Medical Terminology

7TH EDITION

AN ILLUSTRATED GUIDE

医学术语图解指南

英文版·第7版·

Barbara Janson Cohen, MEd
Ann DePetris, RN, MSA, CCRP

--本书特色--

★ 精细插图使得重点词汇易于理解和记忆

★ 每个章节前预习提示材料为丰富的内容提供要点

★ 案例与问题呈现出医学词汇在临床场景中的具体应用

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Wolters Kluwer Health | Lippincott Williams & Wilkins

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Medical Terminology

7TH EDITION

AN ILLUSTRATED GUIDE

Dedications

I am most grateful to Ann DePetris, a skilled and knowledgeable contributor to this text. Ann has shown a great commitment to the development of this revision, always willing to share the work and bringing her clinical expertise to the project. Thanks, Ann, for being a great and generous coworker. It's to you that I dedicate this edition of the book.

Barbara Cohen

To some very special people in my life—my husband Michael, son Paul, daughter Marie, and her husband Bobby. This wouldn't have been possible without all of your loving patience and unconditional support. And to Barbara Cohen—the uniqueness and high standards reflected in *Medical Terminology: An Illustrated Guide*, are the direct result of your unbelievable dedication and skills. You are a remarkable author and educator, and a true mentor. Barbara, it has been an honor and pleasure to work with you on this seventh edition. It's to all of you I dedicate my contributions to this edition.

Ann DePetris

Preface

Knowledge of medical terminology is fundamental to a wide variety of health care fields. This book is designed to satisfy the basic learning requirements needed to practice in any health career setting. In the course of your training and future careers, you will need to learn thousands of new terms. The job might be overwhelming if not for learning the skills of dividing the words into their component parts. These roots, suffixes, and prefixes appear over and over in different terms but retain the same meanings. Knowing these meanings will help you define and remember a host of words. This process is like using a set of building blocks to assemble different structures. Using a more scientific example, it's like using the four bases in DNA to code for all the amino acids needed to make proteins.

After the introductory sections, each chapter begins with an illustrated overview of a specific body system with definitions of the key terms related to that system. Tables of word parts and exercises on using them follow. Turning to the abnormal, a section on diseases and treatments is included, followed by definitions of relevant key terms. The section of supplementary terms includes words and phrases that are "good to know" if time allows or if someone is particularly interested in that specialty. The sequence of the systems chapters differs slightly from that found in traditional anatomy and physiology books. The organization emphasizes their clinical importance, starting with the cardiovascular, respiratory, and digestive systems and continuing with systems treated in more specialized fields, such as the urinary, reproductive, and musculoskeletal systems. The chapters can be taken out of order once the introductory units are completed.

We have tried to make this book easy to use and full of reinforcing drills. We have also included many phonetic pronunciations so you can recognize technical terms when they are spoken and can comfortably use them yourself. The online student learning resources offer many additional activities and an audio glossary. Each chapter opens with a short case study. Some of the words and abbreviations in these studies will be unfamiliar at the start, but return to the opening study after you have completed the chapter, and hopefully, it should make more sense.

You are probably at the beginning of a long journey to gain accomplishment in your chosen field. We hope that this book will aid you in that endeavor and provide a basis on which to build your career.

Barbara Cohen and Ann DePetris

Acknowledgments

In our constant quest to improve the quality of *Medical Terminology: An Illustrated Guide*, we rely on the advice and talents of many people. First, we want to acknowledge the observant instructors and students who take the time to suggest improvements in the text. Also we thank the reviewers, who make many valuable suggestions for revisions. The clinicians who contributed current information in their respective fields include: Margaret O. Burr, BS, RVT, RDMS; Michael DePetris, R. Ph.; Paul DePetris, BS; Mary Green, PA-C; Nancy Gurzick, RDH, BS, MA; Marie Howard, PT, DPT; Robert Howard, DO; Bonnie L. Lehman BSN, MS, CNM; Christine Licari, RD; Pamela Morgan, OTR/L; Christina Olkowski, MT (ASCP); Donna Robertson, RNC, MSA; Anne Tobin, RN, MSN, ACNP; and Terese A. Trost MA, RT. The information they shared will help guide students through various career paths. Thanks to you all.

As always, we are grateful to the dedicated staff of Lippincott Williams & Wilkins; especially for this edition, Staci Wolfson, Product Manager, who worked on every aspect of the book and its ancillaries; and David Troy, Executive Editor, who oversaw this project from start to finish.

