

ESSENTIALS OF MEDICAL LANGUAGE

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FIRST EDITION

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Graw
Hill



Essentials of Medical Language

First Edition

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Review Copy



ESSENTIALS OF MEDICAL LANGUAGE, FIRST EDITION

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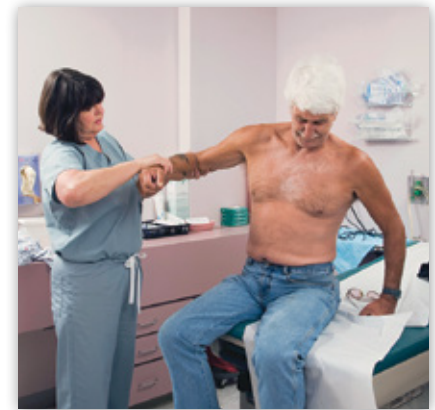
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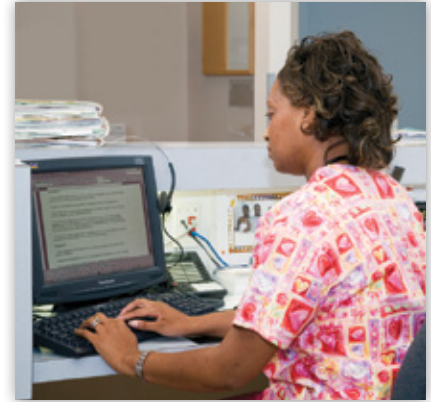
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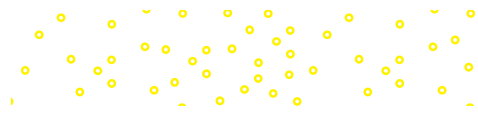
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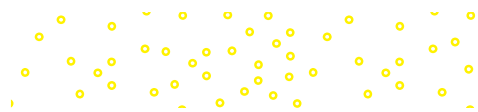
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Essentials of Medical Language

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Learning the Essentials of Medical Language

Welcome

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CASE REPORT W.1

You are . . .

. . . a student preparing for a career as a health professional and allied health care worker.

You are communicating with . . .

. . . many different health professionals in health care teams as you go through an externship at Fulwood Medical Center. The center comprises a medical office building with physicians in a wide range of primary care, medical specialties, and complementary medicine therapies; a 300-bed hospital with a busy Emergency Room and operating rooms; a laboratory, pharmacy, X-Ray Department, Physiotherapy Department, and Patient Education Unit that serve both the hospital and the medical offices.

Between attending classes, doing your externship, working part-time, and bringing up two children, you have a full schedule. The knowledge and skills you are learning in the classroom and at Fulwood Medical Center will prepare you for a successful future.

Learning Outcomes

In order to get the most out of your learning experiences and this textbook, you need to:

- LO W.1** Establish a commitment to learn medical terminology.
- LO W.2** Recognize the knowledge and skills you will need to be an active learner.
- LO W.3** Understand how the contextual approach of this book promotes active learning.
- LO W.4** Utilize the pedagogical devices used in each chapter and lesson.
- LO W.5** Use the vivid illustrations, photos, and tables in the book to enhance understanding of the concepts being taught.
- LO W.6** Solve the exercises in each lesson and at the end of each chapter to demonstrate understanding of the material.
- LO W.7** Implement the effective organizational strategies and study habits described in this chapter of the book.
- LO W.8** Understand how a commitment to lifelong learning will enhance your professionalism.
- LO W.9** Differentiate the roles of the various members of a health care team in different medical specialties and settings.

CASE REPORT W.2

You are . . .

. . . Luis Guitterez, a certified medical assistant (CMA) working with Susan Lee, MD, a primary care physician at Fulwood Medical Center.

You are communicating with . . .

. . . Dr. Lee and Mrs. Martha Jones, a patient.

Luiz Guitterez, CMA: Dr. Lee, this is Mrs. Martha Jones, who is a type **2 diabetic** with **retinopathy** and **neuropathy**. She had a routine appointment with us today. Her temperature is 97.8, pulse 120, respirations 24, blood pressure 100/50.

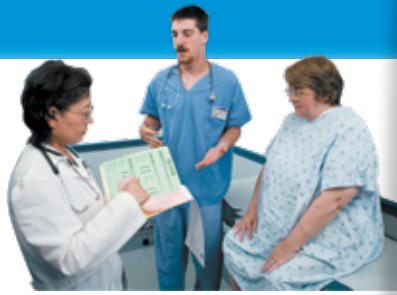
Mrs. Martha Jones: Dr. Lee, I've had a cough and cold for the past few days, and today I'm feeling drowsy and nauseous and my chest hurts.

Dr. Lee: Did you give yourself your morning insulin?

Mrs. Jones: I can't remember.

Dr. Lee: Luis, she's confused, has **tachycardia** and **tachypnea**, and is **hypotensive**. I'm concerned she is going into diabetic **ketoacidosis**. Get the glucometer and test her blood glucose while I examine her. She may have **pneumonia**.

(Note: The pronunciations and meanings of the medical terms used in this Case Report are on page W-9.)



▲ **FIGURE W.1**
Direct Communication
with Doctor and Patient.

McGraw-Hill Education/Rick Brady

Keynote

As a **health professional**, you are part of a team of medical and other professionals who provide health care services designed to improve the health and well-being of their patients.

The Health Care Team (LO W.9)

Fulwood Medical Center is a realistic health care setting that allows you to experience the use of medical language. Each chapter in this book focuses on the medical terminology used in a specific medical specialty and the body systems related to that specialty. A variety of health professionals make up the teams caring for patients in each medical specialty.

The team leader is a medical doctor, or physician, who can be an **MD** (doctor of medicine) or a **DO** (doctor of osteopathy). Most **managed care systems** require the patient to have a **primary care physician**. This physician can be a **family practitioner**, **internist**, or **pediatrician** (for children) and is responsible for the continuing overall care of the patient. In managed care, the primary care physician acts as the “gatekeeper” for the patient to enter the system, supervising all care the patient receives.

If needed medical care is beyond the expertise of the primary care physician, the patient is referred to a medical specialist whose expertise is based on a specific body system or even a part of a body system. For example, a **cardiologist** has expertise in diseases of the heart and vascular system, whereas a **dermatologist** specializes in diseases of the skin and an **orthopedist** in problems with the musculoskeletal system. A **gastroenterologist** is an expert in diseases of the whole digestive system, whereas a **colorectal surgeon** specializes only in diseases of the lower gastrointestinal tract.

Other health professionals work under the supervision of the physician and provide direct care (*Figure W.1*) to the patient. These can include a **physician assistant**, **nurse practitioner**, **medical assistant**, and, in specialty areas, different therapists, technologists, and technicians with expertise in the use of specific therapeutic and diagnostic tools.



▲ **FIGURE W.2**
Administrative medical assistants are among the health professionals who provide indirect care to patients.

McGraw-Hill Education/Rick Brady

Still other health professionals on the team provide indirect patient care (*Figure W.2*). These include **administrative medical assistants, transcriptionists, health information technicians, medical insurance billers, and coders**, all of whom are essential to providing high-quality patient care.

As you study the language of each medical specialty at Fulwood Medical Center, you will also meet the members of each specialty's health care team and learn more about their roles in caring for the patient.

“Why Do I Need to Learn Medical Terminology?”

Communication Needs

Throughout your career as a health professional, you will need to communicate with other health professionals. This need is present whether you are providing direct patient care—for example, as a CMA like Luis Gutierrez—or whether you are providing indirect patient care—for example, as a medical transcriptionist, biller, or coder. In this book, you will find all the medical terms necessary to equip yourself with the essential medical vocabulary needed for work and further study in any of the allied health professional careers.

As you can see in Case Report W.2, health professionals use specific terms and a different language to describe to each other situations they encounter each day. You need to be able to understand, spell, and pronounce the terms they use.

Modern medical terminology is an artificial language constructed over centuries using words and elements from Greek and Latin origins (where healing professions began). Some 15,000 or more words are formed from 1,200 Greek and Latin roots. New words are being added continually as new medical discoveries are made. Medical terminology enables health professionals from different fields, different specialties, and different countries to communicate clearly and precisely with each other. Every profession has its own language (*Figure W.3*).

Listening, Speaking, Reading, Writing, and Critical Thinking

Daily in your practice as a health professional you will:

Listen to information from physicians about patient care, and carry out their instructions.

Listen to patients describing their symptoms, and translate their descriptions into medical terms.

Speak to physicians and other health professionals to report information and ask questions.

Speak to patients to translate and clarify information given to them by physicians and other health professionals.

Read physicians' comments and treatment plans in patient medical records and insurance reports.

Read the results of physical examinations, procedures, and laboratory and diagnostic tests.

Write to document actions taken by yourself and other members of the health care team (*Figure W.4*).

Write to precisely record verbal orders, test results given over the phone, and other phone messages.

Think critically to evaluate medical documentation for accuracy.

Think critically to analyze and discover the meaning of unfamiliar medical terms using the strategies outlined in *Chapter 1* of this book.



▲ **FIGURE W.3**
Every Profession Has Its Own Language

You may have difficulty understanding your auto mechanic when she tells you that the expansion valve, evaporator core, and orifice tubes in your air-conditioning system need to be replaced.

Jupiterimages/Comstock Images/Getty Images



▲ **FIGURE W.4**
Accurate Documentation of Care Is Critical.

McGraw-Hill Education/Rick Brady

IF YOU CANNOT SPEAK AND UNDERSTAND THE LANGUAGE, YOU CANNOT JOIN THE CLUB.

Muscles and Tendons

The Essentials of the Languages of
Orthopedics and Rehabilitation

CHAPTER
5

Learning Outcomes

The **appendicular skeleton**, which includes the bones of the upper and lower limbs, is attached to the **axial skeleton** through joints and muscles. Understanding the terminology that identifies and describes the muscles and tendons of the limbs and trunk is vital to your knowledge of the human body. Information in this chapter provides correct medical terminology for:

- LO 5.1 Use roots, combining forms, suffixes, and prefixes to construct and analyze (deconstruct) medical terms related to muscles and tendons and rehabilitation medicine.
- LO 5.2 Spell and pronounce correctly medical terms related to muscles and tendons and rehabilitation medicine in order to communicate them with accuracy and precision in any health care setting.
- LO 5.3 Define accepted abbreviations related to muscles and tendons and rehabilitation medicine.
- LO 5.4 Define the three different types of muscle in their structures, functions, and disorders.
- LO 5.5 Identify diagnostic and therapeutic methods used to diagnose the disorders of the muscles and tendons.
- LO 5.6 Describe the muscles and tendons of the trunk, shoulder girdle, and upper limbs and their disorders.
- LO 5.7 Describe the muscles and tendons of the pelvic girdle and lower limbs and their disorders.
- LO 5.8 Identify the goals of rehabilitation medicine and the health professionals involved in a rehabilitation program.
- LO 5.9 Apply your knowledge of the medical terms of the muscles and tendons, their disorders and rehabilitation medicine to documentation, medical records, and medical reports.
- LO 5.10 Translate the medical terms of the muscles and tendons and their disorders and rehabilitation medicine into everyday language in order to communicate clearly with patients and their families.

CASE REPORT 5.1

You are . . .

. . . an orthopedic neurologist working with orthopedist Kenneth Sparland, MD, in a Rehab Medical Center.

You are communicating with . . .

Mr. Bruce Adams, a 55-year-old construction worker who presents with severe pain in his right shoulder. He Adams pain began 3 or 4 months ago. It is worse at the end of the workday and when he lifts his arm above his head. Lifting of the pain results in the pain that seldom lets him sleep. Mr. Adams' primary care physician has given him pain medication, sending him to sleep, and referred him to Dr. Sparland for diagnosis and treatment. A physical examination shows that Mr. Adams' pain is noticeably limiting all the **passive** and **active** movements of his right shoulder, including his ability to lift weight.

“What’s Unique About This Book?”

Although the chapters in this book are organized by body system, as in many other textbooks on medical terminology, this book has many unique features that enhance learning, create interest, and provide a consistent learning strategy for you.

Each chapter is broken down into lessons; each lesson is broken down into self-contained topic areas so that there are smaller “chunks” of information to master.

You Are . . . You Are Communicating With . . .

At the beginning of each chapter and lesson, you are placed in the role of a health professional in a field related to the body system and medical specialty covered in the material. At the same time, learning objectives (LOs) are presented for each chapter and lesson. These techniques immediately engage your attention, motivate you to read on to discover how this patient’s diagnosis and care progress, and illustrate the medical terminology being introduced in the lessons.

Word Analysis And Definition

All the information needed for a topic area is presented in self-contained two-page spreads.

On the left-hand page, the new medical terms are introduced. On the right-hand page, for each new medical term the pronunciation, color-coded word elements, and definition are provided in a **Word Analysis and Definition (WAD)** box. For example, in Case Report W.2 earlier in this chapter, the medical terms diabetic, retinopathy, neuropathy, tachycardia, tachypnea, hypotensive, ketoacidosis, glucometer, and pneumonia were used. On the right-hand page here, you can see an example of how these terms are analyzed. All these terms will appear again in the appropriate body-system chapter.

Also, below each WAD are exercises that test your understanding of key components of the terminology analyzed in the WAD.

Exercises

In addition to the exercises at the end of each topic area, there are chapter review questions exercises included in Connect (see below).

Attention is given to developing skills in pronunciation, spelling, forming plurals, using abbreviations, and writing medical language. The exercises take you beyond memorization and teach you to think critically about the realistic application of the medical language you are learning.

A ONE-STOP SPOT TO PRESENT, DELIVER, AND ASSESS DIGITAL ASSETS AVAILABLE WITH ESSENTIALS OF MEDICAL LANGUAGE:

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Connect Essentials of Medical Language also provides students with 24/7 online access to an ebook. This media-rich version of the textbook is available through the McGraw-Hill Education Connect platform and allows seamless integration of text, media, and assessments. To learn more, visit <http://connect.mheducation.com>.

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Keynotes

- **Study Hints** provide ways to help retain knowledge.
- **Abbreviation Boxes** show commonly accepted abbreviations.
- **Illustrations and photos** are vivid and clear and correlate precisely to the appropriate terms in the text.

McGraw-Hill connect

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
diabetes mellitus	dye-ah-BEE-teez MEL-ih-tus		diabetes, Greek <i>a siphon</i> mellitus, Latin <i>sweetened with honey</i>	Metabolic syndrome caused by absolute or relative insulin deficiency and/or insulin ineffectiveness Pertaining to or suffering from diabetes
diabetic (adj)	dye-ah-BET-ik	S/ R/	-ic <i>pertaining to</i> diabet- <i>diabetes</i>	
hypotension	HIGH-poh-TEN-shun	S/ P/ R/	-ion <i>action, condition</i> hypo- <i>below</i> -tens- <i>pressure</i>	Persistent low arterial blood pressure
hypotensive (adj)	HIGH-poh-TEN-siv	S/	-ive <i>pertaining to, quality of</i>	Pertaining to or suffering from hypotension
ketoacidosis	KEY-toe-ass-ih-DOE-sis	S/ R/CF R/CF	-sis <i>abnormal condition</i> ket/o- <i>ketone</i> -acid/o- <i>acid</i>	Excessive production of ketones, making the blood acidic
neuropathy	nyu-ROP-ah-thee	S/ R/CF	-pathy <i>disease</i> neur/o- <i>nerve</i>	Any disorder affecting the nervous system
pneumonia (Note: The initial "p" is silent.)	new-MOH-nee-ah	S/ R/	-ia <i>condition</i> pneumon- <i>air, lung</i>	Inflammation of the lung parenchyma
retinopathy	ret-ih-NOP-ah-thee	S/ R/CF	-pathy <i>disease</i> retin/o- <i>retina</i>	Any disease of the retina
tachycardia	tack-ih-KAR-dee-ah	S/ P/ R/	-ia <i>condition</i> tachy- <i>rapid</i> -card- <i>heart</i>	Rapid heart rate, above 100 beats per minute
tachypnea	tack-ip-NEE-ah	P/ R/	tachy- <i>rapid</i> -pnea <i>breathes</i>	Rapid breathing

The elements of a term are discussed in Chapter 1.

SmartBook is the first and only adaptive reading experience currently available. SmartBook personalizes content for each student in a continuously adapting reading experience. Reading is no longer a passive and linear experience, but an engaging and dynamic one where students are more likely to master and retain important concepts, thus coming to class better prepared. Valuable reports provide instructors with insight into how students are progressing through textbook content, and are useful for shaping in-class time and assessments. As a result of the adaptive reading experience found in SmartBook, students are more likely to retain knowledge, stay in class, and get better grades. This revolutionary technology is available only from McGraw-Hill Education for hundreds of course areas as part of the LearnSmart Advantage series.

EXERCISES

Elements are your best tool for understanding medical terms. In the chart below, the elements are listed in column 1. Identify the meaning of each element in column 2, and give an example of a term containing that element in column 3. Some terms will apply to more than one element. The first one is done for you.

Element	Meaning of Element	Medical Term Containing This Element
hypo	below	hypotension
tens		
ion		
neuro		
refino		
pathy		
ia		
pneumon		
pnea		
tachy		

1. Choose any term from column 3, and use it in a sentence of your choice:

“What Is Lifelong, Active Learning?”

Lifelong Learning

Your current training in medical terminology is necessary for you to be able to continue your education in your health care profession. But it is important to recognize that school is only one of the many places where you acquire knowledge.

You also acquire knowledge:

- Each time you ask a question about a patient or a report and receive an answer.
- Each time you analyze an unfamiliar medical term and discover its meaning.
- Each time you interact with a patient and see how that patient is coping with his or her problems (*Figure W.5*).

All these are opportunities for learning to discover *your own* answers to *your own* problems or lack of knowledge.

This type of knowledge—discovered through your own experience and driven by your own needs and goals—is genuine, real, and trustworthy for you. It is not like what you learn in school, which is determined by some distant authority.

The authentic knowledge you gain from solving your own problems, whether by yourself or with the help of other people or resources, motivates you to acquire still more knowledge and helps you grow as a person and as a professional.

Throughout your working life, additional classroom training will be needed to keep your skills and professional knowledge up to date with new developments in medicine. You will also continue to learn through your own experience. Everything you do in life can result in learning.

Your own experience and judgment become your most valuable resources for making your life vibrant, strong, creative, and what *you* want *it* to be.

Your own experience and judgment maximize your professional and personal success.

Your own learning never ends.

Actively Experiencing Medical Language

Medical terms were created to provide health care professionals a way to communicate with each other and document the care they provide. To provide effective patient care, all health care professionals must be fluent in medical language. One misused or misspelled medical term on a patient record can cause errors that can result in injury or death to patients, incorrect coding or billing of medical claims, and possible fraud charges.

When medical terms are separated from their intended context, as they are in other medical terminology textbooks, it is easy to lose sight of how important it is to use them accurately and precisely. Learning medical terminology in the context of the medical setting reinforces the importance of correct usage and precision in communication.

During your externship at Fulwood Medical Center, you will *experience* medical language. Just as in a real medical center, you will encounter and apply medical terminology in a variety of ways. Actively experiencing medical language will help ensure that you are truly learning, and not simply memorizing, the medical terms in each chapter. Memorizing a term allows you to use it in the same situation (e.g., repeating a definition) but doesn't help you apply it in new situations. Whether you are reading chart notes in a patient's medical record (*Figure W.6*) or a description of the treatment prescribed by a physician, you will see medical terms being used for the purpose they were intended.



▲ **FIGURE W.5**
Every Patient Interaction
Is an Opportunity for
Learning.

McGraw-Hill Education/Rick Brady

Keynote

Novelist Lillian Smith said, “When you stop learning, stop listening, stop looking, and stop asking new questions, then it is time to die.”



▲ **FIGURE W.6**
Medical assistant interacts
with a physician.

McGraw-Hill Education/Rick Brady

Active Learning

It's no good sitting back and expecting someone else to pour knowledge into your head. You have to **actively work at learning** (Figure W.7).

Get the Most Out of Lectures

- **Prepare** for your classroom experiences. Preview the book chapter before class (Figure W.7), and the material will be much easier to understand.
- **Listen actively.** You cannot do this if you are looking at your cell phone, daydreaming, or worrying about what you have to get for dinner.
- **Ask** a question if you do not comprehend something the instructor is saying.
- **Write** good notes. Focus on the main points, and capture key ideas; review and edit your notes within 24 hours of the class.

Get the Most Out of Reading

- **Concentrate** on what you are reading. Review the titles, objectives, headings, and visuals for each lesson to identify what the lesson is all about.
- **Read** actively using the SQ3R method (see the Study Hint) to help you.
- **Write** down any questions you have.

Study with a Partner or Group

- **Find** a study partner. Schedule study dates, compare notes, talk through concepts and questions, and quiz each other.
- **Establish** a small study group, including your study partner. Again, compare notes and quiz each other.

Perform Well on Tests

- **Read** the directions carefully, and scan the entire test so that you know how long it is and what types of activities it contains.
- **Answer** the easy questions or sections first so that you finish as much as possible before doing the difficult questions, which might slow you down.
- **Use** any extra time, after you have finished the test, to check that you have answered all the questions and then to confirm your answers.

Know and Motivate Yourself

- What type of learner are you? **Visual**—who responds best by **seeing** information. **Auditory**—who works best by listening. **Tactile**—who prefers hands-on applications. Recognize your type and motivate yourself by emphasizing your best method of learning to help achieve your goals.

A few months of committed study now is a small price to pay for a lifetime of professionalism.



▲ **FIGURE W.7**
Identify your own personal preferences for learning, and seek out the resources that will best help you with your studies. Recognize your weaknesses, and try to compensate for or work to improve them.

Scott T. Baxter/Getty Images



Study Hint

The SQ3R model for reading is a successful equation for studying:

- S**urvey what you are going to read.
- Q**uestion what you are going to learn after the preview.
- R**ead the assignment.
- R**ecite. Stop every once in a while, look up from the book, and put what you've just read into your own words.
- R**eview. After you've finished, review the main points.



▲ **FIGURE W.8**
An Evening at Home.

lakov.Filimonov/123RF.com

Keynote

Life, living, and learning are constant choices of priority.

CASE REPORT W.3

Your first day of externship at Fulwood Medical Center went well. You enjoyed being in the Primary Care Clinic with Dr. Lee and Luis Gutierrez, CMA. You wonder if this could be a career choice for you. Now it's 6:15 p.m. at home, and you have yet to feed the kids, get them to bed, pay some bills, pick up around the house, and review a whole chapter in your medical terminology text to prepare for a test in class tomorrow. How are you going to do all this?

“How Can I Help Myself Learn Better?”

You have a lot of time and money invested in your education. To succeed, you need to be able to focus and manage your time and your studies. To manage the difficulties described in Case Report W.3 (Figure W.8), you need to:

- **Recognize** the stresses in your life at different times.
- **Prioritize** mentally, and handle each task in the order of importance. In this case, eat a healthy meal with your kids, enjoy putting them to bed, pay the bills, and then relax (or meditate) for 10 minutes. When you are relaxed, settle down to review the text, and go to bed at a reasonable hour. Picking up around the house will have to wait because study and sleep are a higher priority. Sounds too easy? What other choices do you have to be able to study in an effective way?
- **Actively develop a support group.** Enlist the support of your spouse, parents, siblings, friends—any people you can trust and rely on. If you have a test every Thursday, get one of them to come over Wednesday night and put the kids to bed while you go over to his or her house or the library to study.
- **Find your own space.** Create a place where you keep everything for your courses at your fingertips, clutter-free.
- **Study when you are most productive.** Are you a night owl or an early bird? Set a daily study time for yourself.
- **Balance your life.** While studying should be a main focus, plan time for family, friends, leisure, exercise, and sleep.
- **Resist distractions.** Avoid the temptation to surf the Web, send instant messages, and make phone calls. Stick to your schedule.
- **Be realistic** when planning—know your limits and priorities.
- **Be prepared** for the unexpected (child's illness, your illness, inclement weather) that can turn your schedule into shambles.
- **Reprioritize** daily on the basis of schedule disruptions and other conflicts.
- **Identify** clear goals for what you need to get done today, this week, this month, before the end of the semester, and so on.

EXERCISES

Write out all of your activities for a typical week. On average, how many hours each week do you spend sleeping, grooming, eating, working, running errands, studying, attending your children's activities, and watching TV? Add all the hours up. There are 168 hours in the week. How many hours do you have left for studying? A sample time budget is shown below.

Activity	Number of Hours per Day	Number of Days per Week	Number of Hours per Week
Sleeping	8	7	56
Grooming	1	7	7
Meals: preparation, eating, cleanup	1	7	7
Cleaning, laundry	1	3	3
Commuting to and from school	1	5	5
In class	4	5	20
Doing errands	1	3	3
Family time	3	7	21
Church, workout, hobbies			5
Job			30
Friends, going out, TV, entertainment			6
TOTAL			163
TOTAL HOURS IN A WEEK			168
Hours remaining for study			5

- ARE 5 HOURS ENOUGH FOR STUDY?
- WHEN ARE THEY AVAILABLE?
- WHAT CAN YOU DO TO INCREASE THEM?

STUDY HOURS SHOULD BE SPENT IN A SETTING THAT ALLOWS YOU TO CONCENTRATE ON YOUR WORK AND NOT BE DISTRACTED. TURN OFF YOUR CELL PHONE AND TV. THE BIGGEST QUESTION TO ASK YOURSELF IS, "AM I INVESTING MY TIME WISELY?" IF NOT, HOW CAN YOU BUDGET YOUR TIME DIFFERENTLY SO THAT MORE TIME IS SPENT ON HIGHER-PRIORITY ACTIVITIES?

Review Copy

The Anatomy of Medical Terms

The Essential Elements of the Language of Medicine

McGraw-Hill Education/Rick Brady



CASE REPORT 1.1

You are . . .

. . . a **respiratory therapist** working with Tavis Senko, MD, a pulmonologist at Fulwood Medical Center.

You are communicating with . . .

. . . Mrs. Sandra Schwartz, a 43-year-old woman referred to Dr. Senko by her primary care physician, Dr. Andrew McDonald, an **internist**. Mrs. Schwartz has a persistent abnormality on her chest **X-ray**. You have been asked to determine her **pulmonary** function prior to a scheduled **bronchoscopy**.

This summary of a Case Report illustrates for you the use of some simple medical terms. Modern health care and medicine have their own language. The medical terms all have precise meanings, which enable you, as a health professional, to communicate clearly and accurately with other health professionals involved in the care of a patient. This communication is critical for patient safety and the delivery of high-quality patient care.

Learning Outcomes

The technical language of medicine has been developed logically from Latin and Greek roots. In fact, it was in Latin and Greek cultures that the concept of treating patients began. Medical terms are built from their individual parts, or **elements**, which form the **anatomy** of the word. The information in this chapter will enable you to:

- LO 1.1** Select the **roots, combining vowels, and combining forms** of medical terms.
- LO 1.2** Demonstrate the importance of **suffixes and prefixes** in forming medical terms.
- LO 1.3** Construct (build) medical terms from separate elements.
- LO 1.4** Deconstruct (break down) medical terms into their elements.
- LO 1.5** Use correctly the plurals of medical terms.
- LO 1.6** Articulate the correct pronunciations of medical terms.
- LO 1.7** Demonstrate precision and accuracy in documentation and other written and verbal communication of medical terms.



McGraw-Hill Education/Rick Brady

Lesson 1.1

The Construction of Medical Words

Objectives

Your confidence in using and understanding the medical terms in this book will increase as you become familiar with the logic of how these terms are constructed. The information in this lesson will enable you to:

- 1.1.1 Build and construct medical terms using their elements.
- 1.1.2 Select and identify the meaning of essential medical term **roots**.
- 1.1.3 Define the elements **combining vowel** and **combining form**.
- 1.1.4 Identify the **combining vowel** and **combining form** of essential medical terms.
- 1.1.5 Define the elements **suffix** and **prefix**.
- 1.1.6 Select and identify the meaning of the **suffixes** and **prefixes** of essential medical terms.

Roots

- A **root** is the constant foundation and core of a medical term.
- **Roots** are usually of Greek or Latin origin.
- All medical terms have *one or more roots*.
- A **root** can appear anywhere in the term.
- More than one **root** can have the same meaning.
- A **root** plus a **combining vowel** creates a **combining form**.

Abbreviations

- CXR chest X-ray
- RUL right upper lobe

Roots (LO 1.1)

Every medical term has a **root**—the element that provides the core meaning of the word. For example, in Case Report 1.1:

- The word *pneumonia* has the **root pneumon-**, taken from the Greek word meaning *lung* or *air*. The Greek **root pneum-** also means *lung* or *air*. *Pneumonia* is an infection of the lung tissue.
- Dr. Tavis Senko is a *pulmonologist*. The **root pulmon-** is taken from the Latin word meaning *lung*. A *pulmonologist* is a specialist who treats lung diseases.

Case Report 1.1 (continued)

From her medical records, you can see that 2 months ago Mrs. Schwartz developed a right upper lobe (**RUL**) **pneumonia**. After treatment with an **antibiotic**, a follow-up chest **X-ray (CXR)** showed some residual collapse in the right upper lobe and a small right **pneumothorax**. Mrs. Schwartz has smoked a pack a day since she was a teenager. Dr. Senko is concerned that she has lung cancer and has scheduled her for a **bronchoscopy**.

Combining Forms (LO 1.1)

Roots are often joined to other elements in a medical term by adding a **combining vowel**, such as the letter “o,” to the end of the **root**, like *pneum-*, to form *pneum/o-*.



Throughout this book, whenever a term is presented, a **slash (/)** will be used to separate the combining vowel from the **root**. Other examples of this approach are as follows:

- Adding the **combining vowel “o”** to the Latin **root pulmon-** makes the **combining form pulmon/o-**.



Any vowel, “a,” “e,” “i,” “o,” or “u,” can be used as a **combining vowel**.

- The **root respir-** means *to breathe*. Adding the **combining vowel “a”** makes the **combining form respir/a-**.

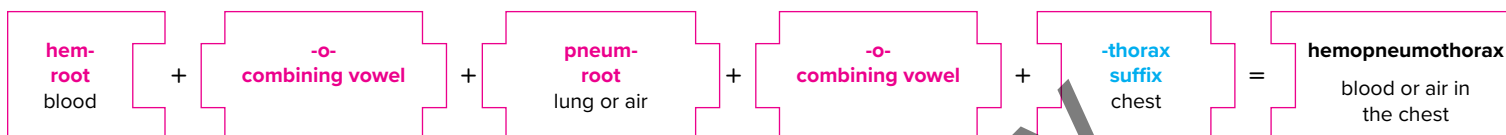


- The **root *branch-*** is derived from the Greek word for *windpipe* and is one of the two subdivisions of the trachea that carry air to and from the lungs. Adding the **combining vowel “o”** to the **root *branch-*** makes the **combining form *branch/o-***.



Many medical terms contain more than one **root**; when two roots occur together, they are always joined by a **combining vowel**, as in the following example:

- The word **hemopneumothorax** has the **root *hem-***, from the Greek word meaning *blood*, and the **root *pneum-***, from the Greek word meaning *air* or *lung*, and the **suffix *-thorax***, from the Greek word meaning *chest*. The **combining vowel “o”** joins these two roots together to make the **combining form, *pneum/o-***. A **hemopneumothorax** is the presence of air and blood in the space that surrounds the lungs in the chest. As blood and air fill the pleural cavity, the lungs cannot expand and respiration is not possible, thus forcing the affected lung to collapse.



Combining Forms

- Combine a **root** and a **combining vowel**.
- Can be attached to another **root** or **combining form**.
- Can precede another word element called a **suffix**.
- Can follow a **prefix**.

Keynotes

- Throughout this book, look for the following patterns:
 - Roots, combining forms, and combining vowels** will be colored **red**.
 - Prefixes** will be colored **green**.
 - Suffixes** will be colored **blue**.
- Different **roots** can have the same meaning. *Pulmon-* and *pneumon-* both mean *lung, air*.

EXERCISES

A. **Review** what you have just learned about roots and combining forms. Select the correct answer to the statement. **LO 1.1**

root **combining form** **combining vowel** **suffix** **prefix**

- Roots and combining forms can go before a _____.
- This element does not have a meaning; it serves to make the word easier to pronounce: _____.
- A _____ can go before a root, but never after.
- The _____ is the root plus a combining vowel.

B. **Identify** the word parts of a medical term. Use the provided medical term to correctly answer the questions. **LO 1.1**

- In the word **pneumonia**, the root is:
 - pneum-
 - pneumon-
 - ia
 - nia
- In the medical term **pulmonologist**, the root is:
 - pulm-
 - pulmon-
 - logist
 - gist
- The combining vowel in the medical term **respiratory** is:
 - a-
 - o-
 - i-
 - e-

Lesson 1.1 (cont'd)

Suffixes

- A **suffix** is a group of letters attached to the end of a **root** or **combining form**.
- A **suffix** changes the meaning of the word.
- If the **suffix** begins with a consonant, it must follow a **combining vowel**.
- If the **suffix** begins with a vowel, no **combining vowel** is needed.
- A few medical terms can have two **suffixes**.
- A **suffix** always appears at the end of a term.
- **Suffixes** that are different can have the same meaning.

Keynote

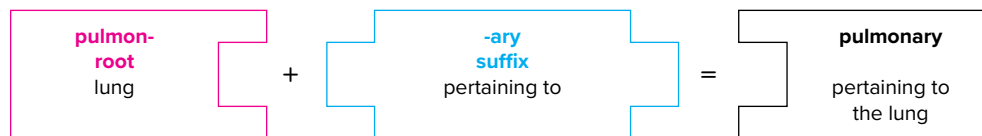
Adjectival **suffixes** meaning *pertaining to*:

-ac, -al, -ale, -alis, -ar, -aris, -ary, atic, -ative, -eal, -ent, -etic, -ial, -ic, -ica, -ical, -ine, -ior, -iosum, -ious, -istic, -ius, -nic, -ous, -tic, -tiz, -tous, -us.

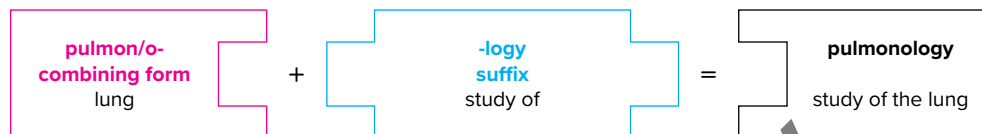
Suffixes (LO 1.2)

A **suffix** is an element added to the end of a **root** or **combining form** to give it a new meaning. You can add different **suffixes** to the same **root** to build new words, all with different meanings. For example:

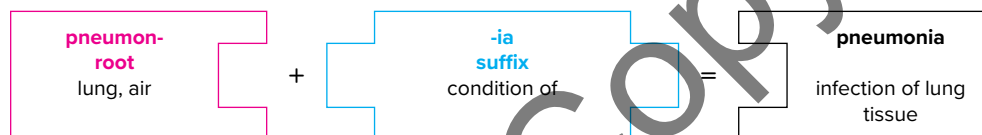
- Add the **suffix -ary** to the **root pulmon-** to create the term **pulmonary**. The **suffix -ary** means *pertaining to* or *relating to*. The adjective **pulmonary** means *pertaining to the lung*. **Pulmonary circulation** means the *passage of blood through the lungs*.



- Add the **suffix -logy** to the **combining form pulmon/o-** to make the term **pulmonology**. The **suffix -logy** means *study of*. **Pulmonology** is the study of the structure, functions, and diseases of the lungs.



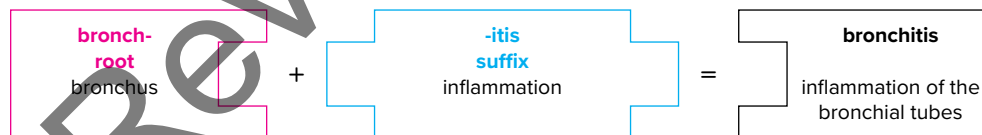
- Add the **suffix -ia** to the **root pneumon-** to make the term **pneumonia**. The **suffix -ia** means *a condition of*. **Pneumonia** is a condition of the lungs that involves an infection of the lung tissue.



- Add the **suffix -ation** to the **root respir-** to make the term **respiration**. The **suffix -ation** means *a process*. **Respiration** is the process of breathing in and out.



- Add the **suffix -itis** to the **root bronch-** to make the term **bronchitis**. The **suffix -itis** means *inflammation*. **Bronchitis** is an inflammation of the bronchial tubes.



Although most **roots** are specific to body systems and medical specialties, **suffixes** are universal and can be applied to all body systems and specialties.

One user-friendly design concept of this book is that all the information you will need for any given topic is presented on the left-hand page of the two-page spread open in front of you. As part of this, you will find a Word Analysis and Definition (WAD) box on the right-hand side of each two-page spread. This section provides the elements, definition, and pronunciation of every new and repeated significant medical term that appears in the two-page spread.

Review all the terms in the WAD before you start any exercise.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
bronchitis	brong-KI-tis	S/ R/	-itis inflammation bronch- bronchus	Inflammation of the bronchi
pneumonia	new-MOH-nee-ah	S/ R/	-ia condition pneumon- lung, air	Inflammation of the lung parenchyma (tissue)
pneumonitis (same as pneumonia)	new-moh-NI-tis	S/	-itis inflammation	
pulmonary	PULL-moh-NAR-ee	S/ R/	-ary pertaining to pulmon- lung	Pertaining to the lungs
pulmonology	PULL-moh-NOL-oh-jee	S/	-logy study of	Study of the lungs, or the medical specialty of disorders of the lungs
pulmonologist	PULL-moh-NOL-oh-jist	R/CF S/	pulmon/o- lung -logist one who studies, specialist	
respiration	RES-pih-RAY-shun	S/ R/	-ation process respir- to breathe	Process of breathing; fundamental process of life used to exchange oxygen and carbon dioxide
respiratory (adj)	RES-pih-rah-tor-ee	S/	-atory pertaining to	

EXERCISES

Elements: It is important for you to recognize the identity of an element. Is it a root, combining form, or suffix? This will help you to determine its place in the term when you are building terms.

A. Build the appropriate medical term to match the definitions given. The placement of the elements is noted for you under the line; each different element is separated on the line. Insert the correct elements on the line. The first one is done for you. **LO 1.1 and 1.2**

- Study of the lungs: _____
pulmon/o / logy
R/CF S
- Pertaining to the lung: _____
R/CF S
- The process of breathing: _____
R/CF S
- Condition of the lung: _____
R/CF S

B. Suffixes can provide clues to the meanings of terms. Answer the following questions using terms related to the respiratory system.

Fill in the blanks. **LO 1.1 and 1.2**

- What is another term with the same meaning as pneumonia? _____
- Which term is a body process? _____
- Which suffix can be applied to a specialist? _____

Prefixes (LO 1.2)

Prefixes

- A **prefix** always appears at the beginning of a term.
- A **prefix** precedes a **root** to change its meaning.
- **Prefixes** can have more than one meaning.
- **Prefixes** never require a **combining vowel**.
- An occasional medical term can have two **prefixes**.
- Not every term has a **prefix**.

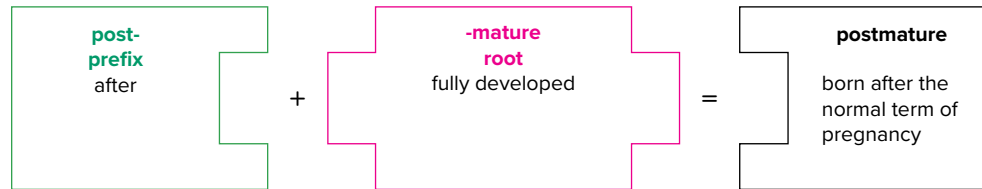
Practical Points

- A **root** can start a term and does not become a **prefix**.
- A **root** can end a term and does not become a **suffix**.

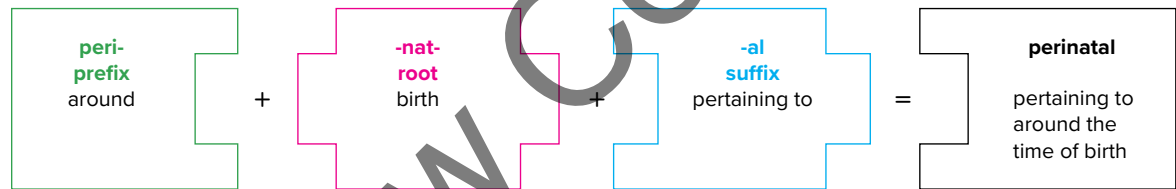
A **prefix** is an element added to the beginning of a **root** or **combining form** to further expand the meaning of a medical term. **Prefixes** usually indicate time, number, size, or location.

Examples of **prefixes** defining time are as follows:

- The term **mature** can refer to an infant born after a normal length of pregnancy, between 37 and 42 weeks.
- An infant born before 37 weeks is called **premature**. The **prefix pre-** means *before*. **Premature** means that the infant was born *before 37 weeks*.
- An infant born after 42 weeks is called **postmature**. The **prefix post-** means *after*. **Postmature** means that the *infant was born after 42 weeks*.



- The term **natal** contains the **root nat-** (*birth or born*) and the **suffix -al** (*pertaining to*); it means *pertaining to birth*.
- Add the **prefix pre-** (*before*) to form **prenatal**, which means *the time before birth*.
- Add the **prefix post-** (*after*) to form **postnatal**, which means *the time after birth*.
- Add the **prefix peri-** (*around*) to form **perinatal**, which means *around the time of birth*. This includes the time immediately *before, during, and directly after birth*.



Examples of **prefixes** indicating number are as follows:

- The term **lateral** contains the **root later-** (*side*) and the **suffix -al** (*pertaining to*). **Lateral** means *pertaining to a side of the body*.
- Add the **prefix uni-** (*one*) to form **unilateral**, which means *pertaining to one side of the body only*.
- Add the **prefix bi-** (*two*) to form **bilateral**, which means *pertaining to both sides of the body*.

Examples of prefixes indicating location are as follows:

- The term **gastric** contains the **root gastr-** (*stomach*) and the **suffix -ic** (*pertaining to*). **Gastric** means *pertaining to the stomach*.
- Add the **prefix epi-** (*above*) to form **epigastric**, which means *pertaining to above the stomach*.
- Add the **prefix hypo-** (*below*) to form **hypogastric**, which means *pertaining to below the stomach*.

Examples of **prefixes** indicating size are as follows:

- The **root -cyte** means *cell*.
- Add the **prefix macro-** (*large*) to form **macrocyte**, which means *a large cell*.
- Add the **prefix micro-** (*small*) to form **microcyte**, which means *a small cell*.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS	DEFINITION
gastric	GAS -trik	S/ -ic <i>pertaining to</i> R/ gastr- <i>stomach</i>	Pertaining to the stomach
epigastric	ep-ih- GAS -trik	P/ epi- <i>above</i>	Abdominal region above the stomach
hypogastric	high-poh- GAS -trik	P/ hypo- <i>below</i>	Abdominal region below the stomach
lateral	LAT -er-al	S/ -al <i>pertaining to</i> R/ later- <i>side</i>	Pertaining to one side of the body
bilateral	by- LAT -er-al	P/ bi- <i>two</i>	Pertaining to both sides of the body
unilateral	you-nih- LAT -er-al	P/ uni- <i>one</i>	Pertaining to one side of the body only
macrocyte	MACK -roh-site	P/ macro- <i>large</i>	Large cell
macrocytic (adj) (Note: The "e" in cyte is deleted to allow the word to flow.)	mack-roh- SIT -ik	R/ -cyte <i>cell</i> S/ -ic <i>pertaining to</i>	Pertaining to a macrocyte
mature	mah- TYUR		Latin <i>ready</i>
postmature	post-mah- TYUR	P/ post- <i>after</i>	Fully developed Infant born after 42 weeks of gestation
premature	pree-mah- TYUR	R/ -mature <i>fully developed</i> P/ pre- <i>before</i>	Occurring before the expected time; e.g., an infant born before 37 weeks of gestation.
microcyte	MY -kroh-site	P/ micro- <i>small</i>	Small cell
microcytic (adj) (Note: The "e" in cyte is deleted to allow the word to flow.)	my-kroh- SIT -ik	R/ -cyte <i>cell</i> S/ -ic <i>pertaining to</i>	Pertaining to a small cell
natal	NAY -tal	S/ -al <i>pertaining to</i> R/ nat- <i>birth, born</i>	Pertaining to birth
perinatal	per-ih- NAY -tal	P/ peri- <i>around</i>	Around the time of birth
postnatal	post- NAY -tal	P/ post- <i>after</i>	After the birth
prenatal	pree- NAY -tal	P/ pre- <i>before</i>	Before the birth
pneumothorax	new-moh- THOR -ax	R/CF pneum/o- <i>air, lung</i> S/ -thorax <i>chest</i>	Air in the pleural cavity

EXERCISES

Prefixes: Solid knowledge of prefixes will quickly help increase your medical vocabulary.

A. Answer the first question, and then build the correct term on the line next to the definitions in 2 through 4. LO 1.1, 1.2, and 1.4

- natal prenatal postnatal perinatal
- The term *natal* means _____
 - Pertaining to around the time of birth: _____ / _____ / _____

P
R/CF
S
 - Pertaining to after the birth: _____ / _____ / _____

P
R/CF
S
 - Pertaining to before the birth: _____ / _____ / _____

P
R/CF
S

B. Prefixes usually indicate time, number, size, or location. Given the prefix, select the correct category of meaning. **LO 1.2**

- hypo
 - time
 - number
 - size
 - location
- uni
 - time
 - number
 - size
 - location



McGraw-Hill Education/Rick Brady

Lesson 1.2

Word Deconstruction, Plurals, Pronunciation, and Precision

Objectives

When you see an unfamiliar medical term, you can learn its meaning by **deconstructing** it—reducing it to its basic elements. In this lesson you will learn to:

- 1.2.1** Break down or deconstruct a medical term into its elements.
- 1.2.2** Use word analysis to help ensure the precise use of medical terms.
- 1.2.3** Use the word elements to analyze and determine the meaning of the term.
- 1.2.4** Apply the correct pronunciation to medical terms.

Keynotes

- Always begin deconstructing a medical term by identifying its suffix.
- Abbreviations are listed in Abbreviations Boxes throughout the book.

Abbreviations

AMI	acute myocardial infarction
CXR	chest X-ray
ECG/ EKG	electrocardiogram
IV	intravenous

CASE REPORT 1.2

You are . . .

. . . a medical assistant working in the office of Lokesh Bannerjee, MD, a cardiologist in Fulwood Medical Center.

You are communicating with . . .

. . . the 70-year-old wife and the 45-year-old son of James Donovan, a 75-year-old man who will be admitted to the hospital's acute care **cardiology** unit.

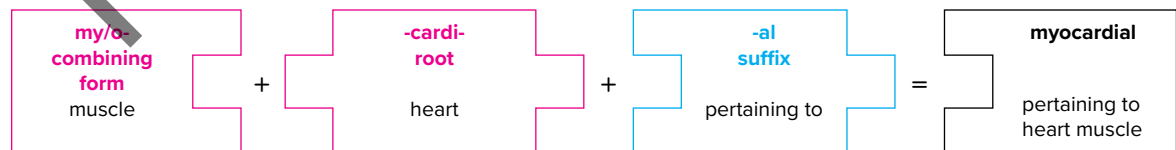
Dr. Bannerjee has **diagnosed** Mr. Donovan with an acute myocardial infarction (**AMI**), confirmed by changes in his **electrocardiogram (ECG/EKG)**. One of your tasks is to explain Mr. Donovan's **diagnosis** and reasons for admission to the hospital to Mrs. Donovan and her son. While Mr. Donovan is waiting to be admitted, he is receiving oxygen through nasal prongs. He is **hypotensive**, and an intravenous (**IV**) infusion of normal saline has been started. His medical record indicates that he is being seen in the neurology clinic for early dementia.

The bold terms in the Case Report are used as examples in the text and/or are deconstructed in the Word Analysis and Definition box (opposite page).

Word Deconstruction (LO 1.1, 1.2, and 1.4)

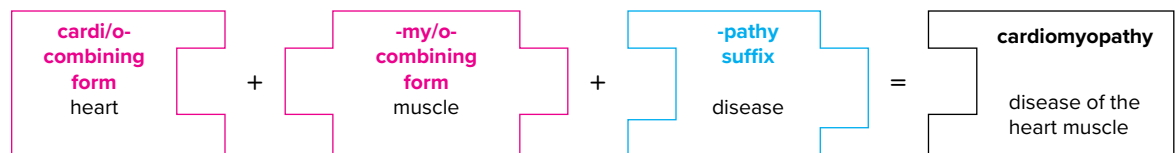
When you see an unfamiliar medical term, first identify the **suffix**. Take the term **cardiologist**. Here, the **suffix** at the end of the word is **-logist**, which means *one who studies and is a specialist in*. This leaves the element **cardi/o-**, which is the **combining form** for *heart*. The term **cardiologist** means *a specialist in the heart and its diseases*. It has a **combining form** and a **suffix**.

In the term **myocardial**, the **suffix** at the end of the word is **-al**, which means *pertaining to*, as you learned earlier in this chapter. The **combining form my/o-**, which means *muscle*, is at the beginning of the word. The **root -cardi-**, which means *heart*, is in the middle of the word. So, the term **myocardial** means *pertaining to the heart muscle*. It has a **combining form**, a **root**, and a **suffix**.



Changing the **suffix** to **-um**, meaning *a structure*, results in the term **myocardium**, *the structure called the heart muscle*.

The term **cardiomyopathy** contains the **suffix -pathy**, meaning *a disease*, the **combining form cardi/o-**, meaning *the heart*, and the **combining form my/o-**, meaning *muscle*. When you put this all together, the term **cardiomyopathy** means *a disease of the heart muscle*.



The term **ischemia** has the **suffix -emia**, which means *a blood condition*. The **root isch-** means *to block*. **Ischemia** means *a blockage of blood flow*. The term **myocardial ischemia** means *a blockage of blood flow to the heart muscle*—better known as a heart attack.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS	DEFINITION	
cardiologist	kar-dee- OL -oh-jist	S/ R/CF	-logist <i>one who studies and is a specialist in</i> cardi/o- <i>heart</i> -logy <i>study of</i>	A medical specialist in the diagnosis and treatment of disorders of the heart Medical specialty of diseases of the heart
cardiology	kar-dee- OL -oh-jee	S/	-logy <i>study of</i>	
cardiomyopathy	KAR-dee-oh-my- OP -ah-thee	S/ R/CF R/CF	-pathy <i>disease</i> cardi/o- <i>heart</i> -my/o- <i>muscle</i>	Disease of the heart muscle, the myocardium
diagnosis (noun)	die-ag- NO -sis	P/ R/	dia- <i>complete</i> -gnosis <i>knowledge of an abnormal condition</i>	The determination of the cause of a disease
diagnoses (pl)	die-ag- NO -seez			
diagnostic (adj)	die-ag- NOS -tik	S/	-tic <i>pertaining to</i>	Pertaining to or establishing a diagnosis
(Note: The "is" in -gnosis is deleted to allow the word to flow.)				
diagnose (verb)	die-ag- NOSE	R/	-gnose <i>recognize an abnormal condition</i>	To make a diagnosis
electrocardiogram	ee-lek-troh- KAR -dee-oh-gram	S/ R/CF R/CF	-gram <i>record</i> electr/o- <i>electricity</i> -cardi/o- <i>heart</i>	Record of the heart's electrical signals
hypotensive (adj)	HIGH -po- TEN -siv	S/ P/ R/	-ive <i>pertaining to</i> hypo- <i>low</i> -tens- <i>pressure</i>	Pertaining to or suffering from low blood pressure
infarct	in- FARKT	P/ R/	in- <i>in</i> -farct <i>area of dead tissue</i>	An area of cell death resulting from blockage of its blood supply
infarction	in- FARK -shun	S/	-ion <i>action, condition</i>	Sudden blockage of an artery
ischemia	is- KEY -me-ah	S/ R/	-emia <i>a blood condition</i> isch- <i>to block</i>	Lack of blood supply to tissue
ischemic (adj)	is- KEY -mik	S/	-emic <i>pertaining to a condition of the blood</i>	Pertaining to the lack of blood supply to tissue
myocardial (adj)	MY-oh- KAR -dee-al	S/ R/CF	-al <i>pertaining to</i> my/o- <i>muscle</i>	Pertaining to heart muscle
myocardium	MY-oh- KAR -dee-um	R/ S/	-cardi- <i>heart</i> -um <i>structure</i>	All the heart muscle
prognosis (noun)	prog- NO -sis	P/ R/	pro- <i>before, project forward</i> -gnosis <i>knowledge of an abnormal condition</i>	A forecast of the probable course and outcome of a disease

Changing the suffix *-emia* to *-emic*, which means *pertaining to a condition of the blood*, creates a new term, **ischemic**, that is an adjective. It means *pertaining to a blockage of blood flow*. It has a **root** and a **suffix**.

EXERCISES

Precision in communication: In addition to using the precise medical terms and speaking and spelling them correctly, you must use the appropriate form of the term as well.

