Important aspects of the history in the patient with hypertension

Duration of hypertension
Last known normal blood pressure
Course of the blood pressure
Prior treatment of hypertension
Drugs: types, doses, side effects
Intake of agents that may cause hypertension
Nonsteroidal antiinflammatory drugs
Estrogens
Adrenal steroids
Cocaine
Sympathomimetics
Excessive sodium
Family history
Hypertension
Premature cardiovascular disease or death
Familial diseases: pheochromocytoma, renal disease, diabetes, gout
Symptoms of secondary causes
Muscle weakness
Spells of tachycardia, sweating, tremor
Thinning of the skin
Flank pain
Symptoms of target-organ damage
Headaches
Transient weakness or blindness
Loss of visual acuity
Chest pain
Dyspnea
Claudication

Presence of other risk factors
Smoking
Diabetes
Dyslipidemia
Physical inactivity
Dietary history
Sodium
Processed foods
Alcohol
Saturated fats
Psychosocial factors
Family structure
Work status
Educational level
Sexual function
Features of sleep apnea
Early morning headaches
Daytime somnolence
Loud snoring
Erratic sleep

Important aspects of the physical examination in the hypertensive patient

Accurate measurement of blood pressure
General appearance
Distribution of body fat
Skin lesions
Muscle strength
Alertness
Fundoscopy
Hemorrhage
Papilledema
Cotton wool spots
Arteriolar narrowing and arteriovenous nicking
Neck
Palpation and auscultation of carotids
Thyroid
Heart
Size
Rhythm
Sounds
Lungs
Rhonchi
Rales
Abdomen
Renal masses
Bruits over aorta or renal arteries
Femoral pulses
Extremities
Peripheral pulses
Edema
Neurologic assessment
Visual disturbance
Focal weakness
Confusion

Diagnosing

- All adults 18 years and older without known HTN should be screened for elevated BP (USPSTF et al., 2021).
- To diagnose HTN the provider should use an average of two or more readings obtained on two or more occasions Out of office BP measurements (ambulatory or home BP monitoring) are recommended to confirm the diagnosis of HTN before starting treatment
  - (USPSTF et al., 2021).

JNC8, ACC/AHA guidelines…. OMG! Confusion confusion

Updates in 2023 after years of resistance, primary care is slowly abandoning JNC8 guidelines and adopting the ACC/AHA 2017 guidelines

American Academy of Nurse practitioners 2017 ACC/AHA and JNC-8 hypertension guidelines

FYI: September 2018 - The American College of Cardiology (ACC) / American Heart Association (AHA) hypertension guideline published in November 2017 introduced new blood-pressure categories lowering the threshold for the diagnosis of hypertension. Items on each of the AANPCB certification examinations are reviewed each year by clinical experts for relevancy to current and best practice. The 2018 certification examinations use the 2017 ACC/AHA and JNC-8 guidelines to reference test items. While treatment targets may differ among various guidelines, it is important to keep evaluation of the individual's health as the central concern.

Diagnosis of HTN according to JNC8 Followed by AAFP and

- A diagnosis of HTN should be made under the following circumstances:
- Age <60 years: SBP ≥140 mm Hg and/or DBP ≥90 mm Hg at ≥2 visits
- Age 60 years or older: SBP ≥150 mm Hg and/or DBP ≥90 mm Hg at ≥2 visits
- Age 60 years or older with CKD or diabetes: SBP ≥140 mm Hg and/or DBP ≥90 mm Hg at ≥2 visits
- Pre-hypertension
  - SBP ≥120 mm Hg and/or DBP ≥80 mm Hg at ≥2 visits

blood pressure classification acc/aha: 2017

Blood Pressure Categories

American Heart Association | American Stroke Association

BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120 – 129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130 – 139	or	80 – 89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

Diagnostics: Hypertension

Initial Tests (lab, imaging)

•Hemoglobin or hematocrit or CBC
•Complete urinalysis (may reveal proteinuria, check kidney function)
•CMP (Potassium, calcium, creatinine), and uric acid
•TSH
•Lipid panel (total, HDL, LDL, triglyceride [TG])
•Fasting blood glucose or hemoglobin A1c
•Urinalysis (to evaluate albumin/creatinine ration)
•EKG to evaluate possible presence of left ventricular hypertrophy (LVH) or rhythm abnormalities,

Follow-Up Tests & Special Considerations

consider echocardiogram stress test if initial diagnostic test are abnormal.
Special tests only if suggested by history, physical, or labs. In particular, consider possibility of sleep apnea.
Ambulatory (24-hour) BP monitoring if “white coat” HTN is suspected, episodic HTN, or autonomic dysfunction
Home BP monitoring is effective, especially when white coat HTN is a consideration; elevated home BPs correlate with adverse outcomes, possibly more so than office BPs, and normal readings are reassuring.

Treatment: Shared decision-making

- Individual treatment goals should be jointly established with patients after discussion of the anticipated potential benefits and harm
- Educate on adverse effects of antihypertensive.
  - All antihypertensives associated with postural hypotension.
- Educate importance of compliance with medications.
  - Uncontrolled hypertension leads to end organ damage (e.g., stroke, heart failure, myocardial infarction, renal insufficiency, retinopathy)
- Stress the importance of blood pressure measurement techniques.
- Non-pharmacological: Recommend lifestyle improvements, including diet, exercise, and reducing or eliminating tobacco/alcohol. (see next slide)

HTN Management plan

- Behavioral modifications:
  - Diet modification: DASH diet with low sodium intake
  - Limit alcohol
  - Stop smoking
  - Routine exercise (30 minutes 5 times a week)
  - Engage in stress reduction activities
  - Discontinue unnecessary medications that can raise b/p