

Kevin's Review - 35 NCLEX Practice Questions

1. Normal venous blood pH ranges from:

- A. 6.8 to 7.2
- B. 7.31 to 7.41
- C. 7.35 to 7.45
- D. 7.0 to 8.0

Correct Answer: B. 7.31 to 7.41

Normal venous blood pH ranges from 7.31 to 7.41. Normal arterial blood pH ranges from 7.35 to 7.45. Blood gas analysis is a commonly used diagnostic tool to evaluate the partial pressures of gas in blood and acid-base content. Understanding and use of blood gas analysis enable providers to interpret respiratory, circulatory, and metabolic disorders.

- **Option A:** A "blood gas analysis" can be performed on blood obtained from anywhere in the circulatory system (artery, vein, or capillary). An arterial blood gas (ABG) tests explicitly blood taken from an artery.
- **Option C:** ABG analysis assesses a patient's partial pressure of oxygen (PaO₂) and carbon dioxide (PaCO₂). PaO₂ provides information on the oxygenation status, and PaCO₂ offers information on the ventilation status (chronic or acute respiratory failure).
- **Option D:** PaCO₂ is affected by hyperventilation (rapid or deep breathing), hypoventilation (slow or shallow breathing), and acid-base status. Although oxygenation and ventilation can be assessed non-invasively via pulse oximetry and end-tidal carbon dioxide monitoring, respectively, ABG analysis is the standard.

2. In the bustling environment of a cystic fibrosis outpatient clinic, a proficient nurse is imparting education to a mother on the crucial technique of postural drainage for her child, diagnosed with cystic fibrosis (CF). This technique is instrumental in facilitating the mobilization and clearance of the tenacious pulmonary secretions characteristic of CF. The nurse emphasizes the correct method to ensure the efficacy and safety of the procedure. What advice should the nurse provide regarding the technique of postural drainage?

- A. Use the heel of her hand during percussion.
- B. Change the child's position every 20 minutes.
- C. Do percussion after the child eats and at bedtime.
- D. Use cupped hands during percussion.
- E. Ensure the room is cold to prevent the spread of germs.
- F. Perform percussion for at least 30 minutes in each position.

Correct Answer: D. Use cupped hands during percussion.

Using cupped hands during percussion creates a cushion of air and produces vibrations that help to loosen mucus in the lungs. This is the correct technique and should be taught to the mother.

- **Option A:** Using the heel of the hand during percussion can be too forceful and may cause discomfort or even injury to the child. The technique of percussion should be gentle yet effective in loosening mucus.

- **Option B:** Changing the child's position every 20 minutes is a correct part of postural drainage, but it is not related to the specific action of percussion. Different positions target different areas of the lung, but the question focuses on the percussion technique.
- **Option C:** Doing percussion right after meals is not recommended as it can cause vomiting or discomfort. It is better to wait 1-2 hours after eating before performing postural drainage and percussion.
- **Option D:** Using cupped hands during percussion creates a cushion of air and produces vibrations that help to loosen mucus in the lungs. This is the correct technique and should be taught to the mother.
- **Option E:** Ensuring the room is cold is not beneficial and can be uncomfortable for the child. A comfortable room temperature is more appropriate for performing postural drainage and percussion.
- **Option F:** Performing percussion for at least 30 minutes in each position is excessive. Typically, percussion in each position is done for 3-5 minutes, depending on the child's tolerance and need.

3. Rhea, confused and short breath, is brought to the emergency department by a family member. The medical history reveals chronic bronchitis and hypertension. To learn more about the current respiratory problem, the doctor orders a chest x-ray and arterial blood gas (ABG) analysis. When reviewing the ABG report, the nurses see many abbreviations. What does a lowercase "a" in ABG value present?

- A. Acid-base balance
- B. Arterial Blood
- C. Arterial oxygen saturation
- D. Alveoli

Correct Answer: B. Arterial Blood

A lowercase "a" in an ABG value represents arterial blood. For instance, the abbreviation PaO₂ refers to the partial pressure of oxygen in arterial blood. Arterial blood gas analysis can be used to assess gas exchange and acid base status as well as to provide immediate information about electrolytes.

- **Option A:** The pH value reflects the acid-base balance in arterial blood. pH is a logarithmic scale of the concentration of hydrogen ions in a solution. It is inversely proportional to the concentration of hydrogen ions. When a solution becomes more acidic the concentration of hydrogen ions increases and the pH falls.
- **Option C:** SaO₂ indicates arterial oxygen saturation. Oxygen saturation (SaO₂) is a measurement of the percentage of how much hemoglobin is saturated with oxygen. Oxygen is transported in the blood in two ways: oxygen dissolved in blood plasma (pO₂) and oxygen bound to hemoglobin (SaO₂). About 97% of oxygen is bound to hemoglobin while 3% is dissolved in plasma.
- **Option D:** An uppercase "A" represents alveolar conditions: for example, PAO₂ indicates the partial pressure of oxygen in the alveoli. Partial pressure of oxygen (PaO₂). This measures the pressure of oxygen dissolved in the blood and how well oxygen is able to move from the airspace of the lungs into the blood.

4. Which of the following disorders results from a deficiency of factor VIII?

- A. Sickle cell disease
- B. Christmas disease
- C. Hemophilia A
- D. Hemophilia B

Correct Answer: C. Hemophilia A

Hemophilia A results from a deficiency of factor VIII. A hereditary hemorrhagic disorder resulting from congenital deficit or scarcity of factor VIII, hemophilia A, which is known as classical hemophilia, manifests as protracted and excessive bleeding either spontaneously or secondary to trauma. Hemophilia A's X-linked trait manifests as a congenital absence or decrease in plasma clotting Factor VIII, a pro-coagulation cofactor and robust initiator of thrombin that is essential for the generation of adequate amounts of fibrin to form a platelet-fibrin plug at sites of endothelial disruption.

- **Option A:** Sickle cell disease is caused by a defective hemoglobin molecule. Sickle cell disease (SCD) is a multisystem disorder and the most common genetic disease in the United States, affecting 1 in 500 African Americans. About 1 in 12 African Americans carry the autosomal recessive mutation, and approximately 300,000 infants are born with sickle cell anemia annually.
- **Option B:** Christmas disease, also called hemophilia B, results in a factor IX deficiency. Hemophilia B, also known as Christmas disease, is the second most common type of hemophilia. The disease was named after Stephen Christmas, who was the first person diagnosed with the condition in 1952. The disorder was ubiquitous in the royal families of Spain, Germany, and Russia.
- **Option D:** Hemophilia B is an inherited disease, mainly caused by the deficiency of factor IX. It mostly affects males, but carrier females may show some signs of bleeding. One of the most famous families with this condition was that of Queen Victoria of England; thus, it is known as the "Royal disease." It is a hereditary hemorrhagic disorder resulting from congenital deficit or scarcity of factor IX, which manifests either spontaneously or after traumatic events.

