

# HYPERTENSION TREATMENT PROTOCOL

## STEP 1

Measure blood pressure (BP) for all adults and in all consultations by trained personnel, following the recommended protocol and using validated manometers.

## STEP 2

**If BP is  $\geq 160 / 100$  mmHg, start treatment immediately.**  
If BP is  $140 / 90$ - $159 / 99$  mmHg,

## STEP 3

After 4 weeks

**If persists  $\geq 140/90$**

## STEP 4

After 4 weeks

**If persists  $\geq 140/90$**

## STEP 5

After 4 weeks

**If persists  $\geq 140/90$**

## STEP 6

After 4 weeks

**If persists  $\geq 140/90$**   
**CONFIRM** that the patient has been taking the medications regularly and correctly. If so, refer the patient to a specialist.

### HEALTHY LIFESTYLE COUNSELING FOR ALL PATIENTS



Stop all tobacco use, avoid secondhand tobacco smoke.



Avoid alcohol consumption.



Increase physical activity to equivalent of brisk walk 150 minutes per week.



Goal: BMI  $20$ - $25$  kg/m<sup>2</sup>



Eat heart-healthy diet:

- Consume less than a teaspoon of salt a day ( $<5$ g per day);
- Eat  $\geq 5$  servings of vegetables / fruits 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 foods rich in omega 3 fatty acids at least twice a week;
- Avoid added sugars.

### PRECAUTIONS

#### Ace inhibitors and ARBs

- ACE inhibitors (and ARBs) should not be given to women who pregnant or may become pregnant.
- They carry a small risk of angioedema; the risk is greater in people of African descent (not observed with ARBs).
- Risk of hyperkalemia, particularly if the patient has a chronic kidney disease.

#### Calcium channel blockers:

the use of calcium channel blockers can cause malleolar edema in up to 10% of patients, especially at high doses, if an ACE inhibitor or an ARB is not being used.

#### Diuretics:

can produce hypokalemia and can have adverse effects on lipid and glucose values.

### SECONDARY PREVENTION

#### Cardiovascular risk

- Estimate the cardiovascular risk in all patients with hypertension.
- Patients with diabetes, coronary heart disease, stroke or chronic kidney disease are considered high cardiovascular risk.

#### Control goal

- The goal of BP is  $<130/80$  mmHg in people with high cardiovascular risk, in patients with diabetes, coronary heart disease, stroke or chronic kidney disease.
- In patients with Type 2 Diabetes: BP  $<130/80$  mmHg, HgA1c  $<7\%$ , LDL  $<100$  mg / dl.

#### Treatment

- Add statins in all patients of high cardiovascular risk regardless of their cholesterol or LDL levels.
- Add statins in patients  $\geq 40$  years with moderate cardiovascular risk, with total cholesterol  $\geq 5$  mmol / L ( $190$  mg / dl) or with LDL cholesterol  $\geq 3$  mmol / L ( $115$  mg / dl).
- Add statins in patients  $\geq 40$  years with low cardiovascular risk, with total cholesterol  $\geq 8$  mmol / L ( $320$  mg / dl).
- Consider adding statins in those with moderate cardiovascular risk.
- Aspirin: Add aspirin to all patients with high cardiovascular risk unless they have specific contraindications.