

Kevin's Review - 100 NCLEX Practice Questions

1. Amid an ongoing economic recession, a small town has seen a significant uptick in community stress levels, manifesting in increased cases of anxiety and depression among its residents. In response, the local healthcare department has coordinated a community outreach program focused on stress management and coping mechanisms. A group of volunteer nurses have been tasked to lead interactive sessions with the community members. During a breakout session, a perplexed participant named Mary, who recently lost her job and is struggling to support her family, seeks guidance on effectively coping with stress. The nurses prepare to explain different beliefs and methods that can help individuals cope with stressful life events. They developed a questionnaire to gauge the participants' understanding of stress management principles post-session. Which belief, as a method of coping with stressful life events, would the nurses most likely advocate for during the session?

- A. Avoidance of stress is an important goal for living.
- B. Control over one's response to stress is possible.
- C. Most people have no control over their level of stress.
- D. Significant others are important to provide care and concern.
- E. Meditative practices and relaxation techniques can help manage stress responses.
- F. Finding a support group to share and discuss stressful events can be beneficial.

Correct Answer: B. Control over one's response to stress is possible.

This is the correct answer. It empowers individuals to manage their reactions to stressors, encouraging the development of coping mechanisms and resilience. By selecting option B, the nurses aim to instill a sense of self-efficacy and control in Mary and other participants, fostering a proactive approach towards managing their stress in these challenging times.

- **Options A:** This option may promote an unrealistic expectation as stress is a natural part of life, and avoidance might not be possible or healthy.
- **Options C:** This option could foster a sense of helplessness and may discourage individuals from attempting to manage their stress.
- **Options D:** While social support is crucial, it doesn't equip individuals with personal coping skills. Relying solely on others might not be a long-term solution.
- **Option E:** While this is a useful approach, it's more of an actionable strategy rather than a belief about coping with stress.
- **Option F:** Similar to option D, while helpful, it does not promote individual control over one's response to stress.

2. Nurse Mary is inserting a urinary catheter into a client who is extremely anxious about the procedure. The nurse can facilitate the insertion by asking the client to:

- A. Initiate a stream of urine.
- B. Breathe deeply.

- C. Turn to the side.
- D. Hold the labia or shaft of penis.

Correct Answer: B. Breathe deeply.

When inserting a urinary catheter, facilitate insertion by asking the client to breathe deeply. Doing this will relax the urinary sphincter. Deep breathing can all help create gentle pressure that will loosen the resistance against the catheter.

- **Option A:** Initiating a stream of urine isn't recommended during catheter insertion. Ask the patient to bear down gently (as if to void) and slowly insert catheter through urethral meatus. If urine does not appear in a female patient, the catheter may be in the patient's vagina. Leave the catheter in vagina as a landmark, and insert another sterile catheter.
- **Option C:** Positioning of the patient depends on gender. In a female patient: on back with knees flexed and thighs relaxed so that hips rotate to expose perineal area. On a male patient: Supine with legs extended and slightly apart. The patient should be comfortable, with the perineum or penis exposed, for ease and safety in completing the procedure.
- **Option D:** Holding the labia or penis won't ease insertion, and doing so may contaminate the sterile field. Using sterile technique and dominant hand, clean labia and urethral meatus from clitoris to anus, and from outside labia to inner labial folds and urethral meatus. Or, gently grasp penis at the shaft and hold it at right angle to the body throughout the procedure with a non-dominant hand (now contaminated and no longer sterile). This reduces the transmission of microorganisms.

3. Which of the following vascular system changes results from aging?

- A. Increased peripheral resistance of the blood vessels
- B. Decreased blood flow
- C. Increased workload of the left ventricle
- D. All of the above

Correct Answer: D. All of the above

Aging decreases the elasticity of the blood vessels, which leads to increased peripheral resistance and decreased blood flow. These changes, in turn, increase the workload of the left ventricle. Some changes in the heart and blood vessels normally occur with age. However, many other changes that are common with aging are due to modifiable factors. If not treated, these can lead to heart disease.

- **Option A:** Receptors called baroreceptors monitor the blood pressure and make changes to help maintain a fairly constant blood pressure when a person changes positions or is doing other activities. The baroreceptors become less sensitive with aging. This may explain why many older people have orthostatic hypotension, a condition in which the blood pressure falls when a person goes from lying or sitting to standing. This causes dizziness because there is less blood flow to the brain.
- **Option B:** The main artery from the heart (aorta) becomes thicker, stiffer, and less flexible. This is probably related to changes in the connective tissue of the blood vessel wall. This makes the blood pressure higher and makes the heart work harder, which may lead to thickening of the heart muscle (hypertrophy). The other arteries also thicken and stiffen. In general, most older people have a moderate increase in blood pressure.
- **Option C:** The heart has a natural pacemaker system that controls the heartbeat. Some of the pathways of this system may develop fibrous tissue and fat deposits. The natural pacemaker (the

SA node) loses some of its cells. These changes may result in a slightly slower heart rate. A slight increase in the size of the heart, especially the left ventricle occurs in some people. The heart wall thickens, so the amount of blood that the chamber can hold may actually decrease despite the increased overall heart size. The heart may fill more slowly.

4. A female client has a serum calcium level of 7.2 mg/dl. During the physical examination, nurse Noah expects to assess:

- A. Trousseau's sign.
- B. Homans' sign.
- C. Hegar's sign.
- D. Goodell's sign.

Correct Answer: A. Trousseau's sign.

This client's serum calcium level indicates hypocalcemia, an electrolyte imbalance that causes Trousseau's sign (carpopedal spasm induced by inflating the blood pressure cuff above systolic pressure). Trousseau's sign for latent tetany is most commonly positive in the setting of hypocalcemia. The sign is observable as a carpopedal spasm induced by ischemia secondary to the inflation of a sphygmomanometer cuff, commonly on an individual's arm, to 20 mmHg over their systolic blood pressure for 3 minutes. The carpopedal spasm is visualized as flexion of the wrist, thumb, and metacarpophalangeal joints with hyperextension of the fingers.

- **Option B:** Homans' sign (pain on dorsiflexion of the foot) indicates deep vein thrombosis. A positive Homan's sign (calf pain at dorsiflexion of the foot) is thought to be associated with the presence of thrombosis. However, Homans's sign has a very poor predictive value for the presence or absence of deep vein thrombosis, like any other symptom or clinical sign of this disease.
- **Option C:** Hegar's sign is the softening of the uterine isthmus. Hegar's sign is a non-sensitive indication of pregnancy in women — its absence does not exclude pregnancy. It pertains to the features of the cervix and the uterine isthmus. It is demonstrated as a softening in the consistency of the uterus, and the uterus and cervix seem to be two separate regions.
- **Option D:** Goodell's sign (cervical softening) is a probable sign of pregnancy. In medicine, the Goodell sign is an indication of pregnancy. It is a significant softening of the vaginal portion of the cervix from increased vascularization. This vascularization is a result of hypertrophy and engorgement of the vessels below the growing uterus. This sign occurs at approximately four weeks' gestation.

5. A 23-year-old male client who has had a full-thickness burn is being discharged from the hospital. Which information is most important for the nurse to provide prior to discharge?

- A. How to maintain home smoke detectors
- B. Joining a community reintegration program
- C. Learning to perform dressing changes
- D. Options available for scar removal

Correct Answer: C. Learning to perform dressing changes

Teaching the patient and his family to perform dressing changes is critical for the goal of progression towards independence. Proper management of burn injury through proper dressing changes helps prevent wound deterioration. Encouragement of the patient and his family members in participating in dressing changes and wound care helps prepare for the patient's eventual discharge and home care needs. All other choices (below) are important during the rehabilitation stage but dressing changes is a priority.

- **Option A:** Teach on the importance of installing and maintaining smoke detectors on every level of the home and changing batteries periodically to help prevent fires.
- **Option B:** Surviving a burn injury has a tremendous psychological impact on the patient and family. The nurse plays a key role in helping the patient adapt. Providing referrals to social services and counseling helps the patient during his rehabilitation phase.
- **Option D:** Discussion about burn reconstruction treatment after the scars have healed or matured is usually discussed after the first few years after injury. This option is often used to "improve both the function and the cosmetic appearance of burn scars".

6. Nurse Wayne is aware that a positive Chvostek's sign indicates?

- A. Hypocalcemia
- B. Hyponatremia
- C. Hypokalemia
- D. Hypermagnesemia

Correct Answer: A. Hypocalcemia

Chvostek's sign is elicited by tapping the client's face lightly over the facial nerve, just below the temple. If the client's facial muscles twitch, it indicates hypocalcemia. Chvostek's sign is another manifestation of heightened neuromuscular excitability. It is the spasm of facial muscles in response to tapping the facial nerve near the angle of the jaw.

- **Option B:** Hyponatremia is indicated by weight loss, abdominal cramping, muscle weakness, headache, and postural hypotension. Symptoms depend upon the degree and chronicity of hyponatremia. Patients with mild-to-moderate hyponatremia (greater than 120 mEq/L) or gradual decrease in sodium (greater than 48 hours) have minimal symptoms. Patients with severe hyponatremia (less than 120 mEq/L) or rapid decrease in sodium levels have multiple varied symptoms.
- **Option C:** Hypokalemia causes paralytic ileus and muscle weakness. Significant muscle weakness occurs at serum potassium levels below 2.5 mmol/L but can occur at higher levels if the onset is acute. Similar to the weakness associated with hyperkalemia, the pattern is ascending in nature affecting the lower extremities, progressing to involve the trunk and upper extremities and potentially advancing to paralysis.
- **Option D:** Clients with hypermagnesemia exhibit a loss of deep tendon reflexes, coma, or cardiac arrest. The most frequent symptoms and signs may include weakness, nausea, dizziness, and confusion (less than 7.0 mg/dL). Increasing values (7 to 12 mg/dL) induce decreased reflexes, worsening confusional state, drowsiness, bladder paralysis, flushing, headache, and constipation. A slight reduction in blood pressure and blurred vision caused by diminished accommodation and convergence can manifest.

7. Nurse Trish suggests a crisis intervention group to a client experiencing a developmental crisis. These groups are successful because the:

- A. Crisis intervention worker is a psychologist and understands behavior patterns.
- B. Crisis group supplies a workable solution to the client's problem.
- C. Clients are encouraged to talk about personal problems.
- D. Client is assisted to investigate alternative approaches to solving the identified problem.

Correct Answer: D. Client is assisted to investigate alternative approaches to solving the identified problem

Crisis intervention groups help clients reestablish psychologic equilibrium by assisting them to explore new alternatives for coping. It considers realistic situations using rational and flexible problem-solving methods. Crisis intervention is a short-term management technique designed to reduce potential permanent damage to an individual affected by a crisis. A crisis is defined as an overwhelming event, which can include divorce, violence, the passing of a loved one, or the discovery of a serious illness.

- **Option A:** There are many approaches to integrating crisis intervention, and a member of the healthcare team can complete each step. First responders can triage and assess the situation and administer psychological first aid as needed to victims of a traumatic event to prevent any long-term mental health problems. This approach allows immediate access to crisis intervention, which will facilitate care and lead to improved outcomes. In a hospital setting, the needs of a patient in crisis should be well communicated throughout the management team. As one study suggests, in times of crisis intervention, health professionals should discuss in advance and agree on a plan of care to better facilitate the recovery of the patient.
- **Option B:** A successful intervention involves obtaining background information on the patient, establishing a positive relationship, discussing the events, and providing emotional support. SAFER-R is a common intervention model used, which consists of stabilization, acknowledgment, facilitate understanding, encouragement, recovery, and referral. SAFER-R helps patients return to their mental baseline following a crisis.
- **Option C:** Based on prior studies, it is evident that crisis intervention plays a significant role in enhancing outcomes in psychiatric cases. Community Mental Health Centers and local government agencies often have crisis intervention teams that provide support to the local community at times of mental health crisis. These teams can also be helpful at times of natural or man-made emergencies. Crisis intervention teams often assess and triage the situation and can diffuse the situation and triage for urgent attention of medical or mental health personnel in emergency or community care settings.

8. A clinical instructor teaches a class for the public about diabetes mellitus. Which individual does the nurse assess as being at the highest risk for developing diabetes?

- A. The 50-year-old client who does not get any physical exercise
- B. The 56-year-old client who drinks three glasses of wine each evening
- C. The 42-year-old client who is 50 pounds overweight
- D. The 38-year-old client who smokes one pack of cigarettes per day

Correct Answer: C. The 42-year-old client who is 50 pounds overweight

Obesity increases the likelihood of developing diabetes mellitus due to the overstimulation of the endocrine system. Obesity is believed to account for 80-85% of the risk of developing type 2 diabetes, while recent research suggests that obese people are up to 80 times more likely to develop type 2 diabetes than those with a BMI of less than 22.

- **Option A:** Exercise is important, but lack of exercise is not as big a risk factor as obesity. Scientists in the United States have found that not taking part in much physical activity could be the primary cause of chronic conditions, including diabetes, obesity, and fatty liver disease, and also that taking regular exercise may not actually help people who are sedentary.
- **Option B:** Consuming alcohol is associated with liver disease but is not as high a risk factor for diabetes as obesity. While moderate amounts of alcohol may cause blood sugar to rise, excess alcohol can actually decrease the blood sugar level — sometimes causing it to drop into dangerous levels, especially for people with type 1 diabetes. Beer and sweet wine contain carbohydrates and may raise blood sugar.
- **Option D:** Smoking is a serious health concern but is not a specific risk factor for diabetes. Smokers are 30 to 40 percent more likely to develop type 2 diabetes than nonsmokers. Smoking can also make managing the disease and regulating insulin levels more difficult because high levels of nicotine can lessen the effectiveness of insulin, causing smokers to need more insulin to regulate blood sugar levels.

9. Which finding is characteristic during the emergent period after a deep full-thickness burn injury?

- A. Blood pressure of 170/100 mm Hg
- B. Foul-smelling discharge from wound
- C. Pain at site of injury
- D. Urine output of 10 mL/hr

Correct Answer: D. Urine output of 10 mL/hr

During the fluid shift of the emergent period, blood flow to the kidney may not be adequate for glomerular filtration. As a result, urine output is greatly decreased. Urine output of 0.5 mL/kg or about 30 – 50 mL/hr in adults and 0.5-1.0 mL/kg/hr in children less than 30kg is a good target for adequate fluid resuscitation.

- **Option A:** Blood pressure is usually low. During this inflammatory response, there is a fluid loss that can cause a sharp and potentially deadly drop in blood pressure known as shock.
- **Option B:** A foul-smelling discharge does not occur during the emergent phase. Third-degree involves the full thickness of skin and subcutaneous structures. It appears white or black/brown. With pressure, no blanching occurs. The burn is leathery and dry.
- **Option C:** Pain does not occur with deep full-thickness burns. There is minimal to no pain because of decreased sensation. Full-thickness burns heal by contracture and take greater than 8 weeks. Full-thickness burns require skin grafting.

10. Which action represents the appropriate nursing management of a client wearing a condom catheter?

- A. Ensure that the tip of the penis fits snugly against the end of the condom.

- B. Check the penis for adequate circulation 30 min after applying.
- C. Change the condom every 8 hours.
- D. Tape the collecting tube to the lower abdomen.

Correct Answer: B. Check the penis for adequate circulation 30 min after applying

The penis and condom should be checked 1/2 hour after application to ensure that it's not too tight, and the tubing is taped to the leg or attached to a leg bag. Condom catheters are external urinary catheters that are worn like a condom. They collect urine as it drains out of your bladder and send it to a collection bag strapped to your leg. They're typically used by men who have urinary incontinence (can't control their bladder).

- **Option A:** A 1 in. space should be left between the penis and the end of the condom. Place the condom over the tip of the penis and slowly unroll it until it gets to the base. Leave enough room at the tip (1 to 2 inches) so it won't rub against the condom.
- **Option C:** The condom is changed every 24h. Condom catheters should be replaced every 24 hours. Throw away the old one unless it's designed to be reusable. The collection bag should be emptied when it's about half full or at least every three to four hours for a small bag and every eight hours for a large one.
- **Option D:** An indwelling catheter is taped to the lower abdomen or upper thigh. Use a nonadhesive condom catheter to help prevent irritation from adhesive. An inflatable ring holds it in place. Keep the bag lower than the bladder to avoid backflow of urine from the bag. Securely attach the tube to the leg (below the knee, such as the calf), but leave a little slack so it doesn't pull on the catheter.

11. Miley has been taking growth hormones for quite some time now. As a recipient of the agent, she should be aware that a side effect of growth hormone is:

- A. Increased tumor growth
- B. Soft tissue hypertrophy
- C. Dwarfism
- D. Hyperthyroidism

Correct Answer: A. Increased tumor growth

Growth hormone may increase the size of a tumor if one is present. In addition to the lack of evidence for effectiveness of human growth hormone in these proposed uses, it causes side effects such as diabetes, carpal tunnel syndrome, fluid retention, joint and muscle pain, and high blood pressure. Many of these side effects were seen in studies that used much higher doses of human growth hormone than are now used in elderly people, so there is hope that studies using lower doses alone or in combination with modest doses of anabolic steroids may show a positive ratio of benefits to side effects. Hypothyroidism and soft tissue atrophy are the side effects. Dwarfism is the indication for therapy.

- **Option B:** Anabolic-androgenic steroids (AAS) and other hormones such as growth hormone (GH) and insulin-like growth factor-1 (IGF-1) have been shown to increase muscle mass in patients suffering from various diseases related to muscle atrophy.
- **Option C:** Recombinant human growth hormone therapy (rhGH) is an effective treatment for patients suffering from growth hormone deficiency. Early intervention can prevent short stature and the psychosocial stress associated with it.

- **Option D:** Hyperthyroidism is associated with increased serum IGF-I levels and marked alterations in the neuroregulation of GH secretion. These changes involve decreased GH responsiveness to GHRH at the pituitary level and, at the hypothalamic level, a lack of suppressive effect of an oral glucose load.

