

Kevin's Review - 100 NCLEX Practice Questions

1. Which of the following is the most common symptom of myocardial infarction?

- A. Chest pain
- B. Dyspnea
- C. Edema
- D. Palpitations

Correct Answer: A. Chest pain

The most common symptom of an MI is chest pain, resulting from the deprivation of oxygen to the heart. The classic manifestation of ischemia is usually described as heavy chest pressure or squeezing, a "burning" feeling, or difficulty in breathing. The discomfort or pain often radiates to the left shoulder, neck, or arm. Chest pain may be atypical in a few cases. It builds in intensity over a period of a few minutes.

- **Option B:** Dyspnea is the second most common symptom, related to an increase in the metabolic needs of the body during an MI. Despite variable prevalence estimates, dyspnea has been consistently associated with greater mortality in the general population. It is a more powerful predictor of clinical outcomes than objective physiologic measures such as pulmonary function testing in the general population, or angina in patients referred for cardiac evaluation.
- **Option C:** Edema is a later sign of heart failure, often seen after an MI. All the factors which contribute to increased pressure in the left side and pooling of blood on the left side of the heart can cause cardiogenic pulmonary edema. The result of all these conditions will be increased pressure on the left side of the heart: increased pulmonary venous pressure→ increased capillary pressure in lungs→ pulmonary edema.
- **Option D:** Palpitations may result from the reduced cardiac output, producing arrhythmias. In patients who describe the palpitations as a brief flip-flopping in the chest, the palpitations are thought to be caused by extrasystoles such as supraventricular or ventricular premature contractions. The flip-flop sensation is thought to result from the forceful contraction following the pause and the sensation that the heart is stopped results from the pause. The sensation of rapid fluttering in the chest is thought to result from a sustained ventricular or supraventricular arrhythmia.

2. The nurse assesses a prolonged late deceleration of the fetal heart rate while the client is receiving oxytocin (Pitocin) IV to stimulate labor. The priority nursing intervention would be to:

- A. Turn off the infusion.
- B. Turn the client to the left.
- C. Change the fluid to Ringer's Lactate.
- D. Increase mainline IV rate.

Correct Answer: A. Turn off the infusion

Stopping the infusion will decrease contractions and possibly remove uterine pressure on the fetus, which is a possible cause of the deceleration. When late decelerations are observed, the nurse should attempt to increase the oxygen delivery to the fetus by turning the mother on her left side and/or administering oxygen. If Oxytocin (Pitocin) is being administered, it should be stopped.

- **Option B:** Variable decelerations are marked by a sharp decrease (“V” shape) in FHR that does not correlate to contractions. Umbilical cord compression is usually the cause of variable decelerations. Repositioning of the mother can relieve this compression if it is minor.
- **Option C:** Late decelerations are shown by the FHR gradually decreasing around the peak of the contraction and gradually increasing when the contraction is over. These decelerations will also have a “U” shape but will not mirror the contractions. The most common cause of late decelerations is uteroplacental insufficiency (insufficient oxygen exchange between the placenta and the fetus).
- **Option D:** Increasing the main IV line would not manage the decelerations. While caring for a patient in labor, one of the important nursing duties is monitoring the variability of the fetal heart rate (FHR) and monitoring the FHR response during contractions. Variability in the FHR during labor is a sign of fetal well-being or fetal activity or both. The expected variability usually includes slight accelerations and decelerations.

3. Which question will critique the method of a research project? A. Is the strategy used for analysis compatible with the purpose of the study?

- A. Is the strategy used for analysis compatible with the purpose of the study?
- B. What is the projected significance of the work to nursing?
- C. Are the informants who were chosen appropriate to inform the research?
- D. What are the philosophical underpinnings of the research method?

Correct Answer: A. Is the strategy used for analysis compatible with the purpose of the study?

A research critique is an analysis of a research undertaking that focuses on its strengths and limitations. Critiquing is a systematic process for evaluating research studies and the results reported.

- **Option B:** This question will critique the purpose of a research project. Read the research article or report in its entirety to get a sense of the study and its contribution to knowledge development.
- **Option C:** This question will critique the sampling of a research project. Read the article or report again, paying attention to the questions appropriate to each stage of the critiquing process.
- **Option D:** This question will critique the philosophy of a research project. “The necessary elements in a research critique can be compiled in a series of questions for the process of critiquing research” (Boswell & Cannon, 2009, p. 308).

4. A client arrives at the hospital in the second stage of labor. The fetus’ head is crowning, the client is bearing down, and the birth appears imminent. The nurse should:

- A. Transfer her immediately by stretcher to the birthing unit.
- B. Tell her to breathe through her mouth and not to bear down.
- C. Instruct the client to pant during contractions and to breathe through her mouth.
- D. Support the perineum with the hand to prevent tearing and tell the client to pant.

Correct Answer: D. Support the perineum with the hand to prevent tearing and tell the client to pant.

Gentle pressure is applied to the baby's head as it emerges so it is not born too rapidly. The head is never held back, and it should be supported as it emerges so there will be no vaginal lacerations. It is impossible to push and pant at the same time.

- **Option A:** Imminent delivery is when the baby's head is visible at the vaginal opening during a contraction (crowning). C. A visual inspection of the perineal area should only be done when contractions are less than 5 minutes apart, there is bleeding/fluid discharge, and/or the patient feels the urge to push.
- **Option B:** A visual inspection of the perineal area should only be done when contractions are less than 5 minutes apart, there is bleeding/fluid discharge, and/or the patient feels the urge to push. Do not perform a digital examination to gauge cervical dilation.
- **Option C:** Begin each contraction with two deep breaths. Inhale deeply and exhale slowly through pursed lips. Relax the bottom and push down. Keep the abdominal muscles tight around the baby as she takes another breath. The woman may find herself making throaty sounds. Repeat these steps as long as the contraction lasts.

5. A 35-year-old female has intense fear of riding an elevator. She claims "As if I will die inside." The client is suffering from:

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

Correct Answer: C. Claustrophobia

Claustrophobia is fear of closed space. Claustrophobia is a type of specific phobia, where one has a fear of closed spaces. Examples of closed spaces are engine rooms, MRI machines, elevators, etc. Those with specific phobias generally will report avoidance behaviors regarding the particular object or situation that triggers their fear. The fear can be expressed as a danger of harm, disgust, or experience of the physical symptoms in a phobic scenario. physical symptoms include, but are not limited to, difficulty breathing, trembling, sweating, tachycardia, dry mouth, and chest pain. Emotional symptoms include, but are not limited to, feeling overwhelming anxiety or fear, fear of losing control, feeling an intense need to leave the situation, the understanding of the fear as irrational, but an inability to overcome it.

- **Option A:** Agoraphobia is fear of open space or being a situation where escape is difficult. Agoraphobia is the anxiety that occurs when one is in a public or crowded place, from which a potential escape is difficult, or help may not be readily available. It is characterized by the fear that a panic attack or panic-like symptoms may occur in these situations. Individuals with agoraphobia, therefore, strive to avoid such situations or locations. In the currently-used DSM-5, agoraphobia is considered a distinct diagnosis that can occur independently of other diagnoses, such as generalized anxiety disorder or panic disorder. In the DSM-5, it is defined as "marked fear or anxiety about actual or anticipated exposure of public spaces, with the symptoms of fear or anxiety occurring most of the time in at least two of five common, different situations."
- **Option B:** Social phobia is fear of performing in the presence of others in a way that will be humiliating or embarrassing. Social anxiety disorder (SAD) is characterized by excessive fear of embarrassment, humiliation, or rejection when exposed to possible negative evaluation by others when engaged in a public performance or social interactions. It is also known as social phobia. With the publication of DSM-5, the diagnostic criteria for SAD have been broadened from previous

editions to include fear of acting in a way or show anxiety symptoms that offend others or lead to rejection in addition to fear of humiliation or embarrassment. Additionally, the latest edition of DSM removed the generalized subtype and added the “performance only” specifier.

- **Option D:** Xenophobia is fear of strangers. Xenophobia, or fear of strangers, is a broad term that may be applied to any fear of someone who is different from us. Hostility towards outsiders is often a reaction to fear. It typically involves the belief that there is a conflict between an individual’s ingroup and an outgroup. Xenophobia often overlaps with forms of prejudice including racism and homophobia, but there are important distinctions. Where racism, homophobia, and other forms of discrimination are based on specific characteristics, xenophobia is usually rooted in the perception that members of the outgroup are foreign to the ingroup community.

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

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

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

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

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

7. The nurse is monitoring a female client with a diagnosis of peptic ulcer. Which assessment findings would most likely indicate perforation of the ulcer?

- A. Bradycardia
- B. Numbness in the legs
- C. Nausea and vomiting
- D. A rigid, board-like abdomen

Correct Answer: D. A rigid, board-like abdomen

Perforation of an ulcer is a surgical emergency and is characterized by sudden, sharp, intolerable severe pain beginning in the mid epigastric area and spreading over the abdomen, which becomes rigid and board-like. Perforated peptic ulcer (PPU) is a serious complication of PUD and patients with PPU often present with an acute abdomen that carries a high risk for morbidity and mortality. The lifetime prevalence of perforation in patients with PUD is about 5%. PPU carries mortality ranging from 1.3% to 20%.

- **Option A:** Tachycardia may occur as hypovolemic shock develops. The classic triad of sudden onset of abdominal pain, tachycardia, and abdominal rigidity is the hallmark of perforated peptic ulcers. Early diagnosis, prompt resuscitation, and urgent surgical intervention are essential to improve outcomes.
- **Option B:** Numbness in the legs is not an associated finding. Symptoms of PUD include abdominal pain, upper abdominal discomfort, bloatedness, and feeling of fullness. When PUD worsens and eventually perforates, gastric juice and gas enter the peritoneal cavity leading to chemical peritonitis.
- **Option C:** Nausea and vomiting may occur. Sudden onset of abdominal pain or acute deterioration of the ongoing abdominal pain is typical of PPU. Typically the pain never completely subsides despite usual premedical remedies and forces the patient to seek medical attention.

8. A male client has a reduced serum high-density lipoprotein (HDL) level and an elevated low-density lipoprotein (LDL) level. Which of the following dietary modifications is not appropriate for this client?

- A. Fiber intake of 25 to 30 g daily.
- B. Less than 30% of calories from fat.
- C. Cholesterol intake of less than 300 mg daily.
- D. Less than 10% of calories from saturated fat.

Correct Answer: B. Less than 30% of calories from fat

A client with low serum HDL and high serum LDL levels should get less than 30% of daily calories from fat.

- **Option A:** Fiber intake should be adequate to aid in proper digestion.
- **Option C:** High cholesterol intake can cause fatty deposits in the blood vessels. Eventually, these deposits grow, making it difficult for enough blood to flow through the arteries.
- **Option D:** Saturated fat increases cholesterol and the risk for heart disease and stroke, therefore it should be reduced too.

9. An individual with depression has a deficiency in which neurotransmitters, based on the biogenic amine theory?

- A. Dopamine and thyroxine
- B. GABA and acetylcholine
- C. Cortisone and epinephrine
- D. Serotonin and norepinephrine

Correct Answer: D. Serotonin and norepinephrine

The biogenic amine theory of depression describes deficiencies in the neurotransmitters serotonin and norepinephrine. Antidepressant medications increase the levels of these neurotransmitters and therefore help to relieve depressive symptoms.

- **Option A:** Clinical and preclinical trials suggest a disturbance in central nervous system serotonin (5-HT) activity as an important factor. Other neurotransmitters implicated include norepinephrine (NE), dopamine (DA), glutamate, and brain-derived neurotrophic factor (BDNF).
- **Option B:** The role of CNS 5-HT activity in the pathophysiology of major depressive disorder is suggested by the therapeutic efficacy of selective serotonin reuptake inhibitors (SSRIs). Research findings imply a role for neuronal receptor regulation, intracellular signaling, and gene expression over time, in addition to enhanced neurotransmitter availability.
- **Option C:** According to current research, dopamine, thyroxine, GABA, acetylcholine, cortisone, and epinephrine are not directly related to depression. The underlying pathophysiology of major depressive disorder has not been clearly defined. Current evidence points to a complex interaction between neurotransmitter availability and receptor regulation and sensitivity underlying the affective symptoms.

10. All of the following are crucial needs of the dying client except:

- A. Control of pain
- B. Preservation of dignity and self-worth
- C. Love and belonging
- D. Freedom from decision making

Correct Answer: D. Freedom from decision making

Patients should be made aware that they can participate in their end-of-life care in two distinct ways: by actively making decisions at the end of their life and by making decisions about how they believe they would wish to be cared for based on a hypothetical scenario of impairment. The patient should understand that while his or her health care provider may strongly disagree with or object to the patient's decision to refuse the plan of care, the patient's decision is constitutionally protected.

- **Option A:** Health care professionals should understand that personal, social, and cultural experiences influence a patient's definition of pain, health, and illness, and responses to pain vary among individuals and cultural groups.³ A patient's reaction to pain is influenced by his or her individual perception of it, and the perception of pain reflects his or her attitude toward pain and characteristic way of responding.
- **Option B:** Two key factors which influence the preservation of dignity at the end of life are promoting self-respect and treating the patient with respect; but how are these translated in practice into palliative care? Most end-of-life interventions focus predominantly on symptom control, rather than holistic care. Therefore it may be helpful to consider the physical, emotional, and spiritual needs of patients in palliative care settings.

- **Option C:** Regarding emotional needs, a review found that important actions for healthcare professionals providing end-of-life care include communicating, listening, conveying empathy, and involving patients in decision-making 8. Furthermore, good communication between the patient and their partner about their feelings should be promoted.

11. When preparing a woman who is 2 days postpartum for discharge, recommendations for which of the following contraceptive methods would be avoided?

- A. Diaphragm
- B. Female condom
- C. Oral contraceptives
- D. Rhythm method

Correct Answer: A. Diaphragm

The diaphragm must be fitted individually to ensure effectiveness. Because of the changes to the reproductive structures during pregnancy and following delivery, the diaphragm must be refitted, usually at the 6 weeks' examination following childbirth or after a weight loss of 15 lbs or more. In addition, for maximum effectiveness, the spermicidal jelly should be placed in the dome and around the rim. However, the spermicidal jelly should not be inserted into the vagina until involution is completed at approximately 6 weeks.

- **Option B:** Use of a female condom protects the reproductive system from the introduction of semen or spermicides into the vagina and may be used after childbirth.
- **Option C:** Oral contraceptives may be started within the first postpartum week to ensure suppression of ovulation.
- **Option D:** For the couple who has determined the female's fertile period, using the rhythm method, avoidance of intercourse during this period, is safe and effective.

12. Which of the following diets would be most appropriate for a client with COPD?

- A. Low fat, low cholesterol
- B. Bland, soft diet
- C. Low-Sodium diet
- D. High-calorie, high-protein diet

Correct Answer: D. High-calorie, high-protein diet

The client should eat high-calorie, high-protein meals to maintain nutritional status and prevent weight loss that results from the increased work of breathing. The client should be encouraged to eat small, frequent meals. Eat 20 to 30 grams of fiber each day, from items such as bread, pasta, nuts, seeds, fruits and vegetables. Eat a good source of protein at least twice a day to help maintain strong respiratory muscles. Good choices include milk, eggs, cheese, meat, fish, poultry, nuts and dried beans or peas.

- **Option A:** A low-fat, low-cholesterol diet is indicated for clients with coronary artery disease. Choose mono- and poly-unsaturated fats, which do not contain cholesterol. These are fats that are often liquid at room temperature and come from plant sources, such as canola, safflower and corn oils.
- **Option B:** Metabolism of carbohydrates produces the most carbon dioxide for the amount of oxygen used; metabolism of fat produces the least. For some people with COPD, eating a diet with fewer carbohydrates and more fat helps them breathe easier.
- **Option C:** The client with COPD does not necessarily need to follow a sodium-restricted diet, unless otherwise medically indicated. Choose complex carbohydrates, such as whole-grain bread and pasta, fresh fruits, and vegetables. Limit simple carbohydrates, including table sugar, candy, cake, and regular soft drinks.

13. A natural body defense that plays an active role in preventing infection is:

- A. Yawning
- B. Body hair
- C. Hiccupping
- D. Rapid eye movements

Correct Answer: B. Body hair

Hair on or within body areas, such as the nose, traps and holds particles that contain microorganisms. One of the body's most important physical barriers is the skin barrier, which is composed of three layers of closely packed cells. The thin upper layer is called the epidermis. A second, thicker layer, called the dermis, contains hair follicles, sweat glands, nerves, and blood vessels. A layer of fatty tissue called the hypodermis lies beneath the dermis and contains blood and lymph vessels

- **Option A:** Evidence suggests that drowsiness is the most common stimulus of yawn. Boredom occurs when the main source of stimulation in a person's environment is no longer able to sustain their attention. This induces drowsiness by stimulating the sleep generating system. At this moment, the mind has to make an effort to maintain contact with the external environment.
- **Option C:** Hiccupping does not prevent microorganisms from entering or leaving the body. As they breathe out, the diaphragm pushes up to expel the air. When a person has hiccups, the diaphragm contracts and pulls down, drawing in air between breaths. Immediately after this, the windpipe closes for a moment to prevent more air from entering the lungs. Hiccups often come after eating or drinking too much or too quickly.
- **Option D:** Rapid eye movement marks the stage of sleep during which dreaming occurs. Rapid eye movement (REM) is the stage of sleep characterized by rapid saccadic movements of the eyes. During this stage, the activity of the brain's neurons is quite similar to that during waking hours. Most of the vividly recalled dreams occur during REM sleep.

