Kevin's Review - 100 NCLEX Practice Questions

1. When assessing a client during her first prenatal visit, the nurse discovers that the client had a reduction mammoplasty. The mother indicates she wants to breast-feed. What information should the nurse give to this mother regarding breastfeeding success?

A. “It’s contraindicated for you to breastfeed following this type of surgery.”

B. “I support your commitment; however, you may have to supplement each feeding with formula.”

C. “You should check with your surgeon to determine whether breast-feeding would be possible.”

D. “You should be able to breastfeed without difficulty.”

Correct Answer: B. “I support your commitment; however, you may have to supplement each feeding with formula.”

Recent breast reduction surgeries are done in a way to protect the milk sacs and ducts, so breastfeeding after surgery is possible. Still, it’s good to check with the surgeon to determine what breast reduction procedure was done. There is the possibility that reduction surgery may have decreased the mother’s ability to meet all of her baby’s nutritional needs, and some supplemental feeding may be required. Preparing the mother for this possibility is extremely important because the client’s psychological adaptation to mothering may be dependent on how successfully she breast-feeds.

- **Option A:** While there is evidence that both breastfeeding and breast reduction surgery are beneficial, it is unknown whether breast reduction surgery impacts breastfeeding and whether any breast reduction technique differentially preserves the ability to breastfeed.
- **Option C:** Women considering breast reduction surgery should be told not only the name of the proposed breast reduction technique but its characteristics, including the extent the column of subareolar parenchyma will be preserved and pedicle width, to allow them to gain a better understanding of its impact on breastfeeding.
- **Option D:** Breast reduction techniques have been in a continuous state of development since the early 1900s, with new techniques developed, refined, and modified by subsequent plastic surgeons. This has led to many diverse breast reduction techniques. Its effect on breastfeeding remains entirely unclear, so telling the client that she could breastfeed without difficulty would give her a false sense of reassurance.

2. Which information obtained by assessment ensures that the client’s respiratory efforts are currently adequate?

A. The client is able to talk.

B. The client is alert and oriented.

C. The client’s oxygen saturation is 97%.

D. The client’s chest movements are uninhibited.

Correct Answer: C. The client’s oxygen saturation is 97%.

Clients may have ineffective respiratory efforts and gas exchange even though they are able to talk, have good respiratory movement, and are alert. The best indicator for respiratory effectiveness is the maintenance of oxygen saturation within the normal range.

- **Option A:** A thorough respiratory assessment consists of inspection, palpation, percussion, and auscultation in conjunction with a comprehensive health history. Use a systematic approach and compare findings between left and right so the patient serves as his own control.
- **Option B:** Respirations should be even, unlabored, and regular at a rate of 12 to 20 breaths per minute. Normally, inspiration is half as long as expiration, and chest expansion is symmetrical. If the client appears anxious or exhibits nasal flaring, cyanosis of the lips and mouth, intercostal retraction, or use of accessory muscles of respiration, he may be in respiratory distress.
- **Option D:** Normally, the thorax is symmetrical and the anterior-posterior diameter is less than the transverse diameter. (Equal diameters may signal chronic obstructive pulmonary disease in an adult.) Note any structural deformity such as a pigeon chest (pectus carinatum) or funnel chest (pectus excavatum).

3. A 76-year-old male client had a thromboembolic right stroke; his left arm is swollen. Which of the following conditions may cause swelling after a stroke?

A. Elbow contracture secondary to spasticity.

B. Loss of muscle contraction decreasing venous return.

C. Deep vein thrombosis (DVT) due to immobility of the ipsilateral side.

D. Hypoalbuminemia due to protein escaping from an inflamed glomerulus.

Correct Answer: B. Loss of muscle contraction decreasing venous return

In clients with hemiplegia or hemiparesis, loss of muscle contraction decreases venous return and may cause swelling of the affected extremity.

- **Option A:** Contractures or bony calcifications may occur with a stroke, but don't appear with swelling.
- **Option C:** DVT may develop in clients with a stroke but is more likely to occur in the lower extremities.
- **Option D:** A stroke isn't linked to protein loss. Higher levels of protein were associated with a lower risk of stroke. According to a study, for every 20 grams of protein people ate per day, there is a 26 percent lower risk of stroke.

4. The presence of which of the following electrolytes contributes to acidosis?

A. Sodium

B. Potassium

C. Hydrogen

D. Chloride

Correct Answer: C. Hydrogen

The presence of hydrogen ions determines a solution's acidity. Acidosis is defined as an abnormal clinical process that causes a net gain in hydrogen ions (H+) in the extracellular fluid. Metabolic acidosis occurs when there is an accumulation of H+ or a loss of bicarbonate ions (HCO3?) and is reflected by a decrease in plasma HCO3? (<22 mEq/L).

- **Option A:** Adrenocortical insufficiency that occurs in Addison's disease causes hyponatremia and renal tubular acidosis (RTA). Hyponatremia results from both aldosterone and cortisol insufficiency. RTA is due to aldosterone insufficiency.
- **Option B:** A frequently cited mechanism for these findings is that acidosis causes potassium to move from cells to extracellular fluid (plasma) in exchange for hydrogen ions, and alkalosis causes the reverse movement of potassium and hydrogen ions.
- **Option D:** An increased plasma chloride ion concentration relative to sodium and potassium concentrations will produce a smaller plasma strong ion difference, leading to an increased hydrogen ion concentration, and therefore acidosis.

5. The nurse knows that glucagon may be given in the treatment of hypoglycemia because it:

A. Inhibits gluconeogenesis

B. Stimulates the release of insulin

C. Increases blood glucose levels

D. Provides more storage of glucose.

Correct Answer: C. Increases blood glucose levels

Glucagon, an insulin antagonist produced by the alpha cells in the islets of Langerhans, leads to the conversion of glycogen to glucose in the liver. Glucagon is a polypeptide hormone commonly used in the treatment of severe hypoglycemia with FDA approval for the treatment of severe hypoglycemia and as a diagnostic aid in imaging of the GI tract.

- **Option A:** Glucagon binds G-coupled surface receptors found throughout the body in varying concentrations; binding to the glucagon receptors in the liver, GI tract, heart, pancreas, fat, adrenal glands, and kidneys activate adenylate cyclase, which in turn raises cAMP levels. cAMP stimulates glycogenolysis and gluconeogenesis, resulting in the release of glucose, primarily from liver glycogen stores.
- **Option B:** Insulin secretion is governed by the interaction of nutrients, hormones, and the autonomic nervous system. Glucose, as well as certain other sugars metabolized by islets, stimulates insulin release.
- **Option D:** Glucose is the main source of fuel for our cells. When the body doesn't need to use glucose for energy, it stores it in the liver and muscles. This stored form of glucose is made up of many connected glucose molecules and is called glycogen.

6. Which of the following complications of an abdominal aortic repair is indicated by detection of a hematoma in the perineal area?

A. Hernia

B. Stage 1 pressure ulcer

C. Retroperitoneal rupture at the repair site

D. Rapid expansion of the aneurysm

Correct Answer: C. Retroperitoneal rupture at the repair site

Blood collects in the retroperitoneal space and is exhibited as a hematoma in the perineal area. This rupture is most commonly caused by leakage at the repair site.

- **Option A:** A hernia doesn't cause vascular disturbances. A hernia is the abnormal exit of tissue or an organ, such as the bowel, through the wall of the cavity in which it normally resides. Hernias come in a number of types. Most commonly they involve the abdomen, specifically the groin. Groin hernias are most commonly of the inguinal type but may also be femoral.
- **Option B:** A pressure ulcer does not cause significant bleeding, and does not cause a hematoma. Bedsores — also called pressure ulcers and decubitus ulcers — are injuries to the skin and underlying tissue resulting from prolonged pressure on the skin. Bedsores most often develop on skin that covers bony areas of the body, such as the heels, ankles, hips, and tailbone.
- **Option D:** Because no bleeding occurs with the rapid expansion of the aneurysm, a hematoma won't form. The fast growth of abdominal aortic aneurysm (AAA) diameter is claimed to be an indication for aneurysm repair. If fast growth is a valid indication for operative repair then an episode of measured fast growth should be followed by sustained rapid expansion and a high risk of rupture.

7. 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.

8. Cataracts result in the opacity of the crystalline lens. Which of the following best explains the functions of the lens?

A. The lens controls stimulation of the retina.

B. The lens orchestrates eye movement.

C. The lens focuses light rays on the retina.

D. The lens magnifies small objects.

Correct Answer: C. The lens focuses light rays on the retina.

The lens allows light to pass through the pupil and focus light on the retina. The lens is a curved structure in the eye that bends light and focuses it for the retina to help you see images clearly. The crystalline lens, a clear disk behind the iris, is flexible and changes shape to help you see objects at varying distances.

- **Option A:** Retinal tissue is stimulated by light but also responds to mechanical disturbances. Flashing lights usually are caused by separation of the posterior vitreous. As the vitreous gel separates from the retina, it stimulates the retinal tissue mechanically, resulting in the release of phosphenes and the sensation of light.
- **Option B:** Because only a small portion of the retina, the fovea, is actually employed for distinct vision, it is vitally important that the motor apparatus governing the direction of gaze be extremely precise in its operation, and rapid.
- **Option D:** The lens works much like a camera lens, bending and focusing light to produce a clear image. The crystalline lens is a convex lens that creates an inverted image focused on the retina. The brain flips the image back to normal to create what you see around you. In a process called accommodation, the elasticity of the crystalline lens allows you to focus on images at far distances and near with minimal disruption.

9. A cyanotic client with an unknown diagnosis is admitted to the E.R. In relation to oxygen, the first nursing action would be to:

A. Wait until the client's lab work is done.

B. Not administer oxygen unless ordered by the physician.

C. Administer oxygen at 2 L flow per minute.

D. Administer oxygen at 10 L flow per minute and check the client's nail beds.

Correct Answer: C. Administer oxygen at 2 L flow per minute.

Administer oxygen at 2 L/minute and no more, for if the client is emphysemic and receives too high a level of oxygen, he will develop CO_2 narcosis and the respiratory system will cease to function. With prolonged oxygen therapy there is an increase in blood oxygen level, which suppresses peripheral chemoreceptors; depresses ventilator drive and increase in PCO_2. high blood oxygen level may also disrupt the ventilation: perfusion balance (V/Q) and cause an increase in dead space to tidal volume ratio and increase in PCO_2.

- **Option A:** This is the 'gold standard' monitor of ventilation. Arterial blood gases are needed to obtain accurate data, in particular, evidence of hypoventilation (raised $PaCO_2$) as a reason for hypoxemia. Arterial blood gases may also give an indication of the metabolic effects of clinically important hypoxemia.
- **Option B:** Although history taking and clinical examination may clarify the diagnosis, oxygen at 40%–60% should be continued until blood gas results are available unless the patient is drowsy or is known to have had previous episodes of Hypercapnic respiratory failure.
- **Option D:** Low intravascular volume either due to acute blood loss as in trauma can result in poor oxygen transport and tissue hypoxia. So, these patients should be given high concentration oxygen to maintain oxygen saturation above 90% until arrival at an emergency department. This can be achieved in most cases by the use of approximately 40%–60% oxygen via a medium concentration mask at a flow rate of 4–10 l/ min.

10. In an intricate clinical scenario, a nurse receives a telephonic consultation request from a distressed mother. Her 5-month-old infant, who was previously diagnosed with colic during the last clinic visit, continues to exhibit persistent symptoms. The mother is seeking guidance on managing her infant's condition at home. Which of the following instructions from the nurse would be appropriate for the mother to implement? Select all that apply.

A. Position the infant on his back after feedings.

B. Soothe the child by humming and rocking.

C. Immediately bring the infant to the emergency department.

D. Burp the infant adequately after feedings.

E. Provide small but frequent feedings to the infants.

F. Offer the pacifier if it is not time for the infant to eat.

G. Consider eliminating potential allergens from the infant's or breastfeeding mother's diet.

H. Use over-the-counter gas-relief drops if recommended by a pediatrician.

Correct Answers: B, D, E, F, G, and H

- **Option B:** Soothing techniques such as humming and rocking can help calm a colicky infant. These are non-invasive, gentle strategies to provide comfort.
- **Option D:** Adequate burping can help release trapped gas, which might be contributing to the infant's discomfort. This is a basic and effective care technique for infants with colic.
- **Option E:** Small but frequent feedings can help prevent overfeeding and reduce the likelihood of gas buildup, which can exacerbate colic symptoms.
- **Option F:** A pacifier can provide comfort and help soothe a fussy or colicky infant. It's a simple measure that can be quite effective.
- **Option G:** Dietary factors can contribute to colic. If the infant is breastfed, certain foods in the mother's diet might affect the baby. Similarly, formula-fed infants might have sensitivities to certain formula ingredients. Eliminating potential allergens or irritants can be explored if other strategies don't work.
- **Option H:** Over-the-counter gas-relief drops containing simethicone are sometimes recommended for infants with colic, as they can help reduce gas buildup. However, they should only be used under the guidance of a pediatrician.
- **Option A:** Keep the colicky baby upright after feeding and burp them often. The upright position can give the baby's tummy time to settle, and burping may help ease gas pressure. Using "tummy time" or putting a pressure on the belly may also help to push out trapped gas. The "football hold" involves carrying the baby face-down, with the baby's body resting on one's forearm and the baby's chin cradled in the crook of the elbow, a position reminiscent of tummy time.
- **Option C:** Colic, although distressing, is not typically an emergency unless accompanied by other concerning symptoms such as fever, vomiting, or lethargy. Immediate emergency care is not usually necessary for colic alone.

11. The nurse is preparing to teach a client about the prescribed spironolactone (Aldactone) to monitor for adverse effects of the drug. The nurse should

instruct the client about which adverse effects? Select all that apply.

A. Confusion.

B. Fatigue.

C. Hypertension.

D. Leg cramps.

E. Weakness.

F. Urinary retention.

Correct Answer: A, B, & E.

Spironolactone (Aldactone) is used to treat hypertension and edema by removing excess fluid. Aldactone is known as a potassium-sparing diuretic. Confusion, fatigue, and weakness are signs of hyperkalemia, an adverse effect of spironolactone.

- **Option A:** One study mentions the following additional adverse effects in order from more to less common: dehydration, hyponatremia, gastrointestinal problems (nausea, vomiting, diarrhea or anorexia), neurological abnormalities (headache, drowsiness, asterixis, confusion, or coma), and skin rashes.
- **Option B:** Spironolactone blocks the hormone aldosterone, which can lead to fatigue. In addition, it can lower the blood pressure, and if this drop is sudden, the client may feel tired.
- **Option C:** Spironolactone is used to treat hypertension, so it would not produce this effect. Spironolactone is recommended in patients with resistant hypertension which is defined as uncontrolled blood pressure despite three antihypertensive drug combinations including a diuretic. Spironolactone is a mineralocorticoid receptor antagonist and causes anti-androgenic side effects.
- **Option D:** Leg cramps are an adverse effect of hypokalemia. Hyperkalemia is an adverse effect of spironolactone. This drug is contraindicated in patients with hyperkalemia and in those at increased risk of developing hyperkalemia.
- **Option E:** Symptoms of hypokalemia may include attacks of severe muscle weakness, eventually leading to paralysis and possibly respiratory failure. Muscular malfunction may result in paralysis of the bowel, low blood pressure, muscle twitches and mineral deficiencies (tetany).
- **Option F:** Urinary retention is a side effect of anticholinergics. Medications with anticholinergic properties, such as tricyclic antidepressants, cause urinary retention by decreasing bladder detrusor muscle contraction.

12. During a school health fair, a nurse is stationed at the vital signs booth. As students from various age groups approach, the nurse takes their vital signs. Later, while reviewing the recorded data, the nurse identifies one set of vital signs that seems abnormal for the age group. Which of the following vital signs taken during the health fair appears to be outside the typical range for the respective age group?

A. 11-year-old male athlete who just finished a sprint: 90 BPM, 22 RPM, 100/70 mmHg

B. 13-year-old female who mentioned she was feeling a bit anxious about an upcoming exam: 105 BPM, 22 RPM, 105/50 mmHg

C. 5-year-old male who was excitedly running around with friends before coming to the booth: 102 BPM, 24 RPM, 90/65 mmHg

D. 6-year-old female who was calmly coloring a picture before her turn: 100 BPM, 26 RPM, 90/70 mmHg

E. 14-year-old male who was resting and reading a book: 85 BPM, 20 RPM, 110/70 mmHg

F. 12-year-old female who was practicing deep breathing exercises: 88 BPM, 18 RPM, 95/60 mmHg

Correct Answer: B. 13-year-old female who mentioned she was feeling a bit anxious about an upcoming exam: 105 BPM, 22 RPM, 105/50 mmHg

The normal range of vital signs for 11 to 14-year-olds: Heart rate: 60-105 BPM; Respiratory rate: 12-20 CPM; Blood pressure: Systolic-85-120, diastolic- 55-80 mmHg; Body temperature: 98.0 degrees Fahrenheit (36.6 degrees Celsius) to 98.6 degrees Fahrenheit (37 degrees Celsius). The client's diastolic pressure is lower than the normal range. Both her respiratory rate and heart rate are slightly increased.

13. Nurse Myrna develops a counter-transference reaction. This is evidenced by:

A. Revealing personal information to the client.

B. Focusing on the feelings of the client.

C. Confronting the client about discrepancies in verbal or nonverbal behavior.

D. The client feels angry towards the nurse who resembles his mother.

Correct Answer: A. Revealing personal information to the client

Counter-transference is an emotional reaction of the nurse on the client based on her unconscious needs and conflicts. Countertransference is defined as redirection of a psychotherapist's feelings toward a client – or, more generally, as a therapist's emotional entanglement with a client. Just as transference is the concept of a client redirecting feelings meant for others onto the therapist, countertransference is the reaction to a client's transference, in which the counselor projects his or her feelings unconsciously onto the client. How countertransference is used in therapy can make it either helpful or problematic.

- **Option B:** It is important for the therapist to understand the role that of transference and countertransference, and deal with those emotions in such a way that the core of the counseling relationship is not shattered by these feelings. Once countertransference is recognized, it is important that the therapist acknowledge and work through those feelings.
- **Option C:** This is a therapeutic approach. The idea of countertransference — the counselor's unconscious feelings that emerge as a result of working with the client — is most often attributed to Sigmund Freud, who was the first to name the phenomenon and caution other analysts to manage it within themselves. Some suggest that categorizing countertransference as part of the "psychodynamic approach" has made its understanding more difficult, particularly with the rise of other counseling styles that may not emphasize self-awareness and exploration.
- **Option D:** This is a transference reaction where a client has an emotional reaction towards the nurse based on her past. Signs of countertransference in therapy can include a variety of behaviors, including excessive self-disclosure on the part of the therapist or an inappropriate interest in irrelevant details from the life of the person in treatment. A therapist who acts on their feelings toward the person being treated or that person's situation or engages in behavior not

appropriate to the treatment process may not be effectively managing countertransference.