A. There are several forms for the term diagnosis. Note that there are singular and plural forms of the term, as well as the noun, adjective, and verb forms. Insert the correct form of the term in the documentation below. **LO 1.1, 1.2, and 1.7**

Note: A noun is a person, place, or thing. Singular: One
A verb denotes action. Plural: More than one
An adjective usually describes something.

- The primary _____ for this patient is myocardial ischemia.
- Dr. Bannerjee is unable to _____ this patient until he receives the lab results.
- The _____ tests have been ordered for this patient first thing in the morning.
- It is possible for this patient to have multiple _____ if there is more than one condition present.

B. Identify the form of the term diagnosis. Fill in the blanks. **LO 1.4 and 1.7**

- The verb form: _____
- Plural form: _____
- Singular noun: _____
- Adjective form: _____

Lesson 1.2 (cont'd)

Communication

Some medical terms are pronounced the same but spelled differently. For example:

- Both *ilium* and *ileum* are pronounced **ILL**-ee-um. *Ilium* is a bone in the pelvis; *ileum* is a segment of the small intestine.
- Both *mucus* and *mucous* are pronounced **MYU**-kus. *Mucus* is a noun and is the name of a fluid secreted by *mucous* (adjective) membranes that line body cavities.

A medical term may relate to more than one anatomical structure.

- The term *cervical* means relating to a neck in any sense.
- It can pertain to the neck that joins the head to the trunk with the cervical vertebrae.
- It can also pertain to the cervix of the uterus, with its cervical canal.

Some words, when incorrectly pronounced, sound the same. For example:

- The term *prostate*, pronounced **PROS**-tate, refers to the gland at the base of the male bladder. The term *prostrate* means to be physically weak or exhausted, or to lie flat on the ground.
- Train your ear to hear the differences—*reflex* is not *reflux*.

Many medical terms form a verb, a noun, a plural, and an adjective, and you have to know them all, as in diagnose, diagnosis, diagnoses, and diagnostic (see the WAD on the previous spread).

Plurals (LO 1.5)

Many words in the English language allow you to change them from singular to plural by adding an “s.” For medical terms, this rarely happens, as these plurals are formed in ways that were once logical to Greeks and Romans but now have to be learned by memory in English. Examples of medical terms with Greek and Latin plurals are shown in *Table 1.1*.

Throughout this book, the Greek and Latin plurals of medical terms appear in the Word Analysis and Definition box with the singular medical term, as with the term **diagnosis** in the previous spread.

▼ **TABLE 1.1**

SINGULAR AND PLURAL FORMS

Singular Ending	Plural Ending	Examples
-a		axilla
	-ae	axillae
-ax		thorax
	-aces	thoraces
-en		lumen
	-ina	lumina
-ex		cortex
	-ices	cortices
-is		diagnosis
	-es	diagnoses
-is		epididymis
	-ides	epididymides
-ix		appendix
	-ices	appendices
-ma		carcinoma
	-mata	carcinomata
-on		ganglion
	-a	ganglia
-um		septum
	-a	septa
-us		viscus
	-era	viscera
-us		villus
	-i	villi
-us		corpus
	-ora	corpora
-x		phalanx
	-ges	phalanges
-y		ovary
	-ies	ovaries
-yx		calyx
	-ices	calices

Pronunciation (LO 1.6)

Being able to pronounce words correctly is essential to effective communication. In the medical world, this concept is especially important. As a health professional, you will routinely use medical terms and your colleagues must be able to understand what you are saying. Correct pronunciation is crucial to patient safety and your ability to provide high-quality patient care.

Throughout this book, the pronunciation of medical terms is spelled out phonetically using modern English forms to show you exactly how the terms are pronounced. The word part to be emphasized is shown in bold, uppercase letters.

For example, **pulmonary** is phonetically written **PUL**-moh-nar-ee, and **pulmonology** is written **PUL**-moh-**NOL**-oh-jee. This illustrates that words derived from the same **root** can have their emphasis placed on different parts of the word and that the emphasized part can be from different elements. The emphasized syllable **NOL** comes partly from the **combining form** *pulmon/o-* and partly from the **suffix** *-logy*. You can hear glossary terms pronounced correctly by visiting the audio glossary in Connect® (connect.mheducation.com).

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
axilla axillae (pl) axillary (adj)	AK-sill-ah AK-sill-ee AK-sill-air-ee	S/ R/	Latin <i>armpit</i> -ary pertaining to axill- armpit	Medical term for the armpit Pertaining to the armpit
dementia	dee-MEN-she-ah	S/ P/ R/	-ia condition de- without -ment- mind	Chronic, progressive, irreversible loss of intellectual and mental functions
ganglion ganglia (pl)	GANG-lee-on GANG-lee-ah		Greek <i>a swelling or knot</i>	A fluid-filled cyst or a collection of nerve cells outside the brain and spinal cord
ileum ilium ilia (pl)	ILL-ee-um ILL-ee-um ILL-ee-ah		Latin <i>to twist or roll up</i> Latin <i>groin</i>	Third portion of the small intestine. Large wing-shaped bone at the upper and posterior part of the pelvis
mucus (noun) mucous (adj)	MYU-kus MYU-kus	S/ R/	Greek <i>slime</i> -ous pertaining to muc- mucus	Sticky secretion of cells in mucous membranes Pertaining to mucus or the mucosa
mucosa	myu-KOH-sah	S/	-osa full of; like	Lining of a tubular structure that secretes mucus
prostate	PROS-tate		Greek <i>one who stands before</i> Latin <i>to stretch out</i>	Organ surrounding the urethra at the base of the male urinary bladder To lay flat or to be overcome by physical weakness and exhaustion
prostrate prostration (noun)	pros-TRAYT pros-TRAY-shun			
reflex reflux	REE-fleks REE-fluks		Latin <i>bend back</i> Latin <i>backward flow</i>	An involuntary response to a stimulus Backward flow
septum septa (pl)	SEP-tum SEP-tah		Latin <i>a partition</i>	A thin wall separating two cavities or two tissue masses

EXERCISES

A. Medical language: Many terms in medicine sound and/or look very similar. The difference of only one letter can make a new term. Train your eye and ear to know the difference. Select the correct choice of terms in the following documentation. **LO 1.6 and 1.7**

- The patient's nasal (mucus/mucous) membrane is severely infected.
- Schedule this patient for a (prostrate/prostate) exam at his next annual physical.
- The doctor checked the (reflex/reflux) in the patient's knee.
- The patient's (ilium/ileum) was severely fractured in the motor vehicle accident.

B. Plurals: Select the correct form of the plural in the following sentences. **LO 1.5**

- Because of additional medical problems needing treatment, this patient's insurance claim form will have multiple (diagnoses/diagnosis).
- Check both (axilla/axillae) for any evidence of enlarged lymph nodes.
- Several (septa/septum) exist in the body—e.g., in the heart and in the nose.
- A cluster of (ganglia/ganglion) has formed on her left wrist.

C. Terminology challenge: Use your knowledge of the new medical terms you have learned in this chapter and choose the correct answer. **LO 1.7**

- The term *cervical* can apply to two different places in the body. Where are they?
 - neck of the body and neck of the femur
 - neck of the uterus and neck of the humerus
 - neck of the femur and neck of the humerus
 - neck of the body and neck of the uterus
- The terms *ileum* and *ilium* are pronounced the same but are in two different body systems. Where are they?
 - muscular and nervous systems
 - digestive and skeletal systems
 - circulatory and integumentary systems
 - endocrine and respiratory systems

Lesson 1.2 (cont'd)

Keynotes

- Many words, when they are written or pronounced, have an element that if misspelled or mispronounced gives the intended word an entirely different meaning. A treatment response to the different meaning could cause a medical error or even the death of a patient.
- Precision in written and verbal communication is essential to prevent errors in patient care.
- The medical record in which you document a patient's care and your actions is a legal document. It can be used in court as evidence in professional medical liability cases.

Abbreviation

IV intravenous

Keynotes

- Communicate verbally and in writing with attention to detail, accuracy, and precision.
- When you understand the individual word elements that make up a medical term, you are better able to understand clearly the medical terms you are using.

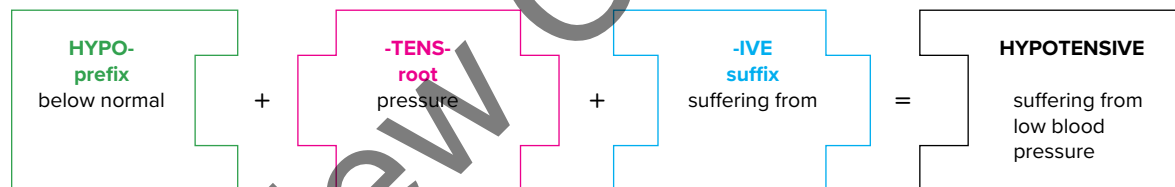
Precision in Communication (LO 1.7)

It's important for you to note that being accurate and precise in both your written and verbal communication with your health care team can save someone's life. Each year in the United States, more than 400,000 people die because of drug reactions and medical errors, many of which are the result of poor communication. On the next page, you will find some specific examples of how certain medical terms could be seriously miscommunicated and misinterpreted.

In the above Case Report involving Mr. Donovan, if **hypotensive** (suffering from **low** blood pressure) were confused with **hypertensive** (suffering from **high** blood pressure), incorrect and dangerous treatments could be prescribed.

- In the word **hypotensive**, the **suffix -ive** means *pertaining to*. The **prefix hypo-** means *below or less than normal*. The **root -tens-** means *pressure*. The term **hypotensive** means *pertaining to or suffering from a below normal or low blood pressure*.
- In the word **hypertensive**, the **prefix hyper-** means *above or higher than normal*. The term **hypertensive** means *pertaining to or suffering from an above normal or high blood pressure*.

To deconstruct the term **hypotensive**, start with the **suffix -ive**, which means *pertaining to or suffering from*. Next, the **prefix hypo-** means *below or less than normal*. Then the **root -tens-** means *pressure*. Now, place the pieces together to form a word meaning *suffering from a below-normal pressure or low blood pressure*.



Also in the above Case Report, the term **neurology**, the specialty of the nervous system (*see Chapter 10*), can sound very similar to **urology**, the study of the urinary system (*see Chapter 13*). In the urinary system, if a patient's **ureter** (the tube from the kidney to the bladder) were confused with the **urethra** (the tube from the bladder to the outside), the consequences could be serious.

As you can see from the above examples, your ability to correctly identify, spell, and pronounce different medical terms is essential. Being a health professional requires the utmost attention to detail, as a patient's life could be in your hands. Incorrect spelling and poor pronunciation not only reflect badly on you and your health team—it could also be a matter of life and death.

Case Report 1.2 (continued)

Mr. Donovan is waiting to be admitted to the hospital and is receiving oxygen through nasal prongs. He is **hypotensive**, and an **intravenous (IV) infusion** of normal saline has been started. According to his medical record, he is being seen in the **neurology** clinic for early dementia.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
cervical (adj)	SER-vih-kal	S/ R/	-al <i>pertaining to</i> cervic- <i>neck</i>	Pertaining to the cervix or to the neck region
cervix	SER-viks		Latin <i>neck</i>	Lower part of the uterus
hypertension	HIGH-per-TEN-shun	S/ P/ R/ S/	-ion <i>condition, action</i> hyper- <i>above normal</i> -tens- <i>pressure</i> -ive <i>pertaining to</i>	Persistent high arterial blood pressure
hypertensive (adj)	HIGH-per-TEN-siv			Pertaining to or suffering from high blood pressure
hypotension	HIGH-poh-TEN-shun	P/	hypo- <i>below normal</i>	Persistent low arterial blood pressure
hypotensive (adj)	HIGH-poh-TEN-siv			Pertaining to or suffering from low blood pressure
infusion	in-FYU-zhun	P/ R/	in- <i>in</i> -fusion <i>to pour</i>	Introduction of a substance other than blood intravenously
transfusion	trans-FYU-zhun	P/	trans- <i>across, through</i>	Transfer of blood or a blood component from a donor to a recipient
intravenous	IN-trah-VEE-nus	S/ P/ R/	-ous <i>pertaining to</i> intra- <i>within, inside</i> -ven- <i>vein</i>	Inside a vein
neurology	nyu-ROL-oh-jee	S/ R/CF	-logy <i>study of</i> neur/o- <i>nerve</i>	Medical specialty of disorders of the nervous system
neurologist	nyu-ROL-oh-jist	S/	-logist <i>one who studies and is a specialist in</i>	Medical specialist in disorders of the nervous system
protocol	PRO-toe-kol		Latin <i>contents page of a book</i>	Detailed plan; in this case, for a regimen of therapy
ureter	you-REE-ter		Greek <i>urinary canal</i> Greek <i>passage for urine</i>	Tube that connects a kidney to the urinary bladder
urethra	you-REE-thrah			Canal leading from the bladder to the outside
urology	you-ROL-oh-jee	S/ R/CF	-logy <i>study of</i> ur/o- <i>urine</i>	Medical specialty of disorders of the urinary system
uterus	YOU-ter-us		Latin <i>womb</i>	Organ in which an egg develops into a fetus
vertebra	VER-teh-brah		Latin <i>bone in the spine</i>	One of the bones of the spinal column
vertebrae (pl)	VER-teh-brae			

EXERCISES

A. **Patient documentation:** Read the following excerpts from patient charts and insert the medical term that correctly completes each sentence. **LO 1.7**

1. This patient has several badly fractured _____ in his spinal column.
2. This patient has nerve damage. Refer him to the department of _____.
3. Schedule this patient for an _____ of chemotherapy drugs today.
4. This patient has low blood pressure—he is _____ and anemic.
5. I am ordering an immediate _____ of 2 units of whole blood for this patient.
6. Send this patient for _____ X-rays of his neck immediately.

B. **Brain teaser:** Challenge yourself to analyze the question and insert the correct answers. **LO 1.1, 1.2, and 1.7**

1. If a medical specialist in the study of disorders of the nervous system is a neurologist, what is a medical specialist in the study of disorders of the urinary system called?
(Hint: Use your knowledge of suffixes and roots to help you.)
2. What element is the difference between high blood pressure and low blood pressure? _____
3. What is the tube that connects a kidney to the bladder? _____
4. What substance goes through a transfusion but not through an infusion? _____

Review Copy

The Body as a Whole, Cells, and Genes

The Essentials of the Languages of Anatomy and Genetics

Classic Collection/Shotshop GmbH/Alamy Images



CASE REPORT 2.1

You are . . .

. . . a certified medical assistant (CMA) employed as an in vitro fertilization coordinator in the Assisted Reproduction Clinic at Fulwood Medical Center.

You are communicating with . . .

. . . Mrs. Mary Arnold, a 35-year-old woman who has been unable to **conceive**. **In vitro fertilization (IVF)** was recommended. After **hormone** therapy, several healthy and mature eggs were recovered from her **ovary**. The eggs were combined with her husband's **sperm** in a laboratory dish where **fertilization** occurred to form a single cell, called a **zygote**. The cells were allowed to divide for five days to become **blastocysts**, and then four blastocysts were implanted in her uterus.

Your role is to guide, counsel, and support Mrs. Arnold and her husband through the implementation and follow-up for the IVF process.

Learning Outcomes

Effective medical treatment recognizes that each organ, tissue, and cell in your body, no matter where it's located, is connected to and functions in harmony with every other organ, tissue, and cell. To understand these concepts, you need to be able to:

LO 2.1 Use **roots**, **combining forms**, **suffixes**, and **prefixes** to construct and analyze (deconstruct) medical terms related to the anatomy and physiology of the body as a whole.

LO 2.2 Spell and pronounce correctly medical terms related to the body as a whole in order to communicate with accuracy and precision in any health care setting.

LO 2.3 Discuss the medical terms associated with cells and tissues.

LO 2.4 Explain the terms genes, genetics, and gene therapy.

LO 2.5 Describe the primary tissue groups and their functions.

LO 2.6 Relate individual organs and organ systems to the organization and function of the body as a whole.

LO 2.7 Integrate the medical terms of the different anatomic positions, planes, and directions of the body into everyday medical language.

LO 2.8 Describe the nine regions of the abdomen.

LO 2.9 Map the body cavities.

LO 2.10 Apply your knowledge of the medical terms of the body as a whole to documentation, medical records, and medical reports.

LO 2.11 Translate the medical terms of the body as a whole into everyday language in order to communicate clearly with patients and their families.

Abbreviations

CMA certified medical assistant
IVF in vitro fertilization

Lesson 2.1

Composition of Body and Cells



Classic Collection/Shotshop GmbH/Alamy Images

Objectives

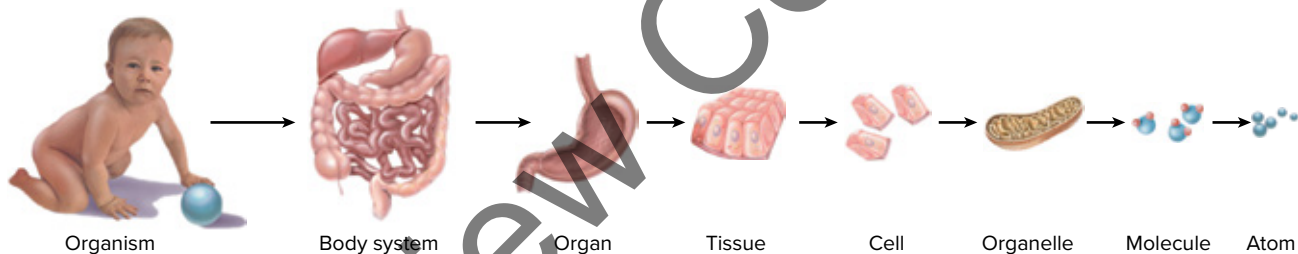
All the different elements of your body interact with each other to support constant change as your body reacts to your environment and to the nourishment you give it. To understand the structure and function of the elements of your body, you need to be able to:

2.1.1 Name the medical terms associated with cells, tissues, and organs.

2.1.2 Discuss the medical terminology for the major structures and functions of a cell.

Composition of the Body (LO 2.1 and 2.2)

- The whole body or organism is composed of **organ systems** (Figure 2.1).
 - Organ systems are composed of **organs**.
 - Organs are composed of **tissues**.
 - Tissues are composed of **cells**.
 - Cells are composed in part of **organelles**.
 - Organelles are composed of **molecules**.
 - Molecules are composed of **atoms**.



▲ **FIGURE 2.1**
Composition of the Body.

The Cell (LO 2.3)

The result of the **fertilization** of an egg by a sperm is a single fertilized cell called a **zygote** (Figure 2.2). This process is also called **conception**. This zygote is the origin of every cell in your body. It divides and multiplies into trillions of cells, which become the basic unit of every tissue and organ. These cells are responsible for the structure and all the functions of your tissues and organs.

Cytology is the study of cell structure and function, and this forms the basis of the knowledge of the anatomy and physiology of every tissue and organ.



▲ **FIGURE 2.2**
Fertilization of Egg by Single Sperm.

Jezper/Shutterstock

Case Report 2.1 (continued)

Mrs. Arnold achieved pregnancy and delivered a healthy girl at term.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
cell	SELL		Latin a storeroom	The smallest unit of the body capable of independent existence
conception	kon-SEP-shun		Latin something received	Fertilization of the egg by sperm to form a zygote
cytology	SIGH-tol-oh-jee	S/ R/CF	-logy study of cyt/o- cell	Study of the cell
cytologist	SIGH-tol-oh-jist	S/ S/	-logist one who studies, a specialist	Specialist in the structure, chemistry, and pathology of the cell
fertilization (noun)	FER-til-eye-ZAY-shun	S/ R/	-ation process fertiliz- to make fruitful	Union of a male sperm and a female egg
fertilize (verb) in vitro	FER-til-ize en-VEE-troh		Greek to bear Latin glass	Penetration of the egg by sperm In vitro fertilization is the process of combining sperm and eggs in a laboratory dish and placing resulting embryos inside a uterus
organ	OR-gan		Latin instrument, tool	Structure with specific functions in a body system Part of a cell having specialized function(s)
organelle	OR-gah-nell	S/ R/	-elle small organ- organ	Any whole living, individual plant or animal
organism	OR-gan-izm	S/ S/	-ism condition, process	
tissue	TISH-you		Latin to weave	Collection of similar cells
zygote	ZYE-goat		Greek yolk	Cell resulting from the union of sperm and egg

EXERCISES

A. Review the terms related to the composition of the body and the cell. Pay careful attention to word elements and meanings. Fill in the blanks. **LO 2.1 and 2.3**

1. Put the following terms in ascending order of their size:

organism cells molecules organs
organ systems organelles atoms tissues

- _____
- _____
- _____
- _____
- _____
- _____
- _____
- _____

B. Use the terms and their elements related to the cell to answer the questions. **LO 2.1 and 2.2**

- The suffix _____ means study of. The suffix that means specialist (in the study of) is _____.
- What part of cyt/o makes it a combining form rather than a root? _____
- What is the medical term for union of a male sperm and a female egg? _____
- What suffix related to the composition of the body and the cell describes the size of something? _____
- What does a cytologist study? _____

Keynote

- The cytoplasm is a clear, gelatinous substance crowded with different organelles.

Abbreviations

DNA	deoxyribonucleic acid
RNA	ribonucleic acid

As the zygote divides, every cell it creates becomes a complex little factory that carries out these basic life functions:

- **Manufacture of proteins and lipids;**
- **Production** and use of energy;
- **Communication** with other cells;
- **Replication of deoxyribonucleic acid (DNA);** and
- **Reproduction** of itself.

All cells contain a fluid called **cytoplasm** (intracellular fluid) surrounded by a cell **membrane** (Figure 2.3). Your cell membrane—made of **proteins** and **lipids**—allows water, oxygen, glucose, **electrolytes**, **steroids**, and alcohol to pass through it. On the outside of the cell membrane, you have receptors that bind to chemical messengers like **hormones** sent by other cells. These are the chemical signals by which your cells communicate with each other.

Organelles (LO 2.2)

Organelles are small structures in the cytoplasm of the cell that carry out special **metabolic** tasks (the chemical processes that occur in the cell).

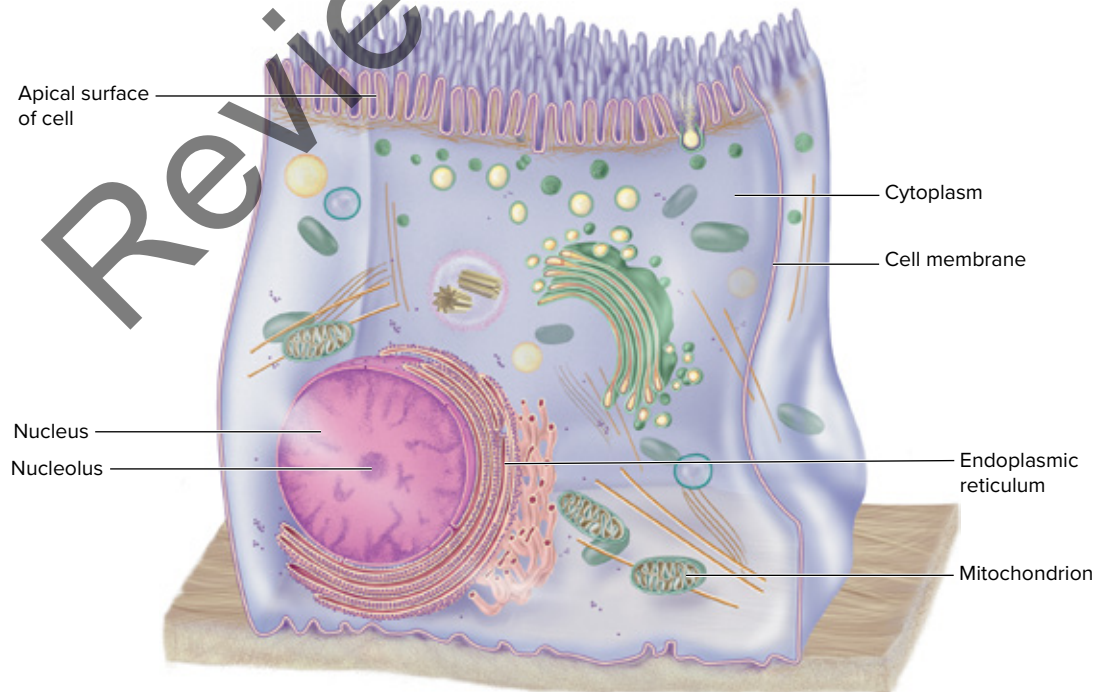
The **nucleus** is the largest organelle (Figure 2.3). It is surrounded by its own membrane and directs all the cell's activities. The 46 molecules of DNA in the nucleus form 46 **chromosomes**.

A **nucleolus** is a small, dense body composed of **ribonucleic acid (RNA)** and protein found in the nucleus. It is involved in the manufacture of proteins from simple materials—a process called **anabolism**.

Mitochondria are the cell's powerhouses. They produce energy by breaking down compounds like glucose and fat in a process called **catabolism**.

- **Metabolism** is the sum of the constructive processes of anabolism and the destructive processes of catabolism within a cell (**intracellular**).

The **endoplasmic reticulum** manufactures steroids, cholesterol and other lipids, and proteins. It also detoxifies alcohol and other drugs.



▲ FIGURE 2.3
Structure of a Representative Cell.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
anabolism	an- AB -oh-lizm	S/ R/	-ism <i>process, condition</i> anabol- <i>build up</i>	The buildup of complex substances in the cell from simpler ones as a part of metabolism
catabolism	kah- TAB -oh-lizm	S/ R/	-ism <i>process, condition</i> catabol- <i>break down</i>	The breakdown of complex substances into simpler ones as a part of metabolism
chromosome	KROH -moh-sohm	S/ R/CF	-some <i>body</i> chrom/o- <i>color</i>	Body in the nucleus that contains DNA and genes
cytoplasm	SIGH -toh-plazm	S/ R/CF	-plasm <i>something formed</i> cyt/o- <i>cell</i>	Clear, gelatinous substance that forms the substance of a cell, except for the nucleus
deoxyribonucleic acid (DNA)	dee- OCK -see-rye-boh-nyu- KLEE -ik ASS -id		deoxyribose <i>a sugar</i> nucleic acid <i>a protein</i>	Source of hereditary characteristics found in chromosomes
electrolyte	ee- LEK -troh-lite	S/ R/CF	-lyte <i>soluble</i> electr/o- <i>electricity</i>	Substance that, when dissolved in a suitable medium, forms electrically charged particles
hormone	HOR -mohn		Greek <i>set in motion</i>	Chemical formed in one tissue or organ and carried by the blood to stimulate or inhibit a function of another tissue or organ
hormonal (adj)	hor- MOHN -al	S/ R/	-al <i>pertaining to</i> hormon- <i>hormone</i>	Pertaining to a hormone
intracellular	in-trah- SELL -you-lar	S/ P/ R/	-ar <i>pertaining to</i> intra- <i>within</i> -cellul- <i>small cell</i>	Within the cell
lipid	LIP -id		Greek <i>fat</i>	General term for all types of fatty compounds; for example, cholesterol, triglycerides, and fatty acids
membrane membranous (adj)	MEM -brain MEM -brah-nus	S/ R/	Latin <i>parchment</i> -ous <i>pertaining to</i> membran- <i>cover, skin</i>	Thin layer of tissue covering a structure or cavity Pertaining to a membrane
metabolism	meh- TAB -oh-lizm	S/ R/	-ism <i>condition, process</i> metabol- <i>change</i>	The constantly changing physical and chemical processes occurring in the cell that are the sum of anabolism and catabolism
metabolic (adj)	met-ah- BOL -ik	S/	-ic <i>pertaining to</i>	Pertaining to metabolism
mitochondria (pl)	my-toe- KON -dree-ah	S/ R/CF R/	-ia <i>condition</i> mit/o- <i>thread</i> -chondr- <i>granule</i>	Organelles that generate, store, and release energy for cell activities
mitochondrion (singular)	my-toe- KON -dree-on	S/	-ion <i>condition</i>	
nucleolus	nyu- KLEE -oh-lus	S/ R/CF	-lus <i>small</i> nucle/o- <i>nucleus</i>	Small mass within the nucleus
nucleus nuclear (adj)	NYU -klee-us NYU -klee-ar	S/ R/	Latin <i>command center</i> -ar <i>pertaining to</i> nucle- <i>nucleus</i>	Functional center of a cell or structure Pertaining to a nucleus
protein	PRO -teen		Greek <i>protein</i>	Class of food substances based on amino acids
ribonucleic acid (RNA)	RYE-boh-nyu- KLEE -ik ASS -id	S/ P/ R/	-ic <i>pertaining to</i> ribo- <i>from ribose, a sugar</i> -nucle- <i>nucleus</i>	The information carrier from DNA in the nucleus to an organelle to produce protein molecules
steroid	STAIR -oyd	S/ R/	-oid <i>resembling</i> ster- <i>solid</i>	Large family of chemical substances found in many drugs, hormones, and body components

EXERCISE

A. **Knowledge** of elements is your best clue to determining the meaning of medical terminology. Deconstruct the elements in these questions to find your answers. Select the **BEST ANSWER** to the question. **LO 2.3**

- Which term relates to electrically charged particles?
 - protein
 - hormonal
 - electrolyte
- Which term relates to change?
 - steroid
 - metabolic
 - lipid
- Which term has an element meaning "condition"?
 - metabolism
 - cytoplasm
 - hormone
- What is a thin layer of tissue that covers a structure or cavity?
 - lipid
 - membrane
 - hormone

Lesson 2.2

Genes and Genetics



Classic Collection/Shotshop GmbH/Alamy Images

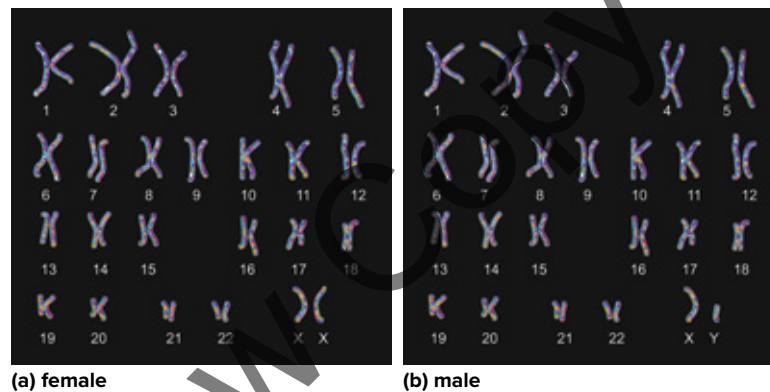
Objectives

- 2.2.1 Describe the structure and functions of deoxyribonucleic acid (DNA).
- 2.2.2 Discuss the roles of genes in heredity.
- 2.2.3 Define mitosis.
- 2.2.4 Discuss mutations and epigenetic changes.

DNA and Genes (LO 2.4)

Inside the cell nucleus are packed 46 molecules of **deoxyribonucleic acid (DNA)** as thin strands called **chromatin**. When cells divide, the chromatin condenses with **histone** proteins to form 23 pairs (46 total) of densely coiled bodies called **chromosomes**. Twenty-two of these pairs look the same in both males and females. In the 23rd pair, females have two copies of the X chromosome; males have one X and one Y. The picture of the human chromosomes lined up in pairs is called a **karyotype** (Figure 2.4).

The information in DNA is stored as a code of four chemical bases: adenine (A), guanine (G), cytosine (C), and thymine (T). The total human DNA contains about 3 billion bases, and more than 99% of those bases are the same in all people. The sequence of these bases determines the building and maintaining of the organism's cells, similar to the way in which letters of the alphabet appear in order to form words and sentences.



▶ **FIGURE 2.4** Human Karyotype.

(a, b) Kateryna Kor/Shutterstock

Abbreviations

A	adenosine
C	cytosine
DNA	deoxyribonucleic acid
G	guanine
T	thymine

Keynotes

- Deoxyribonucleic acid (DNA) is the hereditary material in humans.
- DNA molecules are packaged into chromosomes.
- Genes are the basic functional and physical unit of **heredity** and are made up of DNA.
- Genes regulate the division and replication of cells.
- Cancer can result when cell division and replication are abnormal.
- Chemical compounds can be added to a gene and can lead to abnormal **genetic** (epigenetic) activity producing cancers and degenerative and metabolic diseases.

The **chromosomal** DNA bases pair with each other—A with T and C with G—and are attached to a sugar molecule and a phosphate molecule. A base, sugar, and phosphate form a **nucleotide**. Nucleotides are arranged in two long strands to form a spiral called a double **helix**.

The nuclear DNA in the chromosomes is the **hereditary** material, each unit of which is called a **gene**. The genes act as instructions to make molecules of different proteins. Each person has two copies of each gene, one inherited from each parent. Most genes are the same in all people; only less than one percent is slightly different between people. These small differences contribute to each person's unique physical features. Humans are thought to have between 20,000 and 25,000 genes. This total is called the **genome**.

Mitosis

The critical property of DNA is that it can **replicate**, make copies of itself, so that when cells divide, each new cell has an exact copy of the DNA present in the old cell. This cell division is called **mitosis**, in which a cell duplicates all of its contents, including its chromosomes, to form two identical daughter cells. When mitosis is not performed correctly, abnormal cells, such as cancer cells, can result.

Mutations and Epigenetic Changes

A permanent alteration of the nucleotide sequence of the genome of an organism is called a **mutation**. Mutations may or may not produce visible changes in the observable characteristics (**phenotype**) of an organism. Mutations play a part in both normal and abnormal biological processes including evolution, cancer, and the development of the immune system.

Chemical compounds that become added to single genes can regulate their activity to produce modifications known as **epigenetic** changes. These changes can remain as cells divide and can be inherited through generations. Environmental influences from pollution, drugs, pharmaceuticals, aging, and diets can also produce epigenetic modifications, such as cancers, mental disorders, and degenerative and metabolic disorders.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
chromatin	KROH-ma-tin	S/ R/CF	-tin <i>pertaining to</i> chrom/a- <i>color</i>	DNA that forms chromosomes during cell division
chromosome	KROH-moh-sohm	R/CF	chrom/o- <i>color</i>	The body in the cell nucleus that carries the genes
chromosomal (adj)	KROH-moh-SO-mal	R/ S/	-some <i>body</i> -al <i>pertaining to</i>	Pertaining to a chromosome
deoxyribonucleic acid (DNA)	dee-OCK-see-RYE-boh-noo-KLEE-ik ASS-id	S/ P/ P/ R/ R/ R/	-ic <i>pertaining to</i> de- <i>without</i> -oxy- <i>oxygen</i> -ribo- <i>ribose</i> -nucle- <i>nucleus</i> acid <i>acid, low pH</i>	The chemical repository of hereditary characteristics
epigenetics	EP-ih-jeh-NET-iks	S/ P/ R/	-etics <i>pertaining to</i> epi- <i>above, over</i> -gen- <i>to create</i>	The study of disorders produced by the effects of chemical compounds (e.g., pollutants) or environmental influences (such as diet) on genes
gene	JEEN	S/	Greek <i>birth</i>	The functional unit of heredity on a chromosome
genetic (adj)	jeh-NET-ik	R/	-etic <i>pertaining to</i>	Pertaining to genetics
genome	JEE-nome	R/	gen- <i>to create</i> -ome <i>body</i>	A complete set of chromosomes
helix	HEE-lics		Greek <i>a coil</i>	A spiral of nucleotides in the structure of DNA
heredity	heh-RED-ih-tee	S/	Latin <i>an heir</i>	The transmission of characteristics from parent to offspring
hereditary	heh-RED-ih-ter-ee	R/	-ary <i>pertaining to</i> heredit- <i>inherited through</i> genes	Transmissible from parent to offspring
histone	HIS-tone	S/ R/	-one <i>chemical</i> hist- <i>tissue</i>	A simple protein found in the cell nucleus
karyotype	KAIR-ee-oh-type	S/ R/CF	-type <i>model</i> kary/o- <i>nucleus</i>	The chromosome characteristics of an individual cell
mitosis	my-TOE-sis		Greek <i>thread</i>	Cell division to create two identical cells, each with 46 chromosomes
mutation	myu-TAY-shun		Latin <i>to change</i>	A permanent alteration in the nucleotide sequence of the genome
nucleotide	NYU-klee-oh-tide	R/CF R/	nucle/o- <i>nucleus</i> -tide <i>time</i>	Combination of a DNA base, a sugar molecule, and a phosphate molecule
phenotype	FEE-noh-type	S/ R/CF	-type <i>model</i> phen/o- <i>appearance</i>	Manifestation of a genome
replicate	REP-lih-kate		Latin <i>a reply</i>	To produce an exact copy

EXERCISE

A. Use your knowledge of medical terminology related to genetics. Insert the correct term in the appropriate statement. **LO 2.4**

gene genome mitosis chromosomes chromatin

- When the cell is maintaining normal function, DNA and proteins are contained within thin strands of _____.
- When the cell is dividing, DNA wraps around the proteins and is contained within densely coiled bodies called _____.
- The unit of nuclear DNA in the chromosomes is called a _____.
- A _____ is a complete set of chromosomes.
- The process of _____ occurs when a cell creates an exact copy of itself and divides into two identical cells.



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Lesson 2.3

Genetic Medicine

CASE REPORT 2.2

You are

... a physician's assistant (PA) in the Genetic Counseling Clinic at Fulwood Medical Center.

Your patient is

... Mrs. Patricia Bennet, a 52-year-old office manager with two daughters, aged 30 and 25. Mrs. Bennett's sister, aged 55, recently had a mastectomy for breast cancer and is now receiving chemotherapy. Their mother died of ovarian cancer in her late fifties. Mrs. Bennet wants to know her risk for breast or ovarian cancer, what she can do to prevent it, and what her daughters' risks are.

Objectives

- 2.3.1 Discuss the applications of medical genetics.
- 2.3.2 Define the concept of personalized medicine and its advantages.
- 2.3.3 Describe gene therapy.
- 2.3.4 Explain the values of predictive medicine.

Abbreviations

ADHD	attention deficit hyperactivity disorder
BRCA	breast cancer
PA	physician's assistant

Genetic Medicine (LO 2.4)

Medical genetics is the application of genetics to medical care. Genetic medicine is the newer term for medical genetics and incorporates areas such as gene therapy, personalized (precise) medicine, and predictive medicine.

Every person has a unique variation of the human genome and an individual's health stems from this genetic variation interacting with behaviors (drinking, smoking, etc.) and influences from the environment (chemical pollution in some form). Knowing the genetic makeup will enable more accurate diagnoses to be made, the source of the disease to be understood, and earlier, more accurate treatments or the prevention of progression of the disease provided. This concept is called *personalized medicine*.

One way that the biological variant is seen is responsiveness to drugs. Attention deficit hyperactivity disorder (ADHD) medications only work for one out of ten preschoolers, cancer drugs are effective for only one out of four patients, and depression drugs work for six out of ten patients. The drug Tamoxifen used to be prescribed to women with a form of breast cancer (BRCA), but 65% developed resistance to it. These women were found to have a mutation in their CYP2D6 gene that made Tamoxifen an ineffective treatment.

Personalized medicine can assist with preventive care. Women, such as Patricia Bennet in Case Report 2.2, are already being genotyped for mutations in the BRCA1 and BRCA2 genes if they have a family history of breast or ovarian cancer. In Mrs. Bennet's case, she is positive for both mutations and is now considering surgical measures that can then be taken to prevent the disease from developing. Her daughters have appointments to receive genetic testing in their own health plans.

Cytogenetics is the study of chromosome abnormalities to determine a cause for developmental delay, mental retardation, birth defects, and **dysmorphic** features, and chromosomal abnormalities are often detected in cancer cells.

Gene therapy is an experimental technique to replace a mutated gene that causes disease with a healthy copy, inactivate a mutated gene that is functioning improperly, or introduce a new gene into the body to prevent or help cure a disease. The **therapeutic** genes are introduced into body cells, and some 600 clinical trials utilizing this form of therapy are underway in the United States.

Predictive medicine looks at the probability of a disease and allows preventive measures to be taken. Examples are newborn screening to identify genetic disorders that can be treated early in life, and **prenatal** testing to look for diseases and conditions in an **embryo** or **fetus** whose parents have an increased risk of having a baby with a genetic or chromosomal disorder.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
cytogenetics	SIGH-toh-jeh-NET-iks	S/ R/CF R/	-etics <i>pertaining to</i> cyto- <i>cell</i> -gen- <i>create</i>	Study of chromosomal abnormalities in a cell
dysmorphology	dis-mor-FOLL-oh-jee	S/ P/ R/CF	-logy <i>study of</i> dys- <i>difficult, bad</i> -morph/o- <i>form</i>	The study of developmental structural defects
dysmorphic	dis-MOR-fik	S/ R/CF	-ic <i>pertaining to</i>	Possessing a developmental structural defect
embryo	EM-bree-oh		Greek <i>a young one</i>	Developing organism from conception until the end of the eighth week
fetus	FEE-tus		Latin <i>offspring</i>	Human organism from the end of the eighth week to birth
predictive	pree-DIK-tiv	S/ P/ R/	-ive <i>quality of</i> pre- <i>before</i> -dict- <i>consent</i>	The likelihood of a disease or disorder being present or occurring in the future
prenatal	pree-NAY-tal	S/ P/ R/	-al <i>pertaining to</i> pre- <i>before</i> -nat- <i>born</i>	Before birth
therapy therapeutic	THAIR-ah-pee THAIR-ah-PYU-tik		Greek <i>medical treatment</i> Greek <i>curing of a disorder</i> <i>or disease</i>	Systematic treatment of a disease, dysfunction, or disorder Curing or capable of curing a disorder or disease

EXERCISES

A. Discuss the applications of medical genetics. Choose the correct answer to complete the following statements. **LO 2.4**

- The replacement of a mutated gene with a healthy copy is termed:
 - predictive medicine
 - cytogenetics
 - gene therapy
 - personalized medicine
- The study of chromosome abnormalities in a cell is:
 - cytogenetics
 - dysmorphology
 - prenatal therapy
 - precise medicine
- _____ medicine uses genetics to determine accurate treatments for an existing condition.
 - Personalized
 - Preventative
 - Cytogenetic
 - Predictive

B. Not all terms can be deconstructed. It is sometimes necessary to memorize the medical terms of Greek and Latin origin. Given the definition, provide the term that is being described. Fill in the blanks. **LO 2.4**

- Systematic treatment of a disease, dysfunction, or disorder. _____
- Human organism from conception to the end of the eighth week. _____
- Human organism from the end of the eighth week to birth. _____
- Curing or capable of curing a disorder or disease. _____

Lesson 2.4

Tissues, Organs, and Organ Systems



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Objectives

Your tissues, organs, and organ systems must continually adapt and adjust in order to work in sync with each other. The information in this lesson will enable you to:

- 2.4.1 Define the four primary tissue groups.
- 2.4.2 Discuss the medical terminology for the structure and functions of each tissue group.
- 2.4.3 Name the organ systems.
- 2.4.4 Describe the medical terminology for the structure and functions of each organ system.

Tissues (LO 2.5)

Tissues hold your body together. Each tissue is different but made of similar cells with unique materials around them manufactured by the cells. The many tissues of your body have different structures that enable them to perform specialized functions. **Histology** is the study of the structure and function of tissues. The four primary tissue groups are outlined in *Table 2.1*.

CASE REPORT 2.3

You are . . .
 . . . a physical therapy assistant employed in the Rehabilitation Unit in Fulwood Medical Center.

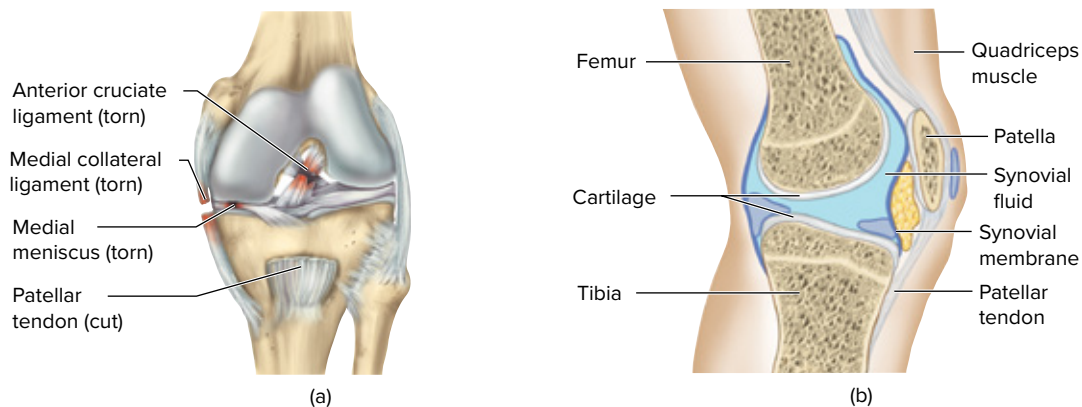
You are communicating with . . .
 . . . Mr. Richard Josen, a 22-year-old man who injured tissues in his left knee while playing football (Figure 2.5). Using **arthroscopy**, the orthopedic surgeon removed his torn **anterior cruciate ligament (ACL)** and replaced it with a **graft** from his **patellar tendon**. The torn medial collateral ligament was **sutured** together. The tear in his medial **meniscus** was repaired. Rehabilitation is focused on strengthening the **muscles** around his knee joint and regaining joint mobility and stability.

▼ **TABLE 2.1**
THE FOUR PRIMARY TISSUE GROUPS (LO 2.5)

Type	Function	Location
Connective	Bind, support, protect, fill spaces, store fat	Widely distributed throughout the body, e.g., in blood, bone, cartilage, and fat
Epithelial	Protect, secrete, absorb, excrete	Cover body surface, cover and line internal organs, compose glands
Muscle	Movement	Attached to bones; found in the walls of hollow tubes, organs, and the heart
Nervous	Transmit impulses for coordination, sensory reception, motor actions	Brain, spinal cord, nerves

Adapted from David Shier, Jackie L. Butler, and Ricki Lewis, *Hole's Human Anatomy and Physiology*, 10th ed. Copyright © 2004 The McGraw-Hill Companies, Inc. Adapted with permission.

► **FIGURE 2.5**
Knee Anatomy.
 (a) Injury to left knee.
 (b) Normal knee.



Abbreviation

ACL anterior cruciate ligament

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
arthros-copy	ar-THROS-koh-pee	S/ R/CF	-scopy to examine, to view arthr/o- joint	Visual examination of the interior of a joint
connective tissue	koh-NECK-tiv TISH-you	S/ R/	-ive pertaining to connect-join together tissue Latin to weave	The supporting tissue of the body
cruciate	KRU-she-ate		Latin cross	Shaped like a cross
graft	GRAFT		French transplant	Transplantation of living tissue
histology	his-TOL-oh-jee	S/ R/CF	-logy study of hist/o- tissue	Study of the structure and function of cells, tissues, and organs
histologist	his-TOL-oh-jist	S/ R/CF	-logist one who studies, specialist	Specialist in histology
ligament	LIG-ah-ment		Latin band	Band of fibrous tissue connecting two structures
meniscus	meh-NISS-kuss		Greek crescent	Disc of cartilage between the bones of a joint
muscle	MUSS-el		Latin muscle	A tissue consisting of contractile cells
patella (singular) patellae (pl)	pah-TELL-ah pah-TELL-ee		Latin small plate	Thin, circular bone embedded in the patellar tendon in front of the knee joint; also called the kneecap
patellar (adj)	pah-TELL-ar	S/ R/	-ar pertaining to patell- patella	Pertaining to the patella
therapy	THAIR-ah-pee		Greek medical treatment	Systematic treatment of a disease, dysfunction, or disorder
therapeutic	THAIR-ah-PYU-tik	S/ R/	-ic pertaining to therapeut- treatment	Relating to the treatment of a disease or disorder
therapist	THAIR-ah-pist	S/ R/	-ist specialist therap- treatment	Professional trained in the practice of a particular therapy

EXERCISES

A. **Review** Case Report 2.3. Then answer the following questions. Fill in the blanks. **LO 2.2, 2.5, and 2.10**

- Which therapeutic procedure was performed on Mr. Josen? _____
- Which tendon contributed a graft to repair the ACL? _____
- What type of surgeon performed the procedures? _____
- Which of the structures repaired is a type of cartilage? _____
- Which structure was repaired by suturing? _____

B. **Dictionary exercise:** When you are working in the medical field, you will be exposed to medical terms you may not recognize. Learn to use the glossary or a good medical dictionary, or practice going online to find the definitions you need. Case Report 2.3 contains some terms that are not defined within the reading. Insert the correct term in the appropriate statement. **LO 2.2 and 2.10**

orthopedic **collateral** **sutured**

- Placing stitches to bind the wound edges together to close an incision or laceration of a body part. _____
- Accessory or secondary _____
- Medical specialty that diagnosis and treats diseases and conditions of bones _____

Lesson 2.4 (cont'd)

Keynotes

- Different tissues are made of specialized cells that manufacture unique fluids. The epithelial layer of the connective tissue synovial membrane is an example, as it produces the lubricant synovial fluid.
- Each connective tissue has distinct functions that enable a structure or organ to function correctly.
- There are four major ligaments of the knee joint:
 1. anterior cruciate ligament (ACL)
 2. posterior cruciate ligament (PCL)
 3. medial collateral ligament (MCL)
 4. lateral collateral ligament (LCL)

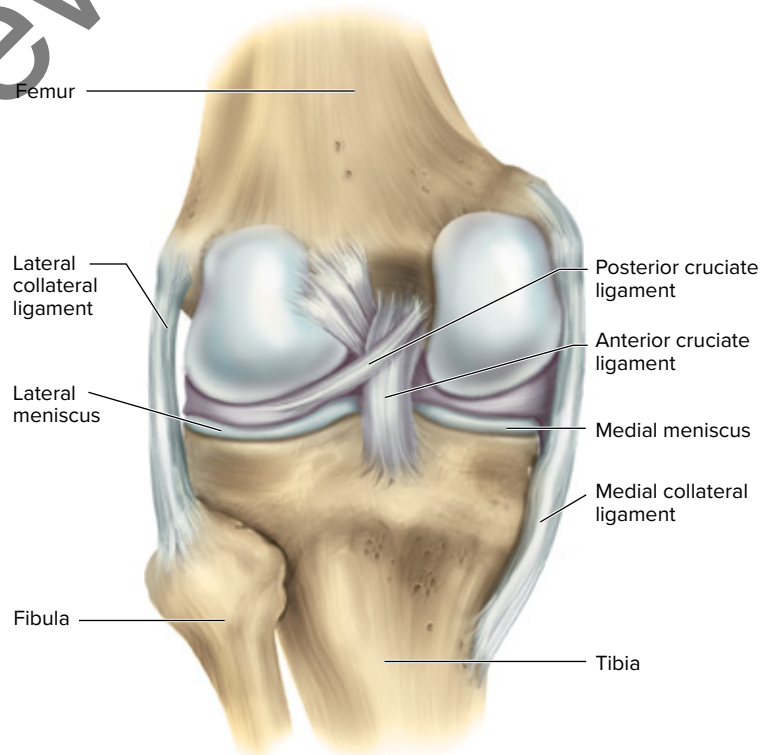
Connective Tissues (LO 2.5)

The relation of structure to function in your body tissues is key. To help you understand this important connection, this lesson uses the knee joint to illustrate the structures and functions of the different tissues found in this joint.

Connective Tissues in the Knee Joint (LO 2.5)

The connective tissues in your knee joint make it possible for you to enjoy your daily life—from standing, sitting, walking, bending, and running. These tissues and their roles are listed below:

- The **bones** of the knee joint are the **femur**, **tibia**, and **patella** (see Chapter 4). Bone is the hardest connective tissue in your body because it contains calcium mineral salts (mainly calcium phosphate). Bones have a good blood supply so they can heal well after a fracture. Bones in general are covered with a thick fibrous tissue called the **periosteum**.
- **Cartilage** has a flexible, rubbery **matrix** (in the knee as a **meniscus**) that allows it to function as a shock absorber and a gliding surface where two bones meet to form a joint. Cartilage has very few blood vessels and heals poorly—sometimes not at all. When it is injured or torn, surgery is often needed. Cartilage also forms the shape of your ear, the tip of your nose, and your larynx.
- **Ligaments** hold the knee joint together. Two ligaments outside the joint cavity on each side of the joint are the **medial collateral ligament (MCL)** and the **lateral collateral ligament (LCL)** (Figure 2.6). Two other ligaments located inside the joint cavity are called the **anterior collateral ligament (ACL)** and the **posterior collateral ligament**; they cross over each other to form an “X”. (Figure 2.6).
- **Ligaments** are strips or bands of fibrous connective tissue made of **collagen** fibers. The knee joint has four major ligaments that hold it together. The blood supply to these ligaments is poor, so they do not heal well without surgery (Figure 2.6).
- **Tendons** are thick, strong ligaments that attach muscles to bone.
- The **joint capsule** of the knee joint encloses the joint cavity. It’s made of thin, fibrous connective tissue and strengthened by fibers that extend over it from the surrounding ligaments and muscles. These features are common to most joints.
- The **synovial membrane** lines many joint capsules and secretes **synovial fluid**—a slippery lubricant stored in the joint cavity. This fluid makes joint movement almost friction-free. It distributes **nutrients** to the cartilage on the joint surfaces of bone.
- **Muscle tissue** stabilizes the joint. Extensions of the large muscle tendons in the front and the rear of the thigh are major stabilizers of the knee joint. The muscles alone extend and flex the knee joint (see Chapter 4).
- **Nervous tissue** carries messages between the brain and the knee structures. All the knee structures are packed with nerves, which is why a knee injury is excruciatingly painful.