14. The nurse is providing discharge instructions to a male client following gastrectomy and instructs the client to take which measure to assist in preventing dumping syndrome?

- A. Ambulate following a meal
- B. Eat high carbohydrate foods

- C. Limit the fluid taken with meal
- D. Sit in a high-Fowler's position during meals

Correct Answer: C. Limit the fluid taken with meals.

Dumping syndrome is a term that refers to a constellation of vasomotor symptoms that occurs after eating, especially following a Billroth II procedure. Early manifestations usually occur within 30 minutes of eating and include vertigo, tachycardia, syncope, sweating, pallor, palpitations, and the desire to lie down. The nurse should instruct the client to decrease the amount of fluid taken at meals.

- **Option A:** The nurse should instruct the client to lie down for 30 minutes after eating to delay gastric emptying, and to take antispasmodics as prescribed. Identify symptoms that may indicate dumping syndrome, (weakness, profuse perspiration, epigastric fullness, nausea and vomiting, abdominal cramping, faintness, flushing, explosive diarrhea, and palpitations occurring within 15 min to 1 hr after eating).
- **Option B:** The nurse should instruct the client to avoid high-carbohydrate foods, including fluids such as fruit nectars. Review dietary needs and regimen (low-carbohydrate, low-fat, high-protein) and the importance of maintaining vitamin supplementation. This may prevent deficiencies, enhance healing, and promote cooperation with therapy. A low-fat diet may be required to reduce the risk of alkaline reflux gastritis.
- **Option D:** The nurse should instruct the client to assume a low Fowler's position during meals. Avoid placing the patient in a supine position, have the patient sit upright after meals. Supine position after meals can increase regurgitation of acid. Instruct the patient to chew food thoroughly and eat slowly. Well-masticated food is easier to swallow. Food should be cut into small pieces.

15. Which of the following would be an appropriate expected outcome for an elderly client recovering from bacterial pneumonia?

- A. A respiratory rate of 25 to 30 breaths per minute.
- B. The ability to perform ADLs without dyspnea.
- C. A maximum loss of 5 to 10 pounds of body weight.
- D. Chest pain that is minimized by splinting the ribcage.

Correct Answer: B. The ability to perform ADL's without dyspnea

An expected outcome for a client recovering from pneumonia would be the ability to perform ADLs without experiencing dyspnea. Determine patient's response to activity. Note reports of dyspnea, increased weakness and fatigue, changes in vital signs during and after activities. Establishes patient's capabilities and needs and facilitates choice of interventions.

- **Option A:** A respiratory rate of 25 to 30 breaths/minute indicates the client is experiencing tachypnea, which would not be expected on recovery. Assess and record respiratory rate and depth at least every 4 hours. The average rate of respiration for adults is 10 to 20 breaths per minute. It is important to take action when there is an alteration in the pattern of breathing to detect early signs of respiratory compromise.
- **Option C:** A weight loss of 5-10 pounds is undesirable; the expected outcome would be to maintain normal weight. Evaluate general nutritional state, obtain baseline weight. Presence of chronic conditions (COPD or alcoholism) or financial limitations can contribute to malnutrition, lowered resistance to infection, and/or delayed response to therapy.

- **Option D:** A client who is recovering from pneumonia should experience decreased or no chest pain. Assess pain characteristics: sharp, constant, stabbing. Investigate changes in character, location, or intensity of pain. Assess reports of pain with breathing or coughing.

16. For a diabetic male client with a foot ulcer, the doctor orders bed rest, a wet-to-dry dressing change every shift, and blood glucose monitoring before meals and bedtime. Why are wet-to-dry dressings used for this client?

- A. They contain exudate and provide a moist wound environment.
- B. They protect the wound from mechanical trauma and promote healing.
- C. They debride the wound and promote healing by secondary intention.
- D. They prevent the entrance of microorganisms and minimize wound discomfort.

Correct Answer: C. They debride the wound and promote healing by secondary intention

For this client, wet-to-dry dressings are most appropriate because they clean the foot ulcer by debriding exudate and necrotic tissue, thus promoting healing by secondary intention.

- **Option A:** Moist, transparent dressings contain exudate and provide a moist wound environment.
- **Option D:** Hydrocolloid dressings prevent the entrance of microorganisms and minimize wound discomfort.
- **Option B:** Dry sterile dressings protect the wound from mechanical trauma and promote healing.

17. Nurse Sarah expects to note an elevated serum glucose level in a client with hyperosmolar hyperglycemic nonketotic syndrome (HHNS). Which other laboratory finding should the nurse anticipate?

- A. Elevated serum acetone level.
- B. Serum ketone bodies.
- C. Serum alkalosis.
- D. Below-normal serum potassium level.

Correct Answer: D. Below-normal serum potassium level.

A client with HHNS has an overall body deficit of potassium resulting from diuresis, which occurs secondary to the hyperosmolar, hyperglycemic state caused by the relative insulin deficiency.

- **Option A:** An elevated serum acetone level is a symptom of diabetic ketoacidosis. Hepatic metabolism of free fatty acids as an alternative energy source results in accumulation of acidic intermediate and end metabolites (ie, ketones). Ketone bodies have generally included acetone, a true ketone.
- **Option B:** Serum ketone bodies are characteristic of diabetic ketoacidosis. Ketone bodies are produced from acetyl coenzyme A mainly in the mitochondria within hepatocytes when carbohydrate utilization is impaired because of relative or absolute insulin deficiency, such that energy must be obtained from fatty acid metabolism.
- **Option C:** Metabolic acidosis, not serum alkalosis, may occur in HHNS. A wide anion gap can be observed in patients with HHNS. The mild acidosis in HHNS is often multifactorial and results, in

part, from the accumulation of minimal ketoacids in the absence of effective insulin activity.

18. A client with major depression has not verbalized problem areas to staff or peers since admission to a psychiatric unit. Which activity should the nurse recommend to help this client express himself?

- A. Art therapy in a small group.
- B. Basketball game with peers on the unit.
- C. Reading a self-help book on depression.
- D. Watching a movie with the peer group.

Correct Answer: A. Art therapy in a small group

Art therapy provides a non-threatening vehicle for the expression of feelings, and use of a small group will help the client become comfortable with peers in a group setting. Initially, provide activities that require minimal concentration (e.g., drawing, playing simple board games). Depressed people lack concentration and memory. Activities that have no “right or wrong” or “winner or loser” minimizes opportunities for the client to put himself/herself down.

- **Option B:** Basketball is a competitive game that requires energy; the client with major depression is not likely to participate in this activity. Involve the client in gross motor activities that call for very little concentration (e.g., walking). Such activities will aid in relieving tensions and might help in elevating the mood.
- **Option C:** Recommending that the client read a self-help book may increase, not decrease his isolation. When the client is in the most depressed state, Involve the client in one-to-one activity; maximizes the potential for interactions while minimizing anxiety levels.
- **Option D:** Watching a movie with a peer group does not guarantee that interaction will occur; therefore, the client may remain isolated. Eventually, involve the client in group activities (e.g., group discussions, art therapy, dance therapy). Socialization minimizes feelings of isolation. Genuine regard for others can increase feelings of self-worth.

19. During a post-operative consultation in a maxillofacial clinic, a patient recovering from facial trauma surgery is given a series of muscle exercises to regain facial movement and symmetry. The physical therapist presents the patient with a list of muscles and their descriptive actions to help the patient understand the focus of each exercise. The nursing intern accompanying the physical therapist is asked to match the muscle names with their corresponding descriptions. Can you help the intern correctly match the muscles? 1. Gastrocnemius 2. Sternocleidomastoid 3. Levator labii superioris 4. Zygomaticus 5. Buccinator 6. Depressor anguli oris 7. Orbicularis oris A. Prayer muscle B. Kissing muscle C. Blowing muscle D. Toe dancer’s muscle E. Smiling muscle F. Pouting muscle G. Sneering muscle

- A. D, G, A, E, C, F, B
- B. D, A, G, E, B, F, C
- C. D, A, G, F, C, E, B

D, D, A, G, E, C, F, B

Correct Answer: D, D, A, G, E, C, F, B

- **1. Gastrocnemius:** This calf muscle helps in plantarflexing the foot at the ankle joint and flexing the leg at the knee joint. When contracted, it allows a person to rise onto their toes, like a ballet dancer. Thus, its description is D. Toe dancer's muscle.
- **2. Sternocleidomastoid:** This muscle, when contracted, causes cervical flexion or rotation. It is often referred to as the A. Prayer muscle because it moves the head forward and downward, as in a praying position.
- **3. Levator labii superioris:** This muscle helps in elevating the upper lip, producing an expression similar to sneering. Hence, its description is G. Sneering muscle.
- **4. Zygomaticus:** This muscle pulls the angle of the mouth upward and backward, as seen when smiling. Its appropriate description is E. Smiling muscle.
- **5. Buccinator:** Located in the cheek, this muscle compresses the cheek against the teeth and aids in blowing air out of the mouth. It's referred to as the C. Blowing muscle.
- **6. Depressor anguli oris:** This muscle depresses the corner of the mouth, producing a frowning or pouting look. Hence, its description is F. Pouting muscle.
- **7. Orbicularis oris:** Surrounding the mouth, this muscle controls the movement of the mouth and lips, especially during actions like puckering or kissing. Thus, it's described as B. Kissing muscle.

20. In the management of bulimic patients, the following nursing interventions will promote a therapeutic relationship except:

- A. Establish an atmosphere of trust.
- B. Discuss their eating behavior.
- C. Help patients identify feelings associated with binge-purge behavior.
- D. Teach the patient about bulimia nervosa.

Correct Answer: B. Discuss their eating behavior.

The client is often ashamed of her eating behavior. Discussion should focus on feelings. Promote self-concept without moral judgment. Patient sees herself as weak-willed, even though part of a person may feel a sense of power and control (dieting, weight loss). Let the patient know that it is acceptable to be different from family, particularly mother. Developing a sense of identity separate from family and maintaining a sense of control in other ways besides dieting and weight loss is a desirable goal of therapy and program.

- **Option A:** Establish a therapeutic nurse-patient relationship. Within a helping relationship, the patient can begin to trust and try out new thinking and behaviors. State rules clearly regarding weighing schedule, remaining in sight during medication and eating times, and consequences of not following the rules. Without undue comment, be consistent in carrying out rules. Consistency is important in establishing trust. As part of the behavior modification program, the patient knows risks involved in not following established rules (decrease in privileges). Failure to follow rules is viewed as a patient's choice and accepted by staff in a matter-of-fact manner so as not to provide reinforcement for undesirable behavior.
- **Option C:** Respond (confront) with reality when a patient makes unrealistic statements. The patient may be denying the psychological aspects of their own situation and are often expressing a sense

of inadequacy and depression. Encourage the patient to express anger and acknowledge when it is verbalized. Important to know that anger is part of self and as such is acceptable. Expressing anger may need to be taught to the patient because anger is generally considered unacceptable in the family, and therefore the patient does not express it.

- **Option D:** Determine the level of knowledge and readiness to learn. Learning is easier when it begins where the learner is. Provide written information for the patient and SO(s); these are helpful as a reminder of and reinforcement for learning. Discuss the consequences of behavior. Sudden death can occur because of electrolyte imbalances; suppression of the immune system and liver damage may result from protein deficiency, or gastric rupture may follow binge-eating and vomiting.

21. 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.

22. Which of the following is the primary predisposing factor related to mastitis?

- A. Epidemic infection from nosocomial sources localizing in the lactiferous glands and ducts.
- B. Endemic infection occurring randomly and localizing in the peri glandular connective tissue.
- C. Temporary urinary retention due to decreased perception of the urge to void.
- D. Breast injury caused by overdistention, stasis, and cracking of the nipples.

Correct Answer: D. Breast injury caused by overdistention, stasis, and cracking of the nipples

With mastitis, injury to the breast, such as overdistention, stasis, and cracking of the nipples, is the primary predisposing factor.

- **Option A:** If a breast doesn't completely empty at feedings, one of the milk ducts can become clogged. The blockage causes milk to back up, leading to breast infection.
- **Option B:** Bacteria from your skin's surface and baby's mouth can enter the milk ducts through a crack in the skin of your nipple or through a milk duct opening. Stagnant milk in a breast that isn't emptied provides a breeding ground for the bacteria.
- **Option C:** Temporary urinary retention due to decreased perception of the urge to void is a contributory factor to the development of urinary tract infection, not mastitis.

23. A male client is admitted to the substance abuse unit for alcohol detoxification. Which of the following medications is Nurse Alice most likely to administer to reduce the symptoms of alcohol withdrawal?

- A. Naloxone (Narcan)
- B. Haloperidol (Haldol)
- C. Magnesium sulfate
- D. Chlordiazepoxide (Librium)

Correct Answer: D. Chlordiazepoxide (Librium)

Chlordiazepoxide (Librium) and other tranquilizers help reduce the symptoms of alcohol withdrawal. Chlordiazepoxide is a long-acting benzodiazepine and is an FDA approved medication for adults with mild-moderate to severe anxiety disorder, preoperative apprehension and anxiety, and withdrawal symptoms of acute alcohol use disorder. Chlordiazepoxide has anti-anxiety, sedative, appetite-stimulating, and weak analgesic actions. It binds to benzodiazepine receptors at the GABA-A ligand-gated chloride channel complex and enhances GABA's inhibitory effects.

- **Option A:** Naloxone (Narcan) is administered for narcotic overdose. Naloxone is indicated for the treatment of opioid toxicity, specifically to reverse respiratory depression from opioid use. It is useful in accidental or intentional overdose and acute or chronic toxicity. Naloxone is a pure, competitive opioid antagonist with a high affinity for the mu-opioid receptor, allowing for reversal of the effects of opioids. The onset of action varies depending on the route of administration but can be as fast as one minute when delivered intravenously (IV) or intraosseous (IO).
- **Option B:** Haloperidol (Haldol) may be given to treat clients with psychosis, severe agitation, or delirium. Haloperidol is a first-generation (typical antipsychotic) which exerts its antipsychotic action by blocking dopamine D2 receptors in the brain. When 72% of dopamine receptors are blocked, this drug achieves its maximal effect. Haloperidol is not selective for the D2 receptor. It also has noradrenergic, cholinergic, and histaminergic blocking action. The blocking of these receptors is associated with various side effects.
- **Option C:** Magnesium sulfate and other anticonvulsant medications are only administered to treat seizures if they occur during withdrawal. Magnesium sulfate administration can be oral (PO), intramuscular (IM), intraosseous (IO), or intravenous (IV). For every 1 gram of magnesium sulfate, it contains 98.6 mg or 8.12Eq of elemental magnesium. Magnesium sulfate can be combined with dextrose 5% or water to make intravenous solutions.

24. A nurse caring for several patients in the cardiac unit is told that one is scheduled for implantation of an automatic internal cardioverter-defibrillator. Which of the following patients is most likely to have this procedure?

- A. A patient admitted for myocardial infarction without cardiac muscle damage.
- B. A postoperative coronary bypass patient, recovering on schedule.
- C. A patient with a history of ventricular tachycardia and syncopal episodes.
- D. A patient with a history of atrial tachycardia and fatigue.

Correct Answer: C. A patient with a history of ventricular tachycardia and syncopal episodes.

An automatic internal cardioverter-defibrillator delivers an electric shock to the heart to terminate episodes of ventricular tachycardia and ventricular fibrillation. This is necessary in a patient with significant ventricular symptoms, such as tachycardia resulting in syncope. Indications are usually secondary where the patient has already suffered and survived cardiac arrest due to ventricular fibrillation/ventricular tachycardia, or primary when the patient is at high risk of sudden cardiac death due to VF/ VT but has never had any such event.

- **Option A:** A patient with myocardial infarction that resolved with no permanent cardiac damage would not be a candidate. ICD is a state of the art device that treats arrhythmias specifically those of ventricular origin like ventricular tachycardia and fibrillation. It has become the first line of defense in patients who are at high risk for sudden cardiac death (SCD) and has shown consistent survival benefit in cardiac arrest survivors (SCA), in patients with Heart failure and severe systolic dysfunction (left ventricular ejection fraction-LVEF less than or equal to 35%) as well as in patients with hypertrophic cardiomyopathy (HCM).
- **Option B:** A patient recovering well from coronary bypass would not need the device. ICD is essentially a pacemaker with the ability to recognize abnormally fast cardiac rhythm and provide immediate treatment which can be in the form of overdrive pacing called anti-tachycardia Pacing (ATP) or shock therapy which could be synchronized or unsynchronized, depending on the recognized rhythm and the pre-programmed rhythm detection algorithm.
- **Option D:** Atrial tachycardia is less serious and is treated conservatively with medication and cardioversion as a last resort. Secondary prophylaxis usually involves the event of cardiac arrest due to ventricular fibrillation (VF) or hemodynamically unstable, also known as pulseless, ventricular tachycardia (VT). Adequate workup and exclusion of reversible causes should be done first before deciding to put the device in, as is endorsed by the guidelines laid down by Heart Rhythm Society (HRS) and American College of Cardiology (ACC).

25. A client with AIDS is taking Zovirax (acyclovir). Which nursing intervention is most critical during the administration of acyclovir?

- A. Limit the client's activity
- B. Encourage a high-carbohydrate diet
- C. Utilize an incentive spirometer to improve respiratory function
- D. Encourage fluids

Correct Answer: D. Encourage fluids

Clients taking Acyclovir should be encouraged to drink plenty of fluids because renal impairment can occur. Acute kidney injury (AKI) is the most significant side effect of parenteral acyclovir administration.

