Psychiatric-Mental Health Nursing 9th edition Videbeck Solutions Manual

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Suggested Answers to Assignments, Chapter 2, Neurobiologic Theories and Psychopharmacology

Written Assignments	**Learning Objective(s)**
1. Students' answers should include the following: • Cerebrum, cerebellum, brainstem, limbic system, and their associated functions.	1
2. Students' answers should include the following: • Compliance with the medication regimen is enhanced when the regimen is as simple as possible. • A medication is selected on the basis of its effect on the client's target symptoms. Many psychotropic drugs must be given in adequate dosages for some time before their full effect is realized.	8

Group Assignments	**Learning Objective(s)**
1. Students' answers should include the following: • Computed tomography (CT), magnetic resonance imaging (MRI), positron emission tomography (PET), and single-photon emission computerized tomography (SPECT)	2
2. Students' answers should include the following: • Memory loss, financial constraints, lack of transportation, lack of knowledge of how to obtain refills for prescriptions, and inability to plan ahead to get new prescriptions before the supply runs out.	7

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Clinical Assignments	Learning Objective(s)
1. Students' answers should include the following: • Selective serotonin reuptake inhibitors (SSRIs) should be taken first thing in the morning. • To minimize side effects, client generally should take cyclic compounds at night in a single dose daily. • Clients taking monoamine oxidase inhibitors (MAOIs) need to be aware that a life-threatening hyperadrenergic crisis can occur if they do not observe certain dietary restrictions. The clients need to receive a written list of foods to avoid. Do not take any additional medication and avoid over-the-counter medication.	8
2. Students' answers should include the following: • A drug card that entails the action, side effects, and nursing considerations for each drug.	5
3. Students' answers should include the following: • The dosage of medication is often adjusted to the lowest effective dosage for the client. A client may need higher dosages to stabilize their target symptoms, whereas lower dosages can be used to sustain effects over time.	6

Web Assignment	Learning Objective
1. Students' answers should include the following: • Summarize research related to neurobiologic theories of psychopharmacologic treatment of mental disorders.	3

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Suggested Answers to Case Study, Chapter 2, Neurobiologic Theories and Psychopharmacology

1.

a. The nurse is a good resource for providing information and answering questions. The nurse's responsibility includes education. Mary should inform the client that schizophrenia is a disorder that is chronic in nature, like high blood pressure, and that such clients need to remain on their medication for the long term so that the health problem is fully treated. As part of the client teaching, Mary should also explain that ziprasidone (Geodon) is a second-generation antipsychotic and that it is used to help the client maintain clear thinking, eliminate hallucinations, and therefore feel less confused. Additionally, ziprasidone (Geodon) typically has less extrapyramidal symptoms (EPSs) and should be fairly well tolerated by the client, thus improving client compliance.
b. Mary, the student nurse, should also assess the client's understanding of their new diagnosis of schizophrenia. Does the client have a clear idea of what their symptoms are? Teaching should also focus on assisting the client to understand the symptoms that the ziprasidone (Geodon) should "target" or assist in decreasing. This teaching will also help the client to remain more compliant with taking the medication. Mary should stress the importance of taking the medication every day as prescribed, ensuring that the client understands that this is not a PRN, or an as-needed, medication. Side effects should also be reviewed with the client, including what the client should do if they experience those side effects.

Case Study, Chapter 2, Neurobiologic Theories and Psychopharmacology

1. Mary is the student nurse caring for a 27-year-old client who has been newly diagnosed with schizophrenia. The client has been prescribed ziprasidone (Geodon). The client asks Mary how long the medication will need to be taken. (Learning Objectives: 2, 3, 4)
   a. What is the student nurse's responsibility to the client regarding client education?
   b. What questions might the student nurse, Mary, have for the client in order to provide information at a level that the client can understand?

Suggested Answers to Discussion Topics, Chapter 2, Neurobiologic Theories and Psychopharmacology

Suggested Answers to Discussion Topics	Learning Objective(s)
1. Students' answers should include the following: • Typical antipsychotics are potent antagonists (blockers) of D_2, D_3, and D_4. They are effective in treating target symptoms but also produce many extrapyramidal side effects because of the blocking of the D_2 receptors. • Atypical antipsychotics such as clozapine (Clozaril) are relatively weak blockers of D_2, which may account for the lower incidence of extrapyramidal side effects; also atypical antipsychotics inhibit the reuptake of serotonin, as do some antidepressants, increasing their effectiveness in treating the depressive aspects of schizophrenia.	3, 4, 5
2. Students' answers should include the following: • Because of the serious side effects of antipsychotic medications, clients must be well educated regarding their medications, medication compliance, and side effects.	5
3. Students' answers should include the following: • It is important to be compliant with the medication regimen to prevent relapse. • Barriers to medication compliance include financial constraints, lack of transportation to pharmacy or physician's office, memory difficulties, and side effects of the prescribed medications.	7

Guided Lecture Notes, Chapter 2, Neurobiologic Theories and Psychopharmacology

Learning Objective 1. Discuss the structures, processes, and functions of the brain.

