These questions are included in the slide presentations as pre-lecture items to assess pre-lecture knowledge. You may use them as audience response questions or as test items. They are included as a separate module document for your ease of review.

Lecture Topic: Clinical Implications of the Aging Process

1. An 82 year old female presents with increasing shortness of breath and fatigue for the last few days. She has a history of hypertension, diabetes mellitus type 2, and osteoarthritis of the knees. Her medications include glyburide 5 mg daily, hydrochlorothiazide 25 mg daily, lisinopril 10 mg daily, and Ibuprofen 200 mg once daily as needed. BP is 110/70, resp. 20/minute, pulse is irregular. Lungs reveal bibasilar crackles and there is trace pedal edema. PaO₂ on room air is 65. EKG reveals

![EKG Image]

Which age-related physiologic change makes her more vulnerable to develop symptoms of CHF?

A. Decline in renal function
B. Hypoxia
C. Increase in atrial natriuretic peptide (ANP) levels
D. Increase in BP
E. Tachycardia and loss of atrial kick

Answer: E

2. An 80 year old white male complains of mild shortness of breath on exertion. He denies any chest pain, wheezing, or cough. There is no history of hypertension or CAD. He denies history of smoking. On examination, his lungs are clear with no crackles or wheezing. X-ray of the chest and electrocardiogram reveal normal findings. Which of the following describes expected age-related changes in pulmonary function?

A. Decreased total lung capacity, decreased FEV₁, decreased residual volume
B. Increased total lung capacity, decreased FEV₁ and decreased residual volume
C. Increased total lung capacity, decreased FEV₁ and increased residual volume
D. Stable total lung capacity, decreased vital capacity, decreased residual volume
E. Stable total lung capacity, decreased vital capacity, increased residual volume

Answer: E

3. Which aspect of renal function is relatively maintained with aging?

A. Ability to excrete acid load
B. Concentrating capacity
C. Diluting capacity
D. Erythropoietin production
E. Metabolism of parathyroid hormone

Answer: D