5. The nurse is caring for a client following enucleation. The nurse notes the presence of bright red blood drainage on the dressing. Which nursing action is appropriate?

- A. Notify the physician.
- B. Continue to monitor the drainage.
- C. Document the finding.
- D. Mark the drainage on the dressing and monitor for any increase in bleeding.

Correct Answer: A. Notify the physician.

If the nurse notes the presence of bright red drainage on the dressing, it must be reported to the physician because this indicated hemorrhage. Enucleation is the removal of the eye from the orbit and involves the separation of all tissue connections between the globe and the orbit. The main indications for enucleation are trauma, painful eye, a blind eye, which is unsightly, intraocular malignancy, and as part of eye donation.

- **Option B:** Postoperative orbital hemorrhage after enucleation is rare with the use of compression bandages, and the precautions discussed earlier. If severe hemorrhage occurs, surgical exploration may be necessary, and separate incisions can decrease wound dehiscence and fat atrophy.

- **Option C:** This is not a normal finding. Edema of the orbit after enucleation is common and usually settles down with time. Orbital infection is a rare complication but can lead to wound dehiscence, implant exposure, and extrusion. Symptoms can be increased chemosis and persistent pain in the socket.
- **Option D:** The pressure patch can remain in place up to a week to reduce postoperative edema, although it is generally removed in 24 hours because of the inevitable oozing and soaking of the dressing that occurs. It will need to be removed to allow the application of topical antibiotics and corticosteroid ointment onto the conformer.

6. Jason James is taking β blockers, all of the following should be included in his assessment except:

- A. Pulmonary function tests
- B. Baseline ECG
- C. Glucose level
- D. Blood pressure

Correct Answer: A. Pulmonary function tests

Unless the client has a history of pulmonary disease and pulmonary function tests are indicated, there is no need to include this in the routine assessment of the client taking β blockers. Beta-blockers, as a class of drugs, are primarily used to treat cardiovascular diseases and other conditions.

- **Option B:** Sotalol blocks the potassium channels in the heart and thereby induces QT prolongation. It increases the risk of torsades de pointes. Specific beta-blockers are contraindicated depending on the patient's past medical history. Patients diagnosed with long QT syndrome or who have had torsades de pointes in the past should not use the drug sotalol. When using sotalol, the clinician must monitor the QTc interval as sotalol has QT-prolonging effects.
- **Option C:** Beta-blockers can induce both hyperglycemia and mask the hemodynamic signs, usually seen in a hypoglycemic patient, such as tachycardia. The catecholamines, epinephrine, and norepinephrine bind to B1 receptors and increase cardiac automaticity as well as conduction velocity. B1 receptors also induce renin release, and this leads to an increase in blood pressure. In contrast, binding to B2 receptors causes relaxation of the smooth muscles along with increased metabolic effects such as glycogenolysis.
- **Option D:** The patient's heart rate and blood pressure require monitoring while using beta-blockers. Beta receptors are found all over the body and induce a broad range of physiologic effects. The blockade of these receptors with beta-blocker medications can lead to many adverse effects. Bradycardia and hypotension are two adverse effects that may commonly occur.

7. Which of the following results is the primary treatment goal for angina?

- A. Reversal of ischemia.
- B. Reversal of infarction.
- C. Reduction of stress and anxiety.
- D. Reduction of associated risk factors.

Correct Answer: A. Reversal of ischemia.

Reversal of the ischemia is the primary goal, achieved by reducing oxygen consumption and increasing oxygen supply. As heart rate is the main influencer of oxygen consumption, most anginal events are initiated by an increase in heart rate. Three classes of drugs used for angina reduce symptoms by way of heart rate reduction— beta-blockers, ivabradine, and non-dihydropyridine calcium channel blockers.

- **Option B:** An infarction is permanent and can't be reversed. Another mechanism by which anginal symptoms can be treated is with vascular smooth muscle relaxation. This leads to coronary artery dilatation, thereby increasing perfusion ability. The drugs that work on this mechanism are dihydropyridine calcium channel blockers, nitrates, and nicorandil.
- **Option C:** Lifestyle modifications include regular exercise, weight control, and smoking cessation and should be encouraged. Risk factor modification includes controlling blood pressure, cholesterol, and blood sugar. Medications for risk factor modification and to prevent disease progression include aspirin, statins, angiotensin-converting enzyme inhibitors, or angiotensin receptor blockers.
- **Option D:** Prognosis of chronic stable angina progression to cardiac events varies among patients. Factors affecting prognosis include cardiovascular comorbidities as well as compliance with lifestyle modifications and medical treatment plans. Long-term prognosis is also affected by left ventricular systolic function, the degree of exercise the patient can tolerate, and the extent of CAD present.

8. Which of the following is accurate pertaining to physical exercise and type 2 diabetes mellitus?

- A. Physical exercise can slow the progression of type 2 diabetes mellitus.
- B. Strenuous exercise is beneficial when blood glucose is high.
- C. Patients who take insulin and engage in strenuous physical exercise might experience hyperglycemia.
- D. Adjusting insulin regimen allows for safe participation in all forms of exercise.

Correct Answer: A. Physical exercise can slow the progression of type 2 diabetes mellitus.

Physical exercise slows the progression of type 2 diabetes mellitus because exercise has beneficial effects on carbohydrate metabolism and insulin sensitivity. Exercise improves blood glucose control in type 2 diabetes, reduces cardiovascular risk factors, contributes to weight loss, and improves well-being.

- **Option B:** Daily exercise, or at least not allowing more than 2 days to elapse between exercise sessions, is recommended to enhance insulin action. Adults with type 2 diabetes should ideally perform both aerobic and resistance exercise training for optimal glycemic and health outcomes.
- **Option C:** Insulin action in muscle and liver can be modified by acute bouts of exercise and by regular physical activity. Acutely, aerobic exercise increases muscle glucose uptake up to fivefold through insulin-independent mechanisms.
- **Option D:** Insulin and foods both must be adjusted to allow safe participation in exercise. Aerobic exercise clearly improves glycemic control in type 2 diabetes, particularly when at least 150 min/week are undertaken. Resistance exercise (free weights or weight machines) increases strength in adults with type 2 diabetes by about 50% and improves A1C by 0.57%.

9. Nurse Gerry is aware that the defense mechanism commonly used by clients who are alcoholics is:

- A. Displacement
- B. Denial
- C. Projection
- D. Compensation

Correct Answer: B. Denial

Denial is a method of resolving conflict or escaping unpleasant realities by ignoring their existence. Denial is probably one of the best-known defense mechanisms, used often to describe situations in which people seem unable to face reality or admit an obvious truth (e.g., “He’s in denial”). Denial is an outright refusal to admit or recognize that something has occurred or is currently occurring. People living with drug or alcohol addiction often deny that they have a problem, while victims of traumatic events may deny that the event ever occurred.

