

# Kevin's Review - 100 NCLEX Practice Questions

**1. An oxygenated delivery system is prescribed for a client with COPD to deliver a precise oxygen concentration. Which of the following types of oxygen delivery systems would the nurse anticipate to be prescribed?**

- A. Venturi mask
- B. Aerosol mask
- C. Face tent
- D. Tracheostomy collar

**Correct Answer: A. Venturi mask**

The venturi mask delivers the most accurate oxygen concentration. The Venturi mask is the best oxygen delivery system for the client with chronic airflow limitation because it delivers a precise oxygen concentration. An air-entrainment (also known as venturi) mask can provide a pre-set oxygen to the patient using jet mixing. As the percent of inspired oxygen increases using such a mask, the air-to-oxygen ratio decreases, causing the maximum concentration of oxygen provided by an air-entrainment mask to be around 40%. The face tent, the aerosol mask, and the tracheostomy collar are also high-flow oxygen delivery systems but most often are used to administer high humidity.

- **Option B:** A mask used for the therapeutic administration of a nebulized solution, humidity, or high airflow with oxygen enrichment. It has a large-bore inlet and an exhalation port. When the required concentration needs to change during the oxygen therapy treatment pathway, the adult aerosol mask, with a choice of 6 venturis or a multi venturi mask kit, offers a convenient and cost-effective option to meet the individual patient's requirements. The aerosol mask can be used with a nebulizer or 22mm corrugated tubing for combined oxygen therapy and humidification.
- **Option C:** Face tents are used to provide a controlled concentration of oxygen and increase moisture for patients who have facial burns or a broken nose, or who are claustrophobic. It is difficult to achieve high levels of oxygenation with this mask.
- **Option D:** One is to use a tracheostomy collar, which is placed over a breathing tube in a tracheotomy incision in the throat, and through which humidified oxygen is given. The other is to reduce the pressure support supplied via the ventilator.

**2. A male client with a solar burn of the chest, back, face, and arms is seen in urgent care. The nurse's primary concern should be:**

- A. Fluid resuscitation
- B. Infection
- C. Body image
- D. Pain management

**Correct Answer: D. Pain management**

With a superficial partial-thickness burn such as a solar burn (sunburn), the nurse's main concern is pain management. Pain is nearly always present to some degree because of the varying severity of tissue involvement and destruction but is usually most severe during dressing changes and debridement. Changes in location, character, intensity of pain may indicate developing complications (limb ischemia) or herald improvement and/or return of nerve function and sensation.

- **Option A:** Fluid resuscitation becomes a concern if the burn extends to the dermal and subcutaneous skin layers. Fluid resuscitation replaces lost fluids and electrolytes and helps prevent complications (shock, acute tubular necrosis). Replacement formulas vary but are based on the extent of injury, amount of urinary output, and weight. Note: Once initial fluid resuscitation has been accomplished, a steady rate of fluid administration is preferred to boluses, which may increase interstitial fluid shifts and cardiopulmonary congestion.
- **Option B:** Infection becomes a concern if the burn extends to the dermal and subcutaneous skin layers. Dependent on the type or extent of wounds and the choice of wound treatment (open versus closed), isolation may range from a simple wound and/or skin to complete or reverse to reduce risk of cross-contamination and exposure to multiple bacterial flora.
- **Option C:** Body image disturbance is a concern that has lower priority than pain management. Traumatic episodes result in sudden, unanticipated changes, creating feelings of grief over actual or perceived losses. This necessitates support to work through to optimal resolution.

**3. Evaluating the apical pulse is the most reliable noninvasive way to assess cardiac function. Which is the best area for auscultating the apical pulse?**

- A. Aortic arch
- B. Pulmonic area
- C. Tricuspid area
- D. Mitral area

**Correct Answer: D. Mitral area**

The mitral area (also known as the left ventricular area or the apical area), the fifth intercostal space (ICS) at the left midclavicular line, is the best area for auscultating the apical pulse. The apical pulse is auscultated with a stethoscope over the chest where the heart's mitral valve is best heard. In infants and young children, the apical pulse is located at the fourth intercostal space at the left midclavicular line. In adults, the apical pulse is located at the fifth intercostal space at the left midclavicular line.

- **Option A:** The aortic arch is the second ICS to the right of the sternum. Apical pulse rate is indicated during some assessments, such as when conducting a cardiovascular assessment and when a client is taking certain cardiac medications (e.g., digoxin). Sometimes the apical pulse is auscultated pre and post medication administration.
- **Option B:** The pulmonic area is the second intercostal space to the left of the sternum. It is also a best practice to assess apical pulse in infants and children up to five years of age because radial pulses are difficult to palpate and count in this population. It is typical to assess apical pulses in children younger than eighteen, particularly in hospital environments. Apical pulses may also be taken in obese people because their peripheral pulses are sometimes difficult to palpate.
- **Option C:** The tricuspid area is the fifth ICS to the left of the sternum. Position the client in a supine (lying flat) or in a seated position. Physically palpate the intercostal spaces to locate the landmark of the apical pulse. Ask the female client to re-position her own breast tissue to auscultate the apical pulse.

**4. Which of the following statements is true when educating clients about penicillin therapy?**

- A. The client must take the medication at evenly spaced intervals.

- B. The client may save leftover medication for a future illness.
- C. If signs of an allergic reaction, continue the medication and notify the physician.
- D. Clients taking oral contraceptives must be cautioned to use an alternate form of birth control while being treated with penicillin.

**Correct Answer: D. Clients taking oral contraceptives must be cautioned to use an alternate form of birth control while being treated with penicillin.**

Penicillin will reduce the effectiveness of birth control pills. Numerous antibiotics have been implicated in causing oral contraceptive failure by means of interfering with the enterohepatic recirculation of ethinylestradiol. The two groups of antibiotics most commonly involved in contraceptive failures are tetracyclines and penicillins, namely ampicillin.

- **Option A:** The safety of penicillin and penicillin derivatives when administered either intramuscularly, intravenously, or orally for extended periods of time (beyond the usual duration of use) can be extrapolated from multiple published studies. A review of the medical literature reveals studies in which such drugs have been used therapeutically for extended treatment durations. This includes studies of the treatment of recurrent acute otitis media, endocarditis, salmonella infections, prophylaxis of at-risk populations (asplenic children, young children with sickle cell disease, patients with prior rheumatic fever), and the long term treatment of certain types of Lyme disease.
- **Option B:** 159 patients were treated with 200,000 units orally BID, 143 were treated with 200,000 units orally BID-TID, and 9 patients were treated with an unspecified dose. In these studies, the safety and tolerability of the regimen is summarized by such descriptions as the treatment was “generally well tolerated.” There were no reports in any of these studies of adverse events including serious adverse events or adverse events requiring treatment.
- **Option C:** Although there are no specific studies that directly assess the safety of these antibiotics when given over an extended period of time, there is a significant amount of information that supports the safety of such therapy. Despite very wide usage for many years, no reports were found in the literature which described specific adverse events related to long term use of penicillin or amoxicillin.

**5. Dr. Allen, a seasoned neuroendocrinologist, is presenting a case to the students about a 45-year-old patient who suffers from insomnia. The patient has tried multiple therapies and medications with limited success. As part of the discussion on possible treatments, Dr. Allen touches on the hormone melatonin, which has been suggested as a potential supplement for this patient. The professor subsequently challenges the students to identify any misconceptions regarding melatonin based on the information provided during the lecture.**

- A. Melatonin induces heat loss, reduces arousal and related brain activity and delays production of cortisol.
- B. It helps regulate biological rhythms such as sleep and wake cycles.
- C. The secretion of melatonin is inhibited by darkness and triggered by light.
- D. The pineal gland produces and secretes the hormone.

**Correct Answer: C. The secretion of melatonin is inhibited by darkness and triggered by light.**  
The secretion of melatonin is inhibited by exposure to light, particularly bright or natural light. It is

triggered by darkness or low light levels. When the retina in the eye detects reduced light, it signals the pineal gland in the brain to release melatonin, which helps regulate the sleep-wake cycle and prepare the body for sleep.

- **Option A:** Melatonin induces heat loss, reduces arousal and related brain activity, and delays production of cortisol. This statement is true. Melatonin has a calming effect on the body and contributes to setting the body's internal clock to prepare for sleep.
- **Option B:** It helps regulate biological rhythms such as sleep and wake cycles. This statement is true. Melatonin is closely related to the regulation of the sleep-wake cycle, playing a vital role in initiating sleep.
- **Option D:** The pineal gland produces and secretes the hormone. This statement is true. The pineal gland, located in the brain, is the primary source of melatonin production and secretion in the body.

### **6. Which question will critique the auditability of a research project?**

- A. Is the strategy used for analysis compatible with the purpose of the study?
- B. Does the researcher document the research process?
- C. Are the researcher's conceptualizations true to the data?
- D. Has adequate time been allowed to fully understand the phenomenon?

**Correct Answer: B. Does the researcher document the research process?**

This question will critique the auditability of a research project. Understand the purpose and problem, while determining if the design and methodology are consistent with the purpose.

- **Option A:** A research critique is an analysis of a research undertaking that focuses on its strengths and limitations. Critiquing is a systematic process for evaluating research studies and the results reported.
- **Option C:** This question will critique the significance of a research project. "The purpose of a research critique is to determine whether the findings are usable for you" (Brink & Wood, 2001, p. 57).
- **Option D:** This question will critique the credibility of a research project. "The necessary elements in a research critique can be compiled in a series of questions for the process of critiquing research" (Boswell & Cannon, 2009, p. 308).

### **7. Nurse Nancy is teaching Mr. and Mrs. Diaz about the early signs and symptoms of lead poisoning. Which of the following if stated by the couple would indicate the need for further understanding of the case?**

- A. Anemia
- B. Seizures
- C. Irritability
- D. Anorexia

**Correct Answer: B. Seizures**

Seizures usually are associated with encephalopathy, a late sign of lead poisoning. Typically, lead levels have already exceeded 70 mg/dl. In the appropriate clinical setting, lead encephalopathy should

be considered in patients presenting with delirium, altered mental status, or seizures. As lead encephalopathy often presents with altered sensorium, obtaining a history directly from the patient can be challenging.

- **Option A:** Key features of the patient's history that should raise the index of suspicion for lead encephalopathy may include associated abdominal pain, constipation, or anemia, which are other common findings of lead intoxication.
- **Option C:** Particularly in sub-acute cases, additional history of preceding ataxia, headache, sensory or motor deficits, agitation, or irritability may be present. Finally, obtaining a detailed environmental history is important in understanding the route and magnitude of potential lead intoxication.
- **Option D:** A physical exam will primarily reveal CNS derangement. Generally speaking, patients afflicted with lead encephalopathy will appear to be globally altered. They may also exhibit signs of peripheral neuropathy on the exam, such as wrist drop and loss of 2 point discrimination.

**8. A nurse is assisting a gastroenterologist in caring for a client with complaints of epigastric pain. The nurse is explaining the role of the gastric glands in the fundus and body of the stomach which secrete intrinsic factor and hydrochloric acid. The nurse is correct when stating which of these substances as those needed in the GI tract. Select all that apply.**

- A. Vitamin B 12 absorption.
- B. Emulsifying fats.
- C. Dissolving food fibers.
- D. Killing microorganisms.
- E. Activating the enzyme pepsin.
- F. Vitamin B 6 absorption.

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

Hydrochloric acid (HCl), the main constituent of gastric acid, is secreted by parietal cells. The hydrogen (H) and chloride (Cl) components of HCl are secreted separately by hydrogen/potassium ATPase pumps and chloride channels in the stomach. Pepsinogen, a proenzyme for pepsin, is secreted by chief cells.

- **Option A:** Intrinsic factor is needed for vitamin B12 absorption. Approximately 1.2% of vitamin B12 is absorbed passively without the help of intrinsic factors. If a patient receives the oral formulation at high doses, this passive absorption is sufficient to replenish vitamin B12 deficiency.
- **Option B:** Bile is the substance secreted from the gallbladder to emulsify fats as they are consumed. Once the food is present in the duodenum (especially fatty food), the I cells are stimulated to secrete CCK which in turn causes gallbladder wall contraction as well as relaxation of the sphincter of Oddi. The bile then flows into the second part of the duodenum and causes the emulsification of large fat droplets into small ones.
- **Option C:** Hydrochloric acid is needed for dissolving food fibers. When pepsinogen and hydrochloric acid exist together in the gastric juice, pepsin takes its active form. Through the actions of pepsin and the squeezing properties of the stomach, the food bolus enters the intestines as a liquid mixture of partially digested food particles, called chyme.

- **Option D:** Hydrochloric acid is needed for killing microorganisms. The acidic environment of the stomach is not only useful for protein denaturing but also for protection against potentially infectious agents. All material consumed by the body must pass through the stomach, making it an important defense against microbes. Many bacteria are killed or inhibited by the stomach's acidity.
- **Option E:** Hydrochloric acid is needed for activating the enzyme pepsin. Collectively, gastric acid creates an acidic environment that denatures proteins and activates the conversion of pepsinogen to pepsin. Pepsin breaks down proteins into smaller peptides, which may be further processed and later absorbed in the small intestine.
- **Option F:** Vitamin B6, an essential nutrient, must be replaced daily because it is water-soluble and eliminated in urine. As a coenzyme, vitamin B6 is involved as a cofactor in over 100 enzymatic reactions including amino acid metabolism, carbohydrate metabolism, and lipid metabolism. It contributes to cognitive development via neurotransmitter synthesis, immune function via interleukin-2 production, and hemoglobin formation.

**9. The client with dementia is experiencing confusion late in the afternoon and before bedtime. The nurse is aware that the client is experiencing what is known as:**

- A. Chronic fatigue syndrome
- B. Normal aging
- C. Sundowning
- D. Delusions

**Correct Answer: C. Sundowning**

Increased confusion at night is known as “sundowning” syndrome. This increased confusion occurs when the sun begins to set and continues during the night. 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.

- **Option A:** Fatigue is not necessarily present. Sundowning isn't a disease, but a group of symptoms that occur at a specific time of the day that may affect people with dementia, such as Alzheimer's disease. The exact cause of this behavior is unknown.
- **Option B:** Increased confusion at night is not part of normal aging. Some research suggests that a low dose of melatonin — a naturally occurring hormone that induces sleepiness — alone or in combination with exposure to bright light during the day may help ease sundowning.
- **Option D:** A delusion is a firm, fixed belief. Delusions are defined as fixed, false beliefs that conflict with reality. Despite contrary evidence, a person in a delusional state can't let go of their convictions. Delusions are often reinforced by the misinterpretation of events. Many delusions also involve some level of paranoia. For example, someone might contend that the government is controlling our every move via radio waves despite evidence to the contrary.

**10. Which example of a therapeutic communication technique would be effective in the planning phase of the nursing process?**

- A. "We've discussed past coping skills. Let's see if these coping skills can be effective now."

- B. "Please tell me in your own words what brought you to the hospital."
- C. "This new approach worked for you. Keep it up."
- D. "I notice that you seem to be responding to voices that I do not hear."

**Correct Answer: A. "We've discussed past coping skills. Let's see if these coping skills can be effective now."**

This is an example of the therapeutic communication technique of formulating a plan of action. By the use of this technique, the nurse can help the client plan in advance to deal with a stressful situation which may prevent anger and/or anxiety from escalating to an unmanageable level.

- **Option B:** Asking this question should be done at the assessment phase of the nursing process. Encouraging the description of perceptions is a therapeutic technique that allows the nurse to see things from the client's perspective. Encouraging the client to describe fully may relieve the tension the client is feeling.
- **Option C:** Acknowledging that the approach is working occurs in the evaluation phase of the nursing process. Noting the efforts that the client has made shows that the nurse recognizes the client as an individual. Such recognition does not carry the notion of value, that is, of being "good" or "bad".
- **Option D:** Making observations or verbalizing what the nurse perceives may occur in the assessment phase. Sometimes clients cannot verbalize or make themselves understood. Or the client may not be ready to talk.

**11. Arvic who is diagnosed with diabetes mellitus type 1 displays symptoms of hypoglycemia. Which of the following actions should the nurse instruct the parents?**

- A. Give the child honey (simple sugar)
- B. Give the child milk (complex sugar).
- C. Contact the healthcare provider before doing anything.
- D. Give the child nothing by mouth.

**Correct Answer: A. Give the child honey (simple sugar).**

Immediate action is important. Therefore, providing little sugar temporarily corrects low serum glucose levels. Simple sugar is preferred because it is converted to glucose more quickly than complex sugar. A child with hyperglycemia needs fluid to prevent dehydration. Patients should be advised to wear a medical alert bracelet and to carry a glucose source like gel, candy, or tablets on their person in case symptoms arise.

