

# Kevin's Review - 100 NCLEX Practice Questions

**1. Ralph is admitted to Nurseslabs Medical Center with the diagnosis of bipolar disorder, a single manic episode. Which of the following behaviors would the nurse expect to assess?**

- A. Apathy, poor insight, and poverty of ideas.
- B. Anxiety, somatic complaints, and insomnia.
- C. Elation, hyperactivity, and impaired judgment.
- D. Social isolation, delusional thinking, and clang associations.

**Correct Answer: C. Elation, hyperactivity, and impaired judgment**

A client with bipolar disorder, manic episode, would demonstrate flight of ideas and hyperactivity as part of the increased psychomotor activity. The mood is one of elation, and the feeling is that one is invincible; therefore, judgment may be quite impaired. The defining characteristics of mania are increased talkativeness, rapid speech, decreased the need for sleep (unlike depression or anxiety in which the need for sleep exists, but there is an inability to sleep), racing thoughts, distractibility, increase in goal-directed activity, and psychomotor agitation.

- **Option A:** These symptoms would be more characteristic of an individual with long-term schizophrenia. Negative symptoms include anhedonia, poverty of speech, and lack of motivation. The diagnosis of schizophrenia is clinical; made exclusively after obtaining a full psychiatric history and excluding other causes of psychosis.
- **Option B:** The symptoms are more characteristic of someone with an anxiety disorder, although a manic individual may also not sleep because of excessive energy. Generalized anxiety disorder is characterized by persistent, excessive, and unrealistic worry about everyday things. This worry could be multifocal such as finance, family, health, and the future. It is excessive, difficult to control, and is often accompanied by many non-specific psychological and physical symptoms. Excessive worry is the central feature of generalized anxiety disorder.
- **Option D:** These symptoms are characteristic of schizophrenia. Traditionally, symptoms have divided into two main categories: positive symptoms which include hallucinations, delusions, and formal thought disorders.

**2. Nurse Tina is caring for a client with delirium and states that “look at the spiders on the wall”. What should the nurse respond to the client?**

- A. “You’re having hallucination, there are no spiders in this room at all”
- B. “I can see the spiders on the wall, but they are not going to hurt you”
- C. “Would you like me to kill the spiders”
- D. “I know you are frightened, but I do not see spiders on the wall”

**Correct Answer: D. “I know you are frightened, but I do not see spiders on the wall”**

When hallucination is present, the nurse should reinforce reality with the client. Interrupt periods of unreality and reorient; client safety is jeopardized during periods of disorientation; correcting misinterpretations of reality enhances client’s feelings of self-worth and personal dignity.

- **Option A:** Assess the client’s level of anxiety and behaviors that indicate the anxiety is increasing; recognizing these behaviors, the nurse may be able to intervene before violence occurs. Maintain a low level of stimuli in the client’s environment (low lighting, few people, simple decor, low noise

level) because anxiety increases in a highly stimulating environment.

- **Option B:** Maintain a calm manner with the client; attempt to prevent frightening the client unnecessarily; Provide continual reassurance and support. Have sufficient staff available to execute a physical confrontation, if necessary; assistance may be required from others to provide for the physical safety of the client or primary nurse or both.
- **Option C:** Remove all potentially dangerous objects from the client's environment; in a disoriented, confused state, clients may use objects to harm self or others. Sit with the client and provide one-to-one observation if assessed to be actively suicidal; client safety is a nursing priority, and one-to-one observation may be necessary to prevent a suicidal attempt.

**3. During the client's dialysis, the nurse observes that the solution draining from the abdomen is consistently blood-tinged. The client has a permanent peritoneal catheter in place. Which interpretation of this observation would be correct?**

- A. Bleeding is expected with a permanent peritoneal catheter.
- B. Bleeding indicates abdominal blood vessel damage.
- C. Bleeding can indicate kidney damage.
- D. Bleeding is caused by too-rapid infusion of the dialysate.

**Correct Answer: B. Bleeding indicates abdominal blood vessel damage.**

Because the client has a permanent catheter in place, blood-tinged drainage should not occur. Persistent blood-tinged drainage could indicate damage to the abdominal vessels, and the physician should be notified. Catheter insertion, manipulation, and trauma/pulling of the external limb of the catheter can all cause local tissue damage at the peritoneal entry site, which could lead to blood staining.

- **Option A:** Insertion-related trauma to intra-abdominal organs and/or vasculature can also cause more serious and more persistent bleeding. This may be reduced by laparoscopic-assisted placement of catheters, which allows more direct visualization of the catheter during insertion. The risk of bleeding obviously increases if patients have significant adhesions and previous surgeries (often relative contraindications to successful PD).
- **Option C:** The bleeding is originating in the peritoneal cavity, not the kidneys. Hemoperitoneum is seen in patients receiving peritoneal dialysis (PD) because the PD catheter provides a window to the peritoneum. Gynecological-associated phenomena account for the majority of cases. Intra-abdominal pathology of solid organs such as the kidney, liver, and spleen as well as the gastrointestinal tract is recognized. Unique to PD patients, hemoperitoneum may be associated with the catheter itself, uremic bleeding, or peritonitis.
- **Option D:** Too rapid infusion of the dialysate can cause pain. Infusion pain is a frequent problem in peritoneal dialysis (PD), and can markedly vary in intensity and risk. Among the many etiologies are peritonitis and other inflammatory processes of the peritoneum, accidental infusion of air, and acidic pH of the dialysate, and expired dialysate with high concentrations of glucose degradation products or GDPs, extreme temperatures of dialysis solution, hypertonicity of the solution, rapid infusion rates and high pCO<sub>2</sub> levels in the peritoneal dialysis fluid.

**4. The action of medication is inotropic when it:**

- A. Decreased afterload.
- B. Increases heart rate.
- C. Increases the force of contraction.
- D. Is used to treat CHF.

**Correct Answer: C. Increases the force of contraction.**

Inotropic drugs increase the force of contraction. Preload, not afterload, is decreased. Chronotropic drugs increase heart rate. Treatment of CHF is an indication for use not an action of the inotropic drug. Inotropes increase cardiac contractility which improves cardiac output (CO), aiding in maintaining MAP and perfusion to the body.

- **Option A:** Vasodilation can also be achieved with ACE inhibitors or angiotensin II receptor blockers (ARBs). Medications from these categories achieve a reduction in afterload—and consequently less myocardial workload—by promoting vasodilation.
- **Option B:** Atropine is used to increase heart rate through vagolytic effects, causing an increase in cardiac output.
- **Option D:** Doctors usually treat heart failure with a combination of medications. Depending on the symptoms, the client might take one or more medications, including Angiotensin-converting enzyme (ACE) inhibitors. These drugs help people with systolic heart failure live longer and feel better.

**5. A nurse is performing an assessment of a primipara who is being evaluated in a clinic during her second trimester of pregnancy. Which of the following indicates an abnormal physical finding necessitating further testing?**

- A. Consistent increase in fundal height
- B. Fetal heart rate of 180 BPM
- C. Braxton Hicks contractions
- D. Quickening

**Correct Answer: B. Fetal heart rate of 180 BPM.**

The normal range of the fetal heart rate depends on gestational age. The heart rate is usually 160-170 BPM in the first trimester and slows with fetal growth, near and at term, the fetal heart rate ranges from 120-160 BPM. The other options are expected.

- **Option A:** A fundal height measurement is typically done to determine if a baby is small for its gestational age. The measurement is generally defined as the distance in centimeters from the pubic bone to the top of the uterus. The expectation is that after week 24 of pregnancy the fundal height for a normally growing baby will match the number of weeks of pregnancy — plus or minus 2 centimeters.
- **Option C:** Braxton Hicks contractions are sporadic contractions and relaxation of the uterine muscle. Sometimes, they are referred to as prodromal or “false labor” pains. It is believed they start around 6 weeks gestation but usually are not felt until the second or third trimester of the pregnancy.
- **Option D:** Quickening often occurs between the 16th to the 22nd week of pregnancy. This is called a presumptive sign of pregnancy as the other movements of the woman’s body can mimic early fetal movements such as flatus, peristalsis, and abdominal muscle contractions. A multiparous

woman will usually first notice these fluttering movements of the fetus at an earlier gestation than a primiparous woman.

**6. Identify the five most important elements in conducting disaster triage for multiple victims. Select all that apply.**

- A. Assess level of consciousness
- B. Check airway, breathing, and circulation
- C. Monitor vital signs, including pulse and respirations
- D. Inquire about last tetanus shot
- E. Determine a history of allergies to food or medicine
- F. Know the list of current medications
- G. Identify past medical and surgical history
- H. Note color, presence of moisture and temperature of the skin
- I. Visually examine for gross deformities, bleeding, and obvious injuries

**Correct Answers: A, B, C, H, and I**

The following would be appropriate for disaster triage. The other options would be discussed when the staff has time and means to collect additional data. It would be appropriate to include all items during nondisaster circumstances.

- **Option A:** A rapid assessment of the patient's neurologic status is necessary on arrival in the emergency department. This should include the patient's conscious state and neurological signs. This is assessed by the patient's Glasgow coma scale (GCS), pupil size and reaction, and lateralizing signs.
- **Option B:** The common acronym for performing the primary trauma survey is ABCDE, each letter representing an area of focus. If any abnormality is identified in one of the areas of focus, it should be resolved before a practitioner progresses further through the algorithm.
- **Option C:** Assess vital signs; A narrow pulse pressure and tachycardia indicate hypovolemic shock in a trauma setting until proven otherwise. Vital signs should be closely monitored and response to interventions should be assessed. In elderly population, normal vital signs should not be reassuring as hemodynamic changes such as tachycardia or hypotension may be delayed.
- **Option D:** Rendering care to a trauma patient can be a challenging endeavor due to the potential for numerous injuries. This part of evaluation should not be performed until the primary survey is completed.
- **Option E:** It should be performed after the primary survey and the initial stabilization is complete. The purpose of the secondary survey is to obtain pertinent historical data about the patient and his or her injury, as well as to evaluate and treat injuries not found during the primary survey.
- **Option F:** Patients who are hemodynamically unstable should be stabilized first before they are transferred to a trauma center. An attempt should be made to obtain the patient's history regarding the mechanism of injury since certain mechanisms can raise suspicion for certain injuries.
- **Option G:** The purpose of the secondary survey is to obtain a detailed history, perform a head-to-toe physical exam, reassess all vital signs, and obtain pertinent lab and imaging studies to identify injuries and metabolic abnormalities.

- **Option H:** In this, visualize all possible areas of skin. This includes the locations of lacerations, abrasions, ecchymosis, hematoma, marks, or bruises. Pay attention to the hidden areas. Back should be evaluated by log-rolling the patient, and the spine should be palpated for step-offs or focal tenderness.
- **Option I:** The extremities should be assessed for fractures by carefully palpating each extremity over its entire length for tenderness and decreased the range of motion. Assess the integrity of uninjured joints by both active and passive movements. Injured joints should also be immobilized, and radiographs should be obtained if necessary.

**7. A 20-year-old patient is being treated for pneumonia. He has a persistent cough and complains of severe pain on coughing. What could you tell him to help him reduce his discomfort?**

- A. "Hold your cough as much as possible."
- B. "Place the head of your bed flat to help with coughing."
- C. "Restrict fluids to help decrease the amount of sputum."
- D. "Splint your chest wall with a pillow for comfort."

**Correct Answer: D. "Splint your chest wall with a pillow for comfort."**

Showing this patient how to splint his chest wall will help decrease discomfort when coughing.

- **Option A:** Holding in his coughs will only increase his pain.
- **Option B:** Placing the head of the bed flat may increase the frequency of his cough and his work of breathing.
- **Option C:** Increasing fluid intake will help thin the secretions, making it easier for him to clear them.

**8. The most appropriate time for the nurse to obtain a sputum specimen for culture is:**

- A. Early in the morning
- B. After the patient eats a light breakfast
- C. After aerosol therapy
- D. After chest physiotherapy

**Correct Answer: A. Early in the morning**

Obtaining a sputum specimen early in this morning ensures an adequate supply of bacteria for culturing and decreases the risk of contamination from food or medication. A sputum culture is a test to detect and identify bacteria or fungi that infect the lungs or breathing passages. Sputum is a thick fluid produced in the lungs and in the adjacent airways. Normally, a fresh morning sample is preferred for the bacteriological examination of sputum.

- **Option B:** A sputum culture is a test that checks for bacteria or another type of organism that may be causing an infection in your lungs or the airways leading to the lungs. Sputum, also known as phlegm, is a thick type of mucus made in your lungs. If you have an infection or chronic illness affecting the lungs or airways, it can make you cough up sputum.

- **Option C:** Sputum is not the same as spit or saliva. Sputum contains cells from the immune system that help fight the bacteria, fungi, or other foreign substances in your lungs or airways. The thickness of sputum helps trap the foreign material. This allows cilia (tiny hairs) in the airways to push it through the mouth and be coughed out.
- **Option D:** A sputum culture is often done with another test called a Gram stain. A Gram stain is a test that checks for bacteria at the site of a suspected infection or in body fluids such as blood or urine. It can help identify the specific type of infection you may have.

**9. Which home remedy is suitable to relieve the itching associated with varicella?**

- A. Applying a paste of baking soda and water
- B. Dusting the lesions with baby powder
- C. Using cool compresses of normal saline
- D. Applying gauze saturated in hydrogen peroxide

**Correct Answer: A. Applying a paste of baking soda and water**

- Option A: Applying a paste of baking soda and water soothes the itching and helps to dry the vesicles.
- Option B: The use of baby powder is not recommended for either child.
- Options C and D: Hydrogen peroxide and the saline will not relieve the itching and will prevent the vesicles from crusting.

**10. A client is admitted to the unit with the diagnosis of Deficient Fluid Volume related to excessive fluid loss. Which action related to fluid management should be charged to a nursing assistant?**

- A. Administer intravenous (IV) fluids as prescribed by the physician.
- B. Develop a plan for added fluid intake over 24 hours.
- C. Provide straws and offer fluids between meals.
- D. Educate family members to assist the client with fluid intake.

**Correct Answer: C. Provide straws and offer fluids between meals.**

Additional fluid intake can be reinforced by the nursing assistance once it is part of the care plan. A CNA's main role is to provide patients with basic care and assist them in their everyday activities, particularly when patients have a hard time doing a few activities on their own, such as bathing.

- **Option A:** In some hospitals, a CNA will administer a patient's medication. Usually, however, this depends on the CNA's level of experience and training, as well as the regulations of the state.
- **Option B:** Among the tasks that CANNOT be legally and appropriately delegated to nursing assistants include assessments, nursing diagnosis, establishing expected outcomes, evaluating care and any and all other tasks and aspects of care.
- **Option D:** Educating families demand further education and skills that are within the field of practice of an RN. Based on the basic entry educational preparation differences among these

members of the nursing team, care should be assigned according to the level of education of the particular team member.

**11. The physician orders penicillin for a patient with streptococcal pharyngitis. The nurse administers the drug as ordered, and the patient has an allergic reaction. The nurse checks the medication order sheet and finds that the patient is allergic to penicillin. Legal responsibility for the error is:**

- A. Only the nurse's—she should have checked the allergies before administering the medication.
- B. Only the physician's—she gave the order, the nurse is obligated to follow it.
- C. Only the pharmacist's—he should alert the floor to possible allergic reactions.
- D. The pharmacist, physician, and nurse are all liable for the mistake.

**Correct Answer: D. The pharmacist, physician, and nurse are all liable for the mistake.**

The physician, nurse, and pharmacist all are licensed professionals and share responsibility for errors. The legal response to medical errors that do gain legal consideration is typically dominated by one or more of three goals: compensation, accountability, and retribution. These each feature, with greater or lesser emphasis, in different national, legal, and regulatory regimes

- **Option A:** The legal response to a serious accident is usually prolonged and expensive so it is important that it actually promotes future safety. In a criminal prosecution, the emphasis is placed on establishing the culpability or otherwise of an individual, and inquiry into the underlying causes of an event is often inhibited by the strict rules of the process.
- **Option B:** The legal response to error significantly depends on the outcome. Many drug errors are made in healthcare, but only those in which harm results tend to be punished. Punishment is imposed if there are consequences rather than because of any inherent culpability underlying error.
- **Option C:** The legal response tends to be proportionate to the actual consequences of the error, rather than to potential consequences or the moral culpability involved.

**12. After receiving a change-of-shift report at 7:00 AM, which of these patients will you assess first?**

- A. A 23-year-old with a migraine headache who is complaining of severe nausea associated with retching.
- B. A 45-year-old who is scheduled for a craniotomy in 30 minutes and needs preoperative teaching.
- C. A 59-year-old with Parkinson's disease who will need a swallowing assessment before breakfast.
- D. A 63-year-old with multiple sclerosis who has an oral temperature of 101.80 F and flank pain.

**Correct Answer: D. A 63-year-old with multiple sclerosis who has an oral temperature of 101.80 F and flank pain.**

Urinary tract infections are a frequent complication in patients with multiple sclerosis because of the effect on bladder function. The elevated temperature and decreased breath sounds suggest that this patient may have pyelonephritis. The physician should be notified immediately so that antibiotic therapy can be started quickly.

- **Option A:** This patient needs further assessment, but does not require immediate attention. A migraine can cause severe throbbing pain or a pulsing sensation, usually on one side of the head. It's often accompanied by nausea, vomiting, and extreme sensitivity to light and sound. Migraine attacks can last for hours to days, and the pain can be so severe that it interferes with daily activities.
- **Option B:** Preoperative teaching must be done but it is not the nurse's priority. A craniotomy is the surgical removal of part of the bone from the skull to expose the brain. Specialized tools are used to remove the section of bone called the bone flap. The bone flap is temporarily removed, then replaced after the brain surgery has been done.
- **Option C:** The patient should be assessed soon, but does not have an urgent need. In MS, the immune system attacks the protective sheath (myelin) that covers nerve fibers and causes communication problems between your brain and the rest of your body. Eventually, the disease can cause permanent damage or deterioration of the nerves.

