

STUDENT LEARNING GUIDE TO ACCOMPANY

MOSBY'S *Pharmacology* IN *Nursing*

19th
EDITION



McKENRY • SALERNO

Student Learning Guide for

MOSBY'S

Pharmacology in Nursing

19th edition

Leda McKenry, RN, PhD

and

Evelyn Salerno, PharmD, RPh

Prepared by

Linda Wendling

Instructor

University of Missouri, St. Louis

St. Louis, Missouri



St. Louis Baltimore Berlin Boston Carlsbad Chicago London Madrid
Naples New York Philadelphia Sydney Tokyo Toronto



Dedicated to Publishing Excellence

Editor: Robin Carter
Project Coordinator: Gina Gay Wright
Developmental Editor: Linda Wendling
Manuscript Editor: Susan Warrington
Cover Design: Dave Zielenski
Project Manager: Mark Spann
Production Editor: Steve Hetager
Manufacturing Supervisor: Betty Richmod
Design and Layout: Ken Wendling

Copyright © 1995 by Mosby–Year Book
Mosby–Year Book, Inc.
11830 Westline Industrial Drive
St. Louis, MO 63146

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without prior written permission from the publisher. This material may be photocopied for course use if the student text *Mosby's Pharmacology in Nursing* is being used.

Printed in the United States of America.
Composition by Wordbench
ISBN-0-8151-5910-2

95 96 97 98 99 / 9 8 7 6 5 4 3 2

Chapter 1 Orientation to Pharmacology

1. A drug is any substance used in the _____, _____, _____, or _____ of a disease or condition.

2. OTC, or _____, drugs may be purchased _____.

3. The study of hereditary influences on a person's response to a drug is called _____.

4. Pharmacokinetics refers to how, within the body, a drug is _____, _____, _____, _____, and _____.

5. Match the person or groups to the historical event that best relates to them.

_____ Asclepius

a. administered digitalis for heart disease

_____ Religious orders

b. formulated first set of drug standards

_____ Arabs

c. wrote first pharmacopeia

_____ Valerius Cordus

d. Greek god of healing

_____ Withering

e. developed small pox vaccine

_____ Jenner

f. aided sick and needy with good food and rest

_____ Banting

g. discovered insulin

6. Nurses must safeguard patients from drug-induced harm by keeping their _____ current, questioning a drug _____ that is confusing, and using correct _____ and _____.

7. Using your text, the Physician's Desk Reference, and the Hospital Formulary, look up the following drugs and give their official, generic, trade, and chemical names.

Aspirin:

Chlorothiazide:

Diazepam:

Ethacrynic acid:

8. List the four steps of the nursing process.

Chapter 2 Legal and Ethical Aspects of Medication Administration

1. Match the law/act to the definition that best describes it.

- | | |
|--|---|
| _____ Pure Food and Drug Act (1906) | a. increased research into, prevention of, and treatment for drug abuse |
| _____ Sherley Amendment (1912) | b. first federal law to protect the public from mislabeled drugs |
| _____ Food, Drug and Cosmetic Act (1938) | c. related to prescription of drugs and refills |
| _____ Durham-Humphrey Amendment (1952) | d. prevented marketing new drugs before they were properly tested |
| _____ Controlled Substances Act (1970) | e. prohibited the use of fraudulent therapeutic claims |

