

# Kevin's Review - 35 NCLEX Practice Questions

**1. Nurse Daisy is aware that the following pharmacologic agents are sedative-hypnotic medication is used to induce sleep for a client experiencing a sleep disorder is:**

- A. triazolam (Halcion)
- B. paroxetine (Paxil)
- C. fluoxetine (Prozac)
- D. risperidone (Risperdal)

**Correct Answer: A. triazolam (Halcion)**

Triazolam is one of a group of sedative-hypnotic medications that can be used for a limited time because of the risk of dependence. Triazolam is used on a short-term basis to treat insomnia (difficulty falling asleep or staying asleep). Triazolam is in a class of medications called benzodiazepines. It works by slowing activity in the brain to allow sleep. Triazolam comes as a tablet to take by mouth. It is usually taken as needed at bedtime but not with or shortly after a meal. Triazolam may not work well if it is taken with food.

- **Option B:** Paroxetine is a serotonin-specific reuptake inhibitor used for treatment of depression, panic disorder, and obsessive-compulsive disorder. It is FDA approved for major depressive disorder (MDD), obsessive-compulsive disorder (OCD), social anxiety disorder (SAD), panic disorder, posttraumatic stress disorder (PTSD), generalized anxiety disorder (GAD), and premenstrual dysphoric disorder (PMDD), vasomotor symptoms associated with menopause.
- **Option C:** Fluoxetine is a serotonin-specific reuptake inhibitor used for depressive disorders and obsessive-compulsive disorders. Fluoxetine has FDA-approval for major depressive disorder (age eight and older), obsessive-compulsive disorder (age seven and older), panic disorder, bulimia, binge eating disorder, premenstrual dysphoric disorder, bipolar depression (as an adjunct with olanzapine also known as Symbyax), and treatment-resistant depression when used in combination with olanzapine.
- **Option D:** Risperidone is indicated for psychotic disorders. The long-acting risperidone injection has been approved for the use of schizophrenia and maintenance of bipolar disorder (as monotherapy or adjunctive to valproate or lithium) in adults. Risperidone has also been used for augmentation of antidepressant therapy in the treatment of non-psychotic unipolar depression. In addition to irritability associated with autism, risperidone has also been used for social impairment, stereotypical behaviors, cognitive problems, and hyperactivity in autism.

**2. When the baby's head is out, the immediate action of the nurse is**

- A. Cut the umbilical cord
- B. Wipe the baby's face and suction mouth first
- C. Check if there is a cord coiled around the neck
- D. Deliver the anterior shoulder

**Correct Answer: C. Check if there is a cord coiled around the neck.**

The nurse should check if there is a cord coil because the baby will not be delivered safely if the cord is coiled around its neck. Normally the umbilical cord coils to the left. Regardless of its origin, umbilical coiling appears to confer turgor to the umbilical unit, producing a cord that is strong but flexible. The role of umbilical cord coiling is not clear; nonetheless, it is thought to play a role in protecting the

umbilical cord from external forces such as tension, pressure, stretching or entanglement.

- **Option A:** The World Health Organization currently recommends clamping the umbilical cord between one and three minutes after birth, “for improved maternal and infant health and nutrition outcomes,” while the American College of Obstetricians and Gynecologists recommends clamping within 30 to 60 seconds.
- **Option B:** Wiping off the face should be done seconds after you have ensured that there is no cord coil but suctioning of the nose should be done after the mouth because the baby is a “nasal obligate” breather. If the nose is suctioned first before the mouth, the mucus plugging the mouth can be aspirated by the baby.
- **Option D:** Anterior shoulder in obstetrics refers to that shoulder of the fetus that faces the pubic symphysis of the mother during delivery. Depending upon the original position of the fetus, either the left or the right shoulder can be the anterior shoulder.

**3. When performing an assessment to determine which medications can be used, which of the following elements is most important?**

- A. Physical examination
- B. Allergies
- C. Presence of illness
- D. Weight

**Correct Answer: B. Allergies**

Allergies must be determined so that the nurse does not administer a drug that would be dangerous to the client. The nursing assessment includes gathering information concerning the patient’s individual physiological, psychological, sociological, and spiritual needs. It is the first step in the successful evaluation of a patient. Subjective and objective data collection are an integral part of this process.

- **Option A:** Part of the assessment includes data collection by obtaining vital signs such as temperature, respiratory rate, heart rate, blood pressure, and pain level using age or condition appropriate pain scale. The assessment identifies the current and future care needs of the patient by allowing the formation of a nursing diagnosis. The nurse recognizes normal and abnormal patient physiology and helps prioritize interventions and care.
- **Option C:** Physiological abnormalities manifested by changes in vital signs and level of consciousness often provide early warning signs that patient condition is deteriorating; thus, requiring prompt intervention to forego an adverse outcome, decreasing morbidity and mortality risk. In the fast-paced, resource-challenged healthcare environment today, a thorough assessment can pose a challenge for the healthcare provider but is essential to safe, quality care.
- **Option D:** Initial vital sign measurements include temperature recorded in Celsius in most institutions, respiratory rate, pulse rate, blood pressure with appropriate sized cuff, pulse oximetry reading and note if on room air or oxygen; accurately measured weight in kilograms with the proper scale and height measurement, so body mass index (BMI) is calculable for dosing weights and nutritional guidelines.

