

Case 1 – 5min

45-year-old man and a single blood pressure reading of 145/90 in clinic.

What are the next steps to determine if this patient has hypertension?

Assuming hypertension is confirmed, what additional work-up is needed to further evaluate the cause and associated?

What are the appropriate first-line agents & doses?

What lab surveillance, follow-up and titration would you recommend?

Case 2 – 5min



55-year-old African-American woman returns to clinic for BP follow-up. Three months ago, she was diagnosed with hypertension with an average home reading of 155/95. She was started on amlodipine 10mg and has since had an average pressure of 145/90, BMI 29. She has no known heart or kidney disease and a normal A1c and lipid panel. She is a never smoker.

What is the next best step in her management?

- a) Obtain a renin & aldosterone levels
- b) Increase amlodipine to 10mg BID
- c) Start lisinopril 10mg po daily
- d) Start hydralazine 10mg po TID
- e) Start atorvastatin 40mg po daily

Case 3 – 5min

A 60-year-old woman presents for routine follow-up. She has a history of obesity and pre-diabetes, consumes 1-2 alcoholic drinks a night, and does NOT smoke. In the office, her blood pressure is 150/90 for the second consecutive visit. She tells you she prefers to avoid medications, and wonders if she can get her blood pressure under control with lifestyle measures alone.

What are the evidence-based lifestyle modifications to reduce blood pressure and what changes would you recommend to lower BP?

Case 4 – 5min



A 60-year-old man with a history of gout and peripheral arterial disease comes in with a BP 160/95. At his last few visits, his BP has been in a similar range. He does not check his BP at home.

What is your goal BP for this patient?

What medications would you start?

If this patient told you that his BPs were normal at home (“white coat hypertension”) would his condition still confer additional cardiovascular risk? Would you start a med?

1. Benefits of treatment

Example: 50-year-old woman who smokes tobacco, otherwise healthy with sustained BP >150/90

→ If treated to BP <140/85

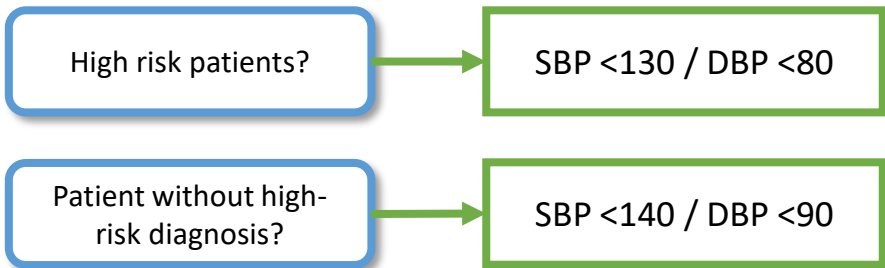
CV Events Over 10 years
Absolute risk reduction = 10%
NNT = 10

Mortality Over 10 years
Absolute risk reduction = 6%
NNT = 16

2. Goal blood pressure for everyone is:

SBP <120 / DBP <80

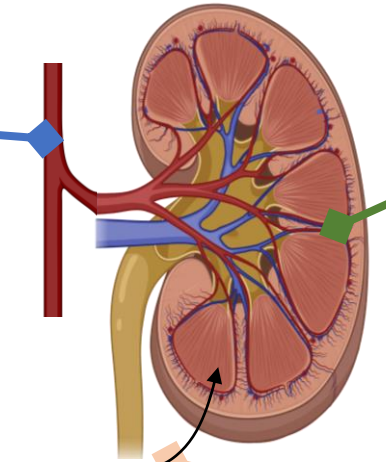
...but, **pharmacologic treatment targets** less aggressive:



Calcium Channel Blocker (CCB)

Example	Amlodipine 5-10mg PO daily
Best Candidate	Most patients. Well tolerated. Good option for late CKD.
Side Effects and Monitoring	Avoid in HFrEF, amlodipine may be used if necessary. Dose dependent pedal edema.

3. Four First Line Agents



Thiazide

Example	Chlorthalidone (preferred) 12.5-25mg PO daily
Best Candidate	Age <65 with venous insufficiency
Side Effects and Monitoring	Obtain BMP 2 weeks after initiation. Monitor for low Na & low K. Increased risk of gout. Not effective with GFR <30

Example	Lisinopril 5-40mg PO daily
Best Candidate	Most patients. Well tolerated. Indications for CVD and proteinuria.
Side Effects and Monitoring	Obtain BMP 1-2 weeks after initiation to monitor K and Cr. Acceptable GFR reduction of ≤ 30%. Risk of angioedema.

ACE Inhibitor

Angiotensin Receptor Blocker (ARB)

Example	Losartan 25-100mg po daily
Best Candidate	Did not tolerate ACE-I
Side Effects and Monitoring	Same as ACE-I, less risk of cough and angioedema

4. When to Suspect Secondary Cause

1. Severe or resistant hypertension
2. Acute rise or increased lability in blood pressure.
3. Before puberty OR less than 30 years without obesity or family history
4. Associated electrolyte abnormalities

Common Differential

