

Kevin's Review - 35 NCLEX Practice Questions

1. Your patient is complaining of muscle cramps while undergoing hemodialysis. Which intervention is effective in relieving muscle cramps?

- A. Increase the rate of dialysis.
- B. Infuse normal saline solution.
- C. Administer a 5% dextrose solution.
- D. Encourage active ROM exercises.

Correct Answer: B. Infuse normal saline solution

Treatment includes administering normal saline or hypertonic normal saline solution because muscle cramps can occur when the sodium and water are removed too quickly during dialysis. Saline and/or dextrose solutions, electrolytes, and NaHCO₃ may be infused in the venous side of continuous arteriovenous (CAV) hemofilter when high ultrafiltration rates are used for removal of extracellular fluid and toxic solutes. Volume expanders may be required during or following hemodialysis if sudden or marked hypotension occurs.

- **Option A:** Reducing the rate of dialysis, not increasing it, may alleviate muscle cramps. The central role of volume removal as the trigger for susceptible patients seems evident from the fact that intradialytic cramps are usually associated with hypotension and that prompt correction of hypotension by saline administration and discontinuation of ultrafiltration often improve the cramping.
- **Option C:** Most patients surveyed (76%) reported that fluid removal by dialysis was decreased, was stopped, and/or fluid was given back as the main intervention used to alleviate their cramps. When asked about all interventions to alleviate dialysis cramps, the most frequent response (29%) was a combination of decreasing fluid removal, raising the lower extremities, and massaging the extremities.
- **Option D:** Avoid trauma to shunt. Handle tubing gently, maintain cannula alignment. Limit activity of extremity. Avoid taking BP or drawing blood samples in shunt extremity. Instruct the patient not to sleep on the side with shunt or carry packages, books, purse on affected extremity.

2. The adaptations of a client with complete heart block would most likely include:

- A. Nausea and vertigo
- B. Flushing and slurred speech
- C. Cephalalgia and blurred vision
- D. Syncope and slow ventricular rate

Correct Answer: D. Syncope and slow ventricular rate

In complete atrioventricular block, the ventricles take over the pacemaker function in the heart but at a much slower rate than that of the SA node. As a result, there is decreased cerebral circulation, causing syncope. Patients with third-degree blocks can have varying clinical presentations. Rarely, patients are asymptomatic. Usually, they may present with generalized fatigue, tiredness, chest pain, shortness of breath, presyncope, or syncope. They may have significant hemodynamic instability and can be obtunded.

- **Option A:** The physical exam is usually remarkable for bradycardia. JVP examination often demonstrates cannon A-waves owing to the simultaneous contraction of the atria and ventricles. Thus a very large pressure wave is felt up against the vein.
- **Option B:** Especially with heart rates below 40/min, patients might also present with features consistent with decompensated heart failure, respiratory distress, and hypoperfusion such as diaphoresis, tachypnea, altered mental status, retraction, cool skin, and decreased capillary refill.
- **Option C:** Patients with complete AV-block accompanying an acute myocardial infarction often have ischemic symptoms of chest pain or dyspnea. The past medical history will often include the presence of cardiovascular disease and/or its risk factors, including diabetes mellitus, hypertension, dyslipidemia, and smoking, etc.

3. Which of the following statements best describes the action of antacids?

- A. Antacids neutralize gastric acid
- B. Antacids block the production of gastric acid
- C. Antacids block dopamine
- D. Antacids enhance the action of acetylcholine

Correct Answer: A. Antacids neutralize gastric acid

Antacids act to bring the pH above 3. Antacids are a group of drugs that have been on the market for many years. They were initially first-line defense against peptic ulcer disease; however, the discovery of proton pump inhibitors revolutionized the treatment of peptic ulcer disease. Currently, antacid use is restricted to the relief of mild intermittent gastroesophageal reflux disease (GERD) associated with heartburn. Other choices are incorrect because they describe the actions of anti-acid drugs.

- **Option B:** The antacids reduce the acid reaching the duodenum by neutralizing the acid present in the stomach. The salts' mechanism of neutralization of acid varies, and each salt has a different mechanism with the ultimate goal of acid neutralization.
- **Option C:** The formulation of aluminum hydrochloride and water results in the neutralization of the acid in the stomach. It is also known to inhibit pepsin activity. Aluminum hydroxide is complexed with a sulfated polysaccharide sucrose octasulfate to form sucralfate. This complex does not have a significant buffering action against the acid or has no effect on the pepsin secretion and does not alter the gastric acid production in any way. Nevertheless, it is known to heal chronic ulcers and prevent acute mucosal damage induced chemically by reducing access to pepsin and acid.
- **Option D:** Calcium salts neutralize gastric acidity resulting in increased gastric and duodenal bulb pH; they additionally inhibit the proteolytic activity of pepsin if the pH is greater than 4 and increase lower esophageal sphincter tone. The calcium released from calcium carbonate is known to increase peristalsis in the esophagus, pushing the acid into the stomach and providing relief from symptoms of heartburn. The calcium salts also form combined insoluble compounds with dietary phosphate and prevent the absorption later.

4. A postpartum primipara asks the nurse, "When can we have sexual intercourse again?" Which of the following would be the nurse's best response?

- A. "Anytime you both want to."

- B. "As soon as you choose a contraceptive method."
- C. "When the discharge has stopped, and the incision is healed."
- D. "After your 6 weeks examination."

Correct Answer: C. "When the discharge has stopped and the incision is healed."

Cessation of the lochial discharge signifies healing of the endometrium. The risk of hemorrhage and infection are minimal 3 weeks after a normal vaginal delivery.

- **Option A:** Telling the client anytime is inappropriate because this response does not provide the client with the specific information she is requesting.
- **Option B:** Choice of a contraceptive method is important, but not the specific criteria for safe resumption of sexual activity.
- **Option D:** Culturally, the 6-weeks' examination has been used as the time frame for resuming sexual activity, but it may be resumed earlier.