**4. 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.

**5. The nurse collecting family assessment data asks. “Who is in your family and where do they live?” Which of the following is the nurse attempting to identify?**

- A. Boundaries
- B. Ethnicity
- C. Relationships
- D. Triangles

**Correct Answer: A. Boundaries**

Family boundaries are parameters that define who is inside and outside the system. The best method of obtaining this information is asking the family directly who they consider to be members. Every system has ways of including and excluding elements so that the line between those within the system and those outside of the system is clear to all. If a family is permeable and has vague boundaries it is considered “open.” Open boundary systems allow elements and situations outside the family to influence it. It may even welcome external influences. Closed boundary systems isolate its members from the environment and seem isolated and self-contained. No family system is completely closed or

completely open.

- **Option B:** Ethnicity is a broader term than race. The term is used to categorize groups of people according to their cultural expression and identification. Commonalities such as racial, national, tribal, religious, linguistic, or cultural origin may be used to describe someone's ethnicity.
- **Option C:** The relationship between two people or groups is the way in which they feel and behave towards each other. A relationship is a close connection between two people, especially one involving romantic or sexual feelings.
- **Option D:** Triangulation or triangling is defined in the AAMFT Family Therapy Glossary as the "process that occurs when a third person is introduced into a dyadic relationship to balance either excessive intimacy, conflict, or distance and provide stability in the system" (Evert et al. 1984 p. 32). This concept is associated with Murray Bowen (1978) who saw triangulation as a way to reduce anxiety in a dyadic relationship.

**6. Tara is an 11-year-old girl diagnosed with type 1 diabetes mellitus (DM). She asks her attending nurse why she can't take a pill rather than shots like her grandmother does. Which of the following would be the nurse's best reply?**

- A. "If your blood glucose levels are controlled, you can switch to using pills."
- B. "The pills correct fat and protein metabolism, not carbohydrate metabolism."
- C. "Your body does not make insulin, so the insulin injections help to replace it."
- D. "The pills work on the adult pancreas, you can switch when you are 18."

**Correct Answer: C. "Your body does not make insulin, so the insulin injections help to replace it."**

The child has type 1 DM, indicating a lack of functioning pancreatic beta cells and an absolute insulin deficiency. Type 1 diabetes is an autoimmune condition that leads to the destruction of pancreatic beta cells which in turn causes insufficient insulin production, resulting in hyperglycemia. Type 1 diabetes is a chronic disease requiring insulin replacement and intensive effort by the patient.

- **Option A:** Oral antidiabetics are indicated only for those with some functioning beta cells, as in those with type 2 DM. Therefore, injections are indicated to supply insulin that is lacking in type 1 diabetes.
- **Option B:** Oral antidiabetics do not correct metabolism. Healthcare practitioners encourage patients to combine lifestyle modifications with oral pharmacologic agents for optimal glycemic control, particularly as type 2 diabetes mellitus progresses with continued loss of pancreatic beta-cell function and insulin production.
- **Option D:** A child with type 1 DM cannot substitute an oral antidiabetic for insulin, regardless of age. Insulin delivery is by multiple daily injections (MDI) or an insulin pump to simulate endogenous insulin physiology. Multiple daily injections include basal insulin once or twice daily, and bolus insulin typically is given at meals three or more times daily and is based on carbohydrate content and current blood glucose.

**7. A client is brought to the emergency unit with third-degree burns on the posterior trunk, right arm, and left posterior leg. Using the Rule of Nines, what is the total body surface area (TBSA) that has been burned?**

- A. 36%
- B. 54%
- C. 45%
- D. 27%

**Correct Answer: A. 36%**

The Rule of Nines, also known as the Wallace Rule of Nines, is a tool used by trauma and emergency medicine providers to assess the total body surface area (TBSA) involved in burn patients. Based on the rule of nines, the posterior trunk equals 18%, right arm equals 9%, and the left posterior leg equals 9%. Therefore, a total of 36%.

- **Option B:** The Rule of Nines estimation of body surface area burned is based on assigning percentages to different body areas. The entire head is estimated as 9% (4.5% for anterior and posterior). The entire trunk is estimated at 36% and can be further broken down into 18% for anterior components and 18% for the back.
- **Option C:** The anterior aspect of the trunk can further be divided into chest (9%) and abdomen (9%). The upper extremities total 18% and thus 9% for each upper extremity. Each upper extremity can further be divided into anterior (4.5%) and posterior (4.5%).
- **Option D:** The lower extremities are estimated at 36%, 18% for each lower extremity. Again this can be further divided into 9% for the anterior and 9% for the posterior aspect. The groin is estimated at 1%.

**8. A miotic medication has been given to a patient with glaucoma. The nurse tells the client that the purpose of this medication is to?**

- A. It blocks the responses that are sent to the eye muscles.
- B. It will relax the eye muscles and decrease blurring of vision.
- C. It will constrict the eye to reduce intraocular pressure.
- D. It will dilate the eye to reduce intraocular pressure.

**Correct Answer: C. It will constrict the eye to reduce intraocular pressure.**

Miotics cause pupillary constrictions and are used to treat glaucoma. These medications reduce eye pressure by increasing the drainage of intraocular fluid through the trabecular meshwork.

- **Options A, B, & D:** These are related to mydriatic medications.

**9. The most important factor in regulating the caliber of blood vessels, which determines resistance to flow, is:**

- A. Hormonal secretion
- B. Independent arterial wall activity.
- C. The influence of circulating chemicals
- D. The sympathetic nervous system

**Correct Answer: D. The sympathetic nervous system**

The autonomic nervous system exerts influence over the organ systems of the body to upregulate and downregulate various functions. The two aspects of the ANS operate as opposing functions that act to achieve homeostasis. The sympathetic nervous system, also known as the “fight or flight” system, increases energy expenditure and inhibits digestion.

