## Family and Adult-Gero Nurse Practitioner

# Certification Practice Questions

Includes Answers and Rationales

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### Study Strategies: Do's and Don'ts from the Experts at APEA

You may be approaching your certification test date with a mix of anticipation and terror. That's normal! This chapter is designed to replace these emotions with confidence and calm. APEA has been preparing NP students to succeed on the primary care certification exams for 20 years. We have some key study and preparation tips for you, presented as easy-to-follow Do's and Don'ts.

### RECOMMENDED STRATEGIES

**Do review the blueprint for the test**. This is available from AANP and ANCC as a breakdown of testing domains and knowledge areas included in the exams. These are entry-level, competency-based examinations that assess for knowledge expected in a new NP, not an NP who has been in practice a year or longer.

**Do develop a schedule for study times and topics.** Set aside several hours of uninterrupted study time every day, and block it out on your calendar. Schedule individual topics for study to ensure that all areas of the exam content are covered. Schedule longer times for areas in which your knowledge is weaker.

**Do begin preparation a few months ahead of the test date.** Use published, peer-reviewed resources, such as the review books and practice questions available from APEA. Online question banks, such as MyQBank from APEA, can be particularly helpful because they provide immediate feedback and can track your performance.

**Do use practice questions to prepare. Pay attention to the rationales.** Using practice questions will expose you to additional information you may not have obtained during your program. The rationales for the proposed answers contain valuable facts and clinical considerations; read and understand them, even when you correctly answer a question.

**Do take a predictor exam to identify areas in which you are weak.** Predictor exams can be useful at the start or at the end of the preparation process. These exams predict your performance on the certification exam. No matter when you choose to take a predictor exam, schedule your study choices according to the weaknesses it identifies. Find APEA's predictor exams at www.apea.com/predictor-exam.

**Do answer questions based on evidence-based practice and clinical guidelines.** Examination content reflects current accepted standards of care, not anyone's personal experience in clinical practice.

**Do read the stem of each question twice.** After doing so, think about what the correct answer might be. Then, and only then, look at the distractors (answer choices).

**Do imagine yourself as the sole provider in a rural health practice.** Study and approach all practice questions as if you were a solo provider. Answer assuming that you have select resources in the clinical setting—not the range you would have in a hospital.

6. A 38-year-old male patient presents for his annual exam. He reports nervousness and weight loss, but denies any change in his dietary intake or exercise level. Based on these findings and the following lab values, what is his most likely diagnosis?

TSH	0.01 mlU/L	Normal values: 0.4-3.8 mlU/L
Free T4	6 ng/dL	Normal values: 0.8-2.8 ng/dL
Free T3	205 ng/dL	Normal values: 70-205 ng/dL

- a. Hypothyroidism
- b. Hyperthyroidism
- c. Subclinical hyperthyroidism
- d. Subclinical hypothyroidism
- 7. A patient has two fasting glucose values (121 mg/dL and 136 mg/dL) that were measured on 2 separate days in the same week. This patient:
  - a. has normal blood glucose values.
  - b. has impaired fasting glucose.
  - c. has Type 2 diabetes mellitus.
  - d. should have an Hgb A1C performed.
- 8. A diabetic patient with albuminuria has been placed on an ACE inhibitor. How soon can the antiproteinuric effect of the ACE inhibitor be realized in this patient?
  - a. 6-8 weeks
  - b. 3 months
  - c. 6 months
  - d. 3-5 years
- 9. Hyperthyroidism may affect the blood pressure:
  - a. by producing an increase in systolic and diastolic readings.
  - b. by producing a decrease in diastolic blood pressure.
  - c. when the heart rate is increased.
  - d. with unpredictable results.
- 10. Mr. Smith, an overweight 48-year-old male with undiagnosed Type 2 diabetes mellitus, presents to your clinic. Which symptom is least likely associated with Type 2 diabetes mellitus?
  - a. Fatigue
  - b. Constipation
  - c. Athlete's foot
  - d. Impetigo

### **Endocrine Disorders**

### 6. *b*.

Hyperthyroidism is commonly diagnosed in men ages mid 20-40 years of age. A decreased TSH level and elevated levels of T4 and/or T3 are characteristic of hyperthyroidism. Nervousness, weight loss incongruent with daily dietary intake and exercise level, palpitations, and tremor are common findings in younger patients diagnosed with hyperthyroidism. More severe cardiovascular symptoms such as atrial fibrillation, are the most common findings in older adults (>60 years of age) who have hyperthyroidism. While the TSH level is also decreased in subclinical hyperthyroidism, the T4 and/or T3 levels remain normal. A low TSH is not consistent with a diagnosis of hypothyroidism.