5. The drug/drugs used most commonly to treat peripheral or cerebral vascular obstructive disease is/are:

- A. pentoxifylline (Trental)
- B. cyclandelate (Cyclan)
- C. isoxsuprine (Vasodilan)
- D. All of the above

Correct Answer: D. All of the above

All are vasodilators used primarily to treat peripheral or cerebral vascular obstructive disease. There are different classes of vasodilators used today in the current clinical practice, and each has different actions on the coronary arteries and peripheral vasculature (arteries and veins). Vasodilators most commonly affect the arteries in the human body, but some vasodilators (such as nitroglycerin) can affect the venous system of the body predominantly.

- **Option A:** Pentoxifylline (PTXF) is a vasoactive agent that improves the flow of blood by reducing its viscosity. Pentoxifylline and its metabolites decrease blood viscosity and improve the blood flow and peripheral tissue oxygenation.
- **Option B:** Cyclandelate belongs to the group of medicines commonly called vasodilators. These medicines increase the size of blood vessels. Cyclandelate is used to treat problems resulting from poor blood circulation.
- **Option C:** Isoxsuprine (Vasodilan) is a beta-adrenergic that directly affects the vascular smooth muscle and results in peripheral vascular dilation. Isoxsuprine relaxes the uterine smooth muscles and is used for the treatment of pre-term labor and dysmenorrhea.

6. Which of the following areas is the most common site of fistulas in clients with Crohn's disease?

- A. Anorectal
- B. Ileum

- C. Rectovaginal
- D. Transverse colon

Correct Answer: A. Anorectal

Fistulas occur in all these areas, but the anorectal area is most common because of the relative thinness of the intestinal wall in this area. The initial lesion starts out as an infiltrate around an intestinal crypt. This goes on to develop ulceration first in the superficial mucosa and involves deeper layers. As the inflammation progresses, non-caseating granulomas form involving all layers of the intestinal wall.

- **Option B:** Small bowel follow-through is often used to assess the involvement of the terminal ileum and can also detect fistulas. The classic string sign due to stricture formation or spasm is often seen.
- **Option C:** Granuloma formation is very common in Crohn's disease but their absence does not exclude the diagnosis. The ongoing inflammation and scarring lead to bowel obstruction and stricture formation.
- **Option D:** It can develop into the classic cobblestone mucosal appearances and skip lesions along the length of the intestine sparing areas with normal mucosa. As the flare of Crohn's settles, scarring replaces the inflamed areas of the intestines.

7. A hospitalized patient is receiving packed red blood cells (PRBCs) for treatment of severe anemia. Which of the following is the most accurate statement?

- A. Transfusion reaction is most likely immediately after the infusion is completed.
- B. PRBCs are best infused slowly through a 20g. IV catheter.
- C. PRBCs should be flushed with a 5% dextrose solution.
- D. A nurse should remain in the room during the first 15 minutes of infusion.

Correct Answer: D. A nurse should remain in the room during the first 15 minutes of infusion.

Transfusion reaction is most likely during the first 15 minutes of infusion, and a nurse should be present during this period.

- **Option A:** Transfusion reaction most likely occurs during the first 15 minutes, not after the infusion has been completed.
- **Option B:** PRBCs should be infused through a 19g or larger IV catheter to avoid slow flow, which can cause clotting.
- **Option C:** PRBCs must be flushed with 0.45% normal saline solution. Other intravenous solutions will hemolyze the cells.

8. Four clients with infections arrive at the emergency department with some existing infection, however, only one private room is available. Which of the following clients is the most appropriate to assign to the private room?

- A. A client with toxic shock syndrome and a temperature of 102.4°F (39.1°C).
- B. A client with diarrhea caused by C. difficile.

- C. A client with a wound infected with VRE.
- D. A client with a cough who may have Koch disease.

Correct Answer: D. A client with a cough who may have Koch disease.

Clients with infections that require airborne precautions (such as TB) need to be in private rooms. Secondary environmental controls consist of controlling the airflow to prevent contamination of air in areas adjacent to the source airborne infection isolation (AII) rooms, and cleaning the air by using high-efficiency particulate air (HEPA) filtration, or ultraviolet germicidal irradiation.

- **Option A:** Standard precautions are required for the client with toxic shock syndrome. At a minimum, standard precautions should be used in the hospital setting to prevent transmission to patients and staff. The CDC has recommended for the first 24 hours of effective antibiotics to have the patient in both contact and droplet isolation.
- **Option B:** Use contact precautions for patients with known or suspected CDI. Place these patients in private rooms. If private rooms are not available, they can be placed in rooms (cohort) with other CDI patients. Wear gloves and a gown when entering CDI patient rooms and during their care.
- **Option C:** Clients with infections that require contact precautions (such as C.difficile and VRE infections) should ideally be placed in private rooms; however, they can be placed in rooms with other clients with the same diagnosis. Wear gloves (clean, non-sterile gloves are adequate) when entering the room of a VRE-infected or colonized patient because VRE can extensively contaminate such an environment. When caring for a patient, a change of gloves might be necessary after contact with a material that could contain high concentrations of VRE.

9. A nurse must measure the intake and output (I&O) for a patient who has a urinary retention catheter. Which equipment is most appropriate to use to accurately measure urine output from a urinary retention catheter?

- A. Urinal
- B. Graduate
- C. Large syringe
- D. Urine collection bag

Correct Answer: B. Graduate

A graduate is a collection container with volume markings usually at 25 mL increments that promote accurate measurements of urine volume. To measure urine output in critical care units, a Foley catheter is introduced through the patient's urethra until it reaches his/her bladder. The other end of the catheter is connected to a graduated container that collects the urine.

- **Option A:** Although urinals have volume markings on the side, usually they occur in 100 mL increments that do not promote accurate measurements. Urine output is the best indicator of the state of the patient's kidneys. If the kidneys are producing an adequate amount of urine it means that they are well perfused and oxygenated. Otherwise, it is a sign that the patient is suffering from some complications.
- **Option C:** Large syringe is impractical. A large syringe is used to obtain a sterile specimen from a retention catheter (Foley catheter). Urine output is required for calculating the patient's water balance, which is essential in the treatment of burn patients. Finally, it is also used in multiple therapy protocols to check whether the patient reacts properly to treatment

- **Option D:** A urine collection bag is flexible and balloons outward as urine collects. In addition, the volume markings are at 100 mL increments that do not promote accurate measurements. In critical care units of first world countries, measurements of every patient's urine output are taken hourly, 24 times a day, 365 days a year. In the case of emerging countries, often only burn patients—for whom urine output monitoring is of paramount importance—have this parameter recorded every hour, while the remaining critical patients have it recorded every 2 or 3 hours.