14. A 28-year-old female patient presents to her primary care physician for a routine medical examination. She had been maintaining a regular exercise regimen and a balanced diet, with no significant health complaints. During the review of her blood test results, she takes an interest in understanding the different types of leukocytes and their respective functions, as she recently read an article on immune health. The healthcare provider takes this opportunity to provide a brief overview of leukocytes, explaining their roles in the immune system and their varying functions. Which of the following leukocytes is NOT correctly matched with its function or description?

A. Monocytes — become macrophages

B. Lymphocytes — vital in immune response

C. Basophils — synthesize or produce antibodies

D. Eosinophils — reduce inflammation

E. Neutrophils — phagocytize microorganisms and other foreign substances

Correct Answer: C. Basophils — synthesize or produce antibodies
Basophils do not synthesize or produce antibodies; this function is carried out by B lymphocytes. Instead, basophils are known for their role in allergic reactions and inflammation, as they release histamine and other inflammatory mediators. Thus, this option is incorrectly matched, making it the correct answer.

- **Option A:** Monocytes are indeed precursor cells to macrophages. Once they migrate to various tissues, they differentiate into macrophages, which are crucial for phagocytosis and triggering an immune response. Thus, this option is correctly matched.
- **Option B:** Lymphocytes are a crucial part of the immune system, primarily involved in the adaptive immune response. They consist of T cells, which help orchestrate the immune response, and B cells, which produce antibodies. Thus, this option is correctly matched.
- **Option D:** Eosinophils are indeed involved in modulating inflammatory responses, especially in allergic reactions and parasitic infections. They release substances that help control the immune response. Thus, this option is correctly matched.
- **Option E:** Neutrophils are essential phagocytic cells that engulf and destroy microorganisms and other foreign substances. They are a key part of the body's innate immune defense. Thus, this option is correctly matched.

15. A 32-year-old female patient presents to the outpatient clinic with complaints of red, itchy eyes with a yellowish discharge for the past three days. She mentions she recently returned from a trip abroad. The nurse, upon reviewing her medical history, notes a previous episode of conjunctivitis last year. Given the patient's presentation and travel history, the nurse suspects a bacterial cause for the conjunctivitis. Which of the following microorganisms, based on the patient's symptoms and history, is most likely responsible for her current condition?

A. Yersinia pestis

B. Helicobacter pylori

C. Vibrio cholerae

D. Haemophilus aegyptius

E. Mycobacterium tuberculosis

F. Staphylococcus aureus

Correct Answer: D. Haemophilus aegyptius

Haemophilus influenzae biogroup aegyptius (Hae) is a causative agent of acute and often purulent conjunctivitis, more commonly known as pink eye. The other microorganisms listed are associated with different diseases and are not typically responsible for conjunctivitis.

16. Which hereditary disease is most closely linked to an aneurysm?

A. Cystic fibrosis

B. Lupus erythematosus

C. Marfan's syndrome

D. Myocardial infarction

Correct Answer: C. Marfan's syndrome

Marfan's syndrome results in the degeneration of the elastic fibers of the aortic media. Therefore, clients with the syndrome are more likely to develop an aortic aneurysm. Marfan syndrome (MFS) is a spectrum of disorders caused by a heritable genetic defect of connective tissue that has an autosomal dominant mode of transmission. The defect itself has been isolated to the FBN1 gene on chromosome 15, which codes for the connective tissue protein fibrillin. Abnormalities in this protein cause a myriad of distinct clinical problems, of which the musculoskeletal, cardiac, and ocular system problems predominate.

- **Option A:** Although cystic fibrosis is hereditary, it hasn't been linked to aneurysms. Cystic fibrosis (CF) is the most common potentially lethal genetic disease in the white population. Improvements in life expectancy have led to increasing recognition of hepatobiliary complications from CF. Splenic artery aneurysms are a rare complication of portal hypertension with high mortality due to their significant potential for rupture, resulting in life-threatening i.p. hemorrhage.
- **Option B:** Lupus erythematosus isn't hereditary. Systemic lupus erythematosus (SLE), is the most common type of lupus. SLE is an autoimmune disease in which the immune system attacks its own tissues, causing widespread inflammation and tissue damage in the affected organs. It can affect the joints, skin, brain, lungs, kidneys, and blood vessels.
- **Option D:** Myocardial infarction is neither hereditary nor a disease. Myocardial infarction (MI) (ie, heart attack) is the irreversible death (necrosis) of heart muscle secondary to prolonged lack of oxygen supply (ischemia). Approximately 1.5 million cases of MI occur annually in the United States.

17. Nurse Kate is reviewing the complications of colonization with a client who has microinvasive cervical cancer. Which complication, if identified by the client, indicates a need for further teaching?

A. Hemorrhage

B. Ruptured ovarian cyst

C. Infection

D. Cervical stenosis

Correct Answer: B. Ruptured ovarian cyst

- **Option B:** Ruptured ovarian cyst is not a complication. This usually occurs after a strenuous exercise and after sexual intercourse.
- **Options A, C, and D:** Conization procedure involves the removal of a cone-shaped area of the cervix. Complications of the procedure include hemorrhage, infection, and cervical stenosis.

18. The clinic nurse asks a 13-year-old female to bend forward at the waist with arms hanging freely. Which of the following assessments is the nurse most likely conducting?

A. Spinal flexibility

B. Leg length disparity

C. Hypostatic blood pressure

D. Scoliosis

Correct Answer: D. Scoliosis

A check for scoliosis, a lateral deviation of the spine, is an important part of the routine adolescent exam. It is assessed by having the teen bend at the waist with arms dangling, while observing for lateral curvature and uneven rib level. Scoliosis is more common in female adolescents. Evaluation is generally a screening evaluation either through a school entity, sports coach, or pediatrician. The proper formal evaluation includes x-ray imaging.

- **Option A:** The ability to move the spine through its full range of motion, both forward and backward, demonstrates a high level of flexibility, and when done correctly, also good control over the spinal structure. Although the spine is made up of a chain of bones, it is flexible due to elastic ligaments and spinal disks.
- **Option B:** Leg length disparity (discrepancy) or anisomelia, is defined as a condition in which the paired lower extremity limbs have a noticeably unequal length. Leg length discrepancy (LLD) has been a controversial issue among researchers and clinicians for many years. Its presence is accepted but there is little consensus as to its many aspects, including the extent of LLD considered to be clinically significant, the prevalence, reliability, and validity of the measuring methods, the effect of LLD on function, and its role in various neuromusculoskeletal conditions
- **Option C:** Orthostatic hypotension is defined as a decrease in systolic blood pressure of 20 mmHg or a decrease in diastolic blood pressure of 10 mmHg within three minutes of standing when compared with blood pressure from the sitting or supine position.

19. Mr. Bartowski who is newly diagnosed with rheumatoid arthritis asks the community nurse how stress can affect his disease. The nurse would explain that:

A. The psychological experience of stress will not affect symptoms of physical disease.

B. Psychological stress can cause painful emotions, which are harmful to a person with an illness.

C. Stress can overburden the body's immune system, and therefore one can experience increased symptoms.

D. The body's stress response is stimulated when there are major disruptions in one's life.

Correct Answer: C. Stress can overburden the body's immune system, and therefore one can experience increased symptoms.

The stress response causes stimulation of the hypothalamic-pituitary-adrenal axis, which can further compromise an immune system that has been activated by the autoimmune disorder of rheumatoid arthritis. Consequently, the client can expect disease symptoms to exacerbate when under stress.

- **Option A:** Research says that rheumatoid arthritis can be caused by stress. Stress triggers rheumatoid arthritis by setting off the immune system's inflammatory response in which cytokines are released. Cytokines are chemicals that play an important role in inflammation and can increase the severity of rheumatoid arthritis in some patients. The greater the exposure to stress, the greater the inflammation becomes. This triggers a rheumatoid arthritis flare.
- **Option B:** Around one out of five patients with rheumatoid arthritis has depression due to the illness. Depression, in turn, further aggravates rheumatoid arthritis and leads to a greater number of painful joints, reduced functioning (higher number of days in bed), and increased visits to the doctor's clinic. All these further affect the patient's mental health and cause more stress and depression.
- **Option D:** Stress can cause rheumatoid arthritis and rheumatoid arthritis itself can also cause stress. Treatments that don't work or their side effects might affect the patient's mind. Joint pain and swelling can make routine activities difficult for the patient. All these things that come with rheumatoid arthritis can make the patient stressed, which can further trigger joint inflammation.

20. A priority nursing diagnosis for a child being admitted from surgery following a tonsillectomy is:

A. Body image disturbance

B. Impaired verbal communication

C. Risk for aspiration

D. Pain

Correct Answer: C. Risk for aspiration

Always remember your ABCs (airway, breathing, circulation) when selecting an answer. Place the child prone or side-lying position. Promotes drainage of blood and unswallowed saliva from the mouth that can potentially be aspirated.

- **Option A:** Does not apply for a child who has undergone a tonsillectomy. Assess for signs and symptoms of inadequate oxygenation. Early signs of hypoxia include confusion, irritability, headaches, pallor, tachycardia, and tachypnea.
- **Option B:** Observe the child for nonverbal indications of pain such as crying, grimacing, irritability. Provides additional information about pain. The child may find discomfort in speaking.
- **Option D:** Although these nursing diagnoses might be appropriate for this child, risk for aspiration should have the highest priority. Apply an ice collar on the neck or encourage the child to eat

popsicles. Cold promotes vasoconstriction and decreases swelling that contributes to pain.

21. A patient with diabetes has had many renal calculi over the past 20 years and now has chronic renal failure. Which substance must be reduced in this patient's diet?

A. Carbohydrates

B. Fats

C. Protein

D. Vitamin C

Correct Answer: C. Protein

Because of damage to the nephrons, the kidney can't excrete all the metabolic wastes of protein, so this patient's protein intake must be restricted. Eating animal protein may increase the chances of developing kidney stones. Although you may need to limit how much animal protein you eat each day, you still need to make sure you get enough protein. Consider replacing some of the meat and animal protein you would typically eat with beans, dried peas, and lentils, which are plant-based foods that are high in protein and low in oxalate.

- **Option A:** Eat oxalates wisely. Foods high in this chemical may increase formation of kidney stones. If you've already had kidney stones, you may wish to reduce or eliminate oxalates from your diet completely. If you're trying to avoid kidney stones, check with your doctor to determine if limiting these foods is enough.
- **Option B:** Good sources of calcium include milk, yogurt, cottage cheese, and other types of cheeses. Vegetarian sources of calcium include legumes, calcium-set tofu, dark green vegetables, nuts, seeds, and blackstrap molasses. If you don't like the taste of cow's milk, or, if it doesn't agree with you, try lactose-free milk, fortified soy milk, or goat's milk.
- **Option D:** Citrus fruit, and their juice, can help reduce or block the formation of stones due to naturally occurring citrate. Good sources of citrus include lemons, oranges, and grapefruit. A higher intake of carbs, fats, and vitamin supplements is needed to ensure the growth and maintenance of the patient's tissues.

22. While assessing a G2P2 client who had a normal spontaneous vaginal delivery 30 minutes ago, the nurse notes a large amount of red vaginal bleeding. What would be the initial priority nursing action?

A. Notify the physician.

B. Encourage breastfeed soon after birth.

C. Monitor vital signs

D. Provide fundal massage.

Correct Answer: D. Provide fundal massage

Fundal massage also called uterine massage is done to reduce bleeding and cramping of the uterus after childbirth. This would be the priority nursing action since it directly addresses the problem.

- **Option A:** The goal is to stop the bleeding immediately, notifying the physician may come after the nurse's intervention.
- **Option B:** Breastfeeding the baby will stimulate the release of oxytocin, which will cause uterine contraction, but it will be slower to do so than the fundal massage.
- **Option C:** Monitor the vital after the bleeding has stopped or has been reduced.

23. A patient on the cardiac telemetry unit unexpectedly goes into ventricular fibrillation. The advanced cardiac life support team prepares to defibrillate. Which of the following choices indicates the correct placement of the conductive gel pads?

A. The left clavicle and right lower sternum.

B. Right of midline below the bottom rib and the left shoulder.

C. The upper and lower halves of the sternum.

D. The right side of the sternum just below the clavicle and left of the precordium.

Correct Answer: D. The right side of the sternum just below the clavicle and left of the precordium.

One gel pad should be placed to the right of the sternum, just below the clavicle and the other just left of the precordium, as indicated by the anatomic location of the heart. To defibrillate, the paddles are placed over the pads. According to the ILCOR guidelines, the sternal paddle should be placed 'just to the right of the upper sternal border below the clavicle' and the apical paddle 'to the left of the nipple with the centre of the electrode in the mid-axillary line'.

- **Option A:** During the gel pad placement study it was noticed that about 50% of doctors placed the rectangular apical paddle vertically upwards, pointing towards the left armpit. The other 50% placed it in a horizontal position across the chest. The present ILCOR guidelines do not specify which orientation should be used for defibrillation. It was hypothesized that, with the paddle method for defibrillation, it would be more difficult to get good skin contact across the curved chest wall with the horizontal orientation, and in a small study this proved to be the case.
- **Option B:** In theory, a paddle position that is too superomedial means that less current will traverse the myocardium. When 60 N (the median force used by defibrillator operators in clinical practice) is applied to both paddles, the resulting TTI is 5% greater with the horizontal orientation. Thus, if paddles are used, it is recommended to use a vertical orientation. It is expected that their flexibility will allow better electrode/skin contact across the curved chest wall; however, in the absence of any evidence to the contrary, it is advised to use vertical orientation for this method as well.
- **Option C:** Most healthcare workers are not achieving optimal TTI during defibrillation. There is now good evidence that the use of a coupling agent, chest hair removal, placement of the apical paddle in a vertical orientation lateral to the nipple in the mid-axillary line, and application of at least 80 N of force are all measures that help minimize the TTI.

24. A 60-year-old male client comes into the emergency department with complaints of crushing chest pain that radiates to his shoulder and left arm. The admitting diagnosis is acute myocardial infarction. Immediate admission orders include oxygen by NC at 4L/minute, blood work, chest X-ray, an ECG, and two (2) mg of morphine given intravenously. The nurse should first:

A. Administer the morphine.

B. Obtain a 12-lead ECG.

C. Obtain the lab work.

D. Order the chest x-ray.

Correct Answer: A. Administer the morphine.

Although obtaining the ECG, chest x-ray, and blood work are all important, the nurse's priority action would be to relieve the crushing chest pain. Opioids may be used for pain control in addition to sublingual nitroglycerin if the blood pressure is adequate. All patients with STEMI and NSTEMI require immediately chewed aspirin 160 mg to 325 mg. Furthermore, the patient should have intravenous access and oxygen supplementation if oxygen saturation is less than 91%.

- **Option B:** The ECG is highly specific for MI (95% to 97%), yet not sensitive (approximately 30%). Right-sided, posterior lead placement, and repeat ECG testing can increase ECG sensitivity. For example, peaked T-waves on ECG, known as "hyperacute T waves," often indicate early ischemia and will progress to ST elevation.
- **Option C:** There are diagnostic guidelines that can assist the practitioner in determining whether further testing is useful in identifying patients with NSTEMI. Given the poor sensitivity of ECG for STEMI, troponins are almost universally used for patients with a suspicious clinical history.
- **Option D:** Cardiac angiography is used to perform percutaneous coronary intervention (PCI) or determine obstructions in the coronary vessels. An echocardiogram is used to assess wall motion, degree of valve abnormality, ischemic mitral regurgitation (MR), and presence of cardiac tamponade

25. A client receiving parenteral nutrition (PN) complains of a headache. A nurse notes that the client has a bounding pulse, jugular distension, and weight gain greater than desired. The nurse determines that the client is experiencing which complication of PN therapy?

A. Air embolism.

B. Hypervolemia.

C. Hyperglycemia.

D. Sepsis.

Correct Answer: B. Hypervolemia.

The client's signs and symptoms are consistent with hypervolemia. This happens when the client receives excessive fluid administration or administration of fluid too rapidly. Increased central venous pressure is noticed first as distention of the jugular veins. Maintaining the head of bed elevated will promote ease in breathing. This position also allows pooling of fluid in the bases and for gas exchange to be more available to the lung tissue.

- **Option A:** An air embolism may occur if IV tubing disconnects and is open to air, or if part of the catheter system is open or removed without being clamped. Symptoms include sudden respiratory distress, decreased oxygen saturation levels, shortness of breath, coughing, chest pain, and decreased blood pressure.

- **Option C:** Hyperglycemia related to sudden increase in glucose after a recent malnourished state. After starvation, glucose intake suppresses gluconeogenesis by leading to the release of insulin and the suppression of glycogen. Excessive glucose may lead to hyperglycemia, with osmotic diuresis, dehydration, metabolic acidosis, and ketoacidosis. Excess glucose also leads to lipogenesis (again caused by insulin stimulation). This may cause fatty liver, increased CO2 production, hypercapnia, and respiratory failure.
- **Option D:** CR-BSI, which starts at the hub connection, is the spread of bacteria through the bloodstream. There's an increased risk of CR-BSI with TPN, due to the high dextrose concentration of TPN. Symptoms include tachycardia, hypotension, elevated or decreased temperature, increased breathing, decreased urine output, and disorientation.

26. A provider prescribes a 24-hour urine collection for a client. Which of the following actions should the nurse take?

A. Discard the first voiding.

B. Keep all voidings in a container at room temperature.

C. Ask the client to urinate and pour the urine into a specimen container.

D. Ask the client to urinate into the toilet, stop midstream, and finish urinating into the specimen container.

Correct Answer: A. Discard the first voiding.

The nurse should discard the first voiding of the 24 hour urine specimen, and note the time. 24-hour urine protein measures the amount of protein released in urine over a 24-hour period. The normal value is less than 100 milligrams per day or less than 10 milligrams per deciliter of urine.

- **Option B:** The nurse should collect all voidings after that and keep them in a refrigerated container. A 24-hour urine collection is done by collecting the urine in a special container over a full 24-hour period. The container must be kept cool until the urine is returned to the lab.
- **Option C:** For a urinalysis, the nurse should ask the client to urinate and pour the urine into a specimen container. Urine is made up of water and dissolved chemicals, such as sodium and potassium. It also contains urea. This is made when protein breaks down. And it contains creatinine, which is formed from muscle breakdown. Normally, urine contains certain amounts of these waste products. It may be a sign of a certain disease or condition if these amounts are not within a normal range. Or if other substances are present.
- **Option D:** For a culture, the nurse should ask the client to urinate first into the toilet, then stop midstream, and finish urinating in the specimen container. A 24-hour urine collection helps diagnose kidney problems. It is often done to see how much creatinine clears through the kidneys. It's also done to measure protein, hormones, minerals, and other chemical compounds.

27. The chamber of the heart that receives oxygenated blood from the lungs is the:

A. Left atrium

B. Right atrium

C. Left ventricle

D. Right ventricle

Correct Answer: A. Left atrium

The left atrium receives oxygenated blood from the lungs and pumps it to the left ventricle. In the lungs, the blood oxygenates as it passes through the capillaries where it is close enough to the oxygen in the alveoli of the lungs. This oxygenated blood is collected by the four pulmonary veins, two from each lung. All four of these veins open into the left atrium that acts as a collection chamber for oxygenated blood. Just like the right atrium, the left atrium passes the blood onto its ventricle both by passive flow and active pumping.