- **Option B:** Because complex sugars, such as milk, are absorbed more slowly, they do not provide an immediate response. For patients unable to take oral agents, a 1-mg intramuscular (IM) injection of glucagon can be administered. Once the patient is more awake, a complex carbohydrate food source should be given to the patient to achieve sustained euglycemia.  
**Option C:** Contacting the healthcare provider wastes valuable time during which emergency measures could be started to raise the child's glucose level. Nonpharmacological management of recurrent hypoglycemia involves patient education and lifestyle changes. Some patients are unaware of the serious ramifications of persistent hypoglycemia. As such, patients should be educated on the importance of routine blood glucose monitoring as well as on the identification of the individual's symptoms of hypoglycemia.

- **Option D:** Prompt action is required to prevent complications of hypoglycemia. Glycemic control has been an important aspect of medical management due to the association between glycosylated hemoglobin levels and cardiovascular events in diabetes mellitus type 1 patients.

**12. Your patient, Christopher, has a diagnosis of ulcerative colitis and has severe abdominal pain aggravated by movement, rebound tenderness, fever, nausea, and decreased urine output. This may indicate which complication?**

- A. Fistula
- B. Bowel perforation
- C. Bowel obstruction
- D. Abscess

**Correct Answer: B. Bowel perforation**

An inflammatory condition that affects the surface of the colon, ulcerative colitis causes friability and erosions with bleeding. Patients with ulcerative colitis are at increased risk for bowel perforation, toxic megacolon, hemorrhage, cancer, and other anorectal and systemic complications. Colonic perforations are usually a complication of a toxic megacolon. However, perforation can also present in severe ulcerative colitis even in the absence of toxic megacolon. Most perforations occur in the left colon, commonly in the sigmoid colon.

- **Option A:** Fistulas can occur anywhere in the bowel. The longer the client has Crohn's, the more likely he is to develop a fistula. In ulcerative colitis the inflammation doesn't spread through the full thickness of the bowel wall, so fistulas are less likely to form. The symptoms the client experiences depend on where the fistula is.
- **Option C:** Crohn's disease affects the entire thickness of the bowel wall. This makes strictures more common in people who have ulcerative colitis, which typically affects only the inner lining of the bowel. Bowel obstructions with strictures may either be temporary or permanent.
- **Option D:** The typical histological (microscopic) lesion of ulcerative colitis is the crypt abscess, in which the epithelium of the crypt breaks down and the lumen fills with polymorphonuclear cells. The lamina propria is infiltrated with leukocytes.

**13. Which of the following snacks would be suitable for the child with gluten-induced enteropathy?**

- A. Ice cold ale
- B. Pumpkin loaf cake
- C. Buckwheat kasha
- D. Oatmeal cookies
- E. Linguine with lemon and tomatoes

**Correct Answer: C. Buckwheat kasha**

**14. Mrs. Lodge's child requires the use of a Pavlik harness. Which of the following would Nurse Betty do to best assess the mother's ability to care for**



***her child?***

- A. Demonstrate to the mother how to remove and reapply the device.
- B. Have the mother remove and reapply the harness before discharge.
- C. Have the mother verbalize the purpose of using the device.
- D. Request a home health care nurse visit after discharge.

**Correct Answer: B. Have the mother remove and reapply the harness before discharge.**

Having the mother remove and reapply the harness before discharge allows the nurse to directly observe the mother's method and comfort level. It also provides time for reinstruction if needed. A successful transition also depends on whether hospitals have adequately educated patients about key elements of care such as diagnosis and follow-up plans.

- **Option A:** Although the nurse's demonstration is a good teaching method, it does not permit evaluation of the mother's routine. A safe and patient-centered passage from the hospital should therefore include consistent and high-quality provision of transitional care (e.g., follow-up appointments, comprehensive and intelligible discharge instructions) should ensure that patients understand key aspects of the transition and should be patient-centered (e.g., provide adequate notice of and preparation for discharge, result in high levels of satisfaction).
- **Option C:** Verbalization is significant to allow the nurse to assess the mother's understanding, but it does not allow evaluation of the mother's psychomotor skills. Although these assessments are important, simply documenting that information is conveyed or that patients are satisfied with practice may not be a sufficient measure of transition success.
- **Option D:** Requesting a home visit is a further means of evaluation but does not provide instant feedback. Evaluation of hospital discharge practice has often focused on chart documentation of specific processes and more recently, on patient satisfaction with discharge care.

***15. After striking his head on a tree while falling from a ladder, a young man age 18 is admitted to the emergency department. He's unconscious and his pupils are nonreactive. Which intervention would be the most dangerous for the client?***

- A. Give him a barbiturate.
- B. Place him on mechanical ventilation.
- C. Perform a lumbar puncture.
- D. Elevate the head of his bed.

**Correct Answer: C. Perform a lumbar puncture.**

The client's history and assessment suggest that he may have increased intracranial pressure (ICP). If this is the case, lumbar puncture shouldn't be done because it can quickly decompress the central nervous system and, thereby, cause additional damage. A head computed tomogram (CT) should be obtained before performing a lumbar puncture if there is a concern for increased intracranial pressure. Signs and symptoms of possible increased intracranial pressure include altered mental status, focal neurological deficits, new-onset seizure, papilledema, immunocompromised state, malignancy, history of focal CNS disease (stroke, focal infection, tumor), concern for mass CNS lesion and age greater than 60 years old.

- **Option A:** After a head injury, barbiturates may be given to prevent seizures. Phenobarbital has extensive use as an antiepileptic drug in the neonatal and pediatric population. It is the most cost-effective drug treatment for epilepsy in adults in low resource countries. Intravenous barbiturates have been used for neurosurgery due to the reduction in cerebral metabolic rate of oxygen consumption.
- **Option B:** Mechanical ventilation may be required if breathing deteriorates. The clinical presentation of increased intracranial pressure can easily be mistaken for other issues, such as intoxication, stroke, infection, or postictal state. It requires a high index of suspicion, particularly in milder cases. In more severe cases, close neurological monitoring and consultation with neurology and neurosurgery are important.
- **Option D:** Elevating the head of the bed may be used to reduce ICP. Elevate the head of the bed to greater than 30 degrees. Keep the neck midline to facilitate venous drainage from the head. Nursing care must pay close attention to changes in neurologic status, any change in vitals such as an increasingly erratic heart rate, development of bradycardia, accurate and equal intake and output when having diuresis, and maintenance of proper blood pressure.

**16. After suffering an acute MI, a client with a history of type 1 diabetes is prescribed metoprolol (Lopressor) I.V. Which nursing interventions are associated with I.V. administration of metoprolol? Select all that apply.**

- A. Monitor glucose levels closely.
- B. Monitor for heart block and bradycardia.
- C. Monitor blood pressure closely.
- D. Mix the drug in 50 ml of dextrose 5% in water and infuse over 30 minutes.
- E. Be aware that the drug is not compatible with morphine.

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

Metoprolol is a cardioselective beta-1-adrenergic receptor inhibitor that competitively blocks beta1-receptors with minimal or no effects on beta-2 receptors at oral doses of less than 100 mg in adults. It decreases cardiac output by negative inotropic and chronotropic effects.

- **Option A:** Metoprolol masks the common signs of hypoglycemia; therefore, glucose levels should be monitored closely in diabetic clients. The mechanism responsible for  $\beta$ -blocker-induced hypoglycemia involves inhibition of hepatic glucose production, which is promoted by sympathetic nervous stimulation. In addition, adrenergic counter-regulation is diminished, resulting in a reduction in glycogenolysis.
- **Option B:** When used to treat an MI, metoprolol is contraindicated in clients with heart rates less than 45 beats/minute and any degree of heart block, so the nurse should monitor the client for bradycardia and heart block.
- **Option C:** Metoprolol masks common signs and symptoms of shock, such as decreased blood pressure, so blood pressure should also be monitored closely. Beta-blockers, including atenolol and metoprolol, may mask the signs of tachycardia and diaphoretic skin seen in patients in shock.
- **Option D:** The nurse should give the drug undiluted by direct injection. Lopressor, metoprolol tartrate USP, is a selective beta1-adrenoreceptor blocking agent, available in 5-mL ampoule for intravenous administration. Each ampul contains a sterile solution of metoprolol tartrate USP, 5 mg, and sodium chloride USP, 45 mg, and water for injection USP.

- **Option E:** Although metoprolol should not be mixed with other drugs, studies have shown that it is compatible when mixed with morphine sulfate or when administered with alteplase infusion at a Y-site connection.

**17. The nurse is providing postpartum teaching for a mother planning to breastfeed her infant. Which of the client's statements indicates the need for additional teaching?**

- A. "I'm wearing a support bra."
- B. "I'm expressing milk from my breast."
- C. "I'm drinking four glasses of fluid during a 24-hour period."
- D. "While I'm in the shower, I'll allow the water to run over my breasts."

**Correct Answer: C. "I'm drinking four glasses of fluid during a 24-hour period."**

Mothers who plan to breastfeed should drink plenty of liquids, and four glasses are not enough in a 24-hour period. Women need extra support, encouragement, and reassurance while breastfeeding. Although we view breastfeeding as a natural process, it is still a skill that has to be learned. Initially, breastfeeding can seem demanding, as the baby may have a desire to feed/suck frequently. Babies, however, begin to establish their own pattern over time, and the mother will begin to feel more comfortable and at ease.

- **Option A:** Wearing a support bra is a good practice for the mother who is breastfeeding as well as the mother who plans to bottle-feed. A comfortable, soft, cotton nursing bra is a good choice for both day and night, and a sports bra style may also make a comfortable bra for nighttime use.
- **Option B:** Expressing milk from the breast will stimulate milk production. If it is necessary to express breast milk, show the mother how to do this and show her how to feed expressed breast milk by the cup. You may need to refer her to a trained infant feeding counselor for this.
- **Option D:** Allowing the water to run over the breast will also facilitate "letdown," when the milk begins to be produced; thus, answer D is incorrect. Some women also find that the initial 'let down' reflex is very strong which causes them pain or they get strong after-pains as their wombs contract. Reassure them that this will pass. The 'let down' reflex may also cause them to leak milk when they have sexual intercourse. Reassure them that this is normal and that they may need to tell their husband or partner that this is normal.

**18. The most serious adverse effect of tricyclic antidepressant (TCA) overdose is:**

- A. Hyperpyrexia
- B. Cardiac arrhythmias
- C. Seizures
- D. Metabolic acidosis

**Correct Answer: B. Cardiac arrhythmias.**

Excessive ingestion of TCAs results in life-threatening wide QRS complex tachycardia. Tricyclic antidepressants act on approximately five different neurotransmitter pathways to achieve their effects. They block the reuptake of serotonin and norepinephrine in presynaptic terminals, which leads to

increased concentration of these neurotransmitters in the synaptic cleft. The increased concentrations of norepinephrine and serotonin in the synapse likely contribute to its antidepressant effect.

- **Option A:** TCAs do not cause an elevation in body temperature. TCAs have varying degrees of receptor affinities, leading to several adverse effects. The most common adverse effects include constipation, dizziness, and xerostomia. Due to its blockade of cholinergic receptors, it can lead to blurred vision, constipation, xerostomia, confusion, urinary retention, and tachycardia.
- **Option C:** TCA overdose can induce seizures, but they are typically not life-threatening. There is evidence of TCAs increasing the risk of seizures in those with epilepsy, and use requires caution in this population.
- **Option D:** TCAs do not cause metabolic acidosis. Due to the blockade of alpha-1 adrenergic receptors, it can cause orthostatic hypotension and dizziness. TCA-induced histamine blockade (H1) may lead to sedation, increased appetite, weight gain, and confusion.

**19. Nurse Aaron is inserting a nasogastric tube to a stroke client. He understands that the best position for the insertion is?**

- A. Low Fowler's.
- B. Sims position.
- C. Trendelenburg.
- D. High Fowler's.

**Correct Answer: D. High Fowler's.**

The best position during a nasogastric tube insertion is sitting or High Fowler's position in order to prevent the risk of aspiration. Position patient sitting up at 45 to 90 degrees (unless contraindicated by the patient's condition), with a pillow under the head and shoulders. This allows the NG tube to pass more easily through the nasopharynx and into the stomach.

- **Option A:** Low fowler's position is similar to the supine position, and is considered the best position for rest. In a low-Fowler's position, the patient's head is inclined at a 15- or 30-degree angle. Insertion of NGT could be particularly difficult in this position. Low Fowler's position is typically used to reduce lower back pain, during administration of drugs, or during tube feeding.
- **Option B:** Insertion of NGT would be impossible in Sim's position. The Sims position is a standard position in which the patient lies on their left side, with right hip and knees bent. The lower arm is behind the back, the thighs flexed. The left knee is slightly tilted. The right arm is positioned comfortably in front of the body, the right arm is rested behind the body. This is also known as "lateral" position. Sim's position is often used for rectal examination and treatments.
- **Option C:** Placing the patient in Trendelenburg position for NGT insertion is highly inappropriate. In Trendelenburg position, the patient is supine on the table with their head declined below their feet at an angle of roughly 16°. Trendelenburg position is typically used for lower abdominal surgeries including colorectal, gynecological, and genitourinary procedures as well as central venous catheter placement.

**20. A nurse in the cardiovascular unit is caring for a patient with congestive heart failure (CHF). The patient, a former biology teacher, is curious about the intrinsic regulatory mechanisms of the heart and how they might be impacting their current condition. Eager to provide a comprehensive response, the nurse**

**retrieves a diagram of the heart and uses it as a teaching tool. To engage the patient and gauge their understanding, the nurse then presents the patient with the following question: “In terms of the intrinsic regulation of the heart, which of these statements is correct?”**

- A. Starling's law of the heart has a major influence on cardiac output.
- B. As venous return increases, cardiac output decreases.
- C. In response to stretch, cardiac muscle fibers contract with less force.
- D. In response to stretch, there is a slight decrease in heart rate.

**Correct Answer: A. Starling’s law of the heart has a major influence on cardiac output.**

Starling’s law of the heart, also known as the Frank-Starling mechanism, is a fundamental principle in cardiovascular physiology that describes the relationship between the preload (stretch) of cardiac muscle fibers and the strength of contraction of the heart. This law influences cardiac output by ensuring that as the volume of blood returning to the heart (preload) increases, the heart’s chambers stretch, leading to a more forceful contraction and, consequently, a higher cardiac output, which is vital for meeting the body’s circulatory demands.

- **Option B:** As venous return increases, cardiac output typically increases. Venous return is one of the factors that influence preload, and according to Starling’s law of the heart, an increased preload often leads to an increased force of contraction and, consequently, an increased cardiac output.
- **Option C:** In response to stretch, cardiac muscle fibers typically contract with more force, not less. This phenomenon is known as the Frank-Starling mechanism or Starling’s law of the heart, which states that the more the cardiac muscle is stretched (preload), the more forcefully it contracts, leading to an increased stroke volume and cardiac output.
- **Option D:** In response to stretch, such as an increase in venous return and preload, there is typically an increase in heart rate through reflex mechanisms like the Bainbridge reflex. This helps to maintain cardiac output and meet the body’s demands for oxygen and nutrients.

**21. A second-year nursing student, who is on a clinical rotation in the infectious diseases unit of a major urban hospital, has just suffered a needlestick injury. The incident occurred while the student was assisting in drawing blood from a patient known to have a high viral load and is positive for AIDS. The student is visibly shaken, as they are aware of the patient’s medical history. Given the circumstances and potential risk, which of the following is the most significant action that the nursing student should take immediately after the incident?**

- A. Immediately see a social worker to discuss potential implications.
- B. Start prophylactic AZT treatment as soon as possible.
- C. Start prophylactic Pentamidine treatment to prevent potential opportunistic infections.
- D. Seek counseling to address potential emotional and psychological impacts.
- E. Report the incident to the clinical instructor and fill out an incident report.
- F. Seek immediate testing for HIV to establish a baseline.

**Correct Answer: B. Start prophylactic AZT treatment**

Azidothymidine (AZT) treatment is the most critical intervention. It is an antiretroviral medication used to prevent and treat HIV/AIDS by reducing the replication of the virus. Post-exposure prophylaxis (PEP) for HIV is a treatment to suppress the virus and prevent infection after exposure. PEP should be taken within 72 hours of possible exposure to HIV, so it is important to seek treatment quickly. While reporting the incident, seeking counseling, and other actions are also important, the immediate priority is to reduce the risk of HIV transmission.

**22. A client with rectal cancer may exhibit which of the following symptoms?**

- A. Abdominal fullness
- B. Gastric fullness
- C. Rectal bleeding
- D. Right upper quadrant pain

**Correct Answer: C. Rectal bleeding**

Rectal bleeding is a common symptom of rectal cancer. Rectal cancer may be missed because other conditions such as hemorrhoids can cause rectal bleeding. Symptoms according to tumor location on the clinical presentation of rectosigmoid are more frequently associated with a change in bowel habits (diminish stool caliber), bright red blood per rectum (hematochezia), pain (tenesmus), leakage diarrhea (mucus discharge), and constipation (obstruction).