10. The nurse expects that a type 1 diabetic may receive how much of his or her morning dose of insulin preoperatively?

- A. 10-20%
- B. 25-40%
- C. 50-60%
- D. 85-90%

Correct Answer: C. 50-60%

Surgical procedures may result in a number of metabolic perturbations that can alter normal glucose homeostasis. Patients with type 1 diabetes mellitus who are using long-acting insulins, such as glargine, should continue these as normal when fasting. Patients taking premixed insulins or fixed-combination insulins are more of a challenge. It may not be feasible or economical to change the patient's premixed insulin just before surgery. In these situations, the patient can take $\frac{1}{2}$ – $\frac{3}{4}$ of the morning dose, followed by administration of a dextrose-containing intravenous fluid and frequent blood glucose checks.

- **Option A:** However, in patients who take high doses of basal insulin (>60% of total daily insulin) or total daily insulin dose is greater than 80 units or are at high risk of hypoglycemia (elderly, renal or hepatic insufficiency, prior hypoglycemic episodes); basal insulin dose should be reduced by 50 to 75% to minimize hypoglycemia risk.
- **Option B:** Patients who are on home insulin therapy should reduce the dose of long-acting basal insulin (glargine, detemir) by 20-25% the evening before surgery. If they routinely take basal insulin only in the morning, then the reduced dose should instead be administered on the morning of surgery.
- **Option D:** If the patient is prone to morning hypoglycemia, the dose can be reduced by 20%. Thus, the diabetic patient may receive 80% of his or her morning dose of insulin preoperatively.

11. The nurse is checking the client's central venous pressure. The nurse should place the zero of the manometer at the:

- A. Phlebostatic axis
- B. PMI
- C. Erb's point
- D. Tail of Spence

Correct Answer: A. Phlebostatic axis

The phlebostatic axis is located at the fifth intercostal space midaxillary line and is the correct placement of the manometer. Phlebostatic axis is a point located by drawing an imaginary line from the

fourth intercostal space at the sternum and finding its intersection with an imaginary line drawn down the center of the chest below the axillae.

- **Option B:** The PMI or point of maximal impulse is located at the fifth intercostal space midclavicular line. The point of maximal impulse, known as PMI, is the location at which the cardiac impulse can be best palpated on the chest wall. Frequently, this is at the fifth intercostal space at the midclavicular line. When dilated cardiomyopathy is present, this can be shifted laterally.
- **Option C:** Erb's point is the point at which you can hear the valves close simultaneously. "Erb's point" is also a term used in head and neck surgery to describe the point on the posterior border of the sternocleidomastoid muscle where the four superficial branches of the cervical plexus—the greater auricular, lesser occipital, transverse cervical, and supraclavicular nerves—emerge from behind the muscle.
- **Option D:** The Tail of Spence (the upper outer quadrant) is the area where most breast cancers are located and has nothing to do with the placement of a manometer. The tail of Spence (Spence's tail, axillary process, axillary tail) is an extension of the tissue of the breast that extends into the axilla. It is actually an extension of the upper lateral quadrant of the breast. It passes into the axilla through an opening in the deep fascia called foramen of Langer.

12. When prioritizing care, which of the following clients should the nurse Olivia assess first?

- A. A 17-year-old client 24-hours post appendectomy.
- B. A 33-year-old client with a recent diagnosis of Guillain-Barre syndrome.
- C. A 50-year-old client 3 days post myocardial infarction.
- D. A 50-year-old client with diverticulitis.

Correct Answer: B. A 33-year-old client with a recent diagnosis of Guillain-Barre syndrome

Guillain-Barre syndrome is characterized by ascending paralysis and potential respiratory failure. The order of client assessment should follow client priorities, with disorder of airways, breathing, and then circulation.

- **Option A:** The client who is post appendectomy has no signs of hemorrhage or unstable vital signs. Possible complications of appendectomy are bleeding, wound infection, peritonitis, blocked bowels, and injury to nearby organs.
- **Option C:** There's no information to suggest the postmyocardial infarction client has an arrhythmia or other complication. About 90% of patients who have an acute MI develop some form of cardiac arrhythmia during or immediately after the event.
- **Option D:** There's no evidence to suggest perforation for the client with diverticulitis as a priority of care. Diverticula are small, bulging pouches that can form in the lining of the digestive system when one or more of the pouches become inflamed, and in some cases infected, that condition is known as diverticulitis.

13. In a pediatric post-surgical unit, an 8-year-old boy, Elijah, is returned to his room following a tonsillectomy procedure to rectify recurrent episodes of streptococcal pharyngitis. The anesthesia is still exhibiting its effects, rendering Elijah sleepy albeit easily arousable. He has a documented history of obstructive sleep apnea. His post-operative orders include monitoring for any

signs of hemorrhage and keeping his airway patent. The registered nurse assigned to Elijah's care needs to ascertain the optimum position to facilitate respiratory function and mitigate the risk of postoperative complications such as aspiration or hemorrhage. Which of the following positions should the nurse place Elijah in?

- A. Sims'
- B. Side-lying
- C. Supine
- D. Prone
- E. High Fowler's
- F. Semi-Fowler's
- G. Trendelenburg

Correct Answer: B. Side-lying

The side-lying position is ideal for maintaining a patent airway and promoting drainage, which is crucial for Elijah's recovery post-tonsillectomy, especially given his history of obstructive sleep apnea. It also minimizes the risk of aspiration should vomiting occur.