- **Option A:** Displacement involves taking out our frustrations, feelings, and impulses on people or objects that are less threatening. Displaced aggression is a common example of this defense mechanism. Rather than express our anger in ways that could lead to negative consequences (like arguing with our boss), we instead express our anger towards a person or object that poses no threat (such as our spouse, children, or pets).
- **Option C:** Projection is a defense mechanism that involves taking our own unacceptable qualities or feelings and ascribing them to other people.³ For example, if you have a strong dislike for someone, you might instead believe that they do not like you. Projection works by allowing the expression of the desire or impulse, but in a way that the ego cannot recognize, therefore reducing anxiety.
- **Option D:** Overachieving in one area to compensate for failures in another. The term compensation refers to a type of defense mechanism in which people overachieve in one area to compensate for failures in another. For example, individuals with poor family lives may direct their energy into excelling above and beyond what is required at work.

10. Mrs. Johanson’s physician has prescribed tetracycline 500 mg PO q6h. While assessing Mrs. Johanson’s nursing history for allergies, the nurse notes that Mrs. Johanson is also taking oral contraceptives. What is the most appropriate initial nursing intervention?

- A. Administer the dose of tetracycline.
- B. Notify the physician that Mrs. Johanson is taking oral contraceptives.
- C. Tell Mrs. Johanson, she should stop taking oral contraceptives since they are inactivated by tetracycline.
- D. Tell Mrs. Johanson, to use another form of birth control for at least two months.

Correct Answer: B. Notify the physician that Mrs. Johanson is taking oral contraceptives.

The nurse should be aware that tetracyclines decrease the effectiveness of oral contraceptives. The physician should be notified. Note on the client’s chart that the physician was notified. The two groups of antibiotics most commonly involved in contraceptive failures are tetracyclines and penicillins, namely ampicillin. Both ampicillin and tetracycline have been shown to affect plasma and urinary concentrations of estrogen in both pregnant and nonpregnant women, while progesterone levels remain constant.

- **Option A:** Tetracycline decreases the effectiveness of oral contraceptives. There may be an equally effective antibiotic available that can be prescribed. Broad spectrum antibiotics can lead to lower levels of circulating oral contraceptive hormone levels and have, thus, been implicated in causing failures in women taking oral contraceptives. Failure of oral contraceptive steroids can lead to several outcomes, including breakthrough bleeding, pregnancy and menstrual abnormalities such as amenorrhea and spotting
- **Option C:** The nurse should not tell the client to stop taking oral contraceptives unless the physician orders this. Oral contraceptives (birth control pills) containing estrogen may not work properly if taken while the woman is taking tetracyclines. Unplanned pregnancies may occur.
- **Option D:** If the physician chooses to keep the client on tetracycline, the client should be encouraged to use another form of birth control. Antibiotics are suspected to diminish oral contraceptive efficacy by two main mechanisms: induction of the cytochrome P450 group of hepatic microsomal enzymes and interference with enterohepatic cycling of ethinylestradiol.

11. A client has an order to have radial ABG drawn. Before drawing the sample, a nurse occludes the:

- Brachial and radial arteries, and then releases them and observes the circulation of the hand.
- Radial and ulnar arteries, releases one, evaluates the color of the hand, and repeats the process with the other artery.
- Radial artery and observes for color changes in the affected hand.
- Ulnar artery and observes for color changes in the affected hand.

Correct Answer: B. Radial and ulnar arteries, releases one, evaluates the color of the hand, and repeats the process with the other artery.

Before drawing an ABG, the nurse assesses the collateral circulation to the hand with Allen's test. This involves compressing the radial and ulnar arteries and asking the client to close and open the fist. This should cause the hand to become pale. The nurse then releases pressure on one artery and observes whether circulation is restored quickly. The nurse repeats the process, releasing the other artery. The blood sample may be taken safely if collateral circulation is adequate.

- **Option A:** Puncture of the radial artery is usually preferred because of the accessibility of the vessel, the presence of collateral circulation, and the artery's superficial course proximal to the wrist, which makes it easier for the clinician to identify the vascular structure and hold local pressure after the procedure is finished.
- **Option C:** The radial artery is most easily accessible medial to the radial styloid process and lateral to the flexor carpi radialis tendon, 2-3 cm proximal to the ventral surface of the wrist crease. Firm occlusive pressure is held on both the radial artery and the ulnar artery. The patient is asked to clench the fist several times until the palmar skin is blanched, then to unclench the fist.
- **Option D:** If radial artery sampling is not feasible, femoral artery puncture is a possible alternative. When femoral artery puncture is being considered, the potential risk of infection at the entry site and the artery's proximity to the femoral vein and nerve must be taken into

12. Which conceptual analysis point of the framework for rigor used for interpretive phenomenology refers to how the study findings will continue to have meaning for the reader?

- A. Resonance
- B. Concreteness
- C. Actualization
- D. Openness

Correct Answer: C. Actualization

Actualization refers to how the study findings will continue to have meaning for the reader. IPA's emphasis on sense-making by both participant and researcher means that it can be described as having cognition as a central analytic concern, and this suggests an interesting theoretical alliance with the cognitive paradigm that is dominant in contemporary psychology.

- **Option A:** Within an interpretive tradition of qualitative research, resonance refers to a researcher's posture of openness and receptivity toward potential meanings embedded in text. It serves as an important ontological and epistemological counterpoint to the postpositivist stance of objective analysis of data.
- **Option B:** In IPA, researchers gather qualitative data from research participants using techniques such as interviews, diaries, or focus groups. Typically, these are approached from a position of flexible and open-ended inquiry, and the interviewer adopts a stance that is curious and facilitative (rather than, say, challenging and interrogative).
- **Option D:** Usually, participants in an IPA study are expected to have certain experiences in common with one another: the small-scale nature of a basic IPA study shows how something is understood in a given context, and from a shared perspective, a method sometimes called homogeneous sampling.

13. Nurse Gil is aware that the following statements describing urinary incontinence in the elderly is true?

- A. Urinary incontinence is a normal part of aging.
- B. Urinary incontinence isn't a disease.
- C. Urinary incontinence in the elderly can't be treated.
- D. Urinary Incontinence is a disease.

Correct Answer: B. Urinary incontinence isn't a disease.

Urinary incontinence isn't a normal part of aging nor is it a disease. It may be caused by confusion, dehydration, fecal impaction, restricted mobility, or other causes. Certain medications, including diuretics, hypnotics, sedatives, anticholinergics, and antihypertensives, may trigger urinary incontinence. Most clients with urinary incontinence can be treated; some can be cured.