- **Option A:** Hormones of the endocrine system are a vast topic with numerous hormones involved, affecting virtually every organ in the human body. Human physiological processes such as homeostasis, metabolic demand, development, and reproduction are all possible because of hormones and the processes mediated by their actions.
- **Option B:** A major role of large arteries is to dampen the pressure oscillations resulting from intermittent LV ejection, which transforms highly pulsatile flow and pressure into a pattern of more continuous flow in peripheral tissues and organs. During systole, roughly 40% to 50% of stroke volume is forwarded directly to peripheral tissues, whereas the remainder is stored in the distended aorta and central arteries. Approximately 10% of the energy produced by the heart is diverted for the distension of arteries and “stored” in the walls.
- **Option C:** The microcirculation deserves special attention since it is across the walls of these vessels that the exchange of oxygen, among other substances, takes place. Furthermore, the arterioles, also known as the “resistance” vessels, are the primary site for control of blood flow. Thus, the blood vessels of the microcirculation play important roles in both the convective (arterioles) and diffusive (capillaries) transport of oxygen.

**10. Four hours after a difficult labor and birth, a primiparous woman refuses to feed her baby, stating that she is too tired and just wants to sleep. The nurse should: Select all that apply.**

- A. Tell the woman she can rest after she feeds her baby.
- B. Recognize this as a behavior of the taking-in stage.
- C. Record the behavior as ineffective maternal-newborn attachment.
- D. Take the baby back to the nursery, reassuring the woman that her rest is a priority at this time.
- E. Acknowledge this as a behavior of the letting go stage.

**Correct Answer: B and D.**

The behavior described is typical of this stage and not a reflection of ineffective attachment unless the behavior persists. Mothers need to reestablish their own well-being in order to effectively care for their baby. The taking-in phase usually sets 1 to 2 days after delivery. This is the time of reflection for the woman because within the 2 to 3 day period, the woman is passive. The woman prefers to talk about her experiences during labor and birth and also her pregnancy. The woman becomes dependent on her healthcare provider or support person with some of the daily tasks and decision-making. The changes that the woman undergoes are crucial within the first 24 hours of postpartum, especially the psychological changes. These changes might affect the woman permanently if not given the appropriate attention and care.

- **Option A:** This does not take into consideration the need for the new mother to be nurtured and have her needs met during the taking-in stage. The taking-in phase provides time for the woman to regain her physical strength and organize her rambling thoughts about her new role. Encouraging the woman to talk about her experiences during labor and birth would greatly help her adjust and let her incorporate it into her new life.

- **Option C:** This dependence is mainly due to her physical discomfort from hemorrhoids or the after pains, from the uncertainty of how she could care for the newborn, and also from the extreme tiredness she feels that follows childbirth. The taking-in phase provides time for the woman to regain her physical strength and organize her rambling thoughts about her new role.
- **Option E.** During the letting go phase, the woman finally accepts her new role and gives up her old roles like being a childless woman or just a mother of one child.

**11. After an abdominal resection for colon cancer, Madeline returns to her room with a Jackson-Pratt drain in place. The purpose of the drain is to:**

- A. Irrigate the incision with a saline solution.
- B. Prevent bacterial infection of the incision.
- C. Measure the amount of fluid lost after surgery.
- D. Prevent accumulation of drainage in the wound.

**Correct Answer: D. Prevent accumulation of drainage in the wound.**

A Jackson-Pratt drain promotes wound healing by allowing fluid to escape from the wound. JP drains are often placed in wounds during surgery to prevent the collection of fluid underneath the incision site. This is a closed, air-tight drainage system which operates by self-suction. The drain(s) promote healing by keeping excess pressure off the incision and decreasing the risk of infection.

- **Option A:** JP drains do not irrigate the incision with saline solution. The drain is sutured (stitched) in place at the skin at the site of insertion to promote stability. Clots in the tubing are expected as long as they do not interfere with the drainage collection. The drain(s) is left in place until the drainage is approximately 30 cc's or less (or 30 ml's, or 1 ounce) per drain for each of 2 consecutive days.
- **Option B:** It does not prevent bacterial infection. After surgery, there is continued oozing and shedding of cells and bodily fluids at the surgical site. The Jackson Pratt drain removes fluid and this removal of fluid speeds healing.
- **Option C:** The drain will automatically suction fluid out when the bulb is compressed. The bulb has to be compressed very well and the drain tab has to be closed in order for the suction to work. When the bulb can maintain its compressed shape, it is a sign that suction is in effect.

**12. Which adaptations should the nurse caring for a client with diabetic ketoacidosis expect the client to exhibit? Select all that apply:**

- A. Sweating
- B. Low PCO<sub>2</sub>
- C. Retinopathy
- D. Acetone breath
- E. Elevated serum bicarbonate

**Correct Answer: B & D.**

Metabolic acidosis initiates respiratory compensation in the form of Kussmaul respirations to counteract the effects of ketone buildup, resulting in a lowered PCO<sub>2</sub>. A fruity odor to the breath (acetone breath)

occurs when the ketone level is elevated in ketoacidosis.

- **Option A:** Sweating is usually a symptom of hypoglycemia. In diabetic ketoacidosis, insulin deficiency and increased counter-regulatory hormones can lead to increased gluconeogenesis, accelerated glycogenolysis, and impaired glucose utilization. This will ultimately cause worsening hyperglycemia.
- **Option B:** The decreased pCO<sub>2</sub> that results from this increased respiration returns the pH towards normal but may not be sufficient to achieve a normal pH.
- **Option C:** Diabetic retinopathy (DR) is a microvascular disorder occurring due to long-term effects of diabetes, leading to vision-threatening damage to the retina, eventually leading to blindness. Uncontrolled diabetes can lead to many ocular disorders like cataracts, glaucoma, ocular surface disorders, recurrent stye, non-arteritic anterior ischemic optic neuropathy, diabetic papillopathy, and diabetic retinopathy, out of which diabetic retinopathy is the most common and severe ocular complication.
- **Option D:** Patients are often ill-appearing. 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 E:** Acidosis in DKA is due to the overproduction of β-hydroxybutyric acid and acetoacetic acid. At physiological pH, these 2 keto acids dissociate completely, and the excess hydrogen ions bind the bicarbonate, resulting in decreased serum bicarbonate levels.

