

ANCC AMB-BC - Quiz Questions with Answers

Assess and Evaluate

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1.

During a chart review, you notice the blood pressure of a patient being treated for hypertension has been consistently elevated over several visits. What should be your next step?

Evaluate the patient's adherence to antihypertensive medications

Increase the dose of antihypertensive medication

Recommend immediate hospitalization

Suggest dietary changes to reduce sodium intake

Correct answer: Evaluate the patient's adherence to antihypertensive medications

The first step in managing a patient with consistently elevated blood pressure is to evaluate their adherence to antihypertensive medications. Non-adherence is a common reason for poorly controlled hypertension, and addressing this issue can often bring blood pressure back into target ranges. Understanding whether the patient is taking their medications as prescribed is crucial before making any changes to the treatment plan.

While increasing the dose of medication may be necessary, it should only be considered after ensuring the patient is adhering to their current regimen. Immediate hospitalization is generally reserved for hypertensive emergencies rather than consistently elevated blood pressure without acute symptoms. Suggesting dietary changes, such as reducing sodium intake, is important for long-term blood pressure control. However, this should come only after ensuring that adherence to the medication is not the primary issue.

2.

A patient with COPD starts a new bronchodilator. What is the best measure to evaluate its effectiveness?

Peak expiratory flow rate

Oxygen saturation levels

Exercise tolerance

Frequency of exacerbations

Correct answer: Peak expiratory flow rate

Peak expiratory flow rate is the most reliable and objective measure of bronchodilator effectiveness in patients with COPD. This measure reflects the maximum speed at which a patient can exhale, providing direct data on how well the bronchodilator is improving airway function. Regular monitoring of peak expiratory flow rate can help assess whether the medication is effective in reducing airway obstruction and improving breathing.

Oxygen saturation levels are important but do not directly measure the effectiveness of bronchodilators, as they assess oxygenation rather than airway function directly. While exercise tolerance may improve with bronchodilator use, it is a subjective measure and can be influenced by factors unrelated to lung function. The frequency of exacerbations is a useful long-term measure but does not provide immediate feedback on bronchodilator effectiveness, making peak expiratory flow rate the preferred method.

3.

A patient presents with complaints of chest pain that worsens when lying down and improves when sitting up. On physical examination, you hear a pericardial friction rub. Which of the following is the most likely explanation for these findings?

Pericarditis

Cardiac tamponade

Pulmonary embolism

Pneumothorax

Correct answer: Pericarditis

Pericarditis is the most likely diagnosis for a patient presenting with chest pain that worsens when lying down and improves when sitting up, especially when accompanied by a pericardial friction rub on auscultation. Pericarditis involves inflammation of the pericardium, and the friction rub is a characteristic finding. The positional nature of the pain is also a hallmark of pericarditis, making it the most likely diagnosis in this scenario.

Cardiac tamponade typically presents with chest pain, but it is more commonly associated with signs of hemodynamic instability, such as hypotension and jugular venous distension, than with a pericardial friction rub. Pulmonary embolism is characterized by sudden onset chest pain and dyspnea, but it does not present with a friction rub or pain that improves with sitting up. Pneumothorax usually presents with sharp chest pain and absent breath sounds on one side, which is not consistent with the friction rub and positional chest pain seen in pericarditis.

4.

Which of the following is a common side effect of opioid analgesics that patients should be monitored for?

Constipation

Hypertension

Diarrhea

Rebound hyperventilation

Correct answer: Constipation

Constipation is a well-known side effect of opioid analgesics, as these medications can slow gastrointestinal motility and lead to reduced bowel movements. Opioids bind to receptors in the gastrointestinal tract, inhibiting peristalsis and increasing the tone of the anal sphincter, resulting in constipation.

Hypertension is not typically associated with opioid analgesics; these drugs can cause hypotension due to their effects on the central nervous system and vascular tone. Diarrhea is also not a common side effect of opioids; instead, their inhibitory effect on bowel movements makes constipation more likely. Rebound hyperventilation is not commonly linked to opioid use. While opioids can suppress respiratory drive, potentially leading to hypoventilation, there is not typically a clinically significant rebound effect.

5.

A telehealth patient describes new-onset palpitations and lightheadedness. Which of the following should be the nurse's primary concern?

Cardiac arrhythmia

Meningitis

Dehydration

Stroke

Correct answer: Cardiac arrhythmia

Cardiac arrhythmia is the primary concern for a patient presenting with new-onset palpitations and lightheadedness because these symptoms together suggest an irregular heart rhythm. This condition requires immediate evaluation to prevent potentially life-threatening complications and to manage the arrhythmia effectively.

Meningitis, which typically presents with fever, headache, and neck stiffness, does not fit the symptoms of palpitations and lightheadedness, making it an unlikely cause in this scenario. Dehydration could potentially explain the lightheadedness, but it is less likely to be responsible for the palpitations. Stroke generally involves neurological deficits rather than palpitations and lightheadedness, making it less likely in this context.

6.

A patient starts a new diuretic for heart failure. Which parameter should be monitored to assess treatment effectiveness?

Weight loss

Urine output

Blood pressure reduction

Electrolyte levels

Correct answer: Weight loss

Weight loss is the best parameter to monitor when assessing the effectiveness of a diuretic in heart failure patients, as it directly correlates with the reduction of fluid retention, which is the primary goal of this treatment. Diuretics work by helping the body expel excess fluid. A decrease in weight indicates this fluid is being effectively eliminated, thereby relieving symptoms like swelling and shortness of breath associated with heart failure.

While urine output increases with diuretic use, it is not as reliable a measure of effectiveness. It is difficult to monitor specific urinary output without having the patient measure the volume of every void, which is not practical outside a hospital environment. Blood pressure reduction can occur with diuretic use, but it is not the main therapeutic target in heart failure management. Monitoring electrolyte levels does not provide information on whether the heart failure symptoms and fluid volumes are improving in response to diuretic use.

7.

Which of the following side effects should be monitored in a patient taking isoniazid for tuberculosis treatment?

Hepatotoxicity

Hypotension

Hyperglycemia

Bradycardia

Correct answer: Hepatotoxicity

Hepatotoxicity is a significant concern in patients taking isoniazid for tuberculosis treatment. Isoniazid can cause liver damage, leading to elevated liver enzymes and, in severe cases, acute liver failure. Due to this risk, patients on isoniazid therapy should be regularly monitored for liver function to detect any signs of hepatotoxicity early.

Hypotension is not a common side effect of isoniazid, as the medication primarily affects the liver and nervous system rather than blood pressure. Hyperglycemia is also not typically associated with isoniazid treatment, as it does not significantly impact blood glucose levels. Bradycardia is not a known side effect of isoniazid, as its primary concerns are related to hepatotoxicity and peripheral neuropathy.

8.

In a patient with type 2 diabetes, which of the following outcomes would indicate optimal control of the disease?

Fasting blood glucose of 95 mg/dL

HbA1c of 8.5%

Postprandial blood glucose of 180 mg/dL

Random blood glucose of 220 mg/dL

Correct answer: Fasting blood glucose of 95 mg/dL

A fasting blood glucose of 95 mg/dL indicates optimal control of type 2 diabetes, as it falls within the normal range (70-130 mg/dL). This outcome suggests effective management of blood glucose levels, which is crucial for reducing the risk of diabetes-related complications such as cardiovascular disease, neuropathy, and retinopathy.

An HbA1c of 8.5% indicates poor long-term glycemic control, as optimal management should aim for an HbA1c of less than 7% to reduce the risk of complications. A postprandial blood glucose of 180 mg/dL is elevated and suggests suboptimal control, with the target postprandial glucose level being below 140 mg/dL for effective management. A random blood glucose of 220 mg/dL indicates hyperglycemia and poor glycemic control.

9.

A patient presents with polyuria, polydipsia, and polyphagia. Which of the following laboratory tests would be most helpful in confirming a diagnosis?

Fasting blood glucose

Complete blood count (CBC)

Serum electrolytes

Urine ketones

Correct answer: Fasting blood glucose

A fasting blood glucose test is the most helpful laboratory test in confirming a diagnosis of diabetes mellitus in a patient presenting with polyuria, polydipsia, and polyphagia. These symptoms are indicative of hyperglycemia, where elevated blood glucose levels cause excessive thirst, urination, and hunger. The fasting blood glucose test provides a reliable measurement of the patient's baseline glucose levels after fasting, making it a crucial tool for diagnosing diabetes and distinguishing between normal and impaired glucose regulation.

A CBC provides information on blood cell counts but does not assess glucose metabolism. Serum electrolytes can reveal imbalances but are not specific indicators of diabetes. Urine ketones can indicate diabetic ketoacidosis in type 1 diabetes but are not definitive for diagnosing diabetes mellitus itself.

10.

Which of the following is a key component of a heart-healthy diet recommended by healthcare professionals?

Low sodium consumption

A daily glass of red wine

High carbohydrate intake

High protein intake

Correct answer: Low sodium consumption

Low sodium consumption is a key component of a heart-healthy diet recommended by healthcare professionals. Reducing sodium intake helps manage blood pressure, reduce fluid retention, and lower the risk of cardiovascular disease. A heart-healthy diet focuses on limiting processed foods, which often contain high levels of sodium, and encourages the consumption of fresh fruits, vegetables, whole grains, and lean proteins.

While a daily glass of red wine has been touted by some for its potential heart health benefits, research indicates that, on its own, red wine does not meaningfully improve heart health and is not a key component of a heart-healthy diet. High carbohydrate intake, particularly from refined sugars and processed foods, is not recommended in a heart-healthy diet. High protein intake can be beneficial in moderation, but it is not the primary focus of a heart-healthy diet and would not contribute to cardiac health like maintaining a low sodium intake would.

11.

A patient with a history of deep vein thrombosis is taking rivaroxaban. What is the primary advantage of this medication compared to warfarin?

No routine INR monitoring is required.

Lower risk of bleeding

Reversible with vitamin K

Longer half-life

Correct answer: No routine INR monitoring is required.

The primary advantage of rivaroxaban over warfarin is that it does not require routine INR monitoring. Rivaroxaban has a predictable pharmacokinetic profile, allowing for consistent anticoagulation without frequent blood tests to monitor INR levels. This feature can make rivaroxaban more convenient for patients and healthcare providers, as it simplifies anticoagulation management and reduces the burden of regular monitoring.

The overall risk of bleeding with rivaroxaban is not significantly lower than that of warfarin, making bleeding risk a less definitive advantage. Unlike warfarin, which is a vitamin K antagonist, Rivaroxaban is not reversible with vitamin K. The half-life of rivaroxaban is not longer than that of warfarin; its convenience advantage lies in the absence of routine INR monitoring rather than the duration of action.

12.

A patient with a history of hypertension presents with headaches and irritability. What should the nurse assess to explore a psychosocial cause?

Stress levels and coping strategies

Medication adherence

Patient history of abuse as a child

Exercise routine

Correct answer: Stress levels and coping strategies

To explore a psychosocial cause of headaches and irritability in a patient with hypertension, the nurse should assess the patient's stress levels and coping strategies. Stress can significantly impact both mental and physical health, potentially exacerbating symptoms like headaches and irritability, especially in individuals who are already managing a chronic condition like hypertension.

While medication adherence is important in managing hypertension, it does not address the psychosocial elements that might be influencing the patient's condition. A history of childhood abuse, though relevant in psychosocial assessments, is not as immediately pertinent to the current symptoms as broader stressors that may be contributing. Assessing the patient's exercise routine focuses more on physical health than on the potential emotional or mental triggers of their symptoms.

13.

During a routine exam, a patient with hypertension reports feeling increasingly anxious. What should the nurse assess to explore a psychosocial factor?

Lifestyle stressors

Medication side effects

Family history of anxiety

The patient's current occupation

Correct answer: Lifestyle stressors

When a patient with hypertension reports feeling increasingly anxious, the nurse should focus on assessing lifestyle stressors as a potential psychosocial factor. Chronic stress can exacerbate both hypertension and anxiety, making it important to understand the patient's daily life and any ongoing stressors that may be contributing to their symptoms. By identifying these factors, the nurse can help the patient find appropriate coping mechanisms and support.

