Kevin's Review - 100 NCLEX Practice Questions

1. A 57-year-old client with a history of asthma is prescribed propranolol (Inderal) to control hypertension. Before administered propranolol, which of the following actions should the nurse take first?

A. Monitor the apical pulse rate.

B. Instruct the client to take medication with food.

C. Question the physician about the order.

D. Caution the client to rise slowly when standing.

Correct Answer: C. Question the physician about the order.

Propranolol and other beta-adrenergic blockers are contraindicated in a client with asthma, so the nurse should question the physician before giving the dose. Propranolol is also contraindicated in those with any lung pathologies, such as COPD, asthma, or emphysema. The pathophysiology of this mechanism is solely due to the effects that beta-2 receptors have on lung function. Normally, activation of beta-2 receptors vasodilates the smooth muscle in the lungs. When using agents like propranolol in patients with underlying lung issues, the blockage of beta-2 causes vasoconstriction of smooth muscle, worsening respiratory function.

- **Option A:** The client's apical pulse should always be checked before giving propranolol; if the pulse rate is extremely low, the nurse should withhold the drug and notify the physician. Whenever a patient is receiving propranolol therapy, it is beneficial to routinely monitor their blood pressure, pulse, and respiratory rate. It is especially important in those with coronary artery disease, COPD, or any other condition that beta-blockade might negatively affect.
- **Option B:** Beta-blockers are widely used in the management of cardiac conditions and thyrotoxicosis, and to reduce perioperative complications. Asthma and chronic obstructive pulmonary disease (COPD) have been classic contraindications to the use of beta-blockers because of their potential for causing bronchospasm.
- **Option D:** Propranolol is contraindicated in patients with asthma, chronic obstructive pulmonary disease (COPD), atrioventricular (AV) block, intermittent claudication, and psychosis. The most frequent adverse effects are lightheadedness, fatigue, dyspnea upon exertion, bronchospasm, insomnia, impotence, and apathy. Reducing the dose of propranolol frequently controls these adverse effects.

2. Which of the following pathologic processes is often associated with aseptic meningitis?

A. Ischemic infarction of cerebral tissue.

B. Childhood diseases of viral causation such as mumps.

C. Brain abscesses caused by a variety of pyogenic organisms.

D. Cerebral ventricular irritation from a traumatic brain injury.

Correct Answer: B. Childhood diseases of viral causation such as mumps.

Aseptic meningitis is caused principally by viruses and is often associated with other diseases such as measles, mumps, herpes, and leukemia. Aseptic meningitis is a term used to define inflammation of the brain meninges due to various etiologies with negative cerebrospinal fluid (CSF) bacterial cultures. It is one of the most common, usually benign, inflammatory disorders of the meninges. Viruses are a common etiology, however, there are many other infective and non-infective causes. Therefore, the

terms aseptic meningitis and viral meningitis are not interchangeable.

- **Option A:** Ischemic infarction of cerebral tissue can occur with tubercular meningitis. In tuberculous meningitis, the meninges are seeded by MTB and form sub-ependymal collections called Rich foci. These foci can rupture into the subarachnoid space and cause an intense inflammatory response that causes the symptoms of meningitis.
- **Option C:** Incidences of brain abscess are high in bacterial meningitis. Several possible risk factors for bacterial meningitis have been identified. Patients with an abnormal communication between the nasopharynx and subarachnoid space are thought to be at increased risk. This abnormal communication can be due to a congenital abnormality or a result of trauma. Patients who have undergone neurosurgery, sustained skull fractures, or have cochlear implants are also at increased risk.
- **Option D:** Traumatic brain injury could lead to bacterial (not viral) meningitis. Nosocomial bacterial meningitis is the result of the manipulation of the meninges during neurosurgical procedures. Invasion of bacteria into the subarachnoid space results in inflammation of the meninges.

3. What is the peak age range for acquiring acute lymphocytic leukemia (ALL)?

A. 4 to 12 years.

B. 20 to 30 years

C. 40 to 50 years

D. 60 to 70 years

Correct Answer: A. 4 to 12 years.

The peak incidence of Acute Lymphocytic Leukemia (ALL) is 4 years of age. It is uncommon after 15 years of age. It is diagnosed in about 4000 people in the United States each year with the majority being under the age of 18. It is the most common malignancy of childhood. The peak age of diagnosis is between two and ten years of age.

- **Option B:** There are rare incidences of ALL between the ages of 20 to 30 years. Acute Lymphocytic Leukemia is more common in children with Trisomy 21 (Down syndrome), neurofibromatosis type 1, Bloom syndrome, and ataxia telangiectasia. All are common in children between two and three years of age.
- **Option C:** Adults between 40 to 50 years old very rarely have cases of ALL. Acute Lymphocytic Leukemia is a disease with low incidence overall in population studies. The incidence of Acute Lymphocytic Leukemia is about 3.3 cases per 100,000 children. Survival rates for ALL have improved dramatically since the 1980s, with a current five-year overall survival rate estimated at greater than 85 percent.
- **Option D:** Prognosis among older adults above 60 years old is poor. Prognosis is diminished in children when diagnosed in infants less than one year of age and in adults. It is more favorable for children. Association of the MLL gene in children at 11q23 chromosome is associated with poor prognosis.

4. Cristina undergoes a biopsy of a suspicious lesion. The biopsy report classifies the lesion according to the TNM staging system as follows: TIS, N0, M0. What does this classification mean?

A. No evidence of primary tumor, no abnormal regional lymph nodes, and no evidence of distant metastasis.

B. Carcinoma in situ, no abnormal regional lymph nodes, and no evidence of distant metastasis.

C. Can't assess tumor or regional lymph nodes and no evidence of metastasis.

D. Carcinoma in situ, no demonstrable metastasis of the regional lymph nodes, and ascending degrees of distant metastasis.

Correct Answer: B. Carcinoma in situ, no abnormal regional lymph nodes, and no evidence of distant metastasis

TIS, N0, M0 denotes carcinoma in situ, no abnormal regional lymph nodes, and no evidence of distant metastasis.

- **Option A:** No evidence of primary tumor, no abnormal regional lymph nodes, and no evidence of distant metastasis is classified as T0, N0, M0.
- **Option C:** If the tumor and regional lymph nodes can't be assessed and no evidence of metastasis exists, the lesion is classified as TX, NX, M0.
- **Option D:** A progressive increase in tumor size, no demonstrable metastases of the regional lymph nodes, and ascending degrees of distant metastasis is classified as T1, T2, T3, or T4; N0; and M1, M2, or M3.

5. For Rico who has chronic pancreatitis, which nursing intervention would be most helpful?

A. Allowing liberalized fluid intake

B. Counseling to stop alcohol consumption

C. Encouraging daily exercise

D. Modifying dietary protein

Correct Answer: B. Counseling to stop alcohol consumption.

Chronic pancreatitis typically results from repeated episodes of acute pancreatitis. More than half of chronic pancreatitis cases are associated with alcoholism. Counseling to stop alcohol consumption would be the most helpful for the client. Explore the availability of treatment programs and rehabilitation of chemical dependency if indicated.

- **Option A:** Resume oral intake with clear liquids and advance diet slowly to provide a high-protein, high-carbohydrate diet, when indicated. Oral feedings given too early in the course of illness may exacerbate symptoms. Loss of pancreatic function and reduced insulin production may require the initiation of a diabetic diet.
- **Option C:** Daily exercise would be helpful but not the most beneficial intervention. Review the importance of initially continuing a bland, low-fat diet with frequent small feedings and restricted caffeine, with a gradual resumption of a normal diet within individual tolerance.
- **Option D:** Dietary protein modification is not necessary for chronic pancreatitis. Maintain NPO status and gastric suctioning in the acute phase. Prevents stimulation and release of pancreatic enzymes (secretin), released when chyme and HCl enter the duodenum.

6. A nurse in the emergency department is observing a 4-year-old child for signs of increased intracranial pressure after a fall from a bicycle, resulting in head trauma. Which of the following signs or symptoms would be cause for concern?

A. Bulging anterior fontanel.

B. Repeated vomiting.

C. Signs of sleepiness at 10 PM.

D. Inability to read short words from a distance of 18 inches.

Correct Answer: B. Repeated vomiting.

Increased pressure caused by bleeding or swelling within the skull can damage delicate brain tissue and may become life threatening. Repeated vomiting can be an early sign of pressure as the vomit center within the medulla is stimulated. Clinical suspicion for intracranial hypertension should be raised if a patient presents with the following signs and symptoms: headaches, vomiting, and altered mental status varying from drowsiness to coma.

- **Option A:** The anterior fontanel is closed in a 4-year-old child. The average closure time of the anterior fontanelle ranges from 13 to 24 months. Infants of African descent statically have larger fontanelles that range from 1.4 to 4.7 cm, and in terms of sex, the fontanelles of male infants will closer sooner compared to female infants.
- **Option C:** Evidence of sleepiness at 10 PM is normal for a four year old. Newborns spend most of their day sleeping, and they only wake up to be fed, on the other hand, 1-year-old infants sleep for 10 to 12 hours at night without waking. The coordination between biological rhythm and sleep-wake cycle develops over the first six months of life.
- **Option D:** The average 4-year-old child cannot read yet, so this too is normal. Most children learn to read by 6 or 7 years of age. Some children learn at 4 or 5 years of age. Even if a child has a head start, she may not stay ahead once school starts. The other students most likely will catch up during the second or third grade.

7. You are a school nurse. Which action will you take to have the most impact on the incidence of infectious disease in the school?

A. Provide written information about infection control to all patients.

B. Ensure that students are immunized according to national guidelines.

C. Make soap and water readily available in the classrooms.

D. Teach students how to cover their mouths when coughing.

Correct Answer: B. Ensure that students are immunized according to national guidelines.

The incidence of once-common infectious diseases such as measles, chickenpox, and mumps has been most effectively reduced by immunization of all school-aged children. School immunization requirements exist to protect students and members of their community from serious vaccine-preventable diseases by ensuring high vaccination rates.

- **Option A:** Relevant studies showed that implementation of health education for school students was conducive for students to consciously adopt healthy behaviors and lifestyle, eliminating or mitigating risk factors that affect the spread of infectious diseases, preventing infectious diseases,

and promoting health and improving quality of life.

- **Option C:** Soap and water are also helpful in reducing the incidence of infectious diseases at school. Alcohol-based antiseptics for hand hygiene are an appealing innovation because of their efficacy in reducing hand contamination and their ease of use, especially when sinks and supplies for hand washing are limited.
- **Option D:** Recommended cough etiquette maneuvers did not block the release and dispersion of a variety of different diameter droplets to the surrounding environment. Droplets smaller than one-micron size dominate the total number of droplets leaked when practicing assessed maneuvers.

8. When caring for a male client with severe impetigo, the nurse should include which intervention in the plan of care?

A. Placing mitts on the client's hands.

B. Administering systemic antibiotics as prescribed.

C. Applying topical antibiotics as prescribed.

D. Continuing to administer antibiotics for 21 days as prescribed.

Correct Answer: B. Administering systemic antibiotics as prescribed.

Impetigo is a contagious, superficial skin infection caused by beta-hemolytic streptococci. If the condition is severe, the physician typically prescribes systemic antibiotics for 7 to 10 days to prevent glomerulonephritis, a dangerous complication. Systemic antibiotics should be prescribed for all cases of bullous impetigo and cases of non-bullous impetigo with more than five lesions, deep tissue involvement, systemic signs of infection, lymphadenopathy, or lesions in the oral cavity.

- **Option A:** The client's nails should be kept trimmed to avoid scratching; however, mitts aren't necessary. Children with impetigo should maintain good personal hygiene and avoid other children during the active outbreak. It is important to wash hands, linens, clothes, and affected areas that may have come into contact with infected fluids.
- **Option C:** Topical antibiotics are less effective than systemic antibiotics in treating impetigo. Topical antibiotics alone or in conjunction with systemic antibiotics are used to treat impetigo. Antibiotic coverage should cover both S aureus and S pyogenes (i.e. GABHS). While untreated impetigo is often self-limiting, antibiotics decrease the duration of illness and spread of lesions.
- **Option D:** Without treatment, the infection heals in 14-21 days. About 20% of cases resolve spontaneously. Scarring is rare but some patients may develop pigmentation changes. Some patients may develop ecthyma. With treatment, cure occurs within 10 days. Neonates may develop meningitis. A rare complication is acute post-streptococcal glomerulonephritis, which occurs 2-3 weeks after the skin infection.

9. All of the following characteristics would indicate to the nurse that an elder client might experience undesirable effects of medicines except:

A. Increased oxidative enzyme levels.

B. Alcohol taken with medication.

C. Medications containing magnesium.

D. Decreased serum albumin.

Correct Answer: A. Increased oxidative enzyme levels.

Oxidative enzyme levels decrease in the elderly, which affects the disposition of medication and can alter the therapeutic effects of medication. Oxidative stress causes cells and entire organisms to age. If reactive oxygen species accumulate, this causes damage to the DNA as well as changes in the protein molecules and lipids in the cell. The cell ultimately loses its functionality and dies. Over time, the tissue suffers, and the body ages.

- **Option B:** Alcohol has a smaller water distribution level in the elderly, resulting in higher blood alcohol levels. Alcohol also interacts with various drugs to either potentiate or interfere with their effects. The older one gets, the longer alcohol stays in the system. So it's more likely to be there when the client takes medicine. And alcohol can affect the way the meds work. It can also lead to serious side effects.
- **Option C:** Magnesium is contained in a lot of medications older clients routinely obtain over the counter. Magnesium toxicity is a real concern. Older adults have lower dietary intakes of magnesium than younger adults. In addition, magnesium absorption from the gut decreases, and renal magnesium excretion increases with age. Older adults are also more likely to have chronic diseases or take medications that alter magnesium status, which can increase their risk of magnesium depletion
- **Option D:** Albumin is the major drug-binding protein. Decreased levels of serum albumin mean that higher levels of the drug remain free and that there are fewer therapeutic effects and increased drug interactions.

10. A walk-in client enters the clinic with a chief complaint of abdominal pain and diarrhea. The nurse takes the client's vital sign hereafter. What phrase of the nursing process is being implemented here by the nurse?

A. Assessment

B. Diagnosis

C. Planning

D. Implementation

Correct Answer: A. Assessment

Assessment is the first phase of the nursing process where a nurse collects information about the client. Assessment is the first step and involves critical thinking skills and data collection; subjective and objective. Subjective data involves verbal statements from the patient or caregiver. Objective data is measurable, tangible data such as vital signs, intake and output, and height and weight.

- **Option B:** Diagnosis is the formulation of the nursing diagnosis from the information collected during the assessment. The formulation of a nursing diagnosis by employing clinical judgment assists in the planning and implementation of patient care. The North American Nursing Diagnosis Association (NANDA) provides nurses with an up to date list of nursing diagnoses. A nursing diagnosis, according to NANDA, is defined as a clinical judgment about responses to actual or potential health problems on the part of the patient, family, or community.
- **Option C:** In Planning, the nurse sets achievable and measurable short and long-term goals. The planning stage is where goals and outcomes are formulated that directly impact patient care based on EDP guidelines. These patient-specific goals and the attainment of such assist in ensuring a positive outcome. Nursing care plans are essential in this phase of goal setting. Care plans provide

a course of direction for personalized care tailored to an individual's unique needs. Overall condition and comorbid conditions play a role in the construction of a care plan. Care plans enhance communication, documentation, reimbursement, and continuity of care across the healthcare continuum.

- **Option D:** Implementation is where nursing care is given. Implementation is the step which involves action or doing and the actual carrying out of nursing interventions outlined in the plan of care. This phase requires nursing interventions such as applying a cardiac monitor or oxygen, direct or indirect care, medication administration, standard treatment protocols, and EDP standards.

11. What is a characteristic of a statistical hypothesis?

A. It is a null hypothesis.

B. It predicts a positive relationship among variables.

C. It is a complex hypothesis.

D. It describes data-analysis methods.

Correct Answer: A. It is a null hypothesis.

Statistical hypotheses, called null hypotheses, state that there is no relationship between the independent and dependent variables. Hypothesis testing is used to assess the plausibility of a hypothesis by using sample data. The test provides evidence concerning the plausibility of the hypothesis, given the data.

- **Option B:** In hypothesis testing, an analyst tests a statistical sample, with the goal of providing evidence on the plausibility of the null hypothesis. Statistical analysts test a hypothesis by measuring and examining a random sample of the population being analyzed. All analysts use a random population sample to test two different hypotheses: the null hypothesis and the alternative hypothesis.
- **Option C:** The null hypothesis is usually a hypothesis of equality between population parameters; e.g., a null hypothesis may state that the population mean return is equal to zero.
- **Option D:** The alternative hypothesis is effectively the opposite of a null hypothesis (e.g., the population mean return is not equal to zero). Thus, they are mutually exclusive, and only one can be true. However, one of the two hypotheses will always be true.

