who are or who may become pregnant.** Before initiating and several weeks after starting a thiazide diuretic, ACE-I, or ARB, check serum creatinine and potassium if possible.
- ³ If systolic BP repeatedly <110 , consider going to prior, less intensive regimen.
- ⁴ Indapamide can be used if chlorthalidone is not available (1.25 mg starting dose, 2.5 mg intensification; for indapamide SR 1.5 mg, do not increase dose at Step 7). Hydrochlorothiazide can be used if neither of the other diuretic agents is available (25 mg starting dose, 50 mg intensification).
- ⁵ Hypokalemia is more common using full-dose diuretic – consider regular lab monitoring. If a diuretic is used instead of amlodipine in the initial treatment, this consideration would apply earlier in the protocol.