- Identify the following brain structures: the cerebrum, cerebellum, brain stem, and limbic system. (Refer to **PowerPoint slides 2 to 6 and Figures 2.1 and 2.2**.)
- Discuss the parts of the cerebrum and functions of each part. (Refer to **PowerPoint slide 3**.)
- Describe the location of the cerebellum. (Refer to **PowerPoint slides 4, 10, and 11**.)
- Explain the functions of the cerebellum. (Refer to **PowerPoint slide 4**.)
- Locate the components of the brain stem and limbic system. (Refer to **PowerPoint slides 5 and 6**.)
- Identify major neurotransmitters. (Refer to **PowerPoint slides 8 and 9.**)
- Discuss the actions of each neurotransmitter: dopamine, norepinephrine, epinephrine, serotonin, histamine, acetylcholine, glutamate, gamma-aminobutyric acid (GABA). (Refer to **PowerPoint slides 8 and 9, Figures 2.3 and 2.4, and Table 2.1**.)

Learning Objective 2. Identify pertinent teaching for clients and families about brain imaging techniques.

- Introduce the major brain imaging techniques: computed tomography (CT); magnetic resonance imaging (MRI); positron emission tomography (PET); single-photon emission computed tomography (SPECT). (Refer to **PowerPoint slide 12**.)
- Explain the role of each in the study of brain diseases and limitations of their use. (Refer to **PowerPoint slides 12, 15, and 16**, **Table 2.2, and Figures 2.5 and 2.6**.)

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- Review teaching related to CT, including that the person undergoing a CT must lie motionless on a stretcher-like table for about 20 to 40 minutes while passing through a tunnel-like "ring."
- Discuss that the person undergoing an MRI must lie in a small, closed chamber and remain motionless during the procedure, which takes about 45 minutes.
- Emphasize that clients with pacemakers or metal implants, such as heart valves or orthopedic devices, cannot undergo MRI.
- Inform that PET and SPECT are used primarily for research.

Learning Objective 3. Describe the current neurobiologic research and theories that are the basis for current psychopharmacologic treatment of mental disorders.

- Discuss genetic and hereditary patterns in explaining the etiology of mental illnesses. (Refer to **PowerPoint slide 13**.)
- Discuss evidence to support the role of psychoimmunology and viral infections in the etiology of mental illnesses. (Refer to **PowerPoint slide 13**.)

Learning Objective 4. Discuss the nurse's role in educating clients and families about current neurobiologic theories and medication management.

- Explain that regarding neurobiologic studies, the nurse is the one who informs about media reports regarding new research, helping to distinguish between facts and hypotheses. (Refer to **PowerPoint slide 14**.)
- Describe the nurse as the key person who can explain if or how new research may affect a client's treatment or prognosis. (Refer to **Figure: Keeping Clients Informed**.)
- Discuss that the nurse often informs clients regarding medication management in the following ways: types of side effects, methods of managing or avoiding unpleasant side effects, and maintaining the medication regimen.

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Learning Objective 5. Discuss the categories of drugs used to treat mental illness and their mechanisms of action, side effects, and special nursing considerations.

- Define psychopharmacology and psychotropic drugs.
- Review the significance of the terms: efficacy, potency, half-life, and approved use. (Refer to **PowerPoint slides 17 and 18**.)
- Review the principles that guide the use of medications to treat psychiatric disorders. (Refer to **PowerPoint slide 19**.)
- Discuss the uses of antipsychotics and their primary mechanism of action. (Refer to **PowerPoint slides 20 and 21**.)
- Differentiate conventional (traditional/typical) and second-generation (atypical) antipsychotics. (Refer to **PowerPoint slides 20, 21, 26, and 27, Table 2.3**.)
- Describe depot injections; identify the six antipsychotics available in this form and discuss the benefits of their use.
- Discuss the side effects associated with antipsychotics; discuss specifically extrapyramidal symptoms (EPS), including acute dystonia, pseudoparkinsonism, and akathisia; neuroleptic malignant syndrome (NMS); tardive dyskinesia (TD); and anticholinergic side effects. (Refer to **PowerPoint slides 22 and 23**.)
- List the drugs used to treat EPSs. (Refer to **PowerPoint slide 22 and Table 2.4**.)
- Review anticholinergic and other side effects associated with antipsychotic use, including second-generation antipsychotics. (Refer to **PowerPoint slides 22-24**)
- Differentiate the four main categories of antidepressants: tricyclic and related cyclic antidepressants, selective serotonin reuptake inhibitors (SSRIs), monoamine oxidase inhibitors (MAOIs), and other antidepressants. (Refer to **PowerPoint slide 29 and Table 2.5**.)
- Discuss the common uses and primary mechanism of action for each of the four categories. (Refer to **PowerPoint slides 28 and 30**.)
- Discuss the side effects associated with SSRIs. (Refer to **PowerPoint slide 31**.)