2. Indicate whether the following are True (T) or False (F).

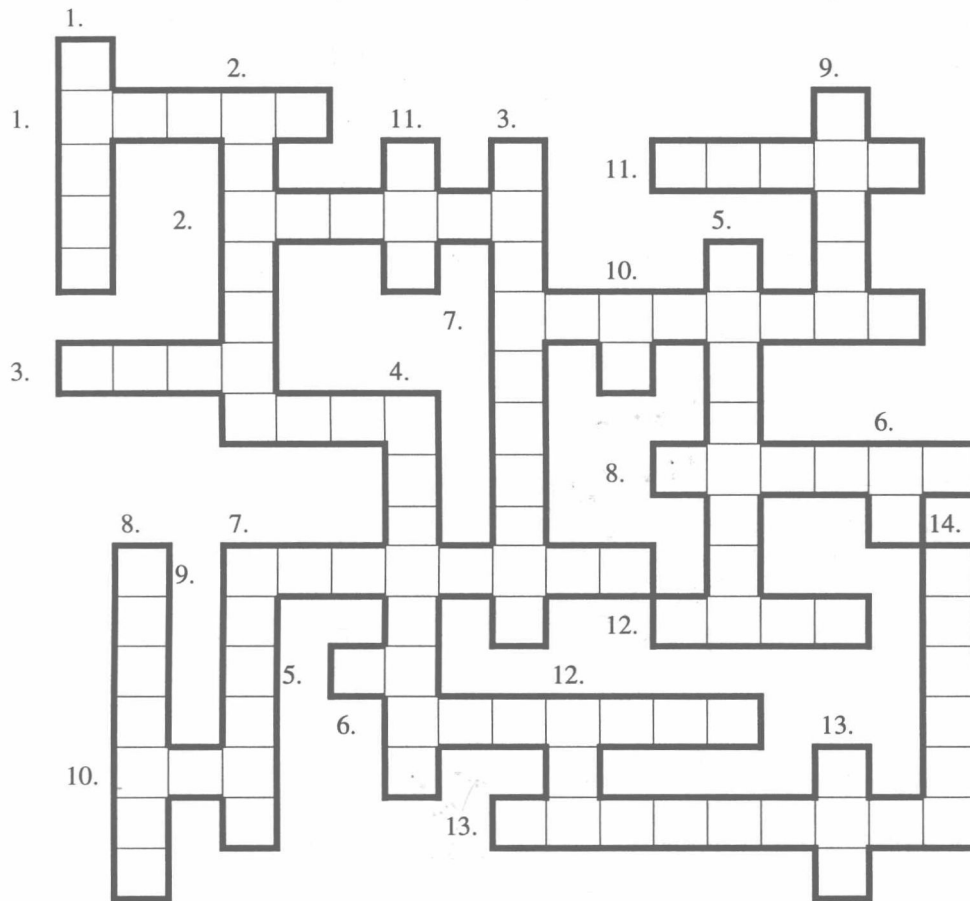
- _____ A category X drug indicates that the drug causes fetal abnormalities.
- _____ A category B drug indicates that it is safe to give the drug to a pregnant woman.
- _____ A schedule V drug indicates that a drug may be sold without a prescription.
- _____ A category D drug indicates that a drug may have possible risk to a human fetus.

3. List three conditions that should be present before a nurse can legally administer a medication.

4. The nurse's responsibilities to clients as defined by various nurses associations' codes of ethics are to

_____, _____, _____, and _____; nursing ethics are based on, among other things, the principles of _____ and _____.

Chapter 3 Principles of Drug Action



Across

1. A way to administer medications
2. Liquid part of the blood
3. A factor affecting the dose of medications for a child
4. Area in which inhalants are absorbed
5. The abbreviation for therapeutic index
6. A form in which a drug can be taken orally
7. Objective and subjective effects of a drug
8. Environment which increases the absorption of aspirin
9. Movement of a drug in the body is called pharmac-
10. A factor affecting the effects of a drug
11. Organic substance insoluble in water
12. The fundamental unit of all living organisms
13. Term for the process of ridding the body of a drug

Down

1. Another term for medications
2. A route in which medications are applied to the skin
3. Adverse reaction produced unintentionally
4. Factors we are born with that can affect drug effects
5. The smallest amount of a substance which can exist alone
6. The abbreviation for a route in which a drug is instilled in muscle
7. An organ which can eliminate drugs
8. An organ which aids in absorption of a drug
9. Various places where drugs can be injected
10. Abbreviation for a route in which a drug is instilled in tissue
11. Abbreviation for aspirin
12. A factor affecting the metabolism of a drug
13. A form in which a drug can be applied to the skin
14. Pharmacodynamics of a drug

Chapters 4 & 5 Assessment, Nursing Diagnosis, Planning, Implementation, and Evaluation

1. For each of the items listed below, indicate what part of the nursing process describes this nursing activity. Write an **A** for assessment, **D** for diagnosis, **P** for planning, **I** for implementation, and **E** for evaluation.

_____ chief complaint of the patient

_____ checking arm band or ID tag before drug administration

_____ nausea due to chemotherapy

_____ recording secondary effects

_____ noncompliance with prescribed steroid therapy

_____ monitoring therapeutic response to a drug

_____ history of allergy

_____ behavioral objectives for the client

_____ instillation of eye drops

_____ calculating flow rate for oxygen therapy

_____ vital signs

_____ observing a client demonstrate proper self-medication with insulin

_____ conversion of an apothecary measure to metric while transcribing a medication order

Explain the following drug orders. Classify the order as a routine order (**RO**), stat order (**Stat**), prn order (**prn**), or single order (**S**).