- **Option A:** Urinary incontinence means a person leaks urine by accident. While it may happen to anyone, urinary incontinence is more common in older people, especially women. Most incontinence in men is related to the prostate gland.
- **Option C:** Today, there are more treatments for urinary incontinence than ever before. The choice of treatment depends on the type of bladder control problem the client has, how serious it is, and what best fits the client's lifestyle.
- **Option D:** The body stores urine in the bladder. During urination, muscles in the bladder tighten to move urine into a tube called the urethra. At the same time, the muscles around the urethra relax and let the urine pass out of the body. When the muscles in and around the bladder don't work the

way they should, urine can leak. Incontinence typically occurs if the muscles relax without warning.

14. During a visit to a community, the nurse will recommend routine screening for diabetes when the person has one or more of seven risk criteria. Which of the following persons that the nurse comes in contact with most needs to be screened for diabetes based on the seven risk criteria?

- A. A client with an HDL cholesterol level of 40 mg/dl and a triglyceride level of 300 mg/dl
- B. A woman who is at 90% of standard body weight after delivering an eight-pound baby
- C. A middle-aged Caucasian male
- D. An older client who is hypotensive

Correct Answer: A. A client with an HDL cholesterol level of 40 mg/dl and a triglyceride level of 300 mg/dl

The seven risk criteria include: greater than 120% of standard bodyweight, certain races but not including Caucasian, delivery of a baby weighing more than 9 pounds or a diagnosis of gestational diabetes, hypertensive, HDL greater than 35 mg/dl or triglyceride level greater than 250 or a triglyceride level of greater than 250 mg/dl, and, lastly, impaired glucose tolerance or impaired fasting glucose on prior testing.

- **Option B:** The American Diabetes Association (ADA) recommends opportunistic screening of adults of any age with a body mass index ≥ 25 kg/m² and additional risk factors, which include physical inactivity, a first-degree relative with diabetes, high-risk race/ethnicity, etc.
- **Option C:** Prevalence of diagnosed diabetes was highest among American Indians/Alaska Natives (14.7%), people of Hispanic origin (12.5%), and non-Hispanic blacks (11.7%), followed by non-Hispanic Asians (9.2%) and non-Hispanic whites (7.5%).
- **Option D:** Postural hypotension occurs when something interrupts this natural response, such as dehydration, which is a common problem for people with less well-controlled diabetes as a result of frequent urination.

15. Which of the following is/are an example(s) of a health restoration activity? Select all that apply.

- A. Administering an antibiotic every day.
- B. Teaching the importance of handwashing.
- C. Assessing a client's surgical incision.
- D. Advising a woman to get an annual mammogram after age 50 years.
- E. Attending rehabilitation of a fractured arm.

Correct Answer: A, C, E

Health restoration activities help an ill client return to health. This would include taking an antibiotic every day and assessing a client's surgical incision. Hand washing and mammograms both involve healthy people who are trying to prevent illness.

- **Option A:** Rehabilitation or restoration is defined as "a set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their

environment”.

- **Option B:** Disease prevention, understood as specific, population-based, and individual-based interventions for primary and secondary (early detection) prevention, aiming to minimize the burden of diseases and associated risk factors.
- **Option C:** Rehabilitation helps a child, adult, or older person to be as independent as possible in everyday activities and enables participation in education, work, recreation, and meaningful life roles such as taking care of a family. It does so by addressing underlying conditions (such as pain) and improving the way an individual function in everyday life, supporting them to overcome difficulties with thinking, seeing, hearing, communicating, eating, or moving around.
- **Option D:** Secondary prevention deals with early detection when this improves the chances for positive health outcomes (this comprises activities such as evidence-based screening programs for early detection of diseases or for prevention of congenital malformations; and preventive drug therapies of proven effectiveness when administered at an early stage of the disease).
- **Option E:** Rehabilitation is highly person-centered, meaning that the interventions and approach selected for each individual depends on their goals and preferences. Rehabilitation can be provided in many different settings, from inpatient or outpatient hospital settings to private clinics, or community settings such as an individual’s home.

16. Thrombolytic therapy is frequently used in the treatment of suspected strokes. Which of the following is a significant complication associated with thrombolytic therapy?

- A. Air embolism
- B. Cerebral hemorrhage
- C. Expansion of the clot
- D. Resolution of the clot

Correct Answer: B. Cerebral hemorrhage

Cerebral hemorrhage is a significant risk when treating a stroke victim with thrombolytic therapy intended to dissolve a suspected clot. Success of the treatment demands that it be instituted as soon as possible, often before the cause of stroke has been determined. Bleeding is the most frequent complication of thrombolytic therapy and can occur in a puncture site or spontaneously anywhere inside the body. Intracranial hemorrhage or hemorrhagic stroke is the greatest concern.

- **Option A:** Air embolism is not a concern. Adverse effects of any fibrinolytic agents are almost similar, which include, but are not limited to, bleeding, hypotension, allergic reactions, angioedema, and reperfusion arrhythmias (when used in acute MI). Among all of the fibrinolytic agents, streptokinase is the most antigenic, thus most frequently complicated by allergic reaction and hypotension.
- **Option C:** The end goal of this therapy is to convert plasminogen into plasmin which is accomplished at the location of the thrombus and on the surface of fibrin by the binding of tPA to plasminogen. This binding helps the conversion.
- **Option D:** Thrombolytic therapy does not lead to expansion of the clot, but to resolution, which is the intended effect. Thrombolytic treatment is also known as fibrinolytic or thrombolysis, to dissolve dangerous intravascular clots to prevent ischemic damage by improving blood flow.

17. An elderly client is hospitalized for transurethral resection of the prostate (TURP). Which finding postoperatively should be reported to the doctor immediately?

- A. Hourly urinary output of 40–50 cc
- B. Bright red urine output with many clots
- C. Dark red urine output with few clots
- D. Requests for pain med q 4 hrs.

Correct Answer: B. Bright red urine with many clots

- Option B: Transurethral resection of the prostate (TURP) is a surgical procedure that involves the removal of a section of the prostate. It is indicated for people with an enlarged prostate. After the procedure, a urinary catheter with continuous bladder irrigation is done to remove and prevent blood clots in the bladder. Bright red bleeding with many clots may indicate the need to increase the rate of irrigation infusion per physician's order.
- Option A: A urine output measuring 40-50 cc is within normal limits.
- Option C: Dark red urine with few clots is normal for a few days after surgery.
- Option D: This does not indicate an excessive need for pain management that requires the doctor's attention.