- **Option A:** Sims' position is often used for rectal examinations, enema administration, and promoting drainage from the mouth which might be beneficial, however, it may not be as effective in keeping the airway open as the side-lying position.
- **Option C:** The supine position is not the most suitable position following a tonsillectomy as it could obstruct Elijah's airway and does not promote drainage, increasing the risk of aspiration.
- **Option D:** Prone position could potentially obstruct Elijah's airway and is not traditionally used following a tonsillectomy due to the risk of increasing pressure on the surgical site, which could lead to hemorrhage.
- **Option E:** High Fowler's position could help in maintaining a patent airway, but it might be uncomfortable for a child who is still sleepy from anesthesia. Additionally, it does not promote drainage as effectively as the side-lying position.
- **Option F:** Semi-Fowler's position can be used to maintain a patent airway but may not provide the necessary drainage from the mouth or be as comfortable for Elijah who is still drowsy from the anesthesia.
- **Option G:** Trendelenburg position is traditionally used to increase venous return to the heart and is not suitable for post-tonsillectomy positioning as it does not promote airway patency or drainage.

14. The nurse in charge is caring for a patient who is in the first stage of labor. What is the shortest but most difficult part of this stage?

- A. Active phase
- B. Complete phase
- C. Latent phase
- D. Transitional phase

Correct Answer: D. Transitional phase

The transitional phase, which lasts 1 to 3 hours, is the shortest but most difficult part of the first stage of labor. This phase is characterized by intense uterine contractions that occur every 1 ½ to 2 minutes and last 45 to 90 seconds.

- **Option A:** The active phase lasts 4 ½ to 6 hours; it is characterized by contractions that start out moderately intense, grow stronger, and last about 60 seconds.
- **Option B:** The complete phase occurs during the second, not first, stage of labor.
- **Option C:** The latent phase lasts 5 to 8 hours and is marked by mild, short, irregular contractions.

15. A nurse is assisting with caloric testing of the oculovestibular reflex of an unconscious client. Cold water is injected into the left auditory canal. The client exhibits eye conjugate movements toward the left followed by a rapid nystagmus toward the right. The nurse understands that this indicates the client has:

- A. A cerebral lesion
- B. A temporal lesion
- C. An intact brainstem
- D. Brain death

Correct Answer: C. An intact brainstem

Caloric testing provides information about differentiating between cerebellar and brainstem lesions. After determining patency of the ear canal, cold or warm water is injected in the auditory canal. A normal response that indicates intact function of cranial nerves III, IV, and VIII is conjugate eye movements toward the side being irrigated, followed by rapid nystagmus to the opposite side. Absent or disconjugate eye movements indicate brainstem damage.

- **Option A:** Caloric testing is clinically useful as a bedside test to isolate the peripheral vestibular system and rule out central etiology of vertigo. When there is a high suspicion for a peripheral lesion, bi-thermal caloric testing is typically performed. However, in cases in which there is a low pretest probability, it can be appropriate only to utilize mono thermal caloric testing and stop when the test is negative or in other words, responses are symmetric (therefore likely indicating a central process).
- **Option B:** The advantage caloric testing has over other studies, such as the vestibular evoked myogenic potential and video head impulse test, is that it does not require head movement to be conducted, rendering better patient compliance in those patients whose symptoms worsen with movement, as well as in patients with limited cervical mobility.
- **Option D:** Another indication for the use of this test is for brain stem testing in comatose patients. As described above, the reflex arc requires an intact brain stem, and therefore lack of nystagmus could indicate a brainstem lesion.

16. David, a 52-year-old travel writer, has been admitted to the hospital due to a severe flare-up of his gout. Over the past week, he attended various culinary events, indulging in rich foods and drinks, which he suspects might have triggered his current episode. Nurse Megan reviews his medical orders and

plans her interventions for David's care. Which actions should she include in her plan? Select all that apply.

- A. Administering nonsteroidal anti-inflammatory drugs (NSAIDs)
- B. Encouraging bed rest to reduce joint stress
- C. Applying warm compresses to the affected joints
- D. Instructing the patient to elevate the affected joints
- E. Educating the patient about dietary modifications to limit purine intake

Correct Answers: A, D, and E.

- **Option A:** NSAIDs are often prescribed for gout flare-ups as they can help reduce pain and inflammation in the affected joints.
- **Option D:** Elevating the affected joint can help reduce swelling and pain.
- **Option E:** Diet plays a significant role in managing gout. Educating the patient about foods high in purine, which can elevate uric acid levels, is crucial. By avoiding or limiting these foods, patients can potentially reduce the frequency and severity of gout attacks.
- **Option B:** While limiting activities that exacerbate pain and inflammation is advisable, complete bed rest is not typically recommended for gout patients. Gentle movement and mobilization can help prevent stiffness and promote joint health.
- **Option C:** During an acute gout flare-up, applying cold compresses is generally preferred over warm compresses. Cold can help reduce inflammation and numb the area, offering pain relief.

17. A 5-year-old girl Hannah is recently diagnosed with Kawasaki disease. Apart from the identified symptoms of the disease, she may also likely develop which of the following?

- A. Sepsis
- B. Meningitis
- C. Mitral valve disease
- D. Aneurysm formation

Correct Answer: D. Aneurysm formation

Kawasaki disease is a rare childhood illness that affects the blood vessels. 20% to 25% of children can develop aneurysm formation if not intervened. Treatment depends on the degree of the disease but is often immediate treatment with IV gamma globulin or aspirin. Corticosteroids can sometimes lessen impending complications. Children who experience the disease usually need lifelong follow-up appointments to keep an eye on heart health.

- **Option A:** Over weeks and months, wall thickening of the coronary aneurysms can lead to stenosis and thrombus formation which can result in myocardial infarction (MI), rupture, ischemia-related dysrhythmias, or death.
- **Option B:** The greatest risk of these cardiac complications is during the period of thrombocytosis. Small coronary aneurysms may resolve in 60% of cases in the later convalescent-phase when inflammatory markers return to normal.

- **Option C:** Kawasaki disease (KD), also known by the name mucocutaneous lymph node syndrome, is an acute, self-limited medium vessel vasculitis that has a predilection for the coronary arteries. It is the leading cause of acquired heart disease in developed nations and is slowly bypassing rheumatic heart disease in developing countries.

18. A nurse is providing discharge education to a 55-year-old client who has been hospitalized with symptoms leading to a diagnosis of atherosclerosis. The client has a sedentary lifestyle, a high-stress job, and a diet high in saturated fats. As part of the client's comprehensive care plan to manage and reduce the progression of atherosclerosis, which of the following lifestyle modifications should the nurse emphasize?