**13. The term “pink puffer” refers to the female client with which of the following conditions?**

- A. Adult respiratory distress syndrome (ARDS)
- B. Asthma
- C. Chronic obstructive bronchitis
- D. Emphysema

**Correct Answer: D. Emphysema**

Because of the large amount of energy it takes to breathe, clients with emphysema are usually cachectic. They're pink and usually breathe through pursed lips, hence the term “puffer.”

- **Option A:** Clients with ARDS are usually acutely short of breath.
- **Option B:** Clients with asthma don't have any particular characteristics.
- **Option C:** Clients with chronic obstructive bronchitis are bloated and cyanotic in appearance.

**14. A clinic patient has a hemoglobin concentration of 10.8 g/dL and reports sticking to a strict vegetarian diet. Which of the following nutritional advice is appropriate?**

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

D. A cup of coffee or tea should be added to every meal

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

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

- **Option A:** In addition, dark green leafy vegetables, such as spinach and kale, and legumes are high in iron.
- **Option B:** Mild anemia does not require that animal sources of iron be added to the diet. Many non-animal sources are available.
- **Option D:** Coffee and tea increase gastrointestinal activity and inhibit the absorption of iron.

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

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

**Correct Answer: C. Geographic**

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

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

**16. The nurse is discussing meal planning with the mother of a 2-year-old toddler. Which of the following statements, if made by the mother, would require a need for further instruction?**

- A. "It is okay to give my child white grape juice for breakfast."
- B. "My child can have a grilled cheese sandwich for lunch."
- C. "We are going on a camping trip this weekend, and I have bought hot dogs to grill for his lunch."
- D. "For a snack, my child can have ice cream."

**Correct Answer: C. "We are going on a camping trip this weekend, and I have bought hot dogs to grill for his lunch."**

Remember the ABCs (airway, breathing, circulation) when answering this question. A hotdog is the size and shape of the child's trachea and poses a risk of aspiration. It is important to avoid foods that may cause choking like slippery foods such as whole grapes; large pieces of meat, poultry, and hot dogs; candy, and cough drops.

- **Option A:** A white grape juice does not pose a risk for aspiration. The toddler years are full of exploring and discovery. The best thing you can do is offer your toddler a variety of foods from each food group with different tastes, textures, and colors.
- **Option B:** A grilled cheese sandwich would not aspirate a toddler. Always cut up foods into small pieces and watch your child while he or she is eating. Offer new foods one at a time, and remember that children may need to try a new food 10 or more times before they accept it.
- **Option D:** Ice cream does not pose a risk of aspiration for a child. Make food simple, plain, and recognizable. Some kids don't like food that is mixed (like a casserole) or food that is touching. Plan regular meals and snacks and give kids enough time to eat.

### **17. The following statements describe somatoform disorders:**

- A. Physical symptoms are explained by organic causes.
- B. It is a voluntary expression of psychological conflicts.
- C. Expression of conflicts through bodily symptoms.
- D. Management entails a specific medical treatment.

**Correct Answer: C. Expression of conflicts through bodily symptoms**

Bodily symptoms are used to handle conflicts. Up to 50 percent of primary care patients present with physical symptoms that cannot be explained by a general medical condition. Some of these patients meet criteria for somatoform disorders. Although most do not meet the strict psychiatric diagnostic criteria for one of the somatoform disorders, they can be referred to as having "somatic preoccupation," a subthreshold presentation of somatoform disorders that can also cause patients distress and require intervention.

- **Option A:** Manifestations do not have an organic basis. The unexplained symptoms of somatoform disorders often lead to general health anxiety; frequent or recurrent and excessive preoccupation with unexplained physical symptoms; inaccurate or exaggerated beliefs about somatic symptoms; difficult encounters with the health care system; disproportionate disability; displays of strong, often negative emotions toward the physician or office staff; unrealistic expectations; and, occasionally, resistance to or noncompliance with diagnostic or treatment efforts.
- **Option B:** This occurs unconsciously. There are three required clinical criteria common to each of the somatoform disorders: The physical symptoms (1) cannot be fully explained by a general medical condition, another mental disorder, or the effects of a substance; (2) are not the result of factitious disorder or malingering; and (3) cause significant impairment in social, occupational, or

other functioning.

- **Option D:** Medical treatment is not used because the disorder does not have a structural or organic basis. Patients who experience unexplained physical symptoms often strongly maintain the belief that their symptoms have a physical cause despite evidence to the contrary. These beliefs are based on a false interpretation of symptoms. Additionally, patients may minimize the involvement of psychiatric factors in the initiation, maintenance, or exacerbation of their physical symptoms.

**18. Which of the following individuals is least likely to be at risk of developing psoriasis?**

- A. A 32 year-old-African American.
- B. A woman experiencing menopause.
- C. A client with a family history of the disorder
- D. An individual who has experienced a significant amount of emotional distress.

**Correct Answer: A. A 32 year-old-African American.**

Psoriasis occurs equally among women and men, although the incidence is lower in darker-skinned races and ethnic groups. Psoriasis has a prevalence ranging from 0.2% to 4.8%. The exact etiology is unknown, but it is considered to be an autoimmune disease mediated by T lymphocytes. There is an association of HLA antigens seen in many psoriatic patients particularly in various racial and ethnic groups.

