

Kevin's Review - 100 NCLEX Practice Questions

1. In preparing a female client for electroconvulsive therapy (ECT), Nurse Michelle knows that succinylcholine (Anectine) will be administered for which therapeutic effect?

- A. Short-acting anesthesia
- B. Decreased oral and respiratory secretions
- C. Skeletal muscle paralysis
- D. Analgesia

Correct Answer: C. Skeletal muscle paralysis

Anectine is a depolarizing muscle relaxant causing paralysis. It is used to reduce the intensity of muscle contractions during the convulsive stage, thereby reducing the risk of bone fractures or dislocation. A nerve stimulator is utilized to monitor succinylcholine, a depolarizing muscle relaxant used to reduce tonic-clonic contractions during the procedure. As an alternative to EMG, a blood pressure cuff is inflated on the patient's ankle to prevent succinylcholine from entering the foot, allowing a visual monitor of seizure activity with measurement of tonic-clonic contractions.

- **Option A:** ECT utilizes general anesthesia. Anesthetic induction medications used include barbiturates such as thiopental and methohexital and nonbarbiturate agents such as propofol and etomidate. Seizure-induced by ECT should last longer than 30 seconds. Methohexital is the most commonly used induction agent due to its quick onset, effectiveness, low cost, and minimal effect on seizure duration. Propofol and thiopental have been shown to reduce seizure duration. Etomidate has correlations with myoclonus and increased seizure duration.
- **Option B:** Administration of an anticholinergic medication before ECT may prevent arrhythmias such as bradycardia or asystole and excessive oral secretions. To induce cerebral vasoconstriction via hypocarbia, the patient is often hyperventilated via bag valve mask before delivery of the electrical stimulus to increase seizure intensity.
- **Option D:** In a patient with numerous missed seizures, anesthetic induction agents such as etomidate or ketamine may be useful as they exhibit less anticonvulsant effects as compared to methohexital. While caffeine had been previously administered to prolong seizures, it is no longer the recommendation due to its uncertain safety profile for this purpose.

2. A 62-year-old client arrives at a community health fair where the nurse is offering blood pressure screenings. Upon assessment, the nurse notes that the client's blood pressure is 160/96 mmHg. The client claims that their blood pressure is "usually much lower" and they recently started new medication for arthritis. What would the nurse advise the client to do?

- A. Go get a blood pressure check within the next 15 minutes
- B. Check blood pressure again in two (2) months
- C. See the healthcare provider immediately
- D. Visit the health care provider within one (1) week for a BP check

Correct Answer: A. Go get a blood pressure check within the next 15 minutes

The blood pressure reading is moderately high with the need to have it rechecked after a few minutes to verify. The client states it is 'usually much lower.' Thus a concern exists for complications such as

stroke.

- **Options B & D:** Waiting 2 months or a week for follow-up is too long.
- **Option C:** Immediate check by the provider of care is not warranted.

3. A client has been diagnosed with Disseminated Intravascular Coagulation (DIC). Which of the following is contraindicated with the client?

- A. Administering Heparin
- B. Administering Coumadin
- C. Treating the underlying cause
- D. Replacing depleted blood products

Correct Answer: B. Administering Coumadin

Disseminated Intravascular Coagulation (DIC) has not been found to respond to oral anticoagulants such as Coumadin. Warfarin is contraindicated in patients with hemorrhagic tendencies (e.g., active GI ulceration, patients bleeding from the GI, respiratory, or GU tract; a cerebral aneurysm; central nervous system (CNS) hemorrhage; dissecting aortic aneurysm; spinal puncture and other diagnostic or therapeutic procedures with the potential for significant bleeding).

- **Option A:** Heparin, an anticoagulant, is widely used during DIC treatment and in the prevention of thrombotic diseases. Heparin may also become necessary if a patient has extensive clotting as this medication may prevent further activation of the clotting cascade. Patients with DIC who are not actively bleeding should receive prophylactic anticoagulation with heparin or low molecular weight heparin (LMWH).
- **Option C:** The DIC component will resolve on its own once the underlying disorder is addressed. The treatment for DIC centers on addressing the underlying disorder, which ultimately led to this condition. Consequently, therapies such as antibiotics for severe sepsis, possible delivery for placental abruption, and possible exploratory surgical intervention for trauma represent the mainstays of treatment for DIC.
- **Option D:** Platelet and factor replacement should be directed not at simply correcting laboratory abnormalities but at addressing clinically relevant bleeding or meeting procedural needs. Platelet and plasma transfusions should only be considered in patients with active bleeding or a high risk of bleeding or those patients requiring an invasive procedure. A common threshold utilized for platelet transfusions in this patient population is less than 50×10^9 platelets per liter for actively hemorrhaging patients and $10\text{-}20 \times 10^9$ platelets per liter for those not actively bleeding but at high risk of future bleeding.

4. When developing a discharge plan to manage the care of a client with COPD, the nurse should anticipate that the client will do which of the following?

- A. Develop infections easily.
- B. Maintain current status.
- C. Require less supplemental oxygen.
- D. Show permanent improvement.

Correct Answer: A. Develop infections easily.

A client with COPD is at high risk for development of respiratory infections. In emphysema, an irritant (e.g., smoking) causes an inflammatory response. Neutrophils and macrophages are recruited and release multiple inflammatory mediators. Oxidants and excess proteases leading to the destruction of the air sacs. The protease-mediated destruction of elastin leads to a loss of elastic recoil and results in airway collapse during exhalation.

- **Option B:** COPD is slowly progressive; therefore, maintaining current status is an unrealistic expectation. COPD is an inflammatory condition involving the airways, lung parenchyma, and pulmonary vasculature. The process is thought to involve oxidative stress and protease-antiprotease imbalances. Emphysema describes one of the structural changes seen in COPD where there is destruction of the alveolar air sacs (gas-exchanging surfaces of the lungs) leading to obstructive physiology.
- **Option C:** This is an unrealistic expectation. The prognosis of COPD is variable based on adherence to treatment including smoking cessation and avoidance of other harmful gases. Patients with other comorbidities (e.g., pulmonary hypertension, cardiovascular disease, lung cancer) typically have a poorer prognosis. The airflow limitation and dyspnea are usually progressive.
- **Option D:** Treatment may slow progression of the disease, but permanent improvement is highly unlikely. As the disease progresses, impairment of gas exchange is often seen. The reduction in ventilation or increase in physiologic dead space leads to CO₂ retention. Pulmonary hypertension may occur due to diffuse vasoconstriction from hypoxemia.

5. When comparing the hematocrit levels of a post-op client, the nurse notes that the hematocrit decreased from 36% to 34% on the third day even though the RBC and hemoglobin values remained stable at 4.5 million and 11.9 g/dL, respectively. Which nursing intervention is most appropriate?

- A. Check the dressing and drains for frank bleeding.
- B. Call the physician.
- C. Continue to monitor vital signs.
- D. Start oxygen at 2L/min per NC.

Correct Answer: C. Continue to monitor vital signs.

The nurse should continue to monitor the client because this value reflects a normal physiologic response. Immediately after surgery, the client's hematocrit reflects a falsely high value related to the body's compensatory response to the stress of sudden loss of fluids and blood. Activation of the intrinsic pathway and the renin-angiotensin cycle via antidiuretic hormone produces vasoconstriction and retention of fluid for the first 1 to 2 days post-op. By the second to third day, this response decreases, and the client's hematocrit level is more reflective of the amount of RBCs in the plasma.

- **Option A:** Fresh bleeding is a less likely occurrence on the third post-op day but is not impossible; however, the nurse would have expected to see a decrease in the RBC and hemoglobin values accompanying the hematocrit. Blood loss in the study by Berg et al. was quantified in 1-1.5 blood units, which equals 560-840 mL, in line with the present study and that from Pape et al.
- **Option B:** The physician does not need to be called. Blood loss is a surgical complication that should be especially aware of in at-risk patients such as those with cardiovascular or anemic problems. Given the results within blood measurements, the observation that there is a decrease in hemoglobin and hematocrit after performing surgery should be taken into consideration, especially in patients at risk of anemia, such as women with metrorrhagia, dysmenorrhea in athletes, etc.

- **Option D:** Oxygen does not need to be started based on these laboratory findings. Platelet replacement may be required to reduce the risk of bleeding. Premedication with antihistamine and antipyretics reduces transfusion reaction side effects.

6. Which activity would not be expected by the nurse to meet the cultural needs of the client?

- A. Promote and support attitudes, behaviors, knowledge, and skills to respectfully meet the client's cultural needs despite the nurse's own beliefs and practices.
- B. Ensure that the interpreter understands not only the language of the client but feelings and attitudes behind cultural practices to make sure an ethical balance can be achieved.
- C. Develop structure and process for meeting cultural needs on a regular basis and means to avoid overlooking these needs with clients.
- D. Expect the family to keep an interpreter present at all times to assist in meeting the communication needs all day and night while hospitalized.

Correct Answer: D. Expect the family to keep an interpreter present at all times to assist in meeting the communication needs all day and night while hospitalized

It is not the family's responsibility to assist in the communication process. Many families will leave someone to help at times, but it is the hospital's legal obligation to find an interpreter for continued understanding by the client to make sure the client is fully informed and comprehends in his or her primary language.

- **Option A:** When caring for a patient from a culture different from the nurse's own, she needs to be aware of and respect his cultural preferences and beliefs; otherwise, he may consider the nurse insensitive and indifferent, possibly even incompetent. But beware of assuming that all members of any one culture act and behave in the same way; in other words, don't stereotype people.
- **Option B:** Establishing an environment where cultural differences are respected begins with effective communication. This occurs not just from speaking the same language, but also through body language and other cues, such as voice, tone, and loudness. The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) requires facilities to have interpreters available, so every facility should make a list available.
- **Option C:** Thinking about one's beliefs and recognizing one's own cultural bias and worldview will help understand differences and resolve cultural and ethical conflicts one may face. But while caring for this patient, promote open dialogue and work with him, his family, and health care providers to reach a culturally appropriate solution. For example, a patient who refuses a routine blood transfusion might accept an autologous one.

7. The family of a schizophrenic client asks the nurse if there is a genetic cause of this disorder. To answer the family, which fact would the nurse cite?

- A. Conclusive evidence indicates a specific gene transmits the disorder.
- B. Incidence of this disorder is variable in all families.
- C. There is a little evidence that genes play a role in transmission.
- D. Genetic factors can increase the vulnerability for this disorder.

Correct Answer: D. Genetic factors can increase the vulnerability for this disorder.

Research shows that family history statistically increases the risk for the development of schizophrenia. Genetics also play a fundamental role – there is a 46% concordance rate in monozygotic twins and a 40% risk of developing schizophrenia if both parents are affected. The gene neuregulin (NGR1) which is involved in glutamate signaling and brain development has been implicated, alongside dysbindin (DTNBP1) which helps glutamate release, and catecholamine O-methyltransferase (COMT) polymorphism, which regulates dopamine function.

- **Option A:** However, no single gene has yet been identified. Several studies postulate that the development of schizophrenia results from abnormalities in multiple neurotransmitters, such as dopaminergic, serotonergic, and alpha-adrenergic hyperactivity or glutaminergic and GABA hypoactivity.
- **Option B:** This is incorrect because genetics plays a role in the etiology of schizophrenia. The incidence is also up to ten times greater in children of African and Caribbean migrants compared to Caucasians according to a study conducted in Britain. The association between cannabis use and psychosis has been widely studied, with recent longitudinal studies suggesting a 40% increased risk, while also suggesting a dose-effect relationship between the use of the drug and the risk of developing schizophrenia.
- **Option C:** The neurochemical abnormality hypothesis argues that an imbalance of dopamine, serotonin, glutamate, and GABA results in the psychiatric manifestations of the disease. It postulates that four main dopaminergic pathways are involved in the development of schizophrenia. This dopamine hypothesis attributes the positive symptoms of the illness to excessive activation of D2 receptors via the mesolimbic pathway, while low levels of dopamine in the nigrostriatal pathway are theorized to cause motor symptoms through their effect on the extrapyramidal system. Low mesocortical dopamine levels resulting from the mesocortical pathway are thought to elicit the negative symptoms of the disease.

8. Match the acid-base status of the following blood samples to the disorders in the given choices. (PaCO₂ values are in mm Hg and bicarbonate values in mmol/l). pH 7.55, PaCO₂ 25, HCO₃⁻ 22

- A. Respiratory Acidosis, Partially Compensated
- B. Respiratory Alkalosis, Uncompensated
- C. Metabolic Alkalosis, Partially Compensated
- D. Metabolic Acidosis, Uncompensated

Correct Answer: B. Respiratory Alkalosis, Uncompensated

- Based on the given ABG values, pH is 7.55. For pH, the normal range is 7.35 to 7.45. Any blood pH above 7.45 (7.46, 7.47, 7.48, and so on...) is ALKALOSIS.
- PaCO₂ is 25. The normal range for PaCO₂ is from 35 to 45. If PaCO₂ is below 35, it is alkalosis. Based on the given ABG values, PaCO₂ is below 35, so it is considered ALKALOSIS.
- HCO₃⁻ is 22. The normal range for HCO₃⁻ is from 22 to 26. It is NORMAL.
- For these ABG values, pH is ALKALOSIS and lines up with PaCO₂ which is RESPIRATORY. Therefore, this group of ABG values is considered RESPIRATORY ALKALOSIS.
- Lastly, it is UNCOMPENSATED because HCO₃⁻ is normal and PaCO₂ is abnormal. It is uncompensated if PaCO₂ or HCO₃⁻ is normal and the other is abnormal.

9. Which element in the circular chain of infection can be eliminated by preserving skin integrity?

- A. Host
- B. Reservoir
- C. Mode of transmission
- D. Portal of entry

Correct Answer: D. Portal of entry

In the circular chain of infection, pathogens must be able to leave their reservoir and be transmitted to a susceptible host through a portal of entry, such as broken skin. The portal of entry refers to the manner in which a pathogen enters a susceptible host. The portal of entry must provide access to tissues in which the pathogen can multiply or a toxin can act. Often, infectious agents use the same portal to enter a new host that they used to exit the source host.

- **Option A:** The final link in the chain of infection is a susceptible host. Susceptibility of a host depends on genetic or constitutional factors, specific immunity, and nonspecific factors that affect an individual's ability to resist infection or to limit pathogenicity. An individual's genetic makeup may either increase or decrease susceptibility.
- **Option B:** The reservoir of an infectious agent is the habitat in which the agent normally lives, grows, and multiplies. Reservoirs include humans, animals, and the environment. The reservoir may or may not be the source from which an agent is transferred to a host.
- **Option C:** An infectious agent may be transmitted from its natural reservoir to a susceptible host in different ways. There are different classifications for modes of transmission. In direct transmission, an infectious agent is transferred from a reservoir to a susceptible host by direct contact or droplet spread. Indirect transmission refers to the transfer of an infectious agent from a reservoir to a host by suspended air particles, inanimate objects (vehicles), or animate intermediaries (vectors).

10. The nurse is performing an assessment on a client who has returned from the dialysis unit following hemodialysis. The client is complaining of a headache and nausea and is extremely restless. Which of the following is the most appropriate nursing action?

- A. Notify the physician.
- B. Monitor the client.
- C. Elevate the head of the bed.
- D. Medicate the client for nausea.

Correct Answer: A. Notify the physician

Disequilibrium syndrome may be due to the rapid decrease in BUN levels during dialysis. These changes can cause cerebral edema that leads to increased intracranial pressure. The client is exhibiting early signs of disequilibrium syndrome and appropriate treatments with anticonvulsant medications and barbiturates may be necessary to prevent a life-threatening situation. The physician must be notified.

- **Option B:** Regardless of severity, DDS is initially treated by modifying the dialysis prescription. This is done by changing the sodium dialysate bath or engaging the changed prescription on the

dialysis machine. The symptoms should resolve as quickly as within 30 minutes. However, if symptoms do not resolve with treatment, it may be required to stop the dialysis occasionally to evaluate for other underlying causes of the symptoms.

- **Option C:** Modalities to prevent the development of DDS include implementing a slow and gentle initial hemodialysis, limiting the clearance of urea to prevent the development of an osmotic gradient, increasing dialysate sodium level, and administration of osmotically active substances. Evidence-based guidelines are lacking, but most experts agree on the gradual clearance of urea.
- **Option D:** In patients with severe symptoms of DDS despite sodium remodeling, a trial to decrease intracerebral pressure could be taken. Some experts suggest using 5 milliliters of 23% saline or 12.5 milligrams of intravenous mannitol to increase the plasma osmolarity and simultaneously decrease further osmotic shift, but these are based on anecdotal evidence and limited data.

11. A nurse reviews the arterial blood gas results of a patient and notes the following: pH 7.45; PCO₂ 30 mm Hg; and bicarbonate concentration of 22 mEq/L. The nurse analyzes these results as indicating:

- A. Metabolic acidosis, compensated.
- B. Metabolic alkalosis, uncompensated.
- C. Respiratory alkalosis, compensated.
- D. Respiratory acidosis, compensated.

Correct Answer: C. Respiratory alkalosis, compensated.

