

Kevin's Review - 35 NCLEX Practice Questions

1. Nurse Martha is teaching her students about bacterial control. Which intervention is the most important factor in preventing the spread of microorganisms?

- A. Maintenance of asepsis with indwelling catheter insertion.
- B. Use of masks, gowns, and gloves when caring for clients with infection.
- C. Correct handwashing technique.
- D. Cleanup of blood spills with sodium hydrochloride.

Correct Answer: C. Correct handwashing technique.

Handwashing remains the most effective procedure for controlling microorganisms and the incidence of nosocomial infections. According to the Centers for Disease Control and Prevention (CDC), hand hygiene is the single most important practice in the reduction of the transmission of infection in the healthcare setting. According to the CDC, hand hygiene encompasses the cleansing of your hands with soap and water, antiseptic hand washes, antiseptic hand rubs such as alcohol-based hand sanitizers, foams or gels, or surgical hand antisepsis.

- **Option A:** Aseptic technique is essential with invasive procedures, including indwelling catheters. The purpose of creating a sterile field is to reduce the number of microbes present to as few as possible. The sterile field is used in many situations outside the operating room as well as inside the operating room when performing surgical cases.
- **Option B:** Masks, gowns, and gloves are necessary only when the likelihood of exposure to blood or body fluids is high. Personal protective equipment serves as a barrier to protect the skin, mucous membranes, airway, and clothing. It includes gowns, gloves, masks, and face shields or goggles.
- **Option D:** Spills of blood from clients with acquired immunodeficiency syndrome should be cleaned with sodium hydrochloride. Standard precautions apply to the care of all patients, irrespective of their disease state. These precautions apply when there is a risk of potential exposure to blood; all body fluids, secretions, and excretions, except sweat, regardless of whether or not they contain visible blood; non-intact skin, and mucous membranes.

2. Which of the following groups of symptoms indicated a ruptured abdominal aneurysm?

- A. Lower back pain, increased BP, decreased RBC, increased WBC
- B. Severe lower back pain, decreased BP, decreased RBC, increased WBC
- C. Severe lower back pain, decreased BP, decreased RBC, decreased WBC
- D. Intermittent lower back pain, decreased BP, decreased RBC, increased WBC

Correct Answer: B. Severe lower back pain, decreased BP, decreased RBC, increased WBC

Severe lower back pain indicates an aneurysm rupture, secondary to pressure being applied within the abdominal cavity. When a rupture occurs, the pain is constant because it can't be alleviated until the aneurysm is repaired. Blood pressure decreases due to the loss of blood. After the aneurysm ruptures, the vasculature is interrupted and blood volume is lost, so blood pressure wouldn't increase. For the same reason, the RBC count has decreased – not increased. The WBC count increases as cells migrate to the site of injury.

- **Option A:** The pain felt during rupture is severe. Due to the loss of blood, the blood pressure decreases.
- **Option C:** The WBC count increases because the cells migrate to the site of injury.
- **Option D:** The pain is not intermittent during an aneurysm; it is constant and severe.

3. An older woman with diabetes mellitus visits the clinic concerning her condition. Which of the following symptoms might an older woman with diabetes mellitus complain?

- A. Anorexia
- B. Pain intolerance
- C. Weight loss
- D. Perineal itching

Correct Answer: D. Perineal itching

Older women might complain of perineal itching due to vaginal candidiasis. In diabetes, blood glucose levels can go abnormally high, which can therefore provide ideal conditions for naturally present yeast to grow and also diminishes the body's ability to fight infection.

- **Option A:** Researchers estimate that 10–20 percent of girls in their mid-teen years and 30–40 percent of late teenaged girls and young adult women with diabetes skip or alter insulin doses to control their weight. In people with diabetes, eating disorders can lead to poor metabolic control and repeated hospitalizations for dangerously high or low blood sugar.
- **Option B:** Diabetic neuropathy can manifest itself as a mononeuropathy, entrapment syndrome, or distal symmetric polyneuropathy (DSPN), which is the most common subtype. DSPN is defined as a chronic, bilateral, length-dependent sensorimotor neuropathy compromising multiple nerves. For 10 to 26% of people with DSPN, the neuropathy is painful.
- **Option C:** In people with diabetes, insufficient insulin prevents the body from getting glucose from the blood into the body's cells to use as energy. When this occurs, the body starts burning fat and muscle for energy, causing a reduction in overall body weight. Unexpected weight loss is often noticed in people prior to a diagnosis of type 1 diabetes but it may also affect people with type 2 diabetes.

4. The nurse is reviewing the laboratory result of a client receiving digoxin (Lanoxin) and notes that the result is 2.5 ng/mL. The nurse plans to do which of the following?

- A. Give the next dose.
- B. Notify the physician.
- C. Check the client's pulse rate.
- D. Increase the next dose as ordered.

Correct Answer: B. Notify the physician.

The normal value therapeutic range for digoxin is 0.5 to 2 ng/mL. A level of 2.5 ng/mL indicates toxicity. The nurse should immediately inform the physician, who may give further instructions about holding the

next doses of digoxin. Digoxin toxicity can present acutely after an overdose or chronically, as is often seen in patients on digoxin that develop acute kidney injury. Approximately 1% of CHF patients treated with digoxin develop toxicity. Additionally, 1% of adverse drug effects in patients greater than age 40 are due to digoxin toxicity; the incidence rises to greater than 3% in patients over age 85.

- **Option A:** Clinical staff should monitor the plasma digoxin level at least 6 hours or 12 hours post-administration of the last loading dose as this is the time to achieve steady-state levels. Recommended thresholds of therapeutic serum digoxin levels are between 0.5 to 2 ng/dl.
- **Option C:** The physician must request regular electrocardiograms and bloodwork to assess for renal function, and electrolytes require close monitoring. No more than 2 ml of the drug should be injected at the same site. The injection should be made deep into the muscle, and the overlying area massaged post-injection. Intravenous injections are metabolized more efficiently than intramuscular injections and are the preferred route, as only about 80% of the drug is absorbed in intramuscular injections as compared to intravenous dosing.
- **Option D:** Digoxin has a narrow therapeutic index. The recommended serum levels stand between 0.8 to 2 ng/mL. When measuring a digoxin serum level, it is essential to draw blood at least 6 to 8 hours after the last dose. The toxicity increases as the serum drug levels increase above 2.0 ng/mL.

