

Kevin's Review - 85 NCLEX Practice Questions

1. A 38-year-old male patient visits a healthcare clinic with complaints of a severe sore throat, nasal congestion, and a general feeling of malaise for the past three days. He mentions a history of recurrent upper respiratory infections. The nurse practitioner, suspecting a possible infection affecting the pharyngeal region, decides to systematically examine the divisions of the pharynx to identify the source of inflammation and discomfort. Turning to a nursing intern shadowing her for the day, she poses a quick question to test her understanding, "Given the patient's complaints and our need for a structured examination, can you tell me the correct sequence in which we should assess the divisions of the pharynx from superior to inferior?"

- A. Oropharynx, Nasopharynx, Laryngopharynx
- B. Nasopharynx, Oropharynx, Laryngopharynx
- C. Laryngopharynx, Nasopharynx, Oropharynx
- D. Nasopharynx, Laryngopharynx, Oropharynx

Correct Answer: B. Nasopharynx, Oropharynx, Laryngopharynx

The nasopharynx is the superior part of the pharynx. It is located posterior to the choanae and superior to the soft palate, which is an incomplete muscle and connective tissue partition separating the nasopharynx from the oropharynx. The oropharynx extends from the uvula to the epiglottis, and the oral cavity opens into the oropharynx. Thus, food, drink, and air all pass through the oropharynx. The laryngopharynx passes posterior to the larynx and extends from the tip of the epiglottis to the esophagus. Food and drink pass through the laryngopharynx to the esophagus.

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

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

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

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

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

3. Which of the following positions would best aid breathing for a client with acute pulmonary edema?

- A. Lying flat in bed.
- B. Left side-lying.
- C. In high Fowler's position.
- D. In semi-Fowler's position.

Correct Answer: C. In high Fowler's position

A high Fowler's position promotes ventilation and facilitates breathing by reducing venous return. Gravity improves lung expansion by lowering diaphragm and shifting fluid to the lower abdominal cavity. Turn or reposition, and provide skin care at regular intervals. Decreases pressure and friction on edematous tissue, which is more prone to breakdown than normal tissue.

- **Option A:** Lying flat on bed may worsen the patient's breathing. Edema can be either a cause or a result of various pathological conditions reflecting four competing forces: blood hydrostatic and osmotic pressures and interstitial fluid hydrostatic and osmotic pressures. The dynamic interaction of these four forces allows fluid to shift from one body compartment to another. Edema may be generalized or localized in dependent areas. Elderly clients may develop dependent edema with relatively little excess fluid.
- **Option B:** Left side-lying position worsens the breathing and increases the workload of the heart. Encourage adequate bed rest. Limited cardiac reserves result in fatigue and activity intolerance. Rest, particularly lying down, favors diuresis and reduction of edema.
- **Option D:** Semi-Fowler's position won't reduce the workload of the heart as well as Fowler's position will. Note the presence of neck and peripheral vein distention, along with pitting edema, and dyspnea. Signs of cardiac decompensation and heart failure. Auscultate lung and heart sounds. Adventitious sounds (crackles) and extra heart sounds (S3) are indicative of fluid excess, possibly returning in the rapid development of pulmonary edema.

4. Freud explains anxiety as:

- A. Strives to gratify the needs for satisfaction and security.
- B. Conflict between id and superego.
- C. A hypothalamic-pituitary-adrenal reaction to stress.
- D. A conditioned response to stressors.

Correct Answer: B. Conflict between id and superego

Freud explains anxiety as due to opposing action drives between the id and the superego. Moral anxiety is a function of the development of the superego. Whatever the anxiety, the ego seeks to reduce it. Operating at the unconscious level, it employs defense mechanisms to distort or deny reality.

- **Option A:** Sullivan identified 2 types of needs, satisfaction and security. Failure to gratify these needs may result in anxiety. Sullivan (1953b) postulated that it is transferred from the parent to the infant through the process of empathy. Anxiety in the mothering one inevitably induces anxiety in the infant. Because all mothers have some amount of anxiety while caring for their babies, all infants will become anxious to some degree.

- **Option C:** Biomedical perspective of anxiety. Serotonin and dopamine are two important neurotransmitters that, when disrupted, can cause feelings of anxiety and depression. Researchers have also found that several parts of the brain are involved in fear and anxiety.
- **Option D:** Explanation of anxiety using the behavioral model. Anxiety is a psychological, physiological, and behavioral state induced in animals and humans by a threat to well-being or survival, either actual or potential. It is characterized by increased arousal, expectancy, autonomic and neuroendocrine activation, and specific behavior patterns. The function of these changes is to facilitate coping with an adverse or unexpected situation.

5. When talking with a pregnant client who is experiencing aching swollen leg veins, the nurse would explain that this is most probably the result of which of the following?

- A. Thrombophlebitis
- B. Pregnancy-induced hypertension
- C. Pressure on blood vessels from the enlarging uterus
- D. The force of gravity pulling down on the uterus

Correct Answer: C. Pressure on blood vessels from the enlarging uterus

The pressure of the growing uterus on blood vessels results in an increased risk for venous stasis in the lower extremities. Subsequently, edema and varicose vein formation may occur.

- **Option A:** Thrombophlebitis is an inflammation of the veins due to thrombus formation. The hypercoagulable condition of the immediate antepartum period is responsible, in large part, for the development of superficial thrombophlebitis and DVT in 0.15% and 0.04% of this patient population, respectively.
- **Option B:** Pregnancy-induced hypertension is not associated with these symptoms. Pregnancy-induced hypertension is associated with significant elevations in total peripheral resistance, enhanced responsiveness to angiotensin II, and marked reductions in renal blood flow and glomerular filtration rate, and proteinuria.
- **Option D:** Gravity plays only a minor role with these symptoms. The center of gravity of pregnant women is displaced anteriorly and superiorly, compared to non-pregnant women. Furthermore, changes are seen in body shape. Because the volume of the lower trunk increases structurally, it becomes unstable. Nagai et al. reported that the postural sway of anterior-posterior movements increased during pregnancy because of the increase in the abdominal circumference

6. After a subtotal gastrectomy, the nurse should anticipate that nasogastric tube drainage will be what color for about 12 to 24 hours after surgery?

- A. Dark brown
- B. Bile green
- C. Bright red
- D. Cloudy white

Correct Answer: A. Dark brown

About 12 to 24 hours after a subtotal gastrectomy, gastric drainage is normally brown, which indicates digested blood. The aims of prophylactic drainage are to prevent repeated infection (for example by discharging remnant blood and preventing abscess formation), control possible leakage from the surgical seam (by drainage of the digestive closure, for example, a colonic anastomosis), and to provide a warning of potential complications.

- **Option B:** Bile green is not expected during the first 12 to 24 hours after subtotal gastrectomy. Bile-colored (greenish) drainage is characteristic when the tube is in the duodenum. Measure and record the amount of drainage. Dispose of measured drainage by flushing into the hopper or toilet.
- **Option C:** Drainage during the first 6 to 12 hours contains some bright red blood, but large amounts of blood or excessively bloody drainage should be reported to the physician promptly. In gastrointestinal drainage, blood varies in color—it may be dark red when fresh, dark brownish-red, or in brown particles (“coffee ground drainage”) if it has been partially digested.
- **Option D:** Cloudy, pale-yellowish drainage is characteristic when the tube is in the stomach. However, this is not expected within 12 to 24 hours. Measure the contents and empty the drainage bottle at the hours ordered by the physician, when the drainage bottle is two-thirds full or when suction is discontinued.

7. Which of the following symptoms is common with a hiatal hernia?

- A. Left arm pain
- B. Lower back pain
- C. Esophageal reflux
- D. Abdominal cramping

Correct Answer: C. Esophageal reflux

Esophageal reflux is a common symptom of a hiatal hernia. This seems to be associated with chronic exposure of the lower esophageal sphincter to the lower pressure of the thorax, making it less effective. In a hiatal hernia, the stomach pushes through that opening and into the chest and compromises the lower esophageal sphincter (LES). This laxity of the LES can allow gastric content and acid to back up into the esophagus and is the leading cause of gastroesophageal reflux disease (GERD).

- **Option A:** There is no left arm pain in hiatal hernia. The typical presentation leading to an evaluation for a hiatal hernia is gastroesophageal reflux disease (GERD). Patients typically complain of heartburn and sometimes regurgitation. While heartburn is the most common complaint, some patients will present with extra-esophageal symptoms such as a chronic cough or asthma.
- **Option B:** Lower back pain is not associated with hiatal hernia. The presentation of regurgitation or extra-esophageal symptoms typically is a sign of disease progression. However, not all patients with regurgitation have GERD, and it is important to note if the regurgitated food is digested or undigested.
- **Option D:** Abdominal cramping is not a symptom of hiatal hernia. Physical examination in patients with a hiatal hernia and GERD rarely helps confirm the diagnosis. The presence of abnormal supraclavicular lymph nodes in patients with heartburn and dysphasia may suggest esophageal or gastric cancer and is an important part of the evaluation.

8. A client completing requirements for student teaching reports to the nurse an incident in which a student was rude and disrespectful. The client states, “None

of the students respects my teaching ability.” The nurse identifies this as an example of which common negative cognition?

- A. Labeling
- B. Fortune telling
- C. Overgeneralization
- D. "Should" statement

Correct Answer: C. Overgeneralization

The client in this situation is overgeneralizing the response of one particular student, inferring that the entire class has this attitude and blowing the incident out of proportion. Overgeneralization frequently affects people with depression or anxiety disorders. It is a way of thinking where you apply one experience to all experiences, including those in the future.

- **Option A:** Labeling is the application of negative labels to oneself or others. This label may be a reasonable reflection of who they are right now, but it also carries a belief that the behavior reflects a person's essence.
- **Option B:** Fortune-telling is the conviction that things will not turn out right, despite evidence to the contrary. Fortune telling is a cognitive distortion in which you predict a negative outcome without realistically considering the actual odds of that outcome. It is linked to anxiety and depression, and is one of the most common cognitive distortions that arise during the course of cognitive restructuring.
- **Option D:** "Should" statements refer to statements establishing standards for self and others. Should statements are a common negative thinking pattern, or cognitive distortion, that can contribute to feelings of fear and worry. They also put unreasonable demands and pressure on ourselves, which can make us feel guilty or like we've failed.

9. Magnesium performs all of the following functions except:

- A. Contributing to vasoconstriction.
- B. Assisting in cardiac muscle contraction.
- C. Facilitating sodium transport.
- D. Assisting in protein metabolism.

Correct Answer: A. Contributing to vasoconstriction.

Magnesium contributes to vasodilation, not vasoconstriction. Magnesium plays a vital role in over 300 reactions involving metabolism. It is involved with hormone receptor binding, muscle contraction, neural activity, neurotransmitter release, vasomotor tone, and cardiac excitability.

- **Option B:** Magnesium acts as a natural calcium channel blocker, and it is a cofactor of the Na-K-ATP pump. Magnesium helps control atrioventricular node conduction. Therefore, hypomagnesemia can cause myocardial excitability resulting in arrhythmias such as ventricular tachycardia and torsades de pointes.
- **Option C:** It is necessary for the active transport of potassium and calcium across the cell membrane. ATP is dependent on magnesium for proper functioning. Roughly 50% of magnesium is located within the bone, 25% is within the muscle, and the remainder is in soft tissue, serum, and red blood cells (RBC).

- **Option D:** The intestine, bone, and kidney maintain magnesium homeostasis. Similar to calcium, magnesium is absorbed via the intestine, stored in the bone, excreted via the kidneys. Absorption of magnesium is inversely proportional to the concentration within the body; if there are low magnesium levels within the body, more magnesium will be absorbed.

10. During preparation for bowel surgery, a male client receives an antibiotic to reduce intestinal bacteria. Antibiotic therapy may interfere with the synthesis of which vitamin and may lead to hypoprothrombinemia?

- A. Vitamin A
- B. Vitamin D
- C. Vitamin E
- D. Vitamin K

Correct Answer: D. Vitamin K

Intestinal bacteria synthesize such nutritional substances as vitamin K, thiamine, riboflavin, vitamin B12, folic acid, biotin, and nicotinic acid. Therefore, antibiotic therapy may interfere with the synthesis of these substances, including vitamin K. Antibiotics, especially those known as cephalosporins, reduce the absorption of vitamin K in the body. Using them for more than 10 days may lower levels of vitamin K because these drugs kill not only harmful bacteria but also the bacteria that make vitamin K.

- **Option A:** Vitamin A is a general term that encompasses various fat-soluble substances such as retinol, retinyl palmitate, and beta-carotene. In the liver, retinol is esterified to retinyl esters and stored in the stellate cells. In the tissues, both retinol and beta-carotene are oxidized to retinal and retinoic acid, which are essential for vision and gene regulation, respectively. These active metabolites bind nuclear receptors of the RAR family to control gene expression.
- **Option B:** Vitamin D is labeled as the “sunshine vitamin,” as it is produced in the skin on sun exposure. Vitamin D is a hormone obtained through dietary consumption and skin production. Ultraviolet B (UVB) radiation, wavelength (290 to 315 nm) converts 7-dehydrocholesterol in the skin to previtamin D. This previtamin D undergoes heat isomerization and is converted to vitamin D. Vitamin D from the skin and diet is metabolized in the liver to 25-hydroxyvitamin D (25 OH D), and 25-hydroxyvitamin D is useful in assessing vitamin D status.
- **Option C:** Intestinal bacteria don’t synthesize vitamin E. Vitamin E or tocopherol is a fat-soluble vitamin functioning as an antioxidant, protecting the cell membrane. As with all fat-soluble vitamins, transport and absorption require intact fat digestion mechanisms. Fat metabolism involves lipases, both lingual and gastric, bile salts, pancreatic enzymes, and intestinal absorption.