**13. A client comes to the outpatient clinic where you work complaining of abdominal pain, diarrhea, shortness of breath, and epistaxis. Which of the following actions would you take first?**

- A. Screening clients for upper respiratory tract symptoms
- B. Call an ambulance to take the client immediately to the hospital
- C. Ask the client about any recent travel to Asia or the Middle East
- D. Determine whether the client has had recommended immunizations

**Correct Answer: C. Ask the client about any recent travel to Asia or the Middle East.**

The client's clinical manifestation suggests possible avian influenza (bird flu). If the client has traveled recently in Asia or the Middle East, where outbreaks of bird flu have occurred, you will need to institute airborne and contact precautions immediately. The other actions may also be appropriate but are not the initial action to take for this client, who may transmit the infection to other clients or staff members

- **Option A:** Most patients present with symptoms consistent with a flu-like viral illness. In these patients, especially during a known avian influenza outbreak, a thorough history is necessary to evaluate for clues that the illness is due to avian influenza.
- **Option B:** Whenever there is a possible outbreak of avian influenza, the essential way to reduce the severity and population impact is to reduce the spread of the virus. Since the human-to-human transmission is uncommon, the focus should be on reinforcing appropriate sanitation habits in the population, especially those that work around birds or that are involved in food preparation.
- **Option D:** There is currently an FDA-licensed vaccine for the H5N1 strain of avian influenza in the United States. In the case of an H5N1 outbreak in the United States, the CDC and public health officials may decide to vaccinate at-risk populations to reduce spread.

**14. A client with pulmonary edema has been on diuretic therapy. The client has an order for additional furosemide (Lasix) in the amount of 40 mg IV push. Knowing that the client also will be started on digoxin (Lanoxin), a nurse checks the client's most recent:**

- A. Digoxin level



- B. Sodium level
- C. Potassium level
- D. Creatinine level

**Correct Answer: C. Potassium level**

The serum potassium level is measured in the client receiving digoxin and furosemide. Heightened digitalis effect leading to digoxin toxicity can occur in the client with hypokalemia. Hypokalemia also predisposes the client to ventricular dysrhythmias. Toxicity can also occur at lower levels, especially in the setting of other risk factors such as low body weight, advanced age, decreased renal function, and hypokalemia. Risk of hypokalemia increases with the use of a high dose of furosemide, decreased oral intake of potassium, in patients with hyperaldosteronism states (liver abnormalities or licorice ingestion) or concomitant use of corticosteroid, ACTH, and laxatives.

- **Option A:** Digoxin has a narrow therapeutic index. The recommended serum levels stand between 0.8 to 2 ng/mL. When measuring a digoxin serum level, it is essential to draw blood at least 6 to 8 hours after the last dose. The toxicity increases as the serum drug levels increase above 2.0 ng/mL.
- **Option B:** According to Beers Criteria, caution is necessary when administering diuretics to patients 65 years and older to avoid potential adverse effects of inducing hyponatremia by causing or exacerbating syndrome of inappropriate antidiuretic hormone secretion (SIADH); therefore, close monitoring of serum sodium is advisable at initiation or during the dose adjustment in older adults.
- **Option D:** In patients with an advanced renal disease with fluid overload the patients should be closely monitored for oliguria, azotemia, and volume status; and if either oliguria or azotemia develops the furosemide should be discontinued to prevent kidney injury.

**15. A client comes to the outpatient clinic and tells the nurse that he has had leg pains that begin when he walks but cease when he stops walking. Which of the following conditions would the nurse assess for?**

- A. An acute obstruction in the vessels of the legs.
- B. Peripheral vascular problems in both legs.
- C. Diabetes
- D. Calcium deficiency

**Correct Answer: B. Peripheral vascular problems in both legs.**

Intermittent claudication is a condition that indicates vascular deficiencies in the peripheral vascular system. Intermittent claudication (IC) typically refers to lower extremity skeletal muscle pain that occurs during exercise. IC presents when there is insufficient oxygen delivery to meet the metabolic requirements of the skeletal muscles. Pain within these muscle groups is reproducibly induced by walking and relieved with rest.

- **Option A:** If an obstruction were present, the leg pain would persist when the client stops walking. The key feature of intermittent claudication is that the muscle discomfort is reproducible. The pain usually comes on during physical activity and subsides after a period of rest. The key reason for the pain is inadequate blood flow.
- **Option C:** Intermittent claudication is a very common problem seen in patients with diabetes mellitus and people who smoke. Intermittent claudication is a common manifestation of peripheral arterial disease (PAD), which includes atherosclerotic stenosis of arteries in the extremities. IC is

commonly localized to the thigh, hip, buttock, and calf muscles.

- **Option D:** Low calcium levels may cause leg cramps but would not necessarily be related to walking. The typical presentation of intermittent claudication is lower extremity pain during ambulation that is relieved with rest. The progression of symptoms is gradual. The pain may be localized to the buttocks or the lower leg, depending on the site of occlusion. Patients with aortoiliac disease frequently develop buttock pain.

**16. Hormonal effects of the antipsychotic medications include which of the following?**

- A. Polydipsia and dysmenorrhea
- B. Dysmenorrhea and increased vaginal bleeding
- C. Retrograde ejaculation and gynecomastia
- D. Akinesia and dysphasia

**Correct Answer: C. Retrograde ejaculation and gynecomastia**

Decreased libido, retrograde ejaculation, and gynecomastia are all hormonal effects that can occur with antipsychotic medications. Reassure the client that the effects can be reversed or that changing medication may be possible. Among women taking conventional antipsychotics, 26% to 78% experienced amenorrhea; some had galactorrhea. There was some evidence that hyperprolactinemia decreases libido, an effect that could cause nonadherence to treatment. In addition, bone loss appeared to be a secondary drug side effect in some studies. Finally, physician surveys indicated that the prevalence and severity of hyperprolactinemia are underestimated.

- **Option A:** Polydipsia is not a hormonal effect. Patients whose signs and symptoms are typical of hyperprolactinemia should be queried closely about their use of antipsychotic medications, and those with long-standing hyperprolactinemia should undergo bone density testing. Hyperprolactinemic effects should be a major consideration in assessing new antipsychotics as they appear on the market.
- **Option B:** Antipsychotic medications are being used increasingly for an expanding array of diagnoses. The stigma associated with antipsychotic medications and the diseases they treat may deter patients from informing healthcare professionals that they are receiving such treatment. Even when clinicians are aware that patients are taking antipsychotics, they may be unaware of the drugs' effects on prolactin levels and, in turn, prolactin's effects on ovarian function.
- **Option D:** Akinesia and dysphasia aren't hormonal effects. Akinesia refers to decreased or absent movement. The term akinesia refers to the inability to perform a clinically perceivable movement. It can present as a delayed response, freezing mid-action, or even total abolition of movement. Akinesia occurs when movement is not perceived either because the amplitude of the movement is small or because the time taken to initiate the reaction is significantly increased. Dysphasia is a condition that affects the ability to produce and understand spoken language. Dysphasia can also cause reading, writing, and gesturing impairments. Dysphasia is caused by brain damage.

**17. Which of the following laboratory tests should be monitored when a client is receiving azathioprine?**

- A. CBC
- B. BUN

C. Electrolytes

D. Sedimentation rate

**Correct Answer: A. CBC**

CBC will identify leukopenia, a common side effect. Complete blood count (CBC) and liver function test (LFT) monitoring weekly are recommended initially for the first 4 to 8 weeks. When maintenance dose achieved, CBC and LFT should get checked every three months for the rest of the treatment. Although it is advisable to check CBC and LFT more frequently in patients with kidney or renal diseases or elderly, patients on high dosages of AZA or with low TPMT activity.

- **Option B:** If patients have abdominal pain or severe nausea/vomiting, serum amylase requires checking to rule out pancreatitis. Lymph node and skin examination should be biannual. If generalized wart occurs, the AZA dose should be reduced or switched to another agent.
- **Option C:** If labs show leukopenia (WBC less than  $3 \times 10^9/L$ ), thrombocytopenia (platelet less than  $120 \times 10^9/L$ ), or transaminitis (liver biochemistry more than half of the normal upper limit), the medication should be stopped.
- **Option D:** Test the patient for hepatitis B and C and PPD. A pregnancy test before treatment initiation is also a recommendation. Checking TPMT activity is suggested before starting the medication. Misclassification of TPMT phenotype can occur by prior blood transfusion.

**18. Which of the following would be the priority nursing diagnosis for a client with an ectopic pregnancy?**

A. Risk for infection

B. Pain

C. Knowledge Deficit

D. Anticipatory Grieving

**Correct Answer: B. Pain**

For the client with an ectopic pregnancy, lower abdominal pain, usually unilateral, is the primary symptom. Thus, pain is the priority.

- **Option A:** Although the potential for infection is always present, the risk is low in ectopic pregnancy because pathogenic microorganisms have not been introduced from external sources.
- **Option C:** The client may have limited knowledge of the pathology and treatment of the condition. The mechanisms responsible for ectopic implantation are unknown. The four main possibilities are anatomic obstruction to the passage of the zygote, an abnormal conceptus, abnormalities in the mechanisms responsible for tubal motility, and transperitoneal migration of the zygote.
- **Option D:** By far the most common emotional reaction after having an ectopic pregnancy is finding oneself suddenly overcome with intense emotions of reliving some aspects of the diagnosis and treatment of the ectopic pregnancy when the woman did not want to. She may also get palpitations, or feel anxious or agitated when reminded of the ectopic pregnancy. These are called flashbacks. She may experience nightmares or bad dreams and have a sense of being "on edge", irritable, or more anxious. Some women also experience a sense of being detached and numb and that the ectopic pregnancy has changed them in some negative way.

**19. Which of the following are the functions of amniotic fluid? Select all that apply.**

- A. Cushions the fetus from abdominal trauma
- B. Serves as the fluid for the fetus
- C. Maintains the internal temperature
- D. Facilitates fetal movement

**Correct Answer: A, B, C, & D**

All the four functions enumerated are true of amniotic fluid. Amniotic fluid surrounds the embryo and fetus during development and has a myriad of functions.

- **Option A:** Physically, it protects the fetus in the event the maternal abdomen is the object of trauma. It protects the umbilical cord by providing a cushion between the fetus and the umbilical cord thus reducing risk of compression between the fetus and the uterine wall.
- **Option B:** It serves as a reservoir of fluid and nutrients for the fetus containing: proteins, electrolytes, immunoglobulins, and vitamins from the mother.  
Option C: The fluid insulates the fetus, keeping it warm and maintaining a regular temperature.
- **Option D:** It provides the necessary fluid, space, and growth factors to allow normal development and growth of fetal organs such as the musculoskeletal system, gastrointestinal system, and pulmonary system.

**20. Which action by the nurse represents proper nasopharyngeal/nasotracheal suctioning technique?**

- A. Lubricate the suction catheter with petroleum jelly before and between insertion.
- B. Apply suction intermittently while inserting the suction catheter.
- C. Rotate the catheter while applying suction.
- D. Hyper oxygenate with 100% oxygen for 30 minutes before and after suctioning.

**Correct Answer: C. Rotate the catheter while applying suction.**

Rotating the catheter prevents pulling of tissue into the opening on the catheter tip and the side. Suction is used to clear retained or excessive lower respiratory tract secretions in patients who are unable to do so effectively for themselves. This could be due to the presence of an artificial airway, such as an endotracheal or tracheostomy tube, or in patients who have a poor cough due to an array of reasons such as excessive sedation or neurological involvement.

- **Option A:** Suction catheters may only be lubricated with water or water-soluble lubricant and petroleum jelly such as Vaseline has an oil base. Lubricate the outside of the airway with a water-soluble/aqueous gel (e.g. KY Jelly). Initially, choose the larger nostril that is clear from other tubes (e.g. nasogastric tube). Insert the tip of the NPA into the nostril, then slightly lift the nares up and direct the airway to follow a path along the floor of the nose, parallel to the hard palate.
- **Option B:** No suction should ever be applied while the catheters are being inserted because this can traumatize tissues. Apply a gentle partial rotation to the NPA if resistance is felt during insertion e.g. from opposition against the turbinates. If this does not relieve the resistance/obstruction then withdraw the airway and try the other nostril before selecting a smaller size.

- **Option D:** The client should be hyper-oxygenated for only a few minutes before and after suctioning and this is generally limited to clients who are intubated or have a tracheostomy. Hyper-oxygenate the patient if able (increase mask flow rate or FiO<sub>2</sub>) delivery of 100% oxygen for > 30 secs prior to the suction event.

**21. A 55-year-old male patient is admitted with acute renal failure and is under the care of a nurse. The patient's recent blood work shows a significantly elevated potassium level, which is a common complication in acute renal failure. The nurse is preparing for the prescribed treatment to address this electrolyte imbalance. Given the patient's condition and laboratory results, for which of the following conditions should the nurse expect hypertonic glucose, insulin infusions, and sodium bicarbonate to be used?**

- A. Hyponatremia.
- B. Hypokalemia.
- C. Hyperkalemia.
- D. Hypercalcemia.

**Correct Answer: C. Hyperkalemia.**

Hyperkalemia is a common complication of acute renal failure. It's life-threatening if immediate action isn't taken to reverse it. The administration of glucose and regular insulin, with sodium bicarbonate, if necessary, can temporarily prevent cardiac arrest by moving potassium into the cells and temporarily reducing serum potassium levels.

- **Option A:** Hyponatremia is believed to be due to post-acute kidney injury diuresis in the face of inability to maximally concentrate the urine because of renal failure. The diuresis caused a disproportionate loss of water in excess of that of sodium in the absence of replenishment of the water loss.
- **Option B:** Hypokalemia is related to increased use of diuretics, decreased use of RAS blockade, and malnutrition, all of which may impose additive deleterious effects on renal outcomes.
- **Option D:** Hypocalcemia is a frequent accompaniment of acute renal failure, but paradoxically hypercalcemia also has been described in association with acute renal failure. This may be caused by dissolution of dystrophic calcifications in traumatized muscle and may lead to severe metastatic calcifications.

**22. Nurse Kate would expect that a client with vascular dementia would experience:**

- A. Loss of remote memory related to anoxia.
- B. Loss of abstract thinking related to emotional state.
- C. Inability to concentrate related to decreased stimuli.
- D. Disturbance in recalling recent events related to cerebral hypoxia.

**Correct Answer: D. Disturbance in recalling recent events related to cerebral hypoxia.**

Cell damage seems to interfere with registering input stimuli, which affects the ability to register and recall recent events; vascular dementia is related to multiple vascular lesions of the cerebral cortex and subcortical structure. Second only to Alzheimer disease (AD), vascular dementia (VD) is one of the most common causes of dementia affecting the elderly (aged greater than 65 years), with a variable presentation and unpredictable disease progression. The diagnosis of VD is obtained by a thorough history and physical examination, including a measure of cognitive performance. VD is diagnostically challenging and not precise given the many causes of dementia, including the potential for a mixed dementia syndrome

- **Option A:** A thorough history should be obtained from the patient, focusing on cognitive and functional deficits, onset, and progression of symptoms. Interviewing family members and caregivers is important as patients with cognitive decline rarely have insight into their cognitive and functional limitations. Caregivers may report an abrupt or stepwise onset of cognitive decline, or the appearance of symptoms may be subtle without connection to an ischemic event.
- **Option B:** The functional assessment should evaluate for impairments in instrumental activities of daily living (IADLs), such as cooking, driving, and financial and medication management, and basic activities of daily living (ADLs), such as dressing, bathing, and toileting. Additionally, patient past medical history, current medications, and surgical history should be obtained. Regarding physical examination, one should assess patients for focal neurologic deficits.
- **Option C:** VD is preventable by modifying the risk factors like diabetes, hypertension, smoking, and hyperlipidemia. The one very important risk factor that should be modified is hypertension. Countless studies show that the use of antihypertensive medications can reduce the risk of vascular dementia. In addition, the patient's coronary artery disease, atrial fibrillation, and ischemic heart disease have to be appropriately managed.

**23. Tony is a night shift nurse who is assigned to a patient whose glucose levels remain normal at bedtime but experiences hypoglycemia at 3 am and hyperglycemia at 7 am. The patient is likely experiencing what kind of complication of insulin therapy?**

- A. Insulin resistance
- B. Dawn phenomenon
- C. Insulin lipohypertrophy
- D. Somogyi phenomenon

**Correct Answer: D. Somogyi phenomenon**

The Somogyi phenomenon ( post-hypoglycemic hyperglycemia) is characterized by a rebound high blood glucose level in the morning in response to low blood glucose that occurs at about 2-3 am in the morning. The Somogyi phenomenon states that early morning hyperglycemia occurs due to a rebound effect from late-night hypoglycemia.

- **Option A:** Insulin resistance happens when a person receiving insulin develops immune antibodies that bind the insulin, hence decreasing the insulin available for use in the body. Insulin resistance impairs glucose disposal, resulting in a compensatory increase in beta-cell insulin production and hyperinsulinemia.
- **Option B:** Dawn phenomenon is characterized by a morning increase of blood sugar which happens as a response to declining levels of insulin and a nocturnal release of hormones (growth hormone, catecholamines, and cortisol).

- **Option C:** Insulin lipohypertrophy is the development of fatty lumps on the surface of the skin and is a common side effect of repeated use of an injection site. Lipodystrophy is associated with increased glycemic variability and unexplained episodes of hypoglycemia further driving up healthcare costs while affecting patient compliance.

**24. A client who is taking famotidine (Pepcid) asks the home care nurse what would be the best medication to take for a headache. The nurse tells the client that it would be best to take:**

- A. aspirin (acetylsalicylic acid, ASA)
- B. ibuprofen (Motrin)
- C. acetaminophen (Tylenol)
- D. naproxen (Naprosyn)

**Correct Answer: C. acetaminophen (Tylenol)**

The client is taking famotidine, a histamine receptor antagonist. This implies that the client has a disorder characterized by gastrointestinal (GI) irritation. The only medication of the ones listed in the options that is not irritating to the GI tract is acetaminophen. The other medications could aggravate an already existing GI problem. Acetaminophen (APAP) is considered a non-opioid analgesic and antipyretic agent used to treat pain and fever. Clinicians can use it for their patients as a single agent for mild to moderate pain and in combination with an opioid analgesic for severe pain.