While medication side effects can cause anxiety, these would be a physical factor, not a psychosocial factor. Although family history of anxiety might be relevant in understanding the patient's background, it does not provide immediate insight into the current psychosocial factors influencing their anxiety. Assessing the patient's occupation is part of understanding lifestyle stressors, but the nurse should take a more comprehensive approach to evaluating all potential sources of stress rather than focusing on a single factor.

14.

A patient with diabetes reports dizziness and confusion during an appointment at a doctor's office. What should the nurse prioritize?

Check the patient's blood glucose level immediately

Suggest the patient sit down and hydrate

Measure the patient's blood pressure

Provide the patient with some juice and peanut butter

Correct answer: Check the patient's blood glucose level immediately

The most important step when a diabetic patient reports dizziness and confusion is to check their blood glucose level immediately. These symptoms are commonly associated with hypoglycemia, which is a medical emergency that requires swift intervention to prevent more severe complications like loss of consciousness or seizures. By promptly measuring blood glucose, the nurse can determine the appropriate course of action, such as administering glucose if needed.

While sitting down and hydrating might help the patient feel better temporarily, it does not address the underlying issue of possible hypoglycemia and can result in ineffective treatment and worsening hypoglycemia. Measuring blood pressure is also less urgent in this context, as the immediate concern should be assessing blood sugar levels.

Giving juice and peanut butter without confirming hypoglycemia could be harmful if the patient is actually experiencing another condition. Blood glucose measurement should be the priority to determine the next steps in treatment.

15.

A patient with a history of asthma contacts the clinic reporting increased wheezing and difficulty breathing. What is the first step?

Advise the patient to use their rescue inhaler

Schedule a same-day in-person appointment

Stay on the phone with the patient until their symptoms improve

Suggest using over-the-counter decongestants

Correct answer: Advise the patient to use their rescue inhaler

For a patient with asthma experiencing increased wheezing and difficulty breathing, the first and most critical step is to advise them to use their rescue inhaler. Rescue inhalers are designed to provide rapid relief during asthma exacerbations by opening the airways and reducing symptoms such as wheezing and shortness of breath. This immediate intervention can prevent the situation from worsening and provide the necessary relief

Scheduling a same-day in-person appointment may be important for follow-up care, but it should not precede the use of the rescue inhaler. Staying on the phone with the patient might delay the use of the inhaler, which is most important for managing acute symptoms. Over-the-counter decongestants are not appropriate for treating asthma exacerbations, making them unsuitable as a first response.

16.

During a virtual visit, a patient complains of the sudden onset of severe back pain after lifting a heavy object. What should the nurse prioritize?

Arrange an immediate in-person evaluation

Suggest bed rest and pain relievers

Advise the patient to visit the emergency department immediately

Schedule a physical therapy appointment

Correct answer: Arrange an immediate in-person evaluation

For a patient experiencing sudden severe back pain after lifting, arranging an immediate in-person evaluation is essential to rule out serious conditions such as a herniated disc, vertebral fracture, or other musculoskeletal injuries. An in-person evaluation allows the healthcare provider to conduct a thorough physical exam and potentially order imaging studies to accurately diagnose the problem and develop an appropriate treatment plan.

Suggesting bed rest and pain relievers alone might help alleviate the pain but risks missing a serious injury that requires immediate attention. Advising the patient to visit the emergency department is appropriate only if there are more severe symptoms, like neurological deficits. Scheduling a physical therapy appointment without first evaluating the injury could be inappropriate, as some conditions might need more urgent medical intervention before rehabilitation begins.

17.

A patient wants to know how to maintain their mental health. Which activity is beneficial for reducing stress and promoting mental well-being?

Mindfulness meditation

Increasing remote socialization via social media

Moderate caffeine intake

Avoid any stressful situations

Correct answer: Mindfulness meditation

Mindfulness meditation is beneficial for reducing stress and promoting mental well-being. This practice encourages relaxation, self-awareness, and emotional regulation, helping individuals manage stress more effectively and improve their mental health. By focusing on the present moment and developing an awareness of thoughts and feelings, mindfulness meditation fosters a sense of calm and resilience in the face of stress.

Increasing remote socialization via social media does not necessarily reduce stress or promote mental well-being, as excessive use of social media can contribute to stress and mental health issues. Moderating caffeine intake is not specifically associated with reducing stress; caffeine consumption can lead to increased anxiety and stress levels. Avoiding stressful situations is not a realistic or effective strategy for promoting mental well-being, as learning to manage stress through techniques like mindfulness meditation is more beneficial than avoiding stress altogether.

18.

A patient with chronic heart failure is on a treatment plan. Which clinical finding would indicate optimal fluid balance?

Clear lung sounds

Normotensive

Weight loss of 2 pounds overnight

Mild to moderate jugular venous distention

Correct answer: Clear lung sounds

Clear lung sounds indicate optimal fluid balance in a patient with chronic heart failure, as they suggest the treatment plan is effectively managing fluid retention and reducing pulmonary congestion. Clear lung sounds reflect the absence of pulmonary edema and signify that the patient is achieving a stable fluid balance, a critical aspect of managing chronic heart failure.

Normotension is important for overall cardiovascular health but does not specifically indicate optimal fluid balance. Fluid balance is more directly assessed by signs of fluid retention or overload, such as lung sounds and peripheral edema. Weight loss of 2 pounds overnight may indicate rapid fluid loss, which is not necessarily a sign of optimal fluid balance. Mild to moderate jugular venous distention suggests fluid overload and does not indicate optimal fluid balance.

19.

When assessing a patient's thyroid gland, you palpate a nodule. What is the most appropriate next step in evaluating this finding?

Perform an ultrasound of the thyroid

Obtain a thyroid-stimulating hormone (TSH) level

Refer to endocrinology

Monitor the nodule for growth over time

Correct answer: Perform an ultrasound of the thyroid

After palpating a thyroid nodule, the most appropriate next step is performing an ultrasound. Thyroid ultrasound is the preferred method for evaluating the characteristics of a nodule, including its size, composition, and any suspicious features that might indicate a risk of malignancy. This imaging study is essential for guiding further diagnostic steps, such as fine-needle aspiration, if necessary.

While obtaining a thyroid-stimulating hormone (TSH) level is important for assessing overall thyroid function, it does not provide information about the physical characteristics of the nodule. Referring to endocrinology might be required depending on the ultrasound findings, but imaging is the first necessary step. Monitoring the nodule over time could be considered once it has been thoroughly evaluated and determined to be low-risk; this decision should follow the initial ultrasound assessment rather than precede it.

20.

A telehealth patient describes mild headaches that occur mainly in the afternoon. What would be your recommended course of action?

Advise the patient to maintain hydration and take breaks during the day

Recommend scheduling an appointment with a neurologist

Suggest the patient take daily aspirin

Instruct the patient to avoid caffeine

Correct answer: Advise the patient to maintain hydration and take breaks during the day

The best course of action for a patient experiencing mild headaches that occur mainly in the afternoon is to advise them to maintain hydration and take breaks during the day. These headaches are likely due to non-emergent factors such as dehydration or fatigue. Addressing these issues through simple lifestyle adjustments can help alleviate symptoms and prevent headaches from worsening.

Scheduling an appointment with a neurologist is unnecessary, as the symptoms described are mild and do not suggest a serious neurological condition. Recommending daily aspirin use is not advisable without a clear diagnosis, as it could lead to unnecessary side effects and complications. Avoiding caffeine is not as broadly applicable or likely to resolve the headaches as ensuring proper hydration and taking regular breaks. Additionally, caffeine intake can actually decrease symptoms of headaches.

21.

A patient with diabetes mellitus presents with tingling and numbness in the feet. What is the most likely cause of these symptoms?

Peripheral neuropathy

Peripheral arterial disease

Diabetic ketoacidosis

Hypoglycemia

Correct answer: Peripheral neuropathy

Peripheral neuropathy is the most likely cause of tingling and numbness in the feet for a patient with diabetes mellitus. Chronic high blood glucose levels can damage the peripheral nerves over time, leading to neuropathy. This condition manifests as sensory changes such as tingling, numbness, and pain, often starting in the lower extremities like the feet. Peripheral neuropathy is a common complication of long-standing diabetes. It results from nerve damage due to decreased circulation caused by increased blood viscosity.

Peripheral arterial disease causes claudication or pain during exertion due to reduced blood flow, not the sensory changes characteristic of neuropathy. Diabetic ketoacidosis involves acute metabolic derangements rather than chronic neuropathic symptoms. Hypoglycemia can cause acute neurological symptoms like confusion but does not result in persistent tingling and numbness.

22.

A patient expresses interest in reducing her risk of developing type 2 diabetes. Which of the following lifestyle modifications is most effective?

Increasing physical activity

Decreasing sugar intake

Staying up to date with all vaccinations

Genetic screening

Correct answer: Increasing physical activity

Increasing physical activity is the most effective lifestyle modification for reducing the risk of developing type 2 diabetes. Regular exercise helps improve insulin sensitivity, control weight, and maintain healthy blood glucose levels, significantly reducing the risk of diabetes. Encouraging individuals to engage in regular exercise can lead to improved glycemic control and a decreased likelihood of developing type 2 diabetes.

Decreasing sugar intake may help maintain a healthy weight, but this intervention on its own is not as comprehensive or effective as increasing physical activity for reducing the risk of type 2 diabetes. Exercise provides broader metabolic benefits that contribute to diabetes prevention, beyond simple dietary modifications.

Staying up to date with all vaccinations is essential for overall health but does not specifically reduce the risk of type 2 diabetes. Genetic screening can identify a predisposition to type 2 diabetes but is not a preventive measure as it provides information instead of impacting health outcomes.

23.

After six months of antihypertensive therapy, which laboratory result would indicate an optimal outcome in a patient with chronic kidney disease?

Serum creatinine of 1.2 mg/dL

Serum potassium of 5.8 mmol/L

Estimated glomerular filtration rate (eGFR) of 45 mL/min/1.73m²

Blood urea nitrogen (BUN) of 35 mg/dL

Correct answer: Serum creatinine of 1.2 mg/dL

A serum creatinine level of 1.2 mg/dL indicates optimal kidney function in a patient with chronic kidney disease, as it reflects effective preservation of renal function. Antihypertensive therapy aims to control blood pressure and reduce stress on the kidneys, helping to prevent further deterioration in kidney function. By maintaining serum creatinine within the normal range, the treatment plan demonstrates success in achieving these goals and minimizing the risk of complications associated with chronic kidney disease.

A serum potassium level of 5.8 mmol/L is elevated and may indicate hyperkalemia, which can be a side effect of certain antihypertensive medications, particularly in patients with kidney disease. An estimated glomerular filtration rate (eGFR) of 45 mL/min/1.73m² indicates moderate chronic kidney disease; improved or stable kidney function at a higher eGFR would be ideal. A blood urea nitrogen (BUN) level of 35 mg/dL is elevated and suggests impaired kidney function.

24.

Which of the following medications requires regular monitoring of INR levels to ensure therapeutic effectiveness and safety?

Warfarin

Clopidogrel

Aspirin

Rivaroxaban

Correct answer: Warfarin

Warfarin is the option that requires regular monitoring of INR levels to ensure therapeutic effectiveness and safety. Warfarin is a vitamin K antagonist that affects the clotting cascade and can have variable effects on individuals due to dietary vitamin K intake, liver function, and genetic factors. Regular INR monitoring is crucial to adjust the warfarin dose and maintain the blood's clotting ability within a target range, thereby minimizing the risk of both bleeding and thromboembolic events.

Clopidogrel and aspirin are antiplatelet medications that do not require INR monitoring. These medications inhibit platelet aggregation and do not affect the coagulation cascade directly, making INR monitoring unnecessary. Rivaroxaban, a direct oral anticoagulant, also does not require routine INR monitoring due to its predictable pharmacokinetic profile, which allows for consistent anticoagulation without the need for frequent blood tests.

25.

Which outcome would indicate effective management of a patient with chronic obstructive pulmonary disease (COPD)?

