

# Kevin's Review - 85 NCLEX Practice Questions

**1. The nurse is evaluating neurological signs of the male client in spinal shock following spinal cord injury. Which of the following observations by the nurse indicates that spinal shock persists?**

- A. Positive reflexes
- B. Hyperreflexia
- C. Inability to elicit a Babinski's reflex.
- D. Reflex emptying of the bladder.

**Correct Answer: C. Inability to elicit a Babinski's reflex.**

Resolution of spinal shock is occurring when there is a return of reflexes (especially flexors to noxious cutaneous stimuli), a state of hyperreflexia rather than flaccidity, reflex emptying of the bladder, and a positive Babinski's reflex. It is more appropriate to use the trauma activation code announced when a patient with spinal shock arrives at the emergency department, that way the trauma team can complete a full workup for the patient. The full spinal examination should include motor, sensory reflexes including bulbocavernosus reflex and anal wink reflex.

- **Option A:** Often it is observed that the patient starts losing neurologic function above the level of injury, which brings anxiety to an inexperienced provider prompting more imaging of the patient's spinal cord. Loss of function that happens several days post-injury above the level of the injury is mostly due to spinal cord pathways rearrangement.
- **Option B:** Once this process abates, the function above the injury returns to normal, although the exact time needed for this process is not precisely defined and could last from weeks to months. If a patient survives the initial injury but remains immobile, the area fills with gliotic tissue.
- **Option D:** Motor activity and strength decrease not only in the skeletal muscles but the motor activity of internal organs like bowel and bladder. This decrease leads to constipation and urinary retention. It is of utmost importance to record an American Spinal Injury Association (ASIA) score as prognostic long-term expectations can be made with fair accuracy before any discussion with family and the patient. While evaluating the patient, assume their spine is unstable and take all the necessary precautions to keep it stable until final imaging is obtained and stability is established.

**2. Which of the following arterial blood gas (ABG) values indicates uncompensated metabolic alkalosis?**

- A. pH 7.48, PaCO<sub>2</sub> 42, HCO<sub>3</sub> 30
- B. pH 7.48, PaCO<sub>2</sub> 46, HCO<sub>3</sub> 30
- C. pH 7.48, PaCO<sub>2</sub> 34, HCO<sub>3</sub> 20
- D. pH 7.48, PaCO<sub>2</sub> 34, HCO<sub>3</sub> 26

**Correct Answer: A. pH 7.48, PaCO<sub>2</sub> 42, HCO<sub>3</sub> 30**

Uncompensated metabolic alkalosis is indicated by ABG values of pH 7.48, PaCO<sub>2</sub> 42, and HCO<sub>3</sub> 30. Normal human physiological pH is 7.35 to 7.45. A decrease in pH below this range is acidosis, an increase over this range is alkalosis. Metabolic alkalosis is defined as a disease state where the body's pH is elevated to greater than 7.45 secondary to some metabolic process.

- **Option B:** These values indicate metabolic alkalosis, partially compensated. HCO<sub>3</sub> functions as an alkalotic substance. CO<sub>2</sub> functions as an acidic substance. Therefore, increases in HCO<sub>3</sub> or

decreases in CO<sub>2</sub> will make blood more alkalotic. The opposite is also true where decreases in HCO<sub>3</sub> or an increase in CO<sub>2</sub> will make blood more acidic. CO<sub>2</sub> levels are physiologically regulated by the pulmonary system through respiration, whereas the HCO<sub>3</sub> levels are regulated through the renal system with reabsorption rates.

- **Option C:** These values indicate respiratory alkalosis, partially compensated. Respiratory alkalosis is 1 of the 4 basic classifications of blood pH imbalances. Normal human physiological pH is 7.35 to 7.45. A decrease in pH below this range is acidosis, an increase above this range is alkalosis. Respiratory alkalosis is by definition a disease state where the body's pH is elevated to greater than 7.45 secondary to some respiratory or pulmonary process.
- **Option D:** These values indicate respiratory alkalosis, uncompensated. If the pH is not within or close to the normal ranges, then a partial compensation exists. If the pH is back within normal ranges then a full compensation has occurred. A non-compensated or uncompensated abnormality usually represents an acute change occurring in the body.

**3. To assess the kidney function of a patient with an indwelling urinary (Foley) catheter, the nurse measures his hourly urine output. She should notify the physician if the urine output is:**

- A. Less than 30 ml/hour
- B. 64 ml in 2 hours
- C. 90 ml in 3 hours
- D. 125 ml in 4 hours

**Correct Answer: A. Less than 30 ml/hour**

A urine output of less than 30ml/hour indicates hypovolemia or oliguria, which is related to kidney function and inadequate fluid intake. Urine output is a noninvasive method to measure fluid balance once intravascular volume has been restored. Normal urine output is defined as 1.5 to 2 mL/kg per hour

- **Option B:** Micturition process entails contraction of the detrusor muscle and relaxation of the internal and external urethral sphincter. The process is slightly different based on age. Children younger than three years old have the micturition process coordinated by the spinal reflex.
- **Option C:** It starts with urine accumulation in the bladder that stretches the detrusor muscle causing activation of stretch receptors. The stretch sensation is carried by the visceral afferent to the sacral region of the spinal cord where it synapses with the interneuron that excites the parasympathetic neurons and inhibits the sympathetic neurons. The visceral afferent impulse concurrently decreases the firing of the somatic efferent that normally keeps the external urethral sphincter closed allowing reflexive urine output.
- **Option D:** Low bladder volume activates the pontine storage center which activates the sympathetic nervous system and inhibits the parasympathetic nervous system cumulatively allowing the accumulation of urine in the bladder. High bladder volume activates the pontine micturition center which activates the parasympathetic nervous system and inhibits the sympathetic nervous system as well as triggers awareness of a full bladder; consequently leading to relaxation of the internal sphincter and a choice to relax the external urethral sphincter once ready to void.

**4. Amid a hazardous material incident in the city, a young woman is rushed to the hospital following exposure to a potentially lethal toxin. Upon arrival, her vitals are stable, but the medical team is aware of the time-sensitive nature of**

***the toxin's effect. The medical toxicologist recommends the administration of antiserum containing specific pre-formed immunoglobulins to neutralize the toxin. A medical student observing the case is then quizzed by his professor about the type of immunity being utilized in this clinical scenario to provide the patient with immediate, temporary protection against the toxin. Which term best describes this form of immunity?***

- A. Active Natural Immunity
- B. Active Artificial Immunity
- C. Passive Natural Immunity
- D. Passive Artificial Immunity

**Correct Answer: D. Passive Artificial Immunity**

Passive artificial immunity is acquired through the administration of pre-formed antibodies or immunoglobulins to provide immediate protection against a specific pathogen or toxin. In this clinical scenario, the patient is being given an antiserum containing pre-formed immunoglobulins to neutralize the toxin, representing an application of passive artificial immunity.

- **Option A:** Active natural immunity arises when an individual encounters a live pathogen naturally, and the body's immune system responds by generating a specific immune response including the production of antibodies. This scenario does not describe active natural immunity as the patient is being given pre-formed antibodies rather than generating her own.
- **Option B:** Active artificial immunity is acquired through vaccination where an individual is exposed to a weakened or inactivated form of the pathogen, or a part of the pathogen, and the body responds by generating a specific immune response. This is not the form of immunity being utilized in this clinical scenario as the patient is not being vaccinated but is receiving pre-formed antibodies.
- **Option C:** Passive natural immunity refers to the transmission of antibodies from mother to infant, either through the placenta during pregnancy or through breast milk postnatally. This type of immunity is naturally acquired and temporary. This scenario does not describe passive natural immunity as the patient is receiving antibodies through medical intervention, not from a maternal source.

***5. The nurse is caring for a client with systemic lupus erythematosus (SLE). The major complication associated with systemic lupus erythematosus is:***

- A. Meningitis
- B. Nephritis
- C. Cardiomegaly
- D. Desquamation

**Correct Answer: B. Nephritis**

- **Option B:** Systemic lupus erythematosus is a form of lupus and an autoimmune disease in which the antibodies attack the body's own cells and tissue causing inflammation and damage to organs such as the kidneys resulting in complications such as nephritis.
- **Options A and C:** SLE affects the musculoskeletal, integumentary, renal, nervous, and cardiovascular systems, but the major complication is renal involvement.

- Option D: SLE produces a “butterfly” rash, not desquamation.

**6. The nurse is teaching the client how to use a metered-dose inhaler (MDI) to administer a Corticosteroid drug. Which of the following client actions indicates that he is using the MDI correctly? Select all that apply.**

- A. The inhaler is held upright.
- B. Head is tilted down while inhaling the medication.
- C. Client waits 5 minutes between puffs.
- D. Mouth is rinsed with water following administration.
- E. Client lies supine for 15 minutes following administration.

**Correct Answer: A & D.**

In using a corticosteroid MDI, remove the cap and hold the inhaler upright, stand or sit up straight, shake the inhaler, tilt your head back slightly, put the inhaler in the mouth, press down on the inhaler quickly, breathe in slowly for 3 to 5 seconds, hold the breath for 10 seconds, breathe out slowly, repeat puffs as prescribed, rinse the mouth, and gargle using water or mouthwash after each use.

- **Option A:** Keep the chin up and the inhaler upright (not aimed at the roof of the mouth or the tongue). Use a spacer/valve-holding chamber (the best way, useful for all patients) by putting the inhaler into the end with the hole and the mouthpiece end in the mouth. If there is no spacer, hold the inhaler 1 to 2 inches (or two-finger widths) in front of an open mouth.
- **Option B:** Head is tilted up during inhalation of the medication. Start breathing in slowly through the mouth and press down on the inhaler one time. If using a spacer or valved-holding chamber, press down on the inhaler before starting to breathe in. Breathe in slowly.
- **Option C:** For inhaled quick-relief medicine (like albuterol), wait about 1 minute between puffs. There is no need to wait between puffs for other medicines.
- **Option D:** If the client is using this inhaler for a corticosteroid preventer medication, with or without a spacer, rinse the mouth with water and spit after inhaling the last dose to reduce the risk of side effects.
- **Option E:** There is no need to lie supine after administration of the medication. If more than one dose is needed, repeat all the steps.

**7. To decrease the likelihood of bradyarrhythmias in children during endotracheal intubation, succinylcholine (Anectine) is used with which of the following agents?**

- A. epinephrine (Adrenalin)
- B. isoproterenol (Isuprel)
- C. atropine sulfate (Atropine)
- D. Lidocaine hydrochloride (Xylocaine)

**Correct Answer: C. atropine sulfate (Atropine)**

Succinylcholine is an ultra-short-acting depolarizing agent used for rapid-sequence intubation. Bradycardia can occur, especially in children. Atropine is the drug of choice in treating succinylcholine-induced bradycardia. Atropine is occasionally used as a premedication. Its anticholinergic effects reduce ACH-mediated bradycardia that can accompany endotracheal intubation.

- **Option A:** Epinephrine is one of the most commonly used agents in various settings as it functions as a medication and hormone. It is currently FDA-approved for various situations, including emergency treatment of type 1 hypersensitivity reactions, including anaphylaxis, induction, and maintenance of mydriasis during intraocular surgeries and hypotension due to septic shock.
- **Option B:** Isoproterenol is not used in rapid-sequence intubation because of its profound cardiac effects. Isoproterenol is a beta-1 and beta-2 adrenergic receptor agonist indicated primarily for bradydysrhythmias. The administration and subsequent post-administration monitoring of this medication are complex and necessitate an interprofessional approach to its usage.
- **Option D:** Lidocaine is used in adults only. The drug is commonly used for local anesthesia, often in combination with epinephrine (which acts as a vasopressor and extends its duration of action at a site by opposing the local vasodilatory effects of lidocaine).

**8. A client with a vancomycin-resistant enterococcus (VRE) infection is admitted to the medical unit. Which action can be delegated to a nursing assistant who is assisting with the client's care?**

- A. Monitor the results of the laboratory culture and sensitivity test.
- B. Educate the client and family members on ways to prevent transmission of VRE.
- C. Implement contact precautions when handling the client.
- D. Collaborate with other departments when the client is transported for the ordered test.

**Correct Answer: C. Implement contact precautions when handling the client.**

All hospital personnel who care for the client are responsible for the correct implementation of contact precautions.

- **Options A, B, and D:** The other options should be carried out by a licensed nurse.

**9. A nurse is caring for a client in labor who is receiving Pitocin by IV infusion to stimulate uterine contractions. Which assessment finding would indicate to the nurse that the infusion needs to be discontinued?**

- A. Three contractions occurring within a 10-minute period
- B. Increased urinary output
- C. Adequate resting tone of the uterus palpated between contractions
- D. A fetal heart rate of 90 beats per minute

**Correct Answer: D. A fetal heart rate of 90 beats per minute**

A normal fetal heart rate is 120-160 BPM. Bradycardia or late or variable decelerations indicate fetal distress and the need to discontinue Pitocin. The goal of labor augmentation is to achieve three good-quality contractions in a 10-minute period.

- **Option A:** Pitocin (oxytocin injection) is a natural hormone that causes the uterus to contract used to induce labor, strengthen labor contractions during childbirth, control bleeding after childbirth, or induce an abortion.
- **Option B:** Oxytocin has an antidiuretic effect and increases the urinary excretion of AQP2 in humans whose urinary concentration mechanism is preserved. Urine volume and free water clearance were decreased, and urine osmolality was increased by the administration of oxytocin or dDAVP in the normal volunteers and CDI patients.
- **Option C:** In a normal labor, one contraction every two to three minutes or less than five contractions in a 10 minute period is ideal. A uterus must rest between contractions, having sufficient uterine resting tone (soft to the touch), and uterine resting time (about one minute).

**10. What's the first intervention for a patient experiencing chest pain and a pO<sub>2</sub> of 89%?**

- A. Administer morphine
- B. Administer oxygen
- C. Administer sublingual nitroglycerin
- D. Obtain an electrocardiogram (ECC)

**Correct Answer: B. Administer oxygen**

Administering supplemental oxygen to the patient is the first priority. Administer oxygen to increase SpO<sub>2</sub> to greater than 90% to help prevent further cardiac damage.

- **Options A and C:** Sublingual nitroglycerin and morphine are commonly administered after oxygen.
- **Option D:** Obtaining an ECG may occur after administering the oxygen to provide baseline data.