- A. Emphasize the importance of not focusing solely on weight as a health measure, but rather on overall cardiovascular health.
- B. Recommend an incremental increase in physical activity, starting with low-intensity exercises such as walking or swimming.
- C. Advise adherence to a heart-healthy diet, rich in fruits, vegetables, whole grains, and lean proteins, while limiting saturated fats and cholesterol.
- D. Counsel on stress management techniques and the importance of incorporating relaxation activities into daily routines.
- E. Discuss smoking cessation strategies if applicable and avoid exposure to secondhand smoke.
- F. Suggest regular monitoring of blood pressure and cholesterol levels with follow-up appointments to assess cardiovascular health.

Correct Answer: B. Recommend an incremental increase in physical activity, starting with low-intensity exercises such as walking or swimming.

Increasing physical activity is a key intervention for a client with atherosclerosis in managing and slowing the disease's progression. While the other options are valid health measures, they are less directly impactful on atherosclerosis than increasing physical activity. A heart-healthy diet (C) and stress management (D) are also essential but support the primary intervention of increased physical activity. Smoking cessation (E) is critical if the client smokes, and regular monitoring (F) is part of ongoing management, but these options were not specified in the original question.

19. A nurse is handling a child who is on furosemide (Lasix) IV infusion. The nurse instructs the mother to encourage the child to eat which of the following?

- A. Apricot and baked potato skin.
- B. Bread and butter.
- C. Gelatin and Cauliflower.
- D. Ginger ale and cereal.

Correct Answer: A. Apricot and baked potato skin.

One of the side effects of taking furosemide is hypokalemia, so a supplemental food rich in potassium is encouraged. Many fresh fruits and vegetables are rich in potassium: Bananas, oranges, cantaloupe, honeydew, apricots, grapefruit (some dried fruits, such as prunes, raisins, and dates, are also high in

potassium).

- **Option B:** Bread is rich in carbohydrates and butter is sufficient in fats. Foods that have the highest concentrations of potassium include cantaloupe, watermelons, grapefruit, all dried fruit and fruit juices, avocados, tomatoes, potatoes (plain and sweet), Brussels sprouts, milk, yogurt, lentils, and most nuts (except peanuts).
- **Option C:** Cauliflower is a cruciferous vegetable that is naturally high in fiber and B-vitamins. It provides antioxidants and phytonutrients that can protect against cancer. It also contains fiber to enhance weight loss and digestion, choline that is essential for learning and memory, and many other important nutrients.
- **Option D:** These are low in potassium. People may think of ginger ale as another form of soda, but in fact, this beverage does have some important nutrients, including calcium, iron, copper, and magnesium, among others. It is relatively low in calories, but most manufacturers add sugar to make the drink more palatable.

20. A client underwent ileostomy, when should the drainage appliance be applied to the stoma?

- A. 24 hours later, when edema has subsided
- B. In the operating room
- C. After the ileostomy begins to function
- D. When the client is able to begin self-care procedures

Correct Answer: B. In the operating room

The stoma drainage bag is applied in the operating room. Drainage from the ileostomy contains secretions that are rich in digestive enzymes and highly irritating to the skin. Protection of the skin from the effects of these enzymes is begun at once. Skin exposed to these enzymes even for a short time becomes reddened, painful, and excoriated.

- **Option A:** If the application of the drainage appliance is delayed after surgery, the skin around the stoma would be most likely irritated and damaged due to the digestive enzymes present in the secretions of the drainage.
- **Option C:** An ileostomy needs a drainage bag before it starts to function so that the secretions from the drainage would be caught up by the bag, preventing contamination of the skin.
- **Option D:** The client would have irritated, damaged skin once the drainage comes out from the stoma and comes into contact with the skin.

21. The nurse is changing the ties of the client with a tracheostomy. The safest method of changing the tracheostomy ties is to:

- A. Apply the new tie before removing the old one.
- B. Have a helper present.
- C. Hold the tracheostomy with the nondominant hand while removing the old tie.
- D. Ask the doctor to suture the tracheostomy in place.

Correct Answer: A. Apply the new tie before removing the old one.

Leaving the old ties in place while securing the clean ties prevents inadvertent dislodging of the tracheostomy tube.

- **Option B:** Having a helper is good, but the helper might not prevent the client from coughing out the tracheotomy.
- **Option C:** Hold the tracheostomy with the nondominant hand while removing the old tie is not the best way to prevent the client from coughing out the tracheotomy.
- **Option D:** Asking the doctor to suture the tracheostomy in place is unnecessary.

22. Which of the following diagnostic tests is definitive for TB?

- A. Chest x-ray
- B. Mantoux test
- C. Sputum culture
- D. Tuberculin test

Correct Answer: C. Sputum culture

The sputum culture for *Mycobacterium tuberculosis* is the only method of confirming the diagnosis. Mycobacterial culture is the gold standard for diagnosis. Mycobacterial culture should be performed on both the solid and liquid medium. Liquid media culture can detect very low bacterial load and is considered a gold standard. Culture essential for drug susceptibility testing.

- **Option A:** Lesions in the lung may not be big enough to be seen on x-ray. A chest x-ray is indicated to rule out or rule in the presence of active disease in all screening test positive cases. In pulmonary tuberculosis, initial testing includes a chest X-Ray, sputum evaluation.
- **Option B:** Skin tests may be falsely positive or falsely negative. The Mantoux reaction following injection of a dose of PPD (purified protein derivative) is the traditional screening test for exposure to Tuberculosis. The result is interpreted taking into consideration the patient's overall risk of exposure. Patients are classified into 3 groups based on the risk of exposure with three corresponding cut-off points.
- **Option D:** Note that a Mantoux test indicates exposure or latent tuberculosis. However, this test lacks specificity, and patients would require subsequent visits for interpreting the results as well as chest x-ray for confirmation. Although relatively sensitive, the Mantoux reaction is not very specific and may give false-positive reactions in individuals who have been exposed to the BCG-vaccine.

23. A client who is 36 weeks pregnant comes to the clinic for a prenatal checkup. To assess the client's preparation for parenting, the nurse might ask which question?