11. In a 50-year-old widower who had a transient ischemic attack, what is the most common vasodilator used for his treatment?

- A. norepinephrine
- B. dopamine (Intropin)
- C. papaverine (Pavabid)
- D. nitroprusside (Nitropress)

Correct Answer: D. nitroprusside (Nitropress)

Nitroprusside (Nitropress) is used in this situation. Sodium nitroprusside (SNP) is a potent vasodilator that first gained FDA approval for the treatment of severe hypertension in 1974. From a hemodynamic perspective, the net result is a decrease in systemic vascular resistance (afterload), ventricular filling pressures, and systemic blood pressure with an increase in cardiac output. A and B are sympathomimetics used to treat hypotension.

- **Option A:** Norepinephrine's predominant use is as a peripheral vasoconstrictor. Specifically, the FDA has approved its use for blood pressure control in specific acute hypotensive states, as well as being a potential adjunct in the treatment of cardiac arrest with profound hypotension. Also, norepinephrine generally has more predictive pharmacologic properties than other alpha agonists. This predictive quality, in combination with some of its beta-agonism (which improves cardiac function relative to pure alpha agonists), makes norepinephrine a widely used vasoactive agent.
- **Option B:** Dopamine (DA) is a peripheral vaso stimulant used to treat low blood pressure, low heart rate, and cardiac arrest, especially in acute neonatal cases via a continuous intravenous drip. Indications for DA include maintenance of blood pressure for chronic congestive heart failure, trauma, renal failure, and even open-heart surgery and shock from myocardial infarction or septicemia. DA administration in low doses may also be beneficial to manage hypotension, low cardiac output, and inadequate organ perfusion (often indicated by low urine production).
- **Option C:** Papaverine is contraindicated in myocardial depressant states. Papaverine is a vasodilator that relaxes smooth muscles in the blood vessels to help them dilate (widen). This lowers blood pressure and allows blood to flow more easily through the veins and arteries. Papaverine is used to treat many conditions that cause spasms of smooth muscle.

12. Nurse Lourdes is teaching a client recovering from Addisonian crisis about the need to take fludrocortisone acetate and hydrocortisone at home. Which statement by the client indicates an understanding of the instructions?

- A. "I'll take my hydrocortisone in the late afternoon, before dinner."
- B. "I'll take all of my hydrocortisone in the morning, right after I wake up."
- C. "I'll take two-thirds of the dose when I wake up and one-third in the late afternoon."
- D. "I'll take the entire dose at bedtime."

Correct Answer: C. "I'll take two-thirds of the dose when I wake up and one-third in the late afternoon."

Hydrocortisone, a glucocorticoid, should be administered according to a schedule that closely reflects the body's own secretion of this hormone; therefore, two-thirds of the dose of hydrocortisone should be taken in the morning and one-third in the late afternoon. This dosage schedule reduces adverse effects.

- **Option A:** Taking the medicine at this schedule may cause adverse effects.
- **Option B:** The dosage should be according to the imitation of when the body secretes glucocorticoids.
- **Option D:** Taking an entire dose might cause severe adverse effects.

13. What is the most common complication of an MI?

- A. Cardiogenic shock
- B. Heart failure

C. Arrhythmias

D. Pericarditis

Correct Answer: C. Arrhythmias

Arrhythmias, caused by oxygen deprivation to the myocardium, are the most common complication of an MI. About 90% of patients who have an acute myocardial infarction (AMI) develop some form of cardiac arrhythmia during or immediately after the event. In 25% of patients, such rhythm abnormalities manifest within the first 24 hours. In this group of patients, the risk of serious arrhythmias, such as ventricular fibrillation, is greatest in the first hour and declines thereafter.

- **Option A:** Cardiogenic shock, another complication of an MI, is defined as the end stage of left ventricular dysfunction. This condition occurs in approximately 15% of clients with MI. Cardiogenic shock is a physiologic state in which inadequate tissue perfusion results from cardiac dysfunction, most often systolic. It is a major, and frequently fatal, complication of a variety of acute and chronic disorders, occurring most commonly following acute myocardial infarction (MI).
- **Option B:** Because the pumping function of the heart is compromised by an MI, heart failure is the second most common complication. Myocardial infarction (MI) remains the most common cause of heart failure (HF) worldwide. For almost 50 years HF has been recognized as a determinant of adverse prognosis after MI, but efforts to promote myocardial repair have failed to translate into clinical therapies.
- **Option D:** Pericarditis most commonly results from a bacterial or viral infection but may occur after the MI. Pericardial inflammation after myocardial infarction can be either acute seen after 3 to 10 days after large transmural myocardial infarction, termed as peri-infarction pericarditis, or immune-mediated inflammation after 1 to 8 weeks termed as post-myocardial infarction syndrome (Dressler syndrome). The pain of pericarditis may be confused as resulting from post-infarction angina or recurrent infarction.

14. The nurse is conducting nutrition counseling for a patient with cholecystitis. Which of the following information is important to communicate?

- A. The patient must maintain a low calorie diet.
- B. The patient must maintain a high protein/low carbohydrate diet.
- C. The patient should limit sweets and sugary drinks.
- D. The patient should limit fatty foods.

Correct Answer: D. The patient should limit fatty foods.

Cholecystitis, inflammation of the gallbladder, is most commonly caused by the presence of gallstones, which may block bile (necessary for fat absorption) from entering the intestines. Patients should decrease dietary fat by limiting foods like fatty meats, fried foods, and creamy desserts to avoid irritation of the gallbladder.

- **Option A:** People who go on an extremely low-calorie diet are more likely to develop gallstones than people on a moderately low-calorie diet. Eating a healthy, well-balanced diet full of fruits and vegetables is the best way to improve and protect the gallbladder's health. Fruits and vegetables are full of nutrients and fiber, the latter of which is essential to a healthy gallbladder.
- **Option B:** A low-fat diet with lean proteins is recommended for patients with cholecystitis. Foods with trans fats, like those in processed or commercially baked products, can also be harmful to gallbladder health.

- **Option C:** Moderate consumption of sweet drinks can be allowed. Avoiding refined white foods, like white pasta, bread, and sugar, can protect the gallbladder. Eat whole-grain cereals, whole-grain bread, whole-grain crackers, brown rice, or whole-grain pasta. Avoid high-fat foods such as croissants, scones, biscuits, waffles, doughnuts, muffins, granola, and high-fat bread.

15. A woman comes into the ER in a severe state of anxiety following a car accident. The most appropriate nursing intervention is to:

- A. Remain with the client.
- B. Put the client in a quiet room.
- C. Teach the client deep breathing.
- D. Encourage the client to talk about their feelings and concerns.

Correct Answer: A. Remain with the client.

If a client with severe anxiety is left alone; the client may feel abandoned and become overwhelmed. Remain with the client at all times when levels of anxiety are high (severe or panic); reassure the client of his or her safety and security. The client's safety is an utmost priority. A highly anxious client should not be left alone as his anxiety will escalate.

- **Option B:** Placing the client in a quiet room is also important, but the nurse must stay with the client. 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 C:** Teaching the client deep breathing or relaxation is not possible until the anxiety decreases. Encourage the client's participation in relaxation exercises such as deep breathing, progressive muscle relaxation, guided imagery, meditation and so forth. Relaxation exercises are effective nonchemical ways to reduce anxiety.
- **Option D:** Encouraging the client to discuss concerns and feelings would not take place until the anxiety has decreased. Observe for increasing anxiety. Assume a calm manner, decrease environmental stimulation, and provide temporary isolation as indicated. Early detection and intervention facilitate modifying a client's behavior by changing the environment and the client's interaction with it, to minimize the spread of anxiety.

16. Propranolol (Inderal) is used in the mental health setting to manage which of the following conditions?

Correct Answer: A. Antipsychotic-induced akathisia and anxiety

Propranolol is a potent beta-adrenergic blocker and produces a sedating effect, therefore it is used to treat antipsychotic-induced akathisia and anxiety. Off-label use of propranolol includes the use in performance anxiety, which is a subset of a social phobia presenting with tachycardia, sweating, and flushing that occurs secondary to increased activation of the sympathetic nervous system.

- **Option B:** OCD is most commonly treated with SSRIs, and at much higher doses than used to treat anxiety or depression. FDA-approved SSRIs include fluoxetine, fluvoxamine, paroxetine, and sertraline. The following are appropriate drugs and doses typically used to treat OCD: fluoxetine 80 mg, escitalopram 40 mg, 300 mg fluvoxamine, and 100 mg paroxetine.

- **Option C:** For the initial treatment of acute psychosis, it is recommended to commence an oral second-generation antipsychotics (SGA) such as aripiprazole, olanzapine, risperidone, quetiapine, asenapine, lurasidone, sertindole, ziprasidone, aripiprazole, molindone, iloperidone, etc. Sometimes, if clinically needed, alongside a benzodiazepine such as diazepam, clonazepam, or lorazepam to control behavioral disturbances and non-acute anxiety. First-generation antipsychotic (FGA) like trifluoperazine, Fluphenazine, haloperidol, pimozide, sulpiride, flupentixol, chlorpromazine, etc. are not commonly used as the first line but can be used.
- **Option D:** A large meta-analysis of medications used in acute mania showed that atypical antipsychotics were more effective than mood stabilizers for this purpose but not necessarily for maintenance of bipolar disorder. The most effective medications are risperidone, olanzapine, and haloperidol. Lithium, quetiapine, and aripiprazole were comparatively effective. Valproic acid, carbamazepine, and ziprasidone were more efficacious than placebo but less so than their previously mentioned competitors.

17. Which of the following medication orders needs further clarification?

Correct Answer: C. Coumadin 10mg PO

- Option C: There is no specified time or frequency for the ordered medication.
- Options A, B, and D: These medications are completely and correctly written.

18. Nurse Johnson is reviewing Mr. Garcia, a 58-year-old client with a history of hypertrophic cardiomyopathy and a recent episode of upper respiratory tract infection. During today's assessment, Nurse Johnson noted that Mr. Garcia's systolic blood pressure has decreased from 145 to 110 mm Hg since his last visit, his heart rate has risen from 72 to 96 beats per minute, and he has been experiencing periodic dizzy spells when standing up. Mr. Garcia mentioned he has been trying to drink less due to concerns about fluid retention. Considering his clinical picture and history, Nurse Johnson should advise Mr. Garcia to:

Correct Answer: C. Force fluids and reassess blood pressure

Given the drop in systolic blood pressure, increased heart rate (which could be compensatory mechanisms due to hypovolemia), and dizziness (potentially orthostatic hypotension), it might be appropriate to advise Mr. Garcia to increase his fluid intake. After doing so, reassessing his blood pressure can provide valuable feedback on his volume status. Orthostatic hypotension, a decrease in systolic blood pressure of more than 15 mmHg, and an increase in heart rate of more than 15 percent usually accompanied by dizziness indicate volume depletion, inadequate vasoconstrictor mechanisms, and autonomic insufficiency.

- **Option A:** Fluids may not be necessarily protein-rich.
- **Option B:** Restricting fluids could aggravate the client's dizziness.
- **Option D:** There is no need to restrict the fluid intake of the client.

19. The client with a benign lung tumor is treated in which of the following ways?

Correct Answer: A. The tumor is removed, involving the least possible amount of tissue

- **Option A:** The tumor is removed to prevent further compression of the lung tissue as the tumor grows, which could lead to respiratory decompensation.
- **Options B, C, and D:** If for some reason it can't be removed, then radiation or chemotherapy may be used to try to shrink the tumor.

20. The correct method for determining the vastus lateralis site for I.M. injection is to:

Correct Answer: D. Divide the area between the greater femoral trochanter and the lateral femoral condyle into thirds, and select the middle third on the anterior of the thigh

The vastus lateralis, a long, thick muscle that extends the full length of the thigh, is viewed by many clinicians as the site of choice for I.M. injections because it has relatively few major nerves and blood vessels. The middle third of the muscle is recommended as the injection site. The patient can be in a supine or sitting position for an injection into this site.

- **Option A:** There are specific landmarks to be taken into consideration while giving IM injections so as to avoid any neurovascular complications. The heel of the opposing hand is placed in the greater trochanter, the index finger in the anterior superior iliac spine, and the middle finger below the iliac crest. The drug is injected in the triangle formed by the index, middle finger, and the iliac crest
- **Option B:** The deltoid area is 2.5 to 5 cm below the acromion process. Intramuscular injection is the method of installing medications into the depth of the bulk of specifically selected muscles. The basis of this process is that the bulky muscles have good vascularity, and therefore the injected drug quickly reaches the systemic circulation and thereafter into the specific region of action, bypassing the first-pass metabolism.
- **Option C:** The vastus lateralis is a common site for IM injection. The middle third of the line joining the greater trochanter of the femur and the lateral femoral condyle of the knee. It is one of the most common medical procedures to be performed on an annual basis. However, there is still a lack of uniform guidelines and an algorithm in giving IM among health professionals across the world.