5. Nurse Bryan knows that the age group that uses the most units of blood and blood products is:

- A. Premature infants.
- B. Children ages 1-20 years.
- C. Adults ages 21-64 years.
- D. The elderly above age 65 years.

Correct Answer: D. The elderly above age 65 years.

People older than 65 years use 43 percent of donated blood. This number is expected to increase as the population ages. Approximately 20.9 million units of blood components, including approximately 13.8 million units of whole blood or red blood cells, were transfused in 2011 in the United States; this was a decrease of 11.6% from 2008, and most likely reflects the growing adoption of blood management processes.

- **Option A:** In high-income countries, transfusion is most commonly used for supportive care in cardiovascular surgery, transplant surgery, massive trauma, and therapy for solid and hematological malignancies. In low- and middle-income countries it is used more often to manage pregnancy-related complications and severe childhood anemia.
- **Option B:** In low-income countries, up to 54 % of blood transfusions are given to children under 5 years of age; whereas, in high-income countries, the most frequently transfused patient group is over 60 years of age, accounting for up to 75% of all transfusions.
- **Option C:** An increase of 7.8 million blood donations from voluntary unpaid donors has been reported from 2013 to 2018. In total, 79 countries collect over 90% of their blood supply from voluntary unpaid blood donors; however, 56 countries collect more than 50% of their blood supply from family/replacement or paid donors.

6. A client has a diagnosis of primary insomnia. Before assessing this client, the nurse recalls the numerous causes of this disorder. Select all that apply.

- A. Chronic stress
- B. Severe anxiety
- C. Generalized pain
- D. Excessive caffeine
- E. Chronic depression
- F. Environmental noise

Correct Answer: A, D, & F.

Acute or primary insomnia is caused by emotional or physical discomfort not caused by the direct physiologic effects of a substance or a medical condition.

- **Option A:** This type of insomnia is usually idiopathic, although it can be impacted by mild to moderate stress. Idiopathic insomnia is truly without any identifiable contributory factor, while stress-related insomnia can be characterized by mild stress, such as rumination or other thoughts throughout the night.
- **Option B:** Primary idiopathic insomnia occurs without any identifiable cause and in the absence of anxiety. Developmental issues during childhood, for example, separation anxiety, may predispose a child to develop sleep problems. People with certain personality traits like perfectionism, ambitiousness, neuroticism, low extraversion, and susceptibility to depression and worry are more likely to develop insomnia over time.
- **Option C:** Comorbid medical issues like restless legs syndrome, chronic pain, gastroesophageal reflux disease (GERD), respiratory issues, and immobility are associated with the risk of chronic insomnia.
- **Option D:** Excessive caffeine intake is an example of disruptive sleep hygiene; caffeine is a stimulant that inhibits sleep. Coffee, tea, cola, and other caffeinated drinks are stimulants. Drinking them in the late afternoon or evening can keep the client from falling asleep at night.
- **Option E:** The sleep problems of primary insomnia are not associated with lifestyle habits or a medical or psychiatric cause. Individuals who have difficulty coping with a stressful situation or those who report being habitual light sleepers have an elevated propensity to develop chronic insomnia. There is a high rate of association between insomnia and psychiatric disorders like depression, anxiety, and post-traumatic stress disorder.
- **Option F:** Environmental noise causes physical and/or emotional effects and therefore is related to primary insomnia. Poor sleep habits include an irregular bedtime schedule, naps, stimulating activities before bed, an uncomfortable sleep environment, and using the bed for work, eating, or watching TV.

7. A nurse is assessing a newborn infant following circumcision and notes that the circumcised area is red with a small amount of bloody drainage. Which of the following nursing actions would be most appropriate?

- A. Document the findings
- B. Contact the physician
- C. Circle the amount of bloody drainage on the dressing and reassess in 30 minutes
- D. Reinforce the dressing

Correct Answer: A. Document the findings. The penis is normally red during the healing process.

- **Option A:** Close observation of the circumcision site during the first few hours is necessary to determine if there is a complication. A yellow exudate may be noted after 24 hours, and this is a part of normal healing. This should not be washed away because it serves a protective function. The nurse would expect that the area would be red with a small amount of bloody drainage. Because the findings identified in the question are normal, the nurse would document the assessment. Additionally, document if the infant is voiding after the procedure to ascertain that the urethra is not occluded. Instruct the parents to keep the site free from feces and covered in petrolatum until healing is complete. If the infant cries constantly and if there is redness or tenderness due to pain, it should be reported to the physician.
- **Option B:** Hemorrhage, infection, and urethral fistula formation are rare complications that can occur from circumcision. If bleeding is not controlled, then the blood vessel may need to be ligated, and the nurse would contact the physician.
- **Option C:** A circumcision site that appears red is normal as long as it does not have a strong odor or strong discharge.
- **Option D:** If the bleeding is excessive, the nurse would apply gentle pressure with sterile gauze.

8. If a client had irritable bowel syndrome, which of the following diagnostic tests would determine if the diagnosis is Crohn's disease or ulcerative colitis?

- A. Abdominal computed tomography (CT) scan
- B. Abdominal x-ray
- C. Barium swallow
- D. Colonoscopy with biopsy

Correct Answer: D. Colonoscopy with biopsy

A colonoscopy with biopsy can be performed to determine the state of the colon's mucosal layers, presence of ulcerations, and level of cytologic development. Diagnosis of ulcerative colitis is made clinically with supportive findings on endoscopy, biopsy, and by negative stool examination for infectious causes. Multiple biopsies should be obtained to confirm the diagnosis.

- **Option A:** Computed tomography (CT) of the abdomen and pelvis is a diagnostic imaging test used to help detect diseases of the small bowel, colon, and other internal organs and is often used to determine the cause of unexplained pain. CT scanning is fast, painless, noninvasive and accurate.
- **Option B:** An abdominal x-ray or CT scan wouldn't provide the cytologic information necessary to diagnose which disease it is. Abdominal x-ray is a commonly performed diagnostic x-ray examination that produces images of the organs in the abdominal cavity including the stomach, liver, intestines, and spleen.
- **Option C:** A barium swallow doesn't involve the intestine. The barium swallow study, also known as a barium esophagogram or esophagram, is a contrast-enhanced radiographic study commonly used to assess structural characteristics of the entire esophagus. It may be used for the diagnosis of a wide range of pathologies including esophageal motility disorders, strictures, and perforations.