18. Which cause of hypertension is the most common in acute renal failure?

- A. Pulmonary edema
- B. Hypervolemia
- C. Hypovolemia
- D. Anemia

Correct Answer: B. Hypervolemia

Acute renal failure causes hypervolemia as a result of overexpansion of extracellular fluid and plasma volume with the hypersecretion of renin. Therefore, hypervolemia causes hypertension. Fluid overload leads to endothelial dysfunction due to inflammation and ischemia-reperfusion injury, causing damage to glycocalyx and capillary leakage. Capillary leakage leads to interstitial edema and at the same time, due to significant loss of volume to the interstitial compartment, there is reduction in circulating intravascular volume. This may then lead to reduction in renal perfusion pressure and subsequently to AKI.

- **Option A:** Interstitial edema leads to impairment in the diffusion of oxygen and metabolites from capillaries to tissues. Interstitial edema increases tissue pressure and leads to obstruction of lymphatic drainage and disturbance in cell-to-cell interaction, which will lead to progressive organ failure. The kidney's ability to accommodate increasing hydrostatic interstitial pressures is limited due to renal capsule, and thus all these effects are more prominently seen in the kidney.
- **Option C:** Fluid overload is also known to cause distension of atria and stretching of vessel walls, causing a release of ANP, which further leads to EGL damage, and cascade leads to AKI. Massive fluid resuscitation and positive fluid balance are known risk factors for intra-abdominal hypertension (IAH) development. Elevated IAP leads to compression of intra-abdominal vessels causing compromised microvascular blood flow and increased renal venous congestion. This results in

impaired renal plasma flow and decreased glomerular filtration rate, causing AKI.

- **Option D:** Acute kidney injury can be classified based on the causative factor into intrinsic renal, prerenal, and postrenal AKI. Prerenal causes contribute to the majority of community-acquired cases of AKI. In the case of prerenal AKI, fluid resuscitation is the gold standard, but if this resuscitation continues beyond the correction of hypovolemia, then it is associated with increased morbidity, mortality, and length of hospital stay as well as increased risk of AKI.

19. A thirty-five-year-old male, who is a professional marathon runner, has been an insulin-dependent diabetic for five years. He visits the clinic, expressing concerns about recent changes in his training performance. He mentions fatigue, occasional dizziness, and now, an inability to urinate for the past 24 hours. Given his profession, medical history, and the presented symptoms, which of the following complications of diabetes would you most likely suspect?

- A. Atherosclerosis
- B. Diabetic nephropathy
- C. Autonomic neuropathy
- D. Somatic neuropathy
- E. Diabetic retinopathy
- F. Hypoglycemia

Correct Answer: C. Autonomic neuropathy

Autonomic neuropathy (also known as Diabetic Autonomic Neuropathy) affects the autonomic nerves, which control the bladder, intestinal tract, and genitals, among other organs. Paralysis of the bladder is a common symptom of this type of neuropathy, as manifested by bladder urgency and inability to start urination.

- **Option A:** Atherosclerosis, or hardening of the arteries, is a condition in which plaque builds up inside the arteries. Plaque is made of cholesterol, fatty substances, cellular waste products, calcium, and fibrin (a clotting material in the blood).
- **Option B:** Diabetic nephropathy (DN) is typically defined by macro albuminuria—that is, a urinary albumin excretion of more than 300 mg in a 24-hour collection—or macroalbuminuria and abnormal renal function as represented by an abnormality in serum creatinine, calculated creatinine clearance, or glomerular filtration rate (GFR). Clinically, diabetic nephropathy is characterized by a progressive increase in proteinuria and an increased need to urinate.
- **Option D:** Somatic neuropathy affects the whole body and presents with diverse clinical pictures, most common is the development of diabetic foot followed by diabetic ulceration and possible amputation.

20. A patient diagnosed with terminal cancer says to the nurse “I’m going to die, and I wish my family would stop hoping for a cure! I get so angry when they carry on like this. After all, I’m the one who’s dying.” Which response by the nurse is therapeutic?

- A. "Have you shared your feelings with your family?"
- B. "I think we should talk more about your anger with your family."
- C. "You're feeling angry that your family continues to hope for you to be cured?"
- D. "You are probably very depressed, which is understandable with such a diagnosis."

Correct Answer: C. "You're feeling angry that your family continues to hope for you to be cured?"

Restating is a therapeutic communication technique in which the nurse repeats what the patient says to show understanding and to review what was said. Restating is done to clarify the client's message by repeating the same statement back to the client.

- **Option A:** Judgements place a positive or negative value on the client and their messages. The therapeutic nurse-client relationship must be, at all times, nonjudgmental, open, and honest.
- **Option B:** While it is appropriate for the nurse to attempt to assess the patient's ability to discuss feelings openly with family members, it does not help the patient discuss the feelings causing the anger.
- **Option D:** The nurse's attempt to focus on the central issue of anger is premature. The nurse would never make a judgment regarding the reason for the patient's feelings; this is non-therapeutic in the one-to-one relationship.

21. The nurse is caring for residents in a long-term care setting for the elderly. Which of the following activities based on Erickson's theory will be most effective in meeting the growth and development needs of a person in this age group?

- A. Boardgame
- B. Mentor other elderly clients
- C. Reminiscence groups
- D. Regularly scheduled social activities

Correct Answer: C. Reminiscence groups

According to Erikson's theory, older adults need to find and accept the meaningfulness of their lives, or they may become depressed, angry, and fear death. Reminiscing contributes to successful adaptation by maintaining self-esteem, reaffirming identity, and working through loss.

- **Option A:** Playing board games is an activity that is appropriate for school-age children where there is an equal share of efforts and tasks to reach a common goal. In addition to teaching them about teamwork, patience, and how to win and lose gracefully, board games can actually benefit kids' brains and language development.
- **Option B:** Mentoring is an activity for individuals who are in their middle adulthood where it involves finding one's purpose and contributing to the development of others.
- **Option D:** Attending social activities is an activity that benefits individuals who are in their adolescent years where these kinds of events play a role in creating and shaping their identity.

22. A 45-year-old female patient presents to the outpatient clinic with complaints of intermittent joint pain, fatigue, and cognitive disturbances. She recalls having a rash resembling a “bull’s-eye” a few weeks ago after a hiking trip in a tick-endemic area. The nurse, upon reviewing her medical history, notes a recent diagnosis of Lyme disease. Given the patient’s presentation and history, which of the following microorganisms is most likely responsible for her condition?

- A. *Borrelia burgdorferi*
- B. *Streptococcus pyogenes*
- C. *Bacillus anthracis*
- D. *Enterococcus faecalis*

Correct Answer: A. *Borrelia burgdorferi*

Lyme disease is the most common vector-borne disease in the United States. Lyme disease is caused by the bacterium *Borrelia burgdorferi* and rarely, *Borrelia mayonii*.