21. A male client with a gunshot wound requires an emergency blood transfusion. His blood type is AB negative. Which blood type would be the safest for him to receive?

Correct Answer: C. A Rh-negative

Human blood can sometimes contain an inherited D antigen. Persons with the D antigen have Rh-positive blood type; those lacking the antigen have Rh-negative blood. It's important that a person with Rh-negative blood receives Rh-negative blood.

- **Option A:** A person with Rh-negative blood should also receive Rh-negative blood.
- **Option B:** If Rh-positive blood is administered to an Rh-negative person, the recipient develops anti-Rh agglutinins, and subsequent transfusions with Rh-positive blood may cause serious reactions with clumping and hemolysis of red blood cells.
- **Option D:** This blood type is still not compatible because it is Rh-positive.

22. The nurse receives the client in the postanesthesia care unit (PACU) following a procedure requiring general anesthesia. The most important assessment made by the nurse relates to the client's:

Correct Answer: D. Respiratory status.

General anesthesia causes relaxation of all muscles, including respiratory muscles, requiring mechanical ventilation. The client's respiratory status must be monitored closely following general anesthesia. After awakening, patients typically recover in the post-anesthesia care unit (PACU). In more critically ill patients, recovery may occur directly in the intensive care unit.

- **Option A:** Patients recover in the recovery unit until they have met PACU discharge criteria. The criteria for discharge from phase 1 to phase 2 of PACU are often based on the (modified) Aldrete score, which includes adequate activity, circulation, consciousness oxygen saturation, and maintenance of respiration.
- **Option B:** Phase 2 of PACU should be met prior to discharging the patient home. This includes the ability to maintain appropriate surgical site dressings, adequate pain control, normothermia, ambulation ability, absence of nausea, and omitting and stable vital signs.
- **Option C:** All patients undergoing a general anesthetic at a minimum must have a post-operative note that documents many of these items (institution dependent). Ideally, the patient should be queried after return to baseline cognition when more clandestine issues may be addressed (e.g., corneal abrasions and extremely rarely, awareness under anesthesia).

23. The clinic nurse notes that following several eye examinations, the physician has documented a diagnosis of legal blindness in the client's chart. The nurse reviews the results of the Snellen's chart test expecting to note which of the following?

Correct Answer: D. 20/200 vision

Legal blindness is defined as 20/200 or less with corrected vision (glasses or contact lenses) or visual acuity of less than 20 degrees of the visual field in the better eye. The WHO describes individuals with low vision as having a best-corrected vision of 20/60 or worse, and blind as best corrected vision worse than 20/400, whereas legal blindness is identified as 20/200 in the United States.

- **Option A:** Although 20/20 visual acuity has been referred to as "perfect vision," it is important to remember that this is only one aspect of vision and does not include other elements such as depth perception, peripheral vision, and colorblindness.
- **Option B:** In the United States, visual acuity screening will typically begin as early as age 3. There is a critical line that the child should be able to complete on a visual acuity chart by age group. The critical line for children between the ages of three to four is 20/50, four to five is 20/40, and five or older is 20/30.
- **Option C:** An individual with 20/60 vision would be able to distinguish the same optotype at 20 ft that another individual with normal (20/20) vision distinguishes at 60 ft. In the logMAR, visual acuity is reported as a single number where 0.0 is standard vision. Visual acuity decreases as the number increases and improves as the number decreases.

24. A nursing instructor asks a nursing student to describe the procedure for administering erythromycin ointment into the eyes of a neonate. The instructor

determines that the student needs to research this procedure further if the student states:

Correct Answer: B. "I will flush the eyes after instilling the ointment."

- **Option B:** Eye prophylaxis protects the neonate against *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. The eyes are not flushed after instillation of the medication because the flush will wash away the administered medication.

25. A patient returns from surgery with an indwelling urinary catheter in place and empty. Six hours later, the volume is 120ml. The drainage system has no obstructions. Which intervention has priority?

Correct Answer: B. Evaluate the patient's circulation and vital signs.

A total UO of 120ml is too low. Assess the patient's circulation and hemodynamic stability for signs of hypovolemia. Normal urine output is 1-2 ml/kg/hr. To determine the urine output of your patient, you need to know their weight, the amount of urine produced, and the amount of time it took them to produce that urine.

- **Option A:** A fluid bolus may be required, but only after further nursing assessment and a doctor's order. A decrease in output (to less than 400 ml per 24 hours) may indicate acute failure, especially in high-risk patients. Accurate monitoring of I&O; is necessary for determining renal function and fluid replacement needs and reducing the risk of fluid overload. Do note that hypervolemia usually occurs in the anuric phase of ARF and may mask the symptoms.
- **Option C:** Accurately record intake and output (I&O;) noting to include "hidden" fluids such as IV antibiotic additives, liquid medications, frozen treats, ice chips. Religiously measure gastrointestinal losses and estimate insensible losses (sweating), including wound drainage, nasogastric outputs, and diarrhea.
- **Option D:** Assess skin, face, dependent areas for edema. Evaluate the degree of edema (on a scale of +1→+4). Edema occurs primarily in dependent tissues of the body, (hands, feet, lumbosacral area). The patient can gain up to 10 lb (4.5 kg) of fluid before pitting edema is detected. Periorbital edema may be a presenting sign of this fluid shift because these fragile tissues are easily distended by even minimal fluid accumulation.

26. An emergency room nurse is assessing a male client who has sustained a blunt injury to the chest wall. Which of these signs would indicate the presence of a pneumothorax in this client?

Correct Answer: B. Diminished breath sounds.

This client has sustained a blunt or a closed chest injury. Basic symptoms of a closed pneumothorax are shortness of breath and chest pain. A larger pneumothorax may cause tachypnea, cyanosis, diminished breath sounds, and subcutaneous emphysema. Hyperresonance also may occur on the affected side. A pneumothorax is defined as a collection of air outside the lung but within the pleural cavity. It occurs when air accumulates between the parietal and visceral pleura inside the chest. The air accumulation can apply pressure on the lung and make it collapse.

- **Option A:** An increase in central venous pressure can result in distended neck veins, hypotension. Patients may have tachypnea, dyspnea, tachycardia, and hypoxia. Clinical presentation of a

pneumothorax can range anywhere from asymptomatic to chest pain and shortness of breath.

- **Option C:** Barrel chest could also be present which consists in increased anterior-posterior diameter of the chest wall and is a normal finding in children, but it is suggestive of hyperinflation with chronic obstructive pulmonary disease (COPD) in adults.
- **Option D:** A sucking sound at the site of injury would be noted with an open chest injury. Open “sucking” chest wounds are treated initially with a three-sided occlusive dressing. Further treatment may require tube thoracostomy and/or chest wall defect repair.

27. Polyethylene glycol-electrolyte solution (GoLYTELY) is prescribed for the female client scheduled for a colonoscopy. The client begins to experience diarrhea following the administration of the solution. What action by the nurse is appropriate?

Correct Answer: D. Explain that diarrhea is expected.

The solution GoLYTELY is a bowel evacuant used to prepare a client for a colonoscopy by cleansing the bowel. The solution is expected to cause mild diarrhea and will clear the bowel in 4 to 5 hours. Polyethylene glycol electrolyte (PEG) is essential for a wide range of bowel preparation, with advantages such as high security, reliable effect, no dehydration, and electrolyte disturbance.

- **Option A:** Starting an IV is unnecessary. Surveys, such as those conducted by Seo et al., have shown that colon cleanliness was the highest at time intervals of 3–5 h after a one-time oral administration of 4 L of PEG solution, whereas colon cleanliness was significantly decreased at time intervals of <3 or >7 h.
- **Option B:** Administering an enema would be inappropriate. Bacteria in intestinal feces account for 20%–30% of the solid weight of feces. This also accords with earlier observations that the PEG solution can only effectively remove solid residues in feces and has no significant effect on colonic bacteria and flora.
- **Option C:** Cancelling the test would be inappropriate. PEG solution combined with lactulose improves the quality of bowel preparation in patients with long interval P-C, which allows patients to have no restriction on the time of colonoscopy, and benefits more patients who need a colonoscopy.

28. Gio, a community health nurse, is instructing a group of female clients about breast self-examination. The nurse instructs the client to perform the examination:

Correct Answer: D. 1 week after menstruation begins

- **Option D:** The breast self-examination should be performed monthly 7 days after the onset of the menstrual period when the breasts are less tender and lumpy.
- **Options A and B:** At the onset of menstruation and during ovulation, hormonal changes occur that may alter breast tissue.
- **Option C:** Performing the examination weekly is not recommended.

29. Jose who is receiving monoamine oxidase inhibitor antidepressant should avoid tyramine, a compound found in which of the following foods?

Correct Answer: C. Aged cheese and Chianti wine

Aged cheese and Chianti wine contain high concentrations of tyramine. 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. Even though it is rare, a high tyramine level can trigger a cerebral hemorrhage, which can even result in death.

- **Option A:** Eating foods with high tyramine can trigger a reaction that can have serious consequences. Patients should know that tyramine can increase with the aging of food; they should be encouraged to have foods that are fresh instead of leftovers or food prepared hours earlier. Tyramine is found in certain foods, beverages, and other substances. Protein-rich foods, for example, typically contain high amounts of tyramine. Foods that are aged (such as cheese) are also high in tyramine because the content of the substance in a food or beverage increases as they age.
- **Option B:** Examples of high levels of tyramine in food are types of fish, as well as types of meat, including sausage, turkey, liver, and salami. Also, certain fruits can contain tyramine like overripe fruits, avocados, bananas, raisins, or figs. Tyramine is a compound that affects your blood pressure. It's regulated and broken down by the MAO enzyme. MAOIs restrict the MAO enzyme to reduce symptoms of depression and anxiety. However, if the MAO enzyme is inhibited, tyramine can reach dangerously high levels in your body. Elevated tyramine can cause your blood vessels to narrow, possibly leading to critically high blood pressure.
- **Option D:** Further examples are cheeses, alcohol, and fava beans; all of these should be avoided even after two weeks of stopping MAOIs. Anyone taking MAOIs is at risk for an adverse hypertensive reaction, with accompanying morbidity. Only eat fresh and freshly cooked foods while taking MAOI as tyramine levels in food increase during the spoiling or decay process. Always use proper food handling, preparation, and safety practices to help prevent spoilage and food poisoning. Cook all foods to the proper temperature indicated for food safety.

30. The nurse should visit which of the following clients first?

Correct Answer: C. The client with chest pain and a history of angina

The client with chest pain should be seen first because this could indicate a myocardial infarction. Despite many advances in treatment, acute MI still carries a mortality rate of 5-30%; the majority of deaths occur prior to arrival to the hospital. In addition, within the first year after an MI, there is an additional mortality rate of 5% to 12%. The overall prognosis depends on the extent of heart muscle damage and ejection fraction.

- **Option A:** The client in answer A has blood glucose within normal limits. The diagnosis of T1DM is usually through a characteristic history supported by elevated serum glucose levels (fasting glucose greater than 126 mg/dL, random glucose over 200 mg/dL, or hemoglobin A1C (HbA1c exceeding 6.5%) with or without antibodies to glutamic acid decarboxylase (GAD) and insulin.
- **Option B:** The client in this option is maintained on blood pressure medication. Pharmacological therapy consists of angiotensin-converting enzyme inhibitors (ACEi), angiotensin receptor blockers (ARBs), diuretics (usually thiazides), calcium channel blockers (CCBs), and beta-blockers (BBs), which are instituted taking into account age, race, and comorbidities such as presence of renal dysfunction, LV dysfunction, heart failure, and cerebrovascular disease. JNC-8, ACC, and ESC/ESH have their separate recommendations for pharmacological management.

- **Option D:** The client in answer D is in no distress. In Raynaud phenomenon, blood-flow restriction occurs during cold temperatures and emotional stress. Specifically, in Raynaud phenomenon, there is vasoconstriction of the digital arteries and cutaneous arterioles.

31. Nurse Florence assesses Mrs. B with borderline personality disorder. Which of the following behaviors are common to this diagnosis? Select all that apply.

Correct Answers: A, B, E

These are all common characteristics of an individual with borderline personality disorder. BPD can often interfere with your ability to enjoy life or achieve fulfillment in relationships, work, or school. It's associated with specific and significant problems in interpersonal relationships, self-image, emotions, behaviors, and thinking.

- **Option A:** BPD is associated with an intense fear of being abandoned by loved ones and attempts to avoid real or imagined abandonment. This usually leads to difficulty trusting others, putting a strain on relationships.
- **Option B:** BPD is associated with a tendency to engage in risky and impulsive behaviors, such as going on shopping sprees, drinking excessive amounts of alcohol or abusing drugs, engaging in promiscuous or risky sex, or binge eating. Also, people with BPD are more prone to engage in self-harming behaviors, such as cutting or burning and attempting suicide.
- **Option C:** Suspiciousness and mistrust of others (option C) are characteristic of paranoid personality disorder. The primary characteristic of this condition is a chronic and pervasive distrust and suspicion of others.
- **Option D:** This is a characteristic of someone with schizoid personality disorder, which is generally aloof in relationships and has unusual speech and mannerisms. They have a sense of indifference to praise and affirmation, as well as to criticism or rejection.
- **Option E:** Emotional instability is a key feature of BPD. Individuals feel like they're on an emotional roller coaster with quick mood shifts (i.e., going from feeling OK to feeling extremely down or blue within a few minutes). Mood changes can last from minutes to days and are often intense. Anger, anxiety, and overwhelming emptiness are common as well.
- **Option F:** People with schizoid personality disorder are often described by others as aloof, cold, and detached. Those who have the disorder may prefer being alone, but some may also experience loneliness and social isolation as a result.