**11. A patient has a severe exacerbation of ulcerative colitis. Long-term medications will probably include:**

- A. Antacids
- B. Antibiotics
- C. Corticosteroids
- D. Histamine<sub>2</sub>-receptor blockers

**Correct Answer: C. Corticosteroids**

Medications to control inflammation such as corticosteroids are used for long-term treatment. First-line treatment is sulfasalazine and 5-aminosalicylates, given orally or rectally, which have a remission rate of about 50%. Glucocorticoids, orally or rectally, can be added for those who fail to achieve remission within two weeks. Except for glucocorticoids, all of these medications can be used in the maintenance of remission.

- **Option A:** Antacids are a group of drugs that have been on the market for many years. They were initially first-line defense against peptic ulcer disease; however, the discovery of proton pump inhibitors revolutionized the treatment of peptic ulcer disease. Currently, antacid use is restricted to the relief of mild intermittent gastroesophageal reflux disease (GERD) associated with heartburn.

- **Option B:** Antibiotic therapy is often initiated before an exact infectious disease diagnosis is made and microbiological results are available. Antibiotics used in this manner are referred to as empiric therapy. This approach attempts to cover all potential pathogens. When microbiology tests result and antibiotic susceptibilities are known, definitive antibiotic therapy can then be tailored to the specific infection etiology.
- **Option D:** H2 receptor blockers, or H2 receptor antagonists (H2RAs), are a class of gastric acid-suppressing agents frequently used in various gastric conditions. They are FDA-approved for short-term use in treating uncomplicated gastroesophageal reflux disease (GERD), gastric or duodenal ulcers, gastric hypersecretion, and mild to infrequent heartburn or indigestion.

**12. A nurse is caring for a client who is starting a long-term therapy of isoniazid (INH). The nurse plans to instruct the client to which of the following?**

- A. Discontinue vitamin supplements such as Vit B6.
- B. Report an incidence of yellowish skin.
- C. Increase intake of tuna for additional nutrition.
- D. Drink alcohol in moderation.

**Correct Answer: B. Report an incidence of yellowish skin.**

Isoniazid (INH) is hepatotoxic hence the client is instructed to report signs of jaundice (Yellowish of the skin or the sclera).

- **Option A:** Vitamin B6 can help in preventing peripheral neuritis.
- **Option B:** Tuna which contains tyramine causes a reaction characterized by redness, flushing, sweating, itching of the skin while taking INH.
- **Option D:** Avoid alcohol because the medication is hepatotoxic.

**13. Etiologies associated with hypocalcemia may include all of the following except:**

- A. Renal failure
- B. Inadequate intake calcium
- C. Metastatic bone lesions
- D. Vitamin D deficiency

**Correct Answer: C. Metastatic bone lesions**

Metastatic bone lesions are associated with hypercalcemia due to accelerated bone metabolism and release of calcium into the serum. Although more common in adults than pediatric patients, the next important etiology to consider is malignancy. Renal carcinomas, leukemias, lymphomas, and rhabdomyosarcoma can be associated with elevated calcium levels mediated by the action of PTH-related peptides. Renal failure, inadequate calcium intake, and vitamin D deficiency may cause hypocalcemia.

- **Option A:** CKD leads to impaired phosphate excretion which drives PTH secretion and can cause secondary hyperparathyroidism. However, due to impaired Vitamin D metabolism and high phosphorus level, the serum calcium remains low despite the high PTH.

- **Option B:** Serum calcium is normally bound to proteins in the blood most prominently albumin and therefore low albumin states can give a falsely low total serum calcium level. Ionized calcium level is usually normal in these states and thus a correction of adding 0.8 mg/dL to serum calcium level is usually recommended for every 1gm drop in serum albumin below normal (4 gm/dL)
- **Option D:** Absolute or relative Vitamin D deficiency includes lack of active metabolite of vitamin D due to inadequate sun exposure or liver disease or kidney disease. Also, included in this category are familial causes of vitamin D resistance.

**14. Which of the following conditions is the predominant cause of angina?**

- A. Increased preload
- B. Decreased afterload
- C. Coronary artery spasm
- D. Inadequate oxygen supply to the myocardium.

**Correct Answer: D. Inadequate oxygen supply to the myocardium.**

Inadequate oxygen supply to the myocardium is responsible for the pain accompanying angina. The heart is dependent on adequate oxygen supply for energy production to support contractility. At the cellular level, ischemia causes an increase in anaerobic glycolysis. This increases the levels of hydrogen, potassium, and lactate in the venous return of the ischemic or affected area of the myocardium.

- **Option A:** Increased preload would be responsible for right-sided heart failure. Increases in preload, as demonstrated through an elevated PCW, are seen in several conditions such as heart failure, mitral stenosis, and mitral regurgitation. At higher preloads, the heart also has an increased oxygen demand, further debilitating the already diseased heart. In cases of heart failure, eventually, the heart cannot keep up with the increased load, and deleterious ventricular remodeling and loss of function ensue.
- **Option B:** Decreased afterload causes increased cardiac output. Afterload is the force against which the ventricles must act in order to eject blood, and is largely dependent on the arterial blood pressure and vascular tone. Similarly, reducing afterload can increase cardiac output, especially in conditions where contractility is impaired.
- **Option C:** Coronary artery spasm is responsible for variant angina. Coronary artery vasospasm (CAVS) is a constriction of the coronary arteries that can cause complete or near-complete occlusion of the vessel. In 1959, Dr. Myron Prinzmetal described a different entity of angina than the classic Heberden's angina which was originally described in 1772. This vasospastic disease can cause acute ischemia and present anywhere along the spectrum of angina from stable angina to acute coronary syndrome.

**15. A Chinese-American client experiencing cough with clear white phlegm, which is believed to be a yin disorder, is likely to treat it with:**

- A. Foods considered being yin.
- B. Foods considered being yang.
- C. Aromatherapy.
- D. Touch therapy.



**Correct Answer: B. Foods considered to be yang.**

In the yin and yang theory, health is believed to exist when all aspects of the person are in perfect balance. Yin foods are cold and yang foods are hot. One eats cold foods when hot has a hot illness and one eats hot foods when one has a cold illness.

- **Option A:** Foods considered yin include dark leafy greens like spinach, lotus root, radish, dandelion greens, cucumbers, bamboo shoots, seaweed, watermelon, green tea, chamomile tea, mint tea, clams, crab, and tofu.
- **Option C:** Aromatherapy is a holistic healing treatment that uses natural plant extracts to promote health and well-being. Sometimes it's called essential oil therapy. Aromatherapy uses aromatic essential oils medicinally to improve the health of the body, mind, and spirit. It enhances both physical and emotional health.
- **Option D:** In touch therapy, practitioners use their hands to manipulate and direct the flow of energy — known as the biofield — throughout the body in order to promote healing and restore the body's ability to heal itself.

**16. The client with a pacemaker should be taught to:**

- A. Report ankle edema
- B. Check his blood pressure daily
- C. Refrain from using a microwave oven
- D. Monitor his pulse rate

**Correct Answer: D. Monitor his pulse rate**

The client with a pacemaker should be taught to count and record his pulse rate. Pacemakers are adjustable artificial electrical pulse generators, frequently emitting a pulse with a duration between 0.5 and 25 milliseconds with an output of 0.1 to 15 volts, at a frequency up to 300 times per minute. The cardiologist or pacemaker technologist will be able to interrogate and control the pacing rate, the pulse width, and the voltage, whether the device is temporary or permanent.

- **Option A:** Ankle edema is a sign of right-sided congestive heart failure. Although this is not normal, it is often present in clients with heart disease. If the edema is present in the hands and face, it should be reported. The pacing and CRT are associated with complications. The majority of complications occur in the hospital or during the first 6 months. Lead complications are the main reason for the re-implantation of the pacemaker and CRT devices. Other complications include, but are not limited to infections, hematoma formation, pericardial effusion or tamponade, pneumothorax, coronary sinus dissection, or perforation. Some old pacemakers are not MRI safe.
- **Option B:** Checking the blood pressure daily is not necessary for these clients. Patients who eventually require permanent pacemaker implantation often present with symptoms of dizziness, lightheadedness, fatigue, syncope, or lack of exercise tolerance. Frequently, these symptoms arise from bradyarrhythmias and patients will have sinus node dysfunction or atrioventricular (AV) conduction defects.
- **Option C:** The client with a pacemaker can use a microwave oven, but he should stand about 5 feet from the oven while it is operating. There are some areas where the indications for a pacemaker are clear, but there are few areas where clinical judgment and expertise plays a greater role. Although the guidelines attempt to define practices that meet the needs of most patients, the ultimate decision for the patient should be based on the particular patient presenting the scenario, clinician judgment, and discussion with the patient about risks and benefits of the procedure.

**17. The doctor suspects that the client has an ectopic pregnancy. Which symptom is consistent with a diagnosis of ectopic pregnancy?**

- A. Painless vaginal bleeding
- B. Abdominal cramping
- C. Throbbing pain in the upper quadrant
- D. Sudden, stabbing pain in the lower quadrant

**Correct Answer: D. Sudden, stabbing pain in the lower quadrant**

The signs of an ectopic pregnancy are vague until the fallopian tube ruptures. The client will complain of sudden, stabbing pain in the lower quadrant that radiates down the leg or up into the chest. Patient's presenting with vaginal bleeding would likely benefit from a pelvic exam to assess for infections as well as assess the cervical os. Bimanual pelvic exams additionally allow for palpation of bilateral adnexa to assess for any abnormal masses/structures or to elicit adnexal tenderness.

- **Option A:** Painless vaginal bleeding is a sign of placenta previa. Painless vaginal bleeding during the second or third trimester of pregnancy is the usual presentation. The bleeding may be provoked from intercourse, vaginal examinations, labor, and at times there may be no identifiable cause.
- **Option B:** Abdominal cramping is a sign of labor. Women will often self-present to obstetrical triage with concern for the onset of labor. Common chief complaints include painful contractions, vaginal bleeding/bloody show, and leakage of fluid from the vagina. It is up to the clinician to determine if the patient is in labor, defined as regular, clinically significant contractions with an objective change in cervical dilation and/or effacement.
- **Option C:** Throbbing pain in the upper quadrant is not a sign of an ectopic pregnancy. After obtaining a thorough history, an attentive physical exam is the next step. Evaluation of vital signs to assess for tachycardia and hypotension is pivotal in determining the patient's hemodynamic stability. When examining the abdomen and suprapubic regions, attention should focus on the location of tenderness as well as any exacerbating factors.

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

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

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

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

- **Option A:** Acetaminophen, an antipyretic, prevents increased temperature. A decrease in temperature reduces metabolism, cerebral blood flow, thus decreasing intracranial pressure. It also relieve headache.

- **Option B:** Dexamethasone, a corticosteroid, 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.

**19. A female client with hepatitis C develops liver failure and GI hemorrhage. The blood products that would most likely bring about hemostasis in the client are:**

- A. Whole blood and albumin.
- B. Platelets and packed red blood cells.
- C. Fresh frozen plasma and whole blood.
- D. Cryoprecipitate and fresh frozen plasma.

**Correct Answer: D. Cryoprecipitate and fresh frozen plasma.**

The liver is vital in the synthesis of clotting factors, so when it's diseased or dysfunctional, as in hepatitis C, bleeding occurs. Treatment consists of administering blood products that aid clotting. These include fresh frozen plasma containing fibrinogen and cryoprecipitate, which have most of the clotting factors.

- **Option A:** Although administering whole blood, albumin, and packed cells will contribute to hemostasis, those products aren't specifically used to treat hemostasis. Whole blood is often divided into component parts for ease of storage and administration. These typically include Red Blood Cells (RBC), Platelets (thrombocytes), and Plasma.
- **Option B:** Platelets are helpful, but the best answer is cryoprecipitate and fresh frozen plasma. Platelets are typically given when patients have a low platelet count (thrombocytopenia) or have platelets that are dysfunctional, due to medications or other acquired or inherited lesions.
- **Option C:** The indications for whole blood and blood component transfusion consist of increasing hemoglobin and oxygenation of tissues, maintaining adequate blood volume to avoid ischemia and hypovolemic shock, and to reconstitute platelets, coagulation factors, and other plasma proteins to a functional status.

**20. A client with schizophrenia has been started on medication therapy with clozapine (Clozaril). A nurse assesses the results of which laboratory study to monitor for adverse effects related to this medication?**

- A. White blood cell
- B. Platelet count
- C. Liver function studies
- D. Random blood sugar

**Correct Answer: A. White blood cell**

Agranulocytosis may experience by the client taking clozapine which can be monitored by evaluating the white blood cell count.

- **Options B, C, and D:** Platelet count, liver function test, and RBS are not related specifically to the use of the medication.

**21. A nurse obtained a client's pulse and found the rate to be above normal. The nurse document these findings as:**

- A. Tachypnea
- B. Hyperpyrexia
- C. Arrhythmia
- D. Tachycardia

**Correct Answer: D. Tachycardia**

Tachycardia means rapid heart rate. Tachycardia refers to a heart rate that's too fast. How that's defined may depend on age and physical condition. Generally speaking, for adults, a heart rate of more than 100 beats per minute (BPM) is considered too fast.

- **Option A:** Tachypnea refers to rapid respiratory rate. Tachypnea is a respiration rate greater than normal, resulting in abnormally rapid breathing. In adult humans at rest, any respiratory rate between 12 and 20 breaths is normal and tachypnea is indicated by a rate greater than 20 breaths per minute.
- **Option B:** Hyperpyrexia means increase in temperature. Hyperpyrexia is another term for a very high fever. The medical criterion for hyperpyrexia is when someone is running a body temperature of more than 106.7°F or 41.5°C. Hyperpyrexia is an emergency that needs immediate attention from a medical professional.
- **Option C:** Arrhythmia means irregular heart rate. An arrhythmia is a problem with the rate or rhythm of the heartbeat. During an arrhythmia, the heart can beat too fast, too slowly, or with an irregular rhythm. When a heart beats too fast, the condition is called tachycardia. When a heart beats too slowly, the condition is called bradycardia.

**22. Which of the following statements about the nursing process is most accurate?**

- A. The nursing process is a four-step procedure for identifying and resolving patient problems.
- B. Beginning in Florence Nightingale's days, nursing students learned and practiced the nursing process.
- C. Use of the nursing process is optional for nurses since there are many ways to accomplish the work of nursing.
- D. The state board examinations for professional nursing practice now use the nursing process rather than medical specialties as an organizing concept.

**Correct Answer: D. The state board examinations for professional nursing practice now use the nursing process rather than medical specialties as an organizing concept.**

The nursing process is a systematic decision-making method focusing on identifying and treating responses of individuals or groups to actual or potential alterations in health it- is the essential core of

nursing practice to deliver holistic, patient-focused care. Nursing process provides an organizing framework for the practice of nursing and the knowledge, judgments, and actions that nurses bring to patient care.”

