

## Test Generator Questions, Chapter 2, Neurobiologic Theories and Psychopharmacology

1. The nurse is preparing a client for a magnetic resonance imaging (MRI). Which statement(s) by the client would require the nurse to notify the health care provider to cancel the procedure? Select all that apply.

- A. "I have such terrible anxiety, I don't know if I can remain still throughout the procedure."
- B. "I had a pacemaker inserted a few years ago because my heart was not beating fast enough."
- C. "I fell down my basement steps last year and broke my hip and had to have a hip replacement."
- D. "When I was diagnosed with mitral valve prolapse, they had to replace the valve with a prosthetic valve."
- E. "I have diabetes mellitus type I and have been taking insulin for many years."

Answer: B, C, D

Rationale: Clients with pacemakers or metal implants, such as heart valves or orthopedic devices, cannot have an MRI due to the metal and the strong magnet in the MRI. Anxiety is not a reason to cancel the procedure since antianxiety medication can be administered prior to the procedure. Diabetes and utilization of insulin is not a contraindication for the use of MRI.

Question format: Multiple Select

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Analyze

Client Needs: Physiological Integrity: Physiological Adaptation

Integrated Process: Communication and Documentation

Learning Objective: 2

Reference: p. 19, Types of Brain Imaging Techniques

2. A client diagnosed with bipolar disorder states to the nurse, "Why did I get this illness? I don't want to be sick." Which response will the nurse provide to **best** response to the client's concern?

- A. "People who develop mental illnesses often had very traumatic childhood experiences."
- B. "There is some evidence that contracting a virus during childhood can lead to bipolar disorder."
- C. "Sometimes people with mental illness have an overactive immune system."
- D. "The cause is not fully known, but mental illnesses do seem to run in families."

Answer: D

Rationale: Current theories and studies indicate that several mental disorders may be linked to a specific gene or combination of genes, but that the source is not solely genetic; nongenetic factors also play important roles. A compromised immune system could contribute to the development of a variety of illnesses, particularly in populations already genetically at risk. Maternal exposure to a virus during critical fetal development of the nervous system may contribute to mental illness. Genetic factors are known to be more salient than childhood trauma in the etiology of these disorders.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Apply

Client Needs: Physiological Integrity: Physiological Adaptation

Integrated Process: Communication and Documentation

Learning Objective: 3

Reference: p. 21, Neurobiologic Causes of Mental Illness

3. A client is prescribed a tricyclic antidepressant for the treatment of depression that has not responded to selective serotonin reuptake inhibitors (SSRI). The client states, "This medication isn't working after 2 weeks of taking it." Which is the **best** response by the nurse?

- A. "You should stop taking the medication since it is not working and try electroconvulsive therapy (ECT)."
- B. "It is likely that you are immune to the medication actions and will need something else."
- C. "Since you took the SSRIs, this medication may not work as well for you."
- D. "This medication may take up to 6 weeks to reach the optimum therapeutic response."

Answer: D

Rationale: Tricyclic antidepressant medications can take between 4 and 6 weeks to reach optimal therapeutic benefits and the client will be educated about what to expect at the beginning of therapy. The client should never be advised to stop taking a medication abruptly since they may likely revert back to the previous or worsening level of depression. Although ECT may be used in treatment that is refractory to the use of antidepressant medications, this is not the effective choice in this case. The use of SSRIs will not prevent the tricyclic antidepressants effectiveness. The client is not experiencing an "immunity" to the medication.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological and Parenteral Therapies

Integrated Process: Teaching/Learning

Learning Objective: 5

Reference: p. 23, Principles that Guide Pharmacologic Treatment

4. The nurse is educating a client about newly prescribed Asenapine for the treatment of schizophrenia. Which statement made by the client indicates the education is effective?

- A. "I will swallow the pill and immediately follow with 8 ounces of water or clear fluid."

- B. "I will come to the office once a month to have injections done so the medication will be more effective."
- C. "The medication will dissolve under my tongue and I won't eat or drink for 10 minutes after it dissolves."
- D. "I need to take this medication with a meal to reduce the gastrointestinal side effects."