9. A patient received surgery and chemotherapy for colon cancer, completing therapy 3 months previously, and she is now in remission. At a follow-up appointment, she complains of fatigue following activity and difficulty with concentration at her weekly bridge games. Which of the following explanations would account for her symptoms?

- A. The symptoms may be the result of anemia caused by chemotherapy.
- B. The patient may be immunosuppressed.
- C. The patient may be depressed.
- D. The patient may be dehydrated.

Correct Answer: A. The symptoms may be the result of anemia caused by chemotherapy.

Three months after surgery and chemotherapy the patient is likely to be feeling the after-effects, which often includes anemia because of bone-marrow suppression. The side effects of cancer chemotherapy can be acute or prolonged, and may need monitoring. It would require multi-disciplinary monitoring as certain patient populations may be at higher risk for complications. Interventions like exercise, optimizing sleep quality, and behavioral therapies such as relaxation can help fatigue.

- **Option B:** There is no evidence that the patient is immunosuppressed, and fatigue is not a typical symptom of immunosuppression. Common toxicities associated with such agents include myelosuppression, nausea, vomiting, GI side effects, mucositis, alopecia, sterility, infertility, and infusion reactions. Furthermore, there is an increased risk of infections due to immunosuppression.
- **Option C:** Patients undergoing chemotherapy usually need strong emotional support, and they are going through anxiety, depression, and anticipatory grief from the expected side effects of the drugs. Multidisciplinary and interprofessional interventions at various stages of their treatment regimen can promote mental health. However, it is not indicated in this stem.
- **Option D:** The information given does not indicate that dehydration is a cause of her symptoms. Chemotherapy-induced nausea and vomiting treatment options include prochlorperazine, haloperidol, metoclopramide, lorazepam, dexamethasone, ondansetron, granisetron, dolasetron, palonosetron, dronabinol, aprepitant, fosaprepitant, netupitant. palonosetron has a longer half-life, better efficacy, and higher binding affinity than granisetron.

10. A client who has been receiving heparin therapy also is started on warfarin sodium (coumadin). The client asks the nurse why both medications are being administered. In formulating a response, the nurse incorporates the understanding that warfarin sodium:

- A. Stimulates the breakdown of specific clotting factors by the liver, and it takes 2-3 days for this to exhibit an anticoagulant effect.
- B. Inhibits synthesis of specific clotting factors in the liver, and it takes 3 to 4 days for this medication to exert an anticoagulation effect.
- C. Stimulates production of the body's own thrombolytic substances, but it takes 2-4 days for it to begin.
- D. Has the same mechanism action of heparin, and the crossover time is needed for the serum level of warfarin sodium to be therapeutic.

Correct Answer: B. Inhibits synthesis of specific clotting factors in the liver, and it takes 3 to 4 days for this medication to exert an anticoagulation effect.

Warfarin sodium works in the liver and inhibits synthesis of four vitamin K-dependent clotting factors (X, IX, VII, and II), but it takes 3 to 4 days before the therapeutic effect of warfarin is exhibited. Heparin is generally continued for seven to ten days. During this time warfarin is generally begun, and it is important to continue the patient on warfarin for five to seven days while the patient is receiving intravenous heparin therapy. After stopping heparin, oral anticoagulation with warfarin should be continued for six weeks.

- **Option A:** Because of the delay in factor II (prothrombin) suppression, heparin is administered concurrently for four to five days to prevent thrombus propagation. Loading doses of warfarin are not warranted and may result in bleeding complications.
- **Option C:** Current recommendations for the initiation of warfarin therapy differ based on the urgency for achieving an anticoagulant effect. While warfarin is being initiated, patients who require rapid anticoagulation should also be given unfractionated heparin or low-molecular-weight heparin intravenously or subcutaneously in doses appropriate for the given indication.
- **Option D:** Heparin and warfarin therapies should overlap for approximately four to five days. The presence of a therapeutic INR does not confer protection from clot formation and expansion during the first few days of warfarin therapy because of the delay in the therapeutic inhibition of prothrombin.

11. Which of the following nursing diagnoses might apply to a patient with hypertonic FVE?

- A. Ineffective airway clearance
- B. Potential for decreased cardiac output
- C. Ineffective breathing pattern
- D. Potential for increased cardiac output

Correct Answer: B. Potential for decreased cardiac output

Potential for decreased cardiac output is a nursing diagnosis associated with hypertonic FVE. Assess for bounding peripheral pulses and S3. These assessment findings are signs of fluid overload. Check for distended neck veins and ascites. Monitor abdominal girth to follow any ascites accurately. Distended neck veins are caused by elevated CVP. Ascites occur when fluid accumulates in extravascular spaces.

- **Option A:** Assess for crackles in the lungs, changes in respiratory pattern, shortness of breath, and orthopnea. These signs are caused by an accumulation of fluid in the lungs.
- **Option C:** Review the patient's history to determine the probable cause of the fluid imbalance. Such information can assist in direct management. History may include increased fluids or sodium intake.
- **Option D:** Monitor input and output closely. Dehydration may be the result of fluid shifting even if overall fluid intake is adequate. In some patients with heart failure, the weight may be a poor indicator of fluid volume status. Poor nutrition and decreased appetite over time result in a decrease in weight, which may be accompanied by fluid retention even though the net weight remains unchanged.

12. A 70-year-old alcoholic patient with acute lethargy, confusion, and incontinence is admitted to the hospital ED. His wife tells you that he fell down the stairs about a month ago, but “he didn’t have a scratch afterward.” She feels that he has become gradually less active and sleepier over the last 10 days or so. Which of the following collaborative interventions will you implement first?

- A. Place on the hospital alcohol withdrawal protocol.
- B. Transfer to radiology for a CT scan.
- C. Insert a retention catheter to straight drainage.
- D. Give phenytoin (Dilantin) 100 mg PO.

Correct Answer: B. Transfer to radiology for a CT scan.

The patient’s history and assessment data indicate that he may have a chronic subdural hematoma. The priority goal is to obtain a rapid diagnosis and send the patient to surgery to have the hematoma evacuated.

- **Option A:** This can be done after the treatment for any intracranial lesion has been implemented.
- **Option C:** This intervention should be done but is not the priority.
- **Option D:** Administration of phenytoin should be implemented as soon as possible, but the initial nursing activities should be directed toward treatment of any intracranial lesion.

