Over the years, the AMA has run dozens of example questions from Kaplan Medical. If you're preparing for the United States Medical Licensing Examination® (USMLE®) Step?1 exam, you might want to know which questions are most often missed by test-prep takers.

We’ve compiled four cases from Kaplan Medical involving cardiovascular concerns. Each question comes with an expert explanation of the answer. To see more stumpers for the Step 1 exam, you can check out all posts in this series.

Think you can answer these stumpers? Find out now.

1. **Identifying cardiovascular status**
   A previously healthy 64-year-old woman is brought to the emergency department because of substernal chest pain, nausea, diaphoresis, and fatigue. Her temperature is 37.1 °C (98.8 °F), pulse is 96 beats per minute, respirations are 18 a minute, and blood pressure is 138/92 mm Hg. A cardiac examination reveals an S₄ gallop but is otherwise unremarkable. Her lungs are clear. Her ECG shows a ST-segment elevation in the inferior chest leads (leads II, III and aVF). Can you evaluate a figure to determine this patient’s cardiovascular status?

2. **Woman has history of chest pain on exertion**
   A 57-year-old woman is admitted to the hospital because of a two-day history of chest pain on exertion. This occurred while doing housework, which consisted of vacuuming and waxing her hardwood floors. She has a history of hypertension, angina, and diabetes.
Cardiac examination shows $S_1$ and $S_2$ heart sounds but are somewhat faint. There are no murmurs or gallops. ECG and cardiac enzymes show no abnormalities. Cardiac catheterization shows areas of coronary artery narrowing, between 50% and 70%. CT angiography shows an 80% stenosis of the right renal artery. What increased in this patient?

3. A nutrient is elevating blood pressure
A 38-year-old woman comes to the physician for a routine health maintenance examination. She has two children and no significant medical history. She has had no major changes in her health over the past year, but she has started a new role in her career as a lawyer and has been much busier than in the past. She describes frustration with the lack of time to exercise and prepare healthy meals, and she has been eating fast food more often than she would like. She has, additionally, started drinking multiple sodas during the day to keep up with her workload. Excess consumption of what nutrient is most likely directly contributing to her elevated blood pressure?

4. Man is dizzy when waking up
A healthy 62-year-old man comes to the physician because of dizziness, especially after getting up from bed in the morning. He is a nonsmoker with a five-year history of mild hypertension. His treatment regimen is hydrochlorothiazide and a salt-restricted diet. On physical examination, his mucous membranes are dry, and his skin shows slightly decreased turgor. What cardiovascular change is most likely to occur as he stands up from a supine position?

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