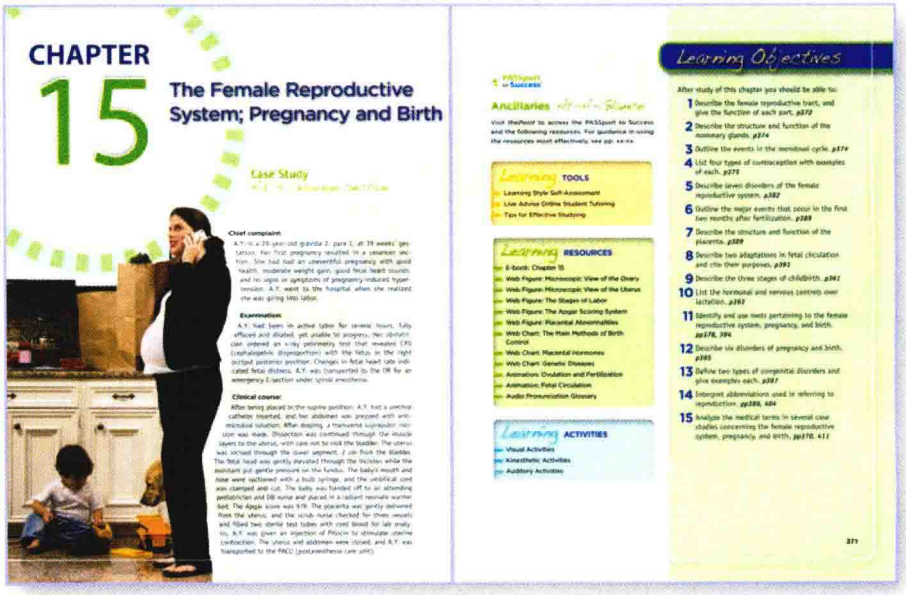
Barbara Cohen
Ann DePetris

User's Guide

Medical Terminology: An Illustrated Guide, 7th edition, was created and developed to help you master the language of medicine. The tools and features in the text will help you work through the material presented. Please take a few moments to look through this User's Guide, which will introduce you to the features that will enhance your learning experience.

Chapter Contents, Objectives, and Pretests

Chapter Opening Case Studies and Objectives help you identify learning goals and familiarize yourself with the materials covered in the chapter. **Chapter Pretests** quiz students on previous knowledge at the beginning of each chapter. Students should take each Chapter Pretest before starting the chapter and again after completing the chapter in order to measure progress.



Detailed Illustrations

Illustrations: Detailed, full-color drawings and photographs illuminate the chapters. These include clinical photographs and tissue micrographs. The many figures amplify and clarify the text and are particularly helpful for visual learners.

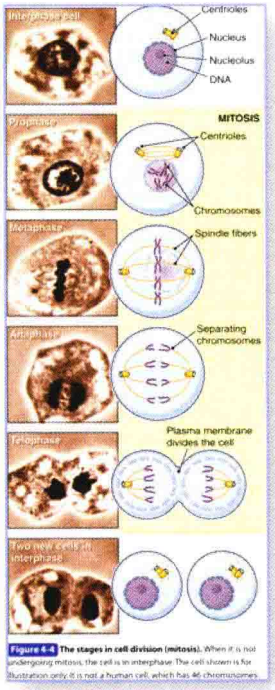


Figure 4-4 The stages in cell division (mitosis). When it is not undergoing mitosis, the cell is in interphase. The cell shown is for illustration only. It is not a human cell, which has 46 chromosomes.

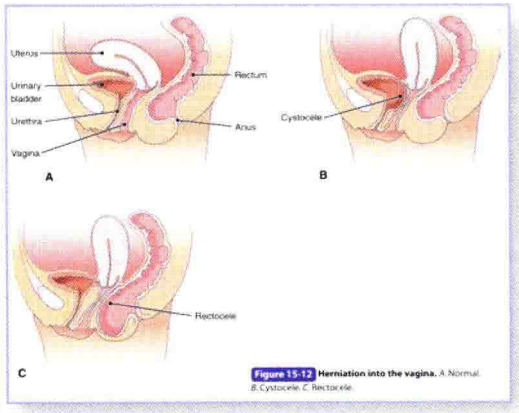


Figure 15-12 Herniation into the vagina. A. Normal. B. Cystocele. C. Rectocele.

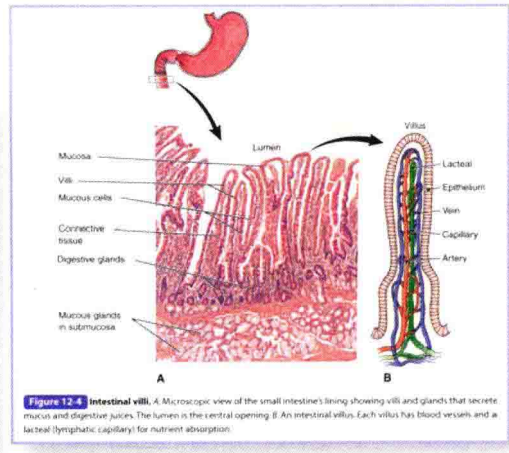


Figure 12-4 Intestinal villi. A. Microscopic view of the small intestine's lining showing villi and glands that secrete mucus and digestive juices. The lumen is the central opening. B. An intestinal villus. Each villus has blood vessels and a lacteal (lymphatic capillary) for nutrient absorption.