- **Option B:** Psoriasis can present at any age. A bimodal age of onset has been recognized. The mean age of onset for the first presentation of psoriasis can range from 15 to 20 years of age, with a second peak occurring at 55 to 60 years.
- **Option C:** A genetic predisposition has been recognized in some cases. Familial occurrence suggests its genetic predisposition. Psoriasis occurs worldwide, and its prevalence varies. In the United States, about 2% of the population is affected. High rates of psoriasis have been reported in the Faroe Islands. The prevalence of psoriasis is low in Japan and may be absent in Aboriginal Australians and Indians from South America.
- **Option D:** Emotional distress, trauma, systemic illness, seasonal changes, and hormonal changes are linked to exacerbations. Generally, summer improves psoriasis while winter aggravates it. Apart from the above factors, infections, psychological stress, alcohol, smoking, obesity, and hypocalcemia are other triggering factors for psoriasis.

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

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

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

If hemoglobin and red cell counts drop from myelosuppression, the oxygen-carrying capacity will fall, leaving the person at risk for angina. Some chemotherapy agents cause the heart muscle to weaken

soon after chemotherapy begins. Novel angiogenesis inhibitors that suppress new blood vessel formation cause blood pressure to rise dramatically and may increase the risk of blood clots and heart failure.

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

**20. Which of the following respiratory disorders is most common in the first 24 to 48 hours after surgery?**

- A. Atelectasis
- B. Bronchitis
- C. Pneumonia
- D. Pneumothorax

**Correct Answer: A. Atelectasis**

Atelectasis develops when there's interference with the normal negative pressure that promotes lung expansion. Clients in the postoperative phase often splint their breathing because of pain and positioning, which causes hypoxia. Postoperative atelectasis typically occurs within 72 hours of general anesthesia and is a well-known postoperative complication. The decrease in pressure allows for passive movement of air into the lungs. This process is inhibited by general anesthesia due to diaphragm relaxation. Patients lying supine have cephalad displacement of the diaphragm further decreasing the transmural pressure gradient and increasing the likelihood of atelectasis. It's uncommon for any of the other respiratory disorders to develop.

- **Option B:** Acute bronchitis is caused by infection of the large airways commonly due to viruses and is usually self-limiting. Bacterial infection is uncommon. Approximately 95% of acute bronchitis in healthy adults is secondary to viruses. It can sometimes be caused by allergens, irritants, and bacteria. Irritants include smoke inhalation, polluted air inhalation, dust, among others.
- **Option C:** While identifying an etiologic agent for pneumonia is essential for effective treatment as well as epidemiological record keeping, this is seldom seen in clinical practice. Widespread reviews have shown that a single cause of pneumonia has often been identified in less than 10% of patients presenting to the emergency department.
- **Option D:** A pneumothorax is defined as a collection of air outside the lung but within the pleural cavity. It occurs when air accumulates between the parietal and visceral pleura inside the chest. The air accumulation can apply pressure on the lung and make it collapse. The degree of collapse determines the clinical presentation of pneumothorax. Air can enter the pleural space by two mechanisms, either by trauma causing a communication through the chest wall or from the lung by rupture of visceral pleura.

**21. The nurse recognizes that additional teaching is necessary when the client who is learning alternative site testing (AST) for glucose monitoring says:**

- A. "I need to rub my forearm vigorously until warm before testing at this site."
- B. "The fingertip is preferred for glucose monitoring if hyperglycemia is suspected."
- C. "I have to make sure that my current glucose monitor can be used at an alternate site."
- D. "Alternate site testing is unsafe if I am experiencing a rapid change in glucose levels."

**Correct Answer: B. "The fingertip is preferred for glucose monitoring if hyperglycemia is suspected."**

The fingertip is preferred for glucose monitoring if hypoglycemia, not hyperglycemia, is suspected. AST (Alternate Site Testing) means using a part of the body other than the fingertips to obtain blood for blood sugar testing.

- **Option A:** Don't squeeze the fingertip vigorously. Instead, hang the hand and arm down, allowing blood to pool in the fingertips. Washing the hands with warm water may also increase blood flow.
- **Option C:** Alternate site testing is not possible with all blood glucose meters. Newer machines only require a smaller drop of blood to provide accurate blood glucose readings from other parts of the body.
- **Option D:** According to reports, routine blood glucose level testing before meals or two or more hours after meals from alternate sites is equivalent to fingertip testing. Therefore, testing when blood glucose is falling rapidly or rising rapidly is likely to be less accurate from alternate sites.

**22. An eighty-five-year-old man was admitted for surgery for benign prostatic hypertrophy. Preoperatively he was alert, oriented, cooperative, and knowledgeable about his surgery. Several hours after surgery, the evening nurse found him acutely confused, agitated, and trying to climb over the protective side rails on his bed. The most appropriate nursing intervention that will calm an agitated client is:**

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

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

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

- **Option B:** Phone calls from his family will not help a client who is trying to climb over the side rails and may even add to his danger. Therapeutic skills need to be directed toward putting the client at ease, because the nurse who is a stranger may pose a threat to the highly anxious client.

- **Option C:** The client needs frequent visits by the staff to orient him and to assess his safety. The client's safety is utmost priority. A highly anxious client should not be left alone as his anxiety will escalate.
- **Option D:** Putting the client in a bright, busy area would probably add to his confusion. Anxious behavior escalates by external stimuli. A smaller or secluded area enhances a sense of security as compared to a large area which can make the client feel lost and panicked.

**23. 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
- 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. Naproxen is used to relieve pain from various conditions such as headache, muscle aches, tendonitis, dental pain, and menstrual cramps. It also reduces pain, swelling, and joint stiffness caused by arthritis, bursitis, and gout attacks.

