PRENTICE HALL'S

LEARNING

SYSTEM

Series

STUDENT

LECTURE

NOTEBOOK

AND STUDY COMPANION

Student Lecture Notebook and Study Companion

Martini

Fundamentals of Anatomy and Physiology, 5/e

To the Student

This Student Lecture Notebook and Study Companion is designed to be a valuable resource that will help you do your best in this anatomy and physiology course.

- Each chapter begins with a Chapter Outline and Chapter Objectives from the text. If your study focuses on this outline and understanding and being able to answer the chapter objectives, you will most likely be prepared for the course tests. Additional help—including self-grading quizzes—is available on the web site that accompanies your text.
- Key illustrations from the textbook and the Instructor's Transparency Set are reproduced in this notebook. Because you won't have to redraw the art in class, you can focus your attention on the instructor's lecture and take your notes in this book. Leave all of your notes together or remove them and organize them by chapter with your SYSTEM EDITION text.

Contents

CHAPTER

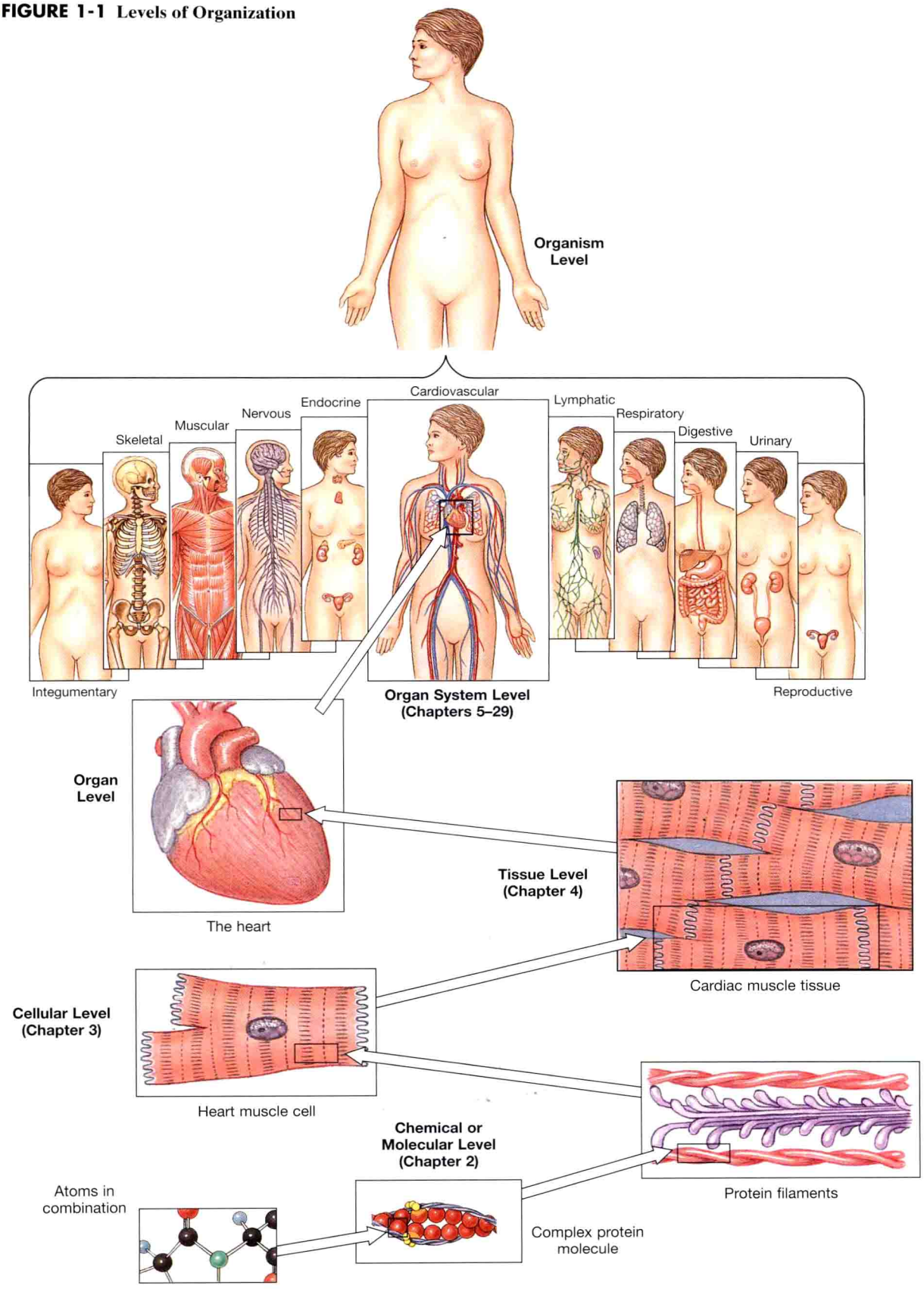
1 An Introduction to Anatomy and Physiology