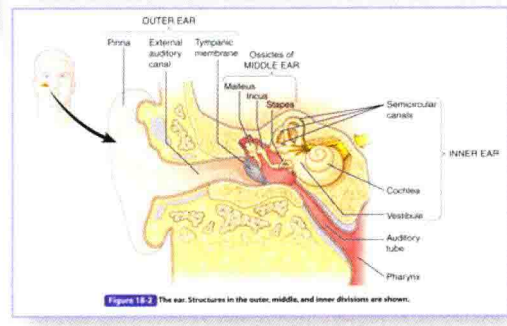
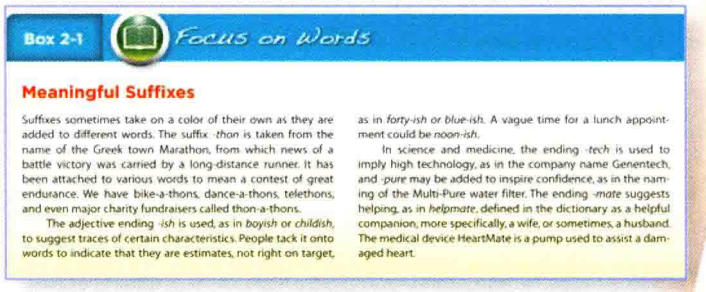


Figure 18-2 The ear. Structures in the outer, middle, and inner divisions are shown.

Feature Boxes

FEATURE BOXES CALL OUT IMPORTANT INFORMATION

Focus on Words boxes provide historical or other interesting information on select terms within a chapter.



Box 2-1 Focus on Words

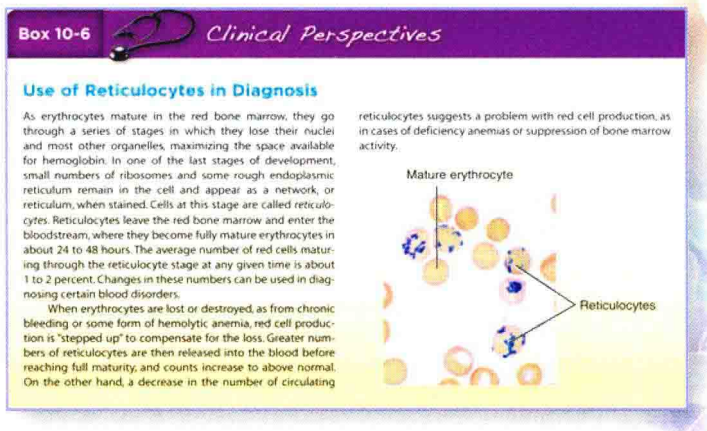
Meaningful Suffixes

Suffixes sometimes take on a color of their own as they are added to different words. The suffix *-thon* is taken from the name of the Greek town Marathon, from which news of a battle victory was carried by a long-distance runner. It has been attached to various words to mean a contest of great endurance. We have bike-a-thons, dance-a-thons, telethons, and even major charity fundraisers called thon-a-thons.

The adjective ending *-ish* is used, as in *boyish* or *childish*, to suggest traces of certain characteristics. People tack it onto words to indicate that they are estimates, not right on target, as in *forty-ish* or *blue-ish*. A vague time for a lunch appointment could be *noon-ish*.

In science and medicine, the ending *-tech* is used to imply high technology, as in the company name Genentech, and *-pure* may be added to inspire confidence, as in the naming of the Multi-Pure water filter. The ending *-mate* suggests helping, as in *helpmate*, defined in the dictionary as a helpful companion, more specifically, a wife, or sometimes, a husband. The medical device HeartMate is a pump used to assist a damaged heart.

Clinical Perspectives boxes focus on body processing as well as techniques used in clinical settings.



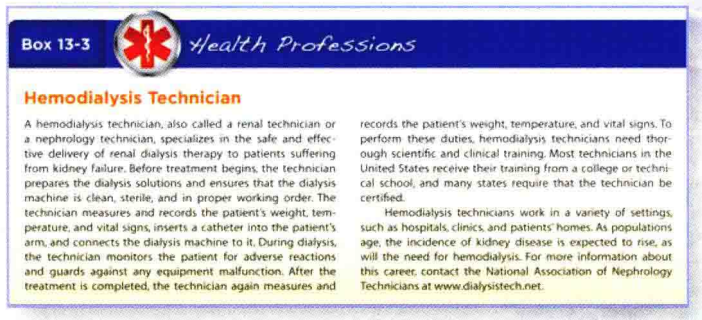
Box 10-6 Clinical Perspectives

Use of Reticulocytes in Diagnosis

As erythrocytes mature in the red bone marrow, they go through a series of stages in which they lose their nuclei and most other organelles, maximizing the space available for hemoglobin. In one of the last stages of development, small numbers of ribosomes and some rough endoplasmic reticulum remain in the cell and appear as a network, or reticulum, when stained. Cells at this stage are called *reticulocytes*. Reticulocytes leave the red bone marrow and enter the bloodstream, where they become fully mature erythrocytes in about 24 to 48 hours. The average number of red cells maturing through the reticulocyte stage at any given time is about 1 to 2 percent. Changes in these numbers can be used in diagnosing certain blood disorders.