- | Classification | Explanation of Drug Order |
|--|---------------------------|
| 2. _____ Demerol 100 mg IM stat _____ | |
| 3. _____ MOM 30 ml po h.s. _____ | |
| 4. _____ Seconal 100 mg po h.s. p.r.n. _____ | |
| 5. _____ Lanoxin 0.25 mg po qd _____ | |
| 6. _____ Dilantin 100 mg po _____ | |
| 7. Mr. Jones develops an elevated temperature. The doctor orders "ASA gr x po stat." Identify the following client reactions as either a therapeutic response to the medication (T), an allergic reaction (A), or a side effect/adverse reaction (S). | |
| _____ Mr. Jones develops shortness of breath. | |
| _____ Temperature returns to normal. | |
| _____ Mr. Jones complains of stomach ache. | |
| 8. For collaborative problems, the nurse's responsibility is to _____, _____, and _____. | |

Chapter 5 Implementation and Evaluation

1. The following abbreviations are commonly used in relation to medication administration. Match the definition to the term it best describes.

_____ ac	a. before meals	i. 8:00 AM, Noon, 4:00 PM, 8:00 PM
_____ bid	b. after meals	j. 9:00 AM daily
_____ gtt	c. drops	k. 9:00 AM, 1:00 PM, 6:00 PM
_____ os	d. ointment	l. each eye
_____ qid	e. right eye	
_____ tid	f. by mouth	
_____ qd	g. two times per day	
_____ OU	h. three times per day	

- | | |
|--|------------------------------|
| 2. 1T = _____ oz = _____ dram = _____ ml | 9. 1 mg = _____ micrograms |
| 3. 1 glassful = _____ ml = _____ oz | 10. _____ oz = 1 lb |
| 4. 3t = _____ gtts | 11. 120 grains = _____ drams |
| 5. 0.5 gm = _____ mg | 12. 164 kg = _____ lb |
| 6. 2000 ml = _____ L | 13. 64 gal = _____ L |
| 7. _____ drams = gr ix | 14. 6 cm = _____ m |
| 8. 100 mg = _____ gm | |

Calculate the following problems for parenteral dosages.

15. Desired: Morphine sulfate 10 mg
Available: Morphine sulfate 16 mg/ml
16. Desired: Penicillin G 400,000 U IM
Available: Penicillin G 1,000,000 U in 5 ml
17. Desired: Atropine sulfate gr 1/150
Available: Atropine sulfate 0.6 mg/ml
18. Infuse 500 ml blood in 2 hours. Administration set has a drop factor of 10. How many drops/min?
19. Client was given 1000 ml NS in 5 hours. What was the rate of administration (flow rate) if drop factor was 15?
20. No sustained-action drug form should be _____ or vigorously mixed with food for administration.
21. Amber colored containers protect some medications against _____ by light.
22. Narcotic drugs must be kept in a _____, and _____ at the end of a shift.

Chapter 6 Cultural and Psychologic Aspects of Drug Therapy

1. List the cultural influences affecting the use of over-the-counter drugs.

2. Barriers to health care for many minority group members relate to _____ and _____.

3. Two groups of drugs with significant differences (among racial and ethnic groups) are _____ and _____.

4. Match the name of the plant to the toxic symptoms it produces.

_____ mountain tobacco	a. hemorrhage
_____ belladonna	b. liver and kidney damage
_____ buckeyes	c. severe muscle weakness
_____ periwinkle	d. blurred vision and hallucinations

5. Using your text, look up the following medications and classify them as to whether they are a controlled substance (CS), prescription (PD), or over-the-counter (OTC). Note: Some medications may have more than one classification, based on dosage.

_____ diazepam
_____ phenobarbital
_____ Mylanta
_____ ampicillin
_____ Orthonovum
_____ Benadryl
_____ Metamucil
_____ Ceclor
_____ Tussi-Organidin
_____ Colace
_____ Robitussin-AC
_____ Theo-Dur
_____ ibuprofen

Chapter 7 Maternal and Child Drug Therapy

1. Mutagenic means to cause _____.
2. Teratogenic means to cause _____.
3. Phocomelia is _____.
4. Body surface area refers to _____.
5. List the effects on the fetus' central nervous system of heavy alcohol use by the childbearing client.
6. Common substances that are suspected to cause adverse reactions in the fetus are _____, _____, and _____.
7. Describe how ear drops should be administered to a child.