The normal pH is 7.35 to 7.45. In a respiratory condition, an opposite (see-saw) will be seen between the pH and the PCO₂. In this situation, the pH is at the high end of the normal value and the PCO₂ is low. In an alkalotic condition, the pH is up. Therefore, the values identified in the question indicate a respiratory alkalosis. Compensation occurs when the pH returns to a normal value. Because the pH is in the normal range at the high end, compensation has occurred.

- **Option A:** The pCO₂ determines whether an acidosis is respiratory or metabolic in origin. Metabolic acidosis is due to alterations in bicarbonate, so the pCO₂ is less than 40 since it is not the cause of the primary acid-base disturbance. In metabolic acidosis, the distinguishing lab value is a decreased bicarbonate (normal range 21 to 28 mEq/L). Respiratory compensation is the physiologic mechanism to help normalize a metabolic acidosis, however, compensation never completely corrects acidemia.
- **Option B:** HCO₃ functions as an alkalotic substance. CO₂ functions as an acidic substance. Therefore, increases in HCO₃ or decreases in CO₂ will make blood more alkalotic. The opposite is also true where decreases in HCO₃ or an increase in CO₂ will make blood more acidic. CO₂ levels are physiologically regulated by the pulmonary system through respiration, whereas the HCO₃ levels are regulated through the renal system with reabsorption rates. Therefore, metabolic alkalosis is an increase in serum HCO₃.
- **Option D:** Respiratory acidosis typically occurs due to failure of ventilation and accumulation of carbon dioxide. The primary disturbance is an elevated arterial partial pressure of carbon dioxide (pCO₂) and a decreased ratio of arterial bicarbonate to arterial pCO₂, which results in a decrease in the pH of the blood. To compensate for the disturbance in the balance between carbon dioxide and bicarbonate (HCO₃⁻), the kidneys begin to excrete more acid in the forms of hydrogen and ammonium and reabsorb more base in the form of bicarbonate. This compensation helps to normalize the pH.

12. Patients with Type 1 diabetes mellitus may require which of the following changes to their daily routine during periods of infection?

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

Correct Answer: C. More insulin

During periods of infection or illness, patients with Type 1 diabetes may need even more insulin to compensate for increased blood glucose levels.

- **Option A:** Changes should be applied to the patient's daily routine to avoid complications from infection.
- **Option B:** Less insulin could lead to hyperglycemia.
- **Option D:** Oral diabetic agents may not be enough to decrease the blood glucose.

13. The majority gastrointestinal reabsorption of water occurs in:

- A. Small intestines
- B. The esophagus
- C. The colon
- D. The stomach

Correct Answer: A. Small intestines

Approximately 85% to 95% of water absorption takes place in the small intestine. The colon absorbs only 500 to 100 cc. Approximately 9 liters of water travels to the gastrointestinal tract per day, and the small intestine absorbs 7 to 8 liters, while the colon absorbs the remaining 1 to 2 liters. Water absorption is thought to occur via osmotic gradients and aquaporins on intestinal membranes.

- **Option B:** Absorption in the esophagus is virtually nil. The mucosa does contain mucous glands that are expressed as foodstuffs distend the esophagus, allowing mucus to be secreted and aid in lubrication. The body of the esophagus is bounded by physiologic sphincters known as the upper and lower esophageal sphincters.
- **Option C:** By the time indigestible materials have reached the colon, most nutrients and up to 90% of the water have been absorbed by the small intestine. The role of the ascending colon is to absorb the remaining water and other key nutrients from the indigestible material, solidifying it to form a stool.
- **Option D:** Contrary to popular thought, the stomach does not contribute to the absorption of any nutrients. This organ can be in the peritoneal cavity, located in the left upper abdominal quadrant, or in the epigastric abdominal region that acts to relay ingested food between the nervous system and the endocrine system.

14. A patient who has received chemotherapy for cancer treatment is given an injection of Epoetin. Which of the following should reflect the findings in a

complete blood count (CBC) drawn several days later?

- A. An increase in neutrophil count
- B. An increase in hematocrit
- C. An increase in platelet count
- D. An increase in serum iron

Correct Answer: B. An increase in hematocrit

Epoetin is a form of erythropoietin, which stimulates the production of red blood cells, causing an increase in hematocrit. Epoetin is given to patients who are anemic, often as a result of chemotherapy treatment.

- **Option A:** GCSFs, such as Neupogen (filgrastim, Amgen), Granix (tbo-filgrastim, Cephalon, Inc.), and Zarxio (filgrastim-sndz, Sandoz), stimulate and promote the maturation and activation of neutrophils.
- **Option C:** Medications such as romiplostim (Nplate) and eltrombopag (Promacta) help the bone marrow produce more platelets.
- **Option D:** Epoetin has no effect on neutrophils, platelets, or serum iron.

15. A patient with Parkinson's disease has a nursing diagnosis of Impaired Physical Mobility related to neuromuscular impairment. You observe a nursing assistant performing all of these actions. For which action must you intervene?

- A. The NA assists the patient to ambulate to the bathroom and back to bed.
- B. The NA reminds the patient not to look at his feet when he is walking.
- C. The NA performs the patient's complete bath and oral care.
- D. The NA sets up the patient's tray and encourages the patient to feed himself.

Correct Answer: C. The NA performs the patient's complete bath and oral care.

The nursing assistant should assist the patient with morning care as needed, but the goal is to keep this patient as independent and mobile as possible.

- **Option A:** Assisting the patient to ambulate prevents incidences of fall and injury.
- **Option B:** Reminding the patient not to look at his feet while walking maintains the client's independence while keeping him safe.
- **Option D:** Encouraging the patient to feed himself is an appropriate goal of maintaining independence.

16. A 28-year-old male patient presents to the emergency department with a sudden onset of severe headache, neck stiffness, and confusion. His roommate mentions that the patient had been complaining of flu-like symptoms for the past few days. Given the patient's presentation and the information provided, the nurse suspects acute meningitis. As the nurse continues the assessment, the patient, though disoriented, tries to describe some of the symptoms he has

been experiencing. Based on the suspicion of acute meningitis, which of the following symptoms reported by the patient would the nurse consider not expected for this condition?

- A. A sudden increase in appetite over the past 24 hours
- B. Episodes of vomiting, especially in the morning
- C. High fever and chills
- D. Sensitivity to light, preferring to stay in a dark room
- E. Muscle aches and joint pain
- F. Ringing in the ears

Correct Answer: A. A sudden increase in appetite over the past 24 hours

Loss of appetite would be expected, not increase in appetite. Most cases of meningitis are caused by an infectious agent that has colonized or established a localized infection elsewhere in the host. Potential sites of colonization or infection include the skin, the nasopharynx, the respiratory tract, the gastrointestinal (GI) tract, and the genitourinary tract. The organism invades the submucosa at these sites by circumventing host defenses (eg, physical barriers, local immunity, and phagocytes or macrophages).

Vomiting occurs in 35% of patients with meningitis. The brain is naturally protected from the body's immune system by the barrier that the meninges create between the bloodstream and the brain. Normally, this protection is an advantage because the barrier prevents the immune system from attacking the brain. However, in meningitis, the blood-brain barrier can become disrupted; once bacteria or other organisms have found their way to the brain, they are somewhat isolated from the immune system and can spread.

The classic triad of meningitis consists of fever, nuchal rigidity, and altered mental status. When the body tries to fight the infection, the problem can worsen; blood vessels become leaky and allow fluid, WBCs, and other infection-fighting particles to enter the meninges and brain. This process, in turn, causes brain swelling and can eventually result in decreasing blood flow to parts of the brain, worsening the symptoms of infection.

Other symptoms include photalgia (photophobia): discomfort when the patient looks into bright lights. Depending on the severity of bacterial meningitis, the inflammatory process may remain confined to the subarachnoid space. In less severe forms, the pial barrier is not penetrated, and the underlying parenchyma remains intact. However, in more severe forms of bacterial meningitis, the pial barrier is breached, and the underlying parenchyma is invaded by the inflammatory process. Thus, bacterial meningitis may lead to widespread cortical destruction, particularly when left untreated.

17. Humatrope (somatropin) is being given to a female patient with turner syndrome. Which of the following findings is associated with this medication?

- A. Decreases ALT and AST level
- B. Mild hyperglycemia
- C. Hypotension
- D. Water intoxication

Correct Answer: B. Mild hyperglycemia

Humatrope (somatropin) is a growth hormone. Excess growth hormone causes insulin resistance and hyperglycemia.

- **Option A:** Elevated AST and ALT are expected.
- **Option C:** Hypertension, not hypotension is a side effect.
- **Option D:** Water intoxication is not a related symptom to this medication.

18. A client calls the emergency department and tells the nurse that he had been cleaning a wooden area in the backyard and came directly into contact with poison ivy shrubs. The client tells the nurse that he cannot see anything on the skin and ask the nurse what to do. Which of the following is the appropriate nursing response?

- A. "Apply calamine lotion immediately to the exposed skin areas."
- B. "It is not necessary to do anything if you cannot see anything on your skin."
- C. "Come to the emergency department."
- D. "Take a shower immediately, lathering, and rinsing several times."

Correct Answer: D. "Take a shower immediately, lathering, and rinsing several times."

When an individual comes in contact with a poison ivy plant, the sap from the plants forms an invisible film on the human skin. The client should be instructed to cleanse the area with alcohol and then shower immediately and to lather the skin several times and rinse each time in running water.

- **Option A:** Calamine lotion is recommended for use if dermatitis occurs.
- **Option B:** The sap that is released from a poison ivy triggers an allergic reaction when it comes into contact with the skin, resulting in an itchy rash that may appear within hours of exposure or up to several days later so it is important to observe and treat it immediately.
- **Option C:** It is not yet necessary to be at the emergency unit at this time.

19. A mother with a Roman Catholic belief has given birth in an ambulance on the way to the hospital. The neonate is in very critical condition with little expectation of surviving the trip to the hospital. Which of these requests should the nurse in the ambulance anticipate and be prepared to do?

- A. The refusal of any treatment for self and the neonate until she talks to a reader.
- B. The placement of a rosary necklace around the neonate's neck and not to remove it unless absolutely necessary.
- C. Arrange for a church elder to be at the emergency department when the ambulance arrives so a "laying on hands" can be done.
- D. Pour fluid over the forehead backward towards the back of the head and say "I baptize you in the name of the father, the son and the holy spirit. Amen."

Correct Answer: D. Pour fluid over the forehead backward towards the back of the head and say "I baptize you in the name of the father, the son and the holy spirit. Amen."

Infant baptism is mandatory in the Roman Catholic belief especially if a neonate is not expected to live. Anyone may perform this if an infant or child is gravely ill. Generally what happens when a child receives emergency baptism in a hospital, is that s/he receives the additional rites of the ceremony in a parish celebration later on—prayers, reading, participation of godparents, anointing with holy chrism, receiving of the baptismal candle, etc.

- **Option A:** This refers to the Christian Science belief. Christian Science subscribes to the Christian belief in an omnipotent, purposeful God, accepts the authority (though not the inerrancy) of the Bible, and holds the Crucifixion and the Resurrection of Jesus Christ to be indispensable to the redemption of mankind.
- **Option B:** This is a belief of Russian Orthodoxy. Russian Orthodox Church, one of the largest autocephalous, or ecclesiastically independent, Eastern Orthodox churches in the world. Its membership is estimated at more than 90 million.
- **Option C:** Mormons believe in divine healing with the laying on of hands. Healing is always attributed to be God's power. Latter-day Saints believe that the Priesthood of God, held by prophets (such as Moses) and worthy disciples of the Savior, was restored by heavenly messengers to the first prophet of this dispensation, Joseph Smith.

20. You are creating a teaching plan for a patient with newly diagnosed migraine headaches. Which key items should be included in the teaching plan? Select all that apply.

- A. Avoid foods that contain tyramine, such as alcohol and aged cheese.
- B. Avoid drugs such as Tagamet, nitroglycerin and Nifedipine.
- C. Abortive therapy is aimed at eliminating the pain during the aura.
- D. A potential side effect of medications is rebound headache.
- E. Complementary therapies such as relaxation may be helpful.
- F. Continue taking estrogen as prescribed by your physician.

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

The client should be counseled on the food and drugs that are allowed. He should also be educated about the side effects of the medications given. Methods of distraction from pain should also be included in the teaching plan.

- **Option A:** One explanation is that it causes nerve cells in the brain to release the chemical norepinephrine. Having higher levels of tyramine in the system — along with an unusual level of brain chemicals — can cause changes in the brain that lead to headaches.
- **Option B:** Oral contraceptives and vasodilators, such as nitroglycerin, can aggravate migraines. Dilation of cerebral arteries causes the commonly reported side effect of migraine-type headache.
- **Option C:** Abortive therapy should be used as early as possible in the course of a migraine. Combination analgesics containing aspirin, caffeine, and acetaminophen are an effective first-line abortive treatment for migraines. Ibuprofen at standard doses is effective for acute migraine treatment.
- **Option D:** Medication overuse headaches or rebound headaches are caused by regular, long-term use of medication to treat headaches, such as migraines. Pain relievers offer relief for occasional headaches. But if one takes them more than a couple of days a week, they may trigger medication overuse headaches.

- **Option E:** Complementary therapies are add-on therapies meant to be used along with traditional treatment, according to the National Center for Complementary and Integrative Health (NCCIH). Massage, spinal manipulation, and acupuncture are examples of complementary therapies that may be beneficial for people with migraines.
- **Option F:** Medications such as estrogen supplements may actually trigger a migraine headache attack. Fluctuations in estrogen, such as before or during menstrual periods, pregnancy, and menopause, seem to trigger headaches in many women.

21. A hospitalized client, diagnosed with a borderline personality disorder, consistently breaks the unit's rules. This behavior should be confronted because it will help the client:

- A. Control anger
- B. Reduce anxiety
- C. Set realistic goals
- D. Become more self-aware

Correct Answer: D. Become more self-aware.

Client's must first become aware of their behavior before they can change it. Occurs after the client is aware of the behavior and has a desire to change the behavior. Review with the client the types of cognitive distortions that affect self-esteem (e.g., self-blame, mind reading, overgeneralization, selective inattention, all-or-none thinking). These are the most common cognitive distortions people use. Identifying them is the first step to correcting distortions that form one's self-view.

- **Option A:** Maintain a neutral, calm, and respectful manner, although with some clients this is easier said than done. Helps the client see himself or herself as respected as a person even when behavior might not be appropriate. Keep in mind clients with personality disorders might defend against feelings of low-self-esteem through blaming, projection, anger, passivity, and demanding behaviors. Many behaviors seen in PD clients cover a fragile sense of self. Often these behaviors are the crux of clients' interpersonal difficulties in all their relationships.
- **Option B:** Focus questions in a positive and active light; helps client refocus on the present and look to the future. For example, "What can you do differently now?" or "What have you learned from that experience?". Allows the client to look at past behaviors differently, and gives the client a sense that he or she has choices in the future.
- **Option C:** Set goals realistically, and renegotiate goals frequently. Remember that a client's negative self-view and distrust of the world took years to develop. Unrealistic goals can set up hopelessness in clients and frustrations in nurse clinicians. Clients might blame the nurse for not "helping them," and nurses might blame the client for not "getting better".

22. Which of the following is the reason to perform a spinal tap on a client newly diagnosed with leukemia?

- A. To assess for central nervous system infiltration
- B. To aid in classification of the leukemia
- C. To rule out meningitis
- D. To decrease intracranial pressure

Correct Answer: A. To assess for central nervous system infiltration

- **Option A:** A spinal tap is performed to check if leukemia has infiltrated into the central nervous system specifically to the cerebrospinal fluid (CSF).
- **Options B and D:** It wouldn't be done to decrease ICP nor does it aid in the classification of leukemia. Spinal taps can result in brain stem herniation in cases of ICP.
- **Option C:** A spinal tap can be done to rule out meningitis but this isn't the indication for the test on a leukemic client.

23. The Hodgkin's disease patient described in the question above undergoes a lymph node biopsy for definitive diagnosis. If the diagnosis of Hodgkin's disease were correct, which of the following cells would the pathologist expect to find?

- A. Lymphoblastic cells
- B. Reed-Sternberg cells
- C. Gaucher's cells
- D. Rieder's cells

Correct Answer: B. Reed-Sternberg cells

A definitive diagnosis of Hodgkin's disease is made if Reed-Sternberg cells are found on pathologic examination of the excised lymph node.

- **Option A:** Lymphoblasts are immature cells found in the bone marrow of patients with acute lymphoblastic leukemia.
- **Option C:** Gaucher's cells are large storage cells found in patients with Gaucher's disease.
- **Option D:** Rieder's cells are myeloblasts found in patients with acute myelogenous leukemia.

24. During a community health outreach program, a group of pediatricians and nurses organize a session on infant health and immunity for new parents. During the session, a nurse educator discusses the significance of breastfeeding in transferring immunity from mother to child. A concerned mother, whose infant has recurrent upper respiratory infections, inquires about the specific antibody present in various bodily secretions like saliva, tears, and colostrum which offers localized immunity to her child. She is particularly interested in understanding how breastfeeding might bolster her child's immune defense against such infections. Given this scenario, which antibody is notably abundant in saliva, tears, and colostrum, offering localized immune defense against infections?