When erythrocytes are lost or destroyed, as from chronic bleeding or some form of hemolytic anemia, red cell production is "stepped up" to compensate for the loss. Greater numbers of reticulocytes are then released into the blood before reaching full maturity, and counts increase to above normal. On the other hand, a decrease in the number of circulating reticulocytes suggests a problem with red cell production, as in cases of deficiency anemias or suppression of bone marrow activity.

Health Professions boxes focus on a variety of health careers, showing how the knowledge of medical terminology is applied in real-world careers.



Box 13-3 Health Professions

Hemodialysis Technician

A hemodialysis technician, also called a renal technician or a nephrology technician, specializes in the safe and effective delivery of renal dialysis therapy to patients suffering from kidney failure. Before treatment begins, the technician prepares the dialysis solutions and ensures that the dialysis machine is clean, sterile, and in proper working order. The technician measures and records the patient's weight, temperature, and vital signs, inserts a catheter into the patient's arm, and connects the dialysis machine to it. During dialysis, the technician monitors the patient for adverse reactions and guards against any equipment malfunction. After the treatment is completed, the technician again measures and records the patient's weight, temperature, and vital signs. To perform these duties, hemodialysis technicians need thorough scientific and clinical training. Most technicians in the United States receive their training from a college or technical school, and many states require that the technician be certified.

Hemodialysis technicians work in a variety of settings, such as hospitals, clinics, and patients' homes. As populations age, the incidence of kidney disease is expected to rise, as will the need for hemodialysis. For more information about this career, contact the National Association of Nephrology Technicians at www.dialysistech.net.

For Your Reference boxes provide supplemental information for terms within a chapter.

Box 21-2 For Your Reference

Types of Skin Lesions

LESION	DESCRIPTION
bulla *BUL-a*	raised, fluid-filled lesion larger than a vesicle (plural: bullae)
fissure *FISH-ur*	crack or break in the skin
macule *MAK-ul*	flat, colored spot
nodule *NOD-ul*	solid, raised lesion larger than a papule; often indicative of systemic disease
papule *PAP-ul*	small, circular, raised lesion at the surface of the skin
plaque *plak*	superficial, flat, or slightly raised differentiated patch more than 1 cm in diameter
pustule *PUS-tul*	raised lesion containing pus; often in a hair follicle or sweat pore
ulcer *UL-ser*	lesion resulting from destruction of the skin and perhaps subcutaneous tissue
vesicle *VES-i-kal*	small, fluid-filled, raised lesion; a blister or bleb
wheal *wel*	smooth, rounded, slightly raised area often associated with itching; seen in urticaria (hives), such as that resulting from allergy

Word Part Tables

DETAILED TABLES

Present roots, prefixes, and suffixes covered in each chapter in an easy-to-reference format (with examples of their use in medical terminology).

Word Part Knowledge aids in the learning and understanding of common terminology.

Table 19-1 Roots for Bones and Joints

Root	Meaning	Example	Definition of Example
oste/o	bone	osteopenia *os-tē-ō-PĒ-nē-a*	deficiency of bone tissue
myel/o	bone marrow; also, spinal cord	myeloid *MĪ-e-loyd*	pertaining to or resembling bone marrow
chondr/o	cartilage	chondroblast *KON-drō-blast*	a cartilage-forming cell
arthr/o	joint	arthrosis *ar-THRŌ-sis*	joint; condition affecting a joint
synov/i	synovial fluid, joint, or membrane	asynovia *a-sin-Ō-vē-a*	lack of synovial fluid
burs/o	bursa	peribursal *per-i-BER-sal*	around a bursa

Exercises

Exercises are designed to test your knowledge before you move to the next learning topic that follows each table.

