

Hypertension Protocol



Measure blood pressure of **all adults** over 30 years

High BP: **SBP ≥ 140** or **DBP ≥ 90** mmHg

Check for compliance at each visit before titration of dose or addition of drugs

- Step 1** If BP is high: ^{*}
Prescribe Amlodipine 5mg
 - Step 2** After 30 days [#] measure BP again. If still high:
Continue Amlodipine 5mg and add Telmisartan 40mg
 - Step 3** After 30 days [#] measure BP again. If still high:
Continue Amlodipine 5mg and increase Telmisartan to 80mg
 - Step 4** After 30 days [#] measure BP again. If still high:
Increase Amlodipine to 10mg ^{} and continue Telmisartan 80mg**
 - Step 5** After 30 days [#] measure BP again. If still high:
Continue Amlodipine 10mg, Telmisartan 80mg and add Hydrochlorothiazide 25mg ^{*} (in the morning)**
 - Step 6** After 30 days [#] measure BP again. If still high:
Continue Amlodipine 10mg, Telmisartan 80mg and increase Hydrochlorothiazide to 50mg (in the morning)
- ⋮
- After 30 days [#] measure BP again. If still high:
 Check if the patient has been taking medications regularly and correctly. If yes, refer to a specialist.

Pregnant women and women who may be pregnant (missed periods)

- ▲ 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.
- Amlodipine 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

- Prescribe Metoprolol/Atenolol (25/50mg) and Amlodipine with initial treatment and refer to specialist.

Heart attack or stroke, ever

- Prescribe Aspirin (75mg) and Statin (10/20mg) and refer to specialist.

Chronic kidney disease

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

Investigation

- Before initiating and several weeks after starting Telmisartan consider checking Serum Creatinine and Potassium.

* If SBP ≥ 180 or DBP ≥ 110, refer patient to a specialist after starting treatment (Amlodipine 5mg OD).
 If SBP 160-179 or DBP 100-109, start treatment on the same day.
 If SBP 140-159 or DBP 90-99, check for 2nd reading after 3 working days and if still elevated, start treatment.

At every step before increasing the dose patient compliance needs to be verified. Dose of anti hypertension medication can be titrated at 15 days frequency if required.

** Amlodipine may cause ankle oedema in some patients. Reassure patient. Leg elevation or compression stockings may help in mild cases. Addition of Telmisartan can reduce oedema. If oedema persists: reduce Amlodipine dose/discontinue it.

*** Chlorthalidone 12.5mg can be used if Hydrochlorothiazide 25mg is not available.

Lifestyle advice for all patients



Avoid tobacco and alcohol Exercise 30 min/day 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, pickles etc
- Use healthy oils like sunflower, mustard, groundnut, etc
- Limit consumption of foods containing high amounts of saturated fats (cheese, ice-cream, fatty meat).
- 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.