12. A 65-year-old retired school teacher, diagnosed with osteoarthritis in both knees, attends a rehabilitation clinic. She expresses the desire to remain active and participate in her weekly dance class, albeit with some modifications due to her condition. During one of her physical therapy sessions, the therapist explained the importance of a therapeutic exercise program tailored to her needs. Later, the nurse assesses the patient's comprehension of the program. Which statement by the patient indicates an understanding of the therapeutic exercise program?

- A. "I will perform exercises to the point of pain to maximize the benefits."
- B. "I will avoid exercising on days when I experience joint stiffness."
- C. "I will use resistance bands to perform strength training exercises."
- . "I will perform exercises in a standing position to improve joint flexibility."

Correct Answer: C. "I will use resistance bands to perform strength training exercises."

Resistance bands are often used in physical therapy for osteoarthritis patients to improve muscle strength without putting excessive stress on the joints. Strength training, when done correctly and under guidance, can provide support to the affected joints and decrease pain. Given the patient's desire to remain active and the nature of osteoarthritis management, strength training exercises using resistance bands would provide the muscle support necessary for joint health without causing undue stress.

- **Option A:** This statement reflects a misconception. Exercises should not be performed to the point of pain. While some discomfort is expected during physical therapy, pushing oneself to the point of pain can lead to injury or exacerbate existing conditions.
- **Option B:** Avoiding exercises altogether on days of stiffness is not typically recommended. Light exercises or warm-ups can actually help relieve stiffness. Regular, gentle movement can prevent further joint stiffness and maintain mobility.
- **Option D:** While standing exercises can be beneficial, the position of exercises (standing, sitting, lying down) is dependent on the individual's needs, the affected joints, and the specific goals of the therapy. Standing exercises might not always be the most suitable for improving joint flexibility, especially for someone with knee osteoarthritis.

13. Marie Joy's lab test revealed that her serum calcium is 2.5 mEq/L. Which assessment data does the nurse document when a client diagnosed with hypocalcemia develops a carpopedal spasm after the blood-pressure cuff is inflated?

- A. Positive Trousseau's sign
- B. Positive Chvostek's sign

- C. Tetany
- D. Paresthesia

Correct Answer: A. Positive Trousseau's sign

In a client with hypocalcemia, a positive Trousseau's sign refers to carpopedal spasm that develops usually within 2 to 5 minutes after applying and inflating a blood pressure cuff to about 20 mm Hg higher than systolic pressure on the upper arm. This spasm occurs as the blood supply to the ulnar nerve is obstructed.

- **Option B:** Chvostek's sign refers to twitching of the facial nerve when tapping below the earlobe. In the late 1800s, Dr. Chvostek noticed that mechanical stimulation of the facial nerve (as with the fingertip of the examiner, for example) could lead to twitching of the ipsilateral facial muscles. The long-accepted explanation is that this resulted from hypocalcemia, and this relationship became known as the Chvostek sign.
- **Option C:** Tetany is a clinical manifestation of hypocalcemia denoted by tingling in the tips of the fingers around the mouth and muscle spasms in the extremities and face. Tetany is generally induced by a rapid decline in serum ionized calcium. Tetany is usually most dangerous and most commonly seen in the presence of respiratory alkalosis causing hypocalcemia.
- **Option D:** Paresthesia refers to numbness or tingling. Paresthesia is an abnormal sensation of the skin (tingling, pricking, chilling, burning, numbness) with no apparent physical cause. Paresthesia may be transient or chronic and may have any of dozens of possible underlying causes.

14. Oral contraceptive pills are of different types. Which type is most appropriate for mothers who are breastfeeding?

- A. Estrogen-only
- B. Progesterone only
- C. Mixed type- estrogen and progesterone
- D. 21-day pills mixed type

Correct Answer: B. Progesterone only

Currently, there are three types of oral contraceptive pills: combined estrogen-progesterone, progesterone only and the continuous or extended use pill. If the mother is breastfeeding, the progesterone only type is the best because estrogen can affect lactation.

- **Option A:** Estrogen has some effect with inhibiting follicular development because of its negative feedback on the anterior pituitary with slow FSH secretion; it's just not as prominent as the progesterone's effect.
- **Option C:** The most commonly prescribed pill is the combined hormonal pill with estrogen and progesterone. Progesterone is the hormone that prevents pregnancy, and the estrogen component will control menstrual bleeding.
- **Option D:** Each pill has the same amount of hormone in it. One pill is taken each day for 21 days and then no pills are taken for the next 7 days.

15. Which of the following medications will likely be ordered for the client?"

- A. Prozac

- B. Valium
- C. Risperdal
- D. Lithium

Correct Answer: B. Valium

Diazepam is an anxiolytic benzodiazepine, first patented and marketed in the United States in 1963. It is a fast-acting, long-lasting benzodiazepine commonly used in the treatment of anxiety disorders, as well as alcohol detoxification, acute recurrent seizures, severe muscle spasm, and spasticity associated with neurologic disorders. In the setting of acute alcohol withdrawal, diazepam is useful for symptomatic relief of agitation, tremor, alcoholic hallucinosis, and acute delirium tremens.

- **Option A:** Fluoxetine has FDA-approval for major depressive disorder (age eight and older), obsessive-compulsive disorder (age seven and older), panic disorder, bulimia, binge eating disorder, premenstrual dysphoric disorder, bipolar depression (as an adjunct with olanzapine also known as Symbyax), and treatment-resistant depression when used in combination with olanzapine. Non-FDA-approved uses for fluoxetine include social anxiety disorder (social phobia), post-traumatic stress disorder in adults, borderline personality disorder, Raynaud phenomenon, and selective mutism.
- **Option C:** In addition to psychotic symptoms, risperidone can be used for aggression and agitation in patients with dementia. Risperidone has also been used for augmentation of antidepressant therapy in the treatment of non-psychotic unipolar depression. In addition to irritability associated with autism, risperidone has also been used for social impairment, stereotypical behaviors, cognitive problems, and hyperactivity in autism.
- **Option D:** Lithium was the first mood stabilizer and is still the first-line treatment option, but is underutilized because it is an older drug. Lithium is a commonly prescribed drug for a manic episode in bipolar disorder as well as maintenance therapy of bipolar disorder in a patient with a history of a manic episode. The primary target symptoms of lithium are mania and unstable mood.

16. 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.

17. While providing home care to a client with congestive heart failure, the nurse is asked how long diuretics must be taken. The best response to this client should be:

- A. "As you urinate more, you will need less medication to control fluid."
- B. "You will have to take this medication for about a year."
- C. "The medication must be continued so the fluid problem is controlled."
- D. "Please talk to your physician about medications and treatments."

Correct Answer: C. "The medication must be continued so the fluid problem is controlled."

This is the most therapeutic response and gives the client accurate information. Diuretics are used to achieve and maintain euvolemia (the patient's 'dry weight') with the lowest possible dose. This means that the dose must be adjusted, particularly after the restoration of the dry body weight, to avoid the risk of dehydration, which leads to hypotension and renal dysfunction.

- **Option A:** In general, due to their greater effectiveness, loop diuretics, such as furosemide, are the mainstay of diuretic therapy in HF. Indeed loop diuretics produce more intense and shorter diuresis than thiazides, which results in more gentle and prolonged diuresis.
- **Option B:** Diuretic efficacy may be limited by adverse neurohormonal activation and by 'congestion-like' symptoms. Diuretics are an extremely useful and varied class of agents for the management of hypovolemic states.
- **Option D:** Furosemide is by far the most common oral loop diuretic, but patients with resistance to oral furosemide therapy may benefit from trials with second-generation oral loop diuretics (bumetanide and torasemide). These may be more efficacious, due to their increased oral bioavailability and potency.

18. Tincture of opium is given to a patient who is having diarrheal episodes. Which of the following is true regarding this medication?

- A. Opium tincture is not a controlled substance.
- B. Opium tincture can be used with medications like naltrexone and buprenorphine.
- C. Has an unpleasant taste and it can be diluted with 15-30 ml water.
- D. It increases intestinal motility and peristalsis.

Correct Answer: C. Has an unpleasant taste and can be diluted with 15-30 ml of water.

Opium tincture is an oral liquid medication used to control diarrhea. It has an unpleasant taste so it should be diluted with 15-30 ml of water.

- **Option A:** Opium tincture contains morphine which is a controlled substance.
- **Option B:** Opium tincture should not be used with medications like naltrexone and buprenorphine because they increase sedation and lower the beneficial effect of opium tincture.
- **Option D:** It is an antidiarrheal, so a decreased motility and peristalsis are expected.

19. A tentative diagnosis of opiate addiction, Nurse Candy should assess a recently hospitalized client for signs of opiate withdrawal. These signs would

include:

- A. Rhinorrhea, convulsions, subnormal temperature
- B. Nausea, dilated pupils, constipation
- C. Lacrimation, vomiting, drowsiness
- D. Muscle aches, papillary constriction, yawning

Correct Answer: D. Muscle aches, papillary constriction, yawning

These adaptations are associated with opiate withdrawal which occurs after cessation or reduction of prolonged moderate or heavy use of opiates. According to Diagnostic and Statistical Manual of Mental Disorders (DSM–5) criteria, signs and symptoms of opioid withdrawal include lacrimation or rhinorrhea, piloerection “goose flesh,” myalgia, diarrhea, nausea/vomiting, pupillary dilation and photophobia, insomnia, autonomic hyperactivity (tachypnea, hyperreflexia, tachycardia, sweating, hypertension, hyperthermia), and yawning.

- **Option A:** Opioid withdrawal syndrome is a life-threatening condition resulting from opioid dependence. Opioids are a group of drugs used for the management of severe pain. They are also commonly used as psychoactive substances around the world. Opioids include drugs such as morphine, heroin, oxycontin, codeine, methadone, and hydromorphone hydrochloride. They produce mental relaxation, pain relief, and euphoric feelings.
- **Option B:** The principal site in the brain that triggers the onset of opioid withdrawal syndrome is the locus coeruleus at the base of the brain. Neurons present in locus coeruleus are noradrenergic and have an increased number of opioid receptors. The locus coeruleus region is the main source of NAergic innervation of the limbic system and cerebral and cerebellar cortices. The NAergic activity in locus coeruleus neurons, an opioid receptor linked mechanism, is a prime causative site of opioid withdrawal symptoms. Furthermore, research has also shown that gray matter and nucleus raphe magnus is also involved in the presentation of opioid withdrawal syndrome.
- **Option C:** Sedative-hypnotic withdrawal symptoms may resemble opioid withdrawal characteristics, but opioid withdrawal is also characterized by lacrimation, rhinorrhea, and pupillary dilation. Hallucinogen and stimulant intoxication can also cause pupillary dilation, but other symptoms of opioid withdrawal-like nausea, diarrhea, vomiting, lacrimation, and rhinorrhea are usually not present.

20. A 34-year-old mother of three joins a nursing class to pursue her dream of becoming a nurse. Recalling her own childbirth experiences, she’s particularly interested when the discussion shifts to hormones that play pivotal roles during labor. As the class delves deeper into the endocrine system, the instructor throws a question to the class to test their understanding. She asks, “Can anyone pinpoint where the antidiuretic hormone (ADH) and oxytocin, which are crucial in water balance and inducing uterine contractions, are primarily synthesized and stored before they fulfill their vital functions?”

- A. Adrenal cortex
- B. Posterior pituitary gland
- C. Thyroid gland
- D. Pineal gland

Correct Answer: B. Posterior pituitary gland

The posterior pituitary gland, also known as the neurohypophysis, serves as a storage and release site for two important hormones: antidiuretic hormone (ADH) and oxytocin. These hormones are produced by specialized neurons in the hypothalamus, located in the brain. They are then transported and stored in the posterior pituitary until they are needed.

- **Option A:** The adrenal cortex produces a variety of steroid hormones including glucocorticoids (like cortisol), mineralocorticoids (like aldosterone), and androgens. It does not produce or store ADH or oxytocin.
- **Option C:** The thyroid gland produces thyroid hormones, including thyroxine (T4) and triiodothyronine (T3), and also calcitonin. It does not synthesize or store ADH or oxytocin.
- **Option D:** The pineal gland produces and secretes melatonin, a hormone that regulates sleep-wake cycles. It does not have a role in the production or storage of ADH or oxytocin.

21. Which of the following medications usually is given to a client with leukemia as prophylaxis against *P. carinii* pneumonia?

- A. Vincristine (Oncovin)
- B. Prednisone (Deltasone)
- C. Oral nystatin suspension
- D. Sulfamethoxazole and trimethoprim (Bactrim)

Correct Answer: D. Sulfamethoxazole and trimethoprim (Bactrim)

- **Option D:** The most frequent cause of death from leukemia is an overwhelming infection. *P. carinii* infection is lethal to a child with leukemia. As prophylaxis against *P. carinii* pneumonia, continuous low doses of co-trimoxazole (Bactrim) are frequently prescribed.
- **Option A:** Vincristine, an antineoplastic agent is used in the treatment for leukemia but is not used as a prophylaxis against pneumonia.
- **Option B:** Prednisone isn't an antibiotic and increases susceptibility to infection.
- **Option C:** Oral nystatin suspension would be indicated for the treatment of thrush.

22. The nurse assesses a prolonged late deceleration of the fetal heart rate while the client is receiving oxytocin (Pitocin) IV to stimulate labor. The priority nursing intervention would be to:

- A. Turn off the infusion.
- B. Turn the client to the left.
- C. Change the fluid to Ringer's Lactate.
- D. Increase mainline IV rate.

Correct Answer: A. Turn off the infusion

Stopping the infusion will decrease contractions and possibly remove uterine pressure on the fetus, which is a possible cause of the deceleration. When late decelerations are observed, the nurse should attempt to increase the oxygen delivery to the fetus by turning the mother on her left side and/or

administering oxygen. If Oxytocin (Pitocin) is being administered, it should be stopped.

- **Option B:** Variable decelerations are marked by a sharp decrease (“V” shape) in FHR that does not correlate to contractions. Umbilical cord compression is usually the cause of variable decelerations. Repositioning of the mother can relieve this compression if it is minor.
- **Option C:** Late decelerations are shown by the FHR gradually decreasing around the peak of the contraction and gradually increasing when the contraction is over. These decelerations will also have a “U” shape but will not mirror the contractions. The most common cause of late decelerations is uteroplacental insufficiency (insufficient oxygen exchange between the placenta and the fetus).
- **Option D:** Increasing the main IV line would not manage the decelerations. While caring for a patient in labor, one of the important nursing duties is monitoring the variability of the fetal heart rate (FHR) and monitoring the FHR response during contractions. Variability in the FHR during labor is a sign of fetal well-being or fetal activity or both. The expected variability usually includes slight accelerations and decelerations.

23. A client is frustrated and embarrassed by urinary incontinence. Which of the following measures should Nurse Ginny include in a bladder retraining program?

- A. Establishing a predetermined fluid intake pattern for the client.
- B. Encouraging the client to increase the time between voidings.
- C. Restricting fluid intake to reduce the need to void.
- D. Assessing present elimination patterns.

Correct Answer: D. Assessing present elimination patterns

The guidelines for initiating bladder retraining include assessing the client's intake patterns, voiding patterns, and reasons for each accidental voiding. Bladder training is an important form of behavior therapy that can be effective in treating urinary incontinence. The goals are to increase the amount of time between emptying the bladder and the amount of fluids the bladder can hold. It also can diminish leakage and the sense of urgency associated with the problem.

- **Option A:** Lowering the client's fluid intake won't reduce or prevent incontinence. The recommended amount of fluids consumed (all types) in 24 hours totals 6-8 glasses. The benefits of adequate fluid intake include prevention of dehydration, constipation, UTI, and kidney stone formation.
- **Option B:** A voiding schedule should be established after assessment. Bladder training requires following a fixed voiding schedule, whether or not the client feels the urge to urinate. If he feels an urge to urinate before the assigned interval, he should use urge suppression techniques — such as relaxation and Kegel exercises.
- **Option C:** The client should actually be encouraged to drink 1.5 to 2 L of water per day. Keeping a diary of the bladder activity is very important. This helps the health care provider determine the correct place to start the training and to monitor the progress throughout the program.

24. A client is diagnosed with prostate cancer. Which test is used to monitor the progression of this disease?

- A. Serum creatinine

- B. Complete blood cell count (CBC)
- C. Prostate-specific antigen (PSA)
- D. Serum potassium

Correct Answer: C. Prostate-specific antigen (PSA)

The PSA test is used to monitor prostate cancer progression; higher PSA levels indicate a greater tumor burden. Elevated Prostate-Specific Antigen (PSA) levels (usually greater than 4 ng/ml) in the blood is how 80% of prostate cancers initially present even though elevated PSA levels alone correctly identify prostate cancer only about 25% to 30% of the time. We recommend at least 2 abnormal PSA levels or the presence of a palpable nodule on DRE to justify a biopsy and further investigation.

- **Option A:** Serum creatinine levels may suggest blockage from an enlarged prostate. The percentage of free PSA in the blood can be a useful indicator of malignancy. If the total PSA is between 4 and 10 ng/ml, a free PSA percentage is considered valid. The free PSA percentage is calculated by multiplying the free PSA level by 100 and dividing by the total PSA value.
- **Option B:** CBC is used to diagnose anemia and polycythemia. Prostate Cancer Antigen 3 (PCA3) is an RNA-based genetic test performed from a urine sample obtained immediately after a prostate massage. PCA3 is a long, non-coding RNA molecule that is overexpressed exclusively in prostatic malignancies. It is upregulated 66 fold in prostate cancers. If PCA3 is elevated, it suggests the presence of prostate cancer.
- **Option D:** Serum potassium levels identify hypokalemia and hyperkalemia. PCA3 is best used to determine the need for a repeat biopsy after initial negative histology. Serial PCA3 testing may also be helpful in monitoring patients with low-grade prostate cancers on active surveillance.

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

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

Correct Answer: A. Yogurt

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

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

26. Tony is a night shift nurse who is assigned to a patient whose glucose levels remain normal at bedtime but experiences hypoglycemia at 3 am and

hyperglycemia at 7 am. The patient is likely experiencing what kind of complication of insulin therapy?