- **Option B:** The right atrium receives blood from the veins and pumps it to the right ventricle. The right atrium receives deoxygenated blood from the entire body except for the lungs (the systemic circulation) via the superior and inferior vena cavae. Also, deoxygenated blood from the heart muscle itself drains into the right atrium via the coronary sinus. The right atrium, therefore, acts as a reservoir to collect deoxygenated blood.
- **Option C:** The left ventricle (the strongest chamber) pumps oxygen-rich blood to the rest of the body, its vigorous contractions create the blood pressure. Oxygenated blood thus fills the left ventricle, passing through the mitral valve. The left ventricle, which is the main pumping chamber of the left heart, then pumps, sending freshly oxygenated blood to the systemic circulation through the aortic valve
- **Option D:** The right ventricle receives blood from the right atrium and pumps it to the lungs, where it is loaded with oxygen. The right ventricle pumps blood through the right ventricular outflow tract, across the pulmonic valve, and into the pulmonary artery that distributes it to the lungs for oxygenation.

28. A 32-year-old male patient presents to a dental clinic for a routine check-up after several years of neglecting his oral health. The dental hygienist notes that, despite some plaque and minor gum inflammation, the patient seems to have all his permanent teeth, with none missing or extracted. Given the patient's age and dental history, the instructor uses this clinical scenario as an opportunity to gauge the students' knowledge about the normal distribution of permanent teeth in each quadrant of an adult mouth. Reflecting on the oral anatomy of this patient, and considering the standard distribution of adult teeth, the instructor poses the question: Each quadrant of the adult mouth typically holds how many permanent ___ incisors, ___ canines, ___ premolars, and ___ molars?

A. 1, 2, 3, 2

B. 1, 2, 2, 3

C. 2, 1, 3, 2

D. 2, 1, 2, 3

Correct Answer: D. 2, 1, 2, 3

There are 32 teeth in the normal adult mouth, located in the mandible and maxillae. The teeth can be divided into quadrants: right upper, left upper, right lower, and left lower. In adults, each quadrant contains one central and one lateral incisor; one canine; first and second premolars; and first, second, and third molars.

- **Option A:** This is incorrect. Adults have 2 incisors (1 central and 1 lateral) in each quadrant. Also, adults do not have 3 premolars in each quadrant; they typically have 2 (1 first premolar and 1 second premolar).

- **Option B:** This is incorrect. Adults have 2 incisors in each quadrant, not 1. Also, there is typically 1 canine in each quadrant, not 2.
- **Option C:** This is incorrect. While adults have 2 incisors and 1 canine in each quadrant, they typically do not have 3 premolars; they have 2 (1 first premolar and 1 second premolar).

29. A male client arriving in the emergency department is receiving cardiopulmonary resuscitation from paramedics who are giving ventilation through an endotracheal (ET) tube that they placed in the client's home. During a pause in compressions, the cardiac monitor shows narrow QRS complexes and a heart rate of beats/minute with a palpable pulse. Which of the following actions should the nurse take first?

A. Start an L.V. line and administer amiodarone (Cordarone), 300 mg L.V. over 10 minutes.

B. Check endotracheal tube placement.

C. Obtain an arterial blood gas (ABG) sample.

D. Administer atropine, 1 mg L.V.

Correct Answer: B. Check endotracheal tube placement.

ET tube placement should be confirmed as soon as the client arrives in the emergency department. Once the airway is secured, oxygenation and ventilation should be confirmed using an end-tidal carbon dioxide monitor and pulse oximetry.

- **Option A:** Next, the nurse should make sure L.V. access is established.
- **Option D:** If the client experiences symptomatic bradycardia, atropine is administered as ordered 0.5 to 1 mg every 3 to 5 minutes to a total of 3 mg.
- **Option C:** Then the nurse should try to find the cause of the client's arrest by obtaining an ABG sample. Amiodarone is indicated for ventricular tachycardia, ventricular fibrillation, and atrial flutter – not symptomatic bradycardia.

30. Which of the following drugs will decrease the effects of vasopressin?

A. digoxin (Lanoxin)

B. lithium (Lithane)

C. penicillin (Pen-Vee-K)

D. azithromycin (Zithromax)

Correct Answer: B. lithium (Lithane)

Lithium is known to decrease the effects of vasopressin. Lithium is a salt, and antidiuretic hormone acts on the water that influences the sodium/water balance. Lithium modifies sodium transport in nerve and muscle cells. It alters the metabolism of neurotransmitters, specifically catecholamines and serotonin. It may alter intracellular signaling via second messenger systems by inhibition of inositol monophosphate. This inhibition, in turn, affects neurotransmission through the phosphatidylinositol secondary messenger system.

- **Option A:** Digoxin has two principal mechanisms of action which are selectively employed depending on the indication. It increases the force of contraction of the heart by reversibly inhibiting

the activity of the myocardial Na-K ATPase pump, an enzyme that controls the movement of ions into the heart. Digoxin induces an increase in intracellular sodium that will drive an influx of calcium in the heart and cause an increase in contractility. Digoxin has vagomimetic effects on the AV node. By stimulating the parasympathetic nervous system, it slows electrical conduction in the atrioventricular node, therefore, decreases the heart rate.

- **Option C:** Penicillin inhibits the cross-linking of peptidoglycan in the cell wall. The catalyst for this reaction is penicillin-binding proteins, such as the enzyme DD-transpeptidase. Penicillin's four-membered ?-lactam ring can bind to DD-transpeptidase to irreversibly inactivate it. The bacteria, therefore, are unable to build their cell walls even while other proteins continue to break down the wall.
- **Option D:** Azithromycin is a broad-spectrum macrolide antimicrobial and is among the most prescribed antimicrobial drugs in the United States. It is a derivative of erythromycin with greatly enhanced activity against gram-negative bacteria (including Enterobacteriaceae) and provides coverage of many gram-positive organisms. As an inhibitor of bacterial protein synthesis (rather than a peptidoglycan cell-wall inhibitor like beta-lactam agents), azithromycin is effective against many "atypical" bacteria such as chlamydiae (e.g., Chlamydia trachomatis and Chlamydophila psittaci), legionella (i.e., Legionella pneumophila), mycoplasma (e.g., Mycoplasma pneumoniae), and mycobacteria (e.g., Mycobacterium avium).

31. Hormonal agents are used to treat some cancers. An example would be:

A. Thyroxine to treat thyroid cancer.

B. ACTH to treat adrenal carcinoma.

C. Estrogen antagonists to treat breast cancer.

D. Glucagon to treat pancreatic carcinoma.

Correct Answer: C. Estrogen antagonists to treat breast cancer.

Estrogen antagonists are used to treat estrogen hormone-dependent cancer, such as breast carcinoma. A well-known estrogen antagonist used in breast cancer therapy is tamoxifen (Nolvadex). This drug, in combination with surgery and other chemotherapeutic drugs, reduces breast cancer recurrence by 30 percent. Estrogen antagonists can also be administered to prevent breast cancer in women who have a strong family history of the disease.

- **Option A:** Thyroxine is a natural thyroid hormone. It does not treat thyroid cancer. Thyroxine is the main hormone secreted into the bloodstream by the thyroid gland. It is the inactive form and most of it is converted to an active form called triiodothyronine by organs such as the liver and kidneys. Thyroid hormones play vital roles in regulating the body's metabolic rate, heart, and digestive functions, muscle control, brain development, and maintenance of bones.
- **Option B:** ACTH is an anterior pituitary hormone, which stimulates the adrenal glands to release glucocorticoids. It does not treat adrenal cancer. Adrenocorticotropic hormone (ACTH) is a tropic hormone produced by the anterior pituitary. The hypothalamic-pituitary axis controls it. ACTH regulates cortisol and androgen production. ACTH receptors are in the adrenal cortex, in particular, the zona fasciculata and zona reticularis. The receptors are G protein-coupled receptors thus stimulating adenylyl cyclase. This leads to an increase in intracellular cAMP and activation of protein kinase A.
- **Option D:** Glucagon is a pancreatic alpha cell hormone, which stimulates glycogenolysis and gluconeogenesis. It does not treat pancreatic cancer. Glucagon is a polypeptide hormone commonly used in the treatment of severe hypoglycemia with FDA approval for the treatment of

severe hypoglycemia and as a diagnostic aid in imaging of the GI tract. Glucagon binds G-coupled surface receptors found throughout the body in varying concentrations; binding to the glucagon receptors in the liver, GI tract, heart, pancreas, fat, adrenal glands, and kidneys activate adenylate cyclase which in turn raises cAMP levels. cAMP stimulates glycogenolysis and gluconeogenesis, resulting in the release of glucose, primarily from liver glycogen stores. The extrahepatic effects of glucagon are also mediated by adenylate cyclase, including relaxation of GI smooth muscle and positive inotropic effects.

32. A nurse in the labor room is caring for a client in the active phases of labor. The nurse is assessing the fetal patterns and notes a late deceleration on the monitor strip. The most appropriate nursing action is to:

A. Place the mother in the supine position.

B. Document the findings and continue to monitor the fetal patterns.

C. Administer oxygen via face mask.

D. Increase the rate of Pitocin IV infusion.

Correct Answer: C. Administer oxygen via face mask.

Late decelerations are due to uteroplacental insufficiency as the result of decreased blood flow and oxygen to the fetus during the uterine contractions. This causes hypoxemia; therefore oxygen is necessary.

- **Option A:** The supine position is avoided because it decreases uterine blood flow to the fetus. The client should be turned to her side to displace pressure of the gravid uterus on the inferior vena cava.
- **Option B:** The findings should be documented after an intervention has been done.
- **Option D:** An intravenous Pitocin infusion is discontinued when a late deceleration is noted. Most Pitocin related birth injury cases involve variable and late decelerations. When the fetal monitor shows late decelerations, it is often a sign that the baby is in distress because the contractions are preventing oxygen from adequately transferring between the uterus and placenta.

33. A female client with amyotrophic lateral sclerosis (ALS) tells the nurse, “Sometimes I feel so frustrated. I can’t do anything without help!” This comment best supports which nursing diagnosis?

A. Anxiety

B. Powerlessness

C. Ineffective denial

D. Risk for disuse syndrome

Correct Answer: B. Powerlessness

This comment best supports a nursing diagnosis of Powerlessness because ALS may lead to locked-in syndrome, characterized by an active and functioning mind locked in a body that can’t perform even simple daily tasks. Discuss with the patient concerning his or her care (e.g., treatment options, convenience of visits, or time of ADLs). Allowing the patient to participate in discussions will increase his or her sense of independence or autonomy.

- **Option A:** Depression has a significant effect on the quality of life in patients with ALS, and studies have shown that treatment can improve quality of life. While no controlled trials have evaluated the treatment of depression in patients with ALS, Amitriptyline is commonly used as it can also treat other symptoms such as insomnia, sialorrhea, and pseudobulbar affect.
- **Option D:** Although Risk for disuse syndrome may be the nursing diagnosis associated with ALS, the client's comment specifically refers to an inability to act autonomously. Limb onset ALS (LO) is the predominant type, presenting in 70% of patients. LO ALS can be further classified as flail arm syndrome or brachial amyotrophic diplegia, which is characterized by LMN weakness and wasting. It usually starts proximally and often symmetrically, then progresses distally to a point where upper extremity function is severely impaired.
- **Option C:** A diagnosis of Ineffective denial would be indicated if the client didn't seem to perceive the personal relevance of symptoms or danger. Patients need to know that this disease causes the muscles to weaken, eventually to the point of paralysis. Patients should also be aware that the disease will get worse and ultimately lead to death. Unfortunately, there is no cure; however, numerous medications can help lessen the associated symptoms. Patients may begin to notice difficulty with fine motor skills, from speaking to writing, as well as with walking, and eventually breathing.

34. Serotonin release stimulates vomiting following chemotherapy. Therefore, serotonin antagonists are effective in preventing and treating nausea and vomiting related to chemotherapy. An example of an effective serotonin antagonist antiemetic is:

A. ondansetron (Zofran).

B. fluoxetine (Prozac).

C. paroxetine (Paxil).

D. sertraline (Zoloft).

Correct Answer: A. ondansetron (Zofran).

Chemotherapy often induces vomiting centrally by stimulating the chemoreceptor trigger zone (CTZ) and peripherally by stimulating visceral afferent nerves in the GI tract. Ondansetron (Zofran) is a serotonin antagonist that blocks the effects of serotonin and prevents and treats nausea and vomiting. It is especially useful in single-day highly emetogenic cancer chemotherapy (for example, cisplatin). The agents in options 2-4 are selective serotonin reuptake inhibitors. They increase the available levels of serotonin.

- **Option B:** Fluoxetine has FDA-approval for major depressive disorder (age eight and older), obsessive-compulsive disorder (age seven and older), panic disorder, bulimia, binge eating disorder, premenstrual dysphoric disorder, bipolar depression (as an adjunct with olanzapine also known as Symbyax), and treatment-resistant depression when used in combination with olanzapine. Fluoxetine exerts its effects by blocking the reuptake of serotonin into presynaptic serotonin neurons by blocking the reuptake transporter protein located in the presynaptic terminal.
- **Option C:** Paroxetine is a selective serotonin reuptake inhibitor (SSRI), and, as such, is identified as an antidepressant. It is FDA approved for major depressive disorder (MDD), obsessive-compulsive disorder (OCD), social anxiety disorder (SAD), panic disorder, posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and premenstrual dysphoric disorder (PMDD), vasomotor symptoms associated with menopause. As an SSRI class drug, paroxetine's signature mechanism of action is to block the serotonin reuptake transporter (SERT) and thus

increase the concentration of synaptic serotonin.

- **Option D:** Sertraline is an antidepressant used as a first-line treatment of a major depressive disorder. The Food and Drug Administration (FDA) has also approved other indications for sertraline, including the treatment of obsessive-compulsive disorder, panic disorder, post-traumatic stress disorder, premenstrual dysphoric disorder, and social anxiety disorder. Sertraline is an antidepressant medication within the selective serotonin reuptake inhibitors (SSRIs) class. Sertraline is an antidepressant with primarily inhibitory effects on presynaptic serotonin reuptake. This inhibition of serotonin reuptake results in an accumulation of serotonin.

35. Nurse Tamara is caring for a client diagnosed with bulimia. The most appropriate initial goal for a client diagnosed with bulimia is to:

A. Avoid shopping for large amounts of food.

B. Control eating impulses.

C. Identify anxiety-causing situations.

D. Eat only three meals per day.

Correct Answer: C. Identify anxiety-causing situations

Bulimic behavior is generally a maladaptive coping response to stress and underlying issues. The client must identify anxiety-causing situations that stimulate the bulimic behavior and then learn new ways of coping with the anxiety. Bulimia nervosa is a condition that occurs most commonly in adolescent females, characterized by indulgence in binge-eating, and inappropriate compensatory behaviors to prevent weight gain.

- **Option A:** Controlling shopping for large amounts of food isn't a goal early in treatment. It is important to educate patients who abuse laxatives that these medications work in the gastrointestinal tract after the areas where caloric absorption has occurred primarily. It is crucial to inform patients that a period of edema and weight gain may follow up to several weeks after discontinuation of purging behavior.
- **Option B:** Managing eating impulses and replacing them with adaptive coping mechanisms can be integrated into the plan of care after initially addressing stress and underlying issues. The primary objective of treatment is a cessation of the binging and purging behavior. Selective serotonin reuptake inhibitors such as fluoxetine, citalopram, and sertraline have shown to reduce symptoms of bulimia nervosa. Fluoxetine is the only FDA approved medication for bulimia nervosa. It appears that a higher dose (60 mg) is significantly better than a placebo in decreasing the frequency of binge and vomiting episodes.
- **Option D:** Eating three meals per day isn't a realistic goal early in treatment. Patients with bulimia nervosa who purge by vomiting often brush their teeth immediately after purging, which can accelerate dental erosion. The clinician should instruct the patients who persist in vomiting to rinse their mouths with water or fluoride rather than brushing their teeth within 30 minutes of each episode. Consider consulting a dentist to address dental issues associated with vomiting.

36. A male client who has heart failure receives an additional dose of bumetanide as prescribed 4 hours after the daily dose. The nurse assesses him 15 minutes after administering the medication and reminds him to save all urine in the bathroom. Thirty minutes later the nurse finds the client on the floor, unresponsive, and bleeding from a laceration. Determine the issues that

support the client's malpractice claim. Select all that apply.

A. Failure to replace body fluids

B. Increased risk of hypotension

C. Failure to teach the client adequately

D. Increased need to protect the client

E. Excessive bumetanide administration

F. Lack of follow-up nursing actions

Correct Answer: B, C, D, & F.

To prove malpractice against a nurse, the plaintiff must prove that the nurse owed a duty to the client, that the nurse breached the duty, and that as result harm was caused to person or property.

- **Option A:** Replacing fluid volume is not the issue; furthermore, the goal of therapy is to reduce total body fluid. Diuretics play a crucial role in treating edema and hypertension by causing the induction of a negative balance of solute and water. Loop diuretics are physiologically the most potent family of diuretics.
- **Option B:** The client has an increased risk of hypotension because hypotension is a common adverse effect of bumetanide, this is the second dose within 4 hours, and the client has heart failure.
- **Option C:** The client can prove that the nurse did not protect him by failing to provide adequate teaching and perform correct and timely nursing interventions after administering the bumetanide.
- **Option D:** After the first 15-minute check, the nurse should continue monitoring the client to ensure compliance with safety measures. Blood pressure, uric acid, jugular venous pressure, blood glucose, electrolytes, blood urea nitrogen/serum creatinine, and urine output must all need monitoring in patients taking bumetanide.
- **Option E:** No data indicate that the dose of bumetanide, a loop diuretic, was excessive. To control edema, a staggering dosing schedule or a 3 to 4 times daily dosing schedule with half-day rest intervals in between is recommended to increase tolerability and efficacy. It is the safest and most effective method for the continued control of edema.
- **Option F:** However, because this medication can cause hypotension, especially after a repeat dose, the nurse should instruct the client to remain in bed and provide him with a urinal. It may be difficult for the client to prove that the second dose of bumetanide caused the injury.

37. While examining a client's leg, the nurse notes an open ulceration with visible granulation tissue in the wound. Until a wound specialist can be contacted, which type of dressings is most appropriate for the nurse in charge to apply?

A. Dry sterile dressing

B. Sterile petroleum gauze

C. Moist, sterile saline gauze

D. Povidone-iodine-soaked gauze

Correct Answer: C. Moist, sterile saline gauze

Moist, sterile saline dressings support would heal and are cost-effective. If the wound is infected and there are a lot of sloughs, which cannot be mechanically debrided, then a chemical debridement can be done with collagenase-based products. The goal is to help the wound heal as soon as possible by using an appropriate dressing material to maintain the right amount of moisture. When the wound bed is dry, use a dressing to increase moisture and if too wet and the surrounding skin is macerated, use material that will absorb excess fluid and protect the surrounding healthy skin.

