

STEP 2

General practice

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	<p>A 76-year-old male presents to the emergency room. He had influenza and now presents with diffuse muscle pain and weakness. His past medical history is remarkable for osteoarthritis, for which he takes ibuprofen. Physical examination reveals a blood pressure of 130/90 with no orthostatic change. The only other finding is diffuse muscle tenderness. Laboratory data includes:</p> <p>BUN: 30 mg/dL Creatinine: 6 mg/dL K: 6.0 meq/L Uric acid: 18 mg/dL Ca: 6.5 mg/dL PO4: 7.5 mg/dL CPK: 28,000 IU/L Urine output: 40 mL/h</p> <p>Which of the following is the most likely diagnosis?</p>
Possible answers	<p>a. Nonsteroidal anti-inflammatory drug-induced acute renal failure (ARF) b. Volume depletion c. Rhabdomyolysis-induced ARF d. Urinary tract obstruction</p>
The correct answer	The answer is c
Rationale for the correct answer	<p>Rhabdomyolysis induced ARF may follow influenza. It is characterized by a creatinine disproportionately elevated compared to BUN (usual BUN-creatinine ratio is 10), hyperkalemia, hyperphosphatemia, and hyperuricemia, all due to release of intracellular muscle products. The high phosphorus causes hypocalcemia. All nonsteroidal agents may cause decreased renal function. Usually this is due to decreased blood flow - less commonly, to drug induced interstitial nephritis. The laboratory abnormalities discussed are not caused by decreased blood flow or by interstitial nephritis. However, stopping the ibuprofen in this patient would be prudent. The absence of orthostatic hypotension makes the diagnosis of volume depletion very unlikely. Nothing on history, physical examination, or electrolyte abnormalities suggests obstruction. However, in a 76-year-old man, considering occult obstruction is always appropriate.</p>
Source of information	<p>PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006</p>

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	<p>You are reviewing a number of patients with congenital heart disease with specific attention to whether or not they need antibiotic prophylaxis for dental work. Who does not require endocarditis prophylaxis (i.e., which condition is at low risk for development of infective endocarditis)?</p>
Possible answers	<p>a. Coarctation of the aorta b. Ventricular septal defect c. Atrial septal defect d. Patent ductus arteriosus e. Hypertrophic cardiomyopathy f. Prosthetic heart valve</p>
The correct answer	The answer is c.

Rationale for the correct answer	In general, congenital heart disease patients are at higher risk of infective endocarditis, except for isolated secundum atrial septal defect and the following if surgically corrected: ASD, VSD, PDA, and pulmonic stenosis. High-risk conditions include prosthetic heart valves, coarctation of the aorta, patent ductus arteriosus, and Marfan's syndrome. Moderate risk is conferred by ventricular septal defect, congenital or acquired valvular disease (including mitral valve prolapse with regurgitation and/or thickened leaflets), and hypertrophic cardiomyopathy. Low risk is seen in ASD, post-CABG, with pacemakers or AICDs, and in MVP without regurgitation.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 45-year-old white female smoker is admitted to the hospital for observation after presenting to the emergency department with vague chest pain. There is no past history of cardiac disease, diabetes, hypertension, or hyperlipidemia. Later that night while in bed she has a recurrence of pain, at which time cardiac monitoring shows a transient elevation of precordial ST segments. The pain is promptly relieved by sublingual nitroglycerin. Physical exam is unremarkable. Which of the following is the best followup management plan?
Possible answers	a. Echocardiography and anti-inflammatory therapy b. EGD and proton pump inhibitor therapy c. Exercise stress testing; treatment depending on results d. Coronary angiography; likely treatment with nitrates and calcium channel blockers e. Chest CT scan
The correct answer	The answer is d.
Rationale for the correct answer	This case describes Prinzmetal's variant angina, a syndrome of ischemic pain that classically occurs at rest rather than with exertion and is associated with transient ST-segment elevation due to focal coronary artery spasm (most commonly involving the right coronary, although in this example, with precordial lead findings, the left anterior descending is more likely). The pain is usually not preceded by a period of chronic stable angina. Exercise stress testing is unlikely to be diagnostic in Prinzmetal's, and results may be difficult to interpret in young females in general. Coronary angiography demonstrating transient coronary artery spasm is the diagnostic hallmark of this condition. Nitrates and calcium channel blockers are the mainstays of treatment. Regarding the other listed choices, echocardiography and anti-inflammatory therapy allude to the diagnosis of pericarditis; however, in this condition STsegment elevation should occur diffusely, and the pain is not relieved by nitroglycerin. EGD and proton pump inhibitor therapy allude to the diagnosis of gastroesophageal reflux, which may produce pain upon lying down, but should not yield ECG changes; nitroglycerin conceivably could relieve the pain of associated esophageal spasm. There is nothing specific here to warrant the chest CT or IV heparin treatment of pulmonary embolism.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	You are seeing in your office a patient with the chief complaint of relatively sudden onset of shortness of breath and weakness, but no chest pain. ECG shows nonspecific ST-T changes. You should be particularly attuned to the possibility of painless, or silent, myocardial infarction in which of the following patients?
Possible answers	a. Unstable angina patient on multiple medications b. Elderly diabetic c. Premenopausal female d. Inferior MI patient e. MI patient with PVCs
The correct answer	The answer is b.
Rationale for the correct answer	The classic presentation of acute myocardial infarction (MI) involves heavy or crushing substernal chest pain or pressure. However, 15 to 20% of infarctions may be painless, with the greatest incidence in diabetics and the elderly. Dyspnea or weakness may initially predominate in these patients. Other presentations include altered mental status, the appearance of an arrhythmia, or hypotension. Diabetics are likely to have abnormal or absent pain response to myocardial ischemia due to generalized autonomic nervous system dysfunction. The other choices have no specific link to greater likelihood of a silent MI.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	You are working in the university student health clinic, seeing adolescents and young adults for urgent care problems, but you remain attuned to the possibility of more serious underlying disease. For each of the numbered cases below, select the associated valvular or related heart disease.
Possible	a. Tricuspid stenosis

answers	b. Tricuspid regurgitation c. Mitral stenosis d. Mitral regurgitation e. Aortic regurgitation (insufficiency) f. Aortic stenosis g. Hypertrophic cardiomyopathy h. Pulmonic stenosis i. Pulmonic regurgitation (insufficiency)
The correct answer	The answer is a
Rationale for the correct answ.	At serum sodium levels compatible with life, neither hyponatremia nor hypernatremia result in any characteristic ECG changes, although nonspecific ST-T changes could occur. A convex elevation of the J point (Osborn wave) is seen in hypothermia
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 55-year-old patient presents to you with a history of having recently had a 3-day hospital stay for gradually increasing shortness of breath and leg swelling while away on a business trip. He reports being told he had congestive heart failure then, but is asymptomatic now, with normal vital signs and physical exam. An echocardiogram is obtained that estimates an ejection fraction of 38%. The patient likes to keep medications to a minimum. He is currently on just aspirin plus a statin. Other than remaining on those, which of the following would be the most appropriate medication recommendation at this time?
Possible answers	a. Begin an ACE inhibitor and then add a beta blocker on a scheduled basis b. Begin digoxin plus furosemide (Lasix) on a scheduled basis c. Begin spironolactone on a scheduled basis d. Begin hydralazine plus nitrates on a scheduled basis e. Just use furosemide (Lasix) plus nitroglycerin if shortness of breath and swelling recur f. Given his preferences, since he is doing well, no other medication is needed
The correct answer	The answer is a.
Rationale for the correct answ.	Angiotensin-converting enzyme inhibitors have been shown to prevent or retard the development of heart failure in patients with left ventricular dysfunction and to reduce long-term mortality when begun shortly after an MI, via inhibition of the renin-angiotensin system and reduction of preload and afterload. Thus they play a central role in heart failure management. An angiotensin II receptor blocker may be substituted. Beta blockers are typically the next addition, also with evidence

	<p>supporting reduction in rehospitalization for CHF and future cardiac events. Loop or thiazide diuretics are administered to those with fluid accumulation. The aldosterone antagonist spironolactone is indicated in more advanced CHF. Digoxin is reserved for those with clear-cut systolic dysfunction, especially with atrial flutter or fibrillation with rapid ventricular response. The nitrate-hydralazine combination is also an option in ACE inhibitor–intolerant patients, almost always in advanced cases. Calcium channel blockers are not indicated for heart failure or routinely post-MI. General therapeutic measures include salt restriction and regular moderate exercise. Patient preferences are important to consider but should not keep you from giving your best medical recommendation, which the patient can then decide to accept or not.</p>
Source of information	<p>PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006</p>

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old construction worker continues to have an elevated blood pressure of 160/95 even after a third agent is added to his antihypertensive regimen. Physical exam is normal, electrolytes are normal, and the patient is taking no over-the-counter medications. Which of the following is the next helpful step for this patient?
Possible answers	<ul style="list-style-type: none"> a. Check pill count b. Evaluate for Cushing syndrome c. Check chest x-ray for coarctation of the aorta d. Obtain a renal angiogram e. Obtain an adrenal CT scan
The correct answer	The answer is a.
Rationale for the correct answ.	The most common cause of refractory hypertension is nonadherence to the medication regimen. A history from the patient is useful, and pill count is the best compliance check. Cushing's disease, coarctation of the aorta, renal artery stenosis, and primary aldosteronism are secondary causes that could result in refractory hypertension, but no clues to these diagnoses are apparent on physical exam or lab.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	An obese 50-year-old woman complains of insomnia, daytime sleepiness, and fatigue. She is found to have recurrent episodes of arterial desaturation—about 30 events per hour—with evidence of obstructive apnea. Which of the following is the treatment of choice for this patient?
Possible answers	<ul style="list-style-type: none"> a. Nasal continuous positive airway pressure b. Uvulopalatopharyngoplasty c. Weight reduction d. Tracheostomy
The correct answer	The answer is a.
Rationale for the correct answ.	In this patient with multiple episodes of desaturation, continuous positive airway pressure would be the recommended therapy. Weight loss is often helpful and should be recommended as well, but would probably not be sufficient. Uvulopalatopharyngoplasty has also been used in obstructive sleep apnea, but when applied to unselected patients is effective in less than 50%. Tracheostomy is a course of last resort that does provide immediate relief.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 40-year-old woman has had increasing fatigue and shortness of breath for years. She is suspected of having pulmonary hypertension based on a chest x-ray that shows right ventricular hypertrophy. Pulmonary embolus is ruled out by spiral CT scan. A right heart catheterization confirms the diagnosis of primary pulmonary hypertension. Which of the following is the best next step in the management of the patient?
Possible answers	a. Acute drug testing with short-acting pulmonary vasodilators b. High-dose nifedipine c. Intravenous prostacyclin d. Lung transplantation
The correct answer	The answer is a.
Rationale for the correct ans.	In all patients in whom primary pulmonary hypertension is confirmed, acute drug testing with a pulmonary vasodilator is necessary to assess the extent of pulmonary vascular reactivity. Inhaled nitric oxide, intravenous adenosine, or intravenous prostacyclin have all been used. Patients who have a good response to the short-acting vasodilator are tried on a long-acting calcium channel antagonist under direct hemodynamic monitoring. Prostacyclin given via the pulmonary artery through a right heart catheterization has been approved for patients who are functional class III or IV and have not responded to calcium channel antagonists. Treprostinil, a prostacyclin and bosentan, an endothelial receptor antagonist have also recently been approved for class III and IV disease. Lung transplantation is reserved for late stages of the disease when patients are unresponsive to prostacyclin. The disease does not appear to recur after transplantation.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

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Question	You are reviewing a number of patients with congenital heart disease with specific attention to whether or not they need antibiotic prophylaxis for dental work. Who does not require endocarditis prophylaxis (i.e., which condition is at low risk for development of infective endocarditis)?
Possible answers	a. Coarctation of the aorta b. Ventricular septal defect c. Atrial septal defect d. Patent ductus arteriosus e. Hypertrophic cardiomyopathy f. Prosthetic heart valve
The correct answer	The answer is c.
Rationale for the correct ans.	In general, congenital heart disease patients are at higher risk of infective endocarditis, except for isolated secundum atrial septal defect and the following if surgically corrected: ASD, VSD, PDA, and pulmonic stenosis. High-risk conditions include prosthetic heart valves, coarctation of the aorta, patent ductus arteriosus, and Marfan's syndrome. Moderate risk is conferred by ventricular septal defect, congenital or acquired valvular disease (including mitral valve prolapse with regurgitation and/or thickened leaflets), and

	hypertrophic cardiomyopathy. Low risk is seen in ASD, post-CABG, with pacemakers or AICDs, and in MVP without regurgitation.
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Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old male with emphysema and a chest x-ray that has shown apical blebs develops the sudden onset of shortness of breath and left-sided pleuritic chest pain. Pneumothorax is suspected. Which of the following physical examination findings would confirm the diagnosis?
Possible answers	a. Localized wheezes at the left base b. Hyperresonance of the left chest with decreased breath sounds c. Increased tactile fremitus on the left side d. Decreased breath sounds on the left side with deviation of the trachea to the left e. Dry crackles at both bases
The correct answer	The answer is b.
Rationale for the correct answ.	The most characteristic findings of pneumothorax are hyperresonance and decreased breath sounds. A tension pneumothorax may displace the mediastinum to the unaffected side. Tactile fremitus would be decreased in the patient with a pneumothorax, but would be increased in conditions in which consolidation of the lung has developed.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 64-year-old woman is found to have a left-sided pleural effusion on chest x-ray. Analysis of the pleural fluid reveals a ratio of concentration of total protein in pleural fluid to serum of 0.38, a lactate dehydrogenase (LDH) level of 125 IU, and a ratio of LDH concentration in pleural fluid to serum of 0.46. Which of the following disorders is most likely in this patient?
Possible answers	a. Bronchogenic carcinoma b. Congestive heart failure c. Pulmonary embolism d. Sarcoidosis e. Systemic lupus erythematosus
The correct answer	The answer is b.
Rationale for the correct answ.	Classifying a pleural effusion as either a transudate or an exudate is useful in identifying the underlying disorder. Pleural fluid is exudative if it has any one of the following three properties: a ratio of concentration of total protein in pleural fluid to serum greater than 0.5, an absolute value of LDH greater than 200 IU, or a ratio of LDH concentration in pleural fluid to serum greater than 0.6.

	Causes of exudative effusions include malignancy, pulmonary embolism, pneumonia, tuberculosis, abdominal disease, collagen vascular diseases, uremia, Dressler syndrome, and chylothorax. Exudative effusions may also be drug-induced. If none of the aforementioned properties are met, the effusion is a transudate. Differential diagnosis for a transudative effusion includes congestive heart failure, nephrotic syndrome, cirrhosis, Meigs syndrome (benign ovarian neoplasm with effusion), and hydronephrosis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 57-year-old man develops acute shortness of breath shortly after a 12-h automobile ride. The patient is admitted to the hospital for shortness of breath. Findings on physical examination are normal except for tachypnea and tachycardia. An electrocardiogram reveals sinus tachycardia but is otherwise normal. Which of the following statements is correct?
Possible answers	<ul style="list-style-type: none"> a. A definitive diagnosis can be made by history alone b. The patient should be admitted to the hospital, and, if there is no contraindication to anticoagulation, intravenous heparin should be started pending further testing c. Normal findings on examination of the lower extremities are extremely unusual in this clinical setting d. Early treatment has little effect on overall mortality
The correct answer	The answer is b.
Rationale for the correct answ.	The clinical situation described is characteristic of pulmonary embolic disease. In greater than 80% of cases, pulmonary emboli arise from thromboses in the deep venous circulation (DVTs) of the lower extremities. DVTs often begin in the calf, where they rarely if ever cause clinically significant pulmonary embolic disease. However, thromboses that begin below the knee frequently “grow,” or propagate, above the knee; clots that dislodge from above the knee cause clinically significant pulmonary emboli, which, if untreated, cause mortality exceeding 80%. Interestingly, only about 50% of patients with DVT of the lower extremities have clinical findings of swelling, warmth, erythema, pain, or “cords.” As long as the superficial venous system, which has connections with the deep venous system, remains patent, none of the classic clinical findings of DVT will occur, because blood will drain from the unobstructed superficial system. When a clot does dislodge from the deep venous system and travels into the pulmonary vasculature, the most common clinical findings are tachypnea and tachycardia; chest pain is less likely and is more indicative of concomitant pulmonary infarction. The ABG is usually abnormal, and a high percentage of patients exhibit hypoxia, hypocapnia, alkalosis, and a widening of the alveolar-arterial gradient. The ECG is frequently abnormal in pulmonary embolic disease. The most common finding is sinus tachycardia, but atrial fibrillation, pseudoinfarction in the inferior leads, and right and left axis deviation are also occasionally seen. Initial treatment for suspected pulmonary embolic disease includes prompt hospitalization and institution of intravenous heparin, provided there are no contraindications to anticoagulation. It is particularly important to make an early diagnosis of pulmonary embolus, as intervention can decrease the mortality rate from 25% down to 5%.
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Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old patient with long-standing chronic obstructive lung disease develops the insidious onset of aching in the distal extremities, particularly the wrists bilaterally. There is a 10-lb weight loss. The skin over the wrists is warm and erythematous. There is bilateral clubbing. Plain film is read as periosteal thickening, possible osteomyelitis. Which of the following is the most appropriate management of this patient?
Possible answers	a. Start ciprofloxacin b. Obtain chest x-ray c. Aspirate both wrists d. Begin gold therapy e. Obtain erythrocyte sedimentation rate
The correct answer	The answer is b.
Rationale for the correct answ.	The clinical picture suggests hypertrophic osteoarthropathy. This process, the pathogenesis of which is unknown, is characterized by clubbing of digits, periosteal new bone formation, and arthritis. Hypertrophic osteoarthropathy is associated with intrathoracic malignancy, suppurative lung disease, and congenital heart problems. Treatment is directed at the underlying disease process. While x-rays may suggest osteomyelitis, the process is usually bilateral and easily distinguishable from osteomyelitis. The first step in evaluation of this patient is to obtain a chest x-ray looking for lung infection and carcinoma.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)

Question	A 45-year-old woman with long-standing, well-controlled rheumatoid arthritis develops severe pain and swelling in the left elbow over 2 days. She is not sexually active. You suspect septic arthritis. If you are correct, which of the following is the most likely organism to cause septic arthritis in this case?
Possible answers	a. Streptococcus pneumoniae b. Neisseria gonorrhoeae c. Escherichia coli d. Staphylococcus aureus
The correct answer	The answer is d.
Rationale for the correct ans.	S. aureus is the most common organism to cause septic arthritis in adults. .-hemolytic streptococci are the second most common. N. gonorrhoeae can also produce septic arthritis, but would be less likely in this patient who is not sexually active. S. pneumoniae and E. coli are rare causes of septic arthritis and usually occur secondary to a primary focus of infection. Septic arthritis commonly occurs in joints that are anatomically damaged, such as in this case with prior rheumatoid arthritis. Anytime a patient with arthritis develops a monoarticular flare out of proportion to the rest of the joints, septic arthritis must be suspected.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old male complains of pain in both knees coming on gradually over the past 2 years. The pain is relieved by rest and worsened by movement. There is bony enlargement of the knees with mild warmth and small effusions. Creptitation is noted on motion of the knee joint bilaterally. There are no other findings except for bony enlargement at the distal interphalangeal joint. The patient is 5 ft 9 in. tall and weighs 210 lb. Which of the following is the best way to prevent disease progression?
Possible answers	a. Weight reduction b. Calcium supplementation c. Total knee replacement d. Long-term nonsteroidal anti-inflammatory drug (NSAID) administration e. Oral prednisone
The correct answer	The answer is a.
Rationale for the correct ans.	The clinical picture of anarthrits of weight-bearing joints made worse by activity is suggestive of degenerative joint disease, also called osteoarthritis. Osteoarthritis may frequently have a mild to moderate inflammatory component. Creptitation in the involved joints is characteristic, as are bony enlargements of the DIP joints. In this overweight patient, weight reduction is the best method to decrease the risk of further degenerative changes. Aspirin, other NSAIDs, or acetaminophen can be used as symptomatic treatment but do not affect the course of the disease. Calcium supplementation may be relevant to associated osteoporosis, but does not treat osteoarthritis. Oral prednisone would not be indicated. Intraarticular corticosteroid injections may be given two to three times per year for symptom reduction. Glucosamine may provide further symptomatic relief. Knee replacement is the treatment of last resort, usually when symptoms are not controlled by medical regimens and/or activities are severely limited.

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Profile	Therapeutic
Discipline	General practice (family medicine)
Question	40-year-old male complains of exquisite pain and tenderness in the left ankle. There is no history of trauma. The patient is taking a mild diuretic for hypertension. On exam, the ankle is very swollen and tender. There are no other physical exam abnormalities. Which of the following is the best next step in management?
Possible answers	a. Begin colchicine and broad-spectrum antibiotics b. Perform arthrocentesis c. Begin allopurinol if uric acid level is elevated d. Obtain ankle x-ray to rule out fracture e. Apply a splint or removable cast
The correct answer	The answer is a.
Rationale for the correct ans.	The clinical picture of symmetrical swelling and tenderness of the metacarpophalangeal (MCP) and wrist joints lasting longer than 6 weeks strongly suggests rheumatoid arthritis. Rheumatoid factor, an immunoglobulin directed against the Fc portion of IgG, is positive in about two-thirds of cases and may be present early in the disease. The history of lethargy or fatigue is a common prodrome of RA. The inflammatory joint changes on exam are not consistent with chronic fatigue syndrome; furthermore, patients with CFS typically report fatigue existing for many years. The MCP-wrist distribution of joint symptoms makes osteoarthritis very unlikely. The x-ray changes described are characteristic of RA, but would occur later in the course of the disease. Although arthritis can occasionally be a manifestation of hematologic malignancies and, rarely, other malignancies, the only indicated screening would be a complete history and physical exam along with a CBC.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 70-year-old female with mild dementia complains of unilateral groin pain. There is some limitation of motion in the right hip. Which of the following is the most appropriate first step in evaluation?
Possible answers	a. CBC and erythrocyte sedimentation rate b. Rheumatoid factor c. X-ray of right hip d. Bone scan
The correct answer	The answer is c.
Rationale for the correct ans.	Hip pain may result from fracture, bursitis, arthritis, tumor, or pain referred from the lumbosacral spine. A film of the right hip is mandatory in this patient. Fracture of the hip must be ruled out, particularly in a woman with mental status abnormalities, who may be prone to falls. Elderly women with osteoporosis are most prone to hip fracture. Pain from the hip joint is most often felt in the groin radiating down the anterior thigh. It is important to realize that patients will often complain of "hip" pain when they mean pain in the buttocks or low back. Pain in the buttocks is most often referred pain from the spine.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old woman with rheumatoid arthritis has been treated with meloxicam (Mobic). You add hydroxychloroquine. Six weeks later her arthritis is mildly improved. The same joints are still involved but she now reports only 1 h morning stiffness. She has, however, developed epigastric burning and melena for the past 3 days. Stool is strongly positive for occult blood. Which of the following is the most likely cause for the melena in this case?
Possible answers	<ul style="list-style-type: none"> a. Emotional stress over her illness resulting in acid peptic disease b. Hydroxychloroquine-induced acid peptic disease c. Gastric lymphoma associated with autoimmune disease d. NSAID gastropathy e. Meckel's diverticulum
The correct answer	The answer is d.
Rationale for the correct answ.	The patient's GI bleeding is most likely due to NSAID gastropathy, an extremely common complication. It may occur without associated abdominal symptoms. Although she recently began hydroxychloroquine, that medicine does not cause GI bleeding. Emotional distress causing ulcer disease, lymphoma, and Meckel's diverticulum are all possible, but there is nothing in this case history to suggest them, and they are much rarer than NSAID gastropathy.
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Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 53-year-old man presents with arthritis and bloody nasal discharge. Urinalysis reveals 4+ proteinuria, RBC's, and RBC casts. ANCA is positive in a cytoplasmic pattern. Antiproteinase 3 (PR3) antibodies are present, but antimyeloperoxidase (MPO) antibodies are absent. Which of the following is the most likely diagnosis?
Possible answers	<ul style="list-style-type: none"> a. Behcet's syndrome b. Sarcoidosis c. Wegener's granulomatosis d. Henoch-Schonlein purpura e. Classic polyarteritis nodosa
The correct answer	The answer is c.