Improved exercise tolerance

Dyspnea stable while at rest

Decreased desire to smoke cigarettes

Improved adherence to home oxygen use

Correct answer: Improved exercise tolerance

Improved exercise tolerance indicates effective management of COPD, as it suggests the patient's treatment plan is successfully enhancing lung function and physical endurance. COPD management aims to improve the patient's ability to perform daily activities and increase their quality of life. By improving exercise tolerance, patients can engage in more physical activity without experiencing debilitating symptoms, which is a key goal in managing COPD.

Stable dyspnea at rest indicates partial control but does not reflect optimal management, as the goal is to improve dyspnea during activity and increase exercise capacity. Decreased desire to smoke cigarettes does not directly measure COPD management success, as the primary focus should be on symptom control and functional improvements. Improved adherence to home oxygen use can be important for treatment compliance but does not directly indicate effective management of COPD.

26.

A pregnant woman is concerned about prenatal health. Which supplement is most important for preventing neural tube defects in the developing fetus?

Folic acid

Vitamin D

Calcium

Vitamin C

Correct answer: Folic acid

Folic acid is the most important supplement for preventing neural tube defects in a developing fetus. Adequate folic acid intake before conception and during early pregnancy is crucial for proper neural tube development, reducing the risk of birth defects such as spina bifida and anencephaly. Women planning to conceive or who are pregnant are advised to take folic acid supplements to ensure sufficient levels of this vital nutrient, as it plays a critical role in the formation of the neural tube and the prevention of congenital anomalies.

Vitamin D is important for bone health but does not specifically prevent neural tube defects, as its role is more related to calcium absorption and bone development than fetal neurological development. Calcium is also crucial for bone health in both the mother and the developing fetus, but it does not address the prevention of neural tube defects. Vitamin C is important for immune function and collagen synthesis but does not play a role in preventing neural tube defects.

27.

When assessing a patient with a chronic illness, the nurse notices the patient avoids eye contact and has a flat affect. What should the nurse assess next?

Symptoms of depression

Level of pain

Symptoms of anxiety

Medication the patient is taking

Correct answer: Symptoms of depression

When a patient with a chronic illness avoids eye contact and has a flat affect, the nurse should prioritize assessing for symptoms of depression. These behaviors are classic indicators of depression, which is common among patients managing chronic conditions due to the emotional and physical toll of their illness.

While assessing pain is important in managing chronic illness, the patient's behavior suggests a psychological issue, such as depression, is more pressing in this case. Anxiety symptoms may also need to be evaluated, but the specific signs of flat affect and avoidance of eye contact are more consistent with depression. Although medication side effects can affect mood, the nurse should first focus on ruling out depression, which is a more likely explanation for the patient's current presentation.

28.

A 70-year-old patient with a history of hypertension and dyslipidemia presents with a new onset of confusion and right-sided weakness. Which of the following conditions should the nurse suspect?

Ischemic stroke

Transient ischemic attack

Hemorrhagic stroke

Hypoglycemia

Correct answer: Ischemic stroke

In an elderly patient with a history of hypertension and dyslipidemia presenting with new-onset confusion and right-sided weakness, ischemic stroke is the most likely diagnosis. These symptoms suggest a sudden loss of blood flow to a part of the brain, consistent with an ischemic stroke. The patient's history of hypertension and dyslipidemia are significant risk factors for stroke, further supporting this diagnosis.

While transient ischemic attack (TIA) could present with similar symptoms, it typically resolves quickly without permanent deficits, making it less likely in this scenario. While TIA is a potential answer, it is less common than ischemic stroke when these symptoms present.

Hemorrhagic stroke can also cause confusion and weakness but often involves a severe headache and rapid deterioration, which are not specified here. Ischemic stroke is also far more common than hemorrhagic stroke. Hypoglycemia can lead to confusion and weakness but does not typically cause unilateral weakness.

29.

A patient's cholesterol panel reveals an increased triglyceride level. What clinical data should be reviewed next?

Dietary intake of fats and sugars

Recent physical activity levels

Family history of hyperlipidemia

Liver function tests

Correct answer: Dietary intake of fats and sugars

When a patient's cholesterol panel shows increased triglyceride levels, the next step is to review their dietary intake of fats and sugars. Diet is one of the most significant factors influencing triglyceride levels, and addressing any excessive consumption of unhealthy fats or sugars can help manage and lower these levels. Focusing on dietary modifications is key to improving the patient's lipid profile and reducing cardiovascular risk.

While recent physical activity levels are also important for overall cardiovascular health, they have a less direct impact on triglycerides compared to diet. Family history of hyperlipidemia can influence lipid levels in some cases, but it is not something that can be modified or directly managed like dietary intake. Liver function tests do not usually correlate with triglyceride levels unless there is underlying liver disease, making diet the priority in this situation.

30.

Which laboratory test is most important in evaluating the effectiveness of an ACE inhibitor in a patient with hypertension?

Blood pressure readings

Serum potassium levels

BNP levels

Bradykinin levels

Correct answer: Blood pressure readings

Blood pressure readings are the most critical test to evaluate the effectiveness of an ACE inhibitor in a patient with hypertension, as the primary goal of treatment is to reduce blood pressure to target levels. Regular monitoring of blood pressure allows clinicians to assess whether the medication is effectively controlling hypertension and if any adjustments are needed.

Serum potassium levels do not assess the primary goal of blood pressure reduction that ACE inhibitors are used to achieve. BNP levels are more relevant in the context of heart failure management rather than hypertension, making them less applicable in this scenario. Bradykinin levels are linked to the pharmacological action of ACE inhibitors but are not practical or useful in evaluating the effectiveness of these medications for hypertension treatment, as they do not provide direct information on blood pressure control.

31.

Which of the following symptoms is most commonly associated with an acute myocardial infarction?

Substernal chest pain

Sharp chest pain

Reproducible chest pain

Lower back pain

Correct answer: Substernal chest pain

Substernal chest pain is the most common symptom associated with an acute myocardial infarction. Patients experiencing a heart attack often describe the pain as a pressure, tightness, or squeezing sensation located behind the sternum, sometimes radiating to the arms, neck, or jaw. This classic presentation of chest pain is a potential indicator of myocardial infarction and should prompt immediate medical evaluation and intervention to restore blood flow and minimize cardiac damage.

Sharp chest pain is more associated with pleuritic or musculoskeletal conditions rather than cardiac ischemia. Reproducible chest pain often suggests a musculoskeletal origin, as myocardial infarction pain is not typically elicited by palpation. Lower back pain is not a common symptom of myocardial infarction, although it may accompany myocardial infarction in some cases, especially in female patients.

32.

A patient is interested in preventing age-related macular degeneration. Which nutrient is beneficial for eye health?

Lutein

Calcium

Iron

Vitamin K

Correct answer: Lutein

Lutein is a nutrient beneficial for eye health that plays a crucial role in preventing age-related macular degeneration (AMD). It is found in high concentrations in the retina, particularly in the macula, where it helps filter harmful blue light and protect the eyes from oxidative stress and damage. By acting as an antioxidant, lutein reduces the risk of AMD and supports overall retinal health, contributing to improved visual acuity and protection against age-related vision loss.

Calcium is essential for bone health but does not play a direct role in eye health or macular degeneration prevention. Iron is important for oxygen transport and energy metabolism but does not specifically benefit eye health or have a known role in preventing macular degeneration. Vitamin K is important for blood clotting and bone health but does not have a direct impact on eye health or age-related macular degeneration.

33.

To evaluate the success of a newly initiated diabetic foot care regimen, which outcome should be prioritized?

Prevention of foot ulcers

Reduction in foot pain

Improvement in blood glucose levels

Prevention of osteomyelitis

Correct answer: Prevention of foot ulcers

Preventing foot ulcers is the most critical outcome when evaluating the success of a diabetic foot care regimen because ulcers can lead to severe complications, including infection, hospitalization, and even amputation. The primary goal of foot care is to maintain skin integrity and prevent ulcers from forming, making this the most important indicator of the regimen's effectiveness.

A reduction in foot pain does not directly measure the prevention of serious complications like ulcers and may indicate worsening peripheral neuropathy instead of successful foot care. Improved blood glucose levels are essential for overall diabetes management but do not specifically assess the success of a foot care regimen. Preventing osteomyelitis is crucial but is a downstream effect of preventing ulcers, so the primary focus should remain on ulcer prevention.

34.

A patient's chart shows an elevated BNP level. What is the most likely condition this data suggests?

Congestive heart failure

Chronic kidney disease

Acute kidney disease

Cirrhosis

Correct answer: Congestive heart failure

Elevated BNP levels are most commonly associated with congestive heart failure, as BNP is a hormone produced by the heart in response to increased pressure and fluid overload. This biomarker helps differentiate heart failure from other causes of shortness of breath and fluid retention, making it a critical tool in diagnosing and managing heart failure.

While chronic kidney disease can lead to fluid retention and indirectly affect BNP levels, BNP is more specifically a marker for heart failure. Acute kidney disease might also cause fluid balance issues, but BNP is not primarily used to diagnose or manage kidney conditions. BNP is not typically elevated due to liver disease, making congestive heart failure the most likely diagnosis when BNP levels are high.

35.

A patient's recent lab results show an elevated white blood cell count. What should the nurse prioritize during chart review?

Signs and symptoms of infection

Recent vaccination history

Fluid intake and hydration status

Dietary protein intake

Correct answer: Signs and symptoms of infection

When a patient has an elevated white blood cell count, the primary focus should be on identifying any signs and symptoms of infection. This is because an elevated white blood cell count typically indicates the body is responding to an infection. By reviewing the chart for any signs of fever, localized pain, swelling, or other indicators of infection, the nurse can determine whether immediate medical intervention is necessary.

While recent vaccination history might be relevant if the elevated white blood cell count is a reaction to a vaccine, it does not provide immediate information about an active infection that could also be causing the elevated levels. Fluid intake and hydration status, although important for maintaining overall health, are not directly connected to changes in white blood cell count. Dietary protein intake also does not address the urgent issue of an elevated white blood cell count that could be potentially signaling an infection.

36.

A patient's chart shows elevated AST and ALT levels. What is the most appropriate next step in the clinical evaluation?

Review the patient's alcohol intake history

Recommend a liver biopsy

Advise the physician of the potential need for immediate cessation of all medications

Schedule an MRI of the liver

Correct answer: Review the patient's alcohol intake history

When a patient has elevated AST and ALT levels, the most appropriate next step is to review their alcohol intake history. Excessive alcohol consumption is a common cause of liver enzyme elevation, and identifying this as a contributing factor is crucial for managing and preventing further liver damage. By addressing alcohol intake, healthcare providers can take steps to reduce liver strain and improve the patient's overall liver function.

Recommending a liver biopsy is a more invasive procedure that would only follow initial assessment of health factors, such as alcohol history and lifestyle assessment. It would typically only be considered if there was a serious concern for liver disease.

Advising immediate cessation of all medications may be excessive without first determining whether alcohol or other factors are responsible for the elevated enzymes. An MRI of the liver may be needed if further imaging is required, but it is not the first line of action; initial assessment should focus on modifiable or causative lifestyle factors like alcohol consumption.

37.

A patient's chart shows a consistently elevated fasting blood glucose level. What action should the nurse take?

Assess the patient's adherence to their recommended treatments

Increase the dosage of insulin

Recommend a high-protein, low-carb diet

Check the patient's fasting A1C levels

Correct answer: Assess the patient's adherence to their recommended treatments

When a patient's fasting blood glucose levels are consistently elevated, the first step should be to assess their adherence to the recommended treatment plan. Non-adherence to medications, dietary guidelines, or other lifestyle recommendations is a common reason for poor glycemic control. By understanding the patient's adherence, the nurse can identify any gaps in care and address them before making changes to the treatment plan.

Increasing the dosage of insulin or recommending dietary changes, such as a high-protein, low-carb diet, may be necessary in some cases, but these actions should only be taken after confirming adherence to the current plan. Adjusting medication or diet without addressing potential adherence issues could lead to unnecessary changes that do not solve the underlying problem. Checking fasting A1C levels is useful for long-term monitoring but is not the immediate priority in managing consistently elevated fasting glucose levels.