► **FIGURE 2.6**
Ligaments of Knee Joint, with the Patellar Tendon Removed.

Anterior view

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
capsule	KAP-syul		Latin <i>little box</i>	Fibrous tissue layer surrounding a joint or other structure
capsular (adj)	KAP-syu-lar	S/ R/	-ar <i>pertaining to</i> capsul- <i>box</i>	Pertaining to a capsule
cartilage	KAR-tih-lage		Latin <i>gristle</i>	Nonvascular, firm connective tissue found mostly in joints
collagen	KOLL-ah-jen	S/ R/CF	-gen <i>produce, form</i> coll/a- <i>glue</i>	Major protein of connective tissue, cartilage, and bone
matrix	MAY-triks		Latin mater <i>mother</i>	Substance that surrounds and protects cells, is manufactured by the cells, and holds them together
nutrient	NYU-tree-ent	S/ R/	-ent <i>end result</i> nutri- <i>nourish</i>	A substance in food required for normal physiologic function
periosteum	PER-ee-OSS-tee-um	S/ P/ R/	-um <i>tissue</i> peri- <i>around</i> -oste- <i>bone</i>	Fibrous membrane covering a bone
synovial	si-NOH-vee-al	S/ P/ R/CF	-al <i>pertaining to</i> syn- <i>together</i> -ov/i- <i>egg</i>	Pertaining to the synovial membrane or fluid
tendon	TEN-dun		Latin <i>sinew</i>	Fibrous band that connects muscle to bone

EXERCISES

A. Construct the appropriate medical term to match the definitions given. The placement of the elements is noted for you under the line; each different element is separated on the line. Write the correct elements on the line. If a term does not have a particular element, leave it blank. **LO 2.5**

- Fibrous membrane covering a bone: _____
P / R/CF / S
- Major protein of connective tissue: _____
P / R/CF / S
- Pertaining to the synovial membrane _____
P / R/CF / S
- Substance in food that nourishes _____
P / R/CF / S

B. Match each connective tissue term to its correct description. **LO 2.5**

- | | |
|--|---------------|
| 1. Term that contains a word element meaning bone | a. cartilage |
| 2. Term that contains a word element that means glue | b. tendon |
| 3. Term that contains a word element meaning egg | c. periosteum |
| 4. Term that is Latin and means gristle | d. synovial |
| 5. Term that is Latin and means sinew | e. collagen |

Keynote

- Homeostasis is the coordinated response of all the organs to maintain the internal physiologic stability of an organism.

Organs and Organ Systems (LO 2.6)

An **organ** is a structure composed of several tissues that work together to carry out specific functions. For example, your skin is an organ that has different tissues in it, such as epithelial cells, hair, nails, and glands (see Chapter 3).

An **organ system** is a group of organs with a specific collective function, like digestion, circulation, or respiration. For example, your nose, pharynx, larynx, trachea, bronchi, and lungs all work together to achieve the total function of respiration (see Chapter 8).

The different organs in an organ system are usually interconnected. For example, in the **urinary organ system** (Figure 2.7), the organs are the kidneys, ureters, bladder, and urethra, and they are all connected (see Chapter 13).

All your organ systems work together to ensure that your body's internal environment remains relatively constant. This process is called **homeostasis**. It ensures that cells receive adequate nutrients and oxygen. It also ensures that cell waste products are removed so your cells can function normally. Disease affecting an organ or organ system disrupts the homeostasis game plan.

Your body has 11 organ systems, as shown in Table 2.2. Muscular and **skeletal** are considered one organ system called the musculoskeletal system (see Chapters 4 and 5). Each body system has a chapter in this book where the terms associated with it are defined.

▼ **TABLE 2.2**
ORGAN SYSTEMS (LO 2.6)

Organ System	Major Organs	Major Functions
Integumentary	Skin, hair, nails, sweat glands, sebaceous glands	Protect tissues, regulate body temperature, support sensory receptors
Skeletal	Bones, ligaments, cartilage	Provide framework, protect soft tissues, provide attachments for muscles, produce blood cells, store inorganic salts
Muscular	Muscles	Cause movements, maintain posture, produce body heat
Nervous	Brain, spinal cord, nerves, sense organs	Receive and interpret sensory information and, in response, stimulate muscles, glands, and other organ systems
Endocrine	Glands that secrete hormones: pituitary, thyroid, parathyroid, adrenal, pancreas, ovaries, testes, pineal, thymus	Control metabolic activities of organs
Cardiovascular	Heart, blood vessels	Move blood and transport substances throughout body
Lymphatic	Lymph vessels and nodes, thymus, spleen	Defend body against infection, return tissue fluid to blood, carry certain absorbed food molecules
Digestive	Mouth, tongue, teeth, salivary glands, pharynx, esophagus, stomach, liver, gallbladder, pancreas, small and large intestines	Receive, break down, and absorb food; eliminate unabsorbed material
Respiratory	Nasal cavity, pharynx, larynx, trachea, bronchi, lungs	Intake and output air, exchange gases between air and blood
Urinary	Kidneys, ureters, urinary bladder, urethra	Remove wastes from blood, maintain water and electrolyte balance, store and transport urine
Reproductive	Male: scrotum, testes, epididymides, vasa deferentia, seminal vesicles, prostate, bulbourethral glands, urethra, penis Female: ovaries, fallopian tubes, uterus, vagina, vulva	Produce and maintain sperm cells, transfer sperm cells into female reproductive tract Produce and maintain egg cells, receive sperm cells, support development of an embryo, function in birth process

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▲ **FIGURE 2.7**
The Urinary System.

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS	DEFINITION
cardiovascular	KAR-dee-oh-VAS-kyu-lar	S/ R/CF R/ -ar pertaining to cardi/o- heart -vascul- blood vessel	Pertaining to the heart and blood vessels
digestion	die-JEST-shun	S/ R/ -ion action digest- break down food	Breakdown of food into elements suitable for cell metabolism
digestive (adj)	die-JEST-iv	S/ -ive pertaining to	Pertaining to digestion
endocrine	EN-doh-krin	P/ R/ endo- within -crine to secrete	A gland that produces an internal or hormonal substance
homeostasis (Note: Hemostasis is the arrest of bleeding.)	hoh-mee-oh-STAY-sis	S/ R/CF -stasis standstill, control home/o- the same	Maintaining the stability of a system or the body's internal environment
integument	in-TEG-you-ment		Latin a covering
integumentary (adj)	in-TEG-you-MENT-ah-ree	S/ R/ -ary pertaining to integument- covering of the body	Organ system that covers the body, the skin being the main organ within the system Pertaining to the covering of the body
lymph	LIMF		Latin clear spring water
lymphatic (adj)	lim-FAT-ic	S/ R/ -atic pertaining to lymph- lymph, lymphatic system	Clear fluid collected from body tissues and transported by lymph vessels to the venous circulation Pertaining to lymph or the lymphatic system
nervous	NER-vus	S/ R/ -ous pertaining to nerv- nerve	Pertaining to a nerve or the nervous system; or easily excited or agitated
nervous system	NER-vus SIS-tem	system Greek an organized whole	The whole, integrated nerve apparatus
respiration	RES-pih-RAY-shun	S/ R/ -ation process respir- to breathe	Process of breathing; fundamental process of life used to exchange oxygen and carbon dioxide
respiratory (adj)	RES-pih-rah-tor-ee	S/ -atory pertaining to	Pertaining to respiration
skeleton skeletal (adj)	SKEL-eh-ton SKEL-eh-tal	S/ R/ Greek skeleton or mummy tal pertaining to skel- skeleton	The bony framework of the body Pertaining to the skeleton
urinary (adj)	YUR-in-ary	S/ R/ -ary pertaining to urin- urine	Pertaining to urine

EXERCISES

A. Construct the correct medical terms by working with the literal meaning of the elements a. Enter the correct elements on each line to complete the term. LO 2.6

- _____ / _____
lymph / pertaining to
- _____ / _____
heart and blood vessels / pertaining to
- _____ / _____
skeleton / pertaining to
- _____ / _____
covering of the body / pertaining to
- _____ / _____
break down food / pertaining to

B. Continue working with the medical terms related to the organs and organ systems. LO 2.6 Remember

- When referring to a body system, add a suffix that means: _____
- Which element type is different between the terms *homeostasis* and *hemostasis*? _____
- What is the main organ in the integumentary system? _____
- What is the bony framework of the body called? _____
- What term refers to clear fluid? _____

Lesson 2.5

Anatomical Positions, Planes, and Directions



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Objectives

Medical terms have been developed over the past several thousand years to help you describe clearly the location of different anatomical structures and lesions and their relation to each other in the human body. To do this, you need to be able to:

- 2.5.1 Define the fundamental anatomical position on which all descriptions of anatomical locations are based.
- 2.5.2 Describe the medical terminology of the different anatomical planes and directions.
- 2.5.3 Relate these terms to physical sites on the body.
- 2.5.4 Locate the body cavities.
- 2.5.5 Identify the medical terminology of the four abdominal quadrants and the nine main regions.

Keynote

- The transverse plane is the only horizontal body plane.

Fundamental Anatomical Position (LO 2.7)

When all anatomical descriptions are used, it's assumed that the body is in the "anatomical position" (Figure 2.8). Here is how this position looks if you're standing in front of a full-length mirror: your body is standing erect, your feet are flat on the floor, your face and eyes are facing forward, and your arms are at your sides with your palms facing forward.

When you lie down flat on your back with your palms upward, you are **supine**. When you lie down flat on your belly with your palms facing the floor, you are **prone**.

Anatomical Directional Terms (LO 2.7)

Directional terms describe the position of one body structure or part relative to another body structure or part. These directional terms are shown in Figures 2.8 and 2.9.

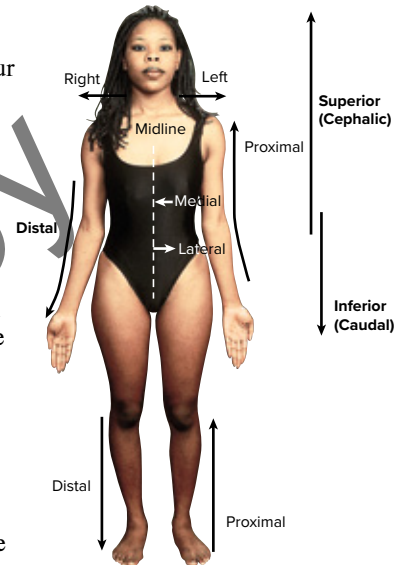
Anatomical Planes (LO 2.7)

Different views of your body are based on imaginary "slices," which produce flat surfaces called **planes** that pass through your body (Figure 2.10). The **three major anatomical planes** are the following:

- Transverse or horizontal:** a plane passing across the body parallel to the floor and perpendicular to the body's long axis. It divides the body into an upper/superior portion and a lower/inferior portion.
- Sagittal:** a vertical plane that divides the body into right and left portions.
- Frontal (coronal):** a vertical plane that divides the body into front (**anterior**) and back (**posterior**) portions.

▼ **FIGURE 2.8**
Anatomical Position, with Directional Terms.

Joe DeGrandis/McGraw-Hill Education

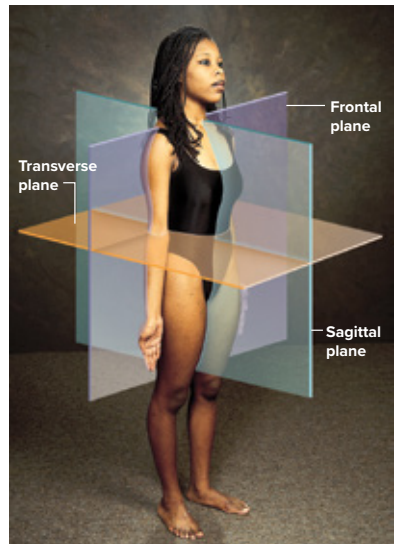


▼ **FIGURE 2.9**
Other Directional Terms.



▼ **FIGURE 2.10**
Anatomical Planes.

Joe DeGrandis/McGraw-Hill Education



Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
anatomy	ah-NAT-oh-mee	S/ R/	-tomy process of separating ana- apart from	Study of the structures of the human body
anatomical (adj)	an-ah-TOM-ik-al	S/	-ical pertaining to	Pertaining to anatomy
anterior (opposite of posterior)	an-TEER-ee-or	S/ R/	-ior pertaining to anter- before, front part	The front surface of the body; situated in front
caudal (opposite of cephalic, same as inferior)	KAW-dal	S/ R/	-al pertaining to caud- tail	Pertaining to or nearer to the tailbone
cephalic (opposite of caudal, same as superior)	seh-FAL-ik	S/ R/	-ic pertaining to cephal- head	Pertaining to or nearer to the head
coronal (same as frontal)	KOR-oh-nal	S/ R/	-al pertaining to coron- crown	Pertaining to the vertical plane dividing the body into anterior and posterior portions
distal (opposite of proximal)	DISS-tal	S/ R/	-al pertaining to dist- away from the center	Situated away from the center of the body
dorsal (same as posterior)	DOOR-sal	S/ R/	-al pertaining to dors- back	Pertaining to the back or situated behind
inferior (opposite of superior)	in-FEER-ee-or	S/ R/	-ior pertaining to infer- below	Situated below
lateral (opposite of medial)	LAT-er-al	S/ R/	-al pertaining to later- side	Situated at the side of a structure
medial (opposite of lateral)	ME-dee-al	S/ R/	-al pertaining to medi- middle	Nearer to the middle of the body
posterior (opposite of anterior)	pohs-TEER-ee-or	S/ R/	-ior pertaining to poster- back part	Pertaining to the back surface of the body; situated behind
prone (opposite of supine)	PROHN		Latin bending forward	Lying face down, flat on your belly
proximal (opposite of distal)	PROK-sih-mal	S/ R/	-al pertaining to proxim- nearest to the center	Situated nearest to the center of the body
sagittal	SAJ-ih-tal	S/ R/	-al pertaining to sagitt- arrow	Vertical plane through the body dividing it into right and left portions
superior (opposite of inferior)	soo-PEER-ee-or	S/ R/	-ior pertaining to super- above	Situated above
supine (opposite of prone)	soo-PINE		Latin lying on the back	Lying face up, flat on your spine
transverse	trans-VERS		Latin crosswise	Horizontal plane dividing the body into upper and lower portions
ventral (same as anterior)	VEN-tral	S/ R/	-al pertaining to ventr- belly	Pertaining to the belly or situated nearer the surface of the belly

Review Copy

EXERCISES

A. Review Case Report 2.1. Use directional terms to correctly answer each question. Fill in the blanks.

LO 2.2 and 2.7

- To examine Mrs. Arnold's abdomen, in which position would you place her? _____
- To examine Mrs. Arnold's spine, in which position would you place her? _____
- Mrs. Arnold's spine is _____ to her abdomen.

B. Identify the following pairs of terms as either opposites or synonyms. **LO 2.7**

- | | |
|-----------------------------|----------------------------|
| 1. anterior/posterior _____ | 4. coronal/frontal _____ |
| 2. ventral/anterior _____ | 5. cephalic/caudal _____ |
| 3. prone/supine _____ | 6. cephalic/superior _____ |



Study Hint

Help your memory with little tricks of association for medical terms. Example: The medical term *supine* has the word up in it. The meaning of *supine* is lying with the face and the anterior part of the body UP. Associate UP with sUPine and you will have no trouble remembering its definition. Then associate the opposite term and you will know the meaning of *prone* as well.

Abbreviations

LLQ	left lower quadrant
LUQ	left upper quadrant
RLQ	right lower quadrant
RUQ	right upper quadrant

Abdominal Quadrants

(LO 2.8)

To simplify your job of locating and identifying abdominal structures and sites of abdominal pain and other abnormalities, you can mentally divide the abdomen into **quadrants**, as shown in *Figure 2.11a*. This approach allows you to separate these locations into manageable parts. So, here you have the right upper quadrant (**RUQ**), left upper quadrant (**LUQ**), right lower quadrant (**RLQ**), and left lower quadrant (**LLQ**).

In addition, there are three main regions of your abdomen—the epigastric, umbilical, and hypogastric regions, as shown in *Figure 2.11b*.

Body Cavities (LO 2.9)

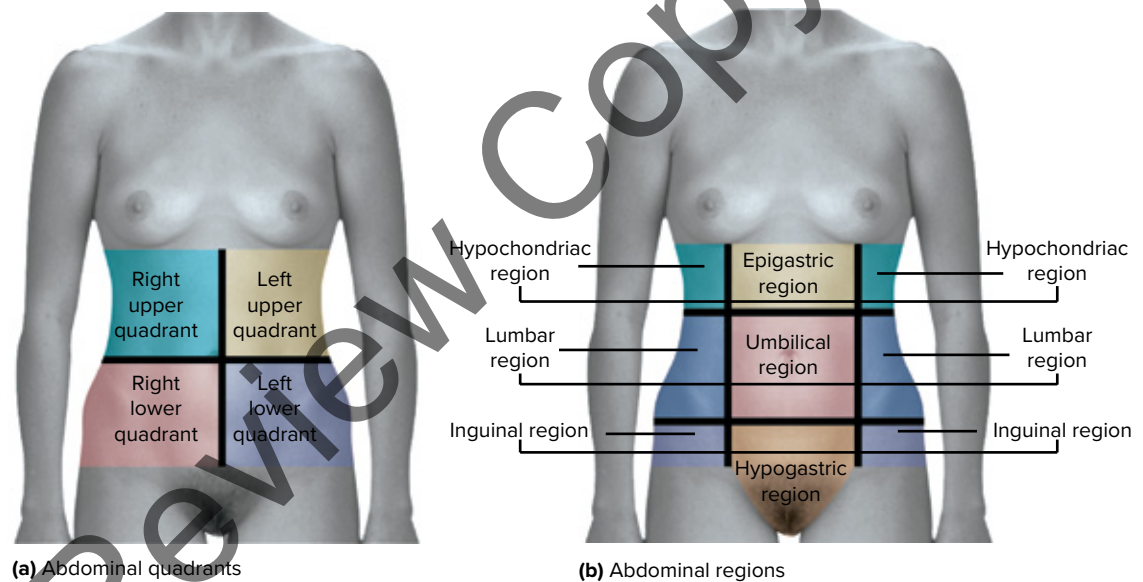
Your body contains many **cavities** or hollow spaces. Some, like the nasal cavity, open to the outside of your

body. Five cavities that do not open to the outside are shown in *Figure 2.12* and listed below.

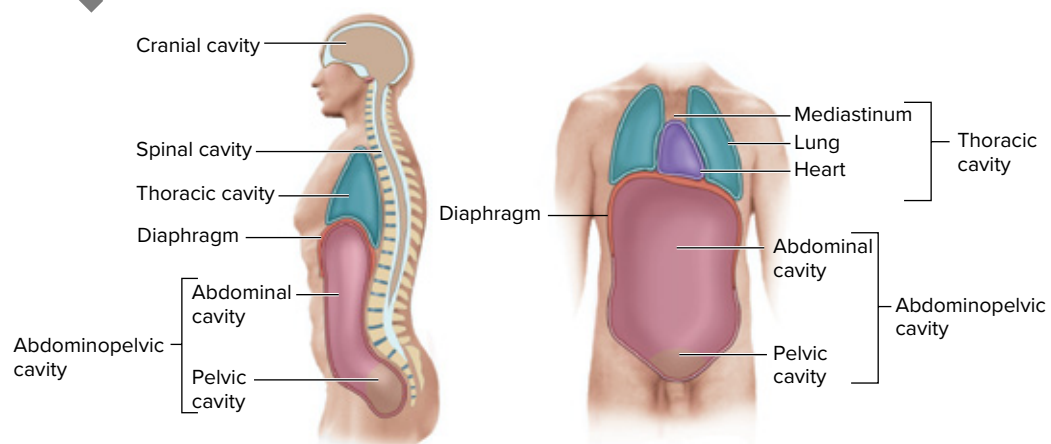
1. The **cranial cavity** contains the brain within the skull.
2. The **thoracic cavity** contains the heart, lungs, thymus gland, trachea and esophagus, and numerous blood vessels and nerves.
3. The **abdominal cavity**, separated from the thoracic cavity by the **diaphragm**, contains the stomach, intestines, liver, spleen, pancreas, and kidneys. There are nine regions in the abdomen, as shown in *Figure 2.11b*.
4. The **pelvic cavity**, surrounded by the pelvic bones, contains the urinary bladder, part of the large intestine, the rectum and anus, and the internal reproductive organs.
5. The **spinal cavity** contains the spinal cord.

The abdominal cavity and pelvic cavity can be combined as the **abdominopelvic cavity**.

► **FIGURE 2.11**
Regional Anatomy.



► **FIGURE 2.12**
Major Body Cavities.



Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
abdomen abdominal (adj)	AB-doh-men ab-DOM-in-al	S/ R/	Latin <i>abdomen</i> -al pertaining to abdomin- abdomen	Part of the trunk between the thorax and the pelvis Pertaining to the abdomen
abdominopelvic	ab-DOM-ih-no-PEL-vik	S/ R/CF R/	-ic pertaining to abdomin/o- abdomen -pelv- pelvis	Pertaining to the abdomen and pelvis
cavity cavities (pl)	KAV-ih-tee KAV-ih-teez	S/ R/	-ity state, condition cav- hollow space	A hollow space or body compartment
cranial (adj)	KRAY-nee-al	S/ R/	-al pertaining to crani- skull	Pertaining to the cranium
cranium	KRAY-nee-um	S/ R/	-um structure	The skull
diaphragm	DIE-ah-fram		Greek <i>diaphragm</i> , fence	Muscular sheet separating the abdominal and thoracic cavities
diaphragmatic (adj)	DIE-ah-frag-MAT-ik	S/ R/	-ic pertaining to diaphragmat- diaphragm	Pertaining to the diaphragm
quadrant	KWAD-rant		Latin <i>one quarter</i>	One quarter of a circle; one of four regions of the surface of the abdomen
spine spinal (adj)	SPYN SPY-nal	S/ R/	Latin <i>spine</i> -al pertaining to spin- spine	The vertebral column or a short bony projection Pertaining to the spine
thoracic (adj)	THOR-ass-ik	S/ R/	-ic pertaining to thorac- chest	Pertaining to the chest (thorax)
thorax	THOR-acks		Greek <i>chest</i>	The part of the trunk between the abdomen and the neck
umbilical (adj)	um-BILL-ih-kal	S/ R/	-al pertaining to umbilic- navel (belly button)	Pertaining to the umbilicus or the center of the abdomen
umbilicus	um-BILL-ih-kuss		Latin <i>navel (belly button)</i>	Pit in the abdomen where the umbilical cord entered the fetus

EXERCISES

A. Deconstruct the following terms into their basic elements. Note that not every type of element will appear in every term. The only element every term needs is a root or a combining form. Fill in the blanks. **LO 2.1 and 2.9**

- diaphragmatic _____ / _____
R/CF S
- abdominopelvic _____ / _____ / _____
R/CF R/CF S
- umbilical _____ / _____
R/CF S
- cranial _____ / _____
R/CF S
- thoracic _____ / _____
R/CF S
- cavity _____ / _____
R/CF S

B. Select the correct answer to answer each question or complete the statement. **LO 2.8 and 2.9**

- Which term contains a root and a combining form?
 - abdominopelvic
 - diaphragmatic
 - thoracic
 - spinal
- Which term is a muscle that separates body cavities?
 - abdominopelvic
 - diaphragm
 - thoracic
 - spinal
- The term “quadrant” represents what number?
 - two
 - four
 - six
 - eight
- The term “spine” also refers to
 - diaphragm
 - skull
 - chest
 - vertebral column
- Which of the following terms is a dentist likely to use?
 - cavity
 - abdomen
 - spinal
 - thoracic

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
biopsy	BI-op-see	S/ R/	-opsy to view bi- life	Removing tissue from a living person for laboratory examination
carcinoma	kar-sih-NOH-mah	S/ R/	-oma tumor, mass carcin- cancer	A malignant and invasive epithelial tumor
cryosurgery	cry-oh-SUR-ger-ee	S/ R/CF R/	-ery process of cry/o- icy cold -surg- operate	Use of liquid nitrogen or argon gas in a probe to freeze and kill abnormal tissue
cutaneous	kyu-TAY-nee-us	S/ R/CF	-ous pertaining to cutan/e- skin	Pertaining to the skin
dermatology	der-mah-TOL-oh-jee	S/ R/CF	-logy study of dermat/o- skin	Medical specialty concerned with disorders of the skin
dermatologist	der-mah-TOL-oh-jist	S/	-logist one who studies, specialist	Medical specialist in diseases of the skin
dermatologic (adj)	der-mah-toh-LOJ-ik	S/	-ic pertaining to	Pertaining to the skin and dermatology
etiology	ee-tee-OL-oh-jee	S/ R/CF	-logy study of eti/o- cause	The study of the causes of a disease
excrete (verb)	eks-KREET	P/ R	ex- out of, away from -crete separate	To pass waste products of metabolism out of the body
excretion (noun)	eks-KREE-shun	S/	-ion action	Removal of waste products of metabolism out of the body
flora	FLO-rah		Latin flower	The population of microorganisms covering the exterior and interior surfaces of healthy animals
integument	in-TEG-you-ment		Latin a covering	Organ system that covers the body, the skin being the main organ within the system
integumentary (adj)	in-TEG-you-MENT-ah-ree	S/ R/	-ary pertaining to integument- covering of the body	Pertaining to the covering of the body
prognosis	prog-NO-sis	P/ R/	pro- projecting forward -gnosis knowledge	Forecast of the probable future course and outcome of a disease
secrete (verb)	seh-KREET	R/	secret- produce	To produce a chemical substance in a cell and release it from the cell
secretion (noun)	seh-KREE-shun	S/	-ion action	Production by a cell(s) of a physiologically active substance and its movement out of the cell.
squamous cell	SKWAY-mus SELL		squamous Latin scaly	Flat, scale-like epithelial cell
synthesis	SIN-the-sis	P/ R/	syn- together -thesis to organize, arrange	The process of building a compound from different elements
synthetic (adj)	sin-THET-ik	S/ R/	-ic pertaining to -thet- arrange, organize	Built up or put together from simpler compounds
vasoconstriction	VAY-soh-con-STRIK-shun	S/ R/CF R/	-ion action vas/o- blood vessel -constrict- narrow	Reduction in diameter of a blood vessel
vasodilation	VAY-soh-die-LAY-shun	R/	-dilat- widen, open up	Increase in diameter of a blood vessel

EXERCISE

A. Review Case Report 3.1 to select the correct answer the following questions. LO 3.2 and 3.8

- Which two types of skin lesions did Dr. Echols remove from Mr. Andrews?
 - squamous cell carcinoma and cryosurgery
 - basal cell carcinoma and squamous cell carcinoma
 - cutaneous and integumentary
 - cryosurgery and excisional biopsy
- What different types of treatment did Dr. Echols use to remove these lesions?
 - squamous cell carcinoma and cryosurgery
 - basal cell carcinoma and squamous cell carcinoma
 - cutaneous and integumentary
 - cryosurgery and excisional biopsy
- What two questions did Dr. Echols need the pathologist to answer?
 - What kind of cancer is present and has the lesion been completely removed?
 - What are the results of the biopsy and what type of flora is present?
 - What is Mr. Andrews' prognosis and has the lesion been completely removed?
 - What is Mr. Andrews' prognosis and should he see a dermatologist?
- What treatment approach involves freezing cancerous tissue?
 - excretion
 - vasoconstriction
 - excisional biopsy
 - cryosurgery
- Cutaneous means:
 - pertaining to the skin
 - action of the skin
 - pertaining to icy cold
 - process of covering the body

Word Analysis and Definition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD	PRONUNCIATION	ELEMENTS		DEFINITION
congenital	con-JEN-ih-tal	S/ P/ R/	-al <i>pertaining to</i> con- <i>with</i> -genit- <i>bring forth</i>	Present at birth
decubitus ulcer (pressure ulcer)	deh-KYU-bit-us UL-ser	P/ R/ R/	de- <i>from</i> -cubitus <i>lying down</i> ulcer <i>sore</i>	Sore caused by lying down for long periods of time
herpes zoster (shingles)	HER-peeZ ZOS-ter		herpes Greek <i>to creep or spread</i> zoster Greek <i>belt, girdle</i>	Painful eruption of vesicles that follows a nerve root on one side of the body
macule	MACK-yul		Latin <i>spot</i>	Small, flat spot or patch on the skin
malignant	mah-LIG-nant	S/ R/	-ant <i>forming, pertaining to</i> malign- <i>harmful, bad</i>	Tumor that invades surrounding tissues and metastasizes to distant organs
malignancy	mah-LIG-nan-see	S/	-ancy <i>state of</i>	State of being malignant
melanin melanoma	MEL-ah-nin mel-ah-NO-mah	S/ R/	Greek <i>black</i> -oma <i>tumor, mass</i> melan- <i>black pigment</i>	Black pigment found in skin, hair, and retina Malignant neoplasm formed from cells that produce melanin
metastasis (noun)	meh-TAS-tah-sis	P/ R/	meta- <i>beyond, subsequent to</i> -stasis <i>stagnate, stay in one place</i>	Spread of a disease from one part of the body to another
metastasize (verb)	meh-TAS-tah-size	S/	-ize <i>affect in a specific way</i>	To spread to distant parts
metastatic (adj)	meh-tah-STAT-ik	R/ S/	-stat- <i>stationary</i> -ic <i>pertaining to</i>	Pertaining to the character of cells that can metastasize
nevus nevi (pl)	NEE-vus NEE-veye		Latin <i>mole, birthmark</i>	Congenital lesion of the skin
papillomavirus	pap-ih-LOH-mah-vi-rus	S/ R/CF	-oma <i>mass, tumor</i> papill/o- <i>papilla, pimple</i> virus Latin <i>poison</i>	Virus that causes warts and is associated with cancer
papule	PAP-yul		Latin <i>pimple</i>	Small, circumscribed elevation on the skin
verruca	ver-ROO-cah		Latin <i>wart</i>	Wart caused by a virus

EXERCISES

A. Identify the italicized element in the first column of the chart, define it, and use it to determine the meaning of the medical term.

LO 3.1 and 3.5

Medical Term	Identity of Element (P, S, R, or CF)	Meaning of Element	Meaning of Medical Term
metastasis	1.	2.	3.
malignant	4.	5.	6.
melanoma	7.	8.	9.
decubitus	10.	11.	12.

B. Demonstrate that you are able to spell medical terms related to disorders of the skin. Fill in the blank with the correct term from the list below.

Not all terms will be used. LO 3.5

congenital herpes zoster macule nevi nevus papillomavirus

- The medical term that means the same as *mole* is _____.
- Shingles is caused by the _____ virus.
- The plural form of the term *nevus* is _____.
- A birthmark is a _____ accumulation of pigment in the skin.

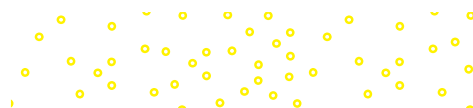
Review Copy

Word Parts and Abbreviations

Note: For easy identification, the word parts in this appendix appear in the same colors as in the Word Analysis and Definition boxes: **suffix**, **prefix**, **root**, **root/combining form**. Any term that is used in the text in both root and combining form is shown only in this appendix as a combining form.

WORD PART	DEFINITION
a-	not, without
a-	variant of ad
ab-	away from
abdomin/o	abdomen
ability	competence
ablat	take away
-able	capable
abort	fail at onset, expel nonviable fetus
abras	scrape off
absorpt	to swallow, take in
ac-	toward
-ac	pertaining to
-acea	condition, remedy
acid/o	acid, low pH
acin	grape
acous	hearing
acr/o	peak, topmost, extremity, highest point
acromi/o	acromion
act	to do, perform, performance
activ	movement
acu	needle
acu-	sharp
acumin	to sharpen
ad-	to, toward, into
adapt	to adjust
-ade	process
aden/o	gland
adenoid	adenoid
adip	fat
adjust	alter
adjuv	give help
adolesc	beginning of adulthood
adren/o	adrenal gland

WORD PART	DEFINITION
aer/o	air, gas
affer	move toward the center
ag-	to
-age	pertaining to
agglutin	sticking together, clumping
-ago	disease
agon	to fight
-agon	to fight
agor/a	marketplace
-agra	severe pain
-al	pertaining to
alanine	an amino acid, protein synthesized in muscle
albicans	white
albin/o	white
albumin	albumin
ald/o	organic compound
-ale	pertaining to
alges	sensation of pain
-algia	pain, painful condition
aliment	nourishment
-alis	pertaining to
alkal	base
all/o	strange, other
allo-	strange, other
alopec-	baldness, mange
alpha-	first letter in the Greek alphabet
alveol	alveolus, air sac
-aly	condition
ambly-	dull
ambulat	to walk, walking
amin/o	nitrogen containing
-amine	nitrogen-containing substance



S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
ammon	ammonia
amni/o	amnion, fetal membrane
amnios	amnion
amph-	around
ampull	bottle-shaped
amput	to prune, cut off
amyl	starch
an-	not, lack of, without
-an	pertaining to
an/o	anus
ana-	away from, excessive
anabol	build up
analysis	process to study whole in terms of its parts
analyst	one who separates
anastom	provide a mouth
-ance	condition, state of
-ancy	state of
andr/o	male, masculine
aneurysm	dilation
angi/o	blood vessel, lymph vessel
angina	sore throat, chest pain radiating to throat
ankyl	stiff
-ant	forming, pertaining to
ant-	against
ante-	before, forward, in front of
anter	before, front part
anthrac	coal
anti-	against
aort	aorta
apo-	different from, separation from
appendic	appendix
apse	clasp
aqu-	water
-ar	pertaining to
arachn	cobweb, spider
-arche	beginning
areol	areola, small area
aria	air
-arian	one who is

WORD PART	DEFINITION
-aris	pertaining to
aroma	smell, sweet herb
array	place in order
arter	artery
arteri/o	artery
arteriosus	like an artery
arthr/o	joint
articul	joint
-ary	pertaining to
asbest	asbestos
ascit	fluid in the belly
-ase	enzyme
aspartate	an amino acid
aspergill	aspergillus
aspirat	to breathe on
assay	evaluate
assist	aid, help
asthm	asthma
astr/o	star
-ata	action, place, use
-ate	composed of, pertaining to
-ated	pertaining to a condition
atel	incomplete
ather/o	porridge, gruel, fatty substance
athet	without position, uncontrolled
-atic	pertaining to
-ation	a process
-ative	pertaining to, quality of
-ator	agent, instrument, person or thing that does something
-atory	pertaining to
atri/o	entrance, atrium
-atric	treatment
attent	awareness
attenu	to weaken
audi/o	hearing
audit	hearing
aur-	ear
auscult	listen to

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
auto-	self, same
avail	useful
axill	armpit, axilla
ayur-	life
azot	nitrogen
-back	back, toward the starting point
bacteri/o	bacteria
balan	glans penis
bar	pressure
bari	weight
bas/o	base, opposite of acid
basal	deepest part
basil	base, support
be	life
behav	mental or motor activity
beta	second letter of Greek alphabet
bi-	two, twice, double
bi/o	life
-bil	able
bil/i	bile
-blast	germ cell, immature cell
blast/o	germ cell, immature cell
blephar/o	eyelid
body	body, mass, substance
bov	cattle
brachi/o	arm
brachii	of the arm
brachy-	short
brady-	slow
bride	rubbish, rubble
bronch/i	bronchus
bronch/o	bronchus
brucell	pathologist David Bruce
buccinat	cheek
bulb/o	bulb
burs	bursa
calc/i	calcium
calcan	calcaneous
calcul	stone, little stone

WORD PART	DEFINITION
callos	thickening
calor	heat
canal	duct or channel
cancer	cancer
candid	<i>Candida</i>
capill	hairlike, capillary
capit	head
capn	carbon dioxide
caps	box, cover, shell
capsul	box
carb/o	carbon
carboxy	group of organic compounds
carcin/o	cancer
card	heart
cardi/o	heart
care	be responsible for
carotene	yellow-red pigment
carotid	large neck artery
carp/o	bones of the wrist
cartilag	cartilage
cata-	down
catabol	break down
catechol	tyrosine-containing
catheter	insert, catheter
caud	tail
cav	hollow space
cava	cave
cavern	cave
cec	cecum
-cele	cave, hernia, swelling
celi	abdomen
cellul	cell, small cell
cent-	hundred
-centesis	to puncture
centr/o	central
ceph	head
cephal/o	head
-cephalus	head
cephaly	condition of the head

WORD PART	DEFINITION
ceps	head
cept	to receive
cerebell	little brain, cerebellum
cerebr/o	brain
cerumin	cerumen
cervic	neck
cess	going forward
chancr	chancre
chem/o	chemical
chemic	chemical
-chete	hair
-chezia	pass a stool
chir/o	hand
chlor	green
chol/e	bile
cholangi	bile duct
cholecyst	gallbladder
choledoch/o	common bile duct
chondr/o	cartilage, rib, granule
chorion	chorion, membrane
chrom/o	color
chromat	color
chron/o	time
chym/o	chyme
-cidal	pertaining to killing
cide	to kill
cili	hairlike structure
circulat	circular route
circum-	around
cirrh	yellow
cis	to cut
cit/i	cell
-clast	break, break down
claudic	limp
claustr/o-	confined space
clav	clavicle
clave	lock
clavicul	clavicle
-cle	small

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
clitor	clitoris
clon	cutting used for propagation, tumult
-clonus	violent action
co-	with, together
coagul/o	clot, clump
coarct	press together, narrow
cobal	cobalt
cocc	round bacterium
coccus	berry, spherical bacterium
cochle	cochlear
code	information system
cognit	thinking
coit	sexual intercourse
col-	with, together
col	colon
coll	collect, glue
coll/a	glue
colon/o	colon
coloniz	form a colony
colp/o	vagina
com	take care of
com-	with, together
comat	coma
combin	combine
comminut	break into pieces
commodat	adjust
compat	tolerate
compet	strive together
complex	woven together
compli	fulfill
compress	press together
compuls	drive, compel
con-	with, together
concav	arched, hollow
concept	become pregnant
concuss	shake or jar violently
condyl	knuckle
confus	bewildered
congest	accumulation of fluid

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
coni	dust
coniz	cone
conjunctiv	conjunctiva
connect	join together
conscious	awareness
constip	press together
constrict	to narrow
contagi/o	transmissible by contact
contaminat/o	to corrupt, make unclean
contin	hold together
contra-	against
contract	draw together, pull together
contus	bruise
convalesc	recover
cor	heart
cori	skin
corne/o	cornea
coron	crown, coronary
corpor/e	body
corpus	body
cortic/o	cortex, cortisone
cortis	cortisone
cost	rib
crani/o	cranium, skull
crease	groove
creat	flesh
creatin	creatinine
crete	to separate
cretin	cretin
crimin	distinguish
crine	secrete
crista	crest
-crit	to separate
cry/o	cold
crypt-	hidden
cub	cube
cubit	elbow
cubitus	elbow, ulna
cune/i	wedge

WORD PART	DEFINITION
cur	cleanse, cure
curat	to care for
curet	to cleanse
cursor	run
cup	point
cutan/e	skin
cyan/o	dark blue
-cyst	cyst, bladder
cyst/o	bladder, sac, cyst
cysteine	an amino acid
cyt/o	cell
-cyte	cell
cyte	cell
dacry/o	tears, lacrimal duct
day	day
de-	without, out of, removal, from
defec	clear out waste
defici	failure, lacking, inadequate
degenerat	deteriorate
deglutit	to swallow
del	visible
deliri	confusion, disorientation
delt	triangle
delus	deceive
dem	the people
demi-	half
dendr/o	treelike
dent	tooth
depend	rely on
depress	press down
derm/a	skin
-derma	skin
dermat/o	skin
dermis	skin
-desis	bind together, fixation of bone or joint
di-	two
dia-	complete
diabet	diabetes
diagnost	decision

WORD PART	DEFINITION
dialectic	argument
dialy	separate
diaphor	sweat
diaphragm/a	diaphragm
diastol	diastole, relaxation
dict	consent, surrender
didym/o	testis
didymis	testis
diet	a way of life
different	not identical
digest	to break down food
digit	finger or toe
dilat	open up, expand, widen
dips	thirst
dis-	apart, away from
discipl	understand
disciplin	disciple, instruction
dist	away from the center
-dium	appearance
diuret	increase urine output
diverticul	byroad
dorm	sleep
dors	back
dorsi	of the back
drome	running
drop	liquid globule
duce	to lead
ducer	to lead, leader
duct	to lead, lead
ductus	leading
duoden	twelve, duodenum
dur	dura
dura	hard
dwarf	miniature
dynam/o	power
-dynia	pain
dys-	bad, difficult, painful
e-	out of, from
-eal	pertaining to

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
ease	normal function, freedom from pain
ec-	out, outside
ech/o	sound wave
echin	hedgehog
eclamps	shining forth
eco-	environment
-ectasis	dilation
-ectomy	excision, surgical excision
ectop	on the outside, displaced
eczem/a	eczema
-ed	pertaining to
edema	edema, swelling
-ee	person who is the object of an action
efface	wipe out
effer	move out from the center
effus	pour out
ejacul	shoot out
ejaculat	shoot out
elasma	plate
elect	choice
electr/o	electric, electricity
elimin	throw away, expel
-elle	small
-em	condition
em-	in, into
-ema	quality of, quantity of
emac/i	make thin
embol	plug
embryon	embryo, fertilized egg
emesis	vomiting
-emesis	to vomit, vomiting
emet	to vomit
emia	a blood condition
-emia	a blood condition
-emic	pertaining to a blood condition
emmetr-	measure
emuls	suspend in a liquid
en-	in

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
-ence	forming, quality of, state of
enceph	brain
encephal/o	brain
encephaly	condition of the brain
-ency	condition, state of, quality of
end-	inside, within
endo-	inside, within
-ent	end result, pertaining to
enter/o	intestine
entery	condition of the intestine
enur	urinate
environ	surroundings
-eon	one who does
eosin/o	dawn
ependym	lining membrane
epi-	above, upon, over
epilept	seizure
epiphys/i	growth
episi/o	vulva
equi-	equal
equin	horse
equip	to fit out
-er	agent, one who does
erect	straight, to set up
erg/o	work
-ergy	process of working
-ery	process of
erysi-	red
erythemat	redness
erythr/o	red
-escent	process
-esis	condition
eso-	inward
esophag/e	esophagus
essent	existence
esthes	sensation, perception
esthet	sensation, perception
estr/o	woman
ethm	sieve

WORD PART	DEFINITION
eti/o	cause
-etic	pertaining to
-etics	pertaining to
-ette	little
eu-	good, normal
ex-	away from, out, out of
exacerbat	increase, aggravate
examin	test, examine
excis	cut out
excret	separate, discharge
exo-	outside, outward
expect	await
expir	breathe out
extra-	out of, outside
faci	face
factor	maker
farct	area of dead tissue
fasc/i	fascia
febr	fever
fec	feces
feed	to give food, nourish
femor	femur
fer	to bear, to carry
ferrit	iron
fertil	able to conceive
fertiliz	to make fruitful
fet/o	fetus
fibr/o	fiber, fibrous
fibrill	small fiber
fibrin/o	fibrin
fibul	fibula
-fication	remove
fida	split
field	definite area
filar	roundworm
filtr	strain through
fiss	split
fistul	tube, pipe
flammat	flame

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
flat	flatus
flatul	excessive gas
flavin	yellow
flex	bend
fluid	flowing
fluo-	fluorine
fluor/o	flux, flow
flux	flow
foc	center, focus
follicul	follicle
foramin	opening, foramen
fore-	in front
-form	appearance of, resembling
format	to form
fract	break
fraction	small amount
free	free
frequ	repeated, often
front	front, forehead
fructos	fruit sugar
function	perform
fund/o	fundus
fung/i	fungus
fusion	to pour
galact/o	milk
gall	bile
gastr/o	stomach
gastrin	stomach hormone
gastrocnem	calf of leg
gemin	twin, double
gen/o	produce, create
-gen	create, produce, form
gen-	birth
-gene	production, give birth
gener	create, produce
genesis	origin, creation, production
-genesis	creation, origin, formation, source
genet	origin
-genic	creation, producing

WORD PART	DEFINITION
genit	bring forth, birth, primary male or female sex organ
genitor	offspring
ger	old age
geront/o	old age
gest	gestation, pregnancy, produce
gestat	gestation, pregnancy, to bear
gigant	giant
gingiv	gums
gland	gland
glauc	lens opacity, grey
gli/o	glue, supportive tissue of nervous system
-glia	glue, supportive tissue of nervous system
globin/o	protein
globul	globular, protein
glomerul/o	glomerulus
gloss/o	tongue
glott	mouth of windpipe
glottis	mouth of windpipe
gluc/o	glucose, sugar
glut	buttocks
glutin	glue, stick
glyc/o	glycogen, glucose, sugar
glycer	glycerol, sweet
gnath	jaw
gnose	use knowledge
gnosis	knowledge
gomph	bolt, nail
gon/o	seed
gonad/o	gonads, testes, or ovaries
gong	daily practice
-grade	going
graft	splice, transplant
-graft	tissue for transplant
graine	head pain
-gram	a record, recording
grand-	big
grand	big
granul/o	granule, small grain

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
-graph	to record, write
-grapher	one who records
-graphy	process of recording
gravida	pregnant
gravis	serious
gru	to move
guan	dung
gurgit	flood
gynec/o	woman, female
habilitat	restore
hale	breathe
halit	breath
hallucin	imagination
hallux	big toe
hem/o	blood
hemangi/o	blood vessel
hemat/o	blood
heme	red iron-containing pigment
hemi-	half
-hemia	blood condition
hepar	liver
hepat/o	liver
herb/i	plant
herni/o	hernia, rupture
herp	blister
hetero-	different
hiat	opening
hist	derived from histidine
hist/o	tissue
holist	entire, whole
hom/i	man
home/o	the same
homo-	same, alike
hormon	chemical messenger, hormone
human	human being
humor	fluid
hyal	glass
hydr/o	water
hyp-	below
hyper-	above, beyond, excess, excessive

WORD PART	DEFINITION
hypn/o	sleep
hypo-	below, deficient, smaller, low, under
hyster/o	uterus
-ia	condition
-iac	pertaining to
-ial	pertaining to
-ian	one who does, specialist
-ias	condition
-iasis	abnormal condition
iatr	medical treatment, physician
-iatic	relating to medicine, medical knowledge
iatics	medical knowledge
-iatrist	practitioner, one who treats
-iatry	treatment, field of medicine
-ibility	able to do
-ible	can do, able to
-ic	pertaining to
-ica	pertaining to
-ical	pertaining to
-ician	expert
-ics	knowledge
ict	seizure
icterus	jaundice
-id	having a particular quality, pertaining to
-ide	having a particular quality
idi/o	unknown, personal
ifer	to bear, carry
-ify	to become
-il	a thing
-ile	pertaining to
ile/o	ileum
ili/o	ilium (hip bone)
im-	in, not
imag	likeness
immun/o	immune, immune response, immunity
immune	protected from
immuniz	make immune
impair	worsen
impede	obstruct

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
-imus	most
-in	substance, chemical compound
in-	not, into, in
incis	cut into
incub	sit on, lie on, hatch
index	to declare
-ine	pertaining to
infant	infant
infect	internal invasion, infection
infer	below, beneath
infest	invade, attack
inflammat	set on fire
inflat	blow up
infra-	below, beneath
-ing	quality of, doing
ingest	carry in
inguin	groin
inhal	breathe in
inhibit	repress
inject	force in
ino	sinew
insect/i	insect
insert	put together
inspir	breathe in
insul	island
integr	whole
integument	covering of the body
inter-	between
interstiti	space between tissues
intestin	gut, intestine
intra-	inside, within
intrins	on the inside
intus-	within
iod	violet, iodine
-ion	action, condition
-ior	pertaining to
-iosum	pertaining to
-ious	pertaining to
irrig	to water

WORD PART	DEFINITION
-is	belonging to, pertaining to
isch	to block
ischi	ischium
-ism	condition, process
-ismus	take action
iso-	equal
-ist	agent, specialist
-istic	pertaining to
-isy	inflammation
-ites	associated with
-ition	process
-itis	inflammation, infection
-ity	condition, state
-ium	structure
-ius	pertaining to
-ive	nature of, quality of, pertaining to
-iz	subject to
-ization	process of inserting or creating
-ize	action, affect in a specific way, policy
-ized	affected in a specific way
-izer	affects in a particular way, line of action
jejun	jejunum
jugul	throat
junct	joining together
juxta-	beside, near, close to
kal	potassium
kary/o	nucleus
kel/o	tumor
kerat	keratin, hard protein
kerat/o	cornea
kern	nucleus
ket/o	ketone
keton	ketone
ketone	organic compound
kin	motion
kinase	enzyme
kinesi/o	movement
kinet	motion
-kinin	move in

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
klept/o	to steal
kyph/o	bent, humpback
labi	lip
labyrinth	inner ear
lacer	to tear
lacrim	tears, tear duct
lact	milk
lactat	secrete milk
lapar/o	abdomen in general
lapse	clasp, fall together
-lapse	fall together, slide
laryng/o	larynx
lash	end of whip
lat	to take
lateral	at the side
latiss	wide
-le	small
lei/o	smooth
-lemma	covering
-lepsy	seizure
lept	thin, small
-let	small
leuk/o	white
lex	word
librium	balance
ligament	ligament
ligat	tie up, tie off
lign	line
-ling	small
lingu	tongue
lip/o	fat
lipid	fat
lith/o	stone
liv	life, live
load	to carry
lob	lobe
locat	a place
log	to study
-logist	one who studies, specialist

WORD PART	DEFINITION
logous	relation
logy	study of
-logy	study of
longev	long life
lord/o	curve, swayback
lubric	make slippery
lucid	bright, clear
lumb	lower back, loin
lump	piece
lun	moon
lupus	wolf
-lus	small
lute	yellow
luxat	dislocate
ly	break down, separate
-ly	every
lymph/o	lymph, lymphatic system
lymphaden/o	lymph node
lymphangi/o	lymphatic vessels
lys/o	decompose, dissolve
lysis	destruction
-lysis	destruction, dissolve, separation
lyt	dissolve, destroy
-lyte	soluble
-lytic	relating to destruction
lyze	destruct, dissolve
macro-	large
macul	spot
magnet	magnet
mak	makes
-maker	one who makes
mal	bad, difficult, inadequate
mal-	bad, difficult
-malacia	abnormal softness
malign	harmful, bad
malleol	small hammer, malleolus
mamm/o	breast
man	frenzy, madness
man/o	pressure

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
mandibul	mandible
-mania	frenzy, madness
manic	affected by frenzy
manipul	handful, use of hands
marker	sign
mast	breast
mastic	chew
mastoid	mastoid process
mater	mother
matern	mother
matur(e)	ripe, ready, fully developed
maxilla	maxilla
medi	middle
media	middle
mediastin/o	mediastinum
medic	medicine
medulla	middle
mega-	enormous
-megaly	enlargement
mei	lessening
mela	black
melan/o	melanin, black pigment
mellit	sweetened with honey
membran/o	cover, skin
men/o	menses, monthly, month
mening/o	meninges, membranes
menisc	crescent, meniscus
menstr/u	menses, occurring monthly
ment	mind, chin
-ment	action, state, resulting state
mere	part
mero-	partial
meso-	middle
meta-	after, beyond, subsequent to
metabol	change
-meter	measure, instrument to measure
metr/o	uterus
-metric	pertaining to measurement
-metrist	skilled in measurement

WORD PART	DEFINITION
-metry	process of measuring
mi-	derived from <i>hemi</i> , half
micr/o	small
micro-	small
mictur	pass urine
mid-	middle
mileusis	lathe
milli	one-thousandth
miner	mines
mineral/o	inorganic material
miss	send
mit	thread
mito-	thread
mitr	having two points
mitt	send
mod	nature, form, method
molec	mass
mollusc	soft
mon	single
monas	single unit
monil	type of fungus
mono-	one, single
morbid	disease
morph/o	shape
mort	death
mot	move
motiv	move
muc/o	mucus, mucous membrane
mucosa	lining of a cavity
multi-	many
mune	in service
muscul/o	muscle
mut	silent
muta	genetic change
mutil	to maim
my/o	muscle
myc/o	fungus
myel/o	spinal cord, bone marrow
myelin	in the spinal cord, myelin