The incidence of AKI is comparable to other nephrotoxic medications such as aminoglycosides. Patients with CKD are at higher risk. Dose adjustment of acyclovir for ideal body weight and baseline renal function is imperative.

- **Option A:** Limiting activity is not necessary. Patients should be monitored for adverse effects such as malaise, inflammation or phlebitis at infusion site, nausea, vomiting, rash (including Steven-Johnson syndrome), transaminitis, nausea, vomiting, diarrhea, headache, abdominal pain, aggression/confusion, agitation, alopecia, anaphylaxis, anemia, angioedema, anorexia, ataxia, coma, disseminated intravascular coagulation (DIC), dizziness and fatigue.
- **Option B:** Eating a high-carbohydrate diet is unnecessary. When taken orally, acyclovir may be taken with or without food 2 to 5 times a day for 5 to 10 days as well as up to 12 months to prevent outbreaks of genital herpes. For limited mucocutaneous lesions, acyclovir administration can be via the oral route. In cases in which there is disseminated, visceral, or CNS involvement, the acyclovir administration should be intravenous.
- **Option C:** Use of an incentive spirometer is not specific to clients taking Acyclovir. A study regarding the pharmacokinetics of acyclovir demonstrated that a patient's glomerular filtration and tubular secretion contribute to its renal excretion. Appropriate cautions are necessary when administering intravenous acyclovir to such higher-risk patients.

26. A client with emphysema should receive only 1 to 3 L/minute of oxygen if needed, or he may lose his hypoxic drive. Which of the following statements is correct about hypoxic drive?

- A. The client doesn't notice he needs to breathe.
- B. The client breathes only when his oxygen levels climb above a certain point.
- C. The client breathes only when his oxygen levels dip below a certain point.
- D. The client breathes only when his carbon dioxide level dips below a certain point.

Correct Answer: C. The client breathes only when his oxygen levels dip below a certain point.

Clients with emphysema breathe when their oxygen levels drop to a certain level; this is known as the hypoxic drive. In the meantime, his carbon dioxide levels continue to climb, and the client will pass out, leading to a respiratory arrest. The hypoxic drive theory then goes on to say that if the healthcare provider gives these patients too much oxygen they blunt their hypoxic drive. As their chemoreceptors are already tolerant of high levels of carbon dioxide, and therefore they have also lost that drive, their respirations will begin to slow causing a further rise in carbon dioxide levels, and a consequent acidosis.

- **Option A:** They don't take a breath when their levels of carbon dioxide are higher than normal, as do those with healthy respiratory physiology. COPD patients tend to have chronically elevated levels of carbon dioxide due to the nature of their illness. The theory goes then that because of this chronically elevated level of carbon dioxide in the chemoreceptors become tolerant of these high levels and therefore the carbon dioxide ceases to be that person's drive to breathe. What therefore drives them to breathe is the hypoxic drive or the lower levels of oxygen.
- **Option B:** If too much oxygen is given, the client has little stimulus to take another breath. The peripheral chemoreceptors are sensitive to the levels of oxygen in the body. They will send a signal to breathe when the partial pressure of oxygen begins to fall. This is referred to as the hypoxic drive but this drive has a much more minor role in breathing.

- **Option D:** The central chemoreceptors monitor carbon dioxide levels in the body. When those carbon dioxide levels are high a signal is sent to speed up the drive to breathe to blow off the excess carbon dioxide. So the levels of carbon dioxide dictate how fast we will breathe.

27. Myocardial oxygen consumption increases as which of the following parameters increase?

- A. Preload, afterload, and cerebral blood flow.
- B. Preload, afterload, and renal blood flow.
- C. Preload, afterload, contractility, and heart rate.
- D. Preload, afterload, cerebral blood flow, and heart rate.

Correct Answer: C. Preload, afterload, contractility, and heart rate.

Myocardial oxygen consumption increases as preload, afterload, renal contractility, and heart rate increase. Cerebral blood flow doesn't directly affect myocardial oxygen consumption. Myocardial oxygen consumption is equal to coronary blood flow multiplied by the arterial-venous oxygen difference. During diastole, the ventricles are receiving blood before systolic contraction. This filling phase of the cardiac cycle allows the coronary arteries to provide maximum blood flow to the heart.

- **Option A:** Since the heart operates solely under aerobic metabolism, myocardial mitochondria must maintain an abundance of oxygen to continue oxidative phosphorylation. Heart rate, contractility, and ventricular-wall tension are the three factors that determine myocardial oxygen demand. An increase in any of these variables requires the body to adapt to sustain adequate oxygen supply to the heart.
- **Option B:** Heart rate is thought to be the most important factor affecting myocardial oxygen demand. With an increased heart rate, the myocardium must work harder to complete the cardiac cycle more efficiently. With a shortened cardiac cycle, the time spent in diastole decreases.
- **Option D:** Contractility or inotropism is the rate of increase in the intraventricular pressure during contraction at a given muscle fiber length. Interestingly, myocytes have the innate ability to exert a contraction at any muscle length. This force is measured after the closure of the mitral valve and before the opening of the aortic valve during which time the intraventricular volume remains constant.

28. The nurse recognizes that urinary elimination changes may occur even in healthy older adults because of which of the following?

- A. The bladder distends and its capacity increases.
- B. Older adults ignore the need to void.
- C. Urine becomes more concentrated.
- D. The amount of urine retained after voiding increases.

Correct Answer: D. The amount of urine retained after voiding increases

The capacity of the bladder may decrease with age but the muscle is weaker and can cause urine to be retained. Muscle changes and changes in the reproductive system can affect bladder control. As the volume of urine held by the bladder increases, so too does the pressure therein. Wall pressure of 5 to 15 mm Hg creates a sensation of bladder fullness while 30 mm Hg and beyond is painful. The

sensation of increasing bladder fullness is conveyed to the spinal cord via the pudendal and hypogastric nerves on both A-delta and C nerve fibers.

- **Option A:** The bladder wall changes. The elastic tissue becomes tough and the bladder becomes less stretchy. The bladder cannot hold as much urine as before. The urethra can become blocked. In women, this can be due to weakened muscles that cause the bladder or vagina to fall out of position (prolapse). In men, the urethra can become blocked by an enlarged prostate gland.
- **Option B:** Older adults don't ignore the urge to void and may have difficulty getting to the toilet in time. Bladder capacity changes throughout one's life. In children, an approximation of bladder volume can be calculated with the formula: $(\text{years of age} + 2) \times 30 \text{ mL}$. By adulthood, the average volume that a functional bladder can comfortably hold is between 300 and 400 mL.
- **Option C:** The kidney becomes less able to concentrate urine with age. Urination or micturition primarily functions in the excretion of metabolic products and toxic wastes. The urinary tract also serves as a storage vessel of the waste filtered from the kidneys. Urine stored in the bladder is released from the bladder through the urethra upon a complex network of neurological function.

29. Restraints can be used for all of the following purposes except to:

- A. Prevent a confused patient from removing tubes, such as feeding tubes, I.V. lines, and urinary catheters.
- B. Prevent a patient from falling out of bed or a chair.
- C. Discourage a patient from attempting to ambulate alone when he requires assistance for his safety.
- D. Prevent a patient from becoming confused or disoriented.

Correct Answer: D. Prevent a patient from becoming confused or disoriented.

By restricting a patient's movements, restraints may increase stress and lead to confusion, rather than prevent it. Restraints in a medical setting are devices that limit a patient's movement. Restraints can help keep a person from getting hurt or doing harm to others, including their caregivers. They are used as a last resort. The other choices are valid reasons for using restraints.

- **Option A:** Sometimes hospital patients who are confused need restraints so that they do not remove catheters and tubes that give them medicine and fluids. A nurse who has special training in using restraints can begin to use them. A doctor or another provider must also be told restraints are being used. The doctor or other provider must then sign a form to allow the continued use of restraints.
- **Option B:** Restraints may be used to keep a person in proper position and prevent movement or falling during surgery or while on a stretcher. Patients who are restrained also need to have their blood flow checked to make sure the restraints are not cutting off their blood flow. They also need to be watched carefully so that the restraints can be removed as soon as the situation is safe.
- **Option C:** Restraints can also be used to control or prevent harmful behavior or get out of bed, fall, and hurt themselves. Restraints should not cause harm or be used as punishment. Health care providers should first try other methods to control a patient and ensure safety. Restraints should be used only as a last choice.

30. During the admission assessment of a 35 year old client with advanced ovarian cancer, the nurse recognizes which symptom as typical of the disease?

- A. Abdominal distention
- B. Abdominal bleeding
- C. Diarrhea
- D. Hypermenorrhea

Correct Answer: A. Abdominal distention

- **Option A:** Clinical manifestations of ovarian cancer include abdominal distention, urinary frequency and urgency, pleural effusion, malnutrition, pain from pressure caused by the growing tumor and the effects of urinary or bowel obstruction, constipation, ascites with dyspnea, and ultimately general severe pain.
- **Options B and D:** Abnormal bleeding, often resulting in hypermenorrhea, is associated with uterine and endometrial cancer.
- **Option C:** Diarrhea is often related to colon cancer, lymphoma, carcinoid syndrome, and pancreatic cancer.

31. The nurse working the organ transplant unit is caring for a client with a decreased white blood cell count. During evening visitation, a visitor brings a basket of fruit. What action should the nurse take?

- A. Allow the client to keep the fruit
- B. Place the fruit next to the bed for easy access by the client
- C. Offer to wash the fruit for the client
- D. Tell the family members to take the fruit home

Correct Answer: D. Tell the family members to take the fruit home

The client with neutropenia should not have fresh fruit because it should be peeled and/or cooked before eating. He should also not eat foods grown on or in the ground or eat from the salad bar. The nurse should remove potted or cut flowers from the room as well. Any source of bacteria should be eliminated, if possible.

- **Option A:** Educate clients and SO about appropriate methods for cleaning, disinfecting, and sterilizing items. Knowledge of ways to reduce or eliminate germs reduces the likelihood of transmission.
- **Option B:** Perform measures to break the chain of infection and prevent infection. Assist clients in carrying out appropriate skin and oral hygiene. Instruct clients to perform hand hygiene when handling food or eating.
- **Option C:** Place the patient in protective isolation if the patient is at high risk of infection. Protective isolation is set when the WBC indicates neutropenia. Wear personal protective equipment (PPE) properly.

32. A nurse is preparing a list of self-care instructions for a PP client who was diagnosed with mastitis. Which of the following instructions would be included on the list. Select all that apply.

- A. Take the prescribed antibiotics until the soreness subsides.

- B. Wear a supportive bra.
- C. Avoid decompression of the breasts by breastfeeding or breast pump.
- D. Rest during the acute phase.
- E. Continue to breastfeed if the breasts are not too sore.

Correct Answer: B, D, and E.

Mastitis is an infection of the lactating breast. Client instructions include resting during the acute phase, maintaining a fluid intake of at least 3 L a day, and taking analgesics to relieve discomfort. Additional supportive measures include the use of moist heat or ice packs and wearing a supportive bra. Non-steroidal anti-inflammatory drugs (NSAIDs) can be used for pain control. Heat applied to the breast just before emptying can help increase milk letdown and facilitate with emptying. Cold packs applied to the breast after emptying can help reduce edema and pain. Providers should ensure the patient that breastfeeding with mastitis is safe and that they should continue to do so if desired. If the patient does not wish to continue to breastfeed, they should be counseled on the importance of continuing to empty the breasts and taught alternative methods such as the use of a breast pump or manual expression.

- **Option A:** Antibiotics may be prescribed and are taken until the complete prescribed course is finished. They are not stopped when the soreness subsides. If the symptoms of lactational mastitis persist beyond 12 to 24 hours, antibiotics should be administered. Because *S. aureus* is the most common cause, antibiotic therapy should be tailored accordingly. In the setting of mild infection without MRSA risk factors, outpatient treatment can be initiated with dicloxacillin or cephalexin.
- **Option C:** Continued decompression of the breast by breastfeeding or pumping is important to empty the breast and prevent formation of an abscess. The initial management of lactational mastitis is symptomatic treatment. Continuing to fully empty the breasts has shown to decrease the duration of symptoms in patients treated both with and without antibiotics. Patients should be encouraged to continue to breastfeed, pump, or hand express. If the patient stops draining the milk, further stasis occurs, and the infection will progress.

33. A 68-year-old male patient presents to the orthopedic clinic with complaints of joint pain and stiffness, particularly in his knees. He mentions that the pain worsens after prolonged standing or walking. Radiographic imaging shows signs of degeneration in the structures that provide cushioning and support between the bones in his knee joints. Which structure is most likely affected in this patient?

- A. Cartilage
- B. Tendons
- C. Ligaments
- D. Bursae

- **Option B:** Tendons are not designed to provide cushioning or support between bones in a joint. Instead, they serve the purpose of connecting muscles to bones, transmitting the force generated by muscles to facilitate movement and stabilize the joint, rather than acting as a protective or cushioning element.
- **Option C:** Ligaments do not offer cushioning or direct support between bones in a joint. Their primary role is to connect bones to one another, providing stability and limiting excessive joint

movement.

- **Option D:** Bursae are small, fluid-filled sacs located near joints and tendons, designed to reduce friction and facilitate smooth movement by minimizing the rubbing of soft tissues against bones or other structures.

34. The nurse is conducting a postoperative assessment of a client on the first day after renal surgery. Which of the following findings would be most important for the nurse to report to the physician?

- A. Temperature, 99.8°F
- B. Urine output, 20 ml/hour
- C. Absence of bowel sounds
- D. A 2x2 inch area of serosanguineous drainage on the flank dressing.

Correct Answer: B. Urine output, 20 ml/hour.

The decrease in urinary output may indicate inadequate renal perfusion and should be reported immediately. Urine output of 30 ml/hour or greater is considered acceptable. There is a possibility that the kidney could become damaged during the surgical procedure. Every attempt will be made to minimize this risk.

- **Option A:** A slight elevation in temperature is expected after surgery. An infection can delay the healing process or cause scarring or other problems. If the wound from the surgical incision becomes infected, it will be treated with antibiotics. Antibiotics are powerful medicines that fight bacterial infections.
- **Option C:** Peristalsis returns gradually, usually the second or third day after surgery. Bowel sounds will be absent until then. The surgery involves the same level of risk for the donor as any other major surgery. The majority of complications following surgery are minor and may cause a longer hospitalization.
- **Option D:** A small amount of serosanguineous drainage is to be expected. The client will be encouraged to move around as soon as he can after surgery. This will stimulate blood circulation to help prevent blood clots.

35. The nurse coming on duty receives the report from the nurse going off duty. Which of the following clients should the on-duty nurse assess first?

- A. The 58-year-old client who was admitted 2 days ago with heart failure, BP of 126/76, and a respiratory rate of 21 breaths a minute.
- B. The 88-year-old client with end-stage right-sided heart failure, BP of 78/50, and a DNR order.
- C. The 62-year-old client who was admitted one day ago with thrombophlebitis and receiving IV heparin.
- D. A 76-year-old client who was admitted 1 hour ago with new-onset atrial fibrillation and is receiving IV diltiazem (Cardizem).

Correct Answer: D. A 76-year-old client who was admitted 1 hour ago with new-onset atrial fibrillation and is receiving IV diltiazem (Cardizem).

The client with A-fib has the greatest potential to become unstable and is on IV medication that requires close monitoring. After assessing this client, the nurse should assess the client with thrombophlebitis who is receiving a heparin infusion, and then go to the 58-year-old client admitted 2-days ago with heart failure (her s/s are resolving and don't require immediate attention). The lowest priority is the 89-year-old with end-stage right-sided heart failure, who requires time-consuming supportive measures.

- **Option A:** Heart failure is a serious medical disorder associated with high mortality. Mortality rates at 1 year and 5 years are 22% and 43%, respectively. The highest mortality is in patients with advanced NYHA class. In addition, heart failure associated with an MI carries a mortality of 30-40%. Heart failure that is associated with systolic dysfunction has a 50% mortality over 5 years. Further, patients with heart failure need repeated admissions over the years.
- **Option B:** The mortality rate is higher in HFrEF than HFmrEF and HFpEF, according to OPTIMIZE-HF trial that showed a mortality rate of 3.9% for HFrEF, 3% for HFmrEF, and 2.9% for HFpEF. The mortality rate is also higher in symptomatic patients. There are some predictors of poor prognosis and increased mortality in hospitalized patients, which include systolic blood pressure less than 115 mmHg, serum creatinine greater than 2.7 mg/dL, serum urea over 15 mmol/L, NT-pro-BNP exceeding 986 pg/mL, and LVEF under 45%.
- **Option C:** Most patients presenting with phlebitis exhibit a fever with abdominal pain; however, nausea, vomiting, and jaundice is rare. Some may present with hypotension, tachycardia, and severe sepsis. Septic emboli may additionally travel to joints or bones, resulting in septic arthritis or osteomyelitis – in which case the patient may complain of joint pains or body aches (e.g., in addition to fever, malaise, and night sweats).

36. In a wound care clinic, Nurse Palmer is assigned to Ms. Harris, a 27-year-old female client with a history of deep vein thrombosis. Ms. Harris presents with a venous stasis ulcer on her left lower leg, which has persisted for the last three months despite home care efforts. Ms. Harris has been managing the ulcer with over-the-counter dressings and is concerned about the lack of progress. She has also mentioned that she's been feeling fatigued lately and has unintentionally lost 5 kg over the past month. Based on the assessment and the client's history, which nursing intervention would be most effective in promoting the healing of the ulcer?