Rationale for the correct answ.	Wegener's granulomatosis (WG) is a granulomatous vasculitis of small arteries and veins that affects the lungs, sinuses, nasopharynx, and kidneys, where it causes a focal and segmental glomerulonephritis. Other organs can also be damaged, including the skin, eyes, and nervous system. Most patients with the disease develop antibodies to certain proteins in the cytoplasm of neutrophils called antineutrophil cytoplasmic antibodies (ANCA). The most common ANCA staining pattern seen in WG is cytoplasmic, C-ANCA. A perinuclear pattern, P-ANCA, is sometimes seen. The C-ANCA pattern is usually caused by antibodies to proteinase-3, whereas P-ANCA is usually caused by antibodies to myeloperoxidase. Henoch-Schonlein purpura and classic polyarteritis generally do not involve the upper airways. Sarcoidosis may involve the upper respiratory tract (20%), but it does not cause bloody nasal discharge and does not cause glomerulonephritis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 32-year-old female is referred to you from an OB-GYN colleague due to the onset of extreme fatigue and dyspnea on exertion 1 month after her second vaginal delivery. By history, physical exam, and echocardiogram, which shows systolic dysfunction, you make the diagnosis of peripartum (postpartum) cardiomyopathy. Which of the following statements is correct?
Possible answers	a. Postpartum cardiomyopathy may occur unexpectedly years after pregnancy and delivery b. About half of all such patients will recover completely c. The condition is idiosyncratic; the risk of recurrence in a future pregnancy is no greater than average d. The postpartum state will require a different therapeutic approach than typical dilated cardiomyopathies
The correct answer	The answer is b.
Rationale for the correct answ.	Peripartum (or postpartum) cardiomyopathy may occur during the last trimester of pregnancy or within 6 months of delivery, but most commonly in the month before or after delivery. The most common demographics are multiparity, African American race, and age greater than 30. About half of patients will recover completely, with most of the rest improving, although the mortality rate is quoted as 10 to 20%. Current advice is to avoid future pregnancies due to the risk of recurrence. Treatment is as for other dilated cardiomyopathies, except that ACE inhibitors are contraindicated in pregnancy.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 35-year-old right-handed construction worker presents with complaints of nocturnal numbness and pain involving the right hand. Symptoms wake him and are then relieved by shaking his hand. There is some atrophy of the thenar eminence. Tinel's sign is positive. Which of the following is the most likely diagnosis?
Possible	a. Carpal tunnel syndrome

answers	b. De Quervain's tenosynovitis c. Amyotrophic lateral sclerosis d. Rheumatoid arthritis of the wrist joint e. Guillain-Barre syndrome
The correct answer	The answer is a.
Rationale for the correct answ.	Carpal tunnel syndrome results from median nerve entrapment and is frequently due to excessive use of the wrist. The process has also been associated with thickening of connective tissue, as in acromegaly, or with deposition of amyloid. It also occurs in hypothyroidism, rheumatoid arthritis, and diabetes mellitus. As in this patient, numbness is frequently worse at night and relieved by shaking the hand. Atrophy of the abductor pollicis brevis as evidenced by thenar wasting is a sign of advanced disease and an indication for surgery. Tinel's sign (paresthesia induced in the median nerve distribution by tapping on the volar aspect of the wrist) is very characteristic but not specific. De Quervain's tenosynovitis causes focal wrist pain on the radial aspect of the hand and is due to inflammation of the tendon sheath of the abductor pollicis longus. It should not produce a positive Tinel sign or evidence of median nerve dysfunction. Amyotrophic lateral sclerosis may present with distal muscle weakness but is not usually focal. Diffuse atrophy and muscle fasciculations would be prominent. Rheumatoid arthritis would not produce these symptoms unless inflammation of the wrist was causing median nerve entrapment in the carpal tunnel. Guillain-Barre syndrome is a rapidly progressive polyneuropathy that typically presents with an ascending paralysis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 72-year-old male comes to the office with intermittent symptoms of dyspnea on exertion, palpitations, and cough occasionally productive of blood. On cardiac auscultation, a low-pitched diastolic rumbling murmur is faintly heard toward the apex. The origin of the patient's problem probably relates to which of the following?
Possible answers	a. Rheumatic fever as a youth b. Long-standing hypertension c. A silent MI within the past year d. A congenital condition
The correct answer	The answer is a.
Rationale for the correct answ.	The history and physical exam findings are consistent with mitral stenosis. Dyspnea may be present secondary to pulmonary edema; palpitations are often related to atrial arrhythmias (PACs, PAT, atrial flutter, or fibrillation); hemoptysis may occur as a consequence of pulmonary hypertension with rupture of bronchial veins. A diastolic rumbling apical murmur is characteristic. An accentuated first heart sound and opening snap may also be present. The etiology of mitral stenosis is usually rheumatic, rarely congenital. Two thirds of patients afflicted are women.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 36-year-old white female nurse comes to the ER due to a sensation of fast heart rate, slight dizziness, and vague chest fullness. Blood pressure is 110/70. The following rhythm strip is obtained, which shows which of the following?
Possible answers	a. Atrial fibrillation b. Atrial flutter c. Supraventricular tachycardia d. Ventricular tachycardia
The correct answer	The answer is c.
Rationale for the correct answ.	Paroxysmal supraventricular tachycardia due to AV nodal reentry typically displays a narrow QRS complex without clearly discernible P waves, with a rate in the 160 to 190 range. The atrial rate is faster in atrial flutter, typically with a classic sawtooth pattern of P waves, with AV conduction ratios most commonly 2:1 or 4:1, leading to ventricular rates of 150 or 75 per min. Atrial fibrillation would show an irregularly irregular rhythm without discrete P waves. Wide QRS complexes with rate greater than 100 would be expected in ventricular tachycardia.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 65-year-old man with diabetes, on an oral hypoglycemic, presents to the ER with a sports-related right shoulder injury. His heart rate was noted to be irregular, and the following ECG was obtained. Which of the following is the best immediate therapy?
Possible answers	a. Atropine b. Isoproterenol c. Pacemaker placement d. Electrical cardioversion e. Digoxin f. Diltiazem
The correct answer	The answer is g.
Rationale for the correct answ.	This ECG shows Mobitz type I second-degree AV block, also known as Wenckebach phenomenon, characterized by progressive PR interval prolongation prior to block of an atrial impulse. This rhythm generally does not require therapy. It may be seen in normal individuals; other causes include inferior MI and drug intoxications such as from digoxin, beta blockers, or calcium channel blockers. Even in the post-MI setting, it is usually stable, although it has the potential to progress to higher-degree AV block with consequent need for pacemaker.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 62-year-old male with underlying COPD develops a viral upper respiratory infection and begins taking an over-the-counter decongestant. Shortly thereafter he experiences palpitations and presents to the emergency room, where the following rhythm strip is obtained. The rhythm strip demonstrates which of the following?
Possible answers	a. Normal sinus rhythm b. Junctional rhythm c. Atrial flutter with 4:1 atrioventricular block d. Paroxysmal atrial tachycardia with 2:1 atrioventricular block e. Complete heart block with 2:1 atrioventricular block
The correct answer	The answer is c.
Rationale for the correct answ.	The rhythm strip in the question reveals atrial flutter with 4:1 atrioventricular (AV) block. Atrial flutter is characterized by an atrial rate of 250 to 350/min; the electrocardiogram typically reveals a sawtooth baseline configuration due to the flutter waves. In the strip, every fourth atrial depolarization is conducted through the AV node, resulting in a ventricular rate of 75/min (although 2:1 conduction is more commonly seen).
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	An 80-year-old with a past history of myocardial infarction is found to have left bundle branch block on ECG. She is asymptomatic, with blood pressure 130/80, lungs clear to auscultation, and no leg edema. On cardiac auscultation, which of the following is the most likely finding?
Possible answers	a. Fixed (wide) split S2 b. Paradoxical (reversed) split S2 c. S3 d. S4 e. Opening snap f. Midsystolic click
The correct answer	The answer is b.
Rationale for the correct answ.	Normally, the second heart sound (S2) is composed of aortic closure followed by pulmonic closure. Because inspiration increases blood return to the right side of the heart, pulmonic closure is delayed, which results in normal splitting of S2 during inspiration. Paradoxical splitting of S2, however, refers to splitting of S2 that is narrowed instead of widened with inspiration consequent to a delayed aortic closure. Paradoxical splitting can result from any electrical or mechanical event that delays left ventricular systole. Thus, aortic stenosis and hypertension, which increase resistance to systolic ejection of blood, delay closure of the aortic valve. Acute ischemia from angina or acute myocardial infarction also can delay ejection of blood from the left ventricle. The most common cause of paradoxical splitting—left bundle branch block—delays electrical activation of the left ventricle. Right bundle branch block results in a wide splitting of S2 that widens further during inspiration. An S3 is typically heard with congestive heart failure, an S4 with hypertension, an opening snap with mitral stenosis,

	and a midsystolic click with mitral valve prolapse.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 36-year-old man presents for a well-patient exam. He gives a history that, over the past 20 years, he has had three episodes of abdominal pain and hematemesis, the most recent of which occurred several years ago. He was told that an ulcer was seen on a barium upper GI radiograph. You obtain a serum assay for <i>Helicobacter pylori</i> IgG, which is positive. What is the most effective regimen to eradicate this organism?
Possible answers	a. Omeprazole 20 mg PO daily for 6 weeks b. Ranitidine 300 mg PO qhs for 6 weeks c. Omeprazole 20 mg bid, amoxicillin 1000 mg bid, clarithromycin 500 mg bid for 14 days d. Pepto-Bismol and metronidazole bid for 7 days
The correct answer	The answer is c.
Rationale for the correct answ.	Although acid suppression therapy leads to 80% healing rates after 4 weeks of treatment, acid reduction alone does not eradicate <i>H. pylori</i> . Three- or four-drug therapy, including bismuth or (most often) proton pump inhibitor, combined with two antibiotics effective against <i>H. pylori</i> , will be necessary to eradicate the organism. Longer duration of therapy (i.e., 14 days) leads to a greater healing rate. This regimen will eradicate <i>H. pylori</i> in more than 90% of patients. Patients whose <i>H. pylori</i> has been eradicated have approximately only a 5% chance of ulcer recurrence (compared to 60 to 70% of patients not treated for <i>H. pylori</i>). Generally, follow-up tests to prove <i>H. pylori</i> eradication are not recommended in the usual patient who becomes asymptomatic. If the peptic ulcer should recur (again, this happens infrequently), either direct testing of a biopsy specimen or a test for urease activity in the stomach (i.e., the C13 breath test) is necessary, as the serological studies remain positive for many years.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 20-year-old fireman comes to the emergency room complaining of headache and dizziness after helping to put out a garage fire. He does not complain of shortness of breath, and the arterial blood gas shows a normal partial pressure of oxygen. Which of the following is the best first step in the management of this patient?
Possible answers	a. Begin oxygen therapy b. Obtain chest x-ray c. Obtain carboxyhemoglobin level d. Obtain CT scan
The correct answer	The answer is c.

Rationale for the correct answ.	With symptoms of headache and dizziness in a fireman, the diagnosis of carbon monoxide poisoning must be addressed quickly. A venous or arterial measure of carboxyhemoglobin must first be obtained, if possible, before oxygen therapy is begun. The use of supplementary oxygen prior to obtaining the test may be a confounding factor in interpreting blood levels. Oxygen or even hyperbaric oxygen is given after blood for carboxyhemoglobin is drawn. Chest x-ray should also be obtained. It may be normal or show a pattern of nonpulmonary edema, or aspiration in severe cases. Central nervous system imaging would not be indicated, and there are no diagnostic patterns that are specific to carbon monoxide poisoning.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 55-year-old woman with long-standing chronic lung disease and episodes of acute bronchitis complains of increasing sputum production, which is now on a daily basis. Sputum is thick, and daily sputum production has dramatically increased over several months. There are flecks of blood in the sputum. The patient has lost 8 lb. Fever and chills are absent, and sputum cultures have not revealed specific pathogens. Chest x-ray shows increased pulmonary markings and honeycombing in the lower lobes. CT scan shows a signet ring sign with markedly dilated bronchi. Which of the following is the most likely cause of the patient's symptoms?
Possible answers	a. Pulmonary tuberculosis b. Exacerbation of chronic lung disease c. Bronchiectasis d. Anerboic lung abscess e. Carcinoma of the lung
The correct answer	The answer is c.
Rationale for the correct answ.	While symptoms such as sputum production and cough are nonspecific, particularly in a patient with known chronic lung disease, the high volume of daily sputum production suggests bronchiectasis. In this process, an abnormal and permanent dilatation of bronchi occurs as the muscular and elastic components of the bronchi are damaged. Clearance of secretions becomes a major problem contributing to a cycle of bronchial inflammation and further deterioration. A highresolution CT scan, now the diagnosis of choice for this disease, shows prominent dilated bronchi and the signet ring sign of dilated bronchus adjacent to pulmonary artery. The specific CT scan picture is pathognomonic for bronchiectasis and makes the diagnosis of lung abscess or tuberculosis unlikely. The increased amount of sputum produced is also very characteristic of bronchiectasis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old male complains of shortness of breath 2 days after a cholecystectomy. There is no fever, chills, sputum production, or pleuritic chest pain. On physical exam temperature is 99°F, pulse is 75, respiratory rate is 20, and blood pressure is 120/70. There are diminished breath sounds and dullness over the left base. Trachea is shifted to the left side. A chest x-ray

	shows a retrocardiac opacity that silhouettes the left diaphragm. Which of the following is the most likely anatomical problem in this patient?
Possible answers	a. An acute process causing inflammation b. A left lower lobe mass c. Diminished lung volume in the left lower lobe, postoperatively d. Acute bronchospasm caused by surgery
The correct answer	The answer is c.
Rationale for the correct answ.	Postoperative atelectasis or volume loss is a very common complication of surgery. General anesthesia and surgical manipulation lead to atelectasis by causing diaphragmatic immobilization. Atelectases is usually basilar. On physical exam, shift of the trachea to the affected side suggests volume loss. On chest x-ray in this patient, loss of the left hemidiaphragm, increased density, and shift of the hilum downward would all suggest left lower lobe collapse. Atelectasis needs to be distinguished from acute consolidation of pneumonia, in which case fever, chills, and purulent sputum are more pronounced and consolidation is present without volume loss.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 40-year-old alcoholic develops cough and fever. Chest x-ray shows an air-fluid level in the superior segment of the right lower lobe. Which of the following is the most likely etiologic agent?
Possible answers	a. Streptococcus pneumoniae b. Haemophilus influenzae c. Legionella d. Anaerobes e. Mycoplasma pneumoniae
The correct answer	The answer is d.
Rationale for the correct answ.	Of the organisms listed, only anaerobic infection is likely to cause a necrotizing process. S. pneumoniae capsular type III pneumococci have been reported to cause cavitory disease, but this is unusual. The location of the infiltrate suggests aspiration, also making anaerobic infection most likely. The superior segment of the right lower lobe is the one most likely to develop an aspiration pneumonia.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	Yesterday you admitted a 55-year-old white male to the hospital for an episode of chest pain, and you are seeking to rule out MI plus assess for any underlying coronary artery disease. The patient tends to be anxious about his health. On admission, his lungs were clear, but his heart revealed a grade 1/6 early systolic murmur at the upper left sternal border without radiation. Blood pressure readings have consistently been in the 140/90 to 150/100 range. Serial cardiac enzymes are normal, and resting ECGs have shown no change from the initial finding of left ventricular hypertrophy with secondary ST-T changes ("LVH with strain"). The thought

	of performing a routine Bruce protocol treadmill exercise test (stress test) comes to mind, but is rejected, primarily due to which of the following?
Possible answers	<ul style="list-style-type: none"> a. Anticipated difficulty with the patient's anxiety (i.e., he might falsely claim chest pain during the test) b. The increased risk associated with these high blood pressure readings c. Concern about the heart murmur, a relative contraindication to stress testing d. The presence of LVH with ST-T changes on baseline ECG e. Concern that this represents the onset of unstable angina with unacceptable risk of MI with stress testing
The correct answer	The answer is d.
Rationale for the correct answ.	Left ventricular hypertrophy and, in particular, preexisting ST-segment depression greater than 1 mm from any cause (such as with bundle branch block, a paced rhythm, or WPW) are contraindications to routine stress testing. New STsegment depression is the most common stress test-induced evidence of myocardial ischemia and would be difficult to assess if the ST segment is already abnormal. Nuclear imaging would be indicated instead. Anxiety, mildly elevated blood pressure, or suspected angina would not preclude a stress test. Cardiac auscultation in this case suggests just an innocent flow murmur. Pathologic murmurs, however, warrant caution. Aortic stenosis, in particular, would be a contraindication to stress testing. This would manifest as a harsh systolic crescendo-decrescendo murmur, usually heard best at the upper right sternal border with radiation to the carotids.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	You are helping with school sports physicals and see a 13-year-old boy who has had some trouble keeping up with his peers. He has a cardiac murmur, which you correctly diagnose as a ventricular septal defect based on which of the following auscultatory findings?
Possible answers	<ul style="list-style-type: none"> a. A systolic crescendo-decrescendo murmur heard best at the upper right sternal border with radiation to the carotids; the murmur is augmented with transient exercise b. A systolic murmur at the pulmonic area and a diastolic rumble along the left sternal border c. A holosystolic murmur at the mid-left sternal border d. A diastolic decrescendo murmur at the mid-left sternal border e. A continuous murmur through systole and diastole at the upper left sternal border
The correct answer	The answer is c.
Rationale for the correct answ.	A holosystolic murmur at the mid-left sternal border is the murmur most characteristic of a ventricular septal defect. Both the murmur of ventricular septal defect and the murmur of mitral regurgitation are enhanced by exercise and diminished by amyl nitrite. Answers a, b, d, and e describe the usual findings in aortic stenosis, atrial septal defect, aortic insufficiency, and patent ductus arteriosus, respectively.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	In the ICU, a patient suddenly becomes unresponsive, pulseless, and hypotensive, with cardiac monitor indicating ventricular tachycardia. The crash cart is immediately available. The first therapeutic step should be?
Possible answers	a. Amiodarone 150 mg IV push b. Lidocaine 1.5 mg/kg IV push c. Epinephrine 1 mg IV push d. Defibrillation at 200 joules e. Defibrillation at 360 joules
The correct answer	The answer is d.
Rationale for the correct answ.	The standard approach to ventricular fibrillation or hypotensive ventricular tachycardia involves defibrillation with 200 joules, then 300, then 360, followed if needed by epinephrine 1 mg IV push every 3 to 5 min. If persistent, such ventricular arrhythmias lead to consideration of amiodarone 150 mg IV push or lidocaine 1.0 to 1.5 mg/kg IV push. In addition, magnesium sulfate 1 to 2 g IV may be given in torsade de pointes or when arrhythmia due to hypomagnesemia is suspected. Procainamide up to 30 mg/min (maximum total 17 mg/kg) is given to patients with intermittent return of a pulse or non-VF rhythm, but then recurrence of VF/VT. A precordial thump may be considered at the outset in this case, but there is insufficient evidence to recommend its use or avoidance.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 55-year-old obese woman develops pressure-like substernal chest pain lasting 1 h. Quickly obtained additional history includes the fact that she works as a housekeeper, which requires a considerable amount of lifting and exertion. Recently she had a somewhat similar pain at night after lying down. There is a positive family history of gallstones (mother and sister). Her ECG is shown below. Which of the following is the most likely diagnosis?
Possible answers	a. Costochondritis b. Acute anterior myocardial infarction c. Acute inferior myocardial infarction d. Pericarditis e. Gastroesophageal reflux f. Cholecystitis
The correct answer	The answer is c.
Rationale for the correct answ.	The ECG shows acute STsegment elevations in the anterior precordial leads. The symptoms have persisted for only 1 h, so the patient is a candidate for primary percutaneous coronary intervention (angioplasty and/or stenting) or thrombolytic therapy, depending on the setting.