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
myo-	to blink
myop	to blink
myos	muscle
myring/o	tympanic membrane, eardrum
myx-	mucus
narc/o	stupor
nas	nose
nat	born, birth
nate	born, birth
natr/i	sodium
natur/o	nature
ne/o	new
nebul	cloud
necr/o	death
neo-	new
nephr/o	kidney
nerv	nerve
-ness	quality, state
neur/o	nerve, nervous tissue
neutr/o	neutral
nici	lethal
nitr/o	nitrogen
noct-	night
noia	to think
nom	law
non-	no, not
nor-	normal
norm-	normal
nos/o	disease
nucle/o	nucleus
nucleol	small nucleus
nutri	nourish
nutrit	nourishment
o/o	egg
oblong	elongated
obsess	besieged by thoughts
obstetr	pregnancy and childbirth
occipit	back of head
occulta	hidden

WORD PART	DEFINITION
ocul/o	eye
-ode	way, road, path
odont	tooth
odyn/o	pain
-oid	resembling
-ol	alcohol, chemical, substance
-ola	small
-ole	small
olfact	smell
oligo-	scanty, too little
om/o	body, tumor
-oma	tumor, mass
onc/o	tumor
-one	chemical substance, hormone
onych/o	nail
ophthalm/o	eye
opthalmos	eye
-opia	sight
opportun	take advantage of
-opsis	vision
-opsy	to view
opt/o	vision
optic	eye
-or	a doer, one who does, that which does something
or/o	mouth
orbit	orbit
orchi/o	testicle
ordin	arrange
orex	appetite
organ	organ, tool, instrument
orth/o	straight
orthot	correct
-orum	function of
-ory	having the function of
os	mouth
-osa	full of, like
-ose	full of
-osis	abnormal condition

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
osmo	push
osmol	concentration
oss/e	bone
oste/o	bone
-osus	condition
ot/o	ear
-otomy	incision
-ous	pertaining to
ov/i	egg
ovari	ovary
ovul	ovum, egg
ox	oxygen
-oxia	oxygen condition
oxid	oxidize
oxy	oxygen
pace	step
palat	palate
palliat	reduce suffering
palm	palm
palpat	touch, stroke
palpit	throb
pan-	all
pancreat	pancreas
panto-	entire
papill/o	pimple
par-	abnormal, beside
para	to bring forth
para-	adjacent to, alongside, beside, abnormal
parasit	parasite
paresis	weakness
pareun	lying beside, sexual intercourse
pariet	wall
paroxysm	irritate; sudden, sharp attack
particul	little piece
partum	childbirth, to bring forth
pat	lie open
patell	patella
patent	lie open
-path	disease

WORD PART	DEFINITION
path/o	disease
pathet	suffering
-pathic	pertaining to a disease
pathy	disease, emotion
-pathy	disease
paus	cessation
pause	cessation
pector	chest
ped	child, foot
pedicul	louse
pelas	skin
pelv	pelvis
pen	penis
-penia	deficient, deficiency
peps	digestion
pepsin/o	pepsin
pept	digest
per-	through, intense
perforat	bore through
perfus	to pour
peri-	around
perine	perineum
peripher	external boundary, outer part, outer edge
periton/e	stretch over, peritoneum
perium	a bringing forth
perm/e	pass through
pes	foot
pesti	pest
petit	small
petit-	small
-pexy	fixation, surgical fixation
phaco-	lens
phag/o	to eat
phage	to eat
-phage	to eat
phagia	swallowing
-phagia	swallowing, eating
phalang/e	phalanx, finger, toe
pharmac/o	drug

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
pharyng/o	pharynx
pharynx	pharynx, throat
phenol	benzene derivative
phenyl	chemical group
pneo-	gray
pher/o	to carry
-pheresis	removal
-phil	attraction
-phile	attraction
-philia	attraction
phim	muzzle
phleb/o	vein
phob	fear
-phobia	fear
phon/o	sound, voice
phor	bear, carry
phosphat	phosphorus
phot/o	light
phren	mind
phylac	protect
phylaxis	protection
-phyll	leaf
physema	blowing
physi/o	body
physis	growth
phyt/o	plant
pia	delicate
pituit	pituitary
pituitar	pituitary
plak	plate, plaque
plant	insert, plant
planus	flat surface
plas	molding, formation, growth
-plasia	formation
-plasm	something formed
plasm/o	to form
-plasty	formation, repair, surgical repair
plate	flat
pleg	paralysis

WORD PART	DEFINITION
plete	filled
pleur	pleura
plexy	stroke
-pnea	breathe
pneum/o	air, lung
pneumat	structure filled with air
pneumon	air, lung
pod	foot
-poiesis	to make
-poiet	the making
-poietin	the maker
poikilo-	irregular
point	to pierce
pol	pole
polio	gray matter
pollut	unclean
poly-	excessive, many, much
polyp	polyp
poplit/e	ham, back of knee
por/o	opening
post-	after
poster	back part
pract	efficient, practical
prand/i	breakfast
pre-	before, in front of
precis	accurate
pregn	with child, pregnant
presby	old person
press	press close, press down, squeeze
prevent	prevent
primi-	first
pro-	before, in front, projecting forward
proct/o	anus and rectum
product	lead forth
prolifer	bear offspring
pronat	bend down
prosta	prostate
prosthet	artificial part
prot/e	first

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
protein	protein
proto-	first
provision	provide
proxim	nearest to the center
prurit	itch
pseudo-	false
psych/o	mind, soul
psyche	mind, soul
pteryg	wing
ptosis	drooping, falling
-ptosis	drooping
ptysis	spit
pub	pubis
puer	child
pulmon/o	lung
puls	to drive
pump	pump
punct	puncture
pupill-	pupil
pur	pus
purul	pus
py/o	pus
pyel/o	renal pelvis
pylor	gate, pylorus
pyr/o	fire, heat
pyrex	fever
pyrid	heat
quadrant	quadrant
quadri-	four
radi/o	radius, X-ray, radiation
radic	root
re-	again, back, backward
recept	receive
rect/o	rectum
reflex	bend back
refract	bend
regul	to rule, control
remiss	send back, give up
ren	kidney

WORD PART	DEFINITION
replic	reply
rescein	resin
resect/o	cut off
resid/u	left over, what is left over
resist	to withstand
respire/a	to breathe
restor	renew
resuscit	revive from apparent death
reticul	fine net, network
retin/o	retina
retinacul	hold back
retro-	backward
rhabd/o	rod shaped, striated
rheumat	a flow, rheumatism
rhin/o	nose
rhythm	rhythm
rib/o	like a rib
ribo	a sugar, pentose
ribo-	from ribose, a sugar
rigid	stiff
rose	rose
rotat	rotate
-rrhagia	excessive flow, discharge
-rrhaphy	suture
rrhea	flow, discharge
-rrhoid	flow
rrhyth	rhythm
rrhythm	rhythm
-rubin	rust colored
rumin	throat
sacchar	sugar
sacr/o	sacrum
sagitt	arrow
saliv	saliva
salping/o	fallopian tube, uterine tube
salpinx	trumpet
san	sound, healthy
sanit	health
sapon	soap

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
sarc/o	flesh, muscle, sarcoma
satur	to fill
scapul	scapula
schiz/o	to split, cleave
scintill	spark
scler/o	hardness, white of eye
scoli/o	crooked
scope	instrument for viewing
-scope	instrument for viewing, instrument to examine
-scopy	to examine, to view
scorb	scurvy
scrot	scrotum
seb/o	sebum
sebac/e	wax
sebum	wax
secret	secrete, produce, separate
sect	cut off
sedat	to calm
sedent	sitting
segment	section
seiz	to grab
self	me, own individual
semi-	half
semin/i	semen
seminat	scatter seed
sen	old age
senesc	growing old
senil	senile
sens	feel
sensitiv	feeling
sensor/i	sensation, sensory
separat	move apart
seps	decay, infection
sept/o	septum, partition
ser/o	serum
serum	serum
sib	relative
-side	glycoside

WORD PART	DEFINITION
sigm	Greek letter "S"
silic	silicon, glass
simi	ape, monkey
simul	imitate
sin/o	sinus
sinus	sinus
sipid	flavor
-sis	abnormal condition, process
sit/u	place
skelet	skeleton
smear	spread
soc	partner
soci/o	society, social
soma	body
somat/o	body
-some	body
somn/o	sleep
son/o	sound
sorbit	fruit of a tree
sorpt	swallow
spad	tear or cut
spasm	spasm, sudden involuntary tightening
spast	tight
specif	species
sperm/i	sperm
spermat/o	sperm
sphen	wedge
spher/o	sphere
sphygm/o	pulse
spin/a	spine
spin/o	spine, spinal cord
spir/o	to breathe
spirat	breathe
spirit/u	spirit
spiro-	spiral, coil
splen/o	spleen
spongios	sponge
spor	spore
stable	steady

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
stag	standing place
stalsis	constrict, constriction
staphyl/o	bunch of grapes
stasis	stagnate, to stand still
-stasis	stop, stand still, control
stat	stationary
-static	stopped, standing still
-statin	inhibit
stax	fall in drops
steat	fat
stein	stone
sten/o	narrow, contract
ster	solid, steroid
stere/o	three-dimensional
steril	sterile, make sterile
stern	chest, breastbone
-steroid	steroid
-sterol	steroid
-sterone	steroid
steth/o	chest
sthen	strength
stigmat	focus
stimul	excite, strengthen
stin	partition
stip	press
stiti	space
stoma	mouth
-stomy	new opening
stone	stone, pebble
storm	crisis
strab	squint
strat	layer
strept/o	twisted
strict	narrow
study	inquiry
su/i	self
sub-	below, under, underneath
suct	suck
suffic/i	enough

WORD PART	DEFINITION
sulf	sulfur
super	above, excessive
super-	above, excessive
supinat	bend backward
supplement	supply to remedy a deficiency
suppress	pressed under, push under
supra-	above
surfact	surface
surg	operate
suscept	to take up
-sylated	linked
sym-	together
symptom	collection of symptoms
syn-	together
syndesm	bind together
synov	synovial membrane
syring/o	tube, pipe
system	the body as a whole
systol/e	contraction, systole
tachy-	rapid
tact	orderly arrangement
tag	touch
tain	hold
talip	ankle bone
tamin	touch
tampon	plug
tangent	touch
tars	ankle
tax	coordination
tempor/o	time, temple
ten/o	tendon
tendin	tendon
tens	pressure
-tensin	tense, taut
terat/o	monster, malformed fetus
term	limit, end
test/o	testis, testicle
testicul	testicle, testis
tetra-	four

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
thalam	thalamus
thalamus	thalamus
thalass	sea
thel	breast, nipple
then	motion
thenar	palm
therap/o	healing, treatment
therapeut	healing, treatment
-therapist	one who treats
therapy	treatment
-therapy	treatment
therm/o	heat
thesis	arrange, place, organize
thet	arrange, place, organize
thi	sulfur
thora	chest
thorac/o	chest
thorax	chest
thromb/o	blood clot, clot
thym	thymus gland
thyr/o	thyroid
tibi	tibia
-tic	pertaining to
-tion	process, being
-tiz	pertaining to
toc	labor, birth
toler	endure
tom/o	cut, slice, layer
-tome	instrument to cut
-tomy	surgical incision
ton/o	pressure, tension
tonsil	tonsil
tonsill/o	tonsil
tope	part, location
topic	local
-tous	pertaining to
tox	poison
-toxic	able to kill
toxic/o	poison

WORD PART	DEFINITION
trache/o	trachea, windpipe
tract	draw, pull
tranquil	calm
trans-	across, through
traumat	wound, injury
tresia	a hole
tri-	three
trich/o	hair
-tripsy	crushing
-tripter	crusher
trochle	pulley
trop	turn, turning
troph	development, nourishment
trophy	development, nourishment
-tropic	a turning, change
-tropin	nourishing, stimulation
tryps	friction
tub	tube
tubercul	swelling, nodule, tuberculosis
tubul	small tube
tussis	cough
tymp/an/o	eardrum, tympanic membrane
-type	model, particular kind
typh	typhus
ulcer	a sore
-ule	little, small
-ulent	abounding in
uln	ulnar
ultra-	higher, beyond
-um	tissue, structure
umbilic	navel, umbilicus
un	one
un-	not
uni-	one
ur/o	urine, urinary system
-ure	process, result of
uresis	to urinate
uret	ureter, urine, urination
ureter/o	ureter

WORD PART	DEFINITION
urethr/o	urethra
-uria	urine
urin	urine
-us	pertaining to
uter/o	uterus
uve	uvea
uvul	uvula
vaccin	vaccine, giving a vaccine
vag	vagus nerve
vagin	sheath, vagina
valgus	turn out
valv	valve
varic/o	varicosity; dilated, tortuous vein
vas/o	blood vessel, duct
vascul	blood vessel
ved	knowledge
veget	plants
vegetat	growth
ven/a	vein
ven/o	vein
ventil	wind
ventr	belly
ventricul	ventricle
vers	turn
-version	change
vert	to turn
vertebr	vertebra
vesic	sac containing fluid
vestibul/o	vestibule, entrance
via	the way
violet	bluish purple
viril	masculine
virus	poison
viscer	internal organs
viscos	viscous, sticky
visu	sight
vita	life
voc	voice
vol	volume

S = Suffix P = Prefix R = Root R/CF = Combining Form

WORD PART	DEFINITION
volunt	willing
volut	shrink, roll up
-volut	rolled up
vuls	tear, pull
vulv/o	vulva
whip	to swing
xanth	yellow
xeno-	foreign
-xis	condition
-yl	substance
zea-	to live
-zoa	animal
zyg	zygote
zygomat	cheekbone
zyme	fermenting, enzyme, transform

Review Copy

Abbreviations

ABBREVIATION	DEFINITION
µg	microgram; one-millionth of a gram
^	increase/ above
v	decrease/ below
1°	primary
2°	secondary
Ab	antibody
ABGs	arterial blood gases
ABO	agents of biologic origin
ABO	a blood group system
AC	acromioclavicular
ACE	angiotensin-converting enzyme
ACL	anterior cruciate ligament
ACLS	advanced cardiac life support
ACTH	adrenocorticotrophic hormone
AD	right ear
ADD	attention deficit disorder
ADH	antidiuretic hormone
ADHD	attention deficit hyperactivity disorder
ADL	activity of daily living
AED	automatic external defibrillator
Afib	atrial fibrillation
Ag	antigen
AIDS	acquired immunodeficiency syndrome
AKA	above-knee amputation
ALL	acute lymphocytic leukemia
ALS	amyotrophic lateral sclerosis
AMI	acute myocardial infarction
AMS	altered mental state
ANS	autonomic nervous system
AOM	acute otitis media
AP	anteroposterior
ARDS	adult respiratory distress syndrome
ARF	acute renal failure
ARF	acute respiratory failure
AROM	active range of motion

ABBREVIATION	DEFINITION
AS	left ear
ASD	atrial septal defect
ASD	autism spectrum disorder
ASHD	arteriosclerotic heart disease
AU	both ears
AV	atrioventricular
AVM	arteriovenous malformation
BBB	blood brain barrier
BD	brain death
BEP	benign enlargement of the prostate
BKA	below-knee amputation
BM	bowel movement
BMD	bone mineral density
BMR	basal metabolic rate
BOM	bilateral otitis media
BP	blood pressure
BPD	borderline personality disorder
BPH	benign prostatic hyperplasia
BPPV	benign paroxysmal positional vertigo
BRCA1	genetic mutation responsible for breast and ovarian cancer (breast cancer 1)
BRCA2	genetic mutation responsible for breast cancer (breast cancer 2)
BSE	bovine spongiform encephalopathy
BSE	breast self-examination
C1	first cervical vertebra
C5	fifth cervical vertebra or nerve
C7	seventh cervical vertebra
CA	cancer
CABG	coronary artery bypass graft
CAD	coronary artery disease
CAO	chronic airway obstruction
CAPD	continuous ambulatory peritoneal dialysis
CBC	complete blood count
CBT	cognitive-behavioral therapy

ABBREVIATION	DEFINITION
CD	conduct disorder
CDC	Centers for Disease Control and Prevention
CF	cystic fibrosis
CHD	congenital heart disease
CHES	certified health education specialist
CHF	congestive heart failure
CJD	Creutzfeldt–Jakob disease
CK	creatine kinase
CKD	chronic kidney disease
CMA	certified medical assistant
CMV	cytomegalovirus
CNA	certified nurse assistant
CNS	central nervous system
c/o	complains of
CO ₂	carbon dioxide
COPD	chronic obstructive pulmonary disease
COT	certified occupational therapist
COTA	certified occupational therapist assistant
CP	cerebral palsy
CPAP	continuous positive airway pressure
CPR	cardiopulmonary resuscitation
CPT	cognitive processing therapy
CRF	chronic renal failure
CRH	corticotropin-releasing hormone
CRP	C-reactive protein
C-section	cesarean section
CSF	cerebrospinal fluid
CT	computed tomography
CVA	cerebrovascular accident
CVP	central venous pressure
CVS	cardiovascular system
CVT	cardiovascular technologist
CXR	chest X-ray
D & C	dilation and curettage
DASH	dietary approaches to stop hypertension
DEXA	dual-energy X-ray absorptiometry
DI	diabetes insipidus
DIC	disseminated intravascular coagulation
DID	dissociative identity disorder

ABBREVIATION	DEFINITION
DIFF	differential white blood cell count
DJD	degenerative joint disease
DKA	diabetic ketoacidosis
dL	deciliter; one-tenth of a liter
DM	diabetes mellitus
DMD	Duchenne muscular dystrophy
DNA	deoxyribonucleic acid
DNR	do not resuscitate
DO	Doctor of Osteopathy
DRE	digital rectal examination
DSM-IV	<i>Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition</i>
DVT	deep vein thrombosis
EBV	Epstein–Barr virus
ECG	electrocardiogram
ECT	electroconvulsive therapy
ED	emergency department
ED	erectile dysfunction
EEG	electroencephalogram
EKG	electrocardiogram
EMG	electromyography
EMT	emergency medical technician
EMT-P	emergency medical technician-paramedic
EPCA-2	early prostate cancer antigen-2
ER	emergency room
ERT	estrogen replacement therapy
ESR	erythrocyte sedimentation rate
ESRD	end-stage renal disease
ESWL	extracorporeal shock wave lithotripsy
FAS	fetal alcohol syndrome
FDA	U.S. Food and Drug Administration
FEV1	forced expiratory volume in 1 second
FSH	follicle-stimulating hormone
FTD	fronto-temporal dementia
FTT	failure to thrive
FUS	focused ultrasound surgery
FVC	forced vital capacity
Fx	fracture
g	gram

ABBREVIATION	DEFINITION
GAD	generalized anxiety disorder
GDM	gestational diabetes mellitus
GERD	gastroesophageal reflux disease
GFR	glomerular filtration rate
GH	growth hormone, somatotrophin
GHRH	growth hormone-releasing hormone
GI	gastrointestinal
GI	glycemic index
GL	glycemic load
GnRH	gonadotrophin-releasing hormone
GTT	glucose tolerance test
GYN	gynecology
HAV	hepatitis A virus
Hb	hemoglobin
Hb A1c	glycosylated hemoglobin A-one-C
HBOT	hyperbaric oxygen therapy
HBV	hepatitis B virus
HCG	human chorionic gonadotropin
HCl	hydrochloric acid
Hct	hematocrit
HCV	hepatitis C virus
HDL	high-density lipoprotein
HDN	hemolytic disease of the newborn
Hgb	hemoglobin
HIPAA	Health Insurance Portability and Accountability Act
HIV	human immunodeficiency virus
HMD	hyaline membrane disease
HPI	history of present illness
HPV	human papilloma virus
HRT	hormone replacement therapy
HSV	herpes simplex virus
HSV-1	herpes simplex virus, type 1
HTN	hypertension
HUS	hemolytic uremic syndrome
IBS	irritable bowel syndrome
ICD	implantable cardioverter/defibrillator
IDDM	insulin-dependent diabetes mellitus
Ig	immunoglobulin
IgA	immunoglobulin A

ABBREVIATION	DEFINITION
IgD	immunoglobulin D
IgE	immunoglobulin E
IgG	immunoglobulin G
IgM	immunoglobulin M
IM	intramuscular
INR	international normalized ratio
ITP	idiopathic (immunologic) thrombocytopenic purpura
IU	international unit(s)
IUD	intrauterine device
IV	intravenous
IVC	inferior vena cava
IVF	in vitro fertilization
IVP	intravenous pyelogram
JRA	juvenile rheumatoid arthritis
KUB	X-ray of abdomen to show kidneys, ureters, and bladder
LADA	latent autoimmune diabetes in adults
LASER	light amplification by stimulated emission of radiation
LCC-ST	certified surgical technologist
LD	learning disability
LDL	low-density lipoprotein
LFT	liver function test
LH	luteinizing hormone
LLQ	left lower quadrant
LOC	loss of consciousness
LPN	licensed practical nurse
LUQ	left upper quadrant
LVN	licensed vocational nurse
mcg	microgram; one-millionth of a gram
MCP	metacarpophalangeal
MCS	minimally conscious state
MCV	mean corpuscular volume
MD	Doctor of Medicine
mg	milligram
MI	myocardial infarction
mL	milliliter
mm³	cubic millimeter
MOAB	monoclonal antibody
MODY	mature onset diabetes of the young

ABBREVIATION	DEFINITION
MONA	morphine, oxygen, nitroglycerine, and aspirin
MPD	multiple personality disorder
MRA	magnetic resonance angiography
MRI	magnetic resonance imaging
mRNA	messenger RNA
MRSA	methicillin-resistant <i>Staphylococcus aureus</i>
MS	multiple sclerosis
MSA	myositis specific antibody
NCI	National Cancer Institute
NIDDM	non-insulin-dependent diabetes mellitus
NIH	National Institutes of Health
NKA	no known allergies
NO	nitric oxide
NRDS	neonatal respiratory distress syndrome
NSAID	nonsteroidal anti-inflammatory drug
O ₂	oxygen
OA	obstetric assistant
OA	osteoarthritis
OB	obstetrics
OCD	obsessive compulsive disorder
OD	Doctor of Osteopathy
OD	right eye
ODD	oppositional defiant disorder
OGTT	oral glucose tolerance test
OME	otitis media with effusion
OR	operating room
OS	left eye
OSHA	Occupational Safety and Health Administration
OT	occupational therapy
OT	ophthalmic technician
OT	oxytocin
OTC	over the counter
OU	both eyes
P	pulse rate
PA	pernicious anemia
PA	posteroanterior
PaO ₂	partial pressure of arterial oxygen
Pap	Papanicolaou (Pap test, Pap smear)

ABBREVIATION	DEFINITION
PAT	paroxysmal atrial tachycardia
PCL	posterior cruciate ligament
PCOS	polycystic ovarian syndrome
PDA	patent ductus arteriosus
PDD-NOS	pervasive developmental disorder, not otherwise specified
PDT	postural drainage therapy
PE tube	pressure equalization tube
PEEP	positive end-expiratory pressure
PEFR	peak expiratory flow rate
PERRLA	pupils equal, round, reactive to light, and accommodation
PET	positron emission tomography
PFTs	pulmonary function tests
PGY	pregnancy
pH	hydrogen ion concentration
PhD	Doctor of Philosophy
PID	pelvic inflammatory disease
PIP	proximal interphalangeal
PKD	polycystic kidney disease
PMDD	premenstrual dysphoric disorder
PMNL	polymorphonuclear leukocyte
PM&R	physical medicine and rehabilitation
PMS	premenstrual syndrome
PNB	pulseless, nonbreather
PNS	peripheral nervous system
PO	by mouth
POC	products of conception
polio	poliomyelitis
PPH	postpartum hemorrhage
PPS	postpolio syndrome
p.r.n, PRN	when necessary
PSA	prostate-specific antigen
PT	physical therapy, physical therapist
PT	physiotherapy
PT	prothrombin time
PTA	physical therapy assistant
PTCA	percutaneous transluminal coronary angioplasty
PTH	parathyroid hormone
PTSD	posttraumatic stress disorder

ABBREVIATION	DEFINITION
PTT	partial thromboplastin time
PVC	premature ventricular contractions
PVD	peripheral vascular disease
PVS	persistent vegetative state
q.4.h.	every 4 hours
q.i.d.	four times each day
R	respiration rate
RA	rheumatoid arthritis
RBC	red blood cell
RDA	recommended dietary allowance
RDS	respiratory distress syndrome
Rh	Rhesus
Rho-GAM	Rhesus immune globulin
RICE	rest, ice, compression, and elevation
RLQ	right lower quadrant
RN	registered nurse
RNA	ribonucleic acid
ROM	range of motion
RU-486	mifepristone
RUQ	right upper quadrant
SA	sinoatrial
SAD	seasonal affective disorder
SARS	severe acute respiratory syndrome
SBS	shaken baby syndrome
SC	subcutaneous
SCI	spinal cord injury
SET	self-examination of the testes
SFD	small for date
SG	specific gravity
SGA	small for gestational age
SI	sacroiliac
SIDS	sudden infant death syndrome
SLE	systemic lupus erythematosus
SOB	short(ness) of breath
SP	standard precautions
SSRI	selective serotonin reuptake inhibitor
STAT	immediately
STD	sexually transmitted disease
SVC	superior vena cava

ABBREVIATION	DEFINITION
T	temperature
T1	first thoracic vertebra or nerve
T3	triiodothyronine
T4	tetraiodothyronine (thyroxine)
TB	tuberculosis
TBI	traumatic brain injury
TENS	transcutaneous electrical nerve stimulation
THR	total hip replacement
TIA	transient ischemic attack
t.i.d.	(Latin <i>ter in die</i>) three times a day
TMJ	temporomandibular joint
TN	trigeminal neuralgia
TNM	tumor-node-metastasis staging system for cancer
TOF	tetralogy of Fallot
tPA	tissue plasminogen activator
TRH	thyrotrophin-releasing hormone
TSH	thyroid-stimulating hormone
TTM	trichotillomania
TTN	transient tachypnea of the newborn
TTP	thrombotic thrombocytopenic purpura
TURP	transurethral resection of the prostate
UA	urinalysis
UP	universal precautions
URI	upper respiratory infection
USDA	U.S. Department of Agriculture
UTI	urinary tract infection
UV	ultraviolet
VEP	visual evoked potential
Vfib	ventricular fibrillation
VS	vital signs
VSD	ventricular septal defect
V-tach	ventricular tachycardia
vWD	von Willebrand disease
vWF	von Willebrand factor
WAD	Word Analysis and Definition (box)
WBC	white blood cell; white blood (cell) count
WNL	within normal limits
WNV	West Nile virus

Review Copy

Diagnostic and Therapeutic Procedures

A compilation of the diagnostic and therapeutic procedural terms used in this book.

A

abdominoplasty Esthetic operation on the abdominal wall (tummy tuck).

ablation Removal of tissue to destroy its function.

activated partial thromboplastin time (APTT) Blood test used to monitor the dose of heparin, an anticoagulant.

adenoidectomy Surgical removal of the adenoid tissue.

alignment Process of bringing the ends of a fractured bone at the break back opposite each other so that they fit together as they did in the original bone.

ambulatory Surgery or any other care provided without an overnight stay in a medical facility.

ambulatory blood pressure monitor Device that provides a record of blood pressure readings over a 24-hour period as patients go about their daily activities.

amniocentesis Removal of amniotic fluid for diagnostic purposes.

amputation Process of removing a limb, part of a limb, a breast, or other projecting part.

anastomosis Surgically made union between two tubular structures.

angiogram Radiographic image of arteries or veins after injection of contrast material.

angiography The process of obtaining an angiogram.

angioplasty Reopening of a blood vessel by surgery.

anoscopy Examination of the anus and lower rectum with a rigid instrument.

Apgar score Evaluation of a newborn's status.

appendectomy Surgical removal of the appendix.

arterial blood gases The measurement of the levels of oxygen and carbon dioxide in the blood—a good indicator of respiratory function.

arteriography X-ray visualization of an artery after injection of contrast material.

arthrocentesis Aspiration of fluid from a joint; used to establish a diagnosis by laboratory examination of the fluid, drain off infected fluid, or insert medication such as local corticosteroids.

arthrodesis Fixation or stiffening of a joint by surgery.

arthrography X-ray of a joint after injection of a contrast medium into the joint to make the inside details of the joint visible.

arthroplasty Replacement of a joint with a prosthesis.

arthroscopy Procedure performed using an arthroscope to examine the internal compartments of a joint or perform a surgical procedure such as debridement, removal of damaged tissue, or repair of torn ligaments.

aspiration Removal by suction of fluid or gas from a body cavity.

atherectomy Surgical removal of atheroma from a blood vessel.

audiometer Electronic device that generates sounds in different frequencies and intensities to test for hearing loss.

auscultation Diagnostic method of listening to body sounds with a stethoscope.

autograft Graft removed from the patient's own skin.

automatic external defibrillator (AED) Device that sends an electric shock to the heart to stop the heart and allow a normal contraction rhythm to resume.

bariatric surgery Surgical treatment of obesity.

barium meal Ingestion of barium sulfate to study the distal esophagus, stomach, and duodenum on X-ray.

barium swallow Ingestion of barium sulfate, a contrast material, to show details of the pharynx and esophagus on X-ray.

biopsy Removal of tissue from a living person for laboratory examination.

blepharoplasty Correction of defects in the eyelids.

bone marrow aspiration or biopsy Use of a needle to remove bone marrow cells.

bone mineral density (BMD) Screening test for osteoporosis using a dual-energy X-ray absorptiometry (DEXA) scan.

brace Appliance to support a part of the body in its correct position.

brachytherapy Radiation therapy in which the source of irradiation is implanted in the tissue to be treated.

bronchoscopy Examination of the interior of the tracheobronchial tree with an endoscope.

C

cannula Tube inserted into a blood vessel or cavity as a channel for fluid or gas.

cardiac catheterization Procedure that detects patterns of pressures and blood flows in the heart. A thin tube is guided into the heart under X-ray guidance after being inserted into a vein or artery.

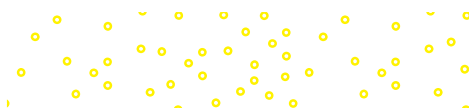
cardiac stress testing Exercise tolerance test that raises the heart rate and monitors the effect on cardiac function.

cardiopulmonary resuscitation Attempt to restore cardiac and pulmonary function.

cardioversion Restoration of a normal heart rhythm by electrical shock. Also called *defibrillation*.

catheterization Introduction of a catheter.

cerebral angiography Injection of a radiopaque dye into the blood vessels of the neck and brain to detect blood vessels that are partially or completely blocked, aneurysms, or arteriovenous malformations.



cerebral arteriography Procedure used to determine the site of bleeding in hemorrhagic strokes, enabling surgery to be performed to stop the bleed or to clip off the aneurysm.

chest X-ray Radiograph image of the chest that can be taken in anteroposterior (AP), posteroanterior (PA), lateral, and sometimes oblique and lateral decubitus positions.

cholangiography Use of a contrast medium to radiographically visualize the bile ducts.

cholecystectomy Surgical removal of the gallbladder.

cholelithotomy Surgical removal of a gallstone(s).

circumcision Removal of part or all of the prepuce of the penis.

clean-catch, midstream urine specimen Sample collected after the external urethral meatus is cleaned. The first part of the urine stream is not collected, and the sterile collecting vessel is introduced into the urinary stream to collect the last part.

clot-busting drugs Drugs injected within a few hours of an MI or thrombotic stroke to dissolve the thrombus. Also called *thrombolytic drugs*.

cognitive behavioral therapy (CBT) A form of psychotherapy that emphasizes the role of thoughts and attitudes in one's feelings and behaviors.

cognitive processing therapy (CPT) Uses a variety of techniques in psychotherapy such as self-discovery and self-instruction.

colonoscopy Examination of the inside of the colon by endoscopy.

colostomy Artificial opening from the colon to the outside of the body.

colpopexy Surgical fixation of a relaxed and prolapsed vagina to the anterior abdominal wall.

computed tomography (CT) Scan in which images of sections of the body are generated by a computer synthesis of X-rays obtained in many different directions in a given plane.

conization Surgical excision of a cone-shaped piece of tissue, e.g., from the outer lining of the cervix.

constant positive airway pressure (CPAP) Attempt to keep alveoli open by maintaining a positive pressure in the airways. A mask is fitted over the nose and mouth and attached to a ventilator.

continuous ambulatory peritoneal dialysis (CAPD) Dialysis performed by the patient at home through an implanted peritoneal catheter, usually 4 times a day, 7 days a week.

continuous cycling peritoneal dialysis Use of a machine to automatically infuse dialysis solution into and out of the abdominal cavity through a peritoneal catheter during sleep.

coronary angiogram Injection of a contrast dye during cardiac catheterization to identify coronary artery blockages.

coronary artery bypass graft surgery (CABG) Procedure in which healthy blood vessels harvested as a graft from the leg, chest, or arm are used to bypass (detour) the blood around blocked coronary arteries.

cryosurgery Use of liquid nitrogen or argon gas in a probe to freeze and kill abnormal tissue.

curette Scoop-shaped instrument for scraping or removing new growths (or earwax).

cystoscopy Insertion of a pencil-thin, flexible, tubelike telescope through the urethra into the bladder to examine directly the lining of the bladder and to take a biopsy if needed.

cystourethrogram X-ray image during voiding to show the structure and function of the bladder and urethra.

D

debridement Removal of injured or necrotic tissue.

defibrillation Restoration of uncontrolled twitching of cardiac muscle fibers to a normal rhythm.

dermabrasion Removal of upper layers of the skin using a high-powered rotating brush.

dermascope An instrument that shines a light on the skin and magnifies a lesion for better diagnostic viewing.

dialysis Artificial method of removing waste materials and excess fluid from blood.

digital rectal examination (DRE) Palpation of the rectum and prostate gland with an index finger.

dilation and curettage (D & C) Dilation of the cervix so that a thin instrument can be inserted to scrape away the lining of the uterus and take tissue samples.

dipstick Plastic strip bearing paper squares of reagent—the most cost-effective method of screening urine. After the stick is dipped in the urine specimen, the color change in each segment of the dipstick is compared to a color chart on the container. Dipsticks can screen for pH, specific gravity, protein, blood, glucose, ketones, bilirubin, nitrite, and leukocyte esterase.

Doppler ultrasound Diagnostic instrument that sends an ultrasonic beam into the body.

E

early morning urine collection Process used to determine the ability of the kidneys to concentrate urine following overnight dehydration.

echocardiography Ultrasound recording of heart function.

echoencephalography Use of ultrasound in the diagnosis of intracranial lesions.

electrocardiogram Record of the electrical signals of the heart.

electrocardiography Interpretation of electrocardiograms.

electroconvulsive therapy (ECT) Passage of electric current through the brain to produce convulsions and treat persistent depression.

electroencephalography Recording of the electrical activity of the brain.

electromyography Recording of electrical activity in muscle.

endarterectomy Surgical removal of plaque from an artery.

endometrial ablation Use of a heat-generating tool or a laser to remove or destroy the lining of the uterus and prevent or reduce menstruation.

endoscope An instrument for the examination of the interior of a hollow or tubular organ.

endoscopy Use of an endoscope to examine the interior of a tubular or hollow organ and perform a biopsy, remove polyps (polypectomy), and coagulate bleeding lesions.

enema Injection of fluid into the rectum and lower bowel.

enteroscopy Examination of the lining of the digestive tract.

episiotomy Surgical incision in the perineum to dilate the opening of the vagina.

evoked responses Use of stimuli for vision, sound, and touch to activate specific areas of the brain and measure their responses with EEG. This provides information about how that specific area of the brain is functioning.

excision Surgical removal of part or all of a structure or organ.

excisional biopsy Removal of a tumor with a surrounding margin of normal tissue.

external fixation Method of maintaining the alignment of a fractured bone by immobilizing the bone through the use of plaster casts, splints, traction, and external fixators such as steel rods and pins.

extracorporeal shock wave lithotripsy (ESWL) Process in which a machine called a *lithotripter* produces shock waves that crumble renal or ureteral stones into small pieces that can pass down the ureter.

F

fasciectomy Surgical removal of fascia.

fecal occult blood test Diagnostic procedure that detects the presence of blood not visible to the naked eye. Trade name: *Hemoccult* test.

fistulectomy Surgical excision of a fistula.

fistulotomy Surgical enlargement or opening up of a fistula.

flexible endoscopy Use of a flexible, slim fiber-optic instrument that transmits light and sends back images to the observer.

forceps extraction Assisted delivery of a baby by an instrument that grasps the head of the baby.

fundoscopy Examination of the retina with an ophthalmoscope.

G

gastroscopy Endoscopic examination of the inside of the stomach.

gavage To feed by a stomach tube.

gingivectomy Surgical removal of diseased gum tissue.

H

heart transplant Surgery in which the heart of a recently deceased person (donor) is transplanted to the recipient after the recipient's diseased heart has been removed.

Hemoccult test Trade name for *fecal occult blood test*.

hemodialysis Process that filters blood through an artificial kidney machine (dialyzer).

hemorrhoidectomy Surgical removal of hemorrhoids.

herniorrhaphy Surgical repair of a hernia.

heterograft Graft from a nonhuman species. Also called *xenograft*.

Holter monitor Continuous ECG recorded on a tape cassette for at least 24 hours as a person works, plays, and rests.

homocysteine Amino acid in the blood. Elevated levels are related to a higher risk of CAD, stroke, and peripheral vascular disease.

homograft Skin graft from another person or a cadaver. Also called *allograft*.

hysterectomy Surgical removal of the uterus.

I

ileostomy Artificial opening from the ileum to the outside of the body.

implantable cardioverter/defibrillator (ICD) Implanted device that senses abnormal rhythms and gives the heart a small electrical shock to return the rhythm to normal.

incision Cut or surgical wound.

internal fixation Use of tissue-compatible materials such as stainless steel and titanium to stabilize fractured bony parts, enabling the patient to return to function more quickly and reducing the incidence of nonunion and malunion (improper healing). The types of internal fixation are wires used as sutures to “sew” the bone fragments together; plates that extend along both or all fragments of bone and are held in place by screws; rods inserted through the medullary cavity of both fragments to align the bones; and screws that can be used on their own as well as with plates.

intra dermal injection Introduction of a short, thin needle into the epidermis, thus raising a small wheal. This site is used for allergy and tuberculosis (TB) testing.

intramuscular (IM) injection Use of a long needle that penetrates the epidermis, dermis, and hypodermis to reach into the muscles underneath. Some antibiotics and immunizations are given by this route.

intrauterine insemination Insertion of sperm directly into the uterus via a special catheter to initiate pregnancy.

intravenous pyelogram (IVP) Procedure in which a contrast material containing iodine is injected intravenously and its progress through the urinary tract is then recorded on a series of rapid radiological images.

intubation Insertion of a tube into a canal, hollow organ, or cavity, e.g., into the trachea for anesthesia or control of ventilation.

in vitro fertilization (IVF) Process of combining sperm and egg in a laboratory dish and placing the resulting embryos inside the uterus.

Ishihara color system Test for color vision defects.

J

Jaeger reading card Chart containing type in different sizes of print for testing near vision.

K

keratomileusis Procedure that cuts and shapes the cornea.

keratoplasty Corneal graft or transplant.

keratotomy Incision through the cornea.

kidney transplant Surgery in which the kidney of a donor is transplanted to a recipient; provides a better quality of life than kidney dialysis, if a suitable donor can be found.

KUB X-ray of the abdomen to show **kidneys**, **ureters**, and **bladder**.

L

laparoscopy Examination of the contents of the abdomen using an endoscope, which can also be used to perform surgery and take samples for biopsy.

laryngoscopy Use of a hollow tube with a light and camera to visualize or operate on the larynx.

laser surgery Use of a concentrated, intense narrow beam of electromagnetic radiation for surgery. (*laser*: light amplification by simulated emission of radiation.)

LASIK Acronym for laser-assisted in situ keratomileusis.

lipectomy Surgical removal of fatty tissue.

lipid profile Group of blood tests that help determine the risk of CAD and comprise total cholesterol; high-density lipoprotein (HDL), or “good cholesterol”; low-density lipoprotein (LDL), or “bad cholesterol”; and triglycerides.

liposuction Surgical removal of fatty tissue using suction.

lobectomy Surgical removal of a lobe of a structure, for example, a lobe of a lung.

lumbar puncture Use of a hollow needle to remove CSF so that it can be examined in the laboratory. Also called *spinal tap*.

lumpectomy Removal of a lesion with preservation of surrounding tissue.

lymphadenectomy Surgical removal of a lymph gland(s).

lymphangiogram Radiographic images of lymph vessels and nodes following injection of contrast material.

M

magnetic resonance angiography (MRA) Method of visualizing vessels that contain flowing structures by producing a contrast between them and stationary structures.

magnetic resonance imaging (MRI) Diagnostic technique that creates detailed images of structures and tissues in various planes without exposing patients to radiation as in conventional radiography or computed tomography.

mammogram Record produced by X-ray imaging of the breast.

mammoplasty Surgical reshaping of the breasts.

mastectomy Surgical excision of the breast.

mechanical ventilation Process by which gases are moved into and out of the lungs via a ventilator that is set to meet the respiratory requirements of the patient.

mediastinoscopy Examination of the mediastinum using an endoscope inserted through an incision in the suprasternal notch.

myomectomy Surgical removal of a uterine myoma (fibroid).

myringotomy Incision through the tympanic membrane; e.g., for the placement of pressure equalization (PE) tubes to allow an effusion to drain.

N

nebulizer Device used to deliver liquid medicine in a fine mist.

nephrectomy Surgical removal of a kidney.

nephrolithotomy Incision into the kidney for removal of a stone.

nephroscopy Examination of the pelvis of the kidney.

nerve conduction studies Studies that measure the speed at which motor or sensory nerves conduct impulses.

nuclear imaging of the heart Use of an injection of a radioactive substance in association with a cardiac stress test to assess cardiac function.

O

ophthalmoscopy Examination of the retina using an ophthalmoscope.

orchiopexy Surgical fixation of a testis in the scrotum.

ostomy Artificial opening into a tubular structure, for example, ileostomy and colostomy.

otoscopy Examination of the ear using an otoscope.

P

pacemaker Device that regulates cardiac electrical activity. The device generates electronic signals carried along thin, insulated wires to the heart muscle.

palpation Examination with the fingers and hands.

panendoscopy Visual examination of the inside of the esophagus, stomach, and upper duodenum using a flexible fiber-optic endoscope.

Pap test Examination of cells taken from the cervix.

parathyroidectomy Surgical removal of the parathyroid glands.

peak flow meter Instrument used to record the greatest flow of air that can be sustained for 10 milliseconds on forced expiration, the peak expiratory flow rate (PEFR). It is of value in following the course of asthma and in postoperative care to monitor the return of lung function after anesthesia.

percutaneous nephrolithotomy Insertion of a nephroscope through the skin to locate and remove a renal pelvic or ureteral stone.

percutaneous transluminal coronary angioplasty (PTCA)

Procedure in which a balloon-tipped catheter is guided to the site of the blockage and inflated to expand the artery from the inside by compressing the plaque against the walls of the artery.

percutaneous transthoracic needle aspiration Insertion of a needle with a cutting chamber through an intercostal space to hook a specimen of parietal pleura for laboratory examination.

peritoneal dialysis Procedure in which a dialysis solution is infused into and drained out of the abdominal cavity through a small, flexible, implanted catheter.

phacoemulsification To break down and remove the lens of the eye using an ultrasound needle.

phlebotomy Process of taking blood from a vein.

photocoagulation Use of a laser beam to form a clot or destroy abnormal capillaries. In the eye, this slows the pace of the visual loss in macular degeneration.

phototherapy Treatment using light rays.

pneumonectomy Surgical removal of a lung.

polypectomy Excision or removal of a polyp.

polysomnography Test to monitor brain waves, muscle tension, eye movement, and oxygen levels in the blood as the patient sleeps.

positive end expiratory pressure (PEEP) Technique in ventilation to keep the alveoli from collapsing in adult and neonatal respiratory distress syndromes.

positron emission tomography (PET) Scan that shows the uptake and distribution of substances such as sugar in tissues to locate abnormal, often malignant, structures.

postural drainage therapy (PDT) Treatment that involves positioning and tilting the patient so that gravity promotes drainage of secretions from lung segments. Chest percussion (tapping) on the chest wall can help loosen, mobilize, and drain the retained secretions.

proctoscopy Examination of the inside of the anus and rectum by endoscopy.

prostatectomy Surgical removal of part or all of the prostate.

prosthesis Manufactured substitute for a missing part of the body.

prothrombin time (PT) Test used to monitor the dose of Coumadin, an anticoagulant. It is reported as an *international normalized ratio (INR)* instead of in seconds.

psychotherapy Treatment of psychiatric disorders based on verbal and nonverbal interventions with the patient.

pulmonary rehabilitation Therapeutic restoration of lung function that includes education, breathing exercises and retraining, exercises for the upper and lower extremities, and psychosocial support.

pulse oximeter Sensor placed on the finger to measure the oxygen saturation of the blood.

pyelogram X-ray image of the renal pelvis and ureters.

Q

quadrantectomy Surgical excision of a quadrant of the breast.

R

radical hysterectomy Surgical removal of the fallopian tubes and ovaries as well as the uterus.

radical mastectomy Complete surgical removal of all breast tissue, the pectoralis major muscle, and associated lymph nodes.

radical prostatectomy Complete surgical removal of the prostate and surrounding tissues.

random urine collection Process in which a sample is taken with no precautions regarding contamination. It is often used for collecting samples for drug testing. “Pee into a cup.”

reduction Procedure in which the distal segment of a fractured bone is pulled back into alignment with the proximal segment. Anesthesia may be used.

rehabilitation Therapeutic restoration of an ability to function as before after disease, illness, or injury.

renal angiogram X-ray with contrast material used to assess blood flow to the kidneys.

resection Removal of a specific part of an organ or structure.

retrograde pyelogram Injection of contrast material through a urinary catheter into the ureters to locate stones and other obstructions.

rhinoplasty Surgical procedure to alter the size or shape of the nose.

Rinne test Test for a conductive hearing loss.

S

salpingectomy Surgical removal of a fallopian tube.

sclerotherapy Injection of a solution into a vein to thrombose it.

segmentectomy Surgical excision of a segment of a tissue or organ.

sigmoidoscopy Endoscopic examination of the sigmoid colon.

Snellen letter chart Test for acuity of distant vision.

sphygmomanometer Instrument for measuring arterial blood pressure.

spinal tap Placement of a needle through an intervertebral space into the subarachnoid space to withdraw CSF.

spirometer Device used to measure the volume of air that a patient moves in and out of the respiratory system.

splenectomy Surgical removal of the spleen.

staging Process of determining the extent of the distribution of a neoplasm. The TNM (tumor-node-metastasis) staging system can be used.

stent placement Procedure in which a wire mesh tube, or stent, is placed inside the vessel to reduce the likelihood that an occluded artery will close up again. Some stents (drug-eluting stents) are covered with a special medication to help keep the artery open.

sterilization Process of making sterile.

stethoscope Instrument for listening to cardiac, respiratory, and other sounds.

stoma Artificial opening.

subcutaneous (SC) injection Injection in which a needle pierces the epidermis and dermis to reach the hypodermis (subcutaneous) layer. This site is used for insulin injections and for some immunizations.

suprapubic transabdominal needle aspiration of the bladder

Procedure used with newborns and small infants to obtain a pure sample of urine.

suture Process or material that brings together the edges of a wound to enhance tissue healing. Also, a form of fibrous joint to unite two bones.

T

thoracentesis Insertion of a needle through an intercostal space to remove fluid from a pleural effusion for laboratory study or to relieve pressure. Also called *pleural tap*.

thoracoscopy Examination of the pleural cavity with an endoscope.

thoracotomy Incision through the chest wall.

thymectomy Surgical removal of the thymus gland.

thyroidectomy Surgical removal of the thyroid gland.

tomography Radiographic image of a selected slice of tissue.

tonometry Measurement of intraocular pressure.

tonsillectomy Surgical removal of the tonsils.

tracheal aspiration Procedure in which a soft catheter is passed into the trachea to allow brushings and washings to remove cells and secretions from the trachea and main bronchi for diagnostic study.

tracheostomy Insertion of a tube into the windpipe to assist breathing.

tracheotomy The process of making an incision into the trachea.

traction Gentle but continuous application of a pulling force that can align a fracture, reduce muscle spasm, and relieve pain.

transdermal application Administration of some medications through the skin by an adhesive transdermal patch that is applied to the skin. The medication diffuses across the epidermis and enters the blood vessels in the dermis. Contraceptive hormones, analgesics, and anti-nausea/ seasickness medications are examples.

transplant The tissue or organ used or the transfer of tissue from one person to another.

transthoracic Going through the chest wall.

tubal ligation Surgery, using laparoscopy, in which both fallopian tubes are cut, a segment is removed, and the ends are tied off and cauterized shut.

24-hour urine collection Process that determines the amount of protein being excreted daily and estimates the kidneys' filtration ability.

tympanostomy Surgically created new opening in the tympanic membrane to allow fluid to drain from the middle ear.

U

ultrasonography Delineation of deep structures using sound waves.

ureteroscopy Examination of the ureter. A small flexible ureteroscope is passed through the urethra and bladder into the ureter. Devices can be passed through the endoscope to remove or fragment stones.

urinalysis (microscopic) Analysis of the solids deposited by centrifuging a specimen of urine. It can reveal RBCs, WBCs, and renal tubular epithelial cells stuck together to form casts (cylindrical molds of cells) in nephrotic syndrome.

urinalysis (U/A) Examination of urine to separate it into its elements and define their kind and/or quantity. A routine urinalysis in the laboratory can include tests for color, clarity, pH, specific gravity, protein, glucose, ketones, and leukocyte esterase (indicator of infection).

urine culture Culture taken from a clean-catch urine specimen. It is the definitive test for a urinary tract infection.

V

vasectomy Excision of a segment of the ductus deferens to interrupt the flow of sperm.

vasovasostomy Microsurgical procedure to suture back together the cut ends of the ductus deferens to restore the flow of sperm. Also called *vasectomy reversal*.

venogram Radiograph of veins after injection of radiopaque contrast material.

vestibulectomy Surgical excision of the vulva.

voiding cystourethrogram (VCUG) Imaging in which a contrast material is inserted into the bladder through a catheter and X-rays are taken during voiding.

W

Weber test Test for sensorineural hearing loss.

X

xenograft Graft from a nonhuman species. Also called *heterograft*.

Review Copy

Pharmacology

A compilation of pharmacologic terms used in this book.

A

acetaminophen Analgesic (reduces response to pain) and antipyretic (reduces fever).

adrenaline (1) Hormone produced by the adrenal medulla that boosts the supply of oxygen and glucose to the brain and increases heart rate and output. (2) Drug used to treat cardiac arrest and dysrhythmias and relieve bronchospasm in asthma. Also called *epinephrine*.

allergen Substance producing a hypersensitivity (allergic) reaction. Examples are animal fur and dander, penicillins, and foods such as eggs, milk, and wheat.

alpha-glucosidase inhibitors Block the breakdown of starches in the intestine.

analgesic Substance that reduces or relieves the response to pain without producing loss of consciousness. Examples are aspirin and other NSAIDs, acetaminophen, and codeine.

androgen Hormone that promotes masculine characteristics. An example is testosterone.

anesthetic Agent that causes absence of feeling or sensation. Examples of local anesthetics are lidocaine and novocaine; examples of general anesthetics are nitrous oxide, thiopental, and ketamine.

antacid Agent that neutralizes the acidity of stomach contents. Examples are aluminum hydroxide, magnesium hydroxide, and calcium carbonate.

antiarrhythmic Agents that restore normal heart rate and rhythm.

antibiotic Substance that has the capacity to inhibit the growth of or destroy bacteria and other microorganisms. Examples are penicillin, erythromycin, cefotaxime, and flucloxacillin.

anticholinergics Agents antagonistic to parasympathetic nerve fibers.

anticoagulant Substance that prevents clotting. Examples are heparin and Coumadin (warfarin).

antidepressants A class of drugs that alleviate the symptoms of depression.

antidiabetic drugs Medications used to treat diabetes. Those given orally include metformin, acarbose, and thiazolidinediones, such as troglitazone. Insulin is given by injection or inhaled.

antidiuretic Agent that decreases urine production. Examples are vasopressin, amiloride, and chlorpropamide.

antiepileptic Agent capable of preventing or arresting epilepsy. Examples are phenobarbital, phenytoin, and valproate.

antifungal agents Agents used to prevent and arrest fungal infections. Examples are the topical applications 1% clotremazole (Lomotrín, Mycelex) and 1% terbinafine (Lamisol), which are available without prescriptions.

antihistamine Agent used to treat allergic symptoms because of its action antagonistic to histamine. Examples are benadryl, diphenhydramine, and cimetidine.

anti-inflammatory Agent that reduces inflammation by acting on the body's responses, without affecting the causative agent. Examples are corticosteroids and aspirin.

antimicrobial Agent used to destroy or prevent multiplication of organisms. (See *antibiotic*.)

antineoplastic Agent that prevents the growth and spread of cancer cells. Examples are methotrexate, fluorouracil, and cyclophosphamide.

antipruritic Medication against itching. Examples are calamine lotion, hydrocortisone cream applied topically, and diphenhydramine (Benadryl) taken orally.

antipyretic Agent that reduces fever. Examples are aspirin and acetaminophen.

antiseptic Agent that reduces the number of microorganisms in different situations. Examples are alcohol, chlorhexidine, and providone-iodine.

anxiolytics Class of drugs that relieve the symptoms of anxiety.

atropine Agent used to dilate the pupils.