32. Nurse April is teaching a client who suspects that she has a lump in her breast. The nurse instructs the client that a diagnosis of breast cancer is confirmed by:

Correct Answer: C. Fine needle aspiration

- **Option C:** Fine needle aspiration and biopsy provide cells for histologic examination to confirm a diagnosis of cancer. During the procedure, a needle is inserted into the lump and a sample of tissue is taken for examination.
- **Option A:** A breast self-examination, if done regularly, is the most reliable method for detecting breast lumps early.
- **Option B:** Mammography is used to detect tumors that are too small to palpate.

- **Option D:** Chest X-rays can be used to pinpoint rib metastasis.

33. Which assessment data would indicate to the nurse that the client would be at risk for a hemorrhagic stroke?

Correct Answer: C. A blood pressure of 220/120 mmHg.

Uncontrolled hypertension is a risk factor for hemorrhagic stroke, which is a ruptured blood vessel in the cranium. Hypertension is the most common cause of hemorrhagic stroke. Long standing hypertension produces degeneration of media, breakage of the elastic lamina, and fragmentation of smooth muscles of arteries.

- **Option A:** High blood glucose levels could predispose a patient to ischemic stroke, but not hemorrhagic. Decreased low-density lipoprotein cholesterol and low triglycerides are also considered to be risk factors. Cerebral microbleeds (CMBs) associated with hypertension, diabetes mellitus, and cigarette smoking increase the risk of ICH.
- **Option B:** Bruit in the carotid artery would predispose a client to an embolic or ischemic stroke. Hypertensive change causes non-lobar intracranial hemorrhage (ICH). Acute hypertension, as seen in eclampsia, also can cause ICH, known as postpartum ICH.
- **Option D:** Cancer is not a precursor to stroke. The common sites of origin of hypertension-induced intracerebral hemorrhage are the small penetrating arteries that originate from basilar arteries or the anterior, middle, or posterior cerebral arteries.

34. When calling the nurse consultant about a difficult client-centered problem, the primary nurse is sure to report the following:

Correct Answer: A. Length of time the current treatment has been in place.

This gives the consulting nurse facts that will influence a new plan. Other choices are subjective and emotional issues and conclusions about the current treatment plan may cause bias in the decision of a new treatment plan by the nurse consultant. In general, it is important to create a supportive environment with open and honest communication, focusing on the achievements and not on negative aspects.

- **Option B:** Navigating the new system is very challenging and it is important for the clients to have a person to whom they could always turn with questions and concerns. It could not necessarily be a formal caseworker, but rather any clinician who had a trusting relationship and was helpful and willing to guide the client.
- **Option C:** Education and information for both the patient and the family were mentioned by all the participants in a study as the main strategies to help them develop a clear understanding of their condition and prognosis.
- **Option D:** Several successful strategies to improve client-centered care have been introduced in different hospitals: writing a family note (a summary that is given to the family) at the family meeting, appointing a contact person/therapy leader for each client, improving continuity and coordination of care through interdisciplinary collaborations, having the same staff working with the client, and providing written materials.

35. What is the purpose of “Tunneling” (inserting the catheter 2-4 inches under the skin) when the surgeon inserts a Hickman central catheter device?

Correct Answer: B. Decreases the risk of infection.

The actual access to the subclavian vein is still just under the clavicle, but by tunneling the distal portion of the catheter several inches under the skin the risk of migratory infection is reduced compared to a catheter that enters the subclavian vein directly and is not tunneled. The catheter is tunneled to prevent infection.

- **Option A:** There are two types of central venous catheters: tunneled and non-tunneled. Tunneled CVC's are placed under the skin and meant to be used for a longer duration of time. Non-tunneled catheters are designed to be temporary and may be put into a large vein near the neck, chest, or groin.
- **Option C:** Tunneled CVC have requirements that are unparalleled by other access devices: high blood flow rates at moderate pressure drops without obstruction, minimal trauma to the vein, resistance to occlusion by fibrous sheathing, prevention of infection, avoidance of clotting, biocompatibility, avoidance of lumen collapse and kinking and breaks, resistance to antiseptic agents, placement with minimal trauma, and radiopaque appearance on X-ray.
- **Option D:** Over 70% of patients initiating chronic hemodialysis in the United States have a tunneled central venous catheter (CVC) for dialysis as their first blood access device. The use of dual lumen CVC for removing and returning blood during dialysis is commonplace now but in the late 1970s, this concept revolutionized dialysis. Before the development of CVC for dialysis, dialysis was possible only with arterial access, through an internal/external AV silicone shunt or through separate catheters placed into an artery and a vein and removed after each treatment.

36. After surgical repair of a hip, which of the following positions is best for the patient's legs and hips?

Correct Answer: A. Abduction

After surgical repair of the hip, keep the legs and hips abducted to stabilize the prosthesis in the acetabulum.

- **Option B:** Adduction brings the limb or hand toward or across the midline of the body, or brings the fingers or toes together.
- **Option C:** Prone position is a body position in which the person lies flat with the chest down and the back up.
- **Option D:** A subluxation is a partial dislocation of a joint. It's often the result of acute injury or repetitive motions, but it can also occur because of medical conditions where the ligaments are loose.

37. A nurse is caring for a client receiving a heparin intravenous (IV) infusion. The nurse expects that which of the following laboratory will be prescribed to monitor the therapeutic effect of heparin?

Correct Answer: B. Activated partial thromboplastin time (aPTT)

Activated partial thromboplastin time assesses the therapeutic level of heparin.

- **Option A:** Prothrombin time (PT) assesses the therapeutic level of warfarin sodium (Coumadin).
- **Options C & D:** Hematocrit (Hgb) and Hemoglobin (Hct) measure the aspect of the red blood cells.

38. A nurse is providing instruction for an obstetrical patient to perform a daily fetal movement count (DFMC). Which instructions could be included in the plan of care? Select all that apply.

Correct Answer: B, C, & D

The fetal alarm signal is reached when no fetal movements are noted for a period of 12 hours. Fetal movement is one show of a baby's health in the womb. Each woman should learn the normal pattern and number of movements for her own baby. A change in the normal pattern or number of fetal movements may mean the baby is under stress. And it's not normal for a baby to stop moving with the start of labor.

- **Option A:** In general, the woman should feel 10 movements in 2 hours. Sit or lie on the side in a comfortable spot during a time of day when the baby is usually active. This may be after eating or moving around. If the woman lies down, lie on the left side, since the baby will have better circulation.

39. The nurse is caring for a severely depressed client who has just been admitted to the in-client psychiatric unit. Which of the following is a priority of care?

Correct Answer: D. Safety

Safety is a priority of care for the depressed client. Precautions to prevent suicide must be a part of the plan. Identify the level of suicide precautions needed. If there is a high-risk, does a hospitalization require it? Or if there is a low risk, will the client be safe to go home with supervision from a family member or a friend? A client with a high-risk will require constant supervision and a safe environment.

- **Option A:** Encourage small, high-calorie, and high-protein snacks and fluids frequently throughout the day and evening if weight loss is noted. Minimize weight loss, constipation, and dehydration. Encourage eating with others. Increases socialization, decreases focus on the food. Weight the client weekly and observe the eating patterns of the client. Give the information needed for revising the intervention.
- **Option B:** Monitor intake and output, especially bowel movements. Most of the depressed clients are constipated. If this problem is not addressed, it can lead to fecal impaction. Encourage the intake of nonalcoholic and non-caffeinated fluids, 6 to 8 glasses a day. Fluids can help prevent constipation. Offer fiber-rich foods and periods of exercise. Roughage and exercise stimulate peristalsis and help evacuation of fecal material.
- **Option C:** Provide rest periods after activities. Fatigue can intensify feelings of depression. Encourage relaxation measures in the evening (e.g., drinking warm milk, back rub, or tepid bath). These measures induce sleep and relaxation. Encourage the client to get up and dress and to stay out of bed during the day. Minimizing sleep during the day increases the likelihood of sleep at night. Reduce environmental and physical stimulants in the evening; Provide decaffeinated coffee, soft music, soft lights, and quiet activities.

40. Which of the following medications given to a 12-year-old client for the treatment of deep partial-thickness burn is the most important to double-check with another licensed nurse before administering it?

Correct Answer: D. Amitriptyline (Elavil) 50 mg PO.

Amitriptyline (Elavil) is useful in the management of neuropathic pain following burn injury and since it is an antidepressant if given with a child, utmost precaution is given. The FDA has issued a black box warning regarding the use of amitriptyline in adolescents and young adults (ages less than 24 years). It can increase the risk of suicidal ideation and behavior.

- **Option A:** Omeprazole is indicated for the short-term treatment of peptic ulcer disease in adults where most patients heal within four weeks. Patients with duodenal ulcer disease and H. pylori infection disease that is active for up to one year may benefit from combination therapy that includes omeprazole with clarithromycin, amoxicillin, and metronidazole.
- **Option B:** Silver sulfadiazine is a medication used in the prevention, management, and treatment of burn wound infections. It is a heavy metal topical agent with antibacterial properties. Typically burn dressings consist of topical silver sulfadiazine combined with fine mesh gauze and are usable in both the inpatient and outpatient settings.
- **Option C:** All health facilities practice double-checking of medications prior to administration, Of all the medications given, Amitriptyline is the most important to double-check with another licensed nurse.

41. Clinical nursing assessment for a patient with microangiopathy who has manifested impaired peripheral arterial circulation includes all of the following, except:

Correct Answer: D. Palpation for increased pulse volume in the arteries of the lower extremities

One of the signs and symptoms of impaired peripheral arterial circulation is the absence of a pulse or a weak pulse in the legs or feet. A general concept to bear in mind is that anything impinging the vessel can decrease peripheral pulses.

- **Option A:** This happens when high pressure in the veins pushes blood into the skin tissue causing reddish-brown staining in the skin tissue. When skin is stained like this, it is very fragile and may break down or, if knocked, fail to heal as usual.
- **Option B:** Severe vasoconstriction reduces blood flow to the skin of the affected areas, causing the skin surface to feel cold to touch and to have a white color. The pale white color is due to virtually no blood flow to the skin.
- **Option C:** When a person develops impaired peripheral arterial circulation, the extremities — usually the legs — don't receive enough blood flow and oxygen to keep up with demand leading to a change in the color of the legs.

42. This drug is usually given parenterally to enhance uterine contraction:

Correct Answer: B. Pitocin

The common oxytocin given to enhance uterine contraction is Pitocin. This is also the drug given to induce labor.

- **Option A:** Terbutaline, sold under the brand name Bricanyl among others, is a β_2 adrenergic receptor agonist, used as a "reliever" inhaler in the management of asthma symptoms and as a tocolytic (anti-contraction medication) to delay preterm labor for up to 48 hours.

- **Option C:** Magnesium sulfate is often quite effective in slowing contractions, although this effect and how long it lasts varies from woman to woman. Like all tocolytic medications, however, magnesium sulfate does not consistently prevent or delay preterm delivery for a significant period of time. The most common explanation is that magnesium lowers calcium levels in uterine muscle cells. Since calcium is necessary for muscle cells to contract, this is thought to relax the uterine muscle.
- **Option D:** The local anesthetic is transferred to the fetus slowly, and its margin of safety is also increased. Considering how local anesthetics have small direct effects on the fetus even at submaximal doses, lidocaine may be considered relatively safe for use in pregnant women.

43. A female client with genital herpes simplex is being treated in the outpatient department. The nurse teaches her about measures that may prevent herpes recurrences and emphasizes the need for prompt treatment if complications arise. Genital herpes simplex increases the risk of:

Correct Answer: C. Cancer of the cervix

A female client with genital herpes simplex is at increased risk for cervical cancer. Genital herpes simplex isn't a risk factor for cancer of the ovaries, uterus, or vagina. Herpes simplex virus-2, the cause of genital herpes, was detected in nearly half of women with invasive cervical cancer — nearly twice as often as in women without signs of cancer, researches report in a study published in the Nov. 6 issue of the Journal of the National Cancer Institute.

- **Option A:** The strongest risk factor of ovarian cancer is a positive family history of breast or ovarian cancer, where a personal history of breast cancer also augments the risk. Several studies have shown an increased risk of smoking, especially the risk of mucinous epithelial tumors.
- **Option B:** Endometrial adenocarcinoma or endometrioid carcinoma is the most common subtype of endometrial cancer. Endometrial adenocarcinoma develops as a result of unopposed estrogen exposure. Estrogen has a proliferative effect on the endometrium, which leads to endometrial hyperplasia. Unmonitored proliferation leads to dysplasia and later carcinoma.
- **Option D:** The malignant and premalignant lesions of the vagina are uncommon. Cancer of the vagina is a clinically heterogeneous disease. The human papillomavirus (HPV) is a known carcinogen for the tumor of the vagina; however, non-HPV-based carcinogenic routes also exist. As with cervical cancer, the high-risk subtypes of HPV can be responsible for other malignancies of the head and neck, as well as the vulva or vagina.