Answer: C

Rationale: Asenapine is a sublingual tablet that is dissolved under the tongue, so food and fluid will be avoided for at least 10 to 15 minutes after the tablet dissolves. The medication is not administered in depot form which would be by injection at regular intervals, such as once a month. The medication is not administered with a meal since it has to be dissolved under the tongue.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Analyze

Client Needs: Physiological Integrity: Pharmacological and Parenteral Therapies

Integrated Process: Teaching/Learning

Learning Objective: 5

Reference: p. 23, Mechanism of Action

5. The nurse administers olanzapine pamoate IM to a client with schizophrenia. Which action by the nurse is essential after the administration of the medication to prevent complications from postinjection delirium/sedation syndrome?
- A. Directly observe the client for 3 hours after injection and do not discharge until symptom free.
  - B. Admit the client to the behavioral health unit for 24 hours to monitor for improvement of hallucinations.
  - C. Administer benztropine to prevent extrapyramidal symptoms after the injection.
  - D. Have the client eat a full meal before discharge to decrease the rate of absorption.

Answer: A

Rationale: For the safety of the client, it is important to monitor the client to ensure that there are no symptoms related to postinjection delirium/sedation syndrome. Optimally, the client should have someone present with them after receiving the medication to drive them home. Admission is not required since the disorder is chronic and hallucinations may not be totally alleviated, even with the medication. The client is not taking a typical antipsychotic and the use of benztropine is not required. The absorption rate is not influenced by food.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological and Parenteral Therapies

Integrated Process: Nursing Process

Learning Objective: 5

Reference: p. 23, Mechanism of Action

6. The nurse is preparing a client for a magnetic resonance imaging (MRI) scan of the head. Which question is a priority for the nurse to ask the client?

- A. "Have you ever had an allergic reaction to radioactive dye?"
- B. "Have you had anything to eat in the last 24 hours?"
- C. "Does your insurance cover the cost of this scan?"
- D. "Are you anxious about being in tight spaces?"

Answer: D

Rationale: The person undergoing an MRI must lie in a small, closed chamber and remain motionless during the procedure, which takes about 45 minutes. Those who feel claustrophobic or have increased anxiety may require sedation before the procedure. Positron emission tomography (PET) scans require radioactive substances to be injected into the bloodstream. A client is not required to fast

before brain imaging studies. Verifying insurance benefits is not a primary role of the nurse.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Apply

Client Needs: Safe and Effective Care Environment: Management of Care

Integrated Process: Nursing Process

Learning Objective: 2

Reference: p. 19–20, Types of Brain Imaging Techniques

7. The nurse is educating a family member of a client suspected to have Alzheimer's disease. Which statement made by the family member indicates that the education is effective?

- A. "It is impossible to know for certain that a person has Alzheimer's disease until the person dies and their brain can be examined via autopsy."
- B. "If we get a positron emission tomography (PET) scan, it may identify amyloid plaques and tangles of Alzheimer's disease."
- C. "It's possible to diagnose Alzheimer's disease by using chemical markers that demonstrate decreased blood flow to the brain."
- D. "It will be necessary to undergo positron emission tomography (PET) scans regularly for a long period of time to know if the client has Alzheimer's disease."

Answer: B

Rationale: Positron emission tomography (PET) scans can identify the amyloid plaques and tangles of Alzheimer's disease in living clients. These conditions previously could be diagnosed only through autopsy. Some persons with schizophrenia demonstrate decreased cerebral blood flow, but this is not a characteristic of Alzheimer's disease. A limitation of PET scans is that the use of radioactive substances limits the number of times a person can undergo these tests. Serial PET scans are not normally necessary or safe.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Apply

Client Needs: Health Promotion and Maintenance

Integrated Process: Teaching/Learning

Learning Objective: 3

Reference: p. 21, Limitations of Brain Imaging Techniques

8. The nurse is performing a medication reconciliation for a client at a high risk for suicide. Which antidepressant drug identified by the nurse will be **best** in the treatment of this client and reduces the risk of lethal overdose?

- A. Tranylcypromine
- B. Sertraline
- C. Imipramine
- D. Phenelzine

Answer: B

Rationale: SSRIs, venlafaxine, nefazodone, and bupropion are often better choices for those who are potentially suicidal or highly impulsive because they carry no risk of lethal overdose, in contrast to the cyclic compounds and the MAOIs.