- **Option A:** Dry sterile dressings adhere to the wound and debride the tissue when removed. Tulle is a non-adherent dressing impregnated with paraffin. It aids healing but doesn't absorb exudate. It also requires a secondary dressing to hold it in place. It is ideal for burns as one can add topical antibiotics to the dressing. It is known to cause allergies, and this limits its wider use.
- **Option B:** Petroleum supports healing but is expensive. The semipermeable dressing allows for moisture to evaporate and also reduces pain. This dressing also acts as a barrier to prevent environmental contamination. The semipermeable dressing does not absorb moisture and requires regular inspection. It also requires a secondary dressing to hold the semipermeable dressing in place.
- **Option D:** Povidone-iodine can irritate epithelial cells, so it shouldn't be left on an open wound. Plastic film dressings are known to absorb exudate and can be used for wounds with a moderate amount of exudate. They should not be used on dry wounds. They often require a secondary dressing to hold the plastic in place.

38. Nurse Lilly has been assigned to a client with Raynaud's disease. Nurse Lilly realizes that the etiology of the disease is unknown but it is characterized by:

A. Episodic vasospastic disorder of capillaries

B. Episodic vasospastic disorder of small veins

C. Episodic vasospastic disorder of the aorta

D. Episodic vasospastic disorder of the small arteries

Correct Answer: D. Episodic vasospastic disorder of the small arteries

Raynaud's disease is characterized by vasospasms of the small cutaneous arteries that involve fingers and toes. In Raynaud phenomenon, blood-flow restriction occurs during cold temperatures and emotional stress. Specifically, in Raynaud phenomenon, there is vasoconstriction of the digital arteries and cutaneous arterioles.

- **Option A:** Only the arteries are affected in Raynaud's disease. With cold temperatures, the sympathetic nervous system causes the release of vasoconstricting neuropeptides and norepinephrine leading to vasoconstriction of arteriole smooth muscle and decreased blood flood to the skin. Of note, in secondary Raynaud phenomenon, endothelin-1 is released by endothelial cells which causes vasoconstriction.
- **Option B:** The veins are unaffected by the vasospasm occurring with Raynaud's disease. In the primary Raynaud phenomenon, an increase in alpha-2 adrenergic sensitivity in the digital and cutaneous vessels results in the vasoconstrictive response to cold temperatures and emotional stress. Alpha-2 adrenergic receptors are present on the distal arterial smooth muscles of the digits and affected by the sympathetic nervous system.
- **Option C:** The aorta is a major blood vessel unaffected by Raynaud's disease. In the secondary Raynaud phenomenon, the underlying disease is the factor that disrupts normal vessel reactivity to

cold temperatures. Usually, the endothelial function of the digital and cutaneous vessels is compromised leading to eventual vasoconstriction with resulting tissue ischemia.

39. When caring for Mr. Roberto's AV shunt on his right arm, you should:

A. Cover the entire cannula with an elastic bandage.

B. Notify the physician if a bruit and thrill are present.

C. Use surgical aseptic technique when giving shunt care.

D. Take the blood pressure on the right arm instead.

Correct Answer: C. Use surgical aseptic technique when giving shunt care.

Avoid contamination of access site. Use aseptic technique and masks when giving shunt care, applying or changing dressings, and when starting or completing dialysis process. Prevents the introduction of organisms that can cause infection.

- **Option A:** Assess skin around vascular access, noting redness, swelling, local warmth, exudate, tenderness. Signs of local infection, which can progress to sepsis if untreated. Monitor temperature. Note presence of fever, chills, hypotension; signs of infection, or sepsis requiring prompt medical intervention.
- **Option B:** Thrill is caused by turbulence of high-pressure arterial blood flow entering a low-pressure venous system and should be palpable above venous exit site. Bruit is the sound caused by the turbulence of arterial blood entering the venous system and should be audible by stethoscope, although may be very faint.
- **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 the affected extremity. Decreases risk of clotting and disconnection.

40. Dr. Grey prescribes norfloxacin (Noroxin), 400 mg P.O. twice daily, for a client with a urinary tract infection (UTI). The client asks the nurse how long to continue taking the drug. For an uncomplicated UTI, the usual duration of norfloxacin therapy is:

A. 3 to 5 days.

B. 7 to 10 days.

C. 12 to 14 days.

D. 10 to 21 days.

Correct Answer: B. 7 to 10 days.

For an uncomplicated UTI, norfloxacin therapy usually lasts 7 to 10 days. Oral quinolones are rapidly absorbed in the gastrointestinal tract and possess a high oral bioavailability, allowing the oral and IV routes of administration to be used interchangeably for certain quinolones. Though quinolones are widely distributed throughout the body, the degree of penetration into tissues and bodily fluids depends on the individual quinolone.

- **Option A:** Taking the drug for less than 7 days wouldn't eradicate such an infection. Most quinolones are predominantly eliminated unchanged by the kidney via glomerular filtration and some degree of tubular secretion. They are typically eliminated through the hepatic and trans-intestinal routes to a lesser extent, though the degree to which they undergo elimination through these routes depends on the individual quinolones.
- **Option C:** Taking it for more than 10 days isn't necessary. Concurrent consumption of food (including dairy products) with oral quinolones has minimal effect on its absorption and activity. However, oral absorption of quinolones substantially decreases when taken together with other medications containing metallic cations due to the chelation that occurs between quinolone functional groups and the cations leading to the formation of an insoluble compound.
- **Option D:** Only a client with a complicated UTI must take norfloxacin for 10 to 21 days. Multiple studies have observed an increase in the elimination half-life of various quinolones with decreasing creatinine clearance. As such, patients with renal impairment should have their quinolone dosage adjusted according to their respective renal function.

41. Situation: A 24-year-old female has an intense fear of spiders. Initial intervention for the client should be to:

A. Encourage to verbalize her fears as much as she wants.

B. Assist her to find meaning to her feelings in relation to her past.

C. Establish trust through a consistent approach.

D. Accept her fears without criticizing.

Correct Answer: D. Accept her fears without criticizing.

The client cannot control her fears although the client knows it's silly and can joke about it. Open up about your awareness of the patient's fear. This approach validates the feelings the patient is holding and demonstrates recognition of those feelings. Tell the patient that fear is a normal and appropriate response to circumstances in which pain, danger, or loss of control is anticipated or felt. This reassurance places fear within the field of normal human experiences.

- **Option A:** Allow expression of the client's fears but he should focus on other productive activities as well. Discuss the situation with the patient and help differentiate between real and imagined threats to well-being. This approach helps the patient deal with fear.
- **Option B:** Provide accurate information if irrational fears based on incorrect information are present. Replacing inaccurate beliefs into accurate information reduces anxiety. If a patient's fear is a reasonable response, empathize with him or her. Avoid false reassurances and be truthful. Reassure patients that asking for help is both a sign of strength and a step toward resolution of the problem.
- **Option C:** Be with the patient to promote safety especially during frightening procedures or treatment. The physical connection with a trusted person helps the patient feel secure and safe during a period of fear. Maintain a relaxed and accepting demeanor while communicating with the patient. The patient's feeling of stability increases in a peaceful and non-threatening environment.

42. The nurse is caring for a client who suffered a spinal cord injury 48 hours ago. The nurse monitors for GI complications by assessing for:

A. A flattened abdomen.

B. Hematest positive nasogastric tube drainage.

C. Hyperactive bowel sounds.

D. A history of diarrhea.

Correct Answer: B. Hematest positive nasogastric tube drainage.

Development of a stress ulcer can be detected by hematest positive NG tube aspirate or stool. Gastrointestinal dysfunction including constipation, straining, diarrhea, distention, abdominal pain, incontinence, rectal bleeding, hemorrhoids, and autonomic dysreflexia during bowel movements occur in 27% to 62% of individuals with a spinal cord injury. During the acute stage of spinal cord injury there is an increased risk of gastrointestinal complications within the first few days post injury, including gastrointestinal hemorrhage, perforation, and paralytic ileus, while neurogenic bowel, affecting almost half of those with a spinal cord injury (46.9%) is a major problem long term both in terms of physical and psychological well being.

- **Option A:** The paralysis does not need to be complete to cause ileus, but the intestinal muscles must be so inactive that it prevents the passage of food, and leads to a functional blockage of the intestine, which causes abdominal distension. A distended abdomen increases the work of breathing but also may cause vomiting, which increases the risk for aspiration pneumonia and further respiratory complications. Individuals with a paralytic ileus are typically managed Nil by Mouth (NPO) with nasogastric suction to regularly aspirate the stomach contents.
- **Option C:** After spinal cord injury, the client can develop paralytic ileus, which is characterized by the absence of bowel sounds and abdominal distention. Paralytic Ileus, often associated with spinal shock post an acute spinal cord injury, is an obstruction of the intestine secondary to paralysis of the intestinal muscles with no evidence of mechanical obstruction, which like spinal shock can last from a few days to a few weeks.
- **Option D:** A history of diarrhea is irrelevant. Lower Motor Neuron (LMN) Bowel Syndrome, occurring in a spinal cord injury at the injury at the conus medullaris or cauda equina results in an areflexic bowel, characterised by loss of spinal cord-mediated peristalsis and slow stool propulsion with an atonic external anal sphincter. Typically associated with constipation and a significant risk of incontinence due to flaccid paralysis of the external anal sphincter and reduced motor control of levator ani.

43. Using cognitive-behavioral therapy, which treatment would be appropriate for a client with depression?

A. Challenging negative thinking

B. Encouraging analysis of dreams

C. Prescribing antidepressant medications

D. Using ultraviolet light therapy

Correct Answer: A. Challenging negative thinking

Cognitive-behavioral therapy includes identifying and challenging a client’s negative cognitions. The belief is that these negative thoughts influence the feelings and behaviors of depression. Cognitive behavioral therapy (CBT) is a type of psychotherapeutic treatment that helps people learn how to identify and change destructive or disturbing thought patterns that have a negative influence on behavior and emotions.

- **Option B:** Dream analysis would be used in psychoanalytic psychotherapy. Dream analysis is a therapeutic technique best known for its use in psychoanalysis. Sigmund Freud viewed dreams as “the royal road” to the unconscious and developed dream analysis, or dream interpretation, as a way of tapping into this unconscious material.
- **Option C:** Antidepressant medication could be part of a treatment program for an individual with depression; however, this would not be considered cognitive-behavioral therapy. The main aim of treatment with antidepressants is to relieve the symptoms of severe depression, such as feeling very down and exhausted, and prevent them from coming back.
- **Option D:** Ultraviolet light therapy would be a somatic approach to treatment for the seasonal affective disorder. Although light therapy is a recognized effective treatment for seasonal affective disorder (SAD), there has been little research into the critical wavelengths of light that produce the antidepressant effect. Previous studies found conflicting results for the importance of the ultraviolet (UV) spectrum in the therapeutic effect of light therapy.

44. A nurse is conducting an assessment of an American Indian woman who has come to the clinic complaining of a headache. The patient tells the nurse that the medicines prescribed by the tribal healer have done some good. What is the appropriate response of the nurse at this time?

A. Tell me about these medicines and how often you are using them.

B. I advise you to refrain from taking those medicines from the tribal healer.

C. Could these medicines cause your headaches?

D. Maybe you should increase the frequency of the healer's medicines.

Correct Answer: A. Tell me about these medicines and how often you are using them.

Asking the patient about the nature of these medicines and how often the client uses them allows the nurse to collect data about the medicines and their uses, to learn more about the practices used by this patient to improve her health, and to check for a potential drug interaction before prescribing other medications or treatment.

- **Option B:** Advising the client to stop taking any nonprescription medicines is inappropriate until the nurse knows the details about all medicines used by the client. Health, for the individual Native American and/or the tribe or family, depends on proper actions and interactions with the spirit world. Well-being or wholeness comes about through walking in harmony with the forces of nature and the universe. Illness is a sign of having fallen out of step with those forces thus causing disharmony in spirit, mind, and body.
- **Option C:** Suggesting the client’s headaches are caused by the healer’s medicines is inappropriate until the nurse knows details about the medicines. Native Americans consider healing a sacred calling. If one is called into the healing ministry one must use that gift to help others. Native healers use healing places and natural means to cure people during illness. Healing power comes from the natural forces of the earth, which can be reached through the saying of prayers.
- **Option D:** Telling the patient to increase the frequency of the healer’s medicines is not within the practice of a nurse. During times of illness, many Native Americans will call upon a medicine man or woman or shaman. In most cases, the medicine person is also considered a holy person because it is the belief that they do all of their healing with the Creator’s help and guidance. Many Native Americans today will call upon both modern medicine and traditional healing ceremonies to achieve wellness.

45. A tentative diagnosis of opiate addiction, Nurse Candy should assess a recently hospitalized client for signs of opiate withdrawal. These signs would include:

A. Rhinorrhea, convulsions, subnormal temperature

B. Nausea, dilated pupils, constipation

C. Lacrimation, vomiting, drowsiness

D. Muscle aches, papillary constriction, yawning

Correct Answer: D. Muscle aches, papillary constriction, yawning

These adaptations are associated with opiate withdrawal which occurs after cessation or reduction of prolonged moderate or heavy use of opiates. According to Diagnostic and Statistical Manual of Mental Disorders (DSM–5) criteria, signs and symptoms of opioid withdrawal include lacrimation or rhinorrhea, piloerection “goose flesh,” myalgia, diarrhea, nausea/vomiting, pupillary dilation and photophobia, insomnia, autonomic hyperactivity (tachypnea, hyperreflexia, tachycardia, sweating, hypertension, hyperthermia), and yawning.

- **Option A:** Opioid withdrawal syndrome is a life-threatening condition resulting from opioid dependence. Opioids are a group of drugs used for the management of severe pain. They are also commonly used as psychoactive substances around the world. Opioids include drugs such as morphine, heroin, oxycontin, codeine, methadone, and hydromorphone hydrochloride. They produce mental relaxation, pain relief, and euphoric feelings.
- **Option B:** The principal site in the brain that triggers the onset of opioid withdrawal syndrome is the locus coeruleus at the base of the brain. Neurons present in locus coeruleus are noradrenergic and have an increased number of opioid receptors. The locus coeruleus region is the main source of NAergic innervation of the limbic system and cerebral and cerebellar cortices. The NAergic activity in locus coeruleus neurons, an opioid receptor linked mechanism, is a prime causative site of opioid withdrawal symptoms. Furthermore, research has also shown that gray matter and nucleus raphe magnus is also involved in the presentation of opioid withdrawal syndrome.
- **Option C:** Sedative-hypnotic withdrawal symptoms may resemble opioid withdrawal characteristics, but opioid withdrawal is also characterized by lacrimation, rhinorrhea, and pupillary dilation. Hallucinogen and stimulant intoxication can also cause pupillary dilation, but other symptoms of opioid withdrawal-like nausea, diarrhea, vomiting, lacrimation, and rhinorrhea are usually not present.

46. A client receiving hydrochlorothiazide is instructed to increase her dietary intake of potassium. The best snack for the client requiring increased potassium is:

A. Pear

B. Apple

C. Orange

D. Avocado

Correct Answer: D. Avocado

- Option D: The fruit which packs the most potassium among the choices is the avocado which contains 487 mg per half serving of the fruit.
- Option A: A pear contains 280 mg of potassium.
- Option B: An apple contains 165 mg of potassium.
- Option C: An orange contains 235 mg of potassium.

47. When attending a client with a head and neck trauma following a vehicular accident, the nurse's initial action is to?

A. Provide oxygen therapy

B. Initiate intravenous access

C. Immobilize the cervical area

D. Do oral and nasal suctioning

Correct Answer: C. Immobilize the cervical area

Clients with suspected or possible cervical spine injury must have their neck immobilized until formal assessment occurs. Maintain cervical spine spinal immobilization and minimize neck movement particularly during transport. Beware that absence of neurologic findings does not eliminate the possibility of spinal cord injury.

- **Option A:** Immediate measures are necessary to maintain breathing and hemodynamic stability, such as oxygen therapy. Hyperbaric oxygen (HBO) therapy has also been shown to exert neuroprotective effects when administered before or after SCI. Experimental studies have revealed various mechanisms that contribute to these neuroprotective effects, including improved spinal cord oxygen tension, decreased apoptosis, reduced inflammation, attenuation of oxidative stress, and improved angiogenesis and autophagy.
- **Option B:** Rapid infusion as quickly as possible of large volumes of crystalloids to restore blood volume and blood pressure is now the standard treatment for patients with combined traumatic brain injury and hemorrhagic shock. The final goal of fluid management is to optimize the circulatory system to ensure the sufficient delivery of oxygen to organs.
- **Option D:** Suctioning is also done after the cervical spine is immobilized. Patients with known or suspected cervical spine injury may require emergent intubation for airway protection and ventilatory support or elective intubation for surgery with or without rigid neck stabilization (i.e., halo).

48. Patricia, a 20-year-old college student with diabetes mellitus, requests additional information about the advantages of using a pen-like insulin delivery device. The nurse explains that the advantages of these devices over syringes include:

A. Accurate dose delivery

B. Shorter injection time

C. Lower cost with reusable insulin cartridges

D. Use of a smaller gauge needle.

Correct Answer: A. Accurate dose delivery

These devices are more accurate because they are easy to use and have improved adherence to insulin regimens by young people because the medication can be administered discreetly. Once in use, most insulin analog vials, cartridges, and prefilled pens must be discarded after 28 days. This means that many patients who use a 10-ml vial end up either wasting insulin or using insulin beyond its recommended discard date. This is rarely a problem for patients using either a 3-ml prefilled pen or a reusable pen containing a 3-ml insulin cartridge.

- **Option B:** Injection time of insulin pens and the traditional insulin syringes have no significant difference. Patients must therefore keep the device in place with the button pressed in for 5–10 seconds. If the patient is using more than 50 units of insulin per dose, a good rule of thumb might be to instruct them to count to 10 regardless of the pen they are using to ensure complete absorption of the insulin.
- **Option C:** An additional issue is the greater prescription cost of insulin cartridges and prefilled insulin pens compared with insulin vials, although the cost to the patient may be the same depending on their coverage; in fact, if they have one copay per box of pens, the cost to the patient may actually be less per unit of insulin. It should be noted, however, that despite the higher unit cost of insulin in pen devices versus vials, several studies have found that overall diabetes-related treatment costs are lower with pen devices than with vial and syringe.
- **Option D:** For all insulin pen devices, a separate prescription for pen needles is required, with gauges ranging from 29 to 32 and in lengths from 5 to 12.7 mm, much like the traditional insulin syringes used. More recent developments have resulted in the introduction of safety needles with protective shields that not only reduce needle-stick injuries but may also allay patient anxieties about needle use.

49. Which of the following treatments is the definitive one for a ruptured aneurysm?

A. Antihypertensive medication administration

B. Aortogram

C. Beta-adrenergic blocker administration

D. Surgical intervention

Correct Answer: D. Surgical intervention

When the vessel ruptures, surgery is the only intervention that can repair it. The techniques used for aneurysm surgery have for long been standardized. 95% of aneurysms are accessible via a small frontotemporal craniotomy centred over the pterion. Only occasional cases, principally aneurysms of the distal anterior cerebral artery and the lower vertebrobasilar trunk, require different surgical approaches.