12. A nurse is monitoring the amount of lochia drainage in a client who is 2 hours postpartum and notes that the client has a saturated perineal pad in 1 hour. The nurse reports the amount of lochial flow as:

A. Scanty

B. Light

C. Heavy

D. Excessive

Correct Answer: C. Heavy

Heavy lochial discharge is a saturated menstrual pad in 1 hour. The woman can expect to see fresh red or browny-red blood loss. The flow of blood may be quite heavy, soaking a maternity pad every few

hours. Don't be alarmed if there are one or two quite large blood clots, they may even be as large as a plum, or the woman may pass several smaller ones about the same size as grapes. They are all just remnants of the placenta coming out of the body as it's no longer needed.

- **Option A:** Scanty = less than 2.5 cm on a menstrual pad in 1 hour.16. After three weeks: Any blood loss at this stage should be a pale, yellowish-white in colour – or the woman may find there is no blood at all.
- **Option B:** Light = less than 10 cm on a menstrual pad in 1 hour. After one week, the blood should now have turned a pinky brown colour and the stain on maternity pads should be getting smaller and lighter. The pad shouldn't be soaking at any time and the woman should let her midwife know if she thinks she might be passing too much blood after one week. She may pass little blood clots, about the size or a raisin or smaller. This is all totally normal.
- **Option D:** Excessive = menstrual pad saturated in 15 minutes. If the woman passes large blood clots after the first 24 hours, or she continues to pass blood clots after one week, it is important to contact a midwife or doctor straight away.

13. A client with Addison's disease has been admitted with a history of nausea and vomiting for the past 3 days. The client is receiving IV glucocorticoids (Solu-Medrol). Which of the following interventions would the nurse implement?

A. Daily weights

B. Intake/output measurements

C. Sodium and potassium levels monitored

D. Glucometer readings as ordered

Correct Answer: D. Glucometer readings as ordered

IV glucocorticoids raise the glucose levels and often require coverage with insulin. Cortisone and prednisone replace cortisol deficits, which will promote sodium reabsorption. Fludrocortisone is a mineralocorticoid for patients who require aldosterone replacement to promote sodium and water replacement. Acute adrenal insufficiency is a medical emergency requiring immediate fluid and corticosteroid administration. If treated for adrenal crisis, the patient requires IV hydrocortisone initially; usually by the second day, administration can be converted to an oral form of replacement.

- **Option A:** Daily weights are unnecessary. Monitor trends in weight. This provides documentation of weight loss trends. Weight loss is a common manifestation of adrenal insufficiency.
- **Option B:** Intake/output measurements are not necessary at this time. Assess vital signs, especially noting BP and HR for orthostatic changes. A BP drop of more than 15 mm Hg when changing from supine to sitting position, with a concurrent elevation of 15 beats per min in HR, indicates reduced circulating fluids.
- **Option C:** Sodium and potassium levels would be monitored when the client is receiving mineralocorticoids. Abnormal laboratory findings include hyperkalemia (related to aldosterone deficiency and decreased renal perfusion), hyponatremia (related to decreased aldosterone and impaired free water clearance), and increase in blood urea nitrogen (related to decreased glomerular filtration from).

14. Nurse Tony was caring for a 41-year-old female client. Which behavior by the client indicates adult cognitive development?

A. Generates new levels of awareness.

B. Assumes responsibility for her actions.

C. Has maximum ability to solve problems and learn new skills.

D. Her perception is based on reality.

Correct Answer: A. Generates new levels of awareness

An adult age 31 to 45 generates a new level of awareness. Two forms of intelligence—crystallized and fluid—are the main focus of middle adulthood. Our crystallized intelligence is dependent upon accumulated knowledge and experience—it is the information, skills, and strategies we have gathered throughout our lifetime. This kind of intelligence tends to hold steady as we age—in fact, it may even improve. For example, adults show relatively stable to increasing scores on intelligence tests until their mid-30s to mid-50s (Bayley & Oden, 1955). Fluid intelligence, on the other hand, is more dependent on basic information-processing skills and starts to decline even prior to middle adulthood. Cognitive processing speed slows down during this stage of life, as does the ability to solve problems and divide attention. However, practical problem-solving skills tend to increase. These skills are necessary to solve real-world problems and figure out how to best achieve the desired goal.

- **Option B:** During early adulthood, cognition begins to stabilize, reaching a peak around the age of 35. Early adulthood is a time of relativistic thinking, in which young people begin to become aware of more than simplistic views of right vs. wrong. They begin to look at ideas and concepts from multiple angles and understand that a question can have more than one right (or wrong) answer.
- **Option C:** The need for specialization results in pragmatic thinking—using logic to solve real-world problems while accepting contradiction, imperfection, and other issues. Finally, young adults develop a sort of expertise in either education or career, which further enhances problem-solving skills and the capacity for creativity.
- **Option D:** Since Piaget's theory, other developmental psychologists have suggested a fifth stage of cognitive development, known as postformal operational thinking (Basseches, 1984; Commons & Bresette, 2006; Sinnott, 1998). In postformal thinking, decisions are made based on situations and circumstances, and logic is integrated with emotion as adults develop principles that depend on contexts. This kind of thinking includes the ability to think in dialectics, and differentiates between the ways in which adults and adolescents are able to cognitively handle emotionally charged situations.

15. The nurse is caring for a client following the removal of the thyroid. Immediately post-op, the nurse should:

A. Maintain the client in a semi-Fowler's position with the head and neck supported by pillows

B. Encourage the client to turn her head side to side, to promote drainage of oral secretions

C. Maintain the client in a supine position with sandbags placed on either side of the head and neck

D. Encourage the client to cough and breathe deeply every 2 hours, with the neck in a flexed position

Correct Answer: A. Maintain the client in a semi-Fowler's position with the head and neck supported by pillows.

- Option A: Following a thyroidectomy, the client should be placed in semi-Fowler's position to decrease swelling that would place pressure on the airway.
- Options B, C, and D: These positions would increase the chances of post-operative complications that include bleeding, swelling, and airway obstruction.

16. Which of the following complications should the nurse carefully monitor a client with acute pancreatitis?

A. Myocardial Infarction

B. Cirrhosis

C. Peptic ulcer

D. Pneumonia

Correct Answer: D. Pneumonia

A client with acute pancreatitis is prone to complications associated with the respiratory system. The relationship between Mycoplasma pneumoniae infection and acute pancreatitis has been debated in the literature. In 1973, Mardh et al. reported four adult cases of acute pancreatitis following pneumonia due to MP; in three of the patients, the pancreatitis occurred in the 3rd week after the onset of cough, by which time the respiratory tract symptoms had almost disappeared.

- **Option A:** Myocardial infarction is not a complication of pancreatitis. Acute pancreatitis may cause kidney failure, which can be treated with dialysis if the kidney failure is severe and persistent.
- **Option B:** Kidney failure, not liver failure, can be caused by acute pancreatitis. Acute pancreatitis may cause kidney failure, which can be treated with dialysis if the kidney failure is severe and persistent.
- **Option C:** Pancreatitis cannot cause peptic ulcer. It is most commonly caused by a bacteria called H. pylori. H. pylorus is a gram-negative bacillus that is found within the gastric epithelial cells. This bacterium is responsible for 90% of duodenal ulcers and 70% to 90% of gastric ulcers. H. pylori infection is more prevalent among those with lower socioeconomic status and is commonly acquired during childhood.

17. James Perez, a nurse on a geriatric floor, is administering a dose of digoxin to one of his patients. The woman asks why she takes a different pill than her niece, who also has heart trouble. James replies that as people get older, liver and kidney function decline, and if the dose is as high as her niece's, the drug will tend to:

A. Have a shorter half-life.

B. Accumulate.

C. Have decreased distribution.

D. Have increased absorption.

Correct Answer: B. Accumulate.

The decreased circulation to the kidney and reduced liver function tend to allow drugs to accumulate and have toxic effects. Physiologic changes and disease associated with aging have an impact on pharmacokinetics and pharmacodynamics of medications. Altered drug response and increased adverse reactions are common amongst the elderly. The narrow therapeutic index of digoxin and pharmacokinetic changes associated with aging increases the risk of toxicity. The most important age-related change is that of deterioration of renal function and this is especially true for digoxin where poorer renal excretion demands lower dosage to avoid toxicity.

- **Option A:** Aging results in prolonged elimination half-life and decreased volume of distribution for digoxin [3]. A recent examination of more than 1000 nursing home residents in Canada showed that 32% of elderly heart failure patients are treated with digoxin, 80% of those received doses higher than recommended, serum digoxin levels were higher than toxic levels in 30% of patients, and 26% had other medications known to be a high risk of digoxin interaction prescribed.
- **Option C:** Drug distribution in the older person can vary due to changes in body composition and critical organ perfusion (due to reduced cardiac output and increased peripheral vascular resistance). The latter will also affect metabolism and elimination with decreased liver and kidney perfusion. The reduction in lean body mass in older people (as much as 19%) will cause an elevation in drug concentrations in muscles for drugs distributed in that manner (eg. digoxin).
- **Option D:** With increasing age, the amount of saliva produced is often reduced and this can reduce the rate of drug absorption by influencing the gastric pH. Furthermore, older people have reduced gastric acid secretion and reduced acidity (increased pH) which can delay the dissolution of oral medications. This is exacerbated by delayed gastric empty due to reduced peristaltic force that reduces the mechanical influences on medication mixing with gastric juices. The surface area for drug absorption is also decreased in aging due to intestinal atrophy which, combined with reduced concentration gradient due to the poorer blood flow, inhibits passive diffusion of drugs into the bloodstream further delaying absorption rate.

18. A female client is brought by ambulance to the hospital emergency room after taking an overdose of barbiturates is comatose. Nurse Trish would be especially alert for which of the following?

A. Epilepsy

B. Myocardial Infarction

C. Renal failure

D. Respiratory failure

Correct Answer: D. Respiratory failure

Barbiturates are CNS depressants; the nurse would be especially alert for the possibility of respiratory failure. Respiratory failure is the most likely cause of death from barbiturate overdose. Acute barbiturate toxicity may occur as the result of an intentional or unintentional overdose. Barbiturates have a history of abuse, New York City Health Department data showed 8469 cases of barbiturate poisoning in the period between 1957 through 1963. Overdose of phenobarbital symptoms includes CNS depression, respiratory failure, and hemodynamic instability. No antidote exists. Treatment of an overdose includes supportive care, activated charcoal (if taken orally), and urinary alkalinization. Case reports exist of successful treatment of overdosage with hemodialysis.

- **Option A:** Tolerance is a gradual loss of effectiveness such that the dose has to be increased to maintain the same effect. This effect is explainable in part from enzyme induction in the liver. Animal models have demonstrated tolerance. Withdrawal symptoms may occur: nervousness, tremor, agitation, and hypotension may develop 2 to 8 days after the abrupt discontinuation of barbiturates. Additionally, the patient may develop delirium or grand mal seizures.
- **Option B:** When given in IV anesthetics, barbiturates will produce a reduction in blood pressure and an increase in heart rate. Respiratory depression and apnea may occur.
- **Option C:** Extravasation of thiopental (a vesicant) may cause severe tissue necrosis. If extravasation occurs, treatment measures include hyaluronidase and phentolamine. Case reports of successful treatment also include topical application of a eutectic mixture of local anesthetics

(EMLA) along with the local injection of lidocaine.

19. All potassium-sparing diuretics:

A. Are required supplements during blood transfusion.

B. Enhance aldosterone action.

C. Cause hypokalemia.

D. Are weak diuretics.

Correct Answer: D. Are weak diuretics.

Potassium-sparing diuretics are not potent diuretics when used alone. They are used as adjunctive therapy with other diuretics to minimize potassium loss. Potassium-sparing diuretics, which include amiloride (Midamor), spironolactone (Aldactone), and eplerenone (Inspra), avoid the potential problem of potassium loss. But the opposite problem can occur. If potassium levels become too high, it can cause dangerous heart rhythm problems and even cardiac arrest.

- **Option A:** Potassium-sparing diuretics given during blood transfusions tend to cause hyperkalemia because potassium is present in the transfusion.
- **Option B:** These drugs block aldosterone's effects. Potassium-sparing diuretics, which include amiloride (Midamor), spironolactone (Aldactone), and eplerenone (Inspra), avoid the potential problem of potassium loss. But the opposite problem can occur. If potassium levels become too high, it can cause dangerous heart rhythm problems and even cardiac arrest.
- **Option C:** These drugs cause hyperkalemia, not hypokalemia People with high blood pressure or heart failure are often advised to limit how much salt or sodium they consume. One way to do that is to use salt substitutes, but these products are high in potassium—a quarter teaspoon of one brand contains about 800 mg of potassium. So, people who take potassium-sparing diuretics should avoid these products.

20. A 35-year-old male was knifed in the street fight, admitted through the ER, and is now in the ICU. An assessment of his condition reveals the following symptoms: respirations shallow and rapid, CVP 15 cm H2O, BP 90 mm Hg systolic, skin cold and pale, urinary output 60-100 mL/hr for the last 2 hours. Analyzing these symptoms, the nurse will base a nursing diagnosis on the conclusion that the client has which of the following conditions?

A. Hypovolemic shock

B. Cardiac tamponade

C. Wound dehiscence

D. Atelectasis

Correct Answer: B. Cardiac tamponade

All of the client's symptoms are found in both cardiac tamponade and hypovolemic shock **EXCEPT** the increase in urinary output. Cardiac tamponade is a medical or traumatic emergency that happens when enough fluid accumulates in the pericardial sac compressing the heart and leading to a decrease in cardiac output and shock. The diagnosis of cardiac tamponade is a clinical diagnosis that requires prompt recognition and treatment to prevent cardiovascular collapse and cardiac arrest.

- **Option A:** Patients with hypovolemic shock have severe hypovolemia with decreased peripheral perfusion. If left untreated, these patients can develop ischemic injury of vital organs, leading to multi-system organ failure. The first factor to be considered is whether the hypovolemic shock has resulted from hemorrhage or fluid losses, as this will dictate treatment.
- **Option C:** Dehiscence is a partial or total separation of previously approximated wound edges, due to a failure of proper wound healing. This scenario typically occurs 5 to 8 days following surgery when healing is still in the early stages. The causes of dehiscence are similar to the causes of poor wound healing and include ischemia, infection, increased abdominal pressure, diabetes, malnutrition, smoking, and obesity.
- **Option D:** The word “atelectasis” is Greek in origin; It is a combination of the Greek words atelez (ateles) and ektasiz (ektasis) meaning “imperfect” and “expansion” respectively. It results from the partial or complete, reversible collapse of the small airways leading to an impaired exchange of CO2 and O2 – i.e., intrapulmonary shunt. The incidence of atelectasis in patients undergoing general anesthesia is 90%.

21. If a blood pressure cuff is too small for a client, blood pressure readings taken with such a cuff may do which of the following?

A. Fail to show changes in blood pressure.

B. Produce a false-high measurement.

C. Cause sciatic nerve damage.

D. Produce a false-low measurement.

Correct Answer: B. Produce a false-high measurement.

Using an undersized blood pressure cuff produces a falsely elevated blood pressure because the cuff can’t record brachial artery measurements unless it’s excessively inflated.

- **Option A:** Using a blood pressure cuff that’s too large or too small can give inaccurate blood pressure readings. The doctor’s office should have several sizes of cuffs to ensure an accurate blood pressure reading. When one measures their blood pressure at home, it’s important to use the proper size cuff.
- **Option C:** The sciatic nerve wouldn’t be damaged by hyperinflation of the blood pressure cuff because the sciatic nerve is located in the lower extremity.
- **Option D:** The inflatable part of the blood pressure cuff should cover about 40% of the distance around (circumference of) the upper arm. The cuff should cover 80% of the area from the elbow to the shoulder.

22. Which of the following respiratory conditions is always considered a medical emergency?

A. Asthma

B. Cystic fibrosis (CF)

C. Epiglottitis

D. Laryngotracheobronchitis (LTB)

Correct Answer: C. Epiglottitis

Epiglottitis, acute and severe inflammation of the epiglottis, is always considered an acute medical emergency because it can lead to acute, life-threatening airway obstruction. Epiglottitis is a life-threatening condition that causes profound swelling of the upper airways which can lead to asphyxia and respiratory arrest.