13. A nurse is caring for a client with diabetic ketoacidosis and documents that the client is experiencing Kussmaul’s respirations. Based on this documentation, which of the following did the nurse most likely observe? Select all that apply.

- A. Respirations that cease for several seconds
- B. Respirations that are regular but abnormally slow
- C. Respirations that are labored and increased in-depth and rate
- D. Respirations that are abnormally deep, regular, and increased in rate
- E. Respirations are rapid and shallow but as acidosis worsens, breathing gradually becomes deep, labored, and gasping

Correct Answer: D & E.

Kussmaul’s respiration is a deep and labored breathing pattern often associated with severe metabolic acidosis, particularly diabetic ketoacidosis (DKA) but also kidney failure. It is a form of hyperventilation. It results from stimulation of the respiratory center in the brain stem by low serum pH.

- **Option A:** In apnea, respirations cease for several seconds. Apnea is the absence of breathing. This signals a life-threatening situation in which the patient will quickly succumb unless rescue breathing is instituted immediately.
- **Option B:** In bradypnea, respirations are regular but abnormally slow. Bradypnea is a respiratory rate that is lower than normal for age.
- **Option C:** In hyperpnea, respirations are labored and increased in depth and rate. Hyperpnea is increased volume with or without an increased rate of breathing. Blood gasses are normal.

- **Option D:** They are abnormally deep, regular, and increased in rate. As classically described, Kussmaul respirations are a deep, sighing respiratory pattern. Dr. Kussmaul actually described it as “air hunger.” Kussmaul’s respiratory pattern occurs due to increased tidal volume with or without an increased respiratory rate.
- **Option E:** In metabolic acidosis, breathing is first rapid and shallow but as acidosis worsens, breathing gradually becomes deep, labored, and gasping. This is probably the most important of the abnormal respiratory patterns.

14. A female client with chronic renal failure (CRF) is receiving a hemodialysis treatment. After hemodialysis, nurse Sarah knows that the client is most likely to experience:

- A. Hematuria.
- B. Weight loss.
- C. Increased urine output.
- D. Increased blood pressure.

Correct Answer: B. Weight loss.

Because CRF causes loss of renal function, the client with this disorder retains fluid. Hemodialysis removes this fluid, causing weight loss. The client’s normal weight without any extra fluid in the body is called “dry weight.” Extra fluid can be dangerous and cause extra strain on the body, including the heart and lungs. When the client has kidney failure, her body depends on dialysis to get rid of the extra fluid and wastes that build up in her body between treatments.

- **Option A:** Hematuria is unlikely to follow hemodialysis because the client with CRF usually forms little or no urine. Hematuria in hemodialysis patients may be a manifestation of the bleeding diathesis seen in renal failure. But it certainly needs further evaluation for structural causes specific to the genitourinary tract and to prevent massive bleeding.
- **Option C:** Hemodialysis doesn’t increase urine output because it doesn’t correct the loss of kidney function, which severely decreases urine production in this disorder. Dialysis, a procedure that uses a special machine to replace the kidneys in filtering waste from the bloodstream, may reduce the daily urine output that a person normally produces. This happens because as the blood is filtered during dialysis, fluid is removed, thus reducing the kidneys’ traditional role.
- **Option D:** By removing fluids, hemodialysis decreases rather than increases the blood pressure. The most common side effect of hemodialysis is low blood pressure. It can occur when too much fluid is removed from the blood during hemodialysis. This causes pressure to drop, and nausea and dizziness can result.

15. Which of the following characteristics will distinguish a postmature neonate at birth?

- A. Plenty of lanugo and vernix caseosa.
- B. Lanugo mainly on the shoulders and vernix in the skin folds.
- C. Pinkish skin with good turgor.
- D. Almost leather-like, dry, cracked skin, negligible vernix caseosa.

Correct Answer: D. Almost leather-like, dry, cracked skin, negligible vernix caseosa

A post mature fetus has the appearance of an old person with dry wrinkled skin and the vernix caseosa has already diminished.

- **Option A:** Lanugo plays an important role in binding the vernix caseosa to the skin of fetuses. Vernix caseosa is the viscous white covering on newborns that protects their skin, prevents water loss, plays an important role in thermoregulation, and contributes to innate immunity.
- **Option B:** Lanugo is the first type of hair to develop in humans. The interaction of lanugo with the vernix is also important in controlling the tempo of the fetal developmental rate during various times in the gestation cycle. Lanugo arises at about three months into development. Hair growth starts on the scalp around the eyebrow, nose, and forehead area and proceeds in a cephalocaudal direction from head to toe. It is shed at about 33 to 36 weeks gestation, when it becomes subsequently incorporated into the amniotic fluid, eventually contributing to the composition of the meconium.
- **Option C:** The skin of a healthy newborn at birth has: Deep red or purple skin and bluish hands and feet. The skin darkens before the infant takes their first breath (when they make that first vigorous cry). A thick, waxy substance called vernix covering the skin.

16. Nurse Mackey is monitoring a patient for adverse reactions during barbiturate therapy. What is the major disadvantage of barbiturate use?

- A. Prolonged half-life
- B. Poor absorption
- C. Potential for drug dependence
- D. Potential for hepatotoxicity

Correct Answer: C. Potential for drug dependence

Patients can become dependent on barbiturates, especially with prolonged use. Due to the abuse potential of barbiturates, restricted access started with the passage of the Federal Comprehensive Drug Abuse and Control Act of 1970. Barbiturates classify as Schedule II-IV based on their abuse potential.

- **Option A:** Because of the rapid distribution of some barbiturates, no correlation exists between duration of action and half-life. The elimination half-life for thiopental is about 5 hours. In children, a shorter elimination half-time occurs due to greater hepatic clearance.
- **Option B:** Barbiturates are absorbed well. Age-related changes have been demonstrated in pharmacokinetics due to slower intercompartmental clearance in the elderly, resulting in higher serum concentrations with smaller drug doses.
- **Option D:** They do not cause hepatotoxicity, although existing hepatic damage does require cautious use of the drug because barbiturates are metabolized in the liver.

17. A 65 years old client is in the first stage of Alzheimer's disease. Nurse Patricia should plan to focus this client's care on:

- A. Offering nourishing finger foods to help maintain the client's nutritional status.
- B. Providing emotional support and individual counseling.
- C. Monitoring the client to prevent minor illnesses from turning into major problems.

D. Suggesting new activities for the client and family to do together.

Correct Answer: B. Providing emotional support and individual counseling.