CHAPTER OUTLINE

CHAPTER OBJECTIVES

1. Describe the basic functions of organisms.
2. Define anatomy and physiology, and describe various specialties of each discipline.
3. Identify the major levels of organization in organisms, from the simplest to the most complex.
4. Identify the organ systems of the human body and the major components of each system.
5. Explain the concept of homeostasis and its significance for organisms.
6. Describe how positive feedback and negative feedback are involved in homeostatic regulation.
7. Use anatomical terms to describe body sections, body regions, and relative positions.
8. Identify the major body cavities and their subdivisions.

•FIGURE 1-1 Levels of Organization



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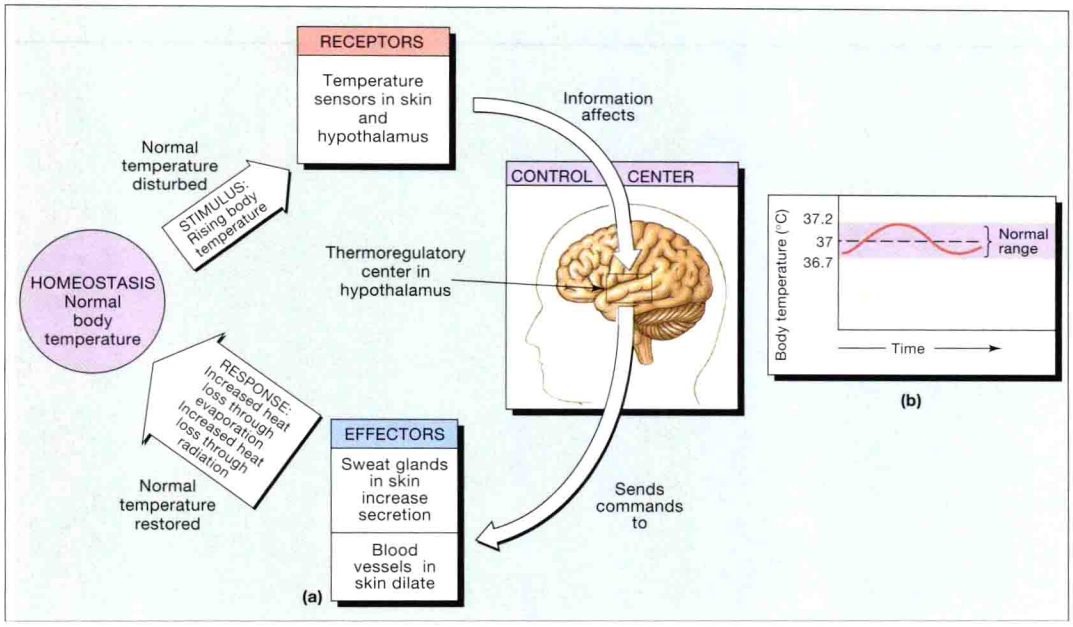
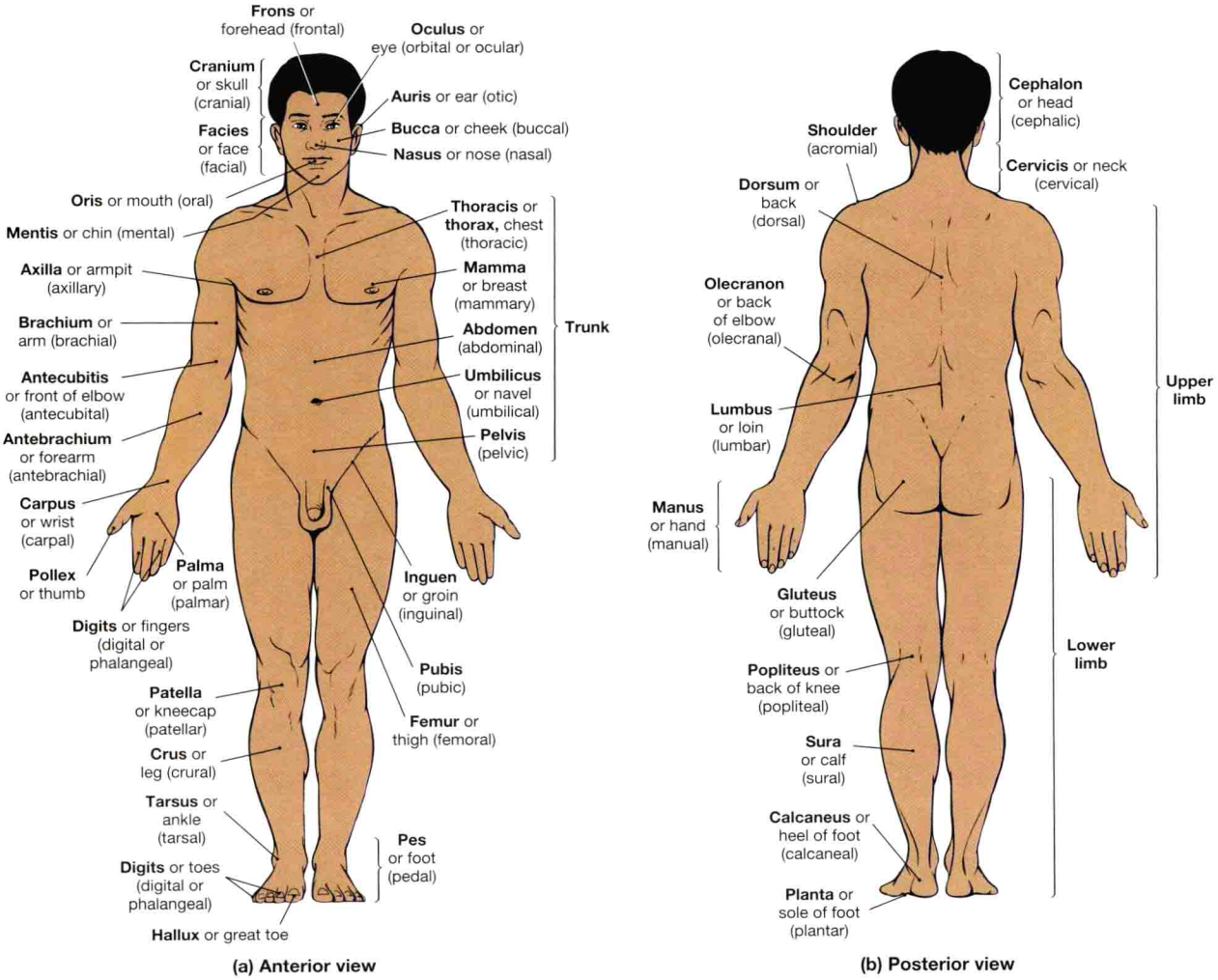