- **Option A:** Asthma is a chronic disease; however, status asthmaticus and acute attacks require prompt treatment. Asthma is a chronic inflammatory disease of the airways, characterized by recurrent episodes of airflow obstruction resulting from edema, bronchospasm, and increased mucus production.
- **Option B:** CF is a chronic disease and is not considered an emergency. Researchers now know that cystic fibrosis is an autosomal recessive disorder of exocrine gland function most commonly affecting persons of Northern European descent at a rate of 1 in 3500. It is a chronic disease that frequently leads to chronic sinopulmonary infections and pancreatic insufficiency.
- **Option D:** Acute LTB requires close observation for airway obstruction, but this condition is not always an emergency. Laryngotracheobronchitis, as the name implies, refers to inflammation of the larynx, trachea, and bronchi. Cases of laryngotracheobronchitis can be more severe than laryngotracheitis as the former extends into the lower airway.

23. Immediately after delivery, the nurse-midwife assesses the neonate's head for signs of molding. Which factors determine the type of molding?

A. Fetal body flexion or extension

B. Maternal age, body frame, and weight

C. Maternal and paternal ethnic backgrounds

D. Maternal parity and gravidity

Correct Answer: A. Fetal body flexion or extension

Fetal attitude—the overall degree of body flexion or extension—determines the type of molding in the head of a neonate.

- **Option B:** When a baby is born in a cephalic position, pressure on the head in the birth canal may mold the head into an oblong shape. The mother's age, body frame, and weight do not affect the pressure.
- **Option C:** There is research that indicates that infant head molding, the application of pressure or bindings to cranial bones to alter their shapes, is prevalent among various Caribbean, Latino, European, African American, Asian, and Native American groups.
- **Option D:** Infants born by primiparous women showed significantly higher degrees of molding of the head than those born by multiparous women.

24. Respiratory regulation of acids and bases involves:

A. Hydrogen

B. Hydroxide

C. Oxygen

D. Carbon dioxide

Correct Answer: D. Carbon dioxide

Respiratory regulation of acid-base balance involves the elimination or retention of carbon dioxide. Arterial blood gas interpretation is best approached systematically. Interpretation leads to an understanding of the degree or severity of abnormalities, whether the abnormalities are acute or chronic, and if the primary disorder is metabolic or respiratory in origin.

- **Option A:** When assessing the acid-base balance, most ABG analyzers measure the pH and PaCO2 directly. A derivative of the Hasselbach equation calculates the serum bicarbonate (HCO3) and base deficit or excess. This calculation frequently results in a discrepancy from the measured due to the blood CO2 unaccounted for by the equation.
- **Option B:** The measured HCO3 uses a strong alkali that liberates all CO2 in serum, including dissolved CO2, carbamino compounds, and carbonic acid. The calculation only accounts for dissolved CO2; this measurement using a standard chemistry analysis will likely be called a "total CO2".
- **Option C:** A "blood gas analysis" can be performed on blood obtained from anywhere in the circulatory system (artery, vein, or capillary). An arterial blood gas (ABG) tests explicitly blood taken from an artery.

25. Every day for the past 2 weeks, a client with schizophrenia stands up during group therapy and screams, "Get out of here right now! The elevator bombs are going to explode in 3 minutes!" The next time this happens, how should the nurse respond?

A. "Why do you think there is a bomb in the elevator?"

B. "That is the same thing you said in yesterday's session."

C. "I know you think there are bombs in the elevator, but there aren't."

D. "If you have something to say, you must do it according to our group rules."

Correct Answer: C. "I know you think there are bombs in the elevator, but there aren't."

This is the most therapeutic response because it orients the client to reality. Identify feelings related to delusions. If a client believes someone is going to harm him/her, the client is experiencing fear. When people believe that they are understood, anxiety might lessen.

- **Option A:** 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:** These are condescending. 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 D:** This sounds punitive and could embarrass the client. 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.

26. A 77-year-old male client is admitted with a diagnosis of dehydration and change in mental status. He's being hydrated with I.V. fluids. When the nurse takes his vital signs, she notes he has a fever of 103°F (39.4°C) a cough producing yellow sputum and pleuritic chest pain. The nurse suspects this client may have which of the following conditions?

A. Adult respiratory distress syndrome (ARDS)

B. Myocardial infarction (MI)

C. Pneumonia

D. Tuberculosis

Correct Answer: C. Pneumonia

Fever, productive cough, and pleuritic chest pain are common signs and symptoms of pneumonia.

- **Option A:** The client with ARDS has dyspnea and hypoxia with worsening hypoxia over time, if not treated aggressively.
- **Option B:** Pleuritic chest pain varies with respiration, unlike the constant chest pain during an MI; so this client most likely isn't having an MI.
- **Option D:** The client with TB typically has a cough producing blood-tinged sputum. A sputum culture should be obtained to confirm the nurse's suspicions.

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

A. Guiding nursing practice.

B. Studying the effects of nursing care on an outcome variable.

C. Developing survey instruments.

D. Developing nursing theory.

Correct Answers: A, C, D

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

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

populations. Rather, they are generalizable in a way that is particularly pertinent to nursing practice, in which there is an expectation that scientific findings, and nursing care itself, be tailored to unique individuals in their distinct contexts.

28. A 36-year-old male client is about to be discharged from the hospital after 5 days due to surgery. Which intervention should be included in the home health care nurse's instructions about measures to prevent constipation?

A. Discouraging the client from eating large amounts of roughage-containing foods in the diet.

B. Encouraging the client to use laxatives routinely to ensure adequate bowel elimination.

C. Instructing the client to establish a bowel evacuation schedule that changes every day.

D. Instructing the client to fill a 2-L bottle with water every night and drink it the next day.

Correct Answer: D. Instructing the client to fill a 2-L bottle with water every night and drink it the next day.

Adequate fluids and fiber in the diet are key to preventing constipation. Having the client fill a 2-L bottle with water every night and drink it the next day is one method for ensuring the client receives at least 2,000 ml of water daily. The client also should be instructed to drink any other fluids throughout the day.

- **Option A:** High fiber or roughage foods are encouraged. Assist the patient to take at least 20 g of dietary fiber (e.g., raw fruits, fresh vegetables, whole grains) per day. Fiber adds bulk to the stool and makes defecation easier because it passes through the intestine essentially unchanged.
- **Option B:** Laxatives should not be used routinely for bowel elimination. They should be used only as a last resort, because clients may become dependent on them. The use of laxatives or enemas is indicated for the short-term management of constipation.
- **Option C:** A regular bowel evacuation schedule should be established. Encourage a regular period for elimination. Most people defecate following the first daily meal or coffee, as a result of the gastrocolic reflex.

29. Nurse Andrei is caring for a client with multiple myeloma. During the review of the laboratory results. The nurse will monitor the client for which of the following conditions?

A. Hypermagnesemia

B. Hyperkalemia

C. Hypernatremia

D. Hypercalcemia

Correct Answer: D. Hypercalcemia

- **Option D:** Patients with multiple myeloma develop a bone disease that causes bone destruction. Calcium is released during this, causing an increase in serum calcium levels.
- **Options A, B, and C:** MM doesn't affect potassium, sodium, or magnesium levels.

30. A female client is admitted to the psychiatric clinic for treatment of anorexia nervosa. To promote the client's physical health, nurse Tair should plan to:

A. Severely restrict the client's physical activities.

B. Weigh the client daily, after the evening meal.

C. Monitor vital signs, serum electrolyte levels, and acid-base balance.

D. Instruct the client to keep an accurate record of food and fluid intake.

Correct Answer: C. Monitor vital signs, serum electrolyte levels, and acid-base balance

An anorexic client who requires hospitalization is in poor physical condition from starvation and may die as a result of arrhythmias, hypothermia, malnutrition, infection, or cardiac abnormalities secondary to electrolyte imbalances. Therefore, monitoring the client's vital signs, serum electrolyte level, and acid-base balance is crucial.

- **Option A:** Restricting the client's physical activities may worsen anxiety. Clients with anorexia appear slow, lethargic, and fatigued; they may be emaciated depending on the amount of weight loss; clients with bulimia may be underweight or overweight but are generally close to expected body weight for age and size.
- **Option B:** This is incorrect because a weight obtained after breakfast is more accurate than one obtained after the evening meal. When clients can eat, a diet of 1200 to 1500 calories per day is ordered, with gradual increases in calories until clients are ingesting adequate amounts for height, activity level, and growth needs; the nurse is responsible for monitoring meals and snacks and often initially will sit with a client during eating at a table away from other clients; after each meal or snack, clients may be required to remain in view of staff for 1 to 2 hours to ensure that they do not empty the stomach by vomiting.
- **Option D:** This would reward the client with attention for not eating and reinforce the control issues that are central to the underlying psychological problem; also, the client may record food and fluid intake inaccurately. The nurse can help clients begin to recognize emotions such as anxiety or guilt by asking them to describe how they are feeling and allowing adequate time for response.

31. The nurse would analyze an arterial pH of 7.46 as indicating:

A. Acidosis

B. Alkalosis

C. Homeostasis

D. Neutrality

Correct Answer: B. Alkalosis

Alkalosis is indicated by a pH above 7.45. A pH below 7.35 is an acidemia, and a pH above 7.45 is an alkalemia. Due to the importance of sustaining a pH level in the needed narrow range, the human body contains compensatory mechanisms.

- **Option A:** The human body experiences four main types of acid-based disorders: metabolic acidosis, metabolic alkalosis, respiratory acidosis, and respiratory alkalosis. If one of these conditions occurs, the human body should induce a counterbalance in the form of an opposite condition.

- **Option C:** To maintain homeostasis, the human body employs many physiological adaptations. One of these is maintaining an acid-base balance. In the absence of pathological states, the pH of the human body ranges between 7.35 to 7.45, with the average at 7.40.
- **Option D:** Arterial blood gas (ABG) sampling, is a test often performed in an inpatient setting to assess the acid-base status of a patient. A needle is used to draw blood from an artery, often the radial and the blood is analyzed to determine parameters such as the pH, pC02, pO2, HCO3, oxygen saturation, and more.

32. Adequate fluid replacement and vasopressin replacement are objectives of therapy for which of the following disease processes? Adequate fluid replacement and vasopressin replacement are objectives of therapy for which of the following disease processes?

A. Diabetes mellitus

B. Diabetes insipidus

C. Diabetic ketoacidosis

D. Syndrome of inappropriate antidiuretic hormone secretion (SIADH)

Correct Answer: B. Diabetes insipidus

Maintaining adequate fluid and replacing vasopressin are the main objectives in treating diabetes insipidus.

- **Option A:** Diabetes is a chronic condition associated with abnormally high levels of sugar (glucose) in the blood. Insulin produced by the pancreas lowers blood glucose.
- **Option C:** Diabetic ketoacidosis is a result of severe insulin insufficiency.
- **Option D:** An excess of antidiuretic hormone leads to SIADH, causing the patient to retain fluid.

33. In a transplant client, the action of cyclosporine is to:

A. Defend the body against foreign antigens.

B. Inhibit T cells in response to antigens.

C. Inhibit B cell immunoglobulin.

D. Intensify the production of T lymphocytes.

Correct Answer: B. Inhibit T cells in response to antigens.

The primary action of cyclosporine is to inhibit T-cell generation in response to transplant antigens. In solid organ transplantation, it has clinical use for the treatment of organ rejection in kidney, liver, and heart allogeneic transplants.

- **Option A:** The mechanism of action of cyclosporine is as a calcineurin inhibitor, a cytochrome P450 3A4 inhibitor, and a P-glycoprotein inhibitor. Cyclosporin A (CsA) inhibits the synthesis of interleukins (IL), including IL-2, which is essential for the self-activation of T lymphocytes (LT) and their differentiation.
- **Option C:** Cyclosporine works to suppress cell-mediated immune reactions. Research has detected no effects on phagocytic function in animals, and it does not cause bone marrow

suppression in animal or human models.

- **Option D:** Cyclosporine is effective due to specific and reversible inhibition of immunocompetent lymphocytes in the G0 and G1-phase of the cell cycle. The T-helper cell is the primary target, although it may also suppress T-suppressor cells. The LT-B-lymphocyte (LB) cooperation is essential for activation of LB; the latter also gets inhibited. Research has demonstrated that CsA had an inhibiting effect on CD4+ CD25+ Tregs, which might block the host immune tolerance potentiality.

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

A. Dark brown

B. Bile green

C. Bright red

D. Cloudy white

Correct Answer: A. Dark brown

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

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

35. Anxiety is caused by:

A. An objective threat.

B. A subjectively perceived threat.

C. Hostility turned to the self.

D. Masked depression.

Correct Answer: B. A subjectively perceived threat.

Anxiety is caused by a subjectively perceived threat. Anxiety is one of the most common mental disorders, with 19.1% of adults in the U.S. being affected in the past year. Anxiety can begin early in life, with an average age of onset of 11 years old, and it may range from mildly uncomfortable

symptoms to severe and debilitating panic that can interfere with a person's ability to live normally.

- **Option A:** Fear is caused by an objective threat. Sometimes fear stems from real threats, but it can also originate from imagined dangers. Fear can also be a symptom of some mental health conditions including panic disorder, social anxiety disorder, phobias, and post-traumatic stress disorder (PTSD).
- **Option C:** A depressed client internalizes hostility. The common features of all the depressive disorders are sadness, emptiness, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function.
- **Option D:** Mania is due to masked depression. Some other hallmarks of mania are an elevated or expansive mood, mood lability, impulsivity, irritability, and grandiosity. If the individual experiencing these symptoms requires hospitalization, then this period automatically qualifies as true mania and not hypomania, even if the symptoms are present for less than one week.

36. In the sympto-thermal method, the parameters being monitored to determine if the woman is fertile or infertile are:

A. Temperature, cervical mucus, cervical consistency

B. Release of ovum, temperature, and vagina

C. Temperature and wetness

D. Temperature, endometrial secretion, mucus

Correct Answer: A. Temperature, cervical mucus, cervical consistency

The 3 parameters measured/monitored which will indicate that the woman has ovulated are- a temperature increase of about 0.2-0.4 degrees centigrade, a softness of the cervix and cervical mucus that looks like the white of an egg which makes the woman feel "wet".

- **Option B:** The symptothermal method is a combination of methods. The two most commonly used are the BBT method and the cervical mucus method. The Marquette method combines BBT and cervical mucus tracking with use of an electronic hormonal fertility monitor. The monitor detects hormones in urine to confirm fertile days. It can be purchased online or at a pharmacy.
- **Option C:** The symptothermal method combines calendar calculations, basal body temperature charting, and cervical mucus monitoring.
- **Option D:** Cervical secretions are the foundation for this method, and the other techniques provide a "double-check." Women may use other signs (e.g., consistency and position of the cervix) or symptoms (e.g., breast tenderness, ovulatory pain) to aid in the identification of the fertile period.

37. A male patient who had surgery 2 days ago for head and neck cancer is about to make his first attempt to ambulate outside his room. The nurse notes that he is steady on his feet and that his vision was unaffected by the surgery. Which of the following nursing interventions would be appropriate?

A. Encourage the patient to walk in the hall alone.

B. Discourage the patient from walking in the hall for a few more days.

C. Accompany the patient for his walk.

D. Consult a physical therapist before allowing the patient to ambulate.

Correct Answer: C. Accompany the patient for his walk.

Accompanying him will offer moral support, enabling him to face the rest of the world. Ambulation stimulates circulation which can help stop the development of stroke-causing blood clots. Walking improves blood flow which aids in quicker wound healing. The gastrointestinal, genitourinary, pulmonary and urinary tract functions are all improved by walking.

- **Option A:** A hospitalized surgical patient leaving his room for the first time fears rejection and others staring at him, so he should not walk alone. Refusal to ambulate correlated with those that eventually developed a complication. Those that eventually developed a postoperative complication were more likely to be in the higher refusal group. Thorn et al. suggested that patient compliance may be a marker of underlying complications. If patients are not engaged in their recovery, there may be a physiologic reason for refusal (i.e., a developing abscess).
- **Option B:** Patients should begin ambulation as soon as possible after surgery to decrease complications and to regain strength and confidence. The multiple physiological benefits of patient ambulation have been documented including the prevention of muscular and cardiovascular deconditioning, reducing the risk of pulmonary and thromboembolic events, and stimulating gastrointestinal recovery through prokinetic effects
- **Option D:** Waiting to consult a physical therapist is unnecessary. Daily ambulation requires collaboration between hospital resources, patient education and available personnel. Second, aggressive non-opioid pain medication regimens are critical to maintain a low mLOS. The increasing use of narcotics especially with a PCA prolonged the LOS. Third, refusal of ambulation often predicted the development of a postoperative complication.

38. A nurse is caring for a postpartum (PP) client with a diagnosis of DVT who is receiving a continuous intravenous infusion of heparin sodium. Which of the following laboratory results will the nurse specifically review to determine if an effective and appropriate dose of the heparin is being delivered?

A. Prothrombin time

B. International normalized ratio

C. Activated partial thromboplastin time

D. Platelet count

Correct Answer: C. Activated partial thromboplastin time.

