Punjab Hypertension Protocol

Measure blood pressure of all adults over 18 years

High BP: SBP ≥ 140 or DBP ≥ 90 mmHg

**Step 1**

If BP is high:

**Prescribe Amlodipine 5mg**

**Step 2**

After 30 days measure BP again. If still high:

**Increase to Amlodipine 10mg**

**Step 3**

After 30 days measure BP again. If still high:

**Add Telmisartan 40mg**

**Step 4**

After 30 days measure BP again. If still high:

**Increase to Telmisartan 80mg**

**Step 5**

After 30 days measure BP again. If still high:

**Add Chlorthalidone 12.5mg**

**Step 6**

After 30 days measure BP again. If still high:

**Increase to Chlorthalidone 25mg**

Check if the patient has been taking medications regularly and correctly. If yes, refer to a specialist.

**Pregnant women and women who may become pregnant**

- DO NOT give Telmisartan or Chlorthalidone.
- Statins, ACE inhibitors, angiotensin receptor blockers (ARBs), and thiazide/thiazide-like diuretics should not be given to pregnant women or to women of childbearing age not on effective contraception.
- Calcium channel blocker (CCB) can be used. If not controlled with intensification dose, refer to a specialist.

**Diabetic patients**

- Treat diabetes according to protocol.
- Aim for a BP target of < 140/90 mmHg.

**Heart attack in last 3 years**

- Add beta blocker to Amlodipine with initial treatment.

**Heart attack or stroke, ever**

- Begin low-dose aspirin (75mg) and statin.

**People with high CVD risk**

- Consider aspirin and statin.

**Chronic kidney disease**

- ACEI or ARB preferred if close clinical and biochemical monitoring is possible.

**Lifestyle advice for all patients**

- Avoid tobacco and alcohol
- Exercise 2.5 hours/week
- Reduce weight, if overweight
- Reduce salt, under 1 tsp/day
- Eat less fried foods
- Eat 5 servings of fruits and vegetables per day.
- Avoid papads, chips, chutneys, dips, and pickles.
- Use healthy oils like sunflower, mustard, or groundnut.
- Limit consumption of foods containing high amounts of saturated fats.
- Reduce fat intake by changing how you cook:
  - Remove the fatty part of meat
  - Use vegetable oil
  - Boil, steam, or bake instead of fry
  - Limit reuse of oil for frying
- Avoid processed foods containing trans fats.
- Avoid added sugar.

* If SBP ≥ 180 or DBP ≥ 110, refer patient to a specialist after starting treatment.
If SBP 160-179 or DBP 100-109, start treatment on the same day.
If SBP 140-159 or DBP 90-99, check on a different day and if still elevated, start treatment.

# Dose of antihypertension medications can be titrated at 15 days frequency if required.

**Hydrochlorothiazide can be used if Chlorthalidone is not available (25 mg starting dose, 50 mg intensification dose).**

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