

**SOLUTIONS MANUAL**



# Medical Dosage Calculations

Learn to calculate dosages safely and accurately!

**9<sup>th</sup>**  
Edition

Olsen • Giangrosso • Shrimpton • Dillon



# **Instructor's Resource Manual with Test Bank for *Medical Dosage Calculations***

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## Textbook Overview

Each chapter in *Medical Dosage Calculations* contains fully worked, illustrative examples that students should complete on their own or with the aid of the instructor. There is a handy pull-out card with formulas, equivalences, and other ready information for the students.

In the textbook, the following can be found at the end of each chapter:

- **Try These for Practice** questions (5) that summarize the most important concepts in the chapter. These problems can be done by the student or the instructor in class or they can be assigned as homework. Fully worked answers are found in Appendix A at the back of the textbook.
- **Exercises** (usually 20) that can be assigned for classwork or homework. Fully worked answers are found in Appendix A at the back of the textbook.
- **Additional Exercises** (usually 20) that can be assigned for classwork or homework. Answers are not in the textbook, but they are in this manual. These are particularly suitable for homework where the instructor does not want the students to be able to check their answers.
- **Cumulative Review Exercises** (15) begin in Chapter 4 and spiral back to content of earlier chapters. Answers are found in Appendix A at the back of the textbook.
- **Case Studies** begin in Chapter 6. Answers are found in Appendix A at the back of the textbook.

## Additional Instructional Resources

- **Instructor Resource CD-ROM:** This CD-ROM provides text slides and illustrations, in PowerPoint for use in classroom lectures. It also contains an electronic test bank, animations, and video clips from the Student CD-ROM. This supplement is available to faculty upon adoption of textbook.
- **OneKey Online Course Management Systems:** The online course management solutions feature interactive modules, electronic test bank, PowerPoint slides, and assessments. For more information about adopting an online course management system, please contact, your Prentice Hall Health Sales Representative or go online to the appropriate website below

Blackboard: <http://cms.prenhall.com/webcut/index.html>

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## Chapter 2 Safe and Accurate Drug Administration

### Chapter Overview

Chapter 2 is a general introduction to the drug administration process. It introduces the student to the role of the person who administers patient medication. The student will begin to develop a vocabulary of terms necessary to understand pertinent information about drugs and their administration. This will help the student to become comfortable in the responsibilities of administering drugs safely. Safety, documentation, and accuracy are stressed throughout the text. Recent Joint Commission on Accreditation of Healthcare Organizations (JCAHO) recommendations are included. The “Six Rights” of medication administration are discussed extensively. The student is shown how to interpret Drug Prescriptions, Medication Orders, Medication Administration Records (MAR), Drug Labels, and Package Inserts. Military time is introduced.

### Instructor’s Notes

- The PowerPoint slides are particularly useful in presenting the material in this chapter. Slides of Drug Prescriptions, Medication Orders, Medication Administration Records, Drug Labels, and Package Inserts can be projected on a screen as the instructor explains their various components.

- Students who have learned this material in other courses may review this chapter quickly.
- Discuss regarding the abbreviations to be avoided. JCAHO's "Do Not Use List".
- Interpreting a drug order is very important for the rest of the course and should be stressed.
- If the Internet is accessible in the classroom, pharmaceutical company Web sites can be used to view actual package inserts for drugs.

### Key Terms

b.i.d.  
 body surface area (BSA)  
 extended release  
 generic name  
 intracardiac (IC)  
 intradermal (ID)  
 intramuscular (IM)  
 intravenous (IV)  
 medication administration record (MAR)  
 medication order  
 meters squared (m<sup>2</sup>)  
 military time  
 national drug code (NDC)  
 nomogram  
 oral (PO)  
 package insert  
 pharmacist  
*Physician's Desk Reference (PDR)*  
 prescriber  
 prescription  
 prn  
 registration symbol ®  
 q.i.d.  
 stat  
 subcutaneous (subcut)  
 sustained release (SR)  
 t.i.d.  
 trade name  
 trademark ™  
 United States Pharmacopoeia (USP)

### Answers to Additional Exercises

1. hydroxyzine hydrochloride
2. Geodon
3. Quinidine gluconate
4. orally
5. Atarax

Name of Drug	Dose	Route	Time	Date Started	Exp. Date
--------------	------	-------	------	--------------	-----------

Celebrex	100 mg	PO	8 A.M., 8 P.M.	12/7	12/18
Flomax	0.4 mg	PO	5 P.M.	12/7	12/13
Ditropan	5 mg	PO	8 A.M.	12/7	12/13
Zoloft	0.1 g	PO	8 A.M.	12/8	12/14
Seroquel	100 mg	PO	9 P.M.	12/7	12/13
Valium	10 mg	PO	9 P.M.	12/9	12/16
fluconazole	400 mg	IV	8 A.M., 8 P.M.	12/8	12/15

6. (a) Celebrex (b) 4 (c) fluconazole  
 (d) one, Flomax (e) 8 A.M. (f) Robert Graham  
 (g) Seroquel (h) Mae Ling
7. (a) transdermal (b) 21  
 (c) nitroglycerin, Diabinese, Monopril (d) furosemide  
 (e) Cefaclor (f) Diabinese
8. (a) atorvastatin calcium (b) tablet  
 (c) standard cholesterol-lowering diet (d) 20 mg once daily

### Chapter Examination Questions

Study the drug labels shown in •Figure 2.1 and supply the following information.