Calculate the following dosages for children using the different rules and the nomogram for determining body surface area for children.

Adult Dose	Data for Children			Clark	BSA
	Age	Weight (lb)	Height (in)		
8. Atropine sulfate gr 1.150	18 mo	25	32	_____	_____
9. Aminophylline 0.5 gm	6 yr	38	42	_____	_____
10. Gentamycin 80 mg	22 mo	28	33	_____	_____

Chapter 8 Drug Therapy for the Elderly

Define the following term.

1. Polypharmacy _____

2. List physiological factors affecting pharmacokinetics in the elderly.

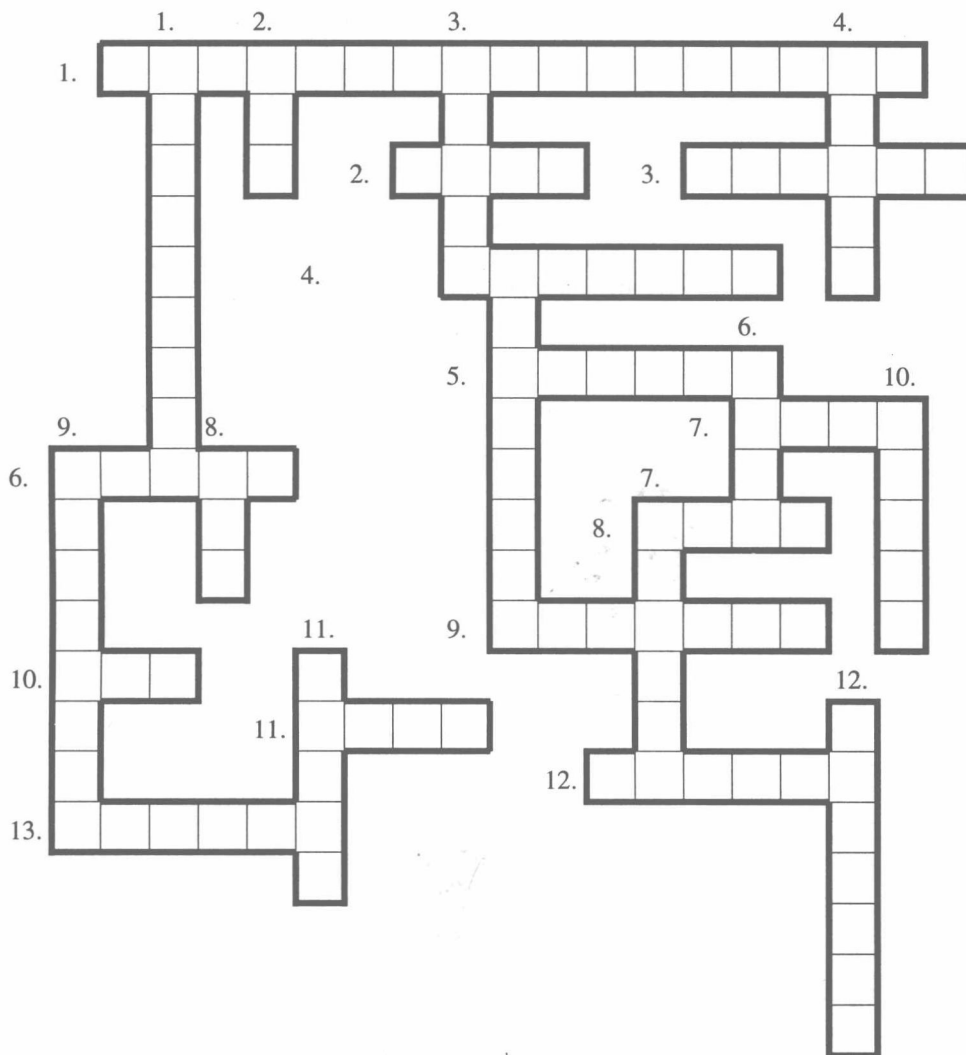
3. List some factors that may complicate drug therapy in the elderly.