- **Option A:** The nursing process is a five-step process. The nursing process functions as a systematic guide to client-centered care with 5 sequential steps. These are assessment, diagnosis, planning, implementation, and evaluation. The utilization of the nursing process to guide care is clinically significant going forward in this dynamic, complex world of patient care.
- **Option B:** The term nursing process was first used by Hall in 1955. In 1958, Ida Jean Orlando started the nursing process that still guides nursing care today. Defined as a systematic approach to care using the fundamental principles of critical thinking, client-centered approaches to treatment, goal-oriented tasks, evidence-based practice (EDP) recommendations, and nursing intuition.
- **Option C:** Nursing process is not optional since standards demand the use of it. Holistic and scientific postulates are integrated to provide the basis for compassionate, quality-based care. As explored by Salmond and Echevarria, healthcare is changing, and the traditional roles of nurses are transforming to meet the demands of this new healthcare environment. Nurses are in a position to promote change and impact patient delivery care models in the future.

**23. A nurse instructs a client to use the pursed lip method of breathing. The client asks the nurse about the purpose of this type of breathing. The nurse responds, knowing that the primary purpose of pursed lip breathing is:**

- A. Promote oxygen intake.
- B. Strengthen the diaphragm.
- C. Strengthen the intercostal muscles.
- D. Promote carbon dioxide elimination.

**Correct Answer: D. Promote carbon dioxide elimination**

Pursed lip breathing facilitates maximum expiration for clients with obstructive lung disease. This type of breathing allows better expiration by increasing airway pressure that keeps air passages open during exhalation. Pursed-lip breathing is a technique that allows people to control their oxygenation and ventilation. The technique requires a person to inspire through the nose and exhale through the mouth at a slow controlled flow.

- **Option A:** Deep breathing prevents air from getting trapped in the lungs, which can cause the client to feel short of breath. As a result, he can breathe in more fresh air. It's best to do this exercise with other daily breathing exercises that can be performed for 10 minutes at a time, 3 to 4 times per day.
- **Option B:** Diaphragmatic breathing, or “belly breathing,” engages the diaphragm, which is supposed to do most of the heavy lifting when it comes to breathing. This technique is particularly helpful in people with COPD, as the diaphragm isn't as effective in these individuals and could be strengthened. The technique best used when feeling rested.
- **Option C:** Breathing exercises which slowly fill the lungs with air to expand the chest and work the intercostal muscles. To do this exercise, it is typically recommended to sit or stand with the back straight, then take a full breath from the bottom of the lungs. It can help to think of breathing from the diaphragm, by slowly expanding the abdominal muscles while inhaling, then pushing air from the lungs using these same muscles.

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

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

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

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

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

**25. Which assessment finding assists the nurse in confirming inhalation injury?**

- A. Brassy cough
- B. Decreased blood pressure
- C. Nausea
- D. Headache

**Correct Answer: A. Brassy cough**

Brassy cough and wheezing are some signs seen with inhalation injury. Damage to airway tissue causes increased mucus production, edema, denudation of epithelium, and mucosal ulceration and hemorrhage. Obstruction of airflow is often the effect caused by tissue edema narrowing the passageways and mucus/blood/fluid impeding airflow.

- **Option B:** Patients with carbon monoxide poisoning may exhibit hypotension. As carboxyhemoglobin (COHgb) levels rise, the cerebral blood vessels dilate, and both coronary blood flow and capillary density increase. Cardiac effects, especially ventricular arrhythmias occur. Ventricular arrhythmias are implicated as the cause of death most often in CO poisoning.
- **Option C:** Most commonly, patients with carbon monoxide poisoning will present with headache (more than 90%), dizziness, weakness, and nausea. Patients may be tachycardic and tachypneic.
- **Option D:** Patients may have systemic symptoms like a headache, delirium, hallucinations, and may even be comatose. Many different etiologies may cause changes in mental status including hypoxia, hypercarbia, or asphyxiant exposure (carbon monoxide, hydrogen cyanide). But headaches can also be seen with carbon monoxide poisoning.

**26. A nurse is caring for a middle-aged client who has undergone hemicolectomy for colon cancer. The client has two children. Which concepts about families should the nurse consider when providing care for this client? Select all that apply.**

- A. Illness in one family member can affect all members.
- B. Family roles do not change because of illness.
- C. A family member may perform more than one role at a time.
- D. Children typically are not affected by adult illness.
- E. The effects of an illness on a family depends on the stage of the family's life cycle.
- F. Changes in sleeping and eating patterns may be signs of stress in a family.

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

Quality of life (QoL) of individuals is closely related to the QoL of those around them, including partners or parents. Therefore, any chronic illness carries the potential to impact the life of the family.

- **Option A:** Illness in one family member can affect all family members, even children. Family members suffer greatly from the emotional effects of living with and caring for, a relative with a disease, with the impact of some diseases being felt by every member of the family.
- **Option B:** Family members of patients experience a negative effect on their family relationships, both between the relative and the patient and between other members of the family as a result of the patient's illness.
- **Option C:** Each member of a family may have several roles to perform. A middle-aged client, for example, may have the roles of father/mother, husband/wife, wage earner, child care provider, and housekeeper. When one family member cannot fulfill a role because of illness, the roles of the other family members are affected.
- **Option D:** Most chronic diseases have similar effects on family members including psychological and emotional functioning, disruption of leisure activities, effect on interpersonal relationships, and financial resources.
- **Option E:** Families move through certain predictable life cycles (such as birth of a baby, a growing family, adult children leaving home, and grandparenting). The impact of illness on the family depends on the stage of the life cycle as family members take on different roles and the family structure changes.

- **Option F:** Illness produces stress in families; changes in eating and sleeping patterns are signs of stress. The psychological distress felt by family members often results from their feelings of helplessness and lack of control. Many different emotions are mentioned by family members; guilt, anger, worry, upset, frustration, embarrassment, despair, loss, relief.

**27. Situation: In a home visit done by the nurse, she suspects that the wife and her child are victims of abuse. Which of the following is the most appropriate for the nurse to ask?**

- A. "Are you being threatened or hurt by your partner?"
- B. "Are you frightened of your partner?"
- C. "Is something bothering you?"
- D. "What happens when you and your partner argue?"

**Correct Answer: A. "Are you being threatened or hurt by your partner?"**

The nurse validates her observation by asking simple, direct questions. This also shows empathy. Some survivors may be hesitant to discuss certain aspects of their experience, while others may be more willing to share. Let the survivor share their story in their own words. While paraphrasing may be a helpful technique to understand the interviewee, it runs the risk of generalizing their experience.

- **Option B:** Try not to make assumptions. Recognize that every survivor has had a different experience, and may be at different points in their healing process. Try not to assume something has already taken place, such as reporting to law enforcement, or that the survivor may feel a certain way.
- **Option C:** Ask for additional input. Ask the survivor if there is anything else they would like to share with you. Some aspects of their experience might not have been addressed as a direct answer to your questions. Give the survivor the opportunity to share any additional information.
- **Option D:** Be mindful and respect boundaries. Ask if there is anything the survivor would prefer not to discuss. Let the survivor know that it's OK if they don't want to answer every question you ask. Avoid giving advice. It's natural to try to give people solutions, especially if you have dealt with a similar situation. Keep in mind that survivors may have already taken action, or may not be looking for another solution. Instead of saying, "You should report," or "You should find a therapist," take a more supportive approach by asking, "Would you be interested in resources that may help with healing and recovery?"

**28. Pediculicides are used to treat which of the following disorders?**

- A. Scabies
- B. Fungal infections
- C. Viral infections
- D. Head lice

**Correct Answer: D. Head lice**

Pediculicides are an effective treatment for head lice. An anti-parasite medication used to treat head lice, onchocerciasis, strongyloidiasis, ascariasis, trichuriasis, and enterobiasis.



- **Option A:** Scabicides are used to treat scabies. Products used to treat scabies are called scabicides because they kill scabies mites; some also kill mite eggs. Scabicides used to treat human scabies are available only with a doctor's prescription. No "over-the-counter" (non-prescription) products have been tested and approved to treat scabies.
- **Option B:** Antifungals are used to treat fungal infections. An antifungal medication, also known as an antimycotic medication, is a pharmaceutical fungicide or fungistatic used to treat and prevent mycosis such as athlete's foot, ringworm, candidiasis (thrush), serious systemic infections such as cryptococcal meningitis, and others.
- **Option C:** Antivirals are used to treat viral infections. Antivirals are medications that reduce the ability of flu viruses to multiply. The CDC considers antiviral drugs as a "second line of defense against the flu." The first line of defense is getting an annual flu vaccine. When taken at the onset of flu, these drugs help decrease the severity and duration of flu symptoms.

**29. Nurse Jannah is monitoring a male client who has been placed in restraints because of violent behavior. Nurse determines that it will be safe to remove the restraints when:**

- A. The client verbalizes the reasons for the violent behavior.
- B. The client apologizes and tells the nurse that it will never happen again.
- C. No acts of aggression have been observed within 1 hour after the release of two of the extremity restraints.
- D. The administered medication has taken effect.

**Correct Answer: C. No acts of aggression have been observed within 1 hour after the release of two of the extremity restraints.**

The best indicator that the behavior is controlled if the client exhibits no signs of aggression after partial release of restraints. When the patient is no longer a danger to themselves or others, the restraints should be removed immediately. The Occupational Safety and Health Administration (OSHA) stated that 75% of annual assaults in the workplace occur in the healthcare and social service fields. As reported in the National Crime Victimization Survey, healthcare workers face a 20% higher chance of being victimized in the workplace when compared to other workers.

- **Option A:** The impetus to administer restraint and seclusion protocol is to obviate potential violence and potentiate harm reduction. Hazards to be avoided include both harm to the patient and the caretaker. This danger encompasses both nonviolent and violent risks. Healthcare providers are encouraged to always remain vigilant. Violence history remains the best predictor for future violence. The classic escalation of patient violence progresses from anger, resistance, and finally to confrontation. Signs of impending violent behavior include provocative behavior, posturing, pacing, angry demeanor, and aggressive acts.
- **Option B:** Once an agitated patient has been identified, staff must give the patient the opportunity to calm down before physical intervention. Often, agitated but cooperative patients will be amenable to verbal de-escalation. Guidelines recommend an honest and straightforward approach with the implementation of friendly gestures proves most beneficial in the setting of an agitated patient. Following fruitless de-escalation techniques, emergency seclusion and restraint can be indicated.
- **Option D:** This does not ensure that the client has controlled the behavior. Document appropriate clinical indications and have a standardized checklist prepared for staff to monitor and supply patient needs effectively. Numerous deaths and adverse patient outcomes have been reported due

to inappropriate restraint placement and negligent monitoring. After restraint placement, patients should be reevaluated every hour and moved at regular intervals to prevent sequelae such as pressure ulcers, rhabdomyolysis, and paresthesias.

**30. Using the principles of standard precautions, the nurse would wear gloves in what nursing interventions?**

- A. Providing a back massage.
- B. Feeding a client.
- C. Providing hair care.
- D. Providing oral hygiene.

**Correct Answer: D. Providing oral hygiene**

Doing oral care requires the nurse to wear gloves. Standard precautions apply to the care of all patients, irrespective of their disease state. These precautions apply when there is a risk of potential exposure to (1) blood; (2) all body fluids, secretions, and excretions, except sweat, regardless of whether or not they contain visible blood; (3) non-intact skin, and (4) mucous membranes. This includes the use of hand hygiene and personal protective equipment (PPE), with hand hygiene being the single most important means to prevent transmission of disease.

- **Option A:** Must be worn when touching blood, body fluids, secretions, excretions, mucous membranes, or non-intact skin. Change when there is contact with potentially infected material in the same patient to avoid cross-contamination. Remove before touching surfaces and clean items. Wearing gloves does not mitigate the need for proper hand hygiene.
- **Option B:** Hand washing after feeding the client is sufficient. Handwashing with soap and water for at least 40 to 60 seconds, making sure not to use clean hands to turn off the faucet, must be performed if hands are visibly soiled, after using the restroom, or if potential exposure to spore-forming organisms.
- **Option C:** Gloves are not needed in providing hair care. Hand rubbing with alcohol applied generously to cover hands completely should be performed and hands rubbed until dry.

**31. A physician has diagnosed acute gastritis in a clinic patient. Which of the following medications would be contraindicated for this patient?**

- A. naproxen sodium (Naprosyn)
- B. calcium carbonate (Tums)
- C. clarithromycin (Biaxin)
- D. furosemide (Lasix)

**Correct Answer: A. naproxen sodium (Naprosyn)**

Naproxen sodium is a nonsteroidal anti-inflammatory drug that can cause inflammation of the upper GI tract. For this reason, it is contraindicated in a patient with gastritis. COX-1 and COX-2 inhibition lead to decreased prostaglandin synthesis in the gastric mucosa. The prostaglandins maintain mucosal integrity, therefore decreased synthesis causes reduced protection to the tissue. However, studies indicate COX-1 has a more significant effect on the integrity of the mucosa; consequently, selective COX-2 inhibitors such as Celecoxib do not have as much of an effect on gastric tissue.

- **Option B:** Calcium carbonate is used as an antacid for the relief of indigestion and is not contraindicated. Calcium carbonate is an inorganic salt primarily used in the management and treatment of low calcium conditions, GERD, CKD, and a variety of other indicated conditions. It is classified as a calcium supplement, antacid, and as a phosphate binder.
- **Option C:** Clarithromycin is an antibacterial often used for the treatment of *Helicobacter pylori* in gastritis. Clarithromycin is in a class of medications called macrolide antibiotics. It works by stopping the growth of bacteria. Clarithromycin is used to treat certain bacterial infections, such as pneumonia (a lung infection), bronchitis (infection of the tubes leading to the lungs), and infections of the ears, sinuses, skin, and throat.
- **Option D:** Furosemide is a loop diuretic and is contraindicated in a patient with gastritis. 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 nephrotic syndrome.

**32. She came across a theory which states that the leadership style is effective depends on the situation. Which of the following styles best fits a situation when the followers are self-directed, experts, and are matured A. Democratic individuals?**

- A. Democratic
- B. Authoritarian
- C. Laissez-faire
- D. Bureaucratic

**Correct Answer: C. Laissez faire**

Laissez-faire leadership is preferred when the followers know what to do and are experts in the field. This leadership style is relationship-oriented rather than task-centered. This kind of leadership is very hands-off—managers trust their employees and are confident in their abilities. They give guidance and take responsibility where needed, but this leadership style means that subordinates and team members have the real lead.