	Aspirin should be given. Nitroglycerin and morphine are indicated for pain control. Beta blockers reduce pain, limit infarct size, and decrease ventricular arrhythmias. There is no role for calcium channel blockers in this acute setting; in fact, short-acting dihydropyridines may increase mortality.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 55-year-old type 2 diabetic patient has lost weight and has had good control of his blood sugar on oral agents. He has a history of mild hypertension and hyperlipidemia. He asks for advice about an exercise program. Which of the following statements is correct?
Possible answers	a. Exercise should be avoided because it may cause foot trauma b. An active lifestyle cannot slow the complications of diabetes c. Vigorous exercise cannot precipitate hypoglycemia d. A stress test should be recommended prior to beginning an exercise program
The correct answer	The answer is d.
Rationale for the correct ans.	An active lifestyle and a good exercise program can prevent the complications of diabetes. Benefits include blood pressure control, reduction in body fat, weight loss, and increased insulin sensitivity. However, there are pitfalls to such a program. Some forms of exercise might jeopardize adequate foot care, and foot exam becomes particularly important in the patient who is doing weight-bearing exercise. Exercise can induce hypoglycemia by potentiating insulin action; this is particularly true in the type 1 diabetic. Diabetics who have risk factors for cardiovascular disease, such as hypertension and hyperlipidemia, should undergo an exercise stress test prior to engaging in a rigorous exercise program. This is important because asymptomatic cardiovascular disease is more common in diabetics.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 90-year-old male complains of hip and back pain. He has also developed headaches, hearing loss, and tinnitus. On physical exam the skull appears enlarged, with prominent superficial veins. There is marked kyphosis, and the bones of the leg appear deformed. Plasma alkaline phosphatase is elevated. A skull x-ray shows sharply demarcated lucencies in the frontal, parietal, and occipital bones. X-rays of the hip show thickening of the pelvic brim. Which of the following is the most likely diagnosis?
Possible answers	a. Multiple myeloma b. Paget's disease c. Hypercalcemia d. Metastatic bone disease

The correct answer	The answer is b.
Rationale for the correct answ.	This patient has widespread Paget's disease of bone. Excessive resorption of bone is followed by replacement of normal marrow with dense, trabecular, disorganized bone. Hearing loss and tinnitus are due to direct involvement of the ossicles of the inner ear. Plasma alkaline phosphatase levels represent increased bone turnover. Neither myeloma or metastatic bone disease would result in bony deformity such as skull enlargement. Alkaline phosphatase is a marker of bone formation and does not rise in pure lytic lesions such as multiple myeloma.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old woman comes to the emergency room in a coma. The patient's temperature is 35°C. She is bradycardic. Her thyroid gland is enlarged. There is bilateral hyporeflexia. Which of the following is the best next step in management?
Possible answers	a. Await results of T4, TSH b. Obtain T4, TSH; begin thyroid hormone and glucocorticoid c. Begin rapid rewarming d. Obtain CT scan of the head
The correct answer	The answer is b.
Rationale for the correct answ.	The clinical concern in this patient is myxedema coma. Once this diagnosis is considered, treatment must be started, as it is a medical emergency. Treatment is initiated; should lab results not support the diagnosis, then treatment would be stopped. An intravenous bolus of thyroxine is given (300 to 500 mcg), followed by daily intravenous doses. Glucocorticoids are given concomitantly. Intravenous fluids are also needed; rewarming should be accompanied slowly, so as not to precipitate cardiac arrhythmias. If alveolar ventilation is compromised, then intubation may also be necessary.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 30-year-old female complains of fatigue, constipation, and weight gain. There is no prior history of neck surgery or radiation. Her voice is hoarse and her skin is dry. Serum TSH is

	elevated and T4 is low. Which of the following is the most likely cause of these findings?
Possible answers	a. Autoimmune disease b. Postablative hypothyroidism c. Pituitary hypofunction d. Thyroid carcinoma
The correct answer	The answer is a.
Rationale for the correct answ.	This patient presents with classic features of hypothyroidism. Autoimmune thyroiditis usually occurs in women, has a genetic component, and is associated with other autoimmune conditions. Autoimmune thyroiditis may be present with a goiter (Hashimoto's thyroiditis) or with minimal residual thyroid tissue (atrophic thyroiditis). Once hypothyroidism is diagnosed by clinical features and TSH and free T4 measurements, etiology can be confirmed by measuring the presence of autoantibody—particularly thyroid peroxidase (TPO), which is present in 90 to 95% of patients with autoimmune hypothyroidism. Biopsy by fine needle aspirate can confirm the diagnosis but is not necessary in most cases.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 25-year-old woman is admitted for hypertensive crisis. In the hospital, blood pressure is labile and responds poorly to antihypertensive therapy. The patient complains of palpitations and apprehension. Her past medical history shows that she developed hypotension during an operation for appendicitis. Hct: 49% (37–48) WBC: $11 \times 10^3/\text{mm}^3$ (4.3–10.8) Plasma glucose: 160 mg/dL (75–115) Plasma calcium: 11 mg/dL (9–10.5) Which of the following is the most likely diagnosis?
Possible answers	a. Pheochromocytoma b. Renal artery stenosis c. Essential hypertension d. Insulin-dependent diabetes mellitus
The correct answer	The answer is a.
Rationale for the correct answ.	A hypertensive crisis in this young woman suggests a secondary cause of hypertension. In the setting of palpitations, apprehension, and hyperglycemia, pheochromocytoma should be considered. Pheochromocytomas are derived from the adrenal medulla. They are capable of producing and secreting catecholamines. Unexplained hypertension associated with surgery or trauma may also suggest the disease. Clinical symptoms are the result of catecholamine secretion. For example, the patient's hyperglycemia is a result of a catecholamine effect of insulin suppression and stimulation of hepatic glucose output. Hypercalcemia has been attributed to ectopic secretion of parathormone-related protein. Renal artery stenosis can cause severe hypertension but would not explain the systemic symptoms or laboratory abnormalities in this case.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 30-year-old man is evaluated for a thyroid nodule. The patient reports that his father died from thyroid cancer and that a brother had a history of recurrent renal stones. Blood calcitonin concentration is 2000 pg/mL (normal is less than 100); serum calcium and phosphate levels are normal. Before referring the patient to a surgeon, the physician should do which of the following?
Possible answers	<ul style="list-style-type: none"> a. Obtain a liver scan b. Perform a calcium infusion test c. Measure urinary catecholamines d. Administer suppressive doses of thyroxine and measure levels of thyroidstimulating hormone e. Treat the patient with radioactive iodine
The correct answer	The answer is c.
Rationale for the correct answ.	For the patient described, the markedly increased calcitonin levels indicate the diagnosis of medullary carcinoma of the thyroid. In view of the family history, the patient most likely has multiple endocrine neoplasia (MEN) type II, which includes medullary carcinoma of the thyroid gland, pheochromocytoma, and parathyroid hyperplasia. Pheochromocytoma may exist without sustained hypertension, as indicated by excessive urinary catecholamines. Before thyroid surgery is performed on this patient, a pheochromocytoma must be ruled out through urinary catecholamine determinations; the presence of such a tumor might expose him to a hypertensive crisis during surgery. The entire thyroid gland must be removed because foci of parafollicular cell hyperplasia, a premalignant lesion, may be scattered throughout the gland. Successful removal of the medullary carcinoma can be monitored with serum calcitonin levels. Hyperparathyroidism, while unlikely in this patient, is probably present in his brother. Hypoparathyroidism is unlikely with a normal serum calcium level.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	An ECG is brought to you with notation of this being a 62-year-old male with small cell carcinoma of the lung and hyponatremia. The electrocardiographic finding most likely to occur in this case is which of the following?
Possible answers	<ul style="list-style-type: none"> a. No abnormal change b. Shortened PR interval c. Prolonged PR interval d. Convex elevation of the J point (Osborn wave) e. Diffuse ST-segment elevation
The correct answer	The answer is a.
Rationale for the correct answ.	At serum sodium levels compatible with life, neither hyponatremia nor hypernatremia result in any characteristic ECG changes, although nonspecific ST-T changes could occur. A convex elevation of the J point (Osborn wave) is seen in hypothermia.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 54-year-old man who has had a Billroth II procedure for peptic ulcer disease now presents with abdominal pain and is found to have recurrent ulcer disease. The physician is considering this patient's illness to be secondary either to a retained antrum or to a gastrinoma. Which of the following tests would best differentiate the two conditions?
Possible answers	a. Random gastrin level b. Determination of 24-h acid production c. Serum calcium level d. Secretin infusion e. Insulin-induced hypoglycemia
The correct answer	The answer is d.
Rationale for the correct answ.	The diagnosis of gastrinoma should be considered in all patients with recurrent ulcers after surgical correction for peptic ulcer disease, ulcers in the distal duodenum or jejunum, ulcer disease associated with diarrhea, or evidence suggestive of the multiple endocrine neoplasia (MEN) type I (familial association of pituitary, parathyroid, and pancreatic tumors) in ulcer patients. Because basal serum gastrin and basal acid production may both be normal or only slightly elevated in patients with gastrinomas, provocative tests may be needed for diagnosis. Both the secretin and calcium infusion tests are used; a paradoxical increase in serum gastrin concentration is seen in response to both infusions in patients with gastrinomas. In contrast, other conditions associated with hypergastrinemia, such as duodenal ulcers, retained antrum, gastric outlet obstruction, antral G cell hyperplasia, and pernicious anemia, will respond with either no change or a decrease in serum gastrin.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 35-year-old alcoholic male is admitted for nausea, vomiting, and abdominal pain that radiates to the back. Which of the following laboratory values suggests a poor prognosis in this patient?
Possible answers	a. Elevated serum lipase b. Elevated serum amylase c. Leukocytosis of 20,000/.m d. Diastolic blood pressure greater than 90 mmHg
The correct answer	The answer is c.
Rationale for the correct answ.	The Ranson criteria are used to determine prognosis in acute pancreatitis. Factors that adversely affect survival include age greater than 55 years, leukocytosis greater than 16,000/.m, glucose greater than 200 mg/dL, LDH greater than 400 IU, and AST greater than 250 IU/L. After the

	initial 48 h, a decrease in hematocrit, hypocalcemia, hypoxemia, an increase in BUN, and hypoalbuminemia are also poor prognostic findings. Hypotension with systolic BP less than 90 mmHg is also a poor prognostic sign; diastolic hypertension is not correlated with prognosis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 30-year-old nursing student presents with confusion, sweating, hunger, and fatigue. Blood sugar is noted to be 40 mg/dL. The patient has no history of diabetes mellitus, although her sister is an insulin-dependent diabetic. The patient has had several similar episodes over the past year, all occurring just prior to reporting for work in the early morning. On this evaluation, the patient is found to have high insulin levels and a low C peptide level. Which of the following is the most likely diagnosis?
Possible answers	a. Reactive hypoglycemia b. Early diabetes mellitus c. Factitious hypoglycemia d. Insulinoma
The correct answer	The answer is c.
Rationale for the correct answ.	This clinical picture and laboratory results suggest factitious hypoglycemia caused by selfadministration of insulin. The diagnosis should be suspected in health care workers, patients or family members with diabetes, and others who have a history of malingering. Patients present with symptoms of hypoglycemia and low plasma glucose levels. Insulin levels will be high, but without a concomitant rise in C peptide. Endogenous hyperinsulinism, such as would be seen with an insulinoma, would result in elevated plasma insulin concentrations (>36 pmol/L) and elevated C peptide levels (>0.2 mmol/L). C peptide is derived from the breakdown of proinsulin, which is produced endogenously; thus C peptide will not rise in the patient who develops hypoglycemia from exogenous insulin. Reactive hypoglycemia occurs after meals and is self-limited. A rapid postprandial rise in glucose may induce a brisk insulin response that causes transient hypoglycemia hours later. It may be associated with gastric or intestinal surgery.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 46-year-old male with HIV and severe penicillin allergy receiving zidovudine, indinavir, and stavudine presents with fever, nonproductive cough, and severe hypoxia. Chest x-ray reveals diffuse increased interstitial markings and a possible lobar consolidation in the left lower lobe. After appropriate evaluation, the patient receives levofloxacin, trimethoprim-sulfa-methoxazole,

	and acyclovir. Initial serum creatinine is 1.6 mg/dL. On day 4, it has risen to 3.8 mg/dL and a normal serum potassium has risen to 7.1 mg/dL. Urinalysis reveals no casts, 10 to 20 WBC/HPF, and rare RBCs. Which drug is the most likely cause of renal failure?
Possible answers	a. Levofloxacin b. Trimethoprim-sulfamethoxazole c. Acyclovir d. Indinavir
The correct answer	The answer is b.
Rationale for the correct ans.	In the elderly or in patients with renal insufficiency, full doses of trimethoprim-sulfamethoxazole frequently cause drug-induced interstitial nephritis and hyperkalemia (due to inhibition of the sodium-potassium transport system in the distal nephron). Levofloxacin is a very rare cause of renal dysfunction. In the setting of volume depletion, acyclovir may cause acute renal failure secondary to intratubular obstruction from crystal deposition. Crystals are absent from the urine in this case. Indinavir may crystallize and cause either nephrolithiasis or renal failure due to tubular obstruction.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 70-year-old male presents with a complaint of fatigue. There is no history of alcohol abuse or liver disease; the patient is taking no medications. Scleral icterus is noted on physical exam. There is no evidence for chronic liver disease on physical exam, and the liver and spleen are nonpalpable. The patient has a normocytic, normochromic anemia. Urinalysis shows bilirubinuria with absent urine urobilinogen. Serum bilirubin is 12 mg/dL, AST and ALT are in normal range, and alkaline phosphatase is 300 U/L (3 times normal). Which of the following is the best next step in evaluation?
Possible answers	a. Ultrasound or CT scan b. Hepatitis profile c. Reticulocyte count d. Family history for hemochromatosis
The correct answer	The answer is a.
Rationale for the correct ans.	Patients with jaundice should be characterized as having unconjugated (indirect reacting) or conjugated (direct) hyperbilirubinemia. Causes of unconjugated hyperbilirubinemia include hemolysis, ineffective erythropoiesis, or enzyme deficiencies (the commonest in adults being Gilbert's syndrome). The patient, however, has a conjugated hyperbilirubinemia, which almost always indicates significant liver dysfunction, either hepatocellular or cholestatic (obstructive); this patient's predominant elevation of alkaline phosphatase suggests a cholestatic pattern. Normal transaminases rule out disease-causing hepatocellular damage (such as viral or alcoholic hepatitis). Instead, a disease of bile ducts or a cause of impaired bile excretion should be considered. Ultrasound or CT scan will evaluate the patient for biliary or pancreatic cancer or stone disease versus intrahepatic cholestasis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
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Discipline	General practice (family medicine)
Question	A 42-year-old man presents for the evaluation of splenomegaly, which was incidentally discovered on physical exam. You note mild abdominal distension with shifting dullness and perform diagnostic abdominal paracentesis. The fluid is straw-colored, nonbloody, and contains 320 white blood cells per .L, 68% of which are lymphocytes. The peritoneal fluid albumin level is 1.3 g/dL; the serum albumin level is 3.8 g/dL. Which of the following is the most likely diagnosis?
Possible answers	a. Portal hypertension b. Pancreatitis c. Tuberculous peritonitis d. Hepatoma
The correct answer	The answer is a.
Rationale for the correct answ.	A serum albumin minus ascitic fluid albumin greater than 1.1 suggests portal hypertension alone as a cause for ascites. Tuberculosis, pancreatitis, and malignancy would cause inflammation and increased capillary permeability, causing protein to leak into the ascitic fluid. This would result in a gradient between the serum and ascitic fluid of less than 1.1.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 63-year-old woman with cirrhosis due to chronic hepatitis C is hospitalized because of confusion. She has guaiac-positive stools and a lowgrade fever. She has received lorazepam for sleep disturbance. On physical exam, the patient is confused. She has no meningeal signs and no focal neurologic findings. There is hyperreflexia and a nonrhythmic flapping tremor of the wrist. Which of the following is the most likely explanation for this patient's mental status change?
Possible answers	a. Tuberculosis meningitis b. Subdural hematoma c. Alcohol withdrawal seizure d. Hepatic encephalopathy
The correct answer	The answer is d.
Rationale for the correct answ.	Hepatic encephalopathy presents as a change of consciousness, behavior, and neuromuscular function associated with liver disease. Hyperreflexia and asterixis (flapping tremor) are clinical manifestations of the disease process that result from toxins in the systemic circulation as a result of impaired hepatic clearance. Fever, gastrointestinal bleeding, and sedation are all potential precipitating factors in a patient with liver disease. Meningitis, subdural hematoma, and postictal state all occur in the alcoholic patient as well, and these may need to be distinguished from encephalopathy by additional tests such as lumbar puncture, CT scan, and EEG.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old black male with a history of alcohol and tobacco abuse has complained of difficulty swallowing solid food for the past 2 months. More recently, swallowing fluids has also become a problem. He has noted black, tarry stools on occasion. The patient has lost 10 lb. Which of the following statements is correct?
Possible answers	a. The patient's prognosis is good b. Barium contrast study is indicated c. The most likely diagnosis is peptic ulcer disease d. The patient has achalasia
The correct answer	The answer is b.
Rationale for the correct ans.	The most likely diagnosis in this patient is esophageal carcinoma. Dysphagia is progressive, first for solids and then liquids. There is blood in the stool and a history of weight loss. Alcohol use and cigarette smoking are risk factors. Prognosis is not good, as once there is trouble swallowing, there is significant esophageal narrowing and the disease is usually incurable. A barium contrast study should demonstrate an esophageal carcinoma with marked narrowing and an irregular, ragged mucosal pattern. Formerly squamous cell carcinoma accounted for 90% of esophageal cancer, but its incidence is decreasing. Now more than 50% are adenocarcinomas, most often associated with Barrett's esophagus. Achalasia should not cause guaiac-positive stools or progressive symptoms.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 34-year-old male presents with substernal discomfort. The symptoms are worse after meals, particularly a heavy evening meal, and are sometimes associated with hot/sour fluid in the back of the throat and nocturnal awakening. The patient denies difficulty swallowing, pain on swallowing, or weight loss. The symptoms have been present for 6 weeks; the patient has gained 20 lb in the past 2 years. Which of the following is the most appropriate initial approach?
Possible answers	a. A therapeutic trial of ranitidine b. Exercise test with thallium imaging c. Esophagogastroduodenoscopy d. CT scan of the chest
The correct answer	The answer is a.
Rationale for the correct ans.	In the absence of alarm symptoms (such as dysphagia, odynophagia, weight loss, or gastrointestinal bleeding), a therapeutic trial of acid reduction therapy is reasonable. Mild to moderate GERD symptoms often respond to H ₂ blockers. More severe disease, including erosive esophagitis, usually requires proton pump inhibitor therapy for 8 weeks before healing. If the patient has recurrent symptoms or has had symptomatic GERD for over 5 years,

	endoscopy may be indicated to rule out Barrett's esophagus (gastric metaplasia of the lower esophagus). Barrett's esophagus is a premalignant condition, and most patients receive surveillance EGD every 2 to 3 years, although evidence of mortality benefit from this approach is not available. In the absence of alarm symptoms, a therapeutic trial is generally favored over the more expensive invasive approach.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A nursing student has just completed her hepatitis B vaccine series. On reviewing her laboratory studies (assuming she has no prior exposure to hepatitis B), you should expect which of the following?
Possible answers	a. Positive test for hepatitis B surface antigen b. Antibody against hepatitis B surface antigen (anti-HBs) alone c. Antibody against hepatitis core antigen (anti-HBc) d. Antibody against both surface and core antigen e. Antibody against hepatitis E antigen
The correct answer	The answer is b.
Rationale for the correct ans.	The current hepatitis B vaccine is genetically engineered to consist of hepatitis B surface antigen particles. Therefore, only antibody to surface antigen will be detected after vaccination. Since the patient has had no exposure to hepatitis B, she should be surface antigen-negative; surface antigen positivity means active disease, either acute or chronic. Patients who have recovered from hepatitis B have antibodies both to HBs and HBc.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 40-year-old white male complains of weakness, weight loss, and abdominal pain. On examination, the patient has diffuse hyperpigmentation and a palpable liver edge. Polyarthritis of the wrists and hips is also noted. Fasting blood sugar is 185 mg/dL. Which of the following is the most likely diagnosis?
Possible answers	a. Insulin-dependent diabetes mellitus b. Pancreatic carcinoma c. Addison's disease d. Hemochromatosis
The correct answer	The answer is d.
Rationale for the correct	Hemochromatosis is a disorder of iron storage that results in deposition of iron in parenchymal cells. The liver is usually enlarged, and excessive skin pigmentation is present in 90% of

answ.	symptomatic patients at the time of diagnosis. Diabetes occurs secondary to direct damage of the pancreas by iron deposition. Arthropathy develops in 25 to 50% of cases. Other diagnoses listed could not explain all the manifestations of this patient's disease process. Addison's disease can cause weight loss and hyperpigmentation but does not affect the liver or joints; it is associated with hypoglycemia rather than diabetes mellitus.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 72-year-old woman notices progressive dysphagia to solids and liquids. There is no history of alcohol or tobacco use, and the patient takes no medications. She denies heartburn, but occasionally notices the regurgitation of undigested food from meals eaten several hours before. Her barium swallow is shown. Which of the following is the cause of this condition?
Possible answers	a. Growth of malignant squamous cells into the muscularis mucosa b. Scarring due to silent gastroesophageal reflux c. Spasm of the lower esophageal sphincter d. Loss of intramural neurons in the esophagus
The correct answer	The answer is d.
Rationale for the correct ans.	The barium swallow shows the dilated baglike proximal esophagus and tapered distal esophageal ring characteristic of achalasia. This is a motor disorder of the esophagus and classically produces dysphagia to both solids and liquids. Structural disorders such as cancer and stricture usually cause trouble swallowing solids as the first manifestation. In achalasia, manometry shows elevated pressure and poor relaxation of the lower esophageal sphincter. In classic achalasia the contractions of the esophagus are weak, although a variant called vigorous achalasia is associated with large-amplitude prolonged contractions. Medications (nitrates, calcium channel blockers, botox injections into the LES) or physical procedures (balloon dilatation or surgical myotomy) that decrease LES pressure are the recommended treatments.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 73-year-old male undergoes abdominal aortic aneurysm repair. Postoperatively, his blood pressure is 110/70, abdominal aortic heart rate is 110, surgical wound is clean, and a Foley catheter is in place. His urine output drops to 40 cc/h, and creatinine rises from 1.5 to 2.2 mg/dL. Which of the following diagnostic tests is more useful for this patient?
Possible answers	a. Urine sodium b. Urinalysis

	c. Renal ultrasound d. Urine uric acid–urine creatinine ratio
The correct answer	The answer is b.
Rationale for the correct answ.	Urinalysis would be the best test because it is likely to show muddy brown granular casts, diagnostic of acute tubular necrosis and consistent with rhabdomyolysis-induced ARF. In oliguric (less than 20 mL urine per hour) ARF, a urine sodium less than 10 meq/L suggests prerenal azotemia; a value greater than 20 meq/L suggests acute tubular necrosis. Urine sodium is not useful in nonoliguric ARF (greater than 20 mL urine per hour). Obstructive uropathy is unlikely with the multiple electrolyte disorders in this patient. However, renal ultrasound is an appropriate test in a 76-year-old male to be sure occult obstruction is not contributing to renal failure. Despite the high serum uric acid, acute urate nephropathy does not occur with rhabdomyolysis. Acute urate nephropathy may occur with chemotherapy of aggressive tumors (e.g., Burkitt's lymphoma) and is characterized by a urine uric acid–creatinine ratio greater than 1.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 46-year-old male with HIV and severe penicillin allergy receiving zidovudine, indinavir, and stavudine presents with fever, nonproductive cough, and severe hypoxia. Chest x-ray reveals diffuse increased interstitial markings and a possible lobar consolidation in the left lower lobe. After appropriate evaluation, the patient receives levofloxacin, trimethoprim-sulfamethoxazole, and acyclovir. Initial serum creatinine is 1.6 mg/dL. On day 4, it has risen to 3.8 mg/dL and a normal serum potassium has risen to 7.1 mg/dL. Urinalysis reveals no casts, 10 to 20 WBC/HPF, and rare RBCs. Which drug is the most likely cause of renal failure?
Possible answers	a. Levofloxacin b. Trimethoprim-sulfamethoxazole c. Acyclovir d. Indinavir
The correct answer	The answer is b.
Rationale for the correct answ.	In the elderly or in patients with renal insufficiency, full doses of trimethoprim-sulfamethoxazole frequently cause drug-induced interstitial nephritis and hyperkalemia (due to inhibition of the sodium-potassium transport system in the distal nephron). Levofloxacin is a very rare cause of renal dysfunction. In the setting of volume depletion, acyclovir may cause acute renal failure secondary to intratubular obstruction from crystal deposition. Crystals are absent from the urine in this case. Indinavir may crystallize and cause either nephrolithiasis or renal failure due to tubular obstruction.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)