- **Option A:** Aspirin is a cyclooxygenase-1 (COX-1) inhibitor. It is a modifier of the enzymatic activity of cyclooxygenase-2 (COX-2). Unlike other NSAIDs (ibuprofen/naproxen), which bind reversibly to this enzyme, aspirin binding is irreversible. It also blocks thromboxane A<sub>2</sub> on platelets in an irreversible fashion preventing platelet aggregation. Aspirin increases the risk of GI bleeding in patients who already suffer from peptic ulcer disease or gastritis. The risk of bleeding is still present even without these conditions if there is concomitant consumption of alcohol or if the patient is on warfarin.
- **Option B:** Ibuprofen is also FDA-approved for use in mild to moderate pain. It is also available as an over-the-counter medication for pain, usually mild. Some common over-the-counter uses for ibuprofen are muscle sprains or strains, joint aches, pain from migraine, sore throat, and pain from cold or cases of flu. Gastrointestinal bleeding is a well-known adverse effect of ibuprofen usage and can lead to gastritis, ulceration, hemorrhage, or perforation. Inhibition of COX isoforms in ibuprofen usage leads to the reduction of prostaglandins, which play a role in the secretion of gastroprotective mucus. This effect is more pronounced in non-selective NSAIDs, with COX-2 selective NSAIDs having a lower incidence of gastrointestinal complications, which is of particular concern in children, for which the use of ibuprofen is higher than other NSAIDs due to its comparative safety compared to other drugs in its class.
- **Option D:** Off-label uses of Naproxen include the treatment of acute migraines and migraine prophylaxis, with Naproxen being considered a first-line abortive remedy for acute migraines. Further, it can be used for chronic migraine prevention as well, along with other medications such as beta-blockers, antidepressants, and anticonvulsants. COX-1 and COX-2 inhibition lead to decreased prostaglandin synthesis in the gastric mucosa. The prostaglandins maintain mucosal integrity, therefore decreased synthesis causes reduced protection to the tissue. However, studies indicate COX-1 has a more significant effect on the integrity of the mucosa; consequently, selective COX-2 inhibitors such as Celecoxib do not have as much of an effect on gastric tissue.

**25. During a breast examination, which finding most strongly suggests that the Luz has breast cancer?**

- A. Slight asymmetry of the breasts
- B. A fixed nodular mass with dimpling of the overlying skin
- C. Bloody discharge from the nipple
- D. Multiple firm, round, freely movable masses that change with the menstrual cycle

**Correct Answer: B. A fixed nodular mass with dimpling of the overlying skin**

A fixed nodular mass with dimpling of the overlying skin is common during the late stages of breast cancer.

- **Option A:** Many women have slightly asymmetrical breasts.
- **Option C:** Bloody nipple discharge is a sign of intraductal papilloma, a benign condition.
- **Option D:** Multiple firm, round, freely movable masses that change with the menstrual cycle indicate fibrocystic breasts, a benign condition.

**26. When evaluating a client's adaptation to pain, which behavior indicates appropriate adaptation?**

- A. The client distracts himself during pain episodes.
- B. The client denies the existence of any pain.
- C. The client reports no need for family support.
- D. The client reports pain reduction with decreased activity.

**Correct Answer: A. The client distracts himself during pain episodes.**

Distraction is an appropriate method of reducing pain. This technique involves heightening one's concentration upon non-painful stimuli to decrease one's awareness and experience of pain. Drawing the person away from the pain lessens the perception of pain. Examples include reading, watching TV, playing video games, and guided imagery.

- **Option B:** Denying the existence of any pain is inappropriate and not indicative of coping. It is essential to assist patients to express as factually as possible (i.e., without the effect of mood, emotion, or anxiety) the effect of pain relief measures. Inconsistencies between behavior or appearance and what the patient says about pain relief (or lack of it) may be more a reflection of other methods the patient is using to cope with the pain rather than pain relief itself.
- **Option C:** Exclusion of family members and other sources of support represents a maladaptive response. Nurses have the duty to ask their clients about their pain and believe their reports of pain. Challenging or undermining their pain reports results in an unhealthy therapeutic relationship that may hinder pain management and deteriorate rapport.
- **Option D:** Range-of-motion exercises and at least mild activity, not a decreased activity, can help reduce pain and are important to prevent complications of immobility. Nonpharmacologic methods in pain management may include physical, cognitive-behavioral strategies, and lifestyle pain management. These methods are used to provide comfort by altering psychological responses to pain.



**27. Which of the following drugs can cause severe hematologic disorders?**

- A. digoxin (Lanoxin)
- B. quinidine (Cardioquin)
- C. disopyramide (Norpace)
- D. procainamide (Pronestyl)

**Correct Answer: D. procainamide (Pronestyl)**

Pronestyl is known for this serious side effect. Associate Pronestyl with plasma — P and P. This drug is known for its hematologic side effects. Procainamide is known to cause certain blood dyscrasias. Procainamide has been known to cause bone marrow toxicity, leading to pancytopenia or agranulocytosis; this is usually due to hypersensitivity or varied immunologic mechanisms

- **Option A:** 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 B:** 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 C:** Despite rarely used now for heart rhythm abnormalities because of the availability of newer drugs that provided better efficacy and favorable side effect profiles, disopyramide is still the drug of choice for vagally mediated atrial fibrillation such as sleep-induced or atrial fibrillation in athlete groups. The effectiveness of disopyramide in these conditions is due to its anticholinergic activity that abolished parasympathetic tone.

**28. You are a registered dietitian in a primary healthcare clinic. Today, you are reviewing the case of Sophia, a 34-year-old female who has recently adopted a vegetarian lifestyle for ethical reasons. During her clinic visit, routine blood work reveals that Sophia’s hemoglobin concentration stands at 10.8 g/dL, which is slightly lower than the normal range for adult females (11.1 to 15.7 g/dL). During the consultation, Sophia emphasizes her commitment to adhering to a vegetarian diet and is looking for advice to ensure her nutritional needs are met, particularly concerning her iron intake, which may be implicated in her decreased hemoglobin levels. Given her dietary restrictions and current hemoglobin levels, what would be the most appropriate nutritional advice to provide to Sophia?**

- A. The diet is providing adequate sources of iron and requires no changes.
- B. The patient should add meat to her diet; a vegetarian diet is not advised.
- C. A cup of coffee or tea should be added to every meal.
- D. The patient should use iron cookware to prepare foods, such as dark-green, leafy vegetables and legumes, which are high in iron.

- E. Increase the intake of Vitamin C rich foods to enhance iron absorption.
- F. Consider adding a daily iron supplement after consulting with a healthcare provider.

**Correct Answer: D. The patient should use iron cookware to prepare foods, such as dark green, leafy vegetables and legumes, which are high in iron.**

Normal hemoglobin values range from 11.5-15.0. This vegetarian patient is mildly anemic. When food is prepared in iron cookware its iron content is increased.

- **Option A:** Given the lower hemoglobin concentration, it may indicate that the current vegetarian diet may not be providing adequate iron.
- **Option B:** This advice disregards the patient's ethical choice of a vegetarian diet. There are ways to optimize iron intake within a vegetarian diet.
- **Option C:** Coffee and tea can inhibit iron absorption due to their polyphenol content, making this advice inappropriate.
- **Option E:** Vitamin C can enhance non-heme iron absorption from plant foods, which could be a useful advice for the patient. However, using iron cookware could provide a more direct means of increasing dietary iron.
- **Option F:** While supplementation can be a valid option, it's essential to get iron from dietary sources. It's also important to note that iron supplementation should only be done under medical supervision due to the risks associated with iron overload.

**29. In the past, factors to determine whether a woman was likely to have a high-risk pregnancy were evaluated primarily from a medical point of view. A broader, more comprehensive approach to high-risk pregnancy has been adopted. There are now four categories based on threats to the health of the woman and the outcome of pregnancy. Which of the options listed here is not included as a category?**

- A. Biophysical
- B. Psychosocial
- C. Geographic
- D. Environmental

**Correct Answer: C. Geographic**

The fourth category is correctly referred to as the sociodemographic risk category. Several risk factors for high-risk pregnancy were present before pregnancy, including multiple pregnancies, maternal age under 16 or over 35 years, and interval between pregnancies less than one year.

- **Option A:** A fetal biophysical profile is a prenatal test used to check on a baby's well-being. The test combines fetal heart rate monitoring (nonstress test) and fetal ultrasound to evaluate a baby's heart rate, breathing, movements, muscle tone and amniotic fluid level.
- **Option B:** A pregnancy may be determined to be at high risk because of obstetric factors in previous pregnancies or the present one; conditions that are, themselves, psychosocial: anxiety disorders (GAD, OCD, panic disorder, PTSD), mood disorders, and schizophrenia, all of which are a background for a disturbed pregnancy and might complicate a pregnancy denominated high risk for some other reason.

- **Option D:** Environmental factors that have been implicated in adverse pregnancy outcomes include smoking, video display terminals, anesthetic gases, antineoplastic drugs and exposure to lead, selenium and inorganic mercury.

**30. When a drug is 50% protein-bound, it means that:**

- A. 50% of the drug destroys protein.
- B. 50% of the dose is at work.
- C. 50% of the drug is excreted in the kidneys.
- D. Protein must be restricted in the diet.

**Correct Answer: B. 50% of the dose is at work**

The percentage of drugs, not protein-bound is the amount of drug that is free to exert its effect on the body's tissues. The other options are incorrect because protein binding has nothing to do with the destruction of protein, drug excretion, or protein in the diet. Note that the concept of "50% bound" literally means that 50% is BOUND or connected to protein. This means that the remaining 50% is available.

- **Option A:** Plasma protein binding refers to the degree to which medications attach to proteins within the blood. A drug's efficiency may be affected by the degree to which it binds. The less bound a drug is, the more efficiently it can traverse cell membranes or diffuse.
- **Option C:** Protein-binding may affect drug activity in one of two ways: either by changing the effective concentration of the drug at its site of action or by changing the rate at which the drug is eliminated, thus affecting the length of time for which effective concentrations are maintained.
- **Option D:** Many drugs in circulation are bound to plasma proteins, and because the bound drug is too large to pass through biological membranes, only free drugs are available for delivery to the tissues and to produce the desired pharmacological action. Therefore the degree of protein binding can greatly affect the pharmacokinetics of drugs.

**31. A client with diabetes mellitus has an above-knee amputation because of severe peripheral vascular disease, Two days following surgery, when preparing the client for dinner, it is the nurse's primary responsibility to:**

- A. Check the client's serum glucose level
- B. Assist the client out of bed to the chair
- C. Place the client in a High-Fowler's position
- D. Ensure that the client's residual limb is elevated

**Correct Answer: A. Check the client's serum glucose level**

Because the client has diabetes, it is essential that the blood glucose level is determined before meals to evaluate the success of control of diabetes and the possible need for insulin coverage. Integrating CGMs as part of a glycemic control protocol can lead to better management of glucose levels with fewer hyperglycemia episodes and lower glucose level variability resulting in better post-surgical outcome.

- **Option B:** Physical therapy will begin soon after surgery when the client's condition is stable and the doctor clears the client for rehabilitation. The first 2 to 3 days of treatment may include gentle

stretching and range-of-motion exercises, learning to roll in bed, sit on the side of the bed, and move safely to a chair.

- **Option C:** In clients who have undergone transtibial and transfemoral amputations, prolonged sitting with the hip and knee flexed should be avoided. Clients who have undergone transfemoral amputations should be instructed to lie in the prone position multiple times during the day to stretch the hip musculature.
- **Option D:** Elevate the stump for the first 24 to 48 hours. Move and turn the client gently and slowly to prevent severe muscle spasms. Reposition the client every 2 hours, turning the patient from side to side and prone, if possible.

**32. The cervical dilatation taken at 8:00 AM in a G1P0 patient was 6 centimeters. A repeat I.E. done at 10 A. M. showed that cervical dilatation was 7 cm. The correct interpretation of this result is:**

- A. Labor is progressing as expected.
- B. The latent phase of Stage 1 is prolonged.
- C. The active phase of Stage 1 is protracted.
- D. The duration of labor is normal.

**Correct Answer: C. The active phase of Stage 1 is protracted**

The active phase of Stage I starts from 4cm cervical dilatation and is expected that the uterus will dilate by 1cm every hour. Since the time elapsed is already 2 hours, the dilatation is expected to be already 8 cm. Hence, the active phase is protracted.

- **Option A:** In the active phase, the cervix changes more rapidly and predictably until it reaches 10 centimeters and cervical dilatation and effacement are complete. Active labor with more rapid cervical dilatation generally starts around 6 centimeters of dilatation. During the active phase, the cervix typically dilated at a rate of 1.2 to 1.5 centimeters per hour.
- **Option B:** During the latent phase, the cervix dilates slowly to approximately 6 centimeters. The latent phase is generally considerably longer and less predictable with regard to the rate of cervical change than is observed in the active phase. A normal latent phase can last up to 20 hours and 14 hours in nulliparous and multiparous women respectively, without being considered prolonged.
- **Option D:** Sedation can increase the duration of the latent phase of labor. Multiparas, or women with a history of prior vaginal delivery, tend to demonstrate more rapid cervical dilatation. The absence of cervical change for greater than 4 hours in the presence of adequate contractions or six hours with inadequate contractions is considered the arrest of labor and may warrant clinical intervention.

**33. What is a priority nursing assessment in the first 24 hours after admission of the client with a thrombotic stroke?**

- A. Cholesterol level
- B. Pupil size and pupillary response
- C. Bowel sounds
- D. Echocardiogram

**Correct Answer: B. Pupil size and pupillary response**

It is crucial to monitor the pupil size and pupillary response to indicate changes around the cranial nerves. Pupil reactions are regulated by the oculomotor (III) cranial nerve and are useful in determining whether the brain stem is intact. Pupil size and equality is determined by a balance between parasympathetic and sympathetic innervation. Response to light reflects the combined function of the optic (II) and oculomotor (III) cranial nerves.

- **Option A:** Cholesterol level is an assessment to be addressed for long-term healthy lifestyle rehabilitation. Secure referral to physical therapy and occupational therapy if needed. Reinforce special mobilization techniques such as proprioceptive neuromuscular rehabilitation, neurodevelopmental treatment, motor relearning program, and constraint-induced movement therapy per the client's individualized rehabilitation program.
- **Option C:** Bowel sounds need to be assessed because an ileus or constipation can develop, but is not a priority in the first 24 hours. Identify previous bowel habits and reestablish a normal regimen. Increase bulk in diet, encourage fluid intake, increased activity. Assists in the development of retraining programs (independence) and aids in preventing constipation and impaction (long-term effects).
- **Option D:** An echocardiogram is not needed for the client with a thrombotic stroke. Closely assess and monitor neurological status frequently and compare with baseline. Assesses trends in the level of consciousness (LOC) and potential for increased ICP and is useful in determining location, extent, and progression of damage. May also reveal the presence of TIA, which may warn of impending thrombotic CVA.

**34. Which of the following signs and symptoms would most likely be found in a client with mitral regurgitation?**

- A. Exertional dyspnea
- B. Confusion
- C. Elevated creatine phosphokinase concentration
- D. Chest pain

**Correct Answer: A. Exertional dyspnea**

Weight gain, due to fluid retention and worsening heart failure, causes exertional dyspnea in clients with mitral regurgitation. The rise in left atrial pressure that accompanies mitral valve disease is transmitted backward into pulmonary veins, capillaries, and arterioles and eventually to the right ventricle. Signs and symptoms of pulmonary and systemic venous congestion follow.

- **Option B:** On auscultation, S1 may be diminished in acute mitral regurgitation (MR) and chronic severe MR with defective valve leaflets, and wide splitting of S2 may occur due to early closure of the aortic valve. S3 may be present due to LV dysfunction or as a result of increased blood flow across the mitral valve.
- **Option C:** Usually holosystolic, may be confined to early systole in acute MR, may be confined to late systole in MVP or papillary muscle dysfunction (S1 will probably be normal in these cases since initial closure of mitral valve cusps is unimpeded, and a midsystolic click preceding murmur is suggestive of MVP)
- **Option D:** Murmurs are usually high-pitched, blowing. Usually best heard over the apex; usually radiates to the left axilla or subscapular region: posterior leaflet dysfunction causes murmur to radiate to the sternum or aortic area, and anterior leaflet dysfunction causes murmur to radiate to

the back or top of the head.

**35. Which statement best describes the effects of immobility in children?**

- A. Immobility prevents the progression of language and fine motor development.
- B. Immobility in children has similar physical effects to those found in adults.
- C. Children are more susceptible to the effects of immobility than are adults.
- D. Children are likely to have prolonged immobility with subsequent complications.

**Correct Answer: B. Immobility in children has similar physical effects to those found in adults.**

Care of the immobile child includes efforts to prevent complications of muscle atrophy, contractures, skin breakdown, decreased metabolism and bone demineralization. Secondary alterations also occur in the cardiovascular, respiratory and renal systems. Similar effects and alterations occur in adults.

- **Option A:** The hazards or complications of immobility, such as skin breakdown, pressure ulcers, contractures, muscular weakness, muscular atrophy, disuse osteoporosis, renal calculi, urinary stasis, urinary retention, urinary incontinence, urinary tract infections, atelectasis, pneumonia, decreased respiratory vital capacity, venous stasis, venous insufficiency, orthostatic hypotension, decreased cardiac reserve, edema, emboli, thrombophlebitis, constipation and the loss of calcium from the bones, are highly costly in terms of health care dollars and in terms of client suffering.
- **Option C:** Immobility and complete bed rest can lead to life-threatening physical and psychological complications and consequences. Members of the nursing care team and other health care professionals like physical therapists must, therefore, promote client mobility and prevent immobility whenever possible. Immobility can adversely affect all physiological bodily systems.
- **Option D:** Children stayed in a cast for a long period, so that the effect of postoperative immobility had negative effects on the physical and psychological wellbeing of children with musculoskeletal injuries. Emphasize the importance of implementing a nursing care program for children in the postoperative period for minimizing the physical and psychological effects of immobility on children with musculoskeletal injuries.

**36. A client with paranoid schizophrenia is admitted to the psychiatric unit of a hospital. Nursing assessment should include careful observation of the client's:**

- A. Thinking, perceiving, and decision-making skills
- B. Verbal and nonverbal communication processes
- C. Affect and behavior
- D. Psychomotor activity

**Correct Answer: A. Thinking, perceiving, and decision-making skills**

Nursing assessment of a psychotic client should include careful inquiry about and observation of the client's thinking, perceiving, symbolizing, and decision-making skills and abilities. Assessment of such a client typically reveals alterations in thought content and process, perception, affect, and psychomotor behavior; changes in personality, coping, and sense of self; lack of self-motivation; presence of psychosocial stressors; and degeneration of adaptive functioning.

- **Option B:** Assess if incoherence in speech is chronic or if it is more sudden, as in an exacerbation of symptoms. Establishing a baseline facilitates the establishment of realistic goals, the foundation

for planning effective care. Keep the environment calm, quiet and as free of stimuli as possible. Keep anxiety from escalating and increasing confusion and hallucinations/delusions.