- **Option A:** Democratic leadership, also known as participative leadership or shared leadership, is a type of leadership style in which members of the group take a more participative role in the decision-making process. This type of leadership can apply to any organization, from private businesses to schools to the government.
- **Option B:** Authoritarian leadership, also known as autocratic leadership, is a management style in which an individual has total decision-making power and absolute control over his subordinates. Leaders make decisions with little or no participation or creative input from their followers or team members.
- **Option D:** Bureaucratic leadership refers to organizational leadership through a highly formalized set of processes, procedures, and structures. Here, rules, policies, and hierarchies form a clear set of expectations as well as an explicit chain of command.

**33. 1800 ml is equal to how many liters?**

- A. 1.8

- B. 18000
- C. 180
- D. 2800

**Correct Answer: A. 1.8**

1,800 ml is equal to 1.8 liters.

- **Option B:** 18000 liters is equal to 18,000,000 ml.
- **Option C:** 180 liters is equal to 180,000 ml.
- **Option D:** 2800 liters is equal to 280,000 ml.

**34. A first-day postoperative client on a PCA pump reports that the pain control is inadequate. What is the first action you should take?**

- A. Deliver the bolus dose per standing order.
- B. Contact the physician to increase the dose.
- C. Try non-pharmacological comfort measures.
- D. Assess the pain for location, quality, and intensity.

**Correct Answer: D. Assess the pain for location, quality, and intensity.**

Assess the pain for changes in location, quality, and intensity, as well as changes in response to medication. This assessment will guide the next steps. Patient-controlled analgesia is used to treat acute, chronic, postoperative, and labor pain. A variety of medications can be used for patient-controlled analgesia and are administered intravenously (IV), through an epidural or peripheral nerve catheter, and transdermally.

- **Option A:** The goal of PCA is to efficiently deliver pain relief at a patient's preferred dose and schedule by allowing them to administer a predetermined bolus dose of medication on-demand at the press of a button. Each bolus can be administered alone or coupled with a background infusion of medication.
- **Option B:** The initial loading dose can be titrated by a nurse to reach the minimum effective concentration (MEC) of the desired medication. The bolus or demand dose is the dose of medication delivered each time the patient presses the button. A lockout interval is the time after a demand dose in which a dose of medication will not get administered even if the patient presses the button; this is done to prevent overdosing.
- **Option C:** The use of PCA has been proven to be more effective at pain control than non-patient-controlled opioid injections and results in higher patient satisfaction. PCA has also been found to be preferred by nurses because it allows for a reduction in their workload. PCA will enable patients to be in more control over their pain and helps them shift toward a more internal locus of control over their care.

**35. The burned client is ordered to receive intravenous cimetidine, an H2 histamine blocking agent, during the emergent phase. When the client's family asks why this drug is being given, what is the nurse's best response?**

- A. "To increase urine output and prevent kidney damage."

- B. "To stimulate intestinal movement and prevent abdominal bloating."
- C. "To decrease hydrochloric acid production in the stomach and prevent ulcers."
- D. "To inhibit loss of fluid from the circulatory system and prevent hypovolemic shock."

**Correct Answer: C. "To decrease hydrochloric acid production in the stomach and prevent ulcers."**

Ulcerative gastrointestinal disease may develop within 24 hours after a severe burn as a result of increased hydrochloric acid production and decreased mucosal barrier. Cimetidine inhibits the production and release of hydrochloric acid.

- **Option A:** Adequate fluid therapy is crucial in maintaining renal function. Monitoring by urine output or Swan-Ganz catheterization and thermodilution cardiac output determination is useful in the circulatory management of severely burned patients. Albumin infusion increases plasma volume by 37% and normalizes elevated basal levels of aldosterone and plasma renin activity.
- **Option B:** Other management for severe burns includes nasogastric tube placement as most patients will develop ileus. Foley catheters should be placed to monitor urine output. Cardiac and pulse oximetry monitoring are indicated. Pain control is best managed with IV medication.
- **Option D:** Patients with burns of more than 20% – 25% of their body surface should be managed with aggressive IV fluid resuscitation to prevent "burn shock." A variety of formulas exist, like Brooke, Galveston, Rule of Ten, etc.4, but the most common formula is the Parkland Formula. This formula estimates the amount of fluid given in the first 24 hours, starting from the time of the burn.

**36. In a renowned dermatology conference, Dr. Simmons presents a case study of a patient with a genetic condition that hampers the skin's natural renewal process, making the skin appear prematurely aged. Citing this case, Dr. Simmons postulates the importance of the skin's regenerative capacity and asks the attendees to identify the specific layer in the skin where the majority of mitotic division takes place, facilitating the continuous renewal and repair of the epidermis. Which of the following is the correct layer?**

- A. Stratum spinosum
- B. Stratum granulosum
- C. Stratum corneum
- D. Stratum basale

**Correct Answer: D. Stratum basale**

Stratum basale is the deepest layer of the epidermis, also known as the "basal layer." It contains columnar to cuboidal keratinocytes, melanocytes, Merkel cells, and stem cells. The stem cells in this layer undergo continuous mitotic division, providing new cells that differentiate and mature as they migrate to the surface of the epidermis. This is the primary site for the renewal and repair of the epidermis.

- **Option A:** Stratum spinosum, also known as the "spiny layer," is positioned above the stratum basale. Keratinocytes in this layer are connected by desmosomes, giving them a spiny appearance. While some cell division does occur here, the primary site of mitosis is in the stratum basale.

- **Option B:** The stratum granulosum is the “granular layer” where keratinocytes produce keratohyalin and lamellated granules. These cells are in the process of dying and don’t undergo mitotic division.
- **Option C:** The stratum corneum is the outermost layer of the epidermis, comprised of dead, flattened keratinocytes called corneocytes. These cells are continuously shed from the surface and replaced by cells from the deeper layers. No cell division occurs in this layer.

**37. Orlando who has been taking steroids for rheumatoid arthritis over several years presents with a compression vertebral fracture. This fracture is due to:**

- A. An entirely separate condition.
- B. The osteoporotic effect of long-term steroid use.
- C. Deterioration in rheumatoid arthritis.
- D. An excessively high dose of steroids.

**Correct Answer: B. The osteoporotic effect of long-term steroid use.**

In a client on long-term steroids, a compression vertebral fracture can be assumed to be due to the steroids’ bone-softening effect. Corticosteroids impair the mineralization of bone matrix by initially favoring the activity of osteoclasts (during the first 6 to 12 months of therapy) while also inhibiting the absorption of calcium in the gut. Corticosteroids have also been shown to cause a decrease in bone formation by reducing the activity and lifespan of osteoblasts, promoting their apoptosis as well as the apoptosis of osteocytes.

- **Option A:** Research has shown that prednisone doses as low as 5 mg/day can lead to bone loss. The use of 5 mg or more per day of prednisolone (or its equivalent) has been associated with significant reductions in bone mineral density (BMD) and increased fracture risk within 3 to 6 months of initiation.
- **Option C:** Researchers saw osteonecrosis in a study in 9 to 40% of patients receiving long-term corticosteroid therapy, both systemic and intra-articular routes, as well as in the absence of corticosteroid-induced osteoporosis. Alcoholism, sickle cell disease, human immunodeficiency virus (HIV) infection, and radiation exposure are also associated with osteonecrosis.
- **Option D:** Clinicians should consider bone mineral density (BMD) testing at baseline and after one year of corticosteroid therapy along with height measurement and screening for any fragility fractures. Subsequent assessments can then be pushed out to every 2 to 3 years if stable at one year.[2] If the patient shows decreased BMD, consider pharmacologic therapy, and the recommendation is to use that the World Health Organization’s Fracture Risk Assessment Tool (FRAX) to determine patients who will benefit from pharmacologic treatment.

**38. The nurse is aware that one of the following classes of medications maximizes cardiac performance in clients with heart failure by increasing ventricular contractility?**

- A. Beta-adrenergic blockers
- B. Calcium channel blocker
- C. Diuretics
- D. Inotropic agents

**Correct Answer: D. Inotropic agents**

Inotropic agents are administered to increase the force of the heart's contractions, thereby increasing ventricular contractility and ultimately increasing cardiac output.

- **Option A:** Beta-adrenergic blockers work by blocking beta receptors in the myocardium, reducing the response to catecholamines and sympathetic nerve stimulation.
- **Option B:** Calcium channel blockers decrease the heart rate and ultimately decrease the workload of the heart.
- **Option C:** Diuretics are administered to decrease the overall vascular volume, also decreasing the workload of the heart.

**39. You are responsible for the care of a postoperative patient with a thoracotomy. The patient has been given a nursing diagnosis of Activity Intolerance. Which action should you delegate to the nursing assistant?**

- A. Instructing the patient to alternate rest and activity periods
- B. Encouraging, monitoring, and recording nutritional intake
- C. Monitoring cardiorespiratory response to activity
- D. Planning activities for periods when the patient has the most energy

**Correct Answer: B. Encouraging, monitoring, and recording nutritional intake**

The nursing assistant's training includes how to monitor and record intake and output. After the nurse has taught the patient about the importance of adequate nutritional intake for energy, the nursing assistant can remind and encourage the patient to take-in adequate nutrition.

- **Option A:** Instructing patients requires more education and skill, and are appropriate to the RN's scope of practice. Discussing and teaching require additional education and training. These actions are within the scope of practice of the RN.
- **Option C:** Monitoring the patient's cardiovascular response to activity is a complex process requiring additional education, training, and skill, and falls within the RN's scope of practice.
- **Option D:** 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.

**40. The physician has ordered a minimal-bacteria diet for a client with neutropenia. The client should be taught to avoid eating:**

- A. Packed fruits
- B. Salt
- C. Fresh raw pepper
- D. Ketchup

**Correct Answer: C. Fresh raw pepper**

Fresh raw or whole pepper is not allowed unless thoroughly cooked in food. A low-bacteria diet is designed to reduce exposure to bacteria and other pathogens that can make one sick. It's often prescribed for people who are at a greater risk of infection because they're currently not making enough white blood cells due to certain illnesses or medical treatments.

- **Option A:** Canned fruits are allowed since they are processed and pasteurized. Fresh fruits and vegetables are fine as long as they are washed first or cooked thoroughly. Meat, fish, and eggs should also be fully cooked. Commercially prepared and packaged foods are acceptable but avoid buying foods indented and swollen cans or damaged packaging.
- **Option B:** Salt is allowed. The keys to a low-bacteria diet are choosing foods that are less likely to carry bacteria while avoiding the foods that do. Frequent hand washing and paying particular attention to food safety practices are also essential.
- **Option D:** Ketchup is also allowed. Bread, ready-to-eat cereals, pancakes, waffles, and crackers are safe to eat. Bottled beverages, hot beverages, and pasteurized fruit and vegetable juices are good as well. Cream cheese, sour cream, mayonnaise, margarine, commercial peanut butter, and chocolate are okay, too.

**41. Neurovascular assessment for a fracture patient includes: Select all that apply.**

- A. Prosthesis
- B. Polyps
- C. Pain
- D. Pallor
- E. Pulselessness
- F. Paresthesia
- G. Paralysis
- H. Poikilothermia

**Correct Answer: C, D, E, F, G, and H**

When damage occurs to a muscle or muscle group within the fascial compartment, the resulting swelling and bleeding can create an increased pressure that, if left untreated, can choke off circulation, eventually leading to localized cellular hypoxia and death. The six P's of compartment syndrome for warning signs to watch for are Pain, Pallor, Pulselessness, Paresthesia, Paralysis, and Poikilothermia.

- **Option A:** The major components of lower extremity prosthesis include the socket, suspension mechanism, knee joint (if needed), pylon, and the terminal device. The goals of lower limb prosthesis include comfortability, lightweight, durable, aesthetically pleasing, low maintenance, and appropriate mechanical function for the amputee's functional status.
- **Option B:** Polyps are abnormal tissue growths that most often look like small, flat bumps or tiny mushroom-like stalks. Most polyps are small and less than half an inch wide. Polyps in the colon are the most common, but it's also possible to develop polyps in places that include: ear canal.
- **Option C:** Complications can be prevented when pain is identified and treated early. Pain can be caused by sensory nerve damage and/or diminished blood flow. Use a pain assessment tool to assess severity of pain. A hallmark of neurovascular compromise is pain disproportionate to the injury



- **Option D:** Pallor or cyanosis may indicate inadequate arterial supply; dusky, cyanotic, mottled, or purple black coloration may indicate inadequate venous return. Consider the patient's usual skin tone and any skin conditions when performing this assessment; cyanosis can present differently in different skin tones.
- **Option E:** Assess upper extremity peripheral pulses (brachial, radial, and ulnar) and lower extremity peripheral pulses (femoral, popliteal, posterior tibialis, and dorsalis pedis) bilaterally. Be sure to assess for the presence of pulses distal to any injury.
- **Option F:** Ask the patient about changes in sensation, such as tingling, numbness (paresthesia), pressure, or burning. A pressure sensory exam often consists of assessing light touch with a cotton swab and assessing temperature discrimination with warm and cold stimuli; pinprick sensation can be tested using the sharp end of a disposable safety pin.
- **Option G:** Assess range of motion and strength. The patient's ability to perform specific movements is a key indicator of motor function of specific nerves. Loss of motor function is often a late sign of neurovascular compromise; thus, frequent assessment and careful attention is required to detect these subtle changes in the patient.
- **Option H:** Poikilothermia, the inability to maintain a constant core temperature independent of ambient temperature, markedly influences both the mental and physical function of affected patients; furthermore, prolonged hypothermia can induce numerous complications.

**42. While working in a neurology clinic, a nurse encounters a patient, Mrs. Anderson, who was recently diagnosed with ageusia, the loss of the sense of taste. The patient, a culinary enthusiast, is naturally distressed by her diagnosis. To gain a better understanding of her condition and potential treatment avenues, Mrs. Anderson wishes to understand the anatomy of the taste system in detail. To aid her understanding, the nurse describes the various components involved in the taste sensation and tests her knowledge with a question. During a patient's assessment, the nurse discusses the sense of taste and the structures responsible for detecting taste stimuli. What are these sensory structures called?**

- A. Taste buds
- B. Papillae
- C. Taste cells
- D. Taste hairs
- E. Taste pore

**Correct Answer: A. Taste buds**

Taste buds are small sensory organs located on the tongue and throughout the mouth that contain specialized cells called gustatory cells. These cells are responsible for detecting and transmitting information about the various tastes humans perceive, including sweet, salty, sour, bitter, and umami, by sending signals to the brain to create the sensation of taste.