- A. "Are you planning to have epidural anesthesia?"
- B. "Have you begun prenatal classes?"
- C. "What changes have you made at home to get ready for the baby?"
- D. "Can you tell me about the meals you typically eat each day?"

Correct Answer: C. "What changes have you made at home to get ready for the baby?"

During the third trimester, the pregnant client typically perceives the fetus as a separate being. To verify that this has occurred, the nurse should ask whether she has made appropriate changes at home such as obtaining infant supplies and equipment.

- **Option A:** The type of anesthesia planned doesn't reflect the client's preparation for parenting.
- **Option B:** The client should have begun prenatal classes earlier in the pregnancy.
- **Option D:** The nurse should have obtained dietary information during the first trimester to give the client time to make any necessary changes.

24. Which of the following symptoms is expected with hemoglobin of 10 g/dl?

- A. None
- B. Pallor
- C. Palpitations
- D. Shortness of breath

Correct Answer: A. None

Mild anemia usually has no clinical signs. Palpitations, SOB, and pallor are all associated with severe anemia. Whether or not a patient becomes symptomatic depends on the etiology of anemia, the acuity of onset, and the presence of other comorbidities, especially the presence of cardiovascular disease. Most patients experience some symptoms related to anemia when the hemoglobin drops below 7.0 g/dL.

- **Option B:** Pallor is the most commonly encountered physical finding in patients with anemia. As mentioned earlier, this sign is due to the shunting of blood away from the skin and other peripheral tissues, permitting enhanced blood flow to vital organs.
- **Option C:** Hemoglobin is the protein in red blood cells that helps transport oxygen around the body. In iron deficiency, low levels of hemoglobin mean the heart has to work extra hard to carry oxygen. This may lead to irregular heartbeats or the feeling that the heart is beating abnormally fast.
- **Option D:** Hemoglobin is an iron-rich protein that helps red blood cells carry oxygen from the lungs to the rest of the body. If the client has anemia, the body does not get enough oxygen-rich blood. This can cause him to feel tired or weak. He may also have shortness of breath, dizziness, headaches, or an irregular heartbeat.

25. Beta-adrenergic agonists such as albuterol are given to Reggie, a child with asthma. Such drugs are administered primarily to do which of the following?

- A. Dilate the bronchioles
- B. Reduce secondary infections
- C. Decrease postnasal drip
- D. Reduce airway inflammation

Correct Answer: A. Dilate the bronchioles

Beta-adrenergic agonists, such as albuterol, are highly effective bronchodilators and are used to dilate the narrow airways associated with asthma. Albuterol and levalbuterol are examples of short-acting

bronchodilators. They have a quick onset of action, within 5 to 15 minutes, and a duration of action of 4 to 6 hours. Their administration is most often by nebulizer or inhaler.

- **Option B:** Antibiotics are used to prevent secondary infection. Antibiotics cannot help with asthma attacks and guidelines do not recommend routinely prescribing antibiotics after an asthma attack. They should only be prescribed after an asthma attack if there is strong evidence that there is a bacterial infection. For example, a bacterial chest infection or pneumonia.
- **Option C:** Decongestants may be given to decrease postnasal drip. Oral decongestants such as pseudoephedrine are useful in relieving symptoms but are not recommended for extended daily use due to their side-effect profile. Intranasal decongestants such as xylometazoline are alpha-agonists that are delivered directly to nasal tissue to produce vasoconstriction.
- **Option D:** Corticosteroids may be used for their anti-inflammatory effect. Montelukast can be an alternative. Montelukast is a leukotriene receptor antagonist available in 4 mg granules, or 4 mg and 5 mg chewable tablets, as well as in a 10 mg tablet formulation. Single evening dosing prescription is by age and FDA approved for asthma control from 12 months of age.

26. A mother of a term neonate asks what the thick, white, cheesy coating is on his skin. Which correctly describes this finding?

- A. Lanugo
- B. Milia
- C. Nevus flammeus
- D. Vernix

Correct Answer: D. Vernix.

- **Option D:** Vernix caseosa or vernix is the waxy or cheese-like white substance found coating the skin of newborn human babies. It is produced by dedicated cells and is thought to have some protective roles during fetal development and for a few hours after birth.

27. The nurse has been teaching the role of diet in regulating blood pressure to a client with hypertension. Which meal selection indicates that the client understands his new diet?

- A. Oatmeal, apple juice, dry toast, and coffee
- B. Pancakes, ham, tomato juice, and coffee
- C. Cornflakes, whole milk, banana, and coffee
- D. Scrambled eggs, bacon, toast, and coffee

Correct Answer: A. Oatmeal, apple juice, dry toast, and coffee

- **Option A:** Oatmeal is low in sodium and high in fiber. Limiting sodium intake and increasing fiber helps to lower cholesterol levels, which reduces blood pressure.
- **Answers B and D:** They contain animal proteins that are high in both cholesterol and sodium.
- **Option C:** Cornflakes and whole milk are higher in sodium and are poor sources of fiber.

28. A client has just received a renal transplant and has started cyclosporine therapy to prevent graft rejection. Which of the following conditions is a major complication of this drug therapy?

- A. Depression
- B. Hemorrhage
- C. Infection
- D. Peptic ulcer disease

Correct Answer: C. Infection

Infection is the major complication to watch for in clients on cyclosporine therapy because it's an immunosuppressive drug. Urinary tract infections are common within the first 6 months. Opportunistic infections are more likely to occur 1–6 months after transplantation, reflecting the greater impact of immunosuppression during this time. Reactivation of latent pathogens such as polyomavirus BK, hepatitis C virus (HCV), and mycobacterium tuberculosis may also occur.