- **Option A:** Abdominal fullness may occur with colon cancer. Physical examination should explore signs of ascites, hepatomegaly, and lymphadenopathy and must extend to a digital rectal exam for fixed mass. A thorough family history is of great relevance in identifying familial clusters and inherited patterns that would change the surveillance and therapy of a high-risk patient.
- **Option B:** Gastric fullness may occur with gastric cancer. The most common physical examination finding is a palpable abdominal mass indicating advanced disease. The patient may also present with signs of metastatic lymphatic spread distribution, including Virchow's node (left supraclavicular adenopathy), Sister Mary Joseph node (periumbilical nodule), and Irish node (left axillary node).
- **Option D:** Right upper quadrant pain may occur with liver cancer. Most patients are initially asymptomatic from hepatocellular carcinoma but often present with related symptoms due to chronic liver disease. Patients may complain of upper abdominal discomfort and distention, weight loss, fever, poor appetite, early satiety, diarrhea, and other symptoms.

**23. The nurse is administering fluids intravenously as ordered to a client who acquired a full-thickness burn injury on the abdomen. To determine the sufficiency of fluid resuscitation, the nurse would monitor which of the following would provide the most reliable parameter for determining adequacy?**

- A. Level of consciousness
- B. Peripheral pulses
- C. Urine output
- D. Vital signs

**Correct Answer: C. Urine output**

Of all the options, urine output is the most reliable indicator for determining the adequacy of fluid resuscitation. Urine output of 0.5 mL/kg or about 30 – 50 mL/hr in adults and 0.5-1.0 mL/kg/hr in children less than 30kg is a good target for adequate fluid resuscitation.

- **Option A:** Heart rate, mental status, and capillary refill may be affected by the underlying disease process and are less reliable markers. The actual endpoint of fluid therapy in shock is to optimize tissue perfusion. However, this parameter is not measured directly. Surrogate endpoints include clinical indicators of end-organ perfusion and measurements of preload.
- **Option B:** Because of compensatory vasoconstriction, mean arterial pressure (MAP) is only a rough guideline; organ hypoperfusion may be present despite apparently normal values. Because urine output does not provide a minute-to-minute indication, measures of preload may be helpful in guiding fluid resuscitation for critically ill patients.
- **Option D:** Patient's vital signs, mental status, capillary refill, and urine output must be monitored and fluid rates adjusted accordingly. Recent literature has raised concerns about complications from over-resuscitation described as "fluid creep." Again, adequate fluid resuscitation is the goal.

**24. A 20-year-old young adult has been admitted to the hospital following a motor vehicle accident. During the assessment, the patient expresses concerns about their recent breakup and how it might be affecting their overall well-being. They mention feeling isolated from peers and struggling with forming close relationships. The patient's parents also share that their child has been distancing from family gatherings and often spends time alone. Based on Erik Erikson's psychosocial development stages and the described behaviors and concerns, the nurse recognizes that the young adult is primarily navigating which developmental stage?**

- A. Trust vs. mistrust
- B. Initiative vs. guilt
- C. Autonomy vs. shame
- D. Intimacy vs. isolation

**Correct Answer: D. Intimacy vs. isolation**

For young adults, typically in their late teens to early twenties, the predominant stage is "Intimacy vs. isolation." In this stage, young adults seek to form close, intimate relationships with others. Success in this stage leads to strong relationships, while failure results in feelings of isolation and loneliness. The described behaviors and concerns of the patient, such as feeling isolated and struggling with forming close relationships, align with this stage.

- **Option A:** Trust vs Mistrust is the first stage of the psychosocial theory. This stage begins at birth and continues to approximately 18 months of age. During this stage, children learn whether or not they can trust the people around them.
- **Option B:** It is as children enter the preschool years (3-6 years old) that they begin the third stage of psychosocial development centered on initiative versus guilt. It is important for the kids to learn that they can exert power over themselves and the world.
- **Option C:** Autonomy vs Shame and doubt is the second stage of Erik Erikson's stages of psychosocial development. This stage occurs between the ages of 18 months to 3 years. According to Erikson, children at this stage are focused on developing a greater sense of control.

**25. Nurse JV is performing wound care. Which of the following practices violates surgical asepsis?**

- A. Holding sterile objects above the waist.
- B. Considering a 1-inch edge around the sterile field as being contaminated.
- C. Pouring solution onto a sterile field cloth.
- D. Opening the outermost flap of a sterile package away from the body.

**Correct Answer: C. Pouring solution onto a sterile field cloth.**

Pouring solution onto a sterile field cloth violates surgical asepsis because moisture penetrating the cloth can carry microorganisms to the sterile field via capillary action. The purpose of creating a sterile field is to reduce the number of microbes present to as few as possible. The sterile field is used in many situations outside the operating room as well as inside the operating room when performing surgical cases. The other options are practices that help ensure surgical asepsis.

- **Option A:** Another area considered unsterile is anything below table height. Once the back table is opened, bend down and move the table closer to the wall by grasping the lower leg of the table. This allows less chance of someone contaminating the table and gets it out of the way.
- **Option B:** The back table allows a large surface to open all other supplies onto it during set-up and is the main sterile field. Once the back table cover is opened, it is important to note that an imaginary 1-inch border exists along the edges of the table. This border is considered unsterile and should be avoided when tossing items onto the field.
- **Option D:** The next item is the ring stand that will hold the basin sets; open the first flap away from you, then each side flap, and lastly the flap closest to you. Bend down and marry (move) the ring stand closer to the back table and close the space between them. The sterile flap will be against the back sterile table drape.

**26. At the community center, the nurse leads an adolescent health information group, which often expands into other areas of discussion. She knows that these youths are trying to find out “who they are,” and discussion often focuses on which directions they want to take in school and life, as well as peer relationships. According to Erikson, this stage is known as:**

- A. identity vs. role confusion.
- B. adolescent rebellion.
- C. career experimentation.
- D. relationship testing

**Correct Answer: A. Identity vs. role confusion.**

During this period, which lasts up to the age of 18-21 years, the individual develops a sense of “self.” Peers have a major big influence over behavior, and the major decision is to determine a vocational goal. As they seek to establish a sense of self, teens may experiment with different roles, activities, and behaviors. According to Erikson, this is important to the process of forming a strong identity and developing a sense of direction in life.

- **Option B:** As they transition from childhood to adulthood, teens may begin to feel confused or insecure about themselves and how they fit into society. Those who are able to develop a strong



sense of identity are better able to have self-confidence or a sense of trust in their abilities, qualities, and judgments.

- **Option C:** Resolving the crisis at this stage of development involves committing to a particular identity. This might involve committing to a career path, deciding what social groups to associate with, and even developing a sense of personal style.
- **Option D:** One of the main elements of Erikson's psychosocial stage theory is the development of ego identity. It is the conscious sense of self that we develop through social interaction, which is constantly changing due to new experiences and information we acquire in our daily interactions with others.

**27. A client is prescribed with guaifenesin (Mucinex). The nurse determines that the client understands the proper administration of this medication if the client states that he or she will:**

- A. Limit oral fluid intake
- B. Take the medication with meals only
- C. Take an additional dose once fever and cough persist
- D. Drink extra fluids while taking this medication

**Correct Answer: D. Drink extra fluids while taking this medication**

Guaifenesin is an expectorant. Drink extra fluids to help loosen the congestion and lubricate the throat while taking this medication.

- **Option A:** Fluids are needed to loosen the secretions.
- **Option B:** The medication does not have to be taken with meals.
- **Option C:** Additional doses should not be taken without the prescription of the doctor.

**28. Following a treadmill test and cardiac catheterization, the client is found to have coronary artery disease, which is inoperative. He is referred to the cardiac rehabilitation unit. During his first visit to the unit he says that he doesn't understand why he needs to be there because there is nothing that can be done to make him better. The best nursing response is:**

- A. "Cardiac rehabilitation is not a cure but can help restore you to many of your former activities."
- B. "Here we teach you to gradually change your lifestyle to accommodate your heart disease."
- C. "You are probably right but we can gradually increase your activities so that you can live a more active life."
- D. "Do you feel that you will have to make some changes in your life now?"

**Correct Answer: A. "Cardiac rehabilitation is not a cure but can help restore you to many of your former activities."**

Such a response does not have false hope to the client but is positive and realistic. The answer tells the client what cardiac rehabilitation is and does not dwell on his negativity about it. Cardiac rehabilitation programs aim to limit the psychological and physiological stresses associated with cardiovascular

disease, reduce the risk of associated mortality, and improve cardiovascular function to help patients optimize their quality of life.

- **Option B:** Cardiovascular disease (CVD) is one of the leading causes of death worldwide and the leading cause of death in the United States. Cardiac rehabilitation is customized to individual patients. Candidates for cardiac rehabilitation include patients with cardiovascular diseases such as ischemic heart disease, heart failure, or myocardial infarctions, or patients who have undergone cardiovascular interventions such as coronary angioplasty or coronary artery bypass grafting.
- **Option C:** Cardiac rehabilitation can reduce smoking, body weight, serum lipids, and blood pressure. Milani et al. found that cardiac rehabilitation decreased depression in heart disease patients who suffered a major coronary event. A Cochrane review noted that cardiac rehabilitation reduced hospital admissions and showed a long-term decrease in all-cause mortality in heart failure patients with preserved ejection fraction.
- **Option D:** Accomplishing these goals is the result of improving overall cardiac function and capacity, halting or reversing the progression of atherosclerotic disease, and increasing the patient's self-confidence through gradual conditioning. Overall cardiac rehabilitation increases the quality of life and decreases health care costs. Cardiac rehabilitation has many physiologic benefits due to its exercise component. Exercise training has been shown to increase maximal oxygen uptake (VO<sub>2</sub>max), improve endothelial function, and improve myocardial reserve flow.

**29. Which client factors should alert the nurse to potential increased complications with a burn injury?**

- A. The client is a 26-year-old male.
- B. The client has had a burn injury in the past.
- C. The burned areas include the hands and perineum.
- D. The burn took place in an open field and ignited the client's clothing.

**Correct Answer: C. The burned areas include the hands and perineum.**

Burns of the perineum increase the risk for sepsis. Burns of the hands require special attention to ensure the best functional outcome. Complications are related to the extension of the burn. Burns to the genitalia and perineum are severe conditions that all urologists should be familiar with and know how to manage. Fluid resuscitation is the initial step in treating these patients and is followed by topical dressings in the case of superficial burns.

- **Option A:** Irrespective of the type of burn injury, the aged population shows slower recoveries and suffers more complications. Age-associated immune dysfunction, immunosenescence, may predispose the elderly burn patients to more infections, slower healing, and/or to other complications.
- **Option B:** Accordingly, patients with burn injury cannot be considered recovered when the wounds have healed; instead, burn injury leads to long-term profound alterations that must be addressed to optimize quality of life.
- **Option D:** Burns to the genitals correspond to approximately 2% of all burn patients in North American case series. The majority of those cases are associated with greater burned body surface areas, in which direct fire and scalding are the most frequent causes. Burn management begins with opportune diagnosis and entails making the correct classification, depending on the depth of the lesion.

**30. A 23-year-old client is diagnosed with human immunodeficiency virus (HIV). After recovering from the initial shock of the diagnosis, the client expresses a desire to learn as much as possible about HIV and acquired immunodeficiency syndrome (AIDS). When teaching the client about the immune system, the nurse states that adaptive immunity is provided by which type of white blood cell?**

- A. Neutrophil
- B. Basophil
- C. Monocyte
- D. Lymphocyte

**Correct Answer: D. Lymphocyte**

The lymphocyte provides adaptive immunity — recognition of a foreign antigen and formation of memory cells against the antigen. Adaptive immunity is mediated by B and T lymphocytes and can be acquired actively or passively.

- **Option A:** The neutrophil is crucial to phagocytosis. Phagocytosis is a process by which certain living cells called phagocytes ingest or engulf other cells or particles.
- **Option B:** The basophil plays an important role in the release of inflammatory mediators. Basophils play a role in preventing blood clotting because they contain heparin. This is a naturally occurring blood-thinning substance.
- **Option C:** The monocyte functions in phagocytosis and monokine production. Monocytes are bone marrow-derived leukocytes that circulate in the blood and spleen.

**31. A client had undergone radiation therapy (external). The expected side effects include the following apart from:**

- A. Hair loss
- B. Ulceration of oral mucous membranes
- C. Constipation
- D. Headache

**Correct Answer: C. Constipation**

- **Option C:** Diarrhea, not constipation is the side effect of radiation therapy which usually starts during or right after the treatment and may last for several weeks.
- **Options A, B, and D:** These are common side effects of radiation therapy.

**32. Nurse Patricia is aware that the major health complication associated with intractable anorexia nervosa would be:**

- A. Cardiac dysrhythmias resulting in cardiac arrest.
- B. Glucose intolerance resulting in protracted hypoglycemia.
- C. Endocrine imbalance causing cold amenorrhea.

D. Decreased metabolism causing cold intolerance.

**Correct Answer: A. Cardiac dysrhythmias resulting in cardiac arrest**

These clients have severely depleted levels of sodium and potassium because of their starvation diet and energy expenditure, these electrolytes are necessary for cardiac functioning. Refeeding syndrome can occur following prolonged starvation. As the body utilizes glucose to produce molecules of adenosine triphosphate (ATP), it depletes the remaining stores of phosphorus. Also, glucose entry into cells is mediated by insulin and occurs rapidly following long periods without food. Both cause electrolyte abnormalities such as hypophosphatemia and hypokalemia, triggering cardiac and respiratory compromise. Patients should be followed carefully for signs of refeeding syndrome and electrolytes closely monitored.

- **Option B:** Anorexia nervosa is a psychiatric disease in which patients restrict their food intake relative to their energy requirements through eating less, exercising more, and/or purging food through laxatives and vomiting. Despite being severely underweight, they do not recognize it and have distorted body images. They can develop complications from being underweight and purging food.
- **Option C:** Patients will report symptoms such as amenorrhea, cold intolerance, constipation, extremity edema, fatigue, and irritability. They may describe restrictive behaviors related to food like calorie counting or portion control, and purging methods, for example, self-induced vomiting or use of diuretics or laxatives. Many exercise compulsively for extended periods of time. Patients with anorexia nervosa develop multiple complications related to prolonged starvation and purging behaviors.
- **Option D:** Remission in anorexia nervosa varies. Three-fourths of patients treated in out-patient settings remit within five years and the same percentage experience intermediate-good outcomes, including weight gain. Relapse is more common in patients who are older with a longer duration of disease or lower body fat/weight at the end of treatment, have comorbid psychiatric disorders, or receive therapy outside of a specialized clinic. Often, patients who achieve partial remission develop another form of eating disorder like bulimia nervosa or an unspecified eating disorder.

**33. A nurse is caring for a 22-year-old individual with a known diagnosis of epilepsy. During the nurse's shift, the patient begins to have a tonic-clonic seizure. During the active phase of the seizure, which of the following actions should the nurse take? Select all that apply.**

- A. Place the patient on their back, remove dangerous objects from the immediate vicinity, and insert a padded tongue depressor.
- B. Place the patient in a lateral position (on their side), remove any hazardous objects nearby, and prepare to use a bite block if needed.
- C. Position the patient supine (on their back), clear the area of any items that might cause injury, and restrain their limbs gently.
- D. Turn the patient to a side-lying position, ensure the environment is safe from potential hazards, and use a pillow or a hand to protect the head.
- E. Keep the patient in a prone position, secure the perimeter for safety, and monitor their respiratory status closely.
- F. Roll the patient onto their side to prevent aspiration, remove objects that could cause harm, and observe for cessation of seizure activity.

**Correct Answers: B, D, and F.**

During a seizure, it is important to prevent injury to the patient. Placing the patient on their side can help maintain an open airway and allow any oral secretions or vomitus to drain, preventing aspiration. Removing dangerous objects helps to minimize the risk of injury. While a bite block may be used in some situations to prevent the patient from biting their tongue, it is not recommended to insert anything into the mouth of someone who is actively seizing due to the risk of injury or aspiration. Protecting the head is also crucial to prevent trauma during convulsive movements.

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

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

**Correct Answer: E. nitroglycerin (Nitrostat)**

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

- **Option A:** Acetaminophen, an antipyretic, prevents increased temperature. A decrease in temperature reduces metabolism, cerebral blood flow, thus decreasing intracranial pressure. It also relieve headache.
- **Option B:** Dexamethasone, a corticosteroids, decreases intracranial pressure by stabilizing the cell membrane and decreases the leakiness in the blood-brain-barrier.
- **Option C:** Mannitol, an osmotic diuretic, lowers intracranial pressure by increasing intravascular pressure to draw fluid from the interstitial spaces and from the brain cells.
- **Option D:** Phenytoin, an anticonvulsant, is given as prophylaxis to prevent seizures. Seizures increase metabolic rate and cerebral blood flow, and volume that may result in increased intracranial pressure.

**35. Cyrill with severe head trauma sustained in a car accident is admitted to the intensive care unit. Thirty-six hours later, the client's urine output suddenly rises above 200 ml/hour, leading the nurse to suspect diabetes insipidus. Which laboratory findings support the nurse's suspicion of diabetes insipidus?**

- A. Above-normal urine and serum osmolality levels.
- B. Below-normal urine and serum osmolality levels.
- C. Above-normal urine osmolality level, below-normal serum osmolality level.
- D. Below-normal urine osmolality level, above-normal serum osmolality level.

