

**Quiz 1 hypertension answers**

The correct answers to questions are indicated by “*”.

All students were awarded 2 points for question #3 due answer “b” being misleading. The answer should have read “b. calcium channel blocker.” which would make “e” the correct answer.

Quiz 1 score stats
9.1±1.8 , mean±sd
10.0, median
0.0-10.0, range
n=163 (TC: 109, Duluth: 54)
HTN question #1 (2 points)

DG is a 55-year-old male with a sitting office blood pressure reading of 139/70 mmHg and 136/72 mmHg 10 minutes after the first reading. His medical history is unremarkable. The physician asked DG to return in 2 weeks for repeat blood pressure measurements. The repeat sitting blood pressures are 138/68 mmHg and 134/71 mmHg. Which of the following classifies DG’s blood pressure per JNC 7?

a. Isolated systolic hypertension.

b. Stage 1 hypertension.

*c. Prehypertension.

d. Optimal blood pressure.

e. Stage 2 hypertension.
HTN question #2 (2 points)

What is/are a major criticism(s) with the ALLHAT and VALUE trials that confound the interpretation of results related to the primary cardiovascular outcome? Select one best answer based your understanding of the ALLHAT and VALUE trials.

* a. Both studies failed to achieve the same blood pressure between each treatment group.

b. Study designs for ALLHAT and VALUE were not randomizing patients to their initial respective treatment groups.

c. The primary authors of both studies had major conflicts of interest with the major pharmaceutical companies supporting the studies.

d. Both studies were not adequately powered to detect a statistical difference between the treatment groups for the primary cardiovascular outcome.

e. Both b and d.
HTN question # 3 (2 points)

PP is a 60-year-old woman with average blood pressure reading today of 150/91 mmHg. She has no associated target organ damage or co-morbid conditions. Hypertension is confirmed with several office blood pressure readings over the last 3 months. She has initiated lifestyle modifications of weight reduction and dietary sodium restriction within the past 2 months. Her current BMI is 31 kg/m2. She is not taking any anti-hypertensive medications and has no known drug allergies. Which of the following is appropriate intervention at this time?

a. Continue lifestyle modifications.

b. calcium channel blocker diuretic.

c. Angiotensin-converting enzyme (ACE) Inhibitor.

d. Beta-blocker.

*e. a and either b, or c, or d are appropriate choices according to JNC 7.*
HTN question #4

A 57 year old male is in the clinic for an annual physical. His sitting blood pressures were 154/98 and 149/97 mmHg measured 10 minutes apart. The blood pressure readings from the last annual visit (1 year ago) were noted to be 141/89 and 139/90. His medical history lists asthma for the past 7 years and hypertension for the past 10 years. His current BMI is 25 kg/m². He takes aspirin 81mg po daily, HCTZ 25 mg po daily for hypertension, albuterol inhaler 1 puff every four hours as need for asthma, fluticasone 220 mcg 1 puff twice daily for asthma. The chart indicates he has no known drug allergies. Based on your knowledge of JNC 7, which of the following is the most appropriate and safest recommendation at this time assuming the patient is compliant with current therapy?

a. Increase HCTZ to 50 mg po daily.

* b. Add lisinopril 10 mg po daily.

c. Add doxazosin 1 mg po daily.

d. Increase HCTZ to 50 mg po daily and start metoprolol 25 mg po twice daily.

e. Continue current therapy and recheck blood pressure 6 months latter.
HTN question #5

Click here for ASCOT-BPLA figure associated with HTN question number 5.

The ASCOT-BPLA (Anglo-Scandinavian Cardiac Outcomes Trial-Blood Pressure Lowering Arm) is a multi-centre, prospective, randomized controlled trial with 19,257 patients with hypertension who were aged 40-79 years and had at least three other cardiovascular risk factors. The primary outcome compared the effect of combinations of atenolol 50-100 mg with a bendroflumethiazide 1.25-25 mg (thiazide) versus amlodipine 5-10 mg with perindopril on non-fatal myocardial infarction (MI) and fatal coronary heart disease (CHD). After 5.5 years, the primary, secondary and tertiary study endpoints with unadjusted Hazard Ratios (HR) and p-values are listed in the attached figure. Your clinical interpretation of this information can best be summarized by which of the following statements.

a. The study confirmed that the combination of atenolol with bendroflumethiazide statistically scientifically increases non-fatal myocardial infarction (MI) and fatal coronary heart disease (CHD) (primary endpoint).

b. There is a 90% relative risk reduction of the primary endpoint when using amlodipine and perindopril.

c. Overall, the primary, secondary and tertiary endpoint hazard ratios indicate that the combination of atenolol and bendroflumethiazide should not be used in clinical practice.

* d. There was a statistically significant reduction in total cardiovascular events and procedures as well as all-cause mortality with the combination of amlodipine and perindopril.

e. Both a and b.