38.

A 55-year-old patient with chronic obstructive pulmonary disease (COPD) is scheduled for surgery. Which preoperative assessment is most critical?

Pulmonary function tests (PFTs)

Complete blood count (CBC)

Electrocardiogram (ECG)

Liver function tests (LFTs)

Correct answer: Pulmonary function tests (PFTs)

Pulmonary function tests (PFTs) are the most critical preoperative assessment for a patient with chronic obstructive pulmonary disease (COPD) scheduled for surgery. PFTs provide valuable information on lung function, measuring parameters such as forced vital capacity and forced expiratory volume, which are essential for evaluating the patient's respiratory status.

A CBC provides hematologic status but does not assess respiratory function. An ECG evaluates cardiac function but does not directly address the pulmonary issues related to COPD. LFTs assess hepatic function, not respiratory risks or COPD status.

39.

Which medication is contraindicated in a patient with a history of angioedema associated with ACE inhibitor therapy?

Lisinopril

Metoprolol

Losartan

Amlodipine

Correct answer: Lisinopril

Lisinopril is contraindicated in patients with a history of angioedema associated with previous ACE inhibitor therapy. Angioedema is a potentially life-threatening condition that can cause swelling of the face, tongue, and airway, leading to respiratory distress. ACE inhibitors like lisinopril are known to cause angioedema in some patients, particularly those with a prior history of this reaction. As a result, lisinopril should be avoided in these individuals to prevent recurrent episodes of angioedema and associated complications.

Metoprolol, a beta-blocker, is not contraindicated in patients with a history of ACE inhibitor-induced angioedema, as it is not an ACE inhibitor. Losartan, an angiotensin II receptor blocker, is often used as an alternative to ACE inhibitors in patients with a history of angioedema due to its lower risk of inducing this reaction. Amlodipine is a calcium channel blocker and is also not contraindicated, as it does not share the same mechanism of action as ACE inhibitors.

40.

A patient with hypertension is evaluating the effectiveness of a low-sodium diet. Which blood pressure reading would best indicate success?

140/85 mmHg

160/90 mmHg

180/95 mmHg

75/55 mmHg

Correct answer: 140/85 mmHg

A blood pressure reading of 140/85 mmHg best indicates a successful response to a low-sodium diet in a patient with hypertension. This reading, while still slightly elevated, is the best blood pressure reading of the options listed. The low-sodium diet aims to reduce blood pressure by minimizing fluid retention and vascular resistance, contributing to improved cardiovascular health. Achieving a blood pressure of 140/85 mmHg likely demonstrates the effectiveness of dietary modifications in managing hypertension and reducing the risk of complications associated with high blood pressure.

A blood pressure reading of 160/90 mmHg is elevated and does not indicate successful management of hypertension. A blood pressure reading of 180/95 mmHg is elevated and reflects poor control of hypertension. A blood pressure reading of 75/55 mmHg indicates hypotension and could indicate an underlying condition rather than the effects of a low-sodium diet.

41.

A patient reports no improvement in symptoms after starting a new medication for hypertension management. What should be the next step in evaluating the treatment plan?

Assess adherence to the prescribed regimen

Increase the medication dosage

Switch to a different medication

Assess for potential obstructive sleep apnea

Correct answer: Assess adherence to the prescribed regimen

The first step in evaluating the lack of improvement in a patient's hypertension management should be to assess adherence to the prescribed regimen. Non-adherence is a common reason for treatment failure, and confirming the patient is taking their medication as directed is critical before making any changes to the treatment plan. This approach helps identify and address barriers to adherence, which can improve the effectiveness of the current treatment.

Increasing the medication dosage without confirming adherence can lead to unnecessary risks, including potential side effects from overtreatment. Switching to a different medication may not resolve the issue if the patient is not adhering to the original prescription. Although evaluating for obstructive sleep apnea can help indicate a potential underlying cause of the hypertension, it should not precede ensuring the patient is following the current treatment regimen properly.

42.

Which medication is most appropriate for treating an acute migraine attack?

Sumatriptan

Ibuprofen

Metoclopramide

Ondansetron

Correct answer: Sumatriptan

Sumatriptan is specifically indicated for the treatment of acute migraine attacks. It is a triptan drug that works by activating serotonin receptors, leading to vasoconstriction of dilated blood vessels in the brain, which is believed to be a contributing factor in migraines. By targeting the underlying mechanisms of migraines, sumatriptan provides effective relief from the headache and associated symptoms.

Ibuprofen, while helpful in alleviating pain, is not as effective as sumatriptan in treating the specific symptoms of a migraine attack. Metoclopramide is an antiemetic and can help alleviate nausea associated with migraines but does not address the headache itself. While it may be used as an adjunct treatment, it is not a primary medication for acute migraine attacks. Ondansetron is also an antiemetic that treats nausea and vomiting but does not directly address migraine headaches.

43.

A patient with obesity has recently started a new exercise program. Which measure is most important in evaluating the effectiveness of the new program?

Waist circumference

Energy levels

Muscle strength

Physical endurance

Correct answer: Waist circumference

Waist circumference is the most important measure to evaluate the effectiveness of an exercise program in a patient with obesity because it directly reflects reductions in visceral fat, which is a significant contributor to obesity-related health risks. A decrease in waist circumference indicates an improvement in central obesity, which is linked to better cardiovascular and metabolic health outcomes, making it a key indicator of the program's success.

Energy levels are subjective and may not correlate with fat loss. Increased muscle strength and endurance are beneficial outcomes typically associated with exercise. They do not necessarily indicate a decrease in central fat, which is the most important outcome in a program designed to reduce health risks associated with obesity.

44.

A 30-year-old patient is concerned about skin cancer prevention. Which of the following measures is most effective in reducing risk?

Avoiding sun exposure during peak hours

Using a tanning bed instead of direct sunlight

Wearing sunscreen on cloudless days

Applying sunscreen once every day

Correct answer: Avoiding sun exposure during peak hours

Avoiding sun exposure during peak hours is the most effective measure for reducing the risk of skin cancer. During these hours, UV radiation from the sun is at its strongest, increasing the risk of skin damage and cancer. Limiting sun exposure during peak times, seeking shade, using sunscreen, and wearing protective clothing can significantly reduce the risk of developing skin cancer.

Using a tanning bed instead of direct sunlight does not reduce skin cancer risk, as tanning beds emit UV radiation that can cause skin damage and increase cancer risk. Wearing sunscreen only on cloudless days is insufficient for effective sun protection, as UV rays can penetrate clouds, and sunscreen should be applied while outdoors regardless of weather conditions. Applying sunscreen once every day is not adequate for continuous protection; sunscreen should be reapplied every two hours and after swimming or sweating to maintain effectiveness.

45.

A patient presents with a complaint of palpitations. On auscultation, you hear an irregular rhythm. Which of the following diagnostic tests is most appropriate to perform next?

Electrocardiogram

Chest X-ray

Echocardiogram

Complete metabolic pannel

Correct answer: Electrocardiogram

When a patient presents with palpitations and an irregular rhythm is heard on auscultation, the next appropriate diagnostic step is to perform an electrocardiogram (ECG). The ECG provides a detailed analysis of the heart's electrical activity and is the gold standard for diagnosing arrhythmias, which are likely responsible for the irregular rhythm. This test will help identify the specific type of arrhythmia and guide the next steps in treatment.

A chest X-ray may be helpful for evaluating structural issues or lung conditions, but it does not assess the heart's rhythm and is not the most immediate diagnostic tool in this scenario. An echocardiogram is valuable for evaluating the heart's structure and function, but it should only typically be considered after the ECG, and only if structural abnormalities are suspected. A complete metabolic panel can identify underlying metabolic issues that may contribute to palpitations, but it does not provide the direct assessment of heart rhythm like an ECG does.

46.

A patient with a recent diagnosis of cancer reports feeling hopeless and unable to concentrate. Which of the following is most important to assess the patient for?

Suicidal thoughts

Impaired cognitive function

Poor health literacy

Impaired social support systems

Correct answer: Suicidal thoughts

When a patient with a recent diagnosis of cancer reports feeling hopeless and unable to concentrate, the most important assessment is to evaluate for suicidal thoughts. These symptoms suggest the patient may be experiencing severe depression, which can increase the risk of suicide. Ensuring the patient's safety by identifying any thoughts of self-harm is the top priority in this situation, as timely intervention can prevent potential tragedy.

Impaired cognitive function could be a concern given the difficulty concentrating, but it is secondary to addressing the immediate risk of suicide. Poor health literacy does not cause the urgent emotional distress the patient is experiencing. Assessing social support systems is important in the long term, but the immediate focus should be on ensuring the patient's safety by evaluating for suicidal thoughts.

47.

A 25-year-old woman with no significant medical history presents for a routine check-up. According to current guidelines, which cancer screening test is recommended for her?

Pap smear

Mammogram

Colonoscopy

PET scan

Correct answer: Pap smear

A Pap smear is a recommended cancer screening test for a 25-year-old woman with no significant medical history. The Pap smear is used to detect precancerous changes and early-stage cervical cancer, allowing for early intervention and prevention of cervical cancer. Current guidelines recommend cervical cancer screening for women aged 21 to 65, making the Pap smear an essential component of routine preventive care for women in this age group.

A mammogram is not typically recommended for women aged 25 with no significant medical history, as it is generally advised for breast cancer screening starting at age 40. A colonoscopy is also not recommended for a 25-year-old woman with no significant medical history, as colorectal cancer screenings typically begin at age 45 for average-risk individuals. A PET scan is not used for routine cancer screening and is reserved for diagnostic purposes when cancer is suspected based on symptoms or other test results.

48.

The nurse is reviewing a patient's recent blood work and notices a sudden increase in liver enzymes. What should be the nurse's first consideration?

Assessing for recent changes in medication

Recommending an increase in protein intake

Scheduling an ultrasound of the liver

Advising the patient to avoid fatty foods

Correct answer: Assessing for recent changes in medication

When faced with a sudden increase in liver enzymes, the first consideration out of the options provided should be assessing for recent changes in the patient's medications. Many medications can cause hepatotoxicity, leading to elevated liver enzymes. Identifying and discontinuing the offending drug is key to preventing further liver damage. Medications such as statins, certain antibiotics, and over-the-counter drugs like acetaminophen are common culprits.

Increasing protein intake is inappropriate and could worsen liver function, especially in patients with liver disease. While an ultrasound of the liver may be necessary if the cause of the enzyme elevation is unclear, it is not the first step. Advising the patient to avoid fatty foods might be helpful in cases of fatty liver disease, but medication assessment should take precedence when liver enzymes rise acutely.

49.

When assessing a telehealth patient with shortness of breath, which of the following findings would most likely require urgent intervention?

Use of accessory muscles

Respiratory rate is 22

The shortness of breath is relieved by sitting

The shortness of breath only occurs during the night

Correct answer: Use of accessory muscles

The use of accessory muscles during breathing indicates the patient is struggling to breathe; it is a sign of significant respiratory distress, which could quickly deteriorate into respiratory failure. This finding is serious enough to require immediate intervention, as it suggests the patient's current respiratory efforts are insufficient to meet their oxygen needs.

A respiratory rate of 22 is somewhat elevated but does not necessarily indicate a critical situation. Shortness of breath relieved by sitting may indicate a condition that requires attention but does not require the same urgency as shortness of breath that requires the use of accessory muscles. Nighttime shortness of breath generally does not indicate the same need for immediate intervention that shortness of breath causing accessory muscle use would.

50.

During chart review, a nurse notices a patient's LDL cholesterol levels have increased significantly. What is the most appropriate next step?

Review the patient's current dietary habits

Schedule a consult with the pharmacologist

Review the patient's current exercise habits

Schedule a cardiology consult

Correct answer: Review the patient's current dietary habits

Reviewing the patient's current dietary habits is the most appropriate next step after noticing a significant increase in LDL cholesterol levels. Diet has a direct and substantial impact on cholesterol levels, particularly LDL, and making dietary adjustments is often the first-line approach to managing elevated cholesterol. By identifying and modifying any dietary habits that may be contributing to the rise in LDL, such as high intake of saturated fats or cholesterol, the nurse can help guide the patient toward healthier choices that can lower their LDL levels.