- A. IgA
- B. IgE
- C. IgG

D. IgM

Correct Answer: A. IgA

Immunoglobulin A (IgA) is predominantly found in mucous membranes lining the gut and respiratory tracts, saliva, tears, and colostrum. It plays a critical role in mucosal immunity by preventing the attachment of bacteria and viruses to mucous membranes, and is particularly vital in providing passive immunity to infants through breastfeeding.

- **Option B:** Immunoglobulin E (IgE) is associated primarily with allergic reactions and parasitic infections. It does not play a primary role in mucosal immunity nor is it significantly present in bodily secretions like saliva, tears, and colostrum.
- **Option C:** Although Immunoglobulin G (IgG) is the most abundant antibody isotype in the blood and provides the majority of antibody-based immunity against invading pathogens, it is not the primary immunoglobulin found in bodily secretions like saliva, tears, and colostrum which provide localized mucosal immunity.
- **Option D:** Immunoglobulin M (IgM) is the first antibody produced in response to an initial exposure to an antigen. It is primarily found in the blood and lymph fluid, playing a crucial role in the early stages of immunity.

25. Mario comes to the clinic complaining of fever, drenching night sweats, and unexplained weight loss over the past 3 months. Physical examination reveals a single enlarged supraclavicular lymph node. Which of the following is the most probable diagnosis?

- A. Influenza
- B. Sickle cell anemia
- C. Leukemia
- D. Hodgkin's disease

Correct Answer: D. Hodgkin's disease

Hodgkin's disease typically causes fever night sweats, weight loss, and lymph node enlargement.

- **Option A:** The incubation period ranges from 1 to 4 days. Peak virus shedding usually occurs from 1 day before the onset of symptoms to 3 days after.
- **Option B:** Clients with sickle cell anemia manifest signs and symptoms of chronic anemia with pallor of the mucous membrane, fatigue, and decreased tolerance for exercise; they don't show fever, night sweats, weight loss or lymph node enlargement.
- **Option C:** In some cases, the signs of leukemia may include noticeable swelling of the neck, armpit, or groin. This occurs when leukemia has spread to the lymph nodes.

26. A male client abruptly sits up in bed, reports having difficulty breathing and has an arterial oxygen saturation of 88%. Which mode of oxygen delivery would most likely reverse the manifestations?

- A. Simple mask
- B. Non-rebreather mask

- C. Face tent
- D. Nasal cannula

Correct Answer: B. Non-rebreather mask

A non-rebreather mask can deliver levels of the fraction of inspired oxygen (FIO₂) as high as 100%. Other modes — simple mask, face tent, and nasal cannula — deliver lower levels of FIO₂.

Non-rebreathing masks have a bag attached to the mask known as a reservoir bag, which inhalation draws from to fill the mask through a one-way valve and features ports at each side for exhalation, resulting in an ability to provide the patient with 100% oxygen at a higher LPM flow rate.

- **Option A:** Face masks can be generally divided into simple facemasks, air-entrainment masks, and non-rebreathers. A simple facemask is a mask with no bag attached, which delivers oxygen at 5 to 8 LPM. A disadvantage of this and other full face masks is the inability of the patient to eat, drink, or easily communicate while using such a device.
- **Option C:** Face tents are used to provide a controlled concentration of oxygen and increase moisture for patients who have facial burn or a broken nose, or who are claustrophobic. The mask covers the nose and mouth and does not create a seal around the nose. It can provide 28% to 100% O₂. Flow meter should be set to deliver O₂ at a minimum of 15 L/min. It is difficult to achieve high levels of oxygenation with this mask.
- **Option D:** Nasal cannula is a thin tube, often affixed behind the ears and used to deliver oxygen directly to the nostrils from a source connected with tubing. This is the most common method of delivery for home use and provides flow rates of 2 to 6 liters per minute (LPM) comfortably, allowing the delivery of oxygen while maintaining the patient's ability to utilize his or her mouth to talk, eat, etc.

27. How can qualitative outcome analysis be used? Select all that apply.

- A. To determine the reliability of intervention outcomes in a study.
- B. To confirm the applicability of clinical strategies.
- C. To develop interventions and then test those selected.
- D. To build theory.

Correct Answers: B, C, D

Qualitative Outcome Analysis (QOA) enhances the identification of meaningful intervention strategies and plans for utilization. The researcher identifies the type of qualitative data that will enable the interpretation and evaluation of interventions, devises a means of data recording and analysis, and finally, disseminates the findings.

- **Option A:** QOA is a systematic means to confirm the applicability of clinical strategies developed from a single qualitative project, to extend the repertoire of clinical interventions, and to evaluate clinical outcomes.
- **Option B:** QOA also provides a way to describe interventions that cannot be easily measured or interventions that are more usefully communicated by description.
- **Option C:** Qualitative Outcome Analysis provides a way to identify and evaluate these interventions and to systematically and descriptively analyze alternative or new interventions.
- **Option D:** This method is used to confirm the efficacy of nursing interventions when experience changes over time, to extend the repertoire of intervention strategies, and to further clinicians'

understanding of possible outcomes.

28. You are acting as a preceptor for a newly graduated RN during her second week of orientation. You would assign the new RN under your supervision to provide care to which patients? Select all that apply.

- A. A 38-year old with moderate persistent asthma awaiting discharge.
- B. A 63-year old with a tracheostomy needing tracheostomy care every shift.
- C. A 56-year old with lung cancer who has just undergone left lower lobectomy.
- D. A 49-year old just admitted with a new diagnosis of esophageal cancer.

Correct Answer: A and B.

- **Option A:** A patient who is waiting for discharge may be stable enough for the care of the student nurse. The client is the center of care. The needs of the client must be competently met with the knowledge, skills and abilities of the staff to meet these needs.
- **Option B:** The new RN is at an early point in her orientation. The most appropriate patients to assign to her are those in stable condition who require routine care. In other words, the nurse who delegates aspects of care to other members of the nursing team must balance the needs of the client with the abilities of those to which the nurse is delegating tasks and aspects of care, among other things such as the scopes of practice and the policies and procedures within the particular healthcare facility.
- **Option C:** The patient with the lobectomy will require the care of a more experienced nurse, who will perform frequent assessments and monitoring for postoperative complications. Some needs require high levels of professional judgment and skill; and other patient needs are somewhat routine and without the need for high levels of professional judgment and skill.
- **Option D:** The patient admitted with newly diagnosed esophageal cancer will also benefit from care by an experienced nurse. This patient may have questions and needs a comprehensive admission assessment. As the new nurse advances through her orientation, you will want to work with her in providing care for these patients with more complex needs.

29. Which play activity is best suited to the gross motor skills of the toddler?

- A. Ball
- B. Coloring book and crayons
- C. Building cubes
- D. Swing set

Correct Answer: A. Ball

- Option A: The toddler has gross motor skills suited to playing with a ball, which can be kicked forward or thrown overhand.
- Options B and C: Coloring and building cubes require fine motor skills.
- Option D: Toddler lacks gross motor skills for play on the swing set.

30. During a client's urinary bladder catheterization, the bladder is emptied gradually. The best rationale for the nurse's action is that completely emptying an overdistended bladder at one time tends to cause:

- A. Renal failure
- B. Abdominal cramping
- C. Possible shock
- D. Atrophy of bladder musculature

Correct Answer: C. Possible shock

Rapid emptying of an overdistended bladder may cause hypotension and shock due to the sudden change of pressure within the abdominal viscera. Previously, removing no more than 1,000 ml at one time was the standard of practice, but this is no longer thought to be necessary as long as the overdistended bladder is emptied slowly.

- **Option A:** Hematuria, hypotension, and postobstructive diuresis can occur after bladder drainage by catheter, and the risk of these complications has been thought to be increased when the bladder is rapidly decompressed; however, there are reports supporting gradual bladder decompression to avoid hematuria, hypotension, and post obstructive diuresis, the evidence is overall weak.
- **Option B:** A Foley was used for urethral catheterization. The bladder is catheterized in the normal way under aseptic conditions using a two-way Foley catheter. Patients were evaluated for pain (treatment success), hematuria, and hypotension. Pain was assessed as present or absent. The assessment was done using pain analog scores.
- **Option D:** Gradual release of the obstructed bladder continues to be recommended as the method of choice based on a theory that slow decompression of the intrabladder pressure will reduce the rate of complications, specifically hematuria, and hypotension.

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

- A. A client with toxic shock syndrome and a temperature of 102.4°F (39.1°C).
- B. A client with diarrhea caused by *C. difficile*.
- C. A client with a wound infected with VRE.
- D. A client with a cough who may have Koch disease.

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

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

- **Option A:** Standard precautions are required for the client with toxic shock syndrome. At a minimum, standard precautions should be used in the hospital setting to prevent transmission to patients and staff. The CDC has recommended for the first 24 hours of effective antibiotics to have the patient in both contact and droplet isolation.

- **Option B:** Use contact precautions for patients with known or suspected CDI. Place these patients in private rooms. If private rooms are not available, they can be placed in rooms (cohort) with other CDI patients. Wear gloves and a gown when entering CDI patient rooms and during their care.
- **Option C:** Clients with infections that require contact precautions (such as C.difficile and VRE infections) should ideally be placed in private rooms; however, they can be placed in rooms with other clients with the same diagnosis. Wear gloves (clean, non-sterile gloves are adequate) when entering the room of a VRE-infected or colonized patient because VRE can extensively contaminate such an environment. When caring for a patient, a change of gloves might be necessary after contact with a material that could contain high concentrations of VRE.

32. A 56-year-old patient is recovering from a mild stroke and is undergoing a comprehensive neurological assessment. The nurse is particularly interested in evaluating the patient's ability to perceive various sensory stimuli. While performing the assessment, the nurse uses different modalities to stimulate the patient's sensory nerve endings, such as using a tuning fork for vibration (testing mechanoreceptors) and ice for cold sensation (testing thermoreceptors). The nurse then poses a question to the medical student accompanying the assessment, aiming to ascertain the student's understanding of sensory physiology. While assessing a patient's sensory function, the nurse explains the concept of specialized cells in the body that can respond to various stimuli by generating action potentials. What are these sensory nerve endings or specialized cells called?

- A. Mechanoreceptors
- B. Chemoreceptors
- C. Photoreceptors
- D. Thermoreceptors
- E. Receptors
- F. Nociceptors

Correct Answer: E. Receptors

Receptors are specialized sensory structures in the body, which can be sensory nerve endings or specialized cells, that detect various stimuli from the environment or within the body. When these receptors are stimulated by specific cues, they generate electrical signals known as action potentials, which transmit information to the central nervous system for processing and response, allowing organisms to perceive and react to their surroundings.

- **Option A:** Mechanoreceptors are specific types of receptors sensitive to mechanical stimuli like touch, pressure, vibration, or stretch. While they indeed are specialized cells responding to stimuli, they represent a subcategory of receptors and are specific to mechanical stimuli.
- **Option B:** Chemoreceptors are sensitive to chemical changes. They are present in areas like the olfactory region in the nose (for the sense of smell) and taste buds (for the sense of taste). While they are specialized for detecting chemical changes, they are only a subset of receptors.
- **Option C:** Photoreceptors, located in the retina of the eye, are sensitive to light, aiding in vision. While essential, they represent a specific group of receptors tied to visual stimuli.

- **Option D:** Thermoreceptors detect changes in temperature. Like the others, they are a specific subset of receptors dedicated to one type of stimulus.
- **Option F:** Nociceptors are pain receptors detecting harmful stimuli or tissue damage. Again, while crucial for pain perception, they are but one type of receptor.

33. The parents of a young man with schizophrenia express feelings of responsibility and guilt for their son's problems. How can the nurse best educate the family?

- A. Acknowledge the parent's responsibility.
- B. Explain the biological nature of schizophrenia.
- C. Refer the family to a support group.
- D. Teach the parents various ways they must change.

Correct Answer: B. Explain the biological nature of schizophrenia.

The parents are feeling responsible and this inappropriate self-blame can be limited by supplying them with the facts about the biological basis of schizophrenia. Schizophrenia is a psychiatric disorder, which is characterized by slow functional deterioration and episodes of relapse or acute exacerbation of psychotic symptoms. The mean age of onset in early adulthood, deterioration in patients' activities of daily living and ability to sustain employment, and the propensity of the disorder to affect insight leave many patients requiring assistance and care for an extended period of time.

- **Option A:** Acknowledging the patient's responsibility is neither accurate nor helpful to the parents and would only reinforce their feelings of guilt. Caregivers of patients with childhood-onset chronic psychiatric disorders such as autism spectrum disorders, who are usually the parents, realize at an early stage that there will be a responsibility for them to care for their child for the rest of their lives in most cases. They, therefore, tend to adapt accordingly as the child grows up and experience a comparatively slow change to their lives and expectations regarding their ill child.
- **Option C:** Support groups are useful; however, the nurse needs to handle the parents' self-blame directly instead of making a referral for this problem. Patients with schizophrenia can often have a normal childhood and adolescence before suddenly, unexpectedly, and often dramatically becoming ill. Because of the age of onset, care responsibilities are suddenly thrust upon mostly parents, even before they have come to terms with the shock of the sudden, dramatic onset of the illness. It often comes at a time when they would expect their child to gain independence and when they themselves are at an age when retirement could have been considered. The lowering of expectation for the future of their child, along with the new, long-term care responsibilities, tends to weigh heavily on these parents, requiring a dramatic adjustment to their lives and subjecting them to unique symptoms and behaviors, which become increasingly difficult to manage, especially for people of their age.
- **Option D:** Teaching the parents various ways to change would reinforce the parental assumption of blame; although parents can learn about schizophrenia and what is helpful and not helpful, the approach suggested in this option implies the parents' behavior is at fault. Caring for family members with schizophrenia subjects caregivers to mostly negative experiences, which in turn negatively impact the caregivers themselves. These negative aspects experienced by patients' relatives as a consequence of their caregiving role are collectively known as 'burden'. Attempts have been made in the literature to better define 'burden' as the existence of serious psychosocial and emotional problems, difficulties or negative events, stressful situations or significant life changes that influence the family member of an ill relative.

34. Which of the following symptoms usually signifies rapid expansion and impending rupture of an abdominal aortic aneurysm?

- A. Abdominal pain
- B. Absent pedal pulses
- C. Angina
- D. Lower back pain

Correct Answer: D. Lower back pain

Lower back pain results from the expansion of an aneurysm. The expansion applies pressure in the abdominal cavity, and the pain is referred to the lower back.

- **Option A:** Abdominal pain is the most common symptom resulting from impaired circulation. The most typical manifestation of rupture is abdominal or back pain with a pulsatile abdominal mass. However, the symptoms may be vague, and the abdominal mass may be missed.
- **Option B:** Absent pedal pulses are a sign of no circulation and would occur after a ruptured aneurysm or in peripheral vascular disease.
- **Option C:** Angina is associated with atherosclerosis of the coronary arteries.

35. Mr. Rodriguez is admitted with severe pain in the knees. Which form of arthritis is characterized by urate deposits and joint pain, usually in the feet and legs, and occurs primarily in men over age 30?

- A. Septic arthritis
- B. Traumatic arthritis
- C. Intermittent arthritis
- D. Gouty arthritis

Correct Answer: D. Gouty arthritis

Gouty arthritis, a metabolic disease, is characterized by urate deposits and pain in the joints, especially those in the feet and legs. Urate deposits don't occur in septic or traumatic arthritis.

- **Option A:** Septic arthritis results from bacterial invasion of a joint and leads to inflammation of the synovial lining.
- **Option B:** Traumatic arthritis results from blunt trauma to a joint or ligament.
- **Option C:** Intermittent arthritis is a rare, benign condition marked by regular, recurrent joint effusions, especially in the knees.

36. Your patient returns from the operating room after abdominal aortic aneurysm repair. Which symptom is a sign of acute renal failure?

- A. Anuria
- B. Diarrhea
- C. Oliguria

D. Vomiting

Correct Answer: C. Oliguria

Urine output less than 50ml in 24 hours signifies oliguria, an early sign of renal failure. In patients with acute oliguria, one of the most common functional derangements that are observed is the sudden fall in the GRF, leading to acute renal failure. It results in rapid increment in plasma urea and creatinine levels, metabolic acidosis with hyperkalemia, other electrolyte abnormalities, and volume overload.

- **Option A:** Anuria is uncommon except in obstructive renal disorders. Anuria is non-passage of urine, in practice is defined as the passage of less than 100 milliliters of urine in a day. Anuria is often caused by a failure in the function of the kidneys. It may also occur because of some severe obstruction like kidney stones or tumors.
- **Option B:** Acute diarrhea is defined as an episode lasting less than 2 weeks. Infection most commonly causes acute diarrhea. Most cases are the result of a viral infection, and the course is self-limited. Chronic diarrhea is defined as a duration lasting longer than 4 weeks and tends to be non-infectious. Common causes include malabsorption, inflammatory bowel disease, and medication side effects.
- **Option D:** When loss of kidney function is mild or moderately severe, the kidneys cannot absorb water from the urine to reduce the volume of urine and concentrate it. Later, the kidneys have less ability to excrete the acids normally produced by the body and the blood becomes more acidic, a condition called acidosis.