Tranylcypromine and phenelzine are MAOIs. Imipramine is a cyclic compound.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological and Parenteral Therapies

Integrated Process: Nursing Process

Learning Objective: 6

Reference: p. 28–29, Preferred Drugs for Clients at High Risk for Suicide

9. A client is prescribed a monoamine oxidase inhibitor (MAOI) for treatment of severe depression. Which statement made by the client indicates that there is understanding of education provided by the nurse related to dietary restrictions?
- A. "I am now allergic to foods that are high in the amino acid tyramine."
  - B. "Certain foods will cause me to have sexual dysfunction when I take this medication."
  - C. "Foods that are high in tyramine will reduce the medication's effectiveness."
  - D. "I will avoid foods that are high in the amino acid tyramine since they can cause severe side effects"

Answer: D

Rationale: Because the enzyme MAOI is necessary to break down the tyramine in certain foods, its inhibition results in increased serum tyramine levels, causing severe hypertension, hyperpyrexia, tachycardia, diaphoresis, tremulousness, and cardiac dysrhythmias. Taking an MAOI does not confer allergy to tyramine. Sexual dysfunction is a common side effect of many antidepressants. There is no evidence that foods high in tyramine will increase sexual dysfunction or reduce the medication's effectiveness.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Analyze

Client Needs: Physiological Integrity: Pharmacological and Parenteral Therapies

Integrated Process: Teaching/Learning

Learning Objective: 5

Reference: p. 28, Antidepressant Drugs

10. A client prescribed disulfiram experiences facial flushing, a throbbing headache, nausea, and vomiting and states to the nurse that "I only drank one beer." Which is the **best** response by the nurse?

- A. "This is a mild side effect of the medication, and one beer shouldn't cause the reaction."

- B. "The reaction that you experienced is an expected response with the ingestion of alcohol."
- C. "This is an idiosyncratic reaction to the medication and is an expected response to treatment."
- D. "You must have a severe allergy to disulfiram that you were not aware of and will need to stop the medication."

Answer: B

Rationale: Disulfiram is a sensitizing agent that causes an adverse reaction when mixed with alcohol in the body. Five to 10 minutes after a person taking disulfiram ingests alcohol, symptoms begin to appear: facial and body flushing from vasodilation, a throbbing headache, sweating, dry mouth, nausea, vomiting, dizziness, and weakness. These symptoms are not mild side effects because these are very uncomfortable symptoms. These symptoms would not be an idiosyncratic reaction because this is the expected reaction. These symptoms are not indicative of a severe allergy to the medication.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Apply

Client Needs: Physiological Integrity: Pharmacological and Parenteral Therapies

Integrated Process: Nursing Process

Learning Objective: 5

Reference: p. 35, Disulfiram

11. When the client asks the nurse how long it will take before the selective serotonin reuptake inhibitor (SSRI) antidepressant medication will be effective, which reply is **most** accurate and therapeutic?
- A. "This medication will be effective within 20 minutes of the first dose."
  - B. "You will have gradual improvement in symptoms over the next 4 to 6 weeks."
  - C. "It will probably take months for the medication to work. In the meantime, you should receive psychotherapy."

D. "It is dependent on how depressed you are. It takes longer the more depressed you are."

Answer: B

Rationale: SSRIs may be effective in 2 to 3 weeks. Researchers believe that the actions of these drugs are an "initiating event" and that eventual therapeutic effectiveness results when neurons respond more slowly, making serotonin available at the synapses. The medication will not be effective within 20 minutes of the first dose, and it will not likely take months for the medication. Attitude and faith will not improve with the medication's effectiveness.

Question format: Multiple Choice

Chapter 2: Neurobiologic Theories and Psychopharmacology

Cognitive Level: Understand

Client Needs: Physiological Integrity: Pharmacological and Parenteral Therapies

Integrated Process: Teaching/Learning

Learning Objective: 6

Reference: p. 28, Antidepressant Drugs

12. A client has a lithium level of 1.2 mEq/L (1.2 mmol/L). Which intervention by the nurse is indicated?

- A. Call the health care provider for an increase in dosage
- B. Do not give the next dose and call the health care provider
- C. Increase fluid intake for the next week
- D. No intervention is necessary at this time

Answer: D

Rationale: The lithium level is within the therapeutic range. Serum levels of less than 0.5 mEq/L (0.5 mmol/L) are rarely therapeutic, and a level of more than 1.5 mEq/L (1.5 mmol/L) is usually considered toxic. Consequently, there is no need to liaise with the health care provider or increase fluid intake.