- **Option B:** Group A *Streptococcus* (group A strep, *Streptococcus pyogenes*) can cause both noninvasive and invasive disease, as well as nonsuppurative sequelae.
- **Option C:** Anthrax is a serious infectious disease caused by gram-positive, rod-shaped bacteria known as *Bacillus anthracis*.
- **Option D:** *Enterococcus faecalis* and *Enterococcus faecium* are the most prevalent species cultured from humans, accounting for more than 90% of clinical isolates. Infections commonly caused by enterococci include urinary tract infection (UTIs), endocarditis, bacteremia, catheter-related infections, wound infections, and intra-abdominal and pelvic infections.

23. Nurse Marco is developing a plan of care for a client with anorexia nervosa. Which action should the nurse include in the plan?

- A. Restricts visits with the family and friends until the client begins to eat.
- B. Provide privacy during meals.
- C. Set up a strict eating plan for the client.
- D. Encourage the client to exercise, which will reduce her anxiety.

Correct Answer: C. Set up a strict eating plan for the client.

Establishing a consistent eating plan and monitoring the client’s weight is very important in this disorder. Establish a minimum weight goal and daily nutritional requirements. Malnutrition is a mood-altering condition, leading to depression and agitation and affecting cognitive function and decision-making. Improved nutritional status enhances thinking ability, allowing initiation of psychological work.

- **Option A:** The family and friends should be included in the client’s care. Identify patterns of interaction. Encourage each family member to speak for self. Do not allow two members to discuss a third without that member’s participation. Helpful information for planning interventions. The enmeshed, over-involved family members often speak for each other and need to learn to be responsible for their own words and actions.

- **Option B:** The client should be monitored during meals-not given privacy. 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. Patient detects urgency and may react to pressure. Any comment that might be seen as coercion provides focus on food. When staff responds in a consistent manner, the patient can begin to trust staff responses. The single area in which the patient has exercised power and control is food or eating, and he or she may experience guilt or rebellion if forced to eat. Structuring meals and decreasing discussions about food will decrease power struggles with the patient and avoid manipulative games.
- **Option D:** Exercise must be limited and supervised. Monitor exercise programs and set limits on physical activities. Chart activity and level of work (pacing and so on). Moderate exercise helps in maintaining muscle tone, weight and combating depression; however, the patient may exercise excessively to burn calories.

24. A female client has experienced an episode of myasthenic crisis. The nurse would assess whether the client has precipitating factors such as:

- A. Getting too little exercise.
- B. Taking excess medication.
- C. Omitting doses of medication.
- D. Increasing intake of fatty foods.

Correct Answer: C. Omitting doses of medication.

Myasthenic crisis often is caused by under medication and responds to the administration of cholinergic medications, such as neostigmine (Prostigmin) and pyridostigmine (Mestinon). Myasthenic crisis is a complication of myasthenia gravis characterized by worsening of muscle weakness, resulting in respiratory failure that requires intubation and mechanical ventilation.

- **Option A:** The most common precipitant is infection. One series documented infection in 38% of patients presenting with myasthenic crisis; most commonly, the infection was bacterial pneumonia followed by a bacterial or viral upper respiratory infection. Other antecedent factors include exposure to temperature extremes, pain, sleep deprivation, and physical or emotional stress.
- **Option B:** Cholinergic crisis (the opposite problem) is caused by excess medication and responds to withholding of medications. Patients taking an excess of acetylcholinesterase inhibitors may precipitate a cholinergic crisis characterized by both muscarinic and nicotinic toxicity. Although cholinergic crisis is an important consideration in the evaluation of the patient in myasthenic crisis, it is uncommon.
- **Option D:** Too little exercise and fatty food intake are incorrect. Overexertion and overeating possibly could trigger a myasthenic crisis. Other precipitants include aspiration pneumonitis, surgery, pregnancy, perimenstrual state, certain medications (see below), and tapering of immune-modulating medications.

25. Aldo, with a somatoform pain disorder may obtain secondary gain. Which of the following statements refers to a secondary gain?

- A. It brings some stability to the family.
- B. It decreases the preoccupation with the physical illness.

- C. It enables the client to avoid some unpleasant activity.
- D. It promotes emotional support or attention for the client.

Correct Answer: D. It promotes emotional support or attention for the client

Secondary gain refers to the benefits of the illness that allow the client to receive emotional support or attention. Secondary gain refers to the external benefits that may be derived as a result of having symptoms. For example, the patient whose sudden onset of paresis (primary gain) causes his or her spouse to stay in an otherwise failing relationship (secondary gain).

- **Option A:** A dysfunctional family may disregard the real issue, although some conflict is relieved. Patients who experience unexplained physical symptoms often strongly maintain the belief that their symptoms have a physical cause despite evidence to the contrary. These beliefs are based on false interpretation of symptoms. Additionally, patients may minimize the involvement of psychiatric factors in the initiation, maintenance, or exacerbation of their physical symptoms.
- **Option B:** Somatoform pain disorder is a preoccupation with pain in the absence of physical disease. Pain disorder is fairly common. Although the pain is associated with psychological factors at its onset (e.g., unexplained chronic headache that began after a significant stressful life event), its onset, severity, exacerbation, or maintenance may also be associated with a general medical condition. Pain is the focus of the disorder, but psychological factors are believed to play the primary role in the perception of pain.
- **Option C:** Primary gain enables the client to avoid some unpleasant activity. A decrease in anxiety (gain) from an unconscious defensive operation, which then causes a physical or conversion symptom, e.g. an arm is voluntarily paralyzed because it was used to hurt somebody, thereby allaying guilt and anxiety.

26. General anesthetics potentiate the effects of which of the following drugs?

- A. Depolarizing agents
- B. Skeletal muscle relaxants
- C. Volatile liquids
- D. Inhalation anesthetics

Correct Answer: B. Skeletal muscle relaxants

The effects of skeletal muscle relaxants are potentiated with the use of general anesthetics. Skeletal muscle relaxants are drugs that are used to relax and reduce tension in muscles. They are more simply referred to as muscle relaxants. Some work in the brain or spinal cord to block or dampen down excessively stimulated nerve pathways.

- **Option A:** Depolarizing agents do not interact with general anesthetics. Depolarizing agents produce their block by binding to and activating the ACh receptor, at first causing muscle contraction, then paralysis. They bind to the receptor and cause depolarization by opening channels just like acetylcholine does.
- **Option C:** Desflurane, isoflurane, and sevoflurane are the most widely used volatile anesthetics today. They are often combined with nitrous oxide. Older, less popular, volatile anesthetics include halothane, enflurane, and methoxyflurane.
- **Option D:** Inhalation anesthetics (nitrous oxide, halothane, isoflurane, desflurane, sevoflurane most commonly used agents in practice today) are used for induction and maintenance of general anesthesia in the operating room. The volatile anesthetics (halothane, isoflurane, desflurane, and

sevoflurane) are liquids at room temperature and require the use of vaporizers for inhalational administration.