37. What is the approximate time that the blastocyst spends traveling to the uterus for implantation?

- A. 2 days
- B. 7 days
- C. 10 days
- D. 14 weeks

Correct Answer: B. 7 days

The blastocyst takes approximately 1 week to travel to the uterus for implantation. Implantation is a process in which a developing embryo, moving as a blastocyst through a uterus, makes contact with the uterine wall and remains attached to it until birth.

- **Option A:** The zygote moves through the fallopian tube and undergoes cell division, a process called cleavage. These cell divisions produce the inner cell mass (ICM), which will become the embryo, and the trophoblast, which surrounds the ICM and interacts with maternal tissues. Together, the ICM and the trophoblast are called the blastocyst.
- **Option C:** A blastocyst successfully implants in the uterus when, as the zona pellucida exits the fallopian tube, the blastocyst leaves the zona pellucida and binds to the endometrium.
- **Option D:** 14 weeks is too long a time to wait for implantation. If the blastocyst does not implant within 7 days, the pregnancy may not occur at all.

38. The nurse plans care for a client in the post-anesthesia care unit. Which of the following should the nurse assess first?

- A. Respiratory status
- B. Level of consciousness
- C. Level of pain
- D. Reflexes and movement of extremities

Correct Answer: A. Respiratory status

Assessing respiratory status is the first priority. Remember ABC. General anesthesia and mechanical ventilation impair pulmonary function, even in normal individuals, and result in decreased oxygenation in the postanesthesia period. They also cause a reduction in functional residual capacity of up to 50% of the preanesthesia value.

- **Option B:** A level of consciousness assessment is also helpful, such as the AVPU scale or the Glasgow Coma Scale. The AVPU scale assesses if the patient is alert and oriented, responds to voice, responds to pain, or is unresponsive. The Glasgow Coma Scale is an objective way to record the conscious state of a patient, examining eye, verbal, and motor responses.
- **Option C:** Pain is a common occurrence after most all types of surgical procedures and is probably the most significant postoperative problem in the eyes of the patient. Prompt and adequate pain relief is a critical nursing intervention.
- **Option D:** Neurologic functions can be assessed by the patient's response to verbal stimuli, pupils' responsiveness to light and accommodation, ability to move all extremities, and strength and equality of a hand grip.

39. Clonidine (Catapres) can be used to treat conditions other than hypertension. Nurse Sally is aware that the following conditions might the drug be administered?

- A. Phencyclidine (PCP) intoxication
- B. Alcohol withdrawal
- C. Opiate withdrawal
- D. Cocaine withdrawal

Correct Answer: C. Opiate withdrawal

Clonidine is used as adjunctive therapy in opiate withdrawal. Symptomatic treatment in opioid withdrawal includes loperamide for diarrhea, promethazine for nausea/vomiting, and ibuprofen for myalgia. Clonidine can be given to reduce blood pressure. 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.

- **Option A:** Benzodiazepines and neuroleptic agents are typically used to treat PCP intoxication. Benzodiazepines are the preferred medication for chemical sedation in patients with PCP toxicity. Lorazepam 2 to 4 mg intravenous (IV) or intramuscular (IM), or diazepam 5 to 10 mg IV or IM are recommended. Benzodiazepines are also the first-line treatment for PCP-induced hypertension and seizures. Hyperthermia from PCP toxicity is due to psychomotor agitation and can be successfully treated with benzodiazepines as well.
- **Option B:** Benzodiazepines, such as chlordiazepoxide (Librium), and neuroleptic agents, such as haloperidol, are used to treat alcohol withdrawal. The hallmark of management for severe

symptoms is the administration of long-acting benzodiazepines. The most commonly used benzodiazepines are intravenous diazepam (Valium) or intravenous lorazepam (Ativan) for management. Patients with severe withdrawal symptoms may require escalating doses and intensive care level monitoring.

- **Option D:** Antidepressants and medications with dopaminergic activity in the brain, such as fluoxetine (Prozac), are used to treat cocaine withdrawal. Central nervous system (CNS) stimulants like cocaine and amphetamine can also produce withdrawal symptoms. Like opioids, the withdrawal symptoms are mild and not life-threatening. Often the individual will develop marked depression, excessive sleep, hunger, dysphoria, and severe psychomotor retardation but all vital functions are well preserved. Recovery is usually slow, and depression can last for several weeks.

40. The following clients are presented with signs and symptoms of heat-related illness. Which of them needs to be attended first?

- A. A relatively healthy homemaker who reports that the air conditioner has been broken for days and who manifest fatigue, hypotension, tachypnea, and profuse sweating.
- B. An elderly person who complains of dizziness and syncope after standing in the sun for several hours to view a parade.
- C. A homeless person who is a poor historian; has altered mental status, poor muscle coordination, and hot, dry ashen skin; and whose duration of heat exposure is unknown.
- D. A marathon runner who complains of severe leg cramps and nausea, and manifests weakness, pallor, diaphoresis, and tachycardia.

Correct Answer: C. A homeless person who is a poor historian; has altered mental status, poor muscle coordination, and hot, dry ashen skin; and whose duration of heat exposure is unknown.

The signs and symptoms manifested by the homeless person indicate that a heat stroke is happening, a medical emergency, which can lead to brain damage. Also, there must be clinical signs of central nervous system dysfunction that may include ataxia, delirium, or seizures, in the setting of exposure to hot weather or strenuous physical exertion. Patients who present with heat stroke typically have vital sign abnormalities to include an elevated core body temperature, sinus tachycardia, tachypnea, a widened pulse pressure, and a quarter of patients will be hypotensive.

- **Option A:** The homemaker is experiencing heat exhaustion, which can be managed by fluids and cooling measures. It is important to differentiate where the patient is on the heat illness continuum. The signs and symptoms of heat exhaustion may present similarly include cramping, fatigue, dizziness, nausea, vomiting, headache. If progression to end-organ damage occurs it then becomes heat injury.
- **Option B:** The elderly client is at risk for heat syncope and should be advised to rest in a cool area and avoid similar situations. Heat syncope is the temporary, self-limited dizziness, weakness, or loss of consciousness during prolonged standing or positional changes in a hot environment, including physical activity. The thinking is that it is due to a combination of dehydration, pooling of blood in the venous system, decreased cardiac filling, and low blood pressure, which leads to decreased cerebral blood flow.
- **Option D:** The runner is experiencing heat cramps, which can be managed with fluid and rest. Heat cramps: include involuntary spasmodic contractions of large muscle groups as opposed to an isolated muscle spasm/cramp that can also occur during or after exertion. This condition is due to a relative deficiency of sodium, potassium, chloride, or magnesium. Other symptoms may include nausea, vomiting, fatigue, weakness, sweating, and tachycardia.

41. Ricardo is scheduled for a prostatectomy, and the anesthesiologist plans to use a spinal (subarachnoid) block during surgery. In the operating room, the nurse positions the client according to the anesthesiologist's instructions. Why does the client require special positioning for this type of anesthesia?

- A. To prevent confusion.
- B. To prevent seizures.
- C. To prevent cerebrospinal fluid (CSF) leakage.
- D. To prevent cardiac arrhythmias.

Correct Answer: C. To prevent cerebrospinal fluid (CSF) leakage

The client receiving a subarachnoid block requires special positioning to prevent CSF leakage and headache and to ensure proper anesthetic distribution.

- **Option A:** Anesthetics are well known to cause confusion, but this typically decreases as the body processes the medications and removes them from circulation.
- **Option B:** Generalized seizure as a complication following epidural anesthesia has been reported, but rarely following spinal anesthesia.
- **Option D:** The incidence of arrhythmias, as well as hypotension during spinal anesthesia, is higher for Cesarean section mostly.

42. In the context of a nephrology clinical rotation, a nursing student is reviewing the critical aspects of renal physiology with their preceptor. To gauge the student's comprehension, the preceptor poses the following question: Approximately _____ L of filtrate enters the nephrons each day; of that volume _____ % is reabsorbed in the proximal tubule.

- A. 80 L and 35%
- B. 180 L and 65%
- C. 240 L and 85%
- D. 280 L and 99%

Correct Answer: B. 180 L and 65%

Approximately 180 L of filtrate enters the nephrons each day; of that volume, 65% is reabsorbed in the proximal tubule. In the proximal tubule, solute molecules move by active transport and cotransport from the lumen of the tubule into the interstitial fluid. Water moves by osmosis because the cells of the tubule wall are permeable to water.

43. A 68-year-old woman with a recent diagnosis of osteoporosis is admitted to the geriatric care unit. Given her heightened risk for fractures, the nurse is keen on implementing preventive measures to minimize the chances of falls. As part of the comprehensive plan of care, which nursing intervention is most appropriate to safeguard the patient against potential falls? Select all that apply.

- A. Encouraging the use of assistive devices for mobility.
- B. Administering calcium supplements as ordered.
- C. Teaching relaxation techniques to manage pain.
- D. Applying heat packs to alleviate discomfort.
- E. Encouraging the patient to walk barefoot for better grip.
- F. Placing the patient's personal items on the floor for easy access.
- G. Installing grab bars in the bathroom and ensuring well-lit hallways.
- H. Recommending the patient to use high-heeled shoes for better posture.

- **Option A. Encouraging the use of assistive devices for mobility.** Using assistive devices such as canes or walkers can improve stability and prevent falls in patients with osteoporosis.
- **Option G. Installing grab bars in the bathroom and ensuring well-lit hallways.** This intervention helps provide stability and support for the patient, especially in areas where falls are common, like the bathroom. Additionally, well-lit hallways help the patient see clearly and navigate safely, reducing the risk of tripping or falling.
- **Option B:** Administering calcium supplements is important for bone health but does not directly prevent falls.
- **Options C & D:** Teaching relaxation techniques and applying heat packs address pain management but not fall prevention.
- **Option E:** Walking without shoes elevates the likelihood of experiencing a fall. Furthermore, individuals who fall either while shoeless or when donning slippers demonstrate a heightened probability of incurring a severe injury.
- **Option H:** High-heeled shoes can actually increase the risk of falls as they can be unstable and alter the wearer's center of gravity. While they might offer a temporary boost in height and posture, they are not recommended for elderly patients or those with conditions like osteoporosis due to the increased risk of imbalance and falls.

44. Cataract surgery results in aphakia. Which of the following statements best describes this term?

- A. Absence of the crystalline lens.
- B. A "keyhole" pupil.
- C. Loss of accommodation.
- D. Retinal detachment.

Correct Answer: A. Absence of the crystalline lens

Aphakia means without a lens. Aphakia is a condition that involves not having an eye lens. The lens of the eye is a clear, flexible structure that allows the eye to focus. This condition is most common in adults with cataracts, but it can also affect infants and children.

- **Option B:** A keyhole pupil results from iridectomy. Coloboma of the iris is a hole or defect of the iris of the eye. Most colobomas are present since birth (congenital). A cat-eye is a type of coloboma. Any defect in the iris that allows light to enter the eye, other than through the pupil, is called a coloboma.

- **Option C:** Loss of accommodation is a normal response to aging. Loss of accommodation is a normal process of aging, called presbyopia. However, premature or acute accommodation loss in a child or young adult necessitates systemic evaluation and laboratory work-up to determine the etiology.
- **Option D:** A retinal detachment is usually associated with retinal holes created by vitreous traction. Retinal detachments constitute a serious ocular condition and can lead to permanent vision loss. When the retina, the neurosensory layer, detaches from the back of the eye, it loses its oxygen and nutrient supply leading to the death of the tissue.

45. A 30-year-old male from Haiti is brought to the emergency department in sickle cell crisis. What is the best position for this client?

- A. Side-lying with knees flexed
- B. Knee-chest
- C. High Fowler's with knees flexed
- D. Semi-Fowler's with legs extended on the bed

Correct Answer: D. Semi-Fowler's with legs extended on the bed

Placing the client in a semi-Fowler's position provides the best oxygenation for this client.

- **Options A, B, and C:** Flexion of the hips and knees, which includes the knee-chest position, impedes circulation and is not correct positioning for this client.

46. The nurse is monitoring a female client receiving paregoric to treat diarrhea for drug interactions. Which drugs can produce additive constipation when given with an opium preparation?

- A. Antiarrhythmic drugs
- B. Anticholinergic drugs
- C. Anticoagulant drugs
- D. Antihypertensive drugs

Correct Answer: B. Anticholinergic drugs

Paregoric has an additive effect of constipation when used with anticholinergic drugs. The opiate anhydrous morphine, which is contained in paregoric, can decrease motility more than loperamide or the combination of diphenoxylate and atropine can. Antiarrhythmics, anticoagulants, and antihypertensives aren't known to interact with paregoric.

- **Option A:** Of the Class III antiarrhythmics, amiodarone is involved in a significant number of interactions since it is a potent inhibitor of several cytochrome P450 enzymes. It can significantly impair the metabolism of digoxin, theophylline and warfarin. Dosages of digoxin and warfarin should empirically be decreased by one-half when amiodarone therapy is added.
- **Option C:** The anticoagulant effect of warfarin is inhibited by drugs like barbiturates, rifampin, azathioprine, and carbamazepine, which increase its clearance by inducing hepatic metabolism. Azathioprine also reduces the anticoagulant effect of warfarin, presumably through a potentiating effect on hepatic clearance.

- **Option D:** Nonsteroidal anti-inflammatory drugs (NSAIDs) can induce an increase in blood pressure (BP) and may potentially reduce the efficacy of several antihypertensive drugs. Probably the main mechanism of action is inhibition of prostaglandin (PG) synthesis since NSAIDs have a higher propensity to increase BP as the regulation of BP (and renal function) is more PG-dependent and to interact with drugs (diuretics, beta-blockers, and ACE inhibitors) that may act through the increase of PG formation.

47. Nina, an oncology nurse educator, is speaking to a women’s group about breast cancer. Questions and comments from the audience reveal a misunderstanding of some aspects of the disease. Various members of the audience have made all of the following statements. Which one is accurate?

- A. Breast cancer requires a mastectomy
- B. Men can develop breast cancer
- C. Breast cancer is the leading killer of women of childbearing age
- D. Mammography is the most reliable method for detecting breast cancer

Correct Answer: B. Men can develop breast cancer

- **Option B:** Men can develop breast cancer, although they seldom do. It is common among older men.
- **Option A:** A mastectomy may not be required if the tumor is small, confined, and in an early stage.
- **Option C:** Lung cancer causes more deaths than breast cancer in women of all ages.
- **Option D:** The most reliable method for detecting breast cancer is monthly self-examination, not mammography.

48. Nursing interventions that can help the patient to relax and sleep restfully include all of the following except:

- A. Have the patient take a 30- to 60-minute nap in the afternoon.
- B. Turn on the television in the patient’s room.
- C. Provide quiet music and interesting reading material.
- D. Massage the patient’s back with long strokes.

Correct Answer: A. Have the patient take a 30- to 60-minute nap in the afternoon.

Napping in the afternoon is not conducive to nighttime sleeping. There are few considerations about naps. For example, a short daytime nap of 15-30 minutes can be restorative for elders and will not interfere with nighttime sleep. On the other hand, insomniacs are cautioned to avoid naps. Quiet music, watching television, reading, and massage usually will relax the patient, helping him to fall asleep.

- **Option B:** For patients in the hospital, factors that can prevent sound sleep include staff noise during a shift, telephones and call lights, doors, paging systems, and even carts wheeled through corridors. Safety and comfort can be promoted by raising side rails, placing the bed in a low position, and using night-lights.
- **Option C:** For individuals who are unable to sleep, they must get out of bed and spend some time in another room. There, they can start some relaxing activities like reading and listening to soft

music. They should continue the activity till they feel drowsy.

- **Option D:** Rituals can be supported in institutionalized patients by assisting them with a hand and face wash, massage, pillow plumping, and even talking about today's accomplishments and enjoyable events. These can promote relaxation and peace of mind.

49. 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.

50. While planning care for a 2-year-old hospitalized child, which situation would the nurse expect to most likely affect the behavior?

- A. Strange bed and surroundings.
- B. Separation from parents.
- C. Presence of other toddlers.
- D. Unfamiliar toys and games.

Correct Answer: B. Separation from parents

Separation anxiety is most evident from 6 months to 30 months of age. It is the greatest stress imposed on a toddler by hospitalization. If separation is avoided, young children have a tremendous capacity to withstand other stress.

- **Option A:** Most children, even school-aged children, are fearful of a strange bed and new surroundings.
- **Option C:** The presence of other toddlers might help the client calm down and adjust with the environment.
- **Option D:** Unfamiliar toys and games would least likely affect the toddler's behavior.

51. A client is having frequent premature ventricular contractions. A nurse would place a priority on the assessment of which of the following items?

- A. Blood pressure and peripheral perfusion.
- B. Sensation of palpitations.
- C. Causative factors such as caffeine.
- D. Precipitating factors such as infection.

Correct Answer: A. Blood pressure and peripheral perfusion.

Premature ventricular contractions can cause hemodynamic compromise. The shortened ventricular filling time with the ectopic beats leads to decreased stroke volume and, if frequent enough, to decreased cardiac output. Physical examination findings would reveal an irregular heart rhythm upon auscultation if the patient is experiencing PVCs during the examination. In some patients, cannon A waves may cause chest or neck discomfort. Otherwise, there would not be any direct physical examination findings. A prolonged run of PVCs can result in hypotension.