- A. Insulin resistance
- B. Dawn phenomenon
- C. Insulin lipohypertrophy
- D. Somogyi phenomenon

Correct Answer: D. Somogyi phenomenon

The Somogyi phenomenon (post-hypoglycemic hyperglycemia) is characterized by a rebound high blood glucose level in the morning in response to low blood glucose that occurs at about 2-3 am in the morning. The Somogyi phenomenon states that early morning hyperglycemia occurs due to a rebound effect from late-night hypoglycemia.

- **Option A:** Insulin resistance happens when a person receiving insulin develops immune antibodies that bind the insulin, hence decreasing the insulin available for use in the body. Insulin resistance impairs glucose disposal, resulting in a compensatory increase in beta-cell insulin production and hyperinsulinemia.
- **Option B:** Dawn phenomenon is characterized by a morning increase of blood sugar which happens as a response to declining levels of insulin and a nocturnal release of hormones (growth hormone, catecholamines, and cortisol).
- **Option C:** Insulin lipohypertrophy is the development of fatty lumps on the surface of the skin and is a common side effect of repeated use of an injection site. Lipodystrophy is associated with increased glycemic variability and unexplained episodes of hypoglycemia further driving up healthcare costs while affecting patient compliance.

27. A male client who has heart failure receives an additional dose of bumetanide as prescribed 4 hours after the daily dose. The nurse assesses him 15 minutes after administering the medication and reminds him to save all urine in the bathroom. Thirty minutes later the nurse finds the client on the floor, unresponsive, and bleeding from a laceration. Determine the issues that support the client's malpractice claim. Select all that apply.

- A. Failure to replace body fluids
- B. Increased risk of hypotension
- C. Failure to teach the client adequately
- D. Increased need to protect the client
- E. Excessive bumetanide administration
- F. Lack of follow-up nursing actions

Correct Answer: B, C, D, & F.

To prove malpractice against a nurse, the plaintiff must prove that the nurse owed a duty to the client, that the nurse breached the duty, and that as result harm was caused to person or property.

- **Option A:** Replacing fluid volume is not the issue; furthermore, the goal of therapy is to reduce total body fluid. Diuretics play a crucial role in treating edema and hypertension by causing the induction

of a negative balance of solute and water. Loop diuretics are physiologically the most potent family of diuretics.

- **Option B:** The client has an increased risk of hypotension because hypotension is a common adverse effect of bumetanide, this is the second dose within 4 hours, and the client has heart failure.
- **Option C:** The client can prove that the nurse did not protect him by failing to provide adequate teaching and perform correct and timely nursing interventions after administering the bumetanide.
- **Option D:** After the first 15-minute check, the nurse should continue monitoring the client to ensure compliance with safety measures. Blood pressure, uric acid, jugular venous pressure, blood glucose, electrolytes, blood urea nitrogen/serum creatinine, and urine output must all need monitoring in patients taking bumetanide.
- **Option E:** No data indicate that the dose of bumetanide, a loop diuretic, was excessive. To control edema, a staggering dosing schedule or a 3 to 4 times daily dosing schedule with half-day rest intervals in between is recommended to increase tolerability and efficacy. It is the safest and most effective method for the continued control of edema.
- **Option F:** However, because this medication can cause hypotension, especially after a repeat dose, the nurse should instruct the client to remain in bed and provide him with a urinal. It may be difficult for the client to prove that the second dose of bumetanide caused the injury.

28. A 68-year-old client comes to the outpatient clinic and complains to the attending nurse about his increased difficulty with “close-work” such as knitting. He indicates he does not have difficulty seeing objects on either side but does state that straight lines appear distorted or wavy. The nurse suspects which of the following disorders is consistent with the client’s reported symptoms?

- A. Glaucoma
- B. Cataracts
- C. Macular degeneration
- D. Subconjunctival hemorrhage

Correct Answer: C. Macular degeneration

Macular degeneration, often age-related macular degeneration (AMD or ARMD), is a medical condition that usually affects older adults and results in a loss of vision in the center of the visual field (the macula) because of damage to the retina. It occurs in “dry” and “wet” forms. It is a major cause of blindness and visual impairment in older adults (>50 years). Macular degeneration can make it difficult or impossible to read or recognize faces, although enough peripheral vision remains to allow other activities of daily life.

- **Option A:** Glaucoma is a condition of increased intraocular pressure in the eye that may progress to a loss of vision. This results in a characteristic optic nerve head appearance on fundoscopic examination and a corresponding progressive loss of vision.
- **Option B:** A cataract is a disease of the eye in which the normally clear lens has opacified which obscures the passage of light. It is a gradually progressive disease and a significant cause of blindness around the world. This blinding disease can affect infants, adults, and older people, but it predominates the latter group. It can be bilateral and vary in severity.

- **Option D:** The red-eye is a common complaint in emergency departments and outpatient clinics. One frequent cause is a subconjunctival hemorrhage. Subconjunctival Hemorrhage (SCH) is a disorder that can occur for the most part from benign situations. However, there are certain times when subconjunctival hemorrhages can occur as a manifestation of a more dangerous underlying diagnosis, especially if persistent or recurrent.

29. A nurse is assessing a 56-year-old patient who presents with a persistent cough producing copious thick sputum, noticeable swelling in the lower extremities, and blue-tinged nail beds. The patient has a detailed smoking history of consuming one to two packs of cigarettes daily for 40 years. Considering the patient's history and current symptoms, which of the following conditions does the patient most likely have?

- A. Adult respiratory distress syndrome (ARDS)
- B. Asthma
- C. Chronic obstructive bronchitis
- D. Emphysema
- D. Emphysema
- E. Pulmonary hypertension
- F. Lung cancer

Correct Answer: C. Chronic obstructive bronchitis

The symptoms described for the client, particularly the chronic cough producing thick sputum, peripheral edema, and cyanotic nail beds, along with the long history of significant smoking, are indicative of chronic obstructive bronchitis. Chronic obstructive bronchitis is a type of chronic obstructive pulmonary disease (COPD) characterized by a long-term cough with mucus. Smoking is the most common cause of COPD.

30. Which of the following pathophysiological mechanisms that occur in the lung parenchyma allow pneumonia to develop?

- A. Atelectasis
- B. Bronchiectasis
- C. Effusion
- D. Inflammation

Correct Answer: D. Inflammation

The common feature of all types of pneumonia is an inflammatory pulmonary response to the offending organism or agent. The resident macrophages serve to protect the lung from foreign pathogens. Ironically, the inflammatory reaction triggered by these very macrophages is what is responsible for the histopathological and clinical findings seen in pneumonia.

- **Option A:** Atelectasis and bronchiectasis indicate a collapse of a portion of the airway that doesn't occur in pneumonia. It is caused by the partial or complete, reversible collapse of the small airways resulting in an impaired exchange of CO₂ and O₂ – i.e., intrapulmonary shunt. The incidence of

atelectasis in patients undergoing general anesthesia is 90%.

- **Option B:** Bronchiectasis is a chronic lung disease characterized by persistent and lifelong widening of the bronchial airways and weakening of the function mucociliary transport mechanism owing to repeated infection contributing to bacterial invasion and mucus pooling throughout the bronchial tree.
- **Option C:** An effusion is an accumulation of excess pleural fluid in the pleural space, which may be a secondary response to pneumonia. Accumulation of excess fluid can occur if there is excessive production or decreased absorption or both overwhelming the normal homeostatic mechanism. If pleural effusion is mainly due to mechanisms that lead to pleural effusion mainly due to increased hydrostatic pressure are usually transudative, and leading to pleural effusion have altered the balance between hydrostatic and oncotic pressures (usually transudates), increased mesothelial and capillary permeability (usually exudates) or impaired lymphatic drainage.

31. Situation: A 24-year-old female has an intense fear of spiders. Initial intervention for the client should be to:

- A. Encourage to verbalize her fears as much as she wants.
- B. Assist her to find meaning to her feelings in relation to her past.
- C. Establish trust through a consistent approach.
- D. Accept her fears without criticizing.

Correct Answer: D. Accept her fears without criticizing.

The client cannot control her fears although the client knows it's silly and can joke about it. Open up about your awareness of the patient's fear. This approach validates the feelings the patient is holding and demonstrates recognition of those feelings. Tell the patient that fear is a normal and appropriate response to circumstances in which pain, danger, or loss of control is anticipated or felt. This reassurance places fear within the field of normal human experiences.

- **Option A:** Allow expression of the client's fears but he should focus on other productive activities as well. Discuss the situation with the patient and help differentiate between real and imagined threats to well-being. This approach helps the patient deal with fear.
- **Option B:** Provide accurate information if irrational fears based on incorrect information are present. Replacing inaccurate beliefs into accurate information reduces anxiety. If a patient's fear is a reasonable response, empathize with him or her. Avoid false reassurances and be truthful. Reassure patients that asking for help is both a sign of strength and a step toward resolution of the problem.
- **Option C:** Be with the patient to promote safety especially during frightening procedures or treatment. The physical connection with a trusted person helps the patient feel secure and safe during a period of fear. Maintain a relaxed and accepting demeanor while communicating with the patient. The patient's feeling of stability increases in a peaceful and non-threatening environment.

32. Nurse Gina understands that her client Glenda who is bulimic feels shame and guilt over binge eating and purging. This disorder is therefore considered:

- A. Ego-distorting
- B. Ego-dystonic

- C. Ego-enhancing
- D. Ego-syntonic

Correct Answer: B. Ego-dystonic

An ego-dystonic disorder is one in which the client views behaviors or symptoms as incongruent with self-image and therefore feels guilt, shame, and distress about the symptoms. Ego-dystonic refers to thoughts, impulses, and behaviors that are felt to be repugnant, distressing, unacceptable or inconsistent with one's self-concept.

- **Option A:** To say that the ego is distorted is simply to say that the mental apparatus is in a state of disordered function, and we cannot pursue this matter fruitfully unless we know exactly what part or layer of the ego is distorted and how and when and why, and with what other psychic reactions the ego-distortion is associated.
- **Option C:** Ego enhancement has been offered as the psychological mechanism that drives differences in judgments about effects on self and others. Findings indicate that although ego enhancement does not appear to directly influence either third-person perception or its relationship to support for government control, it does play a moderating role in regulating the relationship between perceived effects and support for controls, especially in the case of perceived effects on others.
- **Option D:** An ego-syntonic disorder is one which the client views behaviors as congruent with her self-image (as in anorexia nervosa). Ego-syntonic refers to instincts or ideas that are acceptable to the self; that are compatible with one's values and ways of thinking. They are consistent with one's fundamental personality and beliefs.

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

- A. Teach the client to measure I & O.
- B. Involve the client in planning daily meals.
- C. Observe the client during meals.
- D. Monitor the client continuously.

Correct Answer: D. Monitor client continuously

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

- **Option A:** Maintain a regular weighing schedule, such as Monday and Friday before breakfast in the same attire, and graph results. Provides an accurate ongoing record of weight loss or gain. Also diminishes obsessing about changes in weight. Use a consistent approach. Sit with the patient while eating; present and remove food without persuasion and comment. Promote a pleasant environment and record intake.
- **Option B:** Involve the patient in setting up or carrying out a program of behavior modification. Provide a reward for weight gain as individually determined; ignore the loss. Provides structured eating situation while allowing the patient some control in choices. Behavior modification may be effective in mild cases or for short-term weight gain.

- **Option C:** Provide one-to-one supervision and have a patient with bulimia remain in the day room area with no bathroom privileges for a specified period (2 hr) following eating, if contracting is unsuccessful. Prevents vomiting during and after eating. The patient may desire food and use a binge-purge syndrome to maintain weight. Note: the patient may purge for the first time in response to the establishment of a weight gain program.

34. A patient with leukemia is receiving chemotherapy that is known to depress bone marrow. A CBC (complete blood count) reveals a platelet count of 25,000/microliter. Which of the following actions related specifically to the platelet count should be included on the nursing care plan?

- A. Monitor for fever every 4 hours.
- B. Require visitors to wear respiratory masks and protective clothing.
- C. Consider transfusion of packed red blood cells.
- D. Check for signs of bleeding, including examination of urine and stool for blood.

Correct Answer: D. Check for signs of bleeding, including examination of urine and stool for blood.

A platelet count of 25,000/microliter is severely thrombocytopenic and should prompt the initiation of bleeding precautions, including monitoring urine and stool for evidence of bleeding. Review laboratory results for coagulation status as appropriate: platelet count, prothrombin time/international normalized ratio (PT/INR), activated partial thromboplastin time (aPTT), fibrinogen, bleeding time, fibrin degradation products, vitamin K, activated coagulation time (ACT).

- **Option A:** Educate the at-risk patient and caregivers about precautionary measures to prevent tissue trauma or disruption of the normal clotting mechanisms. Thoroughly conform the patient to surroundings; put call light within reach and teach how to call for assistance; respond to call light immediately.
- **Option B:** Monitoring for fever and requiring protective clothing are indicated to prevent infection if white blood cells are decreased. Wash hands and teach patient and SO to wash hands before contact with patients and between procedures with the patient; encourage fluid intake of 2,000 to 3,000 mL of water per day, unless contraindicated.
- **Option C:** Transfusion of red cells is indicated for severe anemia. Prehospital care focuses on the ABCs (airway, breathing, circulation), which include providing oxygen, controlling severe hemorrhage, and initiating intravenous (IV) fluids to maintain hemodynamic stability; airway control may be necessary for a large intracranial hemorrhage.

35. Which of the following nursing interventions would be most helpful in making the respiratory effort of a client with metastatic lung cancer more efficient?

- A. Teaching the client diaphragmatic breathing techniques
- B. Administering cough suppressants as ordered
- C. Teaching and encouraging pursed-lip breathing
- D. Placing the client in a low semi-Fowlers position

Correct Answer: C. Teaching and encouraging pursed-lip breathing

- **Option C:** For clients with obstructive versus restrictive disorders, extending exhalation through pursed-lip breathing will make the respiratory effort more efficient. The usual position of choice for this client is the upright position, leaning slightly forward to allow greater lung expansion.
- **Option A:** Teaching diaphragmatic breathing techniques will be more helpful to the client with a restrictive disorder.
- **Option B:** Administering cough suppressants will not help the respiratory effort.
- **Option D:** A low semi-Fowler's position does not encourage lung expansion. Lung expansion is enhanced in the upright position.

36. A murmur is heard at the second left intercostal space along the left sternal border. Which valve area is this?

- A. Aortic
- B. Mitral
- C. Pulmonic
- D. Tricuspid

Correct Answer: C. Pulmonic

Abnormalities of the pulmonic valve are auscultated at the second left intercostal space along the left sternal border. Murmurs of the cardiac system develop due to alterations in blood flow or mechanical operation. Murmurs develop from a multitude of mechanisms. Typical cases include low blood viscosity from anemia, septal defects, failure of the ductus arteriosus to close in newborns, excessive hydrostatic pressure on cardiac valves causing valve failure, hypertrophic obstructive cardiomyopathy, and valvular specific pathologies.

- **Option A:** Aortic valve abnormalities are heard at the second intercostal space, to the right of the sternum. Aortic regurgitation, also known as aortic insufficiency, is a decrescendo blowing diastolic murmur heard best at the left lower sternal border, heard when blood flows retrograde into the left ventricle. This is most commonly seen in aortic root dilation and as sequelae of aortic stenosis.
- **Option B:** Mitral valve abnormalities are heard at the fifth intercostal space in the midclavicular line. Mitral stenosis is a diastolic murmur, best heard at the left 5th midclavicular line. It is associated with infective endocarditis and chronic rheumatic heart disease. Mitral regurgitation is a systolic murmur, best heard at the left 5th midclavicular line with possible radiation to the left axilla. It is commonly associated with infective endocarditis, rheumatic heart disease, congenital anomalies, and inferior wall myocardial infarctions.
- **Option D:** Tricuspid valve abnormalities are heard at the third and fourth intercostal spaces along the sternal border. Tricuspid stenosis is best heard at the lower left sternal border. Typical causes include infective endocarditis, seen in intravenous drug users, and carcinoid syndrome. Prolonged tricuspid stenosis may lead to right atrial enlargement and arrhythmias. Tricuspid regurgitation is systolic, auscultated at the lower left sternal border. It is also associated with intravenous drug users and carcinoid syndrome.

38. Dr. Martinez, a 52-year-old astrophysicist, is admitted to the medical ward with a markedly swollen, red, and painful right big toe. He shares that he's had similar episodes in the past, but this current flare-up is the worst he's ever

experienced. Laboratory tests confirm elevated uric acid levels, and a diagnosis of gout is made. Given that Dr. Martinez has a keen interest in understanding the science behind his condition and wants to manage it through lifestyle changes in addition to medications, which dietary modification should the nurse suggest as part of a comprehensive management plan?

- A. Decreasing the intake of dairy products
- B. Limiting the consumption of red meat and seafood
- C. Increasing the consumption of purine-rich foods
- D. Avoiding all fruits and vegetables

Correct Answer: B. Limiting the consumption of red meat and seafood.

Foods high in purines, like red meat and seafood, can increase uric acid production. Limiting the intake of these foods can help reduce the risk of gout flare-ups.

- **Option A:** Dairy products, especially low-fat dairy, have been shown to have a protective effect against gout. They can help decrease the risk of gout attacks.
- **Option C:** Increasing the intake of purine-rich foods would likely increase uric acid levels and the risk of gout attacks. This recommendation is counterproductive for gout management.
- **Option D:** Most fruits and vegetables can be a part of a balanced diet for individuals with gout. Some, like cherries, have even been suggested to help reduce the risk of gout attacks. Completely avoiding fruits and vegetables is not recommended for gout patients and may lead to nutritional deficiencies.

39. Nurse Matt makes a home visit to the client with diabetes mellitus. During the visit, Nurse Matt notes the client's additional insulin vials are not refrigerated. What is the best action by the nurse at this time?

- A. Instruct the client to label each vial with the date when opened.
- B. Tell the client there is no need to keep additional vials.
- C. Have the client place the insulin vials in the refrigerator.
- D. Have the client discard the vials.

