

# Kevin's Review - 85 NCLEX Practice Questions

**1. Capillary glucose monitoring is being performed every 4 hours for a client diagnosed with diabetic ketoacidosis. Insulin is administered using a scale of regular insulin according to glucose results. At 2 p.m., the client has a capillary glucose level of 250 mg/dl for which he receives 8 U of regular insulin. Nurse Mariner should expect the dose's:**

- A. Onset to be at 2 p.m. and its peak to be at 3 p.m.
- B. Onset to be at 2:15 p.m. and its peak to be at 3 p.m.
- C. Onset to be at 2:30 p.m. and its peak to be at 4 p.m.
- D. Onset to be at 4 p.m. and its peak to be at 6 p.m.

**Correct Answer: C. Onset to be at 2:30 p.m. and its peak to be at 4 p.m.**

Regular insulin, which is a short-acting insulin, has an onset of 15 to 30 minutes and a peak of 2 to 4 hours. Because the nurse gave the insulin at 2 p.m., the expected onset would be from 2:15 p.m. to 2:30 p.m. and the peak from 4 p.m. to 6 p.m.

- **Option A:** 2 p.m. is when the insulin was given; onset does not occur at the same time as the medication was given
- **Option B:** The peak starts 2 to 4 hours after the insulin was given, which will be at 4 p.m.
- **Option D:** Onset of 4 p.m. is very late; 15 to 30 minutes is the expected onset of insulin. Peak should start at 4 p.m.

**2. A home care nurse is making a routine visit to a client receiving digoxin (Lanoxin) in the treatment of heart failure. The nurse would particularly assess the client for:**

- A. Thrombocytopenia and weight gain
- B. Anorexia, nausea, and visual disturbances
- C. Diarrhea and hypotension
- D. Fatigue and muscle twitching

**Correct Answer: B. Anorexia, nausea, and visual disturbances**

The first signs and symptoms of digoxin toxicity in adults include abdominal pain, N/V, visual disturbances (blurred, yellow, or green vision, halos around lights), bradycardia, and other dysrhythmias. Symptoms may be mild and include nausea, vomiting, and anorexia. Visual side effects might include color changes, also known as xanthopsia. But yellow or green-tinted vision is usually associated with digoxin toxicity. Patients may also highlight blurry vision or photopsia. At toxic levels, digoxin is proarrhythmic.

- **Option A:** An impaired ventricle is more prone to ventricular tachyarrhythmias and ectopy. Abnormally high levels of digoxin stimulate atrial activation, thus atrial tachycardias, which, in a patient on digoxin, is highly suggestive of toxicity. These atrial tachycardias are persistent and resolve with a decrease in serum digoxin levels.
- **Option C:** Digoxin toxicity is clinically relevant as it can lead to fatal cardiac arrhythmias. The estimated frequency is at about 0.8 to 4% of patients on steady digoxin therapy. The rate of toxicity increases as serum digoxin concentration reaches over 2.0 ng/ml.

- **Option D:** Electrocardiogram changes seen with digoxin demonstrate a downsloping ST-segment depression, also known as a “reverse check” sign. The ST segments may appear “scooped” without abnormal Q waves or T wave inversions.[8] Regular intake of digoxin results in changes such as a decreased QT interval, prolongation of the PR interval and T wave inversion or flattening.

**3. Stefan was diagnosed with secondary vesicoureteral reflux; such condition usually results from which of the following?**

- A. Acidic urine
- B. Congenital defects
- C. Hydronephrosis
- D. Infection

**Correct Answer: D. Infection**

Infection is the most common cause of secondary vesicoureteral reflux. The possibility that UTI may cause reflux has also been investigated. Indeed, a subset of patients has been identified in whom reflux was detectable only during an episode of cystitis.

- **Option A:** Acidic urine is normal and helps to prevent infection. According to the American Association for Clinical Chemistry, the average value for urine pH is 6.0, but it can range from 4.5 to 8.0. Urine under 5.0 is acidic, and urine higher than 8.0 is alkaline, or basic.
- **Option B:** Congenital defects cause primary vesicoureteral reflux. Primary reflux is VUR in an otherwise normally functioning lower urinary tract. Rates of reflux are likely increased in the setting of congenital bladder outlet obstruction and neurogenic bladder. More than 50% of boys with posterior urethral valves have VUR. Similar results were seen in a series of children undergoing urodynamic studies for neurogenic bladder.
- **Option C:** Hydronephrosis may result from vesicoureteral reflux. Recurrent UTI, first febrile urinary tract infection (UTI) with abnormal renal ultrasound (US) are indications of VUR. Other indications are prenatal/postnatal urinary tract dilatation, dysfunctional voiding, bladder outlet obstruction, neurogenic bladder, dysuria, hematuria, trauma.

**4. A client is admitted to the psychiatric unit with a tentative diagnosis of psychosis. Her physician prescribes the phenothiazine thioridazine (Mellaril) 50 mg by mouth three times per day. Phenothiazines differ from central nervous system (CNS) depressants in their sedative effects by producing:**

- A. Deeper sleep than CNS depressants.
- B. Greater sedation than CNS depressants.
- C. A calming effect from which the client is easily aroused.
- D. More prolonged sedative effects, making the client more difficult to arouse.

**Correct Answer: C. A calming effect from which the client is easily aroused.**

Shortly after phenothiazine administration, a quieting and calming effect occurs, but the client is easily aroused, alert, and responsive and has good motor coordination. The precise mechanism of action exhibited by phenothiazines is not entirely known. Yet, phenothiazines act primarily through inhibiting the dopamine receptor at the mesolimbic pathway with a selective activity at the D2 receptor. This

inhibition antagonizes the hyperactivity of dopamine at the synapse and reduces positive symptoms such as delusions and hallucinations associated with schizophrenia.

- **Option A:** Benzodiazepines are frequently used to treat insomnia; however, there may be a withdrawal syndrome with rapid eye movement (REM) rebound. Two newer benzodiazepine-like agents, zolpidem and zaleplon, have fewer side effects, yet good efficacy. Other agents for insomnia include sedating antidepressants and over-the-counter sleep products (sedating antihistamines).
- **Option B:** Central Nervous System (CNS) depressants are medicines that include sedatives, tranquilizers, and hypnotics. These drugs can slow brain activity, making them useful for treating anxiety, panic, acute stress reactions, and sleep disorders. CNS depressants cause drowsiness; sedatives are often prescribed to treat sleep disorders like insomnia and hypnotics can induce sleep, whereas tranquilizers are prescribed to treat anxiety or to relieve muscle spasms.
- **Option D:** When people overdose on a CNS depressant, their breathing often slows or stops. This can decrease the amount of oxygen that reaches the brain, a condition called hypoxia. Hypoxia can have short- and long-term mental effects and effects on the nervous system, including coma and permanent brain damage.

**5. A patient with Parkinson's disease has a nursing diagnosis of Impaired Physical Mobility related to neuromuscular impairment. You observe a nursing assistant performing all of these actions. For which action must you intervene?**

- A. The NA assists the patient to ambulate to the bathroom and back to bed.
- B. The NA reminds the patient not to look at his feet when he is walking.
- C. The NA performs the patient's complete bath and oral care.
- D. The NA sets up the patient's tray and encourages the patient to feed himself.

**Correct Answer: C. The NA performs the patient's complete bath and oral care.**

The nursing assistant should assist the patient with morning care as needed, but the goal is to keep this patient as independent and mobile as possible.

- **Option A:** Assisting the patient to ambulate prevents incidences of fall and injury.
- **Option B:** Reminding the patient not to look at his feet while walking maintains the client's independence while keeping him safe.
- **Option D:** Encouraging the patient to feed himself is an appropriate goal of maintaining independence.

**6. When she presents the nursing procedures to be followed, she refers to what type of standards?**

- A. Process
- B. Outcome
- C. Structure
- D. Criteria

**Correct Answer: A. Process**

Process standards include care plans, the nursing procedures to be done to address the needs of the patients. Process standards focus on the practitioner and the activities carried out in delivering care. The development of standards and related criterion measures are then guided by the basic principles.

- **Option B:** Outcome standards focus on the end result of the nursing services and activities carried out and the changes which occurred. This approach is based on the belief that structure, process, and outcome are interdependent.
- **Option C:** Structure standards focus on the settings and environment in which nursing is practiced. This approach may be most suitable for standards developed at the local operational level and written within the framework of the broader standards developed at the national level.
- **Option D:** Criteria is the plural of criterion—a standard or principle for judging, evaluating, or selecting something. Criteria are the ideals or requirements on which a judgment, evaluation, or selection is based.

**7. Nurse Bryan knows that the age group that uses the most units of blood and blood products is:**

- A. Premature infants.
- B. Children ages 1-20 years.
- C. Adults ages 21-64 years.
- D. The elderly above age 65 years.

**Correct Answer: D. The elderly above age 65 years.**

People older than 65 years use 43 percent of donated blood. This number is expected to increase as the population ages. Approximately 20.9 million units of blood components, including approximately 13.8 million units of whole blood or red blood cells, were transfused in 2011 in the United States; this was a decrease of 11.6% from 2008, and most likely reflects the growing adoption of blood management processes.

- **Option A:** In high-income countries, transfusion is most commonly used for supportive care in cardiovascular surgery, transplant surgery, massive trauma, and therapy for solid and hematological malignancies. In low- and middle-income countries it is used more often to manage pregnancy-related complications and severe childhood anemia.
- **Option B:** In low-income countries, up to 54 % of blood transfusions are given to children under 5 years of age; whereas, in high-income countries, the most frequently transfused patient group is over 60 years of age, accounting for up to 75% of all transfusions.
- **Option C:** An increase of 7.8 million blood donations from voluntary unpaid donors has been reported from 2013 to 2018. In total, 79 countries collect over 90% of their blood supply from voluntary unpaid blood donors; however, 56 countries collect more than 50% of their blood supply from family/replacement or paid donors.

**8. Nurse Trish is working in a mental health facility; the nurse's priority nursing intervention for a newly admitted client with bulimia nervosa would be:**

- A. Teach the client to measure I & O.
- B. Involve the client in planning daily meals.

- C. Observe the client during meals.
- D. Monitor the client continuously.

**Correct Answer: D. Monitor client continuously**

These clients often hide food or force vomiting; therefore they must be carefully monitored. Supervise the patient during mealtimes and for a specified period after meals (usually one hour) to prevent vomiting during or after eating. Identify the patient's elimination patterns to prevent self-induced vomiting.

- **Option A:** Maintain a regular weighing schedule, such as Monday and Friday before breakfast in the same attire, and graph results. Provides an accurate ongoing record of weight loss or gain. Also diminishes obsessing about changes in weight. Use a consistent approach. Sit with the patient while eating; present and remove food without persuasion and comment. Promote a pleasant environment and record intake.
- **Option B:** Involve the patient in setting up or carrying out a program of behavior modification. Provide a reward for weight gain as individually determined; ignore the loss. Provides structured eating situation while allowing the patient some control in choices. Behavior modification may be effective in mild cases or for short-term weight gain.
- **Option C:** Provide one-to-one supervision and have a patient with bulimia remain in the day room area with no bathroom privileges for a specified period (2 hr) following eating, if contracting is unsuccessful. Prevents vomiting during and after eating. The patient may desire food and use a binge-purge syndrome to maintain weight. Note: the patient may purge for the first time in response to the establishment of a weight gain program.

**9. A woman with severe mitral stenosis and mitral regurgitation has a pulmonary artery catheter inserted. The physician orders pulmonary artery pressure monitoring, including pulmonary capillary wedge pressures. The purpose of this is to help assess the:**

- A. Degree of coronary artery stenosis.
- B. Peripheral arterial pressure.
- C. Pressure from fluid within the left ventricle.
- D. Oxygen and carbon dioxide concentration in the blood.

**Correct Answer: C. Pressure from fluid within the left ventricle.**

The pulmonary artery pressures are used to assess the heart's ability to receive and pump blood. The pulmonary capillary wedge pressure reflects the left ventricle end-diastolic pressure and guides the physician in determining fluid management for the client. Pulmonary capillary wedge pressure (PCWP) is frequently used to assess left ventricular filling, represent left atrial pressure, and assess mitral valve function. It is measured by inserting a balloon-tipped, multi-lumen catheter (Swan-Ganz catheter) into a central vein, and advancing the catheter into a branch of the pulmonary artery.

- **Option A:** The degree of coronary artery stenosis is assessed during a cardiac catheterization. Although it is used for cardiac hemodynamics and assessment of valvular lesions, its main diagnostic role is the assessment of coronary artery disease. In the contemporary era, left heart catheterization, especially selective coronary angiogram, is considered the gold standard test for coronary artery disease diagnosis.

- **Option B:** The peripheral arterial pressure is assessed with an arterial line. Arterial pressure directly corresponds to cardiac output, arterial elasticity, and peripheral vascular resistance. Blood pressure is remarkably easy to alter and can be affected by many activities. In response to acute changes in blood pressure, the body responds through the baroreceptors located within blood vessels. Baroreceptors are a form of mechanoreceptor that becomes activated by the stretching of the vessel. This sensory information is conveyed to the central nervous system and used to influence peripheral vascular resistance and cardiac output.
- **Option D:** An arterial blood gases (ABG) test measures the acidity (pH) and the levels of oxygen and carbon dioxide in the blood from an artery. This test is used to find out how well the lungs are able to move oxygen into the blood and remove carbon dioxide from the blood. As blood passes through the lungs, oxygen moves into the blood while carbon dioxide moves out of the blood into the lungs. An ABG test uses blood drawn from an artery, where the oxygen and carbon dioxide levels can be measured before they enter body tissues.

**10. A 40-year-old woman with a high body mass index (BMI) is 10 weeks pregnant. Which diagnostic tool is appropriate to suggest to her at this time?**

- A. Biophysical profile
- B. Amniocentesis
- C. Maternal serum alpha-fetoprotein (MSAFP)
- D. Transvaginal ultrasound

**Correct Answer: D. Transvaginal ultrasound**

An ultrasound is the method of biophysical assessment of the infant that is performed at this gestational age. Transvaginal ultrasound is especially useful for obese women, whose thick abdominal layers cannot be penetrated adequately with the abdominal approach.

- **Option A:** A biophysical profile is a method of biophysical assessment of fetal well-being in the third trimester.
- **Option B:** An amniocentesis is performed after the fourteenth week of pregnancy.
- **Option C:** A MSAFP test is performed from week 15 to week 22 of the gestation (weeks 16 to 18 are ideal).

**11. When a husband takes out his work frustrations and anger by abusing his wife at home, the nurse will identify this crisis as which type?**

- A. Psychiatric emergency crisis
- B. Developmental crisis
- C. Anticipated life transition
- D. Dispositional crisis

**Correct Answer D. Dispositional crisis**

A dispositional crisis is a response to an external situational crisis. External anger at work is the dispositional crisis displaced to his wife through abuse. These crises can ensue from a lack of information, such as not knowing which job to take, what type of medical referral to seek for a particular symptom, what one's options are about living arrangements, whom to ask for what.