### 7. *d*.

This patient has elevated glucose readings. One reading indicates impaired fasting glucose (100-125 mg/dL) and the other reading indicates possible Type 2 diabetes (> or equal to 126 mg/dL). Further testing should be done to confirm a diagnosis. Hemoglobin A1C is a good choice to help confirm the diagnosis. A1C > or equal to 6.5% would confirm a diagnosis of Type 2 diabetes. A1C 5.7-6.4 percent helps confirm impaired fasting glucose.

#### 8. *a*.

The effect can be realized as early as 6-8 weeks after starting an ACE inhibitor or ARB. Monitor the patient's serum creatinine and potassium levels with dose changes because both can increase to unacceptable levels when drugs affecting the renin-angiotensin-aldosterone system are used.

### 9. a.

A common effect of hyperthyroidism on blood pressure is an increase in both systolic and diastolic readings over the patient's usual readings. In fact, hyperthyroidism is a common endocrine cause of secondary hypertension. Other endocrine causes of secondary hypertension are pheochromocytoma, Cushing's syndrome, and neuroblastoma. It is common to measure a resting heart rate of greater than 100 bpm in patients who have untreated hyperthyroidism.

### 10. *b*.

Fatigue is a common early symptom of diabetes. Athlete's foot could represent peripheral fungal infections related to sustained elevations in glucose. Impetigo, though not common in adults, could represent a superficial bacterial infection related to elevated glucose levels. Constipation could be due to many factors, but not specifically diabetes. Conversely, the three factors most closely associated with diabetes are fatigue and infections.

### **Gastrointestinal Disorders**

1. A 43-year-old female patient reports a possible exposure to hepatitis C about 4 months ago. She has the following laboratory values. Which statement is true about this patient?

HBsAg	Negative
anti-HBc	Negative
anti-HBs	Positive
anti-HCV	Nonreactive
HCV RNA	Not detectable

- a. The patient has hepatitis B and hepatitis C.
- b. The patient does not have hepatitis C, but has immunity to hepatitis B.
- c. The patient does not have hepatitis B, but could have hepatitis C.
- d. More tests are needed to determine this patient's hepatitis B status.
- 2. An 83-year-old patient is diagnosed with diverticulitis. The most common complaint is:
  - a. rectal bleeding.
  - b. bloating and crampiness.
  - c. left lower quadrant pain.
  - d. frequent belching and flatulence.
- 3. A patient with a suspected inguinal hernia should be examined:
  - a. in the prone position.
  - b. standing.
  - c. side-lying.
  - d. with patient squatting.
- 4. A 35-year-old patient has the following laboratory values. How should they be interpreted?

HBsAg	Negative
anti-HBc	Negative
anti-HBs	Negative

- a. The patient had hepatitis B.
- b. The patient has hepatitis B.
- c. The patient should consider hepatitis B immunization.
- d. The patient has had hepatitis B immunization.
- 5. An older patient presents with left lower quadrant pain. If diverticulitis is suspected, how should the NP proceed?
  - a. Order a chest and abdominal X-ray
  - b. CT scan of abdomen
  - c. Barium enema
  - d. Ultrasound of the abdomen

### 1. *b*.

This patient does not have hepatitis C (HCV) infection. An HCV antibody test (anti-HCV) is recommended as the initial screen for infection. However, development of detectable antibodies (anti-HCV) usually occurs between 2-6 months following exposure. Although it is negative, she was exposed less than 6 months ago and thus a confirmatory test (HCV RNA) is necessary. Since the HCV RNA is negative, she does not have hepatitis C. Typically, subsequent evaluation to detect the presence of HCV RNA is not necessary following a nonreactive anti-HCV result. Because exposure occurred less than 6 months ago, she may lack detectible levels of anti-HCV antibodies, which warrants testing for HCV RNA. HCV RNA levels become detectible before reactive antibodies. HCV RNA was not detected in this patient. This confirms that this patient has a true negative screen for infection with HCV. A positive hepatitis B surface antibody (anti-HBs) in the presence of a negative core antibody (anti-HBc) indicates immunity to hepatitis B from immunization.

#### 2. c.

Diverticular disease is more common in older adults. About 70% of patients diagnosed with diverticulitis have left lower quadrant pain. Rectal bleeding may have varied etiologies, such as rectal carcinoma or hemorrhoids. Bloating and cramping are often found in patients with diverticular disease (diverticulosis) but not specifically diverticulitis. Belching and flatulence are not specifically associated with diverticulosis.