Anticoagulation therapy may be used to prevent the extension of thrombus by delaying the clotting time of the blood. Activated partial thromboplastin time should be monitored, and a heparin dose should be adjusted to maintain a therapeutic level of 1.5 to 2.5 times the control. Anticoagulants derive their effect by acting at different sites of the coagulation cascade. Some act directly by enzyme inhibition, while others indirectly, by binding to antithrombin or by preventing their synthesis from the liver (vitamin K dependent factors).

- **Option A:** This is the initial test used to identify defects in secondary hemostasis. It is the time taken for blood to clot and generates thrombin. A delay in the PT or aPTT indicates the presence of either a deficiency or inhibitor of the clotting factor, except for the antiphospholipid antibody, which can result in delayed aPTT. The normal range for PT levels is approximately 11 to 13 seconds, although levels may vary depending on the laboratory.

- **Option B:** The INR are used to monitor coagulation time when warfarin (Coumadin) is used. The clotting time is the time it takes for plasma to clot after the addition of different substrates in vitro under standard conditions using the capillary method. The average clotting time is between 8 to 15 minutes. Some studies have disputed the use of clotting time as a screening test.
- **Option D:** Although thrombocytopenia increases bleeding risk, it has been shown to predispose patients to venous thromboembolism. Heparin-induced thrombocytopenia is antibody-mediated with complications that include pulmonary embolism, acute myocardial infarction, and ischemic limb necrosis. Therefore, estimation of the bleeding risk before initiation of anticoagulation is essential. The use of argatroban, lepirudin, or danaparoid is recommended over other non-heparin anticoagulants.

39. A clinic nurse is preparing to examine a Hispanic child who was brought by the mother for his first physical check-up. While assessing the child, the nurse would avoid doing which of the following?

A. Weighing the client.

B. Asking the mother questions about the child.

C. Having an interpreter if necessary.

D. Admiring the child.

Correct Answer: D. Admiring the child.

Admiring a Hispanic-American child during the first encounter with a stranger should be avoided since this may give the child the “evil eye” (the child will get sick). If this is done, it can be avoided by touching the child afterward. Beliefs about illnesses affecting the child and infants include mal de ojo (evil eye)/illness affecting children caused by admiration of others.

- **Option A:** Latinos have disproportionately higher rates of obesity and diabetes mellitus. Approximately 43 percent of Mexican Americans older than 20 years are obese, compared with 33 percent of the non-Latino white population. Diabetes and hypertension are closely linked with obesity; 11.8 percent of Latinos older than 20 years have type 2 diabetes (13.3 percent of Mexican Americans), making it the foremost health issue in this population.
- **Option B:** Spanish language handouts are a better option. However, the most useful technique is “teach back” or “show me”: having patients repeat their care instructions until they do it correctly. The extra time necessary for this technique is justified by the prospect of much better understanding and adherence.
- **Option C:** There is ample evidence that Latinos, especially those of Mexican and Central American origin, face significant obstacles to obtaining health care, especially language barriers. Many hospitals and offices lack trained interpreters and rely on ad hoc interpretation by bilingual staff or even the children of patients.

40. Which of the following statements about Attention deficit hyperactivity disorder (ADHD) in children is false?

A. Black parents tend to be less sure of potential causes of and treatments for ADHD than white parents, and they are less likely to connect ADHD to their child's school experiences.

B. Because of its frequent genetic etiology, ADHD in a child is likely foreshadowed by ADHD in other family members.

C. The chances of successful treatment are adversely affected if the parent responsible for implementing the treatment has untreated ADHD.

D. More than 40% of respondents in the recent National Stigma Study-Children (NSS-C) believe that children will face rejection in school for receiving mental health treatment and that negative ramifications will continue into adulthood. More than half expected psychiatric medications to cause a zombie-like effect.

E. The Multimodal Treatment Study of Children with ADHD suggests that pharmacological treatment of ADHD is as effective as behavioral therapy alone.

Correct Answer: E. The Multimodal Treatment Study of Children with ADHD suggests that pharmacological treatment of ADHD is as effective as behavioral therapy alone.

Multimodal treatment involves multiple methods of treatment that work together to help a child with ADHD. The main components of this approach are medications, behavioral therapy, and education.

- **Option A:** In order to diagnose ADHD, it is very important to take a relevant history of the concerned individual. ADHD is diagnosed in children based upon their history where the children face difficulty in at least 6 of the 9 symptoms as mentioned in DSM 5.
- **Option B:** It is one of the most heritable conditions in terms of psychiatric disorders. There is a much greater concordance in monozygotic twins than dizygotic twins. Siblings have twice the risk of having ADHD than the general population.
- **Option C:** The general rule of thumb is that 50% of patients “grow out of” ADHD, especially with treatment, and another 25% do not need treatment into adulthood. This is theorized twofold; first that stimulants help improve the development of the frontal lobe over time, and second that adults often choose careers that don’t require sustained attention.
- **Option D:** Untreated ADHD can cause persisting dysfunction and devastating consequences included but not limited to long-term inability to work, increased car accidents, and increased substance abuse.

41. A patient on the cardiac telemetry unit unexpectedly goes into ventricular fibrillation. The advanced cardiac life support team prepares to defibrillate. Which of the following choices indicates the correct placement of the conductive gel pads?

A. The left clavicle and right lower sternum.

B. Right of midline below the bottom rib and the left shoulder.

C. The upper and lower halves of the sternum.

D. The right side of the sternum just below the clavicle and left of the precordium.

Correct Answer: D. The right side of the sternum just below the clavicle and left of the precordium.

One gel pad should be placed to the right of the sternum, just below the clavicle and the other just left of the precordium, as indicated by the anatomic location of the heart. To defibrillate, the paddles are placed over the pads. According to the ILCOR guidelines, the sternal paddle should be placed ‘just to the right of the upper sternal border below the clavicle’ and the apical paddle ‘to the left of the nipple with the centre of the electrode in the mid-axillary line’.

- **Option A:** During the gel pad placement study it was noticed that about 50% of doctors placed the rectangular apical paddle vertically upwards, pointing towards the left armpit. The other 50% placed it in a horizontal position across the chest. The present ILCOR guidelines do not specify which orientation should be used for defibrillation. It was hypothesized that, with the paddle method for defibrillation, it would be more difficult to get good skin contact across the curved chest wall with the horizontal orientation, and in a small study this proved to be the case.
- **Option B:** In theory, a paddle position that is too superomedial means that less current will traverse the myocardium. When 60 N (the median force used by defibrillator operators in clinical practice) is applied to both paddles, the resulting TTI is 5% greater with the horizontal orientation. Thus, if paddles are used, it is recommended to use a vertical orientation. It is expected that their flexibility will allow better electrode/skin contact across the curved chest wall; however, in the absence of any evidence to the contrary, it is advised to use vertical orientation for this method as well.
- **Option C:** Most healthcare workers are not achieving optimal TTI during defibrillation. There is now good evidence that the use of a coupling agent, chest hair removal, placement of the apical paddle in a vertical orientation lateral to the nipple in the mid-axillary line, and application of at least 80 N of force are all measures that help minimize the TTI.

42. Rob is a 46 y.o. admitted to the hospital with a suspected diagnosis of Hepatitis B. He's jaundiced and reports weakness. Which intervention will you include in his care?

A. Regular exercise.

B. A low-protein diet.

C. Allow the patient to select his meals.

D. Rest period after small, frequent meals.

Correct Answer: D. Rest period after small, frequent meals.

Rest periods and small frequent meals are indicated during the acute phase of hepatitis B. Monitor dietary intake and caloric count. Suggest several small feedings and offer the "largest" meal at breakfast. Large meals are difficult to manage when a patient is anorexic. Anorexia may also worsen during the day, making intake of food difficult later in the day.

- **Option A:** Institute bed red or chair rest during the toxic state. Provide a quiet environment; limit visitors as needed. This promotes rest and relaxation. Available energy is used for healing. Activity and an upright position are believed to decrease hepatic blood flow, which prevents optimal circulation to the liver cells.
- **Option B:** If tolerated, a normal or increased protein intake helps with liver regeneration. Protein restriction may be indicated in severe disease (fulminant hepatitis) because the accumulation of the end products of protein metabolism can potentiate hepatic encephalopathy.
- **Option C:** Consult with a dietitian, nutritional support team to provide diet according to patient's needs, with fat and protein intake as tolerated. Useful in formulating dietary programs to meet individual needs. Fat metabolism varies according to bile production and excretion and may necessitate the restriction of fat intake if diarrhea develops.

43. When interviewing a client, which nonverbal behavior should a nurse employ?

A. Maintaining indirect eye contact with the client

B. Providing space by leaning back away from the client

C. Sitting squarely, facing the client

D. Maintaining open posture with arms and legs crossed

Correct Answer: C. Sitting squarely, facing the client.

When interviewing a client, the nurse should employ the nonverbal behavior of sitting squarely, facing the client. Facilitative skills for active listening can be identified by the acronym SOLER. SOLER includes sitting squarely facing the client (S), open posture when interacting with a client (O), leaning forward toward the client (L), establishing eye contact (E), and relaxing (R).

- **Option A:** Maintaining eye contact shows that the nurse is interested and listening to what the client has to say. It does not mean that the nurse has to stare at the client because this can make them feel uncomfortable, but maintain good, positive eye contact.
- **Option B:** The nurse should lean forward to show that she is interested in what the client is talking about. It also means that the client can lower their voice if they wish to if they are talking about personal issues, for example.
- **Option D:** Open posture when interacting with the client (O). Crossing the arms would make the nurse anxious or defensive. The nurse should identify that maintaining an uncrossed arm and leg posture is nonverbal behavior that reflects the “O” in the active-listening acronym SOLER.

44. A contraindication for topical corticosteroid usage in a male patient with atopic dermatitis (eczema) is:

A. Parasite infection.

B. Viral infection.

C. Bacterial infection.

D. Spirochete infection.

Correct Answer: B. Viral infection.

Topical agents produce a localized, rather than systemic effect. When treating atopic dermatitis with a steroidal preparation, the site is vulnerable to invasion by organisms. Viruses, such as herpes simplex or varicella-zoster, present a risk of disseminated infection. Educate the patient using topical corticosteroids to avoid crowds or people known to have infections and to report even minor signs of an infection. Topical corticosteroid usage results in little danger of concurrent infection with these agents.

- **Option A:** Betamethasone dipropionate and diflorasone diacetate have an increased ability to suppress adrenal function. Around 14 g/week of clobetasol propionate ointment may induce suppression in children, while 49 g/week of betamethasone dipropionate reduces plasma cortisol levels. Temporary reversible suppression is seen with 49 g of superpotent TS used for 2 weeks.
- **Option C:** Topical steroids induce resorption of mucopolysaccharide ground substance in the dermis. Repeated use in the same area causes epidermal thinning and changes in the connective tissue of the dermis leading to lax, transparent, wrinkled, and shiny skin along with striae, fragility, hyperpigmentation, and prominence of underlying veins. The loss of connective tissue support for dermal vasculature results in erythema, telangiectasia, and purpura.
- **Option D:** Mucocutaneous infections (tinea versicolor, onychomycosis due to Trichophyton and Candida species, dermatophytosis) are common during treatment with TS, occurring early in the

therapy. The incidence varies between 16% and 43%. When dermatophyte infections are treated with TS, the symptoms and signs improve transiently, giving rise to tinea incognito. TS suppresses the normal cutaneous immune response to dermatophytes leading to the enchantment of fungal infections. An immune mediated phenomenon called “tinea pseudoimbricata” is a particular type of tinea incognito which has been described by one of the authors.

45. A 72-year-old female patient with a history of type 2 diabetes and hypertension was admitted to the medical-surgical unit due to a minor stroke. On assessment, the nurse noted generalized skin dryness, particularly on the arms, legs, and face. The nurse understands the importance of skin integrity, especially considering the patient’s age and comorbidities. Which of the following nursing interventions should the nurse consider when addressing the patient’s skin dryness? Select all that apply.

A. Consult the dietitian about increasing the patient’s fat intake, and take necessary measures to prevent infection.

B. Use hypoallergenic soap when bathing the patient.

C. Encourage the patient to drink at least 2 liters of water per day.

D. Coordinate with the physician to refer the patient to a dermatologist.

E. Replace hospital-issued gowns with home-laundered ones.

F. Frequently apply a hydrating lotion to the patient's skin.

G. Offer the patient warm tea thrice daily.

Correct Answers: B, C, and F.

Using hypoallergenic soap prevents further irritation and drying of the skin. Drinking adequate water assists in maintaining skin hydration and health. Applying a hydrating lotion helps seal in moisture, preventing further drying and nourishing the skin. These interventions directly address the root cause of skin dryness and provide comprehensive care to promote skin integrity. While some of the other interventions may have benefits in certain contexts, B, C, and F are the most directly applicable to the patient’s skin condition in this scenario.

46. A client is admitted with a diagnosis of delusions of grandeur. This diagnosis reflects a belief that one is:

A. Highly important or famous

B. Being persecuted

C. Connected to events unrelated to oneself

D. Responsible for the evil in the world

Correct Answer: A. Highly important or famous.

A delusion of grandeur is a false belief that one is highly important or famous. A delusion of grandeur is the false belief in one’s own superiority, greatness, or intelligence. People experiencing delusions of grandeur do not just have high self-esteem; instead, they believe in their own greatness and importance even in the face of overwhelming evidence to the contrary. Someone might, for example,

believe they are destined to be the leader of the world, despite having no leadership experience and difficulties in interpersonal relationships. Delusions of grandeur are characterized by their persistence. They are not just moments of fantasy or hopes for the future.

- **Option B:** A delusion of persecution is a false belief that one is being persecuted. Persecutory delusions occur when someone believes others are out to harm them despite evidence to the contrary. It's a type of paranoid thinking that can be part of several different mental illnesses. While everyone may experience some false beliefs about people being "out to get them" at times, for people with persecutory delusions, their beliefs take a serious toll on their lives. Their delusions are usually a symptom of a mental illness that requires professional help.
- **Option C:** In people with bipolar disorder, mania and hypomania can comprise various symptoms, from reckless spending to sexual promiscuity. In addition, some more subtle symptoms may also occur, such as the belief held by some patients that everything occurring around them is related somehow to them when in fact it isn't. This symptom is known as ideas of reference. An extension of those irrational beliefs, delusions of reference, can cause patients to change their behavior significantly because of this mistaken belief.
- **Option D:** A delusion of reference is a false belief that one is connected to events unrelated to oneself or a belief that one is responsible for the evil in the world. A delusion in which the patient believes that unsuspicious occurrences refer to him or her in person. Patients may, for example, believe that certain news bulletins have a direct reference to them, that music played on the radio is played for them, or that car license plates have a meaning relevant to them.

47. When evaluating a male client for complications of acute pancreatitis, the nurse would observe for:

A. Increased intracranial pressure

B. Decreased urine output

C. Bradycardia

D. Hypertension

Correct Answer: B. Decreased urine output

Acute pancreatitis can cause decreased urine output, which results from the renal failure that sometimes accompanies this condition. AKI develops late in the course of acute pancreatitis, usually after failure of other organs. Remarkably, the kidney was the first organ to fail in only 8.9% of patients with AKI, and only a minority of patients develop isolated AKI

- **Option A:** Intracranial pressure neither increases nor decreases in a client with pancreatitis. The causes of increased intracranial pressure (ICP) can be divided based on the intracerebral components causing elevated pressures. Generalized swelling of the brain or cerebral edema from a variety of causes such as trauma, ischemia, hyperammonemia, uremic encephalopathy, and hyponatremia.
- **Option C:** Tachycardia, not bradycardia, usually is associated with pulmonary or hypovolemic complications of pancreatitis. Tachycardia and mild hypotension may result from hypovolemia from sequestration of fluid in the pancreatic bed. About 60% of patients develop low-grade pyrexia from peripancreatic inflammation without evident infection.
- **Option D:** Hypotension can be caused by a hypovolemic complication, but hypertension usually isn't related to acute pancreatitis. Release into the systemic circulation of activated enzymes and proteases may cause endothelial damage leading to extravasation of fluids from the vascular space, hypovolemia, hypotension, increased abdominal pressure, intense kidney vasoconstriction,

hypercoagulability, and fibrin deposition in the glomeruli.

49. A 27-year-old woman has Type I diabetes mellitus. She and her husband want to have a child, so they consulted her diabetologist, who gave her information on pregnancy and diabetes. Of primary importance for the diabetic woman who is considering pregnancy should be:

A. Early prenatal medical care

B. A review of the dietary modifications that will be necessary

C. Understanding that this is a major health risk to the mother

D. Adoption instead of conception

Correct Answer: A. Early prenatal medical care.

Pregnancy makes metabolic control of diabetes more difficult. It is essential that the client starts prenatal care early so that potential complications can be controlled or minimized by the efforts of the client and health care team. The woman does need to be proactive in her diabetes care prior to pregnancy to optimize her health and her baby's and prevent possible complications.