- **Option A:** Psychiatric emergency crisis is when the individual's general functioning has been severely impaired, and the individual has been rendered incompetent. These are crisis situations in which one's general functioning is severely impaired and one is rendered incompetent or unable to maintain responsibility for oneself; in other words, one is dangerous to oneself and/or others.
- **Option B:** Developmental crisis occurs in response to triggering emotions related to unresolved conflict in one's life. This is called a developmental crisis based on Freudian psychology. These occur as part of the process of growing and developing through various periods of life. Sometimes a crisis is a predictable part of the life cycle, such as the crisis described in Erikson's stages of psychosocial development.
- **Option C:** An anticipated life transition crisis is a crisis that is normal in the life cycle; transitional is one over which the person has no control. These are normative, developmental crises that are fairly common in our society. They may result from midlife career changes, getting married, becoming a parent, divorce, the onset of chronic or terminal illness, or changing schools.

**12. You are caring for Rona, a 35-year-old female in a hepatic coma. Which evaluation criteria would be the most appropriate?**

- A. The patient demonstrates an increase in the level of consciousness.
- B. The patient exhibits improved skin integrity.
- C. The patient experiences no evident signs of bleeding.
- D. The patient verbalizes decreased episodes of pain.

**Correct Answer: A. The patient demonstrates an increase in the level of consciousness.**

Increased level of consciousness indicates resolving of a comatose state. Ongoing assessment of behavior and mental status is important because of the fluctuating nature of impending hepatic coma. Other options are important evaluations but do not evaluate a patient in a hepatic coma who is responding to external stimuli.

- **Option B:** Inspect pressure points and skin surfaces closely and routinely. Gently massage bony prominences or areas of continued stress. Use of emollient lotions and limiting the use of soap for bathing may help. Keep linens dry and free of wrinkles.
- **Option C:** Closely assess for signs and symptoms of GI bleeding: check all secretions for frank or occult blood. Observe color and consistency of stools, NG drainage, or vomitus. The esophagus and rectum are the most usual sources of bleeding because of their mucosal fragility and alterations in hemostasis associated with cirrhosis.
- **Option D:** Use small needles for injections. Apply pressure to small bleeding and venipuncture sites for longer than usual. Minimizes damage to tissues, reducing risk of bleeding and hematoma. Encourage the use of soft toothbrush, electric razor, avoiding straining for stool, vigorous nose blowing, and so forth.

**13. Which of the following foods should be avoided by clients who are prone to develop heartburn as a result of gastroesophageal reflux disease (GERD)?**

- A. Lettuce
- B. Eggs
- C. Chocolate

D. Butterscotch

**Correct Answer: C. Chocolate**

Ingestion of chocolate can reduce lower esophageal sphincter (LES) pressure leading to reflux and clinical symptoms of GERD. Ingesting cocoa can cause a surge of serotonin. This surge can cause the esophageal sphincter to relax and gastric contents to rise. Caffeine and theobromine in chocolate may also trigger acid reflux. All of the other foods do not affect LES pressure.

- **Option A:** Vegetables are naturally low in fat and sugar, and they help reduce stomach acid. Good options include green beans, broccoli, asparagus, cauliflower, leafy greens, potatoes, and cucumbers.
- **Option B:** Egg whites are a good option. Stay away from egg yolks, though, which are high in fat and may trigger reflux symptoms. Reflux symptoms may result from stomach acid touching the esophagus and causing irritation and pain.
- **Option D:** The foods the patient eats affect the amount of acid the stomach produces. Eating the right kinds of food is key to controlling acid reflux or GERD, a severe, chronic form of acid reflux. Sources of healthy fats include avocados, walnuts, flaxseed, olive oil, sesame oil, and sunflower oil. Reduce the intake of saturated fats and trans fats and replace them with these healthier unsaturated fats.

**14. Which of the following nursing diagnoses might apply to a patient with hypertonic FVE?**

- A. Ineffective airway clearance
- B. Potential for decreased cardiac output
- C. Ineffective breathing pattern
- D. Potential for increased cardiac output

**Correct Answer: B. Potential for decreased cardiac output**

Potential for decreased cardiac output is a nursing diagnosis associated with hypertonic FVE. Assess for bounding peripheral pulses and S3. These assessment findings are signs of fluid overload. Check for distended neck veins and ascites. Monitor abdominal girth to follow any ascites accurately. Distended neck veins are caused by elevated CVP. Ascites occur when fluid accumulates in extravascular spaces.

- **Option A:** Assess for crackles in the lungs, changes in respiratory pattern, shortness of breath, and orthopnea. These signs are caused by an accumulation of fluid in the lungs.
- **Option C:** Review the patient's history to determine the probable cause of the fluid imbalance. Such information can assist in direct management. History may include increased fluids or sodium intake.
- **Option D:** Monitor input and output closely. Dehydration may be the result of fluid shifting even if overall fluid intake is adequate. In some patients with heart failure, the weight may be a poor indicator of fluid volume status. Poor nutrition and decreased appetite over time result in a decrease in weight, which may be accompanied by fluid retention even though the net weight remains unchanged.



**15. The nurse is aware that the following laboratory values support a diagnosis of pyelonephritis?**

- A. Myoglobinuria
- B. Ketonuria
- C. Pyuria
- D. Low white blood cell (WBC) count

**Correct Answer: C. Pyuria**

Pyelonephritis is diagnosed by the presence of leukocytosis, hematuria, pyuria, and bacteriuria. A urinary specimen should be obtained for a urinalysis. On urinalysis, one should look for pyuria as it is the most common finding in patients with acute pyelonephritis.

- **Option A:** As the name suggests, myoglobinuria means the presence of an abnormally excessive amount of myoglobin in the urine. As myoglobin is present in the muscle cells, myoglobinuria is associated with damage to the cell membranes of myocytes. Numerous etiologies can lead to the rupture of the myocytes' cell membranes.
- **Option B:** Ketonuria indicates a diabetic state. Nitrite production will indicate that the causative bacteria is E.coli. Proteinuria and microscopic hematuria may be present as well on urinalysis. If hematuria is present, then other causes may be considered such as kidney stones.
- **Option D:** The client exhibits fever, chills, and flank pain. Because there is often a septic picture, the WBC count is more likely to be high rather than low. Blood work such as a complete blood cell count (CBC) is sent to look for an elevation in white blood cells. The complete metabolic panel can be used to search for aberrations in creatinine and BUN to assess kidney function.

**16. When counseling a client in ways to prevent cholecystitis, which of the following guidelines is most important?**

- A. Eat a low-protein diet.
- B. Eat a low-fat, low-cholesterol diet.
- C. Limit exercise to 10 minutes/day.
- D. Keep weight proportionate to height.

**Correct Answer: D. Keep weight proportionate to height.**

Obesity is a known cause of gallstones, and maintaining a recommended weight will help protect against gallstones. Excessive dietary intake of cholesterol is associated with the development of gallstones in many people. Being overweight makes one more likely to develop gallstones. To achieve a healthy weight, reduce calories and increase physical activity. Maintain a healthy weight by continuing to eat well and exercise.

- **Option A:** Dietary protein isn't implicated in cholecystitis. Diets high in fat and low in fiber may increase the risk of gallstones. To lower the risk, choose a diet high in fruits, vegetables, and whole grains.
- **Option B:** Liquid protein and low-calorie diets (with rapid weight loss of more than 5 lb [2.3kg] per week) are implicated as the cause of some cases of cholecystitis. Rapid weight loss can increase the risk of gallstones. If the client needs to lose weight, aim to lose 1 or 2 pounds (0.5 to about 1 kilogram) a week.

- **Option C:** Regular exercise (30 minutes/three times a week) may help reduce weight and improve fat metabolism. Reducing stress may reduce bile production, which may also indirectly decrease the chances of developing cholecystitis.

**17. A female client complains of gnawing epigastric pain for a few hours after meals. At times, when the pain is severe, vomiting occurs. Specific tests are indicated to rule out:**

- A. Cancer of the stomach
- B. Peptic ulcer disease
- C. Chronic gastritis
- D. Pylorospasm

**Correct Answer: B. Peptic ulcer disease**

Peptic ulcer disease is characteristically gnawing epigastric pain that may radiate to the back. Vomiting usually reflects pyloric spasm from muscular spasm or obstruction. Peptic ulcer disease is characterized by discontinuation in the inner lining of the gastrointestinal (GI) tract because of gastric acid secretion or pepsin. It extends into the muscularis propria layer of the gastric epithelium. It usually occurs in the stomach and proximal duodenum.

- **Option A:** Cancer would not evidence pain or vomiting unless the pylorus was obstructed. In the United States, most patients have symptoms of an advanced stage at the time of presentation. The most common presenting symptoms for gastric cancers are non-specific weight loss, persistent abdominal pain, dysphagia, hematemesis, anorexia, nausea, early satiety, and dyspepsia.
- **Option C:** The current classification of gastritis is based on time course (acute versus chronic), histological features, anatomic distribution, and underlying pathological mechanisms. Acute gastritis will evolve to chronic, if not treated. There are no typical clinical manifestations of gastritis. Sudden onset of epigastric pain, nausea, and vomiting have been described to accompany acute gastritis.
- **Option D:** There has been much uncertainty about the concept of “pylorospasm”. For many years radiologists considered pylorospasm to be due to spasm of the pyloric ring, where the ring was equated with the pyloric sphincter. It was thought that spasm of the ring (or “sphincter”) closed the pyloric aperture, thereby delaying gastric emptying and causing retention.

**18. A client receiving hemodialysis treatment arrives at the hospital with a blood pressure of 200/100, a heart rate of 110, and a respiratory rate of 36. Oxygen saturation in room air is 89%. He complains of shortness of breath, and +2 pedal edema is noted. His last hemodialysis treatment was yesterday. Which of the following interventions should be done first?**

- A. Administer oxygen.
- B. Elevate the foot of the bed.
- C. Restrict the client’s fluids.
- D. Prepare the client for hemodialysis.

**Correct Answer: A. Administer oxygen.**

Airway and oxygenation are always the first priority. Because the client is complaining of shortness of breath and his oxygen saturation is only 89%, the nurse needs to try to increase his levels by administering oxygen. Evaluate development of tachypnea, dyspnea, increased respiratory effort. Drain dialysate, and notify the physician.

- **Option B:** The foot of the bed may be elevated to reduce edema, but this isn't the priority. Turn from side to side, elevate the head of the bed, apply gentle pressure to the abdomen. May enhance outflow of fluid when the catheter is malpositioned and obstructed by the omentum.
- **Option C:** Maintain fluid restriction as indicated. Fluid restrictions may have to be continued to decrease fluid volume overload. Monitor BP and pulse, noting hypertension, bounding pulses, neck vein distension, peripheral edema; measure CVP if available.
- **Option D:** The client is in pulmonary edema from fluid overload and will need to be dialyzed and have his fluids restricted, but the first interventions should be aimed at the immediate treatment of hypoxia. Alter dialysate regimen as indicated. Changes may be needed in the glucose or sodium concentration to facilitate efficient dialysis.

**19. Nurse Brian is developing a plan of care for marrow suppression, the major dose-limiting adverse reaction to floxuridine (FUDR). How long after drug administration does bone marrow suppression become noticeable?**

- A. 24 hours
- B. 2 to 4 days
- C. 7 to 14 days
- D. 21 to 28 days

**Correct Answer: C. 7 to 14 days**

- Bone marrow suppression becomes noticeable 7 to 14 days after floxuridine administration. Bone marrow recovery occurs in 21 to 28 days.

**20. Match the acid-base status of the following blood samples to the disorders in the given choices. (PaCO<sub>2</sub> values are in mm Hg and bicarbonate values in mmol/l). pH 7.39, PaCO<sub>2</sub> 59, HCO<sub>3</sub><sup>-</sup> 35**

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

**Correct Answer: C. Respiratory Acidosis, Fully Compensated**

- Based on the given ABG values, pH is 7.39. For pH, the normal range is 7.35 to 7.45. So it is NORMAL.
- PaCO<sub>2</sub> is 59. The normal range for PaCO<sub>2</sub> is from 35 to 45. If PaCO<sub>2</sub> is above 45, it is acidosis. Based on the given ABG values, PaCO<sub>2</sub> is above 45, so it is considered ACIDOSIS.
- HCO<sub>3</sub><sup>-</sup> is 35. The normal range for HCO<sub>3</sub> is from 22 to 26. If HCO<sub>3</sub> is above 26, it is alkalosis. Based on the given ABG values, HCO<sub>3</sub> is above 26, so it is considered ALKALOSIS.

- For these ABG values, pH is NORMAL but slightly acidic and lines up with PACO<sub>2</sub> which is RESPIRATORY. Therefore, this group of ABG values is considered RESPIRATORY ACIDOSIS.
- Lastly, it is FULLY COMPENSATED because pH is normal. It is considered fully compensated if pH is normal.

**21. A 5-year-old is admitted with acute leukemia. It will be most important to monitor the child for:**

- A. Petechiae and mucosal ulcers
- B. Bruising and fatigue
- C. Anorexia and abdominal pain
- D. Pallor and bleeding

**Correct Answer: D. Pallor and bleeding**

- Option D: The child with leukemia has low platelet counts, which contribute to spontaneous bleeding.
- Options A, B, and C: These are common in children with leukemia, and are not life-threatening.

**22. Instructions for a client with systemic lupus erythematosus (SLE) would include information about which of the following blood dyscrasias?**

- A. Dressler's syndrome
- B. Polycythemia
- C. Essential thrombocytopenia
- D. Von Willebrand's disease

**Correct Answer: C. Essential thrombocytopenia**

Essential thrombocytopenia is linked to immunologic disorders, such as SLE and the human immunodeficiency virus.

- **Option A:** Dressler's syndrome is pericarditis that occurs after myocardial infarction and isn't linked to SLE.
- **Option B:** Moderate to severe anemia is associated with SLE, not polycythemia. It is found in about 50% of patients, with anemia of chronic disease being the most common form.
- **Option D:** Von Willebrand disease is a blood disorder in which the blood doesn't clot properly. Blood contains many proteins that help the body stop bleeding. One of these proteins is called von Willebrand factor.

**23. Acarbose (Precose), an alpha-glucosidase inhibitor, is prescribed for a female client with type 2 diabetes mellitus. During discharge planning, nurse Pauleen would be aware of the client's need for additional teaching when the client states:**

- A. "It's best if I take the drug with the first bite of a meal."
- B. "The drug makes my pancreas release more insulin."
- C. "I should never take insulin while I'm taking this drug."
- D. "If I have hypoglycemia, I should eat some sugar, not dextrose."

**Correct Answer: D. "If I have hypoglycemia, I should eat some sugar, not dextrose."**

Acarbose delays glucose absorption, so the client should take an oral form of dextrose rather than a product containing table sugar when treating hypoglycemia. Acarbose is FDA approved for the treatment of adults with type 2 diabetes mellitus as an adjunct to diet only or diet and exercise, depending on the patient's health status.