Scheduling a pharmacology consult may be necessary if lifestyle changes are insufficient or if the patient is already on lipid-lowering medications that need adjustment. However, lifestyle modifications, especially dietary changes, should be evaluated first.

Exercise habits are important for cardiovascular health, but they do not have as immediate an impact on LDL cholesterol as diet does, making it a secondary consideration in this context. While a cardiology consult could be appropriate for patients with complex cardiovascular issues, it is not the most immediate or primary action when addressing an increase in LDL cholesterol.

51.

When educating a patient about the use of metformin for type 2 diabetes, which of the following should be emphasized to reduce the risk of lactic acidosis?

Avoid excessive alcohol intake

Take with food to avoid gastrointestinal upset

Increase carbohydrate intake

Limit physical activity

Correct answer: Avoid excessive alcohol intake

When educating a patient about the use of metformin for type 2 diabetes, it is essential to emphasize avoiding excessive alcohol intake to reduce the risk of lactic acidosis. Lactic acidosis is a rare but serious side effect of metformin use that can occur if lactate metabolism is impaired. Alcohol consumption can interfere with the liver's ability to metabolize lactic acid, increasing the risk of accumulation and leading to lactic acidosis.

Taking metformin with food is recommended to minimize gastrointestinal upset, but it does not specifically address the risk of lactic acidosis. Dietary changes, such as increasing carbohydrate intake, are not directly related to lactic acidosis risk reduction. Limiting physical activity is unnecessary for preventing lactic acidosis; instead, regular physical activity is encouraged for patients with type 2 diabetes to support overall health and glycemic control.

52.

A patient with hypothyroidism is receiving levothyroxine. Which lab result indicates optimal thyroid hormone replacement?

TSH of 1.5 mIU/L

Total T4 of 18.0 $\mu\text{g/dL}$

TSH of 8 mIU/L

Total T3 of 40 ng/dL

Correct answer: TSH of 1.5 mIU/L

A TSH of 1.5 mIU/L indicates optimal thyroid hormone replacement in a patient with hypothyroidism, as it falls within the normal reference range (0.4-4.0 mIU/L). This level suggests that levothyroxine therapy is effectively managing thyroid function and maintaining euthyroid status.

A total T4 of 18.0 $\mu\text{g/dL}$ is elevated and suggests potential over-replacement or hyperthyroidism, indicating that the current levothyroxine dose may need adjustment. A TSH of 8 mIU/L indicates under-treatment or persistent hypothyroidism, as it is elevated above the normal range, suggesting inadequate thyroid hormone replacement. Similarly, a total T3 of 40 ng/dL is low and suggests potential under-replacement.

53.

Which symptom would most likely require immediate intervention if reported during a telehealth assessment?

Sudden onset of difficulty speaking

Moderate, intermittent abdominal pain

Persistent cough without fever

Dizziness when going from sitting to standing

Correct answer: Sudden onset of difficulty speaking

Sudden onset of difficulty speaking is a critical symptom that suggests the possibility of a stroke, which necessitates immediate medical intervention to reduce the risk of long-term disability or death. Prompt treatment, such as thrombolytic therapy, can significantly improve outcomes in stroke patients, making this an emergency symptom requiring immediate action.

Moderate, intermittent abdominal pain typically does not indicate an acute emergency and can be evaluated in a non-emergency setting. Persistent cough without fever is often linked to chronic respiratory issues that are not life-threatening unless there are other symptoms suggesting airway compromise. Dizziness when standing up is commonly due to orthostatic hypotension, which can usually be managed with non-urgent interventions.

54.

A patient asks about preventing urinary tract infections (UTIs). Which lifestyle modification should be recommended?

Increase fluid intake

Walk at least five miles daily

Avoid urinating more than once every two hours

Use preventive antibiotics

Correct answer: Increase fluid intake

Increasing fluid intake is a recommended lifestyle modification for preventing urinary tract infections (UTIs). Adequate hydration helps flush bacteria from the urinary tract, reducing the risk of infection and promoting urinary health. By drinking sufficient water throughout the day, individuals can maintain optimal urinary flow, dilute urine, and prevent the growth of bacteria that can lead to UTIs.

Walking at least five miles daily is beneficial for overall health but does not specifically prevent UTIs. Avoiding urination more than once every two hours is not recommended, as holding urine can increase the risk of UTIs by allowing bacteria to multiply in the urinary tract. Using preventive antibiotics is not a first-line strategy for UTI prevention due to the risk of antibiotic resistance; lifestyle modifications like increased fluid intake are preferred.

55.

A patient reports a minor cut that has started to show signs of infection. During a virtual visit, the nurse observes redness and swelling around the wound. What should be the next step?

Refer the patient for an in-person visit for potential antibiotics

Instruct the patient to clean the wound and monitor symptoms

Recommend over-the-counter antibiotic ointment

Advise the patient to visit the emergency department immediately

Correct answer: Refer the patient for an in-person visit for potential antibiotics

When a patient presents with a minor cut showing signs of infection, such as redness and swelling, referring them for an in-person visit is the best course of action. This allows the healthcare provider to evaluate the extent of the infection and determine whether antibiotics are needed. Prompt treatment with the appropriate medication can prevent the infection from worsening or spreading, ensuring effective management of the condition.

Instructing the patient to simply clean the wound and monitor symptoms is not sufficient once signs of infection are present. Over-the-counter antibiotic ointment may not be strong enough to address an infection that has already begun to develop. Visiting the emergency department is not required unless the infection is severe, making a standard in-person clinic visit the most appropriate option for this situation.

56.

During a virtual visit, a patient mentions experiencing mild, occasional dizziness when standing. What would be the most appropriate initial step?

Advise the patient to rise slowly and stay hydrated

Recommend reducing salt intake

Suggest reducing the dose of blood pressure medications

Schedule an in-person evaluation

Correct answer: Advise the patient to rise slowly and stay hydrated

For a patient experiencing mild, occasional dizziness when standing, the most appropriate initial step is to advise them to rise slowly and stay hydrated. These recommendations can help prevent or reduce orthostatic hypotension, which is a common cause of this type of dizziness. Simple lifestyle modifications, such as ensuring adequate hydration and adjusting how they transition from sitting to standing, are effective first-line interventions.

Reducing salt intake is not appropriate in this case, as salt helps maintain blood pressure, and reducing it could exacerbate orthostatic hypotension. Adjusting blood pressure medications without an evaluation of the potential impact of this intervention could lead to suboptimal blood pressure control and should be avoided unless recommended by a healthcare provider. While an in-person evaluation may become necessary if symptoms worsen or persist, the initial approach should focus on simple and effective lifestyle changes to manage the dizziness.

57.

A patient with hyperlipidemia has been following a lipid-lowering regimen. Which lab result indicates successful treatment?

LDL cholesterol of 90 mg/dL

HDL cholesterol of 30 mg/dL

Triglycerides of 220 mg/dL

Total cholesterol of 240 mg/dL

Correct answer: LDL cholesterol of 90 mg/dL

An LDL cholesterol level of 90 mg/dL indicates successful treatment in a patient with hyperlipidemia, as it falls below the target level of less than 100 mg/dL for most individuals. Lowering LDL cholesterol is a primary goal in managing hyperlipidemia, as it reduces the risk of atherosclerosis and cardiovascular disease. Achieving this target suggests the patient's lipid-lowering regimen is effectively managing lipid levels and improving cardiovascular health.

An HDL cholesterol level of 30 mg/dL is considered low and not indicative of successful treatment, as higher HDL levels are desirable for cardiovascular protection, with target levels typically above 35 mg/dL for both men and women. Triglycerides of 220 mg/dL are elevated and do not indicate successful treatment, as optimal triglyceride levels should be below 150 mg/dL to reduce cardiovascular risk. A total cholesterol level of 240 mg/dL is elevated and does not reflect successful lipid-lowering treatment, as total cholesterol should be below 200 mg/dL for optimal cardiovascular health.

58.

After starting a patient on a cholesterol-lowering medication, what is the most appropriate evaluation measure to perform three months later?

Blood work

Blood pressure measurement

BMI measurement

Physical assessment

Correct answer: Blood work

Blood work directly assesses the primary goal of cholesterol-lowering medication, which is to reduce LDL cholesterol levels. After three months, a lipid panel can provide clear data on whether the medication is effectively lowering the patient's cholesterol and achieving the desired therapeutic outcomes.

Blood pressure is related to cardiovascular health but does not directly reflect cholesterol changes. BMI reflects body weight but does not specifically indicate changes in lipid levels. Physical assessments provide general information, but do not provide the specific data needed to evaluate the effectiveness of cholesterol-lowering therapy.

59.

During a telehealth visit, a patient describes experiencing numbness and weakness in their left arm. What is the most appropriate action?

Suggest the patient seek emergency medical attention

Recommend rest and monitoring symptoms

Schedule an in-person follow-up within 48 hours

Schedule an emergency neurology consultation

Correct answer: Suggest the patient seek emergency medical attention

When a patient reports numbness and weakness in the left arm, it is crucial to suggest they seek emergency medical attention immediately. These symptoms are indicative of a stroke or other serious neurological condition, conditions that may be very time-sensitive. Early treatment can significantly improve outcomes by preventing permanent damage and reducing the risk of severe disability or death.

Recommending rest and monitoring symptoms could lead to dangerous delays in treatment, especially if the underlying cause is a stroke. Scheduling an in-person follow-up within 48 hours is similarly inappropriate, as it does not provide the urgent care needed for a potentially life-threatening condition. While an emergency neurology consultation might be necessary later, the immediate priority should be stabilizing the patient in the emergency department, where they can receive immediate assessment and urgent interventions if necessary.

60.

A patient with hypertension is started on lisinopril. Which of the following laboratory parameters should be monitored closely?

Serum potassium

Liver enzymes

Blood glucose

White blood cell count

Correct answer: Serum potassium

Serum potassium levels should be monitored closely in patients taking lisinopril, as it can cause hyperkalemia. Lisinopril is an ACE inhibitor that affects the renin-angiotensin-aldosterone system, reducing aldosterone secretion and leading to increased potassium retention. Hyperkalemia can have serious consequences, including cardiac arrhythmias, making it crucial to monitor potassium levels in patients on lisinopril therapy.

While liver enzymes influence the pharmacology of many medications, monitoring liver function is not a primary concern with lisinopril use, as it is not commonly associated with hepatotoxicity. Blood glucose levels do not require specific monitoring with lisinopril, as it does not significantly affect glucose metabolism. Lisinopril does not typically affect white blood cell count, and monitoring for leukopenia is not a primary concern.

61.

Which of the following medications is most commonly associated with the risk of developing tendonitis or tendon rupture?

Ciprofloxacin

Amoxicillin

Azithromycin

Metronidazole

Correct answer: Ciprofloxacin

Ciprofloxacin, a fluoroquinolone antibiotic, is most commonly associated with the risk of developing tendonitis or tendon rupture. Fluoroquinolone antibiotics can interfere with collagen synthesis and affect tendon integrity, leading to an increased risk of tendon-related injuries. The Achilles tendon is particularly susceptible, and patients taking ciprofloxacin should be advised to report any signs of tendon pain or swelling promptly.

Amoxicillin, a penicillin antibiotic, does not have the same association with tendonitis or tendon rupture, as its mechanism of action and adverse effect profile differ from those of fluoroquinolones. Azithromycin, a macrolide antibiotic, also does not carry a known risk of tendon-related adverse effects. Metronidazole is used to treat anaerobic bacterial infections and certain protozoal infections. It is not associated with tendonitis or tendon rupture.

62.

A patient's lab results indicate a low serum sodium level. Which piece of clinical data should be evaluated next?