- **Option B:** Papillae are small, nipple-like projections on the surface of the tongue. They house the taste buds but are not the primary sensory structures for taste.
- **Option C:** Taste cells are a component of taste buds and are specialized epithelial cells. They are responsible for transducing chemical signals in the mouth into neural signals that the brain can

understand. While they are essential for taste sensation, the broader structure that houses these cells is the taste bud.

- **Option D:** Taste hairs are tiny projections on the taste cells which protrude through the taste pore. They come into contact with tastants (substances that can be tasted), but they themselves are not the primary sensory structures.
- **Option E:** The taste pore is an opening on the surface of the tongue where taste hairs of the taste cells come into contact with saliva and tastants. Like taste hairs, the taste pore is involved in taste sensation but is not the primary sensory structure.

**43. A 24-year old client with anorexia nervosa tells the nurse, “When I look in the mirror, I hate what I see. I look so fat and ugly.” Which strategy should the nurse use to deal with the client’s distorted perceptions and feelings?**

- A. Avoid discussing the client’s perceptions and feelings.
- B. Focus discussions on food and weight.
- C. Avoid discussing unrealistic cultural standards regarding weight.
- D. Provide objective data and feedback regarding the client’s weight and attractiveness.

**Correct Answer: D. Provide objective data and feedback regarding the client’s weight and attractiveness**

By focusing on reality, this strategy may help the client develop a more realistic body image and gain self-esteem. Anorexia nervosa is an eating disorder defined by restriction of energy intake relative to requirements, leading to a significantly low body weight. Patients will have an intense fear of gaining weight and distorted body image with the inability to recognize the seriousness of their significantly low body weight. The mental health nurse should educate the patient on changes in behavior, easing stress, and overcoming any emotional issues.

- **Option A:** This is inappropriate because discussing the client’s perceptions and feelings wouldn’t help her to identify, accept, and work through them. Since recovery involves patients having to face their deepest, most painful, and traumatic thoughts and emotions, supporting them as they go through treatment can be emotionally challenging for nurses. This emotional challenge can be exacerbated when the patient has also been diagnosed with Obsessive-Compulsive Disorder (OCD), depression, or substance abuse, as these may require more intensive one-to-one support.
- **Option B:** Focusing discussions on food and weight would give the client attention for not eating. During the early stages of treatment when patients are still new to recovery, they look to nurses to provide them with a highly structured environment, which sometimes involves nurses making food and behavioral decisions on their behalf. While this might not be an ongoing issue for primary care nurses, they may still be required to offer decisive advice on these areas. Here, it is imperative that nurses offer such advice with a clear message that patients have the power to make these decisions themselves.
- **Option C:** This is inappropriate because recognizing unrealistic cultural standards wouldn’t help the client establish more realistic weight goals. Furthermore, learning motivational interviewing techniques can help facilitate communication with those who might be resistant to discussing topics related to food, weight, and recovery. Such techniques can help develop the skills of empathic understanding, rolling with resistance, and gently assisting patients to make their own, autonomous decision to work towards recovery. Often, the aim is to help patients learn new and healthier ways of coping, and nurses can achieve this through a mix of emotional support, education, and signposting.

**44. The nurse reviews the activity schedule for the day and plans which activity for the manic client?**

- A. Brown-bag luncheon and book review
- B. Tetherball
- C. Paint-by-number activity
- D. Deep breathing and progressive relaxation group

**Correct Answer: B. Tetherball**

A person who is experiencing mania is overactive and full of energy, lacks concentration, and has poor impulse control. The client needs an activity that will allow the use of excess energy yet not endanger others during the process. Tetherball is an exercise that uses the large muscle groups of the body and is a great way to expand the increased energy that the client is experiencing.

- **Option A:** Decreasing environmental stimulation may assist the client to relax; the nurse must provide a quiet environment without noise, television, and other distractions; finger foods or things the client can eat while moving around are the best options to improve nutrition.
- **Option C:** The nurse can direct their need for movement into socially acceptable, large motor activities such as arranging chairs for a community meeting or walking. Clients with mania have short attention spans, so the nurse uses simple, clear sentences when communicating; they may not be able to handle a lot of information at once, so the nurse breaks information into many small segments.
- **Option D:** Deep breathing and progressive relaxation group are a relatively sedated activity that requires concentration, a quality that is lacking in the manic state. Such activities lead to increased frustration and anxiety for the client. A primary nursing responsibility is to provide a safe environment for the client and others; for clients who feel out of control, the nurse must establish external controls emphatically and nonjudgmentally.

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

- A Thirst
- B. Palpitations
- C. Diaphoresis
- D. Slurred speech
- E. Hyperventilation

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

Hypoglycemia is often defined by a plasma glucose concentration below 70 mg/dL; however, signs and symptoms may not occur until plasma glucose concentrations drop below 55 mg/dL. In patients who do not have diabetes, hypoglycemia is uncommon, but when it occurs, there are a few major causes of hypoglycemia: pharmacologic, alcohol, critical illness, counter-regulatory hormone deficiencies, and non-islet cell tumors.

- **Option A:** Neurogenic signs and symptoms can either be adrenergic (tremor, palpitations, anxiety) or cholinergic (hunger, diaphoresis, paresthesias). Neurogenic symptoms and signs arise from sympathoadrenal involvement (either norepinephrine or acetylcholine release) in response to perceived hypoglycemia.
- **Option B:** Palpitations, an adrenergic symptom, occur as the glucose levels fall; the sympathetic nervous system is activated and epinephrine and norepinephrine are secreted causing this response.
- **Option C:** Diaphoresis is a sympathetic nervous system response that occurs as epinephrine and norepinephrine are released. Low blood sugars can affect activity in the autonomic nervous system (ANS), which is responsible for reactions that people cannot control, such as sweating and digestion.
- **Option D:** Slurred speech is a neuroglycopenic symptom; as the brain receives insufficient glucose, the activity of the CNS becomes depressed. These are often called the “warning signs” of hypoglycemia. Lack of glucose in the brain can cause trouble concentrating, changes in vision, slurred speech, lack of coordination, headaches, dizziness, and drowsiness.
- **Option E:** Ketones are cleared out of the body by the kidneys and expelled through urine. In DKA, ketones build up faster than the kidneys can remove them from the body. This results in a buildup of ketones, which is toxic. The body may try to use the lungs to expel the excess ketones, which causes shortness of breath.

**46. Which of the following describes the role of a technician?**

- A. Administers medications to a schizophrenic patient.
- B. The nurse feeds and bathes a catatonic client.
- C. Coordinates diverse aspects of care rendered to the patient.
- D. Disseminates information about alcohol and its effects.

**Correct Answer: A. Administers medications to a schizophrenic patient.**

Administration of medications and treatments, assessment, documentation are the activities of the nurse as a technician. Nurse technicians are medical care providers who give basic medical care to patients. A nurse tech generally works under the supervision of a Registered Nurse. Also known as nursing attendants or nursing aides, they provide important services to help the registered nurses complete their tasks.

- **Option B:** Activities as a parent surrogate. Many theorists believe the role of mother surrogate is detrimental to the nursing profession. The data suggest that during the 1920s and 1930s, the role of the nurse as mother surrogate was influential in the evolution of nursing. If this role has existed since the beginning of the profession, nursing theorists may be forced to conclude that it will always remain an integral component of the nursing role.
- **Option C:** Refers to the ward manager role. Nurse managers are responsible for supervising nursing staff in a hospital or clinical setting. They oversee patient care, make management and budgetary decisions, set work schedules, coordinate meetings, and make decisions about personnel.
- **Option D:** Role as a teacher. After nurses graduate from an RN to BSN degree program, they become educators even if they do not work as teachers in academia. Nurses also are responsible for teaching patients about preventing and managing medical conditions. By relaying information, nurses help patients take control of their healthcare.

**47. 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.

**48. Which of the following meal selections is appropriate for the client with celiac disease?**

- A. Ramen noodles and dumplings
- B. French croissants and donuts
- C. Bacon and egg
- D. Pepperoni pizza and ginger ale

**Correct Answer: C. Bacon and egg**

- **Option C:** Celiac disease is an autoimmune digestive disease that is characterized by a poor immune response to foods that contain gluten. All types of meat (such as bacon) and eggs are gluten-free so it is permitted to a client with this kind of disease.
- **Options A, B, and D:** These food items are not allowed because they contain flour made from wheat, which exacerbates the symptoms of celiac disease.

**49. Physician's orders for a client with acute pancreatitis include the following: strict NPO, NG tube to low intermittent suction. The nurse recognizes that these interventions will:**

- A. Reduce the secretion of pancreatic enzymes
- B. Decrease the client's need for insulin
- C. Prevent secretion of gastric acid
- D. Eliminate the need for analgesia

**Correct Answer: A. Reduce the secretion of pancreatic enzymes**

- Option A: Placing the client on strict NPO status will stop the inflammatory process by reducing the secretion of pancreatic enzymes. The use of low, intermittent suction prevents the release of secretion in the duodenum.
- Option B: The client requires exogenous insulin.
- Options C and D: These interventions do not prevent the secretion of gastric acid and do not eliminate the need for analgesia.

**50. The nurse is aware that the following ways in vascular dementia different from Alzheimer's disease is:**

- A. Vascular dementia has a more abrupt onset.
- B. The duration of vascular dementia is usually brief.
- C. Personality change is common in vascular dementia.
- D. The inability to perform motor activities occurs in vascular dementia.

**Correct Answer: A. Vascular dementia has a more abrupt onset.**

Vascular dementia differs from Alzheimer's disease in that it has a more abrupt onset and runs a highly variable course. VD is distinguished from other forms of dementia in that it results from brain ischemia, although the temporal relationship to the ischemic event may be subtle or go unnoticed. There are various subtypes and multiple terms to describe the vascular pathology and affected brain tissue, such as multi-infarct dementia, small vessel disease or Binswanger disease, strategic infarct dementia, hypoperfusion dementia, hemorrhagic dementia, hereditary vascular dementia, and AD with cardiovascular disease

- **Option B:** The duration of delirium is usually brief. Dementia is a syndrome of chronic progressive cognitive decline resulting in functional impairment. In the Diagnostic Manual of Mental Disorders, Fifth Edition (DSM-V), cognitive decline is quantified as deficits in one or more domains (e.g., memory, executive function, visuospatial, language, attention). Second, only to Alzheimer's disease (AD), vascular dementia (VD) is one of the most common causes of dementia affecting the elderly (aged greater than 65 years), with a variable presentation and unpredictable disease progression.
- **Option C:** Personality change is common in Alzheimer's disease. A thorough history should be obtained from the patient, focusing on cognitive and functional deficits, onset, and progression of symptoms. Interviewing family members and caregivers is important as patients with cognitive decline rarely have insight into their cognitive and functional limitations.

- **Option D:** The inability to carry out motor activities is common in Alzheimer's disease. Caregivers may report an abrupt or stepwise onset of cognitive decline, or the appearance of symptoms may be subtle without connection to an ischemic event. The functional assessment should evaluate for impairments in instrumental activities of daily living (IADLs), such as cooking, driving, and financial and medication management, and basic activities of daily living (ADLs), such as dressing, bathing, and toileting. Additionally, patient's past medical history, current medications, and surgical history should be obtained. Regarding physical examination, one should assess patients for focal neurologic deficits.

**51. 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.

**52. The client has been admitted with a diagnosis of acute pancreatitis. The nurse would assess this client for pain that is:**

- A. Severe and unrelenting, located in the epigastric area and radiating to the back.
- B. Severe and unrelenting, located in the left lower quadrant and radiating to the groin.
- C. Burning and aching, located in the epigastric area and radiating to the umbilicus.
- D. Burning and aching, located in the left lower quadrant and radiating to the hip.

**Correct Answer: A. Severe and unrelenting, located in the epigastric area and radiating to the back.**

The pain associated with acute pancreatitis is often severe and unrelenting, is located in the epigastric region, and radiates to the back. Acute pancreatitis is common and is the leading cause of hospitalization amongst gastrointestinal disorders in the United States. The severity of the disease varies widely, from mild disease needing conservative treatment to severe and complicated disease with high morbidity and mortality.

- **Option B:** The patient will commonly describe moderate to severe abdominal pain located in the epigastrium with nausea and anorexia. The nature of the pain can vary, often depending on whether the etiology is a biliary obstruction or a metabolic/toxicologic cause. Biliary etiology is more often described as a sharper pain, which radiates through to the back with more of acute onset.
- **Option C:** Metabolic and toxicologic causes, such as alcohol, often have a more indolent onset with more dull and generalized pain. A thorough history regarding alcohol use and medications should be gathered, keeping in mind that over five years of heavy alcohol use is often needed to induce alcohol-related pancreatitis.
- **Option D:** Family history should be reviewed, particularly when more common etiologies appear less likely, as there are rare genetically related cases of familial pancreatitis. A physical exam is often significant for elevated temperature, tachycardia, and in severe cases, hypotension. The abdominal exam will typically reveal epigastric tenderness with possible guarding and rigidity and decreased bowel sounds.

**53. Aluminum hydroxide gel (Amphojel) is prescribed for the client with chronic renal failure to take at home. What is the purpose of giving this drug to a client with chronic renal failure?**

- A. To relieve the pain of gastric hyperacidity.
- B. To prevent Curling's stress ulcers.
- C. To bind phosphorus in the intestine.
- D. To reverse metabolic acidosis.

**Correct Answer: C. To bind phosphorus in the intestine.**

A client in renal failure develops hyperphosphatemia that causes a corresponding excretion of the body's calcium stores, leading to renal osteodystrophy. To decrease this loss, aluminum hydroxide gel is prescribed to bind phosphates in the intestine and facilitate their excretion.

- **Option A:** Gastric hyperacidity is not necessarily a problem associated with chronic renal failure. Aluminum hydroxide can also serve as a phosphate binder in patients with chronic renal disease. However, its use in this manner is infrequent due to the risk of adverse effects.
- **Option B:** Antacids will not prevent Curling's stress ulcers. Aluminum hydroxide  $[Al(OH)_3]$  dissociates into  $Al^{3+}$  and  $OH^-$  in the stomach. The freed hydroxide groups then bind to free protons, ultimately producing water and insoluble aluminum salts, mostly  $Al(OH)_3$ , within the stomach. The proton binding serves to increase the overall pH of the stomach, i.e., less acidic, reducing the symptoms of indigestion.
- **Option D:** Antacids will not affect metabolic acidosis. Prolonged administration should not be considered in a patient with renal impairment or a patient on dialysis, as impaired clearance of excess aluminum may precipitate the drug's adverse effects.