- **Option A:** Depression may occur posttransplantation but not because of cyclosporine. While kidney transplantation offers several advantages in terms of improved clinical outcomes and quality of life compared to dialysis modalities, depressive symptoms are still present in approximately 25% of patients, rates comparable to that of the hemodialysis population.
- **Option B:** Hemorrhage is a complication associated with anticoagulant therapy. Bleeding is the most important complication of VKAs and a major concern for both physicians and patients. The occurrence of bleeding during treatment is not only important for the treated subjects, but also for correct and complete use of this therapy in all the subjects who have a clear clinical indication for anticoagulation.
- **Option D:** Peptic ulcer disease is a complication of steroid therapy. It is suggested that the mechanisms responsible for peptic ulcer formation induced by corticosteroids include enhanced gastrin and parietal cell hyperplasia with increased acid secretion, diminished gastric mucus synthesis, and suppressed arachidonic acid metabolism and prostaglandin (PG) synthesis.

29. A patient with Hodgkin's lymphoma is undergoing external radiation therapy on an outpatient basis. After 2 weeks of treatment, the patient tells the nurse, "I am so tired I can hardly get out of bed in the morning." An appropriate intervention for the nurse to plan with the patient is to

- A. Consult with a psychiatrist for treatment of depression
- B. Establish a time to take a short walk every day
- C. Exercise vigorously when fatigue is not as noticeable
- D. Maintain bed rest until the treatment is completed

Correct Answer: B. Establish a time to take a short walk every day

- **Option B:** Walking programs are used to keep the patient active without excessive fatigue.
- **Option A:** Fatigue is expected during treatment and is not an indication of depression.
- **Option C:** Vigorous exercise when the patient is less tired may lead to increased fatigue.
- **Option D:** Bed rest will lead to weakness and other complications of immobility.

30. The nurse would anticipate which of the following ABG results in a client experiencing a prolonged, severe asthma attack?

- A. Decreased PaCO₂, increased PaO₂, and decreased pH.
- B. Increased PaCO₂, decreased PaO₂, and decreased pH.
- C. Increased PaCO₂, increased PaO₂, and increased pH.
- D. Decreased PaCO₂, decreased PaO₂, and increased pH.

Correct Answer: B. Increased PaCO₂, decreased PaO₂, and decreased pH.

As the severe asthma attack worsens, the client becomes fatigued and alveolar hypotension develops. This leads to carbon dioxide retention and hypoxemia. The client develops respiratory acidosis. Therefore, the PaCO₂ level increases, the PaO₂ level decreases, and the pH decreases, indicating acidosis.

- **Option A:** Respiratory acidosis is a very common acid-base disturbance in acute severe asthma and is widely considered to be an ominous finding. Its early recognition and treatment are important and decisive for the final outcome, as it can lead to respiratory failure and arrest if prolonged.
- **Option C:** Hypercapnia in asthma, in addition to the severity of the disease, is also associated with the therapeutic administration of oxygen. Thus, in patients with severe asthma exacerbation, a significant increase (?4 mmHg) in transcutaneous PCO₂ (PtCO₂) was observed in a higher proportion in those receiving high oxygen mixtures (>8 L/min), compared to those who received titrated oxygen (to achieve oxygen saturation of 93–95%)
- **Option D:** Lee et al. noted that PaCO₂ was significantly higher and the arterial blood pH lower in asthmatics who died, and delays in providing mechanical ventilation led to worse outcomes. Another mechanism implicates the Haldane effect, in which oxygen displaces the CO₂ dissociation curve to the right, increasing PaCO₂, which cannot be normalized as patients with severe COPD are unable to increase ventilation.

31. A postpartum (PP) client is being treated for DVT. The nurse understands that the client's response to treatment will be evaluated by regularly assessing the client for:

- A. Dysuria, ecchymosis, and vertigo
- B. Epistaxis, hematuria, and dysuria
- C. Hematuria, ecchymosis, and epistaxis
- D. Hematuria, ecchymosis, and vertigo

Correct Answer: C. Hematuria, ecchymosis, and epistaxis.

The treatment for DVT is anticoagulant therapy. The nurse assesses for bleeding, which is an adverse effect of anticoagulants. This includes hematuria, ecchymosis, and epistaxis. Dysuria and vertigo are not associated specifically with bleeding. The cornerstone of treatment is anticoagulation. NICE guidelines only recommend treating proximal DVT (not distal) and those with pulmonary emboli. In each patient, the risks of anticoagulation need to be weighed against the benefits.

- **Option A:** Low-molecular-weight heparin or fondaparinux for five days or until INR is greater than 2 for 24 hours (unfractionated heparin for patients with renal failure and increased risk of bleeding). If platelet count drops to less than 75,000, switch from heparin to fondaparinux, which is not associated with heparin-induced thrombocytopenia.
- **Option B:** The use of thrombolytic therapy can result in an intracranial bleed, and hence, careful patient selection is vital. Recently endovascular interventions like catheter-directed extraction, stenting, or mechanical thrombectomy have been tried with moderate success. The duration of treatment for DVT is for 3-6 months, but recurrent episodes may require at least 12 months of treatment. Patients with cancer need long term treatment.
- **Option D:** Inferior vena cava filters are not recommended in acute DVT. There are both permanent and temporary inferior vena cava filters available. These devices may decrease the rate of recurrent DVT but do not affect survival. Today, only patients with contraindications to anticoagulation with an increased risk of bleeding should have these filters inserted.

32. Nurse Bella is aware that assessment finding is most consistent with early alcohol withdrawal?

- A. Heart rate of 120 to 140 beats/minute
- B. Heart rate of 50 to 60 beats/minute
- C. Blood pressure of 100/70 mmHg
- D. Blood pressure of 140/80 mmHg

Correct Answer: A. Heart rate of 120 to 140 beats/minute

Tachycardia, a heart rate of 120 to 140 beats/minute, is a common sign of alcohol withdrawal. Blood pressure may be labile throughout withdrawal, fluctuating at different stages. Hypertension typically occurs in early withdrawal. Hypotension, although rare during the early withdrawal stages, may occur in later stages. Hypotension is associated with cardiovascular collapse and most commonly occurs in clients who don't receive treatment. The nurse should monitor the client's vital signs carefully throughout the entire alcohol withdrawal process.