- **Option A:** Administration of antihypertensive medications can help control hypertension, reducing the risk of rupture. Normalization of blood pressure by hydralazine significantly reduced the incidence of ruptured aneurysms and the rupture rate. There was a dose-dependent relationship between the reduction of blood pressure and the prevention of aneurysmal rupture. Captopril and losartan were able to reduce the rupture rates without affecting systemic hypertension induced by DOCA-salt treatment.
- **Option B:** An aortogram is a diagnostic tool used to detect an aneurysm. An aortogram is an invasive diagnostic test using a catheter to inject dye (contrast medium) into the aorta. X-rays are taken of the dye as it travels within the aorta, allowing clear visualization of blood flow. This way,

any structural abnormalities of the aorta will be accurately seen.

- **Option C:** Beta-blockers can slow the heartbeat, thereby decreasing blood pressure. Antihypertensives are used to reduce the rate of rise of the aortic pressure (dP/dt). For acute reduction of arterial pressure, the potent vasodilator sodium nitroprusside is very effective. To reduce dP/dt acutely, administer a beta-blocker intravenously (IV) in incremental doses until a heart rate of 60-80 beats/min is attained. When beta-blockers are contraindicated, as in second- or third-degree atrioventricular block, consider using calcium-channel blockers.

50. Narcolepsy can be best explained as:

A. A sudden muscle weakness during exercise.

B. Stopping breathing for short intervals during sleep.

C. Frequent awakenings during the night.

D. An overwhelming wave of sleepiness and falling asleep.

Correct Answer: D. An overwhelming wave of sleepiness and falling asleep.

Narcolepsy is a dysfunction of mechanisms that regulate the sleep and wake states. Excessive daytime sleepiness is the most common complaint associated with this disorder. During the day a person may suddenly feel an overwhelming wave of sleepiness and fall asleep; REM sleep can occur within 15 minutes of falling asleep. The condition is often under-diagnosed and delays of 5-10 years are common before making a firm diagnosis. Close to 50% of patients develop symptoms in their teenage years.

- **Option A:** Cataplexy is a sudden, often bilateral muscle weakness lasting a few seconds to a couple of minutes in response to increased emotion (typically laughter) during which patients remain conscious. Cataplexy can also be brought on by excitement, anger, grief, or any intense emotion.
- **Option B:** Obstructive sleep apnea (OSA) is characterized by episodes of the complete or partial collapse of the airway with an associated decrease in oxygen saturation or arousal from sleep. This disturbance results in fragmented, nonrestorative sleep.
- **Option C:** Hypnagogic hallucinations are visual, auditory, or tactile dream-like experiences that occur as patients are falling asleep or just waking up. They can typically see human faces or experience a feeling like someone else is in the room. Additionally, these patients have significantly fragmented nighttime sleep.

51. A female client is scheduled to have a chest radiograph. Which of the following questions is of most importance to the nurse assessing this client?

A. “Is there any possibility that you could be pregnant?”

B. “Are you wearing any metal chains or jewelry?”

C. “Can you hold your breath easily?”

D. “Are you able to hold your arms above your head?”

Correct Answer: A. “Is there any possibility that you could be pregnant?”

The most important item to ask about is the client’s pregnancy status because pregnant women should not be exposed to radiation. The risk of side effects of an X-ray while the client is pregnant is extremely minimal, but it is always important to protect the developing fetus from harm.

- **Option B:** Clients are also asked to remove any chains or metal objects that could interfere with obtaining an adequate film. The client may be asked to strip down and wear a hospital gown, or at least remove clothing on the part of the body that needs to be X-rayed.
- **Option C:** A chest radiograph most often is done at full inspiration, which gives optimal lung expansion.
- **Option D:** If a lateral view of the chest is ordered, the client is asked to raise the arms above the head. The client will be asked to stay still so the image will be as clear as possible. This will provide the most accurate image. Most films are done in posterior-anterior view. The X-ray test works by positioning the part of the body being X-rayed between the source of the X-ray and an X-ray detector (such as a film).

52. The nurse is preparing to care for the client following a renal scan. Which of the following would the nurse include in the plan of care?

A. Place the client on radiation precautions for 18 hours.

B. Save all urine in a radiation safe container for 18 hours.

C. Limit contact with the client to 20 minutes per hour.

D. No special precautions except to wear gloves if in contact with the client's urine.

Correct Answer: D. No special precautions except to wear gloves if in contact with the client's urine.

No specific precautions are necessary following a renal scan. The nurse wears gloves to maintain body secretion precautions. The client should tell his doctor about any prescription or over-the-counter medications he is taking. Discuss how to use them before and during the test.

- **Option A:** A renal scan is an outpatient, or same-day, procedure. The client won't have to stay at the hospital overnight. A nuclear medicine technician performs the scan. This is usually done either in a hospital radiology department or a medical office with special equipment.
- **Option B:** Urination into a commode is acceptable without risk from the small amount of radioactive material to be excreted. If the client needs to have an empty bladder for the scan, he may need a soft tube called a catheter to maintain this condition.
- **Option C:** Depending on the reasons for the scan, testing may take between 45 minutes and 3 hours. Talk to the technician beforehand if claustrophobic because the camera may pass close to the body.

53. A nurse is caring for a client who is receiving cyclobenzaprine hydrochloride (Flexeril) for the treatment of muscle spasm. Which of the following medical conditions is contraindicated with the use of the medication?

A. Diabetes Mellitus

B. Angle-closure glaucoma

C. Emphysema

D. Urinary tract infection

Correct Answer: B. Angle-closure glaucoma

Cyclobenzaprine hydrochloride (Flexeril) has an anticholinergic effect, so it is used in caution with patients with angle-closure glaucoma, urinary retention, and increased intraocular pressure.

- **Options A, C, and D:** These conditions are not contraindicated with the medication.

54. A primigravida client at 25 weeks gestation visits the clinic and tells the nurse that her lower back aches when she arrives home from work. The nurse should suggest that the client perform:

A. Tailor sitting

B. Leg lifting

C. Shoulder circling

D. Squatting exercises

Correct Answer: A. Tailor sitting

Tailor sitting is an excellent exercise that helps to strengthen the client's back muscles and also prepares the client for the process of labor. The client should be encouraged to rest periodically during the day and avoid standing or sitting in one position for a long time.

- **Option B:** The leg raise is a great way to strengthen the abdominal muscles. It targets the lower abdominal muscles and hip muscles.
- **Option C:** This exercise can warm up the shoulders, specifically the muscles in the rotator cuff.
- **Option D:** During pregnancy, squats are an excellent resistance exercise to maintain strength and range of motion in the hips, glutes, core, and pelvic floor muscles.

55. The nurse is preparing to discharge a multipara 24 hours after a vaginal delivery. The client is breastfeeding her newborn. The nurse instructs the client that if engorgement occurs the client should:

A. wear a tight fitting bra or breast binder.

B. apply warm, moist heat to the breasts.

C. contact the nurse-midwife for a lactation suppressant.

D. restrict fluid intake to 1000 ml daily.

Correct Answer: B. apply warm, moist heat to the breasts.

- **Option B:** Moist heat has this amazing ability to increase circulation, open milk ducts and stimulate let down – all of which encourage the milk to start flowing.
  Option A: If a bra is worn, it should be big enough or stretchy enough to allow for expansion if breasts fill during the night hours; a bra that is too tight can cause soreness and potential problems such as blocked ducts.
  Option C: The simplest and safest way to suppress lactation is to let milk production stop on its own.
  Option D: Research has found that nursing mothers do not need to drink more fluids than what's necessary to satisfy their thirst.

56. Joy has entered the chemical dependency unit for treatment of alcohol dependency. Which of the following client's possessions will the nurse most likely place in a locked area?

A. Toothpaste

B. Shampoo

C. Antiseptic wash

D. Moisturizer

Correct Answer: C. Antiseptic wash

Antiseptic mouthwash often contains alcohol & should be kept in a locked area, unless labeling clearly indicates that the product does not contain alcohol. Alcohol misuse has been linked to numerous social, economic, and health problems. Estimates vary but have suggested that up to 40% of patients have experienced complications of alcohol misuse. In the United States, 138.3 million people aged 12 and older, surveyed, report that they actively use alcohol, according to the 2015 National Survey on Drug Use and Health. Of those, 48.2% report that they had binge drinking episode(s) within 30 days before taking the survey. Of those who reported binge drinking, 26% reported heavy alcohol use, defined as binge drinking five or more days in the previous 30 days, which accounts for 12.5% of total alcohol users.

- **Option A:** History gathering will often reveal reported episodes of binge drinking of four or five or more drinks at a time. Use of the CAGE questionnaire will reveal a score of 2 or greater (CAGE means (1) have you ever felt you should Cut down on your drinking, (2) have you ever been Annoyed by people criticizing your drinking, (3) have you ever felt Guilty about your alcohol use, or (4) have you ever needed an Eye-opener to steady your nerves or get rid of a hangover).
- **Option B:** The patient may also report frequent falls, blackout spells, unsteadiness, or visual disturbances. They may report seizures if they went a few days without drinking, or tremors, confusion, emotional disturbances, and frequent job changes. They may also report social issues, such as job termination, separation/divorce, estrangement from family, or loss of their home. They may also report sleep disturbances.
- **Option D:** On exams, they may exhibit signs of cerebellar dysfunction, such as ataxia or difficulty with fine motor skills. They may exhibit slurred speech, tachycardia, memory impairment, nystagmus, disinhibited behavior, or hypotension. They may present with tremors, confusion/mental status changes, asterixis, ruddy palms, jaundice, ascites, or other signs of advanced liver disease. There may also be spider angiomata, hepatomegaly/splenomegaly (early; liver becomes cirrhotic and shrunken in advanced disease).

57. While performing a physical examination on a newborn, which assessment should be reported to the physician?

A. Head circumference of 40 cm.

B. Chest circumference of 32 cm.

C. Acrocyanosis and edema of the scalp.

D. Heart rate of 160 and respirations of 40.

Correct Answer: A. Head circumference of 40 cm

Average circumference of the head for a neonate ranges between 32 to 36 cm. An increase in size may indicate hydrocephalus or increased intracranial pressure. A newborn's head is usually about 2 cm larger than the chest size. Between 6 months and 2 years, both measurements are about equal. After 2 years, the chest size becomes larger than the head.

- **Option B:** The body of a normal newborn is essentially cylindrical; head circumference slightly exceeds that of the chest. For a term baby, the average circumference of the head is 33–35 cm (13–14 inches), and the average circumference of the chest is 30–33 cm (12–13 inches).
- **Option C:** Peripheral cyanosis (acrocyanosis) involves the hands, feet, and circumoral area. It is evident in most infants at birth and for a short time thereafter. If limited to the extremities in an otherwise normal infant, it is due to venous stasis and is innocuous. Localized cyanosis may occur in presenting parts, particularly in association with abnormal presentations.
- **Option D:** Heart rates normally fluctuate between 120 and 160 beats per minute. In agitated states, a rate of 200 beats per minute may occur transiently. The heart rate of premature infants is usually between 130 and 170 beats per minute, and during occasional episodes of bradycardia, it may slow to 70 beats per minute or less. Normal neonates breathe at rates that vary between 40 and 60 respirations per minute. Rapid rates are likely to be present for the first few hours after birth.

58. The nurse teaches the client with chronic renal failure when to take the aluminum hydroxide gel. Which of the following statements would indicate that the client understands the teaching?

A. "I'll take it every four (4) hours around the clock."

B. "I'll take it between meals and at bedtime."

C. "I'll take it when I have a sour stomach."

D. "I'll take it with meals and bedtime snacks."

Correct Answer: D. "I'll take it with meals and bedtime snacks."

Aluminum hydroxide gel is administered to bind the phosphates in ingested foods and must be given with or immediately after meals and snacks. Aluminum hydroxide when used as an antacid is to be delivered orally. Shake the aluminum hydroxide suspension well before use. It should be taken 5 to 6 times daily after meals and at bedtime, not to exceed 3.84 g per 24 hours. The patient should follow the dose with water intake.

- **Option A:** There is no need for the client to take it on a 24-hour schedule. When administering aluminum hydroxide as an antacid, the patient should have monitoring of their calcium and phosphate plasma concentrations. Kidney function also requires monitoring, especially with prolonged use of aluminum hydroxide.
- **Option B:** It is not prescribed between meals. Patients should be asked about any kidney issues before aluminum hydroxide administration, as these outcomes have strong correlations with aluminum hydroxide's use as a phosphate binder in patients on dialysis.
- **Option C:** It is not administered to treat hyperacidity in clients with CRF. Prolonged administration should not be considered in a patient with renal impairment or a patient on dialysis, as impaired clearance of excess aluminum may precipitate the drug's adverse effects.

59. Following myocardial infarction, a hospitalized patient is encouraged to practice frequent leg exercises and ambulate in the hallway as directed by his

physician. Which of the following choices reflects the purpose of exercise for this patient?

A. Increases fitness and prevents future heart attacks.

B. Prevents bedsores.

C. Prevents DVT (deep vein thrombosis).

D. Prevent constipations.

Correct Answer: C. Prevents DVT (deep vein thrombosis).

Exercise is important for all hospitalized patients to prevent deep vein thrombosis. Muscular contraction promotes venous return and prevents hemostasis in the lower extremities. Encourage physical activity consistent with the patient's energy levels. Helps promote a sense of autonomy while being realistic about capabilities. Walking down the hall 20 feet or walking through the house, then slowly progressing walking outside the house, saving energy for the return trip.

- **Option A:** This exercise is not sufficiently vigorous to increase physical fitness. Encourage active ROM exercises. Encourage the patient to participate in planning activities that gradually build endurance. Exercise maintains muscle strength, joint ROM, and exercise tolerance. Physical inactive patients need to improve functional capacity through repetitive exercises over a long period of time. Strength training is valuable in enhancing endurance of many ADLs.
- **Option B:** Inspect skin regularly, particularly over bony prominences. Gently massage any reddened areas and provide aids such as sheepskin pads as necessary. Pressure points over bony prominences are most at risk for decreased perfusion. Circulatory stimulation and padding help prevent skin breakdown and decubitus development. Change positions at least every 2 hr (supine, side-lying) and possibly more often if placed on the affected side.
- **Option D:** It is not intended to prevent bedsores or constipation. Have the patient perform the activity more slowly, in a longer time with more rest or pauses, or with assistance if necessary. Gradually increase activity with active range-of-motion exercises in bed, increasing to sitting and then standing. Gradual progression of the activity prevents overexertion.

60. To ensure adequate lactation the nurse should teach the mother to:

A. Breastfeed the baby on self-demand day and night.

B. Feed primarily during the day and allow the baby to sleep through the night.

C. Feed the baby every 3-4 hours following a strict schedule.

D. Breastfeed when the breasts are engorged to ensure adequate supply.

Correct Answer: A. Breastfeed the baby on self-demand day and night

Feeding on self-demand means the mother feeds the baby according to the baby's need. Therefore, this means there will be regular emptying of the breasts, which is essential to maintain adequate lactation.

- **Option B:** Some newborns wake up and breastfeed every 2 to 3 hours like clockwork, but that's not always the case. The baby may want to breastfeed many times in a short period, and then he might sleep for a little longer. This type of feeding is called cluster or bunch feeding. Other babies are sleepy, especially in the very early days, so the mother may have to wake the baby up to breastfeed. All of these patterns are normal. As long as the child is getting enough breast milk and

growing well, there is nothing to worry.

- **Option C:** On average, a breastfed newborn eats approximately every 2 to 3 hours around the clock. That's about 8 to 12 times in a 24-hour period. Newborn have little stomachs and ?breast milk is easily digested, so they should breastfeed often.
- **Option D:** In the beginning, breastfeed the newborn for as long as she will stay on the breast. Continue to breastfeed until there are signs that the child is satisfied. This way, the mother can be sure that the baby is getting enough breast milk at each feeding. Plus, keeping the baby breastfeeding longer, stimulates milk production and helps the mother to build up her breast milk supply.

61. Mr. Bartowski who is newly diagnosed with rheumatoid arthritis asks the community nurse how stress can affect his disease. The nurse would explain that:

A. The psychological experience of stress will not affect symptoms of physical disease.

B. Psychological stress can cause painful emotions, which are harmful to a person with an illness.

C. Stress can overburden the body's immune system, and therefore one can experience increased symptoms.

D. The body's stress response is stimulated when there are major disruptions in one's life.

Correct Answer: C. Stress can overburden the body's immune system, and therefore one can experience increased symptoms.

The stress response causes stimulation of the hypothalamic-pituitary-adrenal axis, which can further compromise an immune system that has been activated by the autoimmune disorder of rheumatoid arthritis. Consequently, the client can expect disease symptoms to exacerbate when under stress.

- **Option A:** Research says that rheumatoid arthritis can be caused by stress. Stress triggers rheumatoid arthritis by setting off the immune system's inflammatory response in which cytokines are released. Cytokines are chemicals that play an important role in inflammation and can increase the severity of rheumatoid arthritis in some patients. The greater the exposure to stress, the greater the inflammation becomes. This triggers a rheumatoid arthritis flare.
- **Option B:** Around one out of five patients with rheumatoid arthritis has depression due to the illness. Depression, in turn, further aggravates rheumatoid arthritis and leads to a greater number of painful joints, reduced functioning (higher number of days in bed), and increased visits to the doctor's clinic. All these further affect the patient's mental health and cause more stress and depression.
- **Option D:** Stress can cause rheumatoid arthritis and rheumatoid arthritis itself can also cause stress. Treatments that don't work or their side effects might affect the patient's mind. Joint pain and swelling can make routine activities difficult for the patient. All these things that come with rheumatoid arthritis can make the patient stressed, which can further trigger joint inflammation.

62. A client is receiving spironolactone to treat hypertension. Which of the following instructions should the nurse provide?

A. "Eat foods high in potassium."

B. "Take daily potassium supplements."

C. “Discontinue sodium restrictions.”

D. “Avoid salt substitutes.”

Correct Answer: D. “Avoid salt substitutes.”

Because Spironolactone is a potassium-sparing diuretic, the client should avoid salt substitutes because of their high potassium content. Spironolactone specifically works by competitively blocking aldosterone receptor-mediated action. The effect of the blockade is that sodium reabsorption with water retention does not occur, and there is increased potassium retention.

- **Option A:** Spironolactone belongs to the drug class of mineralocorticoid receptor antagonists, and it is a nonselective antagonist that can bind to androgen and progesterone receptors. Aldosterone, a component of the renin-angiotensin-aldosterone system, binds to its receptors at the distal tubules and collecting duct and causes sodium reabsorption and potassium secretion, increased vascular stiffness and remodeling, and increased cardiac inflammation, fibrosis, and remodeling.
- **Option B:** Hyperkalemia is an adverse effect of spironolactone. This drug is contraindicated in patients with hyperkalemia and in those at increased risk of developing hyperkalemia. Routine blood work is necessary to evaluate serum potassium levels and any decline in renal function. Additional urine studies to assess kidney function may also be a requirement.
- **Option C:** The client should also avoid potassium-rich foods and potassium supplements. To reduce fluid volume overload, sodium restrictions should continue. Hyperkalemia can be due to spironolactone alone or a synergistic side effect from multiple medications such as beta-blockers, angiotensin-converting enzyme inhibitors, and angiotensin receptor blockers that clinicians often prescribe to patients for indications such as hypertension or heart failure.