EXERCISE 19-1

Fill in the blanks:

1. Osteolysis (*os-tē-OL-i-sis*) is destruction of _____
2. Myelogenous (*mī-e-LOJ-e-nus*) means originating in _____
3. Arthrodesis (*ar-THROD-e-sis*) is fusion of a(n) _____
4. A chondroma (*kon-DRŌ-ma*) is a tumor of _____
5. A bursolith (*BUR-sō-lith*) is a stone in a(n) _____

Define the following words:

6. osteoid (*OS-tē-oyd*) _____
7. myelopoiesis (*mī-e-lō-poy-Ē-sis*) _____
8. chondromalacia (*kon-drō-ma-LĀ-shē-a*) _____
9. arthrocentesis (*ar-thrō-sen-TĒ-sis*) _____
10. bursitis (*bur-SĪ-tis*) _____
11. synovial (*si-NŌ-vē-al*) _____

Write words for the following definitions:

12. inflammation of bone and bone marrow _____
13. a bone-forming cell _____

Term Tables

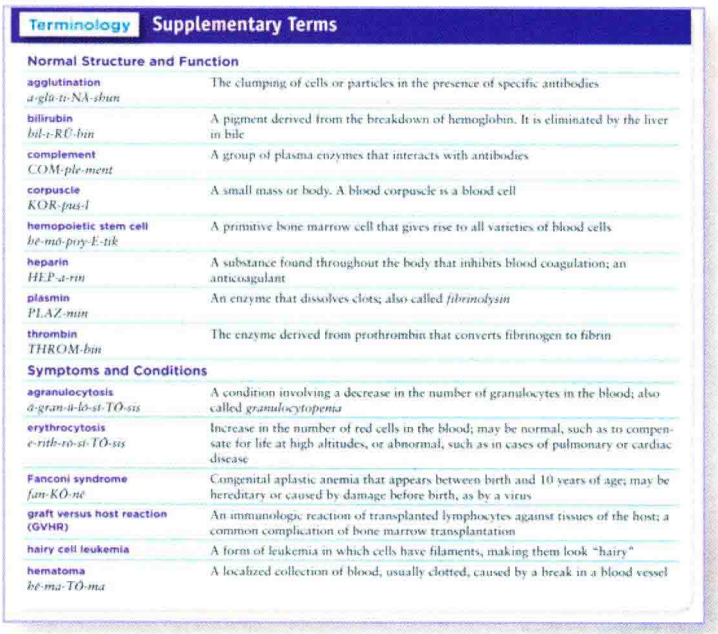
Key Terms include the most commonly used terms.

Terminology Key Terms

Normal Structure and Function

agranulocyte *A-gran-ū-lō-sīt*	A white blood cell that does not have visible granules in its cytoplasm. Agranulocytes include lymphocytes and monocytes (see Box 10-1)
albumin *al-BŪ-min*	A simple protein found in blood plasma
antibody *AN-ti-bod-ē*	A protein produced in response to and interacting specifically with an antigen
antigen *AN-ti-jen*	A substance that induces the formation of an antibody
B cell	A lymphocyte that matures in lymphoid tissue and is active in producing antibodies; B lymphocyte (*LIM-fō-sīt*)
band cell	An immature neutrophil with a nucleus in the shape of a band; also called a stab cell. Band cell counts are used to trace infections and other diseases (see Fig. 10-4)
basophil *BĀ-sō-fil*	A granular leukocyte that stains strongly with basic dyes; active in allergic reactions
blood *blud*	The fluid that circulates in the cardiovascular system (roots: hem/o, hemat/o)
coagulation *kō-ag-ū-LĀ-shun*	Blood clotting
cross-matching	Testing the compatibility of donor and recipient blood in preparation for a transfusion. Donor red cells are mixed with recipient serum to look for an immunologic reaction. Similar tests are done on tissues before transplantation
electrolyte *e-LEK-trō-līt*	A substance that separates into charged particles (ions) in solution; a salt. Term also applied to ions in body fluids
eosinophil *ē-ō-SIN-ō-fil*	A granular leukocyte that stains strongly with acidic dyes; active in allergic reactions and defense against parasites

Supplementary Terms list more specialized terms.



Terminology Supplementary Terms

Normal Structure and Function

agglutination *a-glū-ti-NĀ-shun*	The clumping of cells or particles in the presence of specific antibodies
bilirubin *bil-i-RŪ-bin*	A pigment derived from the breakdown of hemoglobin. It is eliminated by the liver in bile
complement *COM-ple-ment*	A group of plasma enzymes that interacts with antibodies
corpuscle *KOR-pus-l*	A small mass or body. A blood corpuscle is a blood cell
hemopoietic stem cell *hē-mō-poy-E-tik*	A primitive bone marrow cell that gives rise to all varieties of blood cells
heparin *HEP-a-rin*	A substance found throughout the body that inhibits blood coagulation; an anticoagulant
plasmin *PLAZ-min*	An enzyme that dissolves clots; also called *fibrinolysin*
thrombin *THROM-bin*	The enzyme derived from prothrombin that converts fibrinogen to fibrin