Question	A 27-year-old alcoholic presents with the following electrolytes: calcium 6.9 mg/dL, albumin 3.5 g/dL, magnesium 0.7 mg/dL, phosphorus 2.0 mg/dL. Which of the following is the most important cause of the hypocalcemia?
Possible answers	a. Poor dietary intake b. Hypoalbuminemia c. Decreased parathyroid hormone release due to hypomagnesemia d. Decreased end organ response to parathyroid hormone due to hypomagnesemia
The correct answer	The answer is d.
Rationale for the correct answ.	he major effect of hypomagnesemia on parathyroid hormone is decreased end organ response, including bone resistance and reduced renal synthesis of 1,25(OH) ₂ D. A less important effect is impaired hormone release. Hypoalbuminemia decreases the serum calcium by 0.8 mgCa/g albumin and is a minor factor. Due to parathyroid hormone, dietary intake is a less important factor.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 27-year-old female presents to the emergency room with a panic attack. Electrolytes include calcium of 10.5 mg/dL, albumin 4.0 g/dL, phosphorus 0.8 mg/dL, and magnesium of 1.0 mg/dL. Arterial blood gases include a pH of 7.56, PCO ₂ 21 mmHg, PO ₂ 99 mmHg. Which of the following is the most important cause of the hypophosphatemia?
Possible answers	a. Hypomagnesemia b. Hyperparathyroidism c. Respiratory alkalosis d. Poor dietary intake
The correct answer	The answer is c.
Rationale for the correct answ.	Respiratory alkalosis is one of the commonest causes of hypophosphatemia; it is due to intracellular shifts. Hypomagnesemia alone would increase phosphorus by decreasing parathormone effect. Hyperparathyroidism can decrease phosphorus, but not to this degree; also, calcium is not elevated. Severe hypophosphatemia is seen with poor intake, but occurs during the refeeding stage with carbohydrate intake.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A diabetic male presents with hypertension and 24-h urine showing 200 mg of albumin. In a diabetic patient with microalbuminuria, which of the following is the appropriate drug for treatment of hypertension to prevent progression of renal failure?
Possible answers	a. Beta blocker b. Thiazide diuretic c. Angiotensin-converting enzyme inhibitor d. Short-acting dihydropyridine calcium channel blocker for precise control (nifedipine)
The correct answer	The answer is c.
Rationale for the correct ans.	By a variety of mechanisms, angiotensin-converting enzyme inhibitors help to preserve renal function in this situation. Angiotensin receptor blockers or the combination are favored by some. Two caveats: be sure to monitor serum potassium, and, in the older patient with potential renal vascular disease, monitor serum creatinine after initiation of therapy. Although many diabetic patients receive beta blockers due to coronary disease, these are not first-line drugs for preventing progression of renal failure. Caution is necessary in using beta blockers, as they may blunt the symptoms and physiologic response to hypoglycemia. Because of low cost and proven efficacy, thiazide diuretics remain a good choice for the general population, but do not have a specific effect on progression of renal disease. Short-acting dihydropyridine calcium channel blockers (nifedipine) may increase the incidence of stroke and myocardial infarction, and have no role in the treatment of hypertension.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 29-year-old male with HIV, on indinavir, zidovudine, and stavudine, presents with severe edema and a serum creatinine of 2.0 mg/dL. He has had bone pain for 5 years and takes large amounts of acetaminophen with codeine, aspirin, and ibuprofen. He is on prophylactic trimethoprim sulfamethoxazole. Blood pressure is 170/110; urinalysis shows 4+ protein, 5 to 10 RBC, 0 WBC; 24-h urine protein is 6.2 g. Which of the following is the most likely cause of his renal disease?
Possible answers	a. Indinavir toxicity b. Analgesic nephropathy c. Trimethoprim sulfamethoxazole–induced interstitial nephritis d. Focal glomerulosclerosis
The correct answer	The answer is d.
Rationale for the correct ans.	Although many glomerular lesions occur in association with HIV, focal sclerosis is by far the commonest etiology of this patient's syndrome. While focal sclerosis is more common in intravenous drug users than in homosexuals, the lesion is different than so-called heroin nephropathy. Indinavir toxicity may cause tubular obstruction by crystals and is a cause of renal stones, but does not cause nephrotic syndrome. Analgesic nephropathy is a frequently unrecognized cause of occult renal failure; this entity requires at least 10 years of analgesic use and rarely causes significant proteinuria. Trimethoprim-sulfamethoxazole may cause acute interstitial nephritis, but there is no fever, rash, WBC casts, or eosinophils in the urinalysis.

Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006
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Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old male is brought in by ambulance and is unable to speak. The EMS personnel tell you that a neighbor informed them he has had a stroke in the past. There are no family members present. His serum sodium is 118 meq/L. Which of the following is the most helpful first step in the assessment of this patient's hyponatremia?
Possible answers	a. Order a chest X-ray b. Place a Foley catheter to obtain urine sample c. Determine extracellular fluid volume status d. Order a head CT scan e. Order a urine Na ⁺
The correct answer	The answer is c.
Rationale for the correct answ.	The first step in the clinical assessment if hyponatremia is a thorough history and physical exam, including the assessment of extracellular fluid status. Increased ECF in the setting of hyponatremia may be due to heart failure, hepatic cirrhosis, nephrotic syndrome, or renal insufficiency. A normal ECF in the same setting would indicate a disorder such as SIADH, whereas a decreased ECF would lead to a determination of urine Na ⁺ concentration to further determine whether the hyponatremia was due to extrarenal versus intrarenal sodium loss. Determination of plasma osmolality is helpful in the setting of hyponatremia. Most patients with hyponatremia will present with a low plasma osmolality. A high plasma osmolality indicates disorders such as hyperglycemia and a normal plasma osmolality can indicate disorders such as hyperproteinemia and hyperlipidemia. In a clinical setting such as this, determination of ECF status as you are performing the physical exam (history would be limited due to patient's inability to communicate) would be most appropriate. You would not wait for the plasma osmolality before beginning assessment and development of an initial differential diagnosis. Helpful laboratory assessment in the face of hyponatremia includes plasma osmolality, urine osmolality, and urine K ⁺ and Na ⁺ concentration.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old female complains of vague abdominal pain, constipation, and a sense of fullness in the lower abdomen. On physical exam the abdomen is nontender, but there is shifting dullness to percussion. Which of the following is the best next step in evaluation?
Possible answers	a. Abdominal ultrasound b. Pelvic examination c. CA 125 cancer antigen d. Sigmoidoscopy
The correct answer	The answer is b.

Rationale for the correct ans.	The first step in this patient's evaluation is a pelvic exam to check for ovarian cancer. Pelvic fullness, vague discomfort, constipation, and early satiety are often the first symptoms of this disease. Ascites may be present on initial evaluation. Abdominal ultrasound would follow. The CA 125 cancer antigen supports the diagnosis of ovarian cancer, but it is not sensitive or specific. If the pelvic exam and ultrasound were negative, sigmoidoscopy might be indicated to evaluate the patient's constipation.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 40-year-old male complains of hematuria and an aching pain in his right flank. Laboratory data show normal BUN, creatinine, and electrolytes. Hemoglobin is elevated at 18 g/dL and serum calcium is 11 mg/dL. A solid renal mass is found by ultrasound. Which of the following is the most likely diagnosis?
Possible answers	a. Polycystic kidney disease b. Renal carcinoma c. Adrenal adenoma d. Urolithiasis
The correct answer	The answer is b.
Rationale for the correct ans.	Renal carcinoma is twice as common in men as women and tends to occur in the 50- to 70-year age group. Many patients present with a hematuria or flank pain, but the classic triad of hematuria, flank pain, and a palpable flank mass occurs in only 10 to 20% of patients. Paraneoplastic syndromes such as erythrocytosis, hypercalcemia, hepatic dysfunction, and fever of unknown origin are common. Surgery is the only potentially curable therapy; the results of treatment with chemotherapy or radiation therapy for nonresectable disease have been disappointing. Interferon and interleukin 2 produce responses (but no cures) in 10 to 20% of patients. The prognosis for metastatic renal cell carcinoma is dismal.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 20-year-old black male presents to the emergency room complaining of diffuse bone pain and requesting narcotics for his sickle cell crisis. Which of the following physical exam features would suggest an alternative diagnosis to sickle cell anemia (hemoglobin SS)?
Possible answers	a. Scleral icterus b. Systolic murmur c. Splenomegaly

	d. Ankle ulcers
The correct answer	The answer is c.
Rationale for the correct ans.	Splenomegaly is not typical of sickle cell anemia. Recurrent splenic infarcts usually occur during childhood and lead to a small, infarcted spleen with functional asplenia. These patients often have Howell-Jolly bodies on peripheral blood smear (indicative of asplenia) and have an increased incidence of infection with encapsulated organisms. The presence of an enlarged spleen in a patient with sickle cells on peripheral blood smear is most often seen in hemoglobin SC disease. The state of hemolysis results in an unconjugated hyperbilirubinemia and low-grade icterus. Anemia and hypoxemia result in a hyperdynamic circulation and a systolic ejection murmur. Ankle ulcers and other chronic skin ulcers may be persistent problems, particularly in those with severe anemia.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 78-year-old man complains of increasing fatigue and bone pain, especially around the knees and ankles. He has a long-standing anemia with a hemoglobin of 9 to 10 g/dL and MCV of 102. He had not responded to therapeutic trials of iron and vitamin B12, but had been symptomatically stable until the past month. Examination reveals pallor and spleen tip just palpable at the left costal margin. CBC reveals hemoglobin of 8.2 g/dL, but for the first time his platelet count is low (15,000); the white blood cell count is 14,000. What is the likely cause of his worsening anemia?
Possible answers	a. Folic acid deficiency b. Acute myeloid leukemia c. Myelofibrosis d. Tuberculosis e. Viral infection
The correct answer	The answer is b.
Rationale for the correct ans.	The patient has probably had myelodysplastic syndrome (MDS) for years. This is a common cause of anemia with mild macrocytosis in the elderly. Some of these patients will transform into acute myeloid leukemia. The leukemic cells can expand the marrow and cause diffuse bone pain (especially over the sternum and around the knees). Although 20% of patients with MDS can have mild splenomegaly, the newly detected spleen tip and the rapidly worsening pancytopenia suggest that leukemic cells are squeezing out the normal hematopoietic cells. Patients with secondary AML (i.e., AML that arises from a preexisting hematopoietic disease) have a grave prognosis and respond poorly to combination chemotherapy.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 54-year-old alcoholic woman presents with upper gastrointestinal bleeding and receives 4

	units of packed red blood cells and 8 units of fresh frozen plasma. The bleeding stabilizes, but two days later the patient develops respiratory distress and hypoxemia. A chest X-ray shows bilateral infiltrates consistent with pulmonary edema. Which of the following is the likely cause of her respiratory symptoms?
Possible answers	a. Aspiration pneumonia b. Pulmonary emboli c. Transfusion reaction d. Pneumocystis carinii pneumonia
The correct answer	The answer is c.
Rationale for the correct ans.	Although the risk of the transmission of infectious agents with transfusions is very low (probably less than one in a million for hepatitis C and HIV), other types of transfusion reactions still occur. Febrile and allergic reactions occur between 1 and 4% of the time. A more serious consequence is transfusion-related acute lung injury (TRALI), a form of noncardiogenic pulmonary edema that, while selflimited, can lead to respiratory failure and the need for mechanical ventilation. It is caused by antibodies in the donor plasma that bind to HLA antigens on the patient's white blood cells. Aspiration pneumonia can mimic TRALI but usually has other features (e.g., purulent sputum) to distinguish it.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 53-year-old female presents to the emergency room with a minor injury and is found to have a blood pressure of 150/102, possibly elevated due to pain. On follow-up at your office, her BP on two occasions is 142/94 despite good dietary habits and reasonable exercise. Her history and physical are essentially normal except that she has had a hysterectomy. Basic lab evaluation reveals no significant abnormalities. Based on recent recommendations of the JNC 7 (The Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure) which of the following is accurate information to give her?
Possible answers	a. At age >50, high diastolic BP becomes a more important cardiovascular risk factor than high systolic b. The new classification of prehypertension fits her latest BP readings; continue close follow-up c. Thiazide diuretics are being emphasized as the initial antihypertensive for most and would be a good choice for her d. Initiating therapy with two antihypertensives would be preferred based on her current BP e. Estrogen-replacement therapy would be helpful in delaying her need for antihypertensives
The correct answer	The answer is c.
Rationale for the correct ans.	A key point in the JNC 7 is that a thiazide diuretic should be used in most patients with uncomplicated hypertension when diet and lifestyle modifications are not sufficient. Other major points include (1) systolic BP > 140 is a more important cardiovascular risk factor than diastolic BP in persons over age 50; (2) individuals normotensive at age 55 still have a 90% lifetime risk of developing hypertension, and CVD risk doubles, beginning at 115/75, for each rise in BP of 20/10; (3) a new category of prehypertension has been designated with systolic BP 120 to 139 or diastolic BP 80 to 89, with emphasis on healthy diet and lifestyle modifications;

	(4) most patients will require two or more antihypertensives to achieve goal BP, which is <140/90 except in diabetes or renal disease; (5) if BP > 20/10 above goal is present at the outset, consider initiating therapy with two agents. Estrogen-replacement plays no beneficial cardiovascular role here.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A patient with type 2 diabetes mellitus is found to have a blood pressure of 152/98. She has never had any ophthalmologic, cardiovascular, or renal complications of diabetes or hypertension. Which of the following is the currently recommended goal for blood pressure control in this case?
Possible answers	a. Less than 160/90 b. Less than 145/95 c. Less than 140/90 d. Less than 130/80 e. Less than 120/70
The correct answer	The answer is d.
Rationale for the correct answ.	Goals for blood pressure control and lipid levels are typically more stringent in the diabetic compared to the nondiabetic. The previously recommended goal blood pressure of <130/85 has been shifted down to <130/80. The same is true for those with renal disease.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	409. A 60-year-old white male just moved to town and needs to establish care for coronary artery disease, given the fact that he had a “heart attack” last year. Preferring a “natural” approach, he has been very conscientious about low-fat, low-cholesterol eating habits and a significant exercise program, but gradually eliminated a number of prescription medications (he does not recall their names) that he was on at the time of hospital discharge. Past history is negative for hypertension, diabetes, or smoking. The lipid profile you obtain shows the following: Total cholesterol: 198 mg/dL Triglycerides: 160 mg/dL HDL: 42 LDL (calculated): 124. Which of the following recommendations would most optimally treat his lipid status?
Possible answers	a. Continue current dietary efforts and exercise b. Add an HMG-CoA reductase inhibitor (statin drug) c. Add a fibric acid derivative such as gemfibrozil d. Review previous medications and resume an angiotensin-converting enzyme inhibitor
The correct answer	The answer is b.
Rationale for the correct answ.	The National Cholesterol Education Program Adult Treatment Panel III recommendations include lowering the LDL cholesterol to <100 mg/dL in those with known coronary heart disease (secondary prevention). The 2004 update to these guidelines adds an optional

	goal of LDL < 70 mg/dL in very high risk patients. In this case, with dietary efforts and exercise already well-established and unlikely to reduce LDL further, a statin drug is indicated. These typically lower LDL by 20 to 50%. Gemfibrozil is used primarily for hypertriglyceridemia. ACE inhibitors have no significant effect on lipids.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old male had an anterior myocardial infarction 3 months ago. He currently is asymptomatic and has normal vital signs and a normal physical exam. He is on an antiplatelet agent and an ACE inhibitor. What other category of medication would typically be prescribed for secondary prevention of myocardial infarction?
Possible answers	a. Alpha blocker b. Beta blocker c. Calcium channel blocker d. Nitrates
The correct answer	The answer is b.
Rationale for the correct ans.	Beta blockers are documented to lower the risk of myocardial reinfarction, whereas calcium channel blockers may increase the risk. Alpha blockers have been associated with an increased risk of congestive heart failure. ACE inhibitors are beneficial in this setting, and the data is accumulating that angiotensin II receptor blockers are as well. Despite their decades-long use in the treatment of coronary artery disease, such as for angina, nitrates are not indicated for secondary prevention of infarction.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old white male who comes for general checkup is a healthy nonsmoker, free of hypertension, diabetes, or cardiac disease. However, his 53-year-old brother had coronary artery bypass surgery this year. You order a fasting lipid profile and are able to calculate his coronary heart disease 10-year risk as 6%. Which of the following is the currently recommended LDL target level for this patient?
Possible answers	a. Less than 160 mg/dL b. Less than 130 mg/dL c. Less than 100 mg/dL d. Less than 70 mg/dL
The correct answer	The answer is b.
Rationale for	The National Cholesterol Education Program Adult Treatment Panel III primary prevention

the correct answ.	guidelines include lowering the LDL to <160 mg/dL if the patient is free of coronary heart disease and with zero or one risk factor. Less than 130 mg/dL is recommended if free of coronary heart disease and with two or more risk factors. These risk factors include cigarette smoking, hypertension (BP 140/90 or greater, or an antihypertensive medication), low HDL cholesterol (<40 mg/dL), family history of premature coronary heart disease (CHD in first-degree male relative <55 years or in female <65 years old), and age (men 45 years old or greater; women 55 or greater). The goal is <100 mg/dL in the presence of known coronary heart disease or coronary heart disease equivalents such as diabetes or calculated CHD 10 year risk of >20%. In this example, although the patient is healthy, he has two risk factors by virtue of being male age 45 years or older, plus family history of early coronary heart disease, but the CHD 10-year risk is low. Therefore the goal is <130. If specific BP and lipid numbers had been given in the question and his CHD 10-year risk had calculated to be in the 10 to 20% range (i.e., moderately high risk), the new 2004 ATP III update adds a more aggressive optional goal of <100.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 58-year-old male has a history of hypertension and asks about reducing his risk for myocardial infarction. A lipid profile is obtained that shows a low HDL cholesterol of 32 mg/dL. An important recommendation in attempting to raise the HDL would be:
Possible answers	a. Aspirin, one tablet each day b. Dehydroepiandrosterone (DHEA) c. Vitamin E, 400 U each day d. Folic acid plus pyridoxine (vitamin B6) e. Exercise
The correct answer	The answer is e.
Rationale for the correct answ.	Within this group of choices, only exercise has been shown to raise HDL. Among current lipid-lowering medications, nicotinic acid has the most potent HDL-increasing effect at 15 to 35%, followed by fibric acids and then statins. Alcohol also increases the HDL level (HDL2 and HDL3 subfractions), thereby imparting some cardioprotective effect, but at the risk of cardiomyopathy, sudden death, hemorrhagic stroke, and other noncardiovascular problems among heavy drinkers. The cardiovascular system may benefit from aspirin via antiplatelet effects and folic acid/pyridoxine via lowering high homocysteine levels; after initial enthusiasm for vitamin E, more recent studies have not shown consistent cardiovascular benefit from antioxidant vitamins. None of these raise HDL. DHEA lowers HDL.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 32-year-old diabetic female who takes an estrogen-containing oral contraceptive and drinks three beers per day is found to have a triglyceride level greater than 1000 mg/dL. She is at most risk for which of the following complications?
Possible answers	a. Acute pancreatitis b. Sudden cardiac death c. Acute peripheral arterial occlusion d. Acute renal insufficiency

	e. Myositis
The correct answer	The answer is a.
Rationale for the correct answ.	Hypertriglyceridemia, which is enhanced by poorly controlled diabetes, estrogen, and alcohol, predisposes to pancreatitis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 28-year-old, otherwise healthy white female on no medications presents to the ER with chest pressure, dizziness, numbness in both hands, and feeling of impending doom that began while walking in the mall. Physical exam reveals no specific abnormalities. The most appropriate direction to take in the management plan would be which of the following?
Possible answers	a. Exercise stress testing b. Echocardiography c. Empiric proton pump inhibitor therapy d. Reassurance plus alprazolam and/or antidepressant therapy e. Chest CT scan with consideration of IV heparin
The correct answer	The answer is d.
Rationale for the correct answ.	Although other possibilities need to be considered and possibly evaluated, the patient's age and symptoms are consistent with panic disorder. The diagnostic criteria for panic attack are a discrete period of intense fear or discomfort, in which four or more of the following symptoms develop abruptly and reach a peak within 10 min: palpitations, pounding heart, or accelerated heart rate; sweating; trembling or shaking; sensations of shortness of breath or smothering; feeling of choking; chest pain or discomfort; nausea or abdominal distress; feeling dizzy, unsteady, lightheaded, or faint; derealization or depersonalization; fear of losing control or going crazy; fear of dying; paresthesias; chills or hot flushes. Patient education/awareness is fundamentally important. Drug therapy may consist of antidepressants and/or the benzodiazepine alprazolam. The other answers allude to diagnoses of angina or other heart disease, gastroesophageal reflux, or pulmonary embolus. Angina would be unlikely in such a young female; GERD also more likely in an older person and typically at night upon lying down; PE not likely with normal exam, including absence of tachypnea.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 45-year-old, generally healthy female on no medications comes to your office with a 10-day history of nasal congestion, sore throat, dry cough, and initial low-grade fever, all of which