- **Option B:** Calcium carbonate is used as an antacid for the relief of indigestion and is not contraindicated. Calcium carbonate is a dietary supplement used when the amount of calcium taken in the diet is not enough. Calcium is needed by the body for healthy bones, muscles, nervous system, and heart. Calcium carbonate also is used as an antacid to relieve heartburn, acid indigestion, and upset stomach. It is available with or without a prescription.
- **Option C:** Clarithromycin is an antibacterial often used for the treatment of *Helicobacter pylori* in gastritis. 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. It also is used to treat and prevent disseminated *Mycobacterium avium* complex (MAC) infection [a type of lung infection that often affects people with human immunodeficiency virus (HIV)]. It is used in combination with other medications to eliminate *H. pylori*, a bacterium that causes ulcers. Clarithromycin is in a class of medications called macrolide antibiotics. It works by stopping the growth of bacteria.
- **Option D:** Furosemide is a loop diuretic and is NOT contraindicated in a patient with gastritis. Furosemide is used alone or in combination with other medications to treat high blood pressure. Furosemide is used to treat edema (fluid retention; excess fluid held in body tissues) caused by various medical problems, including heart, kidney, and liver disease. Furosemide is in a class of medications called diuretics ('water pills'). It works by causing the kidneys to get rid of unneeded water and salt from the body into the urine.

**24. A client comes into the health clinic 3 years after undergoing resection of the terminal ileum complaining of weakness, shortness of breath, and a sore tongue. Which client statement indicates a need for intervention and client teaching?**

- A. "I have been drinking plenty of fluids."

- B. "I have been gargling with warm salt water for my sore tongue."
- C. "I have 3 to 4 loose stools per day."
- D. "I take a vitamin B12 tablet every day."

**Correct Answer: D. "I take a vitamin B12 tablet every day."**

Vitamin B12 combines with intrinsic factor in the stomach and is then carried to the ileum, where it is absorbed in the bloodstream. In this situation, vitamin B12 cannot be absorbed regardless of the amount of oral intake of sources of vitamin B12 such as animal protein or vitamin B12 tablets. Vitamin B12 needs to be injected every month, because the ileum has been surgically removed.

- **Option A:** Replacement of fluids and electrolytes is important when the client has continuous multiple loose stools on a daily basis. Massive small bowel resection can lead to short bowel syndrome (SBS), a condition that is characterized by malnutrition and malabsorption secondary to loss of functional small bowel and more rapid intestinal transit. In addition to weight loss and protein-calorie malnutrition, patients suffer from diarrhea, steatorrhea, electrolyte abnormalities, and deficiencies in fat-soluble vitamins.
- **Option B:** Warm salt water is used to soothe sore mucous membranes. Parenteral nutrition, therefore, is a mainstay of early SBS management to limit malnutrition. Early return to enteral feeds once ileus has resolved is advised, even if a diagnosis of SBS is expected. Enteral feeding is thought to stimulate intestinal adaptation by both directly stimulating enterocytes and by inducing endocrine and paracrine effects signaling for hypertrophy of the remaining small bowel mucosa.
- **Option C:** Crohn's disease and small bowel resection may cause several loose stools a day. Drugs such as loperamide, diphenoxylate and atropine, and opiates will slow gut function, increasing the potential absorptive time of enteral feeds. Reducing gastrointestinal secretion and controlling diarrhea are also important goals for maximizing absorption.

**25. The client with a testicular cancer is being treated with Etoposide (Etopophos). Which of the following side effect is specifically associated with this medication?**

- A. Chest pain
- B. Edema
- C. Alopecia
- D. Orthostatic hypotension

**Correct Answer: D. Orthostatic hypotension**

While on etoposide infusion, blood pressure is monitored throughout and it should be administered slowly over 30-60 minutes to avoid hypotension.

- **Options A & B:** These are not related to this medication.
- **Option C:** Alopecia happens nearly with all the neoplastic medications.

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

- A. Alveolar damage in the infarcted area.

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

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

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

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

**27. The lochia on the first few days after delivery is characterized as**

- A. Pinkish with some blood clots
- B. Whitish with some mucus
- C. Reddish with some mucus
- D. Serous with some brown tinged mucus

**Correct Answer: C. Reddish with some mucus**

Right after delivery, the vaginal discharge called lochia will be reddish because there is some blood, endometrial tissue, and mucus. Since it is not pure blood it is non-clotting. Lochia rubra (or cruenta) is the first discharge, Composed of blood, shreds of fetal membranes, decidua, vernix caseosa, lanugo and membranes. It is red in color because of the large amount of blood it contains. It lasts 1 to 4 days after birth, before easing to light "spotting".

- **Option A:** Lochia serosa is the term for lochia that has thinned and turned brownish or pink in color. It contains serous exudate, erythrocytes, leukocytes, cervical mucus, and microorganisms. This stage continues until around the tenth day after delivery. Lochia serosa which persists to some weeks after birth can indicate late postpartum hemorrhaging and should be reported to a physician.
- **Option B:** Lochia alba (or purulenta) is the name for lochia once it has turned whitish or yellowish-white. It typically lasts from the second through the third to sixth weeks after delivery. It contains fewer red blood cells and is mainly made up of leukocytes, epithelial cells, cholesterol, fat, mucus and microorganisms. Continuation beyond a few weeks can indicate a genital lesion, which should be reported to a physician.
- **Option D:** Between days four and seven, the blood should turn a pinkish or brownish color. Clots should get smaller or disappear. By the end of the first week, the discharge will likely be white or yellow in color. In three to six weeks, it should stop.