- **Option B:** The doctor may refer the woman to a diabetes educator and/or a dietitian to help her with a meal plan and blood sugar management. A review of dietary modifications is important once the woman is pregnant. However, it is not of primary importance when considering pregnancy.
- **Option C:** While there is some risk to the pregnant diabetic woman, it is not considered a major health risk. The greater risk is to the fetus. Other potential risks of poorly controlled diabetes in pregnancy include low blood glucose in the baby at birth, a large baby, or under certain circumstances, a growth-restricted baby.
- **Option D:** The alternative of adoption is not necessary just because the client is a diabetic. Many diabetic women have pregnancies with successful outcomes if they receive good care. Having diabetes, especially with out-of-control blood sugars, increases the risks of pregnancy. However, with good planning and blood sugar control, the risks can be lowered.

50. Vivid dreaming occurs in which stage of sleep?

A. Stage I non-REM

B. Rapid eye movement (REM) stage

C. Stage II non-REM

D. Delta stage

Correct Answer: B. Rapid eye movement (REM) stage

Other characteristics of rapid eye movement (REM) sleep are deep sleep (the patient cannot be awakened easily), depressed muscle tone, and possibly irregular heart and respiratory rates. This is the stage associated with dreaming. Interestingly, the EEG is similar to an awake individual, but the skeletal muscles are atonic and without movement. The exception is the eye and diaphragmatic breathing muscles, which remain active. The breathing rate is altered though, being more erratic and irregular. This stage usually starts 90 minutes after falling asleep, and each of the REM cycles gets longer throughout the night. The first period typically lasts 10 minutes, and the final one can last up to an hour.

- **Option A:** Non-REM sleep is a deep, restful sleep without dreaming. This is the lightest stage of sleep and starts when more than 50% of the alpha waves are replaced with low-amplitude mixed-frequency (LAMF) activity. There is muscle tone present in the skeletal muscle and breathing tends to occur at a regular rate. This stage tends to last 1 to 5 minutes, consisting of around 5% of the total cycle.
- **Option C:** This stage represents deeper sleep the heart rate and body temperature drop. It is characterized by the presence of sleep spindles, K-complexes, or both. These sleep spindles will activate the superior temporal gyri, anterior cingulate, insular cortices, and the thalamus. The K-complexes show a transition into a deeper sleep. Stage 2 sleep lasts around 25 minutes in the initial cycle and lengthens with each successive cycle, eventually consisting of about 50% of total sleep.
- **Option D:** Delta stage, or slow-wave sleep, occurs during non-REM Stages III and IV and is often equated with quiet sleep. This is considered the deepest stage of sleep and is characterized by a much slower frequency with high amplitude signals known as delta waves. This stage is the most difficult to awaken from, and for some people, even loud noises (over 100 decibels) will not awaken them. As people get older, they tend to spend less time in this slow, delta wave sleep and more time stage N2 sleep. This is the stage when the body repairs and regrows its tissues, builds bone and muscle, and strengthens the immune system.

51. A client is scheduled for an Intravenous Pyelogram (IVP). In order to prepare the client for this test, the nurse would:

A. Instruct the client to maintain a regular diet the day prior to the examination.

B. Restrict the client's fluid intake 4 hours prior to the examination.

C. Administer a laxative to the client the evening before the examination.

D. Inform the client that only 1 x-ray of his abdomen is necessary.

Correct Answer: C. Administer a laxative to the client the evening before the examination

Bowel prep is important because it will allow greater visualization of the bladder and ureters. Intravenous pyelogram (IVP) is an x-ray exam that uses an injection of contrast material to evaluate the kidneys, ureters, and bladder and help diagnose blood in the urine or pain in the side or lower back. An IVP may provide enough information to allow the doctor to treat with medication and avoid surgery.

- **Option A:** Eating and drinking the night before the exam should be avoided.
- **Option B:** Restriction of fluids on the night before the exam should be emphasized.
- **Option D:** An intravenous pyelogram is an x-ray of the kidneys, ureters, and urinary bladder that uses iodinated contrast material injected into veins.

52. An appropriate nursing intervention when caring for a postpartum mother with thrombophlebitis is:

A. Encourage the mother to ambulate to relieve the pain in the leg.

B. Instruct the mother to apply elastic bondage from the foot going towards the knee to improve venous return flow.

C. Apply warm compress on the affected leg to relieve the pain.

D. Elevate the affected leg and keep the patient on bedrest.

Correct Answer: D. Elevate the affected leg and keep the patient on bed rest.

If the mother already has thrombophlebitis, the nursing intervention is bed rest to prevent the possible dislodging of the thrombus and keeping the affected leg elevated to help reduce the inflammation.

- **Option A:** During pregnancy, an increase in most procoagulant factors and a reduction in fibrinolytic activity occurs. Plasma fibrinogen levels gradually increase after the third month of pregnancy, to double those of the nonpregnant state. In the second half of pregnancy, levels of factors VII, VIII, IX, and X also increase. Decreased fibrinolytic activity is probably related to a decrease in the level of circulating plasminogen activator. In addition, a 68% reduction in protein S levels is measured during pregnancy and in the postpartum period. Protein S levels do not return to the reference range until 12 weeks after delivery. These changes are necessary to prevent hemorrhage during placental separation.
- **Option B:** The routine use of graduated support stockings (class I or II), especially when the patient is confined on an airplane or otherwise, is extremely important.
- **Option C:** A warm water compress is valuable in the treatment of phlebitis, and could decrease the degree of phlebitis both effectively and inexpensively.

53. 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.

54. Adrenergic blockers are contraindicated in:

A. Hypertension

B. Pheochromocytoma

C. Migraines

D. Obstructive airway disease

Correct Answer: D. Obstructive airway disease

Adrenergic blockers tend to cause bronchoconstriction, so are therefore contraindicated in obstructive pulmonary disease. Traditionally, beta-blockers have been contraindicated in asthmatic patients. However, recommendations have aligned for allowing cardio-selective beta-blockers, also known as beta-1 selective, in asthmatics but not non-selective beta-blockers. Less commonly, bronchospasm presents in patients on beta-blockers. Asthmatic patients are at a higher risk.

- **Option A:** Patients who have either acute or chronic bradycardia and/or hypotension have relatively contraindication to beta-blocker usage. The patient's heart rate and blood pressure require monitoring while using beta-blockers. Bradycardia and hypotension are two adverse effects that may commonly occur.
- **Option B:** Beta receptors are found all over the body and induce a broad range of physiologic effects. The blockade of these receptors with beta-blocker medications can lead to many adverse effects. The catecholamines, epinephrine, and norepinephrine bind to B1 receptors and increase cardiac automaticity as well as conduction velocity. B1 receptors also induce renin release, and this leads to an increase in blood pressure. In contrast, binding to B2 receptors causes relaxation of the smooth muscles along with increased metabolic effects such as glycogenolysis.
- **Option C:** Beta-blockers are indicated and have FDA approval for the treatment of tachycardia, hypertension, myocardial infarction, congestive heart failure, cardiac arrhythmias, coronary artery disease, hyperthyroidism, essential tremor, aortic dissection, portal hypertension, glaucoma, migraine prophylaxis, and other conditions.

55. A client with oxalate renal calculi should be taught to avoid eating:

A. Grapefruit

B. Milk

C. Rhubarb

D. Oranges

Correct Answer: C. Rhubarb

- Option C: The client with oxalate renal calculi should avoid sources of oxalate, which include rhubarb, spinach, rice bran, almonds, and miso soup.
- Options A, and D: Grapefruit and orange are naturally good sources of vitamin C which can help decrease the formation of stones.
- Option B: Milk a source of calcium. A low calcium diet can increase oxalate levels.

56. A 62-year-old female patient visits the cardiology clinic after experiencing episodes of chest discomfort and shortness of breath. After her initial evaluation, the cardiologist suggests an echocardiogram to visualize the heart's structure and function. Upon reviewing the echocardiogram results, it becomes

apparent that the patient has a blood flow anomaly, which the nurse suspects might be due to valve dysfunction. The nurse uses this opportunity to educate the patient about the heart's anatomy and blood flow using a visual aid. With certain components missing from the diagram, the patient is challenged to recall the order in which blood flows through the heart. Given the echocardiogram findings and the subsequent discussion on heart function, which of the following sequences represents the accurate path of blood flow through the heart?

A. (1) Tricuspid Valve, (2) Aortic Valve, (3) Pulmonary Circulation, (4) Mitral Valve, (5) Pulmonic Valve

B. (1) Mitral Valve, (2) Pulmonic Valve, (3) Pulmonary Circulation, (4) Tricuspid Valve, (5) Aortic Valve

C. (1) Mitral Valve, (2) Aortic Valve, (3) Pulmonary Circulation, (4) Tricuspid Valve, (5) Pulmonic Valve

D. (1) Tricuspid Valve, (2) Pulmonic Valve, (3) Pulmonary Circulation, (4) Mitral Valve, (5) Aortic Valve

Correct Answer: D. (1) Tricuspid Valve, (2) Pulmonic Valve, (3) Pulmonary Circulation, (4) Mitral Valve, (5) Aortic Valve

Blood enters the heart through two large veins, the inferior and superior vena cava, emptying oxygen-poor blood from the body into the right atrium. As the atrium contracts, blood flows from your right atrium into your right ventricle through the open tricuspid valve. When the ventricle is full, the tricuspid valve shuts. This prevents blood from flowing backward into the right atrium while the ventricle contracts. As the ventricle contracts, blood leaves the heart through the pulmonic valve, into the pulmonary artery, and to the lungs, where it is oxygenated. The oxygenated blood then returns to the heart through the pulmonary veins. The pulmonary veins empty oxygen-rich blood from the lungs into the left atrium. As the atrium contracts, blood flows from your left atrium into your left ventricle through the open mitral valve. When the ventricle is full, the mitral valve shuts. This prevents blood from flowing backward into the atrium while the ventricle contracts. As the ventricle contracts, blood leaves the heart through the aortic valve, into the aorta, and into the body.

- **Option A:** Incorrect order. Blood doesn't flow from the tricuspid valve directly to the aortic valve. It must first pass through the right ventricle, the pulmonic valve, the pulmonary circulation, the left atrium, and then the mitral valve before reaching the aortic valve.
- **Option B:** This order starts with the left side of the heart and moves to the right side before moving back to the left, which is not the correct flow of blood.
- **Option C:** Blood doesn't flow from the mitral valve directly to the aortic valve without first passing through the left ventricle. Additionally, this sequence has the blood traveling backward from the pulmonary circulation to the tricuspid valve.

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

A. Admit him to the hospital in respiratory isolation.

B. Prescribe isoniazid and tell him to go home and rest.

C. Give a tuberculin test and tell him to come back in 48 hours and have it read.

D. Give a prescription for isoniazid, 300 mg daily for 2 weeks, and send him home.

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

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

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

58. A nurse is describing the process of fetal circulation to a client during a prenatal visit. The nurse accurately tells the client that fetal circulation consists of:

A. Two umbilical veins and one umbilical artery.

B. Two umbilical arteries and one umbilical vein.

C. Arteries carrying oxygenated blood to the fetus.

D. Veins carrying deoxygenated blood to the fetus.

Correct Answer: B. Two umbilical arteries and one umbilical vein.

Blood pumped by the embryo's heart leaves the embryo through two umbilical arteries. Once oxygenated, the blood then is returned by one umbilical vein. Arteries carry deoxygenated blood and waste products from the fetus, and veins carry oxygenated blood and provide oxygen and nutrients to the fetus.

- **Option A:** The fetal circulation system is distinctly different from adult circulation. This intricate system allows the fetus to receive oxygenated blood and nutrients from the placenta. It comprises the blood vessels in the placenta and the umbilical cord, which contains two umbilical arteries and one umbilical vein.
- **Option C:** Oxygenated blood from the mother in the placenta flows through the umbilical vein and into the inferior vena cava (IVC), bypassing the liver via the ductus venosus. From the IVC, oxygenated blood travels to the right atrium of the heart. There is greater pressure in the right atrium compared to the left atrium in fetal circulation; therefore most of the blood is shunted from the right atrium to the left atrium through an opening called the foramen ovale. Once in the left atrium, blood travels through the left ventricle into the aorta and the systemic circulation.
- **Option D:** The deoxygenated blood travels back to the placenta via the umbilical arteries to be oxygenated by the mother. Additionally, some oxygenated blood in the right atrium can also enter

the right ventricle and then the pulmonary artery. Because there is high resistance to blood flow in the lungs, the blood is shunted from the pulmonary artery into the aorta via the ductus arteriosus, hence bypassing the lungs. Blood then enters the systemic circulation, and the deoxygenated blood is recycled back to the mother via the umbilical arteries.

59. 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.

60. During a cardiology rotation, a group of nursing students are shadowing a cardiologist. The doctor is interpreting an ECG for a patient recently admitted with chest pain. The patient, intrigued by the wavy lines on the monitor, inquires about their meaning. The cardiologist provides a brief overview of the ECG components, emphasizing the importance of each wave and interval. Spotting an excellent teaching opportunity, the cardiologist then turns to the students and poses a question to test their knowledge. "In the context of electrocardiograms, which component illustrates the repolarization of the ventricles?"

A. P wave

B. P-Q or P-R interval

C. QRS complex

D. Q-T interval

E. T wave

Correct Answer: E. T wave
The T wave represents the repolarization of the ventricles, and the beginning of the T wave precedes ventricular relaxation.

- **Option A:** The P wave results from depolarization of the atrial myocardium, and the beginning of the P wave precedes the onset of atrial contraction.
- **Option B:** The time between the beginning of the P wave and the beginning of the QRS complex is the PQ interval, commonly called the PR interval because the Q wave is very small. During the PR interval, the atria contract and begin to relax.
- **Option C:** The QRS complex consists of three individual waves: the Q, R, and S waves. The QRS complex results from depolarization of the ventricles, and the beginning of the QRS complex precedes ventricular contraction.
- **Option D:** The QT interval extends from the beginning of the QRS complex to the end of the T wave and represents the length of time required for ventricular depolarization and repolarization.

61. Which drug is used to manage preterm labor by causing smooth muscle relaxation?

A. Oxytocin

B. Prostaglandin

C. Ritodrine

D. Estrogen

Correct Answer: C. Ritodrine

Ritodrine is used to arrest uterine contractions in preterm labor. Tocolysis is effective because it focuses on both delaying and weakening uterine contractions. The pharmacology targets the activity of the myometrium. The myometrium is the smooth muscle in the uterus. Tocolysis is used in the setting of preterm labor. Preterm birth is delivery before 37 weeks gestation and after 20 weeks. To diagnose preterm labor, continued contractions happen during the gestational age range mentioned previously to produce cervical changes.

- **Option A:** Oxytocin is used to stimulate labor. From a physiologic perspective, the myometrium is responsible for the contractional effort of childbirth. Like all smooth muscles, this process is calcium-mediated. The start of a contraction does not require any nerve input nor hormonal stimulus. It begins with a spontaneous depolarization of the cell surface, which opens voltage-gated calcium channels. The influx of calcium into the cells binds to intracellular calmodulin. This new complex activates myosin light chain kinase, an enzyme that phosphorylates myosin light chains, which are located on a critical portion of the myosin heads. The phosphorylation and dephosphorylation of the myosin head cause the continual bridging to actin filaments. This repetitive process results in the myometrium of contraction.
- **Option B:** Prostaglandins can cause vasodilation or vasoconstriction in vascular smooth muscle cells, activate or inhibit platelet aggregation, induce labor, regulate hormones, and decrease

intraocular pressure. PGF2 alpha can be applied vaginally or intramuscularly to induce abortion in pregnant patients. In some cases, misoprostol (PGE1) can be used rectally for the treatment of postpartum hemorrhage.

- **Option D:** Estrogen is a steroid hormone associated with the female reproductive organs and is responsible for the development of female sexual characteristics. Estrogen is often referred to the following structures as either estrone, estradiol, and estriol. Of the previously mentioned forms of estrogen, estradiol is the most common form of estrogen hormone for hormone replacement therapy (HRT) in the treatment of symptoms of menopause. In the uterus, estrogen helps to proliferate endometrial cells in the follicular phase of the menstrual cycle, thickening the endometrial lining in preparation for pregnancy.

62. The client is admitted to the hospital with BPH, and a transurethral resection of the prostate is performed. Four hours after surgery the nurse takes the client's VS and empties the urinary drainage bag. Which of the following assessment findings would indicate the need to notify the physician?

A. Red bloody urine

B. Urinary output of 200 ml greater than intake

C. Blood pressure of 100/50 and pulse 130.

D. Pain related to bladder spasms.

Correct Answer: C. Blood pressure of 100/50 and pulse 130.