Clients in the first stage of Alzheimer's disease are aware that something is happening to them and may become overwhelmed and frightened. Therefore, nursing care typically focuses on providing emotional support and individual counseling. Identify possible support systems and ability to participate in social activities. Community resources are available for clients and families dealing with stages of AD that provide information and assistance.

- **Option A:** During this stage, offering nourishing finger foods helps clients to feed themselves and maintain adequate nutrition. Offer vegetables, fruits, whole grains, low-fat dairy products, and lean protein foods. Some fat is essential for health — but not all fats are equal. Go light on fats that are bad for heart health, such as butter, solid shortening, lard and fatty cuts of meats.
- **Option C:** The other options are appropriate during the second stage of Alzheimer's disease when the client needs continuous monitoring to prevent minor illnesses from progressing into major problems and when maintaining adequate nutrition may become a challenge.
- **Option D:** Instruct the family to utilize distraction techniques, such as soothing music, going for a walk, or looking at picture albums if the patient has delusions. Distraction may be effective to calm the patient if stressful situations occur. Instruct the family to avoid having the patient watch violent TV shows. The patient cannot make a distinction between reality from fiction, and witnessing violent acts on the screen may be frightening to the patient.

18. In the neonatal intensive care unit (NICU) of Tranquil Beginnings Hospital, Nurse Veronica is starting her shift. She's handed over the care of baby Ethan, who was born 12 hours ago with a noticeable cleft lip. The new parents, first-timers, are understandably concerned and have a lot of questions. As part of her assessment and while preparing to guide and reassure the parents, Nurse Veronica pays particular attention to potential complications that might be directly related to baby Ethan's cleft lip. While evaluating a newborn like Ethan with a cleft lip, which of the following aspects of his health should the nurse be particularly vigilant about, anticipating that it will most likely be compromised?

- A. Sucking ability
- B. Respiratory status
- C. Locomotion
- D. GI function
- E. Auditory function
- F. Vision

Correct Answer: A. Sucking ability

Newborns with a cleft lip often have difficulty creating a seal and generating the necessary suction for effective breastfeeding or bottle-feeding. This is a primary concern and often requires specialized feeding techniques or tools to support adequate nutrition. In this scenario, Nurse Veronica would focus on guiding and supporting Ethan's parents in managing his feeding needs, helping them understand his sucking challenges, and introducing them to specialized feeding techniques or tools designed for babies with a cleft lip.

- **Option B:** While respiratory issues can be a concern in newborns for various reasons, a cleft lip, in isolation, does not directly impact the respiratory system.
- **Option C:** Locomotion, or movement, is not typically affected by a cleft lip. This option pertains more to the physical ability to move, which is unrelated to the condition in question.
- **Option D:** A cleft lip does not directly affect gastrointestinal function. However, feeding difficulties related to the cleft lip might indirectly impact weight gain and nutrition.
- **Option E:** Although children with cleft palate (which can co-exist with cleft lip) may have an increased risk of middle ear infections that can affect hearing, a cleft lip alone does not directly impact auditory function.
- **Option F:** Vision is not impacted by a cleft lip.

19. An infant with congestive heart failure is receiving diuretic therapy at home. Which of the following symptoms would indicate that the dosage may need to be increased?

- A. Sudden weight gain
- B. Decreased blood pressure
- C. Slow, shallow breathing
- D. Bradycardia

Correct Answer: A. Sudden weight gain

Weight gain is an early symptom of congestive heart failure due to accumulation of fluid. Important among these are renal retention of fluid, renin-angiotensin mediated vasoconstriction and sympathetic overactivity. Excessive fluid retention increases the cardiac output by increasing the end diastolic volume (preload), but also results in symptoms of pulmonary and systemic congestion.

- **Option B:** Vasoconstriction (increase in afterload) tends to maintain flow to vital organs, but it is disproportionately elevated in patients with CHF and increases myocardial work. Similarly, sympathetic overactivity results in increase in contractility, which also increases myocardial requirements. An understanding of the interplay of the four principal determinants of cardiac output – preload, afterload, contractility and heart rate is essential in optimising the therapy of CHF. It is clinically useful to consider CHF in different age groups separately.
- **Option C:** In the past, the most sensitive and specific variables for the presence of CHF ($p < 0.0001$) were, a history of less than 3.5 oz/feed, respiratory rate greater than 50/min, an abnormal respiratory pattern, diastolic filling sounds, and hepatomegaly. Moderate to severe CHF was considered to be present when patients took less than 3 oz/feed or greater than 40 min/feed, had an abnormal respiratory pattern with a resting respiratory rate greater than 60/min, and had a diastolic filling sound and moderate hepatomegaly.
- **Option D:** Tachycardia > 150 /min is common, and heart rates > 180 /min are abnormal even in the setting of respiratory distress and suggests CHF. Severe CHF was accompanied by a heart rate greater than 170/min, decreased perfusion, and severe hepatomegaly. Thus, the grading of the severity of CHF in infants should include an accurate description of these historical and clinical variables.

20. Clients with type 1 diabetes may require which of the following changes to their daily routine during periods of infection?

- A. No changes
- B. Less insulin
- C. More insulin
- D. Oral antidiabetic agents

Correct Answer: C. More insulin

During periods of infection or illness, diabetics may need even more insulin to compensate for increased blood glucose levels. During illness, it is important that insulin be continued even if the patient is unable to eat or is vomiting.

- **Option A:** The appropriate insulin dosage is dependent on the glycemic response of the individual to food intake and exercise regimens. A dosage algorithm suited to the individual's needs and treatment goals should be developed with the cooperation of the patient.
- **Option B:** Rapid-acting insulin analogs should be injected within 15 min before a meal or immediately after a meal. The most commonly recommended interval between injection of short-acting (regular) insulin and a meal is 30 min.
- **Option D:** Healthcare practitioners must encourage patients to combine lifestyle modifications with oral pharmacologic agents for optimal glycemic control, particularly as type 2 diabetes mellitus progresses with continued loss of pancreatic beta-cell function and insulin production.

21. When discussing normal infant growth and development with parents, which of the following toys would the nurse suggest as most appropriate for an 8-month-old?

- A. Push-pull toys
- B. Rattle
- C. Large blocks
- D. Mobile

Correct Answer: C. Large blocks

Because the 8-month-old is refining his gross motor skills, being able to sit unsupported, and also improving his fine motor skills, probably capable of making hand-to-hand transfers, large blocks would be the most appropriate toy selection.