	were nearly resolved. However, over the past 24 to 48 h she has developed a sharp chest pain, worse with deep inspiration or cough, but no dyspnea. Due to the severity of the pain, the nurse had obtained an ECG, which showed diffuse ST elevation. On physical exam, you expect the most likely finding to be which of the following?
Possible answers	a. A loud pulmonic component of S2 b. An S3 gallop c. A pericardial friction rub d. Bilateral basilar rales e. Elevated blood pressure >160/100
The correct answer	The answer is c.
Rationale for the correct ans.	This history and ECG suggest acute postviral pericarditis, in which the most likely confirmatory physical finding of those listed would be the pericardial friction rub. This may be transitory and may best be heard in expiration with patient upright or leaning forward. A loud S2 might be heard with a pulmonary embolus, an S3 gallop with CHF, and bibasilar rales with CHF or possibly pneumonia.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 25-year-old male PhD candidate recently traveled to Central America for 1 month to gain further information for his dissertation regarding the socioeconomics of that region. While there, he took ciprofloxacin twice a day for 5 days for diarrhea. However, over the 2 to 3 weeks since coming home, he has continued to have occasional loose stools plus vague abdominal discomfort and bloating. There has been no rectal bleeding. Which of the following therapies is most likely to relieve this traveler's diarrhea?
Possible answers	a. Ciprofloxacin (repeat course) b. Doxycycline c. Metronidazole d. Trimethoprim-sulfa (Bactrim DS) e. Oral glucose-electrolyte solution
The correct answer	The answer is c.
Rationale for the correct ans.	Giardia lamblia gives the subacute to chronic picture as described in this patient and responds to metronidazole therapy. It is contracted by ingesting contaminated food or water, with the classic zoonotic reservoirs being the freshwater streams of the northern United States and also the water supplies in Russia and developing countries. Bacterial pathogens such as Campylobacter jejuni, enterotoxigenic E. coli, Salmonella, and Shigella usually cause acute diarrhea, often bloody. They usually respond to fluoroquinolones or azithromycin. Oral glucose-electrolyte solution rehydration is the mainstay of Vibrio cholerae therapy. Hydration rather than antibiotics is also the key for enterohemorrhagic E. coli.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 25-year-old asymptomatic HIV-positive male with CD4+ cell count of 525 comes to you for travel advice and immunizations prior to a trip to Indonesia. Which of the following is an inappropriate recommendation?
Possible answers	a. Give tetanus-diphtheria booster if not up-to-date b. Give oral polio booster if not up-to-date c. Start hepatitis B immunization series if never received d. Give pneumococcal vaccine if never received e. Give second MMR if only one dose previously received f. Give malaria prophylaxis
The correct answer	The answer is b.
Rationale for the correct answ.	The usual immunizations may be given to an HIV-infected person, preferably as early in the course as possible, except for oral polio vaccine (and varicella). OPV yields an unacceptably high risk of live virus proliferation and paralytic polio. Immunocompromised persons and their household contacts should receive inactivated poliovirus vaccine (IPV), not OPV.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	In August you saw a debilitated 80-year-old female who required nursing home placement. She had had no immunizations for many years except for a pneumococcal vaccine 3 years ago when discharged from the hospital after a stay for pneumonia. Appropriate admission orders to the nursing home in August included which of the following?
Possible answers	a. Flu shot b. Haemophilus influenzae B immunization c. Hepatitis B immunization series d. Pneumococcal revaccination e. Tetanus-diphtheria toxoid booster
The correct answer	The answer is e.
Rationale for the correct answ.	A Td (adult tetanusdiphtheria booster) should be given every 10 years. A flu shot should be given in this age group, but at the appropriate time in the fall. There is no recommendation to give the Haemophilus immunization in adults. This patient is not in one of the high-risk categories for hepatitis B (including health care workers, hemodialysis patients, routine recipients of clotting factors, travelers to endemic areas, persons at elevated risk for sexually transmitted diseases, injection drug users, those in institutions for the mentally retarded, and household contacts of hepatitis B carriers) and therefore has no specific indication to receive this series. The pneumococcal vaccine may be given again to higher-risk individuals at least 5 years after the original.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	An asymptomatic 50-year-old man who has smoked one pack of cigarettes per day for 30 years comes to you for a general checkup and wants “the works” for cancer screening. In fact, he hands you a list of tests he desires. Which test is inappropriate based on American Cancer Society guidelines?
Possible answers	a. Chest x-ray b. Digital rectal exam c. Flexible sigmoidoscopy d. Prostate-specific antigen (PSA) blood test e. Skin exam
The correct answer	The answer is a.
Rationale for the correct answ.	Neither the chest x-ray nor any other test has proven to be an effective screen for lung cancer (although spiral chest CT shows some promise). The digital rectal exam aids in screening for rectal and prostate cancer. Other options regarding colorectal cancer are flexible sigmoidoscopy every 5 years, colonoscopy every 10 years, or double-contrast barium enema every 5 to 10 years. PSA levels, though somewhat controversial, play a role in prostate cancer screening. The physical exam remains important (e.g., in detection of testicular and skin cancers), although definitive evidence regarding screening is sparse.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	An asymptomatic 35-year-old female comes to you for routine exam. She has no unusual family history of breast cancer. Based on American Cancer Society guidelines for early detection of breast cancer, this patient at standard risk should be advised to do which of the following?
Possible answers	a. Perform breast self-examination monthly b. Obtain physician-performed breast examination yearly c. Begin yearly mammograms d. Obtain genetic testing via blood work as a baseline e. Wait until age 40 to begin cancer screening
The correct answer	The answer is a.
Rationale for the correct answ.	For early detection of breast cancer, the American Cancer Society recommends breast selfexamination monthly starting at age 20; breast physical examination every 3 years from ages 20 to 40, then yearly; and mammography every year beginning at age 40. Other organizations advise mammography every 1 to 2 years from ages 40 to 50, then yearly, possibly stopping at age 70 or 75.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	On presentation for yearly exam, a healthy, non-sexually active, postmenopausal 60-year-old female gives a history of having had normal yearly mammograms and normal yearly Pap smears over the past 10 years, but has never had an endometrial tissue sample or any screening test for ovarian cancer. The most clearly indicated cancer screening evaluation on today's visit is which of the following?
Possible answers	a. Bilateral mammogram b. Pap smear c. Endometrial tissue sample d. CA 125 blood test e. CEA level
The correct answer	The answer is a.
Rationale for the correct ans.	Breast cancer is the most common of women's cancers. Mammography is still recommended yearly from age 50 upward (and every 1 to 2 years from ages 40 to 50, depending on the organization, some of which also conclude exams at age 70 or 75). Pap smears to screen for cervical cancer may be performed yearly, but after three consecutive normal exams this may be done less frequently. Endometrial tissue samples for uterine cancer become important at menopause if at high risk. There is no true screening test for ovarian cancer at present. CEA levels are not recommended as a colon cancer screen.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	You have been asked to perform a preoperative consultation on a 66 year-old male who will be undergoing transurethral resection of the prostate for urinary retention. Of the following findings, which you detect by history, physical, ECG, and lab, which is of most concern in predicting a cardiac complication in this patient undergoing noncardiac surgery?
Possible answers	a. Age over 65 b. Current cigarette use at one pack per day c. Serum creatinine 2.2 mg/dL d. History of three alcoholic drinks/day with ALT (SGOT) 60 mg/dL e. ECG (and subsequent cardiac monitoring) with right bundle branch block and 5 PVCs/minute f. The nature of the surgery itself (on the high-risk list)
The correct	The answer is c.

answer	
Rationale for the correct answ.	The original standard for the measurement of cardiac risk in the setting of noncardiac surgery was the Goldman index. The American Heart Association and American College of Cardiology also have guidelines. More recently, the revised cardiac risk index of Lee has gained preference as more accurate. Its six predictive factors for post-op cardiac complications are high-risk type of surgery (intraperitoneal, intrathoracic, or suprainguinal vascular), ischemic heart disease, history of congestive heart failure, history of symptomatic cerebrovascular disease, insulin therapy for diabetes, and pre-op serum creatinine > 2.0 mg/dL. Only the last of these applies to this case.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 42-year-old male is persuaded by his wife to come to you for general checkup. She hints of concern about alcohol use. Therefore, you ask the CAGE questions as an initial screen. These include which of the following?
Possible answers	a. Concern expressed by family b. Previous Alcoholics Anonymous contact c. Alcohol intake greater than two drinks per 24 h d. Gastrointestinal symptoms e. Use of an eye-opener f. Presence of excess extremity shakiness
The correct answer	The answer is e.
Rationale for the correct answ.	The CAGE screening tool for alcoholism consists of asking about alcohol-related trouble: cutting down, being annoyed by criticisms, guilt, and use of an eye-opener (i.e., alcohol consumption upon arising).
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 78-year-old female comes to your office with symptoms of insomnia nearly every day, fatigue, weight loss of over 5% of body weight over the past month, loss of interest in most activities, and diminished ability to concentrate. Although further testing may be necessary, based on this history the most likely approach to therapy will involve which of the following?
Possible answers	a. Antidepressant b. Cholinesterase inhibitor such as donepezil c. Iron supplement d. Prednisone e. Thyroid supplement
The correct answer	The answer is a.
Rationale for	Depression is commonly encountered in the outpatient setting and probably underlies the chief

the correct answ.	complaint of fatigue more than any other cause. Among the criteria for diagnosis are the presence during the same 2-week period of five or more of nine specific symptoms. Five of these are mentioned in the question; the other four are depressed mood, psychomotor agitation or retardation, feelings of worthlessness, and recurrent thoughts of death (or suicidal ideation). Thus psychotherapy and antidepressant medication would be the basic treatment.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	65-year-old female was hospitalized for pulmonary embolus and eventually discharged on warfarin (Coumadin) with a therapeutic INR. During the next 2 weeks as an outpatient, she was started back on her previous ACE inhibitor antihypertensive, given temazepam for insomnia, treated with ciprofloxacin for a urinary tract infection, started on over-the-counter famotidine (Pepcid) for GI symptoms, and told to stop the OTC naproxen she was taking. Follow-up INR was too high, most likely due to which of the following?
Possible answers	a. ACE inhibitor therapy b. Temazepam c. Ciprofloxacin d. Famotidine (Pepcid) e. Naproxen discontinuation
The correct answer	The answer is c.
Rationale for the correct answ.	Many medications can potentiate warfarin (Coumadin), including the fluoroquinolone ciprofloxacin and various other broad-spectrum antibiotics. The other choices do not. Nonsteroidal anti-inflammatory drugs may occasionally enhance warfarin's effect, so discontinuing naproxen, if anything, should lower the INR. If the H2 blocker cimetidine or the proton pump inhibitor omeprazole had been used for gastric acid reduction in this case, either of these can potentiate warfarin and increase the INR. Of interest is that one other increasingly seen potentiator of warfarin is the over-the-counter herbal product ginkgo biloba.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
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Discipline	General practice (family medicine)
Question	A 20-year-old college basketball player is brought to the university urgent care clinic after developing chest pain and palpitations during practice, but no dyspnea or tachypnea. There is no unusual family history of cardiac diseases, and social history is negative for alcohol or drug use. Cardiac auscultation is unremarkable, and ECG shows only occasional PVCs. Which of the following is the most appropriate next step in evaluation and/or management?
Possible answers	a. Obtain urine drug screen b. Arrange treadmill stress test c. Obtain Doppler ultrasound of deep veins of lower legs d. Institute cardioselective beta blocker therapy e. Institute respiratory therapy for this form of exercise-induced bronchospasm
The correct answer	The answer is a.
Rationale for the correct answ.	The question of cocaine use must be raised in virtually all young adults with cardiovascular symptoms, despite a professed negative history. Therefore, a urine drug screen should be obtained early on. If this is negative, the patient might well need further cardiac evaluation, such as echocardiogram, ambulatory cardiac monitoring, and/or stress test.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 92-year-old woman with type 2 diabetes mellitus has developed cellulitis and gangrene of her left foot. She requires a lifesaving amputation, but refuses to give consent for the surgery. She has been ambulatory in her nursing home but states that she would be so dependent after surgery that life would not be worth living for her. She has no living relatives; she enjoys walks and gardening. She is competent and of clear mind. Which of the following is the most appropriate course of action?
Possible answers	a. Perform emergency surgery b. Consult a psychiatrist c. Request permission for surgery from a friend of the patient d. Follow the patient's wishes
The correct answer	The answer is d.
Rationale for the correct answ.	The principle of autonomy is an overriding issue in this patient, who is competent to make her own decisions about surgery. Consulting a psychiatrist would be inappropriate unless there is some reason to believe the patient is not competent. No such concern is present in this description of the patient. Since the patient is competent, no friend or relative can give permission for the procedure.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 20-year-old complains of diarrhea, burning of the throat, and difficulty swallowing over 2 months. On exam, he has mild jaundice and transverse white striae of the fingernails. There is also evidence for peripheral neuropathy. Which of the following is the best diagnostic study in this case?
Possible answers	a. Liver biopsy b. Arsenic level c. Antinuclear antibody d. Endoscopy (EGD) e. TSH plus free T4
The correct answer	The answer is b.
Rationale for the correct answ.	Although there is no clue to exposure (pesticides, herbicides; wood preservatives; smelting and microelectronics by-products; contamination of deep water wells; folk remedies), the clinical picture is characteristic of arsenic poisoning. Manifestations of toxicity are varied but include irritation of the GI tract, resulting in the symptoms described. Arsenic combines with the globin chain of hemoglobin to produce hemolysis. The white transverse lines of the fingernails, called Aldrich-Mees lines, are a manifestation of chronic arsenic poisoning.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A young boy believes he was bitten by a spider while playing in his attic. Severe pain develops at the site of the bite after several hours. Bullae and erythema develop around the bite, and some skin necrosis becomes apparent. The boy is afebrile without evidence of toxicity. This is most likely which of the following?
Possible answers	a. A black widow (<i>Latrodectus mactans</i>) spider bite, with local wound care the initial therapy b. A black widow (<i>Latrodectus mactans</i>) spider bite, with antivenin indicated as soon as possible c. A brown recluse (<i>Loxosceles</i> sp.) spider bite, with local wound care the initial therapy d. A brown recluse (<i>Loxosceles</i> sp.) spider bite, with early but rapidly progressing streptococcal necrotizing fasciitis
The correct answer	The answer is c.
Rationale for the correct answ.	Bites from <i>Loxosceles</i> spiders (including the brown recluse) may cause necrosis of tissue at the site of the bite. The cause of the local reaction is not well understood but is thought to involve complement-mediated tissue damage. Dapsone, steroids, and antivenin have all been used in treatment, but no therapy is of proven value. The bite of the black widow spider causes

	neurologic signs and abdominal pain but does not result in soft tissue damage. Without fever and toxicity, the skin signs described are not likely to be secondary to bacterial infection.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 70-year-old male with unresectable carcinoma of the lung metastatic to liver and bone has developed progressive weight loss, anorexia, and shortness of breath. The patient has executed a valid living will that prohibits the use of feeding tube in the setting of terminal illness. The patient becomes lethargic and stops eating altogether. The patient's wife of 30 years insists on enteral feeding for her husband. Since he has become unable to take in adequate nutrition, which of the following is the most appropriate course of action?
Possible answers	a. Respect the wife's wishes as a reliable surrogate decision maker b. Resist the placement of a feeding tube in accordance with the living will c. Call a family conference to get broad input from others d. Place a feeding tube until such time as the matter can be discussed with the patient
The correct answer	The answer is b.
Rationale for the correct answ.	The patient's autonomy as directed by the living will must be respected. This autonomy is not transferred to a surrogate decision maker, even one who is very credible. A family conference in this case would not change the overriding issue—that a valid living will is in effect.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	After being stung by a yellow jacket, a 14-year-old develops the sudden onset of hoarseness and shortness of breath. An urticarial rash is noted. Which of the following is the most important first step in treatment?
Possible answers	a. An antihistamine b. Epinephrine c. Venom immunotherapy d. Corticosteroids e. Removal of the stinger
The correct	The answer is b.

answer	
Rationale for the correct answ.	The administration of epinephrine is the best treatment in the acute setting. Epinephrine provides both .and .-adrenergic effects. Antihistamines and corticosteroids are frequently given as well, although they have little immediate effect. The patient should be offered venom immunotherapy after recovery from the systemic reaction. Removal without compression of an insect stinger is worthwhile, but not the primary concern.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 40-year-old male is found to have a uric acid level of 9 mg/dL on a comprehensive blood chemistry profile. The patient has never had gouty arthritis, renal disease, or kidney stones. The patient has no evidence on history or physical exam of underlying chronic or malignant disease. The approach to this patient is best stated by which of the following?
Possible answers	a. The risk of urolithiasis requires the institution of prophylactic therapy such as allopurinol b. Asymptomatic hyperuricemia is associated with an increased risk of gouty arthritis, but benefits of prophylaxis do not outweigh risks in this patient c. Further investigation beyond history and physical is needed to assess for lymphoproliferative disease d. Hyperuricemia is associated with cardiovascular disease; its treatment will lower this risk
The correct answer	The answer is b.
Rationale for the correct answ.	The answer is b. Asymptomatic hyperuricemia does increase the risk of acute gouty arthritis, but most hyperuricemic individuals never have an episode. The cost of lifelong prophylaxis is high, as is the risk of an adverse reaction to a drug like allopurinol, such that the more conservative approach is favored of treating an acute attack when it occurs. Prophylactic therapy would be reserved for patients with repeated acute attacks. Likewise the risk of urolithiasis is sufficiently low that prophylaxis is not necessary until the development of a stone. Structural kidney damage is not identifiable before a first gouty attack. Hyperuricemia is associated with but not a cause of arteriosclerotic disease and there is no proven cardiovascular benefit to reducing the uric acid level. However, an elevated uric level may be a clue to look for diabetes, hypertension, and/or hyperlipidemia. In patients with lymphoproliferative disease, prophylaxis for the prevention of renal impairment is recommended, especially in the face of chemotherapy.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 38-year-old obese female with history of chronic venous insufficiency and peripheral edema was admitted to the hospital the previous night for cellulitis involving both lower legs. She has had recurrent such episodes, treated successfully in the past with various antibiotics, including

	<p>cefazolin, nafcillin, ampicillin/sulbactam, and even levofloxacin. Intravenous levofloxacin was again chosen due to the perceived ease in transitioning to a once-daily oral outpatient dose. Past history is otherwise significant only for hypertension, which is being treated at home with HCTZ 25 mg, lisinopril 40 mg, and atenolol 100 mg, all once each morning. Admission BP was 144/92 and the orders were written to continue each of these antihypertensives at one tablet po qd. The only other in-hospital medication is daily prophylactic enoxaparin. As you round at 6 P.M. on the day following admission, the nurse contacts you emergently stating that she has just finished giving evening meds and the patient's BP is unexpectedly 90/50. There is no chest pain, dyspnea, or tachypnea. Which of the following etiologies for hypotension is most likely?</p>
Possible answers	<p>a. An allergic reaction to either the antibiotic or one of the antihypertensives b. A vasovagal reaction secondary to pain c. Hypovolemia due to the cellulitis d. The new onset of diabetic ketoacidosis e. Acute pulmonary embolism f. Medication error g. Herbal product use by the patient while in the hospital</p>
The correct answer	<p>The answer is f.</p>
Rationale for the correct answ.	<p>The concept being advanced here is medication error. A new emphasis is being placed on reducing all medical errors, including those related to misreading of handwriting, which might include avoidance of certain abbreviations or use of an electronic medical record. In this case the pharmacist and/or nurse mistook the medication orders for one tablet po qd (once a day) for one tablet po qid (four times a day), such that the patient had received three doses of each antihypertensive by 6 P.M. There is no particular clue to the other listed answers. For example, an allergic reaction would seem unlikely with medications previously well tolerated; there are no symptoms or signs of acute pulmonary embolism, and a prophylactic anticoagulant is in use. The use by the patient within the hospital of substances from outside, unknown to the medical staff, is a valid consideration. Related to effect on blood pressure, the main herbal product adverse effect is an elevated BP from those containing ephedrine.</p>
Source of information	<p>PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006</p>