Correct Answer: C. Have the client place the insulin vials in the refrigerator.

Vials not in use should be refrigerated to preserve drug potency. Vials of insulin not in use should be refrigerated. Extreme temperatures (<36 or >86°F, <2 or >30°C) and excess agitation should be avoided to prevent loss of potency, clumping, frosting, or precipitation.

- **Option A:** Writing the date of opening on the vial is good practice, but does not address the need to refrigerate additional vials. Specific storage guidelines provided by the manufacturer should be followed. Insulin in use may be kept at room temperature to limit local irritation at the injection site, which may occur when cold insulin is used.
- **Option B:** The client should always have additional vials of insulin available. The patient should always have available a spare bottle of each type of insulin used. Although an expiration date is stamped on each vial of insulin, a loss in potency may occur after the bottle has been in use for >1 month, especially if it was stored at room temperature.

- **Option D:** There is no need to discard the vials. If uncertain about the potency of a vial of insulin, the individual should replace the vial in question with another of the same type. The person administering insulin should inspect the bottle before each use for changes (i.e., clumping, frosting, precipitation, or change in clarity or color) that may signify a loss in potency.

40. Which of the following meal selections is appropriate for the client with celiac disease?

- A. Ramen noodles and dumplings
- B. French croissants and donuts
- C. Bacon and egg
- D. Pepperoni pizza and ginger ale

Correct Answer: C. Bacon and egg

- **Option C:** Celiac disease is an autoimmune digestive disease that is characterized by a poor immune response to foods that contain gluten. All types of meat (such as bacon) and eggs are gluten-free so it is permitted to a client with this kind of disease.
- **Options A, B, and D:** These food items are not allowed because they contain flour made from wheat, which exacerbates the symptoms of celiac disease.

41. A patient has a severe exacerbation of ulcerative colitis. Long-term medications will probably include:

- A. Antacids
- B. Antibiotics
- C. Corticosteroids
- D. Histamine₂-receptor blockers

Correct Answer: C. Corticosteroids

Medications to control inflammation such as corticosteroids are used for long-term treatment. First-line treatment is sulfasalazine and 5-aminosalicylates, given orally or rectally, which have a remission rate of about 50%. Glucocorticoids, orally or rectally, can be added for those who fail to achieve remission within two weeks. Except for glucocorticoids, all of these medications can be used in the maintenance of remission.

- **Option A:** Antacids are a group of drugs that have been on the market for many years. They were initially first-line defense against peptic ulcer disease; however, the discovery of proton pump inhibitors revolutionized the treatment of peptic ulcer disease. Currently, antacid use is restricted to the relief of mild intermittent gastroesophageal reflux disease (GERD) associated with heartburn.
- **Option B:** Antibiotic therapy is often initiated before an exact infectious disease diagnosis is made and microbiological results are available. Antibiotics used in this manner are referred to as empiric therapy. This approach attempts to cover all potential pathogens. When microbiology tests result and antibiotic susceptibilities are known, definitive antibiotic therapy can then be tailored to the specific infection etiology.
- **Option D:** 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.

42. Which action(s) should you delegate to the experienced nursing assistant when caring for a patient with a thrombotic stroke with residual left-sided weakness? Select all that apply.

- A. Assist the patient to reposition every 2 hours.
- B. Reapply pneumatic compression boots.
- C. Remind the patient to perform active ROM.
- D. Check extremities for redness and edema.

Correct Answer: A, B, & C.

The experienced nursing assistant would know how to reposition the patient and how to reapply compression boots and would remind the patient to perform activities he has been taught to perform.

- **Option D:** Assessing for redness and swelling (signs of deep venous thrombosis {DVT}) requires additional education and is still appropriate to the professional nurse.

43. Nurse Kate would expect that a client with vascular dementia would experience:

- A. Loss of remote memory related to anoxia.
- B. Loss of abstract thinking related to emotional state.
- C. Inability to concentrate related to decreased stimuli.
- D. Disturbance in recalling recent events related to cerebral hypoxia.

Correct Answer: D. Disturbance in recalling recent events related to cerebral hypoxia.

Cell damage seems to interfere with registering input stimuli, which affects the ability to register and recall recent events; vascular dementia is related to multiple vascular lesions of the cerebral cortex and subcortical structure. Second only to Alzheimer disease (AD), vascular dementia (VD) is one of the most common causes of dementia affecting the elderly (aged greater than 65 years), with a variable presentation and unpredictable disease progression. The diagnosis of VD is obtained by a thorough history and physical examination, including a measure of cognitive performance. VD is diagnostically challenging and not precise given the many causes of dementia, including the potential for a mixed dementia syndrome

- **Option A:** A thorough history should be obtained from the patient, focusing on cognitive and functional deficits, onset, and progression of symptoms. Interviewing family members and caregivers is important as patients with cognitive decline rarely have insight into their cognitive and functional limitations. Caregivers may report an abrupt or stepwise onset of cognitive decline, or the appearance of symptoms may be subtle without connection to an ischemic event.
- **Option B:** The functional assessment should evaluate for impairments in instrumental activities of daily living (IADLs), such as cooking, driving, and financial and medication management, and basic activities of daily living (ADLs), such as dressing, bathing, and toileting. Additionally, patient past medical history, current medications, and surgical history should be obtained. Regarding physical examination, one should assess patients for focal neurologic deficits.

- **Option C:** VD is preventable by modifying the risk factors like diabetes, hypertension, smoking, and hyperlipidemia. The one very important risk factor that should be modified is hypertension. Countless studies show that the use of antihypertensive medications can reduce the risk of vascular dementia. In addition, the patient's coronary artery disease, atrial fibrillation, and ischemic heart disease have to be appropriately managed.

44. Scott is a teenager suffering from osteomyelitis; the nurse would expect which of the following symptoms? Select all that apply.

- A. Fever
- B. Irritability
- C. Pallor
- D. Tenderness
- E. Swelling

Correct Answer: A, B, D, & E

The symptoms for acute and chronic osteomyelitis are very similar and include fever, irritability, fatigue, nausea, tenderness, redness (not pallor in option C), and warmth in the area of the infection, swelling around the affected bone, and lost range of motion.

- **Option A:** There may be a dull pain with or without motion and sometimes constitutional symptoms such as fever or chills. In subacute presentations, some patients may have generalized malaise, mild pain over several weeks with minimal fever, or other constitutional symptoms.
- **Option B:** Physical examination should focus primarily on finding a possible nidus of infection, assessing sensory function, and peripheral vasculature. Some patients are at high risk for osteomyelitis, and these include those with bacteremia, endocarditis, intravenous drug use, trauma, and open fractures.
- **Option C:** In chronic osteomyelitis, symptoms may occur over a longer duration of time, usually more than two weeks. As with acute osteomyelitis, patients may also present with swelling, pain, and erythema at the site of infection, but constitutional symptoms like fever are less common.
- **Option D:** Tenderness to palpation over vertebral bone may be a significant finding in vertebral osteomyelitis. The ability to probe an ulcer to the bone with a blunt sterile instrument is highly suggestive of osteomyelitis.
- **Option E:** Acute osteomyelitis may present gradually with onset over a few days but usually manifests within two weeks. Patients may have local symptoms such as erythema, swelling, and warmth at the site of infection.

45. A client's younger daughter is ignoring curfew. The client states, "I'm afraid she will get pregnant." The nurse responds, "Hang in there. Don't you think she has a lot to learn about life?" This is an example of which communication block?

- A. Requesting an explanation
- B. Belittling the client
- C. Making stereotyped comments

D. Probing

Correct Answer: C. Making stereotyped comments

This is an example of the nontherapeutic communication block of making stereotyped comments. Clichés and trite expressions are meaningless in a therapeutic nurse-client relationship. Such comments are of no value in the nurse-client relationship. Any automatic responses will lack the nurse's consideration or thoughtfulness.

- **Option A:** Requesting an explanation or asking the client to provide reasons for thoughts, feelings, behaviors or events is nontherapeutic. There is a difference between asking the client to describe what is occurring or has taken place and asking him to explain why. Usually, a "why" question is intimidating.
- **Option B:** Belittling the client refers to misjudging the degree of the client's discomfort. When the nurse tries to equate the intense and overwhelming feelings the client has expressed to "everybody" or to the nurse's own feelings, the nurse implies that the discomfort is temporary, mild, self-limiting, or not very important. The client is focused on his or her own worries and feelings' hearing the problems or feelings of others is not helpful.
- **Option D:** Probing is the persistent questioning of the client. Probing tends to make the client feel used or invaded. Clients have the right not to talk about issues or concerns if they choose. Pushing and probing by the nurse will not encourage the client to talk.

46. At what stage of labor is the mother advised to bear down?

- A. When the mother feels the pressure at the rectal area.
- B. During a uterine contraction.
- C. In between uterine contraction to prevent uterine rupture.
- D. Anytime the mother feels like bearing down.

Correct Answer: B. During a uterine contraction

The primary power of labor and delivery is the uterine contraction. This should be augmented by the mother's bearing down during a contraction.

- **Option A:** During the second stage of labor, the fetal presentation comes down and compression occurs in both the bladder and rectum, generating a reflex that causes a strong urge to bear down, or 'push'. Therefore, the combination of involuntary intrauterine contractions and voluntary expulsive effort, through the abdominal and respiratory muscles, will help fetus delivery.
- **Option C:** Maternal pushing during the second stage of labor is an important and indispensable contributor to the involuntary expulsive force developed by uterine contraction.
- **Option D:** Waiting for the urge to push with an epidural does shorten the duration of pushing and increases spontaneous vaginal delivery, but lengthens the second stage and doubles the risk of low umbilical cord pH (based on data from one study).

47. The most important assessment for the nurse to make after a client has had a femoropopliteal bypass for peripheral vascular disease would be:

- A. Incisional pain
- B. Pedal pulse rate

- C. Capillary refill time
- D. Degree of hair growth

Correct Answer: C. Capillary refill time

Checking capillary refill provides data about the current perfusion of the extremity. Vascular surgery is considered a high-risk procedure and most procedures carry a >5% risk of an acute cardiac event. Direct reconstruction of aorta iliofemoral disease is associated with a 2.8% perioperative mortality while extra-anatomic bypass confers an 8.8% mortality.

- **Option A:** Patients undergoing PVB are at risk for wound infection, bleeding, pneumonia, conduit occlusion, and peripheral nerve damage. These patients often also have a higher prevalence of cerebrovascular and coronary artery disease which significantly increases their risk for stroke and myocardial infarction surgery.
- **Option B:** While the presence and quality of the pedal pulse provide data about peripheral circulation, it is not necessary to count the rate. Postoperatively, the patient's distal flow to the posterior tibial and dorsalis pedis should be assessed. If the pulses are not palpable, a doppler should be used for identification.
- **Option D:** Indicators for potential adverse outcomes include smoking, pulmonary disease, female sex, diabetes mellitus, previous bypass history, and advanced age. Conduit-related complications can be divided into immediate and long-term. Immediate including acute thrombosis and bleeding. Long-term including infection and occlusion secondary to intimal hyperplasia.

48. Emergency medical technicians transport a 27-year-old ironworker to the emergency department. They tell the nurse, "He fell from a two-story building. He has a large contusion on his left chest and a hematoma in the left parietal area. He has a compound fracture of his left femur and he's comatose. We intubated him and he's maintaining an arterial oxygen saturation of 92% by pulse oximeter with a manual resuscitation bag." Which intervention by the nurse has the highest priority?

- A. Assessing the left leg.
- B. Assessing the pupils.
- C. Placing the client in Trendelenburg's position.
- D. Assessing level of consciousness.

Correct Answer: A. Assessing the left leg.

In the scenario, airway and breathing are established so the nurse's next priority should be circulation. With a compound fracture of the femur, there is a high risk of profuse bleeding; therefore, the nurse should assess the site. Monitor vital signs. Note signs of general pallor, cyanosis, cool skin, changes in mentation. Inadequate circulating volume compromises systemic tissue perfusion.

- **Option B:** Test sensation of peroneal nerve by pinch or pinprick in the dorsal web between the first and second toe, and assess the ability to dorsiflex toes if indicated. Length and position of peroneal nerve increase risk of its injury in the presence of leg fracture, edema or compartment syndrome, or malposition of traction apparatus.
- **Option C:** The nurse doesn't have enough data to warrant putting the client in Trendelenburg's position. Handle injured tissues and bones gently, especially during the first several days. This may

prevent the development of fat emboli (usually seen in the first 12–72 hr), which are closely associated with fractures, especially of the long bones and pelvis.

- **Option D:** Neurologic assessment is a secondary concern to airway, breathing, and circulation. Perform neurovascular assessments, noting changes in motor and sensory function. Ask the patient to localize pain and discomfort. Impaired feeling, numbness, tingling, increased or diffuse pain occurs when circulation to nerves is inadequate or nerves are damaged.

49. A female child, age 2, is brought to the emergency department after ingesting an unknown number of aspirin tablets about 30 minutes earlier. On entering the examination room, the child is crying and clinging to the mother. Which data should the nurse obtain first?

- A. Heart rate, respiratory rate, and blood pressure
- B. Recent exposure to communicable diseases
- C. Number of immunizations received
- D. Height and weight

Correct Answer: A. Heart rate, respiratory rate, and blood pressure

The most important data to obtain on a child's arrival in the emergency department are vital sign measurements. Salicylate toxicity is a medical emergency. Intentional ingestion or accidental overdose can cause severe metabolic derangements, making treatment difficult. In an acute salicylate overdose, the onset of symptoms will occur within 3 to 8 hours. The severity of symptoms is dependent on the amount ingested.

- **Option B:** If the patient can provide history, there are several important pieces of information to obtain. These include time of ingestion, amount ingested, as well as formulation. The latter is important as it may affect the rate of absorption.
- **Option C:** It is critical to determine if there were any other substances ingested as this may complicate treatment and increase mortality. Determine whether this was accidental or intentional. This information should be corroborated by family, friends, or EMS personnel.
- **Option D:** The nurse should gather these data later. Aspirin has the propensity to form bezoars which will delay absorption. Aspirin can cause pyloric sphincter spasms, which increases the amount of time in the stomach allowing for more absorption.

50. During the history, which information from a 21-year-old client would indicate a risk for development of testicular cancer?

- A. Genital Herpes
- B. Hydrocele
- C. Measles
- D. Undescended testicle

Correct Answer: D. Undescended testicle

Undescended testicles make the client at high risk for testicular cancer. Mumps, inguinal hernia in childhood, orchitis, and testicular cancer in the contralateral testis are other predisposing factors. The

risk of testicular cancer might be a little higher for men whose testicles stayed in the abdomen as opposed to one that has descended at least partway. If cancer does develop, it's usually in the undescended testicle, but about 1 out of 4 cases occur in the normally descended testicle.

- **Option A:** While HPV infections are very common, cancer caused by HPV is not. Most people infected with HPV will not develop cancer-related to the infection. However, some people with long-lasting infections of high-risk types of HPV, are at risk of developing cancer.
- **Option B:** Hydroceles generally don't pose any threat to the testicles. They're usually painless and disappear without treatment. However, if the patient has scrotal swelling, he should see his doctor rule out other causes that are more harmful such as testicular cancer.
- **Option C:** Measles has a low death rate in healthy children and adults, and most people who contract the measles virus recover fully. The risk of complications is higher in the following groups: children under 5 years old. adults over 20 years old.

51. Which of the following groups of symptoms indicates a ruptured abdominal aortic aneurysm?

- A. Lower back pain, increased blood pressure, decreased red blood cell (RBC) count, increased white blood (WBC) count.
- B. Severe lower back pain, decreased blood pressure, decreased RBC count, increased WBC count.
- C. Severe lower back pain, decreased blood pressure, decreased RBC count, decreased RBC count, decreased WBC count.
- D. Intermittent lower back pain, decreased blood pressure, decreased RBC count, increased WBC count.

Correct Answer: B. Severe lower back pain, decreased blood pressure, decreased RBC count, increased WBC count.

Severe lower back pain indicates an aneurysm rupture, secondary to pressure being applied within the abdominal cavity. When rupture occurs, the pain is constant because it can't be alleviated until the aneurysm is repaired. Blood pressure decreases due to the loss of blood. After the aneurysm ruptures, the vasculature is interrupted and blood volume is lost, so blood pressure wouldn't increase. For the same reason, the RBC count has decreased – not increased. The WBC count increases as cells migrate to the site of injury.

- **Option A:** The pain is severe due to the ruptured aneurysm; the blood pressure is decreased due to blood loss.
- **Option C:** The increase in WBC count is due to the cells migrating to the site of the injury.
- **Option D:** The pain in a ruptured aneurysm is constant and can only be alleviated if the aneurysm is repaired.

52. Nursing care for a client with schizophrenia must be based on valid psychiatric and nursing theories. The nurse's interpersonal communication with the client and specific nursing interventions must be:

- A. Clearly identified with boundaries and specifically defined roles.
- B. Warm and non-threatening.

- C. Centered on clearly defined limits and expression of empathy.
- D. Flexible enough for the nurse to adjust the plan of care as the situation warrants.

Correct Answer: D. Flexible enough for the nurse to adjust the plan of care as the situation warrants.

A flexible plan of care is needed for any client who behaves in a suspicious, withdrawn, or regressed manner or who has a thought disorder. Because such a client communicates at different levels and is in control of himself at various times, the nurse must be able to adjust nursing care as the situation warrants. Ensure that the goals set are realistic; whether in the hospital or community. Avoids pressure on the client and sense of failure on part of the nurse/family. This sense of failure can lead to mutual withdrawal.