- **Option A:** Push-pull toys would be more appropriate for the 10 to 12-month-old as he or she begins to cruise the environment. Push toys provide support for babies who aren't quite ready to stand or walk on their own. Teetering behind a push toy helps build strength, balance, and confidence — three essential ingredients to becoming a champion walker. Like push toys, pull toys and ride-ons also boost balance and coordination.
- **Option B:** Rattles are more appropriate for infants in the 1 to 3 month age range. The sounds rattles make can also alert babies to noise. If they hear the sound of a rattle, babies will eventually turn their heads towards the sound. Many rattles also have moving parts that can be twisted, turned, and spun, which can help further develop a baby's attention span and fine motor skills.
- **Option D:** Mobiles pose a danger to older infants because of possible strangulation.

22. Ricky with chronic schizophrenia takes neuroleptic medication and is admitted to the psychiatric unit. Nursing assessment reveals rigidity, fever, hypertension, and diaphoresis. These findings suggest which life-threatening reaction:

- A. Tardive dyskinesia
- B. Dystonia
- C. Neuroleptic malignant syndrome
- D. Akathisia

Correct Answer: C. Neuroleptic malignant syndrome

The client's signs and symptoms suggest neuroleptic malignant syndrome, a life-threatening reaction to neuroleptic medication that requires immediate treatment. Neuroleptic malignant syndrome (NMS) is a life-threatening idiosyncratic reaction to antipsychotic drugs characterized by fever, altered mental status, muscle rigidity, and autonomic dysfunction. It has been associated with virtually all neuroleptics, including newer atypical antipsychotics, as well as a variety of other medications that affect central dopaminergic neurotransmission.

- **Option A:** Tardive dyskinesia causes involuntary movements of the tongue, mouth, facial muscles, and arm and leg muscles. Tardive dyskinesia (TD) is a syndrome which includes a group of iatrogenic movement disorders caused due to a blockade of dopamine receptors. The movement disorders include akathisia, dystonia, buccolingual stereotypy, myoclonus, chorea, tics, and other abnormal involuntary movements which are commonly caused by the long-term use of typical antipsychotics.
- **Option B:** Dystonia is characterized by cramps and rigidity of the tongue, face, neck, and back muscles. Dystonia is defined by involuntary maintained contraction of agonist and antagonist muscles yielding abnormal posturing, twisting, and repetitive movements or tremulous and can be initiated or worsened by attempted movement.
- **Option D:** Akathisia causes restlessness, anxiety, and jitteriness. Akathisia is defined as an inability to remain still. It is a neuropsychiatric syndrome that is associated with psychomotor restlessness. The individual with akathisia will generally experience an intense sensation of unease or an inner restlessness that usually involves the lower extremities. This results in a compulsion to move. In most cases the movement is repetitive. The individual may cross, uncross, swing, or shift from one foot to the other. To the observer, this may appear as a persistent fidget.

24. The client has experienced an electrical injury, with the entrance site on the left hand and the exit site on the left foot. What are the priority assessment data to obtain from this client on admission?

- A. Airway patency
- B. Heart rate and rhythm
- C. Orientation to time, place, and person
- D. Current range of motion in all extremities

Correct Answer: B. Heart rate and rhythm

Electric current travels through the body from the entrance site to the exit site and can seriously damage all tissues between the two sites. Early cardiac damage from electrical injury includes irregular heart rate, rhythm, and ECG changes. It is also important to obtain the patient's cardiac history, including any history of prior arrhythmias.

- **Option A:** The airway is not at any particular risk with this injury. Any patient that was in contact with a high voltage source should have continuous cardiac monitoring during evaluation.
- **Option C:** These patients are specifically at risk for cardiac damage if the path of the current traversed the heart. One may also consider CT imaging of the head if the patient has altered mental status or associated head trauma from a fall or being thrown in a blast.
- **Option D:** Range of motion is also important. However, the priority is to make sure that the heart rate and rhythm are adequate to support perfusion to the brain and other vital organs.

25. When assessing a patient for electrolyte balance, the nurse is aware that etiologies for hyponatremia include:

- A. Water gain
- B. Diuretic therapy
- C. Diaphoresis
- D. All of the following

Correct Answer: D. All of the following

Water gain, diuretic therapy, and diaphoresis are etiologies of hyponatremia. The etiology of hyponatremia can be classified based upon the volume status of the extracellular fluid. Sodium is the major solute of extracellular fluid (ECF). Based upon the volume of ECF, a patient can be classified into hypovolemic, euvolemic, or hypervolemic.

- **Option A:** Physiological stimuli that cause vasopressin release in adjunct with increased fluid intake can cause hyponatremia. Hypothyroidism and adrenal insufficiency may contribute to an increased release of vasopressin. Physiological stimuli for vasopressin release include loss of intravascular volume (hypovolemic hyponatremia) and the loss of effective intravascular volume (hypervolemic hyponatremia).
- **Option B:** Many drugs cause hyponatremia and the most common include: vasopressin analogs such as desmopressin and oxytocin; medications that stimulate vasopressin release or potentiate the effects of vasopressin such as selective serotonin-reuptake inhibitors and other antidepressants morphine and other opioids; and medications that impair urinary dilution such as thiazide diuretics.
- **Option C:** Water excretion is tightly regulated by antidiuretic hormone (ADH), synthesized in the hypothalamus, and stored in the posterior pituitary gland. Changes in tonicity lead to either enhancement or suppression of ADH secretion. Increased ADH secretion causes reabsorption of water in the kidney, and suppression causes the opposite effect.

26. The nurse prepares discharge instructions for a male client following cryosurgery for the treatment of a malignant skin lesion. Which of the following should the nurse include in the instruction?

- A. Avoid showering for 7 to 10 days

- B. Apply ice to the site to prevent discomfort
- C. Apply alcohol-soaked dressing twice a day
- D. Clean the site with hydrogen peroxide to prevent infection

Correct Answer: D. Clean the site with hydrogen peroxide to prevent infection

Cryosurgery involves the local application of liquid nitrogen to isolated lesions and causes cell death and tissue destruction. The nurse informs the client that swelling and increased tenderness of the treated area can occur when the skin thaws. Tissue freezing is followed by hemorrhagic blister formation in 1 to 2 days. The nurse instructs the client to clean the treatment site with hydrogen peroxide to prevent secondary infection. A topical antibiotic also may be prescribed.