B

benzothiazide Diuretic that increases the excretion of sodium and potassium with an accompanying volume of water.

beta blocker Agent used in the treatment of a variety of cardiovascular diseases. Examples are propranolol and acebutolol.

biguanides Agents that decrease glucose production in the liver.

bronchodilator Agent that relaxes the smooth muscles of the bronchioles. Examples are theophylline; beta-2 agonists, such as salbutamol and terbutaline; and anticholinergics, such as ipratropium bromide.

C

calcium channel blocker Agent that decreases the force of contraction of the myocardium, dilates coronary arteries, and reduces blood pressure. Examples are amlodipine and verapamil.

chemotherapy Treatment using chemical agents, usually in relation to neoplastic disease. Examples are platinum compounds such as cisplatin or paraplatin.

chronotropic Agents that alter the heart rate.

cleansing agents Soaps, shampoos, and detergents that are used to clean wounds and abrasions or to remove crusts and scales.

coagulant Substance that causes clotting. Thrombin and fibrin glue are used surgically to treat bleeding.

contraceptive Agent that prevents conception. Examples are condoms, diaphragms, and birth control pills using a mixture of estrogen and progesterone.

corticosteroids Hormones produced by the adrenal cortex. Examples are cortisol and aldosterone.

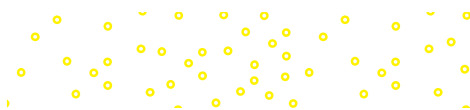
cortisol One of the glucocorticoids produced by the adrenal cortex; has anti-inflammatory effects. Also called *hydrocortisone*.

creams Water-based emulsions with a cooling and soothing effect that are cosmetically well tolerated.

D

decongestant An agent that reduces the swelling and fluid in the nose and sinuses. Examples are pseudoephedrine and phenylephrine.

depressant Substance that diminishes activity, sensation, or tone, particularly in relation to the nervous system. Examples are alcohol, barbiturates, and benzodiazepines.



disease-modifying drug Agent that has partial success in slowing down the accumulation of disabilities in a specific disease process. Examples in multiple sclerosis (MS) include interferons and mitoxantrone.

disinfectant Agent used to destroy pathogenic and other microorganisms on nonliving surfaces. Examples are alcohol, hydrogen peroxide, and hypochlorites.

diuretic Agent that increases urine output. Examples are furosemide, hydrochlorothiazide, spironolactone, and mannitol.

dopamine Chemical neurotransmitter in some specific areas of the brain.

E

epinephrine (1) Hormone produced by the adrenal medulla that boosts the supply of oxygen and glucose to the brain and increases heart rate and output. (2) Drug used to treat cardiac arrest and dysrhythmias and relieve bronchospasm in asthma. Also called *adrenaline*.

estrogen Generic term for hormones that stimulate female secondary sex characteristics.

F

fluorescein Dye that produces a vivid green color under a blue light; used to diagnose corneal abrasions and foreign bodies in the eye.

G

gels Jelly-like watery suspension using a chemical gelling agent for insoluble drugs such as corticosteroids and retinoids.

H

histamine Compound liberated in tissues as a result of injury or an immune response.

hydrocortisone Potent glucocorticoid with anti-inflammatory properties. Also called *cortisol*.

I

immunization Treatment with an agent designed to protect susceptible people from a communicable disease, such as agents that protect against the childhood diseases of measles, rubella, and pertussis.

inotropic Agents that change the force of ventricular contraction.

insulin Hormone produced by the islet cells of the pancreas that promotes glucose use. Injectable insulin preparations are classified by their speed of action.

L

lidocaine Ocular local anesthetic.

loop diuretic Promotes evacuation of urine in the kidney.

M

melatonin Hormone formed and secreted by the pineal gland during darkness. Serotonin is a precursor. It assists in the control of daily body rhythms, stimulates the immune system, and is an antioxidant.

morphine Derivative of opium used as an analgesic or sedative.

mucolytic Agent that attempts to break up mucus to allow it to be

cleared more effectively from the airways. Examples are guaifenesin (common in over-the-counter cough medications), potassium iodide, and *N*-acetylcysteine (taken through a nebulizer).

mydriatic Agent that dilates the pupils of the eye.

N

narcotic Drug derived from opium. Examples are heroin, morphine, codeine, and demerol.

neurotransmitter Chemical that crosses a synapse to stimulate or inhibit another neuron or the cell of a muscle or gland. Examples are norepinephrine, serotonin, and dopamine.

O

ointments Agents that contain no water and are oil-based to provide an occlusive layer to retain water in the skin; they are used to treat chronic, dry, and scaly conditions.

opiate Drug derived from opium. Examples are morphine, codeine, heroin, and demerol.

osmotic diuretic Promotes evacuation of water and electrolytes in the kidney.

oxygen Gas given by nasal cannula or by mask and intubation to relieve hypoxia. Patients with severe, chronic COPD can be attached to a portable cylinder of oxygen.

P

pharmacist Person licensed by the state to prepare and dispense drugs.

pharmacology Science of the preparation, uses, and effects of drugs.

pharmacy Facility licensed to prepare and dispense drugs.

placebo Inert, medically inactive compound with no intrinsic therapeutic value.

progesterone Hormone used to correct abnormalities of menstruation, and as a contraceptive.

prostaglandin Hormone present in many tissues; first isolated from the prostate gland.

psychedelic A class of drugs that enhance sensory experiences and consciousness.

psychoactive Agent able to alter mood, behavior, and/or cognition. Examples include narcotics, stimulants, antidepressants, and hallucinogens.

R

retinoids Keratolytic agents applied for psoriasis, acne, and photo damage.

S

saline Salt solution, usually sodium chloride.

selective serotonin reuptake inhibitors Class of drugs that prevent the reuptake of serotonin and are used in the treatment of depression.

somatotropin Hormone of the anterior pituitary gland that stimulates the growth of body tissues. Also called *growth hormone (GH)*.

spermicide Agent that destroys sperm. Examples are nonoxynol-9 and benzalkonium chloride.

sterilization Elimination of all microorganisms by high-pressure steam (autoclave), dry heat (oven), or radiation.

steroid Large family of chemical substances found in many drugs, hormones, and body components.

stimulant Agent that excites or strengthens. Examples include caffeine, nicotine, and cocaine.

sulfonylureas Agents that stimulate the beta cells of the pancreas to produce more insulin.

surfactant Protein and fat compound that creates surface tension to hold the lung alveolar walls apart.

T

teratogen Agent that produces fetal abnormalities—congenital malformations—while organs and structures are being formed. (All medications readily cross the placenta.) Examples include alcohol, isotretinoin (acne medication), valproic acid (anticonvulsant), and the rubella virus.

testosterone The major androgen that promotes development of male sex characteristics.

thrombolytic Agent injected within a few hours of a myocardial infarction (MI) or stroke to dissolve the thrombus causing the arterial

blockage. Examples are streptokinase and tissue plasminogen activator (tPA). Also called *clot-busting drug*.

thyroxine Thyroid hormone T4, tetraiodothyronine.

topical Medication applied to the skin to obtain a local effect. Examples are ointments, creams, gels, lotions, patches, and sprays.

toxin Poisonous substance formed by a living cell or organism. Examples are venom from bee stings, snake bites, and jellyfish stings.

triamcinolone Synthetic corticosteroid.

V

vaccine Agent used to generate immunity and composed of the antigenic components of a killed or attenuated microorganism or its inactivated toxins. See *immunization*.

vasopressin Synthetic hormone causing contraction of smooth muscle.

vitamin Essential organic substance necessary in small amounts for normal cell function.

W

warfarin Anticoagulant; also used as rat poison. Trade name: *Coumadin*.

Review Copy

Review Copy

A

abdomen (AB-doh-men) Part of the trunk between the thorax and the pelvis.

abdominal (ab-DOM-in-al) Pertaining to the abdomen.

abdominopelvic (ab-DOM-ih-no-PEL-vik) Pertaining to the abdomen and pelvis.

abdominoplasty (ab-DOM-ih-noh-plas-tee) Surgical removal of excess subcutaneous fat from the abdominal wall (tummy tuck).

abduction (ab-DUCK-shun) Action of moving away from the midline.

abductor (ab-DUCK-tor) Muscle that moves a body part away from the midline.

ablation (ab-LAY-shun) Removal of tissue to destroy its function.

abortion (ah-BOR-shun) Spontaneous or induced expulsion of the fetus from the uterus at 20 weeks or less.

abrasion (ah-BRAY-zhun) Area of skin or mucous membrane that has been scraped off.

abruptio (ab-RUP-she-oh) Placenta abruptio is the premature detachment of the placenta.

absorb (ab-SORB) To take in.

absorption (ab-SORP-shun) Uptake of nutrients and water by cells in the GI tract.

accessory (ak-SESS-oh-ree) A muscle or nerve that is auxiliary to a more major structure.

accommodate (ah-KOM-oh-date) To adapt to meet a need.

accommodation (ah-kom-oh-DAY-shun) The act of adjusting something to make it fit the needs; for example, the lens of the eye adjusts itself.

accommodative (ah-kom-oh-DAY-tiv) Pertaining to accommodation.

acetabulum (ass-eh-TAB-you-lum) The cup-shaped cavity of the hip bone that receives the head of the femur to form the hip joint.

acetaminophen (ah-seat-ah-MIN-oh-fen) Medication that is an analgesic and an antipyretic.

acetone (ASS-eh-tone) Ketone that is found in blood, urine, and breath when diabetes mellitus is out of control.

Achilles tendon (ah-KILL-eeze) A tendon formed from gastrocnemius and soleus muscles and inserted into the calcaneus bone. Also called *calcaneal tendon*.

achondroplasia (a-kon-droh-PLAY-zee-ah) Condition with abnormal conversion of cartilage into bone, leading to dwarfism.

acne (AK-nee) Inflammatory disease of sebaceous glands and hair follicles.

acoustic (ah-KYU-stik) Pertaining to hearing.

acquired immunodeficiency syndrome (AIDS) (ah-KWIRED IM-you-noh-dee-FISH-en-see SIN-droh-m) Infection with the HIV.

acromegaly (ak-roe-MEG-ah-lee) Enlargement of the head, face, hands, and feet due to excess growth hormone in an adult.

acromioclavicular (AC) (ah-CROW-mee-oh-klah-VICK-you-lar) The joint between the acromion and the clavicle.

acromion (ah-CROW-mee-on) Lateral end of the scapula, extending over the shoulder joint.

active (AK-tiv) Causing action or change.

activities of daily living (ADLs) (ak-TIV-ih-teez of DAY-lee LIV-ing) Daily routines for mobility, personal care, bathing, dressing, eating, and moving.

activity (ak-TIV-ih-tee) A goal-directed human action.

acute (ah-KYUT) Disease of sudden onset.

adapt (a-DAPT) To adjust to different conditions.

adaptation (ad-ap-TAY-shun) Change in the function or structure of an organ to meet new conditions.

addict (ADD-ikt) One who cannot live without a substance or practice.

addiction (ah-DIK-shun) Habitual psychologic and physiologic dependence on a substance or practice.

Addison disease (ADD-ih-son diz-EEZ) An autoimmune disease leading to decreased production of adrenocortical steroids.

adduction (ah-DUCK-shun) Action of moving toward the midline.

adductor (ah-DUCK-tor) Muscle that moves a body part toward the midline.

adenocarcinoma (ADD-eh-noh-kar-sih-NOH-mah) A cancer arising from glandular epithelial cells.

adenoid (ADD-eh-noyd) Single mass of lymphoid tissue in the midline at the back of the throat.

adenoidectomy (ADD-eh-noy-DEK-toh-me) Surgical removal of the adenoid tissue.

adipose (ADD-ih-pose) Containing fat.

adolescence (ad-oh-LESS-ence) Stage that begins with puberty and ends with physical maturity.

adolescent (ad-oh-LESS-ent) Pertaining to adolescence or a person in that stage.

adrenal gland (ah-DREE-nal GLAND) The suprarenal gland on the upper pole of each kidney.

adrenaline (ah-DREN-ah-lin) One of the catecholamines. Also called *epinephrine*.

adrenocortical (ah-DREE-noh-KOR-tih-kal) Pertaining to the cortex of the adrenal gland.

adrenocorticotrophic (ah-DREE-noh-KOR-tih-koh-TROH-pik) Hormone of the anterior pituitary that stimulates the cortex of the adrenal gland to produce its own hormones.

afferent (AFF-eh-rent) Moving toward a center; for example, nerve fibers conducting impulses to the spinal cord and brain.

aged (A-jid) Having lived to an advanced age.

agenesis (a-JEN-eh-sis) Failure to develop any organ or any part.

agglutinate (ah-GLUE-tin-ate) Stick together to form clumps.

agglutination (ah-glue-tih-NAY-shun) Process by which cells or other particles adhere to each other to form clumps.

aging (A-jing) The process of human maturation and decline.

agranulocyte (a-GRAN-you-loh-site) A white blood cell without any granules in its cytoplasm.

aldosterone (al-DOS-ter-own) Mineralocorticoid hormone of the adrenal cortex.

alignment (a-LINE-ment) Having a structure in its correct position relative to other structures.

- alimentary** (al-ih-MEN-tar-ee) Pertaining to the digestive tract.
- alimentary canal** (al-ih-MEN-tar-ee kah-NAL) Digestive tract.
- allergen** (AL-er-jen) Substance producing a hypersensitivity (allergic) reaction.
- allergenic** (al-er-JEN-ik) Pertaining to the capacity to produce an allergic reaction.
- allergic** (ah-LER-jik) Pertaining to or suffering from an allergy.
- allergy** (AL-er-jee) Hypersensitivity to an allergen.
- allograft** (AL-oh-graft) Skin graft from another person or a cadaver. Also called *homograft*.
- alloimmune** (AL-oh-im-YUNE) Immune reaction directed against foreign tissue.
- alopecia** (al-oh-PEE-shah) Partial or complete loss of hair, naturally or from medication.
- alveolus** (al-VEE-oh-lus) Terminal element of the respiratory tract where gas exchange occurs. Plural *alveoli*.
- Alzheimer disease** (AWLZ-high-mer diz-EEZ) Common form of dementia.
- amblyopia** (am-blee-OH-pee-ah) Failure or incomplete development of the pathways of vision to the brain.
- ambulatory** (AM-byu-LAY-tor-ee) Surgery or any other care provided without an overnight stay in a medical facility.
- amenorrhea** (a-men-oh-REE-ah) Absence or abnormal cessation of menstrual flow.
- amino acid** (ah-ME-no ASS-id) The basic building block for protein.
- ammonia** (ah-MOAN-ih-ah) Toxic breakdown product of amino acids (proteins).
- amniocentesis** (AM-nee-oh-sen-TEE-sis) Removal of amniotic fluid for diagnostic purposes.
- amnion** (AM-nee-on) Membrane around the fetus that contains amniotic fluid.
- amniotic** (am-nee-OT-ik) Pertaining to the amnion.
- ampulla** (am-PULL-ah) Dilated portion of a canal or duct.
- amputation** (am-pyu-TAY-shun) Process of removing a limb, a part of a limb, a breast, or some other projecting part. Verb *amputate*.
- amputee** (AM-pyu-tee) A person with an amputation.
- amylase** (AM-il-ase) One of a group of enzymes that breaks down starch.
- amyotrophic** (a-my-oh-TROH-fik) Pertaining to muscular atrophy.
- anabolism** (an-AB-oh-lizm) The buildup of complex substances in the cell from simpler ones as a part of metabolism.
- anal** (A-nal) Pertaining to the anus.
- analgesia** (an-al-JEE-zee-ah) State in which pain is reduced.
- analgesic** (an-al-JEE-zic) Substance that produces analgesia.
- anaphylactic** (AN-ah-fih-LAK-tik) Pertaining to anaphylaxis.
- anaphylaxis** (AN-ah-fih-LAK-sis) Immediate severe allergic response.
- anastomosis** (ah-NAS-toh-MOH-sis) A surgically made union between two tubular structures. Plural *anastomoses*.
- androgen** (AN-droh-jen) Hormone that promotes masculine characteristics.
- anemia** (ah-NEE-me-ah) Decreased number of red blood cells.
- anemic** (ah-NEE-mik) Pertaining to or suffering from anemia.
- anencephaly** (AN-en-SEF-ah-lee) Born without cerebral hemispheres.
- anesthesia** (an-es-THEE-zee-ah) Complete loss of sensation.
- anesthesiologist** (AN-es-thee-zee-OL-oh-jist) Medical specialist in anesthesia.
- anesthesiology** (AN-es-thee-zee-OL-oh-jee) Medical specialty related to anesthesia.
- anesthetic** (an-es-THET-ik) Agent that causes absence of feeling or sensation.
- aneurysm** (AN-yur-izm) Circumscribed dilation of an artery or cardiac chamber.
- angiogram** (AN-jee-oh-gram) Radiograph obtained after injection of radiopaque contrast material into blood vessels.
- angiography** (an-jee-OG-rah-fee) Radiography of vessels after injection of contrast material.
- angioplasty** (AN-jee-oh-PLAS-tee) Recanalization of a blood vessel by surgery.
- anomaly** (ah-NOM-ah-lee) Structural abnormality present at birth.
- anorectal junction** (A-no-RECK-tal JUNK-shun) Junction between the anus and the rectum.
- anorexia** (an-oh-RECK-see-ah) Without an appetite; *or* having an aversion to food.
- anoxia** (an-OCK-see-ah) Without oxygen.
- anoxic** (an-OCK-sik) Pertaining to or suffering from a lack of oxygen.
- antacid** (ant-ASS-id) Agent that neutralizes the acidity of stomach contents.
- antagonist** (an-TAG-oh-nist) An opposing structure, agent, disease, or process.
- antagonistic** (an-TAG-oh-nist-ik) Having an opposite function.
- antecubital** (an-teh-KYU-bit-al) In front of the elbow.
- anterior** (an-TEER-ee-or) Front surface of body; situated in front.
- anteversion** (an-teh-VER-zhun) Forward displacement or tilting of a structure.
- anthracosis** (an-thra-KOH-sis) Lung disease caused by the inhalation of coal dust.
- anthrax** (AN-thraks) A severe, malignant infectious disease.
- antibiotic** (AN-tih-bye-OT-ik) A substance that has the capacity to inhibit growth of and destroy bacteria and other microorganisms.
- antibody** (AN-tee-body) Protein produced in response to an antigen. Plural *antibodies*.
- anticoagulant** (AN-tee-koh-AG-you-lant) Substance that prevents clotting.
- antidiuretic** (AN-tih-die-you-RET-ik) An agent that decreases urine production.
- antidiuretic hormone (ADH)** (AN-tih-die-you-RET-ik HOR-mohn) Posterior pituitary hormone that decreases urine output by acting on the kidney. Also called *vasopressin*.
- antiepileptic** (AN-tih-epi-LEP-tik) A pharmacologic agent capable of preventing or arresting epilepsy.
- antigen** (AN-tee-jen) Substance capable of triggering an immune response.
- antihistamine** (AN-tih-HISS-tah-mean) Drug used to treat allergic symptoms because of its action antagonistic to histamine.
- antimicrobial** (AN-tee-my-KROH-bee-al) Agent to destroy or prevent multiplication of organisms.
- antineoplastic** (AN-tee-nee-oh-PLAS-tik) Pertaining to the prevention of the growth and spread of cancer cells.

- antipruritic** (AN-tee-pru-RIT-ik) Medication against itching.
- antipyretic** (AN-tee-pie-RET-ik) Agent that reduces fever.
- antiseptics** (an-tee-SEP-sis) Inhibiting the growth of infectious agents.
- antiseptic** (an-tee-SEP-tik) An agent or substance capable of affecting antiseptics.
- antiserum** (an-tee-SEER-um) Serum taken from another human or animal that has antibodies to a disease. Also called *immune serum*.
- antisocial personality disorder** (AN-tee-SOH-shall per-son-AL-ih-tee dis-OR-der) Chronic violation of the rights of others.
- antrum** (AN-trum) A closed cavity.
- anuria** (an-YOU-ree-ah) Absence of urine production.
- anus** (A-nus) Terminal opening of the digestive tract through which feces are discharged.
- anxiety** (ang-ZI-eh-tee) Distress and dread caused by fear.
- aorta** (a-OR-tuh) Main trunk of the systemic arterial system.
- aortic** (a-OR-tik) Pertaining to the aorta.
- apex** (A-peks) Tip or end; for example, of the cone-shaped heart.
- Apgar score** (AP-gar SKOR) Evaluation of a newborn's status.
- aphthous** (AF-thus) Painful small oral ulcers (canker sores).
- apnea** (AP-nee-ah) Absence of spontaneous respiration.
- apoptosis** (AP-op-TOE-sis) Programmed normal cell death.
- appendicitis** (ah-pen-dih-SIGH-tis) Inflammation of the appendix.
- appendicular** (AP-en-DICK-you-lar) Relating to the limbs, e.g., the appendicular skeleton.
- appendix** (ah-PEN-dicks) Small blind projection from the pouch of the cecum.
- aqueous humor** (AK-we-us HEW-mor) Watery liquid in the anterior and posterior chambers of the eye.
- arachnoid mater** (ah-RACK-noyd MAY-ter) Weblike middle layer of the three meninges.
- areola** (ah-REE-oh-luh) Circular reddish area surrounding the nipple.
- areolar** (ah-REE-oh-lar) Pertaining to the areola.
- arrhythmia** (a-RITH-me-ah) Condition when the heart rhythm is abnormal.
- arteriography** (ar-teer-ee-OG-rah-fee) X-ray visualization of an artery after injection of contrast material.
- arteriole** (ar-TIER-ee-ole) Small terminal artery leading into the capillary network.
- arteriosclerosis** (ar-TIER-ee-oh-skler-OH-sis) Hardening of the arteries.
- arteriosclerotic** (ar-TIER-ee-oh-skler-OT-ik) Pertaining to or suffering from arteriosclerosis.
- artery** (AR-ter-ee) Thick-walled blood vessel carrying blood away from the heart.
- arthritis** (ar-THRI-tis) Inflammation of a joint or joints.
- arthrocentesis** (AR-throw-sen-TEE-sis) Withdrawal of fluid from a joint through a needle.
- arthrodesis** (ar-throw-DEE-sis) Fixation or stiffening of a joint by surgery.
- arthrography** (ar-THROG-rah-fee) X-ray of a joint taken after the injection of a contrast medium into the joint.
- arthroplasty** (AR-throw-plas-tee) Surgery to restore, as far as possible, the function of a joint.
- arthroscope** (AR-thro-skope) Endoscope used to examine the interior of a joint.
- arthroscopy** (ar-THROS-koh-pee) Visual examination of the interior of a joint.
- articulate** (ar-TIK-you-late) Two separate bones have formed a joint.
- articulation** (ar-tik-you-LAY-shun) A joint.
- asbestosis** (as-bes-TOE-sis) Lung disease caused by the inhalation of asbestos particles.
- ascites** (ah-SIGH-teez) Accumulation of fluid in the abdominal cavity.
- asepsis** (a-SEP-sis) Absence of living pathogenic organisms.
- Asperger syndrome** (AHS-per-ger SIN-droh-m) Developmental disorder of children.
- aspiration** (AS-pih-RAY-shun) Removal by suction of fluid or gas from a body cavity. Verb *aspirate*.
- asthma** (AZ-mah) Episodes of breathing difficulty due to narrowed or obstructed airways.
- asthmatic** (az-MAT-ik) Suffering from or pertaining to asthma.
- astigmatism** (ah-STIG-maht-izm) Inability to focus light rays that enter the eye in different planes.
- asymptomatic** (A-simp-toe-MAT-ik) Without any symptoms experienced by the patient.
- astystole** (a-SIS-toe-lee) Absence of contractions of the heart.
- ataxia** (a-TAK-see-ah) Inability to coordinate muscle activity, leading to jerky movements.
- ataxic** (a-TAK-sik) Pertaining to or suffering from ataxia.
- atelectasis** (at-el-ECK-tah-sis) Collapse of part of a lung.
- atherectomy** (ath-er-EK-toe-me) Surgical removal of atheroma.
- atheroma** (ath-er-ROE-mah) Lipid deposit in the lining of an artery.
- atherosclerosis** (ATH-er-oh-skler-OH-sis) Atheroma in arteries.
- athetoid** (ATH-eh-toyd) Resembling or suffering from athetosis.
- athetosis** (ath-eh-TOE-sis) Slow, writhing involuntary movements.
- atonic** (a-TOHN-ik) Without normal muscular tone.
- atopic** (a-TOP-ik) Pertaining to an allergy.
- atopy** (AT-oh-pee) State of hypersensitivity to an allergen—allergic.
- atresia** (a-TREE-zee-ah) Congenital absence of a normal opening or lumen.
- atrial** (A-tree-al) Pertaining to the atrium.
- atrioventricular (AV)** (A-tree-oh-ven-TRICK-you-lar) Pertaining to both the atrium and the ventricle.
- atrium** (A-tree-um) Chamber where blood enters the heart on both right and left sides. Plural *atria*.
- atrophy** (A-troh-fee) Wasting or diminished volume of a tissue or organ.
- atropine** (AT-ro-peen) Pharmacologic agent used to dilate pupils.
- attenuate** (ah-TEN-you-ate) Weaken the ability of an organism to produce disease.
- audiologist** (aw-dee-OL-oh-jist) Specialist in evaluation of hearing function.
- audiology** (aw-dee-OL-oh-jee) Study of hearing disorders.
- audiometer** (aw-dee-OM-eh-ter) Instrument to measure hearing.
- audiometric** (AW-dee-oh-MET-rik) Pertaining to the measurement of hearing.

GLOSSARY

auditory (AW-dih-tor-ee) Pertaining to the sense or the organs of hearing.

aura (AWE-rah) Sensory experience preceding an epileptic seizure or a migraine headache.

auricle (AW-ri-kul) The shell-like external ear.

auscultation (aws-kul-TAY-shun) Diagnostic method of listening to body sounds with a stethoscope.

autism (AWE-tizm) Developmental disorder of children.

autistic (awe-TIS-tik) Pertaining to autism.

autoantibody (awe-toe-AN-tee-bod-ee) Antibody produced in response to an antigen from the host's own tissue.

autograft (AWE-toe-graft) A graft using tissue taken from the same individual who is receiving the graft.

autoimmune (awe-toe-im-YUNE) Immune reaction directed against a person's own tissue.

autologous (awe-TOL-oh-gus) Blood transfusion with the same person as donor and recipient.

autolysis (awe-TOL-ih-sis) Destruction of cells by enzymes within the cells.

autonomic (awe-toh-NOM-ik) Self-governing visceral motor division of the peripheral nervous system.

autopsy (AWE-top-see) Examination of the body and organs of a dead person to determine the cause of death.

avascular (a-VAS-cue-lar) Without a blood supply.

avulsion (a-VUL-shun) Forcible separation or tearing away, often of a tendon from bone.

axial (AK-see-al) Relating to the head and trunk, e.g., the axial skeleton.

axilla (AK-sill-ah) Medical name for the armpit. Plural *axillae*.

axillary (AK-sill-air-ee) Pertaining to the armpit.

axon (ACK-son) Single process of a nerve cell carrying nervous impulses away from the cell body.

azoospermia (a-zoh-oh-SPER-me-ah) Absence of living sperm in the semen.

azotemia (a-zo-TEE-me-ah) Excess nitrogenous waste products in the blood.

B

bacterial (bak-TEER-ee-al) Pertaining to bacteria.

bacterium (bak-TEER-ee-um) A unicellular (single-cell), simple, microscopic organism. Plural *bacteria*.

balanitis (bal-ah-NIE-tis) Inflammation of the glans and prepuce of the penis.

bariatric (bar-ee-AT-rik) Treatment of obesity.

basilar (BAS-ih-lar) Pertaining to the base of a structure.

basophil (BAY-so-fill) A basophil's granules attract basic blue stain in the laboratory.

Bell palsy (BELL PAWL-zee) Paresis, or paralysis, of one side of the face.

biceps brachii (BYE-sepz BRAY-key-eye) A muscle of the arm that has two heads or points of origin on the scapula.

bicuspid (by-KUSS-pid) Having two points. A bicuspid heart valve has two flaps; a bicuspid (premolar) tooth has two points.

bifid (BI-fid) Separated into two parts.

bilateral (by-LAT-er-al) On two sides; for example, in both ears.

bile (BILE) Fluid secreted by the liver into the duodenum.

bile acids (BILE AH-sids) Steroids synthesized from cholesterol.

biliary (BILL-ee-air-ree) Pertaining to bile or the biliary tract.

bilirubin (bill-ee-RU-bin) Bile pigment formed in the liver from hemoglobin.

binge eating (BINJ EE-ting) Eating with periods of excessive intake.

biopsy (BI-op-see) Removing tissue from a living person for laboratory examination.

bipolar disorder (bi-POH-lar dis-OR-der) A mood disorder with alternating episodes of depression and mania.

bladder (BLAD-er) Hollow sac that holds fluid, for example, urine or bile.

blastocyst (BLAS-toe-sist) First 2 weeks of the developing embryo.

blepharitis (blef-ah-RYE-tis) Inflammation of the eyelid.

blepharoplasty (BLEF-ah-roh-PLAS-tee) Surgical repair of the eyelid.

blepharoptosis (BLEF-ah-ROP-toe-sis) Drooping of the upper eyelid.

blood-brain barrier (BBB) (BLUD BRAYN BAIR-ee-er) A selective mechanism that protects the brain from toxins and infections.

bolus (BOH-lus) Single mass of a substance.

botulism (BOT-you-lizm) Food poisoning caused by the neurotoxin produced by *Clostridium botulinum*.

bovine spongiform encephalopathy (BO-vine SPON-jee-form en-sef-ah-LOP-ah-thee) Disease of cattle that can be transmitted to humans, causing Creutzfeldt-Jakob disease. Also called *mad cow disease*.

bowel (BOUGH-el) Another name for *intestine*.

brace (BRACE) Appliance to support a part of the body in its correct position.

brachial (BRAY-kee-al) Pertaining to the arm.

brachialis (BRAY-kee-al-is) Muscle that lies underneath the biceps and is the strongest flexor of the forearm.

brachioradialis (BRAY-kee-oh-RAY-dee-al-is) Muscle that helps flex the forearm.

brachytherapy (brah-kee-THAIR-ah pee) Radiation therapy in which the source of radiation is implanted in the tissue to be treated.

bradycardia (brad-ee-KAR-dee-ah) Slow heart rate (below 60 beats per minute).

bradypnea (brad-ip-NEE-ah) Slow breathing.

brainstem (BRAYN-stem) Comprises the thalamus, pineal gland, pons, fourth ventricle, and medulla oblongata.

breech (BREECH) Buttocks-first presentation of the fetus at delivery.

broad-spectrum (broad-SPECK-trum) An antibiotic with a wide range of activity against a variety of organisms.

bronchiectasis (brong-key-ECK-tah-sis) Chronic dilation of the bronchi following inflammatory disease and obstruction.

bronchiole (BRONG-key-ole) Increasingly smaller subdivisions of bronchi.

bronchiolitis (brong-key-oh-LYE-tis) Inflammation of the small bronchioles.

bronchitis (bron-KI-tis) Inflammation of the bronchi.

bronchoconstriction (BRONG-koh-kon-STRIK-shun) Reduction in the diameter of a bronchus.

bronchodilator (BRONG-koh-die-LAY-tor) Agent that increases the diameter of a bronchus.

bronchogenic (BRONG-koh-JEN-ik) Arising from a bronchus.

bronchopneumonia (BRONG-koh-new-MOH-nee-ah) Acute inflammation of the walls of smaller bronchioles with spread to lung parenchyma.

bronchoscope (BRONG-koh-skope) Endoscope used for bronchoscopy.

bronchoscopy (brong-KOS-koh-pee) Examination of the interior of the tracheobronchial tree with an endoscope.

bronchus (BRONG-kuss) One of two subdivisions of the trachea. Plural *bronchi*.

bulbourethral (BUL-boh-you-REE-thral) Pertaining to the bulbous penis and urethra.

bulimia (buh-LEEM-ee-ah) Episodic bouts of excessive eating with compensatory throwing up.

bullae (BULL-ah) Bubble-like dilated structure. Plural *bullae*.

bundle of His (BUN-del of HISS) Pathway for electrical signals to be transmitted to the ventricles. Also called *atrioventricular (AV) bundle*.

bunion (BUN-yun) A swelling at the base of the big toe.

bursa (BURR-sah) A closed sac containing synovial fluid. Plural *bursae*.

bursitis (burr-SIGH-tis) Inflammation of a bursa.

C

cadaver (kah-DAV-er) A dead body or corpse.

calcaneal (kal-KAY-knee-al) Pertaining to the calcaneus.

calcaneus (kal-KAY-knee-us) Bone of the tarsus that forms the heel.

calcitonin (kal-sih-TONE-in) Thyroid hormone that moves calcium from blood to bones.

calculus (KAL-kyu-lus) Small stone. Plural *calculi*.

callus (KAL-us) Bony tissue that forms at a fracture site early in healing.

calyx (KAY-licks) Funnel-shaped structure. Plural *calyces*.

cancellous (KAN-seh-lus) Bone that has a spongy or lattice-like structure.

cancer (KAN-ser) General term for a malignant neoplasm.

Candida (KAN-did-ah) A yeastlike fungus.

Candida albicans (KAN-did-ah AL-bih-kanz) The most common form of *Candida*.

candidiasis (can-dih-DIE-ah-sis) Infection with the yeastlike fungus *Candida*. Also called *thrush*.

canker (KANG-ker) Nonmedical term for an aphthous ulcer. Also called *mouth ulcer*.

cannula (KAN-you-lah) Tube inserted into a blood vessel or cavity as a channel for fluid.

capillary (KAP-ih-lair-ee) Minute blood vessel between the arterial and venous systems.

capsular (KAP-syu-lar) Pertaining to a capsule.

capsule (KAP-syul) Fibrous tissue layer surrounding a joint or other structure.

carbohydrate (kar-boh-HIGH-drate) Group of organic food compounds that includes sugars, starch, glycogen, and cellulose.

carbuncle (KAR-bunk-ul) Infection of many furuncles in a small area, often on the back of the neck.

carcinogen (kar-SIN-oh-jen) Cancer-producing agent.

carcinogenesis (kar-SIN-oh-JEN-eh-sis) Origin and development of cancer.

carcinoma (kar-sih-NOH-mah) A malignant and invasive epithelial tumor.

carcinoma in situ (kar-sih-NOH-mah in SIGH-too) Carcinoma that has not invaded surrounding tissues.

cardiac (KAR-dee-ak) Pertaining to the heart.

cardiogenic (KAR-dee-oh-JEN-ik) Of cardiac origin.

cardiologist (KAR-dee-OL-oh-jist) A medical specialist in the diagnosis and treatment of disorders of the heart (cardiology).

cardiology (KAR-dee-OL-oh-jee) Medical specialty of diseases of the heart.

cardiomegaly (KAR-dee-oh-MEG-ah-lee) Enlargement of the heart.

cardiomyopathy (KAR-dee-oh-my-OP-ah-thee) Disease of the heart muscle, the myocardium.

cardiopulmonary resuscitation (KAR-dee-oh-PUL-moh-nary ree-sus-ih-TAY-shun) The attempt to restore cardiac and pulmonary function.

cardiovascular (KAR-dee-oh-VAS-kyu-lar) Pertaining to the heart and blood vessels.

cardioversion (KAR-dee-oh-VER-zhun) Restoration of a normal heart rhythm by electric shock. Also called *defibrillation*.

caries (KARE-eez) Bacterial destruction of teeth.

carotid (kah-ROT-id) Main artery of the neck.

carotid endarterectomy (kah-ROT-id END-ar-ter-EK-toe-me) Surgical removal of diseased lining from the carotid artery to leave a smooth lining and restore blood flow.

carpal (KAR-pal) Pertaining to the wrist.

carpus (KAR-pus) Collective term for the eight carpal bones of the wrist.

cartilage (KAR-tih-lage) Nonvascular, firm connective tissue found mostly in joints.

catabolism (kah-TAB-oh-lizm) Breakdown of complex substances into simpler ones as a part of metabolism.

cataplexy (KAT-ah-plek-see) Sudden loss of muscle tone with brief paralysis.

cataract (KAT-ah-ract) Complete or partial opacity of the lens.

catecholamine (kat-eh-COAL-ah-meen) Major element in the stress response; includes epinephrine and norepinephrine.

catheter (KATH-eh-ter) Hollow tube to allow passage of fluid into or out of a body cavity, organ, or vessel.

catheterization (KATH-eh-ter-ih-ZAY-shun) Introduction of a catheter.

catheterize (KATH-eh-teh-RIZE) To introduce a catheter.

caudal (KAW-dal) Pertaining to or nearer to the tailbone.

cautery (KAW-ter-ee) Agent or device used to burn or scar a tissue.

cavernosa (kav-er-NOH-sah) Resembling a cave.

cavity (KAV-ih-tee) Hollow space or body compartment. Plural *cavities*.

cecal (SEE-kal) Pertaining to the cecum.

cecum (SEE-kum) Blind pouch that is the first part of the large intestine.

celiac (SEE-lee-ack) Relating to the abdominal cavity.

celiac disease (SEE-lee-ak diz-EEZ) Disease caused by sensitivity to gluten.

- cell** (SELL) The smallest unit of the body capable of independent existence.
- cellular** (SELL-you-lar) Pertaining to a cell.
- cellulitis** (SELL-you-LIE-tis) Infection of subcutaneous connective tissue.
- cephalic** (seh-FAL-ik) Pertaining to or nearer to the head.
- cerebellum** (ser-eh-BELL-um) The most posterior area of the brain, located between the midbrain and the cerebral hemispheres.
- cerebral** (SER-ee-bral) Pertaining to the cerebral hemispheres or the brain.
- cerebrospinal** (SER-ee-broh-SPY-nal) Pertaining to the brain and spinal cord.
- cerebrospinal fluid (CSF)** (SER-ee-broh-SPY-nal FLU-id) Fluid formed in the ventricles of the brain that surrounds the brain and spinal cord.
- cerebrum** (SER-ee-brum) Cerebral hemispheres.
- cerumen** (seh-ROO-men) Waxy secretion of the ceruminous glands of the external ear.
- ceruminous** (seh-ROO-mih-nus) Pertaining to cerumen.
- cervical** (SER-vih-kal) Pertaining to the cervix or to the neck region.
- cervix** (SER-viks) The lower part of the uterus.
- cesarean section** (seh-ZAH-ree-an SEK-shun) Extraction of the fetus through an incision in the abdomen and uterine wall. Also called *C-section*.
- chancere** (SHAN-ker) Primary lesion of syphilis.
- chemotherapy** (KEY-moh-THAIR-ah-pee) Treatment using chemical agents.
- chiasm** (KYE-asm) X-shaped crossing of the two optic nerves at the base of the brain. Alternative term *chiasma*.
- chickenpox** (CHICK-en-pocks) Acute, contagious viral disease. Also called *varicella*.
- chiropractic** (kye-roh-PRAK-tik) Diagnosis, treatment, and prevention of mechanical disorders of the musculoskeletal system.
- chiropractor** (kye-roh-PRAK-tor) Practitioner of chiropractic.
- chlamydia** (klah-MID-ee-ah) An STD caused by an infection with *Chlamydia*, a species of bacteria.
- cholangiography** (KOH-lan-jee-OG-rah-fee) Use of a contrast medium to radiographically visualize the bile ducts.
- cholecystectomy** (KOH-leh-sis-TECK-toe-me) Surgical removal of the gallbladder.
- cholecystitis** (KOH-leh-sis-TIE-tis) Inflammation of the gallbladder.
- choledocholithiasis** (KOH-leh-DOH-koh-li-THIGH-ah-sis) Presence of a gallstone in the common bile duct.
- cholelithiasis** (KOH-leh-lih-THIGH-ah-sis) Condition of having bile stones (gallstones).
- cholelithotomy** (KOH-leh-lih-THOT-oh-me) Surgical removal of a gallstone(s).
- cholesteatoma** (KOH-less-tee-ah-TOE-mah) Yellow, waxy tumor arising in the middle ear.
- cholesterol** (koh-LESS-ter-ol) Formed in liver cells; is the most abundant steroid in tissues and circulates in the plasma attached to proteins of different densities.
- chorea** (kor-EE-ah) Involuntary, irregular spasms of limb and facial muscles.
- choreic** (kor-EE-ik) Pertaining to or suffering from chorea.
- chorion** (KOH-ree-on) The fetal membrane that forms the placenta.
- chorionic** (koh-ree-ON-ik) Pertaining to the chorion.
- chorionic villus** (koh-ree-ON-ik VILL-us) Vascular process of the embryonic chorion to form the placenta.
- choroid** (KOR-oid) Region of the retina and uvea.
- chromosome** (KROH-moh-sohm) Body in the nucleus that contains DNA and genes.
- chronic** (KRON-ik) A persistent, long-term disease.
- chyle** (KYLE) A milky fluid that results from the digestion and absorption of fats in the small intestine.
- chyme** (KYME) Semifluid, partially digested food passed from the stomach into the duodenum.
- cilium** (SILL-ee-um) Hairlike motile projection from the surface of a cell. Plural *cilia*.
- circulation** (SER-kyu-LAY-shun) Continuous movement of blood through the heart and blood vessels.
- circumcision** (ser-kum-SIZH-un) To remove part or all of the prepuce.
- circumduct** (ser-kum-DUCKT) To move an extremity in a circular motion.
- circumduction** (ser-kum-DUCK-shun) Movement of an extremity in a circular motion.
- cirrhosis** (sir-ROE-sis) Extensive fibrotic liver disease.
- claudication** (klaw-dih-KAY-shun) Intermittent leg pain and limping.
- clavicle** (KLAV-ih-kul) Curved bone that forms the anterior part of the pectoral girdle.
- clavicular** (klah-VICK-you-lar) Pertaining to the clavicle.
- cleft lip** (KLEFT LIP) Congenital defect of the upper lip.
- cleft palate** (KLEFT PAL-ate) Congenital defect of the palate.
- clitoris** (KLIT-oh-ris) Erectile organ of the vulva.
- clonic** (KLON-ik) State of rapid successions of muscular contractions and relaxations.
- closed fracture** (KLOSD FRAK-chur) A bone is broken but the skin over it is intact.
- Clostridium botulinum*** (klos-TRID-ee-um bot-you-LIE-num) Bacterium that causes food poisoning.
- clot** (KLOT) The mass of fibrin and cells that is produced in a wound.
- coagulant** (koh-AG-you-lant) Substance that causes clotting.
- coagulate** (koh-AG-you-late) Form a clot.
- coagulation** (koh-ag-you-LAY-shun) The process of blood clotting.
- coagulopathy** (koh-ag-you-LOP-ah-thee) Disorder of blood clotting. Plural *coagulopathies*.
- coarctation** (koh-ark-TAY-shun) Constriction, stenosis, particularly of the aorta.
- coccyx** (KOK-sicks) Small tailbone at the lower end of the vertebral column.
- cochlea** (KOK-lee-ah) An intricate combination of passages; used to describe the inner ear.
- cochlear** (KOK-lee-ar) Pertaining to the cochlea.
- cognition** (kog-NIH-shun) Process of acquiring knowledge through thinking, learning, and memory.
- cognitive-behavioral therapy (CBT)** (KOG-nih-tiv be-HAYV-yur-al THAIR-ah-pee) Psychotherapy that emphasizes thoughts and attitudes in one's behavior.

- coitus** (KOH-it-us) Sexual intercourse.
- colic** (KOL-ik) Spasmodic, crampy pains in the abdomen.
- colitis** (koh-LIE-tis) Inflammation of the colon.
- collagen** (KOLL-ah-jen) Major protein of connective tissue, cartilage, and bone.
- collateral** (koh-LAT-er-al) Situated at the side, often to bypass an obstruction.
- Colles fracture** (KOL-ez FRAK-chur) Fracture of the distal radius at the wrist.
- colloid** (COLL-oyd) Liquid containing suspended particles.
- colon** (KOH-lon) The large intestine, extending from the cecum to the rectum.
- colostomy** (koh-LOSS-toe-me) Artificial opening from the colon to the outside of the body.
- colostrum** (koh-LOSS-trum) The first breast secretion at the end of pregnancy.
- colpopexy** (KOL-poh-peck-see) Surgical fixation of the vagina.
- coma** (KOH-mah) State of deep unconsciousness.
- comatose** (KOH-mah-toes) In a state of coma.
- comedo** (KOM-ee-doh) A whitehead or blackhead caused by too much sebum and too many keratin cells blocking the hair follicle. Plural *comedones*.
- comminuted fracture** (KOM-ih-nyu-ted FRAK-chur) A fracture in which the bone is broken into small pieces.
- competent** (KOM-peh-tent) Capable of performing a task or function.
- complement** (KOM-pleh-ment) Group of proteins in the serum that finish off the work of antibodies to destroy bacteria and other cells.
- complete fracture** (kom-PLEET FRAK-chur) A bone is fractured into two separate pieces.
- compliance** (kom-PLY-ance) Measure of the capacity of a chamber or hollow viscus (e.g., the lungs) to expand; *or* consistency and accuracy with which a patient follows a treatment regimen.
- compression** (kom-PRESH-un) Squeeze together to increase density and/or decrease a dimension of a structure.
- compression fracture** (kom-PRESH-un FRAK-chur) Fracture of a vertebra causing loss of height of the vertebra.
- compulsion** (kom-PUL-shun) Uncontrollable impulses to perform an act repetitively.
- compulsive** (kom-PUL-siv) Possessing uncontrollable impulses to perform an act repetitively.
- conception** (kon-SEP-shun) Fertilization of the egg by sperm to form a zygote.
- concha** (KON-kah) Shell-shaped bone on the medial wall of the nasal cavity. Plural *conchae*.
- concussion** (kon-KUSH-un) Mild brain injury.
- condom** (KON-dom) A sheath or cover for the penis or vagina to prevent conception and infection.
- conductive hearing loss** (kon-DUK-tiv) Hearing loss caused by lesions in the outer ear or middle ear.
- condyle** (KON-dile) Large, smooth, rounded expansion of the end of a bone where it forms a joint with another bone.
- confusion** (kon-FEW-zhun) Mental state in which environmental stimuli are not processed appropriately.
- congenital** (kon-JEN-ih-tal) Present at birth, either inherited or due to an event during gestation up to the moment of birth.
- conization** (koh-ni-ZAY-shun) Surgical excision of a cone-shaped piece of tissue.
- conjunctiva** (kon-junk-TIE-vah) Inner lining of the eyelids.
- conjunctival** (kon-junk-TIE-val) Pertaining to the conjunctiva.
- conjunctivitis** (kon-junk-tih-VI-tis) Inflammation of the conjunctiva.
- connective tissue** (koh-NECK-tiv TISH-you) The supporting tissue of the body.
- consciousness** (KON-shus-ness) The state of being aware of and responsive to the environment.
- constipation** (kon-stih-PAY-shun) Hard, infrequent bowel movements.
- constrict** (kon-STRIKT) To become or make narrow.
- constriction** (kon-STRIK-shun) A narrowed portion of a structure.
- contagious** (kon-TAY-jus) Infection can be transmitted from person to person or from a person to a surface to a person.
- contaminate** (kon-TAM-in-ate) To cause the presence of an infectious agent to be on any surface or in any substance.
- contamination** (KON-tam-ih-NAY-shun) Presence of an infectious agent on a surface or in substances.
- contraception** (kon-trah-SEP-shun) Prevention of pregnancy.
- contraceptive** (kon-trah-SEP-tiv) An agent that prevents conception.
- contract** (kon-TRAKT) Draw together or shorten.
- contracture** (kon-TRAK-chur) Muscle shortening due to spasm or fibrosis.
- contrecoup** (KON-treh-koo) Injury to the brain at a point directly opposite the point of original contact.
- contusion** (kon-TOO-zhun) Hemorrhage into a tissue (bruising), including the brain.
- convulsion** (kon-VUL-shun) Alternative name for seizure.
- cor pulmonale** (KOR pul-moh-NAH-lee) Right-sided heart failure arising from chronic lung disease.
- cornea** (KOR-nee-ah) The central, transparent part of the outer coat of the eye covering the iris and pupil.
- corneal** (KOR-nee-al) Pertaining to the cornea.
- coronal** (KOR-oh-nal) Pertaining to the vertical plane dividing the body into anterior and posterior portions.
- coronal plane** (KOR-oh-nal PLAIN) Vertical plane dividing the body into anterior and posterior portions.
- coronary circulation** (KOR-oh-nair-ee SER-kyu-LAY-shun) Blood vessels supplying the heart.
- corpus** (KOR-pus) Major part of a structure. Plural *corpora*.
- corpus albicans** (KOR-pus AL-bih-kanz) An atrophied corpus luteum.
- corpus callosum** (KOR-pus kah-LOW-sum) Bridge of nerve fibers connecting the two cerebral hemispheres.
- corpus luteum** (KOR-pus LOO-teh-um) Yellow structure formed at the site of a ruptured ovarian follicle.
- corpuscle** (KOR-pus-ul) A blood cell.
- cortex** (KOR-teks) Outer portion of an organ, such as bone; gray covering of cerebral hemispheres. Plural *cortices*.
- cortical** (KOR-tih-cal) Pertaining to a cortex.

corticosteroid (KOR-tih-koh-STAIR-oyd) A hormone produced by the adrenal cortex.

corticotropin (KOR-tih-koh-TROH-pin) Pituitary hormone that stimulates the cortex of the adrenal gland to secrete corticosteroids.

cortisol (KOR-tih-sol) One of the glucocorticoids produced by the adrenal cortex; has anti-inflammatory effects. Also called *hydrocortisone*.

coryza (koh-RYE-zah) Viral inflammation of the mucous membrane of the nose. Also called *acute rhinitis*.

coup (KOO) Injury to the brain occurring directly under the skull at the point of contact.

coxa (COCK-sah) Hipbone. Plural *coxae*.

cranial (KRAY-nee-al) Pertaining to the cranium.

craniofacial (KRAY-nee-oh-FAY-shal) Pertaining to both the face and the cranium.

cranium (KRAY-nee-um) The skull.

cretin (KREH-tin) A person with severe congenital hypothyroidism.

cretinism (KREH-tin-izm) Condition of severe congenital hypothyroidism.

Creutzfeldt-Jakob disease (KROITS-felt YAK-op diz-EEZ) Progressive incurable neurologic disease caused by infectious prions.

cricoid (CRY-koyd) Ring-shaped cartilage in the larynx.

crista ampullaris (KRIS-tah am-PULL-air-is) Mound of hair cells and gelatinous material in the ampulla of a semicircular canal.

Crohn disease (KRONE diz-EEZ) Narrowing and thickening of terminal small bowel. Also called *regional enteritis*.

croup (KROOP) Infection of the upper airways in children, characterized by a barking cough. Also called *laryngotracheobronchitis*.

cruciate (KRU-she-ate) Shaped like a cross.

cryosurgery (cry-oh-SUR-jer-ee) Use of liquid nitrogen or argon gas in a probe to freeze and kill abnormal tissue.

cryptorchism (krip-TOR-kizm) Failure of one or both testes to descend into the scrotum.

cuirettage (kyu-reh-TAHJ) Scraping the interior of a cavity.

cuirette (kyu-RET) Scoop-shaped instrument for scraping the interior of a cavity or removing new growths.

Cushing syndrome (KUSH-ing SIN-droh-m) Hypersecretion of cortisol (hydrocortisone) by the adrenal cortex.

cutaneous (kyu-TAY-nee-us) Pertaining to the skin.

cuticle (KEW-tih-cul) Nonliving epidermis at the base of the fingernails and toenails.

cyanosis (sigh-ah-NO-sis) Blue discoloration of the skin, lips, and nail beds due to low levels of oxygen in the blood.

cyanotic (sigh-ah-NOT-ik) Pertaining to or marked by cyanosis.

cyst (SIST) An abnormal, fluid-containing sac.

cystic (SIS-tik) Relating to a cyst.

cystic fibrosis (CF) (SIS-tik fie-BROH-sis) Genetic disease in which excessive viscid mucus obstructs passages, including bronchi.

cystitis (sis-TIE-tis) Inflammation of the urinary bladder.

cystocele (SIS-toh-seal) Hernia of the bladder into the vagina.

cystoscope (SIS-toh-sko-pe) An endoscope inserted to view the inside of the bladder.

cystoscopy (sis-TOS-koh-pee) Using a cystoscope to examine the inside of the urinary bladder.

cystourethrogram (sis-toh-you-REETH-roe-gram) X-ray image during voiding to show the structure and function of the bladder and urethra.

cytologist (SIGH-toh-oh-jist) Specialist in the structure, chemistry, and pathology of the cell.

cytology (SIGH-toh-oh-jee) Study of the cell.

cytoplasm (SIGH-toh-plazm) Clear, gelatinous substance that forms the substance of a cell except for the nucleus.

cytotoxic (sigh-toh-TOX-ik) Destructive to cells.