- **Option B:** The client may be asymptomatic or may feel palpitations. A thorough history should include any associated symptoms with the palpitations, the patient's medical history, medication, and supplement usage as well as a detailed social history. It is crucial to inquire about any illicit drug use in those who frequently experience PVCs.
- **Option C:** Common known etiologies include excess caffeine consumption, excess catecholamines, high levels of anxiety, and electrolyte abnormalities. Specific electrolyte changes found in those who experience PVCs are low blood potassium, low blood magnesium, and high blood calcium. Alcohol, tobacco, and illicit drugs are also associated with PVCs as are stimulant-based medications. Patients suffering from sleep deprivation also experience PVCs.
- **Option D:** PVCs can be caused by cardiac disorders or by any number of physiological stressors, such as infection, illness, surgery, or trauma, and by the intake of caffeine, alcohol, or nicotine. There are numerous cardiac and non-cardiac pathologies that are causative of PVCs. Examples include cardiomyopathy, mitral valve prolapse, and myocardial infarction. Any structural heart disease that alters conduction pathways due to tissue alterations can cause PVCs. Non-cardiac examples are hyperthyroidism, anemia, and even hypertension.

52. A child is admitted to the hospital with suspected rheumatic fever. Which of the following observations is not confirming the diagnosis?

- A. A reddened rash visible over the trunk and extremities.
- B. A history of sore throat that was self-limited in the past month.
- C. A negative antistreptolysin O titer.
- D. An unexplained fever.

Correct Answer: C. A negative antistreptolysin O titer.

Rheumatic fever is caused by an untreated group A B hemolytic Streptococcus infection in the previous 2-6 weeks, confirmed by a positive antistreptolysin O titer. ASO is a test used to detect streptococcal antibodies directed against streptococcal lysin O. An elevated titer is proof of a previous streptococcal infection. It is usually more elevated after a pharyngeal than skin infection, while the ADB is typically elevated regardless of the site of the infection.

- **Option A:** Rheumatic fever is characterized by a red rash over the trunk and extremities. The individual lesions of erythema marginatum are evanescent, moving over the skin in serpiginous patterns. Likened to smoke rings, they have a tendency to advance at the margins while clearing in the center.
- **Option B:** Although estimates vary, only 35%-60% of patients with rheumatic fever recall having any upper respiratory symptoms, most commonly, sore throat, in the preceding several weeks. Studies in developed countries have established that rheumatic fever followed only pharyngeal infections and that not all serotypes of group A streptococci cause rheumatic fever.
- **Option D:** Other symptoms of rheumatic fever include fever. The average duration of an untreated ARF attack is 3 months. Chronic rheumatic fever, generally defined as disease persisting for longer than 6 months, occurs in less than 5% of cases.

53. When the bag of waters ruptures spontaneously, the nurse should inspect the vaginal introitus for possible cord prolapse. If there is part of the cord that has prolapsed into the vaginal opening the correct nursing intervention is:

- Push back the prolapsed cord into the vaginal canal.
- Place the mother in a semi fowlers position to improve circulation.
- Cover the prolapsed cord with sterile gauze wet with sterile NSS and place the woman in Trendelenburg position.
- Push back the cord into the vagina and place the woman in Sim's position.

Correct Answer: C. Cover the prolapsed cord with sterile gauze wet with sterile NSS and place the woman in Trendelenburg position.

The correct action of the nurse is to cover the cord with sterile gauze wet with sterile NSS. Observe strict asepsis in the care of the cord to prevent infection. The cord has to be kept moist to prevent it from drying. Don't attempt to put back the cord into the vagina but relieve pressure on the cord by positioning the mother either on Trendelenburg or Sims position

- **Option A:** Avoid handling the cord to reduce vasospasm. Manually elevate the presenting part by lifting the presenting part of the cord by vaginal digital examination. Alternatively, if in the community, fill the maternal bladder with 500ml of normal saline (warmed if possible) via a urinary catheter and arrange immediate hospital transfer.
- **Option B:** Encourage into left lateral position with head down and a pillow placed under left hip OR knee-chest position. This will relieve pressure off the cord from the presenting part.
- **Option D:** Umbilical cord prolapse is an acute obstetric emergency that requires immediate delivery of the baby. The route of delivery is usually by cesarean section. The doctor will relieve cord compression by manually elevating the fetal presentation part until a cesarean section is performed.

54. During the warfarin (Coumadin) administration, the nurse can expect that the initial extension of PT occurs within how many hours after therapy begins?

- 1 to 2
- 4 to 6
- 8 to 12

D. 12 to 24

Correct Answer: C. 8 to 12.

Initial extension of PT occurs within 8 to 12 hours after warfarin therapy begins. Warfarin is an oral anticoagulant commonly used to treat and prevent blood clots. Warfarin has multiple FDA-approved and off-label clinical uses.

- **Option A:** Warfarin competitively inhibits the vitamin K epoxide reductase complex 1 (VKORC1), which is an essential enzyme for activating the vitamin K available in the body. Through this mechanism, warfarin can deplete functional vitamin K reserves and therefore reduce the synthesis of active clotting factors. The hepatic synthesis of coagulation factors II, VII, IX, and X, as well as coagulation regulatory factors protein C and protein S, require the presence of vitamin K. Vitamin K is an essential cofactor for the synthesis of all of these vitamin K-dependent clotting factors.
- **Option B:** Warfarin is a once-daily oral medication. Warfarin administration can be at any time during the day, but recommendations are for administration in the afternoon or evening. By instructing patients to take warfarin later in the day, healthcare providers can have the opportunity to individualize a patient's warfarin dose the same day based on their most current lab values.
- **Option D:** Patients receiving treatment with warfarin should have close monitoring to ensure the safety and efficacy of the medication. Periodic blood testing is the recommendation to assess the patient's prothrombin time (PT) and the international normalized ratio (INR).

55. The nurse is interviewing a newly admitted psychiatric client. Which nursing statement is an example of offering a general lead?

- A. "Do you know why you are here?"
- B. "Are you feeling depressed or anxious?"
- C. "Can you chronologically order the events that led to your admission?"
- D. "Yes, I see. Go on."

Correct Answer: D. "Yes, I see. Go on."

The nurse's statement, "Yes, I see. Go on." is an example of the therapeutic communication technique of a general lead. Offering a general lead encourages the client to continue sharing information. It indicates that the nurse is listening and following what the client is saying without taking away the initiative for the interaction.

- **Option A:** There is a difference between asking the client to describe what is occurring or has taken place and asking him to explain why. Usually, a "why" question is intimidating.
- **Option B:** Interpreting refers to making conscious that which is unconscious to the client. The client's thoughts and feelings are his own, not to be interpreted by the nurse or for hidden meaning. Only the client can identify or confirm the presence of feelings.
- **Option C:** Placing events in time or sequences refers to clarifying the relationship of events in time. Putting events in proper sequence helps both the nurse and the client to see them in perspective. The client may gain insight into cause-and-effect behavior and consequences, or the client may be able to see that perhaps some things are not related.

56. The nurse is giving instructions to a client receiving cholestyramine (Prevalite). Which statement made by the client indicates a need for further

teachings?

- A. "This medication will help lower my cholesterol".
- B. "I will continue taking my multivitamins".
- C. "I will sip the cholestyramine powder for a long time for faster absorption".
- D. "I will include a high fiber rich food in my diet".

Correct Answer: C. "I will sip the cholestyramine powder for a long time for faster absorption".

Sipping the medication for a long time may cause tooth discoloration or tooth decay. Regular brushing of teeth is therefore recommended.

- **Option A:** Cholestyramine is a bile acid sequestrant. It works by helping the body remove bile acids, which can lower cholesterol levels in the blood.
- **Option B:** Cholestyramine may decrease the absorption of some vitamins such as vitamin K and folate.
- **Option D:** High fiber diet is advised to prevent constipation (a side effect of the medication).

57. Which of the following would be priority assessment data to gather from a client who has been diagnosed with pneumonia? Select all that apply.

- A. Auscultation of breath sounds.
- B. Auscultation of bowel sounds.
- C. Presence of chest pain.
- D. Presence of peripheral edema.
- E. Color of nail beds.

Correct Answers: A, C, E.

A respiratory assessment, which includes auscultating breath sounds and assessing the color of the nail beds, is a priority for clients with pneumonia. Assessing for the presence of chest pain is also an important respiratory assessment as chest pain can interfere with the client's ability to breathe deeply. Auscultating bowel sounds and assessing for peripheral edema may be appropriate assessments, but these are not priority assessments for the patient with pneumonia.

- **Option A:** The movement of air generates normal breath sounds through the large and small airways. Normal breath sounds have a frequency of approximately 100 Hz. The absence of breath sounds should prompt the health care provider to consider shallow breath, abnormal anatomy or pathologic entities such as airway obstruction, bulla, hyperinflation, pneumothorax, pleural effusion or thickening, and obesity.
- **Option B:** When bowel sounds are not present, one should listen for a full 3 minutes before determining that bowel sounds are, in fact, absent. Auscultation for abdominal bruits is the next phase of abdominal examination. Bruits are "swishing" sounds heard over major arteries during systole or, less commonly, systole and diastole. The area over the aorta, both renal arteries, and the iliac arteries should be examined carefully for bruits.
- **Option C:** In the face of a history of chest discomfort, ask the patient to point to the area(s) of greatest discomfort. Palpate the area with increasing firmness in an attempt to elicit tenderness and to assess if this maneuver reproduces the patient's symptoms. Pay particular attention to the

costochondral junctions in patients reporting anterior chest pain to evaluate the possibility of costochondritis.

- **Option D:** The detailed physical exam can help immensely to differentiate systemic causes such as CHF (common findings are jugular venous distension, dyspnea, bilateral crackles, history of heart disease), liver disease (jaundice, ascites, history of hepatitis, and alcohol use disorder), renal disease (proteinuria, oliguria, history of uncontrolled diabetes and hypertension), thyroid disease (fatigue, anemia, weight gain).
- **Option E:** Active observation skills are used to search for the use of pursed lips during expiration, the activity and development of the sternocleidomastoid muscles, the use of other accessory muscles of ventilation, the presence of shoulder girdle fixation in relation to the use of these accessory muscles, the flaring of the nasal alae, the presence of jugular venous distention, the degree of comfort, and, as discussed in previous chapters, the presence of cyanosis and clubbing.

58. Aubrey thinks about primary nursing as a system to deliver care. Which of the following activities is not done by a primary nurse?

- A. Collaborates with the physician.
- B. Provides care to a group of patients together with a group of nurses.
- C. Provides care for 5-6 patients during their hospital stay.
- D. Performs comprehensive initial assessment.

Correct Answer: B. Provides care to a group of patients together with a group of nurses.

This function is done in team nursing where the nurse is a member of a team that provides care for a group of patients. Primary care nursing is when a single nurse is identified as the point of contact and primary caregiver for a patient during his or her particular hospital stay or other episodes of care. As envisioned by staff nurses at the University of Minnesota in 1969, the primary care nursing team is composed of that lead nurse, who directly supervises the engagement of a licensed practical nurse and/or nursing assistant in that patient's care.

- **Option A:** Further, the primary care nurse acts as a care partner, serving as a communications liaison between the patient and his or her doctor and other care team members. (In many facilities and systems, the position of nurse practitioner has been created to fulfill this role.)
- **Option C:** The primary nursing model is hailed by proponents as creating a better bond and trust relationship between patients and caregivers, thanks to that single-source relationship. They say that the patient's care is elevated by having that single nurse overseeing its delivery and that its structure empowers the nurse to utilize managerial abilities as well as deploy their best bedside care.
- **Option D:** Primary health care (PHC) is a principle-based, comprehensive approach. It focuses on the way services are delivered, from birth to death, across the continuum of care in all settings.

59. The nurse is caring for a woman 2 hours after a vaginal delivery. Documentation indicates that the membranes were ruptured for 36 hours prior to delivery. What are the priority nursing diagnoses at this time?

Altered tissue perfusion

Risk for fluid volume deficit

High risk for hemorrhage

Risk for infection

Correct Answer: D. Risk for infection

Membranes ruptured over 24 hours prior to birth greatly increases the risk of infection to both mother and the newborn. Rupture of membranes results from a variety of factors that ultimately lead to accelerated membrane weakening. This is caused by an increase in local cytokines, an imbalance in the interaction between matrix metalloproteinases and tissue inhibitors of matrix metalloproteinases, increased collagenase and protease activity, and other factors that can cause increased intrauterine pressure.

- **Option A:** There should be little or no alteration in perfusion after premature rupture of the membranes. Decreased tissue perfusion can be temporary, with few or minimal consequences to the health of the patient, or it can be more acute or protracted, with potentially destructive effects on the patient. When diminished tissue perfusion becomes chronic, it can result in tissue or organ damage or death.
- **Option B:** There may be a risk for deficient fluid volume, but it is not a priority. Fluid volume deficit (FVD) or hypovolemia is a state or condition where the fluid output exceeds the fluid intake. It occurs when the body loses both water and electrolytes from the ECF in similar proportions. Common sources of fluid loss are the gastrointestinal tract, polyuria, and increased perspiration.
- **Option C:** Hemorrhage is not a great risk in premature rupture of membranes. One of the complications of PROM is intraventricular hemorrhage. This is because blood vessels in the brain of premature infants are not fully developed, and are therefore weaker than that of term babies. Research shows that intraventricular hemorrhages (IVH) or brain bleeds are significantly reduced by steroid treatment, without an increase in either maternal or neonatal infection.

60. Joey stresses the importance of promoting ‘esprit d corps’ among the members of the unit. Which of the following remarks of the staff indicates that they understand what he pointed out?

- A. “Let’s work together in harmony; we need to be supportive of one another”
- B. “In order that we achieve the same results; we must all follow the directives of Julius and not from other managers.”
- C. “We will ensure that all the resources we need are available when needed.”
- D. “We need to put our efforts together in order to raise the bar of excellence in the care we provide to all our patients.”

Correct Answer: A. “Let’s work together in harmony; we need to be supportive of one another”

Esprit de corps means managers should create and foster among their employees the morale, common spirit, sense of identification, feeling of pride, loyalty, devotion, honor, solidarity, unity, and cohesiveness with respect to their organization or organizational department.

- **Option B:** In the principle of unity of command, an employee should have only one boss and follow his command. If an employee has to follow more than one boss, there begins a conflict of interest and can create confusion.
- **Option C:** A company should maintain a well-defined work order to have a favorable work culture. A positive atmosphere in the workplace will boost more positive productivity.

- **Option D:** In the principle of unity of direction, whoever is engaged in the same activity should have a unified goal. This means all the people working in a company should have one goal and motive which will make the work easier and achieve the set goal easily.

61. Louie, with burns over 35% of the body, complains of chilling. In promoting the client's comfort, the nurse should:

- A. Maintain room humidity below 40%
- B. Place top sheet on the client
- C. Limit the occurrence of drafts
- D. Keep room temperature at 80 degrees

Correct Answer: C. Limit the occurrence of drafts

A client with burns is very sensitive to temperature changes because heat is lost in the burn areas. Changes in location, character, intensity of pain may indicate developing complications (limb ischemia) or herald improvement and/or return of nerve function and sensation.

- **Option A:** Maintain comfortable environmental temperature, provide heat lamps, heat-retaining body coverings. Temperature regulation may be lost with major burns. External heat sources may be necessary to prevent chilling.
- **Option B:** Cover wounds as soon as possible unless open-air exposure burn care method is required. Temperature changes and air movement can cause great pain to exposed nerve endings.
- **Option D:** The major burn patient needs a body temperature greater than 37 – 37.5°C to reach 38.5°C, to avoid critical temperature and decrease energy expenditure, controlling hypercatabolic state. The recommended ambient temperature in large burn units is between 28 and 33°C.

62. The client with a colostomy has an order for irrigation of the colostomy. The nurse used which solution for irrigation? A. Distilled water

- A. Distilled water
- B. Tap water
- C. Sterile water
- D. Lactated Ringer's

Correct Answer: B. Tap water

Warm tap water or saline solution is used to irrigate a colostomy. If tap water is not suitable for drinking, then bottled water should be used. The prescribed irrigating solution is usually 500-1000cc warm (100°–105°F) tap water. Fill the irrigation bag with the prescribed solution and hang it on the IV pole or hook.

- **Option A:** Distilled water is not used for irrigation. When performed safely and correctly, CI is an excellent method to regulate the evacuation of stool from the ostomy in a selected population of patients with an end colostomy and has rarely been associated with complications. It may also help to improve quality of life
- **Option C:** Sterile water is not used for irrigation. Using water that is too warm or too cool, or instilling water too quickly, may cause abdominal cramps or a vasovagal response.⁶ Therefore, it is

important to provide careful written and oral instructions to the patient. In addition, the first irrigation should be performed in the presence of a health care professional because a small number of patients may experience dizziness as a result of a fall in blood pressure or pulse rate.

- **Option D:** Lactated Ringer's are not used for irrigation. Irrigations for colostomies involve the regular installation of moderate to large volumes of water to clear the colon of stool. Essentially, it is an enema into the stoma resulting in the clearing of stool from the colon. Some individuals who have colostomies choose to use irrigations as a means to regulate the function of their stoma.