- **Option C:** Identify with client symptoms he experiences when he or she begins to feel anxious around others. Increased anxiety can intensify agitation, aggressiveness, and suspiciousness. Assess if the medication has reached therapeutic levels. Many of the positive symptoms of schizophrenia (hallucinations, delusions, racing thoughts) will subside with medications, which will facilitate interactions.
- **Option D:** Although assessing communication processes, affect, behavior, and psychomotor activity would reveal important information about the client's condition, the nurse should concentrate on determining whether the client is hallucinating by assessing thought processes and decision-making ability.

**37. The nurse is caring for a client with an autoimmune disorder at a medical clinic, where alternative medicine is used as an adjunct to traditional therapies. Which information should the nurse teach the client to help foster a sense of control over his symptoms?**

- A. Pathophysiology of disease process.
- B. Principles of good nutrition.
- C. Side effects of medications.
- D. Stress management techniques.

**Correct Answer: D. Stress management techniques**

In autoimmune disorders, stress and the response to stress can exacerbate symptoms. Stress management techniques can help the client reduce the psychological response to stress, which in turn will help reduce the physiologic stress response. This will afford the client an increased sense of control over his symptoms.

- **Option A:** Correctly prioritizing patient care is an essential good nursing practice. A nurse with multiple patients needs to determine the order that they will be seen. If a patient presents with multiple symptoms, the nurse must know which to address first. Understanding pathophysiology is essential for the critical thinking required by nurses to prioritize and deliver patient care. It will allow the nurse to recognize critical changes in the patient's status and aid in making the correct judgments in the clinical setting.
- **Option B:** Beginning with a discussion of basic health concepts and then explaining how nutrition affects our bodies is a good strategy. Nutrition is how food affects the health of the body. Food is essential—it provides vital nutrients for survival, and helps the body function and stay healthy. Food consists of macronutrients including protein, carbohydrate, and fat that not only offer calories to fuel the body and give it energy but play specific roles in maintaining health. Food also supplies micronutrients (vitamins and minerals) and phytochemicals that don't provide calories but serve a variety of critical functions to ensure the body operates optimally.
- **Option C:** The nurse can address the remaining answer choices in her teaching about the client's disease and treatment; however, knowledge alone will not help the client to manage his stress effectively enough to control symptoms. It's easy for patients to make significant mistakes with their medications. We know this because statistics show that every minute, around three Americans call a poison control center because they have done just that. Furthermore, data shows that the rate of serious mistakes is on the rise, with many errors leading to a hospital stay. While mistakes are inevitable, clinicians can help reduce their likelihood. That's where the importance of medication

education for patients comes in.

**38. A 6-year-old child with leukemia is hospitalized and is receiving combination chemotherapy. Laboratory results indicate that the child is neutropenic, and the nurse prepares to implement protective isolation procedures. Which interventions would the nurse initiate? Select all that apply.**

- A. Restrict all visitors.
- B. Place the child on a low-bacteria diet.
- C. Change dressings using sterile technique.
- D. Encourage the consumption of fresh fruits and vegetables.
- E. Perform meticulous hand washing before caring for the child.
- F. Allow fresh-cut flowers in the room as long as they are kept in a vase with fresh water.

**Correct Answer: B, C, & E.**

Leukemias are a group of hematologic disorders characterized by the dysfunctional proliferation and development of leukocytes. Many genetic and environmental risk factors have been identified, though the exact cause of most leukemia subtypes is unknown.

- **Option A:** Not all visitors need to be restricted, but anyone who is ill should not be allowed in the child's room. Bone marrow suppression, neutropenia, and chemotherapy place the patient at high risk for infection.
- **Option B:** The child is placed on a low-bacteria diet. Provide a nutritious diet, high in protein and calories, avoiding raw fruits, vegetables, or uncooked meats. Proper nutrition enhances the immune system. Minimizes potential sources of bacterial contamination.
- **Option C:** Dressings are always changed with sterile technique. Provide thorough skin care by keeping the patient's skin and perianal area clean, apply mild lotion or creams to keep the skin from drying or cracking. Thoroughly clean skin before all invasive skin procedures.
- **Option D:** Fruits and vegetables not peeled before being eaten harbor molds and should be avoided until the white blood cell count rises. Restrict fresh fruits and make sure they are properly washed or peeled.
- **Option E:** Meticulous hand washing is required before caring for the child. In addition, gloves, a mask, and a gown are worn (per agency policy). This prevents cross-contamination and reduces the risk of infection.
- **Option F:** For the hospitalized neutropenic child, flowers or plants should not be kept in the room because standing water and damp soil harbor *Aspergillus* and *Pseudomonas*, to which these children are very susceptible.

**39. A black client with asthma seeks emergency care for acute respiratory distress. Because of this client's dark skin, the nurse should assess for cyanosis by inspecting the:**

- A. Lips
- B. Mucous membranes



- C. Nail beds
- D. Earlobes

**Correct Answer: B. Mucous membranes**

Skin color doesn't affect the mucous membranes. When the oxygen level has dropped only a small amount, cyanosis may be hard to detect. In dark-skinned people, cyanosis may be easier to see in the mucous membranes (lips, gums, around the eyes) and nails. The lips, nail beds, and earlobes are less reliable indicators of cyanosis because they're affected by skin color.

- **Option A:** Red blood cells provide oxygen to body tissues. Most of the time, nearly all red blood cells in the arteries carry a full supply of oxygen. These blood cells are bright red and the skin is pinkish or red. Blood that has lost its oxygen is dark bluish-red. People whose blood is low in oxygen tend to have a bluish color to their skin. This condition is called cyanosis.
- **Option C:** But in dark-skinned patients, cyanosis may present as gray or whitish (not bluish) skin around the mouth, and the conjunctivae may appear gray or bluish. When assessing a patient's skin, use natural light or a halogen lamp rather than fluorescent light, which may alter the skin's true color and give the illusion of a bluish tint.
- **Option D:** Skin color is particularly important in detecting cyanosis and staging pressure ulcers. Cyanosis occurs when a person has 5 g/dL of unoxygenated hemoglobin in the arterial blood. Central cyanosis (cyanosis of the lips, mucous membranes, and tongue) occurs when arterial oxygen saturation falls below 85% in patients with normal hemoglobin levels.

**40. In renal regulation of water balance, the functions of angiotensin II include:**

- A. Blood clotting within the nephron.
- B. Increasing progesterone secretion into the renal tubules.
- C. Catalyzing calcium-rich nutrients.
- D. Selectively constricting portions of the arteriole in the nephron.

**Correct Answer: D. Selectively constricting portions of the arteriole in the nephron.**

As part of the renal regulation of water balance, angiotensin II selectively constricts portions of the arteriole in the nephron. ATII is a potent vasopressor, acting on vascular endothelial receptors. The two types of ATII receptors present in the heart and vascular smooth muscle that are responsible for signal transduction in mediating the vasoconstrictive action of ATII are the AT1 and AT2 receptors.

- **Option A:** The kidney regulates plasma osmolarity by modulating the amount of water, solutes, and electrolytes in the blood. It ensures long term acid-base balance and also produces erythropoietin which stimulates the production of red blood cells. It also produces renin for blood pressure regulation and carries out the conversion of vitamin D to its active form.
- **Option B:** In the normal circumstance, the PCT reabsorbs all the glucose and amino acids as well as 65% of Na and water. The PCT reabsorb sodium ions by primary active transport via a basolateral Na-K pump. It reabsorbs glucose, amino acids, and vitamins through secondary active transport with Na and an electrochemical gradient drives passive paracellular diffusion.
- **Option C:** The next tubular segment for reabsorption is the distal convoluted tubule (DCT). There is a primary active sodium transport at the basolateral membrane and secondary active transport at the apical membrane through Na-Cl symporter and channels. This process is aldosterone regulated at the distal portion. There is also calcium reabsorption via passive uptake controlled by the parathyroid hormone.

**41. Amidst a hectic morning shift at the pediatric nephrology unit, Nurse Kai is assigned to closely monitor the progress of 7-year-old Isabella who has been grappling with acute post-streptococcal glomerulonephritis (APSGN) for the past week. The medical team has been steadfastly managing her condition with a regimen of antibiotics, corticosteroids, and supportive measures. The parents, although distressed, are showing unwavering support and are keenly interested in understanding the trajectory of their daughter's recovery. They are closely observing Isabella and are yearning for any positive sign indicating an improvement in her condition. Nurse Kai, with his expertise, knows that certain clinical manifestations may herald improvement in APSGN. He meticulously evaluates Isabella's clinical parameters and discusses the findings with the medical team and the parents. During his next interaction with Isabella's parents, Nurse Kai plans to explain the significance of certain clinical findings as potential early signs of improvement in APSGN. Among the following findings, which one does Nurse Kai identify as the earliest sign of improvement in a child with acute post-streptococcal glomerulonephritis?**

- A. Increased urine output
- B. Increased appetite
- C. Increased energy level
- D. Decreased diarrhea
- E. Decreased blood pressure
- F. Improved urine color clarity
- G. Decreased edema

**Correct Answer: A. Increased urine output**

Increased urine output: Increased urine output is often the earliest sign of renal recovery in APSGN. It indicates that the glomerular filtration rate is improving and the kidneys are better able to excrete fluid. Nurse Kai, in elucidating the dynamics of APSGN recovery to Isabella's parents, underscores the pivotal significance of an increased urine output as the earliest sign of amelioration in APSGN. This meticulous explanation helps in allaying the anxieties of Isabella's parents and fosters a better understanding of the ongoing recovery process.

- **Option B:** While increased appetite may indicate overall improvement, it is not as specific to renal function recovery as increased urine output is.
- **Option C:** Like appetite, an increased energy level may be a positive sign of recovery but is not specifically tied to renal function improvement.
- **Option D:** Diarrhea is not a typical symptom of APSGN; therefore, its resolution would not be a direct indicator of improvement in this renal condition.
- **Option E:** While decreasing blood pressure can be a sign of improving renal function especially if hypertension was a symptom, it often follows the increase in urine output, making it a subsequent rather than an earliest sign of improvement.
- **Option F:** Improvement in urine color clarity can indicate decreasing hematuria and proteinuria which is a positive sign, but usually follows after an increase in urine output.

- **Option G:** Decreased edema is a positive sign of improvement in APSGN, indicating better fluid management by the kidneys, however, it often follows increased urine output.

**42. After a liver biopsy, place the patient in which of the following positions?**

- A. Left side-lying, with the bed flat
- B. Right side-lying, with the bed flat
- C. Left side-lying, with the bed in semi-Fowler's position
- D. Right side-lying, with the bed in semi-Fowler's position

**Correct Answer: B. Right side-lying, with the bed flat.**

Positioning the patient on his right side with the bed flat will splint the biopsy site and minimize bleeding.

- **Options A, C, D:** The other positions won't do this and may cause more bleeding at the site or internally.

**43. The nurse is aware that the best way to prevent postoperative wound infection in the surgical client is to:**

- A. Administer a prescribed antibiotic
- B. Wash her hands for 2 minutes before care
- C. Wear a mask when providing care
- D. Ask the client to cover her mouth when she coughs

**Correct Answer: B. Wash her hands for 2 minutes before care**

The best way to prevent postoperative wound infection is hand washing. Up to 60% of SSI can be prevented. Prevention of postoperative wound infection is done by good general hygiene, operative sterility and effective barriers against transmission of infections, before, during and after surgery.

- **Option A:** Use of prescribed antibiotics will treat infection, not prevent infections. The prophylaxis should only cover the current operating time and start at the beginning of anaesthesia (1A). The prophylaxis should reach high enough tissue doses before incision (1A). Short half-life preparations (e.g. cefalotin) must be followed up with a new dose if prolonged operating time.
- **Option C:** Perform good hand hygiene throughout your stay. If bedridden, ask for wipes for hand disinfection. Ask visitors to carry out hand hygiene on arrival and when they leave the hospital. Ask health professionals to carry out hand hygiene if this fails—before and after your examination.
- **Option D:** Asking the client to cover her mouth are good practices but will not prevent wound infections. Ensure the eradication of infections, urinary tract infections, skin infections, and other local infections prior to admission. Check the dental status, especially before larger elective interventions with implants and the like. Postpone surgery, if possible, until the infection is cleared.

**44. A male client who is experiencing disordered thinking about food being poisoned is admitted to the mental health unit. The nurse uses which communication technique to encourage the client to eat dinner?**

- A. Focusing on self-disclosure of own food preference.
- B. Using open-ended questions and silence.
- C. Offering opinions about the need to eat.
- D. Verbalizing reasons that the client may not choose to eat.

**Correct Answer: B. Using open-ended question and silence**

Open-ended questions and silence are strategies used to encourage clients to discuss their problem in a descriptive manner. At times, it's useful to not speak at all. Deliberate silence can give both nurses and patients an opportunity to think through and process what comes next in the conversation. It may give patients the time and space they need to broach a new topic. Nurses should always let patients break the silence.

- **Option A:** Sometimes during a conversation, patients mention something particularly important. When this happens, nurses can focus on their statement, prompting patients to discuss it further. Patients don't always have an objective perspective on what is relevant to their case; as impartial observers, nurses can more easily pick out the topics to focus on.
- **Option C:** Recognition acknowledges a patient's behavior and highlights it without giving an overt compliment. A compliment can sometimes be taken as condescending, especially when it concerns a routine task like making the bed. However, saying something like "I noticed you took all of your medications" draws attention to the action and encourages it without requiring a compliment.
- **Option D:** Patients often ask nurses for advice about what they should do about particular problems or in specific situations. Nurses can ask patients what they think they should do, which encourages patients to be accountable for their own actions and helps them come up with solutions themselves.

**45. A 43-year-old African American male is admitted with sickle cell anemia. The nurse plans to assess circulation in the lower extremities every 2 hours. Which of the following outcome criteria would the nurse use?**

- A. Body temperature of 99°F or less
- B. Toes moved in active range of motion
- C. Sensation reported when soles of feet are touched
- D. Capillary refill of < 3 seconds

**Correct Answer: D. Capillary refill of < 3 seconds**

It is important to assess the extremities for blood vessel occlusion in the client with sickle cell anemia because a change in capillary refill would indicate a change in circulation.

- **Options A, B, and C:** Body temperature, motion, and sensation would not give information regarding peripheral circulation.

**46. A nurse is monitoring a client receiving ethambutol (Myambutol) for adverse effects. The nurse determines that the client is experiencing a side effect of the medication, in which of the following?**

- A. Red-orange colored bodily secretions

- B. Damaged hearing
- C. Loss of smell
- D. Difficulty distinguishing the color red from green

**Correct Answer: D. Difficulty distinguishing the color yellow from orange**

Ethambutol (Myambutol) causes optic neuritis characterized by decreased visual acuity and the ability to distinguish between the color red from green.

- **Option A:** Red-orange discoloration of secretions is a side effect of Rifampin.
- **Option B:** Ototoxicity is a side effect of Streptomycin.
- **Option C:** This is not a related symptom of this anti-TB medication.

**47. You're preparing a teaching plan for a 27 y.o. named Jeff who underwent surgery to close a temporary ileostomy. Which nutritional guidelines do you include in this plan?**

- A. There is no need to change eating habits.
- B. Eat six small meals a day.
- C. Eat the largest meal in the evening.
- D. Restrict fluid intake.

**Correct Answer: B. Eat six small meals a day.**

To avoid overloading the small intestine, encourage the patient to eat six small, regularly spaced meals. An ileostomy closure surgery is done to reverse the ileostomy so the client can have bowel movements as he did before the surgery. Ileostomy closure surgery is usually done through the stoma.

- **Option A:** The patient should eat 5 to 6 small meals throughout the day. He should remember to eat slowly and chew his food well. It's important the patient tries to maintain his weight. After surgery, foods may affect the patient differently. Certain foods may make him have bowel movements right after he eats them.
- **Option C:** Certain foods may cause diarrhea (loose or watery bowel movements). The patient may need to change his diet after surgery. During the first few months after the surgery, the patient will need to test foods and see how he reacts to them. It may be helpful to keep a food diary. This will help keep track of which foods cause discomfort.
- **Option D:** The patient should drink 8 to 10 (8-ounce) glasses of liquids every day. The amount of alcohol the patient drinks can affect him during and after the surgery. If the patient stops drinking alcohol suddenly, it can cause seizures, delirium, and death.

**48. A client enters the emergency department confused, twitching, and having seizures. His family states he recently was placed on corticosteroids for arthritis and was feeling better and exercising daily. On data collection, he has flushed skin, dry mucous membranes, an elevated temperature, and poor skin turgor. His serum sodium level is 172 mEq/L. Choose the interventions that the health care provider would likely prescribe. Select all that apply.**

- A. Monitor intake and output.
- B. Monitor vital signs.
- C. Maintain a sodium-reduced diet.
- D. Monitor electrolyte levels.
- E. Increase water intake orally.
- F. Administer sodium replacements.

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

Hypernatremia is described as having a serum sodium level that exceeds 145 mEq/L. Signs and symptoms would include dry mucous membranes, loss of skin turgor, thirst, flushed skin, elevated temperature, oliguria, muscle twitching, fatigue, confusion, and seizures. Interventions include monitoring fluid balance, monitoring vital signs, reducing dietary intake of sodium, monitoring electrolyte levels, and increasing oral intake of water.

- **Option A:** Monitor intake and output and specific gravity. Assess the presence and location of edema. Weigh the client daily. These parameters are variable, depending on the fluid status, and are indicators of therapy needs and effectiveness.
- **Option B:** Depending on the fluid status, hypertension or hypotension may be present. The presence of postural hypotension may affect activity tolerance. Metabolic acidosis secondary to hyperchloremia may result in deep, labored breathing with air hunger, which can lead to cardiopulmonary arrest if left untreated.
- **Option C:** Teach the client to avoid foods high in sodium such as regular canned vegetables and vegetable juices, processed foods, snack foods, and condiments. Decreases the risk of sodium-associated complications such as stroke, heart disease, and heart failure.
- **Option D:** Monitor serum electrolytes, osmolality, and arterial blood gasses, as indicated. This will evaluate the therapy's needs and effectiveness.
- **Option E:** Encourage increased oral and IV fluid intake. Replacement of total body water deficit will gradually restore sodium and water balance.
- **Option F:** Sodium replacement therapy would not be prescribed for a client with hypernatremia. Sodium intake restriction while promoting renal clearance decreases serum sodium levels in the presence of extracellular fluid excess.