- A. Apply dressing using sterile technique
- B. Improve the client's nutrition status
- C. Initiate limb compression therapy
- D. Begin proteolytic debridement

Correct Answer: B. Improve the client's nutrition status

Venous stasis occurs when venous blood collects and stagnates in the lower leg due to incompetent venous valves. Eventually, little oxygen and nutrients are supplied to the cells of the lower extremities causing the cells to die or necrose. This ultimately leads to the formation of venous stasis ulcers characterized by shallow but large brown wounds with irregular margins that typically develop on the lower leg or ankle. The goal of clinical management in a client with venous stasis ulcers is to promote healing. This only can be accomplished with proper nutrition. Nutritional deficiencies are common causes of venous ulcers. Alterations in the diet to include foods high in protein, iron, zinc, and vitamins C and A are encouraged to promote wound healing.

- **Option A:** Dressings are often used under compression bandages to promote faster healing and prevent adherence of the bandage to the ulcer. A wide range of dressings are available, including hydrocolloids (e.g., Duoderm), foams, hydrogels, pastes, and simple non-adherent dressings.
- **Option C:** Compression therapy is the standard of care for venous ulcers and chronic venous insufficiency. A recent Cochrane review found that venous ulcers heal more quickly with compression therapy than without. Methods include inelastic, elastic, and intermittent pneumatic compression. Compression therapy reduces edema, improves venous reflux, enhances healing of ulcers, and reduces pain.
- **Option D:** Removal of necrotic tissue and bacterial burden through debridement has long been used in wound care to enhance healing. Debridement may be sharp (e.g., using a curette or scissors), enzymatic, mechanical, biologic (i.e., using larvae), or autolytic.

37. The client with open burn wounds begins to have diarrhea. The client is found to have a below-normal temperature, with a white blood cell count of 4000/mm³. Which is the nurse's best action?

- A. Continuing to monitor the client
- B. Increasing the temperature in the room
- C. Increasing the rate of the intravenous fluids
- D. Preparing to do a workup for sepsis

Correct Answer: D. Preparing to do a workup for sepsis.

These findings are associated with systemic gram-negative infection and sepsis. To verify that sepsis is occurring, cultures of the wound and blood must be taken to determine the appropriate antibiotic to be started.

- **Option A:** Continuing just to monitor the situation can lead to septic shock. Indicators of sepsis (often occurs with full-thickness burn) requiring prompt evaluation and intervention. Changes in sensorium, bowel habits, and the respiratory rate usually precede fever and alteration of laboratory studies.
- **Option B:** Increasing the temperature in the room may make the client more comfortable, but the priority is finding out if the client has sepsis and treating it before it becomes a shock situation.
- **Option C:** Increasing the rate of intravenous fluids may be done to replace fluid losses with diarrhea, but is not the priority action. Fluid resuscitation replaces lost fluids and electrolytes and helps prevent complications (shock, acute tubular necrosis). Replacement formulas vary but are based on the extent of injury, amount of urinary output, and weight.

38. A female client comes into the emergency room complaining of SOB and pain in the lung area. She states that she started taking birth control pills 3 weeks ago and that she smokes. Her VS are: 140/80, P 110, R 40. The physician orders ABG's, results are as follows: pH: 7.50; PaCO₂ 29 mm Hg; PaO₂ 60 mm Hg; HCO₃⁻ 24 mEq/L; SaO₂ 86%. Considering these results, the first intervention is to:

- A. Begin mechanical ventilation.

- B. Place the client on oxygen.
- C. Give the client sodium bicarbonate.
- D. Monitor for pulmonary embolism.

Correct Answer: B. Place the client on oxygen

The pH (7.50) reflects alkalosis, and the low PaCO₂ indicates the lungs are involved. The client should immediately be placed on oxygen via mask so that the SaO₂ is brought up to 95%. Encourage slow, regular breathing to decrease the amount of CO₂ she is losing.

- **Option A:** Mechanical ventilation may be ordered for acute respiratory acidosis. In patients who are not significantly encephalopathic and have no excessive secretions, noninvasive ventilation with CPAP or BIPAP can be a useful modality to support ventilation and avoid the need for anesthesia and sedation, as well as the risk of nosocomial infection with endotracheal intubation.
- **Option C:** Sodium bicarbonate would be given to reverse acidosis. Sodium bicarbonate infusion reduces plasma ionized calcium concentration in critically ill patients with metabolic acidosis. In vitro, bicarbonate concentration has a major effect reducing ionized calcium level in serum
- **Option D:** This client may have pulmonary embolism, so she should be monitored for this condition, but it is not the first intervention. A timely diagnosis of a pulmonary embolism (PE) is crucial because of the high associated mortality and morbidity, which may be prevented with early treatment. It is important to note that 30% of untreated patients with pulmonary embolism die, while only 8% die after timely therapy.

39. A client has driven himself to the ER. He is 50 years old, has a history of hypertension, and informs the nurse that his father died of a heart attack at 60 years of age. The client is presently complaining of indigestion. The nurse connects him to an ECG monitor and begins administering oxygen at 2 L/minute per NC. The nurse's next action would be to:

- A. Call for the doctor.
- B. Start an intravenous line.
- C. Obtain a portable chest radiograph.
- D. Draw blood for laboratory studies.

Correct Answer: B. Start an intravenous line.

Advanced cardiac life support recommends that at least one or two intravenous lines be inserted in one or both of the antecubital spaces. Reperfusion therapy is indicated in all patients with symptoms of ischemia of less than 12-hours duration and persistent ST-segment elevation. Primary percutaneous coronary intervention (PCI) is preferred to fibrinolysis if the procedure can be performed <120 minutes of ECG diagnosis.

- **Option A:** Patients can present with chest discomfort or pressure that can radiate to the neck, jaw, shoulder, or arm. In addition to the history and physical exam, myocardial ischemia may be associated with ECG changes and elevated biochemical markers such as cardiac troponins.
- **Option C:** The resting 12 lead ECG is the first-line diagnostic tool for the diagnosis of acute coronary syndrome (ACS). It should be obtained within 10 minutes of the patient's arrival in the emergency department. Acute MI is often associated with dynamic changes in the ECG waveform.

- **Option D:** Drawing blood is important but secondary to starting the intravenous line. Cardiac troponins (I and T) are components of the contractile apparatus of myocardial cells and expressed almost exclusively in the heart. Elevated serum levels of cardiac troponin are not specific to the underlying mode of injury (ischemic vs. tension).

40. A 32-year-old male patient presents to a dental clinic for a routine check-up after several years of neglecting his oral health. The dental hygienist notes that, despite some plaque and minor gum inflammation, the patient seems to have all his permanent teeth, with none missing or extracted. Given the patient's age and dental history, the instructor uses this clinical scenario as an opportunity to gauge the students' knowledge about the normal distribution of permanent teeth in each quadrant of an adult mouth. Reflecting on the oral anatomy of this patient, and considering the standard distribution of adult teeth, the instructor poses the question: Each quadrant of the adult mouth typically holds how many permanent ___ incisors, ___ canines, ___ premolars, and ___ molars?

- A. 1, 2, 3, 2
- B. 1, 2, 2, 3
- C. 2, 1, 3, 2
- D. 2, 1, 2, 3

Correct Answer: D. 2, 1, 2, 3

There are 32 teeth in the normal adult mouth, located in the mandible and maxillae. The teeth can be divided into quadrants: right upper, left upper, right lower, and left lower. In adults, each quadrant contains one central and one lateral incisor; one canine; first and second premolars; and first, second, and third molars.

- **Option A:** This is incorrect. Adults have 2 incisors (1 central and 1 lateral) in each quadrant. Also, adults do not have 3 premolars in each quadrant; they typically have 2 (1 first premolar and 1 second premolar).
- **Option B:** This is incorrect. Adults have 2 incisors in each quadrant, not 1. Also, there is typically 1 canine in each quadrant, not 2.
- **Option C:** This is incorrect. While adults have 2 incisors and 1 canine in each quadrant, they typically do not have 3 premolars; they have 2 (1 first premolar and 1 second premolar).

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

- A. Place the patient on their back, remove dangerous objects from the immediate vicinity, and insert a padded tongue depressor.
- B. Place the patient in a lateral position (on their side), remove any hazardous objects nearby, and prepare to use a bite block if needed.
- C. Position the patient supine (on their back), clear the area of any items that might cause injury, and restrain their limbs gently.

D. Turn the patient to a side-lying position, ensure the environment is safe from potential hazards, and use a pillow or a hand to protect the head.

E. Keep the patient in a prone position, secure the perimeter for safety, and monitor their respiratory status closely.

F. Roll the patient onto their side to prevent aspiration, remove objects that could cause harm, and observe for cessation of seizure activity.

Correct Answers: B, D, and F.

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

42. The nurse is caring for a client following the reimplantation of the thumb and index finger. Which finding should be reported to the physician immediately?

A. Coolness and discoloration of the digits

B. Temperature of 100°F

C. Complaints of pain

D. Difficulty moving the digits

Correct Answer: A. Coolness and discoloration of the digits

- Option A: Coolness and discoloration of the reimplanted digits indicate compromised circulation, which should be reported immediately to the physician.
- Option B: The temperature should be monitored, but the client would receive antibiotics to prevent infection.
- Options C and D: Pain and difficulty moving the digits are expected following amputation and reimplantation.

43. What is the definitive test used to diagnose an abdominal aortic aneurysm?

A. Abdominal X-ray

B. Arteriogram

C. CT scan

D. Ultrasound

Correct Answer: B. Arteriogram

An arteriogram accurately and directly depicts the vasculature; therefore, it clearly delineates the vessels and any abnormalities.

- **Option A:** An abdominal aneurysm would only be visible on an X-ray if it were calcified. Plain radiography is often performed on patients with abdominal complaints before the diagnosis of AAA has been entertained. Using this method to evaluate patients with AAA is difficult because the only

marginally specific finding, aortic wall calcification, is seen less than half of the time. Aortic-wall calcification (see the images below) may appear without aneurysm rim calcification, resulting in a high false-negative rate.

- **Option C:** CT scan doesn't give a direct view of the vessels. CT permits visualization of the retroperitoneum, is not limited by obesity or bowel gas, detects leakage, and allows concomitant evaluation of the kidneys.
- **Option D:** Ultrasound doesn't yield as accurate a diagnosis as the arteriogram. Ultrasonography is the standard imaging tool for AAA. When performed by trained personnel, it has a sensitivity of nearly 100% and a specificity approaching 96% for the detection of infrarenal AAA.

44. The nurse is teaching a psychiatric client about her prescribed drugs, chlorpromazine, and benztropine. Why is benztropine administered?

- A. To reduce psychotic symptoms.
- B. To reduce extrapyramidal symptoms.
- C. To control nausea and vomiting.
- D. To relieve anxiety.

Correct Answer: B. To reduce extrapyramidal symptoms

Benzotropine is an anticholinergic medication, administered to reduce the extrapyramidal adverse effects of chlorpromazine and other antipsychotic medications. Consequently, it reduces central cholinergic effects by blocking muscarinic receptors that appear to improve the symptoms of Parkinson's disease. Thus, benztropine blocks the cholinergic muscarinic receptor in the central nervous system. Therefore, it reduces the cholinergic effects significantly during Parkinson's disease which becomes more pronounced in the nigrostriatal tract because of reduced dopamine concentrations.

- **Option A:** The first-generation antipsychotics work by inhibiting dopaminergic neurotransmission. Their effectiveness is best when they block about 72% of the D2 dopamine receptors in the brain. They also have noradrenergic, cholinergic, and histaminergic blocking action. Second-generation antipsychotics work by blocking D2 dopamine receptors as well as serotonin receptor antagonist action. The 5-HT_{2A} subtype of serotonin receptor is most commonly involved.
- **Option C:** Benzodiazepines are mainly used as adjunctive agents to reduce anxiety, anticipatory nausea and vomiting, and refractory emesis occurring despite adequate prophylaxis regimens. Lorazepam (Ativan) and alprazolam (Xanax) are the most commonly used drugs in this class.
- **Option D:** Acute anxiety may require treatment with a benzodiazepine. Chronic anxiety treatment consists of psychotherapy, pharmacotherapy, or a combination of both. Pharmacotherapy: selective serotonin reuptake inhibitors (SSRIs), serotonin-norepinephrine reuptake inhibitors (SNRIs), benzodiazepines, tricyclic antidepressants, mild tranquilizers, and beta-blockers treat anxiety disorders.

45. A patient is about to undergo bone marrow aspiration and biopsy and expresses fear and anxiety about the procedure. Which of the following is the most effective nursing response?

- A. Warn the patient to stay very still because the smallest movement will increase her pain.

- B. Encourage the family to stay in the room for the procedure.
- C. Stay with the patient and focus on slow, deep breathing for relaxation.
- D. Delay the procedure to allow the patient to deal with her feelings.

Correct Answer: C. Stay with the patient and focus on slow, deep breathing for relaxation.

Slow, deep breathing is the most effective method of reducing anxiety and stress. It reduces the level of carbon dioxide in the brain to increase calm and relaxation. Stay with the patient during panic attacks. Use short, simple directions. Encourage the client's participation in relaxation exercises such as deep breathing, progressive muscle relaxation, guided imagery, meditation and so forth.

- **Option A:** Warning the patient to remain still will likely increase her anxiety. Maintain a calm, non-threatening manner while working with the client. Anxiety is contagious and may be transferred from health care provider to client or vice versa. Client develops feeling of security in presence of calm staff person.
- **Option B:** Encouraging family members to stay with the patient may make her worry about their anxiety as well as her own. Move the client to a quiet area with minimal stimuli such as a small room or seclusion area (dim lighting, few people, and so on.) 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.
- **Option D:** Delaying the procedure is unlikely to allay her fears. Establish and maintain a trusting relationship by listening to the client; displaying warmth, answering questions directly, offering unconditional acceptance; being available, and respecting the client's use of personal space.

46. A 65-year-old woman with a known history of osteoporosis is admitted to the hospital for a routine check-up. During her stay, the nurse conducts a thorough assessment to monitor the progression of her condition. While most findings are consistent with her diagnosis, one particular observation raises immediate concern. Which of the following findings should the nurse report to the healthcare provider without delay?

- A. Back pain worsened by movement
 - B. Mild tenderness on palpation of long bones
 - C. Height loss of 1 inch over the past year
 - D. Mild fatigue and lethargy
- **Option B:** Mild tenderness on palpation of long bones is a common finding in patients with osteoporosis but does not require immediate intervention.
 - **Option C:** Height loss is expected in patients with osteoporosis due to vertebral compression fractures.
 - **Option D:** Mild fatigue and lethargy may not be directly related to osteoporosis and can be further assessed but do not require immediate attention.

47. Corticosteroids are potent suppressors of the body's inflammatory response. Which of the following conditions or actions do they suppress?

- A. Cushing syndrome
- B. Pain receptors
- C. Immune response
- D. Neural transmission

Correct Answer: C. Immune response

Corticosteroids suppress eosinophils, lymphocytes, and natural killer cells, inhibiting the natural inflammatory process in an infected or injured part of the body. This helps resolve inflammation, stabilizes lysosomal membranes, decreases capillary permeability, and depresses phagocytosis of tissues by white blood cells, thus blocking the release of more inflammatory materials.

- **Option A:** Excessive corticosteroid therapy can lead to Cushing's syndrome.
- **Option B:** Analgesics suppress pain receptors.
- **Option D:** Opioids and heroin may suppress neural transmission if taken in unregulated amounts.

48. She notes that there is increasing unrest of the staff due to fatigue brought about by the shortage of staff. Which action is a priority?

- A. Evaluate the overall result of the unrest.
- B. Initiate a group interaction.
- C. Develop a plan and implement it.
- D. Identify external and internal forces.

Correct Answer: B. Initiate a group interaction

Initiating a group interaction will be an opportunity to discuss the problem in the open. Managers should communicate conflict resolution policies and processes to create a sense of safety in the workplace and provide an outlet for employees to report incidents should they feel the need. It is also important to ensure that employees understand any no retaliation policies regarding expressing concerns in the workplace.

- **Option A:** To help employees cope, employers can consider implementing an employee assistance program (EAP). An EAP will help alleviate stress and worry, connect employees with the resources they need to manage their mental health and help prevent potential violence before it occurs.
- **Option C:** Having a plan in place helps organizations remain calm during a chaotic situation. A business continuity plan should detail how the business will respond to a variety of situations.
- **Option D:** Understanding the community, developing processes to address a variety of "what if" scenarios, and exemplifying appropriate behavior will help employers maintain a civil workplace and squash conflicts before they get out of hand.

49. Referencing the image below, what is the name of the structure marked #1.

- A. Minor calyx
- B. Major calyx
- C. Cortical blood vessels

- D. Interlobal blood vessels
- E. Arcuate blood vessels
- F. Renal vein
- G. Renal nerve
- H. Renal artery
- I. Renal pelvis
- J. Renal pyramid

Correct answer: #1 is Option C. Cortical blood vessels

The cortical blood vessels are the arteries and veins that supply blood to the renal cortex, which is the outer layer of the kidney.

50. Which of the following is accurate pertaining to physical exercise and type 2 diabetes mellitus?

- A. Physical exercise can slow the progression of type 2 diabetes mellitus.
- B. Strenuous exercise is beneficial when blood glucose is high.
- C. Patients who take insulin and engage in strenuous physical exercise might experience hyperglycemia.
- D. Adjusting insulin regimen allows for safe participation in all forms of exercise.