**54. The nurse notes that a client is quite suspicious during an assessment interview and believes that her family is under investigation by the CIA. What would the appropriate nursing interventions be with this client? Select all that apply.**

- A. Use active listening skills to seek information from the client.



- B. Encourage the client to describe the problem as she sees it.
- C. Ask the client to tell you exactly what she thinks is happening.
- D. Tell the client that she is delusional and you can help her.
- E. Explain to the client that most people are not investigated by the CIA.
- F. Reassure the client that you are not with the CIA.

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

The client is displaying paranoid behaviors, which necessitates a matter of fact approach that is nonjudgmental and accepting the client's statements and shows the nurses willingness to actively listen. The last three do not contribute to a therapeutic nurse client relationship.

- **Option A:** Explore how the delusions are experienced by the client. Exploring the delusions and sharing the experience can help give the person a sense of power that he or she might be able to manage the delusions.
- **Option B:** Help the client to identify times that the delusions are most prevalent and frightening. This helps both nurse and client identify situations and times that might be most anxiety-producing and threatening to the client.
- **Option C:** Help the client to identify the needs that might underlie the delusions. What other ways can these needs be met? Delusions might reflect needs for anger, power, self-esteem, and sexuality.
- **Option D:** Accept the fact that the paranoia is real to the client, but explain that you do not see his paranoia. Validating that your reality does not include delusions can help the client cast "doubt" on the validity of his or her thoughts.
- **Option E:** 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.
- **Option F:** Recognizes the client's delusions as the client's perception of the environment. Recognizing the client's perception can help you understand the feelings he or she is experiencing.

**55. A female client is admitted in a disoriented and restless state after sustaining a concussion during a car accident. Which nursing diagnosis takes highest priority for this client's plan of care?**

- A. Disturbed sensory perception (visual)
- B. Self-care deficit: Dressing/grooming
- C. Impaired verbal communication
- D. Risk for injury

**Correct Answer: D. Risk for injury**

Because the client is disoriented and restless, the most important nursing diagnosis is risk for injury. Provide for safety needs (e.g., supervision, side rails, seizure precautions, placing call bell within reach, positioning needed items within reach/clearing traffic paths, ambulating with devices). This is to prevent untoward incidents and to promote safety.

- **Option A:** Avoid challenging illogical thinking. Challenges to the patient's thinking can be perceived as threatening and result in a defensive reaction. Orient the patient to surroundings, staff,

necessary activities as needed. Present reality concisely and briefly. Avoid challenging illogical thinking—defensive reactions may result. Increased orientation ensures greater degree of safety for the patient.

- **Option B:** Modulate sensory exposure. Provide a calm environment; eliminate extraneous noise and stimuli. Increased levels of visual and auditory stimulation can be misinterpreted by the confused patient. Assist the family and significant others in developing coping strategies. The family needs to let the patient do all that he or she is able to do to maximize the patient's level of functioning and quality of life.
- **Option C:** Give simple directions. Allow sufficient time for the patient to respond, to communicate, to make decisions. This communication method can reduce anxiety experienced in a strange environment.

**56. The nurse has been teaching the role of diet in regulating blood pressure to a client with hypertension. Which meal selection indicates that the client understands his new diet?**

- A. Oatmeal, apple juice, dry toast, and coffee
- B. Pancakes, ham, tomato juice, and coffee
- C. Cornflakes, whole milk, banana, and coffee
- D. Scrambled eggs, bacon, toast, and coffee

**Correct Answer: A. Oatmeal, apple juice, dry toast, and coffee**

- Option A: Oatmeal is low in sodium and high in fiber. Limiting sodium intake and increasing fiber helps to lower cholesterol levels, which reduces blood pressure.
- Answers B and D: They contain animal proteins that are high in both cholesterol and sodium.
- Option C: Cornflakes and whole milk are higher in sodium and are poor sources of fiber.

**57. A client with a diagnosis of diabetic ketoacidosis (DKA) is being treated in the ER. Which finding would a nurse expect to note as confirming this diagnosis?**

- A. Elevated blood glucose level and a low plasma bicarbonate
- B. Decreased urine output
- C. Increased respiration and an increase in pH
- D. Comatose state

**Correct Answer: A. Elevated blood glucose level and a low plasma bicarbonate**

In diabetic acidosis, the arterial pH is less than 7.35, plasma bicarbonate is less than 15mEq/L, and the blood glucose level is higher than 250mg/dl and ketones are present in the blood and urine. Diabetic ketoacidosis (DKA) is characterized by uncontrolled hyperglycemia, metabolic acidosis, and increased body ketone concentration.

- **Option B:** Patients may have symptoms of hyperglycemia like polyphagia, polyuria, or polydipsia. As patients become more volume-depleted, they may experience decreased urine output, dry mouth, or decreased sweating indicative of dehydration.

- **Option C:** The client would be experiencing Kussmaul's respirations. Kussmaul's breathing, which is labored, deep, and tachypneic, may occur. Some providers may appreciate a fruity scent to the patient's breath, indicative of the presence of acetone.
- **Option D:** A comatose state may occur if DKA is not treated, but coma would not confirm the diagnosis. In the most severe cases, altered mental status, general drowsiness, and focal neurologic deficits can be appreciated and are signs of cerebral edema. If found, this needs to be treated immediately.

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

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

**Correct Answer: C. 8**

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

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

**59. During a class discussion, the 50-year-old professor suddenly feels left-sided chest pain, dizziness, and diaphoresis. What is the priority action when he arrives in the ED triage area?**

- A. Supply oxygen via nasal cannula
- B. Place intravenous (IV) access
- C. Notify the ED physician
- D. Set the client on continuous electrocardiographic monitoring

**Correct Answer: A. Supply oxygen via nasal cannula**

Increasing myocardial oxygenation is the priority goal. Place the patient on a cardiac monitor, establish intravascular access (IV) access, give 162 mg to 325 mg chewable aspirin, clopidogrel, or ticagrelor (unless bypass surgery is imminent), control pain and consider oxygen (O<sub>2</sub>) therapy.

- **Option B:** Intravenous opioids (e.g., morphine) are the analgesics most commonly used for pain relief (Class IIa). The results from CRUSADE quality improvement initiative have shown that the use of morphine may be associated with a higher risk of death and adverse clinical outcomes.
- **Option C:** After providing initial treatment, the physician should be notified. Patients with non-ST elevation myocardial infarction (NSTEMI) and unstable angina should be admitted for cardiology consultation and workup. Patients with stable angina may be appropriate for outpatient workup.
- **Option D:** The other actions are also appropriate and should be done immediately. Electrocardiogram (ECG) preferably in the first 10 min of arrival, (consider serial ECGs). Patients with ST-elevation on ECG patients should receive immediate reperfusion therapy either pharmacologic (thrombolytics) or transfer to the catheterization laboratory for percutaneous coronary intervention (PCI).

**60. Which of the following is most accurate regarding the grounded-theory method?**

- A. Data is collected using an etic perspective.
- B. It is a process of constructing human experience.
- C. Secondary sources are sometimes used.
- D. It is an inductive approach.

**Correct Answer: D. It is an inductive approach.**

Grounded theory (GT) is a structured, yet flexible methodology. This methodology is appropriate when little is known about a phenomenon; the aim being to produce or construct an explanatory theory that uncovers a process inherent to the substantive area of inquiry. One of the defining characteristics of GT is that it aims to generate a theory that is grounded in the data.

- **Option A:** Data is collected using the emic perspective. A hallmark of GT is concurrent data generation/collection and analysis. In GT, researchers may utilize both qualitative and quantitative data as espoused by Glaser's dictum; 'all is data'.
- **Option B:** The grounded-theory method is a process of constructing theory from human experience. Constructivist GT's methodological underpinnings focus on how participants construct meaning in relation to the area of inquiry. A constructivist co-constructs experience and meanings with participants.
- **Option C:** In grounded theory, only primary sources (the participants) are used. Elicited data are produced by participants in response to, or directed by, the researcher whereas extant data includes data that is already available such as documents and published literature.

**61. A client with diabetes asks the nurse for advice regarding methods of birth control. Which method of birth control is most suitable for the client with diabetes?**

- A. Intrauterine device
- B. Oral contraceptives

C. Diaphragm

D. Contraceptive sponge

**Correct Answer: C. Diaphragm**

The best method of birth control for the client with diabetes is the diaphragm. The diaphragm is a birth control (contraceptive) device that prevents sperm from entering the uterus. The diaphragm is a small, reusable rubber or silicone cup with a flexible rim that covers the cervix. Before sex, the diaphragm is inserted deep into the vagina so that part of the rim fits snugly behind the pubic bone. The diaphragm is effective at preventing pregnancy only when used with spermicide.

- **Option A:** Permanent intrauterine device can cause a continuing inflammatory response in diabetics that should be avoided. Fibrinolytic activity is due in part to prostaglandin synthetase activation which was thought to be required for the efficacy of the copper IUD. Its absence was thought to be a possible reason why copper IUDs were less effective in diabetics (and in nondiabetics who became pregnant).
- **Option B:** Oral contraceptives tend to elevate blood glucose levels. Choice of contraception should be made on the preference of the woman and individual risk factors identified such as the presence of vascular, nephropathy, neuropathy, or retinal disease. Choosing a safe and reliable method of contraception for a woman with DM needs careful consideration and practitioners need to make reference to the WHO Medical Eligibility Criteria for Contraceptive Use.
- **Option C:** Contraceptive sponges are not good at preventing pregnancy. The contraceptive sponge is a type of birth control (contraceptive) that prevents sperm from entering the uterus. It is soft and disk-shaped, and made of polyurethane foam. The contraceptive sponge contains spermicide, which blocks or kills sperm.

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

A. "Eat foods high in potassium."

B. "Take daily potassium supplements."

C. "Discontinue sodium restrictions."

D. "Avoid salt substitutes."

**Correct Answer: D. "Avoid salt substitutes."**

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

- **Option A:** Spironolactone belongs to the drug class of mineralocorticoid receptor antagonists, and it is a nonselective antagonist that can bind to androgen and progesterone receptors. Aldosterone, a component of the renin-angiotensin-aldosterone system, binds to its receptors at the distal tubules and collecting duct and causes sodium reabsorption and potassium secretion, increased vascular stiffness and remodeling, and increased cardiac inflammation, fibrosis, and remodeling.
- **Option B:** Hyperkalemia is an adverse effect of spironolactone. This drug is contraindicated in patients with hyperkalemia and in those at increased risk of developing hyperkalemia. Routine blood work is necessary to evaluate serum potassium levels and any decline in renal function. Additional urine studies to assess kidney function may also be a requirement.

- **Option C:** The client should also avoid potassium-rich foods and potassium supplements. To reduce fluid volume overload, sodium restrictions should continue. Hyperkalemia can be due to spironolactone alone or a synergistic side effect from multiple medications such as beta-blockers, angiotensin-converting enzyme inhibitors, and angiotensin receptor blockers that clinicians often prescribe to patients for indications such as hypertension or heart failure.

**63. Which of the following groups of clients are most at risk for GI bleeding from the use of NSAIDs?**

- A. Clients with dysmenorrhea.
- B. Clients with headaches.
- C. Clients with arthritis.
- D. Clients with renal failure.

**Correct Answer: C. Clients with arthritis.**

Clients with arthritis are taking the drugs for prolonged periods of time and may take higher doses. Nonsteroidal anti-inflammatory drugs (NSAIDs) are a drug class FDA-approved for use as antipyretic, anti-inflammatory, and analgesic agents. These effects make NSAIDs useful for the treatment of muscle pain, dysmenorrhea, arthritic conditions, pyrexia, gout, migraines, and used as opioid-sparing agents in certain acute trauma cases. Choices A and B are incorrect because the use of NSAIDs with these clients is intermittent.

- **Option A:** Gastric adverse effects are likely due to the inhibition of COX-1, preventing the creation of prostaglandins that protect the gastric mucosa. The damage is more likely in a patient that has a prior history of peptic ulcers. Since it is COX-1 specific, the use of COX-2 selective NSAIDs is a lower risk alternative.
- **Option B:** The main mechanism of action of NSAIDs is the inhibition of the enzyme cyclooxygenase (COX). Cyclooxygenase is required to convert arachidonic acid into thromboxanes, prostaglandins, and prostacyclins. The therapeutic effects of NSAIDs are attributed to the lack of these eicosanoids. Specifically, thromboxanes play a role in platelet adhesion, prostaglandins cause vasodilation, increase the temperature set-point in the hypothalamus, and play a role in anti-nociception.
- **Option D:** Renal failure is a contraindication for NSAIDs because most of the drug is excreted through the kidneys. Renal adverse effects are because COX-1 and COX-2 facilitate the production of prostaglandins that play a role in renal hemodynamics. In a patient with normal renal function, inhibition of prostaglandin synthesis does not pose a large problem; however, in a patient with renal dysfunction, these prostaglandins play a greater role and can be the source of problems when reduced via NSAIDs. Complications that can occur due to this are acute renal dysfunction, fluid and electrolyte disorders, renal papillary necrosis, and nephrotic syndrome/ interstitial nephritis.

**64. The nurse correctly teaches a client taking the Benzodiazepine Oxazepam (Serax) to avoid excessive intake of:**

- A. Cheese
- B. Coffee
- C. Sugar

D. Shellfish

**Correct Answer: B. Coffee**

Coffee contains caffeine, which has a stimulating effect on the central nervous system that will counteract the effect of the antianxiety medication oxazepam. None of the remaining foods is contraindicated. These drugs may act as depressants to the CNS, specifically inhibiting respiratory drive. Therefore, careful monitoring of all vitals, especially blood pressure and respiratory rate, should be performed after the administration of benzodiazepines. Waveform capnography, if available, should be seriously considered to monitor respiratory status.