•FIGURE 1-4 Negative Feedback: The Control of Body Temperature



•FIGURE 1-6 Anatomical Landmarks

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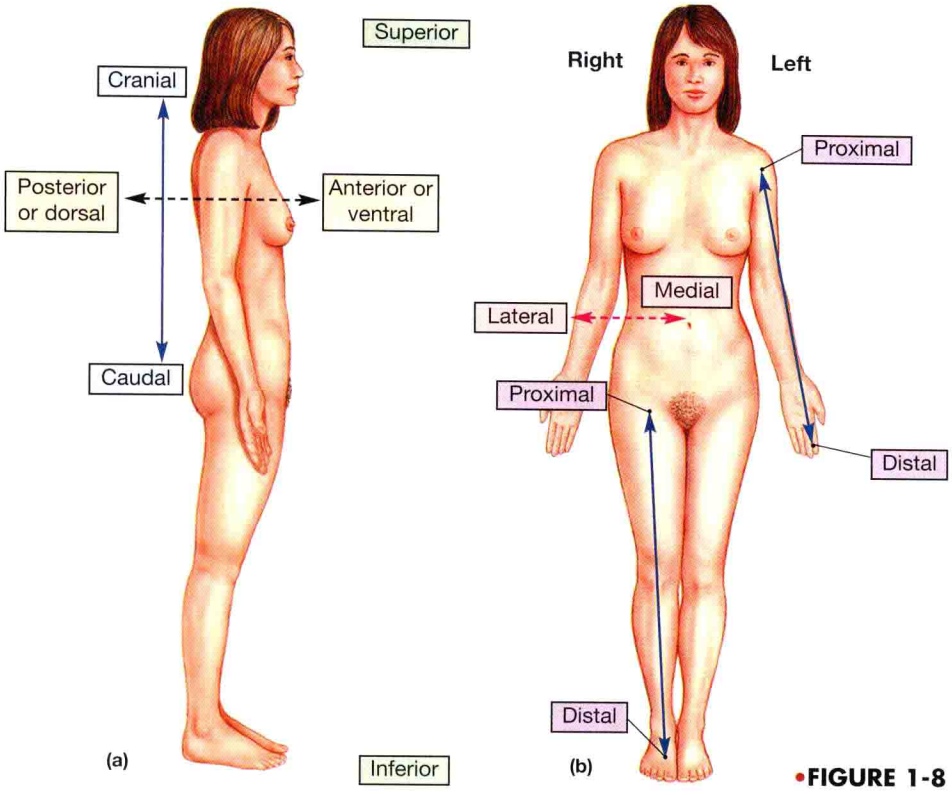
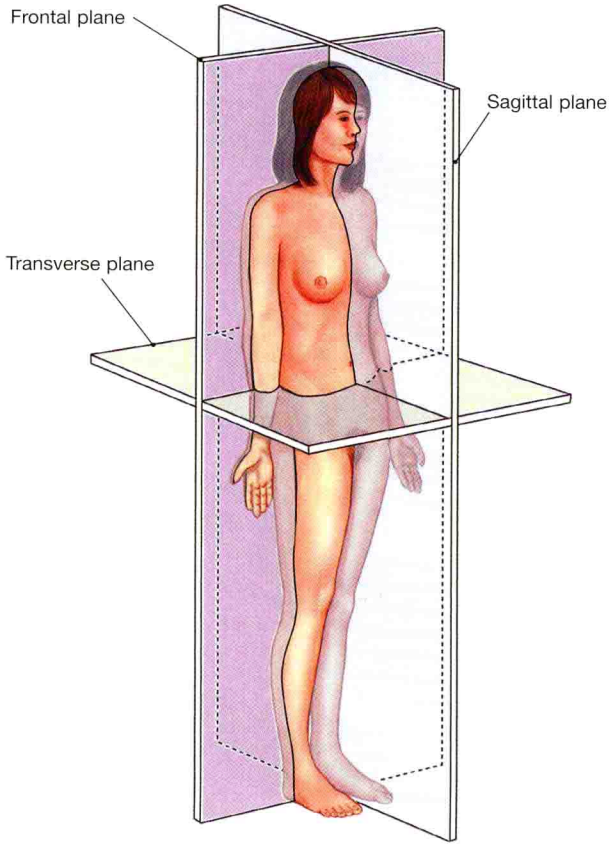