**Correct Answer: D. Below-normal urine osmolality level, above-normal serum osmolality level**

In diabetes insipidus, excessive polyuria causes dilute urine, resulting in a below-normal urine osmolality level. At the same time, polyuria depletes the body of water, causing dehydration that leads to an above-normal serum osmolality level.

- **Option A:** Urine osmolality level should be below normal because of excessive polyuria.
- **Option B:** Serum osmolality levels should be above normal because of dehydration.
- **Option C:** For the same reasons, diabetes insipidus doesn't cause above-normal urine osmolality or below-normal serum osmolality levels.

**36. A male client is color blind. The nurse understands that this client has a problem with:**

- A. Rods.
- B. Cones.
- C. Lens.
- D. Aqueous humor.

**Correct Answer: B. Cones.**

Cones provide daylight color vision, and their stimulation is interpreted as color. If one or more types of cones are absent or defective, color blindness occurs. Very few individuals are truly color blind, but instead, see a disrupted range of colors. The most common forms are protanopia and deuteranopia, conditions arising from loss of function of one of the cones, leading to dichromic vision.

- **Option A:** Rods are sensitive to low levels of illumination but can't discriminate color. Rods are the cells primarily responsible for scotopic vision, or low-light vision. Rods are the more abundant cell-type of the retina and reach their maximum density approximately 15 to 20 degrees from the fovea, a small depression in the retina of the eye where visual acuity is highest. There are approximately 90 million rod cells in the human retina.
- **Option C:** The lens is responsible for focusing images. The lens is the adjustable component of the refractive system: its shape is altered by the contraction or relaxation of the ciliary muscle to focus on objects that are near or far.
- **Option D:** Aqueous humor is a clear watery fluid and isn't involved in color perception. Aqueous humor is a low viscosity fluid secreted from plasma components by the ciliary body into the posterior chamber of the eye. The humor then travels to the anterior chamber and proceeds to drain into the systemic cardiovascular circulation by an incompletely understood mechanism. Aqueous humor circulation forms the basis of intraocular pressure (IOP), which is associated with glaucoma; this is how the synthesis, circulation, and drainage of aqueous humor become clinically significant.

**37. 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.

**38. The dialysis solution is warmed before use in peritoneal dialysis primarily to:**

- A. Encourage the removal of serum urea.
- B. Force potassium back into the cells.
- C. Add extra warmth into the body.
- D. Promote abdominal muscle relaxation.

**Correct Answer: A. Encourage the removal of serum urea.**

The main reason for warming the peritoneal dialysis solution is that the warm solution helps dilate peritoneal vessels, which increases urea clearance. Warm dialysate to body temperature before infusing. Warming the solution increases the rate of urea removal by dilating peritoneal vessels. Cold dialysate causes vasoconstriction, which can cause discomfort and excessively lower the core body temperature, precipitating cardiac arrest.

- **Option B:** The warmed solution does not force potassium into the cells. Monitor serum sodium. Hypernatremia may be present, although serum levels may reflect dilutional effect of fluid volume overload.
- **Option C:** Warmed dialyzing solution also contributes to client comfort by preventing chilly sensations, but this is a secondary reason for warming the solution. Note reports of discomfort that is most pronounced near the end of inflow and instill no more than 2000 mL of solution at a single time.
- **Option D:** The warmed solution does not promote abdominal muscle relaxation. Explain that initial discomfort usually subsides after the first few exchanges. Monitor for pain that begins during inflow and continues during equilibration phase. Slow infusion rate as indicated.

**39. The client with a history of diabetes insipidus is admitted with polyuria, polydipsia, and mental confusion. The priority intervention for this client is:**

- A. Measure the urinary output
- B. Check the vital signs
- C. Encourage increased fluid intake
- D. Weigh the client

**Correct Answer: B. Check the vital signs**

A large amount of fluid loss can cause fluid and electrolyte imbalance that should be corrected. The loss of electrolytes would be reflected in the vital signs. Monitor for signs of hypovolemic shock (e.g., tachycardia, tachypnea, hypotension). Frequent assessment can detect changes early for rapid intervention. Polyuria causes decreased circulatory blood volume.

- **Option A:** Measuring the urinary output is important, but the stem already says that the client has polyuria. Monitor intake and output. Report urine volume greater than 200 mL for each of 2 consecutive hours or 500 mL in a 2-hour period. With DI, the patient voids large urine volumes independent of the fluid intake. Urine output ranges from 2 to 3 L/day with renal DI to greater than 10 L/day with central DI.
- **Option C:** Encouraging fluid intake will not correct the problem. Allow the patient to drink water at will. Patients with intact thirst mechanisms may maintain fluid balance by drinking huge quantities of water to compensate for the amount they urinate. Patients prefer cold or ice water.
- **Option D:** Weighing the client is not necessary at this time. Monitor serum and urine osmolality. Urine osmolality will be decreased and serum osmolality will increase. Monitor urine-specific gravity. This may be 1.005 or less.

**40. Insensible fluid losses include:**

- A. Urine
- B. Gastric drainage
- C. Bleeding
- D. Perspiration

**Correct Answer: D. Perspiration**

Perspiration and the fluid lost via the lungs are termed insensible losses; normally, insensible losses equal about 1000 cc/day. Insensible fluid loss is the amount of body fluid lost daily that is not easily measured, from the respiratory system, skin, and water in the excreted stool. The exact amount is unmeasurable but is estimated to be between 40 to 800mL/day in the average adult without comorbidities.

- **Option A:** Expect a minimum of 1.5 mL/kg per hour in children and greater than 1 mL/kg per hour in adults. Special situations such as administering nephrotoxic medications such as acyclovir warrant higher thresholds for urine output to minimize renal toxicity.
- **Option B:** An important distinction in managing fluids is differentiating between maintenance fluids and fluid replacement. Maintenance fluids should address the patient's basic physiological needs, including both sensible and insensible fluid losses. Sensible fluid losses refer to typical routes of excretion such as urination and defecation.



- **Option C:** One general principle for all patient scenarios is to replace whatever fluid is being lost as accurately as possible. These fluid losses can differ depending on patients' medical conditions and differ by both volume and composition.

**41. A client arrives in the emergency with complaints of chest pain and is diagnosed with acute MI. A morphine 4mg IV was given 5 minutes ago. Which of the following assessments made by the nurse indicates a further immediate action?**

- A. Respiratory rate from 20 bpm to 12 bpm.
- B. Blood pressure from 120/70 to 100/60 mmHg.
- C. The client still complains of chest pain with a pain scale of 2/10.
- D. Cardiac rate of 103 bpm and a normal sinus rhythm of the ECG.

**Correct Answer: C. The client still complains of chest pain with a pain scale of 2/10.**

The goal for the client with an acute myocardial infarction is to eliminate the pain. Even pain related to a level of 2/10 should be managed with an additional dose of morphine.

- **Options A, B, & D:** Although hypotension, respiratory depression, and tachycardia are the side effects of morphine, they do not require further action at this time.

**42. Which of the following is the most important physical assessment parameter the nurse would consider when assessing fluid and electrolyte imbalance?**

- A. Skin turgor
- B. Intake and output
- C. Osmotic pressure
- D. Cardiac rate and rhythm

**Correct Answer: D. Cardiac rate and rhythm**

Cardiac rate and rhythm are the most important physical assessment parameter to measure. Skin turgor, intake, and output are physical assessment parameters a nurse would consider when assessing fluid and electrolyte imbalance, but choice d is the most important. Tachycardia and hypertension are common manifestations. Tachypnea is usually present with or without dyspnea. Elevated CVP may be noted before dyspnea and adventitious breath sounds occur. Hypertension may be a primary disorder or occur secondary to other associated conditions such as heart failure.

- **Option A:** Skin turgor is a sign of fluid loss (dehydration). Diarrhea or vomiting can cause fluid loss. Infants and young children with these conditions can rapidly lose a lot of fluid if they do not take enough water. Fever speeds up this process. To check for skin turgor, the health care provider grasps the skin between two fingers so that it is tented up. Commonly on the lower arm or abdomen is checked. The skin is held for a few seconds then released.
- **Option B:** These measurements are important to help evaluate a person's fluid and electrolyte balance, to suggest various diagnoses and allows for a prompt intervention to correct the imbalance. Records of all intake and output must be kept meticulously in an Intake and Output Chart (I/O Chart).

- **Option C:** Osmosis is the diffusion of water across a membrane in response to osmotic pressure caused by an imbalance of molecules on either side of the membrane. Osmoregulation is the process of maintenance of salt and water balance ( osmotic balance) across membranes within the body's fluids, which are composed of water, plus electrolytes, and non-electrolytes.

**43. Which of the following classes of medications protects the ischemic myocardium by blocking catecholamines and sympathetic nerve stimulation?**

- A. Beta-adrenergic blockers
- B. Calcium channel blockers
- C. Narcotics
- D. Nitrates

**Correct Answer: A. Beta-adrenergic blockers**

Beta-adrenergic blockers work by blocking beta receptors in the myocardium, reducing the response to catecholamines and sympathetic nerve stimulation. They protect the myocardium, helping to reduce the risk of another infarction by decreasing the workload of the heart and decreasing myocardial oxygen demand.

- **Option B:** Calcium channel blockers reduce the workload of the heart by decreasing the heart rate.
- **Option C:** Narcotics reduce myocardial oxygen demand, promote vasodilation, and decrease anxiety.
- **Option D:** Nitrates reduce myocardial oxygen consumption by decreasing left ventricular end-diastolic pressure (preload) and systemic vascular resistance (afterload).

**44. The community nurse is conducting a health promotion program at a local school and is discussing the risk factors associated with cancer. Which of the following, if identified by the client as a risk factor, indicates a need for further instructions?**

- A. Stress
- B. Exposure to radiation
- C. Viral factors
- D. Low-fat and high-fiber diet

**Correct Answer: D. Low-fat and high-fiber diet**

- **Option D:** A diet high in fat may be a factor in the development of breast, colon, and prostate cancers. High-fiber diets may reduce the risk of colon cancer.
- **Option A:** Increased stress has been associated with causing the growth and proliferation of cancer cells.
- **Option B:** Two forms of radiation, ultraviolet and ionizing, can lead to cancer.
- **Option C:** Viruses may be one of the multiple agents acting to initiate carcinogenesis and have been associated with several types of cancer.

**45. A client is being weaned off from parenteral nutrition (PN) and is given a go-signal to take a regular diet. The ongoing solution rate has been 120ml/hr. A nurse expects that which of the following prescriptions regarding the PN solution will accompany the diet order?**

- A. Decrease the PN rate to 60ml/hr.
- B. Start 0.9% normal saline at 30 ml/hr.
- C. Maintain the present infusion rate.
- D. Discontinue the PN.

**Correct Answer: A. Decrease the PN rate to 60ml/hr.**

When a client begins eating a regular diet after a period of receiving PN, the PN is decreased slowly. Gradually decreasing the infusion rate allows the client to remain sufficiently nourished during the transition to a normal diet and prevents an episode of hypoglycemia.

- **Option B:** Parenteral nutrition is the intravenous administration of nutrition outside of the gastrointestinal tract. Total parenteral nutrition (TPN) is when the IV administered nutrition is the only source of nutrition the patient is receiving. Total parenteral nutrition is indicated when there is an inadequate gastrointestinal function and contraindications to enteral nutrition.
- **Option C:** Patients who recently received TPN should be monitored daily until stable. They require more frequent monitoring if metabolic abnormalities are detected or if the patient has a risk of refeeding syndrome. Refeeding syndrome can occur in severely malnourished and cachectic individuals when feeding is reintroduced and can lead to severe electrolyte instabilities.
- **Option D:** PN that is terminated abruptly will cause hypoglycemia. Total parenteral nutrition administration is through a central venous catheter. A central venous catheter is an access device that terminates in the superior vena cava or the right atrium and is used to administer nutrition, medication, chemotherapy, etc. Establishing this access could be through a peripherally inserted central catheter (PICC), central venous catheter, or an implanted port.

**46. A client with hypothyroidism asks the nurse if she will still need to take thyroid medication during the pregnancy. The nurse's response is based on the knowledge that:**

- A. There is no need to take thyroid medication because the fetus's thyroid produces a thyroid-stimulating hormone.
- B. Regulation of thyroid medication is more difficult because the thyroid gland increases in size during pregnancy.
- C. It is more difficult to maintain thyroid regulation during pregnancy due to a slowing of metabolism.
- D. Fetal growth is arrested if thyroid medication is continued during pregnancy.

**Correct Answer: B. Regulation of thyroid medication is more difficult because the thyroid gland increases in size during pregnancy.**

During pregnancy, the thyroid gland triples in size. This makes it more difficult to regulate thyroid medication. During pregnancy, there are increased metabolic needs of the maternal body resulting in changes in thyroid physiology. These changes in thyroid physiology reflect in altered thyroid function tests.

- **Option A:** There could be a need for thyroid medication during pregnancy. The serum TSH concentration is the initial and most reliable measure of thyroid function during pregnancy. As elaborated above, there are physiologic changes in TSH levels during pregnancy which warrants close monitoring of TSH levels. As per the latest American Thyroid Association (ATA) guidelines, serum TSH levels during pregnancy should be defined using population and trimester-specific based reference ranges.
- **Option C:** The thyroid function does not slow. When population and trimester-specific normal ranges are not available, the ATA guidelines recommend reducing the lower limit of TSH by 0.4 mU/L and the upper limit by 0.5 mU/L. It would correspond to the TSH reference range of 0.1 to 4.0 mU/L during the first trimester with a gradual return of TSH towards the non-pregnant normal range during second and third trimesters.
- **Option D:** Fetal growth is not arrested if thyroid medication is continued. There is an increase in iodine requirement during pregnancy due to an increase in maternal thyroid hormone production as well as an increase in renal iodine clearance. Along with the above two factors, there is also a fetal iodine requirement; therefore, dietary iodine requirements are higher during pregnancy.

**47. The patient with COPD has a nursing diagnosis of Ineffective Breathing Pattern. Which is an appropriate action to delegate to the experienced LPN under your supervision?**

- Observe how well the patient performs pursed-lip breathing.
- Plan a nursing care regimen that gradually increases activity intolerance.
- Assist the patient with basic activities of daily living.
- Consult with the physical therapy department about reconditioning exercises.

**Correct Answer: A. Observe how well the patient performs pursed-lip breathing**

Experienced LPNs/LVNs can use observation of patients to gather data regarding how well patients perform interventions that have already been taught. The scope of practice for the licensed practical or vocational nurse will most likely include the legal ability of this nurse to perform data collection, plan, implement and evaluate care under the direct supervision and guidance of the registered nurse.

- **Option B:** Planning requires additional education and skills, appropriate to an RN. The scope of practice for the registered nurse will most likely include the legal ability of the registered professional nurse to perform all phases of the nursing process including assessment, nursing diagnosis, planning, implementation and evaluation.
- **Option C:** Assisting patients with ADLs is more appropriately delegated to a nursing assistant. Some examples of tasks and aspects of care that can be delegated legally to nonprofessional, unlicensed assistive nursing personnel, provided they are competent in these areas, under the direct supervision of the nurse include assisting the client with their activities of daily living such as ambulation, dressing, grooming, bathing and hygiene.
- **Option D:** Scopes of practice are also considered prior to the assignment of care. All states have scopes of practice for advanced nurse practitioners, registered nurses, licensed practical nurses and unlicensed assistive personnel like nursing assistants and patient care technicians.

**48. Which of the following reflects the principle on which a client's diet will most likely be based during the acute phase of MI?**

- A. Liquids as ordered
- B. Small, easily digested meals
- C. Three regular meals per day
- D. NPO

**Correct Answer: B. Small, easily digested meals**

Recommended dietary principles in the acute phase of MI include avoiding large meals because small, easily digested foods are better tolerated. Fluids are given according to the client's needs, and sodium restrictions may be prescribed, especially for clients with manifestations of heart failure. Cholesterol restrictions may be ordered as well.

- **Option A:** Limit saturated fat and trans fat and replace them with the better fats, monounsaturated and polyunsaturated. If there is a need to lower blood cholesterol, reduce saturated fat to no more than 5 to 6 percent of total calories. For someone eating 2,000 calories a day, that's about 13 grams of saturated fat.
- **Option C:** Choose foods with less sodium and prepare foods with little or no salt. To lower blood pressure, aim to eat no more than 2,300 milligrams of sodium per day. Reducing daily intake to 1,500 mg is desirable because it can lower blood pressure even further. If the client can't meet these goals right now, even reducing sodium intake by 1,000 mg per day can benefit blood pressure.
- **Option D:** Clients are not prescribed a diet of liquids only or NPO unless their condition is very unstable. Choose poultry and fish without skin and prepare them in healthy ways without added saturated and trans fat. If the client chooses to eat meat, look for the leanest cuts available and prepare them in healthy and delicious ways.

**49. The nurse is teaching a female client with a leg ulcer about tissue repair and wound healing. Which of the following statements by the client indicates effective teaching?**

- A. "To make the bandage tightly wrapped ."
- B. "My foot should feel cold."
- C. "I'll include fruits and vegetables in my meal plan."
- D. "I'll restrict my intake of protein."