Correct Answer: A. Physical exercise can slow the progression of type 2 diabetes mellitus.

Physical exercise slows the progression of type 2 diabetes mellitus because exercise has beneficial effects on carbohydrate metabolism and insulin sensitivity. Exercise improves blood glucose control in type 2 diabetes, reduces cardiovascular risk factors, contributes to weight loss, and improves well-being.

- **Option B:** Daily exercise, or at least not allowing more than 2 days to elapse between exercise sessions, is recommended to enhance insulin action. Adults with type 2 diabetes should ideally perform both aerobic and resistance exercise training for optimal glycemic and health outcomes.
- **Option C:** Insulin action in muscle and liver can be modified by acute bouts of exercise and by regular physical activity. Acutely, aerobic exercise increases muscle glucose uptake up to fivefold through insulin-independent mechanisms.
- **Option D:** Insulin and foods both must be adjusted to allow safe participation in exercise. Aerobic exercise clearly improves glycemic control in type 2 diabetes, particularly when at least 150 min/week are undertaken. Resistance exercise (free weights or weight machines) increases strength in adults with type 2 diabetes by about 50% and improves A1C by 0.57%.

51. What would be the primary goal of therapy for a client with pulmonary edema and heart failure?

- A. Enhance comfort
- B. Increase cardiac output
- C. Improve respiratory status

D. Peripheral edema decreased

Correct Answer: B. Increase cardiac output

The primary goal of therapy for the client with pulmonary edema or heart failure is increasing cardiac output. Pulmonary edema is an acute medical emergency requiring immediate intervention. Preload reduction decreases pulmonary capillary hydrostatic pressure and reduces fluid transudation into the pulmonary interstitium and alveoli. Afterload reduction increases cardiac output and improves renal perfusion, which allows for diuresis in the patient with fluid overload.

- **Option A:** Enhancing the client's comfort is a goal of therapy but not an urgent one. The initial management of patients with cardiogenic pulmonary edema (CPE) should address the ABCs of resuscitation, that is, airway, breathing, and circulation. Oxygen should be administered to all patients to keep oxygen saturation at greater than 90%. Any associated arrhythmia or MI should be treated appropriately.
- **Option C:** Respiratory status would improve following an increase in the cardiac output. Patients who remain hypoxic despite supplemental oxygenation and patients who have severe respiratory distress require ventilatory support in addition to maximal medical therapy.
- **Option D:** Peripheral edema is a manifestation of cardiogenic pulmonary edema and right ventricular heart failure, but it is not a primary concern. In general, begin with oral vasodilator therapy, most commonly ACE inhibitors. If the patient was initially treated with inotropic medications, wean the patient off of these as soon as his or her condition is stable, to minimize adverse effects.

52. Ryan underwent an open reduction and internal fixation of the left hip. One day after the operation, the client is complaining of pain. Which data would cause the nurse to refrain from administering the pain medication and to notify the health care provider instead?

- A. Left hip dressing dry and intact.
- B. Blood pressure of 114/78 mm Hg; pulse rate of 82 beats per minute.
- C. Left leg in functional anatomic position.
- D. Left foot cold to touch; no palpable pedal pulse.

Correct Answer: D. Left foot cold to touch; no palpable pedal pulse.

A left foot cold to touch without palpable pedal pulse represents an abnormal finding on neurovascular assessment of the left leg. The client is most likely experiencing some complication from surgery, which requires immediate medical intervention. The nurse should notify the health care provider of these findings.

- **Option A:** A dry and intact hip dressing is a normal assessment of findings that do not require medical intervention. A dressing is considered INTACT if portions of the white dressing border have lifted from the skin as long as the clear viewing window maintains full contact with the skin. The skin under the viewing window does not appear visibly soiled with exudate or blood. The skin under the viewing window does not appear dampened or moist with sweat, exudate, fluid, or blood.
- **Option B:** A blood pressure of 114/78 mm Hg and pulse rate of 82 beats per minute are normal assessment findings that do not require medical intervention. The normal range used in an adult is between 60 to 100 beats /minute with rates above 100 beats/minute and rates and below 60 beats per minute, referred to as tachycardia and bradycardia, respectively. The respiratory rate is the

number of breaths per minute. The normal breathing rate is about 12 to 20 breaths per minute in an average adult.

- **Option C:** A left foot in functional anatomic position are all normal assessment findings that do not require medical intervention. It functions as a rigid structure for weight-bearing and it can also function as a flexible structure to conform to uneven terrain.

53. A patient in her 14th week of pregnancy has presented with abdominal cramping and vaginal bleeding for the past 8 hours. She has passed several clots. What is the primary nursing diagnosis for this patient?

- A. Knowledge deficit
- B. Fluid volume deficit
- C. Anticipatory grieving
- D. Pain

Correct Answer: B. Fluid volume deficit

If bleeding and clots are excessive, this patient may become hypovolemic. Pad count should be instituted. Blood volume expands during pregnancy, and a considerable portion of the weight of a pregnant woman is retained water.

- **Option A:** Knowledge deficit is an appropriate nursing diagnosis because the woman might not have any knowledge on how to manage her symptoms. However, this is not a priority diagnosis.
- **Option C:** Anticipatory grieving is the name given to the tumultuous set of feelings and reactions that occur when someone is expecting the death of a loved one.
- **Option D:** Pain may be felt due to abdominal cramping accompanied by bleeding. This is not a cause of alarm since true labor pain includes strong and regular contractions and lower back pain.

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

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

Correct Answer: A. Apnea

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

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

55. During a routine health assessment at a nursing clinic, a 65-year-old patient, who recently experienced a loss of smell after recovering from a viral infection, inquired about the intricacies of the olfactory system. The patient is curious about how exactly the sense of smell travels from the nostrils to the brain. The nurse, eager to satisfy the patient's curiosity and offer a deeper understanding of the body's mechanisms, illustrates the process through a series of steps, posing a question about the correct sequence of events. During a nursing assessment, a patient asks about the neuronal pathway for olfaction (sense of smell). To provide an accurate response, which of the following best describes the neuronal pathway for olfaction?

- A. Olfactory tracts — Olfactory cortex — Interneurons — Olfactory bulb— Axons from olfactory neurons — Foramina of the cribriform plate
- B. Olfactory bulb — Axons from olfactory neurons — Foramina of the cribriform plate — Interneurons — Olfactory tracts — Olfactory cortex
- C. Foramina of the cribriform plate — Axons from olfactory neurons — Olfactory bulb — Interneurons — Olfactory tracts — Olfactory cortex
- D. Axons from olfactory neurons — Foramina of the cribriform plate — Olfactory bulb — Interneurons — Olfactory tracts — Olfactory cortex

Correct Answer: D. Axons from olfactory neurons — Foramina of the cribriform plate — Olfactory bulb — Interneurons — Olfactory tracts — Olfactory cortex

Olfactory signals begin with the reception of smell by olfactory neurons in the nasal cavity. These neurons have long axons that pass through the foramina of the cribriform plate of the ethmoid bone to reach the olfactory bulb. Within the olfactory bulb, these axons synapse with interneurons. The axons of these interneurons then form the olfactory tracts which project directly to the olfactory cortex in the brain, allowing the perception of smell.

- **Option A:** This sequence is largely reversed and does not represent the correct order of the neuronal pathway for olfaction.
- **Option B:** The order in this option does not begin with the initial reception of the smell (via the axons of olfactory neurons). Additionally, the sequence is somewhat jumbled and does not represent the flow of olfactory information.
- **Option C:** The pathway does start with the axons from olfactory neurons, but the order presented here is not correct. The olfactory bulb does not directly follow the cribriform plate.

56. Albert, a 35-year-old insulin-dependent diabetic, is admitted to the hospital with a diagnosis of pneumonia. He has been febrile since admission. His daily insulin requirement is 24 units of NPH. Every morning Albert is given NPH insulin at 0730. Meals are served at 0830, 1230, and 1830. The nurse expects that the NPH insulin will reach its maximum effect (peak) between the hours of:

- A. 1130 and 1330
- B. 1330 and 1930
- C. 1530 and 2130
- D. 1730 and 2330

Correct Answer: B. 1330 and 1930

The peak time of insulin is the time it is working the hardest to lower blood glucose. NPH insulin is an intermediate-acting insulin that has an onset of 1 to 3 hours after injection, peaks 4 to 12 hours later, and is effective for about 12 to 16 hours.

- **Option A:** NPH human insulin has an onset of insulin effect of 1 to 2 hours, a peak effect of 4 to 6 hours, and a duration of action of more than 12 hours. Very small doses will have an earlier peak effect and shorter duration of action, while higher doses will have a longer time to peak effect and prolonged duration.
- **Option C:** Regular human insulin has an onset of action of 1/2 hour to 1 hour, peak effect in 2 to 4 hours, and duration of action of 6 to 8 hours. The larger the dose of regular the faster the onset of action, but the longer the time to peak effect and the longer the duration of the effect.
- **Option D:** Long-acting insulin analogs have an onset of insulin effect in 1 1/2-2 hours. The insulin effect plateaus over the next few hours and is followed by a relatively flat duration of action that lasts 12-24 hours for insulin detemir and 24 hours for insulin glargine.

57. Francis tells the nurse that her coworkers are sabotaging the computer. When the nurse asks questions, the client becomes argumentative. This behavior shows personality traits associated with which of the following personality disorders?

- A. Antisocial
- B. Histrionic
- C. Paranoid
- D. Schizotypal

Correct Answer: C. Paranoid

Because of their suspiciousness, paranoid personalities ascribe malevolent activities to others and tend to be defensive, becoming quarrelsome and argumentative. Paranoid personality disorder (PPD) is one of a group of conditions called "Cluster A" personality disorders which involve odd or eccentric ways of thinking. People with PPD also suffer from paranoia, an unrelenting mistrust and suspicion of others, even when there is no reason to be suspicious.

- **Option A:** Clients with antisocial personality disorder can also be antagonistic and argumentative but are less suspicious than paranoid personalities. Antisocial personality disorder (ASPD) is a

deeply ingrained and rigid dysfunctional thought process that focuses on social irresponsibility with exploitive, delinquent, and criminal behavior with no remorse. Disregard for and the violation of others' rights are common manifestations of this personality disorder, which displays symptoms that include failure to conform to the law, inability to sustain consistent employment, deception, manipulation for personal gain, and incapacity to form stable relationships.

- **Option B:** Clients with histrionic personality disorder are dramatic, not suspicious and argumentative. Histrionic personality disorder, or dramatic personality disorder, is a psychiatric disorder distinguished by a pattern of exaggerated emotionality and attention-seeking behaviors. Histrionic personality disorder falls within the "Cluster B" of personality disorders. Cluster B personality disorders include conditions such as narcissistic personality disorder, borderline personality disorder, and antisocial personality disorder. These personality disorders are commonly described as dramatic, excitable, erratic, or volatile.
- **Option D:** Clients with schizoid personality disorder are usually detached from others and tend to have eccentric behavior. The schizoid personality type was made official in DSM III in 1980, to describe persons experiencing significant ineptitude in forming meaningful social relationships. Isolation is a salient feature in the history of a schizoid patient. Rarely do they have close relationships, and often they will choose to participate in occupations that are solitary in nature. They infrequently experience strong emotion, express little to no desire for sexual activity with a partner, and tend to be ambivalent to criticism or praise.

58. Following a full-thickness (third-degree) burn of his left arm, a male client is treated with artificial skin. The client understands postoperative care of artificial skin when he states that during the first 7 days after the procedure, he will restrict:

- A. Range of motion
- B. Protein intake
- C. Going outdoors
- D. Fluid ingestion

Correct Answer: A. Range of motion

To prevent disruption of the artificial skin's adherence to the wound bed, the client should restrict range of motion of the involved limb.

- **Options B & D:** Protein intake and fluid intake are important for healing and regeneration and shouldn't be restricted.
- **Option C:** Going outdoors is acceptable as long as the left arm is protected from direct sunlight.

59. A client is admitted to the hospital with benign prostatic hyperplasia, the nurse most relevant assessment would be:

- A. Flank pain radiating in the groin
- B. Distention of the lower abdomen
- C. Perineal edema
- D. Urethral discharge

Correct Answer: B. Distention of the lower abdomen

This indicates that the bladder is distended with urine, therefore palpable. In the elective setting, the examination should include abdominal examination (looking for a palpable bladder/loin pain) and examination of external genitalia (meatal stenosis or phimosis). Benign prostatic hyperplasia (BPH) refers to the nonmalignant growth or hyperplasia of prostate tissue and is a common cause of lower urinary tract symptoms in men.

- **Option A:** Flank pain is a vague symptom associated with urinary system infections. Lower urinary tract symptoms can be divided into storage (frequency, nocturia, urgency) and voiding symptoms (stream, straining, hesitancy, prolonged micturition) and can help establish other causes of urinary symptoms such as urinary tract infections/overactive bladder, in addition to determining the site affected (bladder vs. prostate).
- **Option C:** BPH only occurs in older men. Disease prevalence has been shown to increase with advancing age. Indeed the histological prevalence of BPH at autopsy is as high as 50% to 60% for males in their 60's, increasing to 80% to 90% of those over 70 years of age.
- **Option D:** Urethral discharge is not a manifestation of BPH. Men with BPH are likely to report predominant symptoms of nocturia, poor stream, hesitancy, or prolonged micturition. The examination should then conclude with a digital rectal examination making a note in particular of the size, shape (how many lobes), and consistency (smooth/hard/nodular) of the prostate (BPH is characterized by a smooth enlarged prostate).

60. A geriatric patient is prescribed with cimetidine (Tagamet) for the treatment of heartburn. Which of the following is the most frequent CNS side effect of the medication?

- A. Agitation
- B. Drowsiness
- C. Headache
- D. Somnolence

Correct Answer: A. Agitation

Cimetidine an H₂-receptor antagonist passes the blood-brain barrier, and central nervous system side effects can happen. The most common serious side effects are confusion, agitation, depression, and disorientation.

- **Options B, C, & D:** These are the less common side effects of cimetidine.

61. When asking the parents about the onset of problems in young client with the diagnosis of schizophrenia, Nurse Linda would expect that they would relate the client's difficulties began in:

- A. Early childhood
- B. Late childhood
- C. Adolescence
- D. Puberty

Correct Answer: C. Adolescence

The usual age of onset of schizophrenia is adolescence or early childhood. The first schizophrenic episode usually occurs during early adulthood or late adolescence. Individuals often lack insight at this stage; therefore few will present directly to seek help for their psychotic symptoms. Common presentations include a relative noticing social withdrawal, personality changes or uncharacteristic behavior; deliberate self-harm or suicide attempts; calling the police to report their delusional symptoms or referral via the criminal justice system.

- **Option A:** Though the prevalence of the disease varies globally, estimates are that schizophrenia affects approximately 1% of adults, whereas prevalence in the US is 0.6% to 1.9%. Men are slightly more likely to be diagnosed and have an earlier onset than women, while African-Caribbean migrants and their descendants also have a higher incidence.
- **Option B:** Though the prevalence of the disease varies globally, estimates are that schizophrenia affects approximately 1% of adults, whereas prevalence in the US is 0.6% to 1.9%. Men are slightly more likely to be diagnosed and have an earlier onset than women, while African-Caribbean migrants and their descendants also have a higher incidence.
- **Option D:** In schizophrenia, the prognosis is dependent on several factors. Insidious onset, childhood or adolescent onset, poor premorbid adjustment, and cognitive impairment are indicative of a poor prognostic outcome whereas acute onset, female sex, and living in a developed country signal comparatively better prognostic factors.

62. Nausea and vomiting are common adverse effects of radiation and chemotherapy. When should a nurse administer antiemetics?

- A. When therapy is completed
- B. Immediately after nausea begins
- C. With the administration of therapy
- D. 30 minutes before the initiation of therapy

Correct Answer: D. 30 minutes before the initiation of therapy

- **Option D:** Antiemetics are most beneficial when given before the onset of nausea and vomiting. To calculate the optimum time for administration, the first dose is given 30 minutes to 1 hour before nausea is expected, and then every 2, 4, or 6 hours for approximately 24 hours after chemotherapy.
- **Options A, B, and C:** If the antiemetic was given with the medication or after the medication, it could lose its maximum effectiveness when needed.

63. A client with a productive cough, chills, and night sweats is suspected of having active TB. The physician should take which of the following actions?

- A. Admit him to the hospital in respiratory isolation.
- B. Prescribe isoniazid and tell him to go home and rest.
- C. Give a tuberculin test and tell him to come back in 48 hours and have it read.
- D. Give a prescription for isoniazid, 300 mg daily for 2 weeks, and send him home.

Correct Answer: A. Admit him to the hospital in respiratory isolation.

The client is showing s/s of active TB and because of a productive cough is highly contagious. He should be admitted to the hospital, placed in respiratory isolation, and three sputum cultures should be obtained to confirm the diagnosis. After 7 to 10 days, three more consecutive sputum cultures will be obtained. If they're negative, he would be considered non-contagious and may be sent home, although he'll continue to take the antitubercular drugs for 9 to 12 months.