D

dandruff (DAN-druff) Scales in hair from shedding of the epidermis.

death (DETH) Total and permanent cessation of all vital functions.

debridement (day-BREED-mon) The removal of injured or necrotic tissue.

decongestant (dee-con-JESS-tant) Agent that reduces the swelling and fluid in the nose and sinuses.

decubitus ulcer (de-KYU-bit-us UL-ser) Sore caused by lying down for long periods of time.

defecation (def-eh-KAY-shun) Evacuation of feces from the rectum and anus.

defect (DEE-fect) An absence, malformation, or imperfection.

defective (dee-FEK-tiv) Imperfect.

defibrillation (de-fib-rih-LAY-shun) Restoration of uncontrolled twitching of cardiac muscle fibers to normal rhythm.

defibrillator (de-fib-rih-LAY-tor) Instrument for defibrillation.

deformity (de-FOR-mih-tee) A permanent structural deviation from the normal.

degenerative (dee-JEN-er-a-tiv) Relating to the deterioration of a structure.

deglutition (dee-glue-TISH-un) The act of swallowing.

dehydration (dee-high-DRAY-shun) Process of losing body water.

delirium (de-LIR-ee-um) Acute altered state of consciousness with agitation and disorientation; condition is reversible.

deltoid (DEL-toyd) Large, fan-shaped muscle connecting the scapula and clavicle to the humerus.

delusion (dee-LOO-zhun) Fixed, unyielding false belief held despite strong evidence to the contrary.

dementia (da-MEN-sha) Chronic, progressive, irreversible loss of intellectual and mental functions.

demyelination (dee-MY-eh-lin-A-shun) Process of losing the myelin sheath of a nerve fiber.

dendrite (DEN-dright) Branched extension of the nerve cell body that receives nervous stimuli.

dental (DEN-tal) Pertaining to the teeth.

dentine (DEN-tin) Dense, ivory-like substance located under the enamel in a tooth. (Also spelled *dentin*.)

dentist (DEN-tist) Legally qualified specialist in dentistry.

dentistry (DEN-tis-tree) Evaluation, diagnosis, prevention, and treatment of conditions of the oral cavity and associated structures.

deoxyribonucleic acid (DNA) (dee-OCK-see-rye-boh-nyu-KLEE-ik ASS-id) Source of hereditary characteristics found in chromosomes.

- dependence** (dee-PEN-dense) The state of needing or relying on someone or something else.
- dependent** (dee-PEN-dent) Having to rely on someone else.
- depressant** (de-PRESS-ant) Substance that diminishes activity, sensation, or tone.
- depression** (de-PRESS-shun) Mental disorder with feelings of deep sadness and despair.
- dermabrasion** (der-mah-BRAY-zhun) Removal of upper layers of skin by rotary brush.
- dermal** (DER-mal) Pertaining to the skin.
- dermascope** (DER-mah-skope) Instrument that shines a light on the skin and magnifies a lesion.
- dermatitis** (der-mah-TYE-tis) Inflammation of the skin.
- dermatologic** (der-mah-toh-LOJ-ik) Pertaining to the skin and dermatology.
- dermatologist** (der-mah-TOL-oh-jist) Medical specialist in diseases of the skin.
- dermatology** (der-mah-TOL-oh-jee) Medical specialty concerned with disorders of the skin.
- dermatomyositis** (DER-mah-toe-my-oh-SIGH-tis) Inflammation of the skin and muscles.
- dermis** (DER-miss) Connective tissue layer of the skin beneath the epidermis.
- detoxification** (dee-TOKS-ih-fih-KAY-shun) Remove poison from a tissue or substance.
- diabetes insipidus** (dye-ah-BEE-teez in-SIP-ih-dus) Excretion of large amounts of dilute urine as a result of inadequate ADH production.
- diabetes mellitus** (dye-ah-BEE-teez MEL-ih-tus) Metabolic syndrome caused by absolute or relative insulin deficiency and/or insulin ineffectiveness.
- diabetic** (dye-ah-BET-ik) Pertaining to or suffering from diabetes.
- diagnose** (die-ag-NOSE) To make a diagnosis.
- diagnosis** (die-ag-NO-sis) The determination of the cause of a disease. Plural *diagnoses*.
- diagnostic** (die-ag-NOS-tik) Pertaining to or establishing a diagnosis.
- dialysis** (die-AL-ih-sis) An artificial method of filtration to remove excess waste materials and water from the body.
- diaphoresis** (DIE-ah-foh-REE-sis) Sweat or perspiration.
- diaphoretic** (DIE-ah-foh-RET-ic) Pertaining to sweat or perspiration.
- diaphragm** (DIE-ah-frag) A ring and dome-shaped material inserted into the vagina to prevent pregnancy; *or* the muscular sheet separating the abdominal and thoracic cavities.
- diaphragmatic** (DIE-ah-frag-MAT-ik) Pertaining to the diaphragm.
- diaphysis** (die-AF-ih-sis) The shaft of a long bone.
- diarrhea** (die-ah-REE-ah) Abnormally frequent and loose stools.
- diastasis** (die-ASS-tah-sis) Separation of normally joined parts.
- diastole** (die-AS-toe-lee) Dilation of heart cavities, during which they fill with blood.
- diastolic** (die-as-TOL-ik) Pertaining to diastole.
- differential** (dif-er-EN-shal) A differential white blood cell count lists percentages of the different leukocytes in a blood sample.
- diffuse** (di-FUSE) To disseminate or spread out.
- diffusion** (di-FYU-zhun) The means by which small particles move between tissues.
- digestion** (die-JESS-shun) Breakdown of food into elements suitable for cell metabolism.
- digestive** (die-JEST-iv) Pertaining to digestion.
- digital** (DIJ-ih-tal) Pertaining to a finger or toe.
- dilate** (DIE-late) To perform or undergo dilation.
- dilation** (die-LAY-shun) Stretching or enlarging an opening or a structure.
- diphtheria** (dif-THEER-ee-ah) Disease with a thick, membranous (leathery) coating of the pharynx.
- diplegia** (die-PLEE-jee-ah) Paralysis of all four limbs, with the two legs affected most severely.
- dipstick** (DIP-stick) Strip of plastic or paper bearing squares of reagents that change color in the presence of abnormal chemicals in the urine.
- disability** (dis-ah-BILL-ih-tee) Diminished capacity to perform certain activities or functions.
- discipline** (DIS-ih-plin) Training for proper conduct or action.
- disease** (diz-EEZ) A disorder of body functions, systems, or organs.
- disinfectant** (dis-in-FEK-tant) Agent that disinfects.
- disinfection** (dis-in-FEK-shun) Process of destruction of microorganisms by chemical agents.
- dislocation** (dis-low-KAY-shun) Completely out of joint.
- displaced fracture** (dis-PLAYSD FRAK-chur) A fracture in which the fragments are separated and are not in alignment.
- disseminate** (dih-SEM-in-ate) Widely scattered throughout the body or an organ.
- dissociative identity disorder** (di-SO-see-ah-tiv eye-DEN-tih-tee dis-OR-der) Part of an individual's personality is separated from the rest, leading to multiple personalities.
- distal** (DISS-tal) Situated away from the center of the body.
- diuresis** (die-you-REE-sis) Excretion of large volumes of urine.
- diuretic** (die-you-RET-ik) Agent that increases urine output.
- diverticulitis** (DIE-ver-tick-you-LIE-tis) Inflammation of the diverticula.
- diverticulosis** (DIE-ver-tick-you-LOW-sis) Presence of a number of small pouches in the wall of the large intestine.
- diverticulum** (die-ver-TICK-you-lum) A pouchlike opening or sac from a tubular structure (e.g., gut). Plural *diverticula*.
- dopamine** (DOH-pah-meen) Neurotransmitter in specific small areas of the brain.
- Doppler** (DOP-ler) Diagnostic instrument that sends an ultrasonic beam into the body.
- Doppler ultrasonography** (DOP-ler UL-trah-soh-NOG-rah-fee) Detects direction, velocity, and turbulence of blood flow; used in workup of stroke patients.
- dormant** (DOOR-mant) Inactive.
- dorsal** (DOOR-sal) Pertaining to the back or situated behind.
- dorsum** (DOOR-sum) Upper, posterior, or back surface.
- Down syndrome** (DOWN SIN-drome) A syndrome with variable abnormalities associated with three copies of chromosome 21.
- Duchenne muscular dystrophy** (DOO-shen MUSS-kyu-lar DISS-troh-fee) Symmetrical weakness and wasting of pelvic, shoulder, and proximal limb muscles.

ductus arteriosus (DUK-tus ar-TEER-ih-OH-sus) Fetal vessel that connects the descending aorta with the left pulmonary artery.

ductus deferens (DUK-tus DEH-fuh-renz) Tube that receives sperm from the epididymis. Also known as *vas deferens*.

duodenal (du-oh-DEE-nal) Pertaining to the duodenum.

duodenum (du-oh-DEE-num) The first part of the small intestine; approximately 12 finger-breadths (9 to 10 inches) in length.

dura mater (DYU-rah MAY-ter) Hard, fibrous outer layer of the meninges.

dysentery (DIS-en-tare-ee) Disease with diarrhea, bowel spasms, fever, and dehydration.

dysfunctional (dis-FUNK-shun-al) Difficulty in functioning.

dyslexia (dis-LEK-see-ah) Impaired reading and writing ability below the person's level of intelligence.

dyslexic (dis-LEK-sik) Pertaining to or suffering from dyslexia.

dysmenorrhea (dis-men-oh-REE-ah) Painful and difficult menstruation.

dyspareunia (dis-pah-RUE-nee-ah) Pain during sexual intercourse.

dyspepsia (dis-PEP-see-ah) "Upset stomach," epigastric pain, nausea, and gas.

dysphagia (dis-FAY-jee-ah) Difficulty in swallowing.

dysphoria (dis-FOR-ee-ah) Psychiatric mood disorder.

dysplasia (dis-PLAY-zee-ah) Abnormal tissue formation.

dysplastic (dis-PLAS-tik) Pertaining to or showing abnormal tissue formation.

dyspnea (disp-NEE-ah) Difficulty breathing.

dyspneic (disp-NEE-ik) Pertaining to or suffering from difficulty in breathing.

dysrhythmia (dis-RITH-me-ah) An abnormal heart rhythm.

dysuria (dis-YOU-ree-ah) Difficulty or pain with urination.

E

echocardiography (EK-oh-kar-dee-OG-rah-fee) Ultrasound recording of heart function.

echoencephalography (EK-oh-en-sef-ah-LOG-rah-fee) Use of ultrasound in the diagnosis of intracranial lesions.

eclampsia (ek-LAMP-see-uh) Convulsions in a patient with preeclampsia.

ectopic (ek-TOP-ik) Out of place, not in a normal position.

eczema (EK-zeh-mah) Inflammatory skin disease, often with a serous discharge.

eczematous (ek-ZEM-ah-tus) Pertaining to or marked by eczema.

edema (ee-DEE-mah) Excessive accumulation of fluid in cells and tissues.

edematous (ee-DEM-ah-tus) Pertaining to or marked by edema.

effacement (ee-FACE-ment) Thinning of the cervix in relation to labor.

efferent (EFF-eh-rent) Moving away from a center; for example, conducting nerve impulses away from the brain or spinal cord.

effusion (eh-FYU-zhun) Collection of fluid that has escaped from blood vessels into a cavity or tissues.

ejaculate (ee-JACK-you-late) To expel suddenly; *or* the semen expelled in ejaculation.

ejaculation (ee-JACK-you-LAY-shun) Process of expelling semen suddenly.

ejaculatory (ee-JACK-you-LAY-tor-ee) Pertaining to ejaculation.

elective (e-LEK-tiv) Surgery or a procedure that is not urgent or vital.

electrocardiogram (ECG or EKG) (ee-LEK-troh-KAR-dee-oh-gram) Record of the electrical signals of the heart.

electrocardiograph (ee-LEK-troh-KAR-dee-oh-graf) Machine that makes the electrocardiogram.

electrocardiography (ee-LEK-troh-kar-dee-OG-rah-fee) Interpretation of electrocardiograms.

electroconvulsive therapy (ECT) (ee-LEK-troh-kon-VUL-siv THAIR-ah-pee) Passage of electric current through the brain to produce convulsions and treat persistent depression.

electrode (ee-LEK-trode) A device for conducting electricity.

electroencephalogram (EEG) (ee-LEK-troh-en-SEF-ah-low-gram) Record of the electrical activity of the brain.

electroencephalograph (ee-LEK-troh-en-SEF-ah-low-graf) Device used to record the electrical activity of the brain.

electroencephalography (ee-LEK-troh-en-SEF-ah-LOG-rah-fee) The process of recording the electrical activity of the brain.

electrolyte (ee-LEK-troh-lite) Substance that, when dissolved in a suitable medium, forms electrically charged particles.

electromyogram (ee-LEK-troh-MY-oh-gram) Recording of electric currents associated with muscle action.

electromyography (ee-LEK-troh-my-OG-rah-fee) Recording of electrical activity in muscle.

electroneurodiagnostic (ee-LEK-troh-NYUR-oh-die-ag-NOS-tik) Pertaining to the use of electricity in the diagnosis of a neurologic disorder.

elimination (e-lim-ih-NAY-shun) Removal of waste material from the digestive tract.

emaciated (ee-MAY-see-AY-ted) Pertaining to or suffering from emaciation.

emaciation (ee-may-see-AY-shun) Abnormal thinness.

embolus (EM-boh-lus) Detached piece of thrombus, a mass of bacteria, quantity of air, or foreign body that blocks a blood vessel.

embryo (EM-bree-oh) Developing organism from conception until the end of the second month.

embryology (em-bree-OL-oh-jee) Science of the origin and early development of an organism.

embryonic (em-bree-ON-ic) Pertaining to the embryo.

emesis (EM-eh-sis) Vomit.

emmetropia (emm-eh-TROH-pee-ah) Normal refractive condition of the eye.

empathy (EM-pah-thee) Ability to place yourself into the feelings, emotions, and reactions of another person.

emphysema (em-fih-SEE-mah) Dilation of respiratory bronchioles and alveoli.

empyema (EM-pie-EE-mah) Pus in a body cavity, particularly in the pleural cavity.

emulsify (ee-MUL-sih-fye) Break up into very small droplets to suspend in a solution (emulsion).

emulsion (ee-MUL-shun) The system that contains small droplets suspended in a liquid.

- enamel** (ee-NAM-el) Hard substance covering a tooth.
- encephalitis** (en-SEF-ah-LIE-tis) Inflammation of brain cells and tissues.
- encephalocele** (en-SEF-ah-loh-seal) Congenital defect of the cranium with herniation of brain tissue.
- encephalomyelitis** (en-SEF-ah-loh-MY-eh-LIE-tis) Inflammation of the brain and spinal cord.
- encephalopathy** (en-sef-ah-LOP-ah-thee) Any disorder of the brain.
- encopresis** (en-koh-PREE-sis) Repeated soiling with feces.
- endarterectomy** (END-ar-ter-EK-toe-me) Surgical removal of plaque from an artery.
- endemic** (en-DEM-ik) Pertaining to a disease always present in a community.
- endocardial** (en-doh-KAR-dee-al) Pertaining to the endocardium.
- endocarditis** (EN-doh-kar-DIE-tis) Inflammation of the lining of the heart.
- endocardium** (en-doh-KAR-dee-um) The inside lining of the heart.
- endocrine** (EN-doh-krin) A gland that produces an internal or hormonal substance.
- endocrinologist** (EN-doh-krih-NOL-oh-jist) A medical specialist in endocrinology.
- endocrinology** (EN-doh-krih-NOL-oh-jee) Medical specialty concerned with the production and effects of hormones.
- endometrial** (en-doh-ME-tree-al) Pertaining to the inner lining of the uterus.
- endometriosis** (EN-doh-me-tree-OH-sis) Endometrial tissue outside the uterus.
- endometrium** (en-doh-ME-tree-um) Inner lining of the uterus.
- endorphin** (en-DOR-fin) A natural substance in the brain that simulates opium.
- endoscope** (EN-doh-skope) Instrument to examine the inside of a tubular or hollow organ.
- endoscopy** (en-DOS-koh-pee) The use of an endoscope.
- endotracheal** (en-doh-TRAY-kee-al) Pertaining to being inside the trachea.
- enema** (EN-eh-mah) An injection of fluid into the rectum.
- enteric** (en-TEHR-ik) Pertaining to the intestine.
- enteroscope** (EN-ter-oh-SKOPE) Slender, tubular instrument with light source and camera to visualize the digestive tract.
- enteroscopy** (en-ter-OSS-koh-pee) The examination of the lining of the digestive tract.
- enuresis** (en-you-REE-sis) Bedwetting; urinary incontinence.
- enzyme** (EN-zime) Protein that induces changes in other substances.
- eosinophil** (ee-oh-SIN-oh-fill) An eosinophil's granules attract a rosy-red color on staining.
- epicardial** (ep-ih-KAR-dee-al) Pertaining to the epicardium.
- epicardium** (ep-ih-KAR-dee-um) The outer layer of the heart wall.
- epicondyle** (ep-ih-KON-dile) Projection above the condyle for attachment of a ligament or tendon.
- epidemic** (ep-ih-DEM-ik) Pertaining to an outbreak in a community of a disease or a health-related behavior.
- epidermal** (ep-ih-DER-mal) Pertaining to the epidermis.
- epidermis** (ep-ih-DER-miss) Top layer of the skin.
- epididymis** (ep-ih-DID-ih-miss) Coiled tube attached to the testis.
- epididymitis** (ep-ih-did-ih-MY-tis) Inflammation of the epididymis.
- epididymoorchitis** (ep-ih-DID-ih-moh-or-KIE-tis) Inflammation of the epididymis and testicle. Also called *orchitis*.
- epidural** (ep-ih-DYU-ral) Above the dura.
- epidural space** (ep-ih-DYU-ral SPASE) Space between the dura mater and the wall of the vertebral canal.
- epigastric** (ep-ih-GAS-trik) Pertaining to the abdominal region above the stomach.
- epigastrium** (ep-ih-GAS-tri-um) The abdominal region above the stomach.
- epiglottis** (ep-ih-GLOT-is) Leaf-shaped plate of cartilage that shuts off the larynx during swallowing.
- epiglottitis** (ep-ih-glot-EYE-tis) Inflammation of the epiglottis.
- epilepsy** (EP-ih-LEP-see) Chronic brain disorder due to paroxysmal excessive neuronal discharges.
- epileptic** (EP-ih-LEP-tik) Pertaining to or suffering from epilepsy.
- epinephrine** (ep-ih-NEF-rin) Main catecholamine produced by the adrenal medulla. Also called *adrenaline*.
- epiphysial** (ep-ih-FIZ-ee-al) Pertaining to an epiphysis.
- epiphysial plate** (eh-ih-FIZ-ee-al PLATE) Layer of cartilage between the epiphysis and the metaphysis where bone growth occurs.
- epiphysis** (ep-ih-FI-sis) Expanded area at the proximal and distal ends of a long bone to provide increased surface area for attachment of ligaments and tendons.
- episiotomy** (eh-piz-ee-OT-oh-me) Surgical incision of the vulva.
- epispadias** (ep-ih-SPAY-dee-as) Condition in which the urethral opening is on the dorsum of the penis.
- epistaxis** (ep-ih-STAK-sis) Nosebleed.
- epithelium** (ep-ih-THEE-lee-um) Tissue that covers surfaces or lines cavities.
- equilibrium** (ee-kwi-LIB-ree-um) Being evenly balanced.
- erectile** (ee-REK-tile) Capable of erection or being distended with blood.
- erection** (ee-REK-shun) Distended and rigid state of an organ.
- erosion** (ee-ROE-zhun) Form a shallow ulcer in the lining of a structure.
- erythroblast** (eh-RITH-ro-blast) Precursor to a red blood cell.
- erythroblastosis** (eh-RITH-roh-blas-TOH-sis) Condition of many immature red cells in blood.
- erythrocyte** (eh-RITH-roh-site) A red blood cell.
- erythropoiesis** (eh-RITH-roh-poy-EE-sis) The formation of red blood cells.
- erythropoietin** (eh-RITH-roh-POY-ee-tin) Protein secreted by the kidney that stimulates red blood cell production.
- eschar** (ESS-kar) The burnt, dead tissue lying on top of third-degree burns.
- Escherichia coli*** (esh-eh-RIK-ee-ah KOH-lie) Organism in the intestine; releases an exotoxin that can cause diarrhea.
- esophageal** (ee-SOF-ah-JEE-al) Pertaining to the esophagus.
- esophagitis** (ee-SOF-ah-JI-tis) Inflammation of the lining of the esophagus.
- esophagus** (ee-SOF-ah-gus) Tube linking the pharynx to the stomach.

GLOSSARY

esotropia (es-oh-TROH-pee-ah) Turning the eye inward toward the nose.

estrogen (ES-troh-jen) Generic term for hormones that stimulate female secondary sex characteristics.

ethmoid (ETH-moyd) Bone that forms the back of the nose and encloses numerous air cells.

etiology (ee-tee-OL-oh-jee) The study of the causes of a disease.

eupnea (yoop-NEE-ah) Normal breathing.

eustachian tube (you-STAY-shun TYUB) Tube that connects the middle ear to the nasopharynx. Also called *auditory tube*.

euthyroid (you-THIGH-royd) Normal thyroid function.

eversion (ee-VER-zhun) Turning outward.

evert (ee-VERT) To turn outward.

evolve (ee-VOLV) To develop gradually.

Ewing sarcoma (YOU-ing sar-KOH-mah) A malignant neoplasm of bone.

exacerbation (ek-zas-er-BAY-shun) Period when there is an increase in the severity of a disease.

excision (ek-SIZH-un) Surgical removal of part or all of a structure.

excoriate (eks-KOR-ee-ate) To scratch.

excoriation (eks-KOR-ee-AY-shun) Scratch mark.

excrete (eks-KREET) To pass waste products of metabolism out of the body.

excretion (eks-KREE-shun) Removal of waste products of metabolism out of the body.

exhale (EKS-hail) Breathe out.

exocrine (EK-soh-krin) A gland that secretes substances outwardly through excretory ducts.

exophthalmos (ek-sof-THAL-mos) Protrusion of the eyeball.

exotropia (ek-soh-TROH-pee-ah) Turning the eye outward away from the nose.

expectorate (ek-SPEK-toh-rate) Cough up and spit out mucus from the respiratory tract.

expiration (EKS-pih-RAY-shun) Breathe out.

extension (eks-TEN-shun) Straighten a joint to increase its angle.

extracorporeal (EKS-tra-kor-POH-ree-al) Outside the body.

extrinsic (eks-TRIN-sik) Any muscle located entirely on the outside of the structure under consideration; for example, the eye.

F

facies (FASH-eez) Facial features and expressions.

fallopian tubes (fah-LOW-pee-an) Uterine tubes connected to the fundus of the uterus.

Fallot (fah-LOW) First described the tetralogy of congenital heart defects.

fascia (FASH-ee-ah) Sheet of fibrous connective tissue.

fasciectomy (fash-ee-EK-toe-me) Surgical removal of fascia.

fasciitis (fash-ee-EYE-tis) Inflammation of fascia.

fasciotomy (fash-ee-OT-oh-me) An incision through a band of fascia, usually to relieve pressure on underlying structures.

febrile (FEB-ril or FEB-rile) Pertaining to or suffering from fever.

fecal (FEE-kal) Pertaining to feces.

feces (FEE-seez) Undigested, waste material discharged from the bowel.

femoral (FEM-oh-ral) Pertaining to the femur.

femur (FEE-mur) The thigh bone.

fertilization (FER-til-eye-ZAY-shun) Union of a male sperm and a female egg.

fertilize (FER-til-ize) Penetration of the egg by sperm.

fetal (FEE-tal) Pertaining to the fetus.

fetalis (fee-TAH-lis) Erythroblastosis fetalis is a hemolytic disease of the newborn.

fetus (FEE-tus) Human organism from the end of the eighth week after conception to birth.

fever (FEE-ver) Increased body temperature that is a physiologic response to disease.

fibrillation (fi-brih-LAY-shun) Uncontrolled quivering or twitching of the heart muscle.

fibrin (FIE-brin) Stringy protein fiber that is a component of a blood clot.

fibrinogen (fie-BRIN-oh-jen) Precursor of fibrin in blood-clotting process.

fibroadenoma (FIE-broh-ad-en-OH-muh) Benign tumor containing much fibrous tissue.

fibroblast (FIE-broh-blast) Cell that forms collagen fibers.

fibrocystic disease (fie-broh-SIS-tik diz-EEZ) Benign breast disease with multiple tiny lumps and cysts.

fibroid (FIE-broyd) Uterine tumor resembling fibrous tissue.

fibromyalgia (fie-broh-my-AL-jee-ah) Pain in the muscle fibers.

fibromyoma (FIE-broh-my-OH-mah) Benign neoplasm derived from smooth muscle and containing fibrous tissue.

fibrosis (fie-BROH-sis) Repair of dead tissue cells by formation of fibrous tissue.

fibrotic (fie-BROT-ik) Pertaining to or affected by fibrosis.

fibula (FIB-you-lah) The smaller of the two bones of the lower leg.

fibular (FIB-you-lar) Pertaining to the fibula.

filter (FIL-ter) Porous substance used to separate liquids or gases from particulate matter; *or* to subject a substance to the action of a filter.

filtrate (FIL-trate) That which has passed through a filter.

filtration (fil-TRAY-shun) Process of passing liquid through a filter.

fimbria (FIM-bree-ah) A fringelike structure on the surface of a cell or microorganism. Plural *fimbriae*.

fissure (FISH-ur) Deep furrow or cleft. Plural *fissures*.

fistula (FIS-tyu-lah) Abnormal passage. Plural *fistulae* or *fistulas*.

flank (FLANK) Side of the body between pelvis and ribs.

flatulence (FLAT-you-lence) Excessive amount of gas in the stomach and intestines.

flatus (FLAY-tus) Gas or air expelled through the anus.

flex (FLEKS) To bend a joint so that the two parts come together.

flexion (FLEK-shun) Bend a joint to decrease its angle.

flexor (FLEK-sor) Muscle or tendon that flexes a joint.

flexure (FLEK-shur) A bend in a structure.

flora (FLO-rah) Microorganisms covering the exterior and interior surfaces of a healthy animal.

fluorescein (flor-ESS-ee-in) Dye that produces a vivid green color under a blue light to diagnose corneal abrasions and foreign bodies.

follicle (FOLL-ih-kull) Spherical mass of cells containing a cavity; *or* a small cul-de-sac, such as a hair follicle.

follicular (fo-LIK-you-lar) Pertaining to a follicle.

foramen (fo-RAY-men) An opening through a structure. Plural *foramina*.

forceps extraction (FOR-seps ek-STRAK-shun) Assisted delivery of the baby by an instrument that grasps the head of the baby.

foreskin (FOR-skin) Skin that covers the glans penis.

fornix (FOR-niks) Arch-shaped, blind-ended part of the vagina behind and around the cervix. Plural *fornices*.

fovea centralis (FOH-vee-ah sen-TRAH-lis) Small pit in the center of the macula that has the highest visual acuity.

frenulum (FREN-you-lum) Fold of mucous membrane between the glans and the prepuce.

frontal (FRON-tal) Vertical plane dividing the body into anterior and posterior portions.

function (FUNK-shun) The ability of an organ or tissue to perform its special work.

fundoscopic (fun-doh-SKOP-ik) Pertaining to fundoscopy.

fundoscopy (fun-DOS-koh-pee) Examination of the fundus (retina) of the eye.

fundus (FUN-dus) Part farthest from the opening of a hollow organ.

fungicide (FUN-ji-side) Agent to destroy fungi.

fungus (FUN-gus) General term used to describe yeasts and molds. Plural *fungi*.

G

galactorrhea (gah-LAK-toe-REE-ah) Abnormal flow of milk from the breasts.

gallbladder (GAWL-blad-er) Receptacle on the inferior surface of the liver for storing bile.

gallstone (GAWL-stone) Hard mass of cholesterol, calcium, and bilirubin that can be formed in the gallbladder and bile duct.

ganglion (GANG-lee-on) Collection of nerve cells outside the brain and spinal cord; *or* a fluid-filled cyst. Plural *ganglia*.

gastric (GAS-trik) Pertaining to the stomach.

gastrin (GAS-trin) Hormone secreted in the stomach that stimulates secretion of HCl and increases gastric motility.

gastritis (gas-TRY-tis) Inflammation of the lining of the stomach.

gastrocnemius (gas-trok-NEE-me-us) Major muscle in back of the lower leg (the calf).

gastroenteritis (GAS-troh-en-ter-I-tis) Inflammation of the stomach and intestines.

gastroenterologist (GAS-troh-en-ter-OL-oh-jist) Medical specialist in gastroenterology.

gastroenterology (GAS-troh-en-ter-OL-oh-gee) Medical specialty of the stomach and intestines.

gastroesophageal (GAS-troh-ee-sof-ah-JEE-al) Pertaining to the stomach and esophagus.

gastrointestinal (GI) (GAS-troh-in-TESS-tin-al) Pertaining to the stomach and intestines.

gastroscope (GAS-troh-skope) Endoscope for examining the inside of the stomach.

gastroscopy (gas-TROS-koh-pee) Endoscopic examination of the stomach.

gavage (guh-VAHZH) To feed by a stomach tube.

gene (JEEN) Functional segment of DNA molecule.

geneticist (jeh-NET-ih-sist) A specialist in genetics.

genetics (jeh-NET-iks) Science of the inheritance of characteristics.

genital (JEN-ih-tal) Relating to reproduction or to the male or female sex organs.

genitalia (JEN-ih-TAY-lee-ah) External and internal organs of reproduction.

geriatrician (jer-ee-ah-TRISH-an) Medical specialist in the process and problems of aging.

geriatrics (jer-ee-AT-riks) Medical specialty that deals with the problems of aging.

gerontologist (jer-on-TOL-oh-jist) Medical specialist in the process and general problems of aging.

gerontology (jer-on-TOL-oh-jee) Study of the process and problems of aging.

gestation (jes-TAY-shun) From conception to birth.

gestational (jes-TAY-shun-al) Pertaining to gestation.

gigantism (JI-gan-tizm) Abnormal height and size of the entire body.

gingiva (JIN-jih-vah) Tissue surrounding the teeth and covering the jaw.

gingival (JIN-jih-val) Pertaining to the gingiva.

gingivectomy (jin-jih-VEC-toe-me) Surgical removal of diseased gum tissue.

gingivitis (jin-jih-VI-tis) Inflammation of the gums.

glans (GLANZ) Head of the penis or clitoris.

glaucoma (glau-KOH-mah) Increased intraocular pressure.

glia (GLEE-ah) Connective tissue that holds a structure together.

glial (GLEE-al) Pertaining to glia or neuroglia.

glioma (gli-OH-mah) Tumor of a glial cell.

glomerulonephritis (glo-MER-you-low-nef-RYE-tis) Infection of the glomeruli of the kidney.

glomerulus (glo-MER-you-lus) Plexus of capillaries; part of a nephron. Plural *glomeruli*.

glossodynia (gloss-oh-DIN-ee-ah) Painful, burning tongue.

glossopharyngeal (GLOSS-oh-fah-RIN-jee-al) Ninth (IX) cranial nerve, supplying the tongue and pharynx.

glottis (GLOT-is) Vocal apparatus of the larynx.

glucagon (GLU-kah-gon) Pancreatic hormone that supports blood glucose levels.

glucocorticoid (glu-co-KOR-tih-koyd) Hormone of the adrenal cortex that helps regulate glucose metabolism.

gluconeogenesis (GLU-koh-nee-oh-JEN-eh-sis) Formation of glucose from noncarbohydrate sources.

glucose (GLU-kose) The final product of carbohydrate digestion and the main sugar in the blood.

gluteal (GLU-tee-al) Pertaining to the buttocks.

gluten (GLU-ten) Insoluble protein found in wheat, barley, and oats.

gluteus (GLU-tee-us) Refers to one of three muscles in the buttocks.

glycogen (GLYE-koh-gen) The body's principal carbohydrate reserve, stored in the liver and skeletal muscle.

glycogenolysis (GLYE-koh-jen-oh-LYE-sis) Conversion of glycogen to glucose.

glycosuria (GLYE-koh-SYU-ree-ah) Presence of glucose in urine.

glycosylated hemoglobin (Hb A1c) (GLYE-koh-sih-lay-ted HE-moh-GLOW-bin) Hemoglobin A fraction linked to glucose; used as an index of glucose control.

goiter (GOY-ter) Enlargement of the thyroid gland.

gomphosis (gom-FOE-sis) Joint formed by a peg and socket. Plural *gomphoses*.

gonad (GO-nad) Testis or ovary. Plural *gonads*.

gonadotropin (GO-nad-oh-TROH-pin) Any hormone that stimulates gonad function.

gonorrhea (gon-oh-REE-ah) Specific contagious sexually transmitted infection.

grade (GRAYD) In cancer pathology, a classification of the rate of growth of cancer cells.

graft (GRAFT) Transplantation of living tissue.

grand mal (GRAHN MAL) Old name for generalized tonic-clonic seizure.

granulation (gran-you-LAY-shun) New fibrous tissue formed during wound healing.

granulocyte (GRAN-you-loh-site) A white blood cell that contains multiple small granules in its cytoplasm.

granulosa cell (gran-you-LOW-sah SELL) Cell lining the ovarian follicle.

Graves disease (GRAVZ diz-EEZ) Hyperthyroidism with toxic goiter.

gravid (GRAV-id) Pregnant.

gravida (GRAV-ih-dah) A pregnant woman.

gray matter (GRAY MATT-er) Regions of the brain and spinal cord occupied by cell bodies and dendrites.

greenstick fracture (GREEN-stik FRAK-chur) A fracture in which one side of the bone is partially broken and the other side is bent. Occurs mostly in children.

groin (GROYN) Crease where the thigh joins the abdomen.

Guillain-Barré syndrome (GEE-yan bah-RAY SIN-drom) Disorder in which the body makes antibodies against myelin, disrupting nerve conduction.

gurney (GURR-knee) A stretcher on wheels used to transport hospital patients.

gynecologic (GUY-nih-koh-LOJ-ik) Pertaining to gynecology.

gynecologist (guy-nih-KOL-oh-jist) Specialist in gynecology.

gynecology (guy-nih-KOL-oh-jee) Medical specialty of diseases of the female.

gynecomastia (GUY-nih-koh-MAS-tee-ah) Enlargement of the breast.

gyrus (JI-rus) Rounded elevation on the surface of the cerebral hemispheres. Plural *gyri*.

H

hairline fracture (HAIR-line FRAK-chur) A fracture without separation of the fragments.

halitosis (hal-ih-TOE-sis) Bad odor of the breath.

hallucination (hah-loo-sih-NAY-shun) Perception of an object or event when there is no such thing present.

hallux valgus (HAL-uks VAL-gus) Deviation of the big toe toward the lateral side of the foot.

Hashimoto disease (hah-shee-MOH-toe diz-EEZ) Autoimmune disease of the thyroid gland. Also called *Hashimoto thyroiditis*.

Haversian canals (hah-VER-shan ka-NALS) Vascular canals in bone. Also called *central canals*.

Heberden node (HEH-ber-den NOHD) Bony lump on the terminal phalanx of the fingers in osteoarthritis.

hemangioma (he-MAN-jee-oh-mah) Abnormal mass of proliferating blood vessels.

hematemesis (he-mah-TEM-eh-sis) Vomiting of red blood.

hematocrit (Hct) (HE-mat-oh-krit) Percentage of red blood cells in the blood.

hematologist (he-mah-TOL-oh-jist) Specialist in hematology.

hematology (he-mah-TOL-oh-jee) Medical specialty of disorders of the blood.

hematoma (he-mah-TOE-mah) Collection of blood that has escaped from the blood vessels into surrounding tissues. Also called *bruise*.

hematuria (he-mah-TYU-ree-ah) Blood in the urine.

heme (HEEM) The iron-based component of hemoglobin that carries oxygen.

hemiparesis (HEM-ee-pah-REE-sis) Weakness of one side of the body.

hemiplegia (hem-ee-PLÉE-jee-ah) Paralysis of one side of the body.

hemiplegic (hem-ee-PLÉE-jik) Pertaining to or suffering from hemiplegia.

Hemocult test (HEEM-o-kult TEST) Trade name for a fecal occult blood test.

hemodialysis (HE-moh-die-AL-ih-sis) An artificial method of filtration to remove excess waste materials and water directly from the blood.

hemodynamics (HE-moh-die-NAM-iks) The science of the flow of blood through the circulation.

hemoglobin (HE-moh-GLOW-bin) Red-pigmented protein that is the main component of red blood cells.

hemoglobinopathy (HE-moh-GLOW-bin-OP-ah-thee) Disease caused by the presence of an abnormal hemoglobin in the red blood cells.

hemolysis (he-MOL-ih-sis) Destruction of red blood cells so that hemoglobin is liberated.

hemolytic (he-moh-LIT-ik) Pertaining to the process of destruction of red blood cells.

hemophilia (he-moh-FILL-ee-ah) An inherited disease from a deficiency of clotting factor VIII.

hemoptysis (he-MOP-tih-sis) Bloody sputum.

hemorrhage (HEM-oh-raj) To bleed profusely.

hemorrhoid (HEM-oh-royd) Dilated rectal vein producing painful anal swelling. Plural *hemorrhoids*.

hemorrhoidectomy (HEM-oh-royd-EK-toh-me) Surgical removal of hemorrhoids.

- hemostasis** (he-moh-STAY-sis) Control of or stopping bleeding.
- hemothorax** (he-moh-THOR-ax) Blood in the pleural cavity.
- heparin** (HEP-ah-rin) An anticoagulant secreted particularly by liver cells.
- hepatic** (hep-AT-ik) Pertaining to the liver.
- hepatitis** (hep-ah-TIE-tis) Inflammation of the liver.
- hernia** (HER-nee-ah) Protrusion of a structure through the tissue that normally contains it.
- herniate** (HER-nee-ate) To protrude.
- herniation** (her-nee-AY-shun) Protrusion of an anatomical structure from its normal location.
- herniorrhaphy** (HER-nee-OR-ah-fee) Repair of a hernia.
- herpes simplex virus (HSV)** (HER-peeZ SIM-pleks VIE-rus) Manifests with painful, watery blisters on the skin and mucous membranes.
- herpes zoster** (HER-peeZ ZOS-ter) Painful eruption of vesicles that follows a nerve root on one side of the body. Also called *shingles*.
- heterograft** (HET-er-oh-graft) A graft using tissue taken from another species. Also called *xenograft*.
- hiatal** (high-AY-tal) Pertaining to a hernia.
- hiatus** (high-AY-tus) An opening through a structure.
- hilum** (HIGH-lum) The site where the nerves and blood vessels enter and leave an organ. Plural *hila*.
- histamine** (HISS-tah-mean) Compound liberated in tissues as a result of injury or an allergic response.
- histologist** (his-TOL-oh-jist) Specialist in histology.
- histology** (his-TOL-oh-jee) Study of the structure and function of cells, tissues, and organs.
- Hodgkin lymphoma** (HOJ-kin lim-FOH-mah) Marked by chronic enlargement of lymph nodes spreading to other nodes in an orderly way.
- holistic** (ho-LIS-tik) Pertaining to the care of the whole person in physical, mental, emotional, and spiritual dimensions.
- homeostasis** (hoh-mee-oh-STAY-sis) Maintaining the stability of a system or the body's internal environment.
- homograft** (HOH-moh-graft) Skin graft from another person or a cadaver. Also called *allograft*.
- hordeolum** (hor-DEE-oh-lum) Abscess in an eyelash follicle. Also called *stye*.
- hormonal** (hor-MOHN-al) Pertaining to a hormone.
- hormone** (HOR-mohn) Chemical formed in one tissue or organ and carried by the blood to stimulate or inhibit a function of another tissue or organ.
- Horner syndrome** (HOR-ner SIN-drome) Disorder of the sympathetic nerves to the face and eye.
- hospice** (HOS-pis) Provides care to the dying and their families.
- human immunodeficiency virus (HIV)** (HYU-man IM-you-noh-dee-FISH-en-see VIE-rus) Etiologic agent of acquired immunodeficiency syndrome (AIDS).
- human papilloma virus (HPV)** (HYU-man pap-ih-LOW-mah VIE-rus) Causes warts on the skin and genitalia and can increase the risk for cervical cancer.
- humerus** (HYU-mer-us) Single bone of the upper arm.
- humoral immunity** (HYU-mor-al ihm-YUNE-ih-tee) Defense mechanism arising from antibodies in the blood.
- Huntington disease** (HUN-ting-ton diz-EEZ) Progressive inherited, degenerative, incurable neurologic disease. Also called *Huntington chorea*.
- hyaline** (HIGH-ah-line) Cartilage that looks like frosted glass and contains fine collagen fibers.
- hyaline membrane disease** (HIGH-ah-line MEM-brain diz-EEZ) Respiratory distress syndrome of the newborn.
- hydrocele** (HIGH-droh-seal) Collection of fluid in the space of the tunica vaginalis.
- hydrocephalus** (high-droh-SEF-ah-lus) Excess CSF in the cerebral ventricles; may cause enlarged head.
- hydrochloric acid (HCl)** (high-droh-KLOR-ik ASS-id) The acid of gastric juice.
- hydrocortisone** (high-droh-KOR-tih-sohn) Potent glucocorticoid with anti-inflammatory properties. Also called *cortisol*.
- hydronephrosis** (HIGH-droh-neh-FROH-sis) Dilation of the pelvis and calyces of a kidney.
- hydronephrotic** (HIGH-droh-neh-FROT-ik) Pertaining to or suffering from hydronephrosis.
- hymen** (HIGH-men) Thin membrane partly occluding the vaginal orifice.
- hyperactivity** (HIGH-per-ac-TIV-ih-tee) Excessive restlessness and movement.
- hypercalcemia** (HIGH-per-cal-SEE-me-ah) Excessive level of calcium in the blood.
- hypercapnia** (HIGH-per-KAP-nee-ah) Abnormal increase of carbon dioxide in the arterial bloodstream.
- hyperemesis** (high-per-EM-eh-sis) Excessive vomiting.
- hyperflexion** (high-per-FLEK-shun) Flexion of a limb or part beyond the normal limits.
- hyperglycemia** (HIGH-per-gly-SEE-me-ah) High level of glucose (sugar) in blood.
- hyperglycemic** (HIGH-per-gly-SEE-mik) Pertaining to or having hyperglycemia.
- hyperimmune globulin** (HIGH-per-im-YUNE GLOB-youlin) Immunoglobulin prepared from serum of people with a high antibody titer to a specific antigen.
- hyperkalemia** (HIGH-per-kah-LEE-me-ah) High level of potassium in the blood.
- hypernatremia** (HIGH-per-nah-TREE-me-ah) High level of sodium in the blood.
- hyperopia** (high-per-OH-pee-ah) Able to see distant objects but unable to see close objects.
- hyperosmolar** (HIGH-per-os-MOH-lar) Marked hyperglycemia without ketoacidosis.
- hyperparathyroidism** (HIGH-per-para-THIGH-royd-izm) Excessive production of parathyroid hormone.
- hyperplasia** (HIGH-per-PLAY-zee-ah) Increase in the number of cells in a tissue or organ.
- hyperpnea** (high-perp-NEE-ah) Deeper and more rapid breathing than normal.
- hyperpyrexia** (HIGH-per-pie-REK-see-ah) Extremely high body temperature or fever.
- hypersecretion** (HIGH-per-seh-KREE-shun) Excessive secretion (of mucus or enzymes or waste products).

hypersensitivity (HIGH-per-sen-sih-TIV-ih-tee) Exaggerated abnormal reaction to an allergen.

hypersplenism (high-per-SPLEN-izm) Condition in which the spleen removes blood components at an excessive rate.

hypertension (HIGH-per-TEN-shun) Persistent high arterial blood pressure.

hypertensive (HIGH-per-TEN-siv) Pertaining to or suffering from high blood pressure.

hyperthyroidism (high-per-THIGH-royd-izm) Excessive production of thyroid hormones.

hypertrophy (high-PER-troh-fee) Increase in size, but not in number, of an individual tissue element.

hypochondriac (high-poh-KON-dree-ack) A person who exaggerates the significance of symptoms.

hypochromic (high-poh-CROW-mik) Pale in color, as in RBCs when hemoglobin is deficient.

hypodermic (high-poh-DER-mik) Pertaining to the hypodermis.

hypodermis (high-poh-DER-miss) Tissue layer of skin below the dermis.

hypogastric (high-poh-GAS-trik) Abdominal region below the stomach.

hypoglossal (high-poh-GLOSS-al) Twelfth (XII) cranial nerve, supplying muscles of the tongue.

hypoglycemia (HIGH-poh-gly-SEE-me-ah) Low level of glucose (sugar) in the blood.

hypoglycemic (HIGH-poh-gly-SEE-mik) Pertaining to or suffering from low blood sugar.

hypogonadism (HIGH-poh-GOH-nad-izm) Deficient gonad production of sperm or eggs or hormones.

hypokalemia (HIGH-poh-kah-LEE-me-ah) Low level of potassium in the blood.

hyponatremia (HIGH-poh-nah-TREE-me-ah) Low level of sodium in the blood.

hypoparathyroidism (HIGH-poh-par-ah-THIGH-royd-izm) Deficient production of parathyroid hormone.

hypophysis (high-POF-ih-sis) Another name for *pituitary gland*.

hypopituitarism (HIGH-poh-pih-TYU-ih-tah-rizm) Condition of one or more deficient pituitary hormones.

hypospadias (high-poh-SPAY-dee-as) Urethral opening more proximal than normal on the ventral surface of the penis.

hypotension (HIGH-poh-TEN-shun) Persistent low arterial blood pressure.

hypotensive (HIGH-poh-TEN-siv) Pertaining to or suffering from low blood pressure.

hypothalamic (high-poh-thal-AM-ik) Pertaining to the hypothalamus.

hypothalamus (high-poh-THAL-ah-muss) An area of gray matter lying below the thalamus.

hypothernar eminence (high-poh-THAY-nar EM-in-nens) The fleshy mass at the base of the little finger.

hypothermia (high-poh-THER-me-ah) Very low core body temperature.

hypothyroidism (high-poh-THIGH-royd-izm) Deficient production of thyroid hormones.

hypovolemic (HIGH-poh-vo-LEE-mik) Decreased blood volume in the body.

hypoxia (high-POCK-see-ah) Below-normal levels of oxygen in tissues, gases, or blood.

hypoxic (high-POCK-sik) Deficient in oxygen.

hysterectomy (his-ter-EK-toe-me) Surgical removal of the uterus.

hysteroscopy (his-ter-OS-koh-pee) Visual inspection of the uterine cavity using an endoscope.

I

ictal (IK-tal) Pertaining to, or a condition caused by, a stroke or epilepsy.

idiopathic (ID-ih-oh-PATH-ik) Pertaining to a disease of unknown etiology.

ileocecal (ILL-ee-oh-SEE-cal) Pertaining to the junction of the ileum and cecum.

ileocecal sphincter (ILL-ee-oh-SEE-cal SFINK-ter) A band of muscle that encircles the junction of the ileum and cecum.

ileoscopy (ill-ee-OS-koh-pee) Endoscopic examination of the ileum.

ileostomy (ill-ee-OS-toe-me) Artificial opening from the ileum to the outside of the body.

ileum (ILL-ee-um) Third portion of the small intestine.

iliac (ILL-ee-ack) A structure related to the ilium (pelvic bone).

ilium (ILL-ee-um) Large wing-shaped bone at the upper and posterior part of the pelvis. Plural *ilia*.

immune (im-YUNE) Protected from an infectious disease.

immune serum (im-YUNE SEER-um) Serum taken from another human or animal that has antibodies to a disease. Also called *antisera*.

immunity (im-YUNE-ih-tee) State of being protected.

immunization (IM-you-nih-ZAY-shun) Administration of an agent to provide immunity.

immunize (IM-you-nize) To make resistant to an infectious disease.

immunodeficiency (IM-you-noh-dee-FISH-en-see) Failure of the immune system.

immunoglobulin (IM-you-noh-GLOB-you-lin) Specific protein evoked by an antigen. All antibodies are immunoglobulins.

immunologist (im-you-NOL-oh-jist) Medical specialist in immunology.

immunology (im-you-NOL-oh-jee) The science and practice of immunity and allergy.

immunosuppression (IM-you-noh-suh-PRESH-un) Failure of the immune system caused by an outside agent.

impacted (im-PAK-ted) Immovably wedged, as with earwax blocking the external canal.

impacted fracture (im-PAK-ted FRAK-chur) A fracture in which one bone fragment is driven into the other.

impairment (im-PAIR-ment) The state of being worse, weaker, or damaged.

impetigo (im-peh-TIE-go) Infection of the skin producing thick, yellow crusts.

implant (im-PLANT) To insert material into tissues; *or* the material inserted into tissues.

implantable (im-PLAN-tah-bul) A device that can be inserted into tissues.

implantation (im-plan-TAY-shun) Attachment of a fertilized egg to the endometrium.

impotence (IM-poh-tence) Inability to achieve an erection.

- impulsive** (im-PUL-siv) Inability to resist performing inappropriate actions.
- in situ** (IN SIGH-tyu) In the correct place.
- in utero** (IN YOU-ter-oh) Within the womb; not yet born.
- in vitro fertilization (IVF)** (en VEE-troh FER-til-eye-ZAY-shun)
Process of combining sperm and egg in a laboratory dish and placing the resulting embryos inside the uterus.
- inattention** (IN-ah-TEN-shun) Lack of concentration and direction.
- incision** (in-SIZH-un) A cut or surgical wound.
- incompetence** (in-KOM-peh-tense) Failure of valves to close completely.
- incomplete fracture** (in-kom-PLEET FRAK-chur) A fracture that does not extend across the bone, as in a hairline fracture.
- incontinence** (in-KON-tin-ence) Inability to prevent discharge of urine or feces.
- incontinent** (in-KON-tin-ent) Denoting incontinence.
- incubation** (in-kyu-BAY-shun) Process to develop an infection.
- incus** (IN-cuss) Middle one of the three ossicles in the middle ear; shaped like an anvil.
- independence** (in-dee-PEN-dense) The state of being able to think and act for oneself.
- independent** (in-dee-PEN-dent) Pertaining to the ability to think and act for oneself.
- indigestion** (in-dee-JESS-chun) Symptoms resulting from difficulty in digesting food.
- infancy** (IN-fan-see) The first year of life.
- infant** (IN-fant) Child in the first year of life.
- infarct** (in-FARKT) Area of cell death resulting from blockage of its blood supply.
- infarction** (in-FARKT-shun) Sudden blockage of an artery.
- infect** (in-FEKT) To invade an organism by a microorganism.
- infection** (in-FEK-shun) Invasion of the body by disease-producing microorganisms.
- infectious** (in-FEK-shus) Capable of being transmitted to a person; *or* a disease caused by the action of a microorganism.
- inferior** (in-FEER-ee-or) Situated below.
- infertility** (in-fer-TIL-ih-tee) Failure to conceive.
- infestation** (in-fes-TAY-shun) Act of being invaded on the skin by a troublesome other species, such as a parasite.
- inflammation** (in-flah-MAY-shun) A complex of cell and chemical reactions in response to an injury or a chemical or biologic agent.
- inflammatory** (in-FLAM-ah-tor-ee) Causing or affected by inflammation.
- influenza** (in-flew-EN-zah) An acute, viral infection of upper and lower respiratory tracts.
- infusion** (in-FYU-zhun) Introduction intravenously of a substance other than blood.
- ingestion** (in-JES-chun) Intake of food, either by mouth or through a nasogastric tube.
- inguinal** (ING-gwin-ahl) Pertaining to the groin.
- inhale** (IN-hail) Breathe in.
- insanity** (in-SAN-ih-tee) Nonmedical term for a person unable to be responsible for his or her actions.
- insecticide** (in-SEK-tih-side) Agent to destroy insects.
- inseminate** (in-SEM-ih-nate) To introduce semen into the vagina.
- insemination** (in-sem-ih-NAY-shun) The introduction of semen into the vagina.
- insertion** (in-SIR-shun) The insertion of a muscle is the attachment of a muscle to a more movable part of the skeleton, as distinct from the origin.
- inspiration** (in-spih-RAY-shun) Breathe in.
- instability** (in-stah-BIL-ih-tee) Abnormal tendency of a joint to partially or fully dislocate.
- insufficiency** (in-suh-FISH-en-see) Lack of completeness of function; for example, for a heart valve to fail to close properly.
- insulin** (IN-syu-lin) A hormone produced by the islet cells of the pancreas.
- integument** (in-TEG-you-ment) Organ system that covers the body, the skin being the main organ within the system.
- integumentary** (in-TEG-you-MENT-ah-ree) Pertaining to the covering of the body.
- interatrial** (IN-ter-AY-tree-al) Between the atria of the heart.
- intercostal** (IN-ter-KOS-tal) The space between two ribs.
- intermittent** (IN-ter-MIT-ent) Alternately ceasing and beginning again.
- internist** (in-TER-nist) A physician trained in internal medicine.
- interosseous** (in-ter-OSS-ee-us) A structure between bones; for example, muscles.
- interphalangeal** (IN-ter-fay-LAN-jee-al) Finger or toe joint between two phalanges.
- interstitial** (in-ter-STISH-al) Pertaining to spaces between cells in a tissue or organ.
- interventricular** (IN-ter-ven-TRIK-you-lar) Between the ventricles of the heart.
- intervertebral** (IN-ter-VER-teh-bral) The space between two vertebrae.
- intestinal** (in-TESS-tin-al) Pertaining to the intestine.
- intestine** (in-TESS-tin) The digestive tube from stomach to anus.
- intolerance** (in-TOL-er-ance) Inability of the small intestine to digest and dispose of a particular dietary substance.
- intracellular** (in-trah-SELL-you-lar) Within the cell.
- intracranial** (in-trah-KRAY-nee-al) Within the cranium (skull).
- intra dermal** (in-trah-DER-mal) Within the epidermis.
- intramuscular** (in-trah-MUSS-kew-lar) Within the muscle.
- intraocular** (in-trah-OCK-you-lar) Pertaining to the inside of the eye.
- intra thecal** (IN-trah-THEE-kal) Within the subarachnoid or subdural space.
- intrauterine** (IN-trah-YOU-ter-ine) Inside the uterine cavity.
- intravenous** (IN-trah-VEE-nus) Through a vein.
- intrinsic** (in-TRIN-sik) Any muscle located entirely within (inside) the structure under consideration; for example, muscles inside the vocal cords or the eye.
- intrinsic factor** (in-TRIN-sik FAK-tor) Makes the absorption of vitamin B₁₂ happen.