- **Option A:** The client does not need to avoid showering.
- **Option B:** Application of a warm, damp washcloth intermittently to the site will provide relief from any discomfort.
- **Option C:** Alcohol-soaked dressings will cause irritation.

27. Steroids, if used following kidney transplantation would cause which of the following side effects?

- A. Alopecia
- B. Increase Cholesterol Level
- C. Orthostatic Hypotension
- D. Increase Blood Glucose Level

Correct Answer: D. Increased Blood Glucose Level

In the past, people with kidney transplants usually have taken steroids (such as prednisone) as one of their immunosuppressive medications to prevent rejection. But steroids may cause weight gain, diabetes, high blood pressure, heart and blood vessel disease (cardiovascular disease), osteoporosis, and other problems.

- **Option A:** Alopecia is a complication of organ transplantation and has been observed with increasing frequency in pancreas and kidney transplant recipients at UMMS. Several patients have presented with alopecia totalis and no obvious etiology. Many of the drugs commonly used after transplant have been reported to cause alopecia; however, it was not known if one of the medications used was a primary cause to this disturbing problem.
- **Option B:** Because hyperlipidemia occurs in 60–80% of kidney transplant recipients, findings might be of clinical value for the future improvement of kidney transplantation outcome. Although the underlying mechanisms of their findings are not clear, high serum cholesterol levels may increase the risks of cardiovascular disease and impair renal function, which may influence graft and patient survivals.
- **Option C:** Orthostatic hypotension is common after kidney-pancreas transplant. It is unrelated to preexisting autonomic neuropathy or posttransplant polyuria in most patients. This complication requires further study.

28. Which drug is indicated for pain related to acute renal calculi?

- A. Narcotic analgesics
- B. Nonsteroidal anti-inflammatory drugs (NSAIDs)
- C. Muscle relaxants
- D. Salicylates

Correct Answer: A. Narcotic analgesics

Narcotic analgesics are usually needed to relieve the severe pain of renal calculi. Narcotic analgesics act at the central nervous system (CNS) mu receptors and are commonly used in the treatment of renal colic. They are inexpensive and proven effective. Disadvantages include sedation, respiratory depression, smooth muscle spasm, and potential for abuse and addiction.

- **Option B:** Nonsteroidal anti-inflammatory drugs (NSAIDs) inhibit pain and inflammatory reactions by decreasing the activity of cyclooxygenase, which is responsible for prostaglandin synthesis. Both properties are beneficial in the management of renal (ureteral) colic.
- **Option C:** Muscle relaxants are typically used to treat skeletal muscle spasms. Muscle relaxants are used to treat muscle spasm, which may play a role in patient discomfort. Skeletal muscle relaxant used in conjunction with other therapies to treat pain and discomfort associated with musculoskeletal conditions. Reduces nerve impulse transmission from spinal cord to skeletal muscle.
- **Option D:** Salicylates are used for their anti-inflammatory and antipyretic properties and to treat less severe pain. Aspirin is a cyclooxygenase-1 (COX-1) inhibitor. It is a modifier of the enzymatic activity of cyclooxygenase-2 (COX-2). Unlike other NSAIDs (ibuprofen/naproxen), which bind reversibly to this enzyme, aspirin binding is irreversible. It also blocks thromboxane A2 on platelets in an irreversible fashion preventing platelet aggregation.

29. Which of the following medical treatments should the nurse anticipate administering to a client with increased intracranial pressure due to brain hemorrhage, except?

- A. acetaminophen (Tylenol)
- B. dexamethasone (Decadron)
- C. mannitol (Osmitrol)
- D. phenytoin (Dilantin)
- E. nitroglycerin (Nitrostat)

Correct Answer: E. nitroglycerin (Nitrostat)

Decreasing blood pressure is essential to prevent exacerbation of intracerebral bleeding. However, BP medication such as nitroglycerin is avoided due to its vasodilating effects that increase cerebral blood volume and thus increases intracranial pressure.

- **Option A:** Acetaminophen, an antipyretic, prevents increased temperature. A decrease in temperature reduces metabolism, cerebral blood flow, thus decreasing intracranial pressure. It also relieve headache.
- **Option B:** Dexamethasone, a corticosteroids, decreases intracranial pressure by stabilizing the cell membrane and decreases the leakiness in the blood-brain-barrier.

- **Option C:** Mannitol, an osmotic diuretic, lowers intracranial pressure by increasing intravascular pressure to draw fluid from the interstitial spaces and from the brain cells.
- **Option D:** Phenytoin, an anticonvulsant, is given as prophylaxis to prevent seizures. Seizures increase metabolic rate and cerebral blood flow, and volume that may result in increased intracranial pressure.

30. Prior to oral defense, a 21-year-old nursing student goes straight to the clinic due to tingling sensations, palpitations, and chest tightness. Deep, rapid breathing and carpal spasms are also observed. What is the nursing priority action for this situation?

- A. Give supplemental oxygen
- B. Allow the student to breathe into a paper bag
- C. Report to the physician immediately
- D. Get an order for an anxiolytic medication

Correct Answer: B. Allow the student to breathe into a paper bag

The student is hyperventilating secondary to anxiety, and breathing into a paper bag will provide rebreathing of carbon dioxide. Encouraging slow breathing will also help. The idea behind breathing into a paper bag or mask is that rebreathing exhaled air helps the body put CO₂ back into the blood.

- **Option A:** Acute anxiety may require treatment with a benzodiazepine. Chronic anxiety treatment consists of psychotherapy, pharmacotherapy, or a combination of both. Anxiety disorders appear to be caused by an interaction of biopsychosocial factors. Genetic vulnerability interacts with situations that are stressful or traumatic to produce clinically significant syndromes.
- **Option C:** Report it to the physician once there is a recurrence or the breathing did not improve. Anxiety is one of the most common psychiatric disorders but the true prevalence is not known as many people do not seek help or clinicians fail to make the diagnosis. Anxiety is one of the most common psychiatric disorders in the general population. Specific phobia is the most common with a 12-month prevalence rate of 12.1%. Social anxiety disorder is the next most common, with a 12-month prevalence rate of 7.4%.
- **Option D:** Selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), benzodiazepines, tricyclic antidepressants, mild tranquilizers, and beta-blockers treat anxiety disorders.

31. The family of a client who has been burned asks at what point the client will no longer be at greater risk for infection. What is the nurse's best response?