Symptoms and Conditions

agranulocytosis *ā-gran-ū-lō-sī-TŌ-sis*	A condition involving a decrease in the number of granulocytes in the blood; also called *granulocytopenia*
erythrocytosis *e-rith-rō-sī-TŌ-sis*	Increase in the number of red cells in the blood; may be normal, such as to compensate for life at high altitudes, or abnormal, such as in cases of pulmonary or cardiac disease
Fanconi syndrome *fan-KŌ-nē*	Congenital aplastic anemia that appears between birth and 10 years of age; may be hereditary or caused by damage before birth, as by a virus
graft versus host reaction (GVHR)	An immunologic reaction of transplanted lymphocytes against tissues of the host; a common complication of bone marrow transplantation
hairy cell leukemia	A form of leukemia in which cells have filaments, making them look "hairy"
hematoma *hē-ma-TŌ-ma*	A localized collection of blood, usually clotted, caused by a break in a blood vessel

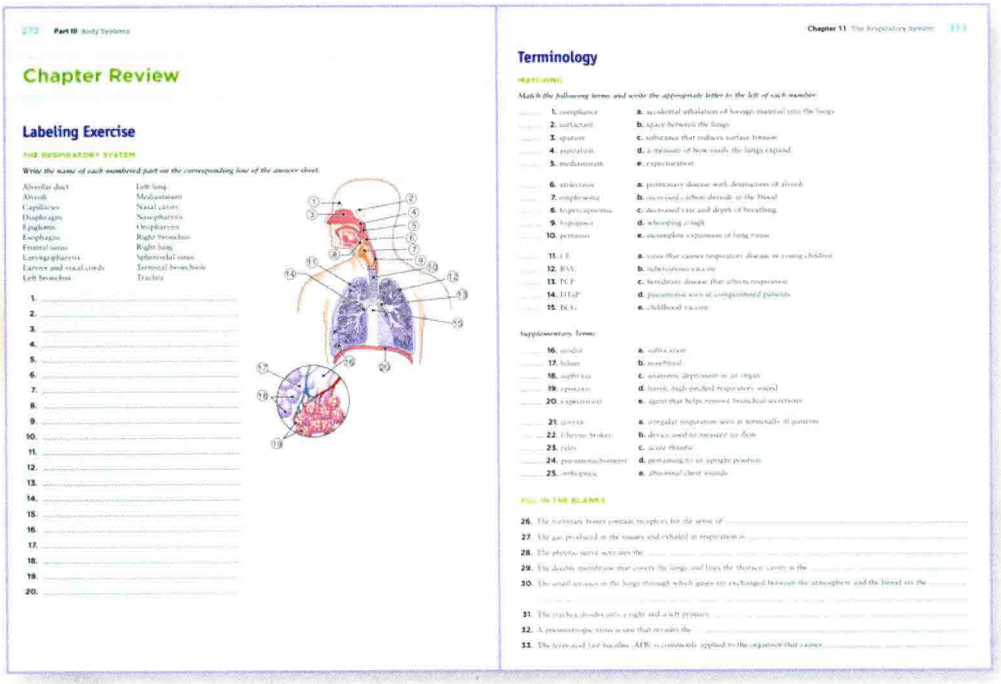
Abbreviations are listed for common terms.

Terminology Abbreviations

Ab	Antibody	**ITP**	Idiopathic thrombocytopenic purpura
Ag	Antigen, also silver	**lytes**	Electrolytes
AIDS	Acquired immunodeficiency syndrome	**MCH**	Mean corpuscular hemoglobin
ALL	Acute lymphoblastic (lymphocytic) leukemia	**MCHC**	Mean corpuscular hemoglobin concentration
AML	Acute myeloblastic (myelogenous) leukemia	**mcL**	Microliter
		mcm	Micrometer
APTT	Activated partial thromboplastin time	**MCV**	Mean corpuscular volume
BT	Bleeding time	**MDS**	Myelodysplastic syndrome
CBC	Complete blood count	**mEq**	Milliequivalent
CGL	Chronic granulocytic leukemia	**NHL**	Non-Hodgkin lymphoma
CLL	Chronic lymphocytic leukemia	**PCV**	Packed cell volume
CML	Chronic myelogenous leukemia	**pH**	Scale for measuring hydrogen ion concentration (acidity or alkalinity)
crit	Hematocrit		
DIC	Disseminated intravascular coagulation	**Ph**	Philadelphia chromosome
Diff	Differential count	**PMN**	Polymorphonuclear (neutrophil)
EBV	Epstein-Barr virus	**poly**	Neutrophil
ELISA	Enzyme-linked immunosorbent assay	**polymorph**	Neutrophil
EPO, EP	Erythropoietin	**PT**	Prothrombin time; pro time
ESR	Erythrocyte sedimentation rate	**PTT**	Partial thromboplastin time
FFP	Fresh frozen plasma	**RBC**	Red blood cell; red blood (cell) count
Hb, Hgb	Hemoglobin	**seg**	Neutrophil
Hct, Ht	Hematocrit	**SLE**	Systemic lupus erythematosus
HDN	Hemolytic disease of the newborn	**T(C)T**	Thrombin (clotting) time
HIV	Human immunodeficiency virus	**TTP**	Thrombotic thrombocytopenic purpura
IF	Intrinsic factor	**vWF**	von Willebrand factor
Ig	Immunoglobulin	**WBC**	White blood cell; white blood (cell) count

Chapter Review Exercises

Chapter Review Exercises are designed to test your knowledge of the chapter material and appear at the end of each chapter.