27. As a competent nurse, you know that the most significant contraindication for therapy with lipid-lowering agent is:

- A. Renal disease.
- B. Diabetes.
- C. Liver disease.
- D. Cardiac disease.

Correct Answer: C. Liver disease.

All lipid-lowering agents except the bile acid sequestrants are potentially hepatotoxic, so the most significant contraindication is liver disease. Contraindications to statins include use by patients with active hepatic disease or unexplained persistent elevations in aminotransferase levels. Ezetimibe is contraindicated in patients who are using an HMG-CoA reductase inhibitor (statin) in patients with active liver disease or otherwise unexplained elevated serum transaminase values. Ezetimibe alone is not contraindicated in patients with mild to moderate hepatic impairment.

- **Option A:** Fibrate use requires monitoring with liver function tests, renal function tests, and also CBC due to risk for pancytopenia. Ezetimibe, when used with a statin, can increase the risk of muscle toxicity, especially in advanced age over 65 years old, renal impairment, or hypothyroidism. Patients taking ezetimibe with cyclosporine are at an increased risk of ezetimibe toxicity as it can result in a 2.3- to 12-fold increase in ezetimibe concentration.
- **Option B:** Statins have an increased risk of developing diabetes mellitus; thus, caution is necessary for patients with already increased blood glucose levels or increased Hba1c levels.
- **Option D:** Statin-induced muscle injury can vary from myalgias to rarely myonecrosis or rhabdomyolysis. A meta-analysis of 42 randomized trials of statins found little or no excess risk of myalgias, CK elevations, rhabdomyolysis, or discontinuation of therapy versus placebo; however, in clinical practice muscle side effects are relatively common and the explanation for this difference is uncertain.

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

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

Correct Answer: A. Range of motion

To prevent disruption of the artificial skin's adherence to the wound bed, the client should restrict range of motion of the involved limb. Skin grafting is the transfer of cutaneous tissue from one portion of the body to another, often used to cover large wounds. The rationale of skin grafts is to take skin from a

donor site that will heal and transfer the skin to an area of need. After incorporation, skin grafts provide wounds with protection from the environment, pathogens, temperature, and excessive water loss like normal skin.

- **Option B:** Protein intake and fluid intake are important for healing and regeneration and shouldn't be restricted. Additionally, since many of these patients remain immobile, nurses should ensure they are on deep vein thrombosis. Wound dressing changes should take place according to the preference of the surgeon. Once the wounds have healed, some patients may require physical therapy. Others may need to wear compression garments to prevent hypertrophic scarring.
- **Option C:** Going outdoors is acceptable as long as the left arm is protected from direct sunlight. A tie over a bolster of petroleum-infused gauze, cotton balls, and non-dissolvable suture is frequently placed on smaller STSG recipient sites. A negative pressure wound vacuum is another viable option for areas that are difficult to bolster.
- **Option D:** Split-thickness skin grafts typically become adherent to the recipient wound bed 5 to 7 days following skin graft placement. The dressings placed intraoperatively are kept in place until 5 to 7 days postoperatively to minimize shear and traction to the healing skin graft. At 5 to 7 days postoperatively, the dressings are taken down, and the skin graft inspected.

29. A client has autoimmune thrombocytopenic purpura. To determine the client's response to treatment, the nurse would monitor:

- A. Platelet count
- B. White blood cell count
- C. Potassium levels
- D. Partial prothrombin time (PTT)

Correct Answer: A. Platelet count

Clients with autoimmune thrombocytopenic purpura (ATP) have low platelet counts, making answer A the correct answer. The laboratory tests will show low platelet count, usually $<40 \times 10^9/L$ for over three months. Blood film shows large platelets and tiny platelet fragments. Bone marrow examination shows an increased number of megakaryocytes.

- **Option B:** Often associated with the CBC is a differential, which refers to the relative amounts of white blood cell types (i.e., neutrophil, lymphocyte, eosinophil, etc.) as a percentage of the total number of WBCs. Of note, if a subtype of white blood cells seems to be elevated based on the differential, the actual value of the type of white blood cells should be calculated by multiplying the percentage listed on the differential by the total number of white blood cells.
- **Option C:** Potassium disorders are related to cardiac arrhythmias. Hypokalemia occurs when serum potassium levels under 3.6 mmol/L—weakness, fatigue, and muscle twitching present in hypokalemia. Hyperkalemia occurs when the serum potassium levels above 5.5 mmol/L, which can result in arrhythmias. Muscle cramps, muscle weakness, rhabdomyolysis, myoglobinuria are presenting signs and symptoms in hyperkalemia.
- **Option D:** Patients with a propensity for bleeding should undergo testing to determine the presence of a clotting disorder. For patients with deficiencies or defects of the intrinsic clotting cascade, the PTT will be elevated. Normal PTT values can vary between laboratories but 25 to 35 seconds is considered normal.

30. Which of the following is the nurse's role in health promotion?

- A. Health risk appraisal
- B. Teach client to be effective health consumer
- C. Worksite wellness
- D. None of the above

Correct Answer: B. Teach client to be effective health consumer

Nurses play a huge role in illness prevention and health promotion. Nurses assume the role of ambassadors of wellness. The World Health Organization (WHO) defines health promotion as a process of enabling people to increase control over and to improve their health (WHO, 1986). Nurses are best qualified to take on the job of health promoter due to their expertise. There are few health care occupations that have the high level of health education knowledge, skills, theory, and research to be able to focus on prevention because it is considered part of their professional development focus.

- **Option A:** An HRA may be a simple questionnaire eliciting self-reported information on risk factors, behaviors, or diagnoses. Questionnaires may be supplemented with clinical examinations to obtain data on variables such as height, weight, body mass index (BMI), heart rate, or blood pressure. Some HRAs may include performance tests such as grip strength, timed-up-and-go, chair rise, or four-meter walk test.
- **Option C:** Studies show that employees are more likely to be on the job and performing well when they are in optimal health. Benefits of implementing a wellness program include: improved disease management and prevention, and a healthier workforce in general, both of which contribute to lower health care costs.
- **Option D:** One of the most critical roles that nurses have in health promotion and disease preventions is that of an educator. Nurses spend the most time with the patients and provide anticipatory guidance about immunizations, nutrition, dietary, medications, and safety.

31. Specific classification of the chemotherapeutic agent, Vincristine (Oncovin) is:

- A. Hormone modulator
- B. Mitotic inhibitor
- C. Antineoplastic antibiotic
- D. Antimetabolite

Correct Answer: B. Mitotic inhibitor

- **Option B:** Vincristine is a mitotic inhibitor that inhibits mitosis or cell division. Other examples of mitotic inhibitors are paclitaxel, docetaxel, and vinblastine.
- **Option A:** Hormone modulators work by interfering with the activity of hormones. A good example are the selective estrogen receptor modulators (Tamoxifen, Raloxifene, and Ospemifene).
- **Option C:** Antineoplastic antibiotic (e.g., doxorubicin, mitoxantrone, and bleomycin) blocks cell growth by interfering with DNA.
- **Option D:** Antimetabolites (such as Sulfanilamides) work by acting as false metabolites that prevent DNA synthesis.