### 3. *b*.

The patient should be examined while he is standing. He should be asked to bear down, cough, or strain during the exam. Though hernias are far more common in males, they can be found in females too. In males, the patient should be asked to stand. The examiner should put his 2nd or 3rd finger through the scrotum and into the external ring. When the patient is asked to cough, a "silky" feel will butt up against the examiner's finger, and the hernia can be easily felt.

### 4. c.

This patient has a negative hepatitis B surface antigen (HBsAg). Therefore, he does not have hepatitis B. The patient has a negative hepatitis B core antibody (anti-HBc). Therefore, he has never had hepatitis B. The patient has a negative hepatitis B surface antibody (anti-HBs). Therefore, he is not considered immune, and immunization should be considered. There is a remote possibility that this patient has been immunized but did not produce hepatitis B surface antibodies. If this were the case, he should consider immunization once again.

### 5. *b*.

CT scan of the abdomen is the diagnostic test of choice for this patient with suspected diverticulitis. The CT scan is able to demonstrate inflammatory changes in the colonic wall, colonic diverticula, thickening of the bowel wall, fistula formation, peritonitis, and other complications associated with diverticulitis. A chest and abdominal X-rays are commonly ordered and can help exclude other causes of abdominal pain, but they do not help diagnose diverticulitis. Barium enema would be contraindicated if there were a potential for perforation. Ultrasound is much less widely used than CT.

### Family Exam #1 Questions

- 1. Drugs that target the renin-angiotensin-aldosterone system are particularly beneficial in patients who have:
  - a. diabetic nephropathy.
  - b. kidney stones.
  - c. chronic heart failure.
  - d. hypertension.
- 2. A patient who is at high risk for skin cancer should:
  - a. eat foods high in vitamin A.
  - b. use emollients regularly.
  - c. be examined by a dermatologist quarterly.
  - d. examine his skin monthly for changes.
- 3. A patient has two palpable, tender, left preauricular nodes that are about 0.5 cm in diameter. What condition might this be associated with?
  - a. Ear infection
  - b. Conjunctivitis
  - c. Ulceration on the tongue
  - d. Sore throat
- 4. A 51-year-old overweight Caucasian male is diagnosed today with Type 2 diabetes. His blood pressure is 142/102 mmHg. What medications should be initiated today?

Cholesterol, Total	280 mg/dL
LDL Cholesterol	210 mg/dL
<b>HDL Cholesterol</b>	35 mg/dL
Triglycerides	198 mg/dL

- a. Metformin, atorvastatin, ramipril, ASA
- b. Glimepiride, ASA, fosinopril
- c. Metformin, niacin, Monopril
- d. Metformin, ASA, and pravastatin
- 5. The most common place for indirect inguinal hernias to develop is:
  - a. the femoral ring.
  - b. Hesselbach's triangle.
  - c. the external inguinal ring.
  - d. the internal inguinal ring.

### Family Exam #1 Answers

#### 1. *a*

Examples of drugs that target the renin-angiotensin-aldosterone system are angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs). These drugs are particularly beneficial to patients who have diabetic nephropathy because they both prevent and treat diabetic nephropathy. These agents also lower blood pressure, which has been shown to be renoprotective. Management of glucose levels and hypertension is especially important in preventing diabetic nephropathy, but so is aggressive management of hyperlipidemia.

### 2. *d*.

Patients should be examined periodically for evidence of skin cancer by a professional examiner (NP, MD or PA). The frequency and type of examination depends on the risk level and personal and family history of the patient. However, a patient should examine his own skin regularly for changes. Once he has begun to examine his skin, research demonstrates that he will identify early changes and can make his provider aware of them.

### 3. *b*.

The eyes are drained partly by the preauricular lymph nodes. These nodes may be palpated anterior to the ear. They can enlarge in response to eye infections like conjunctivitis, allergies, or foreign bodies in the eye.

### 4. a.

This patient needs several medications started today. The American Diabetes Association recommends starting treatment with metformin. This should be initiated today. The drug class of choice for treatment of his LDL cholesterol is a statin. Dietary modifications are usually attempted for 3 months prior to initiation of a statin. However, considering this patient's LDLs of 210 mg/dL and his diagnosis of diabetes, strong consideration should be given to initiating therapy today with a statin. An ACE inhibitor is a good antihypertensive medication to treat blood pressure elevations in a 51-year-old overweight Caucasian male who has diabetes. An aspirin should be initiated if there are no contraindications. The ADA recommends (Level C) ASA therapy (low dose) as primary prevention in patients who have Type 2 diabetes and are at increased cardiovascular risk. ASA use as secondary prevention in patients who have diabetes and a history of a cardiovascular event is Level A.