44. The nurse is preparing a client for cardiac catheterization. Which nursing interventions are necessary in preparing the client for this procedure. Select all that apply.

Correct Answer: A, B, E, and F.

In cardiac catheterization, a contrast dye is injected into the coronary artery and provides info on patency. The term cardiac catheterization can refer to either right heart catheterization or left heart catheterization, or both. The procedure can be either diagnostic or therapeutic, and interventional cardiologists can perform a variety of interventions depending on the clinical need.

- **Option A:** Informed consent must be signed prior to any invasive procedure. Most of the procedures can be performed with minimal or moderate sedation with the help of a local anesthetic, but some procedures will require anesthesia services for providing deep sedation or general

anesthesia.

- **Option B:** The physician is responsible for explaining the procedure, the nurse can reinforce. Preparation for the cardiac catheterization procedure starts with a thorough history of the patient along with a detailed examination. After defining the clinical question, the performing interventional cardiologist will decide on the access for the procedure.
- **Option C:** The patient would be NPO 6-18 hours prior. The rationale of NPO in the setting of cardiac catheterization is to reduce the risk of aspiration, and more so, of a patient needing emergent cardiac surgery.
- **Option D:** Peripheral pulses are important afterward. The most frequent complication after transradial access is about a 5% risk of radial artery occlusion. This is a clinically insignificant complication if the Allen test is normal. Patients with incomplete palmar arch and abnormal Allen test may have symptoms of hand ischemia after radial artery occlusion.
- **Option E:** An ECG would be done but measures electrical, not blood flow. Basic workup includes a complete blood count (CBC), basic metabolic panel (BMP), prothrombin time, electrocardiogram, and chest X-ray.
- **Option F:** Shellfish is an indicator of an allergy to the medium injected. Patients with documented allergy to radio-iodinated contrast material will need premedication with corticosteroids and antihistamines.

45. What is the most important nursing action when measuring a pulmonary capillary wedge pressure (PCWP)?

Correct Answer: B. Deflate the balloon as soon as the PCWP is measured.

While the balloon must be inflated to measure the capillary wedge pressure, leaving the balloon inflated will interfere with blood flow to the lung. Once the catheter is advanced into the pulmonary artery to the point where the waveform changes into a wedge form, the balloon should be deflated. The catheter will then show the PA pressures. After obtaining the appropriate PA pressures, a PCWP/pulmonary artery occlusion pressure can now be measured.

- **Option A:** Bearing down will increase intrathoracic pressure and alter the reading. The balloon is inflated only until the PA pressure waveform changes into a wedged waveform. When the balloon is inflated, it creates a static column of blood between the artery distal to the catheter and the pulmonary vein. This post-capillary pressure, known as the PCWP, is an indirect estimate of the pressure in the left atrium.
- **Option C:** While a supine position is preferred; it is not essential. The first step of the procedure is to clean the area with an antiseptic solution, and the patient is draped to make a sterile working field. Using a vascular probe, the position of the vessel is confirmed again. Following this, local anesthesia is provided at the site of insertion.
- **Option D:** Agency protocols relative to flushing of unused ports must be followed. Once the procedure is done, a chest X-ray should be ordered to confirm the position of the catheter and to check for any complications. The tip of the PA catheter should not extend beyond 2 cm of the hilum and is usually within the mediastinal shadow.

46. A patient is brought to the emergency department after a bee sting. The family reports a history of severe allergic reaction, and the patient appears to have some oral swelling. Which of the following is the most urgent nursing

action?

Correct Answer: B. Maintain a patent airway.

The patient may be experiencing an anaphylactic reaction. Airway management is paramount. Thoroughly examine the patient for airway patency or any indications of an impending loss of airway. Perioral edema, stridor, and angioedema are very high risk, and obtaining a definitive airway is imperative. Delay may reduce the chances of successful intubation as continued swelling occurs, increasing the risk for a surgical airway.

- **Option A:** The physician will see the patient as soon as possible with the above actions underway. Often when anaphylaxis is diagnosed co-treatment is initiated with steroids, antihistamines, inhaled bronchodilators, and vasopressors. Glucagon can also be used if indicated. These agents can assist in refractory initial anaphylaxis or aid in the prevention of recurrence and biphasic reactions.
- **Option C:** The most urgent action is to maintain an airway, particularly with visible oral swelling, followed by the administration of epinephrine by subcutaneous injection. Epinephrine is given through intramuscular injection and at a dose of 0.3 to 0.5 mL of 1:1,000 concentration of epinephrine. Pediatric dosing is 0.01 mg/kg or 0.15 mg intramuscularly (IM) (epinephrine injection for pediatric dosage). Intramuscular delivery has proven to provide more rapid delivery and produce better outcomes than subcutaneous or intravascular.
- **Option D:** Oral diphenhydramine is indicated for mild allergic reactions and is not appropriate for anaphylaxis. Antihistamines are often routinely used; most commonly is H blocker administration of diphenhydramine 25 to 50 mg IV/IM. While the clinical benefit is unproven in anaphylaxis, its utility is evident in more minor allergic processes.

47. Your 60 y.o. patient with pyelonephritis and possible septicemia has had five UTIs over the past two years. She is fatigued from lack of sleep, has lost weight, and urinates frequently even in the night. Her labs show: sodium, 154 mEq/L; osmolarity 340 mOsm/L; glucose, 127 mg/dl; and potassium, 3.9 mEq/L. Which nursing diagnosis is a priority?

Correct Answer: B. Fluid volume deficit related to inability to conserve water

Monitor and document vital signs especially BP and HR. Decrease in circulating blood volume can cause hypotension and tachycardia. Alteration in HR is a compensatory mechanism to maintain cardiac output. Usually, the pulse is weak and may be irregular if electrolyte imbalance also occurs. Hypotension is evident in hypovolemia.

- **Option A:** The serum sodium result is normal. Assess skin turgor and oral mucous membranes for signs of dehydration. Signs of dehydration are also detected through the skin. Skin of elderly patients loses elasticity, hence skin turgor should be assessed over the sternum or on the inner thighs. Longitudinal furrows may be noted along the tongue.
- **Option C:** Identify the possible cause of the fluid disturbance or imbalance. Establishing a database of history aids accurate and individualized care for each patient. Weigh daily with the same scale, and preferably at the same time of day. Weight is the best assessment data for possible fluid volume imbalance. An increase of 2 lbs a week is considered normal.
- **Option D:** Monitor serum electrolytes and urine osmolality, and report abnormal values. Elevated blood urea nitrogen suggests fluid deficit. Urine specific gravity is likewise increased. Note the presence of nausea, vomiting, and fever. These factors influence intake, fluid needs, and route of replacement.

48. Nurse Miller works in a bustling medical ward of St. Martha's Metropolitan Hospital. It's a chilly Tuesday morning, and the ward is alive with the sounds of medical devices and muffled conversations. She is now attending to Ms. Johnson, a middle-aged woman with rheumatoid arthritis. As the sun streams in, casting a soft glow across the room, Ms. Johnson describes the intense morning stiffness she feels, making even pulling her blanket away an ordeal. Nurse Miller is keenly aware of how the manifestations of rheumatoid arthritis can be exacerbated in the morning, and she ponders on the most effective intervention to alleviate Ms. Johnson's discomfort. Which nursing intervention should be implemented?

Correct Answer: A. Encouraging warm showers or baths in the morning.

Suggesting warm showers or baths in the morning is a crucial nursing intervention in this scenario. Warm water can help relax and loosen stiff joints, providing relief to the patient. This soothing therapy promotes improved blood circulation to the affected areas, ultimately reducing morning stiffness and enhancing mobility. Recognizing the best immediate approach, Nurse Miller gently suggests to Ms. Johnson the benefits of a warm shower in the morning. She explains how the warmth can help reduce her stiffness and make the start of her day a little easier.

- **Option B:** While NSAIDs are commonly used to manage pain and inflammation associated with rheumatoid arthritis, they are typically prescribed by the physician. The nurse's role may involve administering the prescribed medication as directed, but it should not be the primary intervention for morning stiffness.
- **Option C:** Passive range of motion exercises can be beneficial for maintaining joint flexibility and preventing contractures in patients with rheumatoid arthritis. However, these exercises are typically performed throughout the day and not specifically to address morning stiffness. While they are important for the patient's overall mobility, they may not provide immediate relief from morning stiffness.
- **Option D:** Applying cold packs is not a recommended intervention for rheumatoid arthritis, especially when dealing with morning stiffness. Cold therapy is generally used for acute injuries and can potentially worsen stiffness in this case.

49. A male client with atrial fibrillation who is receiving maintenance therapy of warfarin (Coumadin) has a prothrombin time of 37 seconds. Based on the result, the nurse will follow which of the following doctor's orders?

Correct Answer: D. Withholding the next dose of warfarin.

The normal prothrombin time is 9.6 to 11.8 seconds (male adult). A therapeutic level PT level is 1.5 to 2 times higher than the normal level. Since the value of 37 seconds is high, the nurse should expect that the client's next dose of warfarin will be withheld. Patients receiving treatment with warfarin should have close monitoring to ensure the safety and efficacy of the medication. Periodic blood testing is recommended to assess the patient's prothrombin time (PT) and the international normalized ratio (INR).

- **Option A:** The laboratory parameter utilized to monitor warfarin therapy is the PT/INR. The PT is the number of seconds it takes the blood to clot, and the INR allows for the standardization of the

PT measurement depending on the thromboplastin reagent used by a laboratory. Therefore, monitoring a patient's INR while on warfarin is strongly preferable over PT because it allows for a standardized measurement without variations due to different laboratory sites.

- **Option B:** Routine assessment of INR is essential in the management of patients receiving warfarin therapy. The INR of a patient who is not on anticoagulation therapy is approximately 1.0. If a patient has an INR of 2.0 or 3.0, that would indicate that it takes two or three times longer for that individual's blood to clot than someone who does not take any anticoagulants.
- **Option C:** The therapeutic INR goal for patients on warfarin therapy is dependent on the indication but may vary based on the patient's clinical presentation and provider preference. Most patients on warfarin have an INR goal of 2 to 3. However, specific indications, such as a mechanical mitral valve, require an INR goal of 2.5 to 3.5.

50. The nursing instructor is going over burn injuries. The instructor tells the students that the nursing care priorities for a patient with a burn injury include wound care, nutritional support, and prevention of complications such as infection. Based upon these care priorities, the instructor is most likely discussing a patient in what phase of burn care?

Correct Answer: C. Acute Phase

The acute or intermediate phase of burn care follows the emergent/resuscitative phase and begins 48 to 72 hours after the burn injury. During this phase, attention is directed toward continued assessment and maintenance of respiratory and circulatory status, fluid and electrolyte balance, and gastrointestinal function. Infection prevention, burn wound care that includes wound cleaning, topical antibacterial therapy, wound dressing, dressing changes, wound debridement, and wound grafting, pain management, and nutritional support are priorities at this stage and are discussed in detail in the following sections.

- **Option A:** The emergent phase begins with the onset of burn injury and lasts until the completion of fluid resuscitation or a period of about the first 24 hours. During the emergent phase, the priority of client care involves maintaining an adequate airway and treating the client for burn shock.
- **Option B:** Priorities during the immediate resuscitative phase include first aid, prevention of shock and respiratory distress, detection and treatment of concomitant injuries, and initial wound assessment and care.
- **Option D:** The priorities during the rehabilitation phase include prevention of scars and contractures, rehabilitation, functional and cosmetic reconstruction, and psychosocial counseling.

51. A pregnant client is admitted to the labor room. An assessment is performed, and the nurse notes that the client's hemoglobin and hematocrit levels are low, indicating anemia. The nurse determines that the client is at risk for which of the following?

Correct Answer: D. Postpartum infections

Anemic women have a greater likelihood of cardiac decompensation during labor, postpartum infection, and poor wound healing. Good nutrition is the best way to prevent anemia if the woman is pregnant or trying to become pregnant. Eating foods high in iron content (such as dark green leafy vegetables, red meat, fortified cereals, eggs, and peanuts) can help ensure that she maintains the supply of iron her

body needs to function properly. The obstetrician will also prescribe vitamins to ensure that the woman has enough iron and folic acid. Make sure to get at least 27 mg of iron each day. If the woman does become anemic during pregnancy, it can usually be treated by taking iron supplements.

- **Option A:** The amount of blood in the body increases by about 20-30 percent, which increases the supply of iron and vitamins that the body needs to make hemoglobin. Hemoglobin is the protein in red blood cells that carries oxygen to other cells in the body.
- **Option B:** Mild anemia is normal during pregnancy due to an increase in blood volume. More severe anemia, however, can put the baby at higher risk for anemia later in infancy. In addition, if the mother is significantly anemic during the first two trimesters, she is at greater risk for having a preterm delivery or low-birth-weight baby. Being anemic also burdens the mother by increasing the risk of blood loss during labor and making it more difficult to fight infections.
- **Option C:** Anemia does not specifically present a risk for hemorrhage. Severe anemia may weaken uterine muscular strength or lower resistance to infectious diseases, contributing to postpartum hemorrhage and subsequent maternal mortality. However, the severity of anemia that places a woman at a greater risk of experiencing postpartum hemorrhage or a debilitating and clinically relevant blood loss has not been investigated. Indeed, the impact of anemia on the extent of blood loss at childbirth and postpartum is not well-understood.