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 44-year-old Hispanic female comes to clinic for a general checkup due to concern about a family history of diabetes and high blood pressure. Her height is 62 in, weight 50 kg (110 lb), blood pressure 138/88. Lab evaluation reveals fasting glucose of 120 mg/dL. Lipid profile shows total cholesterol 240 mg/dL, HDL 38 mg/dL, and triglycerides 420 mg/dL; LDL cannot be calculated. She does not smoke, use alcohol, or take any medications. Which of the following is correct regarding the identification of the metabolic syndrome in this patient?
Possible answers	<ul style="list-style-type: none"> a. This syndrome is not present in this case due to the absence of abdominal obesity b. This is not present because the blood pressure is not sufficiently elevated to be a risk factor c. This syndrome is not present because the glucose is not sufficiently elevated to be a risk factor d. This syndrome is present based on the risk factors given e. This syndrome cannot be identified until the LDL is determined f. This syndrome cannot be identified until the presence of hyperuricemia is established
The correct answer	The answer is d.
Rationale for the correct ans.	The metabolic syndrome represents a cluster of metabolic risk factors for coronary heart disease, closely linked to insulin resistance. It can be identified when any three of the following five items are present: abdominal obesity [waist circumference in women >88 cm (>35 in) or in men >102 cm (40 in)]; hypertriglyceridemia (>150 mg/dL); low HDL (<50 mg/dL in women or <40 in men); blood pressure greater than or equal to 130/85; and fasting glucose > 110 mg/dL. In this case, four risk factors are present, all except abdominal obesity. In addition, hyperinsulinemia decreases the renal excretion of uric acid, resulting in hyperuricemia, although this finding is not part of the metabolic syndrome definition.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 78-year-old woman with mild renal insufficiency complains of pain in the right knee on walking that has interfered with her day-to-day activities. Pain is relieved by rest. There are no inflammatory symptoms of redness or swelling. There is minimal joint effusion. An x-ray of the knee shows osteophytes and asymmetric loss of joint space. ESR and white blood cell count are normal. Which of the following is the best initial management of this patient?
Possible answers	<ul style="list-style-type: none"> a. Nonsteroidal anti-inflammatory agent b. Intraarticular corticosteroids c. Acetaminophen d. Total arthroplasty
The correct answer	The answer is c.
Rationale for the correct ans.	In addition to physical therapy, the best symptomatic treatment would be acetaminophen because it is frequently effective in providing pain relief and has an excellent safety profile in the elderly. Nonsteroidals should be avoided, at least initially, because they tend to cause gastrointestinal upset and impairment of renal function. Intraarticular steroids are indicated for large effusions in joints unresponsive to first-line therapy. Arthroplasty is highly effective in treating osteoarthritis of a single joint and is not contraindicated in the elderly. Such surgery is usually considered after attempts at physical therapy, education, and pain relief with pharmacotherapy.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	An 82-year-old man complains of 2 h of severe chest pain that occurred while he was playing tennis. Blood pressure on admission is 140/70, and heart rate is 110. There are no signs of congestive heart failure. Pulses are all palpable, and abdominal exam is normal. Neurologic exam is normal, and stool is guaiac-negative. There is no history of gastrointestinal bleeding, previous stroke, head trauma, or major surgery. There is no history of vascular disease or liver disease. ECG shows ST segment elevation of 3 mm in leads V1 through V3, with three premature ventricular beats per minute. Which of the following is the initial treatment of choice?
Possible answers	a. Prophylactic lidocaine b. Thrombolytic therapy and aspirin c. Heparin d. Aspirin alone
The correct answer	The answer is b.
Rationale for the correct answ.	The patient has clinical and ECG evidence for acute myocardial infarction. He has no contraindications to thrombolytic therapy. (Age per se is not a contraindication to thrombolytic therapy.) Thirty-day mortality is markedly decreased for elderly patients with acute MI treated with aspirin and thrombolytic therapy. Many elderly patients, of course, will have contraindications to thrombolytics, particularly gastrointestinal bleeding, recent stroke, head injury, or surgery. Aspirin alone is not as effective in reducing mortality. Antiarrhythmic agents do not reduce mortality and have pronounced side effects in the elderly. Heparin should be given following thrombolytic therapy.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 65-year-old man has had symptoms of progressive cognitive dysfunction over a 1-year period. Memory and calculation ability are worsening. The patient has also had episodes of paranoia and delusions. Antipsychotic medication resulted in extrapyramidal signs and was stopped. The patient has recently complained of several months of visual hallucinations. There is no history of alcohol abuse. Which of the following is the most likely diagnosis?
Possible answers	a. Lewy body dementia b. Alzheimer's disease c. Early parkinsonism d. Delirium
The correct answer	The answer is a.
Rationale for the correct answ.	Lewy body dementia has been recently recognized as a specific type of dementia different from Alzheimer's disease or Parkinson's disease. On autopsy there is evidence of Lewy bodies throughout the brain, including the cortex. Mild parkinsonism may or may not be present. Paranoia and delusions are more common than in Alzheimer's disease, and treatment with

	antipsychotic drugs characteristically worsens the underlying condition. The visual hallucinations are the most characteristic clinical symptom, making the diagnosis of Alzheimer's disease less likely. Delirium is an acute confusional state that would not present with progressive cognitive deterioration or repeated hallucinations over time.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	An 80-year-old nursing home patient has become increasingly confused and unstable on her feet. On one occasion she has wandered outside the nursing home. In considering the issue of restraints for this individual, which of the following is correct?
Possible answers	a. A geri-chair would provide the best approach to safety and restraint b. Physical restraints are the best method to prevent falls c. Restraints cause many complications and increase the risk of falls d. Sedative medication should be used instead of restraints
The correct answer	The answer is c.
Rationale for the correct answ.	Restraints are being used less and less in nursing homes as their complications and alternatives become more appreciated. The four D's—deconditioning, depression, disorientation, and decubiti—are all complications of restraints. A geri-chair is just another form of physical restraint, which promotes the same difficulties. Effective alternatives to restraints usually require an individual care plan. In this case, alarm bells for the institution's exits and evaluation of the patient's gait would be important. Sedation leads to complications such as pneumonia and may, in fact, also promote falls.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 75-year-old woman who is living independently seeks advice about exercise programs. She has mild hypertension but is otherwise in good health with no other risk factors for cardiovascular disease. Which of the following statements is supported by current data?
Possible answers	a. Walking can reduce mortality from cardiovascular disease and help prevent falls b. Tai chi has become popular in the elderly but results in falls c. This patient would require stress testing before beginning a walking program d. Only high-intensity exercise has been shown to have long-standing benefits
The correct answer	The answer is a.
Rationale for the correct answ.	Walking is the most common exercise in the elderly and has been shown to reduce mortality from coronary artery disease and decrease the incidence of falls. In one study, a rigorous walking program of 2 miles a day reduced coronary artery disease events by 50%. Tai chi exercises, which consist of a sequence of movements used in martial arts, have actually been shown to reduce the incidence of falls in older patients. Exercise need not be high-intensity to have benefits; moderate-intensity activity for 30 min produces most of the health benefits

	of daily exercise. Judgment dictates the degree of medical screening and the use of exercise stress testing in elderly patients who are beginning an exercise program. A walking program does not require such screening. Exercise stress testing has been recommended by some experts for elderly patients with two or more risk factors for heart disease.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A frail 80-year-old nursing home resident has had several episodes of syncope, all of which have occurred while she was returning to her room after breakfast. She complains of light-headedness and states she feels cold and weak. She takes nitroglycerin in the morning for a history of chest pain, but denies recent chest pain or shortness of breath. Which of the following is the most likely method of diagnosis?
Possible answers	a. Cardiac catheterization b. Postprandial blood pressure monitoring c. Holter monitoring d. CT scan
The correct answer	The answer is b.
Rationale for the correct answ.	Postprandial hypotension has been increasingly recognized in the frail elderly. Postprandial reduction in systolic blood pressure in the elderly is common. In one study, a quarter of all patients had a reduction in systolic blood pressure of greater than 20 mmHg. Much of the decrease is due to splanchnic blood pooling. Those on nitrates and other drugs that cause postural hypotension are at greatest risk. Older patients with this condition should avoid large meals. Diagnosis is confirmed by monitoring blood pressure after eating. Cardiac ischemia or arrhythmia cannot be ruled out but are less likely to cause the symptoms described. Arrhythmia is more likely to be of sudden onset but could be evaluated by continuous monitoring later in the workup. CT scan is rarely helpful in the evaluation of syncope in a patient without focal neurologic findings.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 90-year-old male has a history of myocardial infarction, early congestive heart failure, and episodes of atrial fibrillation. Which of the following medications should be avoided for the indication given?
Possible	a. A beta blocker after myocardial infarction

answers	b. Angiotensin-converting enzyme inhibitor in left ventricular systolic dysfunction c. Warfarin in chronic atrial fibrillation d. Digoxin in early signs of congestive heart failure
The correct answer	The answer is d.
Rationale for the correct answ.	All medications should be carefully considered in the elderly with respect to side effects and drug interactions. However, some medications are in fact used too infrequently in the elderly because of side effect concerns. Beta blockers prolong survival in the elderly after myocardial infarction, and have probably been used too infrequently in the elderly after MI. Similarly, ACE inhibitors have a beneficial effect on mortality and functional status in the elderly with systolic dysfunction. They should be prescribed unless there are contraindications such as intolerance, renal insufficiency, elevated serum potassium, or hypotension. Warfarin reduces the risk of thromboembolic events in the elderly with atrial fibrillation. It is estimated that warfarin could prevent an additional 40,000 strokes per year in patients with atrial fibrillation, most of whom are elderly. Digoxin is rarely a drug of choice for heart failure in the elderly patient. In general, it is a drug to avoid in the elderly because of its toxic-to-therapeutic ratio and tendency for drug interactions.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 78-year-old male complains of slowly progressive hearing loss. He finds it particularly difficult to hear his grandchildren and to appreciate conversation in a crowded restaurant. On exam, ear canal and tympanic membranes are normal. Audiology testing finds bilateral upper-frequency hearing loss with difficulties in speech discrimination. Which of the following is the most likely diagnosis?
Possible answers	a. Presbycusis b. Cerumen impaction c. Meniere's disease d. Chronic otitis media
The correct answer	The answer is a.
Rationale for the correct answ.	Presbycusis is the most common cause of sensorineural hearing loss in the elderly. Probably the result of cochlear damage over time, it is characterized by bilateral highfrequency hearing loss above 2000 Hz. Diminished speech discrimination is more apparent compared to other causes of hearing loss. Both Meniere's disease and chronic otitis media are common causes of hearing loss in the elderly; they usually present as unilateral hearing loss. Otoscopy should always be used to rule out hearing loss due to cerumen impaction in the elderly patient.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 90-year-old male complains of nonspecific weakness, some shortness of breath on exertion,

	and poor sleep. In evaluating this patient, which of the following physiologic parameters does not change with age?
Possible answers	a. Creatinine clearance b. Forced expiratory volume c. Hematocrit d. Heart rate response to stress e. Hours of REM sleep
The correct answer	The answer is c.
Rationale for the correct answ.	Hematocrit does not vary with age, and elderly patients with anemia require workup to define the disease process. Lung elasticity decreases with age, resulting in some change over time in pulmonary function test. Creatinine clearance decreases with age, as do heart rate response to stress and number of hours of REM sleep.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 65-year-old male who has not had routine medical care presents for a physical exam and is found to have a blood pressure of 165/80. He has no other risk factors for heart disease. He is not obese and walks 1 mile a day. Physical exam shows no retinopathy, normal cardiac exam including point of maximal impulse, and normal pulses. There is no abdominal bruit, and neurological exam is normal. ECG, electrolytes, blood sugar, and urinalysis are also normal. Repeat visit 2 weeks later shows blood pressure to be unchanged. Which of the following is the best next step in management?
Possible answers	a. Do a workup for secondary causes, including intravenous pyelogram b. Begin therapy with a low-dose diuretic c. Follow patient; avoid toxicity of antihypertensive agents d. Begin therapy with a beta blocker
The correct answer	The answer is b.
Rationale for the correct answ.	There is now general agreement that systolic hypertension in the elderly should be treated and that low-dose thiazide diuretic is the initial regimen of choice in the elderly. Treatment reduces the risk of stroke and cardiovascular events, and side effects appear to be minimal. Atenolol is generally recommended as secondstep therapy. Workup for secondary causes is not indicated, as they are less common in the elderly; however, such a workup may be appropriate if hypertension is refractory to medication. Weight loss and exercise might be initiated prior to antihypertensive medication in a patient with mild systolic hypertension who is obese or sedentary.

Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006
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Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 65-year-old male inquires about the pneumonia vaccine. He has a friend who died of pneumonia. The patient is in good health without underlying disease. Which of the following is the most appropriate management of this patient?
Possible answers	a. Recommend the pneumococcal vaccine and check on the status of other immunizations, particularly tetanus vaccination b. Inform the patient that he has no risk factors for pneumonia c. Report that the present pneumonia vaccine does not work d. Emphasize that the influenza vaccine is more important
The correct answer	The answer is a.
Rationale for the correct ans.	The pneumococcal vaccine is currently recommended for all patients over the age of 65 because age per se is a risk factor for mortality due to pneumococcal infection. The vaccine is safe, and the vaccination program for the elderly is cost-effective. The importance of the annual influenza vaccine should also be explained to the patient. If the visit is during influenza season, both vaccines should be given at the same time. Tetanus vaccination booster is also recommended in the elderly patient who has not had a booster vaccine in 10 years.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	This 80-year-old white male is being evaluated as part of an annual physical exam. On examination there is a large plaque on the left shoulder that is well demarcated, hyperkeratotic, and oily to palpation. It appears to be “stuck on.” It’s surface includes keratin plugs. Which of the following is the most appropriate next step?
Possible answers	a. Biopsy to rule out melanoma b. Advice about sun exposure and actinic keratosis c. Reassurance of the benign nature of this seborrheic keratosis d. Removal of basal cell carcinoma
The correct answer	The answer is c.
Rationale for the correct ans.	The lesion described is characteristic of seborrheic keratosis, which is an extremely common lesion in older patients. The waxy, stuck-on-appearing lesion with keratin plugs is so identifiable that it requires no further workup. It is a benign growth of normal epithelial cells. Melanomas are usually asymmetric with irregular borders and color variegation. Basal cell carcinoma usually presents as a pearly translucent nodule with telangiectasia. Actinic keratoses, a precursor to squamous cell carcinoma, have a reddish, scaly appearance and are usually

	erythematous papules.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 67-year-old male asks for advice about vaccination with the influenza vaccine on a routine visit in the fall. He is ambulatory, in good health, and does not have cardiac or pulmonary disease. There is some shortage of the influenza inactivated vaccine for the year. Which of the following is the best approach to this vaccination?
Possible answers	a. Give the intranasal live vaccine if it is more available than the inactivated vaccine b. Assure the patient that vaccination against influenza is not mandatory since there is no underlying disease c. Vaccinate the patient with the inactivated vaccine unless he is allergic to eggs d. Treat the patient with amantadine at the first sign of an influenza outbreak
The correct answer	The answer is c.
Rationale for the correct answ.	All patients over the age of 65 are high priority to receive the influenza vaccine whether they have underlying disease or not. Most deaths from influenza occur in the over-65 age group. Currently, the live attenuated intranasal vaccine is not approved in the elderly patient population. Amantadine can be started in a patient who has not been vaccinated and is in the midst of an epidemic. However, especially in the elderly, efforts to vaccinate should occur in October or November, prior to influenza activity.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old white female presents for an office visit. Her mother recently broke her hip, and the patient is concerned about her own risk for osteoporosis. She weighs 165 lb and is 5 ft 6 in. tall. She has a 50-pack-year history of tobacco use. Medications include a multivitamin and levothyroxine 50 .g/d. Her exercise regimen includes mowing the lawn and taking care of the garden. She took hormone replacement therapy for 6 years after menopause, which occurred at age 49. Which of the following tests related to osteoporosis, if any, is appropriate for this patient?
Possible answers	a. Nuclear medicine bone scan b. Dual x-ray absorptiometry (Dexa scan) c. No testing is required at this time d. Peripheral bone densitometry

The correct answer	The answer is b.
Rationale for the correct answ.	The World Health Organization and the National Osteoporosis Foundation agree that all postmenopausal patients who are estrogen-deficient with at least one additional risk factor should have a central bone densitometry. A nuclear medicine scan has no role in the diagnosis of osteoporosis. Certainly this patient with estrogen deficiency, low calcium intake, family history, and previous tobacco use has a high pretest probability of osteoporosis; therefore a peripheral bone densitometry, which is used for screening only, would not be a diagnostic test of choice. In addition, due to the above explanation, testing is justified.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 52-year-old black female presents to your office with complaints of an occasional uncomfortable feeling in her chest. She has noticed the chest pain occurring over the past 6 months. The pain usually starts when she gets angry or is hurrying from the parking lot into the office building where she works. The pain is sharp and located in the center of her chest. Sometimes it is associated with shortness of breath. It lasts less than 1 to 2 minutes. Upon reviewing her medical history you note she has poorly controlled hypertension and glucose intolerance. She tells you she does not perform any regular exercise and has gained 20 lb in the past 2 years. On exam, her blood pressure is 150/94, and BMI is 31. Medications include hydrochlorothiazide and lisinopril. Which of the following actions would be most helpful in diagnosing the cause of this patient's chest pain?
Possible answers	a. Discontinuation of current medication b. Pulmonary function testing c. Graded exercise treadmill stress test d. Graded exercise treadmill stress test with thallium scanning e. No further test necessary, reassure the patient
The correct answer	The answer is d.
Rationale for the correct answ.	The most appropriate test would be a graded treadmill stress test with thallium imaging. A graded treadmill stress test has a lower sensitivity and specificity in patients with atypical or no chest pain. A graded treadmill stress test has an increased rate of false-positives and false-negatives in women compared to men. Therefore a negative treadmill stress test would not rule out coronary disease. Subsequent thallium imaging improves sensitivity and specificity. In this patient with hypertension, glucose intolerance, and obesity, the most appropriate first-line evaluation would include ruling out coronary artery disease; therefore pulmonary function testing would not be useful.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 55-year-old white female presents for an annual exam. Medical history is significant for hypertension. She is a nonsmoker. Family history is negative for coronary artery disease. She has no acute complaints. She weighs 80 kg and is 1.65 m tall. BP is 150/100, cholesterol 250 mg/dL, triglycerides 300 mg/dL, HDL 30 mg/dL, and LDL 160 mg/dL. This patient's calculated body mass index (BMI) is which of the following?

Possible answers	a. 33 b. 29 c. 25 d. 22.4 e. 20
The correct answer	The answer is b.
Rationale for the correct answ.	Calculated BMI = weight (kg)/height (m) ² .
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 24-week pregnant female presents with complaints of dysuria. A dipstick urinalysis in your office reveals 2+ leukocyte esterase, trace blood, no protein, no glucose, and 2+ nitrites. You send the urine to the laboratory for culture and sensitivity but want to start empiric treatment for the patient's symptoms. Which of the following medications is most appropriate?
Possible answers	a. Ciprofloxacin b. Cephalexin c. Trimethoprim-sulfamethoxazole d. Tetracycline e. Gentamicin
The correct answer	The answer is b.
Rationale for the correct answ.	Empiric treatment of simple UTI in pregnancy should consider the following: coverage of probable organisms (usually Escherichia coli), possibility of complicating factors such as pyelonephritis or nephrolithiasis, stage of pregnancy, and relative contraindication to the antibiotic. The antibiotics listed all would cover suspected organisms in simple UTI of pregnancy. However, all but one of the antibiotics is contraindicated in pregnancy. Ciprofloxacin is pregnancy category D because of concern about cartilage formation in animal studies. Trimethoprim-sulfa is not the best choice in later stages of pregnancy because trimethoprim is a folate antagonist and is teratogenic in rats, and sulfa drugs have increased risk of kernicterus in premature neonates. Tetracycline is avoided because of possibility of discoloration of teeth and hypoplasia of tooth enamel and long bone growth in the neonate. Also, the mother is at increased risk for acute fatty necrosis of the liver. Gentamicin is not indicated because of concern for possible ototoxicity in the neonate.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
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Discipline	General practice (family medicine)
Question	A 57-year-old white female with a significant past medical history of breast cancer stage 2, ER+, PR+, presents to the emergency room complaining of the sudden onset of chest pain and shortness of breath 2 h ago. The pain is sharp and stabbing in the left posterior lung area. The pain does not increase on exertion but increases with deep breathing. The patient denies any history of cardiovascular or pulmonary disease. Her only medication is tamoxifen for 2 years and OTC vitamins. Pulse is 110, RR 26, BP 150/94; lungs are clear bilaterally; cardiovascular exam shows regular rate and rhythm with a fixed split on S2. ECG shows S wave in lead I, Q wave in lead III, and inverted T in lead III. Pulse oximetry is 90% on room air. Chest x-ray is unremarkable. What is most likely to have contributed to this patient's current respiratory distress?
Possible answers	a. Myocardial infarction b. Breast cancer metastasis c. Tamoxifen use d. Anxiety attack e. Pneumonia
The correct answer	The answer is c.
Rationale for the correct ans.	This patient's history and physical are consistent with a pulmonary embolus. The combination of respiratory distress, hypoxia, tachycardia, clear chest x-ray, and typical ECG changes makes this the most likely choice. There is no evidence on chest x-ray of infiltrate or metastatic disease. An anxiety attack would not cause hypoxia. Tamoxifen is associated with an increased risk of thromboembolic events.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 58-year-old female presents to your office for an acute visit pertaining to a sinus infection. She states she takes no medications except a "baby aspirin." When you inquire why she is taking the 81-mg aspirin, she says "to prevent heart attacks." Her history is negative for hypertension, hyperlipidemia, smoking, diabetes, obesity, or family history of cardiovascular disease. What would you advise this patient about the use of aspirin for heart attack prevention?
Possible answers	a. She should take a full-dose aspirin for better cardiovascular protection b. She does not need to take aspirin for cardiovascular protection c. She should take a full-dose aspirin every other day d. She should take an aspirin only if she experiences chest pain
The correct answer	The answer is b.
Rationale for the correct ans.	This patient is at low risk for cardiovascular disease. Her only listed major cardiovascular risk factor is age >55. The American Heart Association has published "Evidence-based Medicine in the Prevention of Cardiovascular Disease in Women." This guideline recommends that aspirin prophylaxis be used for women at high risk for CVD. In intermediate-risk women aspirin should be taken if blood pressure is controlled and benefit exceeds gastrointestinal risk. In low-risk individuals, aspirin prophylaxis is not recommended. Since the publication of the AHA guidelines in 2004, a large study, "The Women's Health Study," was published (NEJM, 2005). In this study, consisting of more than 39,000 women, aspirin prophylaxis did not provide a significant decrease in myocardial infarction or death from cardiovascular events, although it did decrease the risk of ischemic stroke.
Source of	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

