

# Hypertension Management Protocol

01  
STEP

SCREEN all adults  $\geq 18$  years with Digital BP apparatus

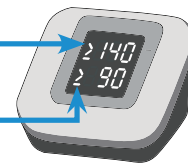


1  
WEEK

Diagnosis of hypertension **should be confirmed at an additional patient visit**, usually within 1 week (**preferably next day**) after the first measurement  
**systolic blood pressure on BOTH DAYS is  $\geq 140$  mmHg and/or diastolic blood pressure on BOTH DAYS is  $\geq 90$  mmHg**

Systolic  
(upper number)

Diastolic  
(lower number)



02  
STEP

Measure the CVD score (non-lab based)



If CVD score  $\geq 20\%$ , add STATIN in addition to below management

If CVD score  $< 20\%$ , initiate management and provide healthy lifestyle counseling

After one month, Measure BP again

03  
STEP

IF  $\geq 140$  mmHg and/or  $\geq 90$  mmHg  
Prescribe ENALAPRIL 5mg

1  
MONTH

After one month, Measure BP again

04  
STEP

IF  $\geq 140$  mmHg and/or  $\geq 90$  mmHg  
Increase ENALAPRIL to 10mg

1  
MONTH

After one month, Measure BP again

05  
STEP

IF  $\geq 140$  mmHg and/or  $\geq 90$  mmHg  
Add AMLODIPINE 5 mg

1  
MONTH

After one month, Measure BP again

06  
STEP

IF  $\geq 140$  mmHg and/or  $\geq 90$  mmHg  
Increase AMLODIPINE to 10 mg

1  
MONTH

After one month, Measure BP again

07  
STEP

IF  $\geq 140$  mmHg and/or  $\geq 90$  mmHg  
CHECK that patient is taking drugs regularly and correctly  
if the case, REFER patient to Referral Hospital/ National Hospital



**THIS PROTOCOL IS CONTRAINDICATED FOR WOMEN who are PREGNANT OR could become PREGNANT.**



Manage diabetes with hypertension as indicated by national standard management guideline. If patient is below 30 years, initiate management, and arrange for specialist consultation to rule out secondary hypertension



**TARGET BP:  $< 140$  mmHg and/or  $< 90$  mmHg**

**Aim for BP:  $< 130/80$  for people at high risk, such as individuals with diabetes, CAD, stroke, or CKD**



- Check for **Drug compliance** at each visit
- Dispense drugs for 30 days** and **give appointment after 4 weeks**
- Advise patient to come to health facility 3 days prior to due date for drugs**
- Medications should be taken **at the same time each day**

4  
WEEKS



**Signs and symptoms of Hypotension:**

SBP  $< 90$  mmHg and DBP  $< 60$  mmHg  
dizziness, fainting, trouble in concentration and blurred vision

**If SBP  $\geq 160$  mmHg or DBP  $\geq 100$  mmHg, start treatment on the same day.** Advised weekly follow up until their SBP  $< 160$  and DBP  $< 100$

**If SBP  $\geq 180$  mmHg or DBP  $\geq 110$  mmHg, administer Enalapril 10 mg and refer to National Hospital.**



**CVD Risk Score**

$\geq 20\%$ , add STATIN (Simvastatin 20mg), STATIN is contraindicated in women who is pregnant or may become pregnant



**HEART ATTACK or STROKE, ever**

Add low dose Aspirin (75 mg) and STATIN (Simvastatin 20 mg)



**HEART ATTACK in previous three years**

Add Beta blocker



**Recommended investigations at initiation of therapy**

Haemoglobin, blood sugar, lipid profile, urine analysis for proteinuria, serum creatinine

## Lifestyle advice for all patients



**Avoid tobacco and alcohol**



**Exercise 60 mins every day**



**Reduce weight, if overweight**



**Reduce salt, under 1 tsp/day**



**Eat less fried foods**

### Advantages of ACB (Enalapril)

- Benefits some patients with kidney disease, prior myocardial infarction, and low ejection fraction

### Disadvantage of ACB (Enalapril)

- A persistent cough is experienced by up to 10% of patients treated
- Small risk of angioedema
- Risk of hyperkalemia, especially if patient has Chronic Kidney Disease

### Advantages of CCB (Amlodipine)

- Reduces need for monitoring of electrolytes and renal function;
- Avoids need for different treatment for women of childbearing age who may become pregnant

### Disadvantage of CCB (Amlodipine)

- Ankle edema may occur in up to 10% of patients, particularly with intensification dose in the absence of an ACE inhibitor

- Eat 5 servings of fruits and vegetables per day
- Limit consumption of foods containing high amounts of saturated fats.
- Reduce weight if overweight.
- 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.