63. Which of the following is a gas component of the ABG measurement?

A. Carbon dioxide

B. Bicarbonate

C. Hydrogen

D. pH

Correct Answer: A. Carbon dioxide

The gases measured by ABGs are oxygen and carbon dioxide. Bicarbonate and hydrogen are ions; their ratio is measured in the pH. An arterial blood gas (ABG) tests explicitly blood taken from an artery. ABG analysis assesses a patient’s partial pressure of oxygen (PaO2) and carbon dioxide (PaCO2).

- **Option B:** The measured HCO3 uses a strong alkali that liberates all CO2 in serum, including dissolved CO2, carbamino compounds, and carbonic acid. The calculation only accounts for dissolved CO2; this measurement using a standard chemistry analysis will likely be called a “total CO2”.
- **Option C:** Hydrogen is not present in blood as gas and, therefore, does not exert partial pressure. However, pH, which measures hydrogen ion activity, is a conventional part of every arterial blood gas determination. The normal range for blood pH is 7.35 to 7.45.
- **Option D:** The pH electrode measures the potential difference between a measuring electrode (which contains the sample in contact with a special glass membrane permeable only to H+ ions) and a reference electrode (which has a known, stable pH). From the voltage across these electrodes, the sample pH is calculated.

64. Antipsychotic drugs are indicated:

A. For the treatment of Tourette's syndrome

B. For the treatment of major depression

C. As an adjunct in the management of seizures

D. To cure psychotic disorders

Correct Answer: A. For the treatment of Tourette's syndrome.

Haloperidol (Haldol) is used for this syndrome. Haloperidol and pimozide are the antipsychotics most commonly used for this syndrome. Tourette disorder is an off-label indication for second-generation antipsychotics.

- **Option B:** Major depression is an affective disorder. When psychotic symptoms accompany depression, antipsychotics may be used to manage the symptoms. However, this choice does not address that situation. First or second-generation antipsychotics, along with an antidepressant, is the treatment of choice for depression with psychotic features. Olanzapine and fluoxetine, as a combination therapy, have FDA approval for treatment-resistant depression.
- **Option C:** Antipsychotics are used with caution in the presence of a history of seizures. Generally, the antipsychotics decrease the seizure threshold. Among the first generation antipsychotics, chlorpromazine appears to be the one most associated with the greatest risk of seizures, whereas in the newer antipsychotics clozapine is thought to be the most likely to cause seizures of that group of medications.
- **Option D:** Antipsychotics are used to ameliorate, reduce, or manage psychotic symptoms; they do not provide a cure. The first-generation antipsychotics work by inhibiting dopaminergic neurotransmission. Their effectiveness is best when they block about 72% of the D2 dopamine receptors in the brain. They also have noradrenergic, cholinergic, and histaminergic blocking action.

65. A client receiving parenteral nutrition (PN) in the home setting has a weight gain of 5 lb in 1 week. The nurse next assesses the client to identify the presence of which of the following?

A. Hypotension.

B. Crackles upon auscultation of the lungs.

C. Thirst.

D. Polyuria.

Correct Answer: B. Crackles upon auscultation of the lungs.

Normally, the weight gain of a client receiving PN is about 1-2 pounds a week. A weight gain of five (5) pounds over a week indicates a client is experiencing fluid retention that can result in hypervolemia. Signs of hypervolemia include weight gain more than desired, headache, jugular vein distention, bounding pulse, and crackles on lung auscultation.

- **Option A:** Hypertension, not hypotension is expected. Fluid overload can occur for the same reasons that fluid overload can occur with a regular peripheral intravenous flow. The rate is too fast and rapid for the client. The signs and symptoms of fluid overload include hypertension, edema, adventitious breath sounds like crackles and rales, shortness of breath, and bulging neck veins.

- **Option C:** Thirst is associated with hyperglycemia. Hyperglycemia can occur as the result of the high dextrose content of the total parenteral nutrition solution as well as the lack of a sufficient amount of administered. This total parenteral nutrition complication can be prevented with the continuous monitoring of the client's blood glucose levels and the titration of insulin administration based on these levels of insulin.
- **Option D:** Polyuria is associated with hyperglycemia. The signs and symptoms of hyperglycemia secondary to total parenteral nutrition are the same as those associated with poorly managed diabetes and they include a high blood glucose level, thirst, excessive urinary output, headache, nausea, and fatigue.

66. A client's ABG results are as follows: pH: 7.16; PaCO2 80 mm Hg; PaO2 46 mm Hg; HCO3- 24 mEq/L; SaO2 81%. This ABG result represents which of the following conditions?

A. Metabolic acidosis

B. Metabolic alkalosis

C. Respiratory acidosis

D. Respiratory alkalosis

Correct Answer: C. Respiratory acidosis

PaCO2 > 40 with a pH < 7.4 indicates a respiratory acidosis. If the pH is in the normal range (7.35-7.45), use a pH of 7.40 as a cutoff point. In other words, a pH of 7.37 would be categorized as acidosis. Arterial blood gas interpretation is best approached systematically. Interpretation leads to an understanding of the degree or severity of abnormalities, whether the abnormalities are acute or chronic, and if the primary disorder is metabolic or respiratory in origin.

- **Option A:** Evaluate the respiratory and metabolic components of the ABG results, the PaCO2 and HCO3, respectively. The PaCO2 indicates whether the acidosis or alkalemia is primarily from a respiratory or metabolic acidosis/alkalosis.
- **Option B:** The acid-base that is inconsistent with the pH is the HCO3, as it is elevated, indicating a metabolic alkalosis, so there is compensation signifying a non-acute primary disorder because it takes days for metabolic compensation to be effective.
- **Option D:** PaCO2 < 40 and pH < 7.4 indicates a respiratory alkalosis (but is often from hyperventilation from anxiety or compensation for a metabolic acidosis). Assess for evidence of compensation for the primary acidosis or alkalosis by looking for the value (PaCO2 or HCO3) that is not consistent with the pH.

67. The nurse is planning activities for a client who has bipolar disorder with aggressive social behavior. Which of the following activities would be most appropriate for this client?

A. Ping pong

B. Writing

C. Chess

D. Basketball

Correct Answer: B. Writing

Solitary activities that require a short attention span with mild physical exertion are the most appropriate activities for a client who is exhibiting aggressive behavior. Writing, walks with a staff, and finger painting are activities that minimize stimuli and provide a constructive release for tension. Provide structured solitary activities with the assistance of a nurse or aide. Structure provides focus and security.

- **Option A:** Ping-pong is a competitive sport. Provide frequent rest periods. Maintaining a low level of stimuli in the client's environment (e.g., loud noises, bright light, low-temperature ventilation) helps minimize escalation of anxiety. Provide frequent high-calorie fluids (e.g., fruit shake, milk). Prevents the risk of serious dehydration.
- **Option C:** Solitary activities requiring short attention spans with mild physical exertion are best initially (e.g., writing, taking photos, painting, or walks with staff). Solitary activities minimize stimuli; mild physical activities release tension constructively. When possible, provide an environment with minimum stimuli (e.g., quiet, soft music, dim lighting). Reduction in stimuli lessens distractibility.
- **Option D:** Competitive games can stimulate aggression and increase psychomotor activity. When less manic, the client might join one or two other clients in quiet, non-stimulating activities (e.g., drawing, board games, cards). As mania subsides, involvement in activities that provide a focus and social contact becomes more appropriate. Competitive games can stimulate aggression and can increase psychomotor activity.

68. Which of the following instruments is used to record intraocular pressure?

A. Goniometer

B. Ophthalmoscope

C. Slit lamp

D. Tonometer

Correct Answer: D. Tonometer

A tonometer is a device used in glaucoma screening to record intraocular pressure. Instruments measuring intraocular pressure assume the eye is a closed globe with uniform pressure distributed throughout the anterior chamber and vitreous cavity. The normal range of intraocular pressure is 10 to 21 millimeters of mercury.

- **Option A:** A goniometer measures joint movement and angles. A goniometer is a device that measures an angle or permits the rotation of an object to a definite position. In orthopedics, the former applies more. The art and science of measuring the joint ranges in each plane of the joint are called goniometry.
- **Option B:** An ophthalmoscope examines the interior of the eye, especially the retina. The ophthalmoscope illuminates the retina through the normal iris defect that is the pupil. Light rays forming the image of the retina re-emerge through the pupil. The viewing aperture (window) of the ophthalmoscope contains a lens that modifies light rays to assist the user.
- **Option C:** A slit-lamp evaluates structures in the anterior chamber in the eye. A slit lamp is a microscope with a bright light used during an eye exam. It gives the ophthalmologist a closer look at the different structures at the front of the eye and inside the eye. It's a key tool in determining the health of the eyes and detecting eye disease.

69. Nurse Jerick is assigned to the neuro-intensive care unit where he is attending to a 35-year-old male patient who was recently involved in a high-speed motorcycle accident. The patient is currently unconscious with a Glasgow Coma Scale score of 6. In order to assess the integrity of the brainstem and the function of the cranial nerves involved in eye movements, a caloric testing of the vestibulo-ocular reflex is ordered by the neurologist. Nurse Jerick carefully performs the test by irrigating the left auditory canal with warm water while observing the patient's eye movements. Upon the infusion of warm water, the patient exhibits conjugate eye movement toward the right, followed by nystagmus toward the left. Based on this response, Nurse Jerick interprets the caloric test findings to infer the status of the patient's brainstem function. Which of the following interpretations is most accurate based on the observed eye movements?

A. Midbrain lesion

B. Coma

C. Intact brainstem

D. Gaze paralysis

Correct Answer: C. Intact brainstem
The observed conjugate eye movement toward the right, followed by nystagmus toward the left, is a normal response during caloric testing. It suggests that the vestibulo-ocular reflex is intact, indicating an intact brainstem and cranial nerve function, at least in the pathways tested.

- **Option A:** A lesion in the midbrain could affect eye movement, but the specific eye movements observed during caloric testing do not provide a clear indication of a midbrain lesion. This option does not best explain the eye movements observed during the test.
- **Option B:** While the patient is unconscious, the term "coma" does not provide a specific interpretation of the caloric test results. The observed eye movements during caloric testing provide information regarding the integrity of the brainstem and cranial nerve function rather than the overall consciousness level.
- **Option D:** Gaze paralysis is a condition where the eyes cannot be directed voluntarily in the horizontal plane. The eye movements observed during the caloric test do not indicate gaze paralysis. The normal reflex observed indicates that the pathways responsible for horizontal gaze (including the brainstem and cranial nerves) are functioning properly.

70. The nurse is admitting a client with hypoglycemia. Identify the signs and symptoms the nurse should expect. Select all that apply.

A. Thirst

B. Palpitations

C. Diaphoresis

D. Slurred speech

E. Hyperventilation

Correct Answers: B, C, & D.

Hypoglycemia is often defined by a plasma glucose concentration below 70 mg/dL; however, signs and symptoms may not occur until plasma glucose concentrations drop below 55 mg/dL. The clinical manifestations of hypoglycemia can be classified as either neuroglycopenic or neurogenic.

- **Option A:** Excessive thirst may be a symptom of high blood sugar (hyperglycemia). It's important to be able to recognize any imbalance in thirst or urine production. It's the function of the kidneys and other organs to help filter out impurities.
- **Option B:** Palpitations, an adrenergic symptom, occur as the glucose levels fall; the sympathetic nervous system is activated and epinephrine and norepinephrine are secreted causing this response.
- **Option C:** Neurogenic signs and symptoms can either be adrenergic (tremor, palpitations, anxiety) or cholinergic (hunger, diaphoresis, paresthesias). Diaphoresis is a sympathetic nervous system response that occurs as epinephrine and norepinephrine are released.
- **Option D:** Neuroglycopenic signs and symptoms are signs and symptoms that result from direct central nervous system (CNS) deprivation of glucose. Slurred speech is a neuroglycopenic symptom; as the brain receives insufficient glucose, the activity of the CNS becomes depressed.
- **Option E:** Rapid or labored breathing, known as Kussmaul breathing, can be a symptom of diabetic ketoacidosis (DKA). Ketoacidosis is a short-term complication of diabetes caused by very high blood glucose levels accompanied by a high level of ketones in the blood.

71. Archie is a child with iron deficiency anemia. He is required to receive elemental iron therapy at 6 mg/kg/day in three divided doses. He weighs 44 lbs. How many milligrams of iron should he receive per dose?

A. 20 mg/dose

B. 40 mg/dose

C. 60 mg/dose

D. 120 mg/dose

Correct Answer: B. 40 mg/dose

The child weighs 44 lbs, which is equal to 20 kg (1 kg=2.2 lb;44/2.2=20kg). Elemental iron therapy is ordered at 6 mg/kg/day in three doses. Therefore, the child receives 120 mg/day (6 mg/20 kg/day=120), divided into three doses (120/3), which is equal to 40 mg/dose.

- **Option A:** There are currently two forms of low-molecular-weight iron dextran available on the market in North American. Both come as injectable solutions [intravenous (IV) or intramuscular (IM)] containing 50 mg/mL of elemental iron. The incidence of toxicity relative to high-molecular-weight preparations is lower with low-molecular-weight iron dextran.
- **Option C:** As per the manufacturer, a test dose of 25 mg (0.5 mL) followed by 1 hour of observation is necessary before administering the remainder of the calculated required dose to monitor for anaphylactoid reactions. Intramuscular injections should be administered to the upper outer quadrant of the buttock using the Z – track technique (lateral displacement of skin prior to injection).
- **Option D:** If total dose calculations exceed the daily allowance of administration, smaller incremental daily doses may be used until the patient achieves the total dose requirement. All doses require administration at a maximum rate of 50 mg (1 mL) per minute. No dosage

adjustments are necessary for renal and/or hepatic impairment.

72. A student nurse is asked to give an example of a long-acting nitrate. He is correct by saying:

A. Nitroglycerin sublingual

B. Nitroglycerin IV

C. Isosorbide PO

D. Nitroglycerin transmucosal

Correct Answer: C. Isosorbide PO

Isosorbide is one of the most frequently administered long-acting nitrates. PO nitrates are longer acting than IV or SL agents. Other forms of commonly used nitrates include isosorbide dinitrate, isosorbide mononitrate, and isosorbide mononitrate sustained-release (SR). These forms are taken orally and have a longer duration of action.

- **Option A:** Sublingual nitroglycerin is the therapy of choice for acute anginal episodes since it avoids first-pass metabolism, allowing for immediate and short anginal relief. The capsule form of nitroglycerin has a longer duration of action and requires larger doses.
- **Option B:** Intravenous nitroglycerin is useful for hypertensive emergencies. For patients with acute anginal pain, short-acting nitrates are useful for symptom relief.
- **Option D:** Nitroglycerin transmucosal is used for acute relief of an attack or acute prophylaxis of angina pectoris due to coronary artery disease.

73. A murmur is heard at the second left intercostal space along the left sternal border. Which valve area is this?

A. Aortic

B. Mitral

C. Pulmonic

D. Tricuspid

Correct Answer: C. Pulmonic

Abnormalities of the pulmonic valve are auscultated at the second left intercostal space along the left sternal border. Murmurs of the cardiac system develop due to alterations in blood flow or mechanical operation. Murmurs develop from a multitude of mechanisms. Typical cases include low blood viscosity from anemia, septal defects, failure of the ductus arteriosus to close in newborns, excessive hydrostatic pressure on cardiac valves causing valve failure, hypertrophic obstructive cardiomyopathy, and valvular specific pathologies.

- **Option A:** Aortic valve abnormalities are heard at the second intercostal space, to the right of the sternum. Aortic regurgitation, also known as aortic insufficiency, is a decrescendo blowing diastolic murmur heard best at the left lower sternal border, heard when blood flows retrograde into the left ventricle. This is most commonly seen in aortic root dilation and as sequelae of aortic stenosis.
- **Option B:** Mitral valve abnormalities are heard at the fifth intercostal space in the midclavicular line. Mitral stenosis is a diastolic murmur, best heard at the left 5th midclavicular line. It is

associated with infective endocarditis and chronic rheumatic heart disease. Mitral regurgitation is a systolic murmur, best heard at the left 5th midclavicular line with possible radiation to the left axilla. It is commonly associated with infective endocarditis, rheumatic heart disease, congenital anomalies, and inferior wall myocardial infarctions.

- **Option D:** Tricuspid valve abnormalities are heard at the third and fourth intercostal spaces along the sternal border. Tricuspid stenosis is best heard at the lower left sternal border. Typical causes include infective endocarditis, seen in intravenous drug users, and carcinoid syndrome. Prolonged tricuspid stenosis may lead to right atrial enlargement and arrhythmias. Tricuspid regurgitation is systolic, auscultated at the lower left sternal border. It is also associated with intravenous drug users and carcinoid syndrome.

74. Propanolol (Inderal) is used in the mental health setting to manage which of the following conditions?

A. Antipsychotic-induced akathisia and anxiety.

B. Obsessive-compulsive disorder (OCD) to reduce ritualistic behavior.

C. Delusions for clients suffering from schizophrenia.

D. The manic phase of bipolar illness as a mood stabilizer.

Correct Answer: A. Antipsychotic-induced akathisia and anxiety

Propranolol is a potent beta-adrenergic blocker and produces a sedating effect, therefore it is used to treat antipsychotic-induced akathisia and anxiety. Off-label use of propranolol includes the use in performance anxiety, which is a subset of a social phobia presenting with tachycardia, sweating, and flushing that occurs secondary to increased activation of the sympathetic nervous system.

- **Option B:** OCD is most commonly treated with SSRIs, and at much higher doses than used to treat anxiety or depression. FDA-approved SSRIs include fluoxetine, fluvoxamine, paroxetine, and sertraline. The following are appropriate drugs and doses typically used to treat OCD: fluoxetine 80 mg, escitalopram 40 mg, 300 mg fluvoxamine, and 100 mg paroxetine.
- **Option C:** For the initial treatment of acute psychosis, it is recommended to commence an oral second-generation antipsychotics (SGA) such as aripiprazole, olanzapine, risperidone, quetiapine, asenapine, lurasidone, sertindole, ziprasidone, aripiprazole, molindone, iloperidone, etc. Sometimes, if clinically needed, alongside a benzodiazepine such as diazepam, clonazepam, or lorazepam to control behavioral disturbances and non-acute anxiety. First-generation antipsychotic (FGA) like trifluoperazine, Fluphenazine, haloperidol, pimozide, sulpiride, flupentixol, chlorpromazine, etc. are not commonly used as the first line but can be used.
- **Option D:** A large meta-analysis of medications used in acute mania showed that atypical antipsychotics were more effective than mood stabilizers for this purpose but not necessarily for maintenance of bipolar disorder. The most effective medications are risperidone, olanzapine, and haloperidol. Lithium, quetiapine, and aripiprazole were comparatively effective. Valproic acid, carbamazepine, and ziprasidone were more efficacious than placebo but less so than their previously mentioned competitors.