### 5. *d*.

The internal inguinal ring is the most common site for development of an indirect inguinal hernia. These can occur in men and women. Though most are probably congenital, symptoms may not be obvious until later in life. Indirect hernias are more common on the right side. Direct inguinal hernias occur through Hesselbach's triangle.

### Adult-Gero Exam #1 Questions

- 1. A patient is diagnosed with tinea pedis. A microscopic examination of the sample taken from the infected area would likely demonstrate:
  - a. hyphae.
  - b. yeasts.
  - c. rods or cocci.
  - d. a combination of hyphae and spores.
- 2. A healthcare provider ("the HCP") was stuck with a needle from a patient suspected to be infected with HIV ("the patient"). A rapid HIV test was performed on the patient and found to be positive. This means that:
  - a. HIV prophylaxis should be initiated.
  - b. the patient is infected with HIV.
  - c. the HIV status of the patient requires further testing.
  - d. the HIV status of the healthcare provider requires further testing.
- 3. The most common co-morbidity associated with depression is:
  - a. anxiety.
  - b. panic disorder.
  - c. obsessive-compulsive disorder.
  - d. somatic disorder.
- 4. Which finding below is considered "within normal limits"?
  - a. A diastolic murmur in an 18-year-old
  - b. An INR of 2.0 in a patient taking warfarin
  - c. Cholesterol level of 205 mg/dL in a 15-year-old
  - d. Blood pressure of 160/70 mmHg in a 75-year-old
- 5. A 26-year-old HIV-positive patient presents with photophobia and temperature of 103.2° F. He complains of a headache. On exam, he is unable to demonstrate full extension of the knee when his hip is flexed. Which choice below is the most likely diagnosis?
  - a. Pneumocystis infection
  - b. Meningitis
  - c. Septic bursitis
  - d. Septic arthritis

### Adult-Gero Exam #1 Answers

#### 1. a.

Under microscopic exam, hyphae are long, thin and branching, and indicate dermatophytic infections. Hyphae are typical in tinea pedis, tinea cruris, and tinea corporis. Yeasts are usually seen in candidal infections. Cocci and rods are specific to bacterial infections.

#### 2. c

The rapid HIV is always performed on the source patient ("the patient"). It is known as an ELISA (enzyme linked immunosorbent assay). In the patient suspected of being HIV positive, it is performed to establish whether or not he was positive at the time of the needle stick. In this case, it was found to be positive, but, this is a screening test, and false positives can occur. Therefore, a confirmatory test, the western blot, is routinely performed on the patient's specimen to confirm the findings of the ELISA. The healthcare provider will usually be tested with a rapid HIV but it is done to establish HIV status at the time of the needlestick. The results of a rapid test can be performed in less than 20 minutes.

### 3. *a*

Anxiety is the most common comorbidity associated with depression. All of the other choices listed are comorbidities associated with depression, but do not occur with the same frequency. When these comorbidities occur in conjunction with depression and are not treated, they worsen the prognosis.

### 4. *b*.

An INR (International Normalized Ratio) is considered the best measure of clotting status in outpatients. Depending on the reason for anticoagulation, a common target is 2.0 - 3.0. Diastolic murmurs are always considered abnormal regardless of age. Cholesterol levels in adolescents should be less than 170 mg/dL (according to National Heart, Lung and Blood institute, NHLBI). Blood pressure of 160/75 mmHg constitutes isolated systolic hypertension, so this is abnormal.

### 5. *b*.

The inability to demonstrate full extension of the knee when the hip is flexed is a positive Brudzinski's sign. This is present in patients who have meningitis. It is not present in patients who have septic bursitis or septic arthritis. HIV-positive patients are more likely to exhibit pneumonia secondary to pneumocystis infection, but he has no respiratory symptoms.

#### 6. *c*.

This is a stress fracture and commonly occurs with an abrupt increase in activity, especially marching. A stress fracture of the metatarsals is commonly called a "march" fracture because it is frequently seen in soldiers who march. This occurs because of an increase in weight-bearing loads on the metatarsals. Stress fractures occur more commonly in patients with flat feet. Stress fractures of the 2nd, 3rd, and 4th metatarsals account for 90% of metatarsal stress fractures.