- **Option B:** He would most likely be given isoniazid and two or three other antitubercular antibiotics until the diagnosis is confirmed, then isolation and treatment would continue if the cultures were positive for TB. It is usually given with vitamin B6, pyridoxine (to prevent nerve damage). Isoniazid is recommended for Mantoux or quantiferon positive individuals and should be continued for 6 or 9 months.
- **Option C:** Note that a Mantoux test indicates exposure or latent tuberculosis. However, this test lacks specificity, and patients would require subsequent visits for interpreting the results as well as chest x-ray for confirmation. Although relatively sensitive, the Mantoux reaction is not very specific and may give false positive reactions in individuals who have been exposed to the BCG-vaccine.
- **Option D:** Treatment of confirmed TB requires a combination of drugs. Combination therapy is always indicated, and monotherapy should never be used for tuberculosis. Isoniazid and Rifampicin follow a 4-drug regimen (usually including Isoniazid, Rifampicin, Ethambutol, and Pyrazinamide) for 2 months or six months. Vitamin B6 is always given with Isoniazid to prevent neural damage (neuropathies).

64. Included as a priority of care for the client will be:

- A. Encourage verbalization of concerns instead of demonstrating them through the body.
- B. Divert attention toward activities.
- C. Place in Semi-fowler's position and render O2 inhalation as ordered.
- D. Help her recognize that her physical condition has an emotional component.

Correct Answer: C. Place in Semi-fowler's position and render O2 inhalation as ordered

Since psychophysiological disorder has an organic basis, priority intervention is directed towards disease-specific management. Failure to address the medical condition of the client may be a life threat. Psychological factors may influence the symptoms and management of asthma, and numerous pathways may contribute to the links between asthma and psychiatric disease states such as depression. The notion that emotional stress can precipitate or exacerbate acute and chronic asthma has been recognized anecdotally for many years.

- **Option A:** Psychological barriers, such as faulty symptom attribution, adoption or rejection of the sick role, and low self-esteem, may negatively impact treatment adherence. Conversely, the presence of a chronic and potentially life-threatening illness may exert enough stress that an anxiety or depressive disorder emerges in vulnerable patients.
- **Option B:** The client has a physical symptom that is adversely affected by psychological factors. Verbalization of feelings in a non-threatening environment and involvement in relaxing activities are an adaptive way of dealing with stressors. However, these are not the priority.
- **Option D:** Helping the client connect the physical symptoms with the emotional problems can be done when the client is ready. Relaxation techniques are generally conducted with or without biofeedback and were the focus of several earlier studies of psychological interventions in asthma. Relaxation techniques control stress and anxiety, which, in asthma, may improve breathing and respiratory function.

65. Which stage of development is most unstable and challenging regarding the development of personal identity?

- A. Adolescence
- B. Toddlerhood
- C. Middle Childhood
- D. Young adulthood

Correct Answer: A. Adolescence

Although it occurs throughout one's lifetime, identity development is considered to be the primary psychosocial task of adolescence or as described by Erickson on identity versus identity confusion. Individuals in this stage start to integrate their values, abilities, inner drives, and past experiences into who they are as persons.

- **Option B:** Toddlers at their age focus on developing their physical, emotional, cognitive, language, and motor skills. Gaining a sense of personal control over the world is important at this stage of development. Children at this age are becoming increasingly independent and want to gain more control over what they do and how they do it.
- **Option C:** Middle childhood is a stage where children learn skills that will help them build social relationships that will prepare them for adolescence. A child's social world expands considerably as they enter school and gain new friendships with peers. Through social interactions, children begin to develop a sense of pride in their accomplishments and abilities.
- **Option D:** Young adulthood would focus on building intimate and loving relationships with other people. Romantic and sexual relationships can be an important part of this stage of life, but intimacy is more about having close, loving relationships. It includes romantic partners, but it can also encompass close, enduring friendships with people outside of the family.

66. A male client scheduled for a skin biopsy is concerned and asks the nurse how painful the procedure is. The appropriate response by the nurse is:

- A. "There is no pain associated with this procedure"
- B. "The local anesthetic may cause a burning or stinging sensation"
- C. "A preoperative medication will be given so you will be sleeping and will not feel any pain"
- D. "There is some pain, but the physician will prescribe an opioid analgesic following the procedure"

Correct Answer: B. "The local anesthetic may cause a burning or stinging sensation"

Depending on the size and location of the lesion, a biopsy is usually a quick and almost painless procedure. The most common source of pain is the initial local anesthetic, which can produce a burning or stinging sensation.

- **Option A:** A mild pain is experienced during the procedure and the application of a local anesthetic prior to the biopsy normally causes a mild stinging sensation lasting a few seconds.
- **Option C:** Preoperative medication is not necessary with this procedure.
- **Option D:** Opioid analgesics are not recommended for relief of postoperative pain since it can cause respiratory depression. Tylenol (acetaminophen) and application of ice to the area for 10 minutes are some of the pain-relieving measures after a skin biopsy

67. The nurse is performing colostomy irrigation on a client. During the irrigation, a client begins to complain of abdominal cramps. Which of the following is the most appropriate nursing action?

- A. Notify the physician.
- B. Increase the height of the irrigation.
- C. Stop the irrigation temporarily.
- D. Medicate with dilaudid and resume the irrigation.

Correct Answer: C. Stop the irrigation temporarily.

If cramping occurs during colostomy irrigation, the irrigation flow is stopped temporarily and the client is allowed to rest. Cramping may occur from an infusion that is too rapid or is causing too much pressure. Have the colostomy patient sit on or near the toilet for about 15 to 20 minutes so the initial colostomy returns can drain into the toilet. (If the patient is on bed rest, allow the colostomy to drain into the bedpan.)

- **Option A:** The physician does not need to be notified. Unless contraindicated or otherwise ordered by the physician, it is best to establish a routine of daily irrigation in accordance with the patient's former bowel habits.
- **Option B:** Increasing the height of the irrigation will cause further discomfort. Hold the enema can approximately 12 inches above the bed and allow the solution to flow in slowly to avoid painful cramps usually caused by too rapid flow.
- **Option C:** Medicating the client for pain is not the most appropriate action. If cramping occurs, slow down the flow rate and ask the patient to deep breathe until cramps subside. Cramping during irrigation may indicate that the flow is too fast or the water is too cold.

68. A 15-year-old male client was sent to the emergency unit following a small laceration on the forehead. The client says that he can't move his legs. Upon assessment, respiratory rate of 20, strong pulses, and capillary refill time of less than 2 seconds. Which triage category would this client be assigned to?

- A. Red
- B. Black
- C. Yellow
- D. Green
- E. White

Correct Answer: C. Yellow

The client is possibly suffering from a spinal injury but otherwise, has a stable status and can communicate so the appropriate tag is yellow. If individuals can breathe spontaneously, follow simple commands, and have distal pulses with a normal capillary refill, they are tagged delayed and given the code yellow.

- **Option A:** Red tags are for people with life-threatening conditions who need immediate emergency treatment. The rest of the individuals who have poor respirations or cannot protect their airway, have absent or decreased peripheral pulses, and are unable to follow simple commands are

tagged immediately and given the color red.

- **Option B:** Black tags are for deceased people and for those who are not expected to survive due to extensive injuries. Once the “minor” injuries are out of the area, responders should begin to move and triage patients with the RPM acronym; respirations, perfusion, and mental status. This includes making sure the individual has a manual respiration rate that is roughly greater than 30 breaths a minute, peripheral pulses are present with a capillary refill of fewer than 2 seconds, and can follow commands. If a patient has none of these, the patient is declared deceased, given a black tag, and moved to the black-coded area.
- **Option D:** Green tags are for those people with non-urgent cases and can wait for their turn for assessment and treatment. Anyone who can follow these commands and walk to this area is designated as “minor” and given a green tag to signify minor injury status.
- **Option E:** White tags are for those with minor injuries that don’t require any medical care. With this method, providers can quickly rule in and rule out individuals who require immediate medical attention, who can wait, and who nothing can be done for.

69. A client is prescribed with carbamazepine (Tegretol) for the treatment of bipolar disorder. Which of the following laboratory results indicates that the client is experiencing a side effect of this medication?

- A. Neutrophil count of 1,200/mm³.
- B. Platelet count of 160,000/mm³.
- C. Uric acid level of 4mg/dl.
- D. SGPT (ALT) level 50 units per liter of serum.

Correct Answer: A. Neutrophil count of 1,200/mm³.

Carbamazepine is used to treat seizures and nerve pain such as trigeminal neuralgia and diabetic neuropathy. It causes a decreased level of platelet count, white blood cells, and neutrophil count. The normal range for neutrophils is 1,500 to 8,000/mm³).

- **Options B, C, & D:** All of these are normal values.

70. A client is hospitalized in the end stage of terminal cancer. His family members are sitting at his bedside. What can the nurse do to best aid the family at this time?

- A. Limit the time visitors may stay so they do not become overwhelmed by the situation.
- B. Avoid telling family members about the client’s actual condition so they will not lose hope.
- C. Discourage spiritual practices because this will have little connection to the client at this time.
- D. Find simple and appropriate care activities for the family to perform.

Correct Answer: D. Find simple and appropriate care activities for the family to perform.

It is helpful for the nurse to find simple care activities for the family to perform, such as feeding the client, washing the client’s face, combing hair, and filling out the client’s menu. This helps the family demonstrate their caring for the client and enables the client to feel their closeness and concern. a. Older adults often become particularly lonely at night and may feel more secure if a family member

stays at the bedside during the night.

- **Option A:** The nurse should allow visitors to remain with dying clients at any time if the client wants them. It is up to the family to determine if they are feeling overwhelmed, not the nurse. Provide family-focused interventions that assist parents in connecting or reconnecting with their existing families, friends, and networks of support as a means of re-establishing coherence and meaning as they go forward.
- **Option B:** Truthful and open communication between the healthcare provider and patient is essential for trust in the relationship and for respect for autonomy. Withholding pertinent medical information from patients in the belief that disclosure is medically contraindicated creates a conflict between the healthcare provider's obligations to promote patient welfare and to respect patient autonomy.
- **Option C:** It is important to keep in mind that there are numerous individual, familial, and cultural differences that make responding appropriately to another person's grief anything but a formula. The United States, as most Western countries, has a variety of cultural, religious, and ethnic variations that mediate and modulate the experience of grief and mourning.

71. Katherine is a young Unit Manager of the Pediatric Ward. Most of her staff nurses are senior to her, very articulate, confident, and sometimes aggressive. Katherine feels uncomfortable believing that she is the scapegoat of everything that goes wrong in her department. Which of the following is the best action that she must take?

- A. Identify the source of the conflict and understand the points of friction.
- B. Disregard what she feels and continues to work independently.
- C. Seek help from the Director of Nursing.
- D. Quit her job and look for another employment.

Correct Answer: A. Identify the source of the conflict and understand the points of friction

This involves a problem-solving approach, which addresses the root cause of the problem. Seek to understand the underlying emotions of the employees in conflict. Employers can manage workplace conflict by creating an organizational culture designed to preclude conflict as much as possible and by dealing promptly and equitably with conflicts that employees cannot resolve among themselves.

- **Option B:** Do not ignore conflict, and do not avoid taking steps to prevent it. Unresolved issues of interpersonal tension and conflict can create emotional stress for employees, politicize the workplace and divert attention from the organization's mission.
- **Option C:** Before escalating the conflict to the Director of Nursing, the unit manager should first try to deescalate the problem. If a manager has mechanisms in place to resolve conflict at its early stages, employees will generally see their employer as fair in their dealings with them and will likely be more satisfied with their jobs.
- **Option D:** If the manager does not act, conflicts will escalate into larger problems, discrimination and harassment complaints may increase, and the employer's reputation could be damaged. When employees mistrust management or perceive the organization as acting unfairly, turnover may increase. This can lead to recruiting and training expenses for new hires and the costs attributable to slippage of performance until new employees become fully proficient in their jobs.

72. To prevent preterm labor from progressing, drugs are usually prescribed to halt the labor. The drugs commonly given are:

- A. Magnesium sulfate and terbutaline
- B. Prostaglandin and oxytocin
- C. Progesterone and estrogen
- D. Dexamethasone and prostaglandin

Correct Answer: A. Magnesium sulfate and terbutaline

Magnesium sulfate acts as a CNS depressant as well as a smooth muscle relaxant. Terbutaline is a drug that inhibits the uterine smooth muscles from contracting. On the other hand, oxytocin and prostaglandin stimulate the contraction of smooth muscles.

- **Option B:** Prostaglandins act to mediate cervical ripening and to stimulate uterine contractions and indirectly to increase fundally dominant myometrial contractility by up-regulation of gap junctions, oxytocin, and arginine vasopressin receptors, and synchronizations of contractions. Oxytocin receptor antagonists (ORA), such as atosiban, have been specially developed for the treatment of preterm labor. ORA has been proposed as effective tocolytic agent for women in preterm labor to prolong pregnancy with fewer side effects than other tocolytic agents.
- **Option C:** In the first trimester, progesterone produced by the corpus luteum is critical to the maintenance of early pregnancy until the placenta takes over this function at 7 to 9 weeks of gestation, hence its name (pro-gestational steroidal ketone). Indeed, removal of the source of progesterone (the corpus luteum) or administration of a progesterone receptor antagonist readily induces abortion before 7 weeks (49 days) of gestation. Estrogen is one of the key hormones of labor. As the labor comes closer, the high levels of estrogens stimulate many different processes necessary for delivery. As the levels of estrogen rise, an increase in oxytocin receptors in the uterus is stimulated, as well as prostaglandins in the cervix.
- **Option D:** Dexamethasone accelerates maturation of fetal lungs, decreases the number of neonates with respiratory distress syndrome, and improves survival in preterm delivered neonates. Optimal gestational age for use of dexamethasone therapy is 31 to 34 weeks of gestation.

73. The nurse is aware that the patients who are allergic to intravenous contrast media are usually also allergic to which of the following products?

- A. Eggs.
- B. Shellfish.
- C. Soy.
- D. Acidic fruits.

Correct Answer: B. Shellfish

Some types of contrast media contain iodine as an ingredient. Shellfish also contain significant amounts of iodine. Therefore, a patient who is allergic to iodine will exhibit an allergic response to both iodine-containing contrast media and shellfish. Fish and shellfish contain iodine, and allergic reactions to seafood are quite common, with a prevalence ranging anywhere between 2% and 6% of the population. As a result, patients with suspected shellfish allergies are often told by providers that they are allergic to iodine. In 1 study, nearly 92% of patients presenting to a pediatrics clinic with a suspected seafood or shellfish allergy cited iodine as the culprit.

- **Option A:** As contrast-enhanced CT scans utilize a variety of iodine-based agents, patients are often told to avoid CT scans with iodinated contrast agents or receive corticosteroid/antihistamine premedications prior to undergoing CT scans to mitigate potentially life-threatening allergic reactions.
- **Option C:** A survey of radiologists and interventional cardiologists revealed that 65.3% and 88.9%, respectively, asked about seafood or shellfish allergies prior to administering contrast-enhanced CT scans, and 34.7% and 50.0%, respectively, stated that they would withhold contrast media or recommend premedication with corticosteroid/antihistamines for patients with seafood or shellfish allergy.
- **Option D:** Although fish and shellfish contain iodine, so do a wide variety of commonly consumed foods (eg, yogurt, milk, bread). In addition, our bodies contain and require sufficient quantities of iodine for basic functions, making immune reactions to such an essential ingredient of life unlikely. Instead, fish and shellfish contain proteins (parvalbumin and tropomyosins, respectively), which act as the major allergens, not iodine.

74. When a client is experiencing diabetic ketoacidosis, the insulin that would be administered is:

- A. Human NPH insulin
- B. Human regular insulin
- C. Insulin lispro injection
- D. Insulin glargine injection

Correct Answer: B. Human regular insulin

Regular insulin (Humulin R) is short-acting insulin and is administered via IV with an initial dose of 0.3 units/kg, followed by 0.2 units/kg 1 hour later, followed by 0.2 units/kg every 2 hours until blood glucose becomes <13.9 mmol/L (<250 mg/dL). At this point, the insulin dose should be decreased by half, to 0.1 units/kg every 2 hours, until the resolution of DKA.

- **Option A:** NPH insulin is FDA-approved in the adult and pediatric population to control type 1 and type 2 diabetes mellitus. It is currently the most widely used basal insulin that simulates the physiological basal insulin action. American Diabetes Association guidelines recommend an NPH insulin dose of 0.4 to 1.0 units/kg/day subcutaneously to manage type 1 diabetes mellitus.
- **Option C:** Insulin lispro is an insulin analog that is FDA-approved for the treatment of patients with diabetes mellitus types 1 and 2 to control hyperglycemia. Its off-label uses include treating patients with mild-to-moderate diabetic ketoacidosis, gestational diabetes mellitus, and mild-to-moderate hyperosmolar hyperglycemic state.
- **Option D:** Insulin glargine is a manmade version of human insulin that is FDA approved to treat adults and children with type 1 diabetes and adults with type 2 diabetes to improve and maintain glycemic control. Insulin glargine is a long-acting insulin injected once daily and provides a basal level of insulin throughout the day.

75. Damage to the VII cranial nerve results in:

- A. Facial pain
- B. Absence of ability to smell

- C. Absence of eye movement
- D. Tinnitus

Correct Answer: A. Facial pain

The facial nerve is cranial nerve VII. If damage occurs, the client will experience facial pain. The sensory portion, or intermediate nerve, has the following components: (1) taste to the anterior two-thirds of the tongue; (2) secretory and vasomotor fibers to the lacrimal gland, the mucous membranes of the nose and mouth, and the submandibular and sublingual salivary glands; (3) cutaneous sensory impulses from the external auditory meatus and region back of the ear.