- **Option A:** The nurse's role should be clear; however, the boundaries or limits of this role should be flexible enough to meet client needs. Structure activities that work at the client's pace and activity. Structure times each day to include planned times for brief interactions and activities with the client on one-on-one basis. Helps the client to develop a sense of safety in a non-threatening environment.
- **Option B:** Because a client with schizophrenia fears closeness and affection, a warm approach may be too threatening. Avoid touching the client. Touch by an unknown person can be misinterpreted as a sexual or threatening gesture. This particularly true for a paranoid client. Keep the client in an environment as free of stimuli (loud noises, crowding) as possible. The client might respond to noises and crowding with agitation, anxiety, and increased inability to concentrate on outside events. The client can lose interest in activities that are too ambitious, which can increase a sense of failure.
- **Option C:** Expressing empathy is important, but centering interventions on clearly defined limits is impossible because the client's situation may change without warning. Teach the client to remove himself briefly when feeling agitated and work on some anxiety relief exercise (e.g., meditations, rhythmic exercise, deep breathing exercise). Teach client skills in dealing with anxiety and increasing a sense of control. Useful coping skills that the client will need include conversational and assertiveness skills. These are fundamental skills for dealing with the world, which everyone uses daily with more or less skill.

54. A female client requires hemodialysis. Which of the following drugs should be withheld before this procedure?

- A. Phosphate binders
- B. Insulin
- C. Antibiotics
- D. Cardiac glycosides

Correct Answer: D. Cardiac glycosides

Cardiac glycosides such as digoxin should be withheld before hemodialysis. Hypokalemia is one of the electrolyte shifts that occur during dialysis, and a hypokalemic client is at risk for arrhythmias secondary to digitalis toxicity. Hyperkalemia can be a marker of severe toxicity in acute poisoning. The role of potassium is less clear in chronic toxicity, although it has been linked to higher mortality despite traditional teaching that hypokalemia worsens the dysfunction at the Na-K transporter.

- **Option A:** Phosphate binders can be administered because they aren't removed from the blood by dialysis. Kidneys excrete ninety percent of the daily phosphate load while the gastrointestinal tract

excretes the remainder. As phosphorus is not significantly bound to albumin, most of it gets filtered at the glomerulus. Therefore, the number of functional nephrons plays a significant role in phosphorus homeostasis.

- **Option B:** For hemodialysis patients with diabetes who refuse to take insulin at home, delivering insulin during dialysis is a good way to improve glycemic control, researchers reported at a meeting sponsored by the National Kidney Foundation.
- **Option C:** Some antibiotics are removed by dialysis and should be administered after the procedure to ensure their therapeutic effects. The nurse should check a formulary to determine whether a particular antibiotic should be administered before or after dialysis. Patients with diabetes make up roughly half of the end-stage renal disease (ESRD) population in the United States, and good glycemic control is essential to slow the progression of both microvascular and macrovascular disease.

55. 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.

56. A client taking the MAOI phenelzine (Nardil) tells the nurse that he routinely takes all of the medications listed below. Which medication would cause the nurse to express concern and therefore initiate further teaching?

- A. Acetaminophen (Tylenol)
- B. Diphenhydramine (Benadryl)
- C. Furosemide (Lasix)
- D. Isosorbide dinitrate (Isordil)

Correct Answer: B. Diphenhydramine (Benadryl)

Over-the-counter medications used for allergies and cold symptoms are contraindicated because they will increase the sympathomimetic effects of MAOIs, possibly causing a hypertensive crisis. In general, SSRIs, SNRIs, TCAs, bupropion, mirtazapine, St. John's Wort and sympathomimetic amines, including stimulants, are contraindicated with MAOIs. Tramadol, meperidine, dextromethorphan, and methadone are contraindicated in patients on MAOIs as they are at high risk for causing serotonin syndrome.

- **Option A:** Acetaminophen (APAP) is considered a non-opioid analgesic and antipyretic agent used to treat pain and fever. Clinicians can use it for their patients as a single agent for mild to moderate pain and in combination with an opioid analgesic for severe pain. Acetaminophen, also called N-acetyl para-aminophenol or paracetamol, is one of the most widely used over-the-counter analgesic and antipyretic agents. Although its exact mechanism of action remains unclear, it is historically categorized along with NSAIDs because it inhibits the cyclooxygenase (COX) pathways.
- **Option C:** The Food and Drug Administration (FDA) has approved the use of furosemide in the treatment of conditions with volume overload and edema secondary to congestive heart failure exacerbation, liver failure, or renal failure including the nephrotic syndrome. Furosemide inhibits tubular reabsorption of sodium and chloride in the proximal and distal tubules, as well as in the thick ascending loop of Henle by inhibiting sodium-chloride cotransport system resulting in excessive excretion of water along with sodium, chloride, magnesium, and calcium.
- **Option D:** Isosorbide is a nitrate that exerts its pharmacologic effect by releasing nitric oxide (NO), an endothelium-derived relaxing factor (EDRF). NO is endogenously produced in the endothelium to dilate the blood vessels. It is for the prevention or treatment of angina pectoris resulting from coronary artery disease; however, it is not recommended for use once the anginal episode has started because the onset of action is not sufficiently rapid enough to abort an acute anginal event. In the latter case, glyceryl trinitrate is preferable.

57. He wants to influence the customary way of thinking and behaving that is shared by the members of the department. Which of the following terms refer to this?

- A. Organizational chart
- B. Cultural network
- C. Organizational structure
- D. Organizational culture

Correct Answer: D. Organizational culture

Organizational culture refers to the way the members of the organization think together and do things around them together. It's their way of life in that organization. An organization's culture defines the proper way to behave within the organization. This culture consists of shared beliefs and values established by leaders and then communicated and reinforced through various methods, ultimately shaping employee perceptions, behaviors, and understanding.

- **Option A:** An organizational chart is a diagram that visually conveys a company's internal structure by detailing the roles, responsibilities, and relationships between individuals within an entity. Organizational charts are alternatively referred to as "org charts" or "organization charts."
- **Option B:** A cultural network hierarchy is presented which classifies these tools according to the CEO's personal involvement with each element. Guidelines are presented for using the tools of cultural communication to change or maintain the culture at both the managerial level and the

operational level of the organization.

- **Option C:** An organizational structure is a system that outlines how certain activities are directed in order to achieve the goals of an organization. These activities can include rules, roles, and responsibilities. The organizational structure also determines how information flows between levels within the company.

58. In a pediatric primary care clinic, Nurse Patterson is preparing to conduct a physical examination on a 2-year-old toddler, Amelia. The toddler presents with a mild cough and runny nose for two days, as reported by her mother. Amelia, being at an age characterized by curiosity yet also anxiety towards unfamiliar situations, appears uneasy about the impending examination. Nurse Patterson, having a vast experience in pediatric nursing, recognizes the importance of employing a child-friendly, systematic approach during the examination to ensure accuracy while minimizing distress for both Amelia and her anxious mother. Utilizing her in-depth understanding of child development and behavior, alongside her clinical skills, Nurse Patterson plans the sequence of the examination to foster a cooperative environment and to glean accurate assessment data. Among the following methods, which would be the most appropriate strategy for Nurse Patterson to employ while performing the physical examination on toddler Amelia?

- A. Proceeding from head to toe
- B. Moving distally to proximally
- C. Transitioning from abdomen to toes, then to head
- D. Progressing from least to most intrusive
- E. Utilizing a play-oriented approach throughout the examination
- F. Adhering to a system-specific approach, based on the presenting symptoms
- G. Involving the parent in distracting the toddler during more intrusive examinations

Correct Answer: D. Progressing from least to most intrusive

Progressing from least to most intrusive is a recognized child-friendly approach. Starting with less invasive examination steps like listening to the heart or lungs can help the toddler acclimate to the examination process before moving onto more invasive steps, making the examination less stressful and more efficient.

- **Option A:** A head-to-toe approach is systematic but might not be child-friendly. Toddlers may feel threatened or fearful, especially when starting with the head which can be perceived as a more invasive part of the examination.
- **Option B:** Moving distally to proximally is not a traditional or recognized method of examination and does not specifically cater to the comfort or the anxiety levels of a toddler.
- **Option C:** Transitioning from abdomen to toes, then to head is not a traditional or recognized method of examination and does not specifically cater to the comfort or the anxiety levels of a toddler.
- **Option E:** Utilizing a play-oriented approach can be beneficial but it's not a method of examination. It's more of a technique to keep the child engaged and less anxious during the examination

process.

- **Option F:** A system-specific approach, while efficient, does not specifically cater to the comfort or the anxiety levels of a toddler. This approach is more symptom or condition focused and may not be child-friendly.
- **Option G:** Involving the parent can be beneficial for distraction and comfort but again, it's not a method of examination. It's more of a technique to ensure a smoother examination process.

59. Dr. Marquez orders a continuous intravenous nitroglycerin infusion for the client suffering from myocardial infarction. Which of the following is the most essential nursing action?

- A. Monitoring urine output frequently
- B. Monitoring blood pressure every 4 hours
- C. Obtaining serum potassium levels daily
- D. Obtaining infusion pump for the medication

Correct Answer: D. Obtaining infusion pump for the medication

Administration of Intravenous nitroglycerin infusion requires a pump for accurate control of medication. There are intravenous (IV) routes of administration for nitroglycerin used most commonly in emergency rooms and intensive care units (ICU). It is administered as a 5% dextrose in water drip and is indicated when sublingual nitroglycerin has failed to provide symptomatic relief or if rapid and continued relief of symptoms is necessary. When administered, its effect requires tight monitoring, as discussed below.

- **Option A:** There is no indication to monitor urine output frequently. In the event of overdose, monitoring of vital signs may be necessary to monitor the hemodynamic effects of nitroglycerin. Continuous monitoring of blood pressure, heart rate, respiratory rate, and oxygen saturation is recommended.
- **Option B:** Blood pressure must be monitored regularly, but it is not the most essential action. Any testing does not currently monitor nitroglycerin levels as its half-life is approximately 2 to 3 minutes, and the drug undergoes rapid metabolism from the body. When administered as a drip in the emergency room or ICU, its effects are often very closely monitored via an arterial line for real-time blood pressure monitoring. This vigilance is necessary to maximize the effectiveness of the drip and provide rapid feedback on the patient's condition.
- **Option C:** Monitoring serum potassium levels daily is unnecessary. Nitroglycerin is both a protein-bound drug and undergoes hepatic metabolism. Therefore it has numerous drug interactions. Before prescribing, providers should determine if the patient is taking any medications that may interact with nitroglycerin.

60. Nurse Linda is caring for a client with head injury and monitoring the client with decerebrate posturing. Which of the following is a characteristic of this type of posturing?

- A. Upper extremity flexion with lower extremity flexion
- B. Upper extremity flexion with lower extremity extension
- C. Extension of the extremities after a stimulus

D. Flexion of the extremities after stimulus

Correct Answer: C. Extension of the extremities after a stimulus

Decerebrate posturing is the extension of the extremities after a stimulus which may occur with upper brain stem injury. Decerebrate posturing is described as adduction and internal rotation of the shoulder, extension at the elbows with pronation of the forearm, and flexion of the fingers.

- **Option A:** Decerebrate posturing is the extension, not flexion, of extremities. As with decorticate posturing, the lower limbs show extension and internal rotation at the hip, with the extension of the knee and plantar flexion of the feet. Toes are typically abducted and hyperextended.
- **Option B:** The upper extremity should be in extension as well as the lower extremity. Decerebrate posturing can be seen in patients with large bilateral forebrain lesions with progression caudally into the diencephalon and midbrain. It can also be caused by a posterior fossa lesion compressing the midbrain or rostral pons.
- **Option D:** There is an extension of extremities after a stimulus in decerebrate posturing. Teasdale and Jennett advocated not using the term 'decerebrate' in the assessment of coma due to its association with a specific physio anatomical correlation, but to rather use the term 'extension.'

61. A client is about to be discharged with a prescription for the antipsychotic agent haloperidol (Haldol), 10 mg by mouth twice per day. During a discharge teaching session, the nurse should provide which instruction to the client?

- A. Take the medication 1 hour before a meal.
- B. Decrease the dosage if signs of illness decrease.
- C. Apply sunscreen before being exposed to the sun.
- D. Increase the dosage up to 50 mg twice per day if signs of illness don't decrease.

Correct Answer: C. Apply a sunscreen before being exposed to the sun.

Because haloperidol can cause photosensitivity and precipitate severe sunburn, the nurse should instruct the client to apply a sunscreen before exposure to the sun. Photosensitivity is an adverse effect of many drugs, characteristically producing skin lesions in the areas exposed to light, which includes the face, "V" area of the neck, extensor surfaces of forearms, and dorsa of hands with sparing of submental and retroauricular areas. Two major mechanisms mediating drug induced photosensitivity reactions are phototoxic and photoallergic responses.

- **Option A:** The nurse also should teach the client to take haloperidol with meals — not 1 hour before. Haloperidol is used widely in different countries. It is available in various forms; the oral route is the most common. For the oral administration, it is available as a tablet form and oral concentrate form.
- **Option B:** The nurse should instruct the client not to decrease the dosage unless the physician orders it. Haloperidol is a first-generation (typical antipsychotic) which exerts its antipsychotic action by blocking dopamine D2 receptors in the brain. When 72% of dopamine receptors are blocked, this drug achieves its maximal effect. Haloperidol is not selective for the D2 receptor. It also has noradrenergic, cholinergic, and histaminergic blocking action. The blocking of these receptors is associated with various side effects.
- **Option D:** Toxicities are the exaggerated symptoms of known pharmacologic effects and known adverse reactions. The most prominent toxicities of haloperidol are 1) severe extrapyramidal symptoms, hypotension, sedation. The patient may appear comatose with severe respiratory

depression or shock from hypotension. The extrapyramidal symptoms are muscular weakness or rigidity, a generalized or localized tremor that may be characterized by the akinetic or agitation types of movements, respectively. Haloperidol overdose is also associated with ECG changes known as torsade de pointes, which may cause arrhythmia or cardiac arrest.

62. Albert, who suffered severe burns 6 months ago, is expressing concern about the possible loss of job-performance abilities and physical disfigurement. Which intervention is the most appropriate for him?

- A. Referring the client for counseling and occupational therapy.
- B. Staying with the client as much as possible and building trust.
- C. Providing cutaneous stimulation and pharmacologic therapy.
- D. Providing distraction and guided imagery techniques.

Correct Answer: A. Referring the client for counseling and occupational therapy

Because it has been 6 months, the client needs professional help to get on with life and handle the limitations imposed by the current problems. Staying with the client, building trust, and providing methods of pain relief, such as cutaneous stimulation, medications, distraction, and guided imagery interventions, would have been more appropriate in earlier stages of postburn injury when physical pain was most severe and fewer psychological factors needed to be addressed.

- **Option B:** Explain to the patient what happened. Provide opportunities for questions and give honest answers. Compassionate statements reflecting the reality of the situation can help the patient and SO acknowledge that reality and begin to deal with what has happened.
- **Option C:** The burned patient may require around-the-clock medication and dose titration. IV method is often used initially to maximize drug effect. Concerns of patient addiction or doubts regarding the degree of pain experienced are not valid during the emergent/acute phase of care, but narcotics should be decreased as soon as feasible and alternative methods for pain relief initiated.
- **Option D:** Encourage use of stress management techniques: progressive relaxation, deep breathing, guided imagery, and visualization. Refocuses attention, promotes relaxation, and enhances the sense of control, which may reduce pharmacological dependency.

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

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

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

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

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

64. Which of the following landmarks is the correct one for obtaining an apical pulse?

- A. Left intercostal space, midaxillary line
- B. Left fifth intercostal space, midclavicular line
- C. Left second intercostal space, midclavicular line
- D. Left seventh intercostal space, midclavicular line

Correct Answer: B. Left fifth intercostal space, midclavicular line

The correct landmark for obtaining an apical pulse is the left intercostal space in the midclavicular line. This is the point of maximum impulse and the location of the left ventricular apex.

- **Option A:** Normally, heart sounds aren't heard in the midaxillary line. During systolic contraction of the heart, a high amplitude wave of blood gets ejected through the aortic valve out towards the periphery. This high-pressure wave distends the arteries, especially compliant "elastic" or "conducting" arteries, which tend to be larger and closer to the heart. The subsequent release of that distention somewhat sustains the systolic wave of blood throughout the body, creating a spike followed by a downward sloping plateau in pulse waveform.

- **Option C:** The left second intercostal space in the midclavicular line is where the pulmonic sounds are auscultated. The intensity of the pulse is determined by blood pressure as well as other physiological factors such as ambient temperature. For example, colder temperatures cause vasoconstriction leading to decreased intensity. Besides the normal variation in a rhythm that occurs with the respiratory cycle, the heart rate should be regular in the absence of pathology.
- **Option D:** Heart sounds are not heard in the seventh intercostal space in the midclavicular line. Pulses are accurately measured when the clinician places their fingertips onto the skin overlying the vessel (locations, see below) and focuses on different aspects of the pulse. (NB: although one often hears that utilization of the thumb for measuring pulses is less accurate secondary to increased perception of the clinician's own pulsation during palpation, the author could not find data to support or refute this claim). If possible, the limb under evaluation should have support throughout palpation.

65. Frequent PVCs are noted on the cardiac monitor of a patient with end-stage renal disease. The priority intervention is:

- A. Call the doctor immediately.
- B. Give the patient IV lidocaine (Xylocaine).
- C. Prepare to defibrillate the patient.
- D. Check the patient's latest potassium level.

Correct Answer: D. Check the patient's latest potassium level

The patient with ESRD may develop arrhythmias caused by hypokalemia. The incidence of PVCs, as well as complex PVCs in patients with ESRD, was comparable to that of the patients who had had myocardial infarction but was significantly higher than that found in low-risk subjects. The high incidence of complex PVCs in patients with ESRD may predispose them to increased cardiovascular death, and further investigation of this finding is indicated.

- **Option A:** Call the doctor after checking the patient's potassium values. The observation that two distinct patterns of arrhythmia appearance can be identified among arrhythmic dialysis patients was first made by Abe et al. They showed patients having almost constant PCV throughout the 24-h ECG recording and patients with a marked increase during dialysis and the early post-dialysis period.
- **Option B:** Lidocaine may be ordered if the PVCs are frequent and the patient is symptomatic. In conventional HD with constant and low potassium (range 0–2.5 mEq/l) a large amount of potassium is abruptly removed from the extracellular space. Most of this potassium originates from the cells, crosses the cell membrane, the extracellular space (the blood), and the dialysis membrane before reaching the dialysate. The depletion of the potassium reserves within the cells may have important repercussions on cardiac electrophysiology.
- **Option C:** Potassium fluxes during HD have been associated with an increase in QT interval, an increase in the dispersion of QT, and in the inhomogeneous repolarisation revealed by the analysis of the spatial aspects of T-wave complexity. The resulting repolarization heterogeneity allows for the onset of distinctive reentrant arrhythmias, and hypokalemia may act as a triggering factor in the genesis of premature ventricular depolarisations.