4. How can a nurse reduce or eliminate the potentially adverse risk factors associated with various drug regimens?

5. The prescriber should _____ and _____ drug therapy for the client.

6. What steps should the nurse take in educating the client regarding medication administration?

Chapter 9 Substance Misuse and Abuse



Across

1. Emotional reliance on a drug
2. Initials for federal agency that monitors data on drug abuse
3. Indiscriminate use of drugs
4. Form of cannabis
5. Sign of drug intoxication with barbiturates
6. Amphetamines are often called pep _____
7. Possible result of acute overdose of opiates
8. Alcoholic beverage often abused by teenagers
9. Related to the belladonna alkaloids
10. Phencyclidine
11. Person can do this if he or she stops abusing
12. Frequently abused OTC drug
13. Pinpoint pupil

Down

1. Combination of heroin and cocaine
2. Few drugs without these effects are abused
3. Severe toxicity can lead to this
4. Many _____ remedies contain alcohol
5. Often abused by young athletes
6. Adverse effect of steroid use by females
7. An alcoholic beverage
8. A hallucinogenic drug
9. Continuing erections
10. Drug use leading to dependence
11. Effect of IV injection of amphetamines
12. Effect of cocaine

Chapter 10 Client Education for Self-Administration of Medication

1. Compliance is the degree to which clients _____, _____, and _____.
2. Knowledge deficit is the state in which _____.
3. Noncompliance is the state in which _____.
4. Therapeutic seeding is a teaching technique of _____, _____, and _____.
5. List factors which can foster noncompliance or ineffective management of the therapeutic regimen.

6. Write two measurable goals for a client learning to self-administer medications.

7. Match Erickson's stage of development to tasks to be accomplished.

_____ infant	a. identity vs role confusion
_____ toddler	b. trust vs mistrust
_____ preschooler	c. generativity vs stagnation
_____ adolescent	d. initiative vs guilt
_____ middle-aged adult	e. autonomy vs shame
_____ older adult	f. integrity vs despair

Chapter 11 Overview of the Central Nervous System

1. The blood-brain barrier is a covering of _____ (called _____) that encircle _____.
2. The extrapyramidal system is _____; it is associated with _____.
3. The primary functions of the reticular activating system are _____, _____, and _____.
4. The best known chemical transmitter of nerve impulses is _____.
5. Endorphins suppress _____.
6. An increase in catecholamines and serotonin causes _____.
7. The _____ controls memory storage and motor functions.
8. The _____ registers such sensations as pain and temperature.
9. The hypothalamus is a major link between the _____ and the _____.
10. The midbrain, pons, and medulla oblongata compose the _____.
11. The two major cell types in the CNS are _____ and _____.
12. List three catecholamines and their effects on the central nervous system.

Chapter 12 Analgesics and Antagonists

1. Somatic pain is _____, _____, and/or _____ in nature.
2. An analgesic is a _____ medication.
3. Gate control theory attempts to explain _____.
4. Opioid refers to _____.
5. Neuropathic pain is caused by _____, not _____.
6. Women are usually _____ for pain.
7. Morphine is indicated for the treatment of _____.
8. Naloxone hydrochloride is a(n) _____; that is, it can reverse _____.
9. Butorphanol tartrate is indicated to treat _____ and as an _____.
10. List some of the more serious adverse reactions reported with morphine.
11. What is the recommended treatment for aspirin overdose?
12. Describe briefly the three steps recommended for pain management in cancer.

Chapter 13 Anesthetics

1. The two major categories of anesthesia are general and _____ or _____.
2. The advantage of balanced anesthesia is _____.
3. Malignant hyperthermia is a dangerous adverse effect of _____, _____ anesthetics.
4. Dissociative anesthesia produces _____ and _____ but not _____.
5. Match the physiological effect to the stage of anesthesia in which it occurs.

_____ vivid dreams

a. analgesia

_____ numbness

b. excitement

_____ rapid eye movement

c. surgical anesthesia

_____ lowered body temperature

_____ exaggerated reflexes

_____ laughter

_____ shallow respiration

6. Develop a nursing diagnosis, goal, and interventions for an elderly client receiving a general anesthetic.

Chapter 14 Antianxiety, Sedative, and Hypnotic Drugs

1. Antianxiety or anxiolytic agents are used to _____.
2. Sedatives and hypnotics are _____ drugs. The major difference between them is the degree of _____ induced.
3. REM (rapid eye movement) sleep is also referred to as _____ or _____ sleep.
4. Insomnia is a frequent concern of _____.
5. List data necessary to collect from a client receiving sedatives/hypnotics during the assessment phase of the nursing process.
6. Develop a care plan (nursing diagnosis, goal, and interventions) for a pediatric client receiving an antianxiety drug.
7. What are nonpharmacologic approaches the client may take to try to resolve insomnia?