63. To avoid fecal impaction, psyllium (Metamucil) should be administered with at least how many ounces of fluid?

- A. 4
- B. 6
- C. 8
- D. 10

Correct Answer: C. 8

Bulk-forming laxatives must be given with at least 8 ounces of liquid plus additional liquid each day to prevent intestinal obstruction. Bulk-forming laxatives retain fluid in the stool and increase stool weight and consistency. Psyllium, dietary fiber, carboxymethylcellulose, and methylcellulose are common examples. It is important to take ample amounts of water for bulk-forming agents to work. Lack of water, in turn, leads to bloating and can cause bowel obstruction.

- **Option A:** Most laxatives are safe when used appropriately and in patients without contraindications. Bulk-forming agents like lactulose can have adverse effects like bloating, nausea, vomiting, and diarrhea. With prokinetic agents, adverse effects like a headache, nausea, and diarrhea have been described.
- **Option B:** Stimulant laxatives are known to cause abdominal pain. Cisapride and tegaserod were withdrawn from the market after cardiovascular adverse effects, including prolonged QT interval that increases the risk for Torsades de Pointes. Mineral oil can cause aspiration and lipid pneumonia.
- **Option D:** Osmotic agents like magnesium can cause metabolic disturbances, especially in the presence of renal involvement. Also, magnesium excretion depends on renal function, and its use requires caution in renal impairment. Osmotic agents result in volume load and should be used with caution in renal or cardiac dysfunction.

64. During a nursing clinical rotation in a cardiac care unit, a student encounters a 68-year-old patient with a history of atrial fibrillation experiencing exacerbation of cardiac arrhythmias post an elective cholecystectomy. During a bedside teaching session, the nurse instructor highlights the intricate neurocardiac interactions and underscores the importance of understanding the cranial nerves involved in regulating cardiac function. The instructor then challenges the student to identify the cranial nerves that are classified as mixed nerves and provide parasympathetic innervation to the viscera of the thorax and abdomen, including the heart, in the context of potential modulation of cardiac arrhythmias. Which among the following cranial nerves should the

student recognize as being primarily responsible for such parasympathetic innervation?

- A. Vagus nerves
- B. Trigeminal nerves
- C. Accessory nerves
- D. Abducens nerves

Correct Answer: A. Vagus nerves

The vagus nerves (cranial nerve X) are mixed nerves that provide the predominant parasympathetic innervation to the viscera of the thorax and abdomen, including the heart. Parasympathetic activation via the vagus nerves can modulate cardiac function by decreasing heart rate and reducing the force of myocardial contractions, which can be pertinent in the management of certain cardiac arrhythmias.

- **Option B:** The trigeminal nerves (cranial nerve V) are primarily associated with sensory innervation to the face and motor innervation to the muscles of mastication. They do not provide parasympathetic innervation to the viscera of the thorax and abdomen and are not directly involved in cardiac regulation.
- **Option C:** The accessory nerves (cranial nerve XI) are primarily motor nerves that innervate the sternocleidomastoid and trapezius muscles. They do not have a role in parasympathetic innervation to the viscera of the thorax and abdomen, nor in cardiac regulation.
- **Option D:** The abducens nerves (cranial nerve VI) are motor nerves responsible for the lateral movement of the eyeball via innervation of the lateral rectus muscle. They do not have a role in parasympathetic innervation to the viscera of the thorax and abdomen, nor in cardiac regulation.

65. A 4 month-year-old infant has just received diphtheria, tetanus, and acellular pertussis (DtaP). Hours later, the mother reports to the clinic because her child develops redness and swelling at the injection site. The nurse instructs the mother to do which of the following?

- A. Application of cold compress
- B. Application of hot compress
- C. Monitor for signs of fever
- D. Report to the clinic for a repeat injection on the other site

Correct Answer: A. Application of cold compress

Redness, tenderness, or swelling may happen at the site of injection. This will be relieved through cool application for the first 24 hours, followed by warm compress if inflammation persists.

- **Option B:** The child may have a fever, soreness, and some swelling and redness in the area where the shot was given. For pain and fever, check with a doctor to see if either acetaminophen or ibuprofen can be given, and to find out the right dose. A warm, damp cloth or a heating pad on the injection site may help reduce soreness, as can moving or using the arm.
- **Option C:** The vaccine can cause mild side effects: fever; mild crankiness; tiredness; loss of appetite; and tenderness, redness, or swelling in the area where the shot was given. Rarely, a child may have a seizure, a high fever, or uncontrollable crying after getting the vaccine. But these sorts of side effects are so rare that researchers question whether they're even caused by the vaccine.

Most kids have a few minor or no side effects.

- **Option D:** Call a physician if not sure whether the vaccine should be postponed or avoided. Children who have had certain problems with the DTaP vaccine usually can safely receive the Td (tetanus and diphtheria) vaccine.

66. 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.

67. A female client with acute renal failure is undergoing dialysis for the first time. The nurse in charge monitors the client closely for dialysis equilibrium syndrome, a complication that is most common during the first few dialysis sessions. Typically, dialysis equilibrium syndrome causes:

- A. Confusion, headache, and seizures.
- B. Acute bone pain and confusion.
- C. Weakness, tingling, and cardiac arrhythmias.
- D. Hypotension, tachycardia, and tachypnea.

Correct Answer: A. Confusion, headache, and seizures.

Dialysis equilibrium syndrome causes confusion, a decreasing level of consciousness, headache, and seizures. These findings, which may last several days, probably result from a relative excess of interstitial or intracellular solutes caused by rapid solute removal from the blood. The resultant organ

swelling interferes with normal physiologic functions. To prevent this syndrome, many dialysis centers keep first-time sessions short and use a reduced blood flow rate.

- **Option B:** Acute bone pain and confusion are associated with aluminum intoxication, another potential complication of dialysis. Aluminum intoxication occurs in patients on chronic dialysis because of the accumulation of aluminum in the body, especially bone, due to aluminum present in dialysis fluids and/or aluminum-containing antacids. Disease manifestations can include acute dementia and a peculiar form of unresponsive severe osteomalacia.
- **Option C:** Weakness, tingling, and cardiac arrhythmias suggest hyperkalemia, which is associated with renal failure. Hyperkalemia is a frequent finding in patients with chronic kidney disease (CKD). This increase in serum potassium levels is associated with decreased renal ion excretion, as well as the use of medications to reduce the progression of CKD or to control associated diseases such as diabetes mellitus and heart failure.
- **Option D:** Hypotension, tachycardia, and tachypnea signal hemorrhage, another dialysis complication. Hemodialysis (HD) patients are generally believed to have an elevated bleeding risk. Bleeding in uremia relates to an acquired defect of primary hemostasis caused by platelet dysfunction and altered platelet–vessel wall interaction.

68. The nurse is teaching a group of clients about the mood-stabilizing medications lithium carbonate. Which medications should she instruct the clients to avoid because of the increased risk of lithium toxicity?

- A. Antacids
- B. Antibiotics
- C. Diuretics
- D. Hypoglycemic agents

Correct Answer: C. Diuretics

The use of diuretics would cause sodium and water excretion, which would increase the risk of lithium toxicity. Clients taking lithium carbonate should be taught to increase their fluid intake and to maintain normal intake of sodium. Treatment for lithium toxicity is primarily hydration and to stop the drug. Give hydration with normal saline, which will also enhance lithium excretion. Avoid all diuretics. If the patient has severe renal dysfunction or failure, or severely altered mental status, then start with hemodialysis. 20 to 30 mg of propranolol given 2 to 3 times per day may help reduce tremors.

- **Option A:** Antacids are a combination of various compounds with various salts of calcium, magnesium, and aluminum as the active ingredients. The antacids act by neutralizing the acid in the stomach and by inhibiting pepsin, which is a proteolytic enzyme. Each of these cationic salts has a characteristic pharmacological property that determines its clinical use.
- **Option B:** The pharmacology behind antibiotics includes destroying the bacterial cell by either preventing cell reproduction or changing a necessary cellular function or process within the cell. Antimicrobial agents are classically grouped into 2 main categories based on their in vitro effect on bacteria: bactericidal and bacteriostatic.
- **Option D:** FDA approved indications for the use of oral hypoglycemic drugs include type 2 diabetes mellitus. Non-FDA approved indications of oral hypoglycemic drugs, such as metformin, are for the prevention of type 2 diabetes mellitus, treatment of gestational diabetes mellitus, treatment of polycystic ovary syndrome (PCOS) with menstrual irregularities, and prevention of ovarian hyperstimulation syndrome in PCOS patients undergoing intracytoplasmic sperm injection (ICSI) or

in vitro fertilization (IVF), and management of antipsychotic-induced weight gain.

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

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

Correct Answer: D. Aneurysm formation

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

- **Option A:** Over weeks and months, wall thickening of the coronary aneurysms can lead to stenosis and thrombus formation which can result in myocardial infarction (MI), rupture, ischemia-related dysrhythmias, or death.
- **Option B:** The greatest risk of these cardiac complications is during the period of thrombocytosis. Small coronary aneurysms may resolve in 60% of cases in the later convalescent-phase when inflammatory markers return to normal.
- **Option C:** Kawasaki disease (KD), also known by the name mucocutaneous lymph node syndrome, is an acute, self-limited medium vessel vasculitis that has a predilection for the coronary arteries. It is the leading cause of acquired heart disease in developed nations and is slowly bypassing rheumatic heart disease in developing countries.

70. Which of the following would lead the nurse to suspect that a child with meningitis has developed disseminated intravascular coagulation?

- A. Hemorrhagic skin rash
- B. Edema
- C. Cyanosis
- D. Dyspnea on exertion

Correct Answer: A. Hemorrhagic skin rash

DIC is characterized by skin petechiae and a purpuric skin rash caused by spontaneous bleeding into the tissues. An abnormal coagulation phenomenon causes the condition. Disseminated intravascular coagulation (DIC) can be defined as a widespread hypercoagulable state that can lead to both microvascular and macrovascular clotting and compromised blood flow, ultimately resulting in multiple organ dysfunction syndrome or MODS. As this process begins consuming clotting factors and platelets in a positive feedback loop, hemorrhage can ensue, which may be the presenting symptom of a patient with DIC.

- **Option B:** Increased intracranial pressure from cerebral edema caused by increased intracellular fluid in the brain. Several factors are involved in the development of cerebral edema: increased blood-brain barrier permeability, cytotoxicity from cytokines, immune cells, and bacteria.
- **Option C:** Cyanosis, broadly speaking, is caused by disorders of deoxygenated hemoglobin and disorders of abnormal hemoglobin. Oxygen might not reach hemoglobin in an adequate or sufficient amount as a result of conditions affecting the respiratory system, cardiovascular system, and the central nervous system.
- **Option D:** Dyspnea on exertion is a symptom of various diseases rather than a disease itself. As such, its etiology can be designated as arising from two primary organ systems: the respiratory system and the cardiac system. Other systemic illnesses may be the culprit as well as a combination of different etiologies.

71. Nurse Farrah is providing care for Kristoff who has jaundice. Which statement indicates that the nurse understands the rationale for instituting skin care measures for the client?

- A. "Jaundice is associated with pressure ulcer formation."
- B. "Jaundice impairs urea production, which produces pruritus."
- C. "Jaundice produces pruritus due to impaired bile acid excretion."
- D. "Jaundice leads to decreased tissue perfusion and subsequent breakdown."

Correct Answer: C. "Jaundice produces pruritus due to impaired bile acid excretion."

Jaundice is a symptom characterized by increased bilirubin concentration in the blood. Bile acid excretion is impaired, increasing the bile acids in the skin and causing pruritus. Patients with jaundice often nominate pruritus as their most troublesome symptom to control and the symptom that has the most negative influence on their quality of life. The presence of pruritus can cause severe sleep deprivation resulting in lassitude, fatigue, depression, and suicidal ideation

- **Option A:** Jaundice is not associated with pressure ulcer formation. However, edema and hypoalbuminemia are. Itching in patients with primary biliary cirrhosis may be severe in the early stages of the disease when bile salt concentrations are low but cease to be a significant symptom when liver failure and cholestasis is advanced.
- **Option B:** Consequently bile salts emerged as the primary causative agents in pruritus. This was supported by the observation that feeding bile salts to cholestatic patients worsened pruritus, intradermal injection of bile salts in healthy volunteers caused local itching, and administration of anion exchange resins to bind luminal bile salts decreased itching intensity.
- **Option D:** Jaundice itself does not lead to decreased tissue perfusion. Histamine is the principal mediator of allergic reactions and is released by mast cells and circulating basophils. Bile salts, particularly chenodeoxycholate and deoxycholate, stimulate the release of histamine from mast cells and plasma histamine concentrations are increased in pruritic patients.

72. A nurse is preparing to perform a fundal assessment on a postpartum client. The initial nursing action in performing this assessment is which of the following?

- A. Ask the client to turn on her side.

- B. Ask the client to lie flat on her back with the knees and legs flat and straight.
- C. Ask the mother to urinate and empty her bladder.
- D. Massage the fundus gently before determining the level of the fundus.

Correct Answer: C. Ask the mother to urinate and empty her bladder.

Before starting the fundal assessment, the nurse should ask the mother to empty her bladder so that an accurate assessment can be done. The postpartum recovery period covers the time period from birth until approximately six to eight weeks after delivery. This is a time of healing and rejuvenation as the mother's body returns to prepregnancy states.

- **Option A:** The nurse may place the woman in a supine position or Semi Fowlers position to avoid a decrease in her blood pressure for fundal assessment. Patients or a family member can be taught to assess the firmness of the fundus and to provide massage in the event of a boggy uterus or excessive bleeding. Patients are encouraged to void before palpation of the uterine fundus because a full bladder displaces the uterus and can lead to excessive bleeding.
- **Option B:** When the nurse is performing a fundal assessment, the nurse asks the woman to lie flat on her back with the knees flexed.
- **Option D:** Massaging the fundus is not appropriate unless the fundus is boggy and soft, and then it should be massaged gently until firm. By approximately one hour post-delivery, the fundus is firm and at the level of the umbilicus.

73. The main benefit of therapeutic massages is:

- A. To help a person with swollen legs to decrease fluid retention.
- B. To help a person with duodenal ulcers feel better.
- C. To help damaged tissue in a diabetic to heal.
- D. To improve circulation and muscle tone.

Correct Answer: D. To improve circulation and muscle tone.

Particularly in elderly adults, therapeutic massage will help improve circulation and muscle tone as well as the personal attention and social interaction that a good massage provides. Damaged or strained muscle fibers release inflammatory chemicals to aid the healing process, but these chemicals cause significant pain and discomfort in the process. At least one study, which looked at the effects of massage on post-exercise tissue inflammation, suggests that even 10 minutes of massage can reduce signs of inflammation and improve cell processes, thereby promoting healing, with effects lasting several hours after the massage.

- **Option A:** Massage only the hands, feet, or scalp of patients with sepsis, fever over 100[degrees]F, nausea or vomiting, sickle cell crisis, HIV crisis, a complicated or high-risk pregnancy, crepitus, edema, thrombocytopenia, or meningitis.
- **Option B:** When patients have fragile skin, or the potential for skin breakdown, apply only light pressure, using enough lotion or oil to minimize friction. For patients with a previous injury, chronic pain, or scar tissue, frequently ask them how the massage feels, and adjust both pressure and massage technique to the patients' preferences.
- **Option C:** A massage is contraindicated in any condition where massage to damaged tissue can dislodge a blood clot. Although massage is associated with few adverse effects, nurses should be careful to avoid areas near open wounds, any stage of pressure ulcer, reddened or swollen areas,

rashes, incisions, thromboses, iv lines, drains, shunts, and tubes.

74. A patient experiencing disturbed thought processes believes that his food is has been poisoned. Which communication technique should the nurse use to encourage the patient to eat?

- A. Using open-ended questions and silence
- B. Sharing personal preference regarding food choices
- C. Documenting reasons why the patient does not want to eat
- D. Offering opinions about the necessity of adequate nutrition

Correct Answer: A. Using open-ended questions and silence.

Open-ended questions and silence are strategies used to encourage patients to discuss their problems. Sharing personal food preferences is not a patient-centered intervention. One of the most important skills of a nurse is developing the ability to establish a therapeutic relationship with clients. For interventions to be successful with clients in a psychiatric facility and in all nursing specialties it is crucial to build a therapeutic relationship.

- **Option B:** Focusing on one's self is a non-therapeutic communication technique. This refers to responding in a way that focuses attention on the nurse instead of the client. An essential factor to build a therapeutic nurse-client relationship is showing genuine interest to the client. For the nurse to do this, he or she should be open, honest, and display congruent behavior. Congruence only occurs when the nurse's words match with her actions.
- **Option C:** Focusing on the negative should be done less than giving options for the patient. Encourage the patient to consider the pros and cons of possible options. In dealing with clients their interest should be the nurse's greatest concern. Thus, empathizing with them is the best technique as it acknowledges the feelings of the client and at the same time, it allows a client to talk and express his or her emotions.
- **Option D:** The remaining option is not helpful to the patient because they do not encourage the patient to express feelings. The nurse should not offer opinions and should encourage the patient to identify the reasons for the behavior.

