

Kevin's Review - 35 NCLEX Practice Questions

1. A 67-year-old male patient who recently had a permanent artificial pacemaker implanted is receiving education from the nurse about managing his health and lifestyle with the device. The patient enjoys an active lifestyle and is keen to understand what activities and precautions are necessary with his new pacemaker. He also uses various electrical appliances at home and is concerned about how they might affect his pacemaker. In this scenario, which piece of information provided by the nurse indicates a knowledge deficit regarding the management of a patient with an artificial cardiac pacemaker?

- A. "Take your pulse rate once a day, in the morning upon awakening."
- B. "You may use electrical appliances but maintain a safe distance from high-powered devices."
- C. "Regular follow-up care is important to ensure the pacemaker is functioning correctly."
- D. "You may engage in contact sports."

Correct Answer: D. may engage in contact sports

The client should be advised by the nurse to avoid contact sports. This will prevent trauma to the area of the pacemaker generator.

- **Option A:** The physician may advise to take and record the pulse rate often to gauge the heart rate. This allows comparison of the heart rate to the acceptable range to determine if the pacemaker is working effectively.
- **Option B:** Use of electrical appliances is allowed, but the client must maintain a distance from the appliances. Devices such as anti-theft systems, metal detectors, cell phones, mp3 players/headphones, radios, power-generating equipment, magnets, etc may interfere with a pacemaker.
- **Option C:** Modern pacemakers are built to last. Still, it needs to be checked periodically to assess the battery and find out how the wires are working, so it is a must to keep pacemaker checkup appointments.

2. Which of the following clients is at greatest risk for digitalis toxicity?

- A. A 25-year-old client with congenital heart disease.
- B. A 50-year-old client with CHF.
- C. A 60-year-old client after myocardial infarction.
- D. An 80-year-old client with CHF.

Correct Answer: D. An 80-year-old client with CHF.

Extremely old clients are at greater risk for digitalis toxicity. Remember when it comes to adversity, the very old and very young are always at the highest risk. There are no evidence-based guidelines for the management of mild to moderate toxicity so there is a wide variation in treatment. Severe toxicity requires hospital admission and consideration of the need for digoxin-specific antibody fragments. Although digoxin-specific antibody fragments are safe and effective, randomized trials have not been performed.

- **Option A:** Digoxin toxicity can emerge during long-term therapy as well as after an overdose. It can occur even when the serum digoxin concentration is within the therapeutic range.

- **Option B:** The clinical features of toxicity are often non-specific. They commonly include lethargy, confusion, and gastrointestinal symptoms (anorexia, nausea, vomiting, diarrhea, and abdominal pain). Visual effects (blurred vision, color disturbances, halos, and scotomas) are rarer in contemporary practice. Cardiac arrhythmias account for most deaths.
- **Option C:** Digoxin increases intracellular calcium in myocardial cells indirectly, by inhibiting the sodium-potassium pump in the cell membrane. Increased intracellular calcium increases cardiac contractility, but also the risk of tachyarrhythmias. Inhibition of this pump causes hyperkalemia commonly seen in toxicity. Digoxin also causes an increase in vagal activity, reducing activity in the sinus node and prolonging conduction in the atrioventricular node.

3. A nurse provides instructions to a client taking fluoxetine (Prozac) a selective serotonin reuptake inhibitor (SSRI) antidepressant. The nurse tells the client to take the medication:

- A. Early in the morning
- B. During lunch time
- C. At snack time
- D. At bedtime

Correct Answer: A. Early in the morning

Fluoxetine is used to treat major depressive disorder, bulimia nervosa obsessive-compulsive disorder, panic disorder, and premenstrual dysphoric disorder (PMDD). It is taken early in the morning to prevent interference with sleep.

4. A patient is admitted to the same-day surgery unit for a liver biopsy. Which of the following laboratory tests assesses coagulation? Select all that apply.

- A. Partial thromboplastin time
- B. Prothrombin time
- C. Platelet count
- D. Hemoglobin

Correct Answer: A, B, & C

Prothrombin time, partial thromboplastin time, and platelet count are all included in coagulation studies.

- **Option A:** The partial thromboplastin time (PTT; also known as activated partial thromboplastin time (aPTT)) is a screening test that helps evaluate a person's ability to appropriately form blood clots. It measures the number of seconds it takes for a clot to form in a sample of blood after substances (reagents) are added.
- **Option B:** Prothrombin time (PT) is a blood test that measures how long it takes blood to clot. A prothrombin time test can be used to check for bleeding problems. PT is also used to check whether medicine to prevent blood clots is working.
- **Option C:** Platelets, also called thrombocytes, are tiny fragments of cells that are essential for normal blood clotting. They are formed from very large cells called megakaryocytes in the bone marrow and are released into the blood to circulate. The platelet count is a test that determines the

number of platelets in a sample of blood.

- **Option D:** The hemoglobin level, though important information prior to an invasive procedure such as liver biopsy, does not assess coagulation.

5. The ideal site for vitamin K injection in the newborn is:

- A. Right upper arm
- B. Left upper arm
- C. Either right or left buttocks
- D. Middle third of the thigh

Correct Answer: D. Middle third of the thigh

Neonates do not have well-developed muscles of the arm. Since Vitamin K is given intramuscular, the site must have sufficient muscles like the middle third of the thigh.

- **Option A:** The deltoid in infants is not sufficiently bulky to absorb IM medications adequately. The vastus lateralis muscle avoids the thicker layer of subcutaneous fat on the anterior thigh.
- **Option B:** The anterolateral thigh is the preferred site for IM injection in infants under 12 months of age. Medications are injected into the bulkiest part of the vastus lateralis thigh muscle, which is the junction of the upper and middle thirds of this muscle.
- **Option C:** Using the vastus lateralis muscle avoids the risk of sciatic nerve damage from gluteal injection. Also, the vastus lateralis muscle has a larger muscle mass than the gluteal region and therefore has reduced risk of severe local reactions.

6. An 85-year-old male patient has been bedridden for two weeks. Which of the following complaints by the patient indicates to the nurse that he is developing a complication of immobility?

- A. Stiffness of the right ankle joint.
- B. Soreness of the gums.
- C. Short-term memory loss.
- D. Decreased appetite.

Correct Answer: A. Stiffness of the right ankle joint.

Stiffness of a joint may indicate the beginning of contracture and/or early muscle atrophy. In the development of joint contractures that result from long-term immobilization, shortening of the joint capsule, synovial adhesions and arthrofibrosis play decisive roles and may present as a generalized joint stiffness

- **Option B:** Soreness of the gums is not related to immobility. Brushing too hard, improper flossing techniques, infection, or gum disease can cause sore and sensitive gums. Other causes unrelated to oral hygiene could include Vitamin K deficiency, hormonal changes during pregnancy, leukemia, or blood disorders.
- **Option C:** Short-term memory loss is not related to immobility. Short-term memory loss is when one forgets things they heard, saw, or did recently. It's a normal part of getting older for many people. But it can also be a sign of a deeper problem, such as dementia, a brain injury, or a mental

health issue.

- **Option D:** Decreased appetite is unlikely to be related to immobility. People can experience a loss of appetite for a wide range of reasons. Some of these are short-term, including colds, food poisoning, other infections, or the side effects of medication. Others are to do with long-term medical conditions, such as diabetes, cancer, or life-limiting illnesses.

7. Ansherina who is receiving a traditional antipsychotic agent complains that she is gaining weight. The nurse would:

- A. Be aware that this is probably delusional thinking because these agents cause weight loss.
- B. Encourage the client to follow a healthy diet and use diet soda to help stabilize her weight.
- C. Discuss a switch to a high-potency agent so the weight gain will not be a problem.
- D. Establish a contract with the client to carefully follow her high-calorie diet.

Correct Answer: B. Encourage the client to follow a healthy diet and use diet soda to help stabilize her weight.

These agents have a known side effect of weight gain. Managing dietary intake can assist in the management of the potentially distressing effect. Olanzapine has been associated most frequently with weight gain, increased appetite, and somnolence. Quetiapine is the least likely to cause extrapyramidal side effects. The most common side effects of quetiapine are somnolence, orthostatic hypotension, and dizziness. Ziprasidone has almost no weight gain but can cause prolongation of QTc.

- **Option A:** First-generation antipsychotics are indicated in the treatment of delusional disorder as well as paranoia associated with personality disorders. Newer medications — called atypical antipsychotic drugs — appear to be more effective in treating the symptoms of delusional disorder. These medications work by blocking dopamine and serotonin receptors in the brain. Serotonin is another neurotransmitter believed to be involved in delusional disorder.
- **Option C:** Second-generation antipsychotics carry the FDA boxed warning of increased incidence of stroke in elderly patients with dementia. The recommendation is to avoid the use of second-generation antipsychotics along with other drugs that prolong the QTc interval.
- **Option D:** Wherever possible use drugs with a lower risk of weight gain. Monitor weight and Body Mass Index (BMI) during antipsychotic treatment. More regular measurements are needed in the first few months of treatment as this is when the risk of weight gain is highest.

8. Which of the following terms refer to the degree to which an instrument measures what it is supposed to be measured?

- A. Validity
- B. Reliability
- C. Meaningfulness
- D. Sensitivity

Correct Answer: A. Validity

Validity is ensuring that the instrument contains appropriate questions about the research topic. Validity is the extent to which the results really measure what they are supposed to measure. A valid measurement is generally reliable: if a test produces accurate results, it should be reproducible.

- **Option B:** Reliability is the repeatability of the instrument; it can elicit the same responses even with varied administration of the instrument. In simple terms, research reliability is the degree to which research method produces stable and consistent results. A specific measure is considered to be reliable if its application on the same object of measurement a number of times produces the same results.
- **Option C:** Meaningfulness is taking that statistic and determining its applicability out in the real world. So all too often researchers get caught up in chasing statistical significance. And while that's part of statistics, the focus should tie back to the real world.
- **Option D:** Sensitivity is an attribute of the instrument that allows the respondents to distinguish differences in the options where to choose from. Sensitivity is one of four related statistics used to describe the accuracy of an instrument for making a dichotomous classification (i.e., positive or negative test outcome). Of these four statistics, sensitivity is defined as the probability of correctly identifying some condition or disease state.

9. Heberden's nodes are a common sign of osteoarthritis. Which of the following statements is correct about this deformity?

- A. It appears only in men.
- B. It appears on the distal interphalangeal joint.
- C. It appears on the proximal interphalangeal joint.
- D. It appears on the dorsolateral aspect of the interphalangeal joint.

Correct Answer: B. It appears on the distal interphalangeal joint.

Heberden's nodes appear on the distal interphalangeal joint on both men and women.

- **Option A:** It appears on both men and women. They are hard bony lumps in the joints of the fingers.
- **Option C:** It does not appear on the proximal, rather, on the distal interphalangeal joint.
- **Option D:** Bouchard's node appears on the dorsolateral aspect of the proximal interphalangeal joint.

10. Which of the following infection control activities should be delegated to an experienced nursing assistant?

- A. Screening clients for upper respiratory tract symptoms
- B. Disinfecting blood pressure cuffs after clients are discharged
- C. Demonstrating correct handwashing techniques to client and family
- D. Asking clients about the duration of antibiotic therapy

Correct Answer: B. Disinfecting blood pressure cuffs after clients are discharged

Nursing assistants can follow agency protocol to disinfect items that come in contact with intact skin by cleaning with chemicals such as alcohol.

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

11. A client with pulmonary edema has been on diuretic therapy. The client has an order for additional furosemide (Lasix) in the amount of 40 mg IV push. Knowing that the client also will be started on digoxin (Lanoxin), a nurse checks the client's most recent:

- A. Digoxin level
- B. Sodium level
- C. Potassium level
- D. Creatinine level

Correct Answer: C. Potassium level

The serum potassium level is measured in the client receiving digoxin and furosemide. Heightened digitalis effect leading to digoxin toxicity can occur in the client with hypokalemia. Hypokalemia also predisposes the client to ventricular dysrhythmias. Toxicity can also occur at lower levels, especially in the setting of other risk factors such as low body weight, advanced age, decreased renal function, and hypokalemia. Risk of hypokalemia increases with the use of a high dose of furosemide, decreased oral intake of potassium, in patients with hyperaldosteronism states (liver abnormalities or licorice ingestion) or concomitant use of corticosteroid, ACTH, and laxatives.

- **Option A:** Digoxin has a narrow therapeutic index. The recommended serum levels stand between 0.8 to 2 ng/mL. When measuring a digoxin serum level, it is essential to draw blood at least 6 to 8 hours after the last dose. The toxicity increases as the serum drug levels increase above 2.0 ng/mL.
- **Option B:** According to Beers Criteria, caution is necessary when administering diuretics to patients 65 years and older to avoid potential adverse effects of inducing hyponatremia by causing or exacerbating syndrome of inappropriate antidiuretic hormone secretion (SIADH); therefore, close monitoring of serum sodium is advisable at initiation or during the dose adjustment in older adults.
- **Option D:** In patients with an advanced renal disease with fluid overload the patients should be closely monitored for oliguria, azotemia, and volume status; and if either oliguria or azotemia develops the furosemide should be discontinued to prevent kidney injury.

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

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

Correct Answer: C. 8

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

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

13. Sickle cell disease (SCD) primarily affects:

- A. children of African descent and Hispanics of Caribbean ancestry.
- B. children of Middle-Eastern and Indian descent.
- C. children of Asian descent.
- D. both African descent and Hispanics of Caribbean ancestry and Middle-Eastern and Indian descent.

Correct Answer: D. Both African descent and Hispanics of Caribbean ancestry and Middle-Eastern and Indian descent.

Sickle cell disease primarily affects children of African descent and Hispanics of Caribbean ancestry. It also occurs in children of Middle-Eastern and Indian descent. Sickle cell anemia is the most common monogenic disorder. Prevalence of the disease is high among the people of Sub-Saharan Africa, South Asia, the Middle East, and the Mediterranean.

- **Option A:** Sickle cell disease (SCD) is a multisystem disorder and the most common genetic disease in the United States, affecting 1 in 500 African Americans. About 1 in 12 African Americans carry the autosomal recessive mutation, and approximately 300,000 infants are born with sickle cell anemia annually.
- **Option B:** Sickle cell disease (SCD) affects millions of people throughout the world and is particularly common among those whose ancestors came from sub-Saharan Africa; Spanish-speaking regions in the Western Hemisphere (South America, the Caribbean, and Central America); Saudi Arabia; India; and Mediterranean countries such as Turkey, Greece, and Italy.
- **Option C:** In Europe and Africa, when there is a high frequency of the malaria parasite, there is a high frequency of the sickle-cell allele. In Asia, the frequency of the sickle cell allele is very low, regardless of the frequency of malaria parasites present.

14. Nurses are bound by a variety of laws. Which description of a type of law is correct?

- A. Statutory law is created by an elected legislature, such as the state legislature that defines the Nurse Practice Act (NPA).
- B. Regulatory law includes prevention of harm for the public and punishment for those laws that are broken.

- C. Common law protects the rights of the individual within society for fair and equal treatment.
- D. Criminal law creates boards that pass rules and regulations to control society.

Correct Answer: A. Statutory law is created by an elected legislature, such as the state legislature that defines the Nurse Practice Act (NPA).

Statutory law is created by the legislature. It creates statutes such as the NPA, which defines the role of the nurse and expectations of the performance of one's duties and explains what is contraindicated as guidelines for breach of those regulations.

- **Option B:** Federal and state regulations influence everything from the air we breathe to the fine print on credit card agreements. Regulatory law involves creating and/or managing the rules and regulations created by federal and state agencies.
- **Option C:** Common law is a body of unwritten laws based on legal precedents established by the courts. Common law influences the decision-making process in unusual cases where the outcome cannot be determined based on existing statutes or written rules of law.
- **Option D:** Criminal law, as distinguished from civil law, is a system of laws concerned with the punishment of individuals who commit crimes. Thus, wherein a civil case of two individuals dispute their rights, a criminal prosecution involves the government deciding whether to punish an individual for either an act or an omission.

15. After the client had tolerated the weaning process, the physician ordered the removal of the endotracheal tube and it will be shifted into a nasal cannula. Which of the following findings after the removal requires immediate intervention by the physician?

- A. Sore throat.
- B. Hoarseness of the voice.
- C. Coughing out blood.
- D. Neck discomfort.

Correct Answer: C. Coughing out blood.

A sign of a tracheal or esophageal perforation that prevents oxygen from reaching the lungs and can result in internal bleeding. This life-threatening side effect of being intubated requires immediate medical intervention. When hemoptysis begins after endotracheal intubation, upper airway trauma caused by the intubation procedure, endotracheal tube, or endotracheal suction catheters must be considered. If hemoptysis begins after a latent period of 1 or more weeks after intubation, a tracheo-artery fistula may be the source of hemorrhage.

- **Option A:** Endotracheal tube (ETT) is often necessary to achieve airway control during general anesthesia. However, postoperative sore throat (POST) is considered as a common adverse event after general anesthesia with ETTs. POST continues to be reported with a high frequency and can sometimes persist for several days
- **Option B:** The incidence of hoarseness after endotracheal intubation varies widely from 14% to 50% but is mostly temporary. In a retrospective study of 3093 patients who had endotracheal intubation during anesthesia, the incidence of hoarseness was 49% in the immediate postoperative period.

- **Option D:** Neck discomfort is normal and the client should limit talking if it occurs. Many people will experience a sore throat and difficulty swallowing immediately after intubation, but recovery is usually quick, taking several hours to several days depending on the time spent intubated. In most cases, a person will fully recover from intubation within a few hours to days and will have no long-term complications

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

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

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

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

17. The nurse knows that glucagon may be given in the treatment of hypoglycemia because it:

- A. Inhibits gluconeogenesis
- B. Stimulates the release of insulin
- C. Increases blood glucose levels
- D. Provides more storage of glucose.

Correct Answer: C. Increases blood glucose levels

Glucagon, an insulin antagonist produced by the alpha cells in the islets of Langerhans, leads to the conversion of glycogen to glucose in the liver. Glucagon is a polypeptide hormone commonly used in the treatment of severe hypoglycemia with FDA approval for the treatment of severe hypoglycemia and as a diagnostic aid in imaging of the GI tract.

- **Option A:** Glucagon binds G-coupled surface receptors found throughout the body in varying concentrations; binding to the glucagon receptors in the liver, GI tract, heart, pancreas, fat, adrenal glands, and kidneys activate adenylate cyclase, which in turn raises cAMP levels. cAMP stimulates glycogenolysis and gluconeogenesis, resulting in the release of glucose, primarily from liver glycogen stores.
- **Option B:** Insulin secretion is governed by the interaction of nutrients, hormones, and the autonomic nervous system. Glucose, as well as certain other sugars metabolized by islets, stimulates insulin release.
- **Option D:** Glucose is the main source of fuel for our cells. When the body doesn't need to use glucose for energy, it stores it in the liver and muscles. This stored form of glucose is made up of many connected glucose molecules and is called glycogen.

18. For the client who is using oral contraceptives, the nurse informs the client about the need to take the pill at the same time each day to accomplish which of the following?

- A. Decrease the incidence of nausea.
- B. Maintain hormonal levels.
- C. Reduce side effects.
- D. Prevent drug interactions.

Correct Answer: B. Maintain hormonal levels

Regular timely ingestion of oral contraceptives is necessary to maintain hormonal levels of the drugs to suppress the action of the hypothalamus and anterior pituitary leading to inappropriate secretion of FSH and LH. Therefore, follicles do not mature, ovulation is inhibited, and pregnancy is prevented.

- **Option A:** The estrogen content of the oral site contraceptive may cause nausea, regardless of when the pill is taken. Nausea can be avoided by taking the medication at night before sleep.
- **Option C:** Most side effects of OCP's are mild and disappear with continued use or switching to another pill formulation. The most common adverse effect of combined oral contraceptive pills is breakthrough bleeding. Women will also complain of nausea, headaches, abdominal cramping, breast tenderness, and an increase in vaginal discharge or decreased libido.
- **Option D:** If the patient has medical conditions that put them at increased risk for taking combined OC's then there exist many alternatives to provide pregnancy prevention. If a patient takes too many oral contraceptive pills at one time the most likely complications will be severe headaches and nausea or vomiting. There is no antidote to treat this condition, just treatment of the symptoms

with antiemetics and analgesics.

19. A male client comes to the emergency department complaining of sudden onset of sharp, severe pain in the lumbar region, which radiates around the side and toward the bladder. The client also reports nausea and vomiting and appears pale, diaphoretic, and anxious. The physician tentatively diagnosed renal calculi and ordered flat-plate abdominal X-rays. Renal calculi can form anywhere in the urinary tract. What is their most common formation site?

- A. Kidney
- B. Ureter
- C. Bladder
- D. Urethra

Correct Answer: A. Kidney

The most common site of renal calculi formation is the kidney. Calculi may travel down the urinary tract with or without causing damage and may lodge anywhere along the tract or may stay within the kidney. 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.

- **Option B:** Development of the stones is related to decreased urine volume or increased excretion of stone-forming components such as calcium, oxalate, uric acid, cystine, xanthine, and phosphate. Calculi may also be caused by low urinary citrate levels or excessive urinary acidity.
- **Option C:** Urolithiasis occurs when solutes crystallize out of urine to form stones. Urolithiasis may occur due to anatomic features leading to urinary stasis, low urine volume, dietary factors (e.g., high oxalate or high sodium), urinary tract infections, systemic acidosis, medications, or uncommonly genetic factors such as cystinuria.
- **Option D:** The most common cause of stone disease is inadequate hydration and subsequent low urine volume. The other four most common factors contributing to urinary stone formation are hypercalciuria, hyperoxaluria, hyperuricosuria, and hypocitraturia. The ureter, bladder, and urethra are less common sites of renal calculi formation.

20. A 50-year-old male client with a history of colorectal cancer has recently undergone a colon resection. Postoperatively, while assisting the client to turn in bed for routine care, the nurse notices the surgical wound site has suddenly dehiscd, and there is evisceration of abdominal contents. In prioritizing the immediate actions to take, which step should the nurse perform first to address this acute complication?

- A. Promptly notify the surgeon to report the critical incident and seek further orders.
- B. Immediately cover the eviscerated tissue with a dressing moistened with sterile normal saline.
- C. Check the client's vital signs to assess for shock or other immediate life-threatening conditions.
- D. Attempt to gently approximate the wound edges without applying pressure to the eviscerated organs.

- E. Prepare the client for emergency surgery while ensuring the preservation of the exposed tissues.
- F. Administer prescribed analgesia to manage the client's pain due to the dehiscence.

Correct Answer: B. Immediately cover the eviscerated tissue with a dressing moistened with sterile normal saline.

This action is critical to maintain the viability of the exposed organs and prevent further contamination and infection. It is the most immediate and appropriate first step in the event of evisceration. Once this is done, the nurse should then perform other actions, such as notifying the surgeon (A), assessing vital signs (C), and preparing the client for emergency intervention (E). Attempting to close the wound (D) or administering pain medication (F) should only be done under the direct instruction of a physician, as they are not initial emergency measures.

21. Joey stresses the importance of promoting 'esprit d corps' among the members of the unit. Which of the following remarks of the staff indicates that they understand what he pointed out?

- A. "Let's work together in harmony; we need to be supportive of one another"
- B. "In order that we achieve the same results; we must all follow the directives of Julius and not from other managers."
- C. "We will ensure that all the resources we need are available when needed."
- D. "We need to put our efforts together in order to raise the bar of excellence in the care we provide to all our patients."

Correct Answer: A. "Let's work together in harmony; we need to be supportive of one another"

Esprit de corps means managers should create and foster among their employees the morale, common spirit, sense of identification, feeling of pride, loyalty, devotion, honor, solidarity, unity, and cohesiveness with respect to their organization or organizational department.

- **Option B:** In the principle of unity of command, an employee should have only one boss and follow his command. If an employee has to follow more than one boss, there begins a conflict of interest and can create confusion.
- **Option C:** A company should maintain a well-defined work order to have a favorable work culture. A positive atmosphere in the workplace will boost more positive productivity.
- **Option D:** In the principle of unity of direction, whoever is engaged in the same activity should have a unified goal. This means all the people working in a company should have one goal and motive which will make the work easier and achieve the set goal easily.

22. Nurse Rica is teaching a client and her family about the causes of depression. Which of the following causative factors should the nurse emphasize as the most significant?

- A. Brain structure abnormalities
- B. Chemical imbalance
- C. Social environment
- D. Recessive gene transmission

Correct Answer: B. Chemical imbalance

Chemical imbalance of neurotransmitters in the brain is the most significant factor in depression. However, the exact cause has not been established, so other factors may also be involved. The underlying pathophysiology of major depressive disorder has not been clearly defined. Current evidence points to a complex interaction between neurotransmitter availability and receptor regulation and sensitivity underlying the affective symptoms.

- **Option A:** Vascular lesions may contribute to depression by disrupting the neural networks involved in emotion regulation—in particular, frontostriatal pathways that link the dorsolateral prefrontal cortex, orbitofrontal cortex, anterior cingulate, and dorsal cingulate. Other components of limbic circuitry, in particular, the hippocampus and amygdala, have been implicated in depression.
- **Option C:** A person's social environment, including lack of support systems, may also increase the risk of depression. The etiology of major depressive disorder is multifactorial with both genetic and environmental factors playing a role. First-degree relatives of depressed individuals are about 3 times as likely to develop depression as the general population; however, depression can occur in people without family histories of depression.
- **Option D:** Although genetic transmission certainly may be a factor, no definite pattern of transmission has been identified. Some evidence suggests that genetic factors play a lesser role in late-onset depression than in early-onset depression. There are potential biological risk factors that have been identified for depression in the elderly.

23. A nurse in a provider's office is assessing a client who reports losing control of urine whenever she coughs, laughs, or sneezes. The client relates a history of three vaginal births, but no serious accidents or illnesses. Which of the following interventions are appropriate for helping to control or eliminate the clients incontinence? Select all that apply.

- A. Limit total daily fluid intake
- B. Decrease or avoid caffeine
- C. Increase the intake of calcium supplements
- D. Avoid the intake of alcohol
- E. Use Crede maneuver

Correct Answer: B and D

Caffeine and alcohol are bladder irritants and can worsen stress incontinence. Alcohol is a bladder irritant and can worsen stress incontinence. Quitting smoking, losing excess weight, or treating a chronic cough will lessen the risk of stress incontinence and improve the symptoms. Stress incontinence is different from urgency incontinence and overactive bladder (OAB). If the client has urgency incontinence or OAB, the bladder muscle contracts, causing a sudden urge to urinate before he can get to the bathroom. Stress incontinence is much more common in women than in men.

- **Option A:** Because stress incontinence results from weak pelvic muscles and other structures, limiting fluid will not resolve the problem. The doctor may recommend how much and when one should consume fluids during the day and evening. However, don't limit what the client drinks so much that he becomes dehydrated.
- **Option B:** Lifestyle changes should be made such as reducing caffeine intake (including green tea), stopping smoking, and losing weight.

- **Option C:** Calcium has no effect on stress incontinence. Bladder training involves learning techniques to increase the length of time between feeling the need to urinate and passing urine. The course usually lasts for at least six weeks and can be combined with the Kegel exercises. Some individuals may find that timed toileting is helpful, particularly for people with a learning disability or cognitive impairment.
- **Option D:** The doctor may also suggest that the client avoid caffeinated, carbonated, and alcoholic beverages, which may irritate and affect bladder function in some people. If he finds that using fluid schedules and avoiding certain beverages significantly improves leakage, the client will have to decide whether making these changes in the diet are worth it.
- **Option E:** The Crede maneuver helps manage reflex incontinence, not stress incontinence. Pelvic floor muscle training is a technique that strengthens the pelvic floor muscles and is an effective treatment for stress incontinence, especially if the muscle has been damaged.

24. Mr. Richards, a 64-year-old retired pilot, has been living with gout for several years. During his last physician visit, he was prescribed probenecid to help manage his condition. Nurse Hamilton is preparing Mr. Richards for discharge and wants to ensure he understands how to take his new medication correctly. Which instructions should Nurse Hamilton emphasize to Mr. Richards regarding the use of probenecid? Select all that apply.

- A. "Increase your fluid intake to prevent kidney stone formation."
- B. "Take the medication on an empty stomach for optimal absorption."
- C. "Avoid consuming alcohol while taking this medication."
- D. "Expect an immediate reduction in pain and swelling."
- E. "Monitor your uric acid levels regularly."

Correct Answers: A, B, C, and E.

- **Option A:** Probenecid increases the excretion of uric acid in the urine, which can lead to the formation of uric acid stones in the kidneys. Increased fluid intake helps dilute the urine and decreases the risk of stone formation.
- **Option B:** This is correct but it can also be taken with food to decrease the risk of gastrointestinal symptoms.
- **Option C:** Alcohol can increase uric acid levels in the blood and reduce the effectiveness of probenecid, potentially triggering gout attacks.
- **Option E:** Monitoring uric acid levels helps assess the effectiveness of the medication and ensures levels are within a therapeutic range.
- **Option D:** Probenecid works by helping the kidneys remove extra uric acid from the body. It does not have direct anti-inflammatory effects and won't offer immediate pain relief.

25. Alendronate (Fosamax) is given to a client with osteoporosis. The nurse advises the client to?

- A. Take the medication in the morning with meals.
- B. Take the medication before bedtime.

- C. Take the medication with a glass of water after rising in the morning.
- D. Take the medication during lunch.

Correct Answer: C. Take the medication with a glass of water after rising in the morning.

Alendronate needs to be taken with a glass of water after rising in the morning in order to prevent gastrointestinal effects.

- **Options A and D:** Alendronate is given on an empty stomach since food can affect gastrointestinal absorption.
- **Option B:** Alendronate should not be taken before bedtime because the medication may not work properly and it can also cause damage to the esophagus.

26. Nurse Cheryl is assessing Fred, a 14-year-old boy who had scoliosis; besides checking neurologic status directly after Harrington rod instrumentation and spinal fusion, she should be regarded with which of the following factors?

- A. Comfort level
- B. Dietary tolerance
- C. Physical therapy needs
- D. Understanding of the procedure

Correct Answer: A. Comfort level

Instrumentation and spinal fusion cause considerable pain. Therefore, the adolescent needs vigorous pain management, which involves assessment, administration of pain medication, and evaluation of the response. In the immediate postoperative period, the child is conscious of sensation and surroundings.

- **Option B:** Typically, shortly after surgery, the adolescent will not be taking anything by mouth. Once discharged, the patient can eat a normal diet. If the stomach is upset, try bland, low-fat foods like plain rice, broiled chicken, toast, and yogurt.
- **Option C:** Physical therapy is not an urgent postoperative goal at this time. However, it may be appropriate later on in the postoperative period. The doctor may advise the client to work with a physiotherapist to improve the strength and flexibility of the back.
- **Option D:** Assessment and understanding of the procedure is a preoperative nursing responsibility. After surgery, the client can expect the back to feel stiff and sore. She may have trouble sitting or standing in one position for very long and may need pain medicine in the weeks after the surgery.

27. During a clinical immunology lecture in a medical school, the professor delves into a complex case of a 38-year-old female patient recently diagnosed with a severe allergic reaction to shellfish. The patient's condition manifesting with urticaria, respiratory distress, and hypotension serves as a conduit for the discussion on hypersensitivity reactions. The professor elucidates the role of various granulocytes and their mediators in allergic reactions and inflammatory processes. In the context of this case and the overarching topic of hypersensitivity reactions, the students are prompted to identify the type of granulocyte that primarily promotes inflammation by releasing histamine and

other inflammatory mediators. Which of the following is the correct answer?

- A. Basophils
- B. Eosinophils
- C. Mast cells
- D. A and C

Correct Answer: D. A and C

Both basophils and mast cells are key players in promoting inflammation by releasing histamine and other inflammatory mediators. Understanding their role is essential in comprehending the pathophysiology of allergic reactions and other inflammatory conditions. This knowledge is also pivotal in formulating therapeutic strategies for conditions like allergies and asthma. Basophils are a type of granulocyte that plays a crucial role in inflammation, particularly in allergic reactions. They release histamine and other inflammatory mediators that contribute to the symptoms seen in hypersensitivity reactions such as the allergic reaction exemplified in the case. Like basophils, mast cells are pivotal in promoting inflammation, especially during allergic reactions. They are found in various tissues and are rich in histamine granules. Upon activation, mast cells release histamine and other inflammatory mediators which significantly contribute to the immediate hypersensitivity reactions.

- **Option B:** Eosinophils are also involved in allergic reactions and parasitic infections. However, they are not the primary cells associated with the release of histamine and other immediate inflammatory mediators. They play a more pronounced role in the modulation of late-phase allergic reactions and combating parasitic infections.

28. He asserts the importance of promoting a positive organizational culture in their unit. Which of the following behaviors indicate that this is attained by the group?

- A. Proactive and caring with one another
- B. Competitive and perfectionist
- C. Powerful and oppositional
- D. Obedient and uncomplaining

Correct Answer: A. Proactive and caring with one another

Without a positive corporate culture, many employees will struggle to find the real value in their work, and this leads to a variety of negative consequences for the bottom line. Employers who invest in the well-being of their employees will be rewarded with happy, dedicated employees

- **Option B:** A positive culture gives an organization a competitive advantage. People want to work for companies with a good reputation from previous and current employees. A company with a positive culture will attract the type of talent that is willing to make their next workplace a home, rather than just a stepping-stone.
- **Option C:** Maintaining positive company culture is a guaranteed way to boost employee morale. Employees will naturally feel happier and enjoy their work more when they work in a positive environment.
- **Option D:** Employees are much more likely to come together as a team at companies with a strong culture. A positive culture facilitates social interaction, teamwork, and open communication. This collaboration can lead to some amazing results.

29. The nurse is assessing the client with a total knee replacement 2 hours postoperative. Which information requires notification of the doctor?

- A. Bleeding on the dressing is 3cm in diameter.
- B. The client has a temperature of 100.6°F (38.1°C).
- C. The client's hematocrit is 26%.
- D. The urinary output has been 60 during the last 2 hours.

Correct Answer: C. The client's hematocrit is 26%.

The client with a total knee replacement should be assessed for anemia. A hematocrit of 26% is extremely low and might require a blood transfusion. Results from a hematocrit test are reported as the percentage of blood cells that are red blood cells. Normal ranges vary substantially with race, age, and sex. The definition of normal red-blood-cell percentage also varies from one medical practice to another.

- **Option A:** Bleeding of 2cm on the dressing is not extreme. Circle and date and time the bleeding and monitor for changes in the client's status. Healthline analyzed data on over 1.5 million Medicare and privately insured people to take a closer look. They found that 4.5 percent of people who are aged under 65 experience complications while in the hospital after a knee replacement.
- **Option B:** A low-grade temperature is not unusual after surgery. Ensure that the client is well hydrated, and recheck the temperature in 1 hour. If the temperature is above 100.6°F (38.1°C), report this finding to the doctor. Tylenol will probably be ordered. Infections are rare after knee replacement surgery, but they can occur. Infection is a severe complication, and it needs immediate medical attention.
- **Option D:** Voiding after surgery is also not uncommon and no need for concern. In rare cases, a person may have osteolysis. This is inflammation that occurs due to microscopic wear of the plastic in the knee implant. The inflammation causes bone to essentially dissolve and weaken.

30. A newborn has been diagnosed with exstrophy of the bladder. The nurse should position the newborn:

- A. Prone
- B. Supine
- C. On either side
- D. With the head elevated

Correct Answer: C. On either side

- **Option C:** Placing the newborn in a side-lying position helps the urine to drain from the exposed bladder.
- **Option A:** It would position the child on the exposed bladder.
- **Options B and D:** Supine and head elevation are incorrect because they would allow the urine to pool.

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

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

Correct Answer: C. Immune response

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

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

32. A 6-year-old child is scheduled to have measles, mumps, and rubella (MMR) vaccine. Which of the following routes will you expect the nurse to administer the vaccine?

- A. Intramuscularly in the vastus lateralis muscle.
- B. Intramuscularly in the deltoid muscle.
- C. Subcutaneously in the gluteal area.
- D. Subcutaneously in the outer aspect of the upper arm.

Correct Answer: D. Subcutaneously in the outer aspect of the upper arm.

(MMR) the vaccine is administered subcutaneously in the outer aspect of the upper arm. The dosage for both MMR and MMRV is 0.5 mL. Both vaccines are administered by the subcutaneous route.

- **Option A:** The preferred injection site in small children is the anterolateral aspect of the thigh. The posterior triceps aspect of the upper arm is the preferred site for older children and adolescents.
- **Option B:** MMR is not administered intramuscularly. The preferred injection site for adults is the posterior triceps aspect of the upper arm. If a second dose is indicated, the minimum interval between the first and second doses should be separated by at least 4 weeks (28 days).
- **Option C:** Gluteal area is not used as a site. The minimum age for both MMR and MMRV is 12 months of age. The typical age for the second dose of either vaccine is at 4 to 6 years of age. The maximum age for the administration of MMRV is 12 years. It should not be administered to anyone 13 years of age or older.

33. 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 1.5×10^8 and 3×10^8 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 500–1000/?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.

34. The following are the physiological maternal changes that occur during the PP period. Select all that apply.

- A. Cervical involution occurs.
- B. Vaginal distention decreases slowly.
- C. Fundus begins to descend into the pelvis after 24 hours.
- D. Cardiac output decreases with resultant tachycardia in the first 24 hours.
- E. Digestive processes slow immediately.

Correct Answers: A and C. In the PP period, cervical healing occurs rapidly and cervical involution occurs.

After 1 week the muscle begins to regenerate and the cervix feels firm and the external os, is the width of a pencil. The fundus begins to descent into the pelvic cavity after 24 hours, a process known as involution.

- **Option B:** Although the vaginal mucosa heals and vaginal distention decreases, it takes the entire PP period for complete involution to occur and muscle tone is never restored to the pregravid state.
- **Option D:** Despite blood loss that occurs during delivery of the baby, a transient increase in cardiac output occurs. The increase in cardiac output, which persists about 48 hours after childbirth, is probably caused by an increase in stroke volume because Bradycardia is often noted during the PP period.
- **Option E:** Soon after childbirth, digestion begins to begin to be active, and the new mother is usually hungry because of the energy expended during labor.

35. Problems with memory and learning would relate to which of the following lobes?

- A. Frontal
- B. Occipital
- C. Parietal
- D. Temporal

Correct Answer: D. Temporal

The temporal lobe functions to regulate memory and learning problems because of the integration of the hippocampus. The hippocampus is responsible for creating declarative memories—those that can be consciously thought of and verbalized. Declarative memory can be episodic and semantic. Episodic memory is the ability to remember a specific occasion in the past in its specific time and place. Meanwhile, semantic memory is the ability to recall general facts about the world.

- **Option A:** The frontal lobe primarily functions to regulate thinking, planning, and judgment. It is the largest lobe, located in front of the cerebral hemispheres, and has significant functions for our body, and these are prospective memory, a type of memory that involves remembering the plans that you made, from a simple daily plan to future lifelong plans; speech and language; personality; and movement control.
- **Option B:** The occipital lobe functions regulate vision. The role of this lobe is visual processing and interpretation. Typically based on the function and structure, the visual cortex is divided into five areas (v1-v5). The primary visual cortex (v1, BA 17) is the first area that receives the visual information from the thalamus, and its located around the calcarine sulcus. The visual cortex receives, processes, interprets the visual information, then this processed information is sent to the other regions of the brain to be further analyzed (example: inferior temporal lobe).
- **Option C:** The parietal lobe primarily functions with sensory function. The Superior parietal lobule contains the somatosensory association (BA 5, 7) cortex which is involved in higher-order functions like motor planning action. The Inferior parietal lobule (supramarginal gyrus BA 40, angular gyrus BA 39) has the Secondary somatosensory cortex (SII), which receives the somatosensory inputs from the thalamus and the contralateral SII, and they integrate those inputs with other major modalities (examples: visual inputs, auditory inputs) to form a higher-order complex functions.