32. Patrick, a healthy adolescent has meningitis and is receiving I.V. and oral fluids. The nurse should monitor this client's fluid intake because fluid overload may cause:

- A. Dehydration
- B. Hypovolemic shock
- C. Cerebral edema
- D. Heart failure

Correct Answer: C. Cerebral edema

Due to the inflammation of the meninges, the client is vulnerable to developing cerebral edema and increased intracranial pressure. Hyponatremic solutions (e.g. 4% dextrose and one-fifth normal saline), which deliver excess free water, may worsen hyponatremia and increase the risk of cerebral edema, and have no place in the management of meningitis.

- **Option A:** Fluid overload won't cause dehydration. Children with meningitis require careful and regular monitoring of clinical signs of hydration state, including signs of overhydration, serum sodium, and laboratory markers of hypovolemia. Under most circumstances, any intravenous fluids given to a child with meningitis should be isotonic e.g. Plasma-Lyte 148 or 0.9% sodium chloride (normal saline) with additional glucose.
- **Option B:** Hypovolemic shock would occur with an extreme loss of fluid or blood. Clinical signs of shock or hypovolemia are hypotension, poor peripheral perfusion, cool pale extremities, tachycardia with low volume pulses, high blood lactate or large base deficit. Children with more than one of these signs should be given 10-20ml per kg of normal saline as a bolus.
- **Option D:** It would be unusual for an adolescent to develop heart failure unless the overhydration is extreme. Bacterial meningitis can cause overhydration by preventing the body from eliminating fluids the way it should. This can lead to hyponatremia, an electrolyte disturbance in which the sodium concentration in the blood plasma is lower than normal.

33. The nurse understands that the therapeutic effects of typical antipsychotic medications are associated with which neurotransmitters change?

- A. Decreased dopamine level
- B. Increased acetylcholine level
- C. Stabilization of serotonin
- D. Stimulation of GABA

Correct Answer: A. Decreased dopamine level

Excess dopamine is thought to be the chemical cause of psychotic thinking. The typical antipsychotics act to block dopamine receptors and therefore decrease the amount of neurotransmitter at the synapses. First-generation antipsychotics are dopamine receptor antagonists (DRA) and are known as typical antipsychotics. They include phenothiazines (trifluoperazine, perphenazine, prochlorperazine, acetophenazine, triflupromazine, mesoridazine), butyrophenones (haloperidol), thioxanthenes (thiothixene, chlorprothixene), dibenzoxazepines (loxapine), dihydroxyindole (molindone), and diphenylbutylpiperidine (pimozide).

- **Option B:** The first-generation antipsychotics work by inhibiting dopaminergic neurotransmission. Their effectiveness is best when they block about 72% of the D2 dopamine receptors in the brain. They also have noradrenergic, cholinergic, and histaminergic blocking action. Second-generation antipsychotics work by blocking D2 dopamine receptors as well as serotonin receptor antagonist action. the 5-HT2A subtype of serotonin receptor is most commonly involved.
- **Option C:** Second-generation antipsychotics are serotonin-dopamine antagonists and are also known as atypical antipsychotics. The Food and Drug Administration (FDA) has approved 12 atypical antipsychotics as of the year 2016. They are risperidone, olanzapine, quetiapine, ziprasidone, aripiprazole, paliperidone, asenapine, lurasidone, iloperidone, cariprazine, brexpiprazole, and clozapine.
- **Option D:** The typical antipsychotics do not increase acetylcholine, stabilize serotonin, stimulate GABA. GABA (gamma-aminobutyric acid) is a common neurotransmitter in the brain, and GABA-ergic neurons are thought to interact with antipsychotic medications, contributing to side effects such as tardive dyskinesia.

34. Drugs that mimic sympathetic activity are known as: Drugs that mimic sympathetic activity are known as:

- A. Cholinergics
- B. Anticholinergics
- C. Adrenergics
- D. Antiadrenergics

Correct Answer: C. Adrenergics

Drugs that mimic the effects of sympathetic activity are known as adrenergics. Adrenergic drugs must be classified based on the specific receptors they bind. Direct-acting drugs, which are the primary focus of this article, include vasopressors, bronchodilators, and other drugs. Indirect acting adrenergic drugs increase norepinephrine and epinephrine through various mechanisms. Hence, their side effect profiles are similar to those seen with vasopressors.

- **Option A:** Cholinergic medications are a category of pharmaceutical agents that act upon the neurotransmitter acetylcholine, the primary neurotransmitter within the parasympathetic nervous system (PNS). There are two broad categories of cholinergic drugs: direct-acting and indirect-acting. The direct-acting cholinergic agonists work by directly binding to and activating the muscarinic receptors. Indirect-acting cholinergic agents increase the availability of acetylcholine at the cholinergic receptors.
- **Option B:** Anticholinesterase medications are agents that inhibit cholinesterase, protect acetylcholine from hydrolysis, and produce cholinergic effects. Anticholinesterases further classify into reversible (carbamates) and irreversible agents (organophosphates).
- **Option D:** Centrally acting antiadrenergic agents inhibit the stimulation of the central nervous system alpha-adrenergic receptors and decrease sympathetic stimulation to the blood vessels and the heart. They block the release and action of catecholamines (epinephrine, norepinephrine, dopamine), which are released in response to stress.

35. A female client arrives at the emergency department with chest and stomach pain and a report of black tarry stool for several months. Which of the following orders should the nurse Oliver anticipate?

- A. Cardiac monitor, oxygen, creatine kinase and lactate dehydrogenase levels
- B. Prothrombin time, partial thromboplastin time, fibrinogen and fibrin split product values
- C. Electrocardiogram, complete blood count, testing for occult blood, comprehensive serum metabolic panel
- D. Electroencephalogram, alkaline phosphatase, and aspartate aminotransferase levels, basic serum metabolic panel

Correct Answer: C. Electrocardiogram, complete blood count, testing for occult blood, comprehensive serum metabolic panel.

An electrocardiogram evaluates the complaints of chest pain, laboratory tests determine anemia, and the stool test for occult blood determines blood in the stool.

- **Option A:** Cardiac monitoring, oxygen, and creatine kinase, and lactate dehydrogenase levels are appropriate for a cardiac primary problem. A basic metabolic panel and alkaline phosphatase and aspartate aminotransferase levels assess liver function.
- **Option B:** Prothrombin time, partial thromboplastin time, fibrinogen and fibrin split products are measured to verify bleeding dyscrasias.
- **Option D:** An electroencephalogram evaluates brain electrical activity.