**Correct Answer: C. "I'll include fruits and vegetables in my meal plan."**

The beneficial nutrients found in fruits and vegetables are essential in the wound healing process.

- **Option A:** The bandage should be secure but not too tight to impede circulation to the area (needed for tissue repair).
- **Option B:** If the client's foot feels cold, circulation is impaired, thus inhibiting wound healing.
- **Option D:** For effective tissue healing, adequate intake of protein is needed.

**50. An eighty-five-year-old man was admitted for surgery for benign prostatic hypertrophy. Preoperatively he was alert, oriented, cooperative, and knowledgeable about his surgery. Several hours after surgery, the evening**

***nurse found him acutely confused, agitated, and trying to climb over the protective side rails on his bed. The most appropriate nursing intervention that will calm an agitated client is:***

- A. Speak soothingly and provide quiet music
- B. Encourage family phone calls
- C. Limit visits by staff
- D. Position in a bright, busy area

**Correct Answer: A. Speak soothingly and provide quiet music**

The environment is an important factor in the prevention of injuries. Talking softly and providing quiet music have a calming effect on the agitated client. Anxiety is contagious and may be transferred from health care provider to client or vice versa. Client develops a feeling of security in the presence of a calm staff person.

- **Option B:** Phone calls from his family will not help a client who is trying to climb over the side rails and may even add to his danger. Therapeutic skills need to be directed toward putting the client at ease, because the nurse who is a stranger may pose a threat to the highly anxious client.
- **Option C:** The client needs frequent visits by the staff to orient him and to assess his safety. The client's safety is utmost priority. A highly anxious client should not be left alone as his anxiety will escalate.
- **Option D:** Putting the client in a bright, busy area would probably add to his confusion. Anxious behavior escalates by external stimuli. A smaller or secluded area enhances a sense of security as compared to a large area which can make the client feel lost and panicked.

***51. A pediatric client with asthma has just received omalizumab (Xolair). The nurse determines that the client might be suffering a life-threatening effect in which of the following?***

- A. Headache and dizziness
- B. Nausea and vomiting
- C. Swelling of the tongue
- D. Joint pain

**Correct Answer: C. Swelling of the lips**

Omalizumab (Xolair) Xolair is an anti-inflammatory that is used to treat moderate to severe asthma that is caused by allergies. An anaphylactic reaction may happen such as flushing, rash, wheezing, or swelling of the face, lips, or tongue.

- **Options A, B, & D:** These are some of the side effects but will not alert the nurse for an anaphylactic reaction.

***52. Another client is brought to the emergency room by friends who state that he took something an hour ago. He is actively hallucinating, agitated, with an irritated nasal septum.***

- A. Heroin
- B. Cocaine
- C. LSD
- D. Marijuana

**Correct Answer: B. Cocaine**

The manifestations indicate intoxication with cocaine, a CNS stimulant. These patients present to the hospital with agitation, chest pain, anxiety, psychosis, and blunt and penetrating traumatic injuries. They are frequently hypertensive and tachycardic. Patients with acute cocaine toxicity presenting to the emergency department (ED) may require urgent treatment for tachycardia, dysrhythmia, hypertension, and coronary vasospasm, leading to pathological sequelae such as acute coronary syndrome, stroke, and death.

- **Option A:** Intoxication with heroin is manifested by euphoria then impairment in judgment, attention, and the presence of pupillary constriction. Heroin, also known as diacetylmorphine, is a very efficient prodrug and more potent than Morphine. Many deaths are caused by heroin overdoses throughout the world each year. Heroin, which can be sniffed, smoked, or injected, is experiencing a rebound in usage, partially related to the efforts to reduce the abuse of prescription pain relievers.
- **Option C:** Intoxication with hallucinogen like LSD is manifested by grandiosity, hallucinations, synesthesia, and increase in vital signs. Patients under the influence of LSD will most likely present to a clinical setting after experiencing what is colloquially referred to as a “bad trip.” Others may present after ingesting the substance unknowingly, or perhaps in exceedingly large doses. D-lysergic acid diethylamide, or LSD, is a compound of the lysergamide class known for its powerful psychedelic effects on humans.
- **Option D:** Intoxication with Marijuana, a cannabinoid is manifested by the sensation of slowed time, conjunctival redness, social withdrawal, impaired judgment, and hallucinations. The term “marijuana” typically refers to the tobacco-like preparations of the leaves and flowers of the plant *Cannabis sativa* and *Cannabis indica*. The plant contains many psychoactive compounds often referred to as cannabinoids. The primary psychoactive ingredient is believed to be tetrahydrocannabinol, which is also responsible for most of the intoxicating effects experienced by users.

**53. Which client would the nurse identify as being most at risk for experiencing a CVA?**

- A. A 39-year-old pregnant female.
- B. A 67-year-old Caucasian male.
- C. An 84-year-old Japanese female.
- D. A 55-year-old African American male.

**Correct Answer: D. A 55-year-old African American male.**

African Americans have twice the rate of CVAs as Caucasians; males are more likely to have strokes than females except in advanced years. Of all the risk factors, hypertension is the most common modifiable risk factor for stroke. Hypertension is most prevalent in African-Americans and also occurs earlier in life.

- **Option A:** Pregnancy is a minimal risk factor for CVA. Stroke is the fifth leading cause of death in the US. The incidence of stroke is around 800,000 people annually. Stroke is the leading cause of disability. The incidence of stroke has declined, but the morbidity has increased. Due to longer life expectancy, the lifetime risk of stroke is higher in women. Globally, at least 5 million people die from strokes and millions of others remain disabled.
- **Option B:** One-third of the adults in the USA have elevated low-density lipoprotein (LDL), leading to plaque formation in the intracerebral vasculature. Eventually, due to the excessive plaque build-up thrombotic strokes occur.
- **Option C:** Asians have a lower risk, possibly due to their high omega-3 fatty acids. Lifestyle measures such as weight loss, salt restriction, taking more fruits and vegetables (such as the Mediterranean diet) are helpful in decreasing blood pressure. Every 10 mm Hg reduction in blood pressure is associated with a 1/3rd reduction in stroke risk in primary prevention.

**54. When administering magnesium sulfate to a client with preeclampsia, the nurse understands that this drug is given to:**

- A. Prevent seizures.
- B. Reduce blood pressure.
- C. Slow the process of labor.
- D. Increase diuresis.

**Correct Answer: A. Prevent seizures**

The chemical makeup of magnesium is similar to that of calcium and, therefore, magnesium will act like calcium in the body. As a result, magnesium will block seizure activity in a hyper-stimulated neurologic system by interfering with signal transmission at the neuromuscular junction.

- **Option B:** Magnesium sulfate may attenuate blood pressure by decreasing the vascular response to pressor substances.
- **Option C:** Since the primary therapeutic goal of tocolysis is to delay preterm delivery within 48 hours from the initiation of steroid prophylaxis, little evidence suggests that extended MgSO<sub>4</sub> therapy is beneficial.
- **Option D:** There are rare cases of pregnant women who develop polyuria after receiving intravenous therapy of magnesium sulfate. It can be considered as another cause of solute diuresis.

**55. The distribution of nurses to areas of “most need” in the time of a nursing shortage is an example of:**

- A. Utilitarianism theory
- B. Deontological theory
- C. Justice
- D. Beneficence

**Correct Answer: C. Justice**



Justice is defined as the fairness of the distribution of resources. However, guidelines for a hierarchy of needs have been established, such as with organ transplantation. Nurses are moved to areas of greatest need when shortages occur on the floors. No floor is left without staff, and another floor that had five staff will give up two to go help the floor that had no staff.

- **Option A:** Utilitarianism is a theory of morality, which advocates actions that foster happiness or pleasure and opposes actions that cause unhappiness or harm. When directed toward making social, economic, or political decisions, a utilitarian philosophy would aim for the betterment of society as a whole.
- **Option B:** In contemporary moral philosophy, deontology is one of those kinds of normative theories regarding which choices are morally required, forbidden, or permitted. In other words, deontology falls within the domain of moral theories that guide and assess our choices of what we ought to do (deontic theories), in contrast to those that guide and assess what kind of person we are and should be (aretaic [virtue] theories).
- **Option D:** Beneficence is defined as an act of charity, mercy, and kindness with a strong connotation of doing good to others including moral obligation. All professionals have the foundational moral imperative of doing right.

**56. Parents can facilitate the adjustment of their other children to a new baby by:**

- A. Having the children choose or make a gift to give to the new baby upon its arrival home.
- B. Emphasizing activities that keep the new baby and other children together.
- C. Having the mother carry the new baby into the home so she can show the other children the new baby.
- D. Reducing stress on others by limiting their involvement in the care of the new baby.

**Correct Answer: A. Having the children choose or make a gift to give to the new baby upon its arrival home.**

Special time should be set aside just for the other children without interruption from the newborn. Someone other than the mother should carry the baby into the home so she can give full attention to greeting her other children. Children should be actively involved in the care of the baby according to their ability without overwhelming them.

- **Option B:** When the new baby arrives, have a family member or friend bring the child to the hospital or birth center for a brief visit. Allow another loved one to hold the baby for a while so that both parents can give the older child plenty of cuddles.
- **Option C:** When the baby is home, take the older child to a special place — such as a favorite playground — to celebrate the new baby's arrival.
- **Option D:** Sometimes older children — stressed by the changes happening around them — take out their frustration on a new baby. If the older child tries to harm the baby, it's time for a talk about appropriate behavior. Also, give the older child extra attention and include him or her in activities that involve the baby, such as singing, bathing, or changing diapers. Praise the older child when he or she acts lovingly toward the new baby.

**57. A 25-year-old male is admitted in sickle cell crisis. Which of the following interventions would be of the highest priority for this client?**

- A. Taking hourly blood pressures with mechanical cuff
- B. Encouraging fluid intake of at least 200mL per hour
- C. Position in high Fowler's with knee gatch raised
- D. Administering Tylenol as ordered

**Correct Answer: B. Encouraging fluid intake of at least 200mL per hour**

It is important to keep the client in sickle cell crisis hydrated to prevent further sickling of the blood.

- **Option A:** Taking hourly blood pressures with mechanical cuff is incorrect because a mechanical cuff places too much pressure on the arm.
- **Option C:** Position in high Fowler's with knee gatch raised is inappropriate because it impedes circulation.
- **Option D:** Administering Tylenol is too mild an analgesic for the client in crisis.

**58. The nurse assessed the client and noted shortness of breath and a recent trip to China. The client is strongly suspected of having Severe Acute Respiratory Syndrome (SARS). Which of these prescribed actions will the nurse take first?**

- A. Place the client on airborne and contact precautions
- B. Introduce normal saline at 75 mL/hr
- C. Give methylprednisolone (SOLU-Medrol) 1 g intravenously (IV)
- D. Take blood, urine, sputum cultures

**Correct Answer: A. Place the client on airborne and contact precautions**

SARS is considered deadly so the initial action is to protect other clients and healthcare workers by securing the client in isolation. If an airborne-agent isolation (negative-pressure) room is not yet available, droplet precautions should be initiated until the client can be moved to a negative-pressure room.

- **Option B:** Early in the pandemic, a combination of ribavirin and corticosteroids was adopted as the standard treatment in Hong Kong, Canada and elsewhere because of the apparent good results of the first few patients. Subsequent reports showed that ribavirin was associated with a high rate of toxicity and lacked in vitro antiviral effect on SARS-coronavirus (SAR-CoV).
- **Option C:** The timing and dosage regimens of steroids in the treatment of SARS are controversial. Pulse methylprednisolone 250 to 500 mg/day for 3 to 6 days has been reported to have some efficacy in a subset of patients with "critical SARS", i.e., critically ill SARS patients with deteriorating radiographic consolidation, increasing oxygen requirement with PaO<sub>2</sub> <10 kPa or SpO<sub>2</sub> <90% on air, and respiratory distress (rate of 30/min).
- **Option D:** Handle these specimens using Universal Precautions, which includes use of gloves, gown, mask, and eye protection. Any procedure with the potential to generate fine-particulate aerosols (e.g., vortexing or sonication of specimens in an open tube) should be performed in a biological safety cabinet (BSC).

**59. A 23-year-old patient in the 27th week of pregnancy has been hospitalized on complete bed rest for 6 days. She experiences sudden shortness of breath, accompanied by chest pain. Which of the following conditions is the most likely cause of her symptoms?**

- A. Myocardial infarction due to a history of atherosclerosis.
- B. Pulmonary embolism due to deep vein thrombosis (DVT).
- C. Anxiety attacks due to worries about her baby's health.
- D. Congestive heart failure due to fluid overload.

**Correct Answer: B. Pulmonary embolism due to deep vein thrombosis (DVT).**

In a hospitalized patient on prolonged bed rest, the most likely cause of sudden onset shortness of breath and chest pain is pulmonary embolism. Pregnancy and prolonged inactivity both increase the risk of clot formation in the deep veins of the legs. These clots can then break loose and travel to the lungs. Most pulmonary embolisms originate as lower extremity DVTs. Hence, risk factors for pulmonary embolism (PE) are the same as risk factors for DVT. Virchow's triad of hypercoagulability, venous stasis, and endothelial injury provides an understanding of these risk factors.

- **Option A:** Smoking and abnormal apolipoprotein ratio showed the strongest association with acute myocardial infarction. The increased risk associated with diabetes and hypertension were found to be higher in women, and the protective effect of exercise and alcohol was also found to be higher in women.
- **Option C:** There is no reason to suspect an anxiety disorder in this patient. Pregnancy is one of the most important events in women's lives. Being pleasant, it is one of the most stressful events in a woman's life, as psychologists have cited, pregnancy as an emotional crisis. Though anxiety is a possible cause of her symptoms, the seriousness of pulmonary embolism demands that it be considered first.
- **Option D:** Myocardial infarction and atherosclerosis are unlikely in a 27-year-old woman, as is congestive heart failure due to fluid overload. Heart failure incidence has remained stable over the past decades, with more than 650,000 new cases of heart failure cases diagnosed annually, especially for individuals greater than 65 years of age. Because prevalence is greater in this age group, heart failure prevalence is expected to worsen in the near future.

**60. A male client is found sitting on the floor of the bathroom in the day treatment clinic with moderate lacerations on both wrists. Surrounded by broken glass, he sits staring blankly at his bleeding wrists while staff members call for an ambulance. How should Nurse Anuktakanuk approach her initially?**

- A. Enter the room quietly and move beside him to assess his injuries.
- B. Call for staff back-up before entering the room and restraining him.
- C. Move as much glass away from him as possible and sit next to him quietly.
- D. Approach him slowly while speaking in a calm voice, calling his name, and telling him that the nurse is here to help him.

**Correct Answer: D. Approach her slowly while speaking in a calm voice, calling her name, and telling her that the nurse is here to help her**

Ensuring the safety of the client and the nurse is the priority at this time. Therefore, the nurse should approach the client cautiously while calling her name and talking to her in a calm, confident manner. Nursing's hands-on approach to patient care and our ability to create therapeutic connections with patients enables us to pick up on key cues. Identifying these cues starts with understanding that suicidal behaviors are neither considered an illness nor a condition, but rather a complex set of behaviors that actually exists on a continuum that ranges from ideas/thoughts to eventual actions.

- **Option A:** The nurse should keep in mind that the client shouldn't be startled or overwhelmed. After explaining that the nurse is there to help, the nurse should observe the client's response carefully. The promotion of a care environment that is safe and conducive to their full recovery is essential in carrying out comprehensive care in mental health. The first step is qualified listening, but it cannot be immersed in a bigoted discourse, full of judgment. One must consider that not always the person is willing to express or externalize what they really feel, and so a new challenge to the health professional emerges, which is the careful observation of the reality of the patient and the listening of silence when the person is not willing to talk.
- **Option B:** If the client shows signs of agitation or confusion or poses a threat, the nurse should retreat and request assistance. For the care to surpass the technical focus, the psychological care and the continuous observation of patients and family members are also necessary, aiming to prioritize the communication in accordance with the qualified listening, as these patients are often insecure. It is important to highlight that all people who attempted suicide should receive professional care due to the emotional fragility in which they find themselves. The competence of the emergency team is saving lives, considering not only the physical aspects but also the psychological aspects involved in the process of caring
- **Option C:** The nurse shouldn't attempt to sit next to the client or examine injuries without first announcing the nurse's presence and assessing the dangers of the situation. There are some essential behaviors that nursing can use to meet a person who attempted suicide or has suicidal ideation, namely: listen carefully, be empathetic, convey non-verbal messages of acceptance, express respect for the opinion of another, talk honestly, show concern, and focus on the feelings of the person. The mere interaction with the patient has a great potential to calm down, prevent, or minimize the severity and intensity of the symptoms. Still, the team should try to establish a bond of trust from the start, whereas, on the other hand, the idea that the patient attempted suicide to manipulate others should be abandoned.