75. The fetal heart rate is checked following rupture of the bag of waters in order to:

A. Check if the fetus is suffering from head compression.

B. Determine if cord compression followed the rupture.

C. Determine if there is uteroplacental insufficiency.

D. Check if the fetal presenting part has adequately descended following the rupture.

Correct Answer: B. Determine if cord compression followed the rupture.

After the rupture of the bag of waters, the cord may also go with the water because of the pressure of the rupture and flow. If the cord goes out of the cervical opening, before the head is delivered (cephalic presentation), the head can compress on the cord causing fetal distress. Fetal distress can be detected through the fetal heart tone. Thus, it is essential to check the FHB right after rupture of the bag to ensure that the cord is not being compressed by the fetal head.

- **Option A:** Head compression during normal uterine contractions may also result in early decelerations, but usually does not harm the fetus. Early decelerations are caused by head compression. Head compression results in fetal vagal stimulation which slows the fetal heart rate during contractions.
- **Option C:** Placental insufficiency is a process whereby there is a progressive deterioration in placental functioning such that oxygen and nutrient transfer to the fetus via the placenta is decreased, culminating in a decompensated hypoxia and acidosis. This process leads to fetal hypoxemia that then stimulates a downregulation of fetal metabolic demands to preserve what nutrients are already accessible, thus resulting in intrauterine fetal growth restriction.
- **Option D:** The downward passage of the presenting part through the pelvis is called descent. This occurs intermittently with contractions. The rate is greatest during the second stage of labor.

76. A 45-year-old woman presents to the emergency department (ED) with complaints of fatigue, muscle weakness, and recent episodes of abdominal pain. On further inquiry, she also mentions frequent urination, bone pain, and having felt a palpable “stone” while urinating last week. The ED physician is concerned about the possibility of hyperparathyroidism, considering the symptoms described. Recognizing the link between the parathyroid hormone and its effect on serum electrolytes, the nurse anticipates specific laboratory investigations to confirm the diagnosis. Select all that apply

A. Sodium

B. Calcium

C. Chloride

D. Potassium

E. Phosphorus

Correct Answer: B and E.
Increased levels of PTH, as seen in hyperparathyroidism, lead to increased calcium levels in the blood (hypercalcemia). This occurs because PTH stimulates the release of calcium from bones, increases calcium absorption from the gut, and promotes calcium reabsorption in the kidneys. In hyperparathyroidism, there’s an increase in PTH which leads to decreased phosphorus levels (hypophosphatemia). This is because PTH decreases the reabsorption of phosphorus in the kidneys, leading to increased phosphorus excretion in the urine. Additionally, PTH reduces the absorption of phosphorus from the intestines.

- **Option A:** The parathyroid hormone (PTH) primarily regulates calcium and phosphorus balance in the body. PTH does not directly influence sodium levels, so sodium levels are not typically altered in hyperparathyroidism.
- **Option C:** Chloride levels are not directly affected by PTH. However, in some cases of hyperparathyroidism, a rise in chloride may be seen in association with a rise in serum calcium. Still, the primary electrolyte derangements in hyperparathyroidism are with calcium and phosphorus.
- **Option D:** PTH does not have a direct effect on potassium levels, so it's not typically altered in hyperparathyroidism.

77. A client with anemia may be tired due to a tissue deficiency of which of the following substances?

A. Carbon dioxide

B. Factor VIII

C. Oxygen

D. T-cell antibodies

Correct Answer: C. Oxygen

Anemia stems from a decreased number of red blood cells and the resulting deficiency in oxygen and body tissues. 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.

- **Option A:** In the human body, carbon dioxide is formed intracellularly as a byproduct of metabolism. CO_2 is transported in the bloodstream to the lungs where it is ultimately removed from the body through exhalation. CO_2 plays various roles in the human body including regulation of blood pH, respiratory drive, and affinity of hemoglobin for oxygen (O_2).
- **Option B:** Clotting factors, such as factor VIII, relate to the body's ability to form blood clots and aren't related to anemia. Clotting factors are arguably the crux and most essential components of hemostasis. Hemostasis is the body's physiological response to vascular endothelial injury, which results in a series of processes that attempt to retain blood within the vascular system through the formation of a clot.
- **Option D:** T cells are a diverse and important group of lymphocytes that mature and undergo positive and negative selection processes in the thymus. These cells play a vital role in both components of active immunity, including cell-mediated and to some extent humoral immunity.

78. When assessing a child's cultural background, the nurse in charge should keep in mind that:

A. Cultural background usually has little bearing on a family's health practices

B. Physical characteristics mark the child as part of a particular culture

C. Heritage dictates a group's shared values

D. Behavioral patterns are passed from one generation to the next

Correct Answer: D. Behavioral patterns are passed from one generation to the next.

A family's behavioral patterns and values are passed from one generation to the next. Pediatric health care providers must be aware of the demographic trends and be culturally competent to deliver the safest, highest quality care possible to children of widely differing groups.

- **Option A:** Cultural background commonly plays a major role in determining a family's health practices. Health and health care disparities are inextricably linked; cultural competence on the part of the health care provider is necessary to minimize and ultimately eliminate any differences in the quality of health care.
- **Option B:** Physical characteristics do not indicate a child's culture. Folk illnesses often do not have a corresponding illness from a biomedical or scientific perspective and may not be perceived as an illness or affliction by another cultural group.
- **Option C:** Although heritage plays a role in culture, it does not dictate a group's shared values and its effect on culture is weaker than that of behavioral patterns. In addition to language differences, cultural differences regarding nonverbal communication can create communication barriers between a child, family, and the health care provider.

79. The nurse is assessing an infant with Hirschsprung's disease. The nurse can expect the infant to:

A. Fixed plantar flexion (equinus) of the ankle

B. Sonorous seal-bark cough

C. Strawberry tongue

D. Abdominal distention

Correct Answer: D. Abdominal distention

- Option D: Hirschsprung's disease (aganglionic megacolon) is a condition where certain nerve cells in the wall of the colon do not form properly, which results in the blockage of the intestine. Symptoms in infants will show an absence of bowel movement in the first 48 hours and abdominal distention.
- Option A: Fixed plantar flexion (equinus) of the ankle is a classic sign of clubfoot.
- Option B: A sonorous seal-bark cough in an infant is a sign of croup or transesophageal atresia.
- Option C: A strawberry tongue is indicative of Kawasaki disease.

80. A client with myasthenia gravis frequently complains of weakness and fatigue. The physician plans to identify whether the client is responding to an overdose of the medication or a worsening of the disease. A tensilon test is performed. Which of the following would indicate that the client is experiencing an overdose of the medication?

A. Temporarily worsening of the condition.

B. Improvement of weakness and fatigue.

C. No change in the condition.

D. Complaints of muscle spasms.

Correct Answer: A. Temporarily worsening of the condition.

Tensilon test/ injection of edrophonium is performed to diagnose cholinergic crisis (overdose with anticholinesterase) or myasthenic crisis (under medication). A tensilon injection makes the client in a cholinergic crisis temporarily worse (negative tensilon test).

- **Option B:** An improvement in the weakness indicates myasthenia crisis (under medication).
- **Option C:** Changes will be observed within 30 to 60 seconds after the injection of the medication.
- **Option D:** Complaints of muscle spasm may indicate that the medications are not working.

81. He discusses the goal of the department. Which of the following statements is a goal?

A. Increase the patient satisfaction rate.

B. Eliminate the incidence of delayed administration of medications.

C. Establish rapport with patients.

D. Reduce response time to two minutes.

Correct Answer: A. Increase the patient satisfaction rate.

A goal is a desired result towards which efforts are directed. A goal is a short statement of the desired outcome to be accomplished over a long time frame, usually three to five years. It is a broad statement that focuses on the desired results and does not describe the methods used to get the intended outcome.

- **Option B:** Objectives are specific, actionable targets that need to be achieved within a smaller time frame, such as a year or less, to reach a certain goal. Objectives describe the actions or activities involved in achieving a goal.
- **Option C:** Goals are the outcomes you intend to achieve, whereas objectives are the specific actions and measurable steps that you need to take to achieve a goal. Goals and objectives work in tandem to achieve success.
- **Option D:** Goals are general statements of what is to be achieved. They do not specify the tasks that need to be performed to accomplish them. Objectives, on the other hand, are specific actions one takes within a certain timeframe.

82. The nurse is interacting with a family consisting of a mother, a father, and a hospitalized adolescent who has a diagnosis of alcohol abuse. The nurse analyzes the situation and agrees with the adolescent's view about family rules. Which intervention is most appropriate?

A. The nurse should align with the adolescent, who is the family scapegoat.

B. The nurse should encourage the parents to adopt more realistic rules.

C. The nurse should encourage the adolescent to comply with parental rules.

D. The nurse should remain objective and encourage mutual negotiation of issues.

Correct Answer: D. The nurse should remain objective and encourage mutual negotiation of issues.

The nurse who wishes to be helpful to the entire family must remain neutral. Taking sides in a conflict situation in a family will not encourage negotiation, which is important for problem resolution. Nurses who choose collaboration as their conflict resolution strategy incorporate others' ideas into their own; while the result may not be as half-and-half as with the compromising method, the solution still has aspects of everyone's opinions and input, increasing group buy-in and general satisfaction with the final decision.

- **Option A:** If the nurse aligned with the adolescent, then the nurse would be blaming the parents for the child's current problem; this would not help the family's situation. Learning to negotiate conflict is a function of a healthy family.
- **Option B:** Instead of adopting a "me vs. you" mentality, nurses approaching interpersonal conflict resolution from a compromising mentality aim to reach a solution that makes both sides at least partially happy. By doing so, both sides leave with something they want and are able to move forward with implementing a solution.
- **Option C:** Encouraging the parents to adopt more realistic rules or the adolescent to comply with parental rules does not give the family an opportunity to try to resolve problems on their own. Nurses who choose to use obliging as their main conflict resolution strategy are people-pleasers. They're fine accommodating other ideas even at the expense of shelving or de-prioritizing their own. This can be helpful when it moves the best solution forward, but it can also be dangerous because it may lead to a case where an individual withholds valid convictions or opinions just to "keep the peace."

83. Which of the following heart muscle diseases is unrelated to other cardiovascular diseases?

A. Cardiomyopathy

B. Coronary artery disease

C. Myocardial infarction

D. Pericardial effusion

Correct Answer: A. Cardiomyopathy

Cardiomyopathy isn't usually related to an underlying heart disease such as atherosclerosis. The etiology in most cases is unknown. Although most cases are idiopathic, a number of conditions (e.g. coronary artery disease, wet beriberi), infections (e.g., Coxsackie B virus, Chagas disease), and substances (e.g. heavy drinking,c cocaine) have been identified as causes.

- **Option B:** The hallmark of the pathophysiology of CAD is the development of atherosclerotic plaque. Plaque is a build-up of fatty material that narrows the vessel lumen and impedes the blood flow. Growth factors released activate smooth muscles, which also take up oxidized LDL particles and collagen and deposit along with activated macrophages and increase the population of foam cells. This process leads to the formation of subendothelial plaque.
- **Option C:** MI is directly related to atherosclerosis. Smoking and abnormal apolipoprotein ratio showed the strongest association with acute myocardial infarction. The increased risk associated with diabetes and hypertension were found to be higher in women, and the protective effect of exercise and alcohol was also found to be higher in women.
- **Option D:** Pericardial effusion is the escape of fluid into the pericardial sac, a condition associated with pericarditis and advanced heart failure. The fluid accumulation increases pressure in the pericardial sac leading to the compression of the heart, especially the right heart due to a thinner wall. Impaired diastolic filling of the right heart causes venous congestion.

84. Which of the following is the primary reason to teach pursed-lip breathing to clients with emphysema?

A. To promote oxygen intake.

B. To strengthen the diaphragm.

C. To strengthen the intercostal muscles.

D. To promote carbon dioxide elimination.

Correct Answer: D. To promote carbon dioxide elimination.

Pursed lip breathing prolongs exhalation and prevents air trapping in the alveoli, thereby promoting carbon dioxide elimination. By prolonged exhalation and helping the client relax, pursed-lip breathing helps the client learn to control the rate and depth of respiration. Pursed-lip breathing does not promote the intake of oxygen, strengthen the diaphragm, or strengthen intercostal muscles.

- **Option A:** For those suffering from chronic obstructive pulmonary disease, the ability to take in oxygen is a constant struggle. It's possible to increase oxygen levels in other ways, such as cellular therapy. Cellular therapy may promote the healing of lung tissue, potentially improving lung function. When lung function improves, the client is able to take in more oxygen as well as expel carbon dioxide because the lungs are working more effectively.
- **Option B:** Diaphragmatic breathing is a type of a breathing exercise that helps strengthen the diaphragm, an important muscle that helps us breathe. This breathing exercise is also sometimes called belly breathing or abdominal breathing.
- **Option C:** Breathing exercises slowly fill the lungs with air to expand the chest and work the intercostal muscles. To do this exercise, it is typically recommended to sit or stand with the back straight, then take a full breath from the bottom of the lungs. It can help to think of breathing from the diaphragm, by slowly expanding the abdominal muscles while inhaling, then pushing air from the lungs using these same muscles.

85. A client with a history of medication noncompliance is receiving outpatient treatment for chronic undifferentiated schizophrenia. The physician is most likely to prescribe which medication for this client?

A. chlorpromazine (Thorazine)

B. imipramine (Tofranil)

C. lithium carbonate (Lithane)

D. fluphenazine decanoate (Prolixin Decanoate)

Correct Answer: D. fluphenazine decanoate (Prolixin Decanoate)

Fluphenazine decanoate is a long-acting antipsychotic agent given by injection. Because it has a 4-week duration of action, it's commonly prescribed for outpatients with a history of medication noncompliance. Fluphenazine is a typical antipsychotic used for symptomatic management of psychosis in patients with schizophrenia. There is a long-acting fluphenazine decanoate formulation that is used primarily as maintenance therapy for chronic schizophrenia and related psychotic disorders in patients who do not tolerate oral formulations or in patients where medication compliance is of concern.

- **Option A:** Chlorpromazine, also an antipsychotic agent, must be administered daily to maintain adequate plasma levels, which necessitates compliance with the dosage schedule. The efficacy of chlorpromazine in bipolar disorder was mainly established to control the manic episode of bipolar illness such as excessive energy, decreased need for sleep, increased excitability and impulsivity, and grandiose ideations.
- **Option B:** Imipramine is a tertiary amine tricyclic antidepressant. Tricyclic antidepressants (TCAs) had been approved by the Food and Drug Administration (FDA) as antidepressants in the 1950s. Although it is FDA approved for the treatment of depression, it is a second-line treatment notably in severe depression with melancholic and atypical features, due to its undesirable side effects and due to its toxicity in overdose.
- **Option C:** Lithium carbonate, a mood stabilizer, is rarely used to treat clients with chronic schizophrenia. Lithium was the first mood stabilizer and is still the first-line treatment option, but is underutilized because it is an older drug. Lithium is a commonly prescribed drug for a manic episode in bipolar disorder as well as maintenance therapy of bipolar disorder in a patient with a history of a manic episode. The primary target symptoms of lithium are mania and unstable mood.

86. A nurse is reviewing a patient's past medical history (PMH). The history indicates the patient has photosensitive reactions to medications. Which of the following drugs is associated with photosensitive reactions? Select all that apply.

A. Ciprofloxacin (Cipro)

B. Sulfonamide

C. Norfloxacin (Noroxin)

D. Sulfamethoxazole and Trimethoprim (Bactrim)

E. Isotretinoin (Accutane)

F. Nitro-Dur patch

Correct Answer: A, B, C, D, and E.

Photosensitivity is an extreme sensitivity to ultraviolet (UV) rays from the sun and other light sources. A type of photosensitivity called Phototoxic reactions are caused when medications in the body interact with UV rays from the sun. Anti-infectives are the most common cause of this type of reaction.

- **Option A:** Ciprofloxacin is used to treat a variety of bacterial infections. Ciprofloxacin belongs to a class of drugs called quinolone antibiotics. It works by stopping the growth of bacteria. This antibiotic treats only bacterial infections. It will not work for virus infections (such as common cold, flu). Unnecessary use or overuse of any antibiotic can lead to its decreased effectiveness.
- **Option B:** Sulfonamides are synthetic bacteriostatic antibiotics that competitively inhibit conversion of p-aminobenzoic acid to dihydropteroate, which bacteria need for folate synthesis and ultimately purine and DNA synthesis. Humans do not synthesize folate but acquire it in their diet, so their DNA synthesis is less affected.
- **Option C:** Norfloxacin is an antibiotic in a group of drugs called fluoroquinolones. Norfloxacin fights bacteria in the body. Norfloxacin is used to treat different bacterial infections of the prostate or urinary tract (bladder and kidneys). Norfloxacin is also used to treat gonorrhea.
- **Option D:** Sulfamethoxazole and trimethoprim combination is used to treat infections such as urinary tract infections, middle ear infections (otitis media), bronchitis, traveler's diarrhea, and

shigellosis (bacillary dysentery). This medicine is also used to prevent or treat Pneumocystis jiroveci pneumonia or Pneumocystis carinii pneumonia (PCP), a very serious kind of pneumonia. Sulfamethoxazole and trimethoprim combination is an antibiotic. It works by eliminating the bacteria that cause many kinds of infections.

- **Option E:** Isotretinoin is a drug used to treat severe acne that hasn't responded to other treatments. It may be prescribed for other uses, including other skin problems and certain kinds of cancer. This drug is a vitamin A derivative (retinoid), so your body reacts to it in a similar way that it does to vitamin A.
- **Option F:** Nitro-Dur patch is used to prevent chest pain or angina. Its side effects are headache, lightheadedness, nausea, and flushing.

87. The nurse is caring for a client admitted with epiglottitis. Because of the possibility of complete obstruction of the airway, which of the following should the nurse have available?

A. Intravenous access supplies

B. A tracheostomy set

C. Intravenous fluid administration pump

D. Supplemental oxygen

Correct Answer: B. A tracheostomy set

For a child with epiglottitis and the possibility of complete obstruction of the airway, emergency tracheostomy equipment should always be kept at the bedside. Prepare for intubation or tracheostomy; Anticipate the need of an artificial airway. An artificial airway is required to promote oxygenation and ventilation and prevent aspiration.

- **Option A:** Administer IV antibiotics as ordered. After obtaining blood and epiglottic cultures, second-or-third generation cephalosporins and beta-lactamase-resistant antibiotics should be started as soon as possible.
- **Option C:** Discourage examining throat with a tongue blade or taking throat culture unless immediate emergency equipment and personnel at hand. Position the child in a sitting up and leaning forward position with mouth open and tongue out ("tripod" position). Allows maximum entry of air into the lungs for improved oxygenation.
- **Option D:** Oxygen will not treat an obstruction. Endotracheal intubation must be readily available; assist with tracheostomy if needed or prepare for the procedure in surgery. Establishes airway if obstruction present and respiratory failure and asphyxia are imminent.