75. In which of the following areas is an abdominal aortic aneurysm most commonly located?

- A. Distal to the iliac arteries
- B. Distal to the renal arteries
- C. Adjacent to the aortic branch
- D. Proximal to the renal arteries

Correct Answer: B. Distal to the renal arteries

The portion of the aorta distal to the renal arteries is more prone to an aneurysm because the vessel isn't surrounded by stable structures, unlike the proximal portion of the aorta.

- **Option A:** Distal to the iliac arteries, the vessel is again surrounded by stable vasculature, making this an uncommon site for an aneurysm.

- **Option C:** There is no area adjacent to the aortic arch, which bends into the thoracic (descending) aorta.
- **Option D:** The proximal portion is surrounded by stable structures, lessening the risk for rupture.

76. Tina with a histrionic personality disorder is melodramatic and responds to others and situations in an exaggerated manner. Nurse Trish would recommend which of the following activities for Tina?

- A. Baking class
- B. Role-playing
- C. Scrapbook making
- D. Music group

Correct Answer: B. Role-playing

The nurse would use role-playing to teach the client appropriate responses to others and in various situations. This client dramatizes events, drawn attention to self, and is unaware of and does not deal with feelings. The nurse works to help the client clarify true feelings & learn to express them appropriately.

- **Option A:** A baking class would not work well with a histrionic client. Histrionic personality disorder, or dramatic personality disorder, is a psychiatric disorder distinguished by a pattern of exaggerated emotionality and attention-seeking behaviors. Histrionic personality disorder falls within the “Cluster B” of personality disorders. Cluster B personality disorders include conditions such as narcissistic personality disorder, borderline personality disorder, and antisocial personality disorder. These personality disorders are commonly described as dramatic, excitable, erratic, or volatile. Specifically, people with histrionic personality disorder typically present as flirtatious, seductive, charming, manipulative, impulsive, and lively.
- **Option C:** People with histrionic personality disorder may feel underappreciated or disregarded when they are not the center of attention. These people are typically the life of the party and have a “larger than life” presence. They may be vibrant, enchanting, overly seductive, or inappropriately sexual with most of the people they meet, even when they are not sexually attracted to them.
- **Option D:** People presenting with histrionic personality disorder may demonstrate rapidly shifting and shallow emotions that others may perceive as insincere. Physical appearance may be used to draw attention to oneself by wearing bright-colored clothing or revealing garments. Those with histrionic personality disorder may speak in a vague style that lacks in detail. Furthermore, they may be dramatic and extremely emotionally expressive, even embarrassing friends and family with public displays of emotions.

77. When should a hypothesis be developed by the researcher during the research process?

- A. Before development of the research question.
- B. After development of the research question.
- C. After a research design is determined.
- D. Before any statistical analysis.

Correct Answer: B. After development of the research question.

The hypothesis is developed after development of the research question. Writing a hypothesis begins with a research question that the researcher wants to answer. The question should be focused, specific, and researchable within the constraints of the project.

- **Option A:** The initial answer to the question should be based on what is already known about the topic. The researcher should look for theories and previous studies to help form educated assumptions about what the research will find. At this stage, the researcher might construct a conceptual framework to identify which variables will be studied and what the relationships are between them.
- **Option C:** A research design encompasses the methodology and procedure employed to conduct scientific research. Although procedures vary from one field of inquiry to another, identifiable features distinguish scientific inquiry from other methods of obtaining knowledge.
- **Option D:** If the research involves statistical hypothesis testing, the researcher will also have to write a null hypothesis. The null hypothesis is the default position that there is no association between the variables. The null hypothesis is written as H_0 , while the alternative hypothesis is H_1 or H_a .

78. The nurse is teaching a group of prenatal clients about the effects of cigarette smoke on fetal development. Which characteristic is associated with babies born to mothers who smoked during pregnancy?

- A. Low birth weight
- B. Large for gestational age
- C. Preterm birth, but appropriate size for gestation
- D. Growth retardation in weight and length

Correct Answer: A. Low birth weight

Infants of mothers who smoke are often low in birth weight. Smoking during pregnancy increases the risk of health problems for developing babies, including preterm birth, low birth weight, and birth defects of the mouth and lip. Smoking during and after pregnancy also increases the risk of sudden infant death syndrome (SIDS).

- **Option B:** Infants who are large for gestational age are associated with diabetic mothers. The reason for excessive growth of the fetus varies but primarily results from an abundance of nutrients combined with hormones in the fetus that stimulate growth. In pregnant women who have diabetes, a large amount of sugar (glucose) crosses the placenta (the organ that provides nourishment to the fetus), resulting in high levels of glucose in the fetus's blood. The high levels of glucose trigger the release of increased amounts of the hormone insulin from the fetus's pancreas. The increased amount of insulin results in accelerated growth of the fetus, including almost all organs except the brain, which grows normally.
- **Option C:** Preterm births are associated with smoking, but not with appropriate size for gestation. Mothers who smoke are more likely to deliver their babies early. Preterm delivery is a leading cause of death, disability, and disease among newborns. One in every five babies born to mothers who smoke during pregnancy has low birth weight.
- **Option D:** Growth retardation is associated with smoking, but this does not affect the infant length. Both babies whose mothers smoke while pregnant and babies who are exposed to secondhand smoke after birth are more likely to die from sudden infant death syndrome (SIDS) than babies who

are not exposed to cigarette smoke. Babies whose mothers smoke are about three times more likely to die from SIDS.

79. A client arrived at the emergency department after suffering multiple physical injuries including a fractured pelvis from a vehicular accident. Upon assessment, the client is incoherent, pale, and diaphoretic. With vital signs as follows: temperature of 97°F (36.11° C), blood pressure of 60/40 mm Hg, heart rate of 143 beats/minute, and a respiratory rate of 30 breaths/minute. The client is mostly suffering from which of the following shock?

- A. Distributive
- B. Hypovolemic
- C. Obstructive
- D. Cardiogenic

Correct Answer: B. Hypovolemic

Hypovolemic shock occurs when the volume of the circulatory system is too depleted to allow adequate circulation to the tissues of the body. A fractured pelvis will lose about one liter of blood hence symptoms such as hypotension, tachycardia, and tachypnea will occur. If left untreated, these patients can develop ischemic injury of vital organs, leading to multi-system organ failure.

- **Option A:** Distributive shock results from a relative inadequate intravascular volume caused by arterial or venous vasodilation. In distributive shock, systemic vasodilation leads to decreased blood flow to the brain, heart, and kidneys damaging vital organs. Additionally, fluid leaks from the capillaries into the surrounding tissues, further complicating the clinical picture.
- **Option C:** An obstructive shock is a form of shock associated with physical obstruction of the major vessels of the heart itself. Obstructive shock is a less common, but important cause of shock in critically ill infants and children. It is caused by mechanical obstruction of blood flow to and/or from the heart and causes can include tension pneumothorax, cardiac tamponade, pulmonary embolism, or cardiac defects resulting in left-sided outflow tract obstruction.
- **Option D:** Causes of cardiogenic include massive myocardial infarction or other causes of primary cardiac (pump) failure. Cardiogenic shock is a primary cardiac disorder characterized by a low cardiac output state of circulatory failure that results in end-organ hypoperfusion and tissue hypoxia. Clinical criteria include a systolic blood pressure of less than or equal to 90 mm Hg for greater than or equal to 30 minutes or support to maintain systolic blood pressure less than or equal to 90 mm Hg and urine output less than or equal to 30 mL/hr or cool extremities.

80. Several clients are admitted to an adult medical unit. The nurse would ensure airborne precautions for a client with which of the following medical conditions?

- A. A diagnosis of AIDS and cytomegalovirus
- B. A positive PPD with an abnormal chest x-ray
- C. A tentative diagnosis of viral pneumonia

D. Mycoplasma pneumonia

Correct Answer: B. A positive PPD with an abnormal chest x-ray

The client who must be placed in airborne precautions is the client with a positive PPD (purified protein derivative) who has a positive x-ray for a suspicious tuberculin lesion. Airborne precautions are required whenever entering a patient's room or environment who has been diagnosed with or is being tested for with high suspicion of anthrax, tuberculosis, measles, chickenpox, or disseminated herpes zoster or other pathogens that can be transmitted through airflow that are 5 micrometers or smaller in size and remain in the environment for long periods of time.

- **Option A:** According to the OSHA database, HIV, hepatitis B and C, tuberculosis, malaria, measles, herpes, chickenpox, and various other bacterial infections are known for being transmitted through blood-containing fluids and products. Blood-borne precautions include wearing gloves, face mask, protective eyewear or goggles, and proper handling of sharp objects with appropriate disposal.
- **Option C:** Prevention, especially in the form of immunization against influenza and measles, can significantly decrease the incidence of viral pneumonia. The traditional role of viral pneumonia was as a disease found predominantly in the very young, the elderly, and those exposed to influenza. In the past, the diagnosis of viral pneumonia was predicated on it being somewhat a diagnosis of exclusion.
- **Option D:** Smoking is the most common cause of lung cancer. It is estimated that 90% of the cases of lung cancer are attributable to smoking. The risk is highest in males who smoke. The risk is further compounded with exposure to other carcinogens, such as asbestos. It is hypothesized that repeated exposure to carcinogens, cigarette smoke, in particular, leads to dysplasia of lung epithelium.

81. A client with multiple injuries is rushed to the ED after a head-on car collision. Which assessment finding takes priority?

- A. Irregular apical pulse
- B. Ecchymosis in the flank area
- C. A deviated trachea
- D. Unequal pupils

Correct Answer: C. A deviated trachea

A deviated trachea is a symptom of tension pneumothorax, which will result in respiratory arrest if not managed. The first question in the ESI triage algorithm for triage nurses asks whether "the patient requires immediate life-saving interventions" or simply "is the patient dying?" The nurse determines this by looking to see if the patient has a patent airway, if the patient is breathing, and if the patient has a pulse.

- **Option A:** Assessment of circulation comes after the airway. The nurse evaluates the patient, checking pulse, rhythm, rate, and airway patency. Is there concern for inadequate oxygenation? Is this person hemodynamically stable? Does the patient need any immediate medication or interventions to replace volume or blood loss? Does this patient have pulselessness, apnea, severe respiratory distress, oxygen saturation below 90, acute mental status changes, or unresponsiveness?
- **Option B:** Ecchymosis can be a sign of internal bleeding, which belongs to assessment of circulation. If the patient is not categorized as a level 1, the nurse then decides if the patient should

wait or not. This is determined by three questions; is the patient in a high-risk situation, confused, lethargic, or disoriented? Or is the patient in severe pain or distress? The high-risk patient is one who could easily deteriorate, one who could have a threat to life, limb, or organ.

- **Option D:** Anisocoria due to trauma may remain permanent but also may improve over time. Surgical management is rarely warranted. A referral to a neuro-ophthalmologist, ophthalmologist, or neurologist may be warranted in cases that do not resolve.

82. Which of the following activities, when voiced by the parents following a teaching session about the characteristics of school-age cognitive development would indicate the need for additional teaching?

- A. Collecting baseball cards and marbles.
- B. Ordering dolls according to size.
- C. Considering simple problem-solving options.
- D. Developing plans for the future.

Correct Answer: D. Developing plans for the future

The school-aged child is in the stage of concrete operations, marked by inductive reasoning, logical operations, and reversible concrete thought. The ability to consider the future requires formal thought operations, which are not developed until adolescence.

- **Option A:** Collecting baseball cards and marbles is an example of concrete operational thinking. Piaget considered the concrete stage a major turning point in the child's cognitive development because it marks the beginning of logical or operational thought.
- **Option B:** Children can conserve number (age 6), mass (age 7), and weight (age 9). Conservation is the understanding that something stays the same in quantity even though its appearance changes.
- **Option C:** Simple problem-solving options is an example of the concrete operational thinking of the school age.

83. The mother of a nine (9)-year-old who is four (4) feet tall asks a nurse which of the following car safety devices is the most appropriate to use. The best nursing response is which of the following?

- A. Booster belt
- B. Seat belt
- C. Front-facing convertible seat
- D. Rear-facing convertible seat

Correct Answer: A. Booster belt

A belt-positioning booster seat is typically used for children whose weight or height exceeds the forward-facing limit for the car safety seat. This is applicable for ages 8-12-year-old and at least 4 feet, 9 inches tall. Booster seats can only be used with the adult lap and shoulder belt.

- **Option B:** Children can start using a seat belt if they can easily rest their back against the seat of the vehicle and can bend their knees over the edge of the seat. Seatbelts must be worn correctly

for them to work properly. Make sure the lap belt fits comfortably across the thighs (not the stomach) and that the child is not slouching. The shoulder strap should go across the chest and shoulder, and never goes beneath a child's arm, behind the back, or across the neck.

- **Option C:** When children outgrow their rear-facing seat, they are buckled in a forward-facing car seat until the age of five or when they reach the upper weight or height limit of the seat. Most convertible car seats can be used in the rear-facing position until a child reaches the weight limit, typically 40 to 50 pounds. At that point, the seat can be converted into a forward-facing car seat. These seats are larger and designed to stay installed in the vehicle.
- **Option D:** Rear-facing-only seats are used for infants up to 22 to 45 pounds. All infants and toddlers should ride in a rear-facing seat as long as possible until they reach the highest weight or height allowed by their car safety seat manufacturer. Most convertible seats have limits that will allow children to ride rear-facing for 2 years or more.

84. Chemotherapeutic agents often produce a certain degree of myelosuppression including leukopenia. Leukopenia does not present immediately but is delayed several days to weeks because:

- A. The patient's hemoglobin and hematocrit are normal.
- B. Red blood cells are affected first.
- C. Folic acid levels are normal.
- D. The current white cell count is not affected by chemotherapy.

Correct Answer: D. The current white cell count is not affected by chemotherapy.

The time required to clear circulating cells before the effect that chemotherapeutic drugs have on precursor cell maturation in the bone marrow becomes evident. Leukopenia is an abnormally low white blood cell count. Answers A-C pertain to red blood cells. Neutropenia, with decreased production with marrow hypoplasia, can be primary and due to chronic benign neutropenia, cyclical neutropenia, and other congenital and familial neutropenias. It can be secondary to cytotoxic drugs, aplastic anemia, leukemia, drug reactions, and infections. Neutropenia, with increased destruction with marrow hyperplasia, is due to hypersplenism and immune neutropenia.

- **Option A:** Low levels of neutrophils may be due to hypoplastic bone marrow, an infection, radiation exposure, tumor infiltration of the bone marrow, myelofibrosis, prolonged exposure to a drug, or a hereditary disorder. Congenital neutropenia or Kostmann syndrome is acquired in an autosomal recessive fashion.
- **Option B:** In primary neutropenia disorders such as chronic granulomatous disease presents with recurrent infections affecting many organs since childhood. It is caused by a failure to produce toxic reactive oxygen species so that the neutrophils can ingest the microorganisms, but they are unable to kill them, as a significant consequence granuloma can obstruct organs such as the stomach, esophagus, or bladder.
- **Option C:** Neutropenia can differentiate from antibody deficiency disorders, where a class or different classes of immunoglobulins are below the normal range or absence. These disorders may present clinically by recurrent infections with bacteria and fungi; some of them are opportunistic pathogens, so the use of antimicrobials to treat infectious diseases is a norm.

85. The nurse notes variable decelerations on the fetal monitor strip. The most appropriate initial action would be to:

- A. Notify her doctor
- B. Start an IV
- C. Reposition the client
- D. Readjust the monitor

Correct Answer: C. Reposition the client

The initial action by the nurse observing a late deceleration should turn the client to the side—preferably, the left side. Administering oxygen is also indicated. Initial management of recurrent variable decelerations should have a target of relieving potential cord compression. Maternal repositioning is a reasonable first maneuver. Variable decelerations can be seen resulting from fetal movement if the fetus is premature.

- **Option A:** Notifying the physician might be necessary but not before turning the client to her side. Recurrent variable decelerations during labor require evaluation. Initial evaluation includes characterization of the decelerations themselves, including their frequency, depth, and duration. It is also important to assess the uterine contraction pattern and the other fetal heart tracing characteristics.
- **Option B:** Starting an IV is not necessary at this time. In specific clinical scenarios that may result in concerning variable decelerations, management should be directed by the etiology of those decelerations. If a patient is having uterine tachysystole, reducing the number of contractions by decreasing oxytocin or administration of a beta-agonist may be appropriate.
- **Option D:** Readjusting the fetal monitor is inappropriate since there is no data to indicate that the monitor has been applied incorrectly. Electronic fetal monitoring is utilized in approximately 85% of live births in the United States, making it the most common procedure in obstetrics. This frequency represents an increase since 1980 when its use was about only 45% of women in labor. Intermittent, variable decelerations, defined as decelerations occurring with less than half of contractions, are the most common fetal heart rate abnormality that takes place in labor.

86. A client is brought to the emergency department having experienced blood loss due to a deep puncture wound. A 3 unit Fresh-frozen plasma (FFP) is ordered. The nurse determines that the reason behind this order is to:

- A. Provide clotting factors and volume expansion.
- B. Increase hemoglobin, hematocrit, and neutrophil levels.
- C. Treat platelet dysfunction.
- D. Treat thrombocytopenia.