- **Option A:** The client should take the drug at the start of a meal, not 30 minutes to an hour before. Acarbose is a commonly used medication for the management of type 2 diabetes mellitus. While the drug is useful, it is not a great agent when used as monotherapy. Because the drug works in the gastrointestinal system, its most common adverse effects are gastrointestinal upset/bloating.
- **Option B:** The alpha-glucosidase inhibitors work by delaying the carbohydrate digestion and glucose absorption. Acarbose is a complex oligosaccharide that acts as a competitive, reversible inhibitor of pancreatic alpha-amylase and membrane-bound intestinal alpha-glucosidase. By delaying the digestion of carbohydrates, acarbose slows glucose absorption, resulting in a reduction of postprandial glucose blood concentrations.
- **Option C:** It's safe to be on a regimen that includes insulin and an alpha-glucosidase inhibitor. If a patient experiences hypoglycemia while taking acarbose in combination with other anti-diabetic medications, the patient should receive instructions to use glucose (gel, tablets, etc.) as acarbose will prevent the breakdown of sucrose (table sugar) and delay glucose absorption, therefore, failing to correct hypoglycemia quickly. Severe hypoglycemia may require intravenous glucose or intramuscular glucagon administration.

**24. A pregnant woman at 32 weeks' gestation complains of feeling dizzy and lightheaded while her fundal height is being measured. Her skin is pale and moist. The nurse's initial response would be to:**

- A. Assess the woman's blood pressure and pulse.
- B. Have the woman breathe into a paper bag.
- C. Raise the woman's legs.
- D. Turn the woman on her left side.

**Correct Answer: D. Turn the woman on her left side.**

During a fundal height measurement, the woman is placed in a supine position. This woman is experiencing supine hypotension as a result of uterine compression of the vena cava and abdominal aorta. Turning her on her side will remove the compression and restore cardiac output and blood pressure.

- **Option A:** After turning the client on the side, then vital signs can be assessed. Because this phenomenon is so well known, standard practice is for clinicians to avoid placing the woman in supine position for routine examinations and procedures, moving the woman into the left lateral if there are signs of fetal distress in labor, and also advising her to avoid the supine position herself, at least during the day.

- **Option B:** Breathing into a paper bag is the solution for dizziness related to respiratory alkalosis associated with hyperventilation.
- **Option C:** Raising her legs will not solve the problem since pressure will remain on the major abdominal blood vessels, thereby continuing to impede cardiac output.

**25. Mrs. dela Riva is in her first trimester of pregnancy. She has been lying all day because her OB-GYN requested her to have a complete bed rest. Which nursing intervention is appropriate when addressing the client's need to maintain skin integrity?**

- A. Monitoring intake and output accurately.
- B. Instructing the client to cough and deep breathe every 2 hours.
- C. Keeping the linens dry and wrinkle-free.
- D. Using a footboard to maintain correct anatomic position.

**Correct Answer: C. Keeping the linens dry and wrinkle-free.**

Keeping the linens dry and wrinkle-free aids in preventing moisture and pressure from interfering with adequate blood supply to the tissues, helping to maintain skin integrity. Encourage the implementation of a turning schedule, restricting time in one position to 2 hours or less, if the patient is restricted to bed.

- **Option A:** Monitoring intake and output aids in assessing and maintaining bladder function. Assess patient's nutritional status, including weight, weight loss, and serum albumin levels. An albumin level less than 2.5 g/dL is a grave sign, indicating severe protein depletion and at high risk of skin breakdown.
- **Option B:** Coughing and deep breathing help promote gas exchange. Reinforce the importance of turning, mobility, and ambulation. These will enhance their sense of efficacy and can improve compliance with the prescribed interventions.
- **Option D:** Using a footboard is appropriate for maintaining a normal body function position. Encourage the patient to change position every 15 minutes and change chair-bound positions every hour. Use pillows or foam wedges to keep bony prominences from direct contact with each other. Keep pillows under the heels to raise off the bed.

**26. An adult client with a borderline personality disorder become nauseated and vomits immediately after drinking 2 ounces of shampoo as a suicide gesture. The most appropriate initial response by the nurse would be to:**

- A. Promptly notify the attending physician.
- B. Immediately initiate suicide precautions.
- C. Sit quietly with the client until nausea and vomiting subsides.
- D. Assess the client's vital signs and administer syrup of ipecac.

**Correct Answer: C. Sit quietly with the client until nausea and vomiting subside.**

This intervention demonstrates the nurse's caring presence which is vital for this client. Identify feelings experienced before and around the act of self-mutilation. Feelings are a guideline for future intervention (e.g., rage at feeling left out or abandoned).

- **Option A:** Although the treatment team does need to know about the event, notification is not the immediate concern. Set and maintain limits on acceptable behavior and make clear client's responsibilities. If the client is hospitalized at the time, be clear regarding the unit rules. Clear and non punitive limit setting is essential for decreasing negative behaviors.
- **Option B:** This is premature and it reinforces the client's predisposition to manipulative behavior. Secure a written or verbal no-harm contract with the client. Identify specific steps (e.g., persons to call upon when prompted to self-mutilate). The client is encouraged to take responsibility for healthier behavior. Talking to others and learning alternative coping skills can reduce frequency and severity until such behavior ceases.
- **Option D:** This medication is inappropriate in this situation; vomiting would be expected after the ingestion of shampoo. After the treatment, discuss what happened right before, and the thoughts and feelings that the client had immediately before self-mutilating. identify dynamics for both client and clinician. Allows the identification of less harmful responses to help relieve intense tensions.

**27. A pregnant woman's last menstrual period began on April 8, 2020, and ended on April 13. Using Naegele's rule her estimated date of birth would be:**

- A. January 15, 2021
- B. January 20, 2021
- C. July 1, 2021
- D. November 5, 2020

**Correct Answer: A. January 15, 2021.**

Naegele's rule requires subtracting 3 months and adding 7 days and 1 year if appropriate to the first day of a pregnant woman's last menstrual period. When this rule was used on April 8, 2020, the estimated date of birth was January 15, 2021.

- **Option B:** Determining gestational age is one of the most critical aspects of providing quality prenatal care. Knowing the gestational age allows the obstetrician to provide care to the mother without compromising maternal or fetal status. It allows for the correct timing of management, such as administering steroids for fetal lung maturity, starting ASA therapy with a history of pre-eclampsia in previous pregnancies, starting hydroxyprogesterone caproate (Makena) for previous preterm deliveries.
- **Option C:** Naegele's rule, derived from a German obstetrician, subtracts 3 months and adds 7 days to calculate the estimated due date (EDD).
- **Option D:** It is prudent for the obstetrician to get a detailed menstrual history, including duration, flow, previous menstrual periods, and hormonal contraceptives. These factors are used to determine the length of her cycles and ovulation period.

**28. Nurse Ian is handling a client with gastroesophageal reflux disease. Which of the following positions will best help the client in this case?**

- A. Right Lateral Recumbent.
- B. Supine position.
- C. Reverse Trendelenburg position.

D. Sims position.

**Correct Answer: C. Reverse Trendelenburg position.**

Reverse Trendelenburg position is advised to a client to promote gastric emptying and prevent gastroesophageal reflux. Studies that monitored esophageal acid exposure after elevation of the head of the bed showed a decrease in reflux activity in adults. Placing blocks under the head of the bed or placing a foam wedge under the patient's mattress can accomplish this.

- **Option A:** In the right lateral recumbent position, the individual is lying on their right side. This position makes it easier to access a patient's left side. The word "lateral" means "to the side," while "recumbent" means "lying down."
- **Option B:** Avoid placing the patient in supine position, have the patient sit upright after meals. Supine position after meals can increase regurgitation of acid. Elevate HOB while in bed to prevent aspiration by preventing the gastric acid to flow back into the esophagus.
- **Option D:** The Sims position is a standard position in which the patient lies on their left side, with right hip and knees bent. The lower arm is behind the back, the thighs flexed. The left knee is slightly tilted. The right arm is positioned comfortably in front of the body, the right arm is rested behind the body. This is also known as "lateral" position. This position is often used for rectal or vaginal examination, and treatments.

**29. The nurse is reviewing the physician's orders written for a male client admitted to the hospital with acute pancreatitis. Which physician order should the nurse question if noted on the client's chart?**

- A. NPO status
- B. Nasogastric tube inserted
- C. Morphine sulfate for pain
- D. An anticholinergic medication

**Correct Answer: C. Morphine sulfate for pain**

Meperidine (Demerol) rather than morphine sulfate is the medication of choice to treat pain because morphine sulfate can cause spasms in the sphincter of Oddi. Histological data show that treatment with morphine after induction of acute pancreatitis exacerbates the disease with increased pancreatic neutrophilic infiltration and necrosis in all three models of acute pancreatitis. Morphine also exacerbated acute pancreatitis-induced gut permeabilization and bacteremia.

- **Option A:** Historically, patients with acute pancreatitis would be kept without food by mouth (nil per os or NPO) until their physician team deemed them ready to eat again, usually based on blood tests or the reported level of pain.
- **Option B:** NGT is used if vomiting is a problem. The tube can be used for a few weeks. It can be used to remove fluid and air and give the pancreas more time to heal. It can also be used to put liquid food into the stomach as the client heals.
- **Option D:** Anticholinergics are used to a variable extent in the treatment of many gastrointestinal conditions, including acute or relapsing chronic pancreatitis, acid-peptic disorders of the upper gastrointestinal tract, chronic inflammations of the intestines, and so-called functional gastrointestinal disorders caused by excessive or abnormal motility.



**30. A nurse in the newborn nursery is monitoring a preterm newborn infant for respiratory distress syndrome. Which assessment signs if noted in the newborn infant would alert the nurse to the possibility of this syndrome?**

- A. Hypotension and Bradycardia
- B. Tachypnea and retractions
- C. Acrocyanosis and grunting
- D. The presence of a barrel chest with grunting

**Correct Answer: B. Tachypnea and retractions**

Respiratory distress syndrome (RDS) usually affects premature babies. It is caused by the absence or lack of surfactant, a phospholipid that lines the alveoli and reduces the surface tension to keep the alveoli from collapsing on expiration. Surfactant is not formed until the 34th week of gestation that is why premature infants are vulnerable.

- **Option B:** Infants who develop RDS have periods during the day when they are free of symptoms because of an initial release of surfactant. The initial signs of respiratory distress includes tachypnea (60 breaths per minute), sternal and subcostal retractions, nasal flaring, cyanotic mucous membranes.
- **Options A, C, & D:** These are **late** signs (after a few hours) of respiratory distress as its intensity increases. **Acrocyanosis** is the blue or cyanotic discoloration of the extremities. **Expiratory grunting** is when the infant closes the glottis in an attempt to increase pressure in the alveoli on expiration in order to keep them from collapsing. Additionally, auscultation may reveal fine rales and diminished breath sounds due to poor air entry.

**31. Nurse Julie recommends that the family of a client with substance-related disorder attend a support group, such as Al-Anon and Alateen. The purpose of these groups is to help family members understand the problem and to:**

- A. Change the problem behaviors of the abuser.
- B. Learn how to assist the abuser in getting help.
- C. Maintain focus on changing their own behaviors.
- D. Prevent substance problems in vulnerable family members.

**Correct Answer: C. Maintain focus on changing their own behaviors.**

Family support groups, such as Al-Anon and Alateen, emphasize the importance of changing one's own behavior rather than trying to change the behavior of the individual with a substance abuse problem. The two disciplines, family therapy and substance abuse treatment, bring different perspectives to treatment implementation. In substance abuse treatment, for instance, the client is the identified patient (IP)—the person in the family with the presenting substance abuse problem. In family therapy, the goal of treatment is to meet the needs of all family members. Family therapy addresses the interdependent nature of family relationships and how these relationships serve the IP and other family members for good or ill.

- **Option A:** The focus of family therapy treatment is to intervene in these complex relational patterns and to alter them in ways that bring about productive change for the entire family. Family therapy rests on the system's perspective. As such, changes in one part of the system can and do produce

changes in other parts of the system, and these changes can contribute to either problems or solutions.

- **Option B:** Trying to change the abuser's behavior or learning ways to find help for the abuser would be viewed as codependent behaviors, and thus would not be advocated by family support groups. It is important to understand the complex role that families can play in substance abuse treatment. They can be a source of help to the treatment process, but they also must manage the consequences of the IP's addictive behavior. Individual family members are concerned about the IP's substance abuse, but they also have their own goals and issues. Providing services to the whole family can improve treatment effectiveness.
- **Option D:** Learning about substance abuse may help a vulnerable family member to avoid this problem; however, that is not the purpose of these groups. Meeting the challenge of working together will call for mutual understanding, flexibility, and adjustments among the substance abuse treatment provider, family therapist, and family. This shift will require a stronger focus on the systemic interactions of families. Many divergent practices must be reconciled if family therapy is to be used in substance abuse treatment. For example, the substance abuse counselor typically facilitates treatment goals with the client; thus the goals are individualized, focused mainly on the client. This reduces the opportunity to include the family's perspective in goal setting, which could facilitate the healing process for the family as a whole.

### **32. The extracellular fluid space holds water, electrolytes, proteins and:**

- A. Red blood cells
- B. Potassium
- C. Lipids
- D. Nucleic acids

**Correct Answer: A. Red blood cells**

The extracellular space contains red blood cells, white blood cells, and platelets in addition to water, electrolytes, and proteins. Extracellular fluid (ECF) or extracellular fluid volume (ECFV) usually denotes all body fluid outside of cells, and consists of plasma, interstitial, and transcellular fluid. An extracellular matrix is an extracellular fluid space containing cell-excreted molecules, and they vary in their type and function. Potassium, lipids, and nucleic acids are intracellular components.

- **Option B:** Potassium is the most abundant exchangeable cation in the body. It exists predominantly in the intracellular fluid at concentrations of 140 to 150 meq/liter and in the extracellular fluid at concentrations of 3.5 to 5 meq/liter.
- **Option C:** Cell membranes are composed of proteins and lipids. Since they are made up of mostly lipids, only certain substances can move through. Phospholipids are the most abundant type of lipid found in the membrane. Phospholipids are made up of two layers, the outer and inner layers.
- **Option D:** The two main types of nucleic acids are deoxyribonucleic acid (DNA) and ribonucleic acid (RNA). DNA is the genetic material found in all living organisms, ranging from single-celled bacteria to multicellular mammals. It is found in the nucleus of eukaryotes and in the organelles, chloroplasts, and mitochondria.

### **33. Gravida refers to which of the following descriptions?**

- A. A serious pregnancy.

- B. Number of times a female has been pregnant.
- C. Number of children a female has delivered.
- D. Number of term pregnancies a female has had.

**Correct Answer: B. Number of times a female has been pregnant.**

Gravida refers to the number of times a female has been pregnant, regardless of pregnancy outcome or the number of neonates delivered.