**49. Which of the following would the nurse identify as a presumptive sign of pregnancy?**

- A. Hegar sign
- B. Nausea and vomiting
- C. Skin pigmentation changes
- D. Positive serum pregnancy test

**Correct Answer: B. Nausea and vomiting**

Presumptive signs of pregnancy are subjective signs. Of the signs listed, only nausea and vomiting are presumptive signs.

- **Option A:** Hegar's sign is a non-sensitive indication of pregnancy in women — its absence does not exclude pregnancy. It pertains to the features of the cervix and the uterine isthmus. It is demonstrated as a softening in the consistency of the uterus, and the uterus and cervix seem to be two separate regions. It is a probable sign of pregnancy.
- **Option C:** The area around the nipples and the skin on the inner thighs, genitals, and neck might darken, possibly due to hormonal changes. The woman might notice a dark line from the navel to the pubic bone (linea nigra). Dark patches might develop on the face (chloasma). Avoid sun exposure, which can worsen chloasma. After childbirth, skin typically returns to its normal pigment over a period of several months.
- **Option D:** A positive serum pregnancy test is considered a probable sign, which is strongly suggestive of pregnancy.

**50. Which client would be appropriate to assign to a newly graduated RN, who has recently completed orientation?**

- A. An anxious, chronic pain client who frequently uses the call button.
- B. A client second-day post-op who needs pain medication prior to dressing changes.
- C. A client with HIV who reports headache and abdominal and pleuritic chest pain.
- D. A client who is being discharged with a surgically implanted catheter.

**Correct Answer: B. A client second-day post-op who needs pain medication prior to dressing changes**

A second-day postoperative client who needs medication prior to dressing changes has predictable and routine care that a new nurse can manage. Some staff members may possess greater expertise than others. Some, such as new graduates, may not possess the same levels of knowledge, past experiences, skills, abilities, and competencies that more experienced staff members possess.

- **Option A:** Although clients with chronic pain can be relatively stable, the interaction with this client will be time-consuming and may cause the new nurse to fall behind. Time is finite and often the needs of the client are virtually infinite. Time management, organization, and priority setting skills, therefore, are essential to the complete and effective provision of care to an individual client and to a group of clients.
- **Option C:** The client with HIV has complex complaints that require expert assessment skills. Staff members differ in terms of their knowledge, skills, abilities, and competencies. A staff member who has just graduated as a certified nursing assistant and a newly graduated registered nurse cannot be expected to perform patient care tasks at the same level of proficiency, skill, and competency as an experienced nursing assistant or registered nurse. It takes time for new graduates to refine the skills that they learned in school.
- **Option D:** The client pending discharge will need special and detailed instructions. Validated and documented competencies must also be considered prior to assignment of patient care. No aspect of care can be assigned or delegated to another nursing staff member unless this staff member has documented evidence that they are deemed competent by a registered nurse to do so.

**51. Prolonged occlusion of the right coronary artery produces an infarction in which of the following areas of the heart?**

- A. Anterior

- B. Apical
- C. Inferior
- D. Lateral

**Correct Answer: C. Inferior**

The right coronary artery supplies the right ventricle or the inferior portion of the heart. Therefore, prolonged occlusion could produce an infarction in that area. The RCA emerges from the anterior ascending aorta and supplies blood primarily to the right atrium, right ventricle. The sinoatrial nodal artery is a branch of the RCA that supplies the SA node.

- **Option A:** The right coronary artery doesn't supply the anterior portion (left ventricle). The LAD supplies blood to the anterior portion of the left ventricle. Other small branches of the coronary arteries are the obtuse marginal artery (OMA), diagonals, and septal perforator (SP).
- **Option B:** The right coronary artery doesn't supply the apical portion (left ventricle) of the heart. The LAD is one of two major branches of the LMCA, with the other being the left circumflex (LCx) coronary arteries. Combined, these two supply blood to the left atrium and left ventricle.
- **Option D:** The right coronary artery doesn't supply the lateral portion (some of the left ventricle and the left atrium). The circumflex artery is responsible for blood supply to the left atrium and the posterior-lateral aspect of the left ventricle. The left anterior descending artery (LAD) supplies the anterior two-thirds of the septum.

**52. A client had oral surgery following a motor vehicle accident. The nurse assessing the client finds the skin flushed and warm. Which of the following would be the best method to take the client's body temperature?**

- A. Oral
- B. Axillary
- C. Arterial line
- D. Rectal

**Correct Answer: B. Axillary**

Taking the temperature via the axilla is the most appropriate route. Body temperature is a numerical expression of the body's heat and metabolic activity balance and can be a major indicator of a person's health status. Assessing a patient's body temperature is a common procedure nurses perform to monitor for signs of infection, environmental exposure, shock, ovulation, or therapeutic response to medications or medical procedures. A normal body temperature can be a potentially positive sign that the patient isn't experiencing a disease process, infection, or trauma and that the body's cells, tissues, and organs aren't under metabolic distress.

- **Option A:** Taking the temperature via the oral route is incorrect since the client had oral surgery. The esophageal temperature probe (ETP) is an 18-in (45.7 cm) long, thin, flexible catheter that has a rounded tip that should be lubricated with water-soluble lubricant before being placed through the nares or mouth, extending into the esophagus at least 2 to 3 in (5 to 7.6 cm). The external end portion of the catheter has a small, coated wire with a plug that can be attached to a telemetry monitor for continuous temperature monitoring.
- **Option C:** A PiCCO thermodilution catheter (Pulsion Medical Systems) containing a temperature thermistor was inserted into the brachial artery at the antecubital fossa and doubled as the arterial pressure monitoring line and arterial blood sampling portal. This measured brachial artery



temperature from the time of insertion to the time the patient left the operating room.

- **Option D:** This is unnecessary. The ETP and RTP (rectal temperature probe) are the same device but can be used in either orifice depending on the patient's medical condition. Again, the tip should be lubricated with water-soluble lubricant, and then placed approximately 3 in (7.6 cm) inside the rectal vault. The RTP can also be attached to a telemetry monitor cable for continuous temperature monitoring.

**53. During the endorsement, which of the following clients should the on-duty nurse assess first?**

- A. The 58-year-old client who was admitted 2 days ago with heart failure, blood pressure of 126/76 mm Hg, and a respiratory rate of 22 breaths/minute.
- B. The 89-year-old client with end-stage right-sided heart failure, blood pressure of 78/50 mm Hg, and a "do not resuscitate" order.
- C. The 62-year-old client who was admitted 1 day ago with thrombophlebitis and is receiving L.V. heparin.
- D. The 75-year-old client who was admitted 1 hour ago with new-onset atrial fibrillation and is receiving L.V. diltiazem (Cardizem).

**Correct Answer: D. The 75-year-old client who was admitted 1 hour ago with new-onset atrial fibrillation and is receiving L.V. diltiazem (Cardizem).**

The client with atrial fibrillation has the greatest potential to become unstable and is on L.V. medication that requires close monitoring.

- **Option A:** After assessing the client with thrombophlebitis, the nurse should assess the 58-year-old client admitted 2 days ago with heart failure (his signs and symptoms are resolving and don't require immediate attention).
- **Option B:** The lowest priority is the 89-year-old with end-stage right-sided heart failure, who requires time-consuming supportive measures.
- **Option C:** Assess this patient next because he is at high risk for developing an emboli, which is fatal.

**54. Which of the following refers to the single cell that reproduces itself after conception?**

- A. Chromosome
- B. Blastocyst
- C. Zygote
- D. Trophoblast

**Correct Answer: C. Zygote**

The zygote is the single cell that reproduces itself after conception. It is the union of the sperm cell and the egg cell. Also known as a fertilized ovum, the zygote begins as a single cell but divides rapidly in the days following fertilization. After this two-week period of cell division, the zygote eventually becomes an embryo. If this goes well, the embryo becomes a fetus.

- **Option A:** The chromosome is the material that makes up the cell and is gained from each parent. Chromosomes are thread-like structures located inside the nucleus of animal and plant cells. Each chromosome is made of protein and a single molecule of deoxyribonucleic acid (DNA). Passed from parents to offspring, DNA contains the specific instructions that make each type of living creature unique.
- **Option B:** The blastocyst consists of cells forming an outer trophoblast (TE, trophoblast) layer, an inner cell mass (ICM, embryo blast), and a blastocoel (fluid-filled cavity). The inner cell mass will form the entire embryo and is the source of true embryonic stem cells capable of forming all cell types within the embryo.
- **Option D:** In early development, the blastocyst outer trophoblast (TE) layer will generate all the extraembryonic trophoblast cell types: cytotrophoblast, syncytiotrophoblast, trophoblastic column, and extravillous trophoblast cells. These cells have an important contribution to extra-embryonic tissues (fetal placenta and membranes) and processes of early development (adplantation, implantation, and endocrine support of pregnancy).

**55. A clinical instructor asks a nursing student about an aldosterone antagonist. The student is correct by saying that aldosterone antagonists:**

- A. Create an osmotic gradient.
- B. Inhibit the exchange of sodium for potassium.
- C. Cause metabolic acidosis.
- D. Work poorly in the presence of endogenous aldosterone.

**Correct Answer: B. Inhibit the exchange of sodium for potassium.**

Aldosterone antagonists compete with endogenous aldosterone and prevent sodium reabsorption in exchange for potassium elimination. Potassium supplements should be discontinued and combination therapy with other drugs that cause hyperkalemia, such as ACE-I and nonsteroidal anti-inflammatory drugs (NSAID), should prompt enhanced electrolyte surveillance. Specifically, serum K<sup>+</sup> levels should be reassessed within one week after a change in the prescribed dose of a medication that increases the risk for hyperkalemia when coadministered with an aldosterone receptor antagonist or if there is a change in the patient's clinical status that influences serum electrolyte levels or fluid balance

- **Option A:** Aldosterone antagonists work on inhibiting the action of aldosterone rather than creating an osmotic gradient. The pathobiological effects of hyperaldosteronism on the cardiovascular system extend beyond increased intravascular fluid retention and volume overload. Hyperaldosteronism causes endothelial dysfunction and impairs vascular reactivity, in part, by decreasing vascular antioxidant capacity, increasing oxidant stress, and limiting bioavailable nitric oxide.
- **Option C:** Aldosterone antagonists do not cause metabolic acidosis. Hyperaldosteronism also activates inflammation; alters fibrinolysis by increasing plasminogen activator inhibitor-1 expression; and promotes tissue fibrosis. Other adverse effects attributed to hyperaldosteronism that may influence cardiovascular function include sympathetic nervous system activation, decreased baroreceptor sensitivity, increased electrolyte excretion (K<sup>+</sup>, Mg<sup>+</sup>), and cardiomyocyte apoptosis.
- **Option D:** Aldosterone antagonists must work in the presence of endogenous aldosterone. Aldosterone is synthesized by the adrenal glands to preserve intravascular sodium, potassium, and water homeostasis. Aldosterone binds to mineralocorticoid receptors in the kidney, colon, and sweat glands and induces sodium (and water) reabsorption with concomitant potassium excretion.

**56. Lorraine who is on chemotherapy has a history of cardiac disease. The client is at risk for cardiac complications because:**

- A. White blood cells are reduced.
- B. Oxygen-carrying capacity may be reduced.
- C. Sodium levels may rise meaning fluid overload.
- D. Hematocrit is lowered.

**Correct Answer: B. Oxygen-carrying capacity may be reduced.**

If hemoglobin and red cell counts drop from myelosuppression, the oxygen-carrying capacity will fall, leaving the person at risk for angina. Some chemotherapy agents cause the heart muscle to weaken soon after chemotherapy begins. Novel angiogenesis inhibitors that suppress new blood vessel formation cause blood pressure to rise dramatically and may increase the risk of blood clots and heart failure.

- **Option A:** Hormonal therapies can cause stroke, heart attacks, and blood clots. Other agents can trigger low blood flow to the heart (ischemia), heart attack, arrhythmias, or inflammation of the sac around the heart. When a severe reaction occurs while a drug is being infused, it may be necessary to stop the treatment.
- **Option C:** The cardiotoxicity of anticancer agents can lead to significant complications that can affect patients being treated for various malignancies. The severity of such toxicity depends on many factors such as the molecular site of action, the immediate and cumulative dose, the method of administration, the presence of any underlying cardiac condition, and the demographics of the patient.
- **Option D:** Moreover, toxicity can be affected by current or previous treatment with other antineoplastic agents. Cardiotoxic effects can occur immediately during administration of the drug, or they may not manifest themselves until months or years after the patient has been treated.

**57. A 67-year-old client develops acute shortness of breath and progressive hypoxia requiring right femur. The hypoxia was probably caused by which of the following conditions?**

- A. Asthma attack
- B. Atelectasis
- C. Bronchitis
- D. Fat embolism

**Correct Answer: D. Fat embolism**

Long bone fractures are correlated with fat emboli, which cause shortness of breath and hypoxia.

- **Option A:** Asthma attacks do not develop following a femoral fracture.
- **Option B:** He could develop atelectasis but it typically doesn't produce progressive hypoxia.
- **Option C:** It's unlikely the client has developed bronchitis without a previous history.

**58. Which behavioral characteristic describes the domestic abuser?**

- A. Alcoholic
- B. Overconfident
- C. High tolerance for frustrations
- D. Low self-esteem

**Correct Answer: D. Low self-esteem**

Batterers are usually physically or psychologically abused as children or have had experiences of parental violence. Batterers are also manipulative, have low self-esteem, and have a great need to exercise control or power-over partners.

- **Option A:** Being an alcoholic predisposes an individual to be a domestic abuser. To be perfectly clear, alcohol and alcoholism are never a sole trigger for, or cause of, domestic abuse. Rather, they are compounding factors that could eventually trigger intimate partner abuse in a violent individual.
- **Option B:** Most domestic abusers have low self-confidence or self-esteem. Basically, domestic violence offenders always feel the need to be in control of their victims. The less in control an offender feels, the more they want to hurt others.
- **Option C:** Domestic abusers often vent out their frustrations on their partners or children. Domestic abuse, often referred to as domestic violence or intimate partner violence (IPV), is a pattern of behavior or behaviors used by one partner to maintain power and control over another partner that they are in a relationship with. Anyone, regardless of race, gender, sexual orientation, religion, or age, can be a victim or perpetrator of domestic abuse. Abuse can be physical, sexual, emotional, mental, social, and financial.

**59. A client with pernicious anemia asks why she must take vitamin B12 injections for the rest of her life. What is the nurse's best response?**

- A. "The reason for your vitamin deficiency is an inability to absorb the vitamin because the stomach is not producing sufficient acid."
- B. "The reason for your vitamin deficiency is an inability to absorb the vitamin because the stomach is not producing sufficient intrinsic factor."
- C. "The reason for your vitamin deficiency is an excessive excretion of the vitamin because of kidney dysfunction."
- D. "The reason for your vitamin deficiency is an increased requirement for the vitamin because of rapid red blood cell production."

**Correct Answer: B. "The reason for your vitamin deficiency is an inability to absorb the vitamin because the stomach is not producing sufficient intrinsic factor."**

Most clients with pernicious anemia have deficient production of intrinsic factor in the stomach. Intrinsic factor attaches to the vitamin in the stomach and forms a complex that allows the vitamin to be absorbed in the small intestine. Intrinsic factor antibodies are immunoglobulin G isotype, and they can be either type 1 or type 2 antibodies. Type 1 operates against the cobalamin binding site, whereas type 2 directs its activity against the ileal mucosa receptor. B12 and intrinsic factor bind to receptors on the ileum, which allows for absorption.

- **Option A:** Pernicious anemia (PA) is megaloblastic anemia resulting from a deficiency of cobalamin (vitamin B12), which in turn is caused by a lack of intrinsic factor (IF). Intrinsic factor is a glycoprotein that binds cobalamin and thereby enables its absorption in the terminal ileum. Autoimmune gastritis is characterized by the destruction of gastric parietal cells and the resulting lack of the glycoprotein intrinsic factor secreted by these cells. The antibodies identified with autoimmunity are intrinsic factor antibodies (IFA) and parietal cell antibodies (PCA).
- **Option C:** Vitamin B12, once absorbed, is a cofactor for the enzyme methionine synthase, which takes part in the conversion of homocysteine to methionine. If this process cannot occur due to pernicious anemia, homocysteine levels accumulate, and pyrimidine bases cannot form, which interferes with DNA synthesis and causes megaloblastic anemia.
- **Option D:** The stomach is producing enough acid, there is not an excessive excretion of the vitamin, and there is not a rapid production of RBCs in this condition. Vitamin B12 is also a cofactor for the enzyme methylmalonyl-CoA mutase, which converts methylmalonyl-CoA to succinyl-CoA. In patients with pernicious anemia, methylmalonic acid (MMA) levels accumulate. Elevated levels of MMA and homocysteine contribute to myelin damage, which causes neurologic deficits, such as neuropathy and ataxia.

**60. Sterile technique is used whenever:**

- A. Strict isolation is required
- B. Terminal disinfection is performed
- C. Invasive procedures are performed
- D. Protective isolation is necessary

**Correct Answer: C. Invasive procedures are performed**

All invasive procedures, including surgery, catheter insertion, and administration of parenteral therapy, require a sterile technique to maintain a sterile environment. All equipment must be sterile, and the nurse and the physician must wear sterile gloves and maintain surgical asepsis. In the operating room, the nurse and physician are required to wear sterile gowns, gloves, masks, hair covers, and shoe covers for all invasive procedures.

- **Option A:** Strict isolation requires the use of clean gloves, masks, gowns, and equipment to prevent the transmission of highly communicable diseases by contact or by airborne routes. Strict isolation is used for diseases spread through the air and in some cases by contact. Patients must be placed in isolation to prevent the spread of infectious diseases. Those who are kept in strict isolation are often kept in a special room at the facility designed for that purpose.
- **Option B:** Terminal disinfection is the disinfection of all contaminated supplies and equipment after a patient has been discharged to prepare them for reuse by another patient. Terminal disinfection has the objective of preparing complete rooms or areas for subsequent patients or residents for them to be treated or cared for without the risk of acquiring an infection. This disinfection measure is applied in rooms and areas where an infected or colonized patient/resident has been cared for or treated. Depending on the existing disease or type of pathogen all near-patient surfaces/objects or all accessible surfaces (e.g. also floors or walls) are to be disinfected.
- **Option D:** The purpose of protective (reverse)isolation is to prevent a person with seriously impaired resistance from coming into contact with potentially pathogenic organisms. Protective Isolation aims to protect an immunocompromised patient who is at high risk of acquiring micro-organisms from either the environment or from other patients, staff, or visitors.