- **Option B:** Olfactory nerve controls smell, and it is cranial nerve I. The olfactory nerve is the first cranial nerve and is instrumental in our sense of smell. The olfactory nerve contains only afferent sensory nerve fibers and, like all cranial nerves, is paired. The olfactory nerve is the shortest cranial nerve, and along with the optic nerve is one of the only two cranial nerves that do not converge with the brainstem.
- **Option C:** Eye movement is controlled by the Trochlear or C IV. The trochlear nerve is the fourth cranial nerve (CN IV) and one of the ocular motor nerves that controls eye movement. The trochlear nerve, while the smallest of the cranial nerves, has the longest intracranial course as it is the only nerve to have a dorsal exit from the brainstem. It originates in the midbrain and extends laterally and anteriorly to the superior oblique muscle.
- **Option D:** The vestibulocochlear nerve or CN VIII is responsible for hearing loss and tinnitus. The vestibulocochlear nerve, also known as cranial nerve eight (CN VIII), consists of the vestibular and cochlear nerves. Each nerve has distinct nuclei within the brainstem. The vestibular nerve is primarily responsible for maintaining body balance and eye movements, while the cochlear nerve is responsible for hearing.

76. Amphotericin B (Fungizone) IV is given to a client with aspergillosis, a fungal infection. In order to prevent its side effects, the nurse anticipates administering which of the following prior, except?

- A. Hydrocortisone.
- B. Ketoconazole.
- C. Diphenhydramine.
- D. Meperidine.

Correct Answer: B. Ketoconazole

Azole antifungals (eg, ketoconazole) decreases the effectiveness of amphotericin b.

- **Options A and C:** Fever, shaking, chills, flushing, loss of appetite, dizziness, nausea, vomiting, headache, shortness of breath, or fast breathing may occur 1 to 3 hours after the infusion is started. Medications such as acetaminophen, diphenhydramine, corticosteroids such as hydrocortisone) may be necessary to prevent these side effects.
- **Option D:** Meperidine (25 to 50 mg IV) has been shown in some patients to decrease the duration of shaking chills and fever that may accompany the infusion of amphotericin B.

77. The nurse is taking the history of a client who has had benign prostatic hyperplasia in the past. To determine whether the client currently is

experiencing difficulty, the nurse asks the client about the presence of which of the following early symptoms?

- A. Urge incontinence
- B. Nocturia
- C. Decreased force in the stream of urine
- D. Urinary retention

Correct Answer: C. Decreased force in the stream of urine

Decreased force in the stream of urine is an early sign of BPH. The stream later becomes weak and dribbling. The client then may develop hematuria, frequency, urgency, urge incontinence, and nocturia. If untreated, complete obstruction and urinary retention can occur. Men with BPH are likely to report predominant symptoms of nocturia, poor stream, hesitancy, or prolonged micturition.

- **Option A:** Lower urinary tract symptoms can be divided into storage (frequency, nocturia, urgency) and voiding symptoms (stream, straining, hesitancy, prolonged micturition) and can help establish other causes of urinary symptoms such as urinary tract infections/overactive bladder, in addition to determining the site affected (bladder vs. prostate).
- **Option B:** Red flags help point to more sinister causes of urinary symptoms such as bladder/prostate cancer, neurology such as cauda equina, or chronic high-pressure retention (which can lead to silent renal failure). The presence of these can be established by asking about visible haematuria/bone pain/weight loss, neurology, and nocturnal enuresis/incontinence, respectively.
- **Option D:** The development of benign prostatic hyperplasia is characterized by stromal and epithelial cell proliferation in the prostate transition zone (surrounding the urethra), this leads to compression of the urethra and the development of bladder outflow obstruction (BOO) which can result in clinical manifestations of lower urinary tract symptoms (LUTS), urinary retention or infections due to incomplete bladder emptying.

78. The client with urolithiasis has a history of chronic urinary tract infections. The nurse concludes that this client most likely has which of the following types of urinary stones?

- A. Calcium oxalate
- B. Uric acid
- C. Struvite
- D. Cystine

Correct Answer: C. Struvite

Struvite stones commonly are referred to as infection stones because they form in urine that is alkaline and rich in ammonia, such as with a urinary tract infection. Struvite stones are also known as triple-phosphate (3 cations associated with 1 anion), infection (or infection-induced), phosphatic, and urease stones.

- **Option A:** Calcium oxalate stones result from increased calcium intake or conditions that raise serum calcium concentrations. Other, less common staghorn calculi can be composed of mixtures of calcium oxalate and calcium phosphate.

- **Option B:** Uric acid stones occur in clients with gout. Uric acid stones form when the levels of uric acid in the urine is too high, and/or the urine is too acidic (pH level below 5.5) on a regular basis. Uric acid can result from a diet high in purines, which are found especially in animal proteins such as beef, poultry, pork, eggs, and fish. The highest levels of purines are found in organ meats, such as liver and fish.
- **Option D:** Cystine stones are rare and occur in clients with a genetic defect that results in decreased renal absorption of the amino acid cystine. Cystine stones are caused by a rare disorder called "cystinuria." The disorder causes a natural substance called "cystine" to leak into the urine. When there is too much cystine in the urine, kidney stones can form.

79. Marielle, 17 years old was sexually attacked while on her way home from school. She is brought to the hospital by her mother. Rape is an example of which type of crisis:

- A. Situational
- B. Adventitious
- C. Developmental
- D. Internal

Correct Answer: B. Adventitious

Adventitious crisis is a crisis involving a traumatic event. It is not part of everyday life. An adventitious crisis can be triggered by a major natural disaster, a man-made disaster, or a crime of violence. Therefore, a tsunami or earthquake can result in an adventitious crisis. Childbirth, the death of a pet, or a leg amputation can cause a situational crisis.

- **Option A:** Situational crisis is from an external source that upsets one's psychological equilibrium. These sudden and unexpected crises include accidents and natural disasters. Getting in a car accident, experiencing a flood or earthquake, or being the victim of a crime are just a few types of situational crises.
- **Option C:** These occur as part of the process of growing and developing through various periods of life. Sometimes a crisis is a predictable part of the life cycle, such as the crisis described in Erikson's stages of psychosocial development.
- **Option D:** Developmental and internal crises are the same. They are transitional or developmental periods in life. A crisis can sometimes be quite obvious, such as a person losing his or her job, getting divorced, or being involved in some type of accident. In other cases, a personal crisis might be less apparent but can still lead to dramatic changes in behavior and mood.

80. Referencing the image below, what is the name of the structure marked #3.

- A. Minor calyx
- B. Major calyx
- C. Cortical blood vessels
- D. Interlobal blood vessels
- E. Arcuate blood vessels
- F. Renal vein

- G. Renal nerve
- H. Renal artery
- I. Renal pelvis
- J. Renal pyramid

Correct answer: #3 is Option E. arcuate blood vessels

arcuate blood vessels are the arteries and veins that run parallel to the kidney surface at the corticomedullary junction, at the base of the pyramids. They are branches of the interlobar arteries and anastomose (connect) with each other to form a network of vessels that supply blood to the renal cortex and the renal medulla.

81. The nurse is instructing a 65-year-old female client diagnosed with osteoporosis. The most important instruction regarding exercise would be to

- A. Exercise doing weight-bearing activities.
- B. Exercise to reduce weight.
- C. Avoid exercise activities that increase the risk of fracture.
- D. Exercise to strengthen muscles and thereby protect bones.

Correct Answer: A. Exercise doing weight-bearing activities.

Weight-bearing exercises are beneficial in the treatment of osteoporosis. Although the loss of bone cannot be substantially reversed, it can be greatly reduced if the client includes weight-bearing exercises along with estrogen replacement and calcium supplements in their treatment protocol. 45 minutes to one hour of aerobic activity two to three times per week

- **Option B:** Resistance training two or three times per week. Each session should include exercises to strengthen the lower limb, trunk, and arm muscles, and each exercise should be performed eight to 10 times
- **Option C:** Balance exercises need to be at a level that is challenging to balance and should be performed for a few minutes at least twice a week. For safety reasons, always make sure to hold on to something if you overbalance it. People with severe osteoporosis or kyphosis (hunching of the upper back) who are at high risk of bone fractures may find that swimming or water exercise is their preferred activity.
- **Option D:** Even though walking is a weight-bearing exercise, it does not greatly improve bone health, muscle strength, fitness or balance, unless it is carried out at high intensity such as at a faster pace, for long durations (such as bushwalking), or incorporates challenging terrain such as hills.

82. While providing home care to a client with congestive heart failure, the nurse is asked how long diuretics must be taken. The best response to this client should be:

- A. "As you urinate more, you will need less medication to control fluid."
- B. "You will have to take this medication for about a year."
- C. "The medication must be continued so the fluid problem is controlled."

D. "Please talk to your physician about medications and treatments."

Correct Answer: C. "The medication must be continued so the fluid problem is controlled."

This is the most therapeutic response and gives the client accurate information. Diuretics are used to achieve and maintain euvolemia (the patient's 'dry weight') with the lowest possible dose. This means that the dose must be adjusted, particularly after the restoration of the dry body weight, to avoid the risk of dehydration, which leads to hypotension and renal dysfunction.

- **Option A:** In general, due to their greater effectiveness, loop diuretics, such as furosemide, are the mainstay of diuretic therapy in HF. Indeed loop diuretics produce more intense and shorter diuresis than thiazides, which results in more gentle and prolonged diuresis.
- **Option B:** Diuretic efficacy may be limited by adverse neurohormonal activation and by 'congestion-like' symptoms. Diuretics are an extremely useful and varied class of agents for the management of hypovolemic states.
- **Option D:** Furosemide is by far the most common oral loop diuretic, but patients with resistance to oral furosemide therapy may benefit from trials with second-generation oral loop diuretics (bumetanide and torasemide). These may be more efficacious, due to their increased oral bioavailability and potency.

83. A nurse is caring for a pregnant client with severe preeclampsia who is receiving IV magnesium sulfate. Select all nursing interventions that apply in the care for the client.

- A. Monitor maternal vital signs every 2 hours.
- B. Notify the physician if respirations are less than 18 per minute.
- C. Monitor renal function and cardiac function closely.
- D. Keep calcium gluconate on hand in case of a magnesium sulfate overdose.
- E. Monitor deep tendon reflexes hourly.
- F. Monitor I and O's hourly.
- G. Notify the physician if urinary output is less than 30 ml per hour.

Correct Answer: C, D, E, F, and G.

- **Option A:** BP should be assessed with the goal of maintaining the diastolic BP at less than 110 mm Hg with administration of antihypertensive medications as needed (eg, hydralazine, labetalol, nifedipine).
- **Option B:** When caring for a client receiving magnesium sulfate therapy, the nurse would monitor maternal vital signs, especially respirations, every 30-60 minutes and notify the physician if respirations are less than 12, because this would indicate respiratory depression.
- **Option C:** Cardiac and renal function are monitored closely. Eclampsia-associated renal abnormalities can include decreases in glomerular filtration rate, renal plasma flow, and uric acid clearance as well as proteinuria. Eclampsia is associated with cardiovascular derangements such as generalized vasospasm, increased peripheral vascular resistance, and increased left ventricular stroke work index. Pulmonary capillary wedge pressure (PCWP) may vary from low to elevated. Importantly, central venous pressure (CVP) may not correlate with PCWP in patients with severe preeclampsia or eclampsia.

- **Option D:** Calcium gluconate is kept on hand in case of magnesium sulfate overdose because calcium gluconate is the antidote for magnesium sulfate toxicity.
- **Option E:** Deep tendon reflexes are assessed hourly. Ankle clonus indicated hyperreflexia and may precede the onset of eclampsia. Although brisk or hyperactive reflexes are common during pregnancy, clonus is a sign of neuromuscular irritability that usually reflects severe preeclampsia.
- **Option F:** Monitor fluid intake and urine output, maternal respiratory rate, and oxygenation, as indicated, and continuously monitor fetal status. Pulmonary arterial pressure monitoring is rarely indicated but may be helpful in patients who have evidence of pulmonary edema or oliguria/anuria.
- **Option G:** The urine output should be maintained at 30 ml per hour because the medication is eliminated through the kidneys.

Source:

84. A nurse is caring for a 5th month old boy who suffered physical injuries from fall. Which of the following is the most appropriate pain assessment that the nurse will use?

- A. Numerical pain scale
- B. McGill pain scale
- C. CRIES scale
- D. Mankoski pain scale

Correct Answer: C. CRIES scale

- Option C: CRIES scale is a commonly used pain scale appropriate for clients ages 6 months and below. It assesses crying, oxygenation, vital signs, facial expression, and sleeplessness of an infant.
- Options A, B, and D: These pain scales require the verbal cooperation of a client which cannot be used to a client as young as 6 months old.

85. Nurse Tiffany reinforces the behavioral contract for a child having difficulty controlling aggressive behaviors in the psychiatric unit. Which of the following is the best rationale for this method of treatment?

- A. It will assist the child to develop more adaptive coping methods.
- B. It will avoid having the nurse be responsible for setting the rules.
- C. It will maintain the nurse's role in controlling the child's behavior.
- D. It will prevent the child from manipulating the nurse.

Correct Answer: A. It will assist the child to develop more adaptive coping methods.

Behavioral therapy is employed for the purpose of developing adaptive behavior that will improve coping. The nurse works to enhance the child's self-functioning and responsibility for his own behavior using appropriate means to develop better-coping skills.

- **Option B:** The nurse does not avoid setting rules; it is the responsibility of the nurse to establish and maintain appropriate limits. The nurse decides which specific behaviors to select for the behavior contract. When possible, the nurse should define behavior targets for the contract in the

form of positive, pro-academic, or pro-social behaviors.

- **Option C:** The behavior contract is a simple positive reinforcement intervention that is widely used by teachers to change student behavior. The behavior contract spells out in detail the expectations of the child and teacher (and sometimes parents) in carrying out the intervention plan, making it a useful planning document. Also, because the child usually has input into the conditions that are established within the contract for earning rewards, the student is more likely to be motivated to abide by the terms of the behavior contract than if those terms had been imposed by someone else.
- **Option D:** Although reinforcing behavioral contracts will help prevent manipulative behavior by the child; this is not the best rationale for using behavioral treatment, which aims to improve client behavior.

86. The nurse is conducting a teaching session for a 25-year-old underweight and emaciated client with newly diagnosed type 1 diabetes mellitus. The client lives alone and is anxious about managing their condition, particularly self-administering insulin injections. Considering the client's physical condition and concerns, which is the most appropriate technique for self-administering insulin injections from the following options:

- A. Instruct the client to pinch the skin up and use a 90-degree angle for insulin injection.
- B. Advise the client to use a 45-degree angle with the skin pinched up during insulin injection.
- C. Teach the client to massage the area of injection after injecting the insulin to promote absorption.
- D. Recommend warming the skin with a warm towel or washcloth prior to the injection to improve circulation.

Correct Answer: B. Use a 45-degree angle with the skin pinched up

For an underweight and emaciated client, using a 45-degree angle with the skin pinched up helps to ensure the insulin is injected into the subcutaneous tissue rather than the muscle. This method promotes proper absorption of insulin and reduces the risk of injection site complications.

- **Option A:** This technique is appropriate for clients with an average or above-average body weight, as it ensures the insulin is injected into the subcutaneous tissue.
- **Option C:** Massaging the injection site is not recommended as it may increase the rate of insulin absorption leading to potential hypoglycemia.
- **Option D:** Warming the skin can lead to faster absorption rates and inconsistent insulin absorption.

87. The school guidance counselor refers a family with an 8-year-old child to the mental health clinic because of the child's frequent fighting in school and truancy. Which of the following data would be a priority to the nurse doing the initial family assessment?

- A. The child's performance in school
- B. Family education and work history
- C. The family's perception of the current problem

D. The teacher's attempt to solve the problem

Correct Answer: C. The family's perception of the current problem

The family's perception of the problem is essential because change in any one part of a family system affects all other parts and the system as a whole. Each member of the family has been affected by the current problems related to the school system and the nurse would be interested in the data. Research indicates at-risk youth are more likely to experience emotional and psychological problems. Young people who are often truant from school represent a group of at-risk youth, but one for which mental health issues are understudied.

- **Option A:** The child's performance in school and the teacher's attempts to solve the problem are relevant and may be assessed; however, priority would be given to the family's perception of the problem. Truancy is a serious problem that affects most school districts in the U.S. Research on truancy can be challenging because there is not a uniform definition of truancy and statistics on truancy rates are lacking and/or inconsistently reported across school districts. Psychological research reports a high prevalence of mental health problems among youths characterized as school refusers. School refusers demonstrate symptoms of mood disorders such as depression and dysthymia, anxiety disorders such as generalized anxiety, separation anxiety, and panic disorder, and disruptive behavior disorders such as oppositional defiant, attention deficit hyperactivity disorder (ADHD) and conduct disorders.
- **Option B:** The family education and work history may be relevant, but are not a priority. Generally, truancy is defined as unauthorized, intentional absence from compulsory schooling. It is estimated that thousands of youth in the U.S. are absent from school each day. For example, recent statistics on truancy in Los Angeles County and Colorado indicate truancy rates greater than 10 percent, with the highest rates in urban high schools. Comparable statistics corroborating high rates of truancy can also be found in other jurisdictions.
- **Option D:** Truancy appears to be a risk factor for a life-course trajectory toward more negative behaviors. As Garry observed, truancy may be the beginning of a lifetime of problems among students who routinely skip school, including poor standardized test performance, high school dropout, a stressed family life, difficulties in emotional/psychological functioning, drug use, and progression to both juvenile delinquency and adult criminal offending. Related research has also documented a link between truancy and later problems with employment, adult crime and incarceration.