### **61. What is the best way to schedule medication for a client with constant pain?**

- A. PRN at the client's request
- B. Prior to painful procedures
- C. IV bolus after pain assessment
- D. Around-the-clock

#### **Correct Answer: D. Around-the-clock**

If the pain is constant, the best schedule is around-the-clock, to provide steady analgesia and pain control. The other options may actually require higher doses to achieve control. Pain medication prescribed around-the-clock has the purpose of managing a patient's baseline pain, which is the average pain intensity the patient experiences. This is generally pain that is continuously experienced.

- **Option A:** The use of "as needed" or "pro re nata" (PRN) range opioid analgesic orders is a common clinical practice in the management of acute pain, designed to provide flexibility in dosing to meet an individual's unique needs. Range orders enable necessary adjustments in doses based on individual response to treatment.

- **Option B:** Of particular importance to nursing care, unrelieved pain reduces patient mobility, resulting in complications such as deep vein thrombosis, pulmonary embolism, and pneumonia. Postsurgical complications related to inadequate pain management negatively affect the patient's welfare and the hospital performance because of extended lengths of stay and readmissions, both of which increase the cost of care.
- **Option C:** Assessment of pain is a critical step to providing good pain management. In a sample of physicians and nurses, Anderson and colleagues found lack of pain assessment was one of the most problematic barriers to achieving good pain control. The most critical aspect of pain assessment is that it is done on a regular basis (e.g., once a shift, every 2 hours) using a standard format. The assessment parameters should be explicitly directed by hospital or unit policies and procedures.

**62. A client with a stage 2 pressure ulcer has methicillin-resistant *Staphylococcus aureus* (MRSA) cultured from the wound. Contact precautions are initiated. Which rule must be observed to follow contact precautions?**

- A. A clean gown and gloves must be worn when in contact with the client.
- B. Everyone who enters the room must wear a N-95 respirator mask.
- C. All linen and trash must be marked as contaminated and send to biohazard waste.
- D. Place the client in a room with a client with an upper respiratory infection.

**Correct Answer: A. A clean gown and gloves must be worn when in contact with the client.**

A clean gown and gloves must be worn when any contact is anticipated with the client or with contaminated items in the room. Visitors might also be asked to wear a gown and gloves. Patients are asked to stay in their hospital rooms as much as possible. They should not go to common areas, such as the gift shop or cafeteria. They may go to other areas of the hospital for treatments and tests.

- **Option B:** A respirator mask is required only with airborne precautions, not contact precautions. Healthcare providers will put on gloves and wear a gown over their clothing while taking care of patients with MRSA.
- **Option C:** All linen must be double-bagged and clearly marked as contaminated. When leaving the room, healthcare providers and visitors remove their gown and gloves and clean their hands.
- **Option D:** The client should be placed in a private room or in a room with a client with an active infection caused by the same organism and no other infections. Whenever possible, patients with MRSA will have a single room or will share a room only with someone else who also has MRSA.

**63. The most indicative test for prostate cancer is:**

- A. A thorough digital rectal examination
- B. Magnetic resonance imaging (MRI)
- C. Excretory urography
- D. Prostate-specific antigen

**Correct Answer: D. Prostate-specific antigen**

An elevated prostate-specific antigen level indicates prostate cancer, but it can be falsely elevated if done after the prostate gland is manipulated. Elevated Prostate Specific Antigen (PSA) levels (usually

greater than 4 ng/ml) in the blood is how 80% of prostate cancers initially present even though elevated PSA levels alone correctly identify prostate cancer only about 25% to 30% of the time. We recommend at least 2 abnormal PSA levels or the presence of a palpable nodule on DRE to justify a biopsy and further investigation.

- **Option A:** A digital rectal examination should be done as part of the yearly screening, and then the antigen test is done if the digital exam suggests cancer. Digital rectal examination (DRE) may detect prostate abnormalities, asymmetry, and suspiciously hard nodules but is not considered a definitive test for prostate cancer by itself. An abnormal DRE initially uncovers about 20% of all prostate cancers.
- **Option B:** MRI is used in staging the cancer. Prostate MRI has much better soft tissue resolution than ultrasound and can identify areas in the gland that are truly “suspicious” with a high degree of accuracy and reliability (positive predictive value greater than 90%). Prostate MRI is also used for surgical planning in men considering radical prostatectomy and for improved biopsies, instead of saturation biopsies, when cancer is strongly suspected despite a negative initial TRUS-guided biopsy.
- **Option C:** An intravenous pyelogram (PIE-uh-low-gram), also called an excretory urogram, is an X-ray exam of the urinary tract. An intravenous pyelogram lets the doctor view the kidneys, the bladder, and the tubes that carry urine from the kidneys to the bladder (ureters).

**64. A 54-year-old woman is admitted to the hospital with severe swelling and pain on the right side of her face, just anterior to her ear. She reports a recent history of a sour taste in her mouth and difficulty with chewing. Preliminary investigations suggest a blockage in one of her salivary ducts, leading to sialadenitis, an inflammation of the salivary gland. This clinical case offers a prime opportunity for the nurse to underscore the role and locations of different salivary glands. To ascertain the student’s understanding, the nurse formulates a question about the salivary glands. Considering the patient’s clinical presentation and the need to determine which salivary gland might be affected, which of the following options should the nurse inquire about as NOT representing a pair of salivary glands?**

- A. Parotid
- B. Submandibular
- C. Submucosal
- D. Sublingual

**Correct Answer: C. Submucosal**

Submucosal is not a pair of salivary glands because it refers to a layer of tissue found beneath the mucosal lining in various parts of the digestive tract, including the mouth.

- **Option A:** The largest of the salivary glands, the parotid glands, are serous glands located just anterior to each ear. Parotid ducts enter the oral cavity adjacent to the second upper molars.
- **Option B:** The submandibular glands produce more serous than mucous secretions. Each gland can be felt as a soft lump along the inferior border of the mandible. The submandibular ducts open into the oral cavity on each side of the frenulum of the tongue.
- **Option D:** The sublingual glands, the smallest of the three paired salivary glands, produce primarily mucous secretions. They lie immediately below the mucous membrane on the floor of the oral

cavity.

**65. A nurse is performing an assessment of a client who is scheduled for cesarean delivery. Which assessment finding would indicate a need to contact the physician?**

- A. Fetal heart rate of 180 beats per minute.
- B. White blood cell count of 12,000.
- C. Maternal pulse rate of 85 beats per minute.
- D. Hemoglobin of 11.0 g/dL.

**Correct Answer: A. Fetal heart rate of 180 beats per minute.**

A normal fetal heart rate is 120-160 beats per minute. A count of 180 beats per minute could indicate fetal distress and would warrant physician notification.

- **Option B:** WBC count increases to 6 to 16 million/mL and can be as high as 20 million/mL during and shortly after labor.
- **Option C:** Initially, the increase in cardiac output is due to an increase in stroke volume. As the stroke volume decreases towards the end of the third trimester, an increase in heart rate acts to maintain the increased cardiac output.
- **Option D:** By full-term, a normal maternal hemoglobin range is 11-13 g/dL as a result of the hemodilution caused by an increase in plasma volume during pregnancy.

**66. The nurse teaches a patient with cancer of the liver about high-protein, high-calorie diet choices. Which snack choice by the patient indicates that the teaching has been effective?**

- A. Fresh fruit salad
- B. Orange sherbet
- C. French fries
- D. Strawberry yogurt

**Correct Answer: D. Strawberry yogurt**

- **Option D:** Yogurt has high biologic value because of the protein and fat content.
- **Option A:** Fruit salad does not have high amounts of protein or fat.
- **Option B:** Orange sherbet is lower in fat and protein than yogurt.
- **Option C:** French fries are high in calories from fat but low in protein.

**67. A 76-year-old woman, newly diagnosed with osteoporosis, is preparing for discharge after a week-long hospital stay due to a minor fracture. As the nurse reviews home safety measures, the patient expresses concern about preventing future fractures in her home environment. She inquires, "Given my condition, what specific precautions should I adopt to ensure my safety at home?" Which**

***of the following recommendations by the nurse would be most pertinent to address her concerns?***

- A. "It's best to abstain entirely from any form of physical activity or exercise to minimize strain on your bones."
- B. "When attempting to access items from elevated areas, always utilize a robust step stool to ensure stability."
- C. "To foster a serene ambiance at home, it's advisable to maintain dim lighting throughout your living spaces."
- D. "It's crucial to eliminate potential tripping hazards, such as throw rugs or clutter, to create clear pathways in your residence."

***68. A client is admitted to the emergency room with a spinal cord injury. The client is complaining of lightheadedness, flushed skin above the level of the injury, and headache. The client's blood pressure is 160/90 mm Hg. Which of the following is a priority action for the nurse to take?***

- A. Loosen tight clothing or accessories
- B. Assess for any bladder distention
- C. Raise the head of the bed
- D. Administer antihypertensive

**Correct Answer: C. Raise the head of the bed**

The client is experiencing an autonomic dysreflexia, a life-threatening medical emergency that affects individuals with spinal injuries. Usually an individual with SCI has a blood pressure reading of 20 mm to 40 mm Hg above baseline. If this condition is suspected, the priority nursing action is to raise the head of bed or place the client in high Fowler's position. This promotes adequate ventilation and prevents the occurrence of hypertensive stroke.

- **Options A & B:** After positioning the client in high Fowler's position, the nurse should remove any noxious stimuli that may trigger autonomic dysreflexia by loosening any tight clothing or objects that might be tight-fitting such as a bracelet, shoes, or stockings and check the bladder if it is too full.
- **Option D:** Antihypertensive medication may be prescribed such as nifedipine and nitrates to decrease cerebral hypertension.

***69. A male client has an abnormal result on a Papanicolaou test. After admitting, he read his chart while the nurse was out of the room, the client asked what dysplasia means. Which definition should the nurse provide?***

- A. Alteration in the size, shape, and organization of differentiated cells
- B. Increase in the number of normal cells in a normal arrangement in a tissue or an organ
- C. Presence of completely undifferentiated tumor cells that don't resemble cells of the tissues of their origin



D. Replacement of one type of fully differentiated cell by another in tissues where the second type normally isn't found

**Correct Answer: A. Alteration in the size, shape, and organization of differentiated cells**

- **Option A:** Dysplasia refers to an alteration in the size, shape, and organization of differentiated cells.
- **Option B:** An increase in the number of normal cells in a normal arrangement in a tissue or an organ is called hyperplasia.
- **Option C:** The presence of completely undifferentiated tumor cells that don't resemble cells of the tissues of their origin is called anaplasia.
- **Option D:** Replacement of one type of fully differentiated cell by another in tissues where the second type normally isn't found is called metaplasia.

**70. Which of the following intravenous solutions would be appropriate for a patient with severe hyponatremia secondary to syndrome of inappropriate antidiuretic hormone (SIADH)?**

- A. Hypotonic solution
- B. Hypertonic solution
- C. Isotonic solution
- D. Normotonic solution

**Correct Answer: B. Hypertonic solution**

When hyponatremia is severe, hypertonic solutions may be used but should be infused with caution due to the potential for the development of CHF. This water retention dilutes serum sodium levels, making the patient hyponatremic and necessitating the administration of hypertonic solutions to balance sodium and water.

- **Option A:** In SIADH, isotonic and hypotonic solutions are not indicated, because urine output is minimal, so water is retained. Patients presenting with severe symptoms such as seizures, confusion, or delirium need urgent initial correction with hypertonic saline infusion for the first few hours rather than just water restriction.
- **Option C:** A 100 mL bolus of 3% hypertonic saline is given in the first 3 to 4 hours, and sodium levels are measured within 2 to 3 hours so that further doses can be adjusted to avoid correcting too rapidly. A rise of 3 to 4 mEq/L within the first few hours in such distressing conditions can be justified.
- **Option D:** Normotonic solutions do not exist. If the patient's mental status does not improve, more boluses of 100 mL hypertonic saline can be given in the same way as above until symptoms get better.

**71. When the nurse is administering a vesicant chemotherapeutic agent intravenously, an important consideration is to**

- A. Stop the infusion if swelling is observed at the site
- B. Infuse the medication over a short period

- C. Administer the chemotherapy through a small-bore catheter
- D. Hold the medication unless a central venous line is available

**Correct Answer: A. Stop the infusion if swelling is observed at the site**

- **Option A:** Swelling at the site may indicate extravasation, and the IV should be stopped immediately.
- **Option B:** The medication should generally be given slowly to avoid irritation of the vein.
- **Option C:** The size of the catheter is not as important as administration of vesicants into a running IV line to allow dilution of the chemotherapy drug.
- **Option D:** These medications can be given through peripheral lines, although central vascular access devices (CVADs) are preferred.

**72. A client tells the nurse that psychotropic medicines are dangerous and refuses to take them. Which intervention should the nurse use first?**

- A. Ask the client about any previous problems with psychotropic medications.
- B. Ask the client if an injection is preferable.
- C. Insist that the client takes medication as prescribed.
- D. Withhold the medication until the client is less suspicious.

**Correct Answer: A. Ask the client about any previous problems with psychotropic medications.**

The nurse needs to clarify the client's previous experience with psychotropic medication in order to understand the meaning of the client's statement. Attempt to understand the significance of these beliefs to the client at the time of their presentation. Important clues to underlying fears and issues can be found in the client's seemingly illogical fantasies. Explain the procedures and try to be sure the client understands the procedures before carrying them out. When the client has full knowledge of procedures, he or she is less likely to feel tricked by the staff.

- **Option B:** Asking the client if an injection is preferable may add to the client's suspicion and feeling threatened. Show empathy regarding the client's feelings; reassure the client of your presence and acceptance. The client's delusion can be distressing. Empathy conveys your caring, interest and acceptance of the client.
- **Option C:** Insisting that the client take medication can be a violation of his right to refuse treatment. Initially do not argue with the client's beliefs or try to convince the client that the delusions are false and unreal. Arguing will only increase a client's defensive position, thereby reinforcing false beliefs. This will result in the client feeling even more isolated and misunderstood.
- **Option D:** Withholding medication prescribed to relieve delusional beliefs will likely intensify paranoid thinking. Encourage healthy habits to optimize functioning: Maintain medication regimen; maintain regular sleep pattern; maintain self-care; and reduce alcohol and drug intake. All are vital to help keep the client in remission.

**73. The newly hired nurse at Nurseslabs Medical Center is assessing a client who abuses barbiturates and benzodiazepine. The nurse would observe for evidence of which withdrawal symptoms?**

- A. Respiratory depression, stupor, and bradycardia
- B. Anxiety, tremors, and tachycardia
- C. Muscle aches, cramps, and lacrimation
- D. Paranoia, depression, and agitation

**Correct Answer: B. Anxiety, tremors, and tachycardia**

Barbiturates and benzodiazepine are CNS depressants; therefore, withdrawal symptoms are related to CNS stimulation caused by the rebounding of neurotransmitters (norepinephrine). Symptoms include increased anxiety, tremors, and vital sign changes (such as tachycardia and hypertension). Chronic abusers can develop severe withdrawal symptoms within 8 to 15 hours of cessation. Symptoms include restlessness, tremors, hyperthermia, sweating, insomnia, anxiety, seizures, circulatory failure, and potentially death.

- **Option A:** Respiratory depression, stupor, and bradycardia are typically associated with an overdose—not withdrawal—of barbiturates or benzodiazepine. Symptoms of barbiturate toxicity vary from case to case, but commonly include difficulty thinking, decreased level of consciousness, bradycardia or rapid and weak pulse, poor coordination, vertigo, nausea, muscle weakness, thirst, oliguria, decreased temperature, and dilated or contracted pupils. Fatal cases are marked by coma, hypotension (low blood pressure), and respiratory depression (decreased efforts to breathe) evidenced by cyanosis and hypotension
- **Option C:** Muscle aches, cramps, and lacrimation are most commonly associated with withdrawal from opiates. According to Diagnostic and Statistical Manual of Mental Disorders (DSM–5) criteria, signs and symptoms of opioid withdrawal include lacrimation or rhinorrhea, piloerection “goose flesh,” myalgia, diarrhea, nausea/vomiting, pupillary dilation and photophobia, insomnia, autonomic hyperactivity (tachypnea, hyperreflexia, tachycardia, sweating, hypertension, hyperthermia), and yawning.
- **Option D:** Paranoia, depression, and agitation are usually associated with withdrawal from CNS stimulants, such as amphetamines or cocaine. Central nervous system (CNS) stimulants like cocaine and amphetamine can also produce withdrawal symptoms. Like opioids, the withdrawal symptoms are mild and not life-threatening. Often the individual will develop marked depression, excessive sleep, hunger, dysphoria, and severe psychomotor retardation but all vital functions are well preserved. Recovery is usually slow, and depression can last for several weeks.

**74. Which factor is least significant during assessment when gathering information about cultural practices?**

- A. Language, timing
- B. Touch, eye contact
- C. Biocultural needs
- D. Pain perception, management expectations

**Correct Answer: C. Biocultural needs**

Cultural practices do not influence biocultural needs because they are inborn risks that are related to a biological need and not a learned cultural belief or practice. Culturally competent healthcare professionals learn about different groups and the values that drive them. They develop nonjudgmental acceptance of cultural and noncultural differences in patients and coworkers, using diversity as a strength that empowers them to achieve mutually acceptable healthcare goals.