Fluid intake and urine output

Dietary salt intake

Serum potassium levels

Blood pressure readings

Correct answer: Fluid intake and urine output

When a patient has a low serum sodium level, the most critical next step is to evaluate fluid intake and urine output. Hyponatremia is often associated with fluid imbalances, such as overhydration or conditions like syndrome of inappropriate antidiuretic hormone secretion (SIADH). By assessing fluid intake and output, healthcare providers can better understand the underlying cause of hyponatremia and make informed decisions regarding treatment.

Dietary salt intake is typically not the primary factor in hyponatremia, and focusing on it may overlook more pressing issues related to fluid balance. While serum potassium levels are important in overall electrolyte management, they do not directly explain the cause of low sodium levels. Blood pressure readings can provide indicators of fluid status but are not as directly related to diagnosing or managing hyponatremia as evaluating fluid intake and urine output.

63.

A patient with chronic kidney disease is being monitored for complications. Which lab result would indicate optimal renal function?

Estimated glomerular filtration rate (eGFR) of 90 mL/min/1.73m²

Serum creatinine of 3.0 mg/dL

Blood urea nitrogen (BUN) of 50 mg/dL

Serum potassium of 6.5 mmol/L

Correct answer: Estimated glomerular filtration rate (eGFR) of 90 mL/min/1.73m²

An estimated glomerular filtration rate (eGFR) of 90 mL/min/1.73m² indicates optimal renal function and suggests the kidneys are filtering blood effectively, without significant impairment. The eGFR is a key measure of kidney function, as it estimates the rate at which the kidneys filter waste products from the blood.

A serum creatinine level of 3.0 mg/dL is elevated and indicates impaired kidney function; normal creatinine levels typically range from 0.6 to 1.2 mg/dL. A blood urea nitrogen (BUN) level of 50 mg/dL is also elevated and indicates impaired renal function; normal BUN levels range from 7 to 20 mg/dL. A serum potassium level of 6.5 mmol/L is elevated and indicates hyperkalemia, a common complication of chronic kidney disease; normal serum potassium levels range from 3.5 to 5.0 mmol/L.

64.

When assessing the effectiveness of a new dietary plan for a patient with hyperlipidemia, which assessment factor should be prioritized?

LDL cholesterol levels

Weight gain

Triglyceride levels

HDL cholesterol levels

Correct answer: LDL cholesterol levels

In managing hyperlipidemia, the primary goal is to reduce LDL cholesterol levels because they are directly associated with atherosclerosis and increased cardiovascular risk. Dietary changes aimed at lowering LDL can significantly impact a patient's overall cardiovascular health. Prioritizing the measurement of LDL cholesterol provides the most relevant information about the effectiveness of the dietary intervention.

While weight gain or loss may result from dietary changes, it is not a direct indicator of improvements in cholesterol levels or reduced cardiovascular risk associated with hyperlipidemia. Although lowering triglycerides is important, LDL reduction is a higher priority due to its stronger link with heart disease. HDL cholesterol is a secondary goal in hyperlipidemia management, with LDL being the most crucial factor to monitor for assessing dietary effectiveness.

65.

A patient on a weight loss program reports positive changes. Which outcome would best indicate success?

Waist circumference reduction by 5 cm

Stable BMI

Improved adherence to the weight loss program

Normotensive blood pressure

Correct answer: Waist circumference reduction by 5 cm

A waist circumference reduction by 5 cm is a key indicator of successful weight loss, as it reflects a decrease in central adiposity. Central adiposity, or abdominal fat, is associated with an increased risk of metabolic syndrome, cardiovascular disease, and type 2 diabetes. Reducing waist circumference indicates a positive change in body composition, suggesting improved metabolic health and reduced risk of obesity-related conditions.

A stable BMI does not indicate successful weight loss, as it suggests no change in body weight or composition. While improved adherence to the weight loss program is important for long-term success, it does not directly measure weight loss outcomes. Normotensive blood pressure is a positive health outcome but is not a direct measure of weight loss success.

66.

Which of the following exercises is most beneficial for bone health and osteoporosis prevention?

Jogging

Swimming

Cycling

Yoga

Correct answer: Jogging

Jogging is a weight-bearing exercise that is most beneficial for bone health and osteoporosis prevention. This type of exercise places stress on the bones, stimulating bone formation and increasing bone density. By engaging in weight-bearing activities like jogging, individuals can strengthen their bones, reduce the risk of fractures, and combat bone loss associated with osteoporosis.

Swimming is a low-impact exercise that does not provide the weight-bearing stimulus needed for bone health. Cycling is also a low-impact exercise that does not offer the weight-bearing benefits necessary for osteoporosis prevention. Yoga is beneficial for flexibility and balance, but it does not provide the weight-bearing stimulus needed for bone health.

67.

A patient with a BMI of 32 is advised on weight management strategies. Which of the following interventions is considered most effective for long-term weight loss?

Structured behavioral therapy

Strict, long-term calorie counting

Intermittent fasting

Dietary supplements

Correct answer: Structured behavioral therapy

Structured behavioral therapy is considered the most effective intervention for long-term weight loss. This approach provides patients with strategies to modify eating and exercise habits, address emotional and psychological factors, and create sustainable lifestyle changes that support weight management. By focusing on behavior change, structured behavioral therapy helps individuals develop healthier relationships with food and exercise, leading to long-term success in maintaining weight loss.

Strict, long-term calorie counting can be effective for weight loss, but it may not be sustainable for everyone and can lead to burnout. Intermittent fasting may help some individuals lose weight, but it is not the most effective or sustainable approach for everyone. Dietary supplements, while sometimes used for weight loss, often lack scientific support and do not address the underlying behaviors necessary for sustainable weight management.

68.

The nurse is reviewing a patient's chart and finds persistently elevated BUN and creatinine levels. What is their next step?

Assess urinary output volumes

Recommend increasing protein intake

Schedule an immediate dialysis session

Assess fluid intake

Correct answer: Assess urinary output volumes

The next appropriate step when faced with persistently elevated BUN and creatinine levels is to assess urinary output volumes, as this provides direct information about kidney function. Monitoring urine output helps determine if the kidneys are still able to filter and excrete waste, which is critical in assessing the severity of renal impairment.

Increasing protein intake is not advisable in this context, as it can further strain the kidneys and exacerbate elevated BUN and creatinine levels. Scheduling dialysis should only be considered after thorough evaluation, as not all patients with elevated kidney function markers require immediate dialysis. While fluid intake is important, it is secondary to assessing the kidneys' ability to produce urine and maintain fluid balance, making urinary output the primary focus.

69.

A patient contacts the nurse via telephone with complaints of dizziness and nausea. Which symptom would require the nurse to escalate care immediately?

Persistent dizziness accompanied by blurred vision

Dizziness when standing up too quickly

The nausea occurs after meals

The dizziness comes and goes

Correct answer: Persistent dizziness accompanied by blurred vision

Persistent dizziness with blurred vision is concerning for serious conditions such as stroke, which requires urgent medical evaluation and possible intervention. This symptom combination suggests there could be a significant impairment in brain function, making it essential to escalate care immediately to prevent further complications.

Dizziness when standing up quickly is usually due to orthostatic hypotension, which is generally managed with non-urgent interventions. Nausea after meals is typically linked to digestive issues, which are not emergency situations. Dizziness that comes and goes is often related to less serious causes, such as dehydration or mild vestibular disturbances, and does not warrant the same immediate escalation of care.

70.

A patient with COPD is being evaluated for improvement after initiating pulmonary rehabilitation. Which would be an expected intended outcome?

Decreased frequency of exacerbations

Absence of dyspnea

Enhanced sputum production

Absence of rales

Correct answer: Decreased frequency of exacerbations

A decreased frequency of exacerbations is an expected and intended outcome of pulmonary rehabilitation for a patient with COPD. This improvement indicates better management of symptoms, reduced inflammation, and enhanced lung function, leading to fewer acute flare-ups and hospitalizations. Pulmonary rehabilitation helps patients improve their exercise tolerance, respiratory muscle strength, and overall lung function, contributing to a more stable disease course and improved quality of life.

The absence of dyspnea is unrealistic in COPD management, as most patients continue to experience some level of breathlessness. Instead, the goal is to reduce the severity and frequency of dyspnea rather than eliminate it entirely. Enhanced sputum production is not an expected outcome of effective COPD management, as increased sputum production can indicate worsened airway inflammation. The absence of rales is not a primary indicator of successful COPD management, as the focus should be on overall symptom improvement and exacerbation reduction. Wheezing or decreased breath sounds, not rales, are more characteristic of COPD.

71.

A patient started on a new antidepressant. What is the most appropriate time frame to evaluate the effectiveness of the medication?

Four weeks

One week

Two weeks

Eight weeks

Correct answer: Four weeks

Evaluating the effectiveness of a new antidepressant after four weeks is recommended because most antidepressants take this long to reach steady-state levels and produce noticeable effects on symptoms. This period allows the medication to build up in the system enough for the patient to begin experiencing potential benefits. Evaluating too early might lead to premature changes in the treatment plan, potentially hindering the overall effectiveness of the therapy.

Assessing at one or two weeks is generally too early, as antidepressants usually do not produce their full effects within this short time frame. One week might show no significant change, and even after two weeks, the effects may still be limited. Waiting eight weeks for the first evaluation might result in prolonged ineffective treatment if the medication is not working, as the efficacy of the medication can be determined before that.

72.

A patient's recent lab results show a significant decrease in platelet count. What should the nurse assess next?

Signs of bleeding or bruising

ALT and AST levels

Dietary intake of vitamin K

White blood cell count

Correct answer: Signs of bleeding or bruising

When a patient has a significant decrease in platelet count, the primary concern is the increased risk of bleeding due to impaired clotting. The nurse should immediately assess for signs of bleeding or bruising, as these can indicate the patient is already experiencing complications from thrombocytopenia. Quick identification and management of bleeding is crucial to prevent severe outcomes such as hemorrhage.

While ALT and AST levels are important for assessing liver function, they do not provide immediate information about the bleeding risks associated with low platelets. Dietary intake of vitamin K affects clotting factors but is not directly related to platelet count; focusing on signs of active bleeding is more urgent. Checking the white blood cell count might be relevant in other scenarios, such as infections, but it is not the priority when addressing a significant drop in platelet levels.

73.

In a patient with chronic kidney disease (CKD), which of the following laboratory findings is most indicative of worsening renal function?

Elevated serum creatinine

Decreased hemoglobin level

Decreased serum potassium

Low blood urea nitrogen (BUN)

Correct answer: Elevated serum creatinine

Of the potential choices, elevated serum creatinine is the laboratory finding most indicative of worsening renal function. Serum creatinine is a waste product of muscle metabolism that the kidneys filter out. When renal function declines, creatinine accumulates in the blood due to decreased kidney clearance. Thus, rising serum creatinine levels directly correlate with reduced glomerular filtration rate (GFR), indicating deterioration in kidney function and serving as a key marker for monitoring the progression of CKD.

Decreased hemoglobin can occur in CKD due to anemia of chronic disease but does not directly reflect kidney function. Decreased serum potassium is not typically observed in CKD, where hyperkalemia is more common due to impaired excretion. Elevated BUN alongside creatinine can indicate reduced kidney clearance, but low BUN is not characteristic of worsening kidney function.

74.

When auscultating a patient's chest, which of the following findings is most indicative of mitral valve prolapse?

Mid-systolic click

Loud S2

Pericardial friction rub

Diastolic murmur

Correct answer: Mid-systolic click

A mid-systolic click is the most indicative auscultatory finding of mitral valve prolapse (MVP). This sound occurs when the mitral valve leaflets suddenly tense as they prolapse into the left atrium during systole, a characteristic feature of MVP. The mid-systolic click is often followed by a late systolic murmur if mitral regurgitation is present, making it a key diagnostic clue for this condition.

A loud S2 sound is more commonly associated with conditions like pulmonary hypertension and does not suggest mitral valve prolapse. A pericardial friction rub is indicative of pericarditis and is unrelated to valvular disorders like MVP. Diastolic murmurs are generally associated with valve issues during the diastolic phase, such as aortic or mitral stenosis, and do not characterize MVP, which presents with a systolic click rather than a diastolic sound.