88. Drew is diagnosed with Type I diabetes mellitus. As a nurse taking care of the client, you should know that in his condition:

- A. Insulin is produced but is malformed.
- B. The beta cells of the pancreas stop producing insulin.
- C. The client cannot be treated.
- D. Diagnosis is made in clients over age 50.

Correct Answer: B. The beta cells of the pancreas stop producing insulin.

In type I diabetes mellitus, the beta cells stop producing insulin completely. T1DM is characterized by the destruction of beta cells in the pancreas, typically secondary to the autoimmune destruction of beta cells. The result is the absolute destruction of beta cells, and consequentially, insulin is absent or extremely low.

- **Option A:** There is no such pathophysiologic process as malformed insulin. A patient with DM has the potential for hyperglycemia. The pathology of DM can be unclear since several factors can often contribute to the disease. Hyperglycemia alone can impair pancreatic beta-cell function and contributes to impaired insulin secretion. Consequentially, there is a vicious cycle of hyperglycemia leading to the impaired metabolic state. Blood glucose levels above 180 mg/dL are often considered hyperglycemic in this context, though because of the variety of mechanisms, there is no clear cutoff point.
- **Option C:** Clients with type I diabetes can be treated with insulin. Since T1DM is a disease primarily due to the absence of insulin, insulin administration through daily injections, or an insulin pump, is the mainstay of treatment. Metformin is the first line of the prescribed diabetic medications and works by lowering basal and postprandial plasma glucose.
- **Option D:** The diagnosis can be made in clients at any age. Globally, 1 in 11 adults has DM (90% having T2DM). The onset of T1DM gradually increases from birth and peaks at ages 4 to 6 years and then again from 10 to 14 years. Approximately 45% of children present before age ten years. The prevalence in people under age 20 is about 2.3 per 1000.

89. Which of the following information must be included for the family of a client diagnosed with a dependent personality disorder?

- A. Promote exercise programs
- B. Explore panic attacks
- C. Address coping skills
- D. Decrease aggressive outbursts

Correct Answer: C. Address coping skills.

The family needs information about coping skills to help the client learn to handle stress. When the client is ready and interested, teach the client coping skills to help defuse tension and trouble feelings (e.g., anxiety reduction, assertiveness skills). Increasing skills help the client use healthier ways to defuse tensions and get needs met.

- **Option A:** Exercise is a health promotion activity for all clients. Clients with a dependent personality disorder wouldn't need exercise promoted more than other people. Clients may benefit from coping skills training (e.g., anger management skills, emotional regulation skills, interpersonal skills). Provide referrals and/or involve professional experts.
- **Option B:** They don't tend to have panic attacks. Identify behavioral limits and behaviors that are expected. Client needs a clear structure. Expect frequent testing of limits initially. Maintaining limits can enhance feelings of safety in the client. Identify what the client sees as the behaviors and circumstances that lead to the hospitalization. Ascertain client's understanding of behaviors and responsibility for own actions.
- **Option D:** Clients with a dependent personality disorder don't have aggressive outbursts; they tend to be passive and submit to others. When appropriate, try to understand underlying feelings prompting inappropriate behaviors. Often acting out behaviors stem from underlying feelings of anger, fear, shame, insecurity, loneliness, etc. Talking about feelings can lead to problem-solving and growth for the client.

90. A client with vaginal cancer is being treated with a radioactive vaginal implant. The client's husband asks the nurse if he can spend the night with his

wife. The nurse should explain that:

- A. Overnight stays by family members is against hospital policy.
- B. There is no need for him to stay because staffing is adequate.
- C. His wife will rest much better knowing that he is at home.
- D. Visitation is limited to 30 minutes when the implant is in place.

Correct Answer: D. Visitation is limited to 30 minutes when the implant is in place.

Clients with radium implants should have close contact limited to 30 minutes per visit. The general rule is limiting time spent exposed to radium, putting distance between people and the radium source, and using lead to shield against the radium. Teaching the family member these principles is extremely important. Internal radiation therapy uses a pill, liquid, implant or temporary source to put radiation inside the body to kill the cancer cells, and may require certain safety precautions for staff and family while the patient is in the hospital or at home, according to the National Cancer Institute

- **Option A:** Do not spend any more time in the patient's room than is necessary to care for the patient. In particular, time at the patient's bedside should be kept to a minimum. Specific "stay times" will be provided on the patient's door.
- **Option B:** Visitors are allowed provided that: visitors shall be 18 years or older; the patient shall not have pregnant visitors, and visitors should remain at least 6 feet from the patients and should not stay more than 2 hours per day (unless other information is provided).
Option C: The most common safety precautions related to preventing unnecessary radiation exposure are limiting time near the patient, maintaining a safe distance of three to six feet from the source of the radiation, and using lead shielding to protect family and staff.

91. Neonates of mothers with diabetes are at risk for which complication following birth?

- A. Atelectasis
- B. Microcephaly
- C. Pneumothorax
- D. Macrosomia

Correct Answer: D. Macrosomia.

- **Option D:** Neonates of mothers with diabetes are at increased risk for macrosomia (excessive fetal growth) as a result of the combination of the increased supply of maternal glucose and an increase in fetal insulin.

92. A nurse is caring for a client requiring surgery and is ordered to have a standby blood secured if in case a blood transfusion is needed during or after the procedure. The nurse suggests to the client to do which of the following to lessen the risk of possible transfusion reaction?

- A. Request that any donated blood be screened twice by the blood bank.
- B. Take iron supplements prior to the surgery and eat green leafy vegetables.

- C. Do an autologous blood donation.
- D. Have a family member donate their own blood.

Correct Answer: C. Do an autologous blood donation.

A donation of your own blood is autologous. Doing this will prevent the risk of transfusion reaction. Autologous blood transfusion is the collection of blood from a single patient and retransfusion back to the same patient when required. This is in contrast to allogeneic blood transfusion where blood from unrelated/anonymous donors is transfused to the recipient. The primary driving forces for the use of autologous blood transfusion are to reduce the risk of transmission of infection and to protect an increasingly scarce resource.

- **Option A:** More recently, concerns have focussed on the blood-borne transmission of variant Creutzfeldt–Jakob disease (vCJD). In 2004, case reports emerged of presumed transmission of vCJD via allogeneic blood transfusion. Unlike hepatitis and HIV, there is no effective screening test and the disease has a variable and often prolonged asymptomatic incubation period.
- **Option B:** As oral iron supplementation requires a significant amount of time, when the interval before surgery is sufficient (at least 6–8 weeks) and no contraindications are present, supplementation with oral iron and nutritional advice may be appropriate for mild-to-moderate IDA and/or nonanemic ID or insufficient iron stores.
- **Option D:** Allogeneic donor blood is becoming an increasingly costly and scarce resource. As demand for blood is outstripping donation, there is a real social and economic pressure to increase the proportion of blood transfused by autologous transfusion.

93. Which of the following is included in the health teachings among clients receiving Valium?

- A. Avoid foods rich in tyramine.
- B. Take the medication after meals.
- C. It is safe to stop it anytime after long term use.
- D. Double up the dose if the client forgets her medication.

Correct Answer: B. Take the medication after meals.

Anti Anxiety medications cause G.I. upset so it should be taken after meals. Benzodiazepines are a class of medicines approved to treat generalized anxiety disorder, insomnia, seizures, social phobia, and panic disorder.

- **Option A:** This is specific for antidepressant MAOI. Taking tyramine-rich food can cause a hypertensive crisis. MAOIs prevent the breakdown of tyramine found in the body as well as certain foods, drinks, and other medications. Patients that take MAOIs and consume tyramine-containing foods or drinks will exhibit high serum tyramine level. A high level of tyramine can cause a sudden increase in blood pressure, called the tyramine pressor response.
- **Option C:** Valium causes dependency. In which case, the medication should be gradually withdrawn to prevent the occurrence of convulsion. However, the potential of overdose from diverted diazepam always exists when combined with opioids, alcohol, or other centrally acting agents. Overdose in adults frequently involves the co-ingestion of other CNS depressants, which work synergistically to increase toxicity. In the case of single-agent diazepam overdose, symptoms manifest as CNS depression and are very rarely fatal. In mild cases, lethargy, drowsiness, and confusion are common symptoms.

- **Option D:** The dose of Valium should not be doubled if the previous dose was not taken. It can intensify the CNS depressant effects. In cases of severe overdose, symptoms manifest as ataxia, diminished reflexes, hypotonia, hypotension, respiratory depression, coma (rarely), and death (very rarely).

94. Which of the following cells is the precursor to the red blood cell (RBC)?

- A. B cell
- B. Macrophage
- C. Stem cell
- D. T cell

Correct Answer: C. Stem cell

The precursor to the RBC is the stem cell. B cells, macrophages, and T cells, and lymphocytes, not RBC precursors. Precursor cells are known as the intermediate cell before they become differentiated after being a stem cell. Usually, a precursor cell is a stem cell with the capacity to differentiate into only one cell type. Sometimes, precursor cells are used as an alternative term for unipotent stem cells.

- **Option A:** B cells are at the center of the adaptive humoral immune system and are responsible for mediating the production of antigen-specific immunoglobulin (Ig) directed against invasive pathogens (typically known as antibodies).
- **Option B:** Macrophages are specialized cells involved in the detection, phagocytosis, and destruction of bacteria and other harmful organisms. In addition, they can also present antigens to T cells and initiate inflammation by releasing molecules (known as cytokines) that activate other cells.
- **Option D:** T cells are so-called because they are predominantly produced in the thymus. They recognize foreign particles (antigen) by a surface-expressed, highly variable, T cell receptor (TCR).

95. Baby Jonathan was born with cleft lip (CL); Nurse Barbara would be alert that which of the following will most likely be compromised?

- A. GI function
- B. Locomotion
- C. Sucking ability
- D. Respiratory status

Correct Answer: C. Sucking ability

Because of the defect, the child will be unable to form a mouth adequately around the nipple, thereby requiring special devices to allow for feeding and sucking gratification. Patients with cleft lips inherently will have some degree of alveolar cleft with potential for collapse of the maxillary arch and class III malocclusion (the maxillary teeth sit posterior to the mandibular teeth). These hard and soft tissue anatomic changes translate to the various changes in appearance, speech, and swallowing/feeding seen in cleft lip patients.

- **Option A:** GI functioning is not compromised in the child with a CL. Speech-language therapists and nutrition consults are usually required to teach parents techniques to meet the special feeding needs of these children. When patients do not meet feeding requirements for adequate nutrition,

which is most common when there is a concomitant cleft palate, feeding access is sometimes required with the assistance of the pediatric surgery team.

- **Option B:** Locomotion would be a problem for older infants because of the use of restraints. Nurses who look after these infants should be fully aware of the risk of aspiration, airway obstruction, and difficulties with feeding. There is no single method of feeding that works in all children and the mother should be educated on the different techniques to help the infant latch on the nipple. In general, the recommendation is a soft nipple that may need to be angled.
- **Option D:** Respiratory status may be compromised if the child is fed improperly during the postoperative period. The mother should be taught about the potential for aspiration and choking. If the infant fails to gain weight, a visit to the pediatrician is highly recommended.

96. The nurse develops the following hypothesis: Elderly women receive less aggressive treatment for breast cancer than do younger women. Which variable would be considered to be the dependent variable?

- A. Degree of treatment received.
- B. Age of the patient.
- C. Type of cancer being treated.
- D. Use of inpatient treatment.

Correct Answer: A. Degree of treatment received.

The degree of treatment received is considered the dependent variable. Dependent variable is the variable that depends on other factors that are measured. These variables are expected to change as a result of experimental manipulation of the independent variable or variables. It is the presumed effect.

- **Option B:** The age of the patient is an independent variable. Independent variable is the variable that is stable and unaffected by the other variables the researcher is trying to measure. It refers to the condition of an experiment that is systematically manipulated by the investigator. It is the presumed cause.
- **Option C:** The type of cancer being treated can be a predictor variable. Predictor variables can be used to predict the value of a dependent variable. Predictor variable is the name given to an independent variable used in regression analyses. The predictor variable provides information on an associated dependent variable regarding a particular outcome. At the most fundamental level, predictor variables are variables that are linked with particular outcomes.
- **Option D:** The use of inpatient treatment is not specified. Researchers often use charts or graphs to visualize the results of their studies. The norm is to place the independent variable on the “x” or horizontal axis and the dependent variable on the “y” or vertical axis.

97. Erickson’s stage of psychosocial development in which social relationships develop and productivity increases.

- A. Initiative vs guilt
- B. Autonomy vs shame and doubt
- C. Industry vs inferiority
- D. Generativity vs stagnation

Correct Answer: C. Industry vs inferiority

Industry vs inferiority starts from 6 to 12 years of age when children need to cope with social and academic demands. Success at this stage leads to competence and self-confidence. Once school begins, actual performance and skill are evaluated. Grades and feedback from educators encourage kids to pay more attention to the actual quality of their work.

- **Option A:** Initiative vs guilt (3 to 6 years) is the stage when children become purposeful and directive. Children need to begin asserting control and power over the environment by taking initiative by planning activities, accomplishing tasks, and facing challenges.
- **Option B:** Autonomy vs shame and doubt (18 months to 3 years) is the stage when children learn to control their own bodies. It is at this point in development that young children begin to express a greater need for independence and control over themselves and the world around them.
- **Option D:** Generativity vs stagnation (35 to 65 years) is the stage when the concern is centered on family and society. During this time, adults strive to create or nurture things that will outlast them; often by parenting children or contributing to positive changes that benefit other people.

98. Which of the following statements is TRUE of conception?

- A. Within 2-4 hours after intercourse, conception is possible in a fertile woman.
- B. Generally, fertilization is possible 4 days after ovulation.
- C. Conception is possible during menstruation in a long menstrual cycle.
- D. To avoid conception, intercourse must be avoided 5 days before and 3 days after menstruation.

Correct Answer: A. Within 2-4 hours after intercourse conception is possible in a fertile woman.

The sperms when deposited near the cervical os will be able to reach the fallopian tubes within 4 hours. If the woman has just ovulated (within 24 hours after the rupture of the Graafian follicle), fertilization is possible.

- **Option B:** Following ovulation, the egg is capable of fertilization for only 12 to 24 hours. Contact between the egg and sperm is random. Once the egg arrives at a specific portion of the tube, called the ampullary-isthmic junction, it rests for another 30 hours.
- **Option C:** Conception during menstrual period is unlikely because the ovulation time is several days away, decreasing any chances of getting pregnant during this time. However, there are exceptions. This applies to women who have a typical 28 to 30 day or longer cycle. If the woman has a shorter cycle, that means that she may ovulate earlier in the cycle.
- **Option D:** The likelihood of getting pregnant right before menstruation is extremely low. For women with a typical 28- to 30-day cycle or longer and their cycles are regular, it is fairly safe to say that ovulation occurred between Day 11 and Day 21. The egg is only available for 12 to 24 hours for conception.

99. A male client has approached the nurse asking for advice on how to deal with his alcohol addiction. Nurse Sally should tell the client that the only effective treatment for alcoholism is:

- A. Psychotherapy
- B. Total abstinence

C. Alcoholics Anonymous (AA)

D. Aversion therapy

Correct Answer B. Total abstinence

Total abstinence is the only effective treatment for alcoholism. For people who have severe alcohol use disorder, this is a key step. The goal is to stop drinking and give the body time to get the alcohol out of the system. That usually takes a few days to a week. Psychotherapy, attendance at AA meetings, and aversion therapy are all adjunctive therapies that can support the client in his efforts to abstain.

- **Option A:** With alcohol use disorder, controlling your drinking is only part of the answer. You also need to learn new skills and strategies to use in everyday life. Psychologists, social workers, or alcohol counselors can teach you how to change the behaviors that make you want to drink; deal with stress and other triggers; build a strong support system; and set goals and reach them.
- **Option C:** Group therapy or a support group can help during rehab and help the client stay on track as life gets back to normal. Group therapy, led by a therapist, can give the client the benefits of therapy along with the support of other members. Support groups aren't led by therapists. Instead, these are groups of people who have alcohol use disorder. Examples include Alcoholics Anonymous, SMART Recovery, and other programs. The peers can offer understanding and advice and help keep the client accountable. Many people stay in groups for years.
- **Option D:** Aversion therapy is a type of behavioral therapy that involves repeatedly pairing an unwanted behavior with discomfort. For example, a person undergoing aversion therapy to stop smoking might receive an electrical shock every time they view an image of a cigarette. The goal of the conditioning process is to make the individual associate the stimulus with unpleasant or uncomfortable sensations.

100. Vic asks the nurse what PSA is. The nurse should reply that it stands for:

A. Prostate-specific antigen, which is used to screen for prostate cancer.

B. Protein serum antigen, which is used to determine protein levels.

C. Pneumococcal strep antigen, which is a bacteria that causes pneumonia.

D. Papanicolaou-specific antigen, which is used to screen for cervical cancer.

Correct Answer: A. Prostate-specific antigen, which is used to screen for prostate cancer.

PSA stands for prostate-specific antigen, which is used to screen for prostate cancer.

- **Option B:** There is no protein serum antigen test for protein levels.
- **Option C:** There is no pneumococcal strep antigen test that tests for bacteria in pneumonia.
- **Option D:** There is no Papanicolaou-specific antigen test available for cervical cancer.