- **Option A:** When a patient doesn't speak English and there is no interpreter, spend more time visiting to allay patients' anxiety. Learn key phrases from the family and use flashcards to enhance communication. When all else fails, sign language does work. Remember that making the effort shows the patient that you care. You are using the language of the heart and building trust.
- **Option B:** Both the clinician and the interpreter must pay particular attention to nonverbal feedback during communication with the patient to ensure understanding of the patient's concerns and desires. During the exchange, the clinician and the interpreter must be able to convey caring and support to gain patients' confidence and trust, particularly when they are revealing sensitive information.
- **Option D:** Culture influences patients' perceptions of illness, pain, and healing. These perceptions may conflict with clinicians' views based on the medical model. Keep an open mind and listen actively to what patients say about their illness.

**75. A client was brought to the emergency department after suffering a closed head injury and lacerations around the face due to a hit-run accident. The client is unconscious and has a minimal response to noxious stimuli. Which of the following assessment findings if observed after few hours, should be reported to the physician immediately?**

- A. Drainage of a clear fluid from the client's nose
- B. Withdrawal of the client in response to painful stimuli
- C. Bruises and minimal edema of the eyelids
- D. Bleeding around the lacerations

**Correct Answer: A. Drainage of a clear fluid from the client's nose**

- Option A: Clear drainage from the client's nose indicates that there is a leakage of CSF and should be reported to the physician immediately.

**76. How should the nurse modify the examination for a 7-year-old child?**

- A. Ask the parents to leave the room before the examination.
- B. Demonstrate equipment before using it.
- C. Allow the child to help with the examination.
- D. Perform invasive procedures (e.g., otoscopic) last.

**Correct Answer: B. Demonstrate equipment before using it.**

The nurse should modify his examination by demonstrating equipment before using it to examine a school-age child. The physical examination is often the first direct contact between the nurse and the child. Establishing a trusting relationship between the child and the examiner is important. Throughout the examination the nurse should be sensitive to the cultural needs of and differences among children. Providing a quiet, private environment for the history and physical examination is important. The classic systematic approach to the physical examination is to begin at the head and proceed through the entire body to the toes. When examining a child, however, the examiner tailors the physical assessment to the child's age and developmental level.

- **Option A:** The nurse should make sure parents are not present during the physical examination of an adolescent, but they usually help younger children feel more secure. To establish trust with the school-age child, the examiner asks the child questions the child can answer. Children in elementary school will talk about school, favorite friends, and activities. Older school-age children may have to be encouraged to talk about their school performance and activities. The examiner encourages the parent to support and reinforce the child's participation in the examination.
- **Option C:** The nurse should allow a preschooler to help with the examination when possible, but not usually a school-age child. The examination proceeds from head to toe. Children of this age prefer a simple drape over their underpants or a colorful examination gown, and the examiner should be sensitive to the child's modesty. The examination is a wonderful opportunity to teach the child about the body and personal care. The nurse answers questions openly and in simple terms.
- **Option D:** It is best to perform invasive procedures last for all age groups; therefore, this does not represent a modification. Toddlers are often fearful of invasive procedures, so those should be performed last in this age group.

**77. The doctor has ordered Percocet (oxycodone) for a client following abdominal surgery. The primary objective of nursing care for the client receiving an opiate analgesic is to:**

- A. Prevent addiction
- B. Reduce pain
- C. Facilitate mobility
- D. Prevent nausea

**Correct Answer: B. Reduce pain**

- Option B: The nurse should be concerned with alleviating the client's pain. Inadequate control of postoperative pain may result in slow recovery.
- Option A: Chronic use of pain medications such as opiates can cause addiction.
- Option C: Opiates can help facilitate mobility but it is a secondary effect after relief from postoperative pain.
- Option D: Nausea is a common side effect of opioid analgesics.

**78. A 16-year-old girl has returned home following hospitalization for treatment of anorexia nervosa. The parents tell the family nurse performing a home visit that their child has always done everything to please them and they cannot understand her current stubbornness about eating. The nurse analyzes the family situation and determines it is characteristic of which relationship style?**

- A. Differentiation
- B. Disengagement
- C. Enmeshment
- D. Scapegoating

**Correct Answer: C. Enmeshment**

Enmeshment is a fusion or over involvement among family members whereby the expectation exists that all members think and act alike. The child who always acts to please her parents is an example of how enmeshment affects development in many cases, a child who develops anorexia nervosa exerts control only in the area of eating behavior. Enmeshed families are families in which the individual is expected to give up their own needs and desires. In enmeshed families, there is a total lack of boundaries, which usually leads to codependent relationships and a dysfunctional family.

- **Option A:** Differentiation is the process of becoming an individual developing autonomy while staying in contact with the family system. "The ability to be in emotional contact with others yet still autonomous in one's own emotional functioning is the essence of the concept of differentiation." (Kerr & Bowen. 1988) "Differentiation is a product of a way of thinking that translates into a way of being. Such changes are reflected in the ability to be in emotional contact with a difficult, emotionally charged problem and not feel compelled to preach about what others "should" do, not rush in to "fix" the problem and not pretend to be detached by emotionally insulating oneself." (Kerr & Bowen 1988).
- **Option B:** The lines of responsibility and authority are strictly enforced and must be followed; however, they are not necessarily communicated or explained. Access to all family members, especially parents or those in authority, is limited. Appropriate communication and expression across subsystems (e.g., children to parents) is stifled.
- **Option D:** In Family Systems theory, scapegoating in a dysfunctional family system is understood to be fueled by unconscious processes whereby the family displaces their own collective psychological difficulties and complexes onto a specific family member. 'The Scapegoat' is one of the roles 'assigned' to a child growing up in a dysfunctional family system (I say more about this process in my answer to question 2). The scapegoating typically (but not always) begins in childhood and often continues into and throughout adulthood, although the role may be passed around to different family members at times.

**79. The nurse is caring for the client with a 5-year-old diagnosis of plumbism. Which information in the health history is most likely related to the development of plumbism?**

- A. The client has traveled out of the country in the last 6 months.
- B. The client's parents are skilled stained-glass artists.
- C. The client lives in a house built in one.
- D. The client has several brothers and sisters.

**Correct Answer: B. The client's parents are skilled stained-glass artists.**

Plumbism is lead poisoning. One factor associated with the consumption of lead is eating from pottery made in Central America or Mexico that is unfired. The child lives in a house built after 1976 (this is when lead was taken out of paint), and the parents make stained glass as a hobby. Stained glass is put together with lead, which can drop on the work area, where the child can consume the lead beads.

- **Option A:** Traveling out of the country does not increase the risk of plumbism. Because lead is not biodegradable, it demonstrates remarkable environmental persistence. Despite the fact that the amount of lead in paint intended for use in or on residential buildings, furniture, or children's toys in the United States has been restricted to 0.06% since 1978 and was further reduced to 0.009% in 2008, lead-based paint continues to be a major source of lead exposure in young children.
- **Option C:** The house was built after the lead was removed with the paint. Several million young children in the United States live in older homes in which lead-based paint was previously used,

and as this old paint ages, it peels, flakes, and crumbles into dust that settles on the interior surfaces of homes and in the soil surrounding the exterior of the home. The dust and soil containing these tiny paint particles inevitably make their way into children's mouths as a result of normal childhood exploratory hand-to-mouth behavior.

- **Option D:** Having several siblings is unrelated to the stem. A variety of occupations and hobbies may expose adults to lead, and working parents may inadvertently bring lead home where they can expose their children second-hand. Some of the highest risk occupations and hobbies include metal welding, battery manufacturing, and recycling, shipbuilding and shipbreaking, firing range use or instruction as well as bullet salvaging, lead smelting and refining, painting and construction work, and pipefitting and plumbing.

**80. 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.

**81. A group of passengers enters the ED with complaints of cough, tightness in the throat, and extreme periorbital swelling. There is a strong odor exuding from their clothes. They report exposure to a "gas bomb" that was placed in the bus terminal. What is the priority action?**

- A. Readily transfer clients and visitors from the area
- B. Check vital signs and auscultate lung sounds
- C. Assist clients in the decontamination area
- D. Direct clients to the cold or clean zone for immediate treatment

**Correct Answer: C. Assist clients in the decontamination area**

Decontamination in a specified area is the priority. The decontamination and support areas are established within the Warm Zone, also referred to as the Contamination Reduction Zone. Decontamination involves thorough washing to remove contaminants.

- **Option A:** Decontamination triage is especially important in mass casualty incidents and should not be confused with medical triage. Decontamination triage is the process of determining which victims require decontamination and which do not. Rapidly identifying victims who may not require decontamination can significantly reduce the time and resources needed for mass decontamination.
- **Option B:** Doing assessments and transferring others delay decontamination and do not protect the total environment. Set up or assign an area or building as a safe refuge/observation area for victims who do not require medical attention. Here they can be monitored for a delayed outbreak of symptoms or indications of residual contamination. Donning personal protective equipment and measures is vital before assisting with decontamination or assessing the clients.
- **Option D:** The clients must undergo decontamination before entering cold or clean zones. In mass casualty incidents, decontamination corridors can be set up that consist of high volume, low-pressure water deluges. Assign personnel to decontamination stations to control and instruct victims when they enter the decontamination area.

**82. A client is admitted for treatment of the syndrome of inappropriate antidiuretic hormone (SIADH). Which nursing intervention is appropriate?**

- A. Infusing I.V. fluids rapidly as ordered.
- B. Encouraging increased oral intake.
- C. Restricting fluids.
- D. Administering glucose-containing I.V. fluids as ordered.

**Correct Answer: C. Restricting fluids.**

To reduce water retention in a client with SIADH, the nurse should restrict fluids.

- **Option A:** Rapid infusion of IV fluids would further increase the client's overload.
- **Option B:** The client should be instructed to restrict his fluid intake. It is also important to restrict sodium intake because higher correction rates have been associated with osmotic demyelination.
- **Option D:** Administering fluids by any route would further increase the client's already heightened fluid load.

**83. A female client is brought to the emergency department with second-and third-degree burns on the left arm, left anterior leg, and anterior trunk. Using the Rule of Nines, what is the total body surface area that has been burned?**

- A. 18%
- B. 27%
- C. 30%



D. 36%

**Correct Answer: D. 36%**

The Rule of Nines divides body surface area into percentages that, when totaled, equal 100%. According to the Rule of Nines, the arms account for 9% each, the anterior legs account for 9% each, and the anterior trunk accounts for 18%. Therefore, this client's burns cover 36% of the body surface area.

- **Option A:** The Rule of Nines, also known as the Wallace Rule of Nines, is a tool used by trauma and emergency medicine providers to assess the total body surface area (TBSA) involved in burn patients. Measurement of the initial burn surface area is important in estimating fluid resuscitation requirements since patients with severe burns will have massive fluid losses due to the removal of the skin barrier.
- **Option B:** The Rule of Nines estimation of body surface area burned is based on assigning percentages to different body areas. The entire head is estimated as 9% (4.5% for anterior and posterior). The entire trunk is estimated at 36% and can be further broken down into 18% for anterior components and 18% for the back. The anterior aspect of the trunk can further be divided into the chest (9%) and abdomen (9%).
- **Option C:** The upper extremities total 18% and thus 9% for each upper extremity. Each upper extremity can further be divided into anterior (4.5%) and posterior (4.5%). The lower extremities are estimated at 36%, 18% for each lower extremity. Again this can be further divided into 9% for the anterior and 9% for the posterior aspect. The groin is estimated at 1%.

**84. Mr. O'Brien, a 70-year-old retired firefighter, arrives at the outpatient orthopedic clinic. He describes a gradual onset of morning stiffness in his hands and knees that usually lasts for about 30 minutes. He also reports pain in these joints, particularly after prolonged activity, noting that his gardening hobby has become increasingly challenging due to these symptoms. With his history and presentation suggestive of osteoarthritis, which nursing interventions would be most appropriate to improve Mr. O'Brien's quality of life and manage his current symptoms? Select all that apply.**

- A. Applying warm packs to affected joints
- B. Assisting with active range of motion exercises
- C. Administering acetaminophen for pain relief
- D. Instructing the patient on joint protection techniques
- E. Providing a supportive joint brace or splint

**Correct Answers: A, C, D, and E.**

- **Option A:** Warm packs can help reduce morning stiffness associated with osteoarthritis. They promote blood flow to the area, thereby decreasing stiffness and easing pain.
- **Option C:** Acetaminophen is often a first-line medication for osteoarthritis pain. It acts centrally in the brain to decrease pain sensation and is generally well-tolerated, with fewer gastrointestinal side effects than NSAIDs.
- **Option D:** Joint protection techniques, such as using tools with larger grips or taking regular breaks during repetitive tasks, can help prevent exacerbation of symptoms and protect joints from

excessive wear and tear.

- **Option E:** Braces or splints can provide additional joint support, reducing pain and strain, especially during activities that place increased stress on the joints. They can also ensure proper joint alignment, which can prevent further deterioration.
- **Option B:** Assisting with active range of motion exercises may exacerbate symptoms and is not recommended for individuals with osteoarthritis.

**85. Mr. and Mrs. Robertson's son was diagnosed with idiopathic thrombocytopenic purpura. They should be aware that the drug to be avoided is:**

- A. Acetaminophen
- B. Aspirin
- C. Codeine
- D. Morphine

**Correct Answer: B. Aspirin**

Aspirin exerts an antiplatelet action and therefore may increase platelet destruction in ITP. Aspirin inhibits platelet function by acetylating platelet cyclooxygenase, increasing the risk of bleeding because it adds a prolonged platelet functional defect to the quantitative defect already present from the severe thrombocytopenia.

- **Option A:** Acetaminophen (paracetamol) is widely used for postoperative analgesia. Its mechanism of action is inhibition of prostaglandin synthesis in the central nervous system, and acetaminophen is traditionally not considered to influence platelet function.
- **Option C:** Non-steroidal anti-inflammatory drugs (NSAID), such as ibuprofen (Nurofen, etc.) should also be avoided for similar reasons. Paracetamol or codeine can be recommended for adults.
- **Option D:** Although it has a very low incidence worldwide, morphine-induced thrombocytopenia can occur in some patients especially with higher doses. From eHealthMe study, from the FDA reports published On January 26, 2015: There were 48,666 people reported to have side effects when taking morphine. Among them, 156 people (0.32%) have Heparin-induced Thrombocytopenia.

**86. The wife admits that she is a victim of abuse and opens up about her persistent distaste for sex. This sexual disorder is:**

- A. Sexual desire disorder
- B. Sexual arousal disorder
- C. Orgasm disorder
- D. Sexual Pain Disorder

**Correct Answer: A. Sexual desire disorder**

Has little or no sexual desire or has a distaste for sex. Hypoactive sexual desire disorder (HSDD) and sexual aversion disorder (SAD) are an under-diagnosed group of disorders that affect men and women. Despite their prevalence, these two disorders are often not addressed by healthcare providers and

patients due their private and awkward nature.

- **Option B:** Failure to maintain the physiologic requirements for sexual intercourse. Sexual arousal disorder is characterized by a lack or absence of sexual fantasies and desire for sexual activity in a situation that would normally produce sexual arousal, or the inability to attain or maintain typical responses to sexual arousal. The disorder is found in the DSM-IV.
- **Option C:** Persistent and recurrent inability to achieve an orgasm. Orgasmic disorder is the lack of or delay in sexual climax (orgasm) even though sexual stimulation is sufficient and the woman is sexually aroused mentally and emotionally. Women may not have an orgasm if love-making ends too soon, there is not enough foreplay, or they are afraid of losing control or letting go.
- **Option D:** Also called dyspareunia. Individuals with this disorder suffer genital pain before, during and after sexual intercourse. Painful intercourse can occur for reasons that range from structural problems to psychological concerns. Many women have painful intercourse at some point in their lives. The medical term for painful intercourse is dyspareunia, defined as persistent or recurrent genital pain that occurs just before, during, or after intercourse.

**87. When planning care for a 8-year-old boy with Down syndrome, the nurse should:**

- A. Plan interventions according to the developmental level of a 7-year-old child because that's the child's age
- B. Plan interventions according to the developmental levels of a 5-year-old because the child will have developmental delays
- C. Assess the child's current developmental level and plan care accordingly
- D. Direct all teaching to the parents because the child can't understand

**Correct Answer: C. Assess the child's current developmental level and plan care accordingly**

Nursing care plans should be planned according to the developmental age of a child with Down syndrome, not the chronological age. Because children with Down syndrome can vary from mildly to severely mentally challenged, each child should be individually assessed. A child with Down syndrome is capable of learning, especially a child with mild limitations.