GLOSSARY

intubation (IN-tyu-BAY-shun) Insertion of a tube into the trachea.

intussusception (IN-tuss-sus-SEP-shun) The slipping of one part of the bowel inside another to cause obstruction.

inversion (in-VER-zhun) Turning inward.

invert (in-VERT) Turn inward.

involuntary (in-VOL-un-tay-ree) Not under control of the will.

involute (in-VOH-loot) Regressive changes in a tissue.

involution (in-voh-LOO-shun) Decrease in size.

iodine (EYE-oh-dine or EYE-oh-deen) Chemical element, the lack of which causes thyroid disease.

iris (EYE-ris) Colored portion of the eye with the pupil in its center.

irrigation (ih-rih-GAY-shun) Use of water to remove wax out of the external ear canal.

ischemia (is-KEY-me-ah) Lack of blood supply to tissue.

ischemic (is-KEY-mik) Pertaining to or affected by the lack of blood supply to tissue.

ischial (IS-key-al) Pertaining to the ischium.

ischium (IS-key-um) Lower and posterior part of the hip bone. Plural *ischia*.

Ishihara color system (ish-ee-HAR-ah) Test for color vision defects.

islet cells (EYE-let SELLZ) Hormone-secreting cells of the pancreas.

islets of Langerhans (EYE-lets of LAHNG-er-hahnz) Areas of pancreatic cells that produce insulin and glucagon. Also called *pancreatic islets*.

isotope (I-so-tope) Radioactive element used in diagnostic procedures.

J

Jaeger reading cards (YA-ger) Type of different sizes for testing near vision.

jaundice (JAWN-dis) Yellow staining of tissues with bile pigments, including bilirubin.

jejunal (je-JEW-nal) Pertaining to the jejunum.

jejunum (je-JEW-num) Segment of small intestine between the duodenum and the ileum.

K

Kaposi sarcoma (kah-POH-see sar-KOH-mah) A skin cancer seen in AIDS patients.

keloid (KEY-loyd) Raised, irregular, lumpy scar due to excess collagen fiber production during healing of a wound.

keratin (KER-ah-tin) Protein found in the skin, nails, and hair.

keratoconjunctivitis (KER-ah-toe-con-JUNGK-tih-VI-tis) Inflammation of the cornea and conjunctiva.

keratomileusis (KER-ah-toe-my-LOO-sis) Cuts and shapes the cornea.

keratotomy (KER-ah-TOT-oh-mee) Incision in the cornea.

kernicterus (ker-NICK-ter-us) Bilirubin staining of the basal nuclei of the brain.

ketoacidosis (KEY-toe-ass-ih-DOE-sis) Excessive production of ketones, making the blood acid.

ketone (KEY-tone) Chemical formed in uncontrolled diabetes or in starvation.

ketosis (key-TOE-sis) Excess production of ketones.

kidney (KID-nee) Organ of excretion.

kyphosis (ki-FOH-sis) A normal posterior curve of the thoracic spine that can be exaggerated in disease.

kyphotic (ki-FOT-ik) Pertaining to or suffering from kyphosis.

L

labium (LAY-bee-um) Fold of the vulva. Plural *labia*.

labor (LAY-bore) Process of expulsion of the fetus.

labyrinth (LAB-ih-rinth) The inner ear.

labyrinthitis (LAB-ih-rin-THI-tis) Inflammation of the inner ear.

laceration (lass-eh-RAY-shun) A tear of the skin.

lacrimal (LAK-rim-al) Pertaining to tears; *or* bone that forms the medial wall of the orbit.

lactase (LAK-tase) Enzyme that breaks down lactose (milk sugar) to glucose and galactose.

lactate (LAK-tate) To produce milk.

lactation (lak-TAY-shun) Production of milk.

lacteal (LAK-tee-al) A lymphatic vessel carrying chyle away from the intestine.

lactiferous (lak-TIF-er-us) Pertaining to or yielding milk.

lactose (LAK-toes) The disaccharide found in cow's milk.

lanugo (la-NYU-go) Fine, soft hair on the fetal body.

laparoscope (LAP-ah-roh-sko-pe) Instrument (endoscope) used for viewing the abdominal contents.

laparoscopic (LAP-ah-roh-SKOP-ik) Pertaining to laparoscopy.

laparoscopy (lap-ah-ROS-koh-pee) Examination of the contents of the abdomen using an endoscope.

laryngeal (lah-RIN-jee-al) Pertaining to the larynx.

laryngitis (lah-rin-JEYE-tis) Inflammation of the larynx.

laryngopharynx (lah-RIN-go-FAH-rinks) Region of the pharynx below the epiglottis that includes the larynx.

laryngoscope (lah-RING-oh-sko-pe) Hollow tube with a light and camera used to visualize or operate on the larynx.

laryngotracheobronchitis (lah-RING-oh-TRAY-kee-oh-brong-KIE-tis) Inflammation of the larynx, trachea, and bronchi. Also called *croup*.

larynx (LAH-rinks) Organ of voice production.

laser surgery (LAY-zer SUR-jeer-ee) Use of a concentrated, intense narrow beam of electromagnetic radiation for surgery.

lateral (LAT-er-al) Situated at the side of a structure.

latissimus dorsi (lah-TISS-ih-muss DOOR-sigh) The widest (broadest) muscle in the back.

leiomyoma (LIE-oh-my-OH-mah) Benign tumor derived from smooth muscle.

lens (LENZ) Transparent refractive structure behind the iris.

lentigo (len-TIH-go) Age spot; small, flat, brown-black spot in the skin of older people. Plural *lentigines*.

leptin (LEP-tin) Hormone secreted by adipose tissue.

lesion (LEE-zhun) Pathologic change or injury in a tissue.

lethargy (LETH-ar-jee) Abnormal drowsiness in depth, length, or time. Adj *lethargic*.

leukemia (loo-KEE-mee-ah) Disease when the blood is taken over by white blood cells and their precursors.

leukemic (loo-KEE-mik) Pertaining to or affected by leukemia.

leukocyte (LOO-koh-site) Another term for a white blood cell. Alternative spelling *leucocyte*.

leukocytosis (LOO-koh-sigh-TOE-sis) An excessive number of white blood cells.

leukopenia (loo-koh-PEE-nee-ah) A deficient number of white blood cells.

libido (lih-BEE-doh) Sexual desire.

life expectancy (LIFE eck-SPEK-tan-see) Statistical determination of the number of years an individual is expected to live.

life span (LIFE SPAN) The age that a person reaches.

ligament (LIG-ah-ment) Band of fibrous tissue connecting two structures.

limbic (LIM-bic) Array of nerve fibers surrounding the thalamus.

linear fracture (LIN-ee-ar FRAK-chur) A fracture running parallel to the length of the bone.

lipase (LIE-paze) Enzyme that breaks down fat.

lipectomy (lip-ECK-toe-me) Surgical removal of adipose tissue.

lipid (LIP-id) General term for all types of fatty compounds; for example, cholesterol, triglycerides, and fatty acids.

lipoprotein (LIP-oh-pro-teen) Bonding of molecules of fat and protein.

liposuction (LIP-oh-suck-shun) Surgical removal of adipose tissue using suction.

lithotripsy (LITH-oh-trip-see) Crushing stones by sound waves.

lithotripter (LITH-oh-trip-ter) Machine that generates sound waves.

liver (LIV-er) Body's largest organ, located in the right upper quadrant of the abdomen.

lobar (LOW-bar) Pertaining to a lobe.

lobe (LOBE) Subdivision of an organ or other part.

lobectomy (low-BECK-toe-me) Surgical removal of a lobe.

lochia (LOW-kee-uh) Vaginal discharge following childbirth.

longevity (lon-JEV-ih-tee) Duration of life beyond the normal expectation.

Loop of Henle (LOOP of HEN-lee) Part of the renal tubule where reabsorption occurs.

lordosis (lore-DOH-sis) A normal forward curvature of the lumbar spine that can be exaggerated in disease.

lordotic (lore-DOT-ik) Pertaining to or suffering from lordosis.

louse (LOWSE) Parasitic insect. Plural *lice*.

lumbar (LUM-bar) Region in the back and sides between the ribs and pelvis.

lumen (LOO-men) The interior space of a tubelike structure.

lumpectomy (lump-ECK-toe-me) Removal of a lesion with preservation of surrounding tissue.

luteal (LOO-tee-al) Pertaining to a corpus luteum.

lutein (LOO-tee-in) Yellow pigment.

luteum (LOO-tee-um) Corpus luteum is the yellow (lutein) body formed after an ovarian follicle ruptures.

lymph (LIMF) A clear fluid collected from body tissues and transported by lymph vessels to the venous circulation.

lymphadenectomy (lim-FAD-eh-NECK-toe-me) Surgical excision of a lymph node(s).

lymphadenitis (lim-FAD-eh-neye-tis) Inflammation of a lymph node(s).

lymphadenopathy (lim-FAD-eh-NOP-ah-thee) Any disease process affecting a lymph node.

lymphangiogram (lim-FAN-jee-oh-gram) Radiographic images of lymph vessels and nodes following injection of contrast material.

lymphatic (lim-FAT-ic) Pertaining to lymph or the lymphatic system.

lymphedema (LIMF-eh-DEE-mah) Tissue swelling due to lymphatic obstruction.

lymphocyte (LIM-foh-site) Small white blood cell with a large nucleus.

lymphoid (LIM-foyd) Resembling lymphatic tissue.

lymphoma (lim-FOH-mah) Any neoplasm of lymphatic tissue.

macrocyte (MACK-roh-site) Large red blood cell.

macrocytic (mack-roh-SIT-ik) Pertaining to a macrocyte.

macrophage (MACK-roh-fayj) Large white blood cell that removes bacteria, foreign particles, and dead cells.

macula lutea (MACK-you-lah LOO-tee-ah) Yellowish spot on the back of the retina; contains the fovea centralis.

macule (MACK-yul) Small, flat spot or patch on the skin.

majus (MAY-jus) Bigger or greater; for example, labium majus. Plural *majora*.

malabsorption (mal-ab-SORP-shun) Inadequate gastrointestinal absorption of nutrients.

malformation (MAL-for-MAY-shun) Failure of proper or normal development.

malfunction (mal-FUNK-shun) Inadequate or abnormal function.

malignancy (mah-LIG-nan-see) State of being malignant.

malignant (mah-LIG-nant) Tumor that invades surrounding tissues and metastasizes to distant organs.

malleus (MAL-ee-us) Outer (lateral) one of the three ossicles in the middle ear; shaped like a hammer.

malnutrition (mal-nyu-TRISH-un) Inadequate nutrition from poor diet or inadequate absorption of nutrients.

malunion (mal-YOU-nee-un) The two bony ends of a fracture fail to heal together in the correct position.

mammary (MAM-ah-ree) Relating to the lactating breast.

mammogram (MAM-oh-gram) The record produced by X-ray imaging of the breast.

mammography (mah-MOG-rah-fee) The process of X-ray examination of the breast.

mammoplasty (MAM-oh-plas-tee) Surgical reshaping of the breast.

mandible (MAN-di-bel) Lower jawbone.

mandibular (man-DIB-you-lar) Pertaining to the mandible.

mania (MAY-nee-ah) Mood disorder with hyperactivity, irritability, and rapid speech.

GLOSSARY

- manic** (MAN-ik) Pertaining to or suffering from mania.
- marrow** (MAH-roe) Fatty, blood-forming tissue in the cavities of long bones.
- mastalgia** (mass-TAL-jee-uh) Pain in the breast.
- mastectomy** (mass-TECK-toe-me) Surgical excision of the breast.
- masticate** (MASS-tih-kate) To chew.
- mastication** (mass-tih-KAY-shun) The process of chewing.
- mastitis** (mass-TIE-tis) Inflammation of the breast.
- mastoid** (MASS-toyd) Small bony protrusion immediately behind the ear.
- maternal** (mah-TER-nal) Pertaining to or derived from the mother.
- matrix** (MAY-triks) Substance that surrounds and protects cells, is manufactured by the cells, and holds them together.
- maturation** (mat-you-RAY-shun) Process to achieve full development.
- mature** (mah-TYUR) Fully developed.
- maxilla** (mak-SILL-ah) Upper jawbone, containing right and left maxillary sinuses.
- maxillary** (MAK-sih-lair-ee) Pertaining to the maxilla.
- maximus** (MAKS-ih-mus) The gluteus maximus muscle is the largest muscle in the body, covering a large part of each buttock.
- meatal** (me-AY-tal) Pertaining to a meatus.
- meatus** (me-AY-tus) The external opening of a passage.
- meconium** (meh-KOH-nee-um) The first bowel movement of the newborn.
- medial** (ME-dee-al) Nearer to the middle of the body.
- mediastinal** (ME-dee-ass-TIE-nal) Pertaining to the mediastinum.
- mediastinoscopy** (ME-dee-ass-tih-NOS-koh-pee) Examination of the mediastinum using an endoscope.
- mediastinum** (ME-dee-ass-TIE-num) Area between the lungs containing the heart, aorta, venae cavae, esophagus, and trachea.
- medius** (ME-dee-us) The gluteus medius muscle is partly covered by the gluteus maximus.
- medulla** (meh-DULL-ah) Central portion of a structure surrounded by cortex.
- medulla oblongata** (meh-DULL-ah ob-lon-GAH-tah) Most posterior subdivision of the brainstem; continuation of the spinal cord.
- medullary** (MED-ul-ah-ree) Pertaining to a medulla.
- meiosis** (my-OH-sis) Two rapid cell divisions, resulting in half the number of chromosomes.
- melanin** (MEL-ah-nin) Black pigment found in the skin, hair, and retina.
- melanoma** (mel-ah-NO-mah) Malignant neoplasm formed from cells that produce melanin.
- melatonin** (mel-ah-TONE-in) Hormone formed by the pineal gland.
- melena** (mel-EN-ah) The passage of black, tarry stools.
- membrane** (MEM-brain) Thin layer of tissue covering a structure or cavity.
- membranous** (MEM-brah-nus) Pertaining to a membrane.
- menarche** (meh-NAR-key) First menstrual period.
- Ménière disease** (men-YEAR diz-EEZ) Disorder of the inner ear with acute attacks of tinnitus, vertigo, and hearing loss.
- meninges** (meh-NIN-jeez) Three-layered covering of the brain and spinal cord.
- meningitis** (men-in-JIE-tis) Inflammation of the meninges.
- meningocele** (meh-NIN-goh-seal) Protrusion of the meninges from the spinal cord or brain through a defect in the vertebral column or cranium.
- meningococcal** (meh-NING-goh-KOK-al) Pertaining to the *meningococcus* bacterium.
- meningomyelocele** (meh-nin-goh-MY-el-oh-seal) Protrusion of the spinal cord and meninges through a defect in the vertebral arch of one or more vertebrae.
- meniscectomy** (MEN-ih-SEK-toh-me) Excision (cutting out) of all or part of a meniscus.
- meniscus** (meh-NISS-kuss) Disc of cartilage between the bones of a joint; for example, in the knee joint. Plural *menisci*.
- menopausal** (MEN-oh-pawz-al) Pertaining to the menopause.
- menopause** (MEN-oh-pawz) Permanent ending of menstrual periods.
- menorrhagia** (men-oh-RAY-jee-ah) Excessive menstrual bleeding.
- menses** (MEN-seez) Monthly uterine bleeding.
- menstrual** (MEN-stru-al) Pertaining to menstruation.
- menstruate** (MEN-stru-ate) The act of menstruation.
- menstruation** (men-stru-AY-shun) Synonym of *menses*.
- mesentery** (MESS-en-ter-ree) A double layer of peritoneum enclosing the abdominal viscera.
- metabolic** (met-ah-BOL-ik) Pertaining to metabolism.
- metabolic acidosis** (met-ah-BOL-ik ass-ih-DOE-sis) Decreased pH in the blood and body tissues as a result of an upset in metabolism.
- metabolism** (meh-TAB-oh-lizm) The constantly changing physical and chemical processes occurring in the cell that are the sum of anabolism and catabolism.
- metacarpal** (MET-ah-KAR-pal) The five bones between the carpus and the fingers.
- metacarpophalangeal** (MET-ah-KAR-poh-fay-LAN-jee-al) The articulations (joints) between the metacarpal bones and the phalanges.
- metastasis** (meh-TAS-tah-sis) Spread of a disease from one part of the body to another. Plural *metastases*.
- metastasize** (meh-TAS-tah-size) To spread to distant parts.
- metastatic** (meh-tah-STAT-ik) Pertaining to the character of cells that can metastasize.
- metatarsal** (MET-ah-TAR-sal) Pertaining to the metatarsus.
- metatarsus** (MET-ah-TAR-sus) The five parallel bones of the foot between the tarsus and the phalanges.
- metrorrhagia** (MEH-troh-RAY-jee-ah) Irregular uterine bleeding between menses.
- microbe** (MY-kroh) Short for *microorganism*.
- microcephalic** (MY-kroh-seh-FAL-ik) Pertaining to or suffering from a small head.
- microcephaly** (MY-kroh-SEF-ah-lee) An abnormally small head.
- microcyte** (MY-kroh-site) Small red blood cell.
- microcytic** (my-kroh-SIT-ik) Pertaining to a small cell.
- microorganism** (MY-kroh-OR-gan-izm) Any organism too small to be seen by the naked eye.
- microscope** (MY-kroh-sko-pe) Instrument for viewing something small that cannot be seen in detail by the naked eye.
- microscopic** (MY-kroh-SKOP-ik) Visible only with the aid of a microscope.

- micturate** (MIK-choo-rate) Pass urine.
- micturition** (mik-choo-RISH-un) Act of passing urine.
- migraine** (MY-grain) Paroxysmal severe headache confined to one side of the head.
- mineral** (MIN-er-al) Inorganic compound usually found in the earth's crust.
- mineralocorticoid** (MIN-er-al-oh-KOR-tih-koyd) Hormone of the adrenal cortex that influences sodium and potassium metabolism.
- minimus** (MIN-ih-mus) The gluteus minimus is the smallest of the gluteal muscles and lies under the gluteus medius.
- minus** (MY-nus) Smaller or lesser; for example, labium minus. Plural *minora*.
- miossis** (my-OH-sis) Constriction of the pupil.
- mitochondrion** (my-toe-KON-dree-on) Organelle that generates, stores, and releases energy for cell activities. Plural *mitochondria*.
- mitosis** (my-TOE-sis) Cell division that creates two identical cells, each with 46 chromosomes.
- mitral** (MY-tral) Shaped like the headdress of a Catholic bishop.
- modify** (MOD-ih-fie) Change the form or qualities of something.
- molar** (MO-lar) One of six teeth in each jaw that grind food.
- mole** (MOLE) Benign localized area of melanin-producing cells.
- molecule** (MOLL-eh-kyul) Very small particle.
- molluscum contagiosum** (moh-LUS-kum kon-TAY-jee-OH-sum) STD caused by a virus.
- monocyte** (MON-oh-site) Large white blood cell with a single nucleus.
- mononeuropathy** (MON-oh-nyu-ROP-ah-thee) Disorder affecting a single nerve.
- mononucleosis** (MON-oh-nyu-klee-OH-sis) Presence of large numbers of specific, diagnostic mononuclear leukocytes.
- monoplegia** (MON-oh-PLÉE-jee-ah) Paralysis of one limb.
- monoplegic** (MON-oh-PLÉE-jik) Pertaining to or suffering from monoplegia.
- mons pubis** (MONZ PYU-bis) Fleishy pad with pubic hair, overlying the pubic bone.
- morbidity** (mor-BID-ih-tee) The frequency of the appearance of a disease.
- morphine** (MOR-feen) Derivative of opium used as an analgesic or sedative.
- mortality** (mor-TAL-ih-tee) Death rate.
- motile** (MOH-til) Capable of spontaneous movement.
- motility** (moh-TILL-ih-tee) The ability for spontaneous movement.
- motor** (MOH-tor) Structures of the nervous system that send impulses out to cause muscles to contract or glands to secrete.
- mouth** (MOWTH) External opening of a cavity or canal.
- mucin** (MYU-sin) Protein element of mucus.
- mucocutaneous** (MYU-koh-kyu-TAY-nee-us) Junction of skin and mucous membrane; for example, the lips.
- mucolytic** (MYU-koh-LIT-ik) Agent capable of dissolving or liquefying mucus.
- mucosa** (myu-KOH-sah) Lining of a tubular structure that secretes mucus. Another name for *mucous membrane*.
- mucous** (MYU-kus) Pertaining to mucus or the mucosa.
- mucus** (MYU-kus) Sticky secretion of cells in mucous membranes.
- multipara** (mul-TIP-ah-ruh) Woman who has given birth to two or more children.
- murmur** (MUR-mur) Abnormal heart sound heard with a stethoscope when a valve closes or opens abnormally.
- muscle** (MUSS-el) A tissue consisting of contractile cells.
- musculoskeletal** (MUSS-kyu-loh-SKEL-eh-tal) Pertaining to the muscles and the bony skeleton.
- mutation** (myu-TAY-shun) Change in the chemistry of a gene.
- mute** (MYUT) Unable or unwilling to speak.
- mutism** (MYU-tizm) Absence of speech.
- myasthenia gravis** (my-as-THEE-nee-ah GRA-vis) Disorder of fluctuating muscle weakness.
- mydriasis** (mih-DRY-ah-sis) Dilation of the pupil.
- myelin** (MY-eh-lin) Material of the sheath around the axon of a nerve.
- myelitis** (MY-eh-LIE-tis) Inflammation of the spinal cord.
- myelocele** (MY-eh-low-seal) Protrusion of the spinal cord through a defect in the vertebral arch.
- myelomeningocele** (MY-eh-low-meh-NING-oh-seal) Protrusion of the spinal cord and meninges through a defect in the vertebral arch of one or more vertebrae.
- myocardial** (my-oh-KAR-dee-al) Pertaining to heart muscle.
- myocarditis** (MY-oh-kar-DIE-tis) Inflammation of the heart muscle.
- myocardium** (my-oh-KAR-dee-um) All the heart muscle.
- myoma** (my-OH-mah) Benign tumor of muscle.
- myomectomy** (my-oh-MEK-toe-me) Surgical removal of a myoma (fibroid).
- myometrium** (my-oh-MEE-tree-um) Muscle wall of the uterus.
- myopathy** (my-OP-ah-thee) Any disease of muscle.
- myopia** (my-OH-pee-ah) Able to see close objects but unable to see distant objects.
- myositis** (my-oh-SIGH-tis) Inflammation of muscle tissue.
- myringotomy** (mir-in-GOT-oh-me) Incision in the tympanic membrane.
- myxedema** (miks-eh-DEE-muh) Nonpitting, waxy edema of the skin in hypothyroidism.

N

- narcissism** (NAR-sih-sizm) A state of relating everything to oneself.
- narcissistic** (NAR-sih-SIS-tik) Relating everything to oneself.
- narcolepsy** (NAR-koh-lep-see) Involuntary falling asleep.
- narcotic** (nar-KOT-ik) Drug derived from opium or any drug with effects similar to those of opium derivatives.
- nares** (NAH-rees) Nostril. Plural *nares*.
- nasal** (NAY-zal) Pertaining to the nose.
- nasogastric** (NAY-zoh-GAS-trik) Pertaining to the nose and stomach.
- nasolacrimal duct** (NAY-zoh-LAK-rim-al DUKT) Passage from the lacrimal sac to the nose.
- nasopharyngeal** (NAY-zoh-fah-RIN-jee-al) Pertaining to the nasopharynx.

GLOSSARY

nasopharynx (NAY-zoh-FAH-rinks) Region of the pharynx at the back of the nose and above the soft palate.

natal (NAY-tal) Pertaining to birth.

nebulizer (NEB-you-liz-er) Device used to deliver liquid medicine in a fine mist.

necrosis (neh-KROH-sis) Pathologic death of cells or tissue.

necrotic (neh-KROT-ik) Pertaining to or affected by necrosis.

necrotizing fasciitis (neh-kroh-TIZE-ing fash-ee-EYE-tis) Inflammation of fascia producing death of the tissue.

neonatal (NEE-oh-NAY-tal) Pertaining to the newborn infant or the newborn period.

neonate (NEE-oh-nate) A newborn infant.

neonatologist (NEE-oh-nay-TOL-oh-jist) Medical specialist in disorders of the newborn.

nephrectomy (nef-REK-toe-me) Surgical removal of a kidney.

nephritis (nef-RY-tis) Inflammation of the kidney.

nephroblastoma (NEF-roh-blas-TOE-mah) Cancerous kidney tumor of childhood. Also known as *Wilms tumor*.

nephrolithiasis (NEF-roe-lih-THIGH-ah-sis) Presence of a kidney stone.

nephrolithotomy (NEF-roe-lih-THOT-oh-me) Incision for removal of a kidney stone.

nephrologist (nef-ROL-oh-jist) Medical specialist in disorders of the kidney.

nephrology (nef-ROL-oh-jee) Medical specialty of diseases of the kidney.

nephron (NEF-ron) Filtration unit of the kidney; glomerulus + renal tubule.

nephropathy (nef-ROP-ah-thee) Any disease of the kidney.

nephroscope (NEF-roe-skope) Endoscope to view the inside of the kidney.

nephroscopy (nef-ROS-koh-pee) To examine the kidney.

nephrosis (nef-ROH-sis) Same as *nephrotic syndrome*.

nephrotic syndrome (nef-ROT-ik SIN-drome) Glomerular disease with marked loss of protein. Also called *nephrosis*.

nerve (NERV) A cord of nerve fibers bound together by connective tissue.

nervous (NER-vus) Pertaining to a nerve or the nervous system; *or* easily excited or agitated.

nervous system (NER-vus SIS-tem) The whole, integrated nerve apparatus.

neural (NYU-ral) Pertaining to nervous tissue.

neuralgia (nyu-RAL-jee-ah) Pain in the distribution of a nerve.

neuroglia (nyu-ROG-lee-ah) Connective tissue holding nervous tissue together.

neurohypophysis (NYU-roh-high-POF-ih-sis) Posterior lobe of the pituitary gland.

neurologic (NYU-roh-LOJ-ik) Pertaining to the nervous system.

neurologist (nyu-ROL-oh-jist) Medical specialist in disorders of the nervous system.

neurology (nyu-ROL-oh-jee) Medical specialty of disorders of the nervous system.

neuroma (nyu-ROH-mah) Any tumor arising from cells in the nervous system.

neuromuscular (NYU-roh-MUSS-kyu-lar) A junction where a nerve supplies muscle tissue.

neuron (NYU-ron) Technical term for a nerve cell; consists of the cell body with its dendrites and axons.

neuropathy (nyu-ROP-ah-thee) Any disorder affecting the nervous system.

neurosurgeon (NYU-roh-SUR-jun) One who operates on the nervous system.

neurosurgery (NYU-roh-SUR-je-ee) Operating on the nervous system.

neurotoxin (NYU-roh-tock-sin) Agent that poisons the nervous system.

neurotransmitter (NYU-roh-trans-MIT-er) Chemical agent that relays messages from one nerve cell to the next.

neutropenia (NEW-troh-PEE-nee-ah) A deficiency of neutrophils.

neutrophil (NEW-troh-fill) A neutrophil's granules take up (purple) stain equally, whether the stain is acid or alkaline.

neutrophilia (NEW-troh-FILL-ee-ah) An increase in neutrophils.

nevus (NEE-vus) Congenital lesion of the skin. Plural *nevi*.

nipple (NIP-el) Projection from the breast into which the lactiferous ducts open.

nitrite (NI-trite) Chemical formed in urine by *E. coli* and other microorganisms.

nitrogenous (ni-TRO-jen-us) Containing or generating nitrogen.

nocturia (nok-TYU-ree-ah) Excessive urination at night.

node (NOHD) A circumscribed mass of tissue.

norepinephrine (NOR-ep-ih-NEFF-rin) Catecholamine hormone of the adrenal gland that is a parasympathetic neurotransmitter. Also called *noradrenaline*.

nosocomial (noh-soh-KOH-mee-al) Acquired while in the hospital.

nuchal cord (NYU-kul KORD) Loop(s) of umbilical cord around the fetal neck.

nuclear (NYU-klee-ar) Pertaining to a nucleus.

nucleolus (nyu-KLEE-oh-lus) Small mass within the nucleus.

nucleus (NYU-klee-us) Functional center of a cell or structure.

nutrient (NYU-tree-ent) A substance in food required for normal physiologic function.

nutrition (nyu-TRISH-un) The study of food and liquid requirements for normal function of the human body.

nystagmus (nis-TAG-mus) Fast uncontrollable movements of the eye in any direction.

obesity (oh-BEE-sih-tee) Excessive amount of fat in the body.

oblique fracture (ob-LEEK FRAK-chur) A diagonal fracture across the long axis of the bone.

obsession (ob-SESH-un) Persistent, recurrent, uncontrollable thoughts or impulses.

obsessive (ob-SES-iv) Possessing persistent, recurrent, uncontrollable thoughts or impulses.

obstetrician (ob-steh-TRISH-un) Medical specialist in obstetrics.

- obstetrics (OB)** (ob-STET-ricks) Medical specialty for the care of women during pregnancy and the postpartum period.
- occipital** (ock-SIP-it-al) The back of the skull.
- occipital lobe** (ock-SIP-it-al LOBE) Posterior area of the cerebral hemispheres.
- occlude** (oh-KLUDE) To close, plug, or completely obstruct.
- occlusion** (oh-KLU-zhun) A complete obstruction.
- occult** (oh-KULT) Not visible on the surface, hidden.
- occult blood** (oh-KULT BLUD) Blood that cannot be seen in the stool but is positive on a fecal occult blood test.
- occupational (OCK-you-PAY-shun-al)** A disorder resulting from exposure to an agent during performance of one's work.
- ocular (OCK-you-lar)** Pertaining to the eye.
- olfaction** (ol-FAK-shun) Sense of smell.
- olfactory** (ol-FAK-toh-ree) Related to the sense of smell.
- oligohydramnios (OL-ih-goh-high-DRAM-nee-os)** Too little amniotic fluid.
- oligospermia (OL-ih-go-SPER-me-ah)** Too few sperm in the semen.
- oliguria** (ol-ih-GYUR-ee-ah) Scanty production of urine.
- omentum** (oh-MEN-tum) Membrane that encloses the bowels.
- onychomycosis** (oh-nih-koh-my-KOH-sis) Condition of a fungus infection in a nail.
- oocyte (OH-oh-site)** Female egg cell.
- oogenesis** (oh-oh-JEN-eh-sis) Development of a female egg cell.
- open fracture (OH-pen FRAK-chur)** The skin over the fracture is broken.
- ophthalmia neonatorum** (off-THAL-me-ah ne-oh-nay-TOR-um) Conjunctivitis of the newborn.
- ophthalmic** (off-THAL-mik) Pertaining to the eye.
- ophthalmologist** (off-thal-MALL-oh-jist) Medical specialist in ophthalmology.
- ophthalmology** (off-thal-MALL-oh-jee) Diagnosis and treatment of diseases of the eye.
- ophthalmoscope** (off-THAL-moh-skope) Instrument for viewing the retina.
- ophthalmoscopic (OFF-thal-moh-SKOP-ik)** Pertaining to the use of an ophthalmoscope.
- ophthalmoscopy (OFF-thal-MOS-koh-pee)** The process of viewing the retina.
- opiate (OH-pee-ate)** A drug derived from opium.
- opportunistic (OP-or-tyu-NIS-tik)** An organism or a disease in a host with lowered resistance.
- opportunistic infection (OP-or-tyu-NIS-tik in-FEK-shun)** An infection that causes disease when the immune system is compromised for other reasons.
- optic (OP-tik)** The eye or vision; *or* second (II) cranial nerve, which carries visual information.
- optical (OP-tih-kal)** Pertaining to the eye or vision.
- optometrist** (op-TOM-eh-trist) Someone skilled in the measurement of vision but who cannot treat eye diseases or prescribe medication.
- optometry** (op-TOM-eh-tree) The profession of the measurement of vision.
- oral (OR-al)** Pertaining to the mouth.
- orbit (OR-bit)** The bony socket that holds the eyeball.
- orbital (OR-bit-al)** Pertaining to the orbit.
- orchietomy** (or-key-ECK-toe-me) Removal of one or both testes.
- orchiopexy (OR-key-oh-PEK-see)** Surgical fixation of a testis in the scrotum.
- orchitis** (or-KIE-tis) Inflammation of the testis. Also called *epididymoorchitis*.
- organ (OR-gan)** Structure with specific functions in a body system.
- organelle (OR-gah-nell)** Part of a cell having specialized function(s).
- organism (OR-gan-izm)** Any whole, living individual animal or plant.
- orifice (OR-ih-fis)** Any opening or aperture.
- origin (OR-ih-gin)** Fixed source of a muscle at its attachment to bone.
- oropharyngeal (OR-oh-fah-RIN-jee-al)** Pertaining to the oropharynx.
- oropharynx (OR-oh-FAH-rinks)** Region at the back of the mouth between the soft palate and the tip of the epiglottis.
- orthopedic** (or-tho-PEE-dik) Pertaining to the correction and cure of deformities and diseases of the musculoskeletal system; originally, most of the deformities treated were in children. Also spelled *orthopaedic*.
- orthopedist** (or-tho-PEE-dist) Specialist in orthopedics.
- orthopnea** (or-THOP-nee-ah) Difficulty in breathing when lying flat.
- orthopneic** (or-THOP-nee-ik) Pertaining to or affected by orthopnea.
- orthotic** (or-THOT-ik) Orthopedic appliance to correct an abnormality.
- orthotist** (or-THOT-ist) Maker and fitter of orthopedic appliances.
- os (OSS)** Opening into a canal; for example, the cervix.
- ossicle (OSS-ih-kel)** A small bone, particularly relating to the three bones in the middle ear.
- osteoarthritis (OSS-tee-oh-ar-THRI-tis)** Chronic inflammatory disease of the joints, with pain and loss of function.
- osteoblast (OSS-tee-oh-blast)** Bone-forming cell.
- osteocalcin (OSS-tee-oh-KAL-sin)** A hormone produced by bone cells.
- osteocyte (OSS-tee-oh-site)** A bone-maintaining cell.
- osteogenesis imperfecta (OSS-tee-oh-JEN-eh-sis im-per-FEK-tah)** Inherited condition when bone formation is incomplete, leading to fragile, easily broken bones.
- osteogenic sarcoma (OSS-tee-oh-JEN-ik sar-KOH-mah)** Malignant tumor originating in bone-producing cells.
- osteomalacia (OSS-tee-oh-mah-LAY-she-ah)** Soft, flexible bones lacking in calcium (rickets).
- osteomyelitis (OSS-tee-oh-my-eh-LIE-tis)** Inflammation of bone tissue.
- osteopath (OSS-tee-oh-path)** Practitioner of osteopathy.
- osteopathy (OSS-tee-OP-ah-thee)** Medical practice based on maintaining the balance of the body.
- osteopenia (OSS-tee-oh-PEE-nee-ah)** Decreased calcification of bone.
- osteoporosis (OSS-tee-oh-poh-ROE-sis)** Condition in which the bones become more porous, brittle, and fragile and more likely to fracture.
- ostomy (OSS-toe-me)** Artificial opening into a tubular structure.
- otitis media** (oh-TIE-tis ME-dee-ah) Inflammation of the middle ear.
- otolith (OH-toe-lith)** A calcium particle in the vestibule of the inner ear.
- otologist** (oh-TOL-oh-jist) Medical specialist in diseases of the ear.

GLOSSARY

otology (oh-TOL-oh-jee) Study of the function and diseases of the ear.

otorhinolaryngologist (oh-toe-rye-no-lah-rin-GOL-oh-jist) Ear, nose, and throat medical specialist.

otosclerosis (OH-toe-sklayr-OH-sis) Hardening at the junction of the stapes and oval window that causes loss of hearing.

otoscope (OH-toe-skope) Instrument for examining the ear.

otoscopic (OH-toe-SKOP-ik) Pertaining to examination with an otoscope.

otoscopy (oh-TOS-koh-pee) Examination of the ear.

ovarian (oh-VAIR-ee-an) Pertaining to the ovary(ies).

ovary (OH-vah-ree) One of the paired female egg-producing glands. Plural *ovaries*.

ovulate (OV-you-late) Release the oocyte from a follicle.

ovulation (OV-you-LAY-shun) Release of an oocyte from a follicle.

ovum (OH-vum) Egg. Also called *oocyte*. Plural *ova*.

oxygen (OCK-see-jen) The gas essential for life.

oxyhemoglobin (OCK-see-he-moh-GLOW-bin) Hemoglobin in combination with oxygen.

oxytocin (OCK-see-TOE-sin) Pituitary hormone that stimulates the uterus to contract.

P

pacemaker (PACE-may-ker) Device that regulates cardiac electrical activity.

palate (PAL-ate) Roof of the mouth.

palatine (PAL-ah-tine) Bone that forms the hard palate and parts of the nose and orbits.

palliative care (PAL-ee-ah-tiv KAIR) To relieve symptoms and pain without curing.

pallor (PAL-or) Paleness of the skin.

palm (PAHLM) Flat or anterior surface of the hand.

palmar (PAHL-mar) Pertaining to the palm.

palpate (PAL-pate) To examine with the fingers and hands.

palpation (pal-PAY-shun) Examination with the fingers and hands.

palpitation (pal-pih-TAY-shun) forcible, rapid beat of the heart felt by the patient.

palsy (PAWL-zee) Paralysis or paresis from brain damage.

pancreas (PAN-kree-as) Lobulated gland, the head of which is tucked into the curve of the duodenum.

pancreatic (PAN-kree-AT-ik) Pertaining to the pancreas.

pancreatic islets (pan-kree-AT-ik EYE-lets) Areas of pancreatic cells that produce insulin and glucagon. Also called *islets of Langerhans*.

pancreatitis (PAN-kree-ah-TIE-tis) Inflammation of the pancreas.

pancytopenia (PAN-site-oh-PEE-nee-ah) Deficiency of all types of blood cells.

pandemic (pan-DEM-ik) Pertaining to a disease attacking the population of a very large area.

panendoscopy (pan-en-DOS-koh-pee) A visual examination of the inside of the esophagus, stomach, and upper duodenum using a flexible fiber-optic endoscope.

panhypopituitarism (pan-HIGH-poh-pih-TYU-ih-tah-rizm) Deficiency of all the pituitary hormones.

Pap test (PAP) Examination of cells taken from the cervix.

papilla (pah-PILL-ah) Any small projection. Plural *papillae*.

papilledema (pah-pill-eh-DEE-mah) Swelling of the optic disc in the retina.

papillomavirus (pap-ih-LOH-mah-vi-rus) Virus that causes warts and is associated with cancer.

papule (PAP-yul) Small, circumscribed elevation on the skin.

para (PAH-rah) Abbreviation for number of deliveries.

paralysis (pah-RAL-ih-sis) Loss of voluntary movement.

paralytic (par-ah-LYT-ik) Suffering from paralysis.

paralyze (PAR-ah-lyze) To make incapable of movement.

paranasal (PAR-ah-NAY-zal) Adjacent to the nose.

paranoia (par-ah-NOY-ah) Presence of persecutory delusions.

paranoid (PAR-ah-noyd) Having delusions of persecution.

paraphimosis (PAR-ah-fih-MOH-sis) Condition in which a retracted prepuce cannot be pulled forward to cover the glans.

paraplegia (par-ah-PLÉE-jee-ah) Paralysis of both lower extremities.

paraplegic (par-ah-PLÉE-jik) Pertaining to or suffering from paraplegia.

parasite (PAR-ah-site) An organism that attaches itself to, lives on or in, and derives its nutrition from another species.

parasitic (par-ah-SIT-ik) Pertaining to a parasite.

parasympathetic (par-ah-sim-pah-THET-ik) Division of the autonomic nervous system; has opposite effects of the sympathetic division.

parathyroid (par-ah-THIGH-royd) Endocrine glands embedded in the back of the thyroid gland.

paraurethral (PAR-ah-you-REE-thral) Situated around the urethra.

parenchyma (pah-RENG-kih-mah) Characteristic functional cells of a gland or organ that are supported by the connective tissue framework.

parenteral (pah-REN-ter-al) Giving medication by any means other than the gastrointestinal tract.

paresis (par-EE-sis) Partial paralysis (weakness).

paresthesia (par-es-THÉE-ze-ah) An abnormal sensation; for example, tingling, burning, prickling. Plural *parasthesias*.

parietal (pah-RYE-eh-tal) Pertaining to the outer layer of the pericardium and the wall of any body cavity; *or* the two bones forming the sidewalls and roof of the cranium.

parietal lobe (pah-RYE-eh-tal LOBE) Area of the brain under the parietal bone.

Parkinson disease (PAR-kin-son diz-EEZ) Disease of muscular rigidity, tremors, and a masklike facial expression.

paronychia (par-oh-NICK-ee-ah) Infection alongside the nail.

parotid (pah-ROT-id) Parotid gland is the salivary gland beside the ear.

paroxysmal (par-ock-SIZ-mal) Occurring in sharp, spasmodic episodes.

particle (PAR-tih-kul) A small piece of matter.

particulate (par-TIK-you-late) Relating to a fine particle.

passive (PASS-iv) Not active.

patella (pah-TELL-ah) Thin, circular bone in front of the knee joint and embedded in the patellar tendon. Also called *kneecap*. Plural *patellae*.

patellar (pah-TELL-ar) Pertaining to the patella.

patent (PAY-tent) Open.

patent ductus arteriosus (PAY-tent DUK-tus ar-ter-ee-OH-sus) An open, direct channel between the aorta and the pulmonary artery.

- pathogen** (PATH-oh-jen) A disease-causing microorganism.
- pathogenic** (path-oh-JEN-ik) Causing disease.
- pathologic fracture** (path-oh-LOJ-ik FRAK-chur) Fracture occurring at a site already weakened by a disease process, such as cancer.
- pathologist** (pa-THOL-oh-jist) A specialist in pathology.
- pathology** (pa-THOL-oh-jee) Medical specialty dealing with the structural and functional changes of a disease process or the cause, development, and structural changes in disease.
- pectoral** (PEK-tor-al) Pertaining to the chest.
- pectoral girdle** (PEK-tor-al GIR-del) Incomplete bony ring that attaches the upper limb to the axial skeleton.
- pectoralis** (PEK-tor-ah-lis) Pertaining to the chest.
- pedal** (PEED-al) Pertaining to the foot.
- pediatrician** (PEE-dee-ah-TRISH-an) Medical specialist in pediatrics.
- pediatrics** (pee-dee-AT-riks) Medical specialty of treating children during development from birth through adolescence.
- pediculosis** (peh-dick-you-LOH-sis) An infestation with lice.
- peer** (PEER) A person at the same level or standing.
- pelvic** (PEL-vik) Pertaining to the pelvis.
- pelvis** (PEL-viss) A basin-shaped ring of bones, ligaments, and muscles at the base of the spine; or a basin-shaped cavity, as in the pelvis of the kidney.
- penile** (PEE-nile) Pertaining to the penis.
- penis** (PEE-nis) Conveys urine and semen to the outside.
- pepsin** (PEP-sin) Enzyme produced by the stomach that breaks down protein.
- pepsinogen** (pep-SIN-oh-jen) Converted by HCl in stomach to pepsin.
- peptic** (PEP-tik) Relating to the stomach and duodenum.
- percutaneous** (PER-kyu-TAY-nee-us) Passage through the skin.
- perforated** (PER-foh-ray-ted) Punctured with one or more holes.
- perforation** (per-foh-RAY-shun) A hole through the wall of a structure.
- perfuse** (per-FYUSE) To force blood to flow through a lumen of a vascular bed.
- perfusion** (per-FYU-zhun) The act of perfusing.
- pericardial** (per-ih-KAR-dee-al) Pertaining to the pericardium.
- pericarditis** (PER-ih-kar-DIE-tis) Inflammation of the pericardium, the covering of the heart.
- pericardium** (per-ih-KAR-dee-um) A double layer of membranes surrounding the heart.
- perimetrium** (per-ih-ME-tree-um) The covering of the uterus; part of the peritoneum.
- perinatal** (per-ih-NAY-tal) Around the time of birth.
- perineal** (PER-ih-NEE-al) Pertaining to the perineum.
- perineum** (PER-ih-NEE-um) Area between the thighs, extending from the coccyx to the pubis.
- periodontal** (PER-ee-oh-DON-tal) Around a tooth.
- periodontics** (PER-ee-oh-DON-tiks) Branch of dentistry specializing in disorders of tissues around the teeth.
- periodontist** (PER-ee-oh-DON-tist) Specialist in periodontics.
- periodontitis** (PER-ee-oh-don-TIE-tis) Inflammation of tissues around a tooth.
- periobital** (per-ee-OR-bit-al) Pertaining to tissues around the orbit.
- periosteal** (PER-ee-OSS-tee-al) Pertaining to the periosteum.
- periosteum** (PER-ee-OSS-tee-um) Fibrous membrane covering a bone.
- peripheral** (peh-RIF-er-al) Pertaining to the periphery or external boundary.
- peripheral vision** (peh-RIF-er-al VIZH-un) Ability to see objects as they come into the outer edges of the visual field.
- peristalsis** (per-ih-STAL-sis) Waves of alternate contraction and relaxation of the muscle wall of a tube; for example, of the intestinal wall to move food along the digestive tract.
- peritoneal** (PER-ih-toe-NEE-al) Pertaining to the peritoneum.
- peritoneum** (PER-ih-toe-NEE-um) Membrane that lines the abdominal cavity.
- peritonitis** (PER-ih-toe-NIE-tis) Inflammation of the peritoneum.
- pernicious anemia** (per-NISH-us ah-NEE-me-ah) Chronic anemia due to lack of vitamin B₁₂.
- pertussis** (per-TUSS-is) Infectious disease with a spasmodic, intense cough ending on a whoop (stridor). Also called *whooping cough*.
- pes planus** (PES PLAY-nuss) A flat foot with no plantar arch.
- pessary** (PES-ah-ree) Appliance inserted into the vagina to support the uterus.
- petechia** (peh-TEE-kee-ah) Pinpoint capillary hemorrhagic spot in the skin. Plural *petechiae*.
- petit mal** (peh-TEE MAL) Old name for absence seizures.
- phacoemulsification** (FAKE-oh-ee-MUL-sih-fih-KAY-shun) Breaking down and sucking out a cataract with an ultrasonic needle.
- phagocyte** (FAG-oh-site) Blood cell that ingests and destroys foreign particles and cells.
- phagocytic** (fag-oh-SIT-ik) Pertaining to a phagocyte.
- phagocytosis** (FAG-oh-sigh-TOE-sis) Process of ingestion and destruction.
- phalanx** (FAY-lanks) A bone of a finger or toe. Plural *phalanges*.
- pharmacist** (FAR-mah-sist) Person licensed by the state to prepare and dispense drugs.
- pharmacology** (far-mah-KOLL-oh-jee) Science of the preparation, uses, and effects of drugs.
- pharmacy** (FAR-mah-see) Facility licensed to prepare and dispense drugs.
- pharyngeal** (fah-RIN-jee-al) Pertaining to the pharynx.
- pharyngitis** (fah-rin-JIE-tis) Inflammation of the pharynx.
- pharynx** (FAH-rinks) Tube from the back of the nose to the larynx.
- phimosis** (fih-MOH-sis) Prepuce cannot be retracted.
- phlebitis** (fleh-BIE-tis) Inflammation of a vein.
- phlebotomist** (fleh-BOT-oh-mist) Person skilled in taking blood from veins.
- phlebotomy** (fleh-BOT-oh-me) Taking blood from a vein.
- phlegm** (FLEM) Abnormal amounts of mucus expectorated from the respiratory tract.
- phobia** (FOH-bee-ah) Pathologic fear or dread.
- photocoagulation** (FOH-toe-koh-AG-you-LAY-shun) Using light (laser beam) to form a clot.

GLOSSARY

- photophobia** (foh-toe-FOH-bee-ah) Fear of the light because it hurts the eyes.
- photophobic** (foh-toe-FOH-bik) Pertaining to or suffering from photophobia.
- photoreceptor** (FOH-toe-ree-SEP-tor) A photoreceptor cell receives light and converts it into electrical impulses.
- photosensitive** (FOH-toe-SEN-sih-tiv) Abnormally sensitive to light.
- photosensitivity** (FOH-toe-sen-sih-TIV-ih-tee) Light produces pain in the eye.
- phototherapy** (foh-toe-THAIR-ah-pee) Treatment using light rays.
- physiatrist** (fizz-I-ah-trist) A physician who specializes in physical medicine and rehabilitation.
- physiatry** (fizz-I-ah-tree) Physical medicine.
- physical** (FIZZ-ih-kal) Relating to the body.
- pia mater** (PEE-ah MAY-ter) Delicate inner layer of the meninges.
- pica** (PIE-kah) Eating substances not considered to be food.
- pineal** (PIN-ee-al) Pertaining to the pineal gland.
- pink eye** Conjunctivitis.
- pinna** (PIN-ah) Another name for *auricle*. Plural *pinnae*.
- pitting edema** (ee-DEE-mah) An indentation made by a finger in an edematous area persists for a long time.
- pituitary** (pih-TYU-ih-tar-ee) Pertaining to the pituitary gland.
- placenta** (plah-SEN-tah) Organ that allows metabolic interchange between the mother and the fetus.
- placenta abruptio** (plah-SEN-tah ab-RUP-she-oh) Premature detachment of the placenta.
- placenta previa** (plah-SEN-tah PREE-vee-ah) Placenta obstructing the fetus during delivery.
- plaque** (PLAK) Patch of abnormal tissue.
- plasma** (PLAZ-mah) Fluid, noncellular component of blood.
- platelet** (PLAYT-let) Cell fragment involved in the clotting process. Also called *thrombocyte*.
- pleura** (PLUR-ah) Membrane covering the lungs and lining the ribs in the thoracic cavity. Plural *pleurae*.
- pleural** (PLUR-al) Pertaining to the pleura.
- pleurisy** (PLUR-ih-see) Inflammation of the pleura.
- plexus** (PLEK-sus) A weblike network of joined nerves. Plural *plexuses*.
- pneumoconiosis** (NEW-moh-koh-nee-OH-sis) Fibrotic lung disease caused by the inhalation of different dusts.
- pneumectomy** (NEW-moh-NECK-toe-me) Surgical removal of a lung.
- pneumonia** (new-MOH-nee-ah) Inflammation of the lung parenchyma (tissue).
- pneumonitis** (new-moh-NI-tis) Synonym for *pneumonia*.
- pneumothorax** (new-moh-THOR-ax) Air in the pleural cavity of the chest.
- podiatrist** (poh-DIE-ah-trist) Practitioner of podiatry.
- podiatry** (poh-DIE-ah-tree) The diagnosis and treatment of disorders and injuries of the foot.
- poliomyelitis** (POE-lee-oh-MY-eh-lie-tis) Inflammation of the gray matter of the spinal cord, leading to paralysis of the limbs and muscles of respiration. Abbreviation *polio*.
- pollutant** (poh-LOO-tant) Substance that makes an environment unclean or impure.
- pollution** (poh-LOO-shun) Condition that is unclean, impure, and a danger to health.
- polycystic** (pol-ee-SIS-tik) Composed of many cysts.
- polycythemia vera** (POL-ee-sigh-THEE-me-ah VEH-rah) Chronic disease with bone marrow hyperplasia, increase in number of RBCs, and increase in blood volume.
- polydipsia** (pol-ee-DIP-see-ah) Excessive thirst.
- polyhydramnios** (POL-ee-high-DRAM-nee-os) Too much amniotic fluid.
- polymenorrhea** (POL-ee-men-oh-REE-ah) More than normal frequency of menses.
- polymorphonuclear** (POL-ee-more-foh-NEW-klee-ahr) White blood cell with a multilobed nucleus.
- polymyositis** (POL-ee-my-oh-SIGH-tis) Inflammation of a number of voluntary muscles simultaneously.
- polyneuropathy** (POL-ee-nyu-ROP-ah-thee) Disorder affecting many nerves.
- polyp** (POL-ip) Any mass of tissue that projects outward.
- polypectomy** (pol-ip-ECK-toh-mee) Excision or removal of a polyp.
- polyphagia** (pol-ee-FAY-jee-ah) Excessive eating.
- polyposis** (pol-ee-POH-sis) Presence of several polyps.
- polysomnography** (POL-ee-som-NOG-rah-fee) Test to monitor brain waves, muscle tension, eye movement, and oxygen levels in the blood as the patient sleeps.
- polyuria** (pol-ee-YOU-ree-ah) Excessive production of urine.
- pons** (PONZ) Part of the brainstem.
- popliteal** (pop-LIT-ee-al) Pertaining to the back of the knee.
- popliteal fossa** (pop-LIT-ee-al FOSS-ah) The hollow at the back of the knee.
- portal vein** (POR-tal) The vein that carries blood from the intestines to the liver.
- postcoital** (post-KOH-ih-tal) After sexual intercourse.
- posterior** (pos-TEER-ee-or) Pertaining to the back surface of the body; situated behind.
- postictal** (post-IK-tal) Transient neurologic deficit after a seizure.
- postmature** (post-mah-TYUR) Infant born after 42 weeks of gestation.
- postmaturity** (post-mah-TYUR-ih-tee) Condition of being postmature.
- postmortem** (post-MOR-tem) Examination of the body and organs of a dead person to determine the cause of death.
- postnatal** (post-NAY-tal) After the birth.
- postpartum** (post-PAR-tum) After childbirth.
- postpolio syndrome** (PPS) (post-POE-lee-oh SIN-drome) Progressive muscle weakness in a person previously affected by polio.
- postprandial** (post-PRAN-dee-al) Following a meal.
- posttraumatic** (post-traw-MAT-ik) Occurring after and caused by trauma.
- Pott fracture** (POT FRAK-shur) Fracture of the lower end of the fibula, often with fracture of the tibial malleolus.
- precancerous** (pree-KAN-ser-us) Lesion from which cancer can develop.
- precipitate labor** (pree-SIP-ih-tate LAY-bore) A very rapid labor and delivery.