A rapid pulse with low blood pressure is a potential sign of excessive blood loss. The physician should be notified. Class III of hemorrhagic shock includes a volume loss from 30% to 40% of total blood volume, from 1500 mL to 2000 mL. A significant drop in blood pressure and changes in mental status occurs. Heart rate and respiratory rate are significantly elevated (more than 120 BPM). Urine output declines. Capillary refill is delayed.

- **Option A:** Frank bleeding (arterial or venous) may occur during the first few days after surgery. In the first two days after surgery, your urine might have blood or clumps of blood in it – particularly following TURP. It is important to drink a lot of water in the first few days in order to rinse the bladder and speed up the healing process. Mild bleeding may occur later too, for example when scabs break away and are flushed out.
- **Option B:** Some hematuria is usual for several days after surgery. Urinary output of 200 ml of greater than intake is adequate. It can take a few months for everything to return to normal. During this time you may have urinary problems, such as an urge to urinate or temporary loss of bladder control. Your organs need some time to adjust to the changes in the operated area and to start working normally again, so it's important to be patient.
- **Options D:** Bladder spasms are expected to occur after surgery. To prevent the healing wound from coming into contact with urine, a urinary catheter is needed for a few days after surgery. A catheter is a thin plastic tube that drains the bladder through the urethra. The tube is held in place by a small water-filled balloon in the bladder. This can lead to painful bladder spasms, mainly in the first few hours and days. Antibiotics are sometimes used to prevent infections.

63. An intoxicated client comes into the emergency unit with uncooperative behavior, mild confusion, and slurred speech. The client is unable to provide a good history but he verbalizes that he has been drinking a lot. Which of the

following is a priority action of the nurse?

A. Administer IV fluid incorporated with Vitamin B1 as ordered

B. Administer Naloxone (Narcan) 4 mg as ordered

C. Contact the family to get information about the client

D. Obtain an order for the determination of blood alcohol level

Correct Answer: A. Administer IV fluid incorporated with Vitamin B1 as ordered.

The client has symptoms of alcohol abuse and there is a risk for Wernicke syndrome, which is caused by a deficiency in Vitamin B. Thiamine deficiency (vitamin B1) is common in patients with alcohol dependence. Cognitive impairments may be an early consequence of thiamine deficiency. Wernicke's encephalopathy is underdiagnosed and undertreated.

- **Option B:** Multiple drug abuse is not uncommon; however, there is currently nothing to suggest an opiate overdose that requires the administration of naloxone. Naloxone is indicated for the treatment of opioid toxicity, specifically to reverse respiratory depression from opioid use. It is useful in accidental or intentional overdose and acute or chronic toxicity.
- **Option C:** Teens and young adults are at higher risk for binge drinking, which can cause alcohol poisoning. Binge drinking is a pattern of drinking that raises the blood alcohol level within a short period of time. Though it varies from person to person, binge drinking is usually defined as four drinks for women and five drinks for men in a two-hour period.
- **Option D:** Additional information or the results of the blood alcohol testing are part of the management but should not delay the immediate treatment. A blood alcohol test may be used to find out if the patient has alcohol poisoning, a life-threatening condition that happens when the blood alcohol level gets very high. Alcohol poisoning can seriously affect basic body functions, including breathing, heart rate, and temperature.

64. A white female client is admitted to an acute care facility with a diagnosis of cerebrovascular accident (CVA). Her history reveals bronchial asthma, exogenous obesity, and iron deficiency anemia. Which history finding is a risk factor for CVA?

A. Caucasian race

B. Female sex

C. Obesity

D. Bronchial asthma

Correct Answer: C. Obesity

Obesity is a risk factor for CVA. Other risk factors include a history of ischemic episodes, cardiovascular disease, diabetes mellitus, atherosclerosis of the cranial vessels, hypertension, polycythemia, smoking, hypercholesterolemia, oral contraceptive use, emotional stress, family history of CVA, and advancing age.

- **Option A:** Of all the risk factors, hypertension is the most common modifiable risk factor for stroke. Hypertension is most prevalent in African-Americans and also occurs earlier in life. According to JNC8, the recommended blood pressure targets in patients with stroke should be less than 140/90 mm Hg.

- **Option B:** One-third of the adults in the USA have elevated low-density lipoprotein (LDL), leading to plaque formation in the intracerebral vasculature. Eventually, due to the excessive plaque build-up thrombotic strokes occur.
- **Option D:** Ischemic etiologies can further be divided into embolic, thrombotic, and lacunar. In general, the common risk factors for stroke include hypertension, diabetes, smoking, obesity, atrial fibrillation, and drug use.

65. Which of the following snacks would be suitable for the child with gluten-induced enteropathy?

A. Ice cold ale

B. Pumpkin loaf cake

C. Buckwheat kasha

D. Oatmeal cookies

E. Linguine with lemon and tomatoes

Correct Answer: C. Buckwheat kasha

66. What information is correct about stomach cancer?

A. Stomach pain is often a late symptom.

B. Surgery is often a successful treatment.

C. Chemotherapy and radiation are often successful treatments.

D. The patient can survive for an extended time with TPN.

Correct Answer: A. Stomach pain is often a late symptom.

Stomach pain is often a late sign of stomach cancer; outcomes are particularly poor when cancer reaches that point. In the United States, most patients have symptoms of an advanced stage at the time of presentation. The most common presenting symptoms for gastric cancers are non-specific weight loss, persistent abdominal pain, dysphagia, hematemesis, anorexia, nausea, early satiety, and dyspepsia.

- **Option B:** Surgery has minimal positive effects. Patients with localized, resectable gastric cancer have the best chance of long-term survival with surgery alone. The main goal of surgery is complete resection with adequate margins (more than 4 cm), and only 50% of patients will obtain R0.
- **Option C:** Chemotherapy and radiation have minimal positive effects. Neoadjuvant chemotherapy has been shown to downstage primary tumors and regional lymph nodes to attempt higher long-term curative resections. Neoadjuvant therapy should be offered to patients at high risk of developing distant metastases (bulky T3/T4, perigastric nodes, linitis plastica, or positive peritoneal cytology), sparing unnecessary surgery in case an emerging metastasis appears.
- **Option D:** TPN may enhance the growth of cancer. Total parenteral nutrition is known to be effective in cases of malnutrition in patients who do not have cancer. However, TPN has not been shown to positively affect the nutritional status in patients with cancer. This is due in part to the metabolic changes associated with cancer.

67. A 57-year-old patient with a recent history of severe left leg pain and diagnosed with acute arterial occlusion is postoperative following an emergency embolectomy. Six hours after the procedure, the nurse is unable to detect pulses in the patient's left foot using a Doppler ultrasound. The nurse informs the surgical team of the potential need for further intervention. When discussing the situation with the patient, who expresses a desire to refuse any additional surgical procedures, what should the nurse prioritize as the initial response?

A. Explain the risks of not having the surgery

B. Notifying the physician immediately

C. Notifying the nursing supervisor

D. Recording the client's refusal in the nurses' notes

Correct Answer: A. Explain the risks of not having the surgery

The best initial response is to explain the risks of not having the surgery.

- **Option B:** If the client understands the risks but still refuses the nurse should notify the physician.
- **Option C:** Notify the nurse supervisor if the client still refuses the surgery after an explanation of risks.
- **Option D:** Record the client's refusal in the nurses' notes if he still refuses after a thorough explanation.

68. Annabelle is being discharged with a colostomy, and you're teaching her about colostomy care. Which statement correctly describes a healthy stoma?

A. "At first, the stoma may bleed slightly when touched."

B. "The stoma should appear dark and have a bluish hue."

C. "A burning sensation under the stoma faceplate is normal."

D. "The stoma should remain swollen away from the abdomen."

Correct Answer: A. "At first, the stoma may bleed slightly when touched."

For the first few days to a week, slight bleeding normally occurs when the stoma is touched because the surgical site is still new. She should report profuse bleeding immediately. A small amount of blood from the stoma itself is not unusual while it is healing.

- **Option B:** A stoma should be a beefy red or pink color. The tissue that makes a stoma is the lining of the intestine and should be moist and shiny. It is very similar in appearance to the inside of the mouth along your cheek.
- **Option C:** The skin may be tender initially during the healing process and may feel irritated by normal cleaning. The skin immediately surrounding the stoma and stoma can be irritated by the cleaning process.
- **Option D:** A normal stoma in the days after surgery may be swollen and may also produce mucus. While the stoma itself should be moist, the skin around the stoma should be normal in appearance.

69. Which statement made by the nurse describes the inheritance pattern of autosomal recessive disorders?

A. An affected newborn has unaffected parents.

B. An affected newborn has one affected parent.

C. Affected parents have a one in four chance of passing on the defective gene.

D. Affected parents have unaffected children who are carriers.

Correct Answer: C. Affected parents have a one in four chance of passing on the defective gene.

Autosomal recessive disorders can be passed from the parents to the infant. If both parents pass the trait, the child will get two abnormal genes and the disease results. Parents can also pass the trait to the infant. Patients affected with autosomal recessive (AR) diseases have a disease allele on each chromosome. The pattern of individuals affected with an AR disease can be traced through a family to determine which individuals are carriers and which individuals are likely to become impacted.

- **Option A:** To have an affected newborn, the parents must be carriers. The easiest way to determine the inheritance pattern of a disorder in a family is by looking at a pedigree. Autosomal recessive diseases typically affect both females and males equally. Autosomal recessive patterns manifest by skipping generations as the affected are usually children of unaffected carriers.
- **Option B:** Both parents must be carriers. The most common situation of an autosomal recessive disease occurs when the parents are each carrier or heterozygous (Dd). Children of carrier parents have a 25% chance of inheriting the disorder. This value is obtained by using the Punnett square model used in genetics.
- **Option D:** The parents might have affected children. Each parent has a 50% chance of passing on the disease allele. Using the multiplication rule of probability, there is a 50% chance that the father passes on his disease allele and a 50% chance that the mother passes on her disease allele; 50% x 50% = 25%. So with the mating of carrier parents, there is a 25% chance that the child will be affected, a 50% chance that the child would be a carrier, and 25% chance that they would be homozygous dominant and unaffected.

70. The mother of a child with cystic fibrosis tells the nurse that her child makes "snoring" sounds when breathing. The nurse is aware that many children with cystic fibrosis have:

A. Enlarged adenoids

B. Choanal atresia

C. Chronic sinusitis

D. Septal deviations

Correct Answer: C. Chronic sinusitis

- Option C: Children with cystic fibrosis are susceptible to chronic sinusitis and nasal polyps, which might require surgical removal.
- Option B: Choanal atresia is a congenital condition in which there is a bony obstruction between the nares and the pharynx.

- Options A and D: Enlarged adenoids and septal deviations are not specific to the child with cystic fibrosis.

71. 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.

72. Mrs. Eleanor, a 68-year-old former ballet dancer, is admitted to the rheumatology clinic for management of her gout. She has had recurrent episodes of painful joint inflammation, particularly in her feet. In light of her medical history and current presentation, her rheumatologist prescribes allopurinol to help manage her condition. Given Mrs. Eleanor's new medication regimen, what intervention should the nurse prioritize to ensure effective and safe management of her gout?

A. Assessing liver function regularly

B. Encouraging the patient to limit fluid intake

C. Administering colchicine before meals

D. Instructing the patient to avoid sunlight exposure

Correct Answer: A. Assessing liver function regularly.

Allopurinol is metabolized in the liver, and while rare, it can have hepatotoxic effects. Regularly monitoring liver function is important to ensure that the patient is not developing any adverse liver reactions to the medication.

- **Option B:** Patients on allopurinol should actually be encouraged to maintain adequate fluid intake to prevent kidney stone formation and assist in uric acid excretion. Reducing fluid intake would be contraindicated.
- **Option C:** While colchicine is another medication used in gout management, the question focuses on allopurinol. Furthermore, the timing of colchicine administration relative to meals is not critical to its absorption.
- **Option D:** While some medications can cause photosensitivity, allopurinol is not commonly associated with this side effect. Thus, this instruction would not be a priority for a patient on allopurinol.

73. Which of the following cluster of data belong to Maslow's hierarchy of needs

A. Love and belonging

B. Physiological needs

C. Self actualization

D. All of the above

Correct Answer: D. All of the above

All of the choices are part of Maslow's Hierarchy of Needs. Maslow first introduced his concept of a hierarchy of needs in his 1943 paper "A Theory of Human Motivation" and his subsequent book Motivation and Personality. This hierarchy suggests that people are motivated to fulfill basic needs before moving on to other, more advanced needs. As a humanist, Maslow believed that people have an inborn desire to be self-actualized, that is, to be all they can be. In order to achieve these ultimate goals, however, a number of more basic needs must be met such as the need for food, safety, love, and self-esteem.

- **Option A:** The social needs in Maslow's hierarchy include such things as love, acceptance, and belonging. At this level, the need for emotional relationships drives human behavior. In order to avoid problems such as loneliness, depression, and anxiety, it is important for people to feel loved and accepted by other people. Personal relationships with friends, family, and lovers play an important role, as does involvement in other groups that might include religious groups, sports teams, book clubs, and other group activities.
- **Option B:** The basic physiological needs are probably fairly apparent—these include the things that are vital to our survival. In addition to the basic requirements of nutrition, air and temperature regulation, the physiological needs also include such things as shelter and clothing. Maslow also included sexual reproduction in this level of the hierarchy of needs since it is essential to the survival and propagation of the species.
- **Option C:** At the very peak of Maslow's hierarchy are the self-actualization needs. "What a man can be, he must be," Maslow explained, referring to the need people have to achieve their full potential as human beings. According to Maslow's definition of self-actualization, "It may be loosely described as the full use and exploitation of talents, capabilities, potentialities, etc. Such people seem to be fulfilling themselves and to be doing the best that they are capable of doing. They are people who have developed or are developing to the full stature of which they are capable."

74. A client is prescribed by the physician to undergo an escharotomy. Which of the following statements made by the nurse is true regarding this procedure?

A. "It is the surgical removal of a thin layer of the client's own unburned skin."

B. "A lengthwise incision is made through the burn eschar to relieve vasodilation."

C. "It is performed at the bedside and without anesthesia."

D. "It is the application of topical enzyme agents directly to the wound, and these agents digest necrotic collagen tissue."

Correct Answer: C. “It is performed at the bedside and without anesthesia”.

An escharotomy is performed at the bedside and without anesthesia since nerve endings have been destroyed by the burn injury. An escharotomy is an emergency surgical procedure involving incising through areas of burnt skin to release the eschar and its constrictive effects, restore distal circulation, and allow adequate ventilation.

- **Option A:** A skin graft, also known as an autograft, involves taking skin from an unburned part of the patient’s body and placing it on the wound after the burn has been removed.
- **Option B:** Escharotomy involves making a lengthwise incision through the burn eschar to relieve vasoconstriction. The incisions should extend from unburnt skin to unburnt skin ideally, or at least into areas of more superficial burns, down to subcutaneous fat, and release any constrictions.
- **Option D:** This is a selective method for debridement of necrotic tissue using an exogenous proteolytic enzyme, collagenase, to debride Clostridium bacteria. Collagenase digests the collagen in the necrotic tissue allowing it to detach.

75. The nurse is providing dietary instructions for a client with hemochromatosis. Which food items should the client consume, except?

A. Grains

B. Coffee

C. Lamb

D. Legumes

Correct Answer: C. Lamb

- Option C: Hemochromatosis is an iron disorder where the body absorbs too much iron. Diet recommendations for this disease include reducing the consumption of red meat. Red meat contains the most easily absorbable form of iron called heme iron.
- Options A and D: Grains and legumes are a good source of phytic acid which inhibits iron absorption.
- Option B: Coffee contains tannins, a polyphenolic substance that can also inhibit iron absorption.

76. Isaiah, a 16-year-old high school student, presented to the school clinic complaining of a sore throat that began 2 days ago. He is worried as he has a big track meet the next day. Upon examination, the nurse found that he had a temperature of 101.8°F and enlarged, tender cervical lymph nodes. His pharynx

is markedly erythematous with exudate. A Rapid Antigen Detection Test (RADT) for Group A Streptococcus is performed and comes back positive, confirming a diagnosis of streptococcal pharyngitis or "strep throat." Considering the assessment data and Isaiah's confirmed diagnosis, which of the following clinical manifestations would the nurse most likely expect?

A. A fiery red pharyngeal membrane and fever.

B. Pain over the sinus area and purulent nasal secretions.

C. Foul-smelling breath and noisy respirations.

D. Weak cough and high-pitched noise on respirations.

E. Tender, swollen anterior cervical lymph nodes.

F. Chest discomfort and a productive cough with yellow sputum.

G. Dry, scratchy throat and hoarseness lasting more than a week.

Correct Answer: A. A fiery red pharyngeal membrane and fever.
The clinical manifestations of strep throat (streptococcal pharyngitis) typically include a sore throat, painful swallowing, and fever. On examination, the pharyngeal membrane often appears red and swollen, sometimes with a "fiery" appearance. This choice represents the classical clinical presentation of strep throat, making it the most likely manifestation expected by the nurse.

- **Option B:** Pain over the sinus area and purulent nasal secretions are more indicative of sinusitis, which is an infection or inflammation of the paranasal sinuses.
- **Option C:** Foul-smelling breath and noisy respirations may be indicative of other respiratory or oropharyngeal infections but are not typically associated with strep throat.
- **Option D:** Weak cough and high-pitched noise on respirations could be associated with other respiratory conditions such as croup or a foreign body aspiration, but these symptoms are not typical of strep throat.
- **Option E:** Tender, swollen anterior cervical lymph nodes can be associated with strep throat due to the local infection and the body's immune response. However, this choice doesn't capture the quintessential manifestations of strep throat as comprehensively as Option A.
- **Option F:** Chest discomfort and a productive cough with yellow sputum are more indicative of a lower respiratory infection such as bacterial pneumonia rather than a strep throat.
- **Option G:** A dry, scratchy throat and hoarseness lasting more than a week may suggest other conditions such as viral pharyngitis, laryngitis, or even gastroesophageal reflux disease (GERD) rather than strep throat.

77. Aluminum hydroxide gel (Amphojel) is prescribed for the client with chronic renal failure to take at home. What is the purpose of giving this drug to a client with chronic renal failure?

A. To relieve the pain of gastric hyperacidity.

B. To prevent Curling's stress ulcers.

C. To bind phosphorus in the intestine.

D. To reverse metabolic acidosis.

Correct Answer: C. To bind phosphorus in the intestine.

A client in renal failure develops hyperphosphatemia that causes a corresponding excretion of the body's calcium stores, leading to renal osteodystrophy. To decrease this loss, aluminum hydroxide gel is prescribed to bind phosphates in the intestine and facilitate their excretion.

- **Option A:** Gastric hyperacidity is not necessarily a problem associated with chronic renal failure. Aluminum hydroxide can also serve as a phosphate binder in patients with chronic renal disease. However, its use in this manner is infrequent due to the risk of adverse effects.
- **Option B:** Antacids will not prevent Curling's stress ulcers. Aluminum hydroxide [Al(OH)3] dissociates into Al3+ and OH- in the stomach. The freed hydroxide groups then bind to free protons, ultimately producing water and insoluble aluminum salts, mostly Al(Cl)3, within the stomach. The proton binding serves to increase the overall pH of the stomach, i.e., less acidic, reducing the symptoms of indigestion.
- **Option D:** Antacids will not affect metabolic acidosis. Prolonged administration should not be considered in a patient with renal impairment or a patient on dialysis, as impaired clearance of excess aluminum may precipitate the drug's adverse effects.

78. Dr. Marquez tells a client that an increased intake of foods that are rich in Vitamin E and beta-carotene are important for healthier skin. The nurse teaches the client that excellent food sources of both of these substances are:

A. Fish and fruit jam

B. Oranges and grapefruit

C. Carrots and potatoes

D. Spinach and mangoes

Correct Answer: D. Spinach and mangoes

Beta-carotene and Vitamin E are antioxidants which help to inhibit oxidation. Vitamin E is found in the following foods: wheat germ, corn, nuts, seeds, olives, spinach, asparagus and other green leafy vegetables. Food sources of beta-carotene include dark green vegetables, carrots, mangoes and tomatoes.

- **Option A:** Fish is rich in protein, while fruit jams are rich in fiber and carbohydrates. Fish is filled with omega-3 fatty acids and vitamins such as D and B2 (riboflavin). Fish is rich in calcium and phosphorus and a great source of minerals, such as iron, zinc, iodine, magnesium, and potassium. The American Heart Association recommends eating fish at least two times per week as part of a healthy diet.
- **Option B:** Oranges and grapefruit are rich in Vitamin C. Lemons, limes, grapefruits, and oranges are high in phytonutrients, such as carotenoids, flavonoids, and polyphenols. These nutrients are types of antioxidants and give the fruits their bright colors and strong scents. They can also help protect the body and prevent many health issues.
- **Option C:** Carrots are rich in beta-carotene, a compound the body changes into vitamin A, which helps keep the eyes healthy. And beta-carotene helps protect the eyes from the sun and lowers the chances of cataracts and other eye problems. Yellow carrots have lutein, which is also good for the eyes. Studies have linked potatoes and their nutrients to a variety of impressive health benefits, including improved blood sugar control, reduced heart disease risk, and higher immunity. They may also improve digestive health and combat signs of aging.

79. George, age 8, is admitted with rheumatic fever. Which clinical finding indicates to the nurse that George needs to continue taking the salicylates he had received at home?

A. Chorea

B. Polyarthritis

C. Subcutaneous nodules

D. Erythema marginatum

Correct Answer: B. Polyarthritis

Polyarthritis is characterized by swollen, painful, hot joints that respond to salicylates. Polyarthritis refers to a joint disease that involves at least five joints. One or more signs of inflammation, including pain, movement restriction, swelling, warmth, and redness, are seen in the joints involved.

- **Option A:** Chorea is the restless and sudden aimless and irregular movements of the extremities suddenly seen in persons with rheumatic fever, especially girls. Chorea may be viewed as resulting from increased dopaminergic activity in the projections from the substantia nigra to the striatum, resulting in decreased GABAergic projection from the striatum to the globus pallidus.
- **Option C:** Subcutaneous nodules are non tender swellings over bony prominences sometimes seen in persons with rheumatic fever. Subcutaneous nodules are deep-seated lesions in the skin, located in the deep dermis and subcutis, often with minimal changes appreciated on the surface of the skin. They are often easier to feel than see.
- **Option D:** Erythema marginatum is a skin condition characterized by nonpruritic rash, affecting the trunk and proximal extremities, seen in persons with rheumatic fever. The pathogenesis for the occurrence of these lesions in cases of hereditary angioedema is proposed to be bradykinin mediated. This was evidenced by the presence of dense stromal and endothelial deposits of bradykinin in skin biopsy specimens taken from lesions of erythema marginatum in patients with hereditary angioedema.

80. You're caring for Jane, a 57 y.o. patient with liver cirrhosis who developed ascites and requires paracentesis. Before her paracentesis, you instruct her to:

A. Empty her bladder.

B. Lie supine in bed.

C. Remain NPO for 4 hours.

D. Clean her bowels with an enema.

Correct Answer: A. Empty her bladder.

A full bladder can interfere with paracentesis and be punctured inadvertently. The preferred site for the procedure is in either the lower quadrant of the abdomen lateral to the rectus sheath. Placing the patient in the lateral decubitus position can aid in identifying fluid pockets in patients with lower fluid volumes. Ask the patient to empty his or her bladder before starting the procedure.

- **Option B:** Placing the patient in the lateral decubitus position can aid in identifying fluid pockets in patients with lower fluid volumes. Paracentesis is done in a lateral decubitus or supine position. The ascites fluid level is percussed, and a needle is inserted either in the midline or lateral lower quadrant (lateral to rectus abdominis muscle, 2 cm to 4 cm superomedial to anterior superior iliac

spine). This positioning avoids puncture of the inferior epigastric arteries.

- **Option C:** NPO is not necessary for the procedure. There are few absolute contraindications for paracentesis. Coagulopathy and thrombocytopenia (both very common in cirrhotic patients) are themselves not absolute contraindications as the incidence of bleeding complications from the procedure has been shown to be very low.
- **Option D:** An enema is not necessary for the procedure. A bedside ultrasound should be used to identify an appropriate location for the procedure. Ultrasound can confirm the presence of fluid and identify an area with a sufficient amount of fluid for aspiration, thereby decreasing the incidence of both unsuccessful aspiration and complications.

81. A 48-year-old male teacher presents to the outpatient rheumatology clinic with a five-year history of rheumatoid arthritis (RA). His main complaint during this visit, besides joint pain, is persistent fatigue which is affecting his ability to keep up with his teaching duties and to engage in social activities. He mentions that fatigue differs from just feeling tired, describing it as an overwhelming sense of exhaustion. The nurse, after listening to his concerns, prepares to suggest an intervention to address his fatigue. Which nursing intervention is most appropriate for this patient?

A. Encouraging the patient to engage in regular physical exercise

B. Teaching energy conservation techniques

C. Administering caffeine-containing beverages

D. Providing the patient with vitamin B12 supplements

Correct Answer: B. Teaching energy conservation techniques.

This is a highly appropriate intervention for patients with RA experiencing fatigue. Energy conservation techniques can include pacing oneself, taking short breaks during activities, prioritizing tasks, and using adaptive equipment. These techniques help patients manage their energy levels and complete necessary tasks without exacerbating fatigue. For a patient with RA experiencing significant fatigue, teaching them techniques to conserve and manage their energy efficiently is the most direct and appropriate intervention.

- **Option A:** Regular physical exercise can be beneficial but may need to be modified based on the patient's energy levels. While it may seem counterintuitive to recommend exercise to someone feeling fatigued, regular low-impact exercises, such as walking or swimming, can help increase energy levels, improve mood, and promote better sleep in RA patients. Exercise can also help maintain joint function and reduce stiffness. Therefore, this is a beneficial intervention.
- **Option C:** While caffeine can act as a stimulant and temporarily alleviate feelings of tiredness, it's not a long-term solution to the fatigue associated with RA. Additionally, excessive caffeine can lead to other issues like insomnia, increased heart rate, and potential exacerbation of RA symptoms. Relying on caffeine is not the best approach for managing RA-related fatigue.
- **Option D:** While vitamin B12 is crucial for energy production in the body, there is no direct evidence linking RA-related fatigue to a vitamin B12 deficiency. Unless the patient has been diagnosed with a B12 deficiency, this intervention would not be the most appropriate. It's essential to ascertain the cause of fatigue before recommending supplements.

82. A nurse is assessing the neurovascular of a client who has returned to the surgical nursing unit 4 hours ago after undergoing an aortoiliac bypass graft. The affected leg is warm, and the nurse notes redness and edema. The pedal pulse is palpable and unchanged from admission. The nurse interprets that the neurovascular status is:

A. Normal because of increased blood flow through the leg.

B. Slightly deteriorating and should be monitored for another hour.

C. Moderately impaired, and the surgeon should be called.

D. Adequate from an arterial approach, but venous complications are arising.

Correct Answer: A. Normal because of increased blood flow through the leg

An expected outcome of surgery is warmth, redness, and edema in the surgical extremity because of increased blood flow. Aortoiliac occlusive disease can contribute to lower extremity ischemic symptoms necessitating intervention. Symptoms of patients with aortoiliac occlusive disease may include claudication, rest pain of the lower extremities, or ischemic ulcer formation on lower extremities due to inadequate blood flow.

- **Option B:** As with any surgical procedure, there exists a risk of bleeding or infection. In addition, there is a risk of wound infection, hematoma. Complications that result in significant morbidities include MI, renal dysfunction, and respiratory dysfunction. Late complications include hernias, graft thrombosis, and graft pseudoaneurysms, graft infections, aortoenteric fistulas further discussed below.
- **Option C:** Most frequently, (in 50% of cases), cardiac ischemia is responsible for death related to aortic reconstruction, which is because there are seldom patients with normal coronary arteries. Hence the importance of pre-operative screening and treatment and cardiac comorbidities. Mortality related to cardiac death following surgical intervention is 1% to 2.5% in some centers.
- **Option D:** Another common complication following surgery is renal insufficiency. This condition is typically a result of prolonged ischemia after clamping suprarenal, embolization secondary to clamping, hypoperfusion, hypovolemia, or intrinsic renal artery disease. Often, this post-operative complication directly relates to the patient's preoperative cardiac and renal function.

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

A. Limit the client's activity

B. Encourage a high-carbohydrate diet

C. Utilize an incentive spirometer to improve respiratory function

D. Encourage fluids

Correct Answer: D. Encourage fluids

Clients taking Acyclovir should be encouraged to drink plenty of fluids because renal impairment can occur. Acute kidney injury (AKI) is the most significant side effect of parenteral acyclovir administration. The incidence of AKI is comparable to other nephrotoxic medications such as aminoglycosides. Patients with CKD are at higher risk. Dose adjustment of acyclovir for ideal body weight and baseline renal function is imperative.

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

84. After undergoing a cardiac catheterization, Tracy has a large puddle of blood under his buttocks. Which of the following steps should the nurse take first?

A. Call for help.

B. Obtain vital signs.

C. Ask the client to "lift up".

D. Apply gloves and assess the groin site.

Correct Answer: D. Apply gloves and assess the groin site.

Observing standard precautions is the first priority when dealing with any blood fluid. Assessment of the groin site is the second priority. This establishes where the blood is coming from and determines how much blood has been lost. The goal in this situation is to stop the bleeding.

- **Option A:** The nurse would call for help if it were warranted after the assessment of the situation.
- **Option B:** After determining the extent of the bleeding, vital signs assessment is important.
- **Option C:** The nurse should never move the client, in case a clot has formed. Moving can disturb the clot and cause rebleeding.

85. Nurse Davis is preparing an anatomy and physiology lecture for a group of first-year nursing students. As part of the skeletal system discussion, she presents a contrast between the bones of the limbs and other bones in the body. She poses the following question: "While most bones of the upper and lower limbs are categorized as long bones, how would you categorize the sacrum and facial bones?"

A. Irregular bones

B. Flat bones

C. Short bones

D. Sesamoid bones

Correct Answer: A. Irregular bones
Irregular bones vary in shape and structure and therefore do not fit into any other category (flat, short, long, or sesamoid). Examples are the irregular bones of the vertebral column, bones of the pelvis (pubis, ilium, and ischium) and facial bones.

- **Option B:** Flat bones have relatively thin, flattened shape. Examples are the ribs, scapulae, and the sternum.
- **Option C:** Short bones are approximately as broad as they are long, such as the bones of the wrist and ankles.
- **Option D:** Sesamoid bones are bones embedded in tendons. These small, round bones are commonly found in the tendons of the hands, knees, and feet.

86. Which of the following best reflects the frequency of reported postpartum "blues"?

A. Between 10% and 40% of all new mothers report some form of postpartum blues.

B. Between 30% and 50% of all new mothers report some form of postpartum blues.

C. Between 50% and 80% of all new mothers report some form of postpartum blues.

D. Between 25% and 70% of all new mothers report some form of postpartum blues.

Correct Answer: C. Between 50% and 80% of all new mothers report some form of postpartum blues

According to statistical reports, between 50% and 80% of all new mothers report some form of postpartum blues. The ranges of 10% to 40%, 30% to 50%, and 25% to 70% are incorrect.

- **Option A:** Postpartum blues, also known as "baby blues," affect approximately 50% to 80% of new mothers. Symptoms may include mood swings with times of feeling anxious, irritable, or tearful interspersed with times of feeling well. Sleeping difficulties may also occur.
- **Option B:** The symptoms usually begin 3-4 days after delivery, worsen by days 5-7, and tend to resolve by day 12. For symptoms that last longer than 2 weeks, it is important for the individual to seek medical attention, since approximately 1 in 5 women with postpartum blues develops postpartum major depression.
- **Option D:** Symptoms peak on the fourth or fifth day after delivery and last for several days, but they are generally time-limited and spontaneously remit within the first 2 postpartum weeks. Symptoms do not interfere with a mother's ability to function and to care for her child.

88. Which of the following is a positive sign of pregnancy?

A. Fetal movement felt by mother

B. Enlargement of the uterus

C. (+) pregnancy test

D. (+) ultrasound

Correct Answer: D. (+) ultrasound

A positive ultrasound will confirm that a woman is pregnant since the fetus in utero is directly visualized.

- **Option A:** The first fetal movements which are felt by the mother are called quickening. One function of these movements is to alert the pregnant woman that she has a fetus growing in her uterus. Quickening often occurs between the 16th to the 22nd week of pregnancy. This is called a presumptive sign of pregnancy as the other movements of the woman's body can mimic early fetal movements such as flatus, peristalsis, and abdominal muscle contractions.
- **Option B:** From conception to delivery, a woman's uterus can grow from the size of a pear to the size of a watermelon. But pregnancy isn't the only potential reason for an enlarged uterus. An enlarged uterus is common and can be a symptom of a variety of medical conditions, some of which require treatment.
- **Option C:** An elevated ?-hCG in the absence of viable pregnancy can occur for multiple reasons and has a broad differential diagnosis including miscarriage, ectopic pregnancy, pituitary hCG production, trophoblastic disease, and phantom hCG.

89. The nurse is assessing a child diagnosed with a brain tumor. Which of the following signs and symptoms would the nurse expect the child to demonstrate? Select all that apply.

A. Increased appetite

B. Vomiting

C. Polydipsia

D. Lethargy

E. Head tilt

F. Increased pulse

Correct Answer: B, D & E

Head tilt, vomiting, and lethargy are classic signs assessed in a child with a brain tumor. Clinical manifestations are the result of location and size of the tumor. Tumors that develop in the brain are called primary tumors. Tumors that spread to the brain after forming in a different part of the body are called secondary tumors or metastatic tumors. This article focuses on primary tumors. There are more than 100 types of primary brain and spinal cord tumors.

- **Option A:** Increased appetite is not a sign of brain tumor. Seizures are the second most common symptom of presentation. The pathophysiology of seizures is attributed to tumor irritation to the cerebral cortex that leads to focal or generalized seizures. Other presenting symptoms of gliomas are tingling sensations, weakness, difficulty ambulation, and in rare cases, patients can present in a comatose state due to hemorrhage within the tumor which leads to an acute herniation syndrome.
- **Option B:** The most common presentations in brain gliomas are headaches, nausea, vomiting, seizures, and in more advanced cases weakness or altered mental status. Other symptoms related to mass effects include nausea, vomiting, and change in vision.
- **Option C:** Polydipsia is not found in a patient with a brain tumor. Symptoms that may be specific to the location of the tumor include changes in judgment, including loss of initiative, sluggishness, and muscle weakness or paralysis is associated with a tumor in the frontal lobe of the cerebrum; or changes in speech, hearing, memory, or emotional state, such as aggressiveness and problems understanding or retrieving words can develop from a tumor in the frontal and temporal lobe of the cerebrum.

- **Option D:** The neurological examination of these patients can be normal or present with different degrees of focal weakness, sensory deficits, or in a severe situation altered mental status due to an acute mass effect resulting from the tumor swelling.
- **Option E:** Headaches are the most common initial presenting symptom of patients with glioma. The pathophysiology of headaches is theorized to be the result of tumor growth that places a mass effect on surrounding tissue. The mass effect, in turn, leads to pressure in the microvasculature and leads to edema. Depending on the location of the tumor in the brain, the mass effect leads to signs of a brain tumor.
- **Option F:** Meningiomas present with typical brain tumor symptoms such as headaches, vision problems, or seizures. A headache–even a severe one–on its own is seldom a symptom of meningioma or any other brain tumor.

90. The client is instructed regarding foods that are low in fat and cholesterol. Which diet selection is lowest in saturated fats?

A. Macaroni and cheese

B. Shrimp with rice

C. Turkey breast

D. Spaghetti

Correct Answer: C. Turkey breast

Turkey contains the least amount of fats and cholesterol. Both turkey and chicken are rich in high-quality protein. Chicken breast has slightly more protein than turkey breast, but turkey thigh is minimally higher in protein than chicken thigh. The other meat cuts provide equal amounts of protein.

- **Option A:** It's typically high in calories because it's made with pasta, cheese, cream, and butter, although the calorie content varies significantly between brands, ingredients, and serving size. Mac and cheese contain large amounts of fat and refined carbs, both of which contribute to its high calorie count. Eating more calories than you burn, regardless of which foods they come from, can lead to weight gain.
- **Option B:** White rice is highly processed and missing its hull (the hard protective coating), bran (outer layer), and germ (nutrient-rich core). Meanwhile, brown rice only has the hull removed. White rice is considered empty carbs since it loses its main sources of nutrients.
- **Option D:** Spaghetti is one of the most popular forms of pasta, and it's used in dishes all around the world. Most spaghetti is made from durum wheat, so it's high in complex carbohydrates and includes all the nutrients found in refined white flour. Liver, eggs, beef, cream sauces, shrimp, cheese, and chocolate should be avoided by the client. The client should bake meat rather than frying to avoid adding fat to the meat during cooking.

91. A 34-year-old female client is requesting information about mammograms and breast cancer. She isn't considered at high risk for breast cancer. What should the nurse tell this client?

A. She should have had a baseline mammogram before age 30

B. When she begins having yearly mammograms, breast self-examinations will no longer be necessary

C. She should perform breast self-examination during the first 5 days of each menstrual cycle

D. She should eat a low-fat diet to further decrease her risk of breast cancer

Correct Answer: D. She should eat a low-fat diet to further decrease her risk of breast cancer

- **Option D:** A low-fat diet (one that maintains weight within 20% of recommended body weight) has been found to decrease a woman's risk of breast cancer.
- **Option A:** A baseline mammogram should be done between ages 30 and 40.
- **Option B:** The client should continue to perform monthly breast self-examinations even when receiving yearly mammograms.
- **Option C:** Monthly breast self-examinations should be done between days 7 and 10 of the menstrual cycle.

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

A. Brain structure abnormalities

B. Chemical imbalance

C. Social environment

D. Recessive gene transmission

Correct Answer: B. Chemical imbalance

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

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

93. The nurse assesses the postpartum vaginal discharge (lochia) on four clients. Which of the following assessments would warrant notification of the physician?

A. A dark red discharge on a 2-day postpartum client.

B. A pink to brownish discharge on a client who is 5 days postpartum.

C. Almost colorless to creamy discharge on a client 2 weeks after delivery.

D. A bright red discharge 5 days after delivery.

Correct Answer: D. A bright red discharge 5 days after delivery

Any bright red vaginal discharge would be considered abnormal, but especially 5 days after delivery, when the lochia is typically pink to brownish. Lochia rubra, a dark red discharge, is present for 2 to 3 days after delivery. Bright red vaginal bleeding at this time suggests late postpartum hemorrhage, which occurs after the first 24 hours following delivery and is generally caused by retained placental fragments or bleeding disorders.

- **Option A:** Lochia rubra is the normal dark red discharge occurring in the first 2 to 3 days after delivery, containing epithelial cells, erythrocyTes, leukocytes, and decidua.
- **Option B:** Lochia serosa is a pink to brownish serosanguineous discharge occurring from 3 to 10 days after delivery that contains decidua, erythrocytes, leukocytes, cervical mucus, and microorganisms.
- **Option C:** Lochia alba is an almost colorless to yellowish discharge occurring from 10 days to 3 weeks after delivery and containing leukocytes, decidua, epithelial cells, fat, cervical mucus, cholesterol crystals, and bacteria.

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

A. Deeper sleep than CNS depressants.

B. Greater sedation than CNS depressants.

C. A calming effect from which the client is easily aroused.

D. More prolonged sedative effects, making the client more difficult to arouse.

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

Shortly after phenothiazine administration, a quieting and calming effect occurs, but the client is easily aroused, alert, and responsive and has good motor coordination. The precise mechanism of action exhibited by phenothiazines is not entirely known. Yet, phenothiazines act primarily through inhibiting the dopamine receptor at the mesolimbic pathway with a selective activity at the D2 receptor. This inhibition antagonizes the hyperactivity of dopamine at the synapse and reduces positive symptoms such as delusions and hallucinations associated with schizophrenia.

- **Option A:** Benzodiazepines are frequently used to treat insomnia; however, there may be a withdrawal syndrome with rapid eye movement (REM) rebound. Two newer benzodiazepine-like agents, zolpidem and zaleplon, have fewer side effects, yet good efficacy. Other agents for insomnia include sedating antidepressants and over-the-counter sleep products (sedating antihistamines).
- **Option B:** Central Nervous System (CNS) depressants are medicines that include sedatives, tranquilizers, and hypnotics. These drugs can slow brain activity, making them useful for treating anxiety, panic, acute stress reactions, and sleep disorders. CNS depressants cause drowsiness; sedatives are often prescribed to treat sleep disorders like insomnia and hypnotics can induce

sleep, whereas tranquilizers are prescribed to treat anxiety or to relieve muscle spasms.

- **Option D:** When people overdose on a CNS depressant, their breathing often slows or stops. This can decrease the amount of oxygen that reaches the brain, a condition called hypoxia. Hypoxia can have short- and long-term mental effects and effects on the nervous system, including coma and permanent brain damage.

95. A client is scheduled for a colonoscopy. The nurse will provide information to the client about which type of enema?

A. Oil retention

B. Return flow

C. High large volume

D. Low, small volume

Correct Answer: D. Low, small volume

Small volume enemas along with other preparations are used to prepare the client for this procedure. The small volume enema is used to clean the lower portion of the colon or the sigmoid. This type of cleansing enema is often used for the patient who is constipated but does not need cleansing of the higher colon. The amount used is less than 500 ml and the bag is raised no higher than 12 inches.

- **Option A:** An oil retention enema is used to soften hard stool. A rectal injection of mineral oil or vegetable Oil, introduced at low pressure and retained for 30 minutes to 3 hours before being expelled. given to soften feces in cases of constipation or impaction. The volume of oil is relatively low, four to six ounces are commonly used, which allows the oil to be more easily retained.
- **Option B:** Return flow enemas help expel flatus because of the risk of loss of fluid and electrolytes A return-flow enema, or Harris flush, is used to remove intestinal gas and stimulate peristalsis. A large volume fluid is used but the fluid is instilled in 100-200 ml increments. Then, the fluid is drawn out by lowering the container below the level of the bowel. This brings the flatus out with the fluid.
- **Option C:** High, large volume enemas are seldom used. The purpose of a large volume enema is to clean as much of the colon as possible of feces, as an intervention for constipation as well as “bowel prep” before a diagnostic procedure. The amount used is 500-1000 ml and the bag is raised as high as 18 inches above the anal opening. The patient is instructed to retain and hold the fluid as long as possible to induce peristalsis and cause evacuation of feces.

96. A nurse is preparing to remove a nasogastric tube from a female client. The nurse should instruct the client to do which of the following just before the nurse removes the tube?

A. Exhale

B. Inhale and exhale quickly

C. Take and hold a deep breath

D. Perform a Valsalva maneuver

Correct Answer: C. Take and hold a deep breath.

When the nurse removes a nasogastric tube, the client is instructed to take and hold a deep breath. This will close the epiglottis. This allows for easy withdrawal through the esophagus into the nose. The nurse removes the tube with one smooth, continuous pull.

- **Option A:** The patient should take a deep breath, and hold it, not exhale. An NG tube should be removed if it is no longer required. The process of removal is usually very quick. Prior to removing an NG tube, verify physician orders. If the NG tube was ordered to remove gastric content, the physician's order may state to "trial" clamping the tube for a number of hours to see if the patient tolerates its removal. During the trial, the patient should not experience any nausea, vomiting, or abdominal distension.
- **Option B:** Inhaling and exhaling quickly could make the removal uncomfortable. Instruct the patient to take a deep breath and hold it. This prevents aspiration; holding the breath closes the glottis.
- **Option D:** Performing the Valsalva maneuver is inappropriate. Kink the NG tube near the nares and gently pull out the tube in a swift, steady motion, wrapping it in hand as it is being pulled out. Dispose of the tube in a garbage bag.

97. During a client's urinary bladder catheterization, the bladder is emptied gradually. The best rationale for the nurse's action is that completely emptying an overdistended bladder at one time tends to cause:

A. Renal failure

B. Abdominal cramping

C. Possible shock

D. Atrophy of bladder musculature

Correct Answer: C. Possible shock

Rapid emptying of an overdistended bladder may cause hypotension and shock due to the sudden change of pressure within the abdominal viscera. Previously, removing no more than 1,000 ml at one time was the standard of practice, but this is no longer thought to be necessary as long as the over distended bladder is emptied slowly.

- **Option A:** Hematuria, hypotension, and postobstructive diuresis can occur after bladder drainage by catheter, and the risk of these complications has been thought to be increased when the bladder is rapidly decompressed; however, there are reports supporting gradual bladder decompression to avoid hematuria, hypotension, and post obstructive diuresis, the evidence is overall weak.
- **Option B:** A Foley was used for urethral catheterization. The bladder is catheterized in the normal way under aseptic conditions using a two-way Foley catheter. Patients were evaluated for pain (treatment success), hematuria, and hypotension. Pain was assessed as present or absent. The assessment was done using pain analog scores.
- **Option D:** Gradual release of the obstructed bladder continues to be recommended as the method of choice based on a theory that slow decompression of the intrabladder pressure will reduce the rate of complications, specifically hematuria, and hypotension.

98. To inhibit pancreatic secretions, which pharmacologic agent would you anticipate administering to a patient with acute pancreatitis?

A. Nitroglycerin

B. Somatostatin

C. Pancrelipase

D. Pepcid

Correct Answer: B. Somatostatin

Somatostatin, a treatment for acute pancreatitis, inhibits the release of pancreatic enzymes. Somatostatin produces predominantly neuroendocrine inhibitory effects across multiple systems. It is known to inhibit GI, endocrine, exocrine, pancreatic, and pituitary secretions, as well as modify neurotransmission and memory formation in the CNS.

- **Option A:** Nitroglycerin is a vasodilator and does not affect pancreatic secretions. Nitroglycerin is a vasodilatory drug used primarily to provide relief from anginal chest pain. It is currently FDA approved for the acute relief of an attack or acute prophylaxis of angina pectoris secondary to coronary artery disease.
- **Option C:** Pancrelipase is an enzyme that aids in the digestion and absorption of fats and proteins. Pancrelipase refers to a class of medications designed to treat malabsorption and abdominal pain secondary to exocrine pancreatic insufficiency. These agents serve as exogenous versions of digestive hormones and enzymes required for normal digestion and are ingested with meals to improve digestion, absorption, and abdominal pain frequently seen in chronic pancreatitis and exocrine pancreatic insufficiency.
- **Option D:** Pepcid is an H2 blocker and is used to decrease gastric motility. H2 receptor blockers, or H2 receptor antagonists (H2RAs), are a class of gastric acid-suppressing agents frequently used in various gastric conditions. They are FDA-approved for short-term use in treating uncomplicated gastroesophageal reflux disease (GERD), gastric or duodenal ulcers, gastric hypersecretion, and mild to infrequent heartburn or indigestion.

99. A patient received 6 units of regular insulin three (3) hours ago. The nurse would be most concerned if which of the following was observed?

A. Kussmaul respirations and diaphoresis

B. Anorexia and lethargy

C. Diaphoresis and trembling

D. Headache and polyuria

Correct Answer: C. Diaphoresis and trembling

Diaphoresis and trembling indicate hypoglycemia and should be treated immediately. Neurogenic signs and symptoms can either be adrenergic (tremor, palpitations, anxiety) or cholinergic (hunger, diaphoresis, paresthesias). Identification of a hypoglycemic patient is critical due to potential adverse effects, including coma and/or death.

- **Option A:** The patient with diabetic ketoacidosis may present with a myriad of symptoms and physical exam findings. Patients may have symptoms of hyperglycemia like polyphagia, polyuria, or polydipsia. Kussmaul's breathing, which is labored, deep, and tachypneic, may occur. Some providers may appreciate a fruity scent to the patient's breath, indicative of the presence of acetone.
- **Option B:** In patients with DM (mainly type 1 but can also be type 2) and on an insulin regimen, blood glucose should be monitored between meals to prevent hypoglycemia. Additionally, weight measurements are necessary due to insulin-associated weight gain.

- **Option D:** Neuroglycopenic signs and symptoms are signs and symptoms that result from direct central nervous system (CNS) deprivation of glucose. These include behavioral changes, confusion, fatigue, seizure, coma, and potential death if not immediately corrected.

100. A patient with ESRD has an arteriovenous fistula in the left arm for hemodialysis. Which intervention do you include in his plan of care?

A. Apply pressure to the needle site upon discontinuing hemodialysis.

B. Keep the head of the bed elevated 45 degrees.

C. Place the left arm on an arm board for at least 30 minutes.

D. Keep the left arm dry.

Correct Answer: A. Apply pressure to the needle site upon discontinuing hemodialysis.

Apply pressure when discontinuing hemodialysis and after removing the venipuncture needle until all the bleeding has stopped. Bleeding may continue for 10 minutes in some patients. The AV fistula is the safest type of vascular access. It can last for years and is least likely to get infections or blood clots. A surgeon connects an artery (a large blood vessel that carries blood from the heart) and a vein (a blood vessel that carries blood to the heart) under the skin in the arm. Usually, they do the AV fistula in the non-dominant arm.

- **Option B:** Remove any restrictive clothing or jewelry from the arm. To prevent injuries, place an armband on the patient or a sign over the bed that says no BP measurements, venipunctures, or injections on the affected side. When blood flow through the vascular access is reduced, it can clot.
- **Option C:** Perform hand hygiene before you assess or touch the vascular access. If it's new vascular access with a wound, don gloves. Position the patient's arm so the vascular access is easily visualized. Palpate the vascular access to feel for a thrill or vibration that indicates arterial and venous blood flow and patency.
- **Option D:** Check the patient's circulation by palpating his pulses distal to the vascular access; observing capillary refill in his fingers; and assessing him for numbness, tingling, altered sensation, coldness, and pallor in the affected extremity.