272 Part III Body Systems

Chapter Review

Labeling Exercise

THE RESPIRATORY SYSTEM

Write the name of each numbered part on the corresponding line of the answer sheet.

Alveolar duct
Alveoli
Capillaries
Diaphragm
Epiglottis
Esophagus
Frontal sinus
Laryngopharynx
Larynx and vocal cords
Left bronchus
Left lung
Mediastinum
Nasal cavity
Nasopharynx
Oropharynx
Right bronchus
Right lung
Sphenoidal sinus
Terminal bronchiole
Trachea

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Chapter 11 The Respiratory System 273

Terminology

MATCHING

Match the following terms and write the appropriate letter to the left of each number.

1. compliance
2. surfactant
3. sputum
4. expiration
5. mediastinum

a. accidental inhalation of foreign material into the lungs
b. space between the lungs
c. substance that reduces surface tension
d. a measure of how much the lungs expand
e. expectorant

6. atelectasis
7. emphysema
8. hypercapnia
9. hypopnea
10. pertussis

a. pulmonary disease with destruction of alveoli
b. increased carbon dioxide in the blood
c. decreased rate and depth of breathing
d. whooping cough
e. incomplete expansion of lung tissue

11. LTB
12. RSV
13. PCP
14. HMP
15. DOA

a. virus that causes respiratory disease in young children
b. tuberculosis vaccine
c. hereditary disease that affects respiration
d. pneumonia seen in compromised patients
e. childhood vaccine

Supplementary Terms

16. stridor
17. lobar
18. asphyxia
19. apnea
20. expectorant

a. suffocation
b. nonbreathing
c. anatomic designation of an organ
d. harsh, high-pitched respiratory sound
e. agent that helps remove bronchial secretions

21. apnea
22. Cheyne-Stokes
23. cyst
24. pneumotachometer
25. orthopnea

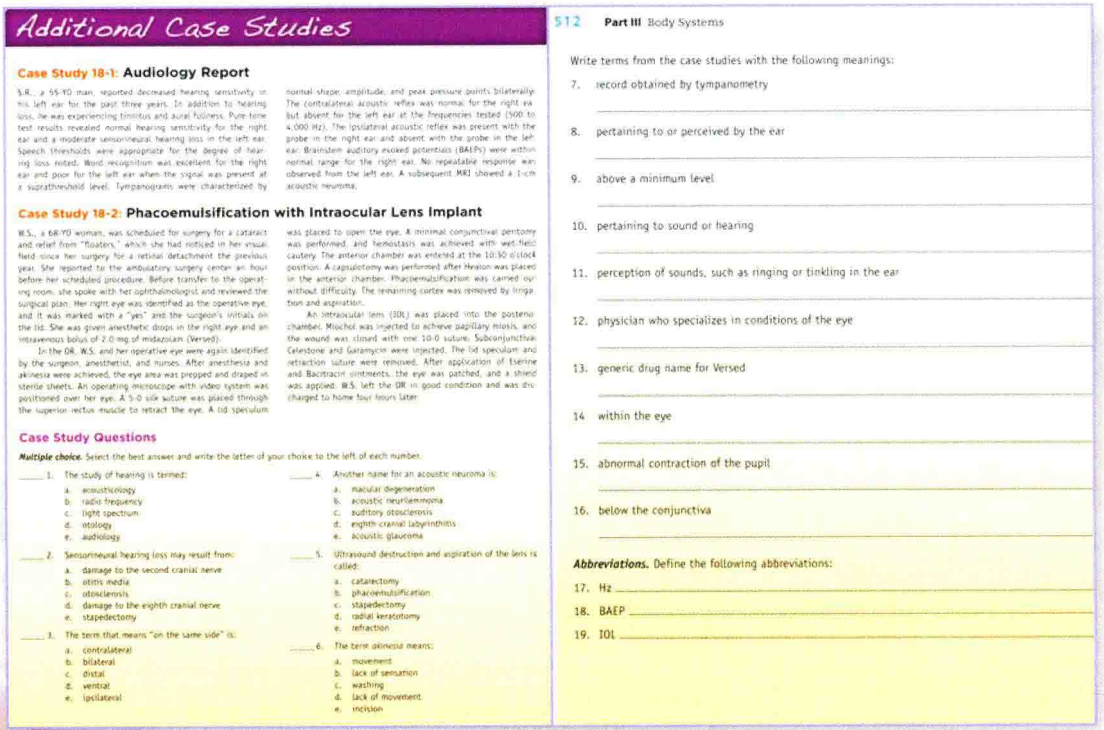
a. irregular respiration seen in terminally ill patients
b. device used to measure air flow
c. acute rhinitis
d. pertaining to an upright position
e. abnormal chest sounds