- **Option A:** Current practices in providing care to those with Down syndrome include the primary emphasis on the treatment of disease with increased attention allocated to health promotion and protection. Children with Down syndrome have several expected developmental and physical challenges. These include poor physical growth and delayed development with achieving milestones such as gross and fine motor skills, speech, and secondary sex characteristics.
- **Option B:** With appropriate therapy, the developmental delay may be minimized, and the child's social quotient may be improved. Such training can provide a foundation for mainstreaming the child with Down syndrome in schools and the community
- **Option D:** Early intervention programs can improve the academic prognosis for children with Down syndrome. Cognitive function varies tremendously and cannot be predicted at birth. No relationship has been shown between the number of Down syndrome features present in a newborn and later cognitive function.

**88. A nurse is administering IV furosemide to a patient admitted with congestive heart failure. After the infusion, which of the following symptoms is not**

**expected?**

- A. Increased urinary output
- B. Decreased edema
- C. Decreased pain
- D. Decreased blood pressure

**Correct Answer: C. Decreased pain**

Furosemide, a loop diuretic, does not alter pain. The Food and Drug Administration (FDA) has approved the use of furosemide in the treatment of conditions with volume overload and edema secondary to congestive heart failure exacerbation, liver failure, or renal failure including the nephrotic syndrome.

- **Option A:** Furosemide acts on the kidneys to increase urinary output. Furosemide inhibits tubular reabsorption of sodium and chloride in the proximal and distal tubules, as well as in the thick ascending loop of Henle by inhibiting sodium-chloride cotransport system resulting in excessive excretion of water along with sodium, chloride, magnesium, and calcium.
- **Option B:** Fluid may move from the periphery, decreasing edema. Careful monitoring of the clinical condition of the patient, daily weight, fluids intake, and urine output, electrolytes, i.e., potassium and magnesium, kidney function monitoring with serum creatinine and serum blood urea nitrogen level is vital to monitor the response to furosemide. Replete electrolytes if indicated as diuresis with furosemide lead to electrolyte depletion, and adjust the dose or even hold off on furosemide if laboratory work shows signs of kidney dysfunction.
- **Option D:** Fluid load is reduced, lowering blood pressure. Furosemide can be a second-line agent in heart failure patients with symptoms, and in patients with advanced kidney disease with an estimated glomerular filtration rate, less than 30 ml per minute the loop diuretics (furosemide) are preferred over thiazide diuretics to treat hypertension.

**89. A client-centered goal is a specific and measurable behavior or response that reflects a client's:**

- A. Desire for specific health care interventions.
- B. Highest possible level of wellness and independence in function.
- C. Physician's goal for the specific client.
- D. Response when compared to another client with a similar problem.

**Correct Answer: B. Highest possible level of wellness and independence in function.**

Client-centered practices facilitate the development of strong therapeutic relationships and enable care providers to understand how to maximize clients' strengths and minimize challenges in achieving treatment and recovery goals.

- **Option A:** Care providers negotiate between clients' decisions and ongoing risk assessments. The care plan reflects safe practices and promotes interventions that minimize or reduce potential harms to the client.
- **Option C:** Client-centred care empowers clients, promoting autonomy, rights, voice, and self-determination in the treatment planning and recovery process and supports care plans that are developed in collaboration with clients, and allows clients to express their self-identified needs and

choices.

- **Option D:** Client-centred care is about treating clients as they want to be treated, with knowledge about and respect for their values and personal priorities. Health care providers who take the time to get to know their clients can provide care that better addresses the needs of clients and improves their quality of care.

**90. Which of the following blood vessel layers may be damaged in a client with an aneurysm?**

- A. Externa
- B. Interna
- C. Media
- D. Interna and Media

**Correct Answer: C. Media**

The factor common to all types of aneurysms is a damaged media. The media has more smooth muscle and less elastic fibers, so it's more capable of vasoconstriction and vasodilation.

- **Option A:** The tunica externa generally has no damage in an aneurysm. The outermost layer, tunica externa, comprises connective tissue providing protection for the vessel.
- **Option B:** The interna generally not damaged in an aneurysm. The tunica intima (New Latin "inner coat"), or intima for short, is the innermost tunica (layer) of an artery or vein. It is made up of one layer of endothelial cells and is supported by an internal elastic lamina. The endothelial cells are in direct contact with the blood flow.
- **Option D:** The media is the most damaged among the blood vessel la

**91. Regardless of the size of a workgroup, enough staff must be available at all times to accomplish certain purposes. Which of these purposes is not included?**

- A. Meet the needs of patients.
- B. Provide a pair of hands to other units as needed.
- C. Cover all time periods adequately.
- D. Allow for growth and development of nursing staff.

**Correct Answer: B. Provide a pair of hands to other units as needed.**

Providing a pair of hands for other units is not a purpose in doing an effective staffing process. This is a function of a staffing coordinator at a centralized model. Staff positions affect customers indirectly, only to the extent that the support they provide helps line employees improve quality and customer satisfaction.

- **Option A:** Staff structure allows to preserve the principle of one-man management (every worker has only one superior), but at the same time provides greater flexibility in changing operating conditions. It also introduces an element of encouraging cooperation between all members of the organization.

- **Option C:** Staff structure or linear-staff organizational structure is one of the attempts to solve the problem of linear structure constraints. Manager having too much various tasks is not able to effectively manage its employees.
- **Option D:** One of the key advantages is that this structure provides line personnel with expertise from staff groups. As a result, the key decision-makers in the organization are well-informed and armed with specialized knowledge.

**92. A female client tells nurse Nikki that she has been working hard for the last 3 months to control her type 2 diabetes mellitus with diet and exercise. To determine the effectiveness of the client's efforts, the nurse should check:**

- A. Urine glucose level.
- B. Fasting blood glucose level.
- C. Serum fructosamine level.
- D. Glycosylated hemoglobin level.

**Correct Answer: D. Glycosylated hemoglobin level.**

Because some of the glucose in the bloodstream attaches to some of the hemoglobin and stays attached during the 120-day lifespan of red blood cells, glycosylated hemoglobin levels provide information about blood glucose levels during the previous 3 months.

- **Option A:** Urine glucose levels only show the glucose levels in the urine at that specific time.
- **Option B:** Fasting blood glucose only gives information about glucose levels at the point in time when they were obtained.
- **Option C:** Serum fructosamine levels provide information about blood glucose control over the past 2 to 3 weeks.

**93. In a recumbent, immobilized patient, lung ventilation can become altered, leading to such respiratory complications as:**

- A. Respiratory acidosis, atelectasis, and hypostatic pneumonia
- B. Apneustic breathing, atypical pneumonia and respiratory alkalosis
- C. Cheyne-Stokes respirations and spontaneous pneumothorax
- D. Kussmaul's respirations and hypoventilation

**Correct Answer: A. Respiratory acidosis, atelectasis, and hypostatic pneumonia**

Because of restricted respiratory movement, a recumbent, immobilize patient is at particular risk for respiratory acidosis from poor gas exchange; atelectasis from reduced surfactant and accumulated mucus in the bronchioles, and hypostatic pneumonia from bacterial growth caused by stasis of mucus secretions.

- **Option B:** Apneustic respiration (a.k.a. apneusis) is an abnormal pattern of breathing characterized by deep, gasping inspiration with a pause at full inspiration followed by a brief, insufficient release. Pneumonia is acquired when a sufficient volume of a pathogenic organism bypasses the body's cough and laryngeal reflexes and makes its way into the parenchyma. In almost every scenario, respiratory alkalosis is induced by a process involving hyperventilation. These include central

causes, hypoxemic causes, pulmonary causes, and iatrogenic causes. Central sources are a head injury, stroke, hyperthyroidism, anxiety-hyperventilation, pain, fear, stress, drugs, medications such as salicylates, and various toxins.

- **Option C:** Cheyne-Stokes respiration is a specific form of periodic breathing (waxing and waning amplitude of flow or tidal volume) characterized by a crescendo-decrescendo pattern of respiration between central apneas or central hypopneas. Unlike obstructive sleep apnea (OSA), which can be the cause of heart failure, Cheyne-Stokes respiration is believed to be a result of heart failure. Spontaneous pneumothorax refers to the abnormal collection of gas in the pleural space between the lungs and the chest wall. Spontaneous pneumothorax occurs without an obvious etiology such as trauma or iatrogenic causes.
- **Option D:** Kussmaul respirations were originally observed and described by Dr. Adolf Kussmaul in 1874. He made his observation in diabetic patients who were comatose and in the late stages of diabetic ketoacidosis. As classically described, Kussmaul respirations are a deep, sighing respiratory pattern. Dr. Kussmaul actually described it as "air hunger." Hypoventilation is breathing that is too shallow or too slow to meet the needs of the body. If a person hypoventilates, the body's carbon dioxide level rises. This causes a buildup of acid and too little oxygen in the blood. A person with hypoventilation might feel sleepy.

**94. Which statement indicates that a client with facial burns understands the need to wear a facial pressure garment?**

- A. "My facial scars should be less severe with the use of this mask."
- B. "The mask will help protect my skin from sun damage."
- C. "This treatment will help prevent infection."
- D. "Using this mask will prevent scars from being permanent."

**Correct Answer: A. "My facial scars should be less severe with the use of this mask."**

The purpose of wearing the pressure garment over burn injuries for up to 1 year is to prevent hypertrophic scarring and contractures from forming. Hypertrophic burn scars pose a challenge for burn survivors and providers. In many cases, they can severely limit a burn survivor's level of function, including work and recreational activities.

- **Option B:** Although the mask does provide protection of sensitive, newly healed skin and grafts from sun exposure, this is not the purpose of wearing the mask. A widespread modality of prevention and treatment of hypertrophic scarring is the utilization of pressure garment therapy (PGT).
- **Option C:** The pressure garment will not alter the risk of infection. At present, PGT is the standard first-line therapy for hypertrophic burn scars in many centers due to its non-invasive characteristics and presumed desirable treatment effects with few associated complications.
- **Option D:** Scars will still be present. This treatment modality continues to be a clinically accepted practice. It is the most common therapy used for the treatment and prevention of abnormal scars after burn injury particularly in North America, Europe, and Scandinavia where it is considered routine practice and regarded as the preferred conservative management with reported thinning and better pliability ranging from 60% to 85%.

**95. 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.

**96. A male client is recovering from an ileostomy that was performed to treat inflammatory bowel disease. During discharge teaching, the nurse should stress the importance of:**

- A. Increasing fluid intake to prevent dehydration.
- B. Wearing an appliance pouch only at bedtime.
- C. Consuming a low-protein, high-fiber diet.
- D. Taking only enteric-coated medications.

**Correct Answer: A. Increasing fluid intake to prevent dehydration.**

Because stool forms in the large intestine, an ileostomy typically drain liquid waste. To avoid fluid loss through ileostomy drainage, the nurse should instruct the client to increase fluid intake. Monitor I&O.; Note number, character, and amount of stools; estimate insensible fluid losses (diaphoresis). Measure urine specific gravity; observe for oliguria. Provides information about overall fluid balance, renal function, and bowel disease control, as well as guidelines for fluid replacement.

- **Option B:** The nurse should teach the client to wear a collection appliance at all times because ileostomy drainage is incontinent. Resume or advance diet as indicated (clear liquids progressing to bland, low residue; then high-protein, high-calorie, caffeine-free, non-spicy, and low-fiber as indicated).



- **Option C:** The nurse should teach the client to avoid high-fiber foods because they may irritate the intestines. Avoid or limit foods that might cause or exacerbate abdominal cramping, flatulence (milk products, foods high in fiber or fat, alcohol, caffeinated beverages, chocolate, peppermint, tomatoes, orange juice).
- **Option D:** The nurse should teach the client to avoid enteric-coated medications because the body can't absorb them after an ileostomy. Allows the intestinal tract to readjust to the digestive process. Protein is necessary for tissue healing integrity. Low bulk decreases peristaltic response to meals.

**97. A 67-year-old male patient who recently had a permanent artificial pacemaker implanted is receiving education from the nurse about managing his health and lifestyle with the device. The patient enjoys an active lifestyle and is keen to understand what activities and precautions are necessary with his new pacemaker. He also uses various electrical appliances at home and is concerned about how they might affect his pacemaker. In this scenario, which piece of information provided by the nurse indicates a knowledge deficit regarding the management of a patient with an artificial cardiac pacemaker?**

- A. "Take your pulse rate once a day, in the morning upon awakening."
- B. "You may use electrical appliances but maintain a safe distance from high-powered devices."
- C. "Regular follow-up care is important to ensure the pacemaker is functioning correctly."
- D. "You may engage in contact sports."

**Correct Answer: D. may engage in contact sports**

The client should be advised by the nurse to avoid contact sports. This will prevent trauma to the area of the pacemaker generator.

- **Option A:** The physician may advise to take and record the pulse rate often to gauge the heart rate. This allows comparison of the heart rate to the acceptable range to determine if the pacemaker is working effectively.
- **Option B:** Use of electrical appliances is allowed, but the client must maintain a distance from the appliances. Devices such as anti-theft systems, metal detectors, cell phones, mp3 players/headphones, radios, power-generating equipment, magnets, etc may interfere with a pacemaker.
- **Option C:** Modern pacemakers are built to last. Still, it needs to be checked periodically to assess the battery and find out how the wires are working, so it is a must to keep pacemaker checkup appointments.

**98. Match the acid-base status of the following blood samples to the disorders in the given choices. (PaCO<sub>2</sub> values are in mm Hg and bicarbonate values in mmol/l). pH 7.17, PaCO<sub>2</sub> 48, HCO<sub>3</sub><sup>-</sup> 36**

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

**Correct Answer: D. Respiratory Acidosis, Partially Compensated**

- Based on the given ABG values, pH is 7.17. For pH, the normal range is 7.35 to 7.45. Any blood pH below 7.35 (7.34, 7.33, 7.32, and so on...) is ACIDOSIS.
- PaCO<sub>2</sub> is 48. The normal range for PaCO<sub>2</sub> is from 35 to 45. If PaCO<sub>2</sub> is above 45, it is acidosis. Based on the given ABG values, PaCO<sub>2</sub> is above 45, so it is considered ACIDOSIS.
- HCO<sub>3</sub><sup>-</sup> is 36. The normal range for HCO<sub>3</sub> is from 22 to 26. If HCO<sub>3</sub> is above 26, it is alkalosis. Based on the given ABG values, HCO<sub>3</sub> is above 26, so it is considered ALKALOSIS.
- For these ABG values, pH is ACIDOSIS and lines up with PaCO<sub>2</sub> which is RESPIRATORY. Therefore, this group of ABG values is considered RESPIRATORY ACIDOSIS.
- Lastly, it is PARTIALLY COMPENSATED because all three (3) values are abnormal. It is considered partially compensated if all three (3) values are abnormal.

**99. During a neurosurgery lecture, the professor shared a case of a 29-year-old male patient who was recently admitted following a severe motor vehicle accident. The patient suffered a penetrating head injury, leading to a foreign object breaching the cranial vault. The neuroimaging displayed a breach through various layers surrounding the brain. The professor utilizes this case to explain the layers of the meninges and their significance in safeguarding the central nervous system. The class is then quizzed about the identification of the meningeal layer which is the innermost and adheres closely to the surface of the brain and spinal cord, following the contours and folds of these structures, thereby serving as a protective barrier. Which of the following is the correct meningeal layer described?**

- A. Arachnoid mater
- B. Pia mater
- C. Dura mater
- D. Tentorium cerebelli

**Correct Answer: B. Pia mater**

The pia mater is the innermost layer of the meninges, a protective membrane system that surrounds the brain and spinal cord. It is a thin and delicate layer that adheres closely to the surface of the brain and spinal cord, providing support and protection while also facilitating the exchange of cerebrospinal fluid.

- **Option A:** The arachnoid mater is the middle layer of the meninges situated between the dura mater and the pia mater. It does not adhere closely to the brain or spinal cord surfaces and does not follow the contours and folds of these structures. It instead forms a loosely fitting sac around them.
- **Option C:** The dura mater is the outermost layer of the meninges and is a thick, durable membrane. It does not adhere to the surface of the brain or spinal cord nor does it follow the contours and folds of these structures. Instead, it forms a tough protective coating with two sub-layers, creating a potential space known as the dural sinuses.
- **Option D:** The tentorium cerebelli is an extension of the dura mater that separates the cerebellum from the inferior portion of the occipital lobes. It is not a layer of the meninges and does not adhere

to the surface of the brain or spinal cord.

**100. Hemoptysis may be present in the client with a pulmonary embolism because of which of the following reasons?**

- A. Alveolar damage in the infarcted area.
- B. Involvement of major blood vessels in the occluded area.
- C. Loss of lung parenchyma.
- D. Loss of lung tissue.

**Correct Answer: A. Alveolar damage in the infarcted area.**

The infarcted area produces alveolar damage that can lead to the production of bloody sputum, sometimes in massive amounts.

- **Option B:** Clot formation usually occurs in the legs. This is called deep vein thrombosis, which occurs in one or more of the deep veins in the legs.
- **Option C:** Loss of lung parenchyma is not found with hemoptysis in pulmonary embolism. The lung parenchyma comprises a large number of thin-walled alveoli, forming an enormous surface area, which serves to maintain proper gas exchange.
- **Option D:** A regional loss of surfactant is one of the consequences in pulmonary embolism.