- **Option B:** Delirium tremens is the most severe form of alcohol withdrawal, and its hallmark is that of an altered sensorium with significant autonomic dysfunction and vital sign abnormalities. It includes visual hallucinations, tachycardia, hypertension, hyperthermia, agitation, and diaphoresis. Symptoms of delirium tremens can last up to seven days after alcohol cessation and may last even longer.
- **Option C:** Alcohol withdrawal can range from very mild symptoms to the severe form, which is named delirium tremens. The hallmark is autonomic dysfunction resulting from the excitation of the central nervous system. Mild signs/symptoms can arise within six hours of alcohol cessation. If symptoms do not progress to more severe symptoms within 24 to 48 hours, the patient will likely recover.
- **Option D:** Patients should be kept calm in a controlled environment to try to reduce the risks of progression from mild symptoms to hallucinations. With mild to moderate symptoms, patients should receive supportive therapy in the form of intravenous rehydration, correction of electrolyte abnormalities, and have comorbid conditions as listed above ruled out.

33. After having transurethral resection of the prostate (TURP), Mr. Lim returns to the unit with a three-way indwelling urinary catheter and continuous closed

bladder irrigation. Which finding suggests that the client's catheter is occluded?

- A. The urine in the drainage bag appears red to pink.
- B. The client reports bladder spasms and the urge to void.
- C. The normal saline irrigant is infusing at a rate of 50 drops/minute.
- D. About 1,000 ml of irrigant have been instilled; 1,200 ml of drainage have been returned.

Correct Answer: B. The client reports bladder spasms and the urge to void.

Reports of bladder spasms and the urge to void suggest that a blood clot may be occluding the catheter. Bladder blood clot formation is a common emergency in urological practice. Severe hematuria can lead to blood clot formation in the bladder cavity and consequent urinary retention. Patients may develop pain if the clots cannot be evacuated in a timely manner.

- **Option A:** After TURP, urine normally appears red to pink. Within the first few weeks after surgery, the scab where prostate tissue has been removed may sometimes loosen and cause some bleeding. By resting when this happens and drinking plenty of fluid, the bleeding will usually stop.
- **Option C:** The normal saline irrigant usually is infused at a rate of 40 to 60 drops/minute or according to facility protocol. Manual bladder washout using a Foley catheter and syringe is the most common method of removing such blood clots. However, this method fails in some patients.
- **Option D:** The amount of retained fluid (1,200 ml) should correspond to the amount of instilled fluid, plus the client's urine output (1,000 ml + 200 ml), which reflects catheter patency. Immediately after the operation, the catheter is connected to irrigation fluids to wash blood and blood clots out of the bladder. As the urine clears the irrigation will be slowed and eventually stopped. The catheter will be removed when the urine is clear and this will usually occur on the second morning after the surgery.

34. A nurse is caring for a patient with peripheral vascular disease (PVD). The patient complains of burning and tingling of the hands and feet and cannot tolerate touch of any kind. Which of the following is the most likely explanation for these symptoms?

- A. Inadequate tissue perfusion leading to nerve damage.
- B. Fluid overload leading to compression of nerve tissue.
- C. Sensation distortion due to psychiatric disturbance.
- D. Inflammation of the skin on the hands and feet.

Correct Answer: A. Inadequate tissue perfusion leading to nerve damage.

Patients with peripheral vascular disease often sustain nerve damage as a result of inadequate tissue perfusion. Intermittent claudication results when blood flow distal to the occlusion is sufficiently compromised, resulting in fixed oxygen delivery that is unable to match oxygen demand. The most severe form of PAD is critical limb ischemia, which is defined as limb pain at rest or impending limb loss.

- **Option B:** Fluid overload is not characteristic of PVD. Atherosclerotic plaque builds up slowly over decades within the wall of the vessel. Plaque accumulation results in vascular stenosis and frequent vascular dilation to maximize end-organ perfusion. Once the vessel dilation capacity is

maximized, the plaque continues to accumulate, which further compromises the lumen occasionally, leading to critical narrowing of the artery.

- **Option C:** There is nothing to indicate psychiatric disturbance in the patient. The overall prognosis of patients with peripheral vascular disease must take into account patient risk factors, cardiovascular health, and disease severity. In terms of limb health at 5 years, nearly 80% of patients will have stable claudication symptoms. Only 1% to 2% of patients will progress to critical limb ischemia in 5 years. Twenty to 30% of patients with PAD will die within 5 years, with 75% of those deaths attributed to cardiovascular causes.
- **Option D:** Skin changes in PVD are secondary to decreased tissue perfusion rather than primary inflammation. Examination of the limbs should involve assessment for pulselessness, pallor, muscular atrophy, cool or cyanotic skin, or pain with palpation. Lower extremity ulcers may be arterial, venous, neuropathic, or a combination of two or more. Ulcers secondary to arterial insufficiency are tender and typically have ragged borders with a dry base and pale or necrotic centers.

35. All of the following characteristics would indicate to the nurse that an elder client might experience undesirable effects of medicines except:

- A. Increased oxidative enzyme levels.
- B. Alcohol taken with medication.
- C. Medications containing magnesium.
- D. Decreased serum albumin.

Correct Answer: A. Increased oxidative enzyme levels.

Oxidative enzyme levels decrease in the elderly, which affects the disposition of medication and can alter the therapeutic effects of medication. Oxidative stress causes cells and entire organisms to age. If reactive oxygen species accumulate, this causes damage to the DNA as well as changes in the protein molecules and lipids in the cell. The cell ultimately loses its functionality and dies. Over time, the tissue suffers, and the body ages.

- **Option B:** Alcohol has a smaller water distribution level in the elderly, resulting in higher blood alcohol levels. Alcohol also interacts with various drugs to either potentiate or interfere with their effects. The older one gets, the longer alcohol stays in the system. So it's more likely to be there when the client takes medicine. And alcohol can affect the way the meds work. It can also lead to serious side effects.
- **Option C:** Magnesium is contained in a lot of medications older clients routinely obtain over the counter. Magnesium toxicity is a real concern. Older adults have lower dietary intakes of magnesium than younger adults. In addition, magnesium absorption from the gut decreases, and renal magnesium excretion increases with age. Older adults are also more likely to have chronic diseases or take medications that alter magnesium status, which can increase their risk of magnesium depletion.
- **Option D:** Albumin is the major drug-binding protein. Decreased levels of serum albumin mean that higher levels of the drug remain free and that there are fewer therapeutic effects and increased drug interactions.