75.

A chart review reveals a patient with frequent episodes of dizziness and low blood pressure. What should be the nurse's next step in clinical data interpretation?

Evaluate current medications for possible side effects

Suggest increasing fluid intake

Recommend a high-salt diet

Schedule a neurological evaluation

Correct answer: Evaluate current medications for possible side effects

When a patient experiences frequent dizziness and low blood pressure, the first step is to evaluate their current medications for possible side effects. Many medications, particularly those used to treat high blood pressure or fluid retention, can lower blood pressure too much or cause dizziness. Identifying and adjusting any medications that may be contributing to these symptoms can help alleviate the problem without the need for more invasive interventions.

Increasing fluid intake can be beneficial for raising blood pressure, but it should not be the first course of action if medication side effects are suspected. Recommending a high-salt diet may not be appropriate for all patients and is not the initial priority. A neurological evaluation is only necessary if there are additional neurological symptoms; otherwise, medication review is the most logical first step in addressing the dizziness and low blood pressure.

76.

A pediatric patient presents with symptoms of fatigue, difficulty concentrating, and headaches. Which assessment finding would suggest a psychological rather than physical cause?

History of childhood abuse

Normal respiratory rate

Elevated heart rate

Palpitations during assessment

Correct answer: History of childhood abuse

A history of childhood abuse is a key indicator that the symptoms of fatigue, difficulty concentrating, and headaches may have a psychological cause. Experiences of trauma, especially in childhood, can lead to long-term emotional and mental health issues, including anxiety, depression, and post-traumatic stress disorder (PTSD), which often manifest with physical symptoms such as those described. This assessment finding strongly suggests that the root cause of the symptoms may be psychological rather than physical.

A normal respiratory rate suggests no underlying respiratory issues are contributing to the symptoms but does not specifically point to a psychological cause. An elevated heart rate could be linked to physical conditions such as anemia or dehydration, making it less indicative of a psychological origin. Palpitations might suggest anxiety, which is psychological, but they are also associated with physical conditions like arrhythmias or hyperthyroidism and are not specific to psychological pathologies.

77.

Which of the following vaccines is recommended for adults to prevent shingles?

Zoster vaccine

Influenza vaccine

Hepatitis B vaccine

MMR vaccine

Correct answer: Zoster vaccine

The zoster vaccine is recommended for adults to prevent shingles, a painful condition caused by the reactivation of the varicella-zoster virus. Shingles can lead to severe pain and complications, such as postherpetic neuralgia, making vaccination an essential preventive measure for adults, particularly those aged 50 and older. By receiving the zoster vaccine, individuals can significantly reduce their risk of developing shingles and its associated complications, improving their quality of life and overall health.

The influenza vaccine is important for preventing seasonal flu but is ineffective against shingles, as it targets a different virus. The hepatitis B vaccine protects against hepatitis B virus infection but does not prevent shingles. The MMR (measles, mumps, rubella) vaccine protects against these three viral infections but is ineffective against the varicella-zoster virus, which causes shingles.

78.

A patient with osteoporosis is undergoing treatment with bisphosphonates. Which outcome would suggest an effective response to therapy?

Bone mineral density increased by 5%

Serum calcium levels of 6 mg/dL

Absence of bone fractures

Evaluation of response to bisphosphonates is subjective

Correct answer: Bone mineral density increased by 5%

An increase in bone mineral density (BMD) by 5% suggests an effective response to bisphosphonate therapy in a patient with osteoporosis. Bisphosphonates are used to increase bone density and reduce the risk of fractures by inhibiting bone resorption. An improvement in BMD demonstrates the medication is effectively enhancing bone strength and reducing the likelihood of fractures.

Serum calcium levels of 6 mg/dL indicate hypocalcemia, which is not a desirable outcome of bisphosphonate therapy, as maintaining normal calcium levels is important for overall health and bone metabolism. While the absence of bone fractures is a positive outcome, it is not a direct measure of the effectiveness of bisphosphonates, as BMD improvement provides a more specific indicator of therapy success. Evaluating the response to bisphosphonates should not be considered subjective, as objective measures like BMD changes provide empirical data on treatment efficacy.

79.

The nurse reviews a patient's chart and notes their last potassium level was 3.0 mEq/L. What is the most appropriate nursing action?

Assess the patient's cardiac rhythm

Recommend potassium-rich foods

Decrease the patient's diuretic dose

Schedule a repeat potassium test

Correct answer: Assess the patient's cardiac rhythm

When a patient has a potassium level of 3.0 mEq/L, the most appropriate action is to assess their cardiac rhythm. Hypokalemia can lead to serious cardiac arrhythmias, and early detection of any abnormal rhythms is critical for preventing potentially life-threatening complications. Monitoring the patient's heart rhythm allows for timely intervention if any arrhythmias are present.

Recommending potassium-rich foods is an important aspect of long-term management of hypokalemia, but it does not address the immediate risks posed by low potassium levels or assess the potential impact this is causing. Adjusting the dose of any diuretics to prevent further potassium loss may be necessary but should only be done after evaluating the patient's current cardiac status. Scheduling a repeat potassium test can help monitor the effectiveness of any interventions, but the initial focus should be on assessing the cardiac impact of the current hypokalemia.

80.

Which of the following medications is used to reverse the effects of opioid overdose?

Naloxone

Flumazenil

Atropine

Epinephrine

Correct answer: Naloxone

Naloxone is an opioid antagonist that works by quickly binding to opioid receptors, displacing opioids, and reversing their effects, including respiratory depression, sedation, and hypotension. Naloxone's rapid action makes it an essential tool in emergency settings where opioid overdose is suspected. Its administration can be life-saving by restoring normal respiration and consciousness in affected individuals.

Flumazenil is effective in reversing benzodiazepine overdose but does not have an impact on opioid receptors and is not suitable for treating opioid toxicity. Atropine is an anticholinergic medication that does not reverse the effects of opioid overdose. Epinephrine is a vasoconstrictor used in anaphylaxis and cardiac arrest but does not interact with opioid receptors or address opioid overdose.

81.

A patient with a history of atrial fibrillation is most at increased risk for which of the following complications?

Stroke

Myocardial infarction

Heart block

Ventricular fibrillation

Correct answer: Stroke

In a patient with a history of atrial fibrillation, stroke is the most significant complication. Atrial fibrillation causes irregular heartbeats, leading to turbulence and stasis of blood flow in the atria, which can result in clot formation. These clots can embolize, most commonly traveling to the brain and causing an ischemic stroke, making stroke the primary risk for patients with atrial fibrillation. Anticoagulation therapy is often prescribed to mitigate this risk and prevent thromboembolic events.

Myocardial infarction is linked to coronary artery disease and is not typically caused by atrial fibrillation. Heart block is characterized by slow electrical conduction, not the rapid irregular rhythm of atrial fibrillation. Ventricular fibrillation is a distinct arrhythmia not directly caused by or related to atrial fibrillation.

82.

Which of the following physical findings is most consistent with a diagnosis of chronic obstructive pulmonary disease (COPD)?

Barrel-shaped chest

Peripheral cyanosis

Loud S3 heart sound

Absent breath sounds

Correct answer: Barrel-shaped chest

A barrel-shaped chest is the most consistent physical finding associated with chronic obstructive pulmonary disease (COPD). This deformity results from chronic lung overinflation, which causes the rib cage to remain in a permanently expanded state. The barrel chest is a classic sign of advanced COPD and helps differentiate it from other pulmonary conditions.

Peripheral cyanosis can occur in COPD but is not specific to the disease and can be seen in other conditions as well. A loud S3 heart sound is typically associated with heart failure rather than pulmonary conditions like COPD. Absent breath sounds are more characteristic of a severe condition like lung collapse or pneumothorax, rather than the chronic, progressive nature of COPD, which usually presents with diminished or wheezing breath sounds instead.

83.

A 62-year-old woman presents with fatigue, weight gain, and constipation. Laboratory results show elevated thyroid-stimulating hormone (TSH). Which of the following should the nurse suspect?

Hypothyroidism

Hyperthyroidism

Subclinical hypothyroidism

Euthyroid sick syndrome

Correct answer: Hypothyroidism

Given the fatigue, weight gain, constipation, and elevated thyroid-stimulating hormone (TSH) levels, the most likely explanation is hypothyroidism. Hypothyroidism occurs when the thyroid gland is underactive and unable to produce sufficient thyroid hormones, leading to an increase in TSH as the body attempts to stimulate the thyroid. The symptoms of fatigue, weight gain, and constipation are classic signs of hypothyroidism, resulting from the decreased metabolic rate caused by insufficient thyroid hormone levels.

Hyperthyroidism is characterized by symptoms that are opposite to those of hypothyroidism, such as weight loss, increased heart rate, and heat intolerance; it is not consistent with the patient's presentation.

Subclinical hypothyroidism involves elevated TSH with normal thyroid hormone levels, typically presenting with milder symptoms or being asymptomatic; the patient's symptoms suggest overt hypothyroidism.

Euthyroid sick syndrome is associated with abnormal thyroid function tests due to non-thyroidal illness and does not match the symptoms and elevated TSH levels observed here.

84.

Which is the desired outcome of a newly initiated smoking cessation program?

Long-term abstinence from tobacco

Reduction of lung cancer risk

Patient-reported satisfaction with the program

Reduction in nicotine cravings

Correct answer: Long-term abstinence from tobacco

The desired outcome of a smoking cessation program is long-term abstinence from tobacco because this directly correlates with the most significant health improvements. Achieving sustained tobacco-free status reduces the risk of numerous diseases and improves overall health, making it the primary goal of any cessation program.

Reducing the risk of lung cancer is a key benefit of quitting smoking, but it is a long-term outcome rather than the immediate goal of a cessation program. Patient satisfaction with the program is important for engagement but does not necessarily indicate success in quitting smoking. While reducing nicotine cravings is beneficial, it is not a substitute for achieving and maintaining long-term abstinence, which is the true measure of effectiveness.

85.

A patient's recent ECG shows atrial fibrillation. What should the nurse evaluate in the patient's chart first?

Current anticoagulation therapy

Blood pressure trends

Recent electrolyte levels

History of cardiovascular disease

Correct answer: Current anticoagulation therapy

When a patient has atrial fibrillation, the most immediate concern is the risk of thromboembolic events, particularly stroke. Therefore, evaluating whether the patient is on anticoagulation therapy is the top priority. Anticoagulation therapy reduces the risk of clot formation, which is essential in managing atrial fibrillation. Ensuring the patient is appropriately anticoagulated can significantly reduce the potential complications of this arrhythmia.

While recent electrolyte levels and blood pressure trends are important in managing the broader cardiovascular health of the patient, they do not address the immediate risk of stroke associated with atrial fibrillation. A history of cardiovascular disease does not directly influence the urgent need to initiate or adjust anticoagulation therapy. These factors are all secondary to ensuring proper anticoagulation is in place.

86.

In an in-person triage setting, which symptom combination is most serious?

Chest pain and shortness of breath

Fever and headache

Nausea and vomiting

Cough and sore throat

Correct answer: Chest pain and shortness of breath

Chest pain and shortness of breath together are the most serious symptom combination in this context because they strongly suggest the possibility of a heart attack or pulmonary embolism, both of which are life-threatening conditions that require immediate medical attention. The urgency of these symptoms means that rapid evaluation and intervention are critical to prevent potentially fatal outcomes.

Fever and headache often suggest an infection that is less likely to be immediately life-threatening compared to a cardiac event. Nausea and vomiting do not usually indicate an acute emergency on their own. Cough and sore throat are typically related to minor respiratory infections, which do not require the same urgent response as the combination of chest pain and shortness of breath.

87.

When triaging over the phone, which of the following complaints would be most important for a nurse to obtain immediate care for?

A patient drooling after eating a food they are allergic to

A patient with a sprained ankle who has no history of ankle problems

A patient with severe abdominal pain making it difficult to eat

A patient with a sore throat and a high fever

Correct answer: A patient drooling after eating a food they are allergic to

A patient drooling after consuming an allergen may indicate angioedema that could potentially lead to airway compromise. Immediate care is necessary to prevent this situation from escalating into a life-threatening emergency, making it the most critical complaint that requires urgent intervention.