52. A female adult patient is taking a progestin-only oral contraceptive or mini pill. Progestin use may increase the patient's risk for:

Correct Answer: D. Tubal or ectopic pregnancy

Women taking the mini pill have a higher incidence of tubal and ectopic pregnancies, possibly because progestin slows ovum transport through the fallopian tubes.

- **Option A:** Progestins are widely regarded as effective treatments for the symptoms of endometriosis despite not all being indicated for the treatment of the disease. It is not yet fully understood how progestins relieve the symptoms of endometriosis, but they probably work by suppressing the growth of endometrial implants in some way, causing them to gradually waste away.
- **Option B:** Hypogonadism is a condition in which the male testes or the female ovaries produce little or no sex hormones. Treatment may involve estrogen and progesterone pills or skin patches, GnRH injections, or HCG injections.
- **Option C:** Premenstrual syndrome is defined as the recurrence of psychological and physical symptoms in the luteal phase, which remit in the follicular phase of the menstrual cycle. The rationale for the use of progesterone and progestogens in the management of premenstrual syndrome is based on the unsubstantiated premise that progesterone deficiency is the cause.

53. A cervical radiation implant is placed in the client for treatment of cervical cancer. The nurse initiates what most appropriate activity order for this client?

Correct Answer: C. Bed rest

- **Option C:** The client with a cervical radiation implant should be maintained on bed rest in the dorsal position to prevent movement of the radiation source. The head of the bed is elevated to a maximum of 10 to 15 degrees for comfort. The nurse avoids turning the client on the side. If turning is absolutely necessary, a pillow is placed between the knees and, with the body in straight alignment, the client is logrolled.

54. The charge nurse on the cardiac unit is planning assignments for the day. Which of the following is the most appropriate assignment for the float nurse that has been reassigned from labor and delivery?

Correct Answer: A. A one-week postoperative coronary bypass patient, who is being evaluated for placement of a pacemaker prior to discharge.

The charge nurse planning assignments must consider the skills of the staff and the needs of the patients. The labor and delivery nurse who is not experienced with the needs of cardiac patients should be assigned to those with the least acute needs. The patient who is one-week post-operative and nearing discharge is likely to require routine care.

- **Option B:** A new patient admitted with suspected MI and scheduled for angiography would require continuous assessment as well as coordination of care that is best carried out by experienced staff. Nurse-patient assignments are typically allocated based on estimated direct patient care requirements with little consideration for other activities that must be completed throughout a shift. In an effort to improve upon previous assignment methodologies, new measures and metrics were considered in this study to reduce and balance demands placed on nurses through the assignment of required activities.
- **Option C:** The unstable patient requires staff that can immediately identify symptoms and respond appropriately. In most hospitals, a unit charge nurse is responsible for the shift assignment of patients to nurses based on experience and past practices. The nurse-patient assignment process is also often a manual process in which the charge nurse must sort through multiple decision criteria in a limited amount of time.
- **Option D:** A postoperative patient also requires close monitoring and cardiac experience. Balancing workload among nurses on a hospital unit is important for the satisfaction and safety of nurses and patients. To balance nurse workloads, direct patient care activities, indirect patient care activities, and non-patient care activities that occur throughout a shift must be considered.

55. Nurse Elizabeth is administering medication via the intraosseous route to a child. Intraosseous drug administration is typically used when a child is:

Correct Answer: C. Critically ill and under age 3

In an emergency, intraosseous drug administration is typically used when a child is critically ill and under age 3. IO access provides a means of administering medications, glucose, and fluids, as well as (potentially) a means of obtaining blood samples. Such a situation would include any resuscitation; cardiopulmonary arrest; shock, regardless of etiology; life-threatening status epilepticus; or lack of venous access resulting from burns, edema, or obesity.

- **Option A:** In the 1980s, IO access was rediscovered as an immediately available tool in resuscitation situations, when time is of the essence and conditions may be adverse. Since then, IO access has become widely accepted in pediatric settings, especially because these patients often provide a particular challenge to obtaining rapid intravascular access.
- **Option B:** Initiation of IO access is indicated in adults, children, infants, or newborns in any clinical situation where vascular access is emergently needed but not immediately available via a peripheral vein.

- **Option D:** A retrospective study by Carlson et al found that in 2011, among out-of-hospital critical procedures provided for pediatric patients by emergency medical services in the United States, IO access was one of the most common.

56. Which instruction should be given to the client who is fitted for a behind-the-ear hearing aid?

Correct Answer: B. Store the hearing aid in a warm place.

The hearing aid should be stored in a warm, dry place. Proper maintenance and care will extend the life of your hearing aid. Make it a habit to keep hearing aids away from heat and moisture. Avoid using hairspray or other hair care products while wearing hearing aids. When it's exposed to moisture it can cause serious damage. Although hearing aids are now being made to be water resistant it's recommended that they are removed when showering or swimming. If they do come in contact with water, dry them immediately with a towel. Never attempt to dry them with a hair drier or other heated device, since the high heat can damage them.

- **Option A:** It should be cleaned daily but should not be moldy. Clean hearing aids as instructed. Earwax and ear drainage can damage a hearing aid. Turn off hearing aids when they are not in use. Always take the hearing aids out before having a shower, taking a bath or going swimming. It's best to leave the hearing aids out of humid environments like the bathroom, as moisture can damage the electronic components in the hearing aid.
- **Option C:** A toothpick is inappropriate to use to clean the aid; the toothpick might break off in the hearing aid. A whistling sound can be caused by a hearing aid that does not fit or work well or is clogged by earwax or fluid. When cleaning your hearing aids, use a dry, soft cloth. Hearing aid care products are available through audiologists and audiometrists. They will also check for ear wax build up and the general working order of the hearing aid.
- **Option D:** Changing the batteries weekly is not necessary. Replace dead batteries immediately. Keep replacement batteries and small aids away from children and pets. Also when changing out batteries, remember to clean the battery contacts in the devices. This can be done by gently wiping them down with a dry cotton swab. If the battery contacts on the devices are dirty, it can create a poor connection and lower performance.

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

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

Normal hemoglobin values range from 11.5-15.0. This vegetarian patient is mildly anemic. When food

is prepared in iron cookware its iron content is increased.

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

58. An experienced registered nurse, specialized in spinal rehabilitation, is floated to the busy emergency department for a shift. The emergency department is currently short-staffed, and there's a power outage in the adjacent building, causing a surge of patients. Among the patients waiting, which client should the charge nurse most appropriately assign to this RN, keeping in mind her expertise and the current situation?

Correct Answer: C. An adolescent who has been on pain medications terminal cancer with an initial assessment finding pupils and a relaxed respiratory rate of 10.

Nurses who are floated to other units should be assigned to a client who has minimal anticipated immediate complications of their problem. This client exhibits opioid toxicity with the pinpoint pupils and has the least risk of complications to occur in the near future.

59. The cyanosis that accompanies bacterial pneumonia is primarily caused by which of the following?

Correct Answer: D. Decreased oxygenation of the blood.

A client with pneumonia has less lung surface available for the diffusion of gases because of the inflammatory pulmonary response that creates lung exudate and results in reduced oxygenation of the blood. The client becomes cyanotic because blood is not adequately oxygenated in the lungs before it enters the peripheral circulation. It is evident that the cyanosis of pneumonia patients is due to the incomplete saturation of venous blood with oxygen in the lungs, and that the various shades of blue observed in the distal parts are caused by an admixture of reduced hemoglobin and oxyhemoglobin in the superficial capillaries.

- **Option A:** With expansion of blood volume in the acute phase of pneumonia, all patients showed an increase in cardiac output, a decrease in arteriovenous oxygen difference, and a decrease in peripheral vascular resistance; however, the percentage change in the hypodynamic patients was not as great as occurred in the patients with normal hemodynamics nor as great as occurred when restudied in convalescence.

- **Option B:** Pleural effusions are common in patients who develop pneumonia. At least 40-60% of patients with bacterial pneumonia will develop a pleural effusion of varying severity. Today, these parapneumonic effusions are not common because of prompt antibiotic therapy.
- **Option C:** The inadequate response to pneumonia is most consistent with depressed myocardial function, but the possibility of decreased intravascular volume as a contributory factor could not be excluded. The arteriovenous oxygen difference was used to assess the adequacy of the circulation to meet peripheral tissue perfusion, and a spectrum of arteriovenous oxygen differences was noted.

60. Nurse Cindy is caring for a client who has undergone a vaginal hysterectomy. The nurse avoids which of the following in the care of this client?

Correct Answer: C. Elevating the knee gatch on the bed

- **Option C:** The nurse should avoid using the knee gatch in the bed, which inhibits venous return, thus placing the client more at risk for deep vein thrombosis or thrombophlebitis.
- **Options A, B, and D:** The client is at risk of deep vein thrombosis or thrombophlebitis after this surgery, as for any other major surgery. For this reason, the nurse implements measures that will prevent this complication. Range-of-motion exercises, anti-embolism stockings, and pneumatic compression boots are helpful.

61. Pierro was noted to be displaying facial grimaces after nurse Kara assessed his complaints of pain rated as 8 on a scale of 1 (no pain) 10 10 (worst pain). Which intervention should the nurse do?

Correct Answer: D. Attempting to rule out complications before administering pain medication.

When intervening with a client complaining of pain, the nurse must always determine if the pain is expected pain or a complication that requires immediate nursing intervention. This must be done before administering the medication. Perform a comprehensive assessment of pain. Determine via assessment the location, characteristics, onset, duration, frequency, quality, and severity of pain.

- **Option A:** Perform a history assessment of pain. Additionally, the nurse should ask the following questions during pain assessment to determine its history: (1) effectiveness of previous pain treatment or management; (2) what medications were taken and when; (3) other medications being taken; (4) allergies or known side effects to medications.
- **Option B:** Guided imagery should be used along with, not instead of, administration of pain medication. Guided imagery involves the use of mental pictures or guiding the patient to imagine an event to distract from the pain.
- **Option C:** The nurse should medicate the client and not discourage medication. Nurses have the duty to ask their clients about their pain and believe their reports of pain. Challenging or undermining their pain reports results in an unhealthy therapeutic relationship that may hinder pain management and deteriorate rapport.

62. When PROM occurs, which of the following provides evidence of the nurse's understanding of the client's immediate needs?

Correct Answer: B. PROM removes the fetus most effective defense against infection

PROM can precipitate many potential and actual problems; one of the most serious is the fetus loss of an effective defense against infection. This is the client's most immediate need at this time.

- **Option A:** Typically, PROM occurs about 1 hour, not 4 hours, before labor begins.
- **Option C:** Fetal viability and gestational age are less immediate considerations that affect the plan of care.
- **Option D:** Malpresentation and an incompetent cervix may be causes of PROM.

63. A client is admitted for an MRI. The nurse should question the client regarding:

Correct Answer: A. Pregnancy

Although there is no evidence to suggest MRI scans can pose a risk during pregnancy, it is considered precaution to not perform MRI during pregnancy, particularly in the first three months. This is particularly the case during the first trimester of pregnancy, as organogenesis takes place during this period. The concerns in pregnancy are the same as for MRI in general, but the fetus may be more sensitive to the effects—particularly to heating and to noise.

- **Option B:** Clients with a titanium hip replacement can have an MRI. Some other devices and implants might be contraindicated. To ensure patients' safety, the radiologist and MRI technologist must evaluate the type of device that patients have. Radiologists, referring physicians and MR technologists, need to be able to assess MRI safety, patients' condition, and compatibility of medical devices to keep patients safe.
- **Option C:** No antibiotics are used with this test. MRI contrast agents are gadolinium chelates with different stability, viscosity, and osmolality. Gadolinium is a relatively very safe contrast; however, it rarely might cause allergic reactions in patients.
- **Option D:** The client should remain still only when instructed. Patients who are unable to be still or obey breathing instructions in the scanner need special attention. Some patients in pain might move during the procedure, which degrades the quality of the images, restrict the interpretation, and decrease the accuracy of the report. Some MRI sequences need to be obtained while patients hold their breath and lie motionless.

64. Which criteria are used to determine the testability of a hypothesis? Select all that apply.

Correct Answers: A, B

Testability refers to the ability to run an experiment to test a hypothesis or theory. When designing a research hypothesis, the questions being asked by the researcher must be testable or the study becomes impossible to provide an answer to the inquiry. Testability refers not only to methods used for the investigation but also the constraints of the researcher.

- **Option A:** Quantifiable words increase the testability of a hypothesis. Write the hypothesis in such a way that it can be proven or disprove it. In many cases, researchers might draw a hypothesis from a specific theory or build on previous research.
- **Option B:** The more clearly the hypothesis is stated, the easier it will be to accept or reject it based on study findings. It must be possible to prove that the hypothesis is true or false.