66. The characteristic manifestation that will differentiate bulimia nervosa from anorexia nervosa is that bulimic individuals:

- A. Have episodic binge eating and purging.
- B. Have repeated attempts to stabilize their weight.
- C. Have peculiar food handling patterns.
- D. Have threatened self-esteem.

Correct Answer: A. Have episodic binge eating and purging

Bulimia is characterized by binge eating which is characterized by taking in a large amount of food over a short period of time. Bulimia nervosa is a condition that occurs most commonly in adolescent females, characterized by indulgence in binge-eating, and inappropriate compensatory behaviors to prevent weight gain. Patients are eating portions more significant than what most people would consume in a similar period (usually less than 2 hours) and under comparable conditions. Binging episodes are followed by inappropriate compensatory behavior to prevent weight gain. The episodes should occur at least once a week for three months to establish a diagnosis.

- **Option B:** The success of many professions depends on a person's weight. Models and actors portray a level of thinness that is difficult to attain, and it is enhanced by make-up and photographic alterations. Athletes in sports such as ballet, long-distance running, and martial arts are pressured to maintain lean body weights to outperform the competition. Media outlets promote diet secrets and weight loss tips in excess. Populations such as maturing females identify thin body types with increased self-esteem and link weight loss with self-control.
- **Option C:** Patients with anorexia nervosa have altered brain function and structure there are deficits in neurotransmitters dopamine (eating behavior and reward) and serotonin (impulse control and neuroticism), differential activation of the corticolimbic system (appetite and fear), and diminished activity among the frontostriatal circuits (habitual behaviors).
- **Option D:** Low esteem is noted in both eating disorders. Anorexia nervosa (AN) mainly affects girls or women between 13 and 45 years of age. According to previous studies, one of the reasons for the desire to be thin is low self-esteem. Low self-esteem is commonly experienced among individuals with eating disorders, which can complicate the recovery process. For many people with eating disorders, the experience of low self-esteem can trigger the development of an eating disorder or influence behaviors that create a chaotic relationship with food and the body.

67. In a specialized pediatric oncology unit, a 7-year-old patient, Noah, has been diagnosed with acute lymphoblastic leukemia (ALL) and is scheduled to commence a chemotherapy regimen as a part of his treatment plan. The pediatric oncology nursing team is meticulously preparing to administer the chemotherapy, cognizant of the potential adverse effects and the critical importance of precise administration to optimize treatment efficacy and patient safety. The charge nurse, with a well-versed knowledge in pediatric oncology nursing, is reviewing the protocol with the nursing staff to ensure a thorough understanding and adherence to the guidelines for chemotherapy administration. The discussion is comprehensive, covering a spectrum of considerations including monitoring for adverse reactions, ensuring a patent intravenous line, and being vigilant for signs of infusion-related complications. Which of the following actions, if performed by the nursing staff during the administration of chemotherapy to Noah, would be deemed inappropriate?

- A. Monitoring the child for both general and specific adverse effects.

- B. Observing the child for 10 minutes to note for signs of anaphylaxis.
- C. Administering medication through a free-flowing intravenous line.
- D. Assessing for signs of infusion infiltration and irritation.
- E. Pre-medicating the child with anti-emetics as ordered, to manage nausea and vomiting.
- F. Conducting a thorough assessment of the child's overall health status and obtaining baseline vital signs prior to administering chemotherapy.
- G. Administering the chemotherapy at a rapid rate to minimize the duration of the infusion.

Correct Answer: G. Administering the chemotherapy at a rapid rate to minimize the duration of the infusion.

Administering chemotherapy at a rapid rate to minimize infusion duration is inappropriate and dangerous. Chemotherapy agents are dosed specifically to balance efficacy with toxicity and should be administered at the prescribed rate to ensure patient safety and treatment effectiveness.

- **Option A:** Monitoring for adverse effects is a crucial aspect of chemotherapy administration to ensure the safety and well-being of the patient.
- **Option B:** Observing for signs of anaphylaxis, especially in the initial phase post administration, is crucial for early detection and management of a severe allergic reaction. However, an extended observation period might be more prudent given the severity of such a reaction.
- **Option C:** Ensuring a free-flowing intravenous line is a fundamental step to ensure accurate dosage delivery and to prevent complications such as infiltration or extravasation.
- **Option D:** Assessing for infusion infiltration and irritation is essential to prevent, identify, and manage potential complications associated with IV chemotherapy administration.
- **Option E:** Pre-medication with anti-emetics can be crucial for managing chemotherapy-induced nausea and vomiting, which are common side effects of chemotherapy.
- **Option F:** Conducting a thorough assessment prior to chemotherapy administration is a pivotal step in ensuring the patient's readiness for chemotherapy and for recognizing any potential contraindications.

68. The clinic nurse is preparing to test the visual acuity of a client using a Snellen chart. Which of the following identifies the accurate procedure for this visual acuity test?

- A. Both eyes are assessed together, followed by the assessment of the right and then the left eye.
- B. The right eye is tested followed by the left eye, and then both eyes are tested.
- C. The client is asked to stand at a distance of 40ft. from the chart and is asked to read the largest line on the chart.
- D. The client is asked to stand at a distance of 40ft from the chart and to read the line that can be read 200 ft away by an individual with unimpaired vision.

Correct Answer: B. The right eye is tested followed by the left eye, and then both eyes are tested.

Visual acuity is assessed in one eye at a time, and then in both eyes together with the client comfortably standing or sitting. The right eye is tested with the left eye covered; then the left eye is tested with the right eye covered. Both eyes then are tested together. Visual acuity is measured with or

without corrective lenses and the client stands at a distance of 20ft. from the chart. A visual acuity test is only one part of a comprehensive ophthalmologic examination. The goal of the visual acuity test is to determine clarity or sharpness of vision.

- **Option A:** Cover the patient's eye with their hand or an occluder card. Some testers prefer to test the eyes in the same order on all patients. An alternative is to test the eye with worse vision first to reduce remembered letters. The second eye can also read the letters backward to reduce remembered letters.
- **Option C:** Position the patient in a well-lit area so that they are a standard distance from the chart. The testing distance is typically 20 feet (6 m), but this may vary. In smaller spaces, mirrors can be used to achieve the required distance. Additionally, a near Snellen chart may be used at 14 inches in some cases, which would require reading glasses if applicable.
- **Option D:** Move the patient closer to the chart if they are unable to read to the top line, the new distance from the chart becomes the numerator in a fraction reporting system. For example, if able to read the top line at 10 feet, the patient's vision would be represented as 10/200.

69. The nurse is providing discharge teaching to the client who was given a prescription for nifedipine (Adalat) for blood pressure management. Which instructions should the nurse include? Select all that apply.

- A. "Increase water intake."
- B. "Increase calcium intake."
- C. "Take pulse rate each day."
- D. "Weigh at the same time each day."
- E. "Palpitations may occur early in therapy."
- F "Be careful when rising from sitting to standing."

Correct Answers: C, D, E, & F.

Nifedipine is a calcium-channel blocker. Its therapeutic outcome is to decrease blood pressure. Its method of action is blockade of the calcium channels in vascular smooth muscle, promoting vasodilation.

- **Option A:** Increased water intake is not indicated in the client with cardiovascular disease. This medicine may cause fluid retention (edema) in some patients.
- **Option B:** Nifedipine does not affect serum calcium levels. During the depolarization phase of smooth muscle cells, there is an influx of calcium ions through voltage-gated channels. Nifedipine inhibits the entry of calcium ions by blocking these voltage-dependent L-type calcium channels in vascular smooth muscle and myocardial cells.
- **Option C:** Also, the client is taught to take his or her own pulse. Nifedipine is a calcium channel blocker. It works by affecting the movement of calcium into the cells of the heart and blood vessels. As a result, nifedipine relaxes blood vessels and increases the supply of blood and oxygen to the heart while reducing its workload.
- **Option D:** Weight should be checked regularly to monitor for early signs of heart failure. Since nifedipine may potentially cause fluid build-up, it is also essential to check the client's weight regularly.

- **Option E:** Side effects that can occur early in therapy include reflex tachycardia (palpitations) and first-dose hypotension, leading to orthostatic hypotension.
- **Option F:** Reduced intracellular calcium reduces peripheral arterial vascular resistance and dilatation of coronary arteries, leading to a reduction in systemic blood pressure and increased myocardial oxygen delivery. Nifedipine thus has hypotensive and antianginal properties.

70. The nurse who volunteers at a senior citizens center is planning activities for the members who attend the center. Which activity would best promote health and maintenance for these senior citizens?

- A. Gardening every day for an hour
- B. Aerobics 3 times a week for 30 minutes
- C. Sculpting twice a week for 60 minutes
- D. Walking 3 to 5 times a week for 30 minutes

Correct Answer: D. Walking three (3) to five (5) times a week for 30 minutes.

Exercise and activity are essential for health promotion and maintenance in older adults and to achieve an optimal level of functioning. About half of the physical deterioration of the older client is caused by disuse rather than by the aging process or disease. One of the best exercises for an older adult is walking, progressing to a 30 minutes session three (3) to five (5) times each week. Swimming and dancing are also beneficial.

- **Option A:** Gardening is a muscle-strengthening activity that can be done by an older adult for at least 2 or more days a week. Everyday gardening is not advisable. Some physical, mental, and age-related conditions must be considered when older people work in the garden, but they should not prevent people from enjoying the garden.
- **Option B:** Aerobic activity considered a vigorous-intensity activity should be done for 75 minutes a week in 10 minutes duration. Aerobics or cardio exercises pretty much fit everyone but the frequency and intensity of each exercise should be considered before sticking to a particular regime.
- **Option C:** Body sculpting for 60 minutes is an activity that is too vigorous for an adult. These popular workouts are well-suited for younger adults looking to bulk up or shed weight in a hurry, but they may put an unhealthy strain on older adults with joint pain, atrophied muscles, posture problems, or issues with balance.

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

- A. Pericarditis
- B. Hypertension
- C. MI
- D. Heart failure

Correct Answer: D. Heart failure

These are the classic signs of failure. Acute and subacute presentations (days to weeks) are characterized by shortness of breath at rest and/or with exertion, orthopnea, paroxysmal nocturnal dyspnea, and right upper quadrant discomfort due to acute hepatic congestion (right heart failure). Chronic presentations (months) differ in that fatigue, anorexia, abdominal distension, and peripheral edema may be more pronounced than dyspnea.

- **Option A:** Pericarditis is exhibited by a feeling of fullness in the chest and auscultation of a pericardial friction rub. The classic presentation is with chest pain that is central, severe, pleuritic (worsened with deep inspiration) and positional (improved by sitting up and leaning forward). The pain may also be radiating and may involve the ridges of the trapezius muscle if the phrenic nerve is inflamed as it traverses the pericardium.
- **Option B:** Hypertension is usually exhibited by headaches, visual disturbances, and a flushed face. Some cases present directly with symptoms of end-organ damage as stroke-like symptoms or hypertensive encephalopathy, chest pain, shortness of breath, and acute pulmonary edema.
- **Option D:** MI causes heart failure but isn't related to these symptoms. Myocardial ischemia can present as chest pain, upper extremity pain, mandibular, or epigastric discomfort that occurs during exertion or at rest. Myocardial ischemia can also present as dyspnea or fatigue, which are known to be ischemic equivalents.

72. A client is wearing a continuous cardiac monitor, which begins to sound its alarm. A nurse sees no electrocardiogram complexes on the screen. The first action of the nurse is to:

- A. Check the client status and lead placement.
- B. Press the recorder button on the electrocardiogram console.
- C. Call the physician.
- D. Call a code blue.

Correct Answer: A. Check the client status and lead placement.

Sudden loss of electrocardiogram complexes indicates ventricular asystole or possible electrode displacement. Accurate assessment of the client and equipment is necessary to determine the cause and identify the appropriate intervention. Unlike invasive procedures, no preparation is needed, but the patient should be advised to keep the monitor away from other electrical devices while wearing the device. Physicians should recommend not to put lotion or moisturizer on the chest as it will affect the attachment of leads.

- **Option B:** After continuous improvement and progress, the Holter is now the size of a small cell phone and gives two types of primary data to analyze. One is the QRS complex, and the other is the R-R interval. It continuously records until it is detached from the patient or it runs out of power, although it is usually used for 24-48Hrs. The power supply lasts 80-100 hours with a tape recording capacity of ten hours.
- **Option C:** There is no need to call the physician immediately. Mobile electrocardiographic monitoring is contraindicated if it delays urgent treatment, hospitalization, or a procedure. For example, it should not be part of the initial investigation for angina, where a stress test would be more appropriate.
- **Option D:** Calling a code blue is unnecessary. The ACC/AHA guidelines discouraged the use of ambulatory ECG for either arrhythmia detection or analysis of heart rhythm variability for risk assessment in patients without symptoms of arrhythmia, even if they had cardiovascular conditions

such as left ventricular hypertrophy, or valvular heart disease.

73. Which of the following diets would be most appropriate for a client with COPD?

- A. Low fat, low cholesterol
- B. Bland, soft diet
- C. Low-Sodium diet
- D. High calorie, high-protein diet

Correct Answer: D. High-calorie, high-protein diet

The client should eat high-calorie, high-protein meals to maintain nutritional status and prevent weight loss that results from the increased work of breathing. The client should be encouraged to eat small, frequent meals. Eat 20 to 30 grams of fiber each day, from items such as bread, pasta, nuts, seeds, fruits and vegetables. Eat a good source of protein at least twice a day to help maintain strong respiratory muscles. Good choices include milk, eggs, cheese, meat, fish, poultry, nuts and dried beans or peas.

- **Option A:** A low-fat, low-cholesterol diet is indicated for clients with coronary artery disease. Choose mono- and poly-unsaturated fats, which do not contain cholesterol. These are fats that are often liquid at room temperature and come from plant sources, such as canola, safflower and corn oils.
- **Option B:** Metabolism of carbohydrates produces the most carbon dioxide for the amount of oxygen used; metabolism of fat produces the least. For some people with COPD, eating a diet with fewer carbohydrates and more fat helps them breathe easier.
- **Option C:** The client with COPD does not necessarily need to follow a sodium-restricted diet, unless otherwise medically indicated. Choose complex carbohydrates, such as whole-grain bread and pasta, fresh fruits, and vegetables. Limit simple carbohydrates, including table sugar, candy, cake, and regular soft drinks.

74. What are the advantages of using directional hypotheses? Select all that apply.

- A. The indication of the use of a theory base to derive the hypothesis.
- B. The provision of a specific theoretical frame of reference.
- C. Ensurance that findings will be generalizable.
- D. The indication of a non-biased selection of subjects.

Correct Answer: A, B

A directional (or one-tailed hypothesis) states which way the researcher thinks the results are going to go, for example in an experimental study we might say..."Participants who have been deprived of sleep for 24 hours will have more cold symptoms in the following week after exposure to a virus than participants who have not been sleep deprived."

- **Option A:** A decent hypothesis will contain two variables, in the case of an experimental hypothesis there will be an IV and a DV; in a correlational hypothesis there will be two co-variables.

- **Option B:** A test of a nondirectional alternative hypothesis does not state the direction of the difference, it indicates only that a difference exists. In contrast, a directional alternative hypothesis specifies the direction of the tested relationship, stating that one variable is predicted to be larger or smaller than the null value.
- **Option C:** A directional hypothesis is a prediction made by a researcher regarding a positive or negative change, relationship, or difference between two variables of a population.
- **Option D:** A directional hypothesis is a one-tailed hypothesis that states the direction of the difference or relationship (e.g. boys are more helpful than girls).

75. Which technique is considered the gold standard for diagnosing DVT?

- A. Ultrasound imaging
- B. Venography
- C. MRI
- D. Doppler flow study

Correct Answer: B. Venography

Proximal leg vein ultrasound, which when positive, indicates that the patient should be treated as having a DVT. If a patient scores 2 or above, either a proximal leg vein ultrasound scan should be done within 4 hours, and if the result is negative, a D-dimer test should be done. If imaging is not possible within 4 hours, a D-dimer test should be undertaken, and an interim 24-hour dose of a parenteral anticoagulant should be given. A proximal leg vein ultrasound scan should be carried out within 24 hours of being requested.

- **Option A:** Complex duplex ultrasound is the imaging modality of choice. There is non-compressible venous segment; loss of phasic flow on Valsalva maneuver; absent color flow if completely occlusive; lack of flow augmentation with calf squeeze; and increased flow in superficial veins.
- **Option C:** Vascular structures should always be interrogated during a routine assessment of the peripheries and pelvis. Incidental DVT has a prevalence of around 0.3% on routine outpatient knee MRI
- **Option D:** Doppler flow is a type of ultrasound. It uses sound waves to measure the flow of blood through a blood vessel. The results are shown on a computer screen in lines called waveforms. It's sometimes called Doppler velocimetry. A Doppler flow study may be used during pregnancy to check the health of the unborn baby (fetus).

76. Nurse Clarisse is teaching a patient about a newly prescribed drug. What could cause a geriatric patient to have difficulty retaining knowledge about prescribed medications?

- A. Decreased plasma drug levels
- B. Sensory deficits
- C. Lack of family support
- D. History of Tourette syndrome

Correct Answer: B. Sensory deficits

Sensory deficits could cause a geriatric patient to have difficulty retaining knowledge about prescribed medications. Age-related decline of the five classical senses (vision, smell, hearing, touch, and taste) poses significant burdens on older adults. The co-occurrence of multiple sensory deficits in older adults is not well characterized and may reflect a common mechanism resulting in global sensory impairment.