- **Option A:** The term gravida comes from the Latin word gravidus. It is used to describe a woman who is pregnant and is also a medical term for the total number of confirmed pregnancies a woman has had, regardless of the outcome of the pregnancy.
- **Option C:** Parity is defined as the number of times that she has given birth to a fetus with a gestational age of 24 weeks or more, regardless of whether the child was born alive or was stillborn.
- **Option D:** ACOG and SMFM use these definitions to describe term pregnancies: Early term: The baby is born between 37 weeks, 0 days and 38 weeks, 6 days. Full term: The baby is born between 39 weeks, 0 days and 40 weeks, 6 days. Late-term: The baby is born between 41 weeks, 0 days and 41 weeks, 6 days.

**34. *Dyspnea, cough, expectoration, weakness, and edema are classic signs and symptoms of which of the following conditions?***

- A. Pericarditis
- B. Hypertension
- C. Obliterative
- D. Restrictive

**Correct Answer: D. Restrictive**

These are the classic symptoms of heart failure. Heart failure is the pathophysiologic state in which the heart, via an abnormality of cardiac function (detectable or not), fails to pump blood at a rate commensurate with the requirements of the metabolizing tissues or is able to do so only with an elevated diastolic filling pressure.

- **Option A:** Pericarditis is exhibited by a feeling of fullness in the chest and auscultation of a pericardial friction rub.
- **Option B:** Hypertension is usually exhibited by headaches, visual disturbances, and a flushed face. Myocardial infarction causes heart failure but isn't related to these symptoms.
- **Option C:** Obliterative cardiomyopathy is very rare. It may result from the end stage of eosinophilic syndromes, in which intracavitary thrombus fills the left ventricular apex and hampers the filling of the ventricles.

**35. *Which of the following would lead the nurse to suspect that a child with meningitis has developed disseminated intravascular coagulation?***

- A. Hemorrhagic skin rash
- B. Edema

C. Cyanosis

D. Dyspnea on exertion

**Correct Answer: A. Hemorrhagic skin rash**

DIC is characterized by skin petechiae and a purpuric skin rash caused by spontaneous bleeding into the tissues. An abnormal coagulation phenomenon causes the condition. Disseminated intravascular coagulation (DIC) can be defined as a widespread hypercoagulable state that can lead to both microvascular and macrovascular clotting and compromised blood flow, ultimately resulting in multiple organ dysfunction syndrome or MODS. As this process begins consuming clotting factors and platelets in a positive feedback loop, hemorrhage can ensue, which may be the presenting symptom of a patient with DIC.

- **Option B:** Increased intracranial pressure from cerebral edema caused by increased intracellular fluid in the brain. Several factors are involved in the development of cerebral edema: increased blood-brain barrier permeability, cytotoxicity from cytokines, immune cells, and bacteria.
- **Option C:** Cyanosis, broadly speaking, is caused by disorders of deoxygenated hemoglobin and disorders of abnormal hemoglobin. Oxygen might not reach hemoglobin in an adequate or sufficient amount as a result of conditions affecting the respiratory system, cardiovascular system, and the central nervous system.
- **Option D:** Dyspnea on exertion is a symptom of various diseases rather than a disease itself. As such, its etiology can be designated as arising from two primary organ systems: the respiratory system and the cardiac system. Other systemic illnesses may be the culprit as well as a combination of different etiologies.

**36. A nurse is giving discharge instructions to a patient who is taking Synthroid (levothyroxine). The nurse instructs the client to notify the physician if which of the following occurs?**

A. Cold intolerance

B. Tremors

C. Coarse, dry hair

D. Muscle cramps

**Correct Answer: B. Tremors**

Excessive doses of levothyroxine can produce signs and symptoms of hyperthyroidism which includes heat tolerance, tremors, nervousness, tachycardia, chest pain, hyperthermia, and insomnia.

- **Options A, C, & D:** These are signs of hypothyroidism.

**37. A patient with acute respiratory distress syndrome (ARDS) is receiving oxygen by a non-rebreather mask, but arterial blood gas measurements still show poor oxygenation. As the nurse responsible for this patient's care, you would anticipate a physician order for what action?**

A. Perform endotracheal intubation and initiate mechanical ventilation.

B. Immediately begin continuous positive airway pressure (CPAP) via the patient's nose and mouth.

- C. Administer furosemide (Lasix) 100 mg IV push stat.
- D. Call a code for respiratory arrest.

**Correct Answer: A. Perform endotracheal intubation and initiate mechanical ventilation**

A non-rebreather mask can deliver nearly 100% oxygen. When the patient's oxygenation status does not improve adequately in response to the delivery of oxygen at this high concentration, refractory hypoxemia is present. Usually, at this stage, the patient is working very hard to breathe and may go into respiratory arrest unless healthcare care providers intervene by providing intubation and mechanical ventilation to decrease the patient's work of breathing.

- **Option B:** To maintain oxygenation, ARDSnet recognizes the benefit of PEEP. The protocol allows for a low or a high PEEP strategy relative to FiO<sub>2</sub>. Either strategy tolerates a PEEP of up to 24 cm HO in patients requiring 100% FiO<sub>2</sub>. Interestingly, the mode in which a patient is ventilated affects lung recovery. Evidence suggests that some ventilatory strategies can exacerbate alveolar damage and perpetuate lung injury in the context of ARDS.
- **Option C:** The chief treatment strategy is supportive care and focuses on 1) reducing shunt fraction, 2) increasing oxygen delivery, 3) decreasing oxygen consumption, and 4) avoiding further injury. Patients are mechanically ventilated, guarded against fluid overload with diuretics, and given nutritional support until evidence of improvement is observed.
- **Option D:** The major cause of death in patients with ARDS was sepsis or multiorgan failure. While mortality rates are now around 9% to 20%, it is much higher in older patients. ARDS has significant morbidity as these patients remain in the hospital for extended periods and have significant weight loss, poor muscle function, and functional impairment.

**38. Which assessment finding indicates that lactulose is effective in decreasing the ammonia level in the client with hepatic encephalopathy?**

- A. Passage of two or three soft stools daily
- B. Evidence of watery diarrhea
- C. Daily deterioration in the client's handwriting
- D. Appearance of frothy, foul-smelling stools

**Correct Answer: A. Passage of two or three soft stools daily.**

Lactulose reduces serum ammonia levels by inducing catharsis, subsequently decreasing colonic pH and inhibiting fecal flora from producing ammonia from urea. Ammonia is removed with the stool. Two or three soft stools daily indicate the effectiveness of the drug. Lactulose, also known as 1,4 beta galactoside-fructose, is a non-absorbable synthetic disaccharide made up of galactose and fructose. The human small intestinal mucosa does not have the enzymes to split lactulose, and hence lactulose reaches the large bowel unchanged. Lactulose is metabolized in the colon by colonic bacteria to monosaccharides, and then to volatile fatty acids, hydrogen, and methane.

- **Option B:** Watery diarrhea indicates overdose. Since its intended use is to soften the stool quantity and increase the stool amount, its most significant side effect remains diarrhea. The diarrhea is dose-dependent and decreases in severity with a reduction in the dose of lactulose.
- **Option C:** Daily deterioration in the client's handwriting indicates an increase in the ammonia level and worsening of hepatic encephalopathy. From a pharmacokinetic standpoint, lactulose has negligible systemic absorption. However, like most laxatives, it has a propensity to bring about large changes in the body's fluid and electrolyte status. This activity would require periodic

electrolyte monitoring, especially in the elderly and critically ill population.

- **Option D:** Frothy, foul-smelling stools indicate steatorrhea, caused by impaired fat digestion. Because lactulose has insignificant absorption by the gut and undergoes rapid excretion by the kidneys, its effects remain localized to the gut microenvironment.

**39. What are the uses of qualitative research methods? Select all that apply.**

- A. Guiding nursing practice.
- B. Studying the effects of nursing care on an outcome variable.
- C. Developing survey instruments.
- D. Developing nursing theory.

**Correct Answers: A, C, D**

Qualitative research refers to a method of inquiry in which the researcher, acting as a data collection instrument, seeks to answer questions about how or why a particular phenomenon occurs. Questions regarding what a phenomenon is comprised may also guide qualitative research

- **Option A:** The most fundamental assumption underlying qualitative research is that reality is something socially constructed on an individual basis. Varied methods of qualitative research exist. Examples of qualitative methods employed in nursing research include grounded theory, phenomenology, ethnography, and qualitative description.
- **Option B:** Regardless of method, participants are purposefully enrolled based on their familiarity with the phenomenon. Data are generally collected via one or a combination of three mechanisms: interviews, observation, or document/photograph review.
- **Option C:** Qualitative findings provide idiographic knowledge about human experiences to readers, who can apply qualitative findings to the care of individuals who are in situations similar to that of those in the sample from which findings came
- **Option D:** Qualitative findings are not generalizable in the prevalent sense of the word—they do not provide laws or relationships that can be taken from a single sample and applied to entire populations. Rather, they are generalizable in a way that is particularly pertinent to nursing practice, in which there is an expectation that scientific findings, and nursing care itself, be tailored to unique individuals in their distinct contexts.

**40. Mr. Thompson, a 58-year-old winery owner, has been admitted to the hospital with a severe gout flare-up. As part of his discharge plan, Nurse Ramirez has been tasked with providing self-care instructions to Mr. Thompson to help manage his gout symptoms and prevent future flare-ups. Given his lifestyle and newly prescribed medication, which self-care instructions should Nurse Ramirez include? Select all that apply.**

- A. "Apply cold packs to the affected joints during flare-ups."
- B. "Limit alcohol consumption to reduce the risk of gout flare-ups."
- C. "Engage in regular physical activity to maintain a healthy weight."
- D. "Avoid dehydration by drinking at least 8 glasses of water per day."

E. "Take colchicine on an empty stomach for optimal absorption."

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

- **Option A:** Cold packs can help reduce inflammation and provide relief from pain during gout flare-ups.
- **Option B:** Excessive alcohol consumption, especially beer, can increase uric acid levels and trigger gout attacks.
- **Option C:** Maintaining a healthy weight can help reduce the risk of gout attacks. Regular physical activity can assist in weight management.
- **Option D:** Adequate hydration can help in the excretion of uric acid through urine, thereby reducing the risk of gout flare-ups.
- **Option E:** Taking colchicine on an empty stomach may increase the risk of gastrointestinal side effects like nausea, vomiting, and diarrhea. It's generally better to take colchicine with food to reduce potential stomach upset.

**41. A nurse is performing a routine assessment of an IV site in a patient receiving both IV fluids and medications through the line. Which of the following would indicate the need for discontinuation of the IV line as the next nursing action?**

- A. The patient complains of pain from movement.
- B. The area proximal to the insertion site is reddened, warm, and painful.
- C. The IV solution is infusing too slowly, particularly when the limb is elevated.
- D. A hematoma is visible in the area of the IV insertion site.

**Correct Answer: B. The area proximal to the insertion site is reddened, warm, and painful.**

An IV site that is red, warm, painful and swollen indicates that phlebitis has developed and the line should be discontinued and restarted at another site. Phlebitis is inflammation of a vein. It is usually associated with acidic or alkaline solutions or solutions that have a high osmolarity. Phlebitis can also occur as a result of vein trauma during insertion, use of an inappropriate I.V. catheter size for the vein, or prolonged use of the same I.V. site.

- **Option A:** Pain on movement should be managed by maneuvers such as splinting the limb with an IV board or gently shifting the position of the catheter before making a decision to remove the line. Apply warm, moist compresses to the area. Document the patient's condition and interventions.
- **Option C:** An IV line that is running slowly may simply need flushing or repositioning. Monitor administration rates and inspect the I.V. site frequently. Change the infusion site according to the facility's policy.
- **Option D:** A hematoma at the site is likely a result of minor bleeding at the time of insertion and does not require discontinuation of the line. Avoid veins that are small and/or fragile, veins in areas of flexion, veins in extremities with preexisting edema, or veins in areas with known neurologic impairment.

**42. Lee Angela's lab test just revealed that her chloride level is 96 mEq/L. As a nurse, you would interpret this serum chloride level as:**

- A. High
- B. Low
- C. Within normal range
- D. High normal

**Correct Answer: C. Within normal range**

Normal serum concentrations of chloride range from 95 to 108 mEq/L. Chloride is an anion found predominantly in the extracellular fluid. The kidneys predominantly regulate serum chloride levels. Most of the chloride, which is filtered by the glomerulus, is reabsorbed by both proximal and distal tubules (majorly by proximal tubule) by both active and passive transport.

- **Option A:** Hyperchloremia is an electrolyte disturbance in which there is an elevated level of the chloride ions in the blood. The normal serum range for chloride is 95 to 108 mEq/L, therefore chloride levels at or above 110 mEq/L usually indicate kidney dysfunction as it is a regulator of chloride concentration.
- **Option B:** The most reduced levels of serum chloride (range 45 to 70 mEq/L) are associated with pernicious forms of vomiting due to gastric outlet obstruction, protracted vomiting in alcoholics, or self-induced vomiting. Individuals with hypochloremia secondary to total body chloride depletion will have physical findings that indicate ECF volume contraction (e.g., hypotension, tachycardia, and orthostatic changes in blood pressure).
- **Option D:** Conditions causing an elevation of the serum chloride concentration and a concomitant elevation of the serum sodium concentration result primarily from disorders associated with loss of electrolyte-free fluids (pure water loss); hypotonic fluids (water deficit in excess of sodium and chloride deficits); or administration of NaCl-containing fluids.

**43. Mickey, a 6-year-old child with a congenital heart disorder is admitted with congestive heart failure. Digoxin (lanoxin) 0.12 mg is ordered for the child. The bottle of Lanoxin contains .05 mg of Lanoxin in 1 ml of solution. What amount should the nurse administer to the child?**

- A. 1.2 ml
- B. 2.4 ml
- C. 3.5 ml
- D. 4.2 ml

**Correct Answer: B. 2.4 ml**

$.05 \text{ mg} / 1 \text{ ml} = .12 \text{ mg} / x \text{ ml}$ ,  $.05x = .12$ ,  $x = 2.4 \text{ ml}$ .

- **Option A:** 1.2 ml is less than the correct dosage and may not produce the desired effects of the drug.
- **Option C:** 3.5 ml is more than the correct dosage as calculated and may produce adverse effects.
- **Option D:** 4.2 ml is an incorrect dosage according to the formula used.

**44. Which of the following is the most common symptom of myocardial infarction (MI)?**



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

**Correct Answer: A. Chest pain**

The most common symptom of an MI is chest pain, resulting from deprivation of oxygen to the heart. Myocardial ischemia can present as chest pain, upper extremity pain, mandibular, or epigastric discomfort that occurs during exertion or at rest. The chest pain is usually retrosternal and is sometimes described as the sensation of pressure or heaviness. The pain often radiates to the left shoulder, neck, or arms with no obvious precipitating factors, and it may be intermittent or persistent. The pain usually lasts for more than 20 minutes. It is usually not affected by positional changes or active movement of the region.

- **Option B:** Dyspnea is the second most common symptom, related to an increase in the metabolic needs of the body during an MI. Myocardial ischemia can also present as dyspnea or fatigue, which are known to be ischemic equivalents.
- **Option C:** Edema is a later sign of heart failure, often seen after an MI. Myocardial edema is a consequence of ischemia and infarction and has functional importance because edema impairs myocyte contractility. The extent of myocardial edema revealed by T2-weighted cardiac magnetic resonance (CMR) imaging correlates with the transmural extent of infarction.
- **Option D:** Palpitations may result from reduced cardiac output, producing arrhythmias. The MI can also present atypically with subtle findings such as palpitations, or more dramatic manifestations, such as cardiac arrest. The MI can sometimes present with no symptoms.

**45. A 3-year-old child was brought to the pediatric clinic after the sudden onset of findings that include irritability, thick muffled voice, croaking on inspiration, hot to touch, sit leaning forward, tongue protruding, drooling, and suprasternal retractions. What should the nurse do first?**

- A. Prepare the child for X-ray of upper airways
- B. Examine the child's throat
- C. Collect a sputum specimen
- D. Notify the healthcare provider of the child's status

**Correct Answer: D. Notify the healthcare provider of the child's status**

These findings suggest a medical emergency and may be due to epiglottitis. Any child with an acute onset of an inflammatory response in the mouth and throat should receive immediate care.

- **Option A:** If epiglottitis is seriously considered, no imaging studies are required. In less-clear cases, imaging studies are occasionally helpful in establishing the diagnosis or excluding epiglottitis.
- **Option B:** Examining the child's throat should not be attempted because it may compromise respiratory effort.
- **Option C:** There are no indications for the collection of sputum specimens.

**46. A female client who was found unconscious at home is brought to the hospital by a rescue squad. In the intensive care unit, the nurse checks the client's oculocephalic (doll's eye) response by:**

- A. Introducing ice water into the external auditory canal.
- B. Touching the cornea with a wisp of cotton.
- C. Turning the client's head suddenly while holding the eyelids open.
- D. Shining a bright light into the pupil.

**Correct Answer: C. Turning the client's head suddenly while holding the eyelids open.**

To elicit the oculocephalic response, which detects cranial nerve compression, the nurse turns the client's head suddenly while holding the eyelids open. Normally, the eyes move from side to side when the head is turned; in an abnormal response, the eyes remain fixed. The oculocephalic reflex (doll's eyes reflex) is an application of the vestibular-ocular reflex (VOR) used for neurologic examination of cranial nerves 3, 6, and 8, the reflex arc including brainstem nuclei, and overall gross brainstem function.

- **Option A:** The nurse introduces ice water into the external auditory canal when testing the oculovestibular response; normally, the client's eyes deviate to the side of ice water introduction. Vestibulo-ocular reflex is an involuntary reflex that stabilizes the visual field and retinal image during head motion by producing eye movements in a counter direction.
- **Option B:** The nurse touches the client's cornea with a wisp of cotton to elicit the corneal reflex response, which reveals brain stem function; blinking is the normal response. The corneal blink reflex is caused by a loop between the trigeminal sensory nerves and the facial motor (VII) nerve innervation of the orbicularis oculi muscles. The reflex activates when sensory stimulus contacts either free nerve endings or mechanoreceptors within the epithelium of the cornea.
- **Option D:** Shining a bright light into the client's pupil helps evaluate brain stem and cranial nerve III functions; normally, the pupil responds by constricting. The oculomotor nerve helps to adjust and coordinate eye position during movement. Several movements assist with this process: saccades, smooth pursuit, fixation, accommodation, vestibulo-ocular reflex, and optokinetic reflex.

**47. It is a transparent membrane that focuses the light that enters the eyes to the retina.**

- A. Lens
- B. Sclera
- C. Cornea
- D. Pupils

**Correct Answer: A. Lens**

The lens is located in the eye. By changing its shape, the lens changes the focal distance of the eye. In other words, it focuses the light rays that pass through it (and onto the retina) in order to create clear images of objects that are positioned at various distances. It also works together with the cornea to refract, or bend, light. The lens consists of the lens capsule, the lens epithelium, and the lens fibers. The lens capsule is the smooth, transparent outermost layer of the lens, while the lens fibers are long, thin, transparent cells that form the bulk of the lens. The lens epithelium lies between these two and is responsible for the stable functioning of the lens. It also creates lens fibers for the lifelong growth of the

lens.

- **Option B:** The sclera is the white part of the eye that surrounds the cornea. In fact, the sclera forms more than 80 percent of the surface area of the eyeball, extending from the cornea all the way to the optic nerve, which exits the back of the eye. Only a small portion of the anterior sclera is visible.
- **Option C:** The cornea is the eye's clear, protective outer layer. Along with the sclera (the white of your eye), it serves as a barrier against dirt, germs, and other things that can cause damage. The cornea can also filter out some of the sun's ultraviolet light. It also plays a key role in vision. As light enters the eye, it gets refracted, or bent, by the cornea's curved edge. This helps determine how well the eye can focus on objects close-up and far away.
- **Option D:** Pupils are the black center of the eye. Their function is to let in light and focus it on the retina (the nerve cells at the back of the eye) so one can see. Muscles located in the iris (the colored part of your eye) control each pupil.

**48. The following statement appears on the nursing care plan for an immunosuppressed client: The client will remain free from infection throughout hospitalization. This statement is an example of a (an):**

- A. Nursing diagnosis
- B. Short-term goal
- C. Long-term goal
- D. Expected outcome

**Correct Answer: B. Short-term goal**

Short-term goals can act as stepping stones to achieving longer-term targets. For example, a client may have the long-term goal of being able to groom herself, including cleaning her teeth, washing her face, combing her hair, and applying her make-up on her own. A short-term goal for this client might be to be able to clean her teeth.

- **Option A:** Actual or potential health problems that can be prevented or resolved by independent nursing intervention are termed nursing diagnoses. NANDA nursing diagnoses are a uniform way of identifying, focusing on, and dealing with specific client needs and responses to actual and high-risk problems.
- **Option C:** Long-term goals are often used for clients who have chronic health problems or who live at home, in nursing homes, or extended-care facilities. Long-term goal indicates an objective to be completed over a longer period, usually over weeks or months.
- **Option D:** Goals or desired outcomes describe what the nurse hopes to achieve by implementing the nursing interventions and are derived from the client's nursing diagnoses. One overall goal is determined for each nursing diagnosis. The terms goal, outcome, and expected outcome are oftentimes used interchangeably.

**49. A 14-year-old boy has acne and according to his parents, dominates the bathroom by using the mirror all the time. Which of the following remarks by the nurse would be least helpful in talking to the boy and his parents?**

- A. "This is probably the only concern he has about his body. So don't worry about it or the time he spends on it."
- B. "Teenagers are anxious about how their peers perceive them. So they spend a lot of time grooming."
- C. "A teen may develop a poor self-image when experiencing acne. Do you feel this way sometimes?"
- D. "You appear to be keeping your face well washed. Would you feel comfortable discussing your cleansing method?"

**Correct Answer: A.** "This is probably the only concern he has about his body. So don't worry about it or the time he spends on it."

Stating that this is probably the only concern the adolescent has and telling the parents not to worry about it or the time he spends on it shuts off further investigation and is likely to make the adolescent and his parents feel defensive.

- **Option B:** The statement about peer acceptance and time spent in front of the mirror for the development of self-image provides information about the adolescent's needs to the parents and may help to gain trust with the adolescent.
- **Option C:** Asking the adolescent how he feels about the acne will encourage the adolescent to share his feelings.
- **Option D:** Discussing the cleansing method shows interest and concern for the adolescent and also can help to identify any patient-teaching needs for the adolescent regarding cleansing.

### ***50. Which histamine-2 antagonist is associated with the most drug interactions?***

- A. ranitidine
- B. cimetidine
- C. Prilosec
- D. nizatidine

**Correct Answer: B. cimetidine**

Cimetidine was the first histamine-2 antagonist developed and is associated with the most toxic drug interactions of the group. High doses of cimetidine (over 5 g/day) can cause reversible impotence or gynecomastia. This effect appears to be the result of the antiandrogenic potential of cimetidine, which depends on an increase in prolactin levels secondary to histamine H2 receptor blockade. Also, cimetidine has non-specific actions that stimulate prolactin secretion, causing galactorrhea in men in a dose-related pattern. The effects could also be related to a blockade of the 2-hydroxylation of estradiol. However, gynecomastia in men is not an adverse effect with the other H2 receptor blockers (ranitidine, famotidine, and nizatidine).

- **Option A:** Severe toxicity to ranitidine is rare, and there currently is no antidote for ranitidine overdose. Patients may present with CNS depression or severe hypotension. Supportive treatment and monitoring based on the presenting symptoms may be warranted.
- **Option C:** Omeprazole is considered a benign drug; however, the primary adverse effects of omeprazole include headache, abdominal pain, nausea, diarrhea, vomiting, and flatulence in adults. The major adverse effects in the pediatric population are similar to adults; the most frequent events were reportedly fever and respiratory. Proton pump inhibitors (PPI) therapy may correlate with an increased risk of *Clostridioides difficile* (C. diff) associated diarrhea.

- **Option D:** H2RAs are generally well-tolerated. Mild side effects may include headache, drowsiness, fatigue, abdominal pain, constipation, or diarrhea. The use of H2RAs in patients with renal impairment, hepatic impairment, or who are over 50 years of age has correlated with central nervous system side effects such as delirium, confusion, hallucinations, or slurred speech.

**51. Because of the risks associated with administration of factor VIII concentrate, the nurse would teach the client's family to recognize and report which of the following?**

- A. Yellowing of the skin
- B. Constipation
- C. Abdominal distention
- D. Puffiness around the eyes

**Correct Answer: A. Yellowing of the skin**

Because factor VIII concentrate is derived from large pools of human plasma, the risk of hepatitis is always present. Any patient with hemophilia who presents with severe acute bleeding episode requires quick recognition of the location and severity of the bleed; this must be followed by immediate replacement with high-dose clotting factor concentrate (CFC) with factor VIII or IX. Clinical manifestations of hepatitis include yellowing of the skin, mucous membranes, and sclera.

- **Option B:** In the 1950s, fresh frozen plasma was first used as a replacement factor in patients with hemophilia, followed by cryoprecipitates in the 1960s. In the 1980s, many patients with hemophilia were affected by contaminated factor concentrates, and 60% to 70% of patients got infected with HIV. Almost 100% of patients got infected with hepatitis C.
- **Option C:** Despite the availability of plasma-derived factor concentrates, about 75% of patients with hemophilia worldwide receive recombinant factor VIII products since they are much safer. Today, many different recombinant factor VIII products are available, including first, second, third, and fourth-generation with and without extended half-life.
- **Option D:** Use of factor VIII concentrate is not associated with constipation, abdominal distention, or puffiness around the eyes. Extended half-life products have made it possible to have fewer scheduled infusions, with research underway to produce factor VIII products with PEGylation and fusing factor VIII with Fc receptor, which has led to products with longer half-lives.

**52. The nurse is caring for a pregnant client. The client asks how the doctor could tell she was pregnant 'just by looking inside.' The nurse tells her the most likely explanation is that she had a positive Chadwick's sign, which is a**

- A. Bluish coloration of the cervix and vaginal walls
- B. Pronounced softening of the cervix
- C. Clot of very thick mucous that obstructs the cervical canal
- D. Slight rotation of the uterus to the right

**Correct Answer: A. Bluish coloration of the cervix and vaginal walls.**

Chadwick sign is an early sign of pregnancy that is characterized by the bluish-purple coloration of the cervix and vaginal walls which occurs during the 4th week of pregnancy. It is caused by

vasocongestion.

- **Option B:** Softening of the cervix is called the Goodell's sign. In medicine, Goodell's sign is an indication of pregnancy. It is a significant softening of the vaginal portion of the cervix from increased vascularization. This vascularization is a result of hypertrophy and engorgement of the vessels below the growing uterus. This sign occurs at approximately four weeks' gestation.
- **Option C:** An increase in vaginal discharge happens during the late third trimester. This thick mucous plug obstructs the cervical canal to prevent bacteria from entering the uterus. Towards the end of pregnancy, the amount of discharge increases further. In the last week or so of pregnancy, it may contain streaks of sticky, jelly-like pink mucus.
- **Option D:** With ascent from the pelvis, the uterus is slightly rotating to the right due to the presence of the rectosigmoid colon to the left side. This is called dextro-rotation.

**53. The nurse is aware that the following terms used to describe reduced cardiac output and perfusion impairment due to ineffective pumping of the heart is:**

- A. Anaphylactic shock
- B. Cardiogenic shock
- C. Distributive shock
- D. Myocardial infarction (MI)

**Correct Answer: B. Cardiogenic shock**

Cardiogenic shock is shock related to ineffective pumping of the heart.

- **Option A:** Anaphylactic shock results from an allergic reaction. This severe reaction happens when an over-release of chemicals puts the person into shock.
- **Option C:** Distributive shock results from changes in the intravascular volume distribution and is usually associated with increased cardiac output.
- **Option D:** MI isn't a shock state, though in most cases, a lack of oxygen to the heart, usually from a heart attack, damages its main pumping chamber. Without oxygen-rich blood circulating to that area of the heart, the heart muscle can weaken and go into cardiogenic shock.

**54. An insulin-dependent diabetic delivered a 10-pound male. When the baby is brought to the nursery, the priority of care is to:**

- A. clean the umbilical cord with Betadine to prevent infection
- B. give the baby a bath
- C. call the laboratory to collect a PKU screening test
- D. check the baby's serum glucose level and administer glucose if < 40 mg/dL

**Correct Answer: D. check the baby's serum glucose level and administer glucose if < 40 mg/dL.**

- **Option D:** Because the mother has diabetes, the baby is at risk for problems. The newborn baby may be large in size (macrosomia). Big babies are more likely to get hurt during delivery. These include shoulder injuries. The baby may also have low blood sugar (hypoglycemia), low blood

calcium, low blood iron, and high levels of red blood cells and thickened blood. Hypoglycemia occurs if the mother's blood glucose levels have been consistently high, causing the fetus to have a high level of insulin in its circulation. The baby's blood glucose level is checked after birth, and if the level is too low, it may be necessary to give the baby glucose intravenously.

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

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

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

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

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

**56. The best way to decrease the risk of transferring pathogens to a patient when removing contaminated gloves is to:**

- A. Wash the gloves before removing them.
- B. Gently pull on the fingers of the gloves when removing them.
- C. Gently pull just below the cuff and invert the gloves when removing them.
- D. Remove the gloves and then turn them inside out.

**Correct Answer: C. Gently pull just below the cuff and invert the gloves when removing them**

Turning the gloves inside out while removing them keeps all contaminants inside the gloves. They should then be placed in a plastic bag with soiled dressings and discarded in a soiled utility room garbage pail (double bagged). The other choices can spread pathogens within the environment.

- **Option A:** They should also only be worn once, being changed between patients or between treatment areas on the same patient. For situations where there is a high risk of contamination or infection, NHS Professionals advise wearing two sets of gloves, known as 'double gloving'.

- **Option B:** Grasp the outside of one glove at the wrist. Do not touch the bare skin. Peel the glove away from the body, pulling it inside out. Hold the glove that was just removed in a gloved hand.
- **Option D:** Peel off the second glove by putting the fingers inside the glove at the top of the wrist. Turn the second glove inside out while pulling it away from the body, leaving the first glove inside the second.

**57. Your patient has complaints of severe right-sided flank pain, nausea, vomiting, and restlessness. He appears slightly pale and is diaphoretic. Vital signs are BP 140/90 mmHg, Pulse 118 beats/min., respirations 33 breaths/minute, and temperature, 98.0F. Which subjective data supports a diagnosis of renal calculi?**

- A. Pain radiating to the right upper quadrant.
- B. History of mild flu symptoms last week.
- C. Dark-colored coffee-ground emesis.
- D. Dark, scanty urine output.

**Correct Answer: A. Pain radiating to the right upper quadrant.**

Patients with renal calculi will most likely report acute, severe flank pain that will often radiate to the abdomen and especially to the groin, testicle, and labia. It is often sharp and severe in nature. It may also be colicky. The pain is often associated with nausea and vomiting which is due to the embryological origins of the urogenital tract.

- **Option B:** If infected, patients may also present with fever, chills, or other systemic signs of infection. This condition, called pyonephrosis or obstructive pyelonephritis, is potentially severe and life-threatening, requiring emergency decompression surgery.
- **Option C:** Patients often present with hematuria as 85% of patients demonstrate at least microscopic hematuria on urinalysis. The physical exam may reveal costovertebral tenderness and hypoactive bowel sounds. The testis and pubic area may also be tender to touch. Fever is rarely seen in renal colic but the presence of fever, pyuria, and leukocytosis may be indicative of pyelonephritis.
- **Option D:** Patients with renal calculi commonly have blood in the urine caused by the stone's passage through the urinary tract. The urine appears dark, tests positive for blood, and is typically scant. Renal calculi are a common cause of blood in the urine (hematuria) and pain in the abdomen, flank, or groin. They occur in one in 11 people at some time in their lifetimes with men affected 2 to 1 over women.

**58. A client who has glaucoma is to have miotic eye drops instilled in both eyes. The nurse knows that the purpose of the medication is to:**

- A. Anesthetize the cornea
- B. Dilate the pupils
- C. Constrict the pupils
- D. Paralyze the muscles of accommodation

**Correct Answer: C. Constrict the pupils**



Miotic eye drops constrict the pupil and allow aqueous humor to drain out of the Canal of Schlemm. Pilocarpine is a muscarinic acetylcholine agonist that is effective in the treatment and management of acute angle-closure glaucoma and radiation-induced xerostomia. Although not a first-line treatment for glaucoma, it is useful as an adjunct medication in the form of ophthalmic drops.

- **Option A:** The cornea and conjunctiva can be anesthetized by drops of any of the local anesthetics. Bupivacaine, for example, is effective as an eyedrop. Bupivacaine is a potent local anesthetic with unique characteristics from the amide group of local anesthetics, first discovered in 1957. Local anesthetics are used in regional anesthesia, epidural anesthesia, spinal anesthesia, and local infiltration. Local anesthetics generally block the generation of an action potential in nerve cells by increasing the threshold for electrical excitation.
- **Option B:** The eye doctor may dilate the pupils with a special medication called a mydriatic, so they can see the inside of the eye during a slit lamp test. Typically, mydriasis reverses within 4 to 8 hours. However, it may take 24 hours for the mydriatic effect to wear off in some individuals. Weaker strength may cause mydriasis with little cycloplegia.
- **Option D:** Scopolamine ophthalmic is an anticholinergic agent that blocks constriction of sphincter muscle of iris and ciliary body muscle, which, in turn, results in mydriasis (dilation) and cycloplegia (paralysis of accommodation). Scopolamine competitively inhibits G-protein coupled post-ganglionic muscarinic receptors for acetylcholine and acts as a nonselective muscarinic antagonist, producing both peripheral antimuscarinic properties and central sedative, antiemetic, and amnesic effects.

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

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

**Correct Answer: A. Range of motion**

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

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

**60. A nurse is monitoring a client receiving ethambutol (Myambutol) for adverse effects. The nurse determines that the client is experiencing a side effect of the medication, in which of the following?**

- A. Red-orange colored bodily secretions
- B. Damaged hearing

- C. Loss of smell
- D. Difficulty distinguishing the color red from green

**Correct Answer: D. Difficulty distinguishing the color yellow from orange**

Ethambutol (Myambutol) causes optic neuritis characterized by decreased visual acuity and the ability to distinguish between the color red from green.

- **Option A:** Red-orange discoloration of secretions is a side effect of Rifampin.
- **Option B:** Ototoxicity is a side effect of Streptomycin.
- **Option C:** This is not a related symptom of this anti-TB medication.

**61. Which of the following areas is the most common site of fistulas in clients with Crohn's disease?**

- A. Anorectal
- B. Ileum
- C. Rectovaginal
- D. Transverse colon

**Correct Answer: A. Anorectal**

Fistulas occur in all these areas, but the anorectal area is most common because of the relative thinness of the intestinal wall in this area. The initial lesion starts out as an infiltrate around an intestinal crypt. This goes on to develop ulceration first in the superficial mucosa and involves deeper layers. As the inflammation progresses, non-caseating granulomas form involving all layers of the intestinal wall.

- **Option B:** Small bowel follow-through is often used to assess the involvement of the terminal ileum and can also detect fistulas. The classic string sign due to stricture formation or spasm is often seen.
- **Option C:** Granuloma formation is very common in Crohn's disease but their absence does not exclude the diagnosis. The ongoing inflammation and scarring lead to bowel obstruction and stricture formation.
- **Option D:** It can develop into the classic cobblestone mucosal appearances and skip lesions along the length of the intestine sparing areas with normal mucosa. As the flare of Crohn's settles, scarring replaces the inflamed areas of the intestines.

**62. Which of the following nursing interventions should be included in the client's care plan during dialysis therapy?**

- A. Limit the client's visitors.
- B. Monitor the client's blood pressure.
- C. Pad the side rails of the bed.
- D. Keep the client NPO.

**Correct Answer: B. Monitor the client's blood pressure.**

Because hypotension is a complication of peritoneal dialysis, the nurse records intake, and output, monitors VS, and observes the client's behavior. Monitor BP (lying and sitting) and pulse. Note level of jugular pulsation. Decreased BP, postural hypotension, and tachycardia are early signs of hypovolemia

- **Option A:** The nurse also encourages visiting and other diversional activities. Encourage use of relaxation techniques. Redirects attention and promotes a sense of control. Elevate head of bed at intervals. Turn the patient from side to side. Provide back care and tissue massage. Position changes and gentle massage may relieve abdominal and general muscle discomfort.
- **Option C:** A client on PD does not need to be placed in bed with padded side rails. Anchor catheter and tubing with tape. Stress the importance of the patient avoiding pulling or pushing on the catheter. Restrain hands if indicated. Reduces risk of trauma by manipulation of the catheter.
- **Option D:** A client on PD does not need to be kept NPO. Maintain nutritional status. Provide a high-calorie, low-protein, low-sodium, and low-potassium diet, with vitamin supplements to balance nutritional intake.

**63. A 13-month-old child recently arrived in the United States from a foreign country with his parents and needs childhood immunizations. His mother reports that he is allergic to eggs. Upon further questioning, you determine that the allergy to eggs is anaphylaxis. Which of the following vaccines should he not receive?**

- A. Hepatitis B.
- B. inactivated polio.
- C. diphtheria, acellular pertussis, tetanus (DTaP).
- D. mumps, measles, rubella (MMR).

**Correct Answer: D. mumps, measles, rubella (MMR)**

The measles portion of the MMR vaccine is grown in chick embryo cells. The current MMR vaccine does not contain a significant amount of egg proteins, and even children with dramatic egg allergies are extremely unlikely to have an anaphylactic reaction. However, patients that do respond to egg contact with anaphylaxis should be in a medically controlled setting where full resuscitation efforts can be administered if anaphylaxis results. The vaccines in options a,b and c do not contain egg protein.

- **Option A:** People who have had an allergic reaction after a previous dose or any component of a hepatitis B vaccine, have had an allergic reaction to yeast, and have had an allergic reaction to neomycin (contraindication for Twinrix) should not be vaccinated.
- **Option B:** People who have had severe allergic (anaphylactic) reactions after a previous dose of inactivated polio vaccine (IPV) or after taking streptomycin, polymyxin B, or neomycin should not receive IPV. IPV contains trace amounts of streptomycin, polymyxin B, and neomycin, and people who are sensitive to these antibiotics can also have hypersensitivity reactions to IPV. No serious adverse events related to the use of enhanced-potency IPV have been documented.
- **Option C:** People with a contraindication for MMR or MMRV vaccine should not receive the vaccine, including anyone who had a severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component; has a known severe immunodeficiency (e.g., from hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, or long-term immunosuppressive therapy or patients with human immunodeficiency virus [HIV] infection who are severely immunocompromised); is pregnant, and has a history of anaphylactic reactions to neomycin.

**64. A child is admitted with a serious infection. After two days of antibiotics, he is severely neutropenic. The physician orders granulocyte transfusions for the next four days. The mother asks the nurse why? The nurse responds:**

- A. "This is the only treatment left to offer the child."
- B. "This therapy is fast and reliable in treating infections in children."
- C. "The physician will have to explain his rationale to you."
- D. "Granulocyte transfusions replenish the low white blood cells until the body can produce its own."

**Correct Answer: D. "Granulocyte transfusions replenish the low white blood cells until the body can produce its own."**

Granulocyte (neutrophil) replacement therapy is given until the patient's blood values are normal and he is able to fight the infection himself. Options 1 and 3 are not therapeutic responses. The usual method to obtain granulocytes for transfusion in the US is by single-donor apheresis (intermittent or continuous centrifugation leukapheresis, using an agent like dextran or heptastarch to facilitate separation of the red blood cells). An adult therapeutic dose of granulocytes obtained by apheresis contains between  $1.5 \times 10^8$  and  $3 \times 10^8$  granulocytes/kg body weight of the designated recipient

- **Option A:** Transfused granulocytes have activity against infectious agents, but may cause transfusion reactions (including severe, even fatal, pulmonary reactions), alloimmunization that could contribute to the rejection of a subsequent HCT, and (unless they are obtained from CMV-seronegative donors) CMV infection. Regarding prevention of infection, there is enough (low quality, but consistent) evidence to suggest that prophylactic GTX (granulocyte transfusions) may result in decreased infection, but there is no evidence they would be better than prophylactic antimicrobials, and overall survival has never been affected.
- **Option B:** The treatment in option 2 takes days and is not always able to prevent morbidity and mortality. There are a few reports that are compelling enough to believe that this intervention may be life-saving under some circumstances, which means centers that take care of patients with prolonged neutropenia should at least consider GTXs. The technical aspects of the procedure must be carefully implemented: obtaining the largest amount of granulocytes, transfusing them within 8 hours, and aiming for an ANC increase in the  $500\text{--}1000/\mu\text{L}$  should be minimum goals.
- **Option C:** Regarding the therapeutic use of GTX for established infections, all modern controlled studies have failed to show clinical benefit. The negative result of the RING study is particularly troublesome because it is difficult to envision how it could have been modified to provide a more definitive answer. Although it is possible, as the authors suggested and some experts have argued, that there was indeed an effect (limited to the patients who received large doses of granulocytes) but the study could not demonstrate it due to lack of power, the simpler explanation is that GTXs, given to the patient population identified by the inclusion criteria of the RING study, do not add any benefit to optimal antimicrobial treatment.

**65. An 87-year-old client requires long-term ventilator therapy. He has a tracheostomy in place and requires frequent suctioning. Which of the following techniques is correct?**

- A. Using intermittent suction while advancing the catheter.
- B. Using continuous suction while withdrawing the catheter.

- C. Using intermittent suction while withdrawing the catheter.
- D. Using continuous suction while advancing the catheter.

**Correct Answer: C. Using intermittent suction while withdrawing the catheter.**

Intermittent suction should be applied during catheter withdrawal. To prevent hypoxia, suctioning shouldn't last more than 10-seconds at a time. Suction shouldn't be applied while the catheter is being advanced. Ensure preoxygenation with 100% FiO<sub>2</sub> was done with adequate pulse oximetry measurements. Preoxygenation is required because airway suctioning procedure may be associated with significant hypoxemia.

- **Option A:** Suctioning of the lower airways should be done in a sterile manner with single-use gloves and suction catheters to prevent contamination and secondary infection. The catheter should be introduced to a depth no more than the tip of the artificial airway to prevent trauma and bleeding from airway mucosa.
- **Option B:** Suction pressure should be kept less than 200 mmHg in adults. It should be set at 80 mmHg to 120 mmHg in neonates. The catheter size used for suction should be less than 50% of the internal diameter of the endotracheal tube. A common conversion is that a 1 mm diameter is equal to a 3 French.
- **Option D:** The duration of suctioning should be less than 15 seconds per suction attempt. Following airway suction, the patient should be allowed to recover for at least 10 to 15 seconds and re-oxygenate as needed before re-suctioning occurs. Standard precautions should be followed while suctioning by the care provider.

**66. After an Rh(-) mother has delivered her Rh (+) baby, the mother is given RhoGam. This is done in order to:**

- A. Prevent the recurrence of Rh(+) babies in future pregnancies.
- B. Prevent the mother from producing antibodies against the Rh(+) antigen that she may have gotten when she delivered to her Rh(+) baby.
- C. Ensure those future pregnancies will not lead to maternal illness.
- D. To prevent the newborn from having problems of incompatibility when it breastfeeds.

**Correct Answer: B. Prevent the mother from producing antibodies against the Rh(+) antigen that she may have gotten when she delivered to her Rh(+) baby**

In Rh incompatibility, a Rh(-) mother will produce antibodies against the fetal Rh (+) antigen which she may have gotten because of the mixing of maternal and fetal blood during labor and delivery. Giving her RhoGam right after birth will prevent her immune system from being permanently sensitized to Rh antigen.

- **Option A:** RhoGAM is a prescription medicine that is used to prevent Rh immunization, a condition in which an individual with Rh-negative blood develops antibodies after exposure to Rh-positive blood.
- **Option C:** RhoGAM prevents the Rh-negative mother from making antibodies directed against her baby's Rh-positive red blood cells during her pregnancy.
- **Option D:** Rho(D) immune globulin is immune globulin (IgG) rich in IgG antibodies against erythrocyte antigen Rho(D). IgG is a normal component of breastmilk. Rho(D) immune globulin is frequently used in nursing mothers and no adverse effects have been reported in breastfed infants. No special precautions are required.

**67. Which of the following symptoms is a client with colon cancer most likely to exhibit?**

- A. A change in appetite.
- B. A change in bowel habits.
- C. An increase in body weight.
- D. An increase in body temperature.

**Correct Answer: B. A change in bowel habits.**

The most common complaint of the client with colon cancer is a change in bowel habits. Tumor location on the clinical presentation can be separated on left-sided with more changes in bowel habits and hematochezia, and right-sided with obscured anemia impacting on late-stage at diagnosis.

- **Option A:** The client may have anorexia, secondary abdominal distention. The provider should perform a thorough physical examination for signs of ascites, hepatomegaly, and lymphadenopathy. Comprehensive family history is of great relevance to identify familial clusters and inherent patterns that would alter surveillance and therapy on the high-risk patient.
- **Option C:** The client may have weight loss. Late presentation with metastatic disease at diagnosis will depend on the symptoms at the organ affected by the route of spread; to the liver via the portal system, to lungs via the inferior vena cava, to supraclavicular adenopathy via lymphatic or to neighbor structures by contiguous invasion.
- **Option D:** Fever isn't associated with colon cancer. Diagnostic colonoscopy's triggers are blood per rectum (37%), abdominal pain (34%), and anemia (23%). The most common indications of emergency surgery are obstruction (57%), peritonitis (25%), and perforation (18%).

**68. Before administering amantadine (Symadine), the nurse should investigate which of the following client statements?**

- A. "My hands are always shaking."
- B. "I had to take Dilantin 6 months ago."
- C. "I take low-dose enteric aspirin each day."
- D. "Simple tasks seem to take so long to perform."

**Correct Answer: B. "I had to take Dilantin 6 months ago."**

Amantadine is used cautiously in clients with a history of seizures. When administering amantadine, renal monitor function, mental status, such as depression/suicidality and psychosis, and blood pressure. Those with seizure disorders have monitoring for seizure activity. Options A and D are clinical manifestations of Parkinson's disease.

- **Option A:** Amantadine is an antiviral agent with mild antiparkinsonian activity. In the treatment of Parkinson disease, studies have shown amantadine acts on dopamine neurons. Amantadine is a weak, non-competitive antagonist of the NMDA receptor, which increases dopamine release and prevents dopamine reuptake.
- **Option C:** Amantadine does not interact negatively with aspirin. Amantadine is contraindicated in patients with hypersensitivity to the drug or components of the formulation. The drug undergoes

renal excretion, so the extended-release dosage-form is contraindicated in patients with end-stage renal disease. Due to the possible anticholinergic side effects, patients with glaucoma or prostate hypertrophy should use it with caution.

- **Option D:** Amantadine is now used mostly for Parkinson's disease. Clinical trials have shown that amantadine decreases symptoms of bradykinesia, rigidity, and tremor. There is a combined synergistic effect with added levodopa, which is converted to dopamine by striatal enzymes in the CNS. There can be a transient benefit to the drug, so short-term therapy for patients with mild disease is best.

**69. The 6-month-old client with a ventral septal defect is receiving Digitalis for regulation of his heart rate. Which finding should be reported to the doctor?**

- A. Blood pressure of 126/80
- B. Blood glucose of 110 mg/dL
- C. Heart rate of 60 bpm
- D. Respiratory rate of 30 per minute

**Correct Answer: C. Heart rate of 60 bpm**

A heart rate of 60 in the baby should be reported immediately. The dose should be held if the heart rate is below 100 bpm. Digoxin has vagomimetic effects on the AV node. By stimulating the parasympathetic nervous system, it slows electrical conduction in the atrioventricular node, therefore, decreases the heart rate. The rise in calcium levels leads to prolongation of phase 4, and phase 0 of the cardiac action potential thus increases the refractory period of the AV node. Slower conduction through the AV node carries a decreased ventricular response.

- **Option A:** It increases the force of contraction of the heart by reversibly inhibiting the activity of the myocardial Na-K ATPase pump, an enzyme that controls the movement of ions into the heart. Digoxin induces an increase in intracellular sodium that will drive an influx of calcium in the heart and cause an increase in contractility. Cardiac output increases with a subsequent decrease in ventricular filling pressures.
- **Option B:** Electrocardiogram changes seen with digoxin demonstrate a downsloping ST-segment depression, also known as a "reverse check" sign. The ST segments may appear "scooped" without abnormal Q waves or T wave inversions. Regular intake of digoxin results in changes such as a decreased QT interval, prolongation of the PR interval and T wave inversion or flattening. In the case of overdose, the patient should receive digoxin immune fab.
- **Option D:** The prescriber needs to check levels with any recent change in medication. The kidneys excrete approximately 70% of digoxin in direct proportion to the patient's glomerular filtration rate. The physician must request regular electrocardiograms and bloodwork to assess for renal function, and electrolytes require close monitoring.

**70. A male client is diagnosed with primary herpes genitalis. Which instruction should the nurse provide?**

- A. "Apply one applicator of terconazole intravaginally at bedtime for 7 days."
- B. "Apply one applicator of tioconazole intravaginally at bedtime for 7 days."
- C. "Apply acyclovir ointment to the lesions every 3 hours, six times a day for 7 days."

D. "Apply sulconazole nitrate twice daily by massaging it gently into the lesions."

**Correct Answer: C. "Apply acyclovir ointment to the lesions every 3 hours, six times a day for 7 days."**

A client with primary herpes genitalis should apply topical acyclovir ointment in sufficient quantities to cover the lesions every 3 hours, six times a day for 7 days. The benefits of acyclovir include its low side effect profile, which allows it to be tolerated for long periods. Suppressive treatment with acyclovir can prevent or delay up to 80% of recurrences, thus reducing shedding by greater than 90%.

- **Option A:** Terconazole is used to treat vulvovaginal candidiasis. There are also prescription therapies: nystatin 100000-unit vaginal tablet for 14 nights, terconazole 80 mg one suppository vaginally for 3 nights, terconazole 0.8% cream vaginally for 3 nights, butoconazole 2% cream one applicator vaginally once (do not use during the first trimester of pregnancy).
- **Option B:** Tioconazole is used to treat vulvovaginal candidiasis. For vaginal candidiasis, several over the counter options are available: clotrimazole 1% cream vaginally for 7 to 14 nights, clotrimazole 2% cream vaginally for 3 nights, miconazole 2% cream vaginally for 7 nights, miconazole 4% cream vaginally for 3 nights, miconazole 100 mg suppository vaginally for 3 nights, tioconazole 6.5% ointment vaginally once.
- **Option D:** Sulconazole nitrate is used to treat tinea versicolor. Topical medications are considered the first-line therapy for pityriasis versicolor. Topical treatments are divided into nonspecific antifungal agents (sulfur plus salicylic acid, selenium sulfide 2.5%, and zinc-pyrithione) that primarily remove dead tissue and prevent further invasion, and specific antifungal drugs, that have fungicidal or fungistatic effects.

**71. A client who frequently exhibits angry outbursts is diagnosed with antisocial personality disorder. Which appropriate feedback should a nurse provide when this client experiences an angry outburst?**

- A. "Why do you continue to alienate your peers by your angry outbursts?"
- B. "You accomplish nothing when you lose your temper like that."
- C. "Showing your anger in that manner is very childish and insensitive."
- D. "During group, you raised your voice, yelled at a peer, left, and slammed the door."

**Correct Answer: D. "During the group, you raised your voice, yelled at a peer, left, and slammed the door."**

The nurse is providing appropriate feedback when stating, "During the group, you raised your voice, yelled at a peer, left, and slammed the door." Giving appropriate feedback involves helping the client consider a modification of behavior. Feedback should give information to the client about how he or she is perceived by others. Feedback should not be evaluative in nature or be used to give advice.

- **Option A:** Requesting an explanation or asking the client to provide reasons for thoughts, feelings, behaviors or events is nontherapeutic. There is a difference between asking the client to describe what is occurring or has taken place and asking him to explain why. Usually, a "why" question is intimidating.
- **Option B:** Telling the client what to do or giving an opinion or making decisions for the client is inappropriate and nontherapeutic. It implies that the client cannot handle life decisions and only the nurse knows what is best for the client.



- **Option C:** Disapproving or denouncing the client's behavior is nontherapeutic. Disapproval implies that the nurse has a right to pass judgement on the client's actions. It further implies that the client is expected to please the nurse.

**72. The nurse is aware that the best way to prevent postoperative wound infection in the surgical client is to:**

- A. Administer a prescribed antibiotic
- B. Wash her hands for 2 minutes before care
- C. Wear a mask when providing care
- D. Ask the client to cover her mouth when she coughs

**Correct Answer: B. Wash her hands for 2 minutes before care**

The best way to prevent postoperative wound infection is hand washing. Up to 60% of SSI can be prevented. Prevention of postoperative wound infection is done by good general hygiene, operative sterility and effective barriers against transmission of infections, before, during and after surgery.

- **Option A:** Use of prescribed antibiotics will treat infection, not prevent infections. The prophylaxis should only cover the current operating time and start at the beginning of anaesthesia (1A). The prophylaxis should reach high enough tissue doses before incision (1A). Short half-life preparations (e.g. cefalotin) must be followed up with a new dose if prolonged operating time.
- **Option C:** Perform good hand hygiene throughout your stay. If bedridden, ask for wipes for hand disinfection. Ask visitors to carry out hand hygiene on arrival and when they leave the hospital. Ask health professionals to carry out hand hygiene if this fails—before and after your examination.
- **Option D:** Asking the client to cover her mouth are good practices but will not prevent wound infections. Ensure the eradication of infections, urinary tract infections, skin infections, and other local infections prior to admission. Check the dental status, especially before larger elective interventions with implants and the like. Postpone surgery, if possible, until the infection is cleared.

**73. Nurse Kate is reviewing the complications of colonization with a client who has microinvasive cervical cancer. Which complication, if identified by the client, indicates a need for further teaching?**

- A. Hemorrhage
- B. Ruptured ovarian cyst
- C. Infection
- D. Cervical stenosis

**Correct Answer: B. Ruptured ovarian cyst**

- **Option B:** Ruptured ovarian cyst is not a complication. This usually occurs after a strenuous exercise and after sexual intercourse.
- **Options A, C, and D:** Conization procedure involves the removal of a cone-shaped area of the cervix. Complications of the procedure include hemorrhage, infection, and cervical stenosis.

**74. In recognizing common behaviors exhibited by a male client who has a diagnosis of schizophrenia, nurse Josie can anticipate:**

- A. Slumped posture, pessimistic outlook, and flight of ideas
- B. Grandiosity, arrogance, and distractibility
- C. Withdrawal, regressed behavior, and lack of social skills
- D. Disorientation, forgetfulness, and anxiety

**Correct Answer: C. Withdrawal, regressed behavior, and lack of social skills**

These are the classic behaviors exhibited by clients with a diagnosis of schizophrenia. Traditionally, symptoms have divided into two main categories: positive symptoms which include hallucinations, delusions, and formal thought disorders, and negative symptoms such as anhedonia, poverty of speech, and lack of motivation.

- **Option A:** Negative symptoms refer to reduced or lack of ability to function normally. For example, the person may neglect personal hygiene or appear to lack emotion (doesn't make eye contact, doesn't change facial expressions, or speaks in a monotone). Also, the person may lose interest in everyday activities, socially withdraw or lack the ability to experience pleasure.
- **Option B:** Delusions are false beliefs that are not based in reality. For example, you think that you're being harmed or harassed; certain gestures or comments are directed at you; you have exceptional ability or fame; another person is in love with you, or a major catastrophe is about to occur. Delusions occur in most people with schizophrenia.
- **Option D:** Disorganized thinking is inferred from disorganized speech. Effective communication can be impaired, and answers to questions may be partially or completely unrelated. Rarely, speech may include putting together meaningless words that can't be understood, sometimes known as word salad.

**75. Using Abraham Maslow's hierarchy of human needs, a nurse assigns highest priority to which client need?**

- A. Security
- B. Elimination
- C. Safety
- D. Belonging

**Correct Answer: B. Elimination**

According to Maslow, elimination is a first-level or physiological need and therefore takes priority over all other needs. In 1943, Abraham Maslow developed a hierarchy based on basic fundamental needs innate for all individuals. Maslow's hierarchy of needs is a motivational theory in psychology comprising a five-tier model of human needs, often depicted as hierarchical levels within a pyramid. From the bottom of the hierarchy upwards, the needs are: physiological (food and clothing), safety (job security), love and belonging needs (friendship), esteem, and self-actualization. Security and safety are second-level needs; belonging is a third-level need. Second- and third-level needs can be met only after a client's first-level needs have been satisfied.

- **Option A:** Once an individual's physiological needs are satisfied, the needs for security and safety become salient. People want to experience order, predictability, and control in their lives. These

needs can be fulfilled by the family and society (e.g. police, schools, business, and medical care).

- **Option C:** Physiological and safety needs provide the basis for the implementation of nursing care and nursing interventions. For example, emotional security, financial security (e.g. employment, social welfare), law and order, freedom from fear, social stability, property, health, and wellbeing (e.g. safety against accidents and injury).
- **Option D:** After physiological and safety needs have been fulfilled, the third level of human needs is social and involves feelings of belongingness. The need for interpersonal relationships motivates behavior. Examples include friendship, intimacy, trust, and acceptance, receiving and giving affection and love. Affiliating, being part of a group (family, friends, work)

**76. A group of nursing students is assigned to care for a client with a nasogastric tube connected to a wall suction. One student asks why the client's respiratory rate has decreased. Choose the best response.**

- A. "Whenever a client develops a respiratory acid-base problem, decreasing the respiratory rate helps fix the problem."
- B. "The client is hypoventilating because of anxiety, and we will have to stay observant for the development of respiratory acidosis."
- C. "It's common for clients with uncomfortable equipment such as nasogastric tubes to have a lower rate of breathing."
- D. "The client may have a metabolic alkalosis due to the nasogastric suctioning, and the decreased respiratory rate is a compensatory mechanism."

**Correct Answer: D. "The client may have a metabolic alkalosis due to the nasogastric suctioning, and the decreased respiratory rate is a compensatory mechanism."**

Nasogastric suctioning can result in a decrease in acid components and a metabolic alkalosis. The client's decrease in rate and depth of ventilation is an attempt to compensate by retaining carbon dioxide. Vomiting or nasogastric (NG) suction generates metabolic alkalosis by the loss of gastric secretions, which are rich in hydrochloric acid (HCl). Whenever a hydrogen ion is excreted, a bicarbonate ion is gained in the extracellular space.

- **Option A:** Metabolic alkalosis causes hypoventilation, which may cause hypoxemia, especially in patients with poor respiratory reserve, and it may impair weaning from mechanical ventilation.
- **Option B:** Hypoventilation develops because of inhibition of the respiratory center in the medulla. Symptoms of hypocalcemia (eg, jitteriness, perioral tingling, muscle spasms) may be present.
- **Option C:** This response may be right, but it does not discuss all the components of the question. As a compensatory mechanism, metabolic alkalosis leads to alveolar hypoventilation with a rise in arterial carbon dioxide tension (PaCO<sub>2</sub>), which diminishes the change in pH that would otherwise occur.

**77. The nurse is caring for a hospitalized client who has chronic renal failure. Which of the following nursing diagnoses are most appropriate for this client? Select all that apply.**

- A. Excess Fluid Volume
- B. Imbalanced Nutrition; Less than Body Requirements

- C. Activity Intolerance
- D. Impaired Gas Exchange
- E. Pain

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

Appropriate nursing diagnoses for clients with chronic renal failure include excess fluid volume related to fluid and sodium retention; imbalanced nutrition, less than body requirements related to anorexia, nausea, and vomiting; and activity intolerance related to fatigue.

- **Option A:** Renal disorder impairs glomerular filtration that results in fluid overload. With fluid volume excess, hydrostatic pressure is higher than the usual pushing excess fluids into the interstitial spaces. Since fluids are not reabsorbed at the venous end, fluid volume overloads the lymph system and stays in the interstitial spaces leading the patient to have edema, weight gain, pulmonary congestion, and HPN at the same time due to decrease GFR, nephron hypertrophied leading to decreased ability of the kidney to concentrate urine and impaired excretion of fluid thus leading to oliguria/anuria.
- **Option B:** Due to restricted foods and prescribed dietary regimen, an individual experiencing renal problems cannot maintain ideal body weight and sufficient nutrition. At the same time, patients may experience anemia due to decreased erythropoietic factors that cause a decrease in the production of RBC causing anemia and fatigue.
- **Option C:** Assess the extent of weakness, fatigue, ability to participate in active and passive activities. Provides information about the impact of activities on fatigue and energy reserves. Encourage quiet play, reading, watching tv, games during times of fatigue. Provides relaxation, stimulation and requires minimal energy expenditure.
- **Option D:** For optimal cell functioning the kidneys excrete potentially harmful nitrogenous products – urea, creatinine, and uric acid. But because of the loss of kidney excretory functions, there is impaired excretion of nitrogenous waste products causing an increase in laboratory results of BUN, creatinine, and uric acid.
- **Option E:** The nursing diagnosis of pain is not commonly related to chronic renal failure. Pain is discomfort that is caused by the stimulation of nerve endings. Any trauma that the kidney experiences (by any causes or factors) perceived by the body as a threat, the body releases cytokine and prostaglandin causing pain which is felt by the patient at his flank area.

**78. What statement indicates the client needs further education regarding skin grafting (allografting)?**

- A. "Because the graft is my own skin, there is no chance it won't 'take.'"
- B. "For the first few days after surgery, the donor sites will be painful."
- C. "I will have some scarring in the area when the skin is removed for grafting."
- D. "I am still at risk for infection after the procedure."

**Correct Answer: A. "Because the graft is my own skin, there is no chance it won't 'take.'"**

Factors other than tissue type, such as circulation and infection, influence whether and how well a graft will work. The client should be prepared for the possibility that not all grafting procedures will be successful. Graft survival depends on the diffusion of nutrients and oxygen from the wound bed known as imbibition. Inosculation then follows when the blood vessels of the graft and from the wound bed grow together to make end-to-end contact. Lastly, neovascularization occurs when new blood vessels

grow from the wound bed into the graft.

- **Option B:** The donor sites will be painful after the surgery. Silicone gel sheets, along with pressure dressings, have shown a dramatic decrease in pain, pruritis, and scar thickness six months after burn injury.
- **Option C:** There can be scarring in the area where the skin is removed for grafting. Burn scars are a common occurrence after skin grafting and can cause anxiety, depression, pain, itching, altered pigmentation, temperature intolerance, and decreased range of motion secondary to scar contracture. Scar formation is propagated by deficiencies in the biosynthetic and tissue degradation pathway during wound healing.
- **Option D:** The client is still at risk for infection. Early failure of graft survival is attributable to seroma and hematoma formation, which lifts the graft off the wound bed, preventing imbibition. Other factors that lead to graft failure include shearing forces, edematous tissue, and infected tissue.

**79. During the administration of chemotherapy agents, Nurse Oliver observed that the IV site is red and swollen when the IV is touched Stacy shouts in pain. The first nursing action to take is:**

- A. Notify the physician.
- B. Flush the IV line with saline solution.
- C. Immediately discontinue the infusion.
- D. Apply an ice pack to the site, followed by warm compress.

**Correct Answer: C. Immediately discontinue the infusion.**

Edema or swelling at the IV site is a sign that the needle has been dislodged and the IV solution is leaking into the tissues causing the edema. The patient feels pain as the nerves are irritated by pressure and the IV solution. The first action of the nurse would be to discontinue the infusion right away to prevent further edema and other complications.

- **Option A:** After discontinuing the infusion, the nurse should notify the physician.
- **Option B:** Flushing may aggravate the edema since the IV cannula might be dislodged.
- **Option D:** Compresses may be given as indicated by the physician.

**80. Paul Jake suffered a stroke and has difficulty swallowing. Which healthcare team member should be consulted to assess the patient's risk for aspiration?**

- A. Respiratory therapist
- B. Occupational therapist
- C. Dentist
- D. Speech therapist

**Correct Answer: D. Speech therapist**

Speech and language therapists provide assistance to clients experiencing swallowing and speech disturbances. They assess the risk for aspiration and recommend a treatment plan to reduce the risk.

Speech-language pathologists (SLPs) work to prevent, assess, diagnose, and treat speech, language, social communication, cognitive-communication, and swallowing disorders in children and adults.

- **Option A:** Respiratory therapists provide care for patients with respiratory disorders. Respiratory therapists interview and examine patients with breathing or cardiopulmonary disorders. Respiratory therapists care for patients who have trouble breathing—for example, from a chronic respiratory disease, such as asthma or emphysema.
- **Option B:** Occupational therapists help patients regain function and independence. Occupational therapists treat injured, ill, or disabled patients through the therapeutic use of everyday activities. They help these patients develop, recover, improve, as well as maintain the skills needed for daily living and working.
- **Option C:** Dentists diagnose and treat dental disorders. Dentists remove tooth decay, fill cavities, and repair fractured teeth. Dentists diagnose and treat problems with patients' teeth, gums, and related parts of the mouth. They provide advice and instruction on taking care of the teeth and gums and on diet choices that affect oral health.

**81. Dr. Thompson, a seasoned endocrinologist, is presenting a case to a group of medical students. He discusses a 40-year-old woman, Mrs. Garcia, who presented with persistent hypertension, fatigue, and muscle weakness. Lab tests revealed abnormally high levels of a particular hormone responsible for sodium and potassium balance in the blood. As Dr. Thompson delves into the source of this hormone, he quizzes the students: “Considering Mrs. Garcia’s condition, from which specific region of the adrenal glands would this hormone, notably a mineralocorticoid like aldosterone, originate?”**

- A. Parafollicular cells
- B. Zona reticularis
- C. Zona glomerulosa
- D. Zona fasciculata

**Correct Answer: C. Zona glomerulosa**

The zona glomerulosa is the outermost layer of the adrenal cortex, responsible for producing mineralocorticoids, with aldosterone being the key hormone. Aldosterone plays a pivotal role in regulating sodium and potassium levels in the body, primarily influencing the reabsorption of sodium ions and the excretion of potassium ions in the kidneys.

- **Option A:** Parafollicular cells. These cells are located in the thyroid gland, not the adrenal glands. They are responsible for producing calcitonin, a hormone involved in calcium homeostasis.
- **Options B:** Zona reticularis. This is the innermost layer of the adrenal cortex. It primarily produces androgens, the precursors to male and female sex hormones.
- **Option D:** Zona fasciculata. This middle layer of the adrenal cortex predominantly produces glucocorticoids, such as cortisol, which are involved in glucose metabolism and the body’s response to stress.

**82. A nurse performs an assessment on a client who is 4 hours PP. The nurse notes that the client has cool, clammy skin and is restless and excessively thirsty. The nurse prepares immediately to:**

- A. Assess for hypovolemia and notify the health care provider.
- B. Begin hourly pad counts and reassure the client.
- C. Begin fundal massage and start oxygen by mask.
- D. Elevate the head of the bed and assess vital signs.

**Correct Answer: A. Assess for hypovolemia and notify the health care provider.**

Symptoms of hypovolemia include cool, clammy, pale skin, sensations of anxiety or impending doom, restlessness, and thirst. When these symptoms are present, the nurse should further assess for hypovolemia and notify the health care provider. Patients with hypovolemic shock have severe hypovolemia with decreased peripheral perfusion. If left untreated, these patients can develop ischemic injury of vital organs, leading to multi-system organ failure.

- **Option B:** The first factor to be considered is whether the hypovolemic shock has resulted from hemorrhage or fluid losses, as this will dictate treatment. When etiology of hypovolemic shock has been determined, replacement of blood or fluid loss should be carried out as soon as possible to minimize tissue ischemia.
- **Option C:** Medical management with uterotonic and pharmacologic agents is typically the first step if uterine atony is identified. While oxytocin is given routinely by most institutions at the time of delivery (see prevention), additional uterotonic medications may be given with bimanual massage in an initial response to hemorrhage. Uterotonic agents include oxytocin, ergot alkaloids, and prostaglandins.
- **Option D:** Initial evaluation of the patient should include a rapid assessment of the patient's status and risk factors. In postpartum women, signs or symptoms of blood loss such as tachycardia and hypotension may be masked, so if these signs are present, there should be a concern for considerable blood volume loss (greater than 25% of total blood volume). Continuous assessment of vital signs and on-going estimation of total blood loss is an important factor in ensuring safe care of the patient with PPH.

**83. A nurse is preparing to assess the uterine fundus of a client in the immediate postpartum period. When the nurse locates the fundus, she notes that the uterus feels soft and boggy. Which of the following nursing interventions would be most appropriate initially?**

- A. Massage the fundus until it is firm.
- B. Elevate the mother's legs.
- C. Push on the uterus to assist in expressing clots.
- D. Encourage the mother to void.

**Correct Answer: A. Massage the fundus until it is firm.**

If the uterus is not contracted firmly, the first intervention is to massage the fundus until it is firm and to express clots that may have accumulated in the uterus. Uterine atony refers to the corpus uteri myometrial cells inadequate contraction in response to endogenous oxytocin that is released in the course of delivery. Risk factors for uterine atony include prolonged labor, precipitous labor, uterine distension (multi-fetal gestation, polyhydramnios, fetal macrosomia), fibroid uterus, chorioamnionitis, indicated magnesium sulfate infusions, and prolonged use of oxytocin.

- **Option B:** Elevating the mother's legs will not manage the uterine atony. Ineffective uterine contraction, either focally or diffusely, is additionally associated with a diverse range of etiologies including retained placental tissue, placental disorders (such as morbidly adherent placenta, placenta previa, and abruptio placentae), coagulopathy (increased fibrin degradation products) and uterine inversion.
- **Option C:** Pushing on an uncontracted uterus can invert the uterus and cause massive hemorrhage. It leads to postpartum hemorrhage as delivery of the placenta leaves disrupted spiral arteries which are uniquely void of musculature and dependent on contractions to mechanically squeeze them into a hemostatic state. Uterine atony is a principal cause of postpartum hemorrhage, an obstetric emergency. Globally, this is one of the top 5 causes of maternal mortality.
- **Option D:** Encouraging the client to void will not assist in managing uterine atony. If the uterus does not remain contracted as a result of the uterine massage, the problem may be distended bladder and the nurse should assist the mother to urinate, but this would not be the initial action. Contraction of the myometrium that mechanically compresses the blood vessels supplying the placental bed provides the principal mechanism uterine hemostasis after delivery of the fetus, and the placenta is concluded. The process is complemented by local decidual hemostatic factors such as tissue factor type-1 plasminogen activator inhibitor as well as by systemic coagulation factors such as platelets, circulating clotting factors.

**84. The newly hired nurse is in his first week on the job in the ED. He used to be a traveling nurse for 5 years. Which area in his present job is the most appropriate assignment for him?**

- A. Fast-track clinic
- B. Pediatric medicine team
- C. Trauma team
- D. Triage

**Correct Answer: A. Fast-track clinic**

The ambulatory or fast-track clinic deals with relatively stable clients. The decision of whether or not to delegate or assign is based upon the RN's judgment concerning the condition of the patient, the competence of all members of the nursing team and the degree of supervision that will be required of the RN if a task is delegated.

- **Option B:** Few places are more hectic than a pediatric ward. Clearly, delegating important nursing tasks is the only plausible way for short-staffed emergency rooms to meet the challenges of providing quality patient care. All decisions related to delegation and assignment are based on the fundamental principles of protection of the health, safety, and welfare of the public.
- **Option C:** This area should be filled with nurses who are experienced with hospital routines and policies and have the ability to locate equipment immediately. There is both individual accountability and organizational accountability for delegation. Organizational accountability for delegation relates to providing sufficient resources, including sufficient staffing with an appropriate staff mix.
- **Option D:** The RN delegates only those tasks for which he or she believes the other health care worker has the knowledge and skill to perform, taking into consideration training, cultural competence, experience and facility/agency policies and procedures.



**85. A nurse is caring for a client with leukemia and notes that the client has a flat neck and hand veins. The nurse suspects hyponatremia. What additional signs would the nurse expect to note in this client if hyponatremia is present? Select all that apply.**

- A. Intense thirst
- B. Slow bounding pulse
- C. Dry mucous membranes
- D. Poor skin turgor
- E. Postural blood pressure changes

**Correct Answer: D & E.**

Hyponatremia is defined as a serum sodium concentration of less than 135 mEq/L but can vary to a small extent in different laboratories. Hyponatremia is a common electrolyte abnormality caused by an excess of total body water when compared to total body sodium content.

- **Option A:** Intense thirst is seen in clients with hypernatremia. The imbalance of water intake and excretion causes hyponatremia or hypernatremia. Water intake is regulated by the thirst mechanism where osmoreceptors in the hypothalamus trigger thirst when body osmolality reaches 295 mOsm/kg.
- **Option B:** A slow, bounding pulse is not indicative of hyponatremia. In a client with hyponatremia, a rapid thready pulse is noted. Reduced dietary sodium intake (sodium reduction) increases heart rate in some studies of animals and humans. As heart rate is independently associated with the development of heart failure and increased risk of premature death a potential increase in heart rate could be a harmful side-effect of sodium reduction.
- **Option C:** Dry mucous membranes are seen in clients with hypernatremia. There are other signs that could lead to a diagnosis of hyponatremia. These are generally dehydration-related symptoms, including dry mucous membranes and reduced elasticity of the skin.
- **Option D:** If the skin of the arm, calf, or thigh is pinched in healthy subjects, it will immediately return to its normally flat state when the pinch is released. This elastic property, called turgor, is lost when there is a loss in the interstitial fluid.
- **Option E:** Postural blood pressure changes occur in the client with hyponatremia. Antidiuretic hormone (ADH) is released when there is a reduction of 15% or more of the EABV. This occurs with hypovolemia (e.g., vomiting, diarrhea), decreased cardiac output (e.g., heart failure), or vasodilation (e.g., cirrhosis).