**61. Effective handwashing requires the use of:**

- A. Soap or detergent to promote emulsification.
- B. Hot water to destroy bacteria.
- C. A disinfectant to increase surface tension.
- D. All of the above.

**Correct Answer: A. Soap or detergent to promote emulsification.**

Soaps and detergents are used to help remove bacteria because of their ability to lower the surface tension of water and act as emulsifying agents. Handwashing is the act of washing hands with soap, either antimicrobial or non antimicrobial, and water for at least 15 to 20 seconds with a vigorous motion to cause friction making sure to include all surfaces of the hands and fingers.

- **Option B:** Hot water may lead to skin irritation or burns. Warm water would be enough for handwashing. Healthcare professionals caring for high-risk patients that are immunocompromised must take great care in performing proper hand hygiene as this patient population is at high risk for opportunistic infections
- **Option C:** Handwashing with soap and water will remove nearly all transient gram-negative bacilli in 10 seconds while chlorhexidine may be more appropriate than soap and water for the removal of transient gram-positive bacteria. According to the CDC, established guidelines recommend that agents used for surgical hand scrubs should reduce microorganisms on intact skin in a substantial manner, contain a nonirritating antimicrobial preparation, have broad-spectrum activity, and be fast-acting and persistent.
- **Option D:** Hand hygiene practices are paramount in reducing cross-transmission of microorganisms, hospital-acquired infections and the risk of occupational exposure to infectious diseases. According to the CDC, understanding the importance of hand hygiene and its impact on the pathogenic spread of microorganisms is best understood when one understands the anatomy of the skin. The skin serves as a protective barrier against water loss, heat loss, microorganisms, and other environmental hazards.

**62. A client is at risk for pulmonary embolism and is on anticoagulant therapy with warfarin (Coumadin). The client's prothrombin time is 20 seconds, with a control of 11 seconds. The nurse assesses that this result is:**

- A. The same as the client's own baseline level.
- B. Lower than the needed therapeutic level.
- C. Within the therapeutic range.
- D. Higher than the therapeutic range.

**Correct Answer: C. Within the therapeutic range.**

The therapeutic range for prothrombin time is 1.5 to 2 times the control for clients at risk for thrombus. Based on the client's control value, the therapeutic range for this individual would be 16.5 to 22 seconds. Therefore the result is within the therapeutic range. PT measures the time, in seconds, for plasma to clot after adding thromboplastin, (a mixture of tissue factor, calcium, and phospholipid) to a patient's plasma sample.

- **Option A:** Many different preparations of thromboplastin reagents are available which can give different PT results even when using the same plasma. Due to this variability, the World Health Organization (WHO) introduced the international normalized ratio (INR) and has become the standard reporting format for PT results.
- **Option B:** The reference ranges for PT vary by laboratory since different facilities use reagents or instruments. However, in most laboratories, the normal range for PT is 10 to 13 seconds. The normal INR for a healthy individual is 1.1 or below, and the therapeutic range for most patients on VKAs is an INR of 2.0 to 3.0.
- **Option D:** An increased PT/INR for patients on VKAs may suggest a super-therapeutic level and will require medication dose adjustments to prevent bleeding. As the use of VKAs increases, it is vital to educate patients on the importance of routine monitoring of PT/INR. Proper monitoring will allow for medication adjustments and prevention of adverse events.

**63. The nurse is monitoring a client receiving peritoneal dialysis and the nurse notes that a client's outflow is less than the inflow. Which of the following actions will the nurse take. Select all that apply.**

- A. Place the client in good body alignment.
- B. Check the level of the drainage bag.
- C. Contact the physician.
- D. Check the peritoneal dialysis system for kinks.
- E. Reposition the client to his or her side.

**Correct Answers: A, B, D, & E.**

Maintain a record of inflow and outflow volumes and cumulative fluid balance. In most cases, the amount drained should equal or exceed the amount instilled. A positive balance indicates a need of further evaluation.

- **Option A:** If outflow drainage is inadequate, the nurse attempts to stimulate outflow by changing the client's position. Assess the patency of catheter, noting difficulty in draining. Note the presence of fibrin strings and plugs. Slowing of flow rate and presence of fibrin suggests partial catheter occlusion requiring further evaluation and intervention.
- **Option B:** The drainage bag needs to be lower than the client's abdomen to enhance gravity drainage. Improper functioning of equipment may result in retained fluid in the abdomen and insufficient clearance of toxins.
- **Option C:** There is no reason to contact the physician. Evaluate development of tachypnea, dyspnea, increased respiratory effort. Drain dialysate, and notify the physician. Abdominal distension and diaphragmatic compression may cause respiratory distress.
- **Option D:** The connecting tubing and the peritoneal dialysis system is also checked for kinks or twisting and the clamps on the system are checked to ensure that they are open. Check tubing for kinks; note placement of bottles and bags. Anchor catheter so that adequate inflow/outflow is achieved.
- **Option E:** Turning the client to the other side or making sure that the client is in good body alignment may assist with outflow drainage. Turn from side to side, elevate the head of the bed, apply gentle pressure to the abdomen. May enhance outflow of fluid when the catheter is malpositioned and obstructed by the omentum.

**64. During the acute phase, the nurse applied gentamicin sulfate (topical antibiotic) to the burn before dressing the wound. The client has all the following manifestations. Which manifestation indicates that the client is having an adverse reaction to this topical agent?**

- A. Increased wound pain 30 to 40 minutes after drug application
- B. Presence of small, pale pink bumps in the wound beds
- C. Decreased white blood cell count
- D. Increased serum creatinine level

**Correct Answer: D. Increased serum creatinine level**

Gentamicin does not stimulate pain in the wound. The small, pale pink bumps in the wound bed are areas of re-epithelialization and not an adverse reaction. Gentamicin is nephrotoxic and sufficient amounts can be absorbed through burn wounds to affect kidney function. Any client receiving gentamicin by any route should have kidney function monitored.

- **Option A:** Gentamicin does not stimulate pain in the wound. The gentamicin is prone to accumulate in the renal proximal tubular cells and can cause damage. Hence, mild proteinuria and reduction of the glomerular filtration rate are potential consequences of gentamicin use, achieving 14% of gentamicin users in a review.
- **Option B:** The small, pale pink bumps in the wound bed are areas of re-epithelialization and not an adverse reaction. Renal function should be evaluated twice-weekly in patients without previous renal disease through serum creatinine and blood urea nitrogen. Periodic microscopic urinalysis is also vital to detect proteinuria and casts, which may indicate kidney injury.
- **Option C:** The possible hypersensitivity manifestations of gentamicin are urticaria, eosinophilia, delayed-type hypersensitivity reaction (Stevens-Johnson syndrome and toxic epidermal necrolysis), angioedema, and anaphylactic shock. The clinical manifestations should guide the treatment strategy.

**65. Which of the following is the primary goal for surgical resection of lung cancer?**

- A. To remove all of the tumor and any collapsed alveoli in the same region
- B. To remove as much as the tumor as possible, without removing any alveoli
- C. To remove the tumor and as little surrounding tissue as possible
- D. To remove the tumor and all surrounding tissue

**Correct Answer: C. To remove the tumor and as little surrounding tissue as possible**

- **Option C:** The goal of surgical resection is to remove the lung tissue that has a tumor in it while saving as much surrounding tissue as possible. There is a possibility of cancer cells remaining in the body after the operation so additional treatment modalities such as chemotherapy and radiation therapy are done.
- **Options A, B, and D:** It may be necessary to remove alveoli and bronchioles, but care is taken to make sure only what's absolutely necessary is removed.



**66. The nurse is suspected of charting medication administration that he did not give. After talking to the nurse, the charge nurse should:**

- A. Call the Board of Nursing
- B. File a formal reprimand
- C. Terminate the nurse
- D. Charge the nurse with a tort

**Correct Answer: B. File a formal reprimand**

The next action after discussing the problem with the nurse is to document the incident by filing a formal reprimand. As a rule of thumb, nurses should avoid making assumptions when they notice gaps or missing information in a patient's treatment documentation. Healthcare professionals have exceedingly demanding schedules, but it's always better to take the time and double-check the details than to make assumptions and be wrong.

- **Option A:** If the behavior continues, the nurse should be reported to the Board of Nursing. Understanding these realities can add hours to the day, so the practical approach is to be strategic with efforts. Look for efficiency, work with colleagues, and use best judgment and ingenuity to find ways to get everything done while still doing it right. It's not easy, but it's also not impossible.
- **Option C:** If the behavior continues or if harm has resulted to the client, the nurse may be terminated, but these are not the first actions requested in the stem. Details save lives, and consistently getting them right is what makes people feel safe when they go to the doctor. Moreover, it's also what keeps nurses from having to defend their actions in a courtroom someday.
- **Option D:** A tort is a wrongful act to the client or his belongings and is not indicated in this instance. A tort is a civil wrong that causes harm to another person by violating a protected right. A civil wrong is an act or omission that is intentional, accidental, or negligent, other than a breach of contract. The specific rights protected give rise to the unique "elements" of each tort. Tort requires the presence of four elements that are the essential facts required to prove a civil wrong.

**67. Nurse Kerrick observes Toni who is hospitalized on an eating disorder unit during mealtimes and for 1 hour after eating. An explanation for this intervention is:**

- A. To develop a trusting relationship.
- B. To maintain focus on the importance of nutrition.
- C. To prevent purging behaviors.
- D. To reinforce the behavioral contact.

**Correct Answer: C. To prevent purging behaviors.**

Toni may experience increased anxiety during treatment and, therefore, may resume behaviors designed to prevent weight gain, such as vomiting or excessive exercise. Supervise the patient during mealtimes and for a specified period after meals (usually one hour). This prevents vomiting during or after eating. Avoid room checks and other control devices whenever possible. External control reinforces feelings of powerlessness and therefore is usually not helpful.

- **Option A:** Use a consistent approach. Sit with the patient while eating; present and remove food without persuasion and comment. Promote a pleasant environment and record intake. Patient

detects urgency and may react to pressure. Any comment that might be seen as coercion provides focus on food. When staff responds in a consistent manner, the patient can begin to trust staff responses. The single area in which the patient has exercised power and control is food or eating, and he or she may experience guilt or rebellion if forced to eat. Structuring meals and decreasing discussions about food will decrease power struggles with the patient and avoid manipulative games.

- **Option B:** Establish a minimum weight goal and daily nutritional requirements. Malnutrition is a mood-altering condition, leading to depression and agitation and affecting cognitive function and decision-making. Improved nutritional status enhances thinking ability, allowing initiation of psychological work. Make a selective menu available, and allow the patient to control choices as much as possible. Patient who gains confidence in herself and feels in control of the environment is more likely to eat preferred foods.
- **Option D:** Maintain a regular weighing schedule, such as Monday and Friday before breakfast in the same attire, and graph results. Provides an accurate ongoing record of weight loss or gain. Also diminishes obsessing about changes in weight. Weigh with back to scale (depending on program protocols). Although some programs prefer the patient to see the results of the weighing, this can force the issue of trust in the patient who usually does not trust others.

**68. Within three (3) minutes after birth the normal heart rate of the infant may range between:**

- A. 100 and 180
- B. 130 and 170
- C. 120 and 160
- D. 100 and 130

**Correct Answer: C. 120 and 160.**

- **Option C:** The heart rate varies with activity; crying will increase the rate, whereas deep sleep will lower it; a rate between 120 and 160 is expected.

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

- A. Pear
- B. Apple
- C. Orange
- D. Avocado

**Correct Answer: D. Avocado**

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

- Option C: An orange contains 235 mg of potassium.

**70. Mr. Lim who is diagnosed with moderate dementia has frequent catastrophic reactions during shower time. Which of the following interventions should be implemented in the plan of care? Select all that apply.**

- A. Assign consistent staff members to assist the client.
- B. Accomplish the task quickly, with several staff members assisting.
- C. Schedule the client's shower at the same time of day.
- D. Sedate the client 30 minutes prior to showering.
- E. Tell the client to remain calm while showering.
- F. Use a calm, supportive, quiet manner when assisting the client.

**Answer: A, C, and F**

Maintaining a consistent routine with the same staff members will help decrease the client's anxiety that occurs whenever changes are made. A calm, quiet manner will be reassuring to the client, also helping to minimize anxiety. Maintain a regular daily schedule routine to prevent problems that may result from thirst, hunger, lack of sleep, or inadequate exercise. Limit decisions that the patient makes. Be supportive and convey warmth and concern when communicating with the patient. The patient may be unable to make even the simplest choice decisions and this will result in frustration and distraction. By avoiding this, the patient has an increased feeling of security. Patients frequently have feelings of loneliness, isolation and depression, and they respond positively to a smile, friendly voice, and gentle touch.

- **Option B:** Moving quickly with several staff members will increase the client's anxiety and may precipitate a catastrophic reaction. Assess a patient's ability to cope with events, interests in surroundings and activity, motivation, and changes in memory pattern. The elderly may have a decrease in memory for more recent events and more active memory for past events and more active memory for past events and reminisce about the pleasant ones. The patient may exhibit assertiveness or aggressiveness to compensate for feelings of insecurity, or develop more narrowed interests and have difficulty accepting changes in lifestyle.
- **Option D:** The use of sedation is not indicated and may increase the risk of client injury from the side effect of drowsiness. Assess and identify a patient's previous history of grooming and bathing, and attempt to maintain similar care. Promotes familiarity with routine bathing time and type of bath or shower, and lessens further confusion and agitation. Ensure all needed items are present in the bathroom prior to the patient's arrival. Ensure that water temperature in the tube is appropriate. Prevents the need to leave the patient unattended, which may result in injury. Elderly are easily child and have fragile skin that is susceptible to scalding.
- **Option E:** Telling the client to remain calm is inappropriate because a client with dementia cannot respond to such a direction. Divert attention to a client when agitated or dangerous behaviors like getting out of bed by climbing the fence bed to promote safety and prevent risk for injury. Eliminate or minimize sources of hazards in the environment. Maintain security by avoiding a confrontation that could improve the behavior or increase the risk for injury.

**71. The high-pressure alarm on a patient's ventilator goes off. When you enter the room to assess the patient, who has ARDS, the oxygen saturation monitor reads 87% and the patient is struggling to sit up. Which action should you take**

**next?**

- A. Reassure the patient that the ventilator will do the work of breathing for him.
- B. Manually ventilate the patient while assessing possible reasons for the high-pressure alarm.
- C. Increase the fraction of inspired oxygen on the ventilator to 100% in preparation for endotracheal suctioning.
- D. Insert an oral airway to prevent the patient from biting on the endotracheal tube.

**Correct Answer: B. Manually ventilate the patient while assessing possible reasons for the high-pressure alarm**

Manual ventilation of the patient will allow you to deliver a FiO<sub>2</sub> of 100% to the patient while you attempt to determine the cause of the high-pressure alarm. Proper ventilation techniques with the BVM should consider safe ventilation parameters for each individual patient and their conditions.

- **Option A:** The patient may need reassurance, but this is not the priority nursing intervention. Indicators of appropriate ventilation include but are not limited to patient chest rise, skin color, electronic vital sign monitoring, resistance on bag squeeze according to patient lung pathology, CO<sub>2</sub> monitoring, and a flashing light on the BVM for rate of breath delivery.
- **Option C:** Excessive volume, pressure or flow may result in morbidity from lung damage, stomach insufflation, or hemodynamic and pulmonary compromise. Lower tidal volumes are needed in ARDS to prevent regional overdistension.
- **Option D:** The patient may need insertion of an oral airway, but the first step should be an assessment of the reason for the high-pressure alarm and resolution of the hypoxemia. PEEP (5–20?cmH<sub>2</sub>O) is a key element of protective ventilation and is routinely applied in all patients with ARDS to facilitate adequate oxygenation and maintain alveolar recruitment.

**72. In clients with a cognitive impairment disorder, the phenomenon of increased confusion in the early evening hours is called:**

- A. Aphasia
- B. Agnosia
- C. Sundowning
- D. Confabulation

**Correct Answer: C. Sundowning**

Sundowning is a common phenomenon that occurs after daylight hours in a client with a cognitive impairment disorder. The term “sundowning” refers to a state of confusion occurring in the late afternoon and spanning into the night. Sundowning can cause a variety of behaviors, such as confusion, anxiety, aggression or ignoring directions. Sundowning can also lead to pacing or wandering. The other options are incorrect responses, although all may be seen in this client.

- **Option A:** Aphasia is a condition that robs you of the ability to communicate. It can affect your ability to speak, write and understand language, both verbal and written. Aphasia typically occurs suddenly after a stroke or a head injury. But it can also come on gradually from a slow-growing brain tumor or a disease that causes progressive, permanent damage (degenerative). The severity of aphasia depends on a number of conditions, including the cause and the extent of the brain damage.

- **Option B:** Agnosia is a rare disorder whereby a patient is unable to recognize and identify objects, persons, or sounds using one or more of their senses despite otherwise normally functioning senses. The deficit cannot be explained by memory, attention, language problems, or unfamiliarity to the stimuli. Usually, one of the sensory modalities is affected.
- **Option D:** Confabulation is a type of memory error in which gaps in a person's memory are unconsciously filled with fabricated, misinterpreted, or distorted information. When someone confabulates, they are confusing things they have imagined with real memories. A person who is confabulating is not lying. They are not making a conscious or intentional attempt to deceive. Rather, they are confident in the truth of their memories even when confronted with contradictory evidence.

**73. Before administering the evening dose of a prescribed medication, the nurse on the evening shift finds an unlabeled, filled syringe in the patient's medication drawer. What should the nurse in charge do?**

- A. Discard the syringe to avoid a medication error.
- B. Obtain a label for the syringe from the pharmacy.
- C. Use the syringe because it looks like it contains the same medication the nurse was prepared to give.
- D. Call the day nurse to verify the contents of the syringe.

**Correct Answer: A. Discard the syringe to avoid a medication error.**

As a safety precaution, the nurse should discard an unlabeled syringe that contains medication. The other options are considered unsafe because they promote error.