- **Option C:** Hypotheses should not have value-laden words. A variable is a factor or element that can be changed and manipulated in ways that are observable and measurable. However, the researcher must also define how the variable will be manipulated and measured in the study.
- **Option D:** Data-collection processes are not part of the criterion used to evaluate the testability of hypotheses. Identify the independent and dependent variables in the hypothesis. The independent variable is what the researcher is controlling or changing. The researcher measures the effect this has on the dependent variable.

65. If a couple would like to enhance their fertility, the following means can be done. Select all that apply.

Correct Answer: A, B, & D

All of the above are essential for enhanced fertility except option C because during the dry period the woman is in her infertile period thus even when sexual contact is done, there will be no ovulation, thus fertilization is not possible.

- **Option A:** By measuring the basal body temperature every morning before getting out of bed, the woman might be able to detect, first, a very slight decrease then a very slight rise in temperature for three mornings in a row. The temperature rise may be as little as half of a degree. This can be a signal that she has ovulated. Keep in mind that an egg only survives about 24 hours after ovulation so this so-called fertile window may not be a good indicator of when the couple should have sex.
- **Option B:** The doctor might recommend that the couple make lifestyle changes before they get pregnant. These might include getting to a healthy weight; improving diet/exercise habits; eliminating alcohol; quitting smoking, if they smoke; and cutting back on caffeine.
- **Option D:** Most healthy couples will conceive within a year of actively trying to get pregnant. If the woman doesn't get pregnant within a year and is under age 35, they should see a doctor for a fertility evaluation. If the woman is over 35, she should only wait six months before seeing a doctor.

66. A 46-year-old female with chronic constipation is assessed by the nurse for a bowel training regimen. Which factor indicates further information is needed by the nurse?

Correct Answer: D. The client's bowel habits were not discussed.

To assess the client for a bowel training program the factors causing the bowel alteration should be assessed. A routine for bowel elimination should be based on the client's previous bowel habits and alterations in bowel habits that have occurred because of illness or trauma.

- **Option A:** Foods high in bulk are appropriate. Assist the patient to take at least 20 g of dietary fiber (e.g., raw fruits, fresh vegetables, whole grains) per day. Fiber adds bulk to the stool and makes defecation easier because it passes through the intestine essentially unchanged.
- **Option B:** The client and the family should assist in the planning of the program which should include foods high in bulk, adequate exercise, and fluid intake of 2500-3000 ml. Encourage the patient to take in fluid 2000 to 3000 mL/day, if not contraindicated medically. Sufficient fluid is needed to keep the fecal mass soft. But take note of some patients or older patients having cardiovascular limitations requiring less fluid intake.
- **Option C:** Exercise should be a part of a bowel training regimen. Urge the patient for some physical activity and exercise. Consider isometric abdominal and gluteal exercises. Movement

promotes peristalsis. Abdominal exercises strengthen abdominal muscles that facilitate defecation.

67. You are making a home visit to a 50-year old patient who was recently hospitalized with a right leg deep vein thrombosis and a pulmonary embolism. The patient's only medication is enoxaparin (Lovenox) subcutaneously. Which assessment information will you need to communicate to the physician?

Correct Answer: C. The patient is unable to remember her husband's first name

Confusion in a patient this age is unusual and may be an indication of intracerebral bleeding associated with enoxaparin use. Because of the reduced effectiveness of the antidote (e.g., protamine), bleeding complications can be severe and life-threatening.

- **Option A:** The right leg symptoms are consistent with a resolving deep vein thrombosis. Around half of people who have had a DVT will experience some degree of chronic discomfort and around 15% of people will experience moderate to severe chronic pain and swelling. This is called post-thrombotic syndrome (PTS) and is caused partly by damage or leftover scar tissue inside the vein.
- **Option B:** The patient may need teaching about keeping the right leg elevated above the heart to reduce swelling and pain. The client may also wear graduated compression stockings. These specially fitted stockings are tight at the feet and become gradually loosened up on the leg, creating gentle pressure that keeps blood from pooling and clotting.
- **Option D:** The presence of ecchymoses may point to a need to do more patient teaching about avoiding injury while taking anticoagulants but does not indicate that the physician needs to be called.

68. A researcher wants to discover why patients of certain ethnic backgrounds are reluctant to ask for pain medication. Because there is little data in the literature on this topic, the researcher designs a study to explore the relationships between cultural belief systems, the experience of pain, and the effective use of medication to relieve pain. The researcher plans to use the findings of this study to formulate hypotheses for a future study. What is a characteristic of this study?

Correct Answer: D. It is a hypothesis-generating study.

Not enough is known in this area at this time to formulate hypotheses, so the researcher will conduct this qualitative study and use the findings to generate hypotheses for future studies. In hypothesis-generating research, the researcher explores a set of data searching for relationships and patterns and then proposes hypotheses that may then be tested in some subsequent study.

- **Option A:** This is a qualitative study, not a quasi-experimental study. Qualitative research involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, or experiences. Qualitative research is the opposite of quantitative research, which involves collecting and analyzing numerical data for statistical analysis.
- **Option B:** Level II evidence is obtained from at least one well-designed randomized, controlled trial. Evidence is obtained from at least one well-designed RCT (e.g. large multi-site RCT). Levels of evidence (sometimes called hierarchy of evidence) are assigned to studies based on the methodological quality of their design, validity, and applicability to patient care. These decisions

give the “grade (or strength) of recommendation.”

- **Option C:** This study has no hypothesis. A directional hypothesis is a prediction made by a researcher regarding a positive or negative change, relationship, or difference between two variables of a population.

69. When caring for an elderly client it is important to keep in mind the changes in color vision that may occur. What colors are apt to be most difficult for the elderly to distinguish?

Correct Answer: B. Blue and green

The elderly have poor blue-green discrimination. The effects of age are greatest on short wavelengths. These changes are related to the yellowing of the lens with age. Nearly 80 percent of the abnormalities involved confusion of the lighter (pastel) shades of blue versus purple and yellow versus green and yellow-green. These “blue-yellow” errors are distinct from the “red-green” errors observed in people with inherited color blindness, which affects about eight percent of males and 0.5 percent of females.

- **Option A:** The elderly are better able to distinguish between red and blue because of the difference in wavelengths. Cells in the retina that are responsible for normal color vision decline in sensitivity as people age, causing colors to become less bright and the contrast between different colors to be less noticeable.
- **Option C:** Red-green color vision deficiencies occur when there are defects with the OPN1LW (red pigment cone) and OPN1MW (green pigment) genes. These affect the way that color wavelengths are detected by the cones in the retina. Red and green color blindness is an inherited disorder that is unrelated to age. Red-green color blindness is typically caused by genetic mutations.
- **Option D:** The elderly are better able to distinguish between blue and gold because of the difference in wavelengths. Blue-yellow color vision defects affect males and females equally. This condition occurs in fewer than 1 in 10,000 people worldwide. Blue cone monochromacy is rarer than the other forms of color vision deficiency, affecting about 1 in 100,000 people worldwide.

70. A client is discharged home with a prescription for Coumadin (sodium warfarin). The client should be instructed to:

Correct Answer: A. Have a Protime done monthly

Coumadin is an anticoagulant. One of the tests for bleeding time is a Protime. This test should be done monthly. The client will need to have his blood tested to tell how well the medication is working. The blood test, called prothrombin time (PT or protime), is used to calculate the International Normalized Ratio (INR). INR helps the healthcare provider determine how well warfarin is working to prevent blood clots and if the dose needs to be adjusted.

- **Option B:** Eating more fruits and vegetables is not necessary, and dark-green vegetables contain vitamin K, which increases clotting. Vitamin K is needed for normal blood clotting. However, large changes in the amount of vitamin K in the diet can change the way warfarin works. If the client eats foods high in vitamin K, it's important to keep a weekly intake of vitamin K-containing foods consistent.
- **Option C:** Drinking more liquids could boost the platelet count and increase the body's immunity. Do not start consuming the following herbal teas and supplements because they may affect the INR, causing it to be too high or too low. If the client drinks tea, black tea (such as orange pekoe

tea) is acceptable because it is not high in Vitamin K.

- **Option D:** Avoiding crowds is important for patients with decreased WBC. Stay away from people who are ill. Avoid contact with anyone who has recently been vaccinated, including infants and children. Avoid crowds as much as possible. When going to places where there are often a lot of people (i.e., church, shopping), try going at off-peak times, when they are not as crowded.

71. A client is being discharged today after undergoing autografting. What would the nurse include in the discharge instructions?

Correct Answer: B. Avoid smoking.

Smoking can decrease the blood supply to the newly graft recipient bed interface, and the chance of graft failure increases. The combined effect of nicotine and carbon monoxide is deadly to the healing process. This can result in partial or complete loss of healing of the wound, skin graft, flap, or any combination of these. This can compromise the cosmetic results of the surgery.

- **Option A:** Static or primary splints are used in the acute phase for skin graft protection after surgery or anti contracture positioning. These splints are applied to adjacent intact skin.
- **Option C:** Healed burns or skin grafts may be extremely sensitive to sunlight and may sunburn more severely even after short periods of time in the sun compared to before the injury. Sun sensitivity after a burn injury may last for a year or more.
- **Option D:** At least 3 weeks after surgery, avoid exercise that stretches the skin graft, unless the doctor gives other instructions. If the graft was placed on the legs, arms, hands, or feet, the patient may need physiotherapy to prevent scar tissue from limiting movement.

72. Nurse Alice is caring for a client being treated for alcoholism. Before initiating therapy with disulfiram (Antabuse), the nurse teaches the client that he must read labels carefully on which of the following products?

Correct Answer: B. Aftershave lotion

Disulfiram may be given to clients with chronic alcohol abuse who wish to curb impulse drinking. Disulfiram works by blocking the oxidation of alcohol, inhibiting the conversion of acetaldehyde to acetate. As acetaldehyde builds up in the blood, the client experiences noxious and uncomfortable symptoms. Even alcohol rubbed onto the skin can produce a reaction. The client receiving disulfiram must be taught to read ingredient labels carefully to avoid products containing alcohol such as aftershave lotions. Close monitoring of adverse events is necessary, in particular, in patients with polysubstance abuse. Patients taking disulfiram require monitoring for signs and symptoms of hepatitis, including fatigue, weakness, anorexia, nausea, vomiting, jaundice, malaise, and dark urine.

- **Option A:** Disulfiram is one of three drugs approved by the FDA for the treatment of alcohol dependence. It is a second-line option (acamprosate and naltrexone are first-line treatments) in patients with sufficient physician supervision. Disulfiram is safe and efficient in supervised short-term and long-term treatment of individuals dependent on alcohol but who are motivated to discontinue alcohol use.
- **Option C:** Disulfiram irreversibly inhibits aldehyde dehydrogenase (ALDH1A1) by competing with nicotinamide adenine dinucleotide (NAD) at the cysteine residue in the active site of the enzyme. ALDH1A1 is a hepatic enzyme of the major oxidative pathway of alcohol metabolism converting ethanol to acetaldehyde. At therapeutic doses of disulfiram, alcohol consumption results in

increased serum acetaldehyde, causing diaphoresis, palpitations, facial flushing, nausea, vertigo, hypotension, and tachycardia.

- **Option D:** Patients receiving metronidazole, paraldehyde, alcohol, or alcohol-containing preparations (sauces, cough mixtures, vinegar) should not receive disulfiram and should be educated in advance to avoid a disulfiram-alcohol reaction. Never administer to a patient if alcohol use is suspected or without the patient's consent and understanding of disulfiram-alcohol reaction.

73. A client visiting a family planning clinic is suspected of having an STI. The best diagnostic test for *treponema pallidum* is:

Correct Answer: C. Fluorescent treponemal antibody (FTA)

Fluorescent treponemal antibody (FTA) is the test for *treponema pallidum*. The fluorescent treponemal antibody absorption (FTA-ABS) test is a blood test that checks for the presence of antibodies to *Treponema pallidum* bacteria. These bacteria cause syphilis. Syphilis is a sexually transmitted infection (STI) that's spread through direct contact with syphilitic sores.

- **Option A:** The venereal disease research laboratory (VDRL) test is designed to assess whether you have syphilis, a sexually transmitted infection (STI). Syphilis is caused by the bacterium *Treponema pallidum*. The bacterium infects by penetrating into the lining of the mouth or genital area. The VDRL test doesn't look for the bacteria that cause syphilis. Instead, it checks for the antibodies your body makes in response to antigens produced by cells damaged by the bacteria. Antibodies are a type of protein produced by your immune system to fight off invaders like bacteria or toxins. Testing for these antibodies can let your doctors know whether you have syphilis.
- **Option B:** The rapid plasma reagin (RPR) test is a blood test that looks for antibodies to syphilis. Syphilis is a sexually transmitted infection (STI) that first causes symptoms seen with many other illnesses. Early symptoms include rash, fever, swollen glands, muscle aches, and sore throat. The RPR test looks for antibodies that react to syphilis in the blood. This means the test doesn't detect the actual bacteria that cause syphilis. Instead, it looks for antibodies against substances given off by cells that have been harmed by the bacteria.
- **Option D:** The Thayer-Martin culture is done for gonorrhea. It is used for culturing and primarily isolating pathogenic *Neisseria* bacteria, including *Neisseria gonorrhoeae* and *Neisseria meningitidis*, as the medium inhibits the growth of most other microorganisms.

74. A client recently started on hemodialysis wants to know how the dialysis will take the place of his kidneys. The nurse's response is based on the knowledge that hemodialysis works by:

Correct Answer: D. Filtering waste through a dialyzing membrane

Hemodialysis works by using a dialyzing membrane to filter waste that has accumulated in the blood. Dialysis largely replicates the functions of the kidneys in patients with chronic kidney failure. Hemodialysis takes over the key tasks of the kidneys, removing waste materials, toxins, excess salt and fluids from the body.

- **Option A:** In hemodialysis, an artificial kidney (hemodialyzer) is used to remove waste and extra chemicals and fluid from the blood. To get the blood into the artificial kidney, the doctor needs to make an access (entrance) into the blood vessels. This is done by minor surgery to the arm or leg.

- **Option B:** The transfer of metabolic toxins through the membrane into the dialysis fluid is based on natural processes. This process is known as diffusion. When blood and dialysis fluid with different concentrations of molecules are separated by a semipermeable membrane, the molecules move through the membrane to the lower concentration. However, large proteins and blood cells are too big to pass through the small membrane-pores, so they remain in the blood.
- **Option C:** A dialyzer is an artificial filter containing fine fibers. The fibers are hollow with microscopic pores in the wall, also known as semi-permeable dialysis membrane. To remove toxins during hemodialysis, a special dialysis-fluid flows through the filter, and bathes the fibers from the outside, while the blood flows through the hollow fiber. Due to the semi-permeable dialysis membrane, toxins, urea and other small particles can pass through the membrane.

75. A female client with a history of pheochromocytoma is admitted to the hospital in an acute hypertensive crisis. To reverse hypertensive crisis caused by pheochromocytoma, nurse Lyka expects to administer:

Correct Answer: C. phentolamine (Regitine)

Pheochromocytoma causes excessive production of epinephrine and norepinephrine, natural catecholamines that raise the blood pressure. Phentolamine, an alpha-adrenergic blocking agent given by I.V. bolus or drip, antagonizes the body's response to circulating epinephrine and norepinephrine, reducing blood pressure quickly and effectively.

- **Option A:** Mannitol, a diuretic, isn't used to treat hypertensive emergencies. Mannitol can be used for the reduction of intracranial pressure and brain mass, to reduce intraocular pressure if this is not achievable by other means, to promote diuresis for acute renal failure to prevent or treat the oliguric phase before irreversible damage, and to promote diuresis to promote excretion of toxic substances, materials, and metabolites.
- **Option B:** Although methyl dopa is an antihypertensive agent available in parenteral form, it isn't effective in treating hypertensive emergencies. Methyl dopa is a medication used in the management and treatment of hypertension. It is in the centrally acting anti-hypertensive class of drugs.
- **Option D:** Felodipine, an antihypertensive agent, is available only in extended-release tablets and therefore doesn't reduce blood pressure quickly enough to correct hypertensive crisis. Felodipine is an agent in the dihydropyridine class of calcium channel blockers. Felodipine is FDA approved and indicated in the treatment of essential hypertension. Reduction in blood pressure lowers the risk of cardiovascular morbidity and mortality.

76. Which term would the nurse use to document pain at one site that is perceived in another site?

Correct Answer: A. Referred pain

Referred pain is pain occurring at one site that is perceived in another site. Referred pain follows dermatome and nerve root patterns. Referred pain is pain perceived at a location other than the site of the painful stimulus/ origin. It is the result of a network of interconnecting sensory nerves that supply many different tissues. When there is an injury at one site in the network it is possible that when the signal is interpreted in the brain signals are experienced in the surrounding nervous tissue.

- **Option B:** Phantom pain refers to pain in a part of the body that is no longer there, such as in amputation. Phantom pain is pain that feels like it's coming from a body part that's no longer there.

Doctors once believed this post-amputation phenomenon was a psychological problem, but experts now recognize that these real sensations originate in the spinal cord and brain.

- **Option C:** Intractable pain refers to moderate to severe pain that cannot be relieved by any known treatment. Intractable pain refers to a type of pain that can't be controlled with standard medical care. Intractable essentially means difficult to treat or manage. This type of pain isn't curable, so the focus of treatment is to reduce the discomfort.
- **Option D:** Aftermath of pain, a phase of the pain experience and the most neglected phase address the client's response to the pain experience. The complexity of pain physiology makes some pains more difficult to manage than others. Acute postoperative pain normally responds well to analgesia, but this should be complemented by strategies such as comfortable positioning, distraction, TENS, and reassurance.

77. When delivering the baby's head the nurse supports the mother's perineum to prevent a tear. This technique is called

Correct Answer: B. Ritgen's technique

Ritgen's technique is done to prevent the perineal tear. This is done by the nurse by supporting the perineum with a sterile towel and pushing the perineum downward with one hand while the other hand is supporting the baby's head as it goes out of the vaginal opening.

- **Option A:** Developed by a mother who needed to express her milk over a long period of time for medical reasons, the Marmet technique mimics the actions of a breastfeeding baby and is the most recommended method of expressing breastmilk by hand.
- **Option C:** Duncan's mechanism is the expulsion of the placenta with the presentation of the maternal rough side first, rather than the usual fetal side of the placenta.
- **Option D:** There are 2 mechanisms possible during the delivery of the placenta. If the shiny portion comes out first, it is called the Schultze mechanism; while if the meaty portion comes out first, it is called the Duncan mechanism.

78. A nurse is watching the cardiac monitor, and a client's rhythm suddenly changes. There are no P waves; instead, there are wavy lines. The QRS complexes measure 0.08 second, but they are irregular, with a rate of 120 beats a minute. The nurse interprets this rhythm as:

Correct Answer: B. Atrial fibrillation

Atrial fibrillation is characterized by a loss of P waves; an undulating, wavy baseline; QRS duration that is often within normal limits; and an irregular ventricular rate, which can range from 60 to 100 beats per minute (when controlled with medications) to 100 to 160 beats per minute (when uncontrolled). Atrial fibrillation is the most common type of cardiac arrhythmia. It is the leading cardiac cause of stroke. Risk factors for atrial fibrillation include advanced age, high blood pressure, underlying heart and lung disease, congenital heart disease, and increased alcohol consumption.

- **Option A:** Sinus tachycardia is a regular cardiac rhythm in which the heart beats faster than normal and results in an increase in cardiac output. While it is common to have sinus tachycardia as a compensatory response to exercise or stress, it becomes concerning when it occurs at rest.
- **Option C:** Ventricular tachycardia is characterized by the absence of P waves, wide QRS complexes (usually greater than 0.14 second), and a rate between 100 and 250 impulses per

minute. The rhythm is usually regular. Ventricular tachycardia is characterized as a wide complex (QRS duration greater than 120 milliseconds) tachyarrhythmia at a heart rate greater than 100 beats per minute. It is classified by duration as non-sustained or sustained. Non-sustained ventricular tachycardia is defined as more than 3 beats of ventricular origin at a rate greater than 100 beats per minute that lasts less than 30 seconds in duration.

- **Option D:** VF is a WCT caused by irregular electrical activity and characterized by a ventricular rate of usually greater than 300 with discrete QRS complexes on the electrocardiogram (ECG). QRS morphology in VF varies in shape, amplitude, and duration with a prominent irregular rhythm.

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

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%.

80. The home health nurse is visiting an 18-year-old with osteogenesis imperfecta. Which information obtained on the visit would cause the most concern? The client:

Correct Answer: A. Likes to play football

The client with osteogenesis imperfecta is at risk for pathological fractures and is likely to experience these fractures if he participates in contact sports. The client might experience symptoms of hypoxia if he becomes dehydrated or deoxygenated; extreme exercise, especially in warm weather, can exacerbate the condition.

- **Option B:** Osteogenesis imperfecta (OI) is a genetic disorder of connective tissues caused by an abnormality in the synthesis or processing of type I collagen. It is also called brittle bone disease. It is characterized by an increased susceptibility to bone fractures and decreased bone density. Other manifestations include blue sclerae, dentinogenesis imperfecta, short stature, as well as deafness in adulthood. There are also reports of valvular insufficiencies and aortic root dilation.
- **Option C:** Osteogenesis imperfecta is a rare genetic disease. In the majority of cases, it occurs secondary to mutations in the COL1A1 and COL1A2 genes. More recently, there has been the identification of diverse mutations related to OI.

- **Option D:** Milder manifestations include generalized laxity, easy bruising, hernias, and excess sweating. Clinical manifestations range from mild with a nearly asymptomatic form to most severe forms (involving infants presenting with crumpled ribs, fragile cranium, and long bone fractures incompatible with life) resulting in perinatal mortality.

81. Nurse Christine is teaching an adolescent health class about the dangers of inhalant abuse; the nurse warns about the possibility of:

Correct Answer: D. Sudden death from cardiac or respiratory depression.

Inhalants are CNS depressants; if taken in an excess amount, they can cause cardiac and respiratory depressions. It is impossible to control the inhalant dosage; therefore, death can occur. Prognosis depends upon follow up and motivational and cognitive behavior therapy. Support like Alcoholics-Anonymous groups play an important role in prognosis. Substance use leads to a number of problems among youth, including accidents, death, health effects, crime, unplanned pregnancy, and lower achievement.

- **Option A:** Substance use and/or substance use disorders (SUDs) are associated with many negative consequences among youth, including accidents, death, health effects, crime, unplanned pregnancy, and lower achievement. Substance use contributes to accidents, death, and a variety of hazardous behaviors. Sexual behaviors are increased during adolescent substance use.
- **Option B:** Posttraumatic stress disorder (PTSD) is a syndrome that results from exposure to real or threatened death, serious injury, or sexual assault. The symptoms of PTSD include persistently re-experiencing the traumatic event, intrusive thoughts, nightmares, flashbacks, dissociation(detachment from oneself or reality), and intense negative emotional (sadness, guilt) and physiological reaction on being exposed to the traumatic reminder.
- **Option C:** As with most behavioral and psychiatric disorders, the interplay between genetic risk, temperamental traits, and the environment may predispose to early use of substances of abuse. Once exposed to substances, brain reward systems reinforce substance use, resulting in repeated use and lower ability to control substance use.

82. Which of the following suggestions should the nurse offer the parents of a 4-year-old boy who resists going to bed at night?

Correct Answer: D. "Read him a story and allow him to play quietly in his bed until he falls asleep."

Preschoolers commonly have fears of the dark, being left alone especially at bedtime, and ghosts, which may affect the child's going to bed at night. Quiet play and time with parents is a positive bedtime routine that provides security and also readies the child for sleep.

- **Option A:** The child should sleep in his own bed.
- **Option B:** Telling the child about locking him in his room will be viewed by the child as a threat. Additionally, a locked door is frightening and potentially hazardous.
- **Option C:** Vigorous activity at bedtime stirs up the child and makes it more difficult to fall asleep.

83. Which of the following best describes thrombophlebitis?

Correct Answer: D. Inflammation of the vascular endothelium with clot formation on the vessel wall

Thrombophlebitis refers to an inflammation of the vascular endothelium with clot formation on the wall of the vessel.

- **Option A:** Blood components combining to form an aggregate body describe a thrombus or thrombosis
- **Option B:** Clots lodging in the pulmonary vasculature refers to pulmonary embolism. Pulmonary embolism usually arises from a thrombus that originates in the deep venous system of the lower extremities; however, it rarely also originates in the pelvic, renal, upper extremity veins, or the right heart chambers
- **Option C:** The femoral vein runs along the inside of the legs from the groin area downward. Femoral vein thrombosis refers to a blood clot present in those veins. These veins are superficial, or close to the surface of the skin, and are often more prone to blood clots than deeper veins.

84. A nurse in a post-surgical unit is monitoring a 46-year-old patient who underwent a thyroidectomy 12 hours ago for the treatment of Grave's disease. Which of the following observations should most concern the nurse?

Correct Answer: E. The patient shows involuntary flexion of their wrist when blood pressure is measured.

Carpal spasms (Trousseau's sign) indicate hypocalcemia which can occur after thyroidectomy due to accidental removal or damage to the parathyroid glands. Hypocalcemia is a serious complication and requires immediate attention. The other options, while they might warrant monitoring, are not as immediately concerning as a potential sign of hypocalcemia.

- **Option A:** The vital signs are all within the normal range.
- **Option B:** Supporting the head and neck while turning protects the surgical site from dehiscence.
- **Option C:** Common side effect of neck surgery.
- **Option D:** Drowsiness may be a side effect of the anesthesia used during surgery and will fade away eventually; a sore throat is a normal finding after thyroid surgery.
- **Option F:** Hoarseness of voice is a common side effect of post-op thyroidectomy due to one or more of the nerves irritated during the procedure or due to inflammation that occurs after surgery.

85. The nurse is teaching the client with polycythemia vera about prevention of complications of the disease. Which of the following statements by the client indicates a need for further teaching?

Correct Answer: A. "I will drink 500mL of fluid or less each day."

The client with polycythemia vera is at risk for thrombus formation. Hydrating the client with at least 3L of fluid per day is important in preventing clot formation, so the statement to drink less than 500mL is incorrect.

- **Option B:** Wearing a support hose promotes venous return.
- **Option C:** The electric razor prevents bleeding due to injury.

- **Option D:** A diet low in iron is essential to preventing further red cell formation.