- A. "As soon as he finishes his antibiotic prescription."
- B. "As soon as his albumin level returns to normal."
- C. "When fluid remobilization has started."
- D. "When the burn wounds are closed."

Correct Answer: D. "When the burn wounds are closed."

Intact skin is a major barrier to infection and other disruptions in homeostasis. No matter how much time has passed since the burn injury, the client remains at high risk for infection as long as any area of skin is open.

- **Option A:** Even after the course of treatment of antibiotics, the patient is still at risk for infection if the wounds remain open. Examine wounds daily, note and document changes in appearance, odor, or quantity of drainage.
- **Option B:** Albumin levels are monitored if there is significant edema. Implement appropriate isolation techniques as indicated. Depending on the type or extent of wounds and the choice of wound treatment (open versus closed), isolation may range from a simple wound and/or skin to complete or reverse to reduce the risk of cross-contamination and exposure to multiple bacterial flora.
- **Option C:** Fluid resuscitation replaces lost fluids and electrolytes and helps prevent complications (shock, acute tubular necrosis). Once initial fluid resuscitation has been accomplished, a steady rate of fluid administration is preferred to boluses, which may increase interstitial fluid shifts and cardiopulmonary congestion.

32. A nurse is monitoring a pregnant client with pregnancy induced hypertension who is at risk for preeclampsia. The nurse checks the client for which specific signs of preeclampsia? Select all that apply.

- A. Elevated blood pressure
- B. Negative urinary protein
- C. Facial edema
- D. Increased respirations
- E. Polydipsia

Correct Answer: A & C. Elevated blood pressure and facial edema.

The three classic signs of preeclampsia are hypertension, generalized edema, and proteinuria. Increased respirations are not a sign of preeclampsia.

- **Option A:** Preeclampsia is defined as the presence of (1) a systolic blood pressure (SBP) greater than or equal to 140 mm Hg or a diastolic blood pressure (DBP) greater than or equal to 90 mm Hg or higher, on two occasions at least 4 hours apart in a previously normotensive patient, OR (2) an SBP greater than or equal to 160 mm Hg or a DBP greater than or equal to 110 mm Hg or higher.
- **Option B:** In addition to the blood pressure criteria, proteinuria of greater than or equal to 0.3 grams in a 24-hour urine specimen, a protein (mg/dL)/creatinine (mg/dL) ratio of 0.3 or higher, or a urine dipstick protein of 1+ (if a quantitative measurement is unavailable) is required to diagnose preeclampsia.
- **Option C:** Edema exists in many pregnant women, but a sudden increase in edema or facial edema is suggestive of preeclampsia. The edema of preeclampsia occurs by a distinct mechanism that is similar to that of angioneurotic edema.
- **Option D:** Shortness of breath, a racing pulse, mental confusion, a heightened sense of anxiety, and a sense of impending doom can be symptoms of preeclampsia. If these symptoms are new to you, they could indicate an elevated blood pressure, or more rarely, fluid collecting in your lungs (pulmonary edema).

- **Option E:** Primary polydipsia (PP) is a condition where there is excess consumption of fluids leading to polyuria with diluted urine and, ultimately, hyponatremia.

33. A client with diabetes has an order for ultrasonography. Preparation for an ultrasound includes:

- A. Increasing fluid intake
- B. Limiting ambulation
- C. Administering an enema
- D. Withholding food for 8 hours

Correct Answer: A. Increasing fluid intake

Before ultrasonography, the client should be taught to drink plenty of fluids and not void. Drink water and do not go to the toilet until after the scan – this may be needed before a scan of the unborn baby or the pelvic area. A full bladder is very important for the ultrasound exam. Empty the bladder 90 minutes before exam time, then consume one 8-ounce glasses of fluid (water, milk, coffee, etc.) about an hour before exam time.

- **Option B:** There is no restriction for ambulation before ultrasound. Most ultrasound scans last between 15 and 45 minutes. They usually take place in a hospital radiology department and are performed either by a radiologist or a sonographer.
- **Option C:** Enema is not necessary during an ultrasound. In some cases, you may also be given an injection of a harmless substance called a contrast agent before the scan, as this can make the images clearer.
- **Option D:** The client should withhold voiding, not food, before an ultrasound. Avoid eating or drinking for several hours before the scan – this may be needed before a scan of your digestive system, including the liver and gallbladder.

34. Which client is most likely to receive opioids for extended periods of time?

- A. A client with fibromyalgia
- B. A client with phantom limb pain
- C. A client with progressive pancreatic cancer
- D. A client with trigeminal neuralgia

Correct Answer: C. A client with progressive pancreatic cancer

Cancer pain generally worsens with disease progression and the use of opioids is more generous. Opioids (narcotics) are used with or without non-opioids to treat moderate to severe pain. They are often a necessary part of a pain relief plan for cancer patients. These medicines are much like natural substances (called endorphins) made by the body to control pain. They were once made from the opium poppy, but today many are man-made in a lab.

- **Option A:** Fibromyalgia is more likely to be treated with non-opioid and adjuvant medications. It is recommended to continue nonpharmacologic measures along with the use of medications for most patients with fibromyalgia. Some patients may, however, respond adequately to nonpharmacologic measures alone. The medications that have been well studied and consistently effective are certain antidepressants and anticonvulsants.

- **Option B:** Phantom limb pain usually subsides after ambulation begins. Treatment, unfortunately, for PLP has not proven to be very effective. While treatment for RLP tends to focus on an organic cause for the pain, PLP focuses on symptomatic control.
- **Option D:** Trigeminal neuralgia is treated with anti-seizure medications such as carbamazepine (Tegretol). The first-line treatment for patients with classic TN and idiopathic TN is pharmacologic therapy. The most commonly used medication is the anticonvulsant drug, carbamazepine. It is usually started at a low dose, and the dose is gradually increased until it controls the pain. It controls pain for most people in the early stages of the disease.

35. The nurse is giving medication teachings to a client receiving theophylline. The nurse instructed the client to limit the intake of which of the following?

- A. Apple and banana
- B. Yogurt and cheese
- C. Tuna and oysters
- D. Cola and chocolate

Correct Answer: D. Cola and chocolate

Theophylline is a methylxanthine bronchodilator. The nurse instructs the client to limit the intake of xanthine-containing foods such as chocolate, cola, and coffee.

- **Options A, B, & C:** These food items can be eaten by a client taking theophylline.