FILL IN THE BLANKS

26. The pulmonary branch contains receptors for the sense of _____
27. The gas produced in the tissues and exhaled in respiration is _____
28. The phrenic nerve activates the _____
29. The double membrane that covers the lungs and lines the thoracic cavity is the _____
30. The small air sacs in the lungs through which gases are exchanged between the atmosphere and the blood are the _____
31. The trachea divides into a right and a left primary _____
32. A pneumatocyst stores a gas that provides the _____
33. The term *acid fast bacillus* (AFB) is commonly applied to the organism that causes _____

Case Studies and Case Study Questions

Case Studies and **Case Study Questions** in every chapter present terminology in the context of a medical report. These are an excellent review tool as they test your cumulative knowledge of medical terminology, and put terminology into a real-world context.



Additional Case Studies

Case Study 18-1: Audiology Report

S.R., a 55-YO man, reported decreased hearing sensitivity in his left ear for the past three years. In addition to hearing loss, he was experiencing tinnitus and aural fullness. Pure-tone test results revealed normal hearing sensitivity for the right ear and a moderate sensorineural hearing loss in the left ear. Speech thresholds were appropriate for the degree of hearing loss noted. Word recognition was excellent for the right ear and poor for the left ear when the signal was present at a suprathreshold level. Tympanograms were characterized by normal shape, amplitude, and peak pressure points bilaterally. The contralateral acoustic reflex was normal for the right ear but absent for the left ear at the frequencies tested (500 to 4,000 Hz). The ipsilateral acoustic reflex was present with the probe in the right ear and absent with the probe in the left ear. Brainstem auditory evoked potentials (BAEPs) were within normal range for the right ear. No repeatable response was observed from the left ear. A subsequent MRI showed a 1-cm acoustic neuroma.

Case Study 18-2: Phacoemulsification with Intraocular Lens Implant

W.S., a 68-YO woman, was scheduled for surgery for a cataract and relief from "floaters," which she had noticed in her visual field since her surgery for a retinal detachment the previous year. She reported to the ambulatory surgery center an hour before her scheduled procedure. Before transfer to the operating room, she spoke with her ophthalmologist and reviewed the surgical plan. Her right eye was identified as the operative eye, and it was marked with a "yes" and the surgeon's initials on the lid. She was given anesthetic drops in the right eye and an intravenous bolus of 2.0 mg of midazolam (Versed).

In the OR, W.S. and her operative eye were again identified by the surgeon, anesthetist, and nurses. After anesthesia and akinesia were achieved, the eye area was prepped and draped in sterile sheets. An operating microscope with video system was positioned over her eye. A 5-0 silk suture was placed through the superior rectus muscle to retract the eye. A lid speculum was placed to open the eye. A minimal conjunctival peritomy was performed, and hemostasis was achieved with wet-field cautery. The anterior chamber was entered at the 10:30 o'clock position. A capsulotomy was performed after Healon was placed in the anterior chamber. Phacoemulsification was carried out without difficulty. The remaining cortex was removed by irrigation and aspiration.

An intraocular lens (IOL) was placed into the posterior chamber. Miochol was injected to achieve pupillary miosis, and the wound was closed with one 10-0 suture. Subconjunctival Celestone and Garamycin were injected. The lid speculum and retraction suture were removed. After application of Isopto Eserine and Bacitracin ointments, the eye was patched, and a shield was applied. W.S. left the OR in good condition and was discharged to home four hours later.

Case Study Questions

Multiple choice. Select the best answer and write the letter of your choice to the left of each number.

_____ 1. The study of hearing is termed:
a. acoustiology
b. radio frequency
c. light spectrum
d. otology
e. audiology

_____ 2. Sensorineural hearing loss may result from:
a. damage to the second cranial nerve
b. otitis media
c. otosclerosis
d. damage to the eighth cranial nerve
e. stapedectomy

_____ 3. The term that means "on the same side" is:
a. contralateral
b. bilateral
c. distal
d. ventral
e. ipsilateral

_____ 4. Another name for an acoustic neuroma is:
a. macular degeneration
b. acoustic neurilemmoma
c. auditory otosclerosis
d. eighth cranial labyrinthitis
e. acoustic glaucoma

_____ 5. Ultrasound destruction and aspiration of the lens is called:
a. cataractomy
b. phacoemulsification
c. stapedectomy
d. radial keratