

Kevin's Review - 85 NCLEX Practice Questions

1. In the bustling orthopedic unit of Springvale Medical Center, Nurse Jamie is prepping Mr. Robbins, an 81-year-old patient with osteoporosis who, after a mild fall in his garden, suffered a hip fracture. His surgery is scheduled for the next morning. Nurse Jamie recognizes the vulnerability of this patient population and the risks associated with surgery. Recollecting her training and experiences, she considers the most immediate and crucial interventions needed in this preoperative stage. Which interventions should the nurse implement during the preoperative phase? Select all that apply.

- A. Providing pain management
- B. Assisting with range of motion exercises
- C. Maintaining immobilization of the affected limb
- D. Administering prophylactic antibiotics
- E. Educating the patient about postoperative care

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

- **Option A:** Pain management is a paramount concern in the preoperative phase for a patient with a hip fracture. Adequate pain control is not only essential for the patient's comfort but also for preventing complications such as pneumonia and deep vein thrombosis. The nurse should assess and address the patient's pain promptly, ensuring that they are as comfortable as possible.
- **Option C:** Immobilization is vital to prevent further displacement of the fracture, reduce pain, and ensure optimal surgical outcomes.
- **Option D:** Administering prophylactic antibiotics before surgery is a standard practice to reduce the risk of surgical site infections. The nurse should follow the prescribed protocol for antibiotic administration, considering factors such as the timing of the dose and any patient allergies.
- **Option E:** Patient education is crucial in the preoperative phase to prepare the patient for the upcoming surgical procedure and postoperative recovery. The nurse should provide information about the surgical process, expected outcomes, potential complications, and postoperative care instructions to ensure that the patient and their family are well-informed and able to participate in their care.
- **Option B:** In the case of a hip fracture, range of motion exercises are generally contraindicated during the preoperative phase. Attempting range of motion exercises can worsen the fracture or cause further damage. Immobilization of the affected limb is typically preferred to prevent further injury before surgical intervention.

2. A pregnant client, age 32, asks the nurse why her doctor has recommended a serum alpha fetoprotein. The nurse should explain that the doctor has recommended the test:

- A. Because it is a state law
- B. To detect cardiovascular defects
- C. Because of her age
- D. To detect neurological defects

Correct Answer: D. To detect neurological defects

Alpha fetoprotein is a screening test done to detect neural tube defects such as spina bifida.

Alpha-fetoprotein (AFP) is a plasma protein produced by the embryonic yolk sac and the fetal liver. AFP levels in serum, amniotic fluid, and urine functions as a screening test for congenital disabilities, chromosomal abnormalities, as well as some other adult occurring tumors and pathologies.

- **Option A:** The test is not mandatory, as stated in answer A. Patients having amniocentesis must be duly counseled about the procedure, as well as, the associated risks. There is a risk of obstetric mishap following amniocentesis; a miscarriage can happen in less than 1% of cases. Some other very rare complications of amniocentesis are preterm labor, infection (amnionitis), iatrogenic trauma, or injury to the developing fetus or mother.
- **Option B:** It does not indicate cardiovascular defects. Maternal blood AFP levels often as part of triple (AFP, Estriol, and hCG) or quadruple (AFP, implies Estriol, hCG and Inhibin A) screening test for birth defects. Levels are usually interpreted for age, race, weight, and gestational age. The elevated levels imply a significant risk of having birth defects, hence, further evaluation may be required to assess the level of risk.
- **Option C:** The mother's age has no bearing on the need for the test, so answer C is incorrect. A significant number of patients with elevated maternal AFP do not develop birth defects, but there may be an increased risk of obstetric complications like premature rupture of membrane, placenta accreta, increta, and packet.

3. During an otoscopic examination, which action should be avoided to prevent the client from discomfort and injury?

- A. Tipping the client's head away from the examiner and pulling the ear up and back.
- B. Inserting the otoscope inferiorly into the distal portion of the external canal.
- C. Inserting the otoscope superiorly into the proximal two-thirds of the external canal.
- D. Bracing the examiner's hand against the client's head.

Correct Answer: C. Inserting the otoscope superiorly into the proximal two-thirds of the external canal.

In the superior position, the speculum of the otoscope is nearest the tympanic membrane, and the most sensitive portion of the external canal is the proximal two-thirds. It is important to avoid these structures during the examination. The provider should then slowly progress the speculum into the canal until the tympanic membrane becomes visible. The provider should evaluate the health of the tympanic membrane and observe factors such as color, presence of perforation, and a bulging appearance.

- **Option A:** With the hand that is not holding the otoscope, the provider should grasp and gently pull the patient's pinna to help straighten the patient's external auditory canal. This step will facilitate visualization of the tympanic membrane. In a child, the examiner should pull the pinna posteriorly and inferiorly. In an adult, the examiner should pull the pinna posteriorly and superiorly.
- **Option B:** During the otoscopic examination, the provider utilizes an otoscope, also known as an auriscope, to visualize the ear anatomy. While performing the otoscopic examination, the provider holds the handle of the otoscope and inserts the cone of the otoscope into the patient's external auditory canal.
- **Option D:** Providers may have their own preferences regarding how to grasp the otoscope. However, it is generally advisable to hold the otoscope like a pen in between the first and second fingers. The otoscope is usually held in the right hand when evaluating the patient's right ear and

the left hand when assessing the patient's left ear. The provider should place their free fifth finger of the hand, holding the otoscope against the patient's cheek to support and brace the hand during the examination.

4. Capillary glucose monitoring is being performed every 4 hours for a female 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 Vince 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. Regular insulin is a medication used in the management of Diabetes Mellitus and hyperglycemia of a variety of etiologies. It is in the short-acting insulin class of drugs.

- **Option A:** Insulin, regular when administered subcutaneously, it should be injected 30 to 40 minutes before each meal. Avoid cold injections. The injection is in the buttocks, thighs, arms, or abdomen; it is necessary to rotate injection sites to avoid lipodystrophy. Do not inject if the solution is viscous or cloudy; use only if clear and colorless.
- **Option B:** When administered intravenously, U-100 administration should be with close monitoring of serum potassium and blood glucose. Do not use if the solution is viscous or cloudy; administration should only take place if it is colorless and clear.
- **Option D:** For intravenous infusions, to minimize insulin adsorption to plastic IV tubing, flush the intravenous tube with priming infusion of 20 mL from a 100 mL-polyvinyl chloride bag insulin, every time a new intravenous tubing is added to the insulin infusion container.

5. A child weighing 30 kg arrives at the clinic with diffuse itching as the result of an allergic reaction to an insect bite. Diphenhydramine (Benadryl) 25 mg 3 times a day is prescribed. The correct pediatric dose is 5 mg/kg/day. Which of the following best describes the prescribed drug dose?

- A. It is the correct dose
- B. The dose is too low
- C. The dose is too high
- D. The dose should be increased or decreased, depending on the symptoms

Correct Answer: B. The dose is too low

This child weighs 30 kg, and the pediatric dose of diphenhydramine is 5 mg/kg/day (5 X 30 = 150/day). Therefore, the correct dose is 150 mg/day. Divided into 3 doses per day, the child should receive 50 mg 3 times a day rather than 25 mg 3 times a day. Dosage should not be titrated based on symptoms without consulting a physician.

- **Option A:** Diphenhydramine is used to relieve red, irritated, itchy, watery eyes; sneezing; and runny nose caused by hay fever, allergies, or the common cold. Diphenhydramine is also used to relieve coughs caused by minor throat or airway irritation.
- **Option C:** Diphenhydramine comes as a tablet, a rapidly disintegrating (dissolving) tablet, a capsule, a liquid-filled capsule, a dissolving strip, powder, and a liquid to take by mouth. When diphenhydramine is used for the relief of allergies, cold, and cough symptoms, it is usually taken every 4 to 6 hours.
- **Option D:** Before you give a diphenhydramine product to a child, check the package label to find out how much medication the child should receive. Give the dose that matches the child's age on the chart. Ask the child's doctor if you don't know how much medication to give the child.

6. The client who is human immunodeficiency virus seropositive has been taking saquinavir (Invirase). The nurse provides medication instructions and advises the client to:

- A. Take the medication in the morning before meals.
- B. Include a low-fat diet.
- C. Weight gain is expected.
- D. Avoid being exposed to sunlight.

Correct Answer: D. Avoid being exposed to sunlight.

Saquinavir (Invirase) is an antiviral medicine that prevents human immunodeficiency virus (HIV) from multiplying in the body. This can cause photosensitivity so the nurse should instruct the client to avoid sun exposure.

- **Option A:** The medicine is taken with food or within 2 hours after eating a full meal.
- **Option B:** The medicine is best absorbed with a high-fat meal.
- **Option C:** Weight loss instead is expected.

7. A 55-year-old librarian, who has managed her osteoarthritis with occasional pain medications, visits the emergency department in the late evening. She describes an unexpected flare-up of severe joint pain in her right knee after standing for extended hours during a book fair. Given the acute nature of her symptoms and her discomfort, the nurse must determine the most immediate and appropriate nursing intervention. Which nursing intervention should be implemented?

- A. Administering a corticosteroid injection to the affected joint
- B. Applying cold packs to the affected joint for 15 minutes
- C. Assisting the patient with gentle range of motion exercises

D. Providing relaxation techniques, such as deep breathing exercises

Correct Answer: B. Applying cold packs to the affected joint for 15 minutes.

Cold packs can help reduce inflammation and numb the area to ease pain. Especially during an acute flare-up, cold therapy can be an immediate and effective way to alleviate discomfort. Given the acute nature of the librarian's symptoms, the most immediate and beneficial nursing intervention would be to apply cold packs to reduce inflammation and ease pain. This intervention offers prompt relief without needing more invasive measures or physician intervention.

- **Option A:** While corticosteroid injections can help reduce inflammation and pain in osteoarthritic joints, this is a procedure typically performed by a physician after a thorough assessment. It's not a first-line immediate nursing intervention.
- **Option C:** Range of motion exercises can be beneficial in maintaining joint flexibility, but during an acute flare-up of pain, these exercises might exacerbate the pain. It's essential to first manage the acute symptoms before incorporating exercises.
- **Option D:** While relaxation techniques can help manage chronic pain and stress, they may not provide the immediate relief needed during an acute flare-up of osteoarthritis pain. It's more of an adjunctive approach and not the primary intervention for acute symptoms.

8. A female client with acute renal failure is undergoing dialysis for the first time. The nurse in charge monitors the client closely for dialysis equilibrium syndrome, a complication that is most common during the first few dialysis sessions. Typically, dialysis equilibrium syndrome causes:

- A. Confusion, headache, and seizures.
- B. Acute bone pain and confusion.
- C. Weakness, tingling, and cardiac arrhythmias.
- D. Hypotension, tachycardia, and tachypnea.

Correct Answer: A. Confusion, headache, and seizures.

Dialysis equilibrium syndrome causes confusion, a decreasing level of consciousness, headache, and seizures. These findings, which may last several days, probably result from a relative excess of interstitial or intracellular solutes caused by rapid solute removal from the blood. The resultant organ swelling interferes with normal physiologic functions. To prevent this syndrome, many dialysis centers keep first-time sessions short and use a reduced blood flow rate.

- **Option B:** Acute bone pain and confusion are associated with aluminum intoxication, another potential complication of dialysis. Aluminum intoxication occurs in patients on chronic dialysis because of the accumulation of aluminum in the body, especially bone, due to aluminum present in dialysis fluids and/or aluminum-containing antacids. Disease manifestations can include acute dementia and a peculiar form of unresponsive severe osteomalacia.
- **Option C:** Weakness, tingling, and cardiac arrhythmias suggest hyperkalemia, which is associated with renal failure. Hyperkalemia is a frequent finding in patients with chronic kidney disease (CKD). This increase in serum potassium levels is associated with decreased renal ion excretion, as well as the use of medications to reduce the progression of CKD or to control associated diseases such as diabetes mellitus and heart failure.
- **Option D:** Hypotension, tachycardia, and tachypnea signal hemorrhage, another dialysis complication. Hemodialysis (HD) patients are generally believed to have an elevated bleeding risk.

Bleeding in uremia relates to an acquired defect of primary hemostasis caused by platelet dysfunction and altered platelet–vessel wall interaction.

9. 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.

10. Which is the priority nursing diagnosis during the first 24 hours for a client with chemical burns to the legs and arms that are red in color, edematous, and without pain?

- A. Decreased Tissue Perfusion
- B. Disturbed Body Image
- C. Risk for Disuse Syndrome
- D. Risk for Ineffective Breathing Pattern

Correct Answer: A. Decreased Tissue Perfusion

During the emergent phase, fluid shifts into interstitial tissue in burned areas. When the burn is circumferential on an extremity, the swelling can compress blood vessels to such an extent that circulation is impaired distal to the injury, causing decreased tissue perfusion and necessitating the intervention of an escharotomy.

- **Option B:** Disturbed body image can develop. Assist the patient to identify the extent of actual change in appearance and body function. This helps begin the process of looking to the future and how life will be different.

- **Option C:** Disuse syndrome can develop. Risk for disuse syndrome may be related to the physiological changes brought about by physical inactivity. These changes may include a decrease in muscle strength, limited joint movement, and loss of bone density. However, this is not a priority diagnosis at this time.
- **Option D:** Chemical burns do not cause inhalation injury and a disrupted breathing pattern. The most common findings represent structural changes to the tissue directly affected, for example, the eye, oral mucosa, skin, esophagus, and lower intestinal system, especially the stomach and pylorus, respiratory system, among others.

11. Following a precipitous delivery, examination of the client's vagina reveals a fourth-degree laceration. Which of the following would be contraindicated when caring for this client?

- A. Applying cold to limit edema during the first 12 to 24 hours.
- B. Instructing the client to use two or more peri pads to cushion the area.
- C. Instructing the client on the use of sitz baths if ordered.
- D. Instructing the client about the importance of perineal (Kegel) exercises.

Correct Answer: B. Instructing the client to use two or more peri pads to cushion the area

Using two or more peripads would do little to reduce the pain or promote perineal healing. A fourth-degree perineal laceration is the injury to the perineum involving the anal sphincter complex and anorectal mucosa.

- **Option A:** Ice packs can help reduce pain and swelling in the perineum. Use ice cubes in a clean, disposable glove. Wrapped in a damp cloth or place the ice pack inside a pad. Never apply directly on skin. Apply for 10-20 minutes. Repeat every 2-3 hours until pain and swelling decrease.
- **Option C:** Hot sitz bath may help speed up the healing process. Use sitz baths a few times a day, 24 hours after giving birth. Sit in water that covers the vulvar area.
- **Option D:** The muscles lie deep in the pelvis and support the pelvic organs and control the bladder and bowel function. The pelvic floor muscles attach to the pubic bone at the front, tail bone at the back, and from one sitting bone to the other sitting bone. It is important to retrain the muscles after a tear, to prevent problems such as incontinence.

12. For a female client with anorexia nervosa, Nurse Jimmy is aware that which goal takes the highest priority?

- A. The client will establish adequate daily nutritional intake.
- B. The client will make a contract with the nurse that sets a target weight.
- C. The client will identify self-perceptions about body size as unrealistic.
- D. The client will verbalize the possible physiological consequences of self-starvation.

Correct Answer: A. The client will establish adequate daily nutritional intake.

According to Maslow's hierarchy of needs, all humans need to meet basic physiological needs first. Because a client with anorexia nervosa eats little or nothing, the nurse must first plan to help the client meet this basic, immediate physiological need. Treatment for anorexia nervosa is centered on nutrition

rehabilitation and psychotherapy. Refeeding syndrome can occur following prolonged starvation. As the body utilizes glucose to produce molecules of adenosine triphosphate (ATP), it depletes the remaining stores of phosphorus. Also, glucose entry into cells is mediated by insulin and occurs rapidly following long periods without food. Both cause electrolyte abnormalities such as hypophosphatemia and hypokalemia, triggering cardiac and respiratory compromise. Patients should be followed carefully for signs of refeeding syndrome and electrolytes closely monitored.

- **Option B:** Recovery from an eating disorder can be a long process that requires not only a qualified team of professionals but also the love and support of family and friends. It is not uncommon for someone who suffers from an eating disorder to feel uncertain about their progress or for their loved ones to feel disengaged from the treatment process. These potential roadblocks may lead to feelings of ambivalence, limited progress, and treatment dropout.
- **Option C:** Anorexia nervosa is a psychiatric disease in which patients restrict their food intake relative to their energy requirements through eating less, exercising more, and/or purging food through laxatives and vomiting. Despite being severely underweight, they do not recognize it and have distorted body images. They can develop complications from being underweight and purging food. Diagnose by history, physical, and lab work that rules out other conditions that can make people lose weight. Treatment includes gaining weight (sometimes in a hospital if severe), therapy to address body image, and management of complications from malnourishment.
- **Option D:** The nurse may give lesser priority to goals that address long-term plans, self-perception, and potential complications. Eating disorders can affect every organ system in the body, and people struggling with an eating disorder need to seek professional help. The earlier a person with an eating disorder seeks treatment, the greater the likelihood of physical and emotional recovery.

13. When caring for a client who is receiving phenytoin and warfarin (Coumadin), the nurse would expect which of the following drug-drug interactions?

- A. Decreased effectiveness of warfarin
- B. Increased effectiveness of phenytoin
- C. Increased effectiveness of warfarin.
- D. Decreased effectiveness of phenytoin.

Correct Answer: A. Decreased effectiveness of warfarin

The interaction will reduce the effectiveness of warfarin. Phenytoin, carbamazepine and phenobarbital are potent inducers of the cytochrome P450 system, and their interactions with warfarin have been known for decades. These drugs can substantially increase the rate at which warfarin is metabolized and thus reduce the effect of a previously adjusted dose.

- **Option B:** Using warfarin together with phenytoin may cause bleeding more easily. It may also increase phenytoin levels. Phenytoin levels and prothrombin time or International Normalized Ratio (INR) should be monitored whenever the dosage is changed or discontinued.
- **Option C:** Sudden withdrawal of any of these drugs may decrease the rate at which warfarin is metabolized and put a patient taking a combination of these drugs at an increased risk of bleeding. Antiepileptic drugs are not only prescribed for epilepsy, which is estimated to affect 200 000 Canadians.
- **Option D:** Despite the approval of new anticoagulants within the past several years, warfarin continues to be commonly used. Thus, awareness of drug interactions involving warfarin continues

to be relevant. The impact of phenytoin on warfarin has been reported previously in the literature to potentiate the anticoagulant effect or interact in a biphasic manner.

14. While caring for a multigravida client in early labor in a birthing center, which of the following foods would be best if the client requests a snack?

- A. Yogurt
- B. Cereal with milk
- C. Vegetable soup
- D. Peanut butter cookies

Correct Answer: A. Yogurt

In some birth settings, intravenous therapy is not used with low-risk clients. Thus, clients in early labor are encouraged to eat healthy snacks and drink fluid to avoid dehydration. Yogurt, which is an excellent source of calcium and riboflavin, is soft and easily digested. During pregnancy, gastric emptying time is delayed. In most hospital settings, clients are allowed only ice chips or clear liquids.

- **Option B:** Most institutions would only allow clear liquids for clients in early labor. This prevents gastrointestinal problems during labor and delivery.
- **Option C:** Vegetables may cause gastric discomfort for the woman during labor.
- **Option D:** Fluids are mostly recommended during this stage of labor, instead of solids, to avoid dehydration.

15. When planning care for a 8-year-old boy with Down syndrome, the nurse should:

- A. Plan interventions according to the developmental level of a 7-year-old child because that's the child's age
- B. Plan interventions according to the developmental levels of a 5-year-old because the child will have developmental delays
- C. Assess the child's current developmental level and plan care accordingly
- D. Direct all teaching to the parents because the child can't understand

Correct Answer: C. Assess the child's current developmental level and plan care accordingly

Nursing care plans should be planned according to the developmental age of a child with Down syndrome, not the chronological age. Because children with Down syndrome can vary from mildly to severely mentally challenged, each child should be individually assessed. A child with Down syndrome is capable of learning, especially a child with mild limitations.

- **Option A:** Current practices in providing care to those with Down syndrome include the primary emphasis on the treatment of disease with increased attention allocated to health promotion and protection. Children with Down syndrome have several expected developmental and physical challenges. These include poor physical growth and delayed development with achieving milestones such as gross and fine motor skills, speech, and secondary sex characteristics.
- **Option B:** With appropriate therapy, the developmental delay may be minimized, and the child's social quotient may be improved. Such training can provide a foundation for mainstreaming the

child with Down syndrome in schools and the community

- **Option D:** Early intervention programs can improve the academic prognosis for children with Down syndrome. Cognitive function varies tremendously and cannot be predicted at birth. No relationship has been shown between the number of Down syndrome features present in a newborn and later cognitive function.

16. To ensure that the baby will breathe as soon as the head is delivered, the nurse's priority action is to

- A. Slap the baby's buttocks to make the baby cry.
- B. Suction the nose and mouth to remove mucous secretions.
- C. Clamp the cord about 6 inches from the base.
- D. Check the baby's color to make sure it is not cyanotic.

Correct Answer: B. Suction the nose and mouth to remove mucous secretions.

Suctioning the nose and mouth of the fetus as soon as the head is delivered will remove any obstruction that may be present allowing for better breathing. Also, if mucus is in the nose and mouth, aspiration of the mucus is possible which can lead to aspiration pneumonia. (Remember that only the baby's head has come out as given in the situation.)

- **Option A:** Earlier, many doctors would hold the baby upside down firmly around his legs and then slap the butt gently. This not only causes slight pain to the child, but the motion also helps loosen any residues that might be obstructing the airways. Constantly doing so can irritate the child enough to begin crying.
- **Option C:** Late cord clamping (performed approximately 1–3 min after birth) is recommended for all births while initiating simultaneous essential neonatal care. Early umbilical cord clamping (less than 1 min after birth) is not recommended unless the neonate is asphyxiated and needs to be moved immediately for resuscitation.
- **Option D:** When a baby is first born, the skin is a dark red to purple color. As the baby starts to breathe air, the color changes to red. This redness normally starts to fade on the first day. A baby's hands and feet may stay bluish in color for several days. This is a normal response to a baby's underdeveloped blood circulation. But blue coloring of other parts of the body isn't normal.

17. Which of the following urinary symptoms does the pregnant woman most frequently experience during the first trimester?

- A. Dysuria
- B. Frequency
- C. Incontinence
- D. Burning

Correct Answer: B. Frequency

Pressure and irritation of the bladder by the growing uterus during the first trimester is responsible for causing urinary frequency.

- **Option A:** The term dysuria is used to describe painful urination, which often signifies an infection of the lower urinary tract. The discomfort is usually described by the patient as burning, stinging, or itching.
- **Option C:** Urinary incontinence — the loss of bladder control — is a common and often embarrassing problem. It can be caused by everyday habits, underlying medical conditions, or physical problems.
- **Option D:** A burning sensation with urination can be caused by infectious (including sexually transmitted infections, or STDs such as chlamydia and gonorrhea) and noninfectious conditions, but it is most commonly due to bacterial infection of the urinary tract affecting the bladder.

18. A nurse is interviewing a client who is about to receive metoprolol. Upon the history taking, the client is also taking insulin. Which of the following statements made by the nurse will correctly explain the possible interaction of these medications?

- A. "This medication will maintain the blood sugar level on a normal range".
- B. "This medication will have no effect on blood sugar level".
- C. "This medication may mask some of the symptoms of hypoglycemia such as tremor, palpitation, and rapid heartbeat.
- D. "This medication may mask some of the symptoms of hyperglycemia such as headache, increased thirst, and blurred vision".

Correct Answer: C. "This medication may mask some of the symptoms of hypoglycemia such as tremor, palpitation, and rapid heartbeat.

Beta-blockers such as metoprolol may increase the risk of hypoglycemia in patients receiving insulin. In addition, beta-blockers may mask some of the symptoms of hypoglycemia such as tremors, palpitation, and rapid heartbeat, making it more difficult to recognize an oncoming episode.

- **Options A and B:** Metoprolol affects blood sugar level by inhibiting the release of insulin from the pancreas resulting in the increase of blood glucose concentrations.
- **Option D:** Hyperglycemia will occur for those individuals who are non-insulin-dependent.

19. You are helping the patient with an SCI to establish a bladder-retraining program. What strategies may stimulate the patient to void? Select all that apply.

- A. Stroke the patient's inner thigh.
- B. Pull on the patient's pubic hair.
- C. Initiate intermittent straight catheterization.
- D. Pour warm water over the perineum.
- E. Tap the bladder to stimulate detrusor muscle.

Correct Answers: A, B, D, & E

All of the strategies, except straight catheterization, may stimulate voiding in patients with SCI.

- **Option C:** Intermittent bladder catheterization can be used to empty the patient's bladder, but it will not stimulate voiding.

20. Which of the following, if stated by the nurse, is correct about Hyperglycemic Hyperosmolar Nonketotic Syndrome (HHNS)?

- A. "This syndrome occurs mainly in people with type 1 diabetes."
- B. "It has a higher mortality rate than diabetic ketoacidosis."
- C. "The client with HHNS is in a state of overhydration."
- D. "This condition develops very rapidly."

Correct Answer: B. "It has a higher mortality rate than diabetic ketoacidosis."

It is a medical emergency and has a higher mortality rate than Diabetic Ketoacidosis. The mortality rate in HHS can be as high as 20% which is about 10 times higher than the mortality seen in diabetic ketoacidosis. Diabetic ketoacidosis (DKA) and hyperglycemic hyperosmolar state (HHS) are acute metabolic complications of diabetes mellitus that can occur in patients with both type 1 and 2 diabetes mellitus.

- **Option A:** Hyperglycemic Hyperosmolar Nonketotic Syndrome occurs only in people with type 2 diabetes. Hyperosmolar hyperglycemic syndrome (HHS) is a clinical condition that arises from a complication of diabetes mellitus. Type 2 diabetes accounts for about 90% to 95% of diabetes cases. It is most commonly seen in patients with obesity.
- **Option C:** As a consequence of obesity and high body mass index (BMI), there is the resistance of the peripheral tissue to the action of insulin. The beta-cell in the pancreas continues to produce insulin, but the amount is not enough to counter the effect of the resistance of the end organ to its effect. HHS is a serious and potentially fatal complication of type 2 diabetes.
- **Option D:** This condition develops very slowly over hours or days. HHS has similar pathophysiology to DKA but with some mild dissimilarities. The hallmark of both conditions is the deficiency of insulin. As a consequence of deficiency of this key hormone, there is a decrease in glucose utilization by the peripheral tissue causing hyperglycemia.

21. In a situation in which there is insufficient staff to implement competent care, a nurse should:

- A. Organize a strike.
- B. Inform the clients of the situation.
- C. Refuse the assignment.
- D. Accept the assignment but make a protest in writing to the administration.

Correct Answer: A. Organize a strike

Insufficient staffing ratios are causing tension in the nursing field across the United States, and hospital safety managers should prevent and prepare for picketing or strikes. Staffing is an issue that is becoming increasingly contentious in hospitals and healthcare facilities across the United States. In 2018, nurses in hospitals run HCA, one of the country's largest healthcare providers, picketed and threatened to strike in five states, according to the New York Times.

- **Option B:** Hospitals have a responsibility to supply patients with uninterrupted healthcare, even should a strike occur. Transparency is key during a nursing strike, so if changes in treatment are inevitable, this must be communicated to patients. Make sure that parents are informed of changes in staffing, whether this is care from nurses or doctors. Patients will appreciate the autonomy to make informed decisions amid staffing disruptions.
- **Option C:** According to the American Nurses Association, Nurses have the “professional right to accept, reject or object in writing to any patient assignment that puts patients or themselves at serious risk for harm.
- **Option D:** If a nursing union is calling for the health care system to hire more nurses amid staffing shortages, it is a signal to the administration that patient safety might be jeopardized. Walk-outs and strikes are often the last resort for nurses – they don’t want to disrupt patient care or hospital operations as much as hospital administrations don’t. These situations occur when communication does not occur.

22. Which of the following nursing interventions is considered the most effective form for universal precautions?

- A. Cap all used needles before removing them from their syringes.
- B. Discard all used uncapped needles and syringes in an impenetrable protective container.
- C. Wear gloves when administering IM injections.
- D. Follow enteric precautions.

Correct Answer: B. Discard all used uncapped needles and syringes in an impenetrable protective container.

According to the Centers for Disease Control (CDC), blood-to-blood contact occurs most commonly when a health care worker attempts to cap a used needle. Universal precautions are a standard set of guidelines aimed at preventing the transmission of bloodborne pathogens from exposure to blood and other potentially infectious materials (OPIM).

- **Option A:** Therefore, used needles should never be recapped; instead they should be inserted in a specially designed puncture resistant, labeled container. In 1987, the CDC introduced another set of guidelines termed Body Substance Isolation. These guidelines advocated the avoidance of direct physical contact with “all moist and potentially infectious body substances,” even if blood is not visible. A limitation of this guideline was that it emphasized handwashing after removal of gloves only if the hands were visibly soiled.
- **Option C:** Wearing gloves is not always necessary when administering an I.M. injection. Must be worn when touching blood, body fluids, secretions, excretions, mucous membranes, or non-intact skin. Change when there is contact with potentially infected material in the same patient to avoid cross-contamination. Remove before touching surfaces and clean items. Wearing gloves does not mitigate the need for proper hand hygiene.
- **Option D:** Enteric precautions prevent the transfer of pathogens via feces. Universal precautions do not apply to sputum, feces, sweat, vomit, tears, urine, or nasal secretions unless they are visibly contaminated with blood because their transmission of Hepatitis B or HIV is extremely low or non-existent.

23. A community health nurse is conducting a teaching session about terrorism with members of the community and discussing information regarding anthrax.

The nurse tells those attending that anthrax can be transmitted via which route(s)? Select all that apply.

- A. Skin
- B. Kissing
- C. Inhalation
- D. Gastrointestinal
- E. Direct contact with an infected individual
- F. Sexual contact with an infected individual

Correct Answer: A, C, & D.

Anthrax is caused by *Bacillus anthracis*, and it can be contracted through the digestive system, abrasions in the skin, or inhalation. It cannot be spread from person to person.

- **Option A:** Skin contact results in cutaneous anthrax. Cutaneous anthrax results from inoculation of *B. anthracis* spores through the abraded skin into subcutaneous tissues. The bacteria subsequently germinate and multiply locally and begin toxin production. This leads to the characteristic edema and cutaneous ulceration.
- **Option B:** Viruses responsible for diseases such as hepatitis viruses, herpesvirus infections (e.g., with Herpes simplex types 1 and 2, Epstein-Barr virus, Cytomegalovirus, and Kaposi syndrome herpesvirus), and papillomaviruses can be conveyed by kissing—as can potentially other viruses present in saliva such as Ebola and Zika viruses.
- **Option C:** Inhalation or ingestion of the spores leads to inhalational or gastrointestinal (GI) anthrax. Inhalational anthrax leads to accumulation of *B. anthracis* spores within the lung alveoli. The spores are engulfed by immune cells (macrophages, neutrophils, dendritic cells) and transported to regional lymph nodes where the bacteria germinate, multiply, and begin toxin production.
- **Option D:** Human transmission occurs via contact with infected animals through butchering and working with hides or ingestion of raw or undercooked meat. GI anthrax occurs due to ingestion of contaminated meat, with spores introduced into the gastrointestinal tract, causing bacterial replication, mucosal ulcerations, and bleeding.
- **Option E:** Anthrax is acquired from animals; there are no reports of direct human to human transmission.
- **Option F:** More than 30 different bacteria, viruses and parasites are known to be transmitted through sexual contact. Eight of these pathogens are linked to the greatest incidence of sexually transmitted disease. Of these 8 infections, 4 are currently curable: syphilis, gonorrhoea, chlamydia and trichomoniasis. The other 4 are viral infections which are incurable: hepatitis B, herpes simplex virus (HSV or herpes), HIV, and human papillomavirus (HPV).

24. While performing a physical examination on a newborn, which assessment should be reported to the physician?

- A. Head circumference of 40 cm.
- B. Chest circumference of 32 cm.
- C. Acrocyanosis and edema of the scalp.

D. Heart rate of 160 and respirations of 40.

Correct Answer: A. Head circumference of 40 cm

Average circumference of the head for a neonate ranges between 32 to 36 cm. An increase in size may indicate hydrocephalus or increased intracranial pressure. A newborn's head is usually about 2 cm larger than the chest size. Between 6 months and 2 years, both measurements are about equal. After 2 years, the chest size becomes larger than the head.

- **Option B:** The body of a normal newborn is essentially cylindrical; head circumference slightly exceeds that of the chest. For a term baby, the average circumference of the head is 33–35 cm (13–14 inches), and the average circumference of the chest is 30–33 cm (12–13 inches).
- **Option C:** Peripheral cyanosis (acrocyanosis) involves the hands, feet, and circumoral area. It is evident in most infants at birth and for a short time thereafter. If limited to the extremities in an otherwise normal infant, it is due to venous stasis and is innocuous. Localized cyanosis may occur in presenting parts, particularly in association with abnormal presentations.
- **Option D:** Heart rates normally fluctuate between 120 and 160 beats per minute. In agitated states, a rate of 200 beats per minute may occur transiently. The heart rate of premature infants is usually between 130 and 170 beats per minute, and during occasional episodes of bradycardia, it may slow to 70 beats per minute or less. Normal neonates breathe at rates that vary between 40 and 60 respirations per minute. Rapid rates are likely to be present for the first few hours after birth.

25. A 67-year-old client develops acute shortness of breath and progressive hypoxia requiring right femur. The hypoxia was probably caused by which of the following conditions?

- A. Asthma attack
- B. Atelectasis
- C. Bronchitis
- D. Fat embolism

Correct Answer: D. Fat embolism

Long bone fractures are correlated with fat emboli, which cause shortness of breath and hypoxia.

- **Option A:** Asthma attacks do not develop following a femoral fracture.
- **Option B:** He could develop atelectasis but it typically doesn't produce progressive hypoxia.
- **Option C:** It's unlikely the client has developed bronchitis without a previous history.

26. Nurse Jeff is performing a skin assessment on a client with a facial lesion. It appears as a well-defined, red, scaling, thickened bump. This type of skin lesion refers to?

- A. Kaposi's Sarcoma
- B. Melanoma
- C. Squamous cell carcinoma
- D. Basal cell carcinoma

Correct Answer: C. Squamous cell carcinoma

A squamous cell carcinoma is characterized by a well-defined, red, scaling, thickened bump on the sun-exposed skin such as the face, ears, neck, lips, and backs of the hands.

- **Option A:** A client with Kaposi's sarcoma has reddish to purplish non-blanching, slightly raised, or nodular lesions of the skin or on the mucosal surfaces.
- **Option B:** A client with melanoma has smooth, dark brown or black colored smooth lesions that become irregular as it grows.
- **Option D:** A client with basal cell carcinoma has red patches, shiny bumps, scars, or growth with slightly raised, rolled edges.

27. Exercise has which of the following effects on clients with asthma, chronic bronchitis, and emphysema?

- A. It enhances cardiovascular fitness.
- B. It improves respiratory muscle strength.
- C. It reduces the number of acute attacks.
- D. It worsens respiratory function and is discouraged.

Correct Answer: A. It enhances cardiovascular fitness.

Exercise can improve cardiovascular fitness and help the client tolerate periods of hypoxia better, perhaps reducing the risk of heart attack. People with long-term lung conditions can help improve their symptoms through regular exercise. It can be tempting to avoid exercise because one may think it will make them breathless, but if the client does less activity he becomes less fit, and daily activities will become even harder.

- **Option B:** Most exercise has little effect on respiratory muscle strength, and these clients can't tolerate the type of exercise necessary to do this. Intermittent exercises can help deal with shortness of breath. In this case, the client alternates brief exercise, lasting 1–2 minutes, with moments of rest (or slower exercise). This is called interval training.
- **Option C:** Exercise won't reduce the number of acute attacks. Having asthma should not restrict the ability to exercise or be physically active. If the client feels uncomfortable during or after exercise, he should ask his doctor to investigate whether the management of his condition could be improved. In fact, many athletes have asthma and are able to compete at the highest level when their condition is well-controlled.
- **Option D:** In some instances, exercise may be contraindicated, and the client should check with his physician before starting any exercise program. It is best to ask the guidance of a doctor or physiotherapist before one begins exercising, to ensure that the exercise plans are in line with the body's capacity and are safe. All exercise programs must be built up over time to allow the body to adapt.

28. In most ethical dilemmas, the solution to the dilemma requires negotiation among members of the health care team. The nurse's point of view is valuable because:

- A. Nurses have a legal license that encourages their presence during ethical discussions.

- B. The principle of autonomy guides all participants to respect their own self-worth.
- C. Nurses develop a relationship with the client that is unique among all professional health care providers.
- D. The nurse's code of ethics recommends that a nurse be present at any ethical discussion about client care.

Correct Answer: C. Nurses develop a relationship to the client that is unique among all professional health care providers

When ethical dilemmas arise, the nurse's point of view is unique and critical. The nurse usually interacts with clients over longer time intervals than do other disciplines. It is important to advocate for patient care, patient rights, and ethical consideration of practice. Ethics inclusion should begin in nursing school and continue as long as the nurse is practicing.

- **Option A:** Nurses have a responsibility to themselves, their profession, and their patients to maintain the highest ethical principles. Many organizations have ethics boards in place to review ethical concerns. Nurses at all levels of practice should be involved in ethics reviews in their targeted specialty area.
- **Option B:** Each patient has the right to make their own decisions based on their own beliefs and values. This is known as autonomy. A patient's need for autonomy may conflict with care guidelines or suggestions that nurses or other healthcare workers believe is best. A person has a right to refuse medications, treatment, surgery, or other medical interventions regardless of what benefit may come from it.
- **Option D:** Ethical dilemmas arise as nurses care for patients. These dilemmas may, at times, conflict with the Code of Ethics or with the nurse's ethical values. Nurses are advocates for patients and must find a balance while delivering patient care.

29. A client with rectal cancer may exhibit which of the following symptoms?

- A. Abdominal fullness
- B. Gastric fullness
- C. Rectal bleeding
- D. Right upper quadrant pain

Correct Answer: C. Rectal bleeding

Rectal bleeding is a common symptom of rectal cancer. Rectal cancer may be missed because other conditions such as hemorrhoids can cause rectal bleeding. Symptoms according to tumor location on the clinical presentation of rectosigmoid are more frequently associated with a change in bowel habits (diminish stool caliber), bright red blood per rectum (hematochezia), pain (tenesmus), leakage diarrhea (mucus discharge), and constipation (obstruction).

- **Option A:** Abdominal fullness may occur with colon cancer. Physical examination should explore signs of ascites, hepatomegaly, and lymphadenopathy and must extend to a digital rectal exam for fixed mass. A thorough family history is of great relevance in identifying familial clusters and inherited patterns that would change the surveillance and therapy of a high-risk patient.
- **Option B:** Gastric fullness may occur with gastric cancer. The most common physical examination finding is a palpable abdominal mass indicating advanced disease. The patient may also present with signs of metastatic lymphatic spread distribution, including Virchow's node (left supraclavicular adenopathy), Sister Mary Joseph node (periumbilical nodule), and Irish node (left axillary node).

- **Option D:** Right upper quadrant pain may occur with liver cancer. Most patients are initially asymptomatic from hepatocellular carcinoma but often present with related symptoms due to chronic liver disease. Patients may complain of upper abdominal discomfort and distention, weight loss, fever, poor appetite, early satiety, diarrhea, and other symptoms.

30. What is meant by the “fittingness” of a research study? A. Truth of findings as judged by the participants.

- A. Truth of findings as judged by the participants.
- B. The appropriateness of the interview questions posed.
- C. Faithfulness to everyday reality of the participants.
- D. The adequacy of the coding system used.

Correct Answer: C. Faithfulness to everyday reality of the participants.

Fittingness is the meaningfulness of the everyday findings to everyday reality of that situation. Are the results described in enough detail so that one may evaluate them for their own practice?

- **Option A:** Credibility is the truth of findings as judged by the participants. To help establish, the researcher should return to the original participants and get them to validate the findings. Others within the discipline may also help establish by review of the data and findings.
- **Option B:** Auditability assists the reader to judge the appropriateness of the interview questions posed. Auditability is established by the reader being able to follow the steps of the research from the research questions, to the data collection, to the data, and then to the findings (categories, themes, model).
- **Option D:** Auditability assists the reader to judge the adequacy of the coding system used. By the steps for interpretation and synthesis and data examples provided, the reader should be able to follow the researcher’s thinking.

31. A female client has a neurological deficit involving the limbic system. Specific to this type of deficit, the nurse would document which of the following information related to the client’s behavior.

- A. Is disoriented to person, place, and time.
- B. Affect is flat, with periods of emotional lability.
- C. Cannot recall what was eaten for breakfast today.
- D. Demonstrate inability to add and subtract; does not know who is the president.

Correct Answer: B. Affect is flat, with periods of emotional lability.

The limbic system is responsible for feelings (affect) and emotions. While the limbic system was initially suggested to be the sole neurological system involved in regulating emotion, it is now considered only one part of the brain to regulate visceral, autonomic processes. In general, the limbic system assists in various processes relating to cognition; including spatial memory, learning, motivation, emotional processing, and social processing.

- **Option A:** The cerebral hemispheres, with specific regional functions, control orientation. The frontal lobe further divides into a superior, middle, and inferior frontal gyrus, primary motor cortex,

and orbital area. These areas combine to control our executive and motor functions. It controls judgment, problem-solving, planning, behavior, personality, speech, writing, speaking, concentration, self-awareness, and intelligence. The parietal lobe is posterior to the central sulcus and anterior to the parieto-occipital sulcus. This lobe controls perception and sensation. The occipital lobe is posterior to the parieto-occipital sulcus and superior to the tentorium cerebelli. This lobe interprets vision, distance, depth, color, and facial recognition. The temporal lobe is inferior to the lateral fissure and further divides into a superior, middle, and inferior temporal gyrus. This lobe controls language comprehension, hearing, and memory.

- **Option C:** Recall of recent events is controlled by the hippocampus. The hippocampus, parahippocampal region of the medial temporal lobe, and the neocortical association have been shown through the autopsy and imaging studies to be essential for memory processing. Impairment of short-term memory leading up to an inability to form new memories occurs when there is bilateral damage to the above-mentioned regions.
- **Option D:** Calculation ability and knowledge of current events relates to the function of the frontal lobe. The frontal lobe further divides into a superior, middle, and inferior frontal gyrus, primary motor cortex, and orbital area. These areas combine to control our executive and motor functions. It controls judgment, problem-solving, planning, behavior, personality, speech, writing, speaking, concentration, self-awareness, and intelligence.

32. Which of the following clients has the lowest risk of diabetes mellitus and stroke?

- A. A 45-year-old African-American woman.
- B. A 35-year-old Native-American man.
- C. A 30-year-old Hispanic-American man.
- D. A 25-year-old Asian-American woman.

Correct Answer: D. A 25-year-old Asian-American woman.

Among the choices, Asian Americans have the lowest risk of diabetes mellitus and stroke due to their health and dietary practices. But people of Asian descent have less muscle and more fat than other groups and often develop diabetes at a younger age and lower weight. That extra body fat tends to be in the belly (visceral fat).

- **Option A:** T2DM varies among ethnic groups and is 2 to 6 times more prevalent in African Americans, Native Americans, Pima Indians, and Hispanic Americans compared to Whites in the United States. While ethnicity alone plays a vital role in T2DM, environmental factors also greatly confer risk for the disease.
- **Option B:** Recent data from the Centers for Disease Control and Prevention (CDC) and Indian Health Service (IHS) show that in some American Indian and Alaska Native communities, diabetes prevalence among adults is as high as 60%. One in six American Indian and Alaska Native adults has diagnosed diabetes—more than double the prevalence rate for the general U.S. population.
- **Option C:** In the United States, T1DM rates rose in most age and ethnic groups by about 2% yearly, and rates are higher in Hispanic youth. The exact reason for this pattern remains unknown. However, some metrics, such as the United States Military Health System data repository, found plateauing over 2007 to 2012 with a prevalence of 1.5 per 1000 and incidence of 20.7 to 21.3 per 1000.

33. A 17-year-old client is taking phenytoin (Dilantin) for the treatment of seizures. Phenytoin blood level reveals to be 25 mcg/ml. Which of the following symptoms would be expected as a result of the laboratory result?

- A. No symptoms, because the value is within the normal range.
- B. Hyperactivity.
- C. Tremors.
- D. Nystagmus.

Correct Answer: D. Nystagmus.

- **Option D:** Phenytoin levels of 20 to 30 mg/L result in nystagmus (Involuntary eye movement).
- **Option A:** The therapeutic level of phenytoin is 10-20mcg/ml. No symptoms will be noted.
- **Options B & C:** Hyperactivity and tremors would occur in phenytoin levels of more than 30 mcg/mL.

34. Your patient is complaining of abdominal pain during assessment. What is your priority?

- A. Auscultate to determine changes in bowel sounds.
- B. Observe the contour of the abdomen.
- C. Palpate the abdomen for a mass.
- D. Percuss the abdomen to determine if fluid is present.

Correct Answer: B. Observe the contour of the abdomen.

The first step in assessing the abdomen is to observe its shape and contour, then auscultate, palpate, and then percuss. It is important to begin with the general examination of the abdomen with the patient in a completely supine position. The presence of any of the following signs may indicate specific disorders. Distension of the abdomen could be present due to small bowel obstruction, masses, tumors, cancer, hepatomegaly, splenomegaly, constipation, abdominal aortic aneurysm, and pregnancy.

- **Option A:** The last step of the abdominal examination is auscultation with a stethoscope. The diaphragm of the stethoscope should be placed on the right side of the umbilicus to listen to the bowel sounds, and their rate should be calculated after listening for at least two minutes. Normal bowel sounds are low-pitched and gurgling, and the rate is normally 2-5/min.
- **Option C:** The examiner should begin with superficial or light palpation from the area furthest from the point of maximal pain and move systematically through the nine regions of the abdomen. It is important to press slowly as pressing too fast may trap a gas pocket within the intestinal lumen and distend the wall resulting in false-positive tenderness.
- **Option D:** A proper technique of percussion is necessary to gain maximum information regarding abdominal pathology. While percussing, it is important to appreciate tympany over air-filled structures such as the stomach and dullness to percussion which may be present due to an underlying mass or organomegaly (for example, hepatomegaly or splenomegaly).

35. A pregnant mother is admitted to the hospital with the chief complaint of profuse vaginal bleeding, AOG 36 wks, not in labor. The nurse must always consider which of the following precautions:

- A. The internal exam is done only at the delivery under strict asepsis with a double set-up.
- B. The preferred manner of delivering the baby is vaginal.
- C. An emergency delivery set for vaginal delivery must be made ready before examining the patient.
- D. Internal exams must be done following routine procedures.

Correct Answer: A. The internal exam is done only at the delivery under strict asepsis with a double set-up.

Painless vaginal bleeding during the third trimester may be a sign of placenta praevia.

- **Option B:** If the bleeding is due to soft tissue injury in the birth canal, immediate vaginal delivery may still be possible so the set up for vaginal delivery will be used.
- **Option C:** A double set-up means there is a set-up for cesarean section and a set-up for vaginal delivery to accommodate immediately the necessary type of delivery needed. In both cases, strict asepsis must be observed.
- **Option D:** If an internal examination is done in this kind of condition, this can lead to even more bleeding and may require immediate delivery of the baby by cesarean section.

36. The type of fluid used to manipulate fluid shifts among compartments states is:

- A. Whole blood
- B. TPN
- C. Albumin
- D. Ensure

Correct Answer: C. Albumin

Albumin is a colloid that is used to manipulate fluid shifts among compartments. Albumin is also a colloid fluid administered to patients in need of fluid resuscitation, especially in the setting of trauma (i.e. hypovolemic shock) or in the setting of large-volume paracentesis. Strength albumin has over crystalloids is that it leads to an increase in intravascular oncotic pressure. There are some situations in which a patient needs improved oncotic pressure, and this characteristic can be advantageous.

- **Option A:** Whole blood is used to replace blood volume. Whole Blood is the simplest, most common type of blood donation. It's also the most flexible because it can be transfused in its original form, or used to help multiple people when separated into its specific components of red cells, plasma, and platelets.
- **Option B:** TPN is used for patients who are unable to take in food or fluid. Total parenteral nutrition (TPN) supplies all daily nutritional requirements. TPN can be used in the hospital or at home. Because TPN solutions are concentrated and can cause thrombosis of peripheral veins, a central venous catheter is usually required.
- **Option D:** Ensure is a high-calorie nutritional supplement; it is not used to manipulate fluid shifts. It contains well-balanced proportions of macronutrients that conform to guidelines for Dietary

Reference Intake and the latest American Heart Association Guidelines for healthy diets.

37. The best way of determining whether a patient has learned to instill ear medication properly is for the nurse to:

- A. Ask the patient if he/she has used ear drops before.
- B. Have the patient repeat the nurse's instructions using her own words.
- C. Demonstrate the procedure to the patient and encourage to ask questions.
- D. Ask the patient to demonstrate the procedure.

Correct Answer: D. Ask the patient to demonstrate the procedure

Return demonstration provides the most certain evidence for evaluating the effectiveness of patient teaching. No matter what kind of ear drops you use or why you use them, it's important to administer them correctly. Using ear drops properly allows the medication to enter your ear canal and treat your ear problem.

- **Option A:** Merely asking the patient does not guarantee that he knows the correct way of instilling the ear drops. Position the head so that the ear faces upward. If you're giving the drops to yourself, it may be easiest to sit or stand upright and tilt your head to the side. If you're giving the drops to someone else, it may be easiest if the person tilts their head or lies down on their side.
- **Option B:** It is better to repeat actions than only repeating words. or adults, gently pull the upper ear up and back. For children, gently pull the lower ear down and back. Squeeze the correct number of drops into the ear. Your doctor's instructions or the bottle's label will tell you how many drops to use.
- **Option C:** After demonstrating to the patient, allow him to demonstrate the procedure too. You should also know how long you can use the ear drops safely after opening the bottle. For prescription ear drops, ask your pharmacist or doctor about the expiration date. For over-the-counter drops, check the expiration date on the label. If the drops have expired, throw them away. Don't use expired ear drops.

38. Meperidine hydrochloride (Demerol) is given to a client who is experiencing post-operative pain. Which of the following are the side effects of the medication, except?

- A. Tremors
- B. Diarrhea
- C. Sweating
- D. Dizziness

Correct Answer: B. Diarrhea

Meperidine hydrochloride is an opioid analgesic. Side effects of this medication are as follows: nausea, vomiting, tremors, sweating, hypotension, urinary retention, confusion, and respiratory depression. Constipation, not diarrhea, is a known side effect of the medication.

39. A patient with diabetes mellitus and renal failure begins hemodialysis. Which diet is best on days between dialysis treatments?

- A. Low-protein diet with unlimited amounts of water.
- B. Low-protein diet with a prescribed amount of water.
- C. No protein in the diet and use of a salt substitute
- D. No restrictions.

Correct Answer: B. Low-protein diet with a prescribed amount of water

The patient should follow a low-protein diet with a prescribed amount of water. The patient requires some protein to meet metabolic needs. Protein can help keep healthy blood protein levels and improve health. Protein also helps keep the muscles strong, helps wounds heal faster, strengthens the immune system, and helps improve overall health.

- **Option A:** Learn how much fluid you can safely drink (including coffee, tea, water, and any food that is liquid at room temperature). Diet is an important part of the treatment. The kidneys cannot get rid of enough waste products and fluids from the blood and the body now has special needs. Therefore, the client will need to limit fluids and change the intake of certain foods in the diet.
- **Option C:** Salt substitutes shouldn't be used without a doctor's order because it may contain potassium, which could make the patient hyperkalemic. Use less salt and eat fewer salty foods: This may help to control blood pressure. It may also help reduce fluid weight gains between dialysis sessions since salt increases thirst and causes the body to retain (or hold on to) fluid.
- **Option D:** Fluid and protein restrictions are needed. At first the kidney and diabetic diet appear to be very different, but they are alike in many ways. Both diets recommend eating 3 balanced meals, avoiding large amounts of protein, and limiting sodium. A balanced meal has at least 3 of the food groups (protein, grain, vegetables, fruits, and dairy). The kidney diet limits the amount of milk that you drink, but many people with diabetes already limit milk to 4 ounces a day.

40. A 38-year-old female patient with a diagnosis of hyperthyroidism is scheduled to receive Lugol's iodine solution as a preoperative preparation before undergoing a subtotal thyroidectomy. The patient experiences symptoms including rapid heart rate, weight loss, and anxiety. The nurse is preparing to administer the medication and educates the patient on its purpose. What is the primary reason for administering Lugol's iodine solution to this patient?

- A. Decrease the total basal metabolic rate.
- B. Maintain the function of the parathyroid glands.
- C. Block the formation of thyroxine by the thyroid gland.
- D. Decrease the size and vascularity of the thyroid gland.
- E. Prevent postoperative hypocalcemia.
- F. Stabilize the patient's heart rate.

Correct Answer: D. Decrease the size and vascularity of the thyroid gland.

Lugol's solution provides iodine, which aids in decreasing the vascularity of the thyroid gland, which limits the risk of hemorrhage when surgery is performed.

41. A nurse is preparing to care for a five (5)-year-old who has been placed in traction following a fracture of the femur. The nurse plans care, knowing that, which of the following is the most appropriate activity for this child?

- A. Large picture books
- B. A radio
- C. Crayons and coloring book
- D. A sports video

Correct Answer: C. Crayons and coloring book

In the preschooler, play is simple and imaginative and includes activities such as crayons and coloring books, puppets, felt and magnetic boards, and Play-Doh. They spend much of their playtime in fantasy activity, which tends to be more cooperative than play that's focused on toys or games.

- **Option A:** Large picture books are most appropriate for the infant where they start to show interest in seeing books with pictures. Regularly read books to the baby, pointing to the pictures when reading and engaging her by changing voices for different characters. Invite the little one to participate by encouraging her to laugh or act surprised by the story, touch the pictures, and turn the pages.
- **Option B:** A radio is most appropriate for the adolescent. Analysis of teenage behavior during play shows that their behavior mimics and practices being an adult, which is a positive for their development. However, it is still important as a parent to hold a discussion with your child to set clear boundaries e.g. controls on the internet and phones, so that they can grow and explore their identity but still within a safe environment.
- **Option D:** Sport is a great way of keeping an element of play in the life of a young adult, and if they keep engaging in sport through their adolescence they will be more likely to be active throughout the rest of adulthood.

42. For a patient with hypomagnesemia, which of the following medications may become toxic?

- A. Lasix
- B. Digoxin
- C. Calcium gluconate
- D. CAPD

Correct Answer: B. Digoxin

In hypomagnesemia, a patient on digoxin is likely to develop digitalis toxicity. Magnesium deficiency was the most frequently identified significant electrolyte disturbance in relation to digoxin toxicity. In the presence of magnesium deficiency digoxin toxicity developed at relatively low serum digoxin concentrations. Neither A nor C has toxicity as a side effect.

- **Option A:** Loop diuretics (including furosemide, bumetanide, and ethacrynic acid), produce large increases in magnesium excretion through the inhibition of the electrical gradient necessary for magnesium reabsorption in the TAL. Long-term thiazide diuretic therapy also may cause magnesium deficiency, through enhanced magnesium excretion and, specifically, reduced renal expression levels of the epithelial magnesium channel TRPM6.
- **Option C:** Calcium gluconate may reverse many of the magnesium-induced changes, including respiratory depression. Administration of IV furosemide can increase magnesium excretion when renal function is adequate; volume status should be maintained.
- **Option D:** CAPD is not a medication. CAPD, (Continuous Ambulatory Peritoneal Dialysis), is a way of artificially removing the waste fluid and poisons from the body by using the abdominal membrane as a filter. The treatment involves putting special dialysis fluid into this cavity, usually four times per day.

43. A client is admitted to the labor and delivery unit in active labor. During the examination, the nurse notes a papular lesion on the perineum. Which initial action is most appropriate?

- A. Document the finding
- B. Report the finding to the doctor
- C. Prepare the client for a C-section
- D. Continue primary care as prescribed

Correct Answer: B. Report the finding to the doctor

Any lesion should be reported to the doctor. This can indicate a herpes lesion. Clients with open lesions related to herpes are delivered by Cesarean section because there is a possibility of transmission of the infection to the fetus with direct contact to lesions. During pregnancy there is a higher risk of perinatal transmission with primary HSV infection than with recurrent infection. If a primary HSV outbreak is diagnosed in pregnancy, oral antiviral treatment may be administered to help reduce the duration and severity of symptoms and viral shedding.

- **Option A:** It is not enough to document the finding. Viral or serologic testing should be performed to confirm suspected HSV infections; the basic groups of tests used are viral and antibody detection techniques. For viral detection, the primary testing techniques are viral culture and HSV antigen detection by polymerase chain reaction.
- **Option C:** The physician must make the decision to perform a C-section. Cesarean delivery is recommended to prevent perinatal HSV transmission in women with active genital lesions or prodromal symptoms, but it is not recommended for women with HSV lesions found only on nongenital areas, such as the back, thigh, or buttock.
- **Option D:** It is not enough to continue primary care. Antiviral agents commonly used to treat HSV infections are acyclovir (Zovirax), famciclovir (Famvir), and valacyclovir (Valtrex), which are all U.S. Food and Drug Administration pregnancy category B medications. For patients with more severe HSV infection, oral treatment can be used for more than 10 days if the lesions have not healed completely.

44. The appropriate needle size for insulin injection is:

- A. 18G, 1 ½" long

- B. 22G, 1" long
- C. 22G, 1 ½" long
- D. 25G, 5/8" long

Correct Answer: D. 25G, 5/8" long

A 25G, 5/8" needle is the recommended size for insulin injection because insulin is administered by the subcutaneous route. The board recommends 4-, 5-, and 6-mm needles for all adult patients regardless of their BMI. It is also recommended to insert 4-, 5-, and 6-mm needles at a 90-degree angle and that, if needed, longer needles should be injected with either a skinfold or a 45-degree angle to avoid intramuscular injection of insulin.

- **Option A:** An 18G, 1 ½" needle is usually used for I.M. injections in children, typically in the vastus lateralis. Ensuring the correct delivery of insulin is essential in the treatment of diabetes. Both proper injection technique and needle length are important considerations for adequate insulin delivery. There have been several studies demonstrating that BMI does not affect efficacy or insulin leakage with shorter pen needles (e.g., 4 or 5 mm vs. 12.7 mm).
- **Option B:** Additionally, the International Scientific Advisory Board for the Third Injection Technique Workshop released recommendations in 2010 on best practices for injection technique for patients with diabetes, which, with regard to needle length, concluded that 4-mm pen needles were efficacious in all patients regardless of BMI.
- **Option C:** A 22G, 1 ½" needle is usually used for adult I.M. injections, which are typically administered in the vastus lateralis or ventrogluteal site. Needle lengths for subcutaneous injections started out as long as 16 mm in 1985, and 12.7-mm needles were introduced in the early 1990s. Over time, with growing evidence of longer needles increasing risks for intramuscular injections and improved technology, shorter needles of 4, 5, 6, and 8 mm have been developed.

45. Which action will the nurse take to most effectively reduce the incidence of hospital-related urinary tract infections (UTI)?

- A. Make sure that clients have an adequate fluid intake
- B. Educate assistive personnel on how to provide good perineal hygiene
- C. Restrict the use of indwelling catheters
- D. Perform dipstick urinalysis for clients with risk factors for UTI

Correct Answer: C. Restrict the use of indwelling catheters

The most effective way to lessen UTIs in the hospital setting is to avoid using retention catheters. Nurses are associated with promoting policies that lessen the unnecessary use of catheters because the use of catheters is the most common cause of hospital-acquired UTIs in the United States.

- **Option A:** Increase the patient's fluid intake. This has been shown to decrease UTI incidence, possibly by diluting the urine and flushing out bacteria. In the past, catheter-associated UTIs were seen as an inevitable consequence of hospitalization. Now they're considered unacceptable results of poor care.
- **Option B:** Perform meatal care twice daily using soap and water and working from the front to the back of the perineal area. Evidence shows no advantage to antiseptic use. Though some research suggests cleaning the catheter with povidone-iodine and applying antibiotic ointment at the insertion site may decrease bacteria, most studies show this practice has no benefit and may even lead to infection.

- **Option D:** The other options also reduce the risk for and/or detect UTIs, but avoidance of indwelling catheter use will be more effective. Urine may be assessed both at the bedside (dipstick) and in the laboratory (microscopy, culture, sensitivity and urinary electrolytes). Urine for laboratory analysis must be transferred quickly and at the correct temperature otherwise breeding ground for contaminants.

46. Which of the following interventions will help lessen the effect of GERD (acid reflux)?

- A. Elevate the head of the bed on 4-6 inch blocks.
- B. Lie down after eating.
- C. Increase fluid intake just before bedtime.
- D. Wear a girdle.

Correct Answer: A. Elevate the head of the bed on 4-6 inch blocks.

Elevation of the head of the bed allows gravity to assist in decreasing the backflow of acid into the esophagus. The fluid does not flow uphill. Instruct to remain in an upright position at least 2 hours after meals; avoiding eating 3 hours before bedtime. Helps control reflux and causes less irritation from reflux action into the esophagus. The other three options all increase fluid backflow into the esophagus through position or increasing abdominal pressure.

- **Option B:** Avoid placing the patient in a 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 C:** Instruct patient regarding eating small amounts of bland food followed by a small amount of water. Instruct to remain in an upright position at least 1–2 hours after meals, and to avoid eating within 2–4 hours of bedtime. Gravity helps control reflux and causes less irritation from reflux action into the esophagus.
- **Option D:** Instruct the patient to avoid bending over, coughing, straining at defecations, and other activities that increase reflux. Promotes comfort by the decrease in intra-abdominal pressure, which reduces the reflux of gastric contents.

47. A client with insulin-dependent diabetes takes 20 units of NPH insulin at 7 a.m. The nurse should observe the client for signs of hypoglycemia at:

- A. 8 a.m.
- B. 10 a.m.
- C. 3 p.m.
- D. 5 a.m.

Correct Answer: C. 3 p.m.

48. What is an appropriate indicator for performing a contraction stress test?

- A. Increased fetal movement and small for gestational age.

- B. Maternal diabetes mellitus and postmaturity.
- C. Adolescent pregnancy and poor prenatal care.
- D. History of preterm labor and intrauterine growth restriction.

Correct Answer: B. Maternal diabetes mellitus and postmaturity.

The contraction stress test helps predict how the baby will do during labor. The test triggers contractions and registers how the baby's heart reacts. A normal heartbeat is a good sign that the baby will be healthy during labor.

- **Option A:** Decreased fetal movement is an indicator for performing a contraction stress test; the size (small for gestational age) is not an indicator.
- **Option C:** Although adolescent pregnancy and poor prenatal care are risk factors for poor fetal outcomes, they are not indicators for performing a contraction stress test.
- **Option D:** Intrauterine growth restriction is an indicator; history of a previous stillbirth, not preterm labor, is another indicator.

49. A client is receiving methocarbamol (Robaxin) as an adjunct to physical therapy for the relief of painful muscle discomfort. Which of the following is not true regarding the use of the medication?

- A. The parenteral form causes hypotension and bradycardia when given rapidly.
- B. The medicine can cause the urine to turn brown, black, or green.
- C. The use of a cold or allergy medicine will lessen the side effects of the medication.
- D. The parenteral form is contraindicated in clients with liver damage.

Correct Answer: C. The use of a cold or allergy medicine will lessen the side effects of the medication.

Methocarbamol is a muscle relaxant. Medicines such as cold or allergy medicine, sedatives, narcotic pain medicine, sleeping pills, muscle relaxers, and medicine for seizures, depression, or anxiety add to the sleepiness caused by methocarbamol.

50. The client at highest risk for nephrotoxicity with aminoglycoside use is a:

- A. Male with a creatinine of 1.7 and BUN of 52 on a 10-day regimen.
- B. Female with BUN of 12 and creatinine of 0.8.
- C. Female with past history of cystitis on 5 days of therapy.
- D. Male with history of kidney stones on 8 days of therapy.

Correct Answer: A. Male with a creatinine of 1.7 and BUN of 52 on a 10-day regimen

Aminoglycosides preferentially affect the proximal tubular cells. These agents are freely filtered by the glomeruli and quickly taken up by the proximal tubular epithelial cells, where they are incorporated into lysosomes after first interacting with phospholipids on the brush border membranes. They exert their main toxic effect within the tubular cell by altering phospholipid metabolism. In addition to their direct effect on cells, aminoglycosides cause renal vasoconstriction.

- **Option B:** A 24-year-old woman with a normal BUN and creatinine would not be at higher risk than others when given aminoglycosides.
- **Option C:** Recurrent cystitis on limited-time therapy does not present a high risk for nephrotoxicity.
- **Option D:** A history of kidney stones on limited-time therapy does not present a high risk for nephrotoxicity.

51. During a prenatal assessment, the clinic nurse suspects that her client was abused. Which of the following questions would be most appropriate?

- A. "Are you being threatened or hurt by your partner?"
- B. "Are you frightened of your partner?"
- C. "Is something bothering you?"
- D. "What happens when you and your partner argue?"

Correct Answer: A. "Are you being threatened or hurt by your partner?"

The use of simple, direct questions, asked in an emphatic manner, is best to validate the presence of an abusive situation. The evaluation should start with a detailed history and physical examination. Clinicians should screen all females for domestic violence, and refer to females who screen positive. This includes females who do not have signs or symptoms of abuse. All healthcare facilities should have a plan in place that provides for assessing, screening, and referring patients for intimate partner violence. Protocols should include referral, documentation, and follow-up.

- **Option B:** Typical domestic injury patterns include contusions to the head, face, neck, breast, chest, abdomen, and musculoskeletal injuries. Accidental injuries more commonly involve the extremities of the body. Abuse victims tend to have multiple injuries in various stages of healing from acute to chronic. Although professional and public awareness has increased, many patients and providers are still hesitant to discuss abuse.
- **Option C:** Domestic violence victims may have emotional and psychological issues such as anxiety and depression. Complaints may include backaches, stomachaches, headaches, fatigue, restlessness, decreased appetite, and insomnia. Women are more likely to experience asthma, irritable bowel syndrome, and diabetes.
- **Option D:** The other questions are indirect and may not lead to the discussion of an abusive situation. Patients that have suffered domestic violence may or may not want a referral. Many are fearful of their lives and financial well-being and hence may be weighing the tradeoff in leaving the abuser leading to loss of support and perhaps the responsibility of caring for children alone. The healthcare provider needs to assure the patient that the decision is voluntary and that the provider will help regardless of the decision. The goal is to make resources accessible, safe, and to enhance support.

52. To provide relief from the cytarabine syndrome, which drug is given?

- A. Dexamethasone
- B. Allopurinol
- C. Alka Seltzer
- D. Aspirin

Correct Answer: A. Dexamethasone

- **Option A:** Steroids such as dexamethasone may be prescribed to promote relief from cytarabine syndrome.
- **Option B:** Allopurinol is given for hyperuricemia that will result from taking some chemotherapeutic agent.
- **Options C and D:** Since cytarabine causes platelets to decrease, aspirin and aspirin-containing products are not advised unless prescribed by the physician.

53. Following a tonsillectomy procedure, a 25-year-old female client, Amelia, is transitioned back to the medical-surgical unit from the post-anesthesia care unit (PACU). Amelia has a history of chronic tonsillitis, which prompted the tonsillectomy. On arrival to the unit, Amelia appears lethargic due to the residual effects of anesthesia and reports a sore throat, a common complaint post-tonsillectomy. The surgical protocol for post-tonsillectomy care underlines the importance of maintaining a patent airway and monitoring for hemorrhage, which could emanate from the surgical site. The medical-surgical nurse, in alignment with these priorities and the assessment of Amelia's level of consciousness and discomfort, needs to determine the most therapeutic position for Amelia to ensure airway patency, comfort, and minimize the risk of postoperative complications such as aspiration or hemorrhage. Which of the following positions should the nurse place Amelia in?

- A. Semi-Fowler's
- B. Supine
- C. High-Fowler's
- D. Side-lying
- E. Prone
- F. Sims'
- G. Trendelenburg

Correct Answer: D. Side-lying

Side-lying position is the most therapeutic position for Amelia as it promotes airway patency and allows for drainage from the surgical site, minimizing the risk of aspiration especially given her lethargic state.

- **Option A:** Semi-Fowler's position, with the head of the bed elevated to about 30 to 45 degrees, can assist in maintaining airway patency but may not provide optimal drainage from the surgical site, especially in a lethargic client, which could increase the risk of aspiration.
- **Option B:** Supine position is not ideal for Amelia post-tonsillectomy as it could predispose her to airway obstruction and does not promote drainage from the surgical site, increasing the risk of aspiration.
- **Option C:** High-Fowler's position, with the head of the bed elevated to about 90 degrees, could also assist in maintaining airway patency but may be uncomfortable for Amelia who is lethargic, and it may not provide the necessary drainage to prevent aspiration.

- **Option E:** Prone position could potentially obstruct Amelia's airway and is not traditionally used following a tonsillectomy due to the risk of increasing pressure on the surgical site, which could lead to hemorrhage.
- **Option F:** Sims' position might promote drainage but may not be as effective in keeping the airway open as the side-lying position.
- **Option G:** Trendelenburg position is used to increase venous return to the heart and is not suitable for post-tonsillectomy positioning as it does not promote airway patency or drainage and could potentially exacerbate Amelia's sore throat.

54. Joy who has just experienced her second spontaneous abortion expresses anger towards her physician, the hospital and the "rotten nursing care". When assessing the situation, the nurse recognizes that the client may be using the coping mechanism of:

- A. Projection
- B. Displacement
- C. Denial
- D. Reaction formation

Correct Answer: B. Displacement

The client's anger over the abortion is shifted to the staff and the hospital because she is unable to deal with the abortion at this time. Displacement is a psychological defense mechanism in which a person redirects a negative emotion from its original source to a less threatening recipient. A classic example of defense is displaced aggression. If a person is angry but cannot direct their anger toward the source without consequences, they might "take out" their anger on a person or thing that poses less of a risk.

- **Option A:** Projection is a defense mechanism that involves taking our own unacceptable qualities or feelings and ascribing them to other people. For example, if you have a strong dislike for someone, you might instead believe that they do not like you. Projection works by allowing the expression of the desire or impulse, but in a way that the ego cannot recognize, therefore reducing anxiety.
- **Option C:** Denial is probably one of the best-known defense mechanisms, used often to describe situations in which people seem unable to face reality or admit an obvious truth (e.g., "He's in denial"). Denial is an outright refusal to admit or recognize that something has occurred or is currently occurring. People living with drug or alcohol addiction often deny that they have a problem, while victims of traumatic events may deny that the event ever occurred.
- **Option D:** Reaction formation reduces anxiety by taking up the opposite feeling, impulse, or behavior. An example of reaction formation would be treating someone you strongly dislike in an excessively friendly manner in order to hide your true feelings. Why do people behave this way? According to Freud, they are using reaction formation as a defense mechanism to hide their true feelings by behaving in the exact opposite manner.

55. Meningitis occurs as an extension of a variety of bacterial infections due to which of the following conditions?

- A. Congenital anatomic abnormality of the meninges.

- B. Lack of acquired resistance to the various etiologic organisms.
- C. Occlusion or narrowing of the CSF pathway.
- D. Natural affinity of the CNS to certain pathogens.

Correct Answer: B. Lack of acquired resistance to the various etiologic organisms.

Extension of a variety of bacterial infections is a major causative factor of meningitis and occurs as a result of a lack of acquired resistance to the etiologic organisms. Preexisting CNS anomalies are factors that contribute to susceptibility. Meningitis can be caused by infectious and non-infectious processes (autoimmune disorders, cancer/paraneoplastic syndromes, drug reactions). The infectious etiologic agents of meningitis include bacteria, viruses, fungi, and less commonly parasites.

- **Option A:** The most common viral agents of meningitis are non-polio enteroviruses (group B coxsackievirus and echovirus). Other viral causes: mumps, Parechovirus, Herpesviruses (including Epstein Barr virus, Herpes simplex virus, and Varicella-zoster virus), measles, influenza, and arboviruses (West Nile, La Crosse, Powassan, Jamestown Canyon).
- **Option C:** Organisms can enter the cerebrospinal fluid (CSF) via neighboring anatomic structures (otitis media, sinusitis), foreign objects (medical devices, penetrating trauma), or during operative procedures. Viruses can penetrate the central nervous system (CNS) via retrograde transmission along neuronal pathways or by hematogenous seeding.
- **Option D:** Bacteria colonize the nasopharynx and enter the bloodstream after mucosal invasion. Upon making their way to the subarachnoid space, the bacteria cross the blood-brain barrier, causing a direct inflammatory and immune-mediated reaction.

56. When do coronary arteries primarily receive blood flow?

- A. During inspiration
- B. During diastole
- C. During expiration
- D. During systole

Correct Answer: B. During diastole

Although the coronary arteries may receive a minute portion of blood during systole, most of the blood flow to coronary arteries is supplied during diastole.

- **Option A:** Breathing patterns are irrelevant to blood flow. It has been suggested that the diaphragm will preferentially steal blood flow from working locomotor muscles during increased activity (Bradley & Leith, 1978; Musch, 1993). In healthy adults, the cost of breathing is <5% of the total oxygen consumption at low-level exercise but approaches 15% during heavy exercise in young athletes or older fit subjects (Aaron et al. 1992; Dempsey & Johnson, 1992). Further, reflex vasoconstriction of the locomotor muscles is evident when a substantial respiratory load is applied sufficient to elicit diaphragm fatigue
- **Option C:** Expiration is not related to the blood flow. The pulmonary system is intimately linked with the cardiovascular system anatomically and hemodynamically and plays a significant role in exercise intolerance through a number of mechanisms (Olson et al. 2006a,b;).
- **Option D:** There is a little portion of the blood that the coronary arteries receive during systole. During systole, intramuscular blood vessels are compressed and twisted by the contracting heart muscle and blood flow to the left ventricle is at its lowest. The force is greatest in the

subendocardial layers where it approximates to intramyocardial pressure.

57. On which of the postpartum days can the client expect lochia serosa?

- A. Days 3 and 4 PP
- B. Days 3 to 10 PP
- C. Days 10-14 PP
- D. Days 14 to 42 PP

Correct Answer: B. Days 3 to 10 PP.

On the third and fourth PP days, the lochia becomes a pale pink or brown and contains old blood, serum, leukocytes, and tissue debris. This type of lochia usually lasts until PP day 10. The mother might notice increased lochia when she gets up in the morning when she is physically active, or while breastfeeding. Moms who have cesarean sections may have less lochia after 24 hours than moms who had vaginal deliveries. The bleeding generally stops within 4 to 6 weeks after delivery. The mother should wear pads, not tampons, as nothing should go in the vagina for six weeks.

- **Option A:** The lochia is the vaginal discharge that originates from the uterus, cervix, and vagina. The lochia is initially red and comprises blood and fragments of decidua, endometrial tissues, and mucus and lasts 1 to 4 days. Lochia rubra usually lasts for the first 3 to 4 days PP.
- **Option C:** The lochia then changes color to yellowish or pale brown, lasting 5 to 9 days, and is composed mainly of blood, mucus, and leukocytes. Lochia alba, which contains leukocytes, decidua, epithelial cells, mucus, and bacteria, may continue for 2 to 6 weeks PP.
- **Option D:** Finally, the lochia is white and contains mostly mucus, lasting up to 10 to 14 days. The lochia can persist up to 5 weeks postpartum. The persistence of red lochia beyond one week might be an indicator of uterine subinvolution. The presence of an offensive odor or large pieces of tissue or blood clots in lochia or the absence of lochia might be a sign of infection.

58. A client who has ulcerative colitis has persistent diarrhea. He is thin and has lost 12 pounds since the exacerbation of his ulcerative colitis. The nurse should anticipate that the physician will order which of the following treatment approaches to help the client meet his nutritional needs?

- A. Initiate continuous enteral feedings.
- B. Encourage a high protein, high-calorie diet.
- C. Implement total parenteral nutrition.
- D. Provide six small meals a day.

Correct Answer: C. Implement total parenteral nutrition.

Food will be withheld from the client with severe symptoms of ulcerative colitis to rest the bowel. To maintain the client's nutritional status, the client will be started on TPN. Dietary measures depend on the patient's condition (if disease is mild, the patient may do well on a low-residue, low-fat diet high in protein and calories with lactose restriction). In moderate disease, elemental enteral products may be given to provide nutrition without overstimulating the bowel. Patient with toxic colitis is NPO and placed on parenteral nutrition.

- **Option A:** Enteral feedings do not allow the bowel to rest. Recommend rest before meals. This quiets peristalsis and increases available energy for eating. Encourage bed rest and limited activity during the acute phase of illness. Decreasing metabolic needs aids in preventing caloric depletion and conserves energy.
- **Option B:** A high-calorie, high-protein diet will worsen the client's symptoms. Avoid or limit foods that might cause or exacerbate abdominal cramping, flatulence (milk products, foods high in fiber or fat, alcohol, caffeinated beverages, chocolate, peppermint, tomatoes, orange juice). Individual tolerance varies, depending on the stage of disease and area of bowel affected.
- **Option D:** Dividing the diet into 6 small meals does not allow the bowel to rest. Keep patient NPO as indicated. Resting the bowel decreases peristalsis and diarrhea, limiting malabsorption and loss of nutrients.

59. Which of the following drugs has been known to be effective in treating obsessive-compulsive disorder (OCD)?

- A. Divalproex (depakote) and Lithium (lithobid)
- B. Chlordiazepoxide (Librium) and diazepam (valium)
- C. Fluvoxamine (Luvox) and clomipramine (anafranil)
- D. Benztropine (Cogentin) and diphenhydramine (benadryl)

Correct Answer: C. Fluvoxamine (Luvox) and clomipramine (Anafranil)

The antidepressants fluvoxamine and clomipramine have been effective in the treatment of OCD. Fluvoxamine is used to treat obsessive-compulsive disorder (bothersome thoughts that won't go away and the need to perform certain actions over and over) and social anxiety disorder (extreme fear of interacting with others or performing in front of others that interferes with normal life). Fluvoxamine is in a class of medications called selective serotonin reuptake inhibitors (SSRIs). It works by increasing the amount of serotonin, a natural substance in the brain that helps maintain mental balance.

Clomipramine is used to treat people with obsessive-compulsive disorder (a condition that causes repeated unwanted thoughts and the need to perform certain behaviors over and over). Clomipramine is in a group of medications called tricyclic antidepressants. It works by increasing the amount of serotonin, a natural substance in the brain that is needed to maintain mental balance.

- **Option A:** Divalproex sodium is a stable coordination compound composed of sodium valproate and valproic acid used to treat manic episodes associated with bipolar disorder, epilepsy, and migraine headaches. Lithium was the first mood stabilizer and is still the first-line treatment option, but is underutilized because it is an older drug. Lithium is a commonly prescribed drug for a manic episode in bipolar disorder as well as maintenance therapy of bipolar disorder in a patient with a history of a manic episode. The primary target symptoms of lithium are mania and unstable mood.
- **Option B:** Chlordiazepoxide is a long-acting benzodiazepine and is an FDA-approved medication for adults with mild-moderate to severe anxiety disorder, preoperative apprehension and anxiety, and withdrawal symptoms of acute alcohol use disorder. It is also FDA approved for pediatric patients greater than six years old for anxiety. Diazepam is an anxiolytic benzodiazepine, first patented and marketed in the United States in 1963. It is a fast-acting, long-lasting benzodiazepine commonly used in the treatment of anxiety disorders, as well as alcohol detoxification, acute recurrent seizures, severe muscle spasm, and spasticity associated with neurologic disorders.
- **Option D:** Benzotropine belongs to the synthetic class of muscarinic receptor antagonists (anticholinergic drugs). Thus, it has a structure similar to that of diphenhydramine and atropine. However, it is long-acting so that its administration can be with less frequency than

diphenhydramine. It also induces less CNS stimulation effect compared to that of trihexyphenidyl, making it a preferable drug of choice for geriatric patients. Diphenhydramine, which is available as an over-the-counter medication, is a first-generation antihistamine that is used in a variety of conditions to treat and prevent dystonias, insomnia, pruritus, urticaria, vertigo, and motion sickness.

60. When performing a postpartum check, the nurse should:

- A. Assist the woman into a lateral position with upper leg flexed forward to facilitate the examination of her perineum.
- B. Assist the woman into a supine position with her arms above her head and her legs extended for the examination of her abdomen.
- C. Instruct the woman to avoid urinating just before the examination since a full bladder will facilitate fundal palpation.
- D. Wash hands and put on sterile gloves before beginning the check.

Correct Answer: A. Assist the woman into a lateral position with upper leg flexed forward to facilitate the examination of her perineum.

While the supine position is best for examining the abdomen, the woman should keep her arms at her sides and slightly flex her knees in order to relax abdominal muscles and facilitate palpation of the fundus. The nurse must be well versed in postpartum assessment and be able to identify subtle changes that could indicate a woman's deteriorating condition. Components of care should be standardized regardless of whether the recovery is done in a post-anesthesia care unit (PACU), a labor and delivery room, or a postpartum room.

- **Option B:** According to the 2010 recommendations from the Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN), the nurse caring for the woman should not have any other patient or infant care responsibilities until an initial assessment is completed and documented, the repair of the episiotomy or perineal lacerations is complete and the woman is hemodynamically stable. Assessments during the immediate postpartum period start from the delivery of the placenta and continue for at least 2 hours or until stable. Assessments should be orderly and ongoing so that timely identification can be made of any abnormal changes in the woman's clinical condition.
- **Option C:** The bladder should be emptied before the check. A full bladder alters the position of the fundus and makes the findings inaccurate. Assist the woman to empty her bladder. Catheterize only if the woman is unable to void and the bladder is distended. Once the bladder is empty, reevaluate the fundal height. Note the overall appearance of the woman, including skin color, motor activity, facial expression, speech, mood, state of awareness, and interactions with others. Any variation from normal assessment parameters requires reassessment, communication, and early intervention as indicated to prevent potentially serious consequences.
- **Option D:** Although hands are washed before starting the check, clean (not sterile) gloves are put on just before the perineum and pad are assessed to protect from contact with blood and secretions. Involution is the process of the uterus returning to its prepregnant state. Uterine tone should be assessed at least as frequently as vital signs, every 15 minutes in the first 2 hours.⁴ Amount of blood loss should be assessed on an ongoing basis during this time. Uterine atony is the most common cause of postpartum hemorrhage, which remains a major cause of maternal morbidity and mortality.

61. Which of the following contributes most to the debilitation of an individual during a course of chemotherapy?

- A. Diarrhea
- B. Alopecia
- C. Constipation
- D. Pain

Correct Answer: A. Diarrhea

Diarrhea will cause debilitation as fluid and nutrients are lost at a time when the body most needs to be nourished. Some cancer treatments can cause diarrhea, including chemotherapy, radiation, surgery (if certain parts of the intestine need to be removed) and bone marrow transplants.

- **Option B:** Chemotherapy-induced alopecia (CIA) is probably one of the most shocking aspects of oncological patients and underestimated by physicians. It negatively influences body image, sexuality, and self-esteem, so that up to 8% of patients decide to refuse chemotherapy if there is the risk of hair loss.
- **Option C:** In addition to the medication being taken during cancer treatment, people with cancer may have other causes of constipation: Scar tissue from surgery or cancer growing in the bowel, which can narrow or partially block the bowel. A tumor or scar tissue completely blocking the bowel, called a bowel obstruction.
- **Option D:** Some chemotherapy drugs can cause painful side effects, such as aching in the muscles and joints, headaches, and stomach pains. Pain may be felt as burning, numbness, tingling or shooting pains in the hands and feet (called peripheral nerve damage). This type of pain can last long after treatment ends.

62. The nurse is caring for a female client with active upper GI bleeding. What is the appropriate diet for this client during the first 24 hours after admission?

- A. Regular diet
- B. Skim milk
- C. Nothing by mouth
- D. Clear liquids

Correct Answer: C. Nothing by mouth

Shock and bleeding must be controlled before oral intake, so the client should receive nothing by mouth. When the bleeding is controlled, the diet is gradually increased, starting with ice chips and then clear liquids. In patients hospitalized for acute upper gastrointestinal bleeding due to an ulcer with high risk of rebleeding or with variceal bleeding, it is recommended to wait at least 48 h after endoscopic therapy before initiating oral or enteral feeding.

- **Option A:** A regular diet is incorrect. Proton pump inhibitors (PPIs) are beneficial for both ulcer and non-ulcer diseases as they reduce the risk of re-bleeding by clot stabilization. Endoscopy should only be performed after hemodynamic stability has been achieved and should not be delayed by more than 24 hours.
- **Option B:** Skim milk shouldn't be given because it increases gastric acid production, which could prolong bleeding. Further research found that ingesting milk increases the production of stomach

acid, which can worsen gastritis symptoms. Any relief gastritis sufferers experience after drinking a glass of milk is likely to be temporary; within a half-hour, symptoms are usually worse, not better.

- **Option D:** A liquid diet is the first diet offered after bleeding and shock are controlled. They can be fed with clear liquids soon after endoscopy. Clear liquids provide the advantage that if the patient starts to bleed again, sedation and anesthesia can be given within two hours after the last ingestion

63. A client who is admitted after a thermal burn injury has the following vital signs: blood pressure, 70/40; heart rate, 140 beats/min; respiratory rate, 25/min. He is pale in color and it is difficult to find pedal pulses. Which action will the nurse take first?

- A. Start intravenous fluids.
- B. Check the pulses using a Doppler device.
- C. Obtain a complete blood count (CBC).
- D. Obtain an electrocardiogram (ECG).

Correct Answer: A. Start intravenous fluids.

Hypovolemic shock is a common cause of death in the emergent phase of clients with serious injuries. Administration of fluids can treat this problem. For burns classified as severe (> 20% TBSA), fluid resuscitation should be initiated to maintain urine output > 0.5 mL/kg/hour.

- **Option C:** Following a severe burn injury, significant hematologic changes occur that are reflected in complete blood count (CBC) measurements. A CBC will be taken to ascertain if a cardiac or bleeding problem is causing these vital signs. However, these are not actions that the nurse would take immediately.
- **Option B:** Checking pulses would indicate perfusion to the periphery but this is not an immediate nursing action. Carefully check pulses in any extremity with circumferential burns. These burns can act as tourniquets as burn-associated edema begins, leading to compartment syndrome.
- **Option D:** In patients with extensive burns, it is sometimes a challenge to monitor the ECG, because the lack of natural skin and application of protective ointments prevent the adherence of the ECG discs.

64. Halfway through the administration of blood, the female client complains of lumbar pain. After stopping the infusion Nurse Hazel should:

- A. Increase the flow of normal saline
- B. Assess the pain further
- C. Notify the blood bank
- D. Obtain vital signs.

Correct Answer: A. Increase the flow of normal saline

The blood must be stopped at once, and then normal saline should be infused to keep the line patent and maintain blood volume. Treatment is to stop the transfusion, leave the IV in place, intravenous fluids with normal saline, keeping urine output greater than 100 mL/hour, diuretics may also be needed and cardiorespiratory support as appropriate. A hemolytic workup should also be performed which

includes sending the donor blood and tubing as well as post-transfusion labs (see below for list) from the recipient to the blood bank.

- **Option B:** Assessing the pain further could delay any interventions that are needed to be done. Fatal hemolysis is extremely rare, occurring only in 1 out of nearly 2 million transfusions. It is the result of ABO incompatibility, and the recipient's antibodies recognize and induce hemolysis in donor's transfused cells. Patients will develop an acute onset of fevers and chills, low back pain, flushing, dyspnea as well as becoming tachycardic and going into shock.
- **Option C:** The blood bank can be notified after stopping the infusion first. According to the American Association of Blood Banks (AABB), febrile reactions are the most common, followed by transfusion-associated circulatory overload, allergic reaction, TRALI, hepatitis C viral infection, hepatitis B viral infection, human immunodeficiency virus (HIV) infection, and fatal hemolysis which is extremely rare, only occurring almost 1 in 2 million transfused units of RBC.
- **Option D:** Vital signs could be obtained after stopping the infusion and infusing normal saline. There are multiple complications of blood transfusions, including infections, hemolytic reactions, allergic reactions, transfusion-related lung injury (TRALI), transfusion-associated circulatory overload, and electrolyte imbalance.

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

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

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

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

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

66. A client receiving vent-assisted mode ventilation begins to experience cluster breathing after recent intracranial occipital bleeding. Which action

would be most appropriate?

- A. Count the rate to be sure the ventilations are deep enough to be sufficient.
- B. Call the physician while another nurse checks the vital signs and ascertains the patient's Glasgow Coma score.
- C. Call the physician to adjust the ventilator settings.
- D. Check deep tendon reflexes to determine the best motor response.

Correct Answer: B. Call the physician while another nurse checks the vital signs and ascertains the patient's Glasgow Coma score.

Cluster breathing consists of clusters of irregular breaths followed by periods of apnea on an irregular basis. A lesion in the upper medulla or lower pons is usually the cause of cluster breathing. Because the client had a bleed in the occipital lobe, which is superior and posterior to the pons and medulla, clinical manifestations that indicate a new lesion are monitored very closely in case another bleed ensues. The physician is notified immediately so that treatment can begin before respirations cease.

- **Option A:** Another nurse needs to assess vital signs and score the client according to the GCS, but time is also of the essence. Changes in blood pressure, compare BP readings in both arms. Respirations, noting patterns and rhythm (periods of apnea after hyperventilation), Cheyne-Stokes respiration. Irregularities can suggest location of cerebral insult or increasing ICP and need for further intervention, including possible respiratory support.
- **Option C:** Maintain bedrest, provide a quiet and relaxing environment, restrict visitors and activities. Cluster nursing interventions and provide rest periods between care activities. Limit duration of procedures. Continuous stimulation or activity can increase intracranial pressure (ICP). Absolute rest and quiet may be needed to prevent rebleeding in the case of hemorrhage.
- **Option D:** Checking deep tendon reflexes is one part of the GCS analysis. Assess for nuchal rigidity, twitching, increased restlessness, irritability, onset of seizure activity. Indicative of meningeal irritation, especially in hemorrhage disorders. Seizures may reflect increased ICP or cerebral injury, requiring further evaluation and intervention.

67. To determine if a patient's respiratory system is functioning, the nurse would assess which of the following parameters:

- A. Respiratory rate
- B. Pulse
- C. Arterial blood gas
- D. Pulse oximetry

Correct Answer: C. Arterial blood gas

Arterial blood gases will indicate CO₂ and O₂ levels. This is an indication that the respiratory system is functioning. Blood gas analysis is a commonly used diagnostic tool to evaluate the partial pressures of gas in blood and acid-base content. Understanding and use of blood gas analysis enable providers to interpret respiratory, circulatory, and metabolic disorders.

- **Option A:** Respiratory rate can reveal data about other systems, such as the brain, making letter c a better choice. The respiratory rate is the number of breaths per minute. The normal breathing rate is about 12 to 20 beats per minute in an average adult. In the pediatric age group, it is defined by

the particular age group. Parameters important here again include its rate, depth of breathing, and its pattern rate of breathing is a crucial parameter.

- **Option B:** Pulse rate is not a measure of respiratory status. Parameters for assessment of pulse include its rate, rhythm, volume, amplitude, and rate of increase, besides its symmetry. The rate of the pulse is significant to measure for assessing the physiological and pathological processes affecting the body. The normal range used in an adult is between 60 to 100 beats /minute with rates above 100 beats/minute and rates and below 60 beats per minute.
- **Option D:** Pulse oximetry yields oxygen saturation levels, which is not a measure of acid-base balance. Pulse oximetry is a non-invasive monitor that measures the oxygen saturation in the blood by shining light at specific wavelengths through tissue (most commonly the fingernail bed).

68. A nurse is assisting a physician with the removal of a chest tube. The nurse should instruct the client to:

- A. Exhale slowly
- B. Stay very still
- C. Inhale and exhale quickly
- D. Perform the Valsalva maneuver

Correct Answer: D. Perform the Valsalva maneuver.

When the chest tube is removed, the client is asked to perform the Valsalva maneuver (take a deep breath, exhale, and bear down). The tube is quickly withdrawn, and an airtight dressing is taped in place. An alternative instruction is to ask the client to take a deep breath and hold the breath while the tube is removed.

- **Option A:** The removal of the chest tube is usually performed quickly and without sedation. The doctor will give specific instructions on how to breathe when the tube is removed. In most cases, the chest tube will be removed as the client is holding his breath. This ensures extra air doesn't get into the lungs.
- **Option B:** Digital drainage systems have the advantage of accurately measuring the presence of air leak and thereby eradicating interobserver variability. These devices are gaining increasing popularity and are the subject of ongoing research on tube thoracostomy management. Additionally, they may play a useful role in younger pediatric patients who are unable to perform forceful expiratory maneuvers or cough on demand; however, this possibility has not yet been well studied.
- **Option C:** No air leak should be present—that is, no bubbling should be seen in the air-leak chamber during forced expiratory maneuvers (eg, Valsalva maneuver) or cough. The swing in the fluid level in the tube in the underwater seal bottle should be minimal, relating to the normal negative pressures in the chest during the phases of respiration.

69. A client is receiving sulfasalazine (Azulfidine) for the treatment of ulcerative colitis. Which of the following assessment findings will concern the nurse most?

- A. Drowsiness
- B. Decreased urine output

- C. Urine discoloration
- D. Vomiting

Correct Answer: B. Decreased urine output

Sulfasalazine is used to treat bowel inflammation, diarrhea (stool frequency), rectal bleeding, and abdominal pain in patients with ulcerative colitis. It is nephrotoxic, so a decrease in urine output is the most serious concern.

- **Options A, C, & D:** These are also side effects but are less serious.

70. The client is having an arteriogram. During the procedure, the client tells the nurse, "I'm feeling really hot." Which response would be best?

- A. "You are having an allergic reaction. I will get an order for Benadryl."
- B. "That feeling of warmth is normal when the dye is injected."
- C. "That feeling of warmth indicates that the clots in the coronary vessels are dissolving."
- D. "I will tell your doctor and let him explain to you the reason for the hot feeling that you are experiencing."

Correct Answer: Answer: B. "That feeling of warmth is normal when the dye is injected."

It is normal for the client to have a warm sensation when dye is injected. The client may have some discomfort from a needle stick. He/she may feel symptoms such as flushing in the face or other parts of the body when the dye is injected. The exact symptoms will depend on the part of the body being examined.

- **Option A:** An area of the groin or the artery in the wrist or hand will be cleaned for the procedure. The client will be given a mild sedative and pain medication to keep them comfortable throughout the procedure. The Radiologist will numb the insertion site and a very small tube called a catheter will be inserted into the vessel. A rapid sequence of X-rays is taken when the dye is injected into the vessel. Each time the contrast is injected, the client may experience a sensation of warmth.
- **Option C:** Warmth does not indicate that clots are dissolving. If the angiogram reveals a narrowed vessel, a balloon angioplasty or stent placement may be performed at the same time. When the procedure is completed, the catheter will be removed, and pressure will be held on the entry site for 10-20 minutes to stop any bleeding. The client may have a compression device applied to stop the bleeding from the angiogram site. This device may stay in place for 1-1 ½ hours.
- **Option D:** This statement indicates that the nurse believes that the hot feeling is abnormal, so it is incorrect. Once the angiogram is completed the client may be on bedrest for 4-6 hours or until he has recovered from sedation. The client will be allowed to eat and will be encouraged to drink fluids to flush the contrast dye from the system. During this time, the catheter insertion site will be watched closely, and blood pressure and pulse will be monitored.

71. Which of the following best describes thrombophlebitis?

- A. Inflammation and clot formation that result when blood components combine to form an aggregate body.
- B. Inflammation and blood clots that eventually become lodged within the pulmonary blood vessels.
- C. Inflammation and blood clots that eventually become lodged within the femoral vein.

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

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

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

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

72. The plan of care for clients with borderline personality should include:

- A. Limit setting and flexibility in schedule.
- B. Giving medications to prevent acting out.
- C. Restricting her from other clients.
- D. Ensuring she adheres to certain restrictions.

Correct Answer: D. Ensuring she adheres to certain restrictions.

The client is manipulative. The client must be informed about the policies, expectations, rules, and regulations upon admission. The nurse must be quite clear about establishing the boundaries of the therapeutic relationship to ensure that neither the client's nor the nurse's boundaries are violated.

- **Option A:** Limits should be firmly and consistently implemented. Flexibility and bargaining are not therapeutic in dealing with a manipulative client. Regardless of the clinical setting, the nurse must provide structure and limit setting in the therapeutic relationship; in a clinic setting, this may mean seeing the client for scheduled appointments of a predetermined length rather than whenever the client appears and demands the nurse's immediate attention.
- **Option B:** There is no specific medication prescribed for this condition. Medications are in no way curative for any personality disorder; they should be viewed as an adjunct to psychotherapy so that the patient may productively engage in psychotherapy.
- **Option C:** This is not part of the care plan. Interaction with other clients are allowed, but the client should be observed and given limits in her attempt to manipulate and dominate others. It is important to teach basic communication skills such as eye contact, active listening, taking turns talking, validating the meaning of another's communication, and using "I" statements.

73. A client with which of the following conditions may experience a dangerous or fatal side effect of theophylline?

- A. Cardiac disorder
- B. Diabetes

- C. Renal disease
- D. Hepatic disease

Correct Answer: A. Cardiac disorder

A client with a heart condition may experience dangerous stimulation from this drug. Use cautiously in patients who have cardiac arrhythmias (excluding bradyarrhythmias), as it may exacerbate arrhythmias. Theophylline should be administered cautiously with all the other choices, but the consequences are most dangerous or possibly fatal for clients with heart conditions.

- **Option B:** Use cautiously in patients with hyperthyroidism, as increased theophylline clearance may occur. Theophylline has a very narrow therapeutic window, and its interaction with various other drugs has led to the limitation of its use. The serum theophylline concentrations require monitoring directly to avoid toxicity as the adverse effects of theophylline are related to its plasma concentration and have been observed when plasma concentrations exceed 20 mg/L. Some patients have also experienced adverse effects at low plasma concentrations. The dose gradually increases until achieving therapeutic plasma concentrations. This approach reduces side effects.
- **Option C:** Serum theophylline concentrations should be checked after the initiation of therapy, before increasing dose and if any signs or symptoms of toxicity appear. Worsening of the current illness, an occurrence of a new illness or any change in the patient's treatment protocol that may alter theophylline clearance should also prompt the physician to check serum concentrations of theophylline. Attention should also be necessary for the infusion site.
- **Option D:** Use cautiously in patients with a hepatic impairment such as cirrhosis, cholestasis, acute hepatitis because there is an increased risk of severe and potentially fatal complications. This risk exists because clearance decreases by 50% or more in these patients. Frequent monitoring and dose reduction of theophylline are necessary for these patients.

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

- A. The patient says that her right leg aches all night
- B. The right calf is warm to the touch and is larger than the left calf
- C. The patient is unable to remember her husband's first name
- D. There are multiple ecchymotic areas on the patient's arms

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

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

- **Option A:** The right leg symptoms are consistent with a resolving deep vein thrombosis. Around half of people who have had a DVT will experience some degree of chronic discomfort and around 15% of people will experience moderate to severe chronic pain and swelling. This is called post-thrombotic syndrome (PTS) and is caused partly by damage or leftover scar tissue inside the vein.
- **Option B:** The patient may need teaching about keeping the right leg elevated above the heart to reduce swelling and pain. The client may also wear graduated compression stockings. These

specially fitted stockings are tight at the feet and become gradually loosened up on the leg, creating gentle pressure that keeps blood from pooling and clotting.

- **Option D:** The presence of ecchymoses may point to a need to do more patient teaching about avoiding injury while taking anticoagulants but does not indicate that the physician needs to be called.