**28. A nurse is caring for a client in the second stage of labor. The client is experiencing uterine contractions every 2 minutes and cries out in pain with each contraction. The nurse recognizes this behavior as:**

- A. Exhaustion
- B. Valsalva's maneuver
- C. Involuntary grunting
- D. Fear of losing control

**Correct Answer: D. Fear of losing control**

Pains, helplessness, panicking, and fear of losing control are possible behaviors in the 2nd stage of labor. In women who have delivered vaginally previously, whose bodies have acclimated to delivering a fetus, the second stage may only require a brief trial, whereas a longer duration may be required for a nulliparous female.

- **Option A:** Labour as a life event is characterized by tremendous physiological and psychological changes that require major behavioral adjustments in a short period of time.
- **Option B:** Exercise involving the Valsalva maneuver (holding one's breath during exertion) because it can cause increased intra-abdominal pressure.
- **Option C:** Labour presents a physical and psychological challenge for women. The latter stages of pregnancy can be a difficult time emotionally. Fear and apprehension are experienced alongside excitement. There are emotions both positive and negative that will affect the woman's birth experience.

**29. Which nursing diagnosis is appropriate for a patient who has received a sedative-hypnotic agent?**

- A. Alteration in tissue perfusion
- B. Fluid volume excess
- C. Risk for injury
- D. Risk for infection

Correct Answer: C. Risk for injury

Sedative-hypnotics cause CNS depression, putting the patient at risk for injury. Symptoms of barbiturate toxicity vary from case to case, but commonly include difficulty thinking, decreased level of consciousness, bradycardia or rapid and weak pulse, poor coordination, vertigo, nausea, muscle weakness, thirst, oliguria, decreased temperature, and dilated or contracted pupils.

- **Option A:** The client may be at risk for altered tissue perfusion, but it is not a higher priority than being at risk for injury. Patient history should focus on determining the exact type and amount of medication taken and whether there has been co-ingestion of other substances.
- **Option B:** Pulmonary edema is another complication associated with barbiturate toxicity and contributing to respiratory depression and death. Complications include hypotension, coma, and respiratory depression. It is important to maintain respiratory and cardiovascular status, as failure to do so can result in hypoxic brain injury and death.
- **Option D:** Physical examination should include serial mental status, vital signs, and neurologic examinations conducted at regular intervals. Barbiturates also have been associated with thrombocytopenia and pulmonary eosinophilia (with febarbamate).

**30. The nurse would analyze an arterial pH of 7.46 as indicating:**

- A. Acidosis
- B. Alkalosis
- C. Homeostasis
- D. Neutrality

**Correct Answer: B. Alkalosis**

Alkalosis is indicated by a pH above 7.45. A pH below 7.35 is an acidemia, and a pH above 7.45 is an alkalemia. Due to the importance of sustaining a pH level in the needed narrow range, the human body contains compensatory mechanisms.

- **Option A:** The human body experiences four main types of acid-based disorders: metabolic acidosis, metabolic alkalosis, respiratory acidosis, and respiratory alkalosis. If one of these conditions occurs, the human body should induce a counterbalance in the form of an opposite condition.
- **Option C:** To maintain homeostasis, the human body employs many physiological adaptations. One of these is maintaining an acid-base balance. In the absence of pathological states, the pH of the human body ranges between 7.35 to 7.45, with the average at 7.40.
- **Option D:** Arterial blood gas (ABG) sampling, is a test often performed in an inpatient setting to assess the acid-base status of a patient. A needle is used to draw blood from an artery, often the radial and the blood is analyzed to determine parameters such as the pH, pCO<sub>2</sub>, pO<sub>2</sub>, HCO<sub>3</sub>, oxygen saturation, and more.

**31. James Perez, a nurse on a geriatric floor, is administering a dose of digoxin to one of his patients. The woman asks why she takes a different pill than her niece, who also has heart trouble. James replies that as people get older, liver and kidney function decline, and if the dose is as high as her niece's, the drug will tend to:**

- A. Have a shorter half-life.
- B. Accumulate.
- C. Have decreased distribution.
- D. Have increased absorption.

**Correct Answer: B. Accumulate.**

The decreased circulation to the kidney and reduced liver function tend to allow drugs to accumulate and have toxic effects. Physiologic changes and disease associated with aging have an impact on pharmacokinetics and pharmacodynamics of medications. Altered drug response and increased adverse reactions are common amongst the elderly. The narrow therapeutic index of digoxin and pharmacokinetic changes associated with aging increases the risk of toxicity. The most important age-related change is that of deterioration of renal function and this is especially true for digoxin where poorer renal excretion demands lower dosage to avoid toxicity.

- **Option A:** Aging results in prolonged elimination half-life and decreased volume of distribution for digoxin [3]. A recent examination of more than 1000 nursing home residents in Canada showed that 32% of elderly heart failure patients are treated with digoxin, 80% of those received doses higher than recommended, serum digoxin levels were higher than toxic levels in 30% of patients, and 26% had other medications known to be a high risk of digoxin interaction prescribed.

- **Option C:** Drug distribution in the older person can vary due to changes in body composition and critical organ perfusion (due to reduced cardiac output and increased peripheral vascular resistance). The latter will also affect metabolism and elimination with decreased liver and kidney perfusion. The reduction in lean body mass in older people (as much as 19%) will cause an elevation in drug concentrations in muscles for drugs distributed in that manner (eg. digoxin).
- **Option D:** With increasing age, the amount of saliva produced is often reduced and this can reduce the rate of drug absorption by influencing the gastric pH. Furthermore, older people have reduced gastric acid secretion and reduced acidity (increased pH) which can delay the dissolution of oral medications. This is exacerbated by delayed gastric empty due to reduced peristaltic force that reduces the mechanical influences on medication mixing with gastric juices. The surface area for drug absorption is also decreased in aging due to intestinal atrophy which, combined with reduced concentration gradient due to the poorer blood flow, inhibits passive diffusion of drugs into the bloodstream further delaying absorption rate.