- Write the trade name for dofetilide.  
\_\_\_\_\_
- Write the trade name for sildenafil citrate.  
\_\_\_\_\_
- Give the trade and generic names of the drug that can be administered intravenously.  
\_\_\_\_\_
- What is the route of administration for budesonide?  
\_\_\_\_\_
- Write the trade name for the drug whose NDC number is 0006027531.  
\_\_\_\_\_
- Study the MAR in •Figure 2.2. Fill in the following chart and answer the questions.

Name of drug	Dose	Route of administration	Time of administration	Date started	Date discontinued
Isoproterenol					
Procardia					
indomethacin					
Digoxin					
Diuril					
Carafate					

- Identify the drugs administered on July 18, 2008.  
\_\_\_\_\_
- Identify the drugs administered PO on July 20, 2008.  
\_\_\_\_\_
- How many drugs were administered at 9 P.M. on July 20, 2008?  
\_\_\_\_\_

- (d) Which drugs were administered daily for 6 consecutive days?  
\_\_\_\_\_
- (e) Who administered the indomethacin at 5:00 P.M. on July 20?  
\_\_\_\_\_
- (f) Identify the drug for which the patient received 0.25 mg.  
\_\_\_\_\_
- (g) How many doses of Carafate were received by Mr. Johnson on July 22?  
\_\_\_\_\_
7. Study the physician's order sheet in •Figure 2.3, then answer the following questions.
- (a) What is the dose of Declomycin?  
\_\_\_\_\_
- (b) How many times a day do you administer vitamin C to Mr. Sanchez?  
\_\_\_\_\_
- (c) If the last dose of Declomycin was given at 12 noon, at what time would you administer the next dose?  
\_\_\_\_\_
- (d) How many milliliters of Exmolol will Mr. Sanchez receive in 60 min?  
\_\_\_\_\_
- (e) What was the patient's date of admission?  
\_\_\_\_\_
8. Use the package excerpt shown in •Figure 2.4 to answer the following questions.
- (a) What is the generic name of the drug?  
\_\_\_\_\_
- (b) What is the usual daily dose for an adult?  
\_\_\_\_\_
- (c) What is the initial oral dose of Declomycin for patients with gonorrhea?  
\_\_\_\_\_
- (d) How is this drug supplied?  
\_\_\_\_\_

### Answers to Chapter Examination Questions

1. Tikosyn
2. Viagra
3. trade name: Cipro; generic name: ciprofloxacin
4. inhalation
5. Singulair
6. (a) Isoproterenol, Procardia, indomethacin, digoxin, Diuril  
(b) Procardia, indomethacin, digoxin, Diuril, Carafate  
(c) one drug, Carafate  
(d) digoxin, Diuril  
(e) Leon Ablon  
(f) digoxin  
(g) 4 doses of Carafate

Name of Drug	Dose	Route of administration	Time of administration	Date started	Date discontinued
Isoproterenol	15 mg	sublingual	t.i.d. 9, 1, 5	7/18/08	7/21/08
Procardia	20 mg	PO (by mouth)	b.i.d. 9, 5	7/18/08	7/21/08
indomethacin	25 mg	PO	b.i.d. 9, 5	7/18/08	7/21/08
digoxin	0.25 mg	PO	daily 9 A.M.	7/18/08	7/23/08
Diuril	500 mg	PO	daily 9 A.M.	7/18/08	7/23/08
Carafate	1 g	PO	q.i.d. 9, 1, 5, 9	7/20/08	7/22/08

7. (a) 300 mg  
 (b) twice a day  
 (c) 6 P.M.  
 (d) 15 mL  
 (e) 10/12/08
8. (a) demeclocycline hydrochloride  
 (b) four divided doses of 150 mg each or two divided doses of 300 mg each  
 (c) initial oral dose of 600 mg Declomycin for gonorrhea  
 (d) 150 mg capsules

● **Figure 2.1**

**Drug labels for Questions 1–5.**

((a, d) Reg. Trademark of Pfizer Inc. Reproduced with permission. (b) Courtesy of AstraZeneca Pharmaceuticals LP. (c) The Labels for the products Singulair 5 mg are reproduced with permission of Merck & Co., Inc., copyright owner. (e) Reproduced with the permission of Bayer Pharmaceuticals Corporation.)

● **Figure 2.2**

**Medication administration record.**

● **Figure 2.3**

**Physician's order sheet.**

● **Figure 2.4**

**Package insert (excerpt) for Declomycin.**

(Courtesy of Esi Lederle, a Business unit of Wyeth Pharmaceuticals, Philadelphia, PA.)