88. Johanna has ventricular ectopy, which of the following drugs is the first line used to treat her condition?

A. quinidine (Cardioquin)

B. digoxin (Lanoxin)

C. procainamide (Pronestyl)

D. lidocaine (Xylocaine)

Correct Answer: D. lidocaine (Xylocaine)

Lidocaine is the only choice used to treat ventricular ectopy. Quinidine and digoxin are class IA antiarrhythmics.

- **Option A:** Quinine is a derivative of the bark of the South American cinchona tree. Quinidine is a stereoisomer of quinine; it is a “class 1a antiarrhythmic drug” and also an antimalarial agent. Class 1a antiarrhythmic agents (for example – quinidine, procainamide, disopyramide, ajmaline) work by inhibiting the fast inward sodium current, depressing the phase 0 of the action potential hence dampening the excitability of cardiac muscles which in turn prolongs the action potential and decreases automaticity.
- **Option B:** Digoxin comes from the foxgloves plant known as Digitalis purpurea. It is a cardiotonic glycoside and belongs to the digitalis class. It increases the force of contraction of the heart by reversibly inhibiting the activity of the myocardial Na-K ATPase pump, an enzyme that controls the movement of ions into the heart. Digoxin has vagomimetic effects on the AV node.
- **Option C:** Procainamide is a medication used in the management and treatment of ventricular arrhythmias, supraventricular arrhythmias, atrial flutter, atrial fibrillation, AV nodal reentrant tachycardia, and Wolf-Parkinson-White syndrome. It is a Class 1A antiarrhythmic agent. Procainamide is a class 1A antiarrhythmic that binds to fast sodium channels inhibiting recovery after repolarization. It also prolongs the action potential and reduces the speed of impulse conduction. This action results in decreased myocardial excitability, slowed conduction velocity, and reduced myocardial contractility.

89. A nurse in the emergency department is observing a 4-year-old child for signs of increased intracranial pressure after a fall from a bicycle, resulting in head trauma. Which of the following signs or symptoms would be cause for concern?

A. Bulging anterior fontanel

B. Repeated vomiting

C. Signs of sleepiness at 10 PM

D. Inability to read short words from a distance of 18 inches

Correct Answer: B. Repeated vomiting

Increased pressure caused by bleeding or swelling within the skull can damage delicate brain tissue and may become life-threatening. Repeated vomiting can be an early sign of pressure as the vomiting center within the medulla is stimulated.

- **Option A:** The anterior fontanel is closed in a 4-year-old child. The average closure time of the anterior fontanelle ranges from 13 to 24 months. Infants of African descent statically have larger fontanelles that range from 1.4 to 4.7 cm, and in terms of sex, the fontanelles of male infants will closer sooner compared to female infants.
- **Option C:** Evidence of sleepiness at 10 PM is normal for a four-year-old. Young toddlers have a sleep schedule supplemented by two naps a day. Toddler sleep problems are compounded by separation anxiety and a fear of missing out, which translates to stalling techniques and stubbornness at bedtime.
- **Option D:** The average 4-year-old child cannot read yet, so this too is normal. At 4, many children just aren’t ready to sit still and focus on a book for long. Others may learn the mechanics of reading but aren’t cognitively ready to comprehend the words.

90. The rationale for inserting a French catheter every hour for the client with epidural anesthesia is:

A. The bladder fills more rapidly because of the medication used for the epidural.

B. Her level of consciousness is such that she is in a trancelike state.

C. The sensation of the bladder filling is diminished or lost.

D. She is embarrassed to ask for the bedpan that frequently.

Correct Answer: C. The sensation of the bladder filling is diminished or lost.

Epidural anesthesia decreases the urge to void and sensation of a full bladder. A full bladder will decrease the progression of labor. Under the influence of epidural analgesia, patients may not feel the urge to urinate, which can result in urinary retention and bladder overdistension. Overfilling of the bladder can stretch and damage the detrusor muscle. For example, the use of lumbar epidural analgesia for labor and delivery has frequently been implicated as a causative factor for postpartum urinary retention. This is supported by the fact that these patients demonstrate a difficulty voiding.

- **Option A:** The medication used for the epidural does not have a diuretic effect. Spinal and epidural opioid administration influence the function of the lower urinary tract by direct spinal action on the sacral nociceptive neurons and autonomic fibres. Long-acting local anesthetics administered intrathecally rapidly block the micturition reflex. Detrusor contraction is restored approximately 7-8 hours after spinal injection of bupivacaine. For this reason, bladder catheterization is a common practice in patients with spinal or epidural anesthesia.
- **Option B:** An epidural does not create a trancelike state for the client. Acute urinary retention is one of the most common complications after surgery and anesthesia. It can occur in patients of both sexes and all age groups and after all types of surgical procedures. It is linked to several factors including increased intravenous fluids, postoperative pain, and type of anesthesia. Micturition depends on coordinated actions between the detrusor muscle and the external urethral sphincter.
- **Option D:** Embarrassed or not, the client would still need to have a French catheter inserted to manage her voiding. The risk of infection with a single catheterization is 1-2% and can rise by 3 to 7 % for every additional day with an indwelling catheter. Traumatic or prolonged catheterization may lead to urethritis and to urethral strictures. There has yet been no consensus for appropriate catheterization strategy during regional anesthesia.

91. He is hopeful that his unit will make a big turnaround in the succeeding months. Which of the following actions of Henry demonstrates that he has reached the third stage of change?

A. Wonders why things are not what they used to be.

B. Finds solutions to the problems.

C. Integrate the solutions to his day-to-day activities.

D. Selects the best change strategy.

Correct Answer: C. Integrate the solutions to his day-to-day activities.

Integrate the solutions to his day-to-day activities is expected to happen during the third stage of change when the change agent incorporates the selected solutions into his system and begins to create a change. In the third and final stage, freezing, the new mindset of the change begins to become the standard, and people's comfort levels return to normal.

- **Option A:** The first stage (unfreezing) involves overcoming inertia and dismantling the existing mindset. It involves getting over the initial defense mechanisms that people exhibit to avoid making a change. People eventually realize that change is necessary and urgent, and this realization allows them to move on to the next stage.
- **Option B:** In the second stage, the actual change occurs. During this stage, an organization's leaders need to focus on clearly communicating to employees the reasons for change and the steps needed to achieve it.
- **Option D:** The second stage is typically a period of confusion and transition in which people are unsure about the change and what may happen in the future. People are aware that the old ways are being challenged, but they do not yet have a clear picture as to what these ways will be replaced with.

92. Which of the following diagnostic tests may be performed to determine if a client has gastric cancer?

A. Barium enema

B. Colonoscopy

C. Gastroscopy

D. Serum chemistry levels

Correct Answer: C. Gastroscopy

A gastroscopy will allow direct visualization of the tumor. Patients presenting with any symptoms suspicious for gastric cancer should undergo an upper endoscopy over barium study (except for limited plastic presenting as leather-flask appearance). Although upper endoscopy is more invasive and costly, it offers tissue diagnosis by direct biopsy of esophageal, gastric, or duodenal lesions.

- **Option A:** A barium enema is a radiographic (X-ray) examination of the lower gastrointestinal (GI) tract. The large intestine, including the rectum, is made visible on X-ray film by filling the colon with a liquid suspension called barium sulfate (barium). Barium highlights certain areas in the body to create a clearer picture.
- **Option B:** A colonoscopy would help diagnose colon cancer. Synchronous or metachronous colorectal cancer is reportedly detected in approximately 1% of patients with gastric cancer. Therefore, screening colonoscopy before surgical interventions for the stomach is now well established.
- **Option D:** Serum chemistry levels don't contribute data useful to the assessment of gastric cancer. Staging pre-preoperative evaluations include chest and abdominal imaging to rule out metastasis and to determine surgical resectability. Abdominopelvic computerized tomography is performed early to rule out gross metastatic disease but does not accurately assess T, N, and small peritoneal metastases with an overall accuracy of 42% to 82%.

93. A client who has been receiving heparin therapy also is started on warfarin. The client asks a nurse why both medications are being administered. In

formulating a response, the nurse incorporates the understanding that warfarin:

A. Stimulates the breakdown of specific clotting factors by the liver, and it takes two (2)- three (3) days for this to exert an anticoagulant effect.

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

C. Stimulates production of the body's own thrombolytic substances, but it takes 2-4 days for this to begin.

D. Has the same mechanism of action as Heparin, and the crossover time is needed for the serum level of warfarin to be therapeutic.

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

Warfarin 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. 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 A:** Warfarin is the oral anticoagulant most frequently used to control and prevent thromboembolic disorders. Prescribing the dose that both avoids hemorrhagic complications and achieves sufficient suppression of thrombosis requires a thorough understanding of the drug's unique pharmacology.
- **Option C:** The earliest changes in the International Normalized Ratio (INR) are typically noted 24 to 36 hours after a dose of warfarin is administered. These changes are due to the clearance of functional factor VII, which is the vitamin K–dependent clotting factor with the shortest half-life (six hours).
- **Option D:** Loading doses theoretically may cause clot formation and/or expansion by limiting the production of proteins C and S, which have shorter half-lives than prothrombin. Consequently, the concurrent use of heparin is extremely important.

94. A young adult is being treated for second and third-degree burns over 25% of his body and is now ready for discharge. The nurse evaluates his understanding of discharge instructions relating to wound care and is satisfied that he is prepared for home care when he makes which statement?

A. "I will need to take sponge baths at home to avoid exposing the wounds to unsterile bathwater."

B. "I can expect occasional periods of low-grade fever and can take Tylenol every 4 hours."

C. "I must wear my Jobst elastic garment all day and can only remove it when I'm going to bed."

D. "If any healed areas break open I should first cover them with a sterile dressing and then report it."

Correct Answer: D. "If any healed areas break open I should first cover them with a sterile dressing and then report it."

The client is taught to report changes in wound healing such as blister formation, signs of infection, and opening of a previously healed area. Sterile dressings are applied until the wound is assessed and a plan of care developed. While many factors must be considered in dressing selection, the goals in selecting the most appropriate dressing should include providing protection from contamination

(bacterial or otherwise) and from physical damage, allowing gas exchange and moisture retention, and providing comfort to enhance functional recovery.

- **Option A:** Bathing or showering in the usual manner is permitted, using a mild detergent soap such as Ivory Snow. This cleanses the wounds, especially those that are still open and removes dead tissue.
- **Option B:** The client must be aware that infection of the wound may occur; signs of infection, including fever, redness, pain, warmth in and around the wound and increased or foul-smelling drainage must be reported immediately.
- **Option C:** The Jobs garment is designed to place constant pressure on the new healthy tissue that is forming to promote adherence to the underlying structure in order to prevent hypertrophic scarring. In order to be effective, the garment must be worn for 23 hours daily. It is removed for wound assessment and wound care and to permit bathing.

95. The nurse is most likely to report which finding to the primary care provider for a client who has an established colostomy?

A. The stoma extends 1/2 inch above the abdomen.

B. The skin under the appliance looks red briefly after removing the appliance.

C. The stoma color is a deep red purple.

D. An ascending colostomy just delivers liquid feces.

Correct Answer: C. The stoma color is a deep red purple.

An established stoma should be dark pink like the color of the buccal mucosa and is slightly raised above the abdomen. A stoma is the exteriorization of a loop of bowel from the anterior abdominal wall, done during a surgical procedure. It is done for diversion or decompression of the remaining bowel. It may be temporary or permanent, depending on the indication for which it was performed. Most stomas are incontinent, which means that there is no voluntary control over the passage of flatus and feces from the stoma.

- **Option A:** The stoma should be assessed and must be moist, above skin level, and pink to red in color, and the peristomal skin should be normal. Any deviation from this should be notified to the surgeon. The stoma should be measured, or the previous measurement remembered and size should not be more than 1/16-1/8.
- **Option B:** The skin under the appliance may remain pink/red for a while after the adhesive is pulled off. The peristomal skin should be dried appropriately to allow good seal formation. Adhesive pastes or powders may also be applied peristomally. The paper cover on the back of the flange is then removed with the border tape in place. It is then placed around the stoma and held in place for 1 to 2 minutes to create an adequate seal.
- **Option D:** Feces from an ascending ostomy are very liquid, less so from a transverse ostomy, and more solid from a descending or sigmoid stoma. Colostomy diarrhea may be complained by the patient in case of ascending or transverse colostomies in case they are not fully explained about the nature of content expected, but stomal diarrhea may be the result of extensive resection with failure of bowel adaptation or if associated with short bowel syndrome.

96. A female client sees a dermatologist for a skin problem. Later, the nurse reviews the client's chart and notes that the chief complaint was intertrigo. This

term refers to which condition?

A. Spontaneously occurring wheals.

B. A fungus that enters the skin's surface, causing infection.

C. Inflammation of a hair follicle.

D. Irritation of opposing skin surfaces caused by friction.

Correct Answer: D. Irritation of opposing skin surfaces caused by friction.

Intertrigo refers to irritation of opposing skin surfaces caused by friction. Intertrigo is a superficial inflammatory skin condition of the skin's flexural surfaces, prompted or irritated by warm temperatures, friction, moisture, maceration, and poor ventilation. Characteristically, the lesions are erythematous patches of various intensity with secondary lesions appearing as the condition progresses or is manipulated.

- **Option A:** Spontaneously occurring wheals occur in hives. Contact urticaria (CU) is a transient wheal and flare reaction that occurs within 10 to 60 minutes at the site of contact of the offending agent and completely resolves within 24 hours. The risk for developing CU increases when there is an interruption of the stratum corneum due to filaggrin gene mutations or skin irritants.
- **Option B:** A fungus that enters the skin surface and causes infection is a dermatophyte. The dermatophyte's ability to attach to the keratinized tissue of skin forms the basis for dermatophytosis (superficial fungal skin infections). The dermatophytes causing tinea corporis belong to genera Trichophyton, Epidermophyton, and Microsporum.
- **Option C:** Inflammation of a hair follicle is called folliculitis. Folliculitis is a common, generally benign, skin condition in which the hair follicle becomes infected/inflamed and forms a pustule or erythematous papule of overlying hair-covered skin. While this is a non-life-threatening condition and in most cases is self-limited, it can present challenges for immunocompromised patients and in some cases progress to more severe diseases.

97. The nurse is assessing the client with a total knee replacement 2 hours postoperative. Which information requires notification of the doctor?

A. Bleeding on the dressing is 3cm in diameter.

B. The client has a temperature of 100.6°F (38.1°C).

C. The client's hematocrit is 26%.

D. The urinary output has been 60 during the last 2 hours.

Correct Answer: C. The client's hematocrit is 26%.

The client with a total knee replacement should be assessed for anemia. A hematocrit of 26% is extremely low and might require a blood transfusion. Results from a hematocrit test are reported as the percentage of blood cells that are red blood cells. Normal ranges vary substantially with race, age, and sex. The definition of normal red-blood-cell percentage also varies from one medical practice to another.

- **Option A:** Bleeding of 2cm on the dressing is not extreme. Circle and date and time the bleeding and monitor for changes in the client's status. Healthline analyzed data on over 1.5 million Medicare and privately insured people to take a closer look. They found that 4.5 percent of people who are aged under 65 experience complications while in the hospital after a knee replacement.

- **Option B:** A low-grade temperature is not unusual after surgery. Ensure that the client is well hydrated, and recheck the temperature in 1 hour. If the temperature is above 100.6°F (38.1°C), report this finding to the doctor. Tylenol will probably be ordered. Infections are rare after knee replacement surgery, but they can occur. Infection is a severe complication, and it needs immediate medical attention.
- **Option D:** Voiding after surgery is also not uncommon and no need for concern. In rare cases, a person may have osteolysis. This is inflammation that occurs due to microscopic wear of the plastic in the knee implant. The inflammation causes bone to essentially dissolve and weaken.

98. A 46-year-old female with chronic constipation is assessed by the nurse for a bowel training regimen. Which factor indicates further information is needed by the nurse?

A. The client's dietary habits include foods high in bulk.

B. The client's fluid intake is between 2500-3000 ml per day.

C. The client engages in moderate exercise each day.

D. The client's bowel habits were not discussed.

Correct Answer: D. The client's bowel habits were not discussed.

To assess the client for a bowel training program the factors causing the bowel alteration should be assessed. A routine for bowel elimination should be based on the client's previous bowel habits and alterations in bowel habits that have occurred because of illness or trauma.

- **Option A:** Foods high in bulk are appropriate. Assist the patient to take at least 20 g of dietary fiber (e.g., raw fruits, fresh vegetables, whole grains) per day. Fiber adds bulk to the stool and makes defecation easier because it passes through the intestine essentially unchanged.
- **Option B:** The client and the family should assist in the planning of the program which should include foods high in bulk, adequate exercise, and fluid intake of 2500-3000 ml. Encourage the patient to take in fluid 2000 to 3000 mL/day, if not contraindicated medically. Sufficient fluid is needed to keep the fecal mass soft. But take note of some patients or older patients having cardiovascular limitations requiring less fluid intake.
- **Option C:** Exercise should be a part of a bowel training regimen. Urge the patient for some physical activity and exercise. Consider isometric abdominal and gluteal exercises. Movement promotes peristalsis. Abdominal exercises strengthen abdominal muscles that facilitate defecation.

99. A 53 y.o. patient has undergone a partial gastrectomy for adenocarcinoma of the stomach. An NG tube is in place and is connected to low continuous suction. During the immediate postoperative period, you expect the gastric secretions to be which color?

A. Brown

B. Clear

C. Red

D. Yellow

Correct Answer: C. Red

Normally, drainage is bloody for the first 24 hours after a partial gastrectomy; then it changes to brown-tinged and then to yellow or clear. Drainage will be bloody for the first 12 hours, and then should clear and turn greenish. Continued or recurrent bleeding suggests complications. A decline in output may reflect the return of GI function.

- **Option A:** This tube will be set to suction and will drain out brownish-colored stomach acid. When it runs from brown to light green to clear, this is an indication that things are moving through the stomach and feedings may be possible.
- **Option B:** Gastric aspirate is usually cloudy and green, tan or off-white, or brown. Intestinal aspirate is generally clear and yellow to bile-colored. Pleural fluid is pale yellow and serous; tracheobronchial secretions are usually tan or off-white mucus.
- **Option D:** Normal color of gastric drainage is light yellow to green in color due to the presence of bile. Bloody drainage may be expected after gastric surgery but must be monitored closely. The presence of coffee-ground type drainage may indicate bleeding.

100. In teaching a female client who is HIV-positive about pregnancy, the nurse would know more teaching is necessary when the client says:

A. The baby can get the virus from my placenta."

B. "I'm planning on starting on birth control pills."

C. "Not everyone who has the virus gives birth to a baby who has the virus."

D. "I'll need to have a C-section if I become pregnant and have a baby."

Correct Answer: D. "I'll need to have a C-section if I become pregnant and have a baby."

A Cesarean section delivery isn't necessary when the mother is HIV-positive.

- **Option A:** The human immunodeficiency virus (HIV) is transmitted from mother to child via the transplacental route.
- **Option B:** The use of birth control will prevent the conception of a child who might have HIV.
- **Option C:** It's true that a mother whose HIV positive can give birth to a baby who's HIV negative.