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Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	The treatment of choice for a 20-year-old college student with a history of upper and lower respiratory symptoms, bullous myringitis, a negative sputum Gram stain, and patchy lower lobe infiltrates on chest x-ray is which of the following?
Possible answers	a. Erythromycin b. Supportive therapy c. Ceftriaxone d. Cefuroxime e. Penicillin
The correct answer	The answer is a.
Rationale for the correct answ.	The treatment of choice for mycoplasma infection is erythromycin. Newer macrolides such as azithromycin or clarithromycin are also effective. Treatment decreases the number of symptomatic days. Mycoplasma does not have a cell wall membrane, so neither penicillin nor ceftriaxone would be effective therapy.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 48-year-old black female complains of joint pain and morning stiffness over 4 months. Examination reveals swelling of the wrists and MCPs as well as tenderness and joint effusion in both knees. The rheumatoid factor is positive, antibodies to cyclic citrullinated protein are present, and subcutaneous nodules are noted on the extensor surfaces of the forearm. Which of the following statements is correct?
Possible answers	a. Prednisone 60 mg per day should be started b. The patient has RA and should be evaluated for disease-modifying antirheumatic therapy c. A nonsteroidal anti-inflammatory drug should be added to aspirin d. The patient's prognosis is highly favorable e. The patient should receive a 3-month trial of full-dose nonsteroidal antiinflammatory agent before determining whether and/or what additional therapy is indicated.
The correct answer	The answer is b.
Rationale for the correct answ.	The patient has more than four of the required signs or symptoms of RA, including morning stiffness, swelling of the wrist or MCP, simultaneous swelling of joints on both sides of body, subcutaneous nodules, and positive rheumatoid factor. Subcutaneous nodules and anti-CCP antibodies are poor prognostic signs for the activity of the disease, and disease-modifying antirheumatic drugs (DMARDs) such as gold, antimalarials, sulfasalazine, methotrexate, leflunamide, anti-TNF agents, or a combination of these drugs should be instituted. Methotrexate has emerged as a cornerstone of most diseasemodifying regimens, to which other agents are often added. Low-dose corticosteroids have recently been shown to reduce the progression of bony erosions and, although controversial, are considered by some to be appropriate disease-modifying agents for long-term therapy. Use of antiinflammatory doses of

	both aspirin and nonsteroidals together is not desirable because it will increase the risk of side effects. Given the aggressive nature of this woman's rheumatoid arthritis and negative prognostic signs, delay in initiating DMARDs is contraindicated. Significant joint damage has been shown by MRI to occur quite early in the course of disease.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 22-year-old male develops the insidious onset of low back pain improved with exercise and worsened by rest. There is no history of diarrhea, conjunctivitis, urethritis, rash, or nail changes. On exam the patient has loss of mobility with respect to lumbar flexion and extension. He has a kyphotic posture. A plain film of the spine shows widening and sclerosis of the sacroiliac joints. Some calcification is noted in the anterior spinal ligament. Which of the following best characterizes this patient's disease process?
Possible answers	a. He is most likely to have acute lumbosacral back strain and requires bed rest b. The patient has a spondyloarthropathy, most likely ankylosing spondylitis c. The patient is likely to die from pulmonary fibrosis and extrathoracic restrictive lung disease d. A rheumatoid factor is likely to be positive e. A colonoscopy is likely to show Crohn's disease
The correct answer	The answer is b.
Rationale for the correct ans.	Insidious back pain occurring in a young male that improves with exercise suggests one of the spondyloarthropathies—ankylosing spondylitis, reactive arthritis (including Reiter's syndrome), psoriatic arthritis, or enteropathic arthritis. In the absence of symptoms or findings to suggest one of the other conditions and in the presence of symmetrical sacroiliitis on x-ray, ankylosing spondylitis is the most likely diagnosis. Acute lumbosacral strain would not be relieved by exercise or worsened by rest. The prognosis in ankylosing spondylitis is generally very good, with only 6% dying of the disease itself. While pulmonary fibrosis and restrictive lung disease can occur, they are rarely a cause of death (cervical fracture, heart block, and amyloidosis are leading causes of death due to ankylosing spondylitis). Rheumatoid factor is negative in all the spondyloarthropathies. Crohn's disease can cause an enteropathic arthritis, and the arthritis may precede the gastrointestinal manifestations, but this diagnosis is far less likely in this case than ankylosing spondylitis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 43-year-old man with diabetes and cardiomegaly has had an attack of pseudogout. He should be evaluated for which of the following?
Possible answers	a. Renal disease b. Hemochromatosis c. Peptic ulcer disease d. Lyme disease

	e. Inflammatory bowel disease
The correct answer	The answer is b.
Rationale for the correct answ.	Pseudogout is part of the spectrum of calcium pyrophosphate deposition disease. It is usually an acute monoarthritis or oligoarthritis caused by calcium pyrophosphate crystals in the joint. Pseudogout may be associated with hemochromatosis. Since the patient has a history of diabetes mellitus and cardiomyopathy, hemochromatosis must be considered. Serum iron saturation should be measured. Ferritin may also be a useful measure of iron stores. Pseudogout has also been associated with hyperparathyroidism. A familial form of the disease has been localized to chromosomes 8q and 5p. Inflammatory bowel disease, Lyme disease, and peptic ulcer disease do not predispose to pseudogout.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 20-year-old woman has developed low-grade fever, a malar rash, and arthralgias of the hands over several months. High titers of anti-DNA antibodies are noted, and complement levels are low. The patient's white blood cell count is 3000/.L, and platelet count is 90,000/.L. The patient is on no medications and has no signs of active infection. Which of the following statements is correct?
Possible answers	a. If glomerulonephritis, severe thrombocytopenia, or hemolytic anemia develops, high-dose glucocorticoid therapy would be indicated b. Central nervous system symptoms will occur within 10 years c. The patient can be expected to develop Raynaud's phenomenon when exposed to cold d. The patient will have a false-positive test for syphilis e. The disease process described is an absolute contraindication to pregnancy
The correct answer	The answer is a.
Rationale for the correct answ.	The combination of fever, malar rash, and arthritis suggests systemic lupus erythematosus, and the patient's thrombocytopenia, leukopenia, and positive antibody to native DNA provide more than four criteria for a definitive diagnosis. Other criteria for the diagnosis of lupus include discoid rash, photosensitivity, oral ulcers, serositis, renal disorders (proteinuria or cellular casts), and neurologic disorder (seizures). High-dose corticosteroids would be indicated for severe or life-threatening complications of lupus such as described in item a. Patients with SLE have an unpredictable course. Few patients develop all signs or symptoms. Neuropsychiatric disease occurs at some time in about half of all SLE patients and Raynaud's phenomenon in about 25%. Pregnancy is relatively safe in women with SLE who have controlled disease and are on less than 10 mg of prednisone.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A patient with low-grade fever and weight loss has poor excursion on the right side of the chest with decreased fremitus, flatness to percussion, and decreased breath sounds all on the right.

	The trachea is deviated to the left. Which of the following is the most likely diagnosis?
Possible answers	a. Pneumothorax b. Pleural effusion c. Consolidated pneumonia d. Atelectasis e. Chronic obstructive lung disease
The correct answer	The answer is b.
Rationale for the correct answ.	The diagnosis in this patient is suggested by the physical exam findings. The findings of poor excursion, flatness of percussion, and decreased fremitus on the right side are all consistent with a right-sided pleural effusion. A large right-sided effusion may shift the trachea to the left. A pneumothorax should result in hyperresonance of the affected side. Atelectasis on the right side would shift the trachea to the right. A consolidated pneumonia would characteristically result in increased fremitus, flatness to percussion, and bronchial breath sounds, and would not cause tracheal deviation.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 30-year-old male is admitted to the hospital after a motorcycle accident that resulted in a fracture of the right femur. The fracture is managed with traction. Three days later the patient becomes confused and tachypneic. A petechial rash is noted over the chest. Lungs are clear to auscultation. Arterial blood gases show PO ₂ of 50, PCO ₂ of 28, and pH of 7.49. Which of the following is the most likely diagnosis?
Possible answers	a. Unilateral pulmonary edema b. Hematoma of the chest c. Fat embolism d. Pulmonary embolism e. Early Staphylococcus aureus pneumonia
The correct answer	The answer is c.
Rationale for the correct answ.	A painful vesicular rash that has a dermatomal distribution strongly suggests herpes zoster, although other viral pathogens may also cause vesicles. Herpes zoster may involve the eyelid when the first or second branch of the fifth cranial nerve is affected. Impetigo is a cellulitis caused by group A -hemolytic streptococci. It often involves the face and can occur after an abrasion of the skin. Its distribution is not dermatomal, and while it may cause vesicles, they are usually small and are not weeping fluid. Chickenpox produces vesicles in various stages of development that are diffuse and produce more pruritus than pain. Coxsackievirus can produce a morbilliform vesiculopustular rash, often with a hemorrhagic component and with lesions of the throat, palms, and soles.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
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Discipline	General practice (family medicine)
Question	A 34-year-old black female presents to your office with symptoms of cough, dyspnea, and lymphadenopathy. Physical exam shows cervical adenopathy and hepatomegaly. Her chest radiograph is shown below. Which of the following is most likely to aid in establishing a diagnosis?
Possible answers	a. Open lung biopsy b. Liver biopsy c. Bronchoscopy and transbronchial lung biopsy d. Scalene node biopsy e. Serum angiotensin converting enzyme (ACE) level
The correct answer	The answer is c.
Rationale for the correct ans.	Sarcoidosis is a systemic illness of unknown etiology. There is a higher prevalence in female patients and in the African American population. Many patients have respiratory symptoms, including cough and dyspnea. Hilar and peripheral lymphadenopathy is common, and 20 to 30% of patients have hepatomegaly. The chest x-ray shows symmetrical hilar lymphadenopathy. The diagnostic method of choice is transbronchial biopsy, which will show a mononuclear cell granulomatous inflammatory process. While liver and scalene node biopsies are often positive, noncaseating granulomas are so frequent in these sites that they are not considered acceptable for primary diagnosis. ACE levels are elevated in two-thirds of patients, but false-positive values are common in other granulomatous disease processes.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 64-year-old woman is found to have a left-sided pleural effusion on chest x-ray. Analysis of the pleural fluid reveals a ratio of concentration of total protein in pleural fluid to serum of 0.38, a lactate dehydrogenase (LDH) level of 125 IU, and a ratio of LDH concentration in pleural fluid to serum of 0.46. Which of the following disorders is most likely in this patient?
Possible answers	a. Bronchogenic carcinoma b. Congestive heart failure c. Pulmonary embolism d. Sarcoidosis e. Systemic lupus erythematosus
The correct answer	The answer is b.
Rationale for the correct ans.	Classifying a pleural effusion as either a transudate or an exudate is useful in identifying the underlying disorder. Pleural fluid is exudative if it has any one of the following three properties: a ratio of concentration of total protein in pleural fluid to serum greater than 0.5, an absolute value of LDH greater than 200 IU, or a ratio of LDH concentration in pleural fluid to serum greater than 0.6. Causes of exudative effusions include malignancy, pulmonary embolism, pneumonia, tuberculosis, abdominal disease, collagen vascular diseases, uremia, Dressler syndrome, and chylothorax. Exudative effusions may also be drug-induced. If none of the aforementioned properties are met, the effusion is a transudate. Differential diagnosis for a transudative effusion includes congestive heart failure, nephrotic syndrome, cirrhosis, Meigs syndrome (benign ovarian neoplasm with effusion), and hydronephrosis.
Source of	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis,

information	Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006
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Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 25-year-old male cigarette smoker has a history of respiratory infections and has also been found to have hematuria. A high value for diffusing capacity is noted during pulmonary function testing. This elevated diffusing capacity is consistent with which of the following disorders?
Possible answers	a. Anemia b. Cystic fibrosis c. Emphysema d. Intrapulmonary hemorrhage
The correct answer	The answer is d.
Rationale for the correct answ.	Carbon monoxide (CO) diffusing capacity provides an estimate of the rate at which oxygen moves by diffusion from alveolar gas to combine with hemoglobin in the red blood cells. It is interpreted as an index of the surface area engaged in alveolar-capillary diffusion. Measurement of diffusing capacity of the lung is done by having the person inspire a low concentration of carbon monoxide. The rate of uptake of the gas by the blood is calculated from the difference between the inspired and expired concentrations. The test can be performed during a single 10-s breath holding or during 1 min of steadystate breathing. The diffusing capacity is defined as the amount of carbon monoxide transferred per minute per millimeter of mercury of driving pressure and correlates with oxygen transport from the alveolus into the capillaries. Primary parenchymal disorders, anemia, and removal of lung tissue decrease the diffusing capacity. Conversely, polycythemia, congestive heart failure, and intrapulmonary hemorrhage tend to increase the value for diffusing capacity. In this patient, the possibility of Goodpasture syndrome would be considered.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 40-year-old man without a significant past medical history comes to the emergency room with a 3-day history of fever and shaking chills; a 15-min episode of rigor; nonproductive cough; anorexia; and the development of right-sided pleuritic chest pain and shortness of breath over the past 12 h. A chest x-ray reveals a consolidated right middle lobe infiltrate, and a CBC shows an elevated neutrophil count with many band forms present. Which of the following statements regarding pneumonia in this patient is correct?
Possible answers	a. Sputum culture is more helpful than sputum Gram stain in choosing empiric antibiotic therapy b. If the Gram stain revealed numerous gram-positive diplococci, numerous white blood cells, and few epithelial cells, Streptococcus pneumoniae would be the most likely diagnosis c. Although S. pneumoniae is the agent most likely to be the cause of this patient's pneumonia, this diagnosis would be very unlikely if blood cultures were negative d. The absence of rigors would rule out a diagnosis of pneumococcal pneumonia e. Penicillin is the drug of choice in all cases of pneumococcal pneumonia
The correct answer	The answer is b.

Rationale for the correct answ.	<p>Pneumonia is a common disorder and is a major cause of death, particularly in hospitalized elderly patients. Before choosing empiric therapy for presumed pneumonia, it is necessary to know the age of the patient, whether the infection is community-acquired or nosocomial, and whether there are any underlying debilitating illnesses. Community-acquired pneumonias in patients over the age of 35 are most likely due to <i>S. pneumoniae</i>, <i>Legionella</i> species (e.g., pneumophila), other atypical agents such as <i>Mycoplasma pneumoniae</i> and <i>Chlamydia pneumoniae</i>, <i>Moraxella catarrhalis</i>, and <i>Haemophilus influenzae</i>. In the case outlined, the history is strongly consistent with pneumococcal pneumonia, manifested by a short prodrome, shaking chills with rigor, fever, chest pain, sparse sputum production associated with cough, and a consolidated lobar infiltrate on chest x-ray. The most reliable method of diagnosing pneumococcal pneumonia is seeing gram-positive diplococci on an adequate sputum (many white cells, few epithelial cells). Sputum culture is also important in the era of penicillin-resistant pneumococci, but is not helpful in initial diagnosis. Blood cultures are positive in only about 20% of patients, and, when positive, are indicative of a more severe case. Although rigors may suggest pneumococcal bacteremia, the absence of rigors does not rule out the diagnosis. About 25 to 50% of pneumococci in the United States are partially or completely resistant to penicillin due to chromosomal mutations resulting in penicillin-binding protein changes. Penicillin is no longer the regimen of choice for pneumococcal pneumonia pending the results of sensitivity testing. The fluoroquinolones or ceftriaxone are widely used as initial therapy for pneumococcal pneumonia.</p>
Source of information	<p>PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006</p>

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	<p>A 57-year-old man develops acute shortness of breath shortly after a 12-h automobile ride. The patient is admitted to the hospital for shortness of breath. Findings on physical examination are normal except for tachypnea and tachycardia. An electrocardiogram reveals sinus tachycardia but is otherwise normal. Which of the following statements is correct?</p>
Possible answers	<p>a. A definitive diagnosis can be made by history alone b. The patient should be admitted to the hospital, and, if there is no contraindication to anticoagulation, intravenous heparin should be started pending further testing c. Normal findings on examination of the lower extremities are extremely unusual in this clinical setting d. Early treatment has little effect on overall mortality</p>
The correct	The answer is b.

answer	
Rationale for the correct answ.	<p>The clinical situation described is characteristic of pulmonary embolic disease. In greater than 80% of cases, pulmonary emboli arise from thromboses in the deep venous circulation (DVTs) of the lower extremities. DVTs often begin in the calf, where they rarely if ever cause clinically significant pulmonary embolic disease. However, thromboses that begin below the knee frequently “grow,” or propagate, above the knee; clots that dislodge from above the knee cause clinically significant pulmonary emboli, which, if untreated, cause mortality exceeding 80%. Interestingly, only about 50% of patients with DVT of the lower extremities have clinical findings of swelling, warmth, erythema, pain, or “cords.” As long as the superficial venous system, which has connections with the deep venous system, remains patent, none of the classic clinical findings of DVT will occur, because blood will drain from the unobstructed superficial system. When a clot does dislodge from the deep venous system and travels into the pulmonary vasculature, the most common clinical findings are tachypnea and tachycardia; chest pain is less likely and is more indicative of concomitant pulmonary infarction. The ABG is usually abnormal, and a high percentage of patients exhibit hypoxia, hypocapnia, alkalosis, and a widening of the alveolar-arterial gradient. The ECG is frequently abnormal in pulmonary embolic disease. The most common finding is sinus tachycardia, but atrial fibrillation, pseudoinfarction in the inferior leads, and right and left axis deviation are also occasionally seen. Initial treatment for suspected pulmonary embolic disease includes prompt hospitalization and institution of intravenous heparin, provided there are no contraindications to anticoagulation. It is particularly important to make an early diagnosis of pulmonary embolus, as intervention can decrease the mortality rate from 25% down to 5%.</p>
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 30-year-old athlete with asthma is also a cigarette smoker. Which of the following is characteristic of asthma but not other obstructive lung disease?
Possible answers	<p>a. Hyperinflation is present on chest x-ray</p> <p>b. Airway obstruction is reversible</p>

	c. Hypoxia occurs as a consequence of ventilation-perfusion mismatch d. The FEV1/FVC ratio is reduced e. Exacerbation often occurs as a result of an upper respiratory tract infection
The correct answer	The answer is b.
Rationale for the correct answ.	Asthma is an incompletely understood inflammatory process that involves the lower airways and results in bronchoconstriction and excess production of mucus, which in turn lead to increased airway resistance and occasionally respiratory failure and death. During acute exacerbations of asthma, and in other obstructive lung diseases such as chronic obstructive pulmonary disease, hyperinflation may be present on chest x-ray. Hypoxia is common and usually a result of ventilation-perfusion mismatch. The FEV1/FVC is reduced, and exacerbations are frequently precipitated by upper airway infections. Only in asthma is the airway obstruction reversible.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old male has had a chronic cough for over 5 years with clear sputum production. He has smoked one pack of cigarettes per day for 20 years and continues to do so. X-ray of the chest shows hyperinflation without infiltrates. Arterial blood gases show a pH of 7.38, PCO ₂ of 40 mmHg, and PO ₂ of 65 mmHg. Spirometry shows an FEV1/FVC of 65%. Which of the following is the most important treatment modality for this patient?
Possible answers	a. Oral corticosteroids b. Home oxygen c. Broad-spectrum antibiotics d. Smoking cessation program e. Prednisone orally
The correct answer	The answer is d.
Rationale for the correct answ.	This patient's chronic cough, hyperinflated lung fields, abnormal pulmonary function tests, and smoking history are all consistent with chronic bronchitis. A smoking cessation program can decrease the rate of lung deterioration and is successful in as many as 40% of patients, particularly when the physician gives a strong antismoking message and uses both counseling and nicotine replacement. Continuous low-flow oxygen becomes beneficial when arterial oxygen concentration falls below 55 mmHg. Antibiotics are indicated only for acute exacerbations of chronic lung disease, which might present with fever, change in color of sputum, and increasing shortness of breath. Oral corticosteroids are helpful in some patients, but are reserved for those who have failed inhaled bronchodilator treatments.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
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Discipline	General practice (family medicine)
Question	A 50-year-old male with emphysema and a chest x-ray that has shown apical blebs develops the sudden onset of shortness of breath and left-sided pleuritic chest pain. Pneumothorax is suspected. Which of the following physical examination findings would confirm the diagnosis?
Possible answers	a. Localized wheezes at the left base b. Hyperresonance of the left chest with decreased breath sounds c. Increased tactile fremitus on the left side d. Decreased breath sounds on the left side with deviation of the trachea to the left
The correct answer	The answer is b.
Rationale for the correct answ.	The most characteristic findings of pneumothorax are hyperresonance and decreased breath sounds. A tension pneumothorax may displace the mediastinum to the unaffected side. Tactile fremitus would be decreased in the patient with a pneumothorax, but would be increased in conditions in which consolidation of the lung has developed.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 30-year-old paraplegic male has a long history of urinary tract infection secondary to an indwelling Foley catheter. He develops fever and hypotension requiring hospitalization, fluid therapy, and intravenous antibiotics. He improves, but over 1 week becomes increasingly short of breath and tachypneic. He develops frothy sputum, diffuse rales, and diffuse alveolar infiltrates. There is no fever, jugular venous distention, S3 gallop, or peripheral or sacral edema. Which of the following is the best approach to a definitive diagnosis in this patient?
Possible answers	a. Blood cultures b. CT scan of the chest c. Pulmonary capillary wedge pressure d. Ventilation-perfusion scan
The correct answer	The answer is c.
Rationale for the correct answ.	Sepsis is the most important single cause of adult respiratory distress syndrome. Early in the course of ARDS, patients may appear stable without respiratory symptoms. Tachypnea, hypoxemia, and diffuse infiltrates gradually develop. It may be difficult to distinguish the process from cardiogenic pulmonary edema, especially in patients who have been given large quantities of fluid. This young patient with no evidence of volume overload would be strongly suspected of having ARDS. The pulmonary capillary wedge pressure would be normal or low in ARDS, but elevated in left ventricular failure. ARDS is a complication of sepsis, but blood cultures may or may not be positive. Neither CT of the chest nor ventilation-perfusion scan would be specific enough to help in diagnosis of ARDS.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 35-year-old female complains of slowly progressive dyspnea. Her history is otherwise unremarkable, and there is no cough, sputum production, pleuritic chest pain, or thrombophlebitis. She has taken appetite suppressants at different times. On physical exam, there is jugular venous distention, a palpable right ventricular lift, and a loud P2 heart sound. Chest x-ray shows clear lung fields. ECG shows right axis deviation. A perfusion lung scan is normal, with no segmental deficits. Which of the following is the most likely diagnosis?
Possible answers	a. Primary pulmonary hypertension b. Recurrent pulmonary emboli c. Cardiac shunt d. Interstitial lung disease
The correct answer	The answer is a.
Rationale for the correct answ.	Although a difficult diagnosis to make, primary pulmonary hypertension is the most likely diagnosis in this young woman who has used appetite suppressants. Primary pulmonary hypertension in the United States was associated with fenfluramines. The predominant symptom is dyspnea, which is usually not apparent in the previously healthy young woman until the disease has advanced. When signs of pulmonary hypertension are apparent from physical findings, chest x-ray, or echocardiography, the diagnosis of recurrent pulmonary embolus must be ruled out. In this case, a normal perfusion lung scan makes pulmonary angiography unnecessary. Restrictive lung disease should be ruled out with pulmonary function testing. An echocardiogram will show right ventricular enlargement and a reduction in the left ventricle size consistent with right ventricular pressure overload.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old male complains of shortness of breath 2 days after a cholecystectomy. There is no fever, chills, sputum production, or pleuritic chest pain. On physical exam temperature is 99°F, pulse is 75, respiratory rate is 20, and blood pressure is 120/70. There are diminished breath sounds and dullness over the left base. Trachea is shifted to the left side. A chest x-ray shows a retrocardiac opacity that silhouettes the left diaphragm. Which of the following is the most likely anatomical problem in this patient?
Possible answers	a. An acute process causing inflammation b. A left lower lobe mass c. Diminished lung volume in the left lower lobe, postoperatively d. Acute bronchospasm caused by surgery
The correct answer	The answer is c.
Rationale for the correct answ.	Postoperative atelectasis or volume loss is a very common complication of surgery. General anesthesia and surgical manipulation lead to atelectasis by causing diaphragmatic immobilization. Atelectases is usually basilar. On physical exam, shift of the trachea to the affected side suggests volume loss. On chest x-ray in this patient, loss of the left hemidiaphragm, increased density, and shift of the hilum downward would all suggest left lower lobe collapse. Atelectasis needs to be distinguished from acute consolidation of

	pneumonia, in which case fever, chills, and purulent sputum are more pronounced and consolidation is present without volume loss.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old male patient on aspirin, an angiotensin-converting enzyme inhibitor, nitrates, and a beta blocker, who is being followed for chronic stable angina, presents to the ER with a history of two or three episodes of more severe and long-lasting anginal chest pain each day over the past 3 days. His ECG and cardiac enzymes are normal. Which of the following is the best course of action?
Possible answers	a. Admit the patient and begin intravenous digoxin b. Admit the patient and begin intravenous heparin c. Admit the patient and give prophylactic thrombolytic therapy d. Admit the patient for observation with no change in medication e. Increase the doses of current medications and follow closely as an outpatient
The correct answer	The answer is b.
Rationale for the correct answ.	This patient presents with unstable angina, a change from the previous chronic stable state in that chest pain has become more frequent and more severe. Antithrombotic therapy with intravenous heparin is indicated, along with additional antiplatelet therapy using clopidogrel. Subcutaneous administration of low-molecular-weight heparin (such as enoxaparin) is an alternative. There is no role for digoxin, as this may increase myocardial oxygen consumption and exacerbate the situation. Thrombolytic therapy is reserved for the treatment, typically within 6 h, of ECG-documented myocardial infarction and does not reduce cardiac events in the setting of unstable angina. A more aggressive approach is early interventional cardiac catheterization with angioplasty and/or stent placement, possibly in conjunction with glycoprotein IIb/IIIa inhibitors.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 60-year-old white female presents with epigastric pain, nausea and vomiting, heart rate of 50, and pronounced first-degree AV block on ER cardiac monitor. Blood pressure is 130/80. Which of the following coronary arteries is most likely to be involved in this process?
Possible answers	a. Right coronary b. Left main c. Left anterior descending d. Circumflex
The correct answer	The answer is a.
Rationale for the correct answ.	The right coronary artery provides the circulation to most of the inferior myocardium. At its proximal end in 60% of patients it supplies the sinoatrial node via the SA artery, and toward its distal end in 90% of patients it supplies the AV node via the posterior descending coronary