75. A patient in the cardiac unit is concerned about the risk factors associated with atherosclerosis. Which of the following are hereditary risk factors for developing atherosclerosis?

- A. Family history of heart disease
- B. Overweight
- C. Smoking
- D. Age

Correct Answer: A. Family history of heart disease

Family history of heart disease is an inherited risk factor that is not subject to a lifestyle change. Having a first-degree relative with heart disease has been shown to significantly increase risk. ASCVD is multifactorial etiology. The most common risk factors include hypercholesterolemia (LDL-cholesterol), hypertension, diabetes mellitus, cigarette smoking, age (male older than 45 years and female older than 55 years), male gender, and strong family history (male relative younger than 55 years and female relative younger than 65 years).

- **Option B:** Also, a sedentary lifestyle, obesity, diets high in saturated and trans-fatty acids, and certain genetic mutations contribute to risk. While a low level of high-density lipoprotein (HDL)-cholesterol is considered a risk factor, pharmacological therapy increasing HDL-cholesterol has yielded negative results raising concerns about the role of HDL in ASCVD.
- **Option C:** Smoking is a risk factor that is subject to lifestyle change and can reduce risk significantly. For the most part atherosclerosis and its pathology can be prevented. All healthcare workers who look after patients should educate patients on the need to exercise regularly, discontinue smoking, maintain healthy body weight, eat a healthy diet, and remain compliant with the medications used to lower lipids.
- **Option D:** Advancing age increases the risk of atherosclerosis but is not a hereditary factor. It has been reported that 75% of acute myocardial infarctions occur from plaque rupture and the highest incidence of plaque rupture was observed in men over 45 years; whereas, in women, the incidence increases beyond age 50 years.

76. A female adult client admitted with a gunshot wound to the abdomen is transferred to the intensive care unit after an exploratory laparotomy. Which assessment finding suggests that the client is experiencing acute renal failure (ARF)?

- A. Blood urea nitrogen (BUN) level of 22 mg/dl.
- B. Serum creatinine level of 1.2 mg/dl.
- C. Temperature of 100.2° F (37.8° C).

D. Urine output of 400 ml/24 hours.

Correct Answer: D. Urine output of 400 ml/24 hours

ARF, characterized by abrupt loss of kidney function, commonly causes oliguria, which is demonstrated by a urine output of 400 ml/24 hours. Renal causes of oliguria arise as a result of tubular damage. As a result of the tubular damage, the kidney loses its normal function i.e., production of urine while excreting the waste metabolites.

- **Option A:** BUN level of 22 mg/dl does not indicate ARF. Urea, in contrast to serum creatinine, is not secreted but is reabsorbed by the renal tubules. The increased reabsorption of sodium and water, rather than the reduced GFR, enhances reabsorption of urea and increases BUN levels.
- **Option B:** A serum creatinine level of 1.2 mg/dl isn't diagnostic of ARF. Acute renal failure occurs when the serum creatinine level increases by 0.5 mg/dL or more within 2 weeks or less. In cases of chronic kidney disease where the baseline creatinine is greater than 2.5 mg/dL, a 20% increase from baseline is required.
- **Option C:** A temperature of 100.2° F (37.8° C) wouldn't result from this disorder. The decrease in renal blood flow (prerenal azotemia): Prerenal AKI occurs secondary to either an absolute reduction in extracellular fluid volume or a reduction in circulating volume despite a normal total fluid volume, e.g., in advanced cirrhosis, heart failure, and sepsis.

77. Cholinergics are contraindicated in:

- A. Tachycardia
- B. Hypothyroidism
- C. Hypotension
- D. Asthma

Correct Answer: D. Asthma

Bronchial asthma is a contraindication of cholinergic because the administration of cholinergic will cause bronchoconstriction. Bronchial muscles constrict, precipitating an attack of bronchial asthma. Mortality from acute poisoning generally results from respiratory failure due to a combination of neuromuscular weakness, depression of the CNS respiratory center, bronchoconstriction, and excessive respiratory secretions.

- **Option A:** Cholinergic medications can cause muscarinic and/or nicotinic adverse effects. Acetylcholine hyperpolarizes the SA nodal cells through M2 receptors of the heart. As a result, bradycardia or even cardiac arrest may occur. At the A-V node and Purkinje fibers, conduction slows, and a complete A-V block may occur. Due to non-uniform vagal innervation of atrial fibers, people may have a predisposition to atrial fibrillation or flutter.
- **Option B:** Anticholinesterases have medical use for the treatment of myasthenia gravis, reversal of neuromuscular blockade, Alzheimer's disease. The initial first-line therapy for most patients is anticholinesterase medication, usually pyridostigmine. Neostigmine is also available but not commonly used.
- **Option C:** M3 receptors present on the blood vessels mediated dilation, causing a fall in blood pressure and flushing. The peripheral nervous system consists of the autonomic and the somatic nervous system. The autonomic nervous system can be further broken down into sympathetic and parasympathetic nervous systems. The parasympathetic nervous system regulates various organ and gland functions and primarily uses acetylcholine as its primary neurotransmitter, as do all the

cholinomimetics.

78. Which element in the circular chain of infection can be eliminated by preserving skin integrity?

- A. Host
- B. Reservoir
- C. Mode of transmission
- D. Portal of entry

Correct Answer: D. Portal of entry

In the circular chain of infection, pathogens must be able to leave their reservoir and be transmitted to a susceptible host through a portal of entry, such as broken skin. The portal of entry refers to the manner in which a pathogen enters a susceptible host. The portal of entry must provide access to tissues in which the pathogen can multiply or a toxin can act. Often, infectious agents use the same portal to enter a new host that they used to exit the source host.

- **Option A:** The final link in the chain of infection is a susceptible host. Susceptibility of a host depends on genetic or constitutional factors, specific immunity, and nonspecific factors that affect an individual's ability to resist infection or to limit pathogenicity. An individual's genetic makeup may either increase or decrease susceptibility.
- **Option B:** The reservoir of an infectious agent is the habitat in which the agent normally lives, grows, and multiplies. Reservoirs include humans, animals, and the environment. The reservoir may or may not be the source from which an agent is transferred to a host.
- **Option C:** An infectious agent may be transmitted from its natural reservoir to a susceptible host in different ways. There are different classifications for modes of transmission. In direct transmission, an infectious agent is transferred from a reservoir to a susceptible host by direct contact or droplet spread. Indirect transmission refers to the transfer of an infectious agent from a reservoir to a host by suspended air particles, inanimate objects (vehicles), or animate intermediaries (vectors).

79. Since admission 4 days ago, a client has refused to take a shower, stating, "There are poison crystals hidden in the showerhead. They'll kill me if I take a shower." Which nursing action is most appropriate?

- A. Dismantling the showerhead and showing the client that there is nothing in it.
- B. Explaining that other clients are complaining about the client's body odor.
- C. Asking a security officer to assist in giving the client a shower.
- D. Accepting these fears and allowing the client to take a sponge bath.

Correct Answer: D. Accepting these fears and allowing the client to take a sponge bath

By acknowledging the client's fears, the nurse can arrange to meet the client's hygiene needs in another way. Attempt to understand the significance of these beliefs to the client at the time of their presentation. Important clues to underlying fears and issues can be found in the client's seemingly illogical fantasies. Recognize the client's delusions as the client's perception of the environment. Recognizing the client's perception can help you understand the feelings he or she is experiencing.

- **Option A:** Because these fears are real to the client, providing a demonstration of reality wouldn't be effective at this time. Interact with clients on the basis of things in the environment. Try to distract the client from their delusions by engaging in reality-based activities (e.g., card games, simple arts and crafts projects etc). When thinking is focused on reality-based activities, the client is free of delusional thinking during that time. Helps focus attention externally.
- **Option B:** Initially do not argue with the client's beliefs or try to convince the client that the delusions are false and unreal. Arguing will only increase a client's defensive position, thereby reinforcing false beliefs. This will result in the client feeling even more isolated and misunderstood.
- **Option C:** These would violate the client's rights by shaming or embarrassing the client. Do not touch the client; use gestures carefully. Suspicious clients might misinterpret touch as either aggressive or sexual in nature and might interpret it as a threatening gesture. People who are psychotic need a lot of personal space.

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

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

Correct Answer: A. 36%

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

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

81. The nurse is assigned to care for the client with a Steinmann pin. During pin care, she notes that the LPN uses sterile gloves and Q-tips to clean the pin. Which action should the nurse take at this time?

- A. Assisting the LPN with opening sterile packages and peroxide.
- B. Telling the LPN that clean gloves are allowed.

- C. Telling the LPN that the registered nurse should perform pin care.
- D. Asking the LPN to clean the weights and pulleys with peroxide.

Correct Answer: A. Assisting the LPN with opening sterile packages and peroxide

The nurse is performing the pin care correctly when she uses sterile gloves and Q-tips. All pins and wire sites must be cleaned daily. Basic pin care will be performed once daily by the hospital nursing staff prior to discharge from the hospital. Following discharge, the patient and family will go to the clinic for pin care teaching and instructions.

- **Option B:** During pin care, the sterile technique is utilized and sterile gloves are needed. The approach to pin care should occur in a stepwise fashion. If step one is effective there is no need to go further and pins can be wrapped with gauze. If step one is not effective, please continue until effective pin care has been achieved.
- **Option C:** A licensed practical nurse can perform pin care. Pin care is recommended during showers, after pool therapy, or swimming in the pool or ocean (ocean saltwater is good for pin sites). Ideally, pin sites are cleaned when the surrounding skin and gauze are soft. This should make removal of gauze and cleaning of pins less painful.
- **Option D:** There is no need to clean the weights. The purpose of the cleaning is to prevent the skin from attaching to the pins and wires and to clean and inspect the area to decrease the chance of infection.

82. Which of the following would best indicate to the nurse that a depressed client is improving?

- A. Reduced levels of anxiety
- B. Changes in vegetative signs
- C. Compliance with medications
- D. Requests to talk to the nurse

Correct Answer: B. Changes in vegetative signs

Vegetative signs such as insomnia, anorexia, psychomotor retardation, constipation, diminished libido, and poor concentration are biological responses to depression. Improvement in these signs indicates a lifting of the depression. Give step-by-step reminders such as "Brush the teeth "Clean the outer surfaces of your upper teeth, then your lower teeth. . ."Encourage the client to get up and dress and to stay out of bed during the day. Minimizing sleep during the day increases the likelihood of sleep at night. Encourage small, high-calorie, and high-protein snacks and fluids frequently throughout the day and evening if weight loss is noted.

- **Option A:** Reduced levels of anxiety do not indicate an improvement in depressive symptoms. Eventually involve the client in group activities (e.g., group discussions, art therapy, dance therapy). Socialization minimizes feelings of isolation. Genuine regard for others can increase feelings of self-worth.
- **Option C:** Compliance with medications does not indicate improvement in depression. Help the client identify negative thinking/thoughts. Teach the client to reframe and/or refute negative thoughts. Negative ruminations add to feelings of hopelessness and are part of a depressed person's faulty thought processes. Intervening in this process helps in a healthier and more useful outlook in life.

- **Option D:** Requests to talk to the nurse vary. Requests may show trust in the nurse but are not a sign that depression has diminished. Initially, provide activities that require minimal concentration (e.g., drawing, playing simple board games). Depressed people lack concentration and memory. Activities that have no “right or wrong” or “winner or loser” minimizes opportunities for the client to put himself/herself down. Eventually maximize the client’s contacts with others (first one other, then two others, etc.).

83. A male client with cholelithiasis has a gallstone lodged in the common bile duct. When assessing this client, the nurse expects to note:

- A. Yellow sclera
- B. Light amber urine
- C. Circumoral pallor
- D. Black, tarry stools

Correct Answer: A. Yellow sclera

Yellow sclera may be the first sign of jaundice, which occurs when the common bile duct is obstructed. Jaundice can be a sign of a common bile duct obstruction from an entrapped gallstone. In the presence of jaundice and abdominal pain, often, a procedure is an indication to go and retrieve the stone to prevent further sequelae.

- **Option B:** Urine normally is light amber. Usually, patients with symptoms from gallstones present with right upper abdominal pain after eating greasy or spicy foods. There is often nausea and vomiting. Pain can also be present in the epigastric area that radiates to the right scapula or mid-back.
- **Option C:** Circumoral pallor doesn’t occur in common bile duct obstruction; it is a sign of hypoxia, respectively. The classic physical exam finding is a positive Murphy’s sign, where the pain is elicited on deep palpation to the right upper quadrant underneath the rib cage upon deep inspiration.
- **Option D:** Black, tarry stools don’t occur in common bile duct obstruction; they are signs of GI bleeding. Progression of this condition is indicated by neurologic changes and hypotension (Reynold’s pentad). Other sequelae are acute pancreatitis with symptoms of midepigastic pain and intractable vomiting.

84. A 26-year-old client is diagnosed with scarlet fever. Which of the following is the most appropriate type of isolation for this client?

- A. Airborne
- B. Contact
- C. Droplet
- D. Standard

Correct Answer: Answer: C. Droplet.

Scarlet fever is an infection caused by Group A Streptococcus bacteria. This bacteria lives in the throat and nose and is highly contagious. It is spread by droplet transmission when infected individual coughs or sneezes.

85. A fifty-year-old client has a tracheostomy and requires tracheal suctioning. The first intervention in completing this procedure would be to:

- A. Change the tracheostomy dressing.
- B. Provide humidity with a trach mask.
- C. Apply oral or nasal suction.
- D. Deflate the tracheal cuff.

Correct Answer: C. Apply oral or nasal suction.

Before deflating the tracheal cuff, the nurse will apply oral or nasal suction to the airway to prevent secretions from falling into the lung. Dressing change and humidity do not relate to suctioning. Airway suctioning is a procedure routinely done in most care settings, including acute care, sub-acute care, long-term care, and home settings. Suctioning is performed when the patient is unable to effectively move secretions from the respiratory tract.

- **Option A:** Airways suctioning is indicated for multiple reasons. Most commonly suctioning is done for the removal of secretions from the respiratory tract, but sometimes also for removal of blood or other materials like meconium in specific cases. Airway suctioning is also performed for diagnostic purposes.
- **Option B:** 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. After preparation with appropriate equipment at the bedside and monitoring continuous heart rate and oxygen saturation (as available), the patient should be suctioned with appropriately sized equipment for their airway.
- **Option D:** After preparation with appropriate equipment at the bedside and monitoring continuous heart rate and oxygen saturation (as available), the patient should be suctioned with appropriately sized equipment for their airway.