- **Option A:** The FDA strongly reminds providers that extreme care should be taken when administering benzodiazepines with other central nervous system depressants such as alcohol, barbiturates, and opioids. The activated charcoal administration is contraindicated in benzodiazepine (BZ) ingestion toxicity/overdose. This is due primarily to altered mental status commonly associated with BZ overdose, which lends itself to aspiration of the activated charcoal.
- **Option C:** Flumazenil is a GABA-A receptor antagonist, acting to reverse the sedative effects of benzodiazepines. Flumazenil functions through competitive inhibition of the alpha-gamma subunit of the GABA-A receptor. Administration of flumazenil should be carried out judiciously, as it may precipitate withdrawal seizures. Of note, one multi-center trial found that patients with excessive benzodiazepine ingestion could become “re-sedated” after flumazenil began to wear off.
- **Option D:** Contraindications include known hypersensitivity to benzodiazepines and angle-closure glaucoma. Glaucoma occurs when the intraocular pressure rises, thereby causing compression of the optic nerve near the posterior surface of the eye. This compression of the lamina cribrosa can lead to axonal damage with subsequent disruption of anterograde and retrograde axonal transport. This results in numerous issues, including ocular pain, nausea/vomiting, blurred vision, an intraocular pressure greater than 21 mmHg, edema of the corneal epithelium, and non-reactive pupils.

**65. What are the three most important prognostic factors in determining long-term survival for children with acute leukemia?**

- A. Histologic type of disease, initial WBC count, and client’s age at diagnosis
- B. Progression of illness, WBC at the time of diagnosis, and client’s age at the time of diagnosis
- C. Histologic type of disease, initial platelet count, and type of treatment
- D. Type of treatment and client’s sex

**Correct Answer: A. Histologic type of disease, initial WBC count, and client’s age at diagnosis**

- **Option A:** The factor whose prognostic value is considered to be of greatest significance in determining the long-range outcome is the histologic type of leukemia. Children with a normal or low WBC count appear to have a much better prognosis than those with a high WBC count. Children diagnosed between ages 2 and 10 have consistently demonstrated a better prognosis because of age 2 or after 10.

**66. Which intervention is most important to use to prevent infection by autocontamination in the burned client during the acute phase of recovery?**

- A. Changing gloves between wound care on different parts of the client’s body.

- B. Avoiding sharing equipment such as blood pressure cuffs between clients.
- C. Using the closed method of burn wound management.
- D. Using proper and consistent handwashing.

**Correct Answer: A. Changing gloves between wound care on different parts of the client's body.**

Autocontamination is the transfer of microorganisms from one area to another area of the same client's body, causing infection of a previously uninfected area. Use gowns, gloves, masks, and strict aseptic techniques during direct wound care and provide sterile or freshly laundered bed linens or gowns.

- **Option B:** Although all techniques listed can help reduce the risk of infection, only changing gloves between carrying out wound care on different parts of the client's body can prevent autocontamination. Depending on the type or extent of wounds and the choice of wound treatment (open versus closed), isolation may range from a simple wound and/or skin to complete or reverse to reduce the risk of cross-contamination and exposure to multiple bacterial flora.
- **Option C:** Prevent skin-to-skin surface contact (wrap each burned finger or toe separately; do not allow burned ear to touch scalp). This identifies the presence of healing (granulation tissue) and provides for early detection of burn-wound infection. Infection in a partial-thickness burn may cause conversion of burn to full-thickness injury.
- **Option D:** Emphasize and model good handwashing techniques for all individuals coming in contact with the patient. This prevents cross-contamination and reduces the risk of acquired infection.

**67. The nurse just received the client's morning laboratory results. Which of these results is of most concern?**

- A. Serum sodium level of 134 mEq/L
- B. Serum potassium level of 5.2 mEq/L
- C. Serum magnesium level of 0.8 mEq/L
- D. Serum calcium level of 10.6 mg/dL

**Correct Answer: C. Serum magnesium level of 0.8 mEq/L**

With a magnesium level this low, the client is at risk for ECG changes and life-threatening ventricular dysrhythmias. Normal serum magnesium levels are between 1.46 and 2.68 mg/dL. Hypomagnesemia can be attributed to chronic disease, alcohol use disorder, gastrointestinal losses, renal losses, and other conditions. Signs and symptoms of hypomagnesemia include anything from mild tremors and generalized weakness to cardiac ischemia and death.

- **Option A:** Hyponatremia is defined as a serum sodium concentration of less than 135 mEq/L but can vary to some extent depending upon the set values of varied laboratories. Patients with mild-to-moderate hyponatremia (greater than 120 mEq/L) or gradual decrease in sodium (greater than 48 hours) have minimal symptoms.
- **Option B:** Hyperkalemia is defined as a serum or plasma potassium level above the upper limits of normal, usually greater than 5.0 mEq/L to 5.5 mEq/L. While mild hyperkalemia is usually asymptomatic, high levels of potassium may cause life-threatening cardiac arrhythmias, muscle weakness or paralysis.
- **Option D:** Hypercalcemia is defined as serum calcium concentration two standard deviations above the mean values. The normal serum calcium ranges from 8.8 mg/dL-10.8 mg/dL. Primary



hyperparathyroidism and malignancy accounts for 90% of the cases of hypercalcemia.

**68. A clinic nurse interviews a parent who is suspected of abusing her child. Which of the following characteristics is the nurse least likely to find in an abusing parent?**

- A. Low self-esteem
- B. Unemployment
- C. Self-blame for the injury to the child
- D. Single status

**Correct Answer: C. Self-blame for the injury to the child**

The profile of a parent at risk of abusive behavior includes a tendency to blame the child or others for the injury sustained. The child may also be perceived by the parents as an extension of self. The parents' lack of self-esteem and negative self-image may be projected onto the child as well. The child becomes a scapegoat and is made to pay for the parents' sense of inadequacy and failure.

- **Option A:** Abusive parents often lack the skills and abilities necessary to provide emotionally for themselves. They have not learned to identify and obtain the emotional support for themselves. They have not learned to identify and obtain the emotional support they need from others nor have they learned how to cope with the anger, fear, frustration they feel, in relation to these unmet needs. Low self-esteem can lead to low expectation; abusive parents are likely to expect, even to provide, rejection. They feel unloved, unappreciated, and unwanted. This negative self-image often leads to perceptions of themselves as insignificant, unattractive, or stupid.
- **Option B:** External stress, like loss of employment or unemployment, is frequently a contribution factor in abuse. Significant personal loss such the death of a close relative or the relocation of a friend or neighbor can strip the parent of precious support mechanisms, heighten the sense of futility and create a feeling of inability to control one's own life. This loss of control can in turn lead to abuse.
- **Option D:** Abusive parents expect very little from others in the way of friendship or support. They avoid rejection and anger by breaking off close personal relationships. They avoid rejection and anger by breaking off close personal relationships. They avoid committing themselves to caring relationships with neighbors, friends, and even family.

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

- A. Barium enema
- B. Colonoscopy
- C. Gastroscopy
- D. Serum chemistry levels

**Correct Answer: C. Gastroscopy**

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

it offers tissue diagnosis by direct biopsy of esophageal, gastric, or duodenal lesions.

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

**70. A 38-year-old male patient was admitted to the emergency department with abdominal pain and vomiting. He mentions he had consumed a large meal of steak and potatoes a few hours earlier. After ruling out other causes, the physician diagnoses him with indigestion due to overeating, emphasizing that the digestive system can be overwhelmed if too much food is ingested at once. This situation allows the instructor to highlight the importance of the mechanical breakdown of food to ensure effective digestion and nutrient absorption. To test the student's grasp of the topic, the instructor presents a question. Reflecting on the patient's overindulgence and the importance of initial food breakdown, which of the following statements should the instructor ask students to identify as BEST describing mechanical digestion? Select all that apply.**

- A. It breaks large food particles into smaller ones.
- B. It involves the breaking of covalent chemical bonds in organic molecules by digestive enzymes.
- C. It begins in the stomach, where some small, lipid-soluble molecules, such as alcohol and aspirin, can diffuse through the stomach epithelium into the circulation.
- D. It requires carrier molecules and includes facilitated diffusion, cotransport, and active transport.
- E. All the statements describe mechanical digestion.

**Correct Answer: A. It breaks large food particles into smaller ones.**

Mechanical digestion is the physical process of breaking down food into smaller particles through actions such as chewing, grinding, and churning. This process increases the surface area of the food, making it easier for enzymes to access and chemically digest nutrients. In the mouth, teeth perform mechanical digestion by crushing and grinding food, while in the stomach, muscular contractions and mixing movements further break down food into a semi-liquid mixture called chyme, aiding in its digestion and absorption in the small intestine.

- **Option B:** This is incorrect. This describes chemical digestion, which involves enzymatic breakdown of food particles into their basic chemical components, like simple sugars, amino acids, and fatty acids.

- **Option C:** This is incorrect. This describes the absorption process of specific substances, not mechanical digestion.
- **Option D:** This is incorrect. This describes aspects of nutrient absorption in the small intestine, not mechanical digestion.
- **Option E:** This is incorrect, as only statement A correctly describes mechanical digestion.

**71. The nurse is caring for a client with a T5 complete spinal cord injury. Upon assessment, the nurse notes flushed skin, diaphoresis above the T5, and a blood pressure of 162/96. The client reports a severe, pounding headache. Which of the following nursing interventions would be appropriate for this client? Select all that apply.**

- A. Elevate the HOB to 90 degrees.
- B. Loosen constrictive clothing.
- C. Use a fan to reduce diaphoresis.
- D. Assess for bladder distention and bowel impaction.
- E. Administer antihypertensive medication.
- F. Place the client in a supine position with legs elevated.

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

The client has signs and symptoms of autonomic dysreflexia. The potentially life-threatening condition is caused by an uninhibited response from the sympathetic nervous system resulting from a lack of control over the autonomic nervous system.

- **Option A:** The nurse should immediately elevate the HOB to 90 degrees and place extremities dependently to decrease venous return to the heart and increase venous return from the brain. Elevate head of bed to 45-degree angle or place patient in sitting position. Lowers BP to prevent intracranial hemorrhage, seizures, or even death. Note: Placing tetraplegic in sitting position automatically lowers BP.
- **Option B:** Because tactile stimuli can trigger autonomic dysreflexia, any constrictive clothing should be loosened. Removing noxious stimulus usually terminates the episode and may prevent more serious autonomic dysreflexia (in the presence of sunburn, topical anesthetic should be applied). Removal of constrictive clothing and vascular support also promotes venous pooling to help lower BP.
- **Option C:** A fan shouldn't be used because cold drafts may trigger autonomic dysreflexia. Identify and monitor precipitating risk factors (bladder and bowel distension or manipulation; bladder spasms, stones, infection; skin/tissue pressure areas, prolonged sitting position; temperature extremes or drafts).
- **Option D:** The nurse should also assess for distended bladder and bowel impaction, which may trigger autonomic dysreflexia, and correct any problems. Eliminate causative stimulus as able such as bladder, bowel, skin pressure (including loosening tight leg bands or clothing, removing abdominal binder or elastic stockings); temperature extremes.
- **Option E:** Elevated blood pressure is the most life-threatening complication of autonomic dysreflexia because it can cause stroke, MI, or seizures. If removing the triggering event doesn't reduce the client's blood pressure, IV antihypertensives should be administered. Monitor BP frequently (every 3–5 min) during acute autonomic dysreflexia and take action to eliminate

stimulus. Continue to monitor BP at intervals after symptoms subside.

- **Option F:** Early detection and immediate intervention is essential to prevent serious consequences and complications. Note: Average systolic BP in a tetraplegic patient is 120, therefore readings of 140+ may be considered high.

**72. JT being the charge nurse for today is providing orientation to Nurse Brad, a newly hired employee. Which of the following action by Nurse Brad requires the most immediate action?**

- A. Educating a newly admitted burn client regarding the use of pressure garments.
- B. Obtaining an anaerobic culture specimen from a superficial burn wound.
- C. Administering tetracycline with a glass of milk to a client with cellulitis.
- D. Discussing the use of herpes zoster vaccine with a 20-year-old client.

**Correct Answer: C. Administering tetracycline with a glass of milk to a client with cellulitis.**

Tetracyclines should never be taken with milk or milk products since dairy products prevent the absorption of tetracycline.

- **Option A:** Pressure garments may be used after graft wounds heal and during the rehabilitation period after a burn injury, but this should be discussed when the client is ready for rehabilitation, now when the client is admitted.
- **Option B:** Anaerobic bacteria would not be likely to grow in a superficial wound.
- **Option D:** The herpes zoster vaccine is recommended for clients who are 60 years or older.

**73. Which of the following infants is least probable to develop sudden infant death syndrome (SIDS)?**

- A. Baby Angela who was premature
- B. A sibling of Baby Angie who died of SIDS
- C. Baby Gabriel with prenatal drug exposure
- D. Baby Gabby who sleeps on his back

**Correct Answer: D. Baby Gabby who sleeps on his back**

Infants who sleep on their back are least likely to develop SIDS. However, SIDS has been associated with infants who sleep on their abdomens. The incidence of SIDS declined by more than 50 percent in the United States after physicians began to promote "On the back to sleep." After the American Academy of Pediatrics (AAP) issued a recommendation for supine sleeping in 1992, the incidence of SIDS decreased.

- **Option A:** Several studies identify the prone sleeping position, sleeping on soft surfaces, sleeping with soft objects, co-sleeping with a parent/parents, maternal smoking during pregnancy, maternal age less than 20 years, late/no prenatal care, preterm birth, low birth weight, lack of breastfeeding, and overheating as risk factors in SIDS deaths.
- **Option B:** Siblings of SIDS infants have an increased risk of dying as a result of SIDS. Siblings are 5-6 times more likely to die from SIDS than the general population. After investigation, not all sibling

deaths can be attributed to SIDS. Sibling deaths were found to be attributable to inborn errors of metabolism, abuse, and malnourishment.

- **Option C:** Maternal drug use and exposure to smoke from tobacco are associated with a higher incidence of SIDS. Exposure to secondhand smoke is an independent risk factor for SIDS, and the risk increases with an increasing amount of exposure. Maternal drug use is associated with a higher incidence of SIDS, although it is not clear whether this is a direct or an indirect effect.

**74. A client is receiving isoetharine hydrochloride (Bronkosol) via a nebulizer. The nurse monitors the client for which side effect of this medication?**

- A. Constipation
- B. Diarrhea
- C. Bradycardia
- D. Tachycardia

**Correct Answer: D. Tachycardia**

Side effects that can occur from a beta 2 agonist include tremors, nausea, nervousness, palpitations, tachycardia, peripheral vasodilation, and dryness of the mouth or throat. Due to the vasodilatory effect of peripheral vasculature and subsequent decrease in cardiac venous return, compensatory mechanisms manifest as tachycardia are relatively common, especially within the first weeks of usage.