	artery. Thus, occlusion of the right coronary artery can cause ischemia of the AV node in particular and possibly the SA node, with AV block and/or bradycardia, as well as symptoms of an inferior MI, as seen in this patient. AV block can occur with anterior MI related to LAD occlusion, but this generally implies a greater area of myocardial involvement and hemodynamic instability.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 45-year-old white female smoker is admitted to the hospital for observation after presenting to the emergency department with vague chest pain. There is no past history of cardiac disease, diabetes, hypertension, or hyperlipidemia. Later that night while in bed she has a recurrence of pain, at which time cardiac monitoring shows a transient elevation of precordial ST segments. The pain is promptly relieved by sublingual nitroglycerin. Physical exam is unremarkable. Which of the following is the best followup management plan?
Possible answers	a. Echocardiography and anti-inflammatory therapy b. EGD and proton pump inhibitor therapy c. Exercise stress testing; treatment depending on results d. Coronary angiography; likely treatment with nitrates and calcium channel blockers e. Chest CT scan; likely treatment with IV heparin
The correct answer	The answer is d.
Rationale for the correct answ.	This case describes Prinzmetal's variant angina, a syndrome of ischemic pain that classically occurs at rest rather than with exertion and is associated with transient ST-segment elevation due to focal coronary artery spasm (most commonly involving the right coronary, although in this example, with precordial lead findings, the left anterior descending is more likely). The pain is usually not preceded by a period of chronic stable angina. Exercise stress testing is unlikely to be diagnostic in Prinzmetal's, and results may be difficult to interpret in young females in general. Coronary angiography demonstrating transient coronary artery spasm is the diagnostic hallmark of this condition. Nitrates and calcium channel blockers are the mainstays of treatment. Regarding the other listed choices, echocardiography and anti-inflammatory therapy allude to the diagnosis of pericarditis; however, in this condition STsegment elevation should occur diffusely, and the pain is not relieved by nitroglycerin. EGD and proton pump inhibitor therapy allude to the diagnosis of gastroesophageal reflux, which may produce pain upon lying down, but should not yield ECG changes; nitroglycerin conceivably could relieve the pain of associated esophageal spasm. There is nothing specific here to warrant the chest CT or IV heparin treatment of pulmonary embolism.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 55-year-old patient presents to you with a history of having recently had a 3-day hospital stay for gradually increasing shortness of breath and leg swelling while away on a business trip. He reports being told he had congestive heart failure then, but is asymptomatic now, with normal vital signs and physical exam. An echocardiogram is obtained that estimates an ejection fraction of 38%. The patient likes to keep medications to a minimum. He is currently on just aspirin plus a statin. Other than remaining on those, which of the following would be the most appropriate medication recommendation at this time?
Possible answers	<ul style="list-style-type: none"> a. Begin an ACE inhibitor and then add a beta blocker on a scheduled basis b. Begin digoxin plus furosemide (Lasix) on a scheduled basis c. Begin spironolactone on a scheduled basis d. Begin hydralazine plus nitrates on a scheduled basis e. Just use furosemide (Lasix) plus nitroglycerin if shortness of breath and swelling recur f. Given his preferences, since he is doing well, no other medication is needed
The correct answer	The answer is a.
Rationale for the correct ans.	Angiotensin-converting enzyme inhibitors have been shown to prevent or retard the development of heart failure in patients with left ventricular dysfunction and to reduce long-term mortality when begun shortly after an MI, via inhibition of the renin-angiotensin system and reduction of preload and afterload. Thus they play a central role in heart failure management. An angiotensin II receptor blocker may be substituted. Beta blockers are typically the next addition, also with evidence supporting reduction in rehospitalization for CHF and future cardiac events. Loop or thiazide diuretics are administered to those with fluid accumulation. The aldosterone antagonist spironolactone is indicated in more advanced CHF. Digoxin is reserved for those with clear-cut systolic dysfunction, especially with atrial flutter or fibrillation with rapid ventricular response. The nitrate-hydralazine combination is also an option in ACE inhibitor-intolerant patients, almost always in advanced cases. Calcium channel blockers are not indicated for heart failure or routinely post-MI. General therapeutic measures include salt restriction and regular moderate exercise. Patient preferences are important to

	consider but should not keep you from giving your best medical recommendation, which the patient can then decide to accept or not.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	You are helping with school sports physicals and see a 13-year-old boy who has had some trouble keeping up with his peers. He has a cardiac murmur, which you correctly diagnose as a ventricular septal defect based on which of the following auscultatory findings?
Possible answers	a. A systolic crescendo-decrescendo murmur heard best at the upper right sternal border with radiation to the carotids; the murmur is augmented with transient exercise b. A systolic murmur at the pulmonic area and a diastolic rumble along the left sternal border c. A holosystolic murmur at the mid-left sternal border d. A diastolic decrescendo murmur at the mid-left sternal border e. A continuous murmur through systole and diastole at the upper left sternal border
The correct answer	The answer is c.
Rationale for the correct answ.	A holosystolic murmur at the mid-left sternal border is the murmur most characteristic of a ventricular septal defect. Both the murmur of ventricular septal defect and the murmur of mitral regurgitation are enhanced by exercise and diminished by amyl nitrite. Answers a, b, d, and e describe the usual findings in aortic stenosis, atrial septal defect, aortic insufficiency, and patent ductus arteriosus, respectively.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
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Discipline	General practice (family medicine)
Question	A 50-year-old obese female is taking oral hypoglycemic agents. While being treated for an upper respiratory infection, she develops lethargy and is brought to the emergency room. On physical exam, there is no focal neurologic finding or neck rigidity. Laboratory results are as follows: Na+: 134 meq/L K+: 4.0 meq/L HCO ₃ : 25 meq/L Glucose: 900 mg/dL BUN: 84 mg/dL Creatinine: 3.0 mg/dL BP: 120/80 sitting, 105/65 lying down Which of the following is the most likely cause of this patient's com
Possible answers	a. Diabetic ketoacidosis b. Hyperosmolar coma c. Inappropriate ADH d. Bacterial meningitis
The correct answer	The answer is b.
Rationale for the correct answ.	This obese patient on oral hypoglycemics has developed hyperglycemia and lethargy during an upper respiratory infection. Hyperosmolar nonketotic states that occur in type 2 diabetes can be fatal. When severe hyperglycemia and dehydration increase serum osmolality above 380 mOsm/L, lethargy or coma occurs. Serum osmolality is measured by the formula: Plasma glucose/180 + blood urea nitrogen/2.8 + (serum Na ⁺⁺ K ⁺) = 290. This patient's serum osmolality is as follows: 900/180 + 84/2.8 + (134 + 4) = 50 + 276 + 30 = 356. Thus the serum osmolality is greater than 350 mOsm/kg. As can be seen from the equation, osmolality depends mostly on the concentration of sodium. Serum osmolality will rise significantly when dehydration prevents the dilution of serum sodium that might otherwise occur with hyperglycemia. Hyperosmolality reflects both hyperglycemia and severe dehydration with hypernatremia. The serum bicarbonate is too high to be consistent with diabetic ketoacidosis. The hyponatremia is related to hyperglycemia. SIADH could not be diagnosed in this clinical setting. Patients with SIADH are not dehydrated but have an inappropriate excretion of ADH that leads to hyponatremia and water retention. The patient's diabetes likely went out of control due to infection. There is no clinical evidence for meningitis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old female is 5 ft 7 in. tall and weighs 185 lb. There is a family history of diabetes mellitus. Fasting blood glucose is 130 mg/dL and 145 mg/dL on two occasions. She is asymptomatic, and physical exam shows no abnormalities. Which of the following is the treatment of choice?
Possible answers	a. Observation b. Medical nutrition therapy c. Insulin d. Oral hypoglycemic agent
The correct answer	The answer is b.
Rationale for the correct answ.	The classification of diabetes mellitus has changed to emphasize the process that leads to hyperglycemia. Type 2 DM is a group of heterogeneous disorders characterized by insulin resistance, impaired secretion of insulin, and increased glucose production. Medical nutrition therapy (MNT) is a term now used to describe the best possible coordination of calorie intake, weight loss, and exercise. It emphasizes modification of risk factors for hypertension and hyperlipidemia, not just weight loss and calorie restriction. In this type 2 patient, medical nutrition therapy that includes dietary modification, weight loss, and exercise is the first

	intervention. Blood glucose control should be reevaluated after 3 to 4 weeks. If target blood sugar is not met, pharmacotherapy should be initiated.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 24-year-old female presents with complaints of anxiety, diarrhea, and heat intolerance. She has lost 20 lb in the past 3 months without really trying. Physical exam reveals a thin, anxious, white female in no distress, with mild proptosis and thyroid gland with diffuse enlargement. Thyroid function testing reveals: TSH <0.03 Elevated T4 Increased T3 uptake The most common diagnosis for this young woman's hyperthyroidism is which of the following?
Possible answers	a. Autoimmune disease b. Benign tumor c. Malignancy d. Viral infection of the thyroid
The correct answer	The answer is a.
Rationale for the correct ans.	This patient has Graves' disease, which accounts for 60 to 80% of all thyrotoxicosis. In addition to thyrotoxicosis, this patient has orbitopathy as well as the characteristic dermopathy of Graves' disease, called pretibial myxedema. Graves' disease is an autoimmune phenomenon. The extrathyroidal manifestations of the diseases are due to immunologically activated fibroblasts in extraocular muscles and skin. Toxic multinodular goiter produces thyrotoxicosis caused by benign, functionally autonomous tumors. The thyroid gland is usually appreciated as a palpably nodular goiter. Toxic multinodular goiter would not produce the proptosis or dermopathy of Graves' disease. Subacute thyroiditis (de Quervain's) is probably caused by a viral infection. It produces a transient hyperthyroidism followed by hypothyroidism. The thyroid gland is tender.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 50-year-old female is evaluated for hypertension. Her blood pressure is 130/98. She complains of polyuria and of mild muscle weakness. She is on no diuretics or other blood pressure medication. On physical exam, the PMI is displaced to the sixth intercostal space. There is no sign of congestive heart failure and no edema. Laboratory values are as follows: Na.: 147 meq/dL K.: 2.3 meq/dL Cl.: 112 meq/dL HCO ₃ : 27 meq/dL The patient is on no other medication. She does not eat licorice. Which of the following will aid in diagnosis?
Possible answers	a. 24-h urine for cortisol b. Urinary metanephrine c. Plasma renin and aldosterone d. Renal angiogram

The correct answer	The answer is c.
Rationale for the correct answ.	The patient has diastolic hypertension with associated hypokalemia. She is not taking diuretics. There is no edema on physical exam. Excessive inappropriate aldosterone production will produce a hypertension with hypokalemia syndrome. Hypersecretion of aldosterone increases distal tubular exchange of sodium for potassium with progressive depletion of body potassium. The hypertension is due to increased sodium absorption. Very low plasma renin that fails to increase with appropriate stimulus (such as volume depletion) and hypersecretion of aldosterone suggest the diagnosis of primary hyperaldosteronism. Suppressed renin activity occurs in about 25% of hypertensive patients with essential hypertension. Lack of suppression of aldosterone is also necessary to diagnose primary aldosteronism. High aldosterone levels that are not suppressed by saline loading prove that there is a primary inappropriate secretion of aldosterone. A 24-h urine for free cortisol would be used in the workup of a patient with Cushing syndrome. Urinary metanephrine is a screening test for pheochromocytoma.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	On routine physical exam, a young woman is found to have a thyroid nodule. There is no pain, hoarseness, hemoptysis, or local symptoms. Serum TSH is normal. Which of the following is the best next step in evaluation?
Possible answers	a. Ultrasonography b. Thyroid scan c. Surgical resection d. Fine needle aspiration of thyroid
The correct answer	The answer is d.
Rationale for the correct answ.	Palpable thyroid nodules are common, occurring in about 5% of all adults. Thyroid fine needle biopsy now plays a central role in the differential diagnosis of thyroid nodules. If the TSH is normal, as it is in this patient, then fine needle aspirate biopsy is indicated and will distinguish cysts from benign lesions or neoplasms. In about 14% of such cases, biopsy will be suspicious or diagnostic for malignancy and surgery will be necessary. Thyroid scan can show a hot nodule, which would be reassuring that the nodule is benign; however, a biopsy would be necessary for cold nodules. Thyroid sonography seldom can rule out malignancy in palpable nodules.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 36-year-old female presents with acute complaints of inability to lose weight despite low-calorie diet and daily exercise. She has also noticed that she is cold-intolerant. You note that she is wearing a jacket even though it is summer. She also reports constipation and hair loss. These symptoms have been worsening over the past 2 to 3 months. An elevated TSH and low total and free T4 confirms your suspicion of hypothyroidism. You suspect the etiology of this

	patient's hypothyroidism is autoimmune thyroiditis. The diagnosis of autoimmune thyroiditis can be confirmed by which of the following?
Possible answers	a. Thyroid peroxidase antibody (TPO) b. Antinuclear antibody c. Thyroid uptake resin d. Thyroid aspiration
The correct answer	The answer is a.
Rationale for the correct answ.	Once hypothyroidism is diagnosed by clinical features and TSH and free T4 measurements, etiology can be confirmed by measuring the presence of autoantibody—particularly thyroid peroxidase (TPO), which is present in 90 to 95% of patients with Endocrinology and Metabolic autoimmune hypothyroidism. Biopsy by fine needle aspirate can confirm the diagnosis but is not necessary in most cases.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 48-year-old female presents to your office on suggestion from a urologist. She has had three episodes of kidney stones. She is taking no medications. She tells you that at a recent health fair a screening heel densitometry indicated that she might have osteoporosis. She is very concerned that something else is going on and wants you to run some more tests. Within the past month, she has had basic lab work consisting of the following: Na: 139 K: 4.2 HCO ₃ : 25 Cl: 101 BUN: 19 Creatinine: 1.1 Ca: 10.4 Which of the following tests will confirm the most likely diagnosis?
Possible answers	a. Thyroid function profile b. The iPTH test c. Liver function tests d. 24-h urine calcium
The correct answer	The answer is b.
Rationale for the correct answ.	Sequelae of hyperparathyroidism include renal stones. Secondary causes such as osteoporosis should definitely be considered in this premenopausal female. Hyperparathyroidism, hyperthyroidism, chronic oral steroid use, vitamin D deficiency, Cushing's syndrome, and celiac sprue are some of the causes of secondary osteoporosis.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
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Discipline	General practice (family medicine)
Question	A 30-year-old female complains of fatigue, constipation, and weight gain. There is no prior history of neck surgery or radiation. Her voice is hoarse and her skin is dry. Serum TSH is elevated and T4 is low. Which of the following is the most likely cause of these findings?
Possible answers	a. Autoimmune disease b. Postablative hypothyroidism c. Pituitary hypofunction d. Thyroid carcinoma
The correct answer	The answer is a.
Rationale for the correct answ.	This patient presents with classic features of hypothyroidism. Autoimmune thyroiditis usually occurs in women, has a genetic component, and is associated with other autoimmune conditions. Autoimmune thyroiditis may be present with a goiter (Hashimoto's thyroiditis) or with minimal residual thyroid tissue (atrophic thyroiditis). Once hypothyroidism is diagnosed by clinical features and TSH and free T4 measurements, etiology can be confirmed by measuring the presence of autoantibody—particularly thyroid peroxidase (TPO), which is present in 90 to 95% of patients with autoimmune hypothyroidism. Biopsy by fine needle aspirate can confirm the diagnosis but is not necessary in most cases.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 25-year-old woman is admitted for hypertensive crisis. In the hospital, blood pressure is labile and responds poorly to antihypertensive therapy. The patient complains of palpitations and apprehension. Her past medical history shows that she developed hypotension during an operation for appendicitis. Hct: 49% (37–48) WBC: 11. 103 mm (4.3–10.8) Plasma glucose: 160 mg/dL (75–115) Plasma calcium: 11 mg/dL (9–10.5) Which of the following is the most likely diagnosis?
Possible answers	a. Pheochromocytoma b. Renal artery stenosis c. Essential hypertension d. Insulin-dependent diabetes mellitus
The correct answer	The answer is a.
Rationale for the correct answ.	A hypertensive crisis in this young woman suggests a secondary cause of hypertension. In the setting of palpitations, apprehension, and hyperglycemia, pheochromocytoma should be considered. Pheochromocytomas are derived from the adrenal medulla. They are capable of producing and secreting catecholamines. Unexplained hypertension associated with surgery or trauma may also suggest the disease. Clinical symptoms are the result of catecholamine secretion. For example, the patient's hyperglycemia is a result of a catecholamine effect of insulin suppression and stimulation of hepatic glucose output. Hypercalcemia has been attributed to ectopic secretion of parathormone-related protein. Renal artery stenosis can cause severe hypertension but would not explain the systemic symptoms or laboratory abnormalities in this case.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A patient with small cell carcinoma of the lung develops lethargy. Serum electrolytes are drawn and show a serum sodium of 118 mg/L. There is no evidence of edema, orthostatic hypotension, or dehydration. Urine is concentrated with an osmolality of 320 mmol/kg. Serum BUN, creatinine, and glucose are within normal range. Which of the following is the next appropriate step?
Possible answers	a. Normal saline infusion b. Diuresis c. Fluid restriction d. Tetracycline
The correct answer	The answer is c.
Rationale for the correct answ.	The patient described has hyponatremia, normovolemia, and concentrated urine. These features are sufficient to make a diagnosis of inappropriate antidiuretic hormone secretion. Inappropriate ADH secretion occurs, in some cases, due to ectopic production by neoplastic tissue. Treatment necessitates restriction of fluid intake. A negative water balance results in a rise in serum Na ⁺ and serum osmolality and symptom improvement. This syndrome can occur as a side effect of many drugs or from carcinoma, head trauma, infections, neurologic diseases, or stroke.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 40-year-old cigarette smoker complains of epigastric pain, well localized, nonradiating, and described as burning. The pain is partially relieved by eating. There is no weight loss. He has not used nonsteroidal anti-inflammatory agents. The pain has gradually worsened over several months. Which of the following is the most sensitive way to make a specific diagnosis?
Possible answers	a. Barium x-ray b. Endoscopy c. Serologic test for Helicobacter pylori d. Serum gastrin
The correct answer	The answer is b.
Rationale for the correct answ.	Localized epigastric burning pain relieved by eating requires evaluation for peptic ulcer disease. Upper gastrointestinal endoscopy provides the best sensitivity and specificity; barium swallow is less expensive, but is less accurate in defining mucosal disease. Patients with refractory or recurrent peptic ulcer disease should have serum gastrin levels measured to rule out gastrinoma. A positive antibody test for H. pylori would only indicate previous exposure.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Chair of propaedeutics to Internal Medicine with patients care, general practice (family medicine)

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 36-year-old man presents for a well-patient exam. He gives a history that, over the past 20 years, he has had three episodes of abdominal pain and hematemesis, the most recent of which occurred several years ago. He was told that an ulcer was seen on a barium upper GI radiograph. You obtain a serum assay for <i>Helicobacter pylori</i> IgG, which is positive. What is the most effective regimen to eradicate this organism?
Possible answers	a. Ultrasound or CT scan b. Hepatitis profile c. Reticulocyte count d. Family history for hemochromatosis
The correct answer	The answer is c.
Rationale for the correct answ.	Although acid suppression therapy leads to 80% healing rates after 4 weeks of treatment, acid reduction alone does not eradicate <i>H. pylori</i> . Three- or four-drug therapy, including bismuth or (most often) proton pump inhibitor, combined with two antibiotics effective against <i>H. pylori</i> , will be necessary to eradicate the organism. Longer duration of therapy (i.e., 14 days) leads to a greater healing rate. This regimen will eradicate <i>H. pylori</i> in more than 90% of patients. Patients whose <i>H. pylori</i> has been eradicated have approximately only a 5% chance of ulcer recurrence (compared to 60 to 70% of patients not treated for <i>H. pylori</i>). Generally, follow-up tests to prove <i>H. pylori</i> eradication are not recommended in the usual patient who becomes asymptomatic. If the peptic ulcer should recur (again, this happens infrequently), either direct testing of a biopsy specimen or a test for urease activity in the stomach (i.e., the C13 breath test) is necessary, as the serological studies remain positive for many years.
Source of information	PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006

Profile	Therapeutic
Discipline	General practice (family medicine)
Question	A 19-year-old woman is brought in by her mother because of chronic diarrhea. The young woman notes several nonbloody unformed stools a day. She has lost 5 lb of weight but is working out daily at a gym. She denies fever, chills, or perianal disease. Stool studies are negative for white cells or occult blood. Stool osmolality is 300 mosm/L. The stool sodium is 35 and stool potassium is 40 meq/L. Which of the following is the most likely diagnosis?
Possible answers	a. Crohn's disease b. Celiac sprue c. Hyperthyroidism d. Laxative abuse
The correct	The answer is d.

answer	
Rationale for the correct answ.	<p>Osmotic diarrhea is detected by finding an elevated osmolar gap in the stool. The formula for osmolar gap is: $\text{Stool osmolarity} - 2 (\text{stool Na} + \text{stool K})$. An osmolar gap above 125 suggests that the diarrhea is caused by osmotically active particles in the stool. Laxative abuse, lactose intolerance, and the ingestion of sorbitol-containing foods are common causes of an osmotic diarrhea. This young woman was likely taking laxatives surreptitiously in an attempt to further lose weight. Inflammatory bowel disease is typically associated with white and red cells in the stool as well as systemic illness. Sprue may cause bulky, greasy, foul-smelling stools and weight loss despite increased caloric intake, although many cases are now diagnosed earlier with biochemical evidence of proximal vitamin or nutrient malabsorption (hypocalcemia or iron or folate deficiency). The hyperdefecation of hyperthyroidism is due to a motility disturbance and would not widen the stool osmolar gap.</p>
Source of information	<p>PreTest Self-Assessment and Review, Eleventh Edition, Steven L. Berk, Marjorie R. Jenkins, William R. Davis, Robert S. Urban. Texas Tech University, Health Science Center, School of Medicine Amarillo, Texas 2006</p>