•**FIGURE 1-8** Directional References



•**FIGURE 1-9** Planes of Section

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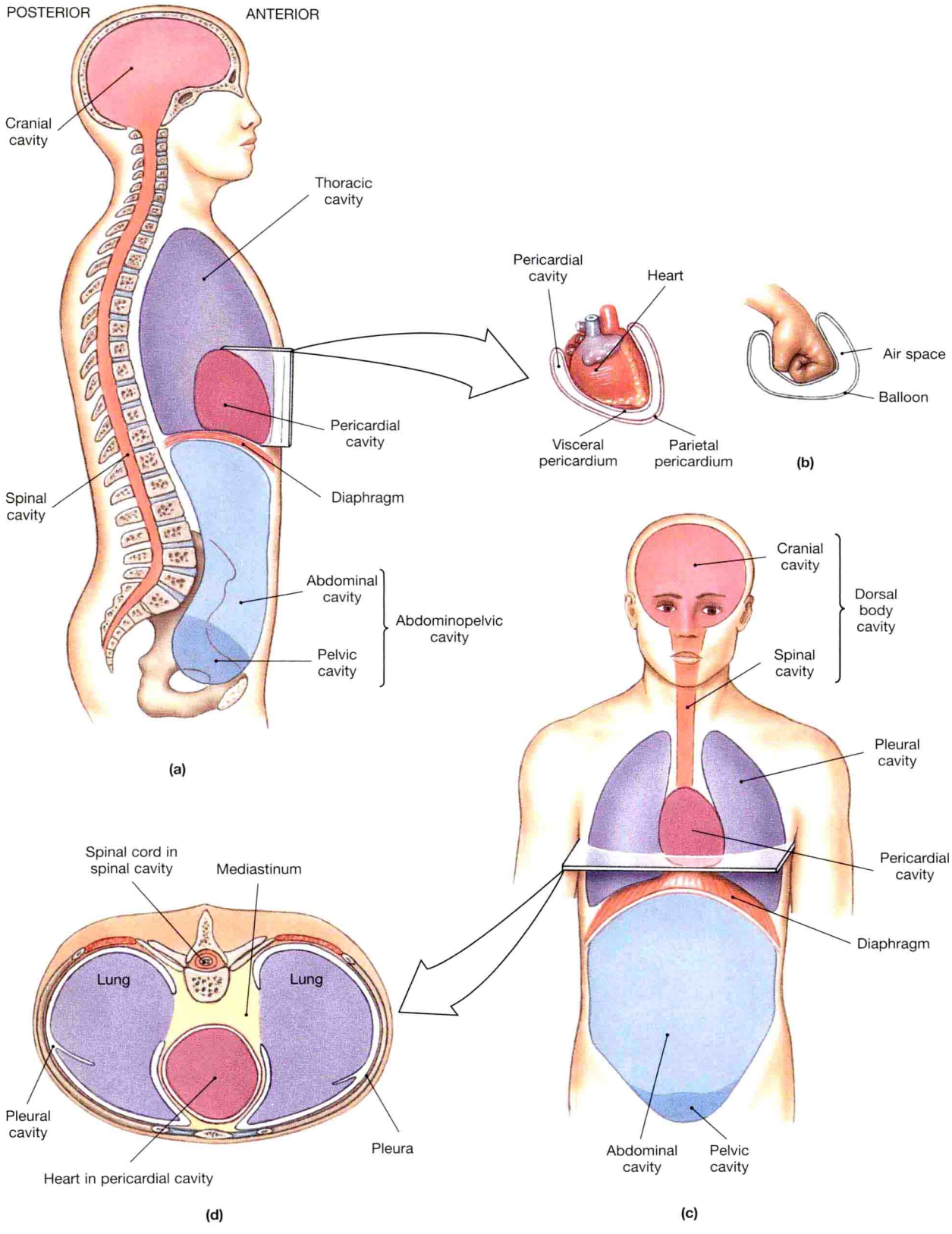

•**FIGURE 1-11** Body Cavities

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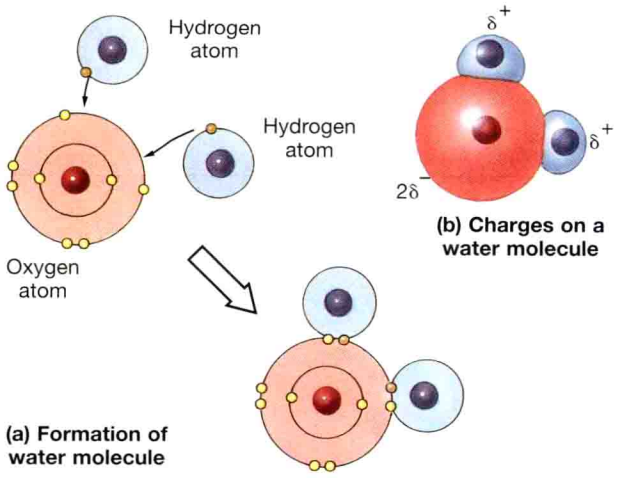
CHAPTER