A sprained ankle, although painful and potentially debilitating, does not pose an immediate threat to life and can be managed without immediate emergency intervention. Severe abdominal pain often requires urgent but not emergency evaluation unless accompanied by more severe symptoms. A sore throat with a high fever points to an infection but does not pose an immediate threat to the airway or overall health, which requires emergency care.

88.

Which of the following conditions is characterized by elevated levels of uric acid in the blood?

Gout

Osteoarthritis

Rheumatoid arthritis

Osteoporosis

Correct answer: Gout

Gout is characterized by elevated levels of uric acid in the blood, leading to the deposition of urate crystals in the joints. This condition results in episodes of acute inflammation, pain, and swelling, typically affecting the big toe or other joints. Hyperuricemia, or elevated uric acid levels, is a hallmark of gout and can lead to crystal formation when uric acid exceeds its solubility threshold. Gout flares occur when these crystals trigger an inflammatory response, causing severe joint pain and swelling that requires medical management to reduce uric acid levels and control inflammation.

Osteoarthritis is characterized by cartilage degeneration that leads to joint pain and stiffness and is unrelated to uric acid levels. Rheumatoid arthritis is an autoimmune disorder causing joint inflammation and damage and is not linked to elevated uric acid levels. Osteoporosis involves decreased bone density and is not connected to uric acid levels.

89.

Which medication is most likely to cause a dry cough as a side effect?

Lisinopril

Amlodipine

Atenolol

Furosemide

Correct answer: Lisinopril

Lisinopril, an ACE inhibitor, is most likely to cause a dry cough as a side effect. This cough occurs due to the accumulation of bradykinin in the respiratory tract, a known effect of ACE inhibitor therapy. Bradykinin is a peptide that can cause irritation in the lungs, leading to a persistent, non-productive cough in some patients. This side effect is well-documented and may necessitate switching to an alternative medication for those who experience significant discomfort.

Amlodipine, a calcium channel blocker, is not commonly associated with causing a dry cough. It primarily affects vascular smooth muscle to lower blood pressure and does not impact bradykinin levels or the respiratory tract. Atenolol, a beta-blocker, also does not typically cause a dry cough, as its action focuses on reducing heart rate and contractility without meaningfully affecting the respiratory tract. Furosemide, a loop diuretic, is not linked to a dry cough either, as it works by increasing urine output through action on the kidneys rather than the respiratory system.

90.

A patient with heart failure is prescribed furosemide. What is the primary therapeutic action of this medication?

Diuresis

Vasodilation

Increased cardiac output

Electrolyte replenishment

Correct answer: Diuresis

The primary therapeutic action of furosemide in heart failure is diuresis. Furosemide is a loop diuretic that works by inhibiting the reabsorption of sodium and chloride in the ascending loop of Henle, leading to increased urine output. By promoting diuresis, furosemide helps reduce fluid overload, decrease blood volume, and alleviate symptoms such as edema and pulmonary congestion. This reduction in fluid volume can relieve the heart's workload, improve cardiac efficiency, and enhance patient comfort by reducing the symptoms associated with heart failure.

Furosemide's primary action is diuresis, not vasodilation. It does not directly increase cardiac output but can improve cardiac function indirectly by reducing fluid overload and decreasing the heart's workload. Furosemide does not replenish electrolytes; instead, it can lead to electrolyte imbalances, such as hypokalemia, due to increased excretion of potassium and other electrolytes in the urine.

91.

A patient contacts the clinic reporting shortness of breath and swelling in their legs. What should the nurse do first?

Arrange for the patient to visit the nearest emergency department

Schedule a same-day in-person visit

Recommend elevating the legs and resting

Ask the patient to weigh themselves and report the measurement

Correct answer: Arrange for the patient to visit the nearest emergency department

When a patient reports shortness of breath and leg swelling, the most appropriate action is to arrange for them to visit the nearest emergency department. These symptoms can be indicative of severe conditions such as heart failure, pulmonary embolism, or other cardiovascular issues that require immediate evaluation and intervention. Prompt emergency care can help prevent further deterioration and potentially life-threatening complications.

Scheduling a same-day in-person visit delays the necessary urgent care, which could be critical for emergent conditions like heart failure or a blood clot. Recommending leg elevation and rest may temporarily relieve some symptoms but fails to address the possible severity of the underlying condition. Asking the patient to weigh themselves is not a priority in this acute situation, as it does not help in diagnosing or managing the immediate threat posed by shortness of breath and leg swelling.

92.

A patient with diabetes reports missing several doses of insulin due to feeling overwhelmed. What should the nurse assess to determine the root cause?

Emotional well-being and stress levels

Blood glucose levels

Understanding of diabetes management

Access to insulin supplies

Correct answer: Emotional well-being and stress levels

In a patient with diabetes who reports missing insulin doses due to feeling overwhelmed, the nurse should prioritize assessing emotional well-being and stress levels. Stress and feeling emotionally overwhelmed can significantly impact a patient's ability to adhere to complex medical regimens like diabetes management. By understanding the patient's emotional state, the nurse can identify the underlying causes of non-adherence and provide targeted support to address these challenges.

Monitoring blood glucose levels does not directly address the reasons for missed doses. While ensuring the patient understands their diabetes management is important, it is secondary to addressing the emotional barriers that are currently interfering with adherence. Access to insulin supplies is a valid concern, but given the patient's report of feeling overwhelmed, the primary focus should be on assessing and supporting their emotional well-being to improve adherence.

93.

A patient is started on levothyroxine for hypothyroidism. Which of the following instructions should be provided to ensure proper absorption?

Take on an empty stomach

Take with orange juice

Take with a high-fat meal

Take at bedtime

Correct answer: Take on an empty stomach

Levothyroxine should be taken on an empty stomach to ensure optimal absorption and efficacy. This medication is used to treat hypothyroidism by replacing deficient thyroid hormone levels, and its absorption can be significantly affected by the presence of food in the gastrointestinal tract. To maximize the absorption and effectiveness of levothyroxine, it should be taken with a full glass of water, preferably 30 to 60 minutes before breakfast, when the stomach is empty. Proper administration of levothyroxine ensures consistent hormone levels and effective management of hypothyroidism symptoms.

Taking levothyroxine with orange juice or a high-fat meal can interfere with its absorption, reducing its therapeutic effect. Juice and certain foods can bind to the medication, preventing it from being absorbed efficiently in the gastrointestinal tract. Taking levothyroxine at bedtime without considering the timing and fasting state can result in inconsistent hormone levels.

94.

Which screening is recommended for detecting abdominal aortic aneurysms in male smokers aged 65-75?

Ultrasound

MRI

Chest X-ray

CT scan

Correct answer: Ultrasound

Ultrasound is recommended for detecting abdominal aortic aneurysms (AAAs) in male smokers aged 65-75. This non-invasive imaging method effectively identifies the presence and size of an aneurysm, allowing for timely intervention if necessary. Ultrasound is favored for initial screening due to its safety, cost-effectiveness, and ability to provide accurate measurements of the abdominal aorta without exposing patients to radiation.

An MRI is not typically used as the initial screening tool for AAA due to its higher cost and complexity, even though it provides detailed imaging. A chest X-ray is not effective for detecting AAA, as it focuses on the chest area rather than the abdominal aorta, making it unsuitable for identifying aneurysms in the abdominal region. A CT scan can be used for detailed imaging of an AAA but is not the primary screening tool due to radiation exposure and higher cost, making ultrasound the preferred option for initial screening.

95.

When starting a patient on a statin, which of the following is the best method to evaluate effectiveness?

LDL cholesterol reduction

Liver enzyme levels

HDL cholesterol increase

Triglyceride increase

Correct answer: LDL cholesterol reduction

The effectiveness of statin therapy is best evaluated by monitoring LDL cholesterol reduction, as lowering LDL is the primary goal of treatment. Statins are designed to decrease LDL levels, which are a major contributor to atherosclerosis and cardiovascular events.

Liver enzyme levels are monitored to detect potential side effects but do not reflect the statin's effectiveness in lowering cholesterol. While HDL cholesterol increases can be beneficial, they are not the primary target of statin therapy. An increase in triglycerides would be an undesirable outcome, making this an inappropriate method of evaluating statin effectiveness.

96.

In a patient with hyperthyroidism, which of the following best indicates successful treatment with antithyroid medications?

Normalized TSH levels

Reduction in tachycardia

Weight gain

Increased appetite

Correct answer: Normalized TSH levels

Normalized TSH levels are the best indicator of successful treatment with antithyroid medications in a patient with hyperthyroidism. Achieving normal TSH levels suggests the medication is effectively regulating thyroid hormone production and restoring euthyroid status. TSH is a sensitive marker of thyroid function, and its normalization indicates the treatment plan is successfully controlling the overproduction of thyroid hormones.

Reduction in tachycardia is a positive outcome but is not a direct measure of successful hyperthyroidism treatment, as normalizing TSH levels provides a more accurate assessment of treatment efficacy. While weight gain may occur with improved thyroid function, it is not a specific indicator of treatment success. Increased appetite can be a sign of improved thyroid function but does not directly measure treatment effectiveness.

97.

A patient expresses fear of going outside after a recent assault in which they were violently robbed, and the mugger was subsequently arrested. What is the priority assessment?

Symptoms of post-traumatic stress disorder (PTSD)

The patient's risk of being assaulted again

Symptoms of depression

The patient's understanding that the perpetrator was arrested

Correct answer: Symptoms of post-traumatic stress disorder (PTSD)

In a patient who expresses fear of going outside after a recent assault, the priority should be to assess for symptoms of PTSD. The traumatic nature of the event, combined with the patient's ongoing fear, suggests they may be struggling with trauma-related symptoms. Early identification of PTSD is essential for initiating the appropriate psychological support and interventions to help the patient cope with the aftermath of the assault.

While assessing the patient's risk of future assaults is important for ensuring safety, it does not directly address the psychological effects of the trauma they have already experienced. While symptoms of depression should be considered, the immediate concern is the potential for PTSD, which is more closely tied to the specific traumatic event. Ensuring the patient understands the perpetrator has been arrested is relevant, but it does not address the core issue of potential PTSD, making it a secondary concern.

98.

Which of the following is the most appropriate triage action for a patient presenting virtually with severe lower abdominal pain and fever?

Refer to the emergency department for evaluation

Advise over-the-counter pain relief and rest

Schedule an appointment for the same day

Assess the timing of their last bowel movement

Correct answer: Refer to the emergency department for evaluation

Referring the patient to the emergency department for evaluation is the most appropriate action when faced with severe lower abdominal pain and fever, as this symptom combination could indicate a serious condition such as appendicitis. Early and accurate diagnosis in a hospital setting is critical to prevent complications and ensure timely treatment.

Advising over-the-counter pain relief and rest is inadequate for such severe symptoms and could delay necessary care, potentially worsening the patient's condition. Scheduling an appointment for the same day is not fast enough for a potentially serious condition that could deteriorate rapidly. Although assessing the timing of the last bowel movement could be relevant in cases of abdominal pain, it does not address the urgent need for evaluation in a patient with both severe pain and fever.

99.

A patient starts physical therapy for chronic low back pain. Which outcome is the most appropriate to assess treatment effectiveness?

Pain reduction

Range of motion

Strength improvement

Decrease in PRN medication use

Correct answer: Pain reduction

Pain reduction is the most appropriate outcome to assess the effectiveness of physical therapy for chronic low back pain, as the primary goal of therapy is to alleviate discomfort and improve the patient's ability to function without pain. By directly measuring pain levels, healthcare providers can evaluate whether the treatment is successful in achieving its intended purpose of improving quality of life through pain relief.

Range of motion and strength improvement are important aspects of physical therapy but are secondary to the primary goal of reducing pain. These factors may contribute to better function, but they do not directly assess how well the therapy is alleviating the patient's pain. A decrease in the use of PRN (as-needed) medication might indicate pain relief but is not as direct or reliable a measure as assessing pain levels themselves.