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- Discuss the side effects associated with cyclic antidepressants. (Refer to **PowerPoint slide 31**.)
- Discuss the side effects associated with MAOIs. (Refer to **PowerPoint slides 32, 40, and 41**.)
- Discuss the side effects associated with other antidepressants. (Refer to **PowerPoint slide 32**)
- Explain serotonin syndrome, which can result from taking an MAOI and an SSRI at the same time. (Refer to **PowerPoint slide 33**.)
- Differentiate the kinds of mood-stabilizing drugs; list their common uses and primary mechanism of action. (Refer to **PowerPoint slides 35 and 36**.)
- Discuss the side effects associated with lithium. (Refer to **PowerPoint slide 37**.)
- Define antianxiety (anxiolytic) drugs. (Refer to **PowerPoint slide 42**.)
- Differentiate between benzodiazepines and buspirone used for anxiety. List their common uses and primary mechanism of action. (Refer to **PowerPoint slide 42 and Table 2.6**.)
- Discuss the side effects associated with antianxiety drugs, including potential safety issues related to sedation. (Refer to **PowerPoint slide 43**.)
- Discuss indications for the use of stimulants and explain their primary mechanism of action. (Refer to **PowerPoint slides 45, 46, 50, and 51**.)
- Discuss the side effects associated with the stimulants. (Refer to **PowerPoint slide 47**.)
- Discuss the use of disulfiram in the treatment of alcoholism. (Refer to **PowerPoint slides 48 and 49**.)
- Explain the side effects associated with disulfiram.
- Review the signs and symptoms of a disulfiram reaction.

Learning Objective 6. Identify client responses that indicate treatment effectiveness.

- While addressing each drug category, explain the therapeutic outcome expected as a result of the mechanism of action. (Refer to **PowerPoint slides 21, 28, 30, 36, 42, 46, and 48**.)
- Explain common cultural differences that influence client responses to some psychotropic medications. (Refer to **PowerPoint slides 52 and 53**.)
- Identify that possible interactions can occur when herbal remedies are used by clients. (Refer to **PowerPoint slide 53**.)

Learning Objective 7. Discuss common barriers to maintaining the medication regimen.

- Discuss the nature of the illnesses treated by these medications, and identify symptoms that may contribute to difficulty maintaining the medication regimen.
- Explain that many clients and families do not realize that mental illness requires continuous medication management and follow-up.
- Clarify that when clients stop taking medication or take medication improperly, it is often the result of faulty thinking and reasoning, which is part of the illness. (Refer to **PowerPoint slide 54**.)
- During discussion of side effects of each category, consider the impact these symptoms have on client compliance. Emphasize the unpleasant nature of many side effects.

Learning Objective 8. Develop a teaching plan for clients and families for implementation of the prescribed therapeutic regimen.

- For each category of drug, review the mechanism of action and side effects, and then discuss teaching implications to reduce side effects and enhance treatment effectiveness.
- Discuss client teaching associated with antipsychotics. (Refer to **PowerPoint slide 25**.)

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    - Sugar-free fluids and candy to ease dry mouth
    - Avoidance of calorie-laden beverages and candy
    - Exercise, increased water, and fiber foods
    - Monitoring of sleepiness
    - Actions if a dose is missed
- Discuss client teaching associated with SSRIs. (Refer to **PowerPoint slide 34**.)
    - Drug first thing in morning
    - Actions if dose is missed
- Discuss client teaching associated with cyclic compounds. (Refer to **PowerPoint slide 34**.)
    - Drug at night
    - Action if dose is missed
- Discuss client teaching associated with MAOIs, including a list of foods to avoid. (Refer to **PowerPoint slide 34 and Box 2.1**.)
    - Foods to avoid
    - Avoidance of any other medication (including over-the-counter)
- Discuss client teaching associated with lithium. (Refer to **PowerPoint slide 39**.)
    - Periodic blood-level monitoring 12 hours after last dose
    - Drug with meals
- Discuss client teaching associated with antianxiety drugs, including potential safety issues related to sedation. (Refer to **PowerPoint slide 44**.)
    - Avoidance of alcohol
    - Safety measures
    - No abrupt discontinuation of benzodiazepines
- Discuss client teaching associated with the stimulants. (Refer to **PowerPoint slide 47**.)
    - Use of caffeine-free beverages
    - Safe storage out of the reach of children
    - Drug after meals

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- Discuss the use of disulfiram in the treatment of alcoholism, including essential areas to include in client teaching, including a comprehensive list of foods and products to avoid. (Refer to **PowerPoint slides 48 and 49**.)