- precursor** (pree-KUR-sir) Cell or substance formed earlier in the development of the cell or substance.
- preeclampsia** (pree-eh-KLAMP-see-uh) Hypertension, edema, and proteinuria during pregnancy.
- preemie** (PREE-me) Slang for *premature baby*.
- pregnancy** (PREG-nan-see) State of being pregnant.
- pregnant** (PREG-nant) Having conceived.
- prehypertension** (pree-HIGH-per-TEN-shun) Precursor to hypertension.
- premature** (pree-mah-TYUR) Occurring before the expected time; for example, an infant born before 37 weeks of gestation.
- prematurity** (pree-mah-TYUR-ih-tee) Condition of being premature.
- premenstrual** (pree-MEN-stru-al) Pertaining to the time immediately before the menses.
- prenatal** (pree-NAY-tal) Before birth.
- prepatellar** (pree-pah-TELL-ar) In front of the patella.
- prepuce** (PREE-puce) Fold of skin that covers the glans penis. Same as *foreskin*.
- presbyopia** (prez-bee-OH-pee-ah) Difficulty in nearsighted vision occurring in middle and old age.
- preterm** (PREE-term) Baby delivered before 37 weeks of gestation. Also called *premature*.
- previa** (PREE-vee-ah) Anything blocking the fetus during its birth; for example, an abnormally situated placenta, *placenta previa*.
- priapism** (PRY-ah-pizm) Persistent erection of the penis.
- primary** (PRY-mah-ree) The first of a disease or symptom, after which others may occur as complications arise.
- primigravida** (pry-mih-GRAY-ih-dah) First pregnancy.
- primipara** (pry-MIP-ah-ruh) Woman giving birth for the first time.
- prion** (PREE-on) Small infectious protein particle.
- proctitis** (prok-TIE-tis) Inflammation of the lining of the rectum.
- proctoscopy** (prok-TOSS-koh-pee) Examination of the inside of the anus by endoscopy.
- progesterone** (pro-JESS-ter-own) Hormone that prepares the uterus for pregnancy.
- progesterin** (pro-JESS-tin) A synthetic form of progesterone.
- prognathism** (PROG-nah-thizm) Condition of a forward-projecting jaw.
- prognosis** (prog-NO-sis) Forecast of the probable future course and outcome of a disease.
- prolactin** (pro-LAK-tin) Pituitary hormone that stimulates the production of milk.
- prolapse** (pro-LAPS) A sinking down of an organ or tissue.
- proliferate** (pro-LIF-eh-rate) To increase in number through reproduction.
- pronate** (PRO-nate) Rotate the forearm so that the surface of the palm faces posteriorly in the anatomical position.
- pronation** (pro-NAY-shun) Process of lying face down or of turning a hand or foot with the volar (palm or sole) surface down.
- prone** (PRONE) Lying face down, flat on your belly.
- prophylactic** (pro-fih-LAK-tik) The act or the agent that prevents a disease.
- prophylaxis** (pro-fih-LAK-sis) Prevention of disease.
- prostaglandin** (PROS-tah-GLAN-din) Hormone present in many tissues but first isolated from the prostate gland.
- prostate** (PROS-tate) Organ surrounding the urethra at the base of the male urinary bladder.
- prostatectomy** (pros-tah-TEK-toe-me) Surgical removal of the prostate.
- prostatic** (pros-TAT-ik) Pertaining to the prostate.
- prostatitis** (pros-tah-TIE-tis) Inflammation of the prostate.
- prosthesis** (PROS-thee-sis) Manufactured substitute for a missing part of the body.
- prosthetic** (pros-THET-ik) Pertaining to a prosthesis.
- prostrate** (pros-TRAYT) To lay flat or to be overcome by physical weakness and exhaustion.
- prostration** (pros-TRAY-shun) To be lying flat or to be overcome by physical weakness and exhaustion.
- protease** (PRO-tee-ase) Group of enzymes that break down protein.
- protein** (PRO-teen) Class of food substances based on amino acids.
- proteinuria** (pro-tee-NYU-ree-ah) Presence of protein in urine.
- prothrombin** (pro-THROM-bin) Protein formed by the liver and converted to thrombin in the blood-clotting mechanism.
- proton pump inhibitor** (PRO-ton PUMP in-HIB-ih-tor) Agent that blocks the enzyme system in the lining of the stomach that produces gastric acid.
- provisional diagnosis** (pro-VIZH-un-al die-ag-NO-sis) A temporary diagnosis pending further examination or testing.
- proximal** (PROK-sih-mal) Situated nearest the center of the body.
- pruritic** (proo-RIT-ik) Itchy.
- pruritus** (proo-RYE-tus) Itching.
- psoriasis** (so-RYE-ah-sis) Rash characterized by reddish, silver-scaled patches.
- psychedelic** (sigh-keh-DEL-ik) An agent that intensifies sensory perception.
- psychiatric** (sigh-kee-AH-trik) Pertaining to psychiatry.
- psychiatrist** (sigh-KIGH-ah-trist) Licensed medical specialist in psychiatry.
- psychiatry** (sigh-KIGH-ah-tree) Diagnosis and treatment of mental disorders.
- psychologic** (sigh-koh-LOJ-ik) Pertaining to psychology.
- psychological** (sigh-koh-LOJ-ik-al) Pertaining to psychology.
- psychologist** (sigh-KOL-oh-jist) One who studies and becomes a specialist in psychology.
- psychology** (sigh-KOL-oh-jee) Study of the behavior of the human mind.
- psychopath** (SIGH-koh-path) Person with antisocial personality disorder.
- psychosis** (sigh-KOH-sis) Disorder causing mental disruption and loss of contact with reality.
- psychosocial** (SIGH-koh-SOH-shal) Involving both the mind and various social and community aspects of life.
- psychosomatic** (SIGH-koh-soh-MAT-ik) Disorders of the body influenced by the mind.
- psychotic** (sigh-KOT-ik) Pertaining to or affected by psychosis.
- ptosis** (TOE-sis) Sinking down of the upper eyelid or an organ.
- pubarche** (pyu-BAR-key) Development of pubic and axillary hair.
- puberty** (PYU-ber-tee) Process of maturing from child to young adult.
- pubic** (PYU-bik) Pertaining to the pubis.

pubis (PYU-bis) Alternative name for *pubic bone*.

puerperium (pyu-er-PER-ee-um) Six-week period after birth in which the uterus involutes.

pulmonary (PULL-moh-NAR-ee) Pertaining to the lungs.

pulmonologist (PULL-moh-NOL-oh-jist) Specialist in treating disorders of the lungs.

pulmonology (PULL-moh-NOL-oh-jee) Study of the lungs, or the medical specialty of disorders of the lungs.

pulp (PULP) Dental pulp is the connective tissue in the cavity in the center of the tooth.

pupil (PYU-pill) The opening in the center of the iris that allows light to reach the lens. Plural *pupillae*.

pupillary (PYU-pill-ah-ree) Pertaining to the pupil.

purge (PURJ) Consciously throw up or cause bowel evacuation.

Purkinje fibers (per-KIN-jee FI-berz) Network of nerve fibers in the myocardium.

purpura (PUR-pyu-rah) Skin hemorrhages that are red initially and then turn purple.

purulent (PURE-you-lent) Showing or containing a lot of pus.

pustule (PUS-tyul) Small protuberance on the skin that contains pus.

pyelitis (pie-eh-LYE-tis) Inflammation of the renal pelvis.

pyelogram (PIE-el-oh-gram) X-ray image of renal pelvis and ureters.

pyelonephritis (PIE-eh-loh-neh-FRY-tis) Inflammation of the kidney and renal pelvis.

pyloric (pie-LOR-ik) Pertaining to the pylorus.

pylorus (pie-LOR-us) Exit area of the stomach.

pyorrhea (pie-oh-REE-ah) Purulent discharge.

pyrexia (pie-REK-see-ah) An abnormally high body temperature or fever.

pyromania (pie-roh-MAY-nee-ah) Morbid impulse to set fires.

Q

quadrant (KWAD-rant) One-quarter of a circle; *or* one of four regions of the surface of the abdomen.

quadrantectomy (kwad-ran-TEK-toe-me) Surgical excision of a quadrant of the breast.

quadriceps femoris (KWAD-rih-seps FEM-or-is) An anterior thigh muscle with four heads.

quadriplegia (kwad-rih-PLIE-jee-ah) Paralysis of all four limbs.

quadriplegic (kwad-rih-PLIE-jik) Pertaining to or suffering from quadriplegia.

R

radial (RAY-dee-al) Pertaining to the forearm or to any of the structures (artery, vein, nerve) named after it; *or* diverging in all directions from any given center.

radiation (ray-dee-AY-shun) To spread out.

radiologic (RAY-dee-oh-LOJ-ik) Pertaining to radiology.

radiologist (ray-dee-OL-oh-jist) Medical specialist in the use of X-rays and other imaging techniques.

radiology (ray-dee-OL-oh-jee) Study of medical imaging.

radius (RAY-dee-us) The forearm bone on the thumb side.

rale (RAHL) Crackle heard through a stethoscope when air bubbles through liquid in the lungs. Plural *rales*.

rash (RASH) Skin eruption.

rectocele (RECK-toe-seal) Hernia of the rectum into the vagina.

rectum (RECK-tum) Terminal part of the colon from the sigmoid to the anal canal.

reflex (REE-fleks) An involuntary response to a stimulus.

reflux (REE-fluks) Backward flow.

refract (ree-FRAKT) Make a change in the direction of, or bend, a ray of light.

refraction (ree-FRAKT-shun) The bending of light.

regenerate (ree-JEN-eh-rate) Reconstitution of a lost part.

regeneration (ree-JEN-eh-RAY-shun) The process of reconstitution.

regulate (REG-you-late) To control the way in which a process progresses.

regulation (REG-you-LAY-shun) Control of the way in which a process progresses.

regurgitate (ree-GUR-jih-tate) To flow backward; for example, blood through a heart valve.

regurgitation (ree-gur-jih-TAY-shun) Expel contents of the stomach into the mouth, short of vomiting.

rehabilitation (REE-hah-bill-ih-TAY-shun) Therapeutic restoration of an ability to function as before.

remission (ree-MISH-un) Period when there is a lessening or absence of the symptoms of a disease.

renal (REE-nal) Pertaining to the kidney.

replication (rep-lih-KAY-shun) Reproduction to produce an exact copy.

reproduction (ree-pro-DUK-shun) The process by which organisms produce offspring.

reproductive (ree-pro-DUK-tiv) Pertaining to reproduction.

resection (ree-SEK-shun) Removal of a specific part of an organ or structure.

resectoscope (ree-SEK-toe-skope) Endoscope for transurethral removal of lesions of the prostate.

residual (reh-ZID-you-al) Pertaining to anything left over.

resistance (reh-ZIS-tants) Ability of an organism to withstand the effects of an antagonistic agent.

resistant (reh-ZIS-tant) Able to resist.

respiration (RES-pih-RAY-shun) Process of breathing; fundamental process of life used to exchange oxygen and carbon dioxide.

respirator (RES-pih-RAY-tor) Another name for *ventilator*.

respiratory (RES-pih-rah-tor-ee) Pertaining to respiration.

retention (ree-TEN-shun) Holding back in the body what should normally be discharged (e.g., urine).

retina (RET-ih-nah) Light-sensitive innermost layer of the eyeball.

retinal (RET-ih-nal) Pertaining to the retina.

retinoblastoma (RET-in-oh-blas-TOE-mah) Malignant neoplasm of primitive retinal cells.

retinoids (RET-ih-noydz) Keratolytic agents applied for psoriasis, acne, and photodamage.

retinopathy (ret-ih-NOP-ah-thee) Any disease of the retina.

retrograde (RET-roh-grade) Reversal of a normal flow; for example, back from the bladder into the ureters.

retroversion (reh-troh-VER-zhun) Tipping backward of the uterus.

retroverted (REH-troh-vert-ed) Tilted backward.

retrovirus (REH-troh-vie-rus) Virus with an RNA core.

rhesus factor (REE-sus FAK-tor) An antigen on the surface of red blood cells of Rh positive individuals. First discovered in Rhesus monkeys.

rheumatic (ru-MA-tik) Pertaining to or affected by rheumatism.

rheumatism (RU-ma-tizm) Pain in various parts of the musculoskeletal system.

rheumatoid arthritis (RA) (RU-mah-toyd ar-THRI-tis) Disease of connective tissue, with arthritis as a major manifestation.

rhinitis (rye-NIE-tis) Inflammation of the nasal mucosa. Also called *coryza*.

rhinoplasty (RYE-no-plas-tee) Surgical procedure to change size or shape of the nose.

rhonchus (RONG-kuss) Wheezing sound heard on auscultation of the lungs; made by air passing through a constricted lumen. Plural *rhonchi*.

ribonucleic acid (RNA) (RYE-boh-nyu-KLEE-ik ASS-id) Information carrier from DNA in the nucleus to an organelle to produce protein molecules.

ribosome (RYE-boh-sohm) Structure in the cell that assembles amino acids into protein.

rickets (RICK-ets) Disease due to vitamin D deficiency, producing soft, flexible bones.

rigidity (ri-JID-ih-tee) Increased muscle tone at rest.

Rinne test (RIN-eh TEST) Test for conductive hearing loss.

root (ROOT) Fundamental or beginning part of a structure.

rooting (RUE-ting) A neonatal reflex to turn toward the nipple and open the mouth when a nipple is placed on the cheek.

rosacea (roh-ZAY-she-ah) Persistent erythematous rash of the central face.

rotator cuff (roh-TAY-tor CUFF) Part of the capsule of the shoulder joint.

rumination (roo-min-NAY-shun) To bring back food into the mouth to chew over and over.

rupture (RUP-tyur) Break or tear of any organ or body part.

S

sacral (SAY-kral) Pertaining to or in the neighborhood of the sacrum.

sacroiliac joint (say-kroh-ILL-ih-ak JOINT) The joint between the sacrum and the ilium.

sacrum (SAY-crum) Segment of the vertebral column that forms part of the pelvis.

sagittal (SAJ-ih-tal) Vertical plane through the body dividing it into right and left portions.

saline (SAY-leen) Salt solution, usually sodium chloride.

saliva (sa-LIE-vah) Secretion in the mouth from salivary glands.

salivary (SAL-ih-var-ee) Pertaining to saliva.

salpingectomy (sal-pin-JEK-toe-me) Surgical excision of a fallopian tube.

salpingitis (sal-pin-JIE-tis) Inflammation of the uterine tube.

saphenous (SAPH-ih-nus) Relating to the saphenous vein in the thigh.

sarcoidosis (sar-koy-DOH-sis) Granulomatous lesions of the lungs and other organs; cause is unknown.

sarcoma (sar-KOH-mah) A malignant tumor originating in connective tissue.

sarcopenia (sar-koh-PEE-nee-ah) Progressive loss of muscle mass and strength with aging.

saturated fatty acid (SATCh-you-ray-ted FAT-ee ASS-id) Lipid that is incapable of absorbing any more hydrogen.

scab (SKAB) Crust that forms over a wound or sore during healing.

scabies (SKAY-beez) Skin disease produced by mites.

scald (SKAWLD) Burn from contact with hot liquid or steam.

scapula (SKAP-you-lah) Shoulder blade. Plural *scapulae*.

scapular (SKAP-you-lar) Pertaining to the scapula.

scar (SKAR) Fibrotic seam that forms when a wound heals.

schizophrenia (skitz-oh-FREE-nee-ah) Disorder of perception, thought, emotion, and behavior.

sclera (SKLAIR-ah) Fibrous outer covering of the eyeball and the white of the eye.

scleral (SKLAIR-al) Pertaining to the sclera.

scleritis (sklair-RI-tis) Inflammation of the sclera.

scleroderma (sklair-oh-DERM-ah) Thickening and hardening of the skin due to new collagen formation.

sclerose (skleh-ROSE) To harden or thicken.

sclerosis (skleh-ROH-sis) Thickening or hardening of a tissue; in the nervous system, hardening of nervous tissue by fibrous and glial connective tissue.

sclerotherapy (SKLAIR-oh-THAIR-ah-pee) Injection of a solution into a vein to thrombose it.

scoliosis (skoh-lee-OH-sis) An abnormal lateral curvature of the vertebral column.

scoliotic (SKOH-lee-OT-ik) Pertaining to or suffering from scoliosis.

scrotal (SKRO-tal) Pertaining to the scrotum.

scrotum (SKRO-tum) Sac containing testes.

seasonal affective disorder (see-ZON-al af-FEK-tiv dis-OR-der) Depression that occurs at the same time every year, often in winter.

sebaceous glands (seh-BAY-shus GLANZ) Glands in the dermis that open into hair follicles and secrete an oily fluid called *sebum*.

seborrhea (seh-oh-REE-ah) Excessive amount of sebum.

seborrheic (seh-oh-REE-ik) Pertaining to seborrhea.

sebum (SEE-bum) Waxy secretion of the sebaceous glands.

secondary (SEK-ond-ah-ree) Diseases or symptoms following a primary disease or symptom.

secrete (seh-KREET) To produce a chemical substance in a cell and release it from the cell.

secretion (seh-KREE-shun) The production of a chemical substance in a cell and its release from the cell.

sedation (seh-DAY-shun) State of being calmed.

sedative (SED-ah-tiv) Agent that calms nervous excitement.

- segment** (SEG-ment) A section of an organ or structure.
- seizure** (SEE-zhur) Event due to excessive electrical activity in the brain.
- self-examination** (SELF-ek-zam-ih-NAY-shun) Conduct an examination of one's own body.
- self-mutilation** (self-myu-tih-LAY-shun) Injury or disfigurement made to one's own body.
- semen** (SEE-men) Penile ejaculate containing sperm and seminal fluid.
- semilunar** (sem-ee-LOO-nar) Appears like a half moon.
- seminal vesicle** (SEM-in-al VES-ih-kull) Sac of the ductus deferens that produces seminal fluid.
- semiferous** (sem-ih-NIF-er-us) Pertaining to carrying semen.
- semiferous tubule** (sem-ih-NIF-er-us TU-byul) Coiled tubes in the testes that produce sperm.
- seminoma** (sem-ih-NO-mah) Neoplasm of germ cells of a testis.
- senescence** (seh-NES-ens) The state of being old.
- senescent** (seh-NES-ent) Growing old.
- senile** (SEE-nile) Characteristic of old age.
- senility** (seh-NIL-ih-tee) Mental disorders occurring in old age.
- sensation** (sen-SAY-shun) The conscious feeling of the effects of a stimulation.
- sensorineural hearing loss** (SEN-sor-ih-NYUR-al) Hearing loss caused by lesions of the inner ear or the auditory nerve.
- sensory** (SEN-soh-ree) Having the function of sensation; structures of the nervous system that carry impulses to the brain.
- sepsis** (SEP-sis) Presence of pathogenic organisms or their toxins in blood or tissues.
- septicemia** (sep-tih-SEE-mee-ah) Microorganisms circulating in, and infecting, the blood (blood poisoning).
- septum** (SEP-tum) A thin wall separating two cavities or tissue masses. Plural *septa*.
- serotonin** (ser-oh-TOE-nin) A neurotransmitter in the central and peripheral nervous systems.
- serum** (SEER-um) Fluid remaining after removal of cells and fibrin clot from blood.
- shock** (SHOCK) Sudden physical or mental collapse or circulatory collapse.
- shunt** (SHUNT) A bypass or diversion of fluid; for example, blood.
- sigmoid** (SIG-moyd) Sigmoid colon is shaped like an "S."
- sigmoidoscopy** (sig-moi-DOS-koh-pee) Endoscopic examination of the sigmoid colon.
- sign** (SINE) Physical evidence of a disease process.
- silicosis** (sil-ih-KOH-sis) Fibrotic lung disease from inhaling silica particles.
- sinoatrial (SA) node** (sigh-noh-AY-tree-al NODE) The center of modified cardiac muscle fibers in the wall of the right atrium that acts as the pacemaker for the heart rhythm.
- sinus** (SIGH-nus) Cavity or hollow space in a bone or other tissue.
- sinus rhythm** (SIGH-nus RITH-um) The normal (optimal) heart rhythm arising from the sinoatrial node.
- sinusitis** (sigh-nyu-SIGH-tis) Inflammation of the lining of a sinus.
- Sjogren syndrome** (SHER-gren SIN-drome) Dryness of the mucous membranes of the eye and mouth.
- skeletal** (SKEL-eh-tal) Pertaining to the skeleton.
- skeleton** (SKEL-eh-ton) The bony framework of the body.
- Skene glands** (SKEEN GLANZ) Paraurethral glands in the anterior wall of the vagina. Also called *paraurethral glands*.
- smegma** (SMEG-mah) Oily material produced by the glans and prepuce.
- Snellen letter chart** (SNEL-en) Test for acuity of distance vision.
- snore** (SNOR) Noise produced by vibrations in the structures of the nasopharynx.
- sociopath** (SOH-see-oh-path) Person with antisocial personality disorder.
- somatic** (soh-MAT-ik) Relating to the body in general; *or* a division of the peripheral nervous system serving the skeletal muscles.
- somatostatin** (SOH-mah-toh-STAT-in) Hormone that inhibits release of growth hormone and insulin.
- somatotrophin** (SOH-mah-toh-TROH-phin) Hormone of the anterior pituitary that stimulates the growth of body tissues. Also called *growth hormone*.
- spasm** (SPASM) Sudden involuntary contraction of a muscle group.
- spasmodic** (spaz-MOD-ik) Intermittent contractions.
- spastic** (SPAS-tik) Increased muscle tone on movement.
- specific** (speh-SIF-ik) Relating to a particular entity.
- specificity** (spes-ih-FIS-ih-tee) State of having a fixed relation to a particular entity.
- sperm** (SPERM) Mature male sex cell. Also called *spermatozoon*.
- spermatic** (SPER-mat-ik) Pertaining to sperm.
- spermatid** (SPER-mat-id) A cell late in the development process of sperm.
- spermatocele** (SPER-mat-oh-seal) Cyst of the epididymis that contains sperm.
- spermatogenesis** (SPER-mat-oh-JEN-eh-sis) The process by which male germ cells differentiate into sperm.
- spermatozoa** (SPER-mat-oh-ZOH-ah) Sperm (plural of *spermatozoon*).
- spermicidal** (sper-mih-SIGH-dal) Pertaining to the killing of sperm; *or* destructive to sperm.
- spermicide** (SPER-mih-side) Agent that destroys sperm.
- sphenoid** (SFEE-noyd) Wedge-shaped bone at the base of the skull.
- sphincter** (SFINK-ter) Band of muscle that encircles an opening; when it contracts, the opening squeezes closed.
- sphygmomanometer** (SFIG-moh-mah-NOM-ih-ter) Instrument for measuring arterial blood pressure.
- spina bifida** (SPY-nah BIH-fih-dah) Failure of one or more vertebral arches to close during fetal development.
- spina bifida cystica** (SIS-tik-ah) Meninges and spinal cord protruding through the absent vertebral arch and having the appearance of a cyst.
- spina bifida occulta** (OH-kul-tah) The deformity of the vertebral arch is not apparent from the surface.
- spinal** (SPY-nal) Pertaining to the spine.
- spinal tap** (SPY-nal TAP) Placement of a needle through an intervertebral space into the subarachnoid space to withdraw CSF.
- spine** (SPINE) The vertebral column; *or* a short bony projection.
- spiral fracture** (SPY-ral FRAK-chur) A fracture in the shape of a coil.

- spirochete** (SPY-roh-keet) Spiral-shaped bacterium causing a sexually transmitted disease (syphilis).
- spirometer** (spy-ROM-eh-ter) An instrument used to measure respiratory volumes.
- spirometry** (spy-ROM-eh-tree) Use of a spirometer.
- spleen** (SPLEEN) Vascular, lymphatic organ in the left upper quadrant of the abdomen.
- splenectomy** (sple-NECK-toe-me) Surgical removal of the spleen.
- splenomegaly** (sple-noh-MEG-ah-lee) Enlarged spleen.
- spondylosis** (spon-dih-LOH-sis) Degenerative osteoarthritis of the spine.
- spongiosum** (spun-jee-OH-sum) Spongelike tissue.
- sprain** (SPRAIN) A wrench or tear in a ligament.
- sputum** (SPYU-tum) Matter coughed up and spat out by individuals with respiratory disorders.
- squamous cell** (SKWAY-mus SELL) Flat, scalelike epithelial cell.
- stabilize** (STAY-bill-ize) To make or hold firm or steady.
- stable** (STAY-bel) Steady, not varying.
- stage** (STAYJ) Definition of the extent and dissemination of a malignant neoplasm.
- staging** (STAY-jing) Process of determination of the extent of the distribution of a neoplasm.
- stapes** (STAY-pee-z) Inner (medial) one of the three ossicles of the middle ear; shaped like a stirrup.
- Staphylococcus** (STAF-ih-loh-KOK-us) Genus of gram-positive bacteria that divide in more than one plane to form clusters. Plural *staphylococci*.
- starch** (STARCH) Complex carbohydrate made of multiple units of glucose attached together.
- stasis** (STAY-sis) Stagnation in the flow of any body fluid.
- statin** (STAH-tin) A class of drugs used to lower blood cholesterol levels.
- status** (STAT-us) A state or condition.
- status epilepticus** (STAT-us ep-ih-LEP-tik-us) Latin phrase for being in a prolonged or recurrent seizure for longer than a specific time frame.
- stem cell** (STEM SELL) Undifferentiated cell found in a differentiated tissue that can divide to yield the specialized cells in that tissue.
- stenosis** (steh-NOH-sis) Narrowing of a canal or passage.
- stent** (STENT) Wire-mesh tube used to keep arteries open.
- stereopsis** (ster-ee-OP-sis) Three-dimensional vision.
- stereotactic** (STER-ee-oh-TAK-tic) A precise three-dimensional method to locate a lesion.
- stereotype** (STER-ee-oh-tipe) An image held in common by members of a group.
- sterile** (STER-il) Free from all living organisms and their spores; *or* unable to fertilize or reproduce.
- sterility** (ster-RIL-ih-tee) Inability to reproduce.
- sterilization** (STER-ih-lih-ZAY-shun) Process of making sterile.
- sterilize** (STER-ih-lize) To make sterile.
- sternum** (STIR-num) Long, flat bone forming the center of the anterior wall of the chest.
- steroid** (STAIR-oyd) Large family of chemical substances found in many drugs, hormones, and body components.
- stethoscope** (STETH-oh-skope) Instrument for listening to cardiac and respiratory sounds.
- stimulant** (STIM-you-lant) Agent that excites or strengthens.
- stimulation** (stim-you-LAY-shun) Arousal to increased functional activity.
- stimulus** (STIM-you-lus) Something that excites or strengthens the functional activity of an organ or part. Plural *stimuli*.
- stoma** (STOW-mah) Artificial opening.
- strabismus** (strah-BIZ-mus) Turning of an eye away from its normal position.
- strain** (STRAIN) Overstretch or tear in a muscle or tendon.
- stratum basale** (STRAH-tum bay-SAL-eh) Deepest layer of the epidermis, from which the other cells originate and migrate.
- Streptococcus** (strep-toe-KOK-us) Genus of gram-positive bacteria that grow in chains. Plural *streptococci*.
- striated muscle** (STRI-ay-ted MUSS-el) Another term for *skeletal muscle*.
- stricture** (STRICK-shur) Narrowing of a tube.
- stridor** (STRY-door) High-pitched noise made when there is a respiratory obstruction in the larynx or trachea.
- stroke** (STROHK) Acute clinical event caused by impaired cerebral circulation.
- stye** (STEYE) Infection of an eyelash follicle.
- subarachnoid space** (sub-ah-RACK-noyd SPACE) Space between the pia mater and the arachnoid membrane.
- subclavian** (sub-CLAY-vee-an) Underneath the clavicle.
- subcutaneous** (sub-kew-TAY-nee-us) Below the skin. Also called *hypodermic*.
- subdural space** (sub-DYU-ral SPASE) Space between the arachnoid and dura mater layers of the meninges.
- sublingual** (sub-LING-wal) Underneath the tongue.
- subluxation** (sub-luck-SAY-shun) An incomplete dislocation when some contact between the joint surfaces remains.
- submandibular** (sub-man-DIB-you-lar) Underneath the mandible.
- submucosa** (sub-mew-KOH-sa) Tissue layer underneath the mucosa.
- substernal** (sub-STER-nal) Under (behind) the sternum or breastbone.
- suction** (SUK-shun) Use of a catheter to clear the upper airway or other tubes.
- sulcus** (SUL-cuss) Groove on the surface of the cerebral hemispheres that separates gyri. Plural *sulci*.
- superficial** (soo-per-FISH-al) Situated near the surface.
- superior** (soo-PEER-ee-or) Situated above.
- supinate** (SOO-pih-nate) Rotate the forearm so that the surface of the palm faces anteriorly in the anatomical position.
- supination** (soo-pih-NAY-shun) Process of lying face upward or of turning a hand or foot so that the palm or sole is facing up.
- supine** (soo-PINE) Lying face up, flat on your spine.
- suprapubic** (SOO-prah-pyu-bik) Above the symphysis pubis.
- surfactant** (sir-FAK-tant) A protein and fat compound that creates surface tension to hold the lung alveolar walls apart.
- suture** (SOO-chur) Two bones are joined together by a fibrous band continuous with their periosteum, as in the skull; *or* a stitch to hold the edges of a wound together; *or* to stitch the edges of a wound together. Plural *sutures*.
- swab** (SWOB) Wad of cotton used to remove or apply something from/to a surface.
- sympathetic** (sim-pah-THET-ik) Division of the autonomic nervous system operating at an unconscious level.

sympathy (SIM-pah-thee) Appreciation and concern for another person's mental and emotional state.

symphysis (SIM-feh-sis) Two bones joined by fibrocartilage. Plural *symphyses*.

symptom (SIMP-tum) Departure from the normal experienced by a patient.

symptomatic (simp-toe-MAT-ik) Pertaining to the symptoms of a disease.

synapse (SIN-aps) Junction between two nerve cells or a nerve fiber and its target cell, where electrical impulses are transmitted between the cells.

syncope (SIN-koh-pee) Temporary loss of consciousness and posture due to diminished cerebral blood flow.

syndesmosis (sin-dez-MOH-sis) Binding together of two bones with ligaments. Plural *syndesmoses*.

syndrome (SIN-droh-m) Combination of signs and symptoms associated with a particular disease process.

synovial (si-NOH-vee-al) Pertaining to synovial fluid and the synovial membrane.

synthesis (SIN-the-sis) The process of building a compound from different elements.

synthetic (sin-THET-ik) Built up or put together from simpler compounds.

syphilis (SIF-ih-lis) Sexually transmitted disease caused by a spirochete.

syringomyelia (sih-RING-oh-my-EE-lee-ah) Abnormal longitudinal cavities in the spinal cord that cause paresthesias and muscle weakness.

systemic (sis-TEM-ik) Relating to the entire organism.

systemic lupus erythematosus (sis-TEM-ik LOO-pus er-ih-THÉE-mah-toe-sus) Inflammatory connective tissue disease affecting the whole body.

systole (SIS-toe-lee) Contraction of the heart muscle.

systolic (sis-TOL-ik) Pertaining to systole.

T

tachycardia (tack-ih-KAR-dee-ah) Rapid heart rate (above 100 beats per minute).

tachypnea (tack-ip-NEE-ah) Rapid breathing.

talipes (TAL-ip-eze) Deformity of the foot involving the talus.

talus (TAY-luss) The tarsal bone that articulates with the tibia to form the ankle joint.

tampon (TAM-pon) Plug or pack in a cavity to absorb or stop bleeding.

tamponade (tam-poh-NAID) Pathologic compression of an organ, such as the heart.

tapeworm (TAPE-worm) Intestinal parasitic worm.

tarsal (TAR-sal) Pertaining to the tarsus.

tarsus (TAR-sus) The collection of seven bones in the foot that form the ankle and instep; *or* the flat fibrous plate that gives shape to the outer edges of the eyelids.

tartar (TAR-tar) Calcified deposit at the gingival margin of the teeth.

Tay-Sachs disease (TAY SAKS diz-EEZ) Congenital fatal disorder of fat metabolism.

temperament (TEM-per-ah-ment) Predisposition to character or personality.

temporal (TEM-pore-al) Bone that forms part of the base and sides of the skull.

temporal lobe (TEM-pore-al LOBE) Posterior two-thirds of the cerebral hemispheres.

temporomandibular joint (TMJ) (TEM-pore-oh-man-DIB-you-lar JOYNT) The joint between the temporal bone and the mandible.

tendinitis (ten-dih-NYE-tis) Inflammation of a tendon. Also spelled *tendonitis*.

tendon (TEN-dun) Fibrous band that connects muscle to bone.

tenosynovitis (TEN-oh-sin-oh-VIE-tis) Inflammation of a tendon and its surrounding synovial sheath.

teratogen (TER-ah-toe-je-n) Agent that produces fetal deformities.

teratogenesis (TER-ah-toe-JEN-eh-sis) Process involved in producing fetal deformities.

teratogenic (TER-ah-toe-JEN-ik) Pertaining to or capable of producing fetal deformities.

teratoma (ter-ah-TOE-mah) Neoplasm of a testis or ovary containing multiple tissues from other sites in the body.

testicle (TES-tih-kul) One of the male reproductive glands. Also called *testis*.

testicular (tes-TICK-you-lar) Pertaining to the testicle.

testis (TES-tis) A synonym for *testicle*. Plural *testes*.

testosterone (tes-TOSS-ter-own) Powerful androgen produced by the testes.

tetany (TET-ah-nee) Severe muscle twitches, cramps, and spasms.

tetralogy of Fallot (TOF) (te-TRA-loh-je-ov fah-LOW) Set of four congenital heart defects occurring together.

thalamus (THAL-ah-mus) Mass of gray matter underneath the ventricle in each cerebral hemisphere.

thalassemia (thal-ah-SEE-mee-ah) Group of inherited blood disorders that produce a hemolytic anemia.

thelarche (thee-LAR-key) Onset of breast development.

thenar (THAY-nar) The thenar eminence is the fleshy mass at the base of the thumb.

therapeutic (THAIR-ah-PYU-tik) Pertaining to the treatment of a disease or disorder.

therapy (THAIR-ah-pee) Systematic treatment of a disease, dysfunction, or disorder.

thoracentesis (THOR-ah-sen-TEE-sis) Insertion of a needle into the pleural cavity to withdraw fluid or air. Also called *pleural tap*.

thoracic (THOR-ass-ik) Pertaining to the chest (thorax).

thoracic cavity (THOR-ass-ik KAV-ih-tee) Space within the chest containing the lungs, heart, aorta, venae cavae, esophagus, trachea, and pulmonary vessels.

thoracoscopy (thor-ah-KOS-koh-pee) Examination of the pleural cavity with an endoscope.

thoracotomy (thor-ah-KOT-oh-me) Incision through the chest wall.

thorax (THOR-acks) The part of the trunk between the abdomen and the neck.

thrombin (THROM-bin) Enzyme that forms fibrin.

thrombocyte (THROM-boh-site) Another name for *platelet*.

thrombocytic (THROM-bo-SIT-ik) Pertaining to a thrombocyte (platelet).

thrombocytopenia (THROM-boh-site-oh-PEE-nee-uh) Deficiency of platelets in circulating blood.

- thromboembolism** (THROM-boh-EM-boh-lizm) A piece of detached blood clot (embolus) blocking a distant blood vessel.
- thrombolysis** (throm-BOH-lih-sis) Dissolving of a thrombus (clot).
- thrombolytic** (throm-boh-LIT-ik) Able to dissolve a thrombus.
- thrombophlebitis** (THROM-boh-fleh-BY-tis) Inflammation of a vein with clot formation.
- thrombosis** (throm-BOH-sis) Formation of a thrombus.
- thrombus** (THROM-bus) A clot attached to a diseased blood vessel or heart lining. Plural *thrombi*.
- thrush** (THRUSH) Infection with *Candida albicans*.
- thymectomy** (thigh-MEK-toe-me) Surgical removal of the thymus gland.
- thymoma** (thigh-MOH-mah) Benign tumor of the thymus.
- thymus** (THIGH-mus) Lymphoid and endocrine gland located in the mediastinum.
- thyroid** (THIGH-royd) Endocrine gland in the neck; *or* a cartilage of the larynx.
- thyroid hormone** (THIGH-royd HOR-mohn) Collective term for the two thyroid hormones, T3 and T4.
- thyroid storm** (THIGH-royd STORM) Medical crisis and emergency due to excess thyroid hormones.
- thyroidectomy** (thigh-royd-ECK-toe-me) Surgical removal of the thyroid gland.
- thyroiditis** (thigh-royd-EYE-tis) Inflammation of the thyroid gland.
- thyrotoxicosis** (THIGH-roe-toks-ih-KOH-sis) Disorder produced by excessive thyroid hormone production.
- thyrotropin** (thigh-roe-TROH-pin) Hormone from the anterior pituitary gland that stimulates function of the thyroid gland.
- thyroxine** (thigh-ROCK-sin) Thyroid hormone T4, tetraiodothyronine.
- tibia** (TIB-ee-ah) The larger bone of the lower leg.
- tibial** (TIB-ee-al) Pertaining to the tibia.
- tic** (TIK) Sudden, involuntary, repeated contraction of muscles.
- tic douloureux** (tik duh-luh-RUE) Painful, sudden, spasmodic involuntary contractions of the facial muscles supplied by the trigeminal nerve. Also called *trigeminal neuralgia*.
- tinea** (TIN-ee-ah) General term for a group of related skin infections caused by different species of fungi.
- tinnitus** (TIN-ih-tus) Persistent ringing, whistling, clicking, or booming noise in the ears.
- tissue** (TISH-you) Collection of similar cells.
- tolerance** (TOL-er-ans) The capacity to become accustomed to a stimulus or drug.
- tomography** (toe-MOG-rah-fee) Radiographic image of a selected slice of tissue.
- tone** (TONE) Tension present in resting muscles.
- tongue** (TUNG) Mobile muscle mass in the mouth; bears the taste buds.
- tonic** (TON-ik) State of muscular contraction.
- tonic-clonic** (TON-ik-KLON-ik) The body alternates between excessive muscular rigidity (tonic) and jerking muscular contractions (clonic).
- tonic-clonic seizure** (TON-ik-KLON-ik SEE-zhur) Generalized seizure due to epileptic activity in all or most of the brain.
- tonometer** (toe-NOM-eh-ter) Instrument for determining intraocular pressure.
- tonometry** (toe-NOM-eh-tree) The measurement of intraocular pressure.
- tonsil** (TON-sill) Mass of lymphoid tissue on either side of the throat at the back of the tongue.
- tonsillectomy** (ton-sih-LEK-toh-me) Surgical removal of the tonsils.
- tonsillitis** (ton-sih-LIE-tis) Inflammation of the tonsils.
- topical** (TOP-ih-kal) Medication applied to the skin to obtain a local effect.
- torsion** (TOR-shun) The act or result of twisting.
- Tourette syndrome** (tur-ET SIN-drome) Disorder of multiple motor and vocal tics.
- toxic** (TOK-sick) Pertaining to a toxin.
- toxicity** (tok-SIS-ih-tee) The state of being poisonous.
- toxin** (TOK-sin) Poisonous substance formed by a cell or organism.
- trachea** (TRAY-kee-ah) Air tube from the larynx to the bronchi.
- tracheal** (TRAY-kee-al) Pertaining to the trachea.
- tracheostomy** (tray-kee-OST-oh-me) Incision into the windpipe into which a tube can be inserted to assist breathing.
- tracheotomy** (tray-kee-OT-oh-me) Incision made into the trachea to create a tracheostomy.
- tract** (TRACKT) Bundle of nerve fibers with a common origin and destination.
- traction** (TRAK-shun) Pulling or dragging force.
- trait** (TRAYT) A discrete characteristic that has a known quality.
- tranquilizer** (TRANG-kwih-lie-zer) Agent that calms without sedating or depressing.
- transdermal** (tranz-DER-mal) Going across or through the skin.
- transfusion** (tranz-FYU-zhun) Transfer of blood or a blood component from donor to recipient.
- transplant** (TRANZ-plant) The tissue or organ used; *or* the act of transferring tissue from one person to another.
- transplantation** (TRANZ-plan-TAY-shun) The moving of tissue or an organ from one person or place to another.
- transthoracic** (tranz-thor-ASS-ik) Going through the chest wall.
- transurethral** (TRANZ-you-REE-thral) Procedure performed through the urethra.
- transverse** (tranz-VERS) Horizontal plane dividing the body into upper and lower portions.
- transverse fracture** (tranz-VERS FRAK-chur) A fracture perpendicular to the long axis of the bone.
- tremor** (TREM-or) Small, shaking, involuntary, repetitive movements of hands, extremities, neck, or jaw.
- triceps brachii** (TRY-sepz BRAY-key-eye) Muscle of the arm that has three heads or points of origin.
- Trichomonas** (trik-oh-MOH-nas) A parasite causing an STD.
- trichomoniasis** (TRIK-oh-moh-NIE-ah-sis) Infection with *Trichomonas vaginalis*.
- tricuspid** (try-KUSS-pid) Having three points; a tricuspid heart valve has three flaps.
- trigeminal** (try-GEM-in-al) The fifth (V) cranial nerve, which has three branches supplying the face.
- triglyceride** (try-GLISS-eh-ride) Lipid containing three fatty acids.
- trimester** (TRY-mes-ter) One-third of the length of a full-term pregnancy.

triplegia (try-**PLEE**-jee-ah) Paralysis of three limbs.

triplegic (try-**PLEE**-jik) Pertaining to or suffering from triplegia.

trochanter (troh-**KAN**-ter) One of two bony prominences near the head of the femur.

tropic (**TROH**-pik) Tropic hormones stimulate other endocrine glands to produce hormones.

tuberculosis (too-**BER**-kyu-**LOW**-sis) Infectious disease that can infect any organ or tissue.

tumor (**TOO**-mor) Any abnormal swelling.

tunica (**TYU**-nih-kah) A covering layer in the wall of a blood vessel or other tubular structure.

tunica vaginalis (**TYU**-nih-kah vaj-ih-**NAHL**-iss) The sheath of the testis and epididymis.

tympanic (tim-**PAN**-ik) Pertaining to the tympanic membrane (eardrum) or tympanic cavity.

tympanostomy (tim-pan-**OS**-toe-me) Surgically created new opening in the tympanic membrane to allow fluid to drain from the middle ear.

U

ulna (**UL**-nah) The medial and larger of the bones of the forearm.

ulnar (**UL**-nar) Pertaining to the ulna or to any of the structures (artery, vein, nerve) named after it.

ultrasonography (**UL**-trah-soh-**NOG**-rah-fee) Delineation of deep structures using sound waves.

ultraviolet (ul-trah-**VIE**-oh-let) Light rays at a higher frequency than the violet end of the spectrum.

umbilical (um-**BILL**-ih-kal) Pertaining to the umbilicus or the center of the abdomen.

umbilicus (um-**BILL**-ih-kuss) Pit in the abdomen where the umbilical cord entered the fetus.

unilateral (you-nih-**LAT**-er-al) Pertaining to one side.

urea (you-**REE**-ah) End product of nitrogen metabolism.

uremia (you-**REE**-me-ah) The complex of symptoms arising from renal failure.

ureter (you-**REE**-ter) Tube that connects a kidney to the urinary bladder.

ureteral (you-**REE**-ter-al) Pertaining to the ureter.

ureteroscope (you-**REE**-ter-oh-scope) Endoscope to view the inside of the ureter.

ureteroscopy (you-**REE**-ter-**OS**-koh-pee) To examine the ureter.

urethra (you-**REE**-thra) Canal leading from the bladder to the outside.

urethritis (you-ree-**THRI**-tis) Inflammation of the urethra.

urinalysis (yur-ih-**NAL**-ih-sis) Examination of urine to separate it into its elements and define their kind and/or quantity.

urinary (**YUR**-in-ary) Pertaining to urine.

urinate (**YUR**-in-ate) To pass urine.

urination (yur-ih-**NAY**-shun) The act of passing urine.

urine (**YUR**-in) Fluid and dissolved substances excreted by the kidney.

urological (yur-oh-**LOJ**-ih-kal) Pertaining to urology.

urologist (you-**ROL**-oh-jist) Medical specialist in disorders of the urinary system.

urology (you-**ROL**-oh-jee) Medical specialty of disorders of the urinary system.

urticaria (ur-tee-**KARE**-ee-ah) Rash of itchy wheals (hives).

uterine (**YOU**-ter-in) Pertaining to the uterus.

uterus (**YOU**-ter-us) Organ in which a fertilized egg develops into a fetus.

uvea (**YOU**-vee-ah) Middle coat of the eyeball—includes the iris, ciliary body, and choroid.

uveitis (you-vee-**EYE**-tis) Inflammation of the uvea.

uvula (**YOU**-vyu-lah) Fleshy projection of the soft palate.

V

vaccinate (**VAK**-sin-ate) To administer a vaccine.

vaccination (vak-sih-**NAY**-shun) Administration of a vaccine.

vaccine (**VAK**-seen) Preparation to generate active immunity.

vagina (vah-**JIE**-nah) Female genital canal extending from the uterus to the vulva.

vaginal (**VAJ**-ih-nal) Pertaining to the vagina.

vaginitis (vah-jih-**NIE**-tis) Inflammation of the vagina.

vaginosis (vah-jih-**NOH**-sis) A disease of the vagina.

vagus (**VAY**-gus) Tenth (**X**) cranial nerve; supplies many different organs throughout the body.

varicocele (**VAIR**-ih-koh-seal) Varicose veins of the spermatic cord.

varicose (**VAIR**-ih-kos) Characterized by or affected with varices.

varicosities (vair-ih-**KOS**-ih-teez) Collection of varicose veins.

varix (**VAIR**-iks) Dilated, tortuous vein. Plural *varices*.

vasectomy (vah-**SEK**-toe-me) Excision of a segment of the ductus deferens.

vasoconstriction (**VAY**-soh-con-**STRIK**-shun) Reduction in the diameter of a blood vessel.

vasodilation (**VAY**-soh-die-**LAY**-shun) Increase in the diameter of a blood vessel.

vasovasostomy (**VAY**-soh-vay-**SOS**-toe-me) Reanastomosis of the ductus deferens to restore the flow of sperm. Also called *vasectomy reversal*.

vegetative (**VEJ**-eh-tay-tiv) Functioning unconsciously, as plant life is assumed to do.

vein (**VANE**) Blood vessel carrying blood toward the heart.

vena cava (**VEE**-nah **KAY**-vah) One of the two largest veins in the body. Plural *venae cavae*.

venogram (**VEE**-noh-gram) Radiograph of veins after injection of radiopaque contrast material.

venous (**VEE**-nuss) Pertaining to a vein.

ventilation (ven-tih-**LAY**-shun) Movement of gases into and out of the lungs.

ventilator (**VEN**-tih-lay-tor) Device that breathes for the patient.

ventral (**VEN**-tral) Pertaining to the belly or situated nearer to the surface of the belly.

ventricle (**VEN**-trih-ke1) Chamber of the heart (pumps blood) or brain (produces cerebrospinal fluid).

venule (**VEN**-yule or **VEEN**-yule) Small vein leading from the capillary network.

vernix caseosa (VER-nicks kay-see-OH-sah) Cheesy substance covering the skin of the fetus.

verruca (ver-ROO-cah) Wart caused by a virus.

vertebra (VER-teh-brah) One of the bones of the spinal column. Plural *vertebrae*.

vertebral (VER-teh-bral) Pertaining to a vertebra.

vertex (VER-teks) Topmost point of the vault of the skull.

vertigo (VER-tih-go) Sensation of spinning or whirling.

vesicle (VES-ih-kull) Small sac containing liquid; for example, a blister.

vestibular (ves-TIB-you-lar) Pertaining to the vestibule.

vestibule (VES-tih-byul) Space at the entrance to a canal.

vestibulectomy (ves-tib-you-LEK-toe-me) Surgical excision of the vulva.

villus (VILL-us) Thin, hairlike projection, particularly of a mucous membrane lining a cavity. Plural *villi*.

virus (VIE-rus) Group of infectious agents that require living cells for growth and reproduction.

viscera (VISS-er-ah) Internal organs, particularly in the abdomen.

visceral (VISS-er-al) Pertaining to the internal organs.

viscosity (viss-KOS-ih-tee) The resistance of a fluid to flow.

viscous (VISS-kus) Sticky fluid that is resistant to flow.

viscus (VISS-kus) Any single internal organ.

visual acuity (VIH-zhoo-al ah-KYU-ih-tee) Sharpness and clearness of vision.

vitamin (VYE-tah-min) Essential organic substance necessary in small amounts for normal cell function.

vitreous (VIT-ree-us) Vitreous humor is a gelatinous liquid in the posterior cavity of the eyeball with the appearance of glass.

vocal (VOH-kal) Pertaining to the voice.

void (VOYD) To evacuate urine or feces.

voluntary muscle (VOL-un-tare-ee MUSS-el) Muscle that is under the control of the will.

vomer (VOH-mer) Lower nasal septum.

vulva (VUL-vah) Female external genitalia.

vulvar (VUL-var) Pertaining to the vulva.

vulvodynia (vul-voh-DIN-ee-uh) Chronic vulvar pain.

vulvovaginal (VUL-voh-VAJ-ih-nal) Pertaining to the vulva and vagina.

vulvovaginitis (VUL-voh-vaj-ih-NIE-tis) Inflammation of the vulva and vagina.

W

warfarin (WAR-fuh-rin) Anticoagulant; also used as rat poison; trade name *Coumadin*.

Weber test (VAY-ber, WEB-er TEST) Test for sensorineural hearing loss.

wheal (WHEEL) Small, itchy swelling of the skin. Wheals raised by an injection do not itch. Also called *hives*.

whiplash (WHIP-lash) Symptoms caused by sudden, uncontrolled extension and flexion of the neck, often in an automobile accident.

white matter (WIGHT MAT-er) Regions of the brain and spinal cord occupied by bundles of axons.

whooping cough (HOO-ping KAWF) Infectious disease with spasmodic, intense cough ending on a whoop (stridor). Also called *pertussis*.

Wilms tumor (WILMZ TOO-mor) Cancerous kidney tumor of childhood. Also known as *nephroblastoma*.

wound (WOOND) Any injury that interrupts the continuity of skin or a mucous membrane.

X

xenograft (ZEN-oh-graft) A graft from another species. Also called *heterograft*.

Y

yeast (YEEST) Microscopic fungus.

Z

zygoma (zye-GO-mah) Bone that forms the prominence of the cheek.

zygomatic (zye-go-MAT-ik) Pertaining to the zygoma.

zygote (ZYE-goat) Cell resulting from the union of the sperm and egg.

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