- **Option B:** Since there are no labels on the syringe, obtaining a label from the pharmacy does not guarantee that they would be able to identify the medication inside the syringe.
- **Option C:** Giving an unidentified medication could cause unwanted effects on the patient instead of desired effects.
- **Option D:** The day nurse would not be able to guarantee that she could identify the medication without its label.

**74. A nurse is managing the care of a 32-year-old female client diagnosed with hyperthyroidism. The client reports experiencing palpitations, unintentional weight loss, and intermittent bouts of excessive sweating. The treatment plan includes antithyroid medications. In addition to administering medication, what nursing interventions should be prioritized to manage the client's condition best?**

- A. Ensure the client is provided with extra blankets and clothing to maintain a warm environment due to heightened sensitivity to cold.
- B. Closely monitor the client for increased signs of restlessness, sweating, and significant weight loss.
- C. Create a balance between the client's periods of activity and rest to manage fatigue without exacerbating symptoms.

- D. Encourage increased physical activity to counteract the sedative effects of the medication and prevent constipation.
- E. Regularly check the client's temperature as they are prone to developing fevers.
- F. Offer a low-iodine diet and coordinate with a dietitian to manage dietary influences on thyroid function.

**Correct Answer: C. Create a balance between the client's periods of activity and rest to manage fatigue without exacerbating symptoms.**

Clients with hyperthyroidism may experience symptoms like fatigue and muscle weakness. Balancing activity with rest helps to conserve energy and prevent exacerbation of symptoms.

- **Option A:** Providing extra blankets is more associated with patients with hypothyroidism.
- **Option B:** Monitoring for signs of restlessness and sweating is essential, but this option refers more to the assessment of potential overmedication rather than an intervention.
- **Option D:** Encouraging the client to be active to prevent constipation (D) is less specific to hyperthyroidism, where diarrhea is more common than constipation.
- **Options E and F:** Checking for fever (E) and offering a low-iodine diet (F) are additional supportive measures. However, they do not directly address managing the client's current symptoms and treatment plan as effectively as balancing activity and rest.

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

- A. Carbon dioxide
- B. Bicarbonate
- C. Hydrogen
- D. pH

**Correct Answer: A. Carbon dioxide**

The gases measured by ABGs are oxygen and carbon dioxide. Bicarbonate and hydrogen are ions; their ratio is measured in the pH. An arterial blood gas (ABG) tests explicitly blood taken from an artery. ABG analysis assesses a patient's partial pressure of oxygen (PaO<sub>2</sub>) and carbon dioxide (PaCO<sub>2</sub>).

- **Option B:** The measured HCO<sub>3</sub> uses a strong alkali that liberates all CO<sub>2</sub> in serum, including dissolved CO<sub>2</sub>, carbamino compounds, and carbonic acid. The calculation only accounts for dissolved CO<sub>2</sub>; this measurement using a standard chemistry analysis will likely be called a "total CO<sub>2</sub>".
- **Option C:** Hydrogen is not present in blood as gas and, therefore, does not exert partial pressure. However, pH, which measures hydrogen ion activity, is a conventional part of every arterial blood gas determination. The normal range for blood pH is 7.35 to 7.45.
- **Option D:** The pH electrode measures the potential difference between a measuring electrode (which contains the sample in contact with a special glass membrane permeable only to H<sup>+</sup> ions) and a reference electrode (which has a known, stable pH). From the voltage across these electrodes, the sample pH is calculated.

**76. The lower limit of viability for infants in terms of age of gestation is:**

- A. 21-24 weeks
- B. 25-27 weeks
- C. 28-30 weeks
- D. 38-40 weeks

**Correct Answer: A. 21-24 weeks**

Viability means the capability of the fetus to live/survive outside of the uterine environment. With the present technological and medical advances, 21 weeks AOG is considered as the minimum fetal age for viability.

- **Option B:** Fetal viability is a major issue that is dependent on the evolution and progress of modern neonatology (Beauthier, 2007). It is generally accepted that a 28-week-old fetus that doesn't need resuscitation is viable. However, according to WHO, fetal viability is possible after 20 weeks of fetal life (22 weeks of amenorrhea).
- **Option C:** A simple way to calculate fetal age (in lunar months) is to divide the fetal length (in cm) by 4 for fetuses less than 5 months' gestation. If it is less than 5 months' gestation the length (in cm) is divided by 5.
- **Option D:** Anthropometric measurements collected during examination of the fetus are used to estimate its age more accurately (Beauthier, 2011b). Three types of data can be gathered from radiologic investigations: direct fetal age estimation from measurement of the length of long bones; fetal age estimation from measurement of the long bones and calculation of fetal stature (crown–heel or crown-rump length); and a more difficult method involving the degree of deciduous teeth calcification; this method requires the conservation of dental crowns.

**77. Ethical principles for professional nursing practice in a clinical setting are guided by the principles of conduct that are written as the:**

- A. American Nurses Association's (ANA's) Code of Ethics
- B. Nurse Practice Act (NPA) written by state legislation
- C. Standards of care from experts in the practice field
- D. Good Samaritan laws for civil guidelines

**Correct Answer: A. American Nurses Association's (ANA's) Code of Ethics**

This set of ethical principles provides the professional guidelines established by the ANA to maintain the highest standards for ideal conduct in practice. As a profession, the ANA wanted to establish rules and then incorporate guidelines for accountability and responsibility of each nurse within the practice setting.

- **Option B:** Every state and territory in the US sets laws to govern the practice of nursing. These laws are defined in the Nursing Practice Act (NPA). The NPA is then interpreted into regulations by each state and territorial nursing board with the authority to regulate the practice of nursing care and the power to enforce the laws. Fifty states, the District of Columbia and 4 United States (US) territories, have state boards of nursing (BON) that are responsible for regulating their individual NPA.
- **Option C:** Professional standards describe the competent level of care in each phase of the nursing process. They reflect a desired and achievable level of performance against which a nurse's actual performance can be compared. The main purpose of professional standards is to

direct and maintain a safe and clinically competent nursing practice.

- **Option D:** Good Samaritan laws have their basis on the idea that consensus agreement favors good “public policy” to limit liability for those who voluntarily perform care and rescue in emergency situations. It is well known that medical emergencies outside of the umbrella “medical setting” or “clinical environment” are common.

**78. The nurse is assigned to care for the client with a Steinmann pin. During pin care, she notes that the LPN uses sterile gloves and Q-tips to clean the pin. Which action should the nurse take at this time?**

- A. Assisting the LPN with opening sterile packages and peroxide.
- B. Telling the LPN that clean gloves are allowed.
- C. Telling the LPN that the registered nurse should perform pin care.
- D. Asking the LPN to clean the weights and pulleys with peroxide.

**Correct Answer: A. Assisting the LPN with opening sterile packages and peroxide**

The nurse is performing the pin care correctly when she uses sterile gloves and Q-tips. All pins and wire sites must be cleaned daily. Basic pin care will be performed once daily by the hospital nursing staff prior to discharge from the hospital. Following discharge, the patient and family will go to the clinic for pin care teaching and instructions.

- **Option B:** During pin care, the sterile technique is utilized and sterile gloves are needed. The approach to pin care should occur in a stepwise fashion. If step one is effective there is no need to go further and pins can be wrapped with gauze. If step one is not effective, please continue until effective pin care has been achieved.
- **Option C:** A licensed practical nurse can perform pin care. Pin care is recommended during showers, after pool therapy, or swimming in the pool or ocean (ocean saltwater is good for pin sites). Ideally, pin sites are cleaned when the surrounding skin and gauze are soft. This should make removal of gauze and cleaning of pins less painful.
- **Option D:** There is no need to clean the weights. The purpose of the cleaning is to prevent the skin from attaching to the pins and wires and to clean and inspect the area to decrease the chance of infection.

**79. Which of the following signs and symptoms would Nurse Maureen include in her teaching plan as an early manifestation of laryngeal cancer?**

- A. Stomatitis
- B. Airway obstruction
- C. Hoarseness
- D. Dysphagia

**Correct Answer: C. Hoarseness**

Early warning signs of laryngeal cancer can vary depending on tumor location. Hoarseness lasting 2 weeks should be evaluated because it is one of the most common warning signs. Patients are typically male with a history of current or past tobacco smoking. Hoarseness is often an early presenting



symptom of glottic cancers due to vocal cord immobility or fixation, with pain with swallowing and referred ear pain indicating advanced disease.

- **Option A:** Stomatitis is one of the early signs of oral cancer. Oral mucosal cancer presents clinically in various ways depending on its location. Early disease may manifest as irregular white, red, or mixed patches on the mucosa. More established cancers appear as an indurated raised nodule, often with an ulcerated surface that may cause little pain.
- **Option B:** Airway obstruction occurs in the late stage, when the swelling or lump in the neck increases in size, enough to obstruct the larynx. Nodal metastases present as fixed, firm, painless masses in the neck. Late symptoms across all subsites include weight loss, dysphagia, aspiration, and its sequelae, and airway compromise. The most crucial component of a physical examination is an invasive assessment of the primary lesion, including indirect laryngoscopy, mirror exam, and often fiberoptic endoscopy.
- **Option D:** Dysphagia is one of the symptoms of laryngeal cancer, but it does not occur in the early stages. The majority of patients first present with hoarseness, otalgia, dysphagia and weight loss to the nurse practitioner or primary care provider. Patients are typically male with a history of current or past tobacco smoking. A referral to an ENT surgeon should be made if the hoarseness is prolonged and associated with other features indicating a malignancy.

**80. A client was brought to the ED due to an abdominal trauma caused by a motorcycle accident. During the assessment, the client complains of epigastric pain and back pain. Which of the following is true regarding the diagnosis of pancreatic injury?**

- A. Redness and bruising may indicate the site of the injury in blunt trauma
- B. The client is symptom-free during the early post-injury period
- C. Signs of peritoneal irritation may indicate pancreatic injury
- D. All of the above

**Correct Answer: D. All of the above**

Blunt injury resulting from vehicular accidents could cause pancreatic injury. Redness, bruising in the flank and severe peritoneal irritation are signs of a pancreatic injury. The client is usually pain-free during the early post-injury period, hence a comprehensive assessment and monitoring should be done.

- **Option A:** Pancreatic injury is hidden in the shadows of coexisting intraabdominal injuries and its inherent retroperitoneal location. Symptoms of radiating epigastric pain to the back, nausea, and vomiting are also seen with the more commonly injured adjacent viscera. An abdominal exam is reported to have a false negative rate of 34% on initial evaluation.
- **Option B:** Traumatic pancreatitis can be a difficult diagnosis to make and requires meticulous investigation. Damage to the pancreas is not very common and is seldom a solitary insult. As the signs and symptoms are nonspecific, a high index of suspicion is necessary to prevent delayed diagnosis.
- **Option C:** Other complications include pancreatic pseudocyst which is a circumscribed collection of enzymes, blood, and necrotic tissue. Less frequent complications include peritonitis, intestinal obstruction, and gastrointestinal bleeding. Pancreatic trauma can disrupt the endocrine function for patients as well.

**81. Continuous positive airway pressure (CPAP) can be provided through an oxygen mask to improve oxygenation in hypoxic patients by which of the following methods? A. The mask provides 100% oxygen to the client.**

- A. The mask provides 100% oxygen to the client.
- B. The mask provides continuous air that the client can breathe.
- C. The mask pressurizes at the end of expiration to open collapsed alveoli.
- D. The mask provides pressurized oxygen so the client can breathe more easily.

**Correct Answer: D. The mask provides pressurized oxygen so the client can breathe more easily.**

The mask provides pressurized oxygen continuously through both inspiration and expiration. Continuous positive airway pressure (CPAP) is a type of positive airway pressure that is used to deliver a set pressure to the airways that is maintained throughout the respiratory cycle, during both inspiration and expiration.

- **Option A:** The mask can be set to deliver any amount of oxygen needed. CPAP therapy utilizes machines specifically designed to deliver a flow of constant pressure. Some CPAP machines have other features as well, such as heated humidifiers. Components of a CPAP machine include an interface for delivering CPAP.
- **Option B:** By providing the client with pressurized oxygen, the client has less resistance to overcome in taking his next breath, making it easier to breathe. Continuous positive airway pressure (CPAP) is a type of positive airway pressure, where the air flow is introduced into the airways to maintain a continuous pressure to constantly stent the airways open, in people who are breathing spontaneously.
- **Option C:** Pressurized oxygen delivered at the end of expiration is positive end-expiratory pressure (PEEP), not continuous positive airway pressure. Positive end-expiratory pressure (PEEP) is the pressure in the alveoli above atmospheric pressure at the end of expiration. CPAP is a way of delivering PEEP but also maintains the set pressure throughout the respiratory cycle, during both inspiration and expiration.

**82. A nurse is preparing to change the parenteral nutrition (PN) solution bag and tubing. The client's central venous line is located in the right subclavian vein. The nurse asks the client to take which essential action during the tube change?**

- A. Turn the head to the right.
- B. Inhale deeply, hold it, and bear down.
- C. Breathe normally.
- D. Exhale slowly and evenly.

**Correct Answer: B. Inhale deeply, hold it, and bear down.**

The client should be asked to perform the Valsalva maneuver during tubing changes. This helps avoid air embolism during tube changes. The nurse asks the client to take a deep breath, hold it, and bear down. Make sure all connections are clamped and closed. Clamp catheter, position patient in left Trendelenburg position, call health care provider, and administer oxygen as needed.

- **Option A:** Option A is incorrect because if the intravenous line is on the right, the client turns his or head to the left. This position increases intrathoracic pressure. Central line management is a crucial skill that is necessary on a routine basis to help lessen or prevent catheter-based infections and complications. Initial placement of central lines is typically by trained physicians, physician assistants, and nurse practitioners in a sterile fashion.
- **Option C:** An air embolism may occur if IV tubing disconnects and is open to air, or if part of the catheter system is open or removed without being clamped. Symptoms include sudden respiratory distress, decreased oxygen saturation levels, shortness of breath, coughing, chest pain, and decreased blood pressure.
- **Option D:** Exhaling can cause the potential for an air embolism during the tube change. Routine evaluation by every team member will ensure that appropriate handling and care of the central line is being performed to help reduce the risk of catheter-associated complications.

**83. Which client situation requires the nurse to discuss the importance of avoiding foods high in potassium?**

- A. A 14-year-old who is taking diuretics.
- B. A 16-year-old with ileostomy.
- C. A 16-year-old with metabolic acidosis.
- D. An 18-year-old who has renal disease.

**Correct Answer: D. An 18-year-old who has renal disease.**

Clients with renal disease are predisposed to hyperkalemia and should avoid foods high in potassium. Clients receiving diuretics, with ileostomies, or with metabolic acidosis may be hypokalemic and should be encouraged to eat foods high in potassium. Encourage intake of carbohydrates and fats and low potassium food such as pineapple, plums, strawberries, carrots, cauliflower, corn, and whole grains. Reduces exogenous sources of potassium and prevents metabolic tissue breakdown with the release of cellular potassium.

- **Option A:** A client receiving diuretics may be hypokalemic. Encourage high potassium diet such as oranges, bananas, tomatoes, coffee, red meat, and dried fruits. Discuss the use of potassium chloride salt substitutes for a client receiving long-term diuretics.
- **Option B:** Patients with ileostomies may have hypokalemia. Potassium may be replaced and level maintained through the diet when the client is allowed oral food and fluids. Dietary replacement of 40 to 60 mEq/L/day is usually sufficient if no abnormal losses are happening.
- **Option C:** Patients with metabolic disease may be hypokalemic. Note for signs of metabolic alkalosis such as tachycardia, dysrhythmias, hypoventilation, tetany, and changes in mentation. These are usually associated with hypokalemia.

**84. A nurse is developing a care plan for a client suffering from shingles. Which of the following cranial nerve should the nurse assess as part of the client's care?**

- A. Cranial nerve number I
- B. Cranial nerve number IV
- C. Cranial nerve number VII

D. Cranial nerve number XI

**Correct Answer: C. Cranial nerve number VII**

A potential complication of shingles is Bell's palsy which can be assessed by the seventh cranial nerve function.

**85. Which development milestone puts the 4-month-old infant at greatest risk for injury?**

- A. Switching objects from one hand to another
- B. Crawling
- C. Standing
- D. Rolling over

**Correct Answer: D. Rolling over**

- Option D: At 4 months of age, the infant can roll over, which makes it vulnerable to falls from dressing tables or beds without rails.
- Option A: Switching objects from one hand to another does not prove a threat to safety.
- Options B and C: A 4-month-old is not capable of crawling or standing.

**86. Which statement regarding heart sounds is correct?**

- A. S1 and S2 sound equally loud over the entire cardiac area.
- B. S1 and S2 sound fainter at the apex.
- C. S1 and S2 sound fainter at the base.
- D. S1 is loudest at the apex, and S2 is loudest at the base.

**Correct Answer: D. S1 is loudest at the apex, and S2 is loudest at the base.**

The S1 sound—the “lub” sound—is loudest at the apex of the heart. It sounds longer, lower, and louder there than the S2 sounds. The S2—the “dub” sound—is loudest at the base. It sounds shorter, sharper, higher, and louder there than S1. Heart sounds are created from blood flowing through the heart chambers as the cardiac valves open and close during the cardiac cycle. Vibrations of these structures from the blood flow create audible sounds — the more turbulent the blood flow, the more vibrations that get created.

- **Option A:** The S1 heart sound is produced as the mitral and tricuspid valves close in systole. This structural and hemodynamic change creates vibrations that are audible at the chest wall. The mitral valve closing is the louder component of S1. It also occurs sooner because of the left ventricle contracts earlier in systole.
- **Option B:** Changes in the intensity of S1 are more attributable to forces acting on the mitral valve. Such causes include a change in left ventricular contractility, mitral structure, or the PR interval. However, under normal resting conditions, the mitral and tricuspid sounds occur close enough together not to be discernible. The most common reasons for a split S1 are things that delay right ventricular contraction, like a right bundle branch block.

- **Option C:** The S2 heart sound is produced with the closing of the aortic and pulmonic valves in diastole. The aortic valve closes sooner than the pulmonic valve, and it is the louder component of S2; this occurs because the pressures in the aorta are higher than the pulmonary artery.