2 The Chemical Level of Organization

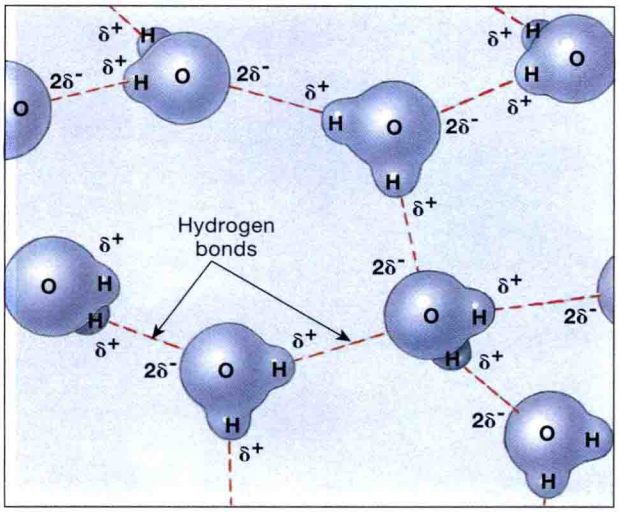
CHAPTER OUTLINE

CHAPTER OBJECTIVES

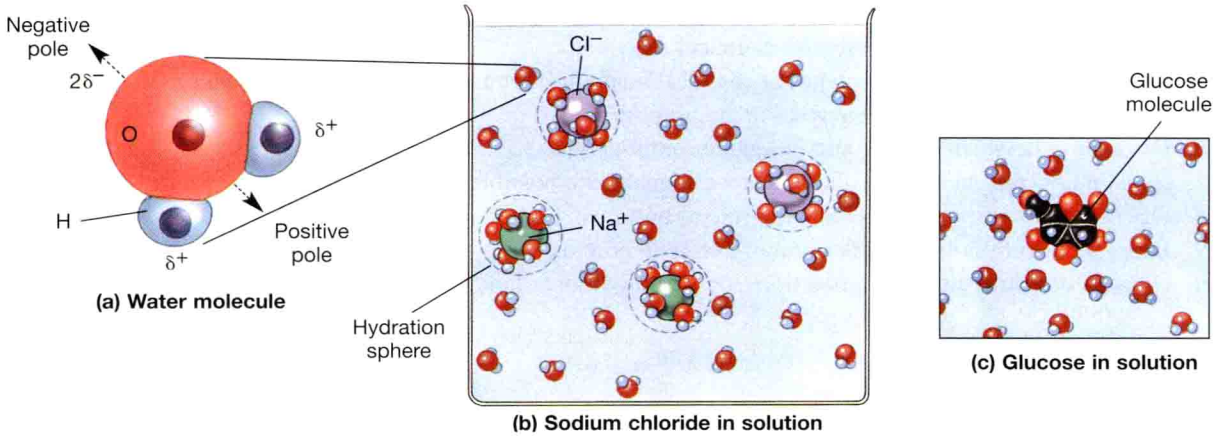
1. Describe an atom and how atomic structure affects interactions between atoms.
2. Compare the ways in which atoms combine to form molecules and compounds.
3. Use chemical notation to symbolize chemical reactions.
4. Distinguish among the major types of chemical reactions that are important for studying physiology.
5. Describe the crucial role of enzymes in metabolism.
6. Distinguish between organic and inorganic compounds.
7. Explain how the chemical properties of water make life possible.
8. Discuss the importance of pH and the role of buffers in body fluids.
9. Describe the physiological roles of inorganic compounds.
10. Discuss the structures and functions of carbohydrates, lipids, proteins, nucleic acids, and high-energy compounds.



•FIGURE 2-5 Polar Covalent Bonds and the Structure of Water



•FIGURE 2-6 Hydrogen Bonds



•FIGURE 2-8 Water Molecules and Solutions

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