- **Option A:** Constipation is not a side effect of isoetharine. Beta-2 agonists have been shown to decrease serum potassium levels via an inward shift of potassium into the cells due to an effect on the membrane-bound Na/K-ATPase, which can potentially result in hypokalemia. Beta-2 agonists also promote glycogenolysis, which can lead to inadvertent elevations in serum glucose.
- **Option B:** Adverse effects of beta-2 agonists most commonly involve the desensitization of the beta-2 adrenergic receptor to the beta-2 agonist. Due to the similar properties between the classes of adrenergic receptors, beta-2 agonists can create an “off-target” effect in stimulating either alpha-1, alpha-2, or beta-1 receptors. The most common side effects of beta-2 agonists involve the cardiac, metabolic, or musculoskeletal system.
- **Option C:** Arrhythmias are seen more commonly in fenoterol usage versus albuterol, and arrhythmias have an increase in frequency in patients with underlying heart disease or concomitant theophylline use. Several studies have also indicated hypoxemia and hypercapnia as exacerbating factors to the cardiotoxic effects of beta-2 agonists.

**75. Which of the following articles would Kevin least consider for his review of literature?**

- A. “Story-Telling and Anxiety Reduction Among Pediatric Patients”
- B. “Turnaround Time in Emergency Rooms”
- C. “Outcome Standards in Tertiary Health Care Institutions”
- D. “Environmental Manipulation and Client Outcomes”

**Correct Answer: A. “Story-Telling and Anxiety Reduction Among Pediatric Patients”**

The article is for pediatric patients and may not be relevant for adult patients. A literature review surveys books, scholarly articles, and any other sources relevant to a particular issue, area of research,

or theory, and by so doing, provides a description, summary, and critical evaluation of these works in relation to the research problem being investigated.

- **Option B:** Literature reviews are designed to provide an overview of sources explored while researching a particular topic and to demonstrate to the readers how the research fits within a larger field of study.
- **Option C:** A literature review may consist of simply a summary of key sources, but in the social sciences, a literature review usually has an organizational pattern and combines both summary and synthesis, often within specific conceptual categories.
- **Option D:** It is important to think of knowledge in a given field as consisting of three layers. First, there are the primary studies that researchers conduct and publish. Second, are the reviews of those studies that summarize and offer new interpretations built from and often extending beyond the primary studies. Third, there are the perceptions, conclusions, opinions, and interpretations that are shared informally that become part of the lore of the field.

**76. When the uterus is firm and contracted after delivery but there is vaginal bleeding, the nurse should suspect which of the following?**

- A. Uterine hypercontractility
- B. Uterine atony
- C. Uterine inversion
- D. Laceration of soft tissues of the cervix and vagina

**Correct Answer: D. Laceration of soft tissues of the cervix and vagina.**

When the uterus is firm and contracted it means that the bleeding is not in the uterus but other parts of the passageway such as the cervix or the vagina. The most common complication of a perineal laceration is bleeding. Most bleeding can be quickly controlled with pressure and surgical repair. However, hematoma formation can lead to large amounts of blood loss in a very short time.

- **Option A:** Uterine hyperstimulation or hypercontractility is a serious complication of labor induction. It is defined as single contractions lasting 2 minutes or more, or five or more contractions in a 10 minute period.
- **Option B:** Uterine atony refers to the corpus uteri myometrial cell's inadequate contraction in response to endogenous oxytocin that is released in the course of delivery. It leads to postpartum hemorrhage as the delivery of the placenta leaves disrupted spiral arteries which are uniquely void of musculature and dependent on contractions to mechanically squeeze them into a hemostatic state. Uterine atony is a principal cause of postpartum hemorrhage, an obstetric emergency. Globally, this is one of the top 5 causes of maternal mortality.
- **Option C:** Uterine inversion is one of the most serious complications of childbirth. Uterine inversion refers to the collapse of the fundus into the uterine cavity. Although it does not often occur, it carries a high risk of mortality due to hemorrhage and shock.

**77. The nurse plans to instruct the postpartum client about methods to prevent breast engorgement. Which of the following measures would the nurse include in the teaching plan?**

- A. Feeding the neonate a maximum of 5 minutes per side on the first day.

- B. Wearing a supportive brassiere with nipple shields.
- C. Breastfeeding the neonate at frequent intervals.
- D. Decreasing fluid intake for the first 24 to 48 hours.

**Correct Answer: C. Breastfeeding the neonate at frequent intervals**

Prevention of breast engorgement is key. The best technique is to empty the breast regularly while feeding. Engorgement is less likely when the mother and neonate are together, as in single-room maternity care continuous rooming-in, because nursing can be done conveniently to meet the neonate's and mother's needs.

- **Option A:** A newborn feeds every 2 to 3 hours. They should be breastfed 8-12 times per day for about the first month. Frequent feedings help stimulate your milk production during the first few weeks.
- **Option B:** A nipple shield is usually meant to be used for a short time. When using a shield, help the baby to latch on by himself with a wide-open mouth. This will help the baby learn to breastfeed without a shield.
- **Option D:** Breastfeeding women are recommended to increase fluid intake by 800 ml/day during the first 6 months postpartum.

**78. Mr. Wenceslao is scheduled to receive an isotonic solution; which one of the following is an example of such a solution?**

- A. D10% W
- B. 0.45% saline
- C. 0.9% saline
- D. 3% normal saline W

**Correct Answer: C. A solution of 0.9% saline is isotonic.**

A solution of 0.9% saline is isotonic. Solutions of 0.33% and 0.45% saline and D5W are hypotonic. An isotonic solution is one that has the same osmolarity, or solute concentration, as another solution. If these two solutions are separated by a semipermeable membrane, water will flow in equal parts out of each solution and into the other.

- **Option A:** D10% W is a crystalloid fluid. Crystalloid fluids are a subset of intravenous solutions that are frequently used in the clinical setting. Crystalloid fluids are the first choice for fluid resuscitation in the presence of hypovolemia, hemorrhage, sepsis, and dehydration.
- **Option B:** 0.45% saline is a hypotonic solution. If a cell is placed in a hypotonic solution, there will be a net flow of water into the cell, and the cell will gain volume. If the solute concentration outside the cell is lower than inside the cell, and the solutes cannot cross the membrane, then that solution is hypotonic to the cell.
- **Option D:** 0.33% saline is a hypotonic solution. In the case of a plant cell, however, a hypotonic extracellular solution is actually ideal. The plasma membrane can only expand to the limit of the rigid cell wall, so the cell won't burst, or lyse.

**79. Hydrochloric acid secretion is blocked by which of the following categories of drugs?**

- A. Antacids
- B. Gastric stimulants
- C. Histamine-2 antagonists
- D. Antihistamines

**Correct Answer: C. histamine-2 antagonists**

This is the only category of drugs that reduces the volume of secretions. H2RAs decrease gastric acid secretion by reversibly binding to histamine H2 receptors located on gastric parietal cells, thereby inhibiting the binding and action of the endogenous ligand histamine. H2 blockers thus function as competitive antagonists. By blocking the histamine receptor and thus histamine stimulation of parietal cell acid secretion, H2RAs suppress both stimulated and basal gastric acid secretion that is induced by histamine.

- **Option A:** The antacids reduce the acid reaching the duodenum by neutralizing the acid present in the stomach. The salts' mechanism of neutralization of acid varies, and each salt has a different mechanism with the ultimate goal of acid neutralization. It is known to heal chronic ulcers and prevent acute mucosal damage induced chemically by reducing access to pepsin and acid.
- **Option B:** Gastrointestinal stimulants are drugs that increase motility of the gastrointestinal smooth muscle, without acting as a purgative. These drugs have different mechanisms of action but they all work to move the contents of the gastrointestinal tract faster.
- **Option D:** First-generation antihistamines easily cross the blood-brain barrier into the central nervous system and antagonize H-1 receptors, which leads to a different therapeutic and adverse effect profile in contrast to second-generation antihistamines, which selectively bind to peripheral histamine receptors.

**80. A client is at risk for increased ICP. Which of the following would be a priority for the nurse to monitor?**

- A. Unequal pupil size
- B. Decreasing systolic blood pressure
- C. Tachycardia
- D. Decreasing body temperature

**Correct Answer: A. Unequal pupil size**

Increasing ICP causes unequal pupils as a result of pressure on the third cranial nerve. Clinical suspicion for intracranial hypertension should be raised if a patient presents with the following signs and symptoms: headaches, vomiting, and altered mental status varying from drowsiness to coma.

- **Option B:** Increasing ICP causes an increase in the systolic pressure, which reflects the additional pressure needed to perfuse the brain. Cerebral autoregulation is the process by which cerebral blood flow varies to maintain adequate cerebral perfusion. When the MAP is elevated, vasoconstriction occurs to limit blood flow and maintain cerebral perfusion. However, if a patient is hypotensive, cerebral vasculature can dilate to increase blood flow and maintain CPP.
- **Option C:** It increases the pressure on the vagus nerve, which produces bradycardia. High blood pressure causes reflex bradycardia and brain stem compromise affecting respiration. Ultimately the contents of the cranium are displaced downwards due to the high ICP, causing a phenomenon known as herniation which can be potentially fatal.



- **Option D:** It causes an increase in body temperature from hypothalamic damage. Cushing triad is a clinical syndrome consisting of hypertension, bradycardia and irregular respiration and is a sign of impending brain herniation. This occurs when the ICP is too high the elevation of blood pressure is a reflex mechanism to maintain CPP.

**81. Nurse Maureen is aware that a client who has been diagnosed with chronic renal failure recognizes an adequate amount of high-biological-value protein when the food the client selected from the menu was:**

- A. Raw carrots
- B. Apple juice
- C. Whole wheat bread
- D. Cottage cheese

**Correct Answer: D. Cottage cheese**

One cup of cottage cheese contains approximately 225 calories, 27 g of protein, 9 g of fat, 30 mg cholesterol, and 6 g of carbohydrate. Proteins of high biological value (HBV) contain optimal levels of amino acids essential for life. In general, proteins from animal sources have a higher biological value than proteins from plant sources. Animal sources of protein are meat, poultry, fish, eggs, milk, cheese and yogurt, and they provide high biological value proteins.

- **Option A:** Raw carrots are rich in beta-carotene and sodium. Plants, legumes, grains, nuts, seeds and vegetables provide low biological value proteins.
- **Option B:** Apple juice is rich in carbohydrates and fiber. Omnivorous diets (containing foods derived from animals and plants) in the developed world provide adequate amounts of protein. However, subgroups of the population who avoid all foods of animal origin may have difficulties in meeting their protein requirements.
- **Option C:** Whole wheat bread contains high amounts of fiber and carbohydrates. However, as the limiting amino acid tends to be different in different vegetable proteins, combination of vegetable sources of proteins in the same meal (e.g. legumes or pulses with cereals), can result in a mix of higher biological value. These combinations are generally found in traditional culinary recipes from the different continents (e.g. beans with rice/pasta/manioc, chick-peas with bread, lentils with potatoes, etc).

**82. A nurse on the surgical floor is prioritizing care for clients after receiving the report from the previous shift. Which of the following patients should the nurse assess first?**

- A. A 35-year-old patient admitted three hours ago for a gunshot wound, with a 1.5 cm area of dark drainage noted on the dressing.
- B. A 43-year-old patient who underwent a mastectomy two days ago, with 23 ml of serosanguinous fluid in the Jackson-Pratt drain.
- C. A 59-year-old patient with a history of a collapsed lung from an accident, with no drainage noted in the chest tube in the past eight hours.
- E. A 54-year-old patient with a total knee replacement two days ago, with moderate swelling at the surgical site.

E. A 47-year-old patient who had a laparoscopic cholecystectomy yesterday, complaining of mild pain at the incision site.

F. A 62-year-old patient who had an abdominal-perineal resection three days ago, now reporting chills.

**Correct Answer: F. A 62-year-old patient who had an abdominal-perineal resection three days ago, now reporting chills.**

The client is at risk for peritonitis; should be assessed for further symptoms and infection.

**83. A child with  $\beta$ -thalassemia is undergoing a blood transfusion. To prevent organ damage from the excessive amount of iron, chelation therapy is prescribed. Which of the following medications will be added to this therapy?**

A. Dextromethorphan

B. Desirudin

C. Deferasirox

D. Desipramine

**Correct Answer: C. Deferasirox.**

Chelation therapy with deferasirox (Exjade) or deferoxamine (Desferal) is prescribed to prevent organ damage from the presence of too much iron in the body as a result of the transfusion.

Transfusion-related iron overload occurs in patients that require frequent transfusions throughout their life. These patients include those affected by Thalassemia, Sickle cell disease, myelodysplastic syndromes, ineffective hematopoiesis, and other inherited anemia disorders.

- **Option A:** This is a cough suppressant. Dextromethorphan received FDA approval in 1958 for its use as a cough suppressant. It is one of the most common compounds found in most over-the-counter antitussives for the past 50 years.
- **Option B:** This is a thrombin inhibitor. Desirudin is used to prevent a type of blood clot called deep vein thrombosis (DVT), which can lead to blood clots in the lungs (pulmonary embolism).
- **Option D:** This is an antidepressant. Desipramine is a secondary amine tricyclic antidepressant that is FDA approved for the treatment of depression. This drug has off-label use to treat bulimia nervosa, irritable bowel syndrome, neuropathic pain, overactive bladder, post-herpetic neuralgia, and ADHD.

**84. Nurse Alexandra teaches a client about elastic stockings. Which of the following statements, if made by the client, indicates to the nurse that the teaching was successful?**

A. "I will wear the stockings until the physician tells me to remove them."

B. "I should wear the stockings even when I am asleep."

C. "Every four hours I should remove the stockings for a half hour."

D. "I should put on the stockings before getting out of bed in the morning."

**Correct Answer: D. "I should put on the stockings before getting out of bed in the morning."**

Promote venous return by applying external pressure on veins.

- **Option A:** The stockings may be removed before going to bed and worn again before getting out of bed.
- **Option B:** Wearing stockings while sleeping is unnecessary. The mechanisms by which wearing elastic stockings prevent DVT are prevention of blood stasis by increasing the blood flow volume and decrease of the caliber of venous blood vessels by compression of the lower limbs.
- **Option C:** The stockings should be worn the whole day and removed before going to sleep.

**85. The physician has ordered a low-potassium diet for a child with acute glomerulonephritis. Which fruit is suitable for the child with potassium restrictions?**

- A. Raisins
- B. Cantaloupe
- C. Blueberries
- D. Apricots

**Correct Answer: C. Blueberries**

- Option C: Patients with decreased kidney function are at risk for hyperkalemia. Blueberries are low in potassium, therefore, it is a suitable fruit on a potassium-restricted diet.
- Options A, B, and D: Raisins, cantaloupe, and apricots are all good sources of potassium.