**87. A female client with chronic obstructive pulmonary disease (COPD) takes anhydrous theophylline, 200 mg P.O. every 8 hours. During a routine clinic visit, the client asks the nurse how the drug works. What is the mechanism of action of anhydrous theophylline in treating a nonreversible obstructive airway disease such as COPD?**

- A. It makes the central respiratory center more sensitive to carbon dioxide and stimulates the respiratory drive.
- B. It inhibits the enzyme phosphodiesterase, decreasing degradation of cyclic adenosine monophosphate, a bronchodilator.
- C. It stimulates adenosine receptors, causing bronchodilation.
- D. It alters diaphragm movement, increasing chest expansion and enhancing the lung's capacity for gas exchange.

**Correct Answer: A. It makes the central respiratory center more sensitive to carbon dioxide and stimulates the respiratory drive.**

Anhydrous theophylline and other methylxanthine agents make the central respiratory center more sensitive to CO<sub>2</sub> and stimulate the respiratory drive. Theophylline is indicated for the treatment of the symptoms and reversible airflow obstruction associated with chronic asthma and other chronic lung diseases, e.g., emphysema and chronic bronchitis.

- **Option B:** Inhibition of phosphodiesterase is the drug's mechanism of action in treating asthma and other reversible obstructive airway diseases — not COPD. At larger doses, theophylline inhibits phosphodiesterase causing increased cyclic adenosine monophosphate resulting in increased levels of adrenergic activation and catecholamine release.
- **Option C:** Methylxanthine agents inhibit rather than stimulate adenosine receptors. One mechanism is that theophylline blocks adenosine receptors, which has both therapeutic and toxic effects such as bronchodilation, tachycardia, cardiac arrhythmias, seizures, and cerebral vasoconstriction.
- **Option D:** Although these agents reduce diaphragmatic fatigue in clients with chronic bronchitis or emphysema, they don't alter diaphragm movement to increase chest expansion and enhance gas exchange. Theophylline causes endogenous release of catecholamines through indirect stimulation of beta-1 and beta-2 receptors, which at therapeutic levels cause desired bronchodilation.

**88. Situation: A 35-year-old male has an intense fear of riding an elevator. He claims "As if I will die inside." This has affected his studies The client is suffering from:**

- A. Agoraphobia
- B. Social phobia
- C. Claustrophobia
- D. Xenophobia

**Correct Answer: C. Claustrophobia**

Claustrophobia is fear of closed space. Claustrophobia is a type of specific phobia, where one has a fear of closed spaces. Examples of closed spaces are engine rooms, MRI machines, elevators, etc. Those with specific phobias generally will report avoidance behaviors regarding the particular object or situation that triggers their fear. The fear can be expressed as a danger of harm, disgust, or experience of the physical symptoms in a phobic scenario.

- **Option A:** Agoraphobia is fear of open space or being a situation where escape is difficult. Agoraphobia is the anxiety that occurs when one is in a public or crowded place, from which a potential escape is difficult, or help may not be readily available. It is characterized by the fear that a panic attack or panic-like symptoms may occur in these situations. Individuals with agoraphobia, therefore, strive to avoid such situations or locations.
- **Option B:** Social phobia is fear of performing in the presence of others in a way that will be humiliating or embarrassing. Social anxiety disorder (SAD) is characterized by excessive fear of embarrassment, humiliation, or rejection when exposed to possible negative evaluation by others when engaged in a public performance or social interactions. It is also known as social phobia. With the publication of DSM-5, the diagnostic criteria for SAD have been broadened from previous editions to include fear of acting in a way or show anxiety symptoms that offend others or lead to rejection in addition to fear of humiliation or embarrassment. Additionally, the latest edition of DSM removed the generalized subtype and added the “performance only” specifier.
- **Option D:** Xenophobia is fear of strangers. Xenophobia, or fear of strangers, is a broad term that may be applied to any fear of someone who is different from us. Hostility towards outsiders is often a reaction to fear. It typically involves the belief that there is a conflict between an individual’s ingroup and an outgroup. Xenophobia often overlaps with forms of prejudice including racism and homophobia, but there are important distinctions. Where racism, homophobia, and other forms of discrimination are based on specific characteristics, xenophobia is usually rooted in the perception that members of the outgroup are foreign to the ingroup community.

**89. Sonny, an African American noticed an appearance of a dark spot under a toenail. This is a typical presentation of what kind of melanoma?**

- A. Lentigo maligna
- B. Nodular melanoma
- C. Amelanotic melanoma
- D. Acral lentiginous melanoma

**Correct Answer: D. Acral lentiginous melanoma**

Acral lentiginous melanoma, the most common form of melanoma seen in people of color, usually appears in hard-to-spot places such as under the fingernails or toenails, on the palms of the hands, or soles of the feet.

- **Option A:** Lentigo maligna typically occurs on sun-damaged skin on the face, ears, arms, or upper torso.
- **Option B:** Nodular melanoma will have a tumor that grows rapidly deeper into the skin than any other type and is most frequently found on the torso, legs, and arms, as well as the scalp in older men.

- **Option C:** Amelanotic melanoma is a type of melanoma where the cancer cells do not produce melanin or pigment. It usually appears as a pink or red spot on the skin.

**90. A clinic patient has recently been prescribed nitroglycerin for treatment of angina. He calls the nurse complaining of frequent headaches. Which of the following responses to the patient is correct?**

- A. "Stop taking the nitroglycerin and see if the headaches improve."
- B. "Go to the emergency department to be checked because nitroglycerin can cause bleeding in the brain."
- C. "Headaches are a frequent side effect of nitroglycerine because it causes vasodilation."
- D. "The headaches are unlikely to be related to the nitroglycerin, so you should see your doctor for further investigation."

**Correct Answer: C. "Headaches are a frequent side effect of nitroglycerine because it causes vasodilation."**

Nitroglycerin is a potent vasodilator and often produces unwanted effects such as headache, dizziness, and hypotension. Headaches can be severe, throbbing, and persistent and may occur immediately after use. Many of these adverse effects are secondary to the hypotensive effects of nitroglycerin. Patients may report symptoms of orthostatic hypotension which manifest as dizziness, weakness, palpitations, and vertigo. Profound hypotension may occur in patients with preload-dependent conditions.

- **Option A:** Patients should be counseled, and the dose titrated, to minimize these effects. The patient should not stop the medication. No currently known antagonist is available to counteract the effect of nitroglycerin. Since the effects are related to venodilation and relative arterial hypovolemia, efforts to increase central fluid volume have proven to be effective.
- **Option B:** Nitroglycerine does not cause bleeding in the brain. Some patients can be more sensitive to the hypotension caused by nitrates, which can result in nausea, vomiting, diaphoresis, pallor, and collapse even at therapeutic doses.
- **Option D:** Headaches are one of the unwanted side effects of nitroglycerin. Syncope is the most dangerous adverse effect and can result in falls and their resultant injuries. The risk of syncope significantly increases with the concurrent use of a phosphodiesterase-5 (PDE-5) inhibitor.

**91. A 5-year-old client was admitted to the emergency unit due to the ingestion of an unknown amount of chewable vitamins for children at an unknown time. Upon assessment, the child is alert and with no symptoms. Which of the following information should be reported to the physician immediately?**

- A. The child was nauseated and vomited once at home
- B. The child has been treated several times for toxic substance ingestion
- C. The vitamin that was ingested contains iron
- D. The child has been treated multiple times for injuries caused by accidents

**Correct Answer: C. The vitamin that was ingested contains iron.**

Iron is a toxic substance that can lead to massive hemorrhage, shock, coma, and kidney failure. Iron poisoning is one of the most common toxic ingestion and one of the most deadly among children. Failure to diagnose and treat iron poisoning can have serious consequences including multi-organ failure and death.

- **Option A:** During the first stage (0.5 to 6 hours), the patient mainly exhibits gastrointestinal (GI) symptoms including abdominal pain, vomiting, diarrhea, hematemesis, and hematochezia. The second stage (6 to 24 hours) represents an apparent recovery phase, as the patient's GI symptoms may resolve despite toxic amounts of iron absorption.
- **Option B:** Patients who have GI symptoms that resolve after a short period of time and have normal vital signs require supportive care and an observation period, as it may represent the second stage of iron toxicity. Patients who remain asymptomatic 4 to 6 hours after ingestion or those who have not ingested a potentially toxic amount do not require any treatment for iron toxicity.
- **Option D:** This information needs further investigation but will not change the immediate diagnostic testing or treatment plan. Patients who have GI symptoms that resolve after a short period of time and have normal vital signs require supportive care and an observation period, as it may represent the second stage of iron toxicity.

**92. The client is admitted to the chemical dependence unit with an order for continuous observation. The nurse is aware that the doctor has ordered continuous observation because:**

- A. Hallucinogenic drugs create both stimulant and depressant effects.
- B. Hallucinogenic drugs induce a state of altered perception.
- C. Hallucinogenic drugs produce severe respiratory depression.
- D. Hallucinogenic drugs induce rapid physical dependence.

**Correct Answer: B. Hallucinogenic drugs induce a state of altered perception.**

Hallucinogenic drugs can cause hallucinations. Continuous observation is ordered to prevent the client from harming himself during withdrawal. Adverse effects are extremely subjective, with significant variability and unpredictability. One patient may experience a positive effect filled with bright hallucinations, sights and sensations, increased awareness owing to mind expansion, and marked euphoria. The positive spectrum of effects is colloquially called a "good trip."

- **Option A:** Another patient may experience the total opposite that is filled with increased anxiety becoming panic, fear, depression, despair, and disappointment. The negative spectrum is colloquially called a "bad trip." One patient can experience both the positive and negative spectrum at different times of use.
- **Option C:** Hallucinogenic drugs don't create both stimulant and depressant effects or produce severe respiratory depression. One of the more disturbing side effects of LSD is the flashback. Flashbacks can be induced by stress or fatigue and by using other drugs. Often a flashback of a "bad trip" can occur without warning, even if the patient was not currently under the influence of LSD.
- **Option D:** They do produce psychological dependence rather than physical dependence. Daily ingestion is almost impossible because it produces an absurd "good trip" or high, making abuse of LSD difficult. The dependence on LSD, therefore, is not from physical effects or cravings but psychological dependence or need.



**93. The nurse is monitoring a client with glaucoma. Which of the following drugs, if prescribed for the client, would the nurse question?**

- A. metipranolol (Optipranolol).
- B. brimonidine (Alphagan P).
- C. dorzolamide (Trusopt).
- D. atropine (Isopto Atropine).

**Correct Answer: D. Atropine (Isopto Atropine).**

Atropine (Isopto Atropine) is a mydriatic and is contraindicated with glaucoma because of the risk of increased ocular pressure.

- **Options A, B, & C:** These are used to treat glaucoma.

**94. The clinical instructor directed the student nurse to care for a client whose potassium is 6.7 mEq/L. Which intervention is delegated correctly to the student nurse?**

- A. Give potassium 10 mEq orally
- B. Give sodium polystyrene sulfonate (Kayexalate) 15 g orally
- C. Give spironolactone (Aldactone) 25 mg orally
- D. Assess the electrocardiogram (ECG) strip for tall T waves

**Correct Answer: B. Give sodium polystyrene sulfonate (Kayexalate) 15 g orally**

Delegation, supervision. The normal range for potassium is 3.5 to 5 mEq/L. The client's potassium level is high. Kayexalate eliminates potassium from the body through the gastrointestinal system. The right person must be assigned to the right tasks and jobs under the right circumstances. The nurse who assigns the tasks and jobs must then communicate with and direct the person doing the task or job.

- **Option A:** Giving additional potassium may further increase the serum potassium level. The registered nurse determines and analyzes all of the health care needs for a group of clients; the registered nurse delegates care that matches the skills of the person that the nurse is delegating to.
- **Option C:** Spironolactone is a potassium-sparing diuretic that may cause the client's potassium level to go even higher. The delegating registered nurse remains accountable for all client care despite the fact that some of these aspects of care can, and are, delegated to others.
- **Option D:** The beginning nursing student does not have the skill to assess ECG strips. Some client needs are relatively predictable; and other patient needs are unpredictable based on the changing status of the client. 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.

**95. Which of the following represents the average amount of weight gained during pregnancy?**

- A. 12 to 22 lb

- B 15 to 25 lb
- C. 24 to 30 lb
- D. 25 to 40 lb

**Correct Answer: C. 24 to 30 lb**

The average amount of weight gained during pregnancy is 24 to 30 lb. This weight gain consists of the following: fetus – 7.5 lb; placenta and membrane – 1.5 lb; amniotic fluid – 2 lb; uterus – 2.5 lb; breasts – 3 lb; and increased blood volume – 2 to 4 lb; extravascular fluid and fat – 4 to 9 lb.

- **Option A:** A gain of 12 to 22 lb is insufficient.
- **Option B:** Whereas a weight gain of 15 to 25 lb is marginal.
- **Option D:** A weight gain of 25 to 40 lb is considered excessive.

**96. A 25-year-old client comes to the outpatient unit with complaints of diarrhea, abdominal pain, shortness of breath, and epistaxis. Which action should the nurse take first?**

- A. Learn whether the client has had recommended immunizations.
- B. Ask the client about any recent travel to Asia or the Middle East.
- C. Have the client pinch the anterior nares firmly for 5 minutes.
- D. Request an ambulance to take the client quickly to the hospital.

**Correct Answer: B. Ask the client about any recent travel to Asia or the Middle East.**

Based on the client's manifestations, avian influenza ("bird flu") is suspected. Outbreaks of bird flu have occurred in Asia or the Middle East. Airborne and contact precautions should be instituted immediately. Although adapted to birds, and often causing only mild illness, avian influenza viruses can be extremely dangerous with successful transmission to humans with a high percentage of confirmed cases requiring hospitalization and frequently intensive care unit (ICU) care.

- **Option A:** Any patient hospitalized with a suspected or confirmed diagnosis of avian influenza should have an infectious disease consultation to better direct care and minimize complications. While the recommendations presented here are necessary for any patient with suspected avian influenza, an infectious disease consultant may be able to better direct treatment for specific avian influenza strains and manage treatment and patient expectations more appropriately.
- **Option C:** After isolating the client accordingly, management of epistaxis may be done. Treatment for anterior bleeding can be started with direct pressure for at least 10 minutes. Have the patient apply constant direct pressure by pinching the nose over the cartilaginous tip (instead of over the bony areas) for a few minutes to try to control the bleed.
- **Option D:** When an outbreak is identified, it is crucial for public health officials to identify at-risk populations and to inform the public of risk factors and ways to detect infection. Because the presence of deadly diseases in a community can incite fear and panic, announcements should include which populations are at low risk for contracting avian influenza.

**97. Which of the following symptoms might a client with right-sided heart failure exhibit?**

- A. Adequate urine output
- B. Polyuria
- C. Oliguria
- D. Polydipsia

**Correct Answer: C. Oliguria**

Inadequate deactivation of aldosterone by the liver after right-sided heart failure leads to fluid retention, which causes oliguria. Oliguria is a late finding in heart failure, and it is found in patients with markedly reduced cardiac output from severely reduced LV function. Nocturia may occur relatively early in the course of heart failure. Recumbency reduces the deficit in cardiac output in relation to oxygen demand, renal vasoconstriction diminishes, and urine formation increases.

- **Option A:** When the body thinks it needs more fluid in its blood vessels, it releases specific chemicals (renin, angiotensin, and aldosterone) that cause the blood vessels to constrict. In addition, these hormones cause the body to retain more sodium and water. This adds fluid to the circulatory system. This fluid becomes part of the blood circulating throughout the system.
- **Option B:** With heart failure, the heart doesn't pump as well as it should. So the body doesn't get enough blood and oxygen. When this occurs, the body believes that there isn't enough fluid inside its vessels. The body's hormone and nervous systems try to make up for this by increasing blood pressure, holding on to salt (sodium) and water in the body, and increasing heart rate. These responses are the body's attempt to compensate for the poor blood circulation and backup of blood.
- **Option D:** Primary polydipsia (PP) is a condition where there is excess consumption of fluids leading to polyuria with diluted urine and, ultimately, hyponatremia. Polyuria can be defined as urine production greater than 40-50 ml/kg in a twenty-four-hour period.

**98. Which of the following measures best determines that a patient who had a pneumothorax no longer needs a chest tube?**

- A. You see a lot of drainage from the chest tube.
- B. Arterial blood gas (ABG) levels are normal.
- C. The chest X-ray continues to show the lung is 35% deflated.
- D. The water-seal chamber doesn't fluctuate when no suction is applied.

**Correct Answer: D. The water-seal chamber doesn't fluctuate when no suction is applied.**

The chest tube isn't removed until the patient's lung has adequately re-expanded and is expected to stay that way. One indication of reexpansion is the cessation of fluctuation in the water-seal chamber when suction isn't applied.

- **Option A:** Drainage should be minimal before the chest tube is removed.
- **Option B:** An ABG test isn't necessary if clinical assessment criteria are met.
- **Option C:** The chest X-ray should show that the lung is re-expanded.

**99. The part of the ear that contains the receptors for hearing is the:**

- A. Utricle

- B. Cochlea
- C. Middle ear
- D. Tympanic cavity

**Correct Answer: B. Cochlea.**

The dendrites of the cochlear nerve terminate on the hair cells of the organ of Corti in the cochlea. The cochlea is the organ of hearing. It takes its name from the Greek language that means the shell of a snail and is the part from where the cochlear part of the VIII cranial nerve forms, thus constituting the vestibulocochlear nerve.

- **Option A:** The utricle is a small membranous sac (part of the membranous labyrinth) and paired with the saccule lies within the vestibule of the inner ear. It has an important role in orientation and static balance, particularly in horizontal tilt.
- **Option C:** The middle ear is an air-filled space. It divides into an upper and a lower chamber, the epitympanic chamber (attic) and the tympanic chamber (atrium), respectively. It is like a room because it has a rectangular-like shape.
- **Option D:** The tympanic cavity is an air-filled compartment surrounded by bone that is separated from the external ear by a thin tympanic membrane (tympanum) and is in direct communication with the pharynx via the auditory tube (also known as the eustachian or pharyngotympanic tube).

**100. Which neonatal behavior is most commonly associated with fetal alcohol syndrome (FAS)?**

- A. Hypoactivity
- B. High birth weight
- C. Poor wake and sleep patterns
- D. High threshold of stimulation

**Correct Answer: C. Poor wake and sleep patterns.**

- **Option C:** Altered sleep patterns are caused by disturbances in the CNS from alcohol exposure in utero.
- **Option A:** Hyperactivity is a characteristic generally noted.
- **Option B:** Low birth weight is a physical defect seen in neonates with FAS.
- **Option D:** Neonates with FAS generally have a low threshold for stimulation.