- **Option A:** Decreased plasma drug levels do not alter the patient's knowledge about the drug. Aging has long been associated with decline in sensory function, a critical component of the health and quality of life of older people
- **Option C:** A lack of family support may affect compliance, not knowledge retention. Vision impairment is correlated with depression, poor quality of life, cognitive decline, and mortality. Hearing loss is associated with slower gait speed (a marker of physical decline), poor cognition, and mortality. Like smell, taste has been associated with nutritional compromise and in-patient mortality, suggesting that chemosensory function is critical. Tactile discrimination declines with age due to the cumulative effects of decreased nerve conduction velocity, decreased density of Meissner's and Pacinian corpuscles, and gray matter changes within the central nervous system, and is also associated with cognitive decline
- **Option D:** Tourette syndrome is unrelated to knowledge retention. Tourette syndrome referred to as Tourette disorder in the recently updated Diagnostic and Statistical Manual of Mental Disorders (DSM-5), is a common neurodevelopmental disorder affecting up to 1% of the population. It is characterized by multiple motor and vocal tics and starts in childhood.

77. A client states, "You won't believe what my husband said to me during visiting hours. He has no right treating me that way." Which nursing response would best assess the situation that occurred?

- A. "Does your husband treat you like this very often?"
- B. "What do you think is your role in this relationship?"
- C. "Why do you think he behaved like that?"
- D. "Describe what happened during your time with your husband."

Correct Answer: D. "Describe what happened during your time with your husband."

This is an example of the therapeutic communication technique of exploring. The purpose of exploring is to delve further into the subject, idea, experience, or relationship. This technique is especially helpful with clients who tend to remain on a superficial level of communication.

- **Option A:** Testing is appraising the client's degree of insight. These types of questions force the client to try to recognize his problems. The client's acknowledgment that he doesn't know these things may meet the nurse's needs but is not helpful for the client.
- **Option B:** Indicating the existence of an external source refers to attributing the source of thoughts, feelings, and behavior to others or to outside influences. To question this implies that the client was made or compelled to think in a certain way. Usually, the nurse does not intend to suggest that the source is external but that is often what the client thinks.
- **Option C:** Usually a "why" question is intimidating. In addition, the client is unlikely to know why and may become defensive trying to explain himself. Requesting an explanation or asking the client to provide reasons for thoughts, feelings, behaviors or events is nontherapeutic.

78. A client with advanced cirrhosis has been diagnosed with hepatic encephalopathy. The nurse expects to assess for:

- A. Malaise
- B. Stomatitis
- C. Hand tremors
- D. Weight loss

Correct Answer: C. Hand tremors

Hepatic encephalopathy results from the accumulation of neurotoxins in the blood, therefore the nurse wants to assess for signs of neurological involvement. Flapping of the hands (asterixis), changes in mentation, agitation, and confusion are common. During the intermediate stages of HE, a characteristic jerking movement of the limbs is often observed (e.g., asterixis) when the patient attempts to hold arms outstretched with hands bent upward at the wrist.

- **Option A:** Malaise is not related to neurological involvement. Other physical signs may include hyperreflexia, a positive Babinski's sign, or Parkinsonian symptoms (e.g., rigidity or tremors). Symptoms typically include confusion, personality changes, disorientation, and a depressed level of consciousness. The earliest stage is often characterized by an inverted sleep-wake pattern wherein patients are found to be sleeping during the day and awake throughout the night.
- **Option B:** Stomatitis is not related to neurological involvement. Throughout the intermediate stages, patients tend to experience worsening levels of confusion, lethargy, and personality changes. In the advanced stages, hepatic encephalopathy may eventually lead to coma (e.g., hepatic coma or coma hepaticum) and ultimately to death.
- **Option D:** These clients typically have ascites and edema so experience weight gain. In order to make a diagnosis of HE, there must be confirmed the presence of liver disease (e.g., abnormal liver function tests, ultrasound or liver biopsy demonstrating liver disease) or a portosystemic shunt, and exclusion of other potential etiologies (e.g., intracranial lesions, masses, hemorrhage or stroke; seizure activity; post-seizure encephalopathy; intracranial infections; or toxic encephalopathy from other causes).

79. Which of the following types of medications can be administered via gastrostomy tube?

- A. Any oral medications.
- B. Capsules' whole contents are dissolved in water.
- C. Enteric-coated tablets that are thoroughly dissolved in water.
- D. Most tablets designed for oral use, except for extended-duration compounds.

Correct Answer: D. Most tablets designed for oral use, except for extended-duration compounds

Most tablets designed for oral use, except for extended-duration compounds can be administered via gastrostomy tube. Drug therapy can be complicated in hospitalized patients requiring an enteral feeding tube (EFT). Some medications may be given via an EFT while others are unsuitable for this form of administration.

- **Option A:** Inappropriate drug selection for EFT administration can cause potential toxicity, reduced efficacy, and tube obstruction. Therefore, it is important to know which drugs may be altered for EFT administration as well as appropriate therapeutic alternatives that can temporarily be substituted for those that may not be given via that route.
- **Option B:** It is preferable to utilize a liquid dosage form whenever possible for EFT administration especially if the patient has a small-bore feeding tube. If an appropriate liquid preparation is not available, the dilution of crushed tablets or the contents of capsules may be necessary prior to EFT administration.
- **Option C:** Capsules, enteric-coated tablets, and most extended duration or sustained-release products should not be dissolved for use in a gastrostomy tube. They are pharmaceutically manufactured in these forms for valid reasons, and altering them destroys their purpose. The nurse should seek an alternate physician's order when an ordered medication is inappropriate for delivery by tube.

80. A client with pneumonia has a temperature ranging between 101° and 102°F and periods of diaphoresis. Based on this information, which of the following nursing interventions would be a priority?

- A. Maintain complete bed rest.
- B. Administer oxygen therapy.
- C. Provide frequent linen changes.
- D. Provide fluid intake of 3 L/day.

Correct Answer: D. Provide fluid intake of 3 L/day

A fluid intake of at least 3 L/day should be provided to replace any fluid loss occurring as a result of the fever and diaphoresis; this is a high-priority intervention. Force fluids to at least 3000 mL/day or as individually appropriate. Meets basic fluid needs, reducing risk of dehydration and to mobilize secretions, and promote expectoration.

- **Option A:** Provide a quiet environment and limit visitors during acute phase as indicated. Encourage use of stress management and diversional activities as appropriate. Reduces stress and excess stimulation, promoting rest. Assist the patient to assume a comfortable position for rest and sleep.
- **Option B:** The purpose of oxygen therapy is to maintain PaO₂ above 60 mmHg. Oxygen is administered by the method that provides appropriate delivery within the patient's tolerance. Note: Patients with underlying chronic lung diseases should be given oxygen cautiously.
- **Option C:** Adjust and monitor environmental factors like room temperature and bed linens as indicated. Room temperature may be accustomed to near normal body temperature and blankets and linens may be adjusted as indicated to regulate temperature of the patient.

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

- A. 24 hours
- B. 2 to 4 days

- C. 7 to 14 days
- D. 21 to 28 days

Correct Answer: C. 7 to 14 days

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

82. What is the approximate time that the blastocyst spends traveling to the uterus for implantation?

- A. 2 days
- B. 7 days
- C. 10 days
- D. 14 weeks

Correct Answer: B. 7 days

The blastocyst takes approximately 1 week to travel to the uterus for implantation. Implantation is a process in which a developing embryo, moving as a blastocyst through a uterus, makes contact with the uterine wall and remains attached to it until birth.

- **Option A:** The zygote moves through the fallopian tube and undergoes cell division, a process called cleavage. These cell divisions produce the inner cell mass (ICM), which will become the embryo, and the trophoblast, which surrounds the ICM and interacts with maternal tissues. Together, the ICM and the trophoblast are called the blastocyst.
- **Option C:** A blastocyst successfully implants in the uterus when, as the zona pellucida exits the fallopian tube, the blastocyst leaves the zona pellucida and binds to the endometrium.
- **Option D:** 14 weeks is too long a time to wait for implantation. If the blastocyst does not implant within 7 days, the pregnancy may not occur at all.

83. She decides to illustrate the organizational structure. Which of the following elements is not included?

- A. Level of authority
- B. Lines of communication
- C. Span of control
- D. Unity of direction

Correct Answer: D. Unity of direction

Unity of direction is a management principle, not an element of an organizational structure. The principle of unity of direction implies that there should be "one head and one plan for a group of activities having the same objective". In other words, each group of activities having the same objectives must have one plan of action and must be under the control of one manager or superior. An organization or group having different plans and more than one head cannot achieve the desired results.

- **Option A:** Distributing authority is another important building block in structuring organizations. Authority in the organization is the right in a position and, through it, the right of the person occupying the position to exercise discretion in making decisions affecting others.
- **Option B:** Organizational structures also rest somewhere on a spectrum of centralization. Generally, more conservative corporate entities adopt a centralized structure. In this design, C-level managers make all the decisions, management designs a plan for execution, and front-line employees carry out that plan.
- **Option C:** An organization's span of control defines how many employees each manager is responsible for within the company. There is no single type of span of control that's ideal for all companies or even for all businesses in a specific industry.

84. A male client visits the physician's office for treatment of a skin disorder. As a primary treatment, the nurse expects the physician to prescribe:

- A. An I.V. corticosteroid
- B. An I.V. antibiotic
- C. An oral antibiotic
- D. A topical agent

Correct Answer: D. A topical agent

Although many drugs are used to treat skin disorders, topical agents — not I.V. or oral agents — are the mainstay of treatment. Topical corticosteroids play a major role in the treatment of many dermatologic conditions. They are FDA-approved and indicated for the use of inflammatory and pruritic presentations of dermatologic conditions.

- **Option B:** The active ingredient, or drug, in a topical preparation is mixed with an inactive ingredient (called the vehicle). The vehicle determines the consistency of the product (for example, thick and greasy or light and watery) and whether the active ingredient remains on the surface or penetrates the skin.
- **Option C:** Topical drugs (drugs applied directly to the skin) are a mainstay of treating skin disorders. Systemic drugs are taken by mouth or given by injection and are distributed throughout the body. Rarely, when a high concentration of a drug is needed at the affected area, a doctor injects the drug just under the skin (intra-dermal injection).
- **Option D:** In addition, many preparations are available in different strengths (concentrations). Choice of vehicle depends on where the drug will be applied, how it will look, and how convenient it is to apply and leave on. Creams, the most commonly used preparations, are emulsions of oil in water, meaning they are primarily water with an oil component. (An ointment is the opposite, some water mixed mostly with oil.) Creams are easy to apply and appear to vanish when rubbed into the skin. They are relatively non-irritating.

85. The burned client newly arrived from an accident scene is prescribed to receive 4 mg of morphine sulfate by IV push. What is the most important reason to administer the opioid analgesic to this client by the intravenous route?

- A. The medication will be effective more quickly than if given intramuscularly.
- B. It is less likely to interfere with the client's breathing and oxygenation.

- C. The danger of an overdose during fluid remobilization is reduced
- D. The client delayed gastric emptying.

Correct Answer: C. The danger of an overdose during fluid remobilization is reduced.

The most important reason is to prevent an overdose from accumulation of drug in the interstitial space during the fluid shift of the emergent phase. When edema is present, cumulative doses are rapidly absorbed when the fluid shift is resolving. This delayed absorption can result in lethal blood levels of analgesics.

- **Option A:** Providing some pain relief has a high priority and giving the drug by the IV route instead of IM, SC, or orally does increase the rate of effect. Pain that is more severe and not well controlled may be manageable with single or continuous doses of IV, epidural, and intrathecal formulations. Infusion dosing can vary significantly between patients and largely depends on how naive or tolerant they are to opiates.
- **Option B:** Respiratory depression is among the more serious adverse reactions with opiate use that is especially important to monitor in the postoperative patient population. Extreme caution is necessary with severe respiratory depression and asthma exacerbation cases since morphine can further decrease the respiratory drive.
- **Option D:** Delayed gastric emptying is not a side effect of morphine. Among the more common unwanted effects of morphine use is constipation. This effect occurs via stimulation of mu-opioid receptors on the myenteric plexus, which in turn inhibits gastric emptying and reduces peristalsis.

86. A client had a transurethral prostatectomy for benign prostatic hypertrophy. He's currently being treated with a continuous bladder irrigation and is complaining of an increase in severity of bladder spasms. Which of the interventions should be done first?

- A. Administer an oral analgesic.
- B. Stop the irrigation and call the physician.
- C. Administer a belladonna and opium suppository as ordered by the physician.
- D. Check for the presence of clots and make sure the catheter is draining properly.

Correct Answer: D. Check for the presence of clots, and make sure the catheter is draining properly.

Blood clots and blocked outflow of urine can increase spasms. Bladder irrigation helps remove and prevent blood clots in the bladder. The blood clots stop urine from flowing through the catheter. The urine collects in the bladder and causes pain that gets worse as the bladder fills.

- **Option A:** Oral analgesics should be given if the spasms are unrelieved by the belladonna and opium suppository. Pain is a common symptom after endoscopic urologic surgery, and the need for effective pain management is obvious. Pain after TURP is due to bladder spasms and the catheter thus differs from open operations. The ideal postoperative analgesic treatment should provide rapid and effective pain relief, have a low incidence of adverse effects, and a minimal impact on organ systems or no significant interaction with other pharmacologic agents.
- **Option B:** The irrigation shouldn't be stopped as long as the catheter is draining because clots will form. The client can expect some discomfort with the catheter in place. At the start of the irrigation, the urine will be bloody and may have blood clots in it. As the irrigation continues, the urine should become pink and clear. The healthcare providers will empty the drainage bag frequently. The

bladder irrigation will be stopped when the client has had clear or slightly pink urine for 1 to 2 days.

- **Option C:** A belladonna and opium suppository should be given to relieve spasms but only after assessment of the drainage. Belladonna and Opium Suppositories (B & O Suppositories) relax the muscles in the rectum, vagina, or bladder. They may also help with relieving pain by decreasing spasms.

87. After completing a second vaginal examination of a client in labor, the nurse-midwife determines that the fetus is in the right occiput anterior position and at (-1) station. Based on these findings, the nurse-midwife knows that the fetal presenting part is:

- A. 1 cm below the ischial spines.
- B. Directly in line with the ischial spines.
- C. 1 cm above the ischial spines.
- D. In no relationship to the ischial spines.

Correct Answer: C. 1 cm above the ischial spines.

Fetal station — the relationship of the fetal presenting part to the maternal ischial spines — is described in the number of centimeters above or below the spines. A presenting part above the ischial spines is designated as -1, -2, or -3.

- **Option A:** A presenting part below the ischial spines, as +1, +2, or +3.
- **Option B:** 0 station is when the baby's head is even with the ischial spines. The baby is said to be "engaged" when the largest part of the head has entered the pelvis.
- **Option D:** If the head is high and not yet engaged in the birth canal, it may float away from the physician's fingers during the vaginal exam.

88. A fragile 87-year-old female has recently been admitted to the hospital with increased confusion and falls over the last two (2) weeks. She is also noted to have a mild left hemiparesis. Which of the following tests is most likely to be performed?

- A. CBC (Complete blood count)
- B. ECG (electrocardiogram)
- C. Thyroid function tests
- D. CT scan

Correct Answer: D. CT scan

A CT scan would be performed for further investigation of the hemiparesis. Noncontrast CT scanning is the most commonly used form of neuroimaging in the acute evaluation of patients with apparent acute stroke.

- **Option A:** A complete blood count (CBC) and a basic chemistry panel can be useful baseline studies. A CBC serves as a baseline study and may reveal a cause for the stroke (eg, polycythemia, thrombocytosis, thrombocytopenia, leukemia), identify evidence of concurrent illness

(eg, anemia), or issues that may affect reperfusion strategies (thrombocytopenia).

- **Option B:** Electrocardiogram may serve as baseline data upon entry into the ED. An electrocardiogram (ECG or EKG) records the electrical signal from the heart to check for different heart conditions. Electrodes are placed on the chest to record the heart's electrical signals, which cause the heart to beat. The signals are shown as waves on an attached computer monitor or printer.
- **Option C:** Testing can often be limited to blood glucose, plus coagulation studies if the patient is on warfarin, heparin, or one of the newer antithrombotic agents (eg, dabigatran, rivaroxaban), not including thyroid studies.

89. Dr. Smith has determined that the client with hepatitis has contracted the infection from contaminated food. The nurse understands that this client is most likely experiencing what type of hepatitis?

- A. Hepatitis A
- B. Hepatitis B
- C. Hepatitis C
- D. Hepatitis D

Correct Answer: A. Hepatitis A

Hepatitis A is transmitted by the fecal-oral route via contaminated food or infected food handlers. The most common mode of transmission of hepatitis A is via the fecal-oral route from contact with food, water, or objects contaminated by fecal matter from an infected individual. It is more commonly encountered in developing countries where due to poverty and lack of sanitation, there is a higher chance of fecal-oral spread.

- **Option B:** Hepatitis B is transmitted parenterally and sexually when individuals come in contact with mucous membranes or body fluids of infected individuals. Transfusion of blood and blood products, injection drug use with shared needles, needlesticks, or wounds caused by other instruments in healthcare workers and hemodialysis are all examples of parenteral and percutaneous exposures, but parenteral mode remains the dominant mode of transmission both globally and in the United States.
- **Option C:** Transmission of Hepatitis C can be parenteral, perinatal, and sexual, with the most common mode being the sharing of contaminated needles among IV drug users. Also, other high-risk groups include people who require frequent blood transfusions and organ transplantation of organs from infected donors.
- **Option D:** Hepatitis D is an RNA virus and a single species in the Deltavirus genus. It contains the hepatitis D antigen and RNA strand and uses HBsAg as its envelope protein; therefore, those who get hepatitis D virus infection have coinfection with the hepatitis B virus as well. Hepatitis D virus has similar modes of transmission as the hepatitis B virus, but perinatal transmission is uncommon.