**32. Nursing intervention for the patient with hyperphosphatemia includes encouraging intake of:**

- A. Vitamin D
- B. Fleets phospho-soda
- C. Milk
- D. Amphojel

**Correct Answer: D. Amphogel**

Administration of phosphate binders (amphojel and basagel) will reduce the serum phosphate levels. Aluminum hydroxide (brand names: Alternagel®, Amphojel®) is an over-the-counter oral antacid and phosphate binder, most commonly used to treat high phosphate levels secondary to kidney dysfunction (abnormal or impaired function of the kidneys). It can also be used to reduce stomach acid production.

- **Option A:** Vitamin D intoxication can produce hyperphosphatemia as a result of excessive gastrointestinal absorption and increased renal reabsorption. Reports indicate that the excessive use of phosphate-containing laxatives or enemas can also produce hyperphosphatemia.
- **Option B:** This medicine is used as part of a bowel cleansing procedure before an x-ray of the bowel, colonoscopy (looking into the bowel with an instrument), or before a bowel operation. It works by producing bowel motions that cleanse the bowel.
- **Option C:** Avoid or limit milk and dairy products, like cheese, yogurt, pudding, and ice cream. Try flavored ice pops or sorbet instead of ice cream. Use non-dairy creamers, soy beverages, or rice milk to replace milk. Make sure the brands are low in phosphorus.

**33. A 68-year-old male patient who had a left-sided stroke is admitted to the hospital. The patient has right-sided weakness and is unable to perform activities of daily living without assistance. The nurse is providing oral hygiene to the patient and is preparing to use a padded tongue blade to open the patient's mouth. Which nursing measure is inappropriate when providing oral hygiene to the patient who had a stroke?**

- A. Placing the client on the back with a small pillow under the head.

- B. Keeping portable suctioning equipment at the bedside.
- C. Opening the client's mouth with a padded tongue blade.
- D. Cleaning the client's mouth and teeth with a toothbrush.

**Correct Answer: A. Placing the client on the back with a small pillow under the head.**

A helpless client should be positioned on the side, not on the back. This lateral position helps secretions escape from the throat and mouth, minimizing the risk of aspiration. Observe the patient for paroxysms of coughing, food dribbling out or pooling in one side of the mouth, food retained for long periods in the mouth, or nasal regurgitation when swallowing liquids.

- **Option B:** It may be necessary to suction, so having suction equipment at the bedside is necessary. Consult with a speech therapist to evaluate gag reflexes; assist in teaching alternate swallowing techniques, advise the patient to take smaller boluses of food, and inform the patient of foods that are easier to swallow; provide thicker liquids or pureed diet as indicated.
- **Option C:** Padded tongue blades are safe to use. Have the patient sit upright, preferably on chair, when eating and drinking; advance diet as tolerated. Prepare for GI feedings through a tube if indicated; elevate the head of bed during feedings, check tube position before feeding, administer feeding slowly, and ensure that the cuff of tracheostomy tube is inflated (if applicable); monitor and report excessive retained or residual feeding.
- **Option D:** A toothbrush is appropriate to use. Encourage personal hygiene activities as soon as the patient can sit up; select suitable self-care activities that can be carried out with one hand.

**34. After falling 20', a 36-year-old man sustains a C6 fracture with spinal cord transection. Which other findings should the nurse expect?**

- A. Quadriplegia with gross arm movement and diaphragmatic breathing.
- B. Quadriplegia and loss of respiratory function.
- C. Paraplegia with intercostal muscle loss.
- D. Loss of bowel and bladder control.

**Correct Answer: A. Quadriplegia with gross arm movement and diaphragmatic breathing**

A client with a spinal cord injury at levels C5 to C6 has quadriplegia with gross arm movement and diaphragmatic breathing. Cervical spine injuries, although uncommon, can result in significant and long-term disability. The cervical spine encompasses seven vertebrae and serves as a protection to the spinal cord. C5 to C7 are responsible for deep tendon reflexes of the biceps, brachioradialis, and triceps respectively. C5 controls shoulder abduction with the aid of C4 and elbow flexion with the aid of C6. C6 to C7 are responsible for elbow extension, wrist extension, and flexion.

- **Option B:** Injury levels C1 to C4 leads to quadriplegia with total loss of respiratory function. C1 to C3 are responsible for movements of the head, the dermatome of C2 is responsible for sensation to the dorsal aspect of the head, and C3 is responsible for sensation to the lateral aspects of the face and posterior portion of the head. C3 to C4 contribute to breathing by controlling the muscles of the diaphragm.
- **Option C:** Paraplegia with intercostal muscle loss occurs with injuries at T1 to L2. This term refers to impairment or loss of motor and/or sensory function in the thoracic, lumbar or sacral (but not cervical) segments of the spinal cord, secondary to damage of neural elements within the spinal canal. With paraplegia, arm functioning is spared but the trunk, legs and pelvic organs may be involved depending on the level of injury.

- **Option D:** Injuries below L2 cause paraplegia and loss of bowel and bladder control. A spinal cord injury may interrupt communication between the nerves in the spinal cord that control bladder and bowel function and the brain, causing incontinence. This results in bladder or bowel dysfunction that is termed “neurogenic bladder” or “neurogenic bowel.”

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

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

**Correct Answer: B. Check for diminished sensations**

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

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