Correct Answer: A. Provide clotting factors and volume expansion.

Fresh-frozen plasma may be used to provide clotting factors or volume expansion. It is rich in clotting factors and can be thawed quickly and transfused right away. Fresh frozen plasma is the fluid portion of a unit of whole blood frozen in a designated time frame, usually within 8 hours. FFP contains all coagulation factors except platelets.

- **Option B:** Increasing hemoglobin, hematocrit, and neutrophil levels is not an indication for FFP. FFP corrects coagulopathy by replacing or supplying plasma proteins in patients who are deficient in or have defective plasma proteins. A standard dose of 10 to 20 mL/kg (4 to 6 units in adults) will raise factor levels by approximately 20%.

- **Option C:** FFP does not contain platelets. Other situations where the administration of FFP cannot be recommended for or against based on systematic review include FFP transfusion at a plasma-to-RBC ratio of 1:3 or more in trauma patients with massive transfusion. Conditions that cause the deficiency of multiple coagulation factors and may require the administration of FFP include liver disease and disseminated intravascular coagulation.
- **Option D:** Treating thrombocytopenia is incorrect since FFP does not contain any platelet. FFP contains fibrinogen (400 to 900 mg/unit), albumin, protein C, protein S, antithrombin, tissue factor pathway inhibitor. It is free of erythrocytes and leukocytes. FFP provides some volume resuscitation, as each unit contains approximately 250 ml.

87. The nurse calls security and has physical restraints applied when a client who is admitted voluntarily becomes both physically and verbally abusive while demanding to be discharged from the hospital. Which represents the possible legal ramifications for the nurse associated with these interventions? Select all that apply.

- A. Libel
- B. Battery
- C. Assault
- D. Slander
- E. False Imprisonment

Correct Answer: B, C, and E.

Voluntary admission to an acute inpatient psychiatric hospital occurs when a person goes for psychiatric evaluation and the evaluating mental health provider and patient agree that the patient would benefit from hospitalization and meets the criteria for hospitalization.

- **Option A:** Libel is the publication of writing, pictures, cartoons, or any other medium that exposes a person to public hatred, shame, disgrace, or ridicule, or induce an ill opinion of a person, and are not true.
- **Option B:** Battery is the intentional act of causing physical harm to someone. Unlike assault, one doesn't have to warn the victim or make him fearful before hurting them for it to count as a battery.
- **Option C:** Assault and battery are related to the act of restraining the patient in a situation that did not meet the criteria for such an intervention. If the mental health professional evaluates the patient and feels that he/she is at risk of harm to self/others or unable to care for self, the mental health professional can convert the admission to involuntary admission.
- **Option D:** Slander is not applicable here since the nurse did not verbally make untrue statements about the patient. If the patient later requests discharge, the hospital can hold the patient on the unit for up to 72 hours until a mental health professional can evaluate the patient for safety concerns. The patient will be discharged if the evaluating mental health professional determines that the patient is safe for discharge.
- **Option E:** A false imprisonment is an act with the intent to confine a person to a specific area. The nurse can be charged with false imprisonment if the nurse prohibits a patient from leaving the hospital if the patient has been admitted voluntarily and if no agency or legal policies exist for detaining the patient.

88. A male client admitted to an acute care facility with pneumonia is receiving supplemental oxygen, 2 L/minute via nasal cannula. The client's history includes chronic obstructive pulmonary disease (COPD) and coronary artery disease. Because of these history findings, the nurse closely monitors the oxygen flow and the client's respiratory status. Which complication may arise if the client receives a high oxygen concentration?

- A. Apnea
- B. Anginal pain
- C. Respiratory alkalosis
- D. Metabolic acidosis

Correct Answer: A. Apnea

Hypoxia is the main breathing stimulus for a client with COPD. Excessive oxygen administration may lead to apnea by removing that stimulus. During apnea, there is no movement of the muscles of inhalation, and the volume of the lungs initially remains unchanged. Depending on how blocked the airways are, there may or may not be a flow of gas between the lungs and the environment.

- **Option B:** Anginal pain results from a reduced myocardial oxygen supply. A client with COPD may have anginal pain from generalized vasoconstriction secondary to hypoxia; however, administering oxygen at any concentration dilates blood vessels, easing anginal pain.
- **Option C:** Respiratory alkalosis results from alveolar hyperventilation, not excessive oxygen administration. In a client with COPD, high oxygen concentrations decrease the ventilatory drive, leading to respiratory acidosis, not alkalosis.
- **Option D:** High oxygen concentrations don't cause metabolic acidosis. Determining the type of metabolic acidosis can help clinicians narrow down the cause of the disturbance. Acidemia refers to a pH less than the normal range of 7.35 to 7.45. In addition, metabolic acidosis requires a bicarbonate value less than 24 mEq/L. Further classification of metabolic acidosis is based on the presence or absence of an anion gap, or concentration of unmeasured serum anions.

89. An adult client with a borderline personality disorder become nauseated and vomits immediately after drinking 2 ounces of shampoo as a suicide gesture. The most appropriate initial response by the nurse would be to:

- A. Promptly notify the attending physician.
- B. Immediately initiate suicide precautions.
- C. Sit quietly with the client until nausea and vomiting subsides.
- D. Assess the client's vital signs and administer syrup of ipecac.

Correct Answer: C. Sit quietly with the client until nausea and vomiting subside.

This intervention demonstrates the nurse's caring presence which is vital for this client. Identify feelings experienced before and around the act of self-mutilation. Feelings are a guideline for future intervention (e.g., rage at feeling left out or abandoned).

- **Option A:** Although the treatment team does need to know about the event, notification is not the immediate concern. Set and maintain limits on acceptable behavior and make clear client's

responsibilities. If the client is hospitalized at the time, be clear regarding the unit rules. Clear and non-punitive limit setting is essential for decreasing negative behaviors.

- **Option B:** This is premature and it reinforces the client's predisposition to manipulative behavior. Secure a written or verbal no-harm contract with the client. Identify specific steps (e.g., persons to call upon when prompted to self-mutilate). The client is encouraged to take responsibility for healthier behavior. Talking to others and learning alternative coping skills can reduce frequency and severity until such behavior ceases.
- **Option D:** This medication is inappropriate in this situation; vomiting would be expected after the ingestion of shampoo. After the treatment, discuss what happened right before, and the thoughts and feelings that the client had immediately before self-mutilating. Identify dynamics for both client and clinician. Allows the identification of less harmful responses to help relieve intense tensions.

90. The nurse is assisting a client on a low-potassium diet to select food items from the menu. Which of the following food items, if selected by the client, would indicate an understanding of this dietary restriction?

- A. Cantaloupe
- B. Spinach
- C. Lima beans
- D. Strawberries

Correct Answer: C. Lima beans

Lima beans (1/3 c) averages three (3) mEq per serving. Each serving of lima beans provides nearly 11 grams of protein—slightly more than other types of beans. Lima beans have a glycemic index (GI) of about 46. (Foods with a GI of 55 or below are considered low glycemic foods.) The glycemic load of a 100-gram serving of lima beans is about 7.

- **Option A:** Cantaloupe (1/4 small). Consuming foods rich in potassium can help decrease blood pressure. The American Heart Association (AHA) recommends that an average adult consume 4,700 mg of potassium a day to keep the cardiovascular system healthy. A cup of cantaloupe provides 473 mg of potassium, or 10% of a person's recommended daily intake.
- **Option B:** Spinach (1/2 cooked). Spinach provides more potassium per serving than a banana—about 12% of the AI per one cup (156 grams) frozen or three cups (100 grams) fresh. This vegetable also packs vitamins A and K, as well as folate and magnesium.
- **Option D:** Strawberries (1 ¼ cups) are high potassium foods and average 7 mEq per serving. Strawberries are rich in vitamin C, potassium, folic acid, and fiber. Due to their high potassium content, strawberries might provide benefits for people who have a raised risk of high blood pressure by helping to offset the effects of sodium in the body.

91. It is a transparent membrane that focuses the light that enters the eyes to the retina.

- A. Lens
- B. Sclera
- C. Cornea

D. Pupils

Correct Answer: A. Lens

The lens is located in the eye. By changing its shape, the lens changes the focal distance of the eye. In other words, it focuses the light rays that pass through it (and onto the retina) in order to create clear images of objects that are positioned at various distances. It also works together with the cornea to refract, or bend, light. The lens consists of the lens capsule, the lens epithelium, and the lens fibers. The lens capsule is the smooth, transparent outermost layer of the lens, while the lens fibers are long, thin, transparent cells that form the bulk of the lens. The lens epithelium lies between these two and is responsible for the stable functioning of the lens. It also creates lens fibers for the lifelong growth of the lens.

- **Option B:** The sclera is the white part of the eye that surrounds the cornea. In fact, the sclera forms more than 80 percent of the surface area of the eyeball, extending from the cornea all the way to the optic nerve, which exits the back of the eye. Only a small portion of the anterior sclera is visible.
- **Option C:** The cornea is the eye's clear, protective outer layer. Along with the sclera (the white of your eye), it serves as a barrier against dirt, germs, and other things that can cause damage. The cornea can also filter out some of the sun's ultraviolet light. It also plays a key role in vision. As light enters the eye, it gets refracted, or bent, by the cornea's curved edge. This helps determine how well the eye can focus on objects close-up and far away.
- **Option D:** Pupils are the black center of the eye. Their function is to let in light and focus it on the retina (the nerve cells at the back of the eye) so one can see. Muscles located in the iris (the colored part of your eye) control each pupil.

92. A 32-year-old pregnant woman in her first trimester visits the antenatal clinic for her routine check-up. She mentions that during her last visit, her obstetrician recommended increasing her intake of folic acid to support the neural development of her baby. She is a vegetarian and is concerned about getting adequate folic acid from her diet. She asks the nurse for advice on food sources. Which of the following foods should the nurse recommend as containing the highest concentration of folic acid?

- A. Green vegetables like spinach and broccoli, and liver for those who consume it.
- B. Yellow vegetables like bell peppers and red meat.
- C. Carrots, especially when consumed raw.
- D. Milk, preferably fortified.
- E. Citrus fruits like oranges and grapefruits.
- F. Whole grains and fortified cereals.

Correct Answer: A. Green vegetables like spinach and broccoli, and liver for those who consume it.

Folic acid, also known as vitamin B9, is essential for many body functions, including the synthesis of DNA and RNA, the metabolism of amino acids, and the formation of red and white blood cells. It's especially crucial during periods of rapid growth such as pregnancy. Green leafy vegetables like spinach and broccoli are rich sources of folic acid. Liver also contains a high concentration of folic acid, but it's important to note the patient's dietary preferences. The other options, while containing some

amounts of folic acid or being beneficial in other ways, do not have as high a concentration as green vegetables and liver.

93. A client at 8 weeks' gestation calls complaining of slight nausea in the morning hours. Which of the following client interventions should the nurse question?

- A. Taking 1 teaspoon of bicarbonate of soda in an 8-ounce glass of water.
- B. Eating a few low-sodium crackers before getting out of bed.
- C. Avoiding the intake of liquids in the morning hours.
- D. Eating six small meals a day instead of three large meals.

Correct Answer: A. Taking 1 teaspoon of bicarbonate of soda in an 8-ounce glass of water.

Using bicarbonate would increase the amount of sodium ingested, which can cause complications.

- **Option B:** Eating low-sodium crackers would be appropriate. Foods high in starch — such as saltines, bread, and toast — help absorb gastric acid and settle a queasy stomach. The bland nature of a cracker helps to satisfy hunger (excessive hunger can exacerbate nausea) without the strong smells or tastes that may increase nausea.
- **Option C:** Since liquids can increase nausea avoiding them in the morning hours when nausea is usually the strongest is appropriate.
- **Option D:** Eating six small meals a day would keep the stomach full, which often decreases nausea.

94. 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.

95. Which of the following medications causes hypoglycemia, except?

- A. Salicylates
- B. Oral contraceptives
- C. Sulfonamides
- D. Anticoagulants

Correct Answer: B. Oral contraceptives

Medications such as thiazide diuretics, corticosteroids, oral contraceptives, estrogen, and sympathomimetics cause hyperglycemia.

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

- A. Avoid showering for 7 to 10 days
- B. Apply ice to the site to prevent discomfort
- C. Apply alcohol-soaked dressing twice a day
- D. Clean the site with hydrogen peroxide to prevent infection

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

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

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

97. A nurse is viewing the cardiac monitor in a client's room and notes that the client has just gone into ventricular tachycardia. The client is awake and alert and has good skin color. The nurse would prepare to do which of the following?

- A. Immediately defibrillate.

- B. Prepare for pacemaker insertion.
- C. Administer amiodarone (Cordarone) intravenously.
- D. Administer epinephrine (Adrenaline) intravenously.

Correct Answer: C. Administer amiodarone (Cordarone) intravenously.

First-line treatment of ventricular tachycardia in a client who is hemodynamically stable is the use of antidysrhythmics such as amiodarone (Cordarone), lidocaine (Xylocaine), and procainamide (Pronestyl). Cardioversion also may be needed to correct the rhythm (cardioversion is recommended for stable ventricular tachycardia). Procainamide will terminate between 50% and 80% of ventricular tachycardias, and it will slow the conduction of those that it does not terminate. Amiodarone will convert about 30% of patients to sinus rhythm but is very effective in reducing the reversion rate of refractory SMVT.

- **Option A:** Defibrillation is used with pulseless ventricular tachycardia. Pulseless VT requires immediate electrical cardioversion with a high-energy defibrillator (150-200 J on biphasic and 360 J on monophasic). Delaying defibrillation for 2 minutes or more decreases survival rate compared with patients receiving immediate defibrillation (39,3% vs. 22,2%). Defibrillation requires fewer joules if it is done early. After every shock, chest compressions should be performed, along with oxygen delivery and intravenous injection of vasopressors and antiarrhythmic drugs.
- **Option B:** The most common indications for permanent pacemaker implantation are sinus node dysfunction (SND) and high-grade atrioventricular (AV) block. Pacemakers are electronic devices that stimulate the heart with electrical impulses to maintain or restore a functional heartbeat. Pacemakers were initially external and involved the placement of subcutaneous electrodes for patients with inappropriate intrinsic cardiac pacemaker activity and/or abnormal conducting tissue.
- **Option D:** Epinephrine would stimulate an already excitable ventricle and is contraindicated. There are no absolute contraindications against using epinephrine. Some relative contraindications include hypersensitivity to sympathomimetic drugs, closed-angle glaucoma, anesthesia with halothane. Another unique contraindication to be aware of is catecholaminergic polymorphic ventricular tachycardia. As is the case with prescribing any medication, all practitioners should use clinical judgment and evaluate the benefits versus risks with epinephrine.

98. 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.

99. A client with macrocytic anemia has a burn on her foot and states that she had been watching television while lying on a heating pad. What is the nurse's first response?

- A. Assess for potential abuse.
- B. Check for diminished sensations.
- C. Document the findings.
- D. Clean and dress the area.

Correct Answer: B. Check for diminished sensations

Macrocytic anemias can result from deficiencies in vitamin B12 or ascorbic acid. Only vitamin B12 deficiency causes diminished sensations of peripheral nerve endings. The nurse should assess for peripheral neuropathy and instruct the client in self-care activities for her diminished sensation to heat and pain. Vitamin B12 deficiency can lead to hematologic and neurological symptoms. Vitamin B12 is stored in excess in the liver, decreasing the likelihood of deficiency.

- **Option A:** The burn could be related to abuse, but this conclusion would require more supporting data. A complete neurologic exam should evaluate for dementia, peripheral neuropathy, ataxia, and a loss of proprioception. A mental status exam may also be useful to evaluate any neuropsychiatric changes.
- **Option C:** The findings should be documented, but the nurse would want to address the client's sensations first. A thorough evaluation of vitamin B12 deficiency should include a complete history and physical with an increased emphasis on gastrointestinal (GI) and neurologic findings. B12 deficiency manifests as macrocytic anemia, and thus, the presenting symptoms often include signs of anemia, such as fatigue and pallor.
- **Option D:** The decision of how to treat the burn should be determined by the physician. Treatment of vitamin B12 deficiency involves repletion with B12. However, depending on the etiology of the deficiency, the duration and route of treatment vary. In patients who are deficient due to a strict vegan diet, an oral supplement of B12 is adequate for repletion.

100. A 40-year-old male patient suffered a burn injury in a household accident. The burns cover his face, neck, right upper arm, and upper trunk. The nurse is using the rule of nines to estimate the total body surface area (TBSA) affected by the burns to guide treatment planning. According to the rule of nines, which area has the largest percent of burns?

- A. Face and neck
- B. Right upper arm and penis
- C. Right thigh and penis
- D. Upper trunk

Correct Answer: D. Upper trunk

The percentage designated for each burned part of the body using the rule of nines: Head and neck 9%; Right upper extremity 9%; Left upper extremity 9%; Anterior trunk 18%; Posterior trunk 18%; Right lower extremity 18%; Left lower extremity 18%; Perineum 1%.

- **Option A:** The face and neck is 9%.
- **Option B:** The right upper arm is 9% and the penis is only 1%.
- **Option C:** The right thigh is 9% and the penis is 1%.