90. The most common injury among elderly persons is:

- A. Atherosclerotic changes in the blood vessels
- B. Increased incidence of gallbladder disease
- C. Urinary Tract Infection

D. Hip fracture

Correct Answer: D. Hip fracture

Hip fracture, the most common injury among elderly persons, usually results from osteoporosis. Hip fractures from falls are one of the leading causes of injuries for seniors and result in the largest number of hospitalizations. Family members and hourly caregivers can take steps to prevent falls, such as removing area rugs, improving lighting throughout the home, and offering mobility support when needed.

- **Option A:** Some changes in the heart and blood vessels normally occur with age. However, many other changes that are common with aging are due to modifiable factors. If not treated, these can lead to heart disease. Arteriosclerosis (hardening of the arteries) is very common. Fatty plaque deposits inside the blood vessels cause them to narrow and totally block blood vessels. The capillary walls thicken slightly. This may cause a slightly slower rate of exchange of nutrients and wastes.
- **Option B:** Increasing age is a major risk factor for their formation, with the prevalence of gallstones being greatest at advanced age. While the majority of gallstones remain asymptomatic, seniors have a high risk for acute cholecystitis with atypical presentation, even when gangrene or perforation has occurred.
- **Option C:** The main cause of UTIs, at any age, is usually bacteria. Escherichia coli is the primary cause, but other organisms can also cause a UTI. In older adults who use catheters or live in a nursing home or other full-time care facility, bacteria such as Enterococci and Staphylococci are more common causes.

91. The physician orders an intramuscular injection of Demerol for the postoperative patient's pain. When preparing to draw up the medication, the nurse is careful to remove the correct vial from the narcotics cabinet. It is labeled

- A. Simethicone.
- B. Albuterol.
- C. Meperidine.
- D. Ibuprofen.

Correct Answer: C. Meperidine.

The generic name for Demerol is meperidine. Meperidine, also known as pethidine, is in the class of phenylpiperidine as a hydrochloride salt synthetic form of the opioid, which is a white crystalline with a melting point of 186 degrees C. This medication has calcium sulfate, dibasic calcium phosphate, starch, stearic acid, and talc as inactive ingredients. Clinicians use meperidine for the treatment of moderate to severe pain. Meperidine has the same mechanism of action as morphine, which is acting as an agonist to the mu-opioid receptor. The anti-shivering effect may involve the stimulation of k-opioid receptors.

- **Option A:** Simethicone is a silicone compound used for the management of flatulence and bloating. It relieves the discomfort produced by the presence of excess gas in the gastrointestinal tract. Simethicone is a silicone compound that functions as a non-systemic surfactant, decreasing the surface tension of gas bubbles in the GI tract. This action results in coalescence and dispersion of the gas bubbles allowing their removal from the GI tract as flatulence or belching. Simethicone Dimethicone causes the gas bubbles to accumulate and therefore pass more easily either through

the upper GI or lower GI opening.

- **Option B:** Albuterol, also known as salbutamol, has an indication for the treatment and prevention of bronchospasm (acute or severe) in patients with reversible obstructive airway disease, including exercise-induced bronchospasm. Albuterol acts on beta-2 adrenergic receptors to relax the bronchial smooth muscle. It also inhibits the release of immediate hypersensitivity mediators from cells, especially mast cells. Although albuterol also affects beta-1 adrenergic receptors, this is minimal and has little effect on the heart rate.
- **Option D:** Ibuprofen is indicated and FDA-approved for use in the treatment of inflammatory diseases and rheumatoid disorders. Ibuprofen is also FDA-approved for use in mild to moderate pain. It is also available as an over-the-counter medication for pain, usually mild. Ibuprofen is also an FDA-approved antipyretic, used for fever reduction in both adults and children. The use of NSAIDs in treating fever is much more commonplace in pediatric patients, and much contemporary research centers around creating more efficacy in the usage of ibuprofen in treating pediatric fever. The primary mechanism of Ibuprofen, an NSAID, is through the inhibition of prostaglandin precursors.

92. The nurse in charge is assessing a patient's abdomen. Which examination technique should the nurse use first?

- A. Auscultation
- B. Inspection
- C. Percussion
- D. Palpation

Correct Answer: B. Inspection

Inspection always comes first when performing a physical examination. It is important to begin with the general examination of the abdomen with the patient in a completely supine position. The presence of any of the following signs may indicate specific disorders. Percussion and palpation of the abdomen may affect bowel motility and therefore should follow auscultation.

- **Option A:** The last step of the abdominal examination is auscultation with a stethoscope. The diaphragm of the stethoscope should be placed on the right side of the umbilicus to listen to the bowel sounds, and their rate should be calculated after listening for at least two minutes. Normal bowel sounds are low-pitched and gurgling, and the rate is normally 2-5/min. Absent bowel sounds may indicate paralytic ileus and hyperactive rushes (borborygmi) are usually present in small bowel obstruction and sometimes may be auscultated in lactose intolerance.
- **Option C:** A proper technique of percussion is necessary to gain maximum information regarding the abdominal pathology. While percussing, it is important to appreciate tympany over air-filled structures such as the stomach and dullness to percussion which may be present due to an underlying mass or organomegaly (for example, hepatomegaly or splenomegaly).
- **Option D:** The ideal position for abdominal examination is to sit or kneel on the right side of the patient with the hand and forearm in the same horizontal plane as the patient's abdomen. There are three stages of palpation that include the superficial or light palpation, deep palpation, and organ palpation and should be performed in the same order. Maneuvers specific to certain diseases are also a part of abdominal palpation.

93. School phobia is usually treated by:

- A. Returning the child to the school immediately with family support.
- B. Calmly explaining why attendance in school is necessary.
- C. Allowing the child to enter the school before the other children.
- D. Allowing the parent to accompany the child in the classroom.

Correct Answer: A. Returning the child to the school immediately with family support.

Exposure to a feared situation can help in overcoming anxiety. Behavior therapy is the most effective treatment for phobias is behavioral therapy. This includes systematic desensitization and flooding. In methodical desensitization, the patient is exposed to a list of stimuli ranging from the least to the most anxiety-provoking. With this method, patients are taught various techniques to deal with anxiety such as relaxation, breathing control, and cognitive approaches.

- **Option B:** This will not help in relieving the anxiety due to separation from a significant other. The cognitive-behavioral approach includes reinforcing the realization that the phobic stimulus is safe. As the patient masters these techniques, they are taught to use them in the face of anxiety-provoking stimuli and induce relaxation. As the patients become desensitized to each stimulus on the scale, they keep moving up until the most anxiety-provoking stimuli no longer elicit any fear or anxiety.
- **Option C:** Anxiety in school phobia is not due to being in school but due to separation from parents/caregivers so these interventions are not applicable. To be successful, behavioral therapy requires that the patient be committed to the treatment, there are distinctly identified problems and objectives, and there are alternative strategies for dealing with the patient's feelings.
- **Option D:** This will not help the child overcome the fear. Other forms of treatment that may also be considered are virtual therapy in which a patient is exposed to or interacts with the phobic object or situation on the computer screen. This field of treatment is relatively new and requires more research. Other treatment modalities include hypnosis, supportive therapy, and family therapy. The goal of all 3 forms of therapy is to help the patient recognize that the feared stimulus is not dangerous and to provide emotional support.

94. Which of the following blood tests will tell the nurse that an adequate amount of drug is present in the blood to prevent arrhythmias?

- A. Serum chemistries
- B. Complete blood counts
- C. Drug levels
- D. None of the above

Correct Answer: C. Drug levels

Knowing drug levels (peak and trough) is the only way to ensure there is enough drug in the body to work. Other choices do not demonstrate drug effect. Screening may have an important role in the epidemiological assessment of poisoning as it is a common finding that more substances are detected in urine than are recorded from history. Specific qualitative tests (e.g. amatoxins, paraquat) may be of clinical assistance in determining evidence of exposure. Clinicians are better served by relying on a careful interpretation of the history and clinical examination in conjunction with readily accessible investigations such as ECG, electrolytes and acid-base analysis.

- **Option A:** The principal methods utilized to measure drug concentrations in clinical toxicology are the same as those used in therapeutic drug monitoring. These include fluorescent immunoassay, enzyme immunoassay, thin-layer chromatography, high performance liquid chromatography, gas chromatography, mass spectroscopy, flame photometry and simple colorimetric methods.
- **Option B:** The use of drug concentrations for research in toxicology is both important and problematic. An understanding of the kinetics of drugs taken in overdose may contribute to the development of more rational treatment and improve clinical outcomes. The problems in assessing such data relate to the variables inherent in the clinical presentation. Such variables include ingested doses, times to presentation, gastrointestinal decontamination, and the likelihood that in most patients there is an opportunity to collect only very few samples.
- **Option D:** To be useful clinically a drug concentration should assist in one or more of the following areas: diagnosis, prognosis, guiding therapy, or assessing the efficacy of current therapy. Even when these criteria are satisfied the drug concentration needs to be interpreted in the context of the individual patient's clinical condition and other factors which may influence the pharmacodynamic response to any blood level (such as coexistent disease or age).

95. Match the acid-base status of the following blood samples to the disorders in the given choices. (PaCO₂ values are in mm Hg and bicarbonate values in mmol/l). pH 7.64, PaCO₂ 25, HCO₃⁻ 19

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

Correct Answer: B. Respiratory Alkalosis, Partially Compensated

- Based on the given ABG values, pH is 7.64. For pH, the normal range is 7.35 to 7.45. Any blood pH above 7.45 (7.46, 7.47, 7.48, and so on...) is ALKALOSIS.
- PaCO₂ is 25. The normal range for PaCO₂ is from 35 to 45. If PaCO₂ is below 35, it is alkalosis. Based on the given ABG values, PaCO₂ is below 35, so it is considered ALKALOSIS.
- HCO₃⁻ is 19. The normal range for HCO₃ is from 22 to 26. If HCO₃ is below 22, it is acidosis. Based on the given ABG values, HCO₃ is below 22, so it is considered ACIDOSIS.
- For these ABG values, pH is ALKALOSIS and lines up with PaCO₂ which is RESPIRATORY. Therefore, this group of ABG values is considered RESPIRATORY ALKALOSIS.
- Lastly, it is PARTIALLY COMPENSATED because all three (3) values are abnormal. It is considered partially compensated if all three (3) values are abnormal.

96. When analgesics are ordered for a client with obstructive sleep apnea (OSA) following surgery, the nurse is most concerned about:

- A. Nonsteroidal anti-inflammatory drugs (NSAIDs)
- B. Opioids
- C. Anticonvulsants
- D. Antidepressants

Correct Answer: B. Opioids

Clients with obstructive sleep apnea are particularly sensitive to opioids. Thus the risk of respiratory depression is increased. The nurse must recognize that clients with OSA should start out receiving very low doses of opioids. Patients should be counseled to avoid alcohol, benzodiazepines, opiates, and some antidepressants which may worsen their condition. Most importantly, patients should reflect on the impact of sleep duration and their health, and place a priority on getting at least 7 to 8 hours of sleep per night.

- **Option A:** Surgical removal of enlarged tonsils and adenoids is the most commonly used treatment for OSA. Given the perioperative risk of the intervention and an estimated recurrence rate of up to 20%, there has recently been an increased interest in non-surgical treatment modalities. As the enlarged adenoids and tonsils consist of hypertrophied lymphoid tissue, anti-inflammatory agents have been proposed as a useful non-invasive treatment option in children with OSA.
- **Option C:** Obstructive sleep apnea, a common disorder resulting in sleep disruption and deprivation, is present in as many as 33% of patients with refractory partial epilepsy. In older adults with epilepsy, the presence of sleep apnea is associated with worsening seizure control or late-onset seizures.
- **Option D:** It is thought that tricyclic antidepressants (TCAs) improve OSA by increasing rapid-eye-movement (REM) sleep latency while decreasing the overall amount of time spent in REM sleep. This modification to sleep architecture possibly improves OSA since the condition worsens during REM sleep, especially in overweight patients.

97. Which of the following respiratory patterns indicate increasing ICP in the brain stem?

- A. Slow, irregular respirations
- B. Rapid, shallow respirations
- C. Asymmetric chest expansion
- D. Nasal flaring

Correct Answer: A. Slow, irregular respirations

Neural control of respiration takes place in the brain stem. Deterioration and pressure produce irregular respiratory patterns. Raised intracranial pressure can overcome perfusion pressure causing further anoxia and injury leading to brain death and/or herniation. Although hyperventilation can lower PaCO₂, causing vasoconstriction and reduce swelling/ICP, it should be avoided.

- **Option B:** Central neurogenic hyperventilation is persistent hyperventilation typically caused by head trauma, severe brain hypoxia, or lack of cerebral perfusion. It is usually due to the midbrain and upper pons damage. Breathing patterns associated with brain injury may not be observed due to mechanical ventilation and sedation. There is a complex interplay in cases that result in brainstem injury.
- **Option C:** Central neurogenic hypoventilation occurs when the medullary respiratory centers are not responding to appropriate stimuli. Central neurogenic hypoventilation may occur with head trauma, cerebral hypoxia, and narcotic suppression.
- **Option D:** Rapid, shallow respirations, asymmetric chest movements, and nasal flaring are more characteristic of respiratory distress or hypoxia. The autoregulation of cerebral blood flow is affected by CO₂ levels in the blood. As CO₂ increases, cerebral vessels will dilate, and as they

decrease, the cerebral vessels will constrict. In traumatic brain injury (TBI), the brain swells and cannot expand due to the fixed volume of the intact skull.

98. A teenage client is diagnosed with “strep throat.” Which clinical manifestation would the nurse expect of the client?

- 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.

Correct Answer: A. A fiery red pharyngeal membrane and fever.

Strep throat, or acute pharyngitis, results in a red throat, edematous lymphoid tissues, enlarged lymph nodes, fever, and sore throat. Physical exam findings including cervical lymphadenopathy, pharyngeal inflammation, and tonsillar exudate. Palatine petechiae and uvular edema are also suggestive.

- **Option B:** Pain over the sinus area and purulent nasal secretions would be evident with sinusitis. Major factors include facial pain/pressure, facial congestion/fullness, nasal obstruction, nasal or postnasal purulence, hyposmia, and fever.
- **Option C:** Foul-smelling breath and respirations indicate adenoiditis. Physical findings include purulent rhinorrhea, post-nasal drip, nasal obstruction, snoring, fever, mouth breathing, and halitosis. Indirect mirror exam may allow the practitioner to observe enlarged adenoids with exudates, though this can be a very challenging exam to perform in children.
- **Option D:** A weak cough and high-pitched noisy respirations are associated with foreign-body aspiration. Sudden onset of cough, choking, and/or dyspnea have been found to be the most common symptoms. One prospective study has cited a sensitivity of 91.1% and specificity of 45.2% for choking and acute cough. Wheeze on auscultation has been found to be a major physical finding and in one study was documented in 60% of cases.

99. A dopamine receptor agonist such as bromocriptine (Parlodel) relieves muscle rigidity caused by antipsychotic medication by:

- A. Blocking dopamine receptors in the central nervous system (CNS)
- B. Blocking acetylcholine in the CNS
- C. Activating norepinephrine in the CNS
- D. Activating dopamine receptors in the CNS

Correct Answer: D. Activating dopamine receptors in the CNS

Extrapyramidal effects and the muscle rigidity induced by antipsychotic medications are caused by a low level of dopamine. In groups of patients with Parkinson’s disease where levodopa is no longer as effective, co-administration with dopamine agonists such as bromocriptine historically was a successful option. Further, bromocriptine is also used as an early treatment for PD to delay the onset of the use of levodopa, ultimately delaying the likely dyskinesia and motor fluctuations that occur with chronic use.

- **Option A:** Dopamine receptor agonists stimulate dopamine receptors and thereby reduce rigidity. Bromocriptine is a dopamine receptor agonist that has selective agonist activity on D2 dopamine receptors while simultaneously acting as a partial antagonist for D1 dopamine receptors.[12]

Dopamine agonism has variable effects depending on the target tissue. In Parkinson disease, bromocriptine binds directly to striatal dopamine D2 receptors, stimulating locomotion and attenuating the bradykinetic symptoms caused by the degeneration of dopaminergic nigrostriatal neurons.

- **Option B:** Parkinson disease (PD) is a progressive neurological disorder characterized by resting tremor, rigidity, akinesia or bradykinesia, and postural instability due to the loss of dopaminergic neurons in the substantia nigra. Although levodopa is an effective treatment of PD, with chronic use, there is a decline in efficacy and motor complications.
- **Option C:** They don't affect norepinephrine or acetylcholine. Bromocriptine is a medication currently used in the management and treatment of Type II diabetes mellitus. It is an ergot alkaloid derivative in the dopamine D2 agonist class of drugs. This discussion reviews the indications, contraindications, and mechanism of action for bromocriptine as a valuable agent in the management for Type II diabetes mellitus, as well as its more traditional uses in Parkinson's disease, acromegaly, and pituitary prolactinomas.

100. A PP nurse is providing instructions to a woman after delivery of a healthy newborn infant. The nurse instructs the mother that she should expect normal bowel elimination to return:

- A. One the day of the delivery
- B. 3 days PP
- C. 7 days PP
- D. within 2 weeks PP

Correct Answer: B. 3 days PP.

After birth, the nurse should auscultate the woman's abdomen in all four quadrants to determine the return of bowel sounds. Normal bowel elimination usually returns 2 to 3 days PP. Surgery, anesthesia, and the use of narcotics and pain control agents also contribute to the longer period of altered bowel function.

- **Option A:** The mother may develop flatulence or constipation due to intestinal ileus (induced by pain or presence of placental hormone relaxin in the circulation), loss of body fluids, laxity of abdominal wall, and hemorrhoids.
- **Option C:** The postpartum constipation is due to the progesterone-induced decrease in gastrointestinal transit time. The compressive effects of the gravid uterus on the stomach, a decrease in lower esophageal sphincter tone due to high progesterone levels, and hypersecretion of acid due to high gastrin levels cause an increase in the incidence of acid reflux during pregnancy.
- **Option D:** After delivery, the levels of progesterone and gastrin drop within 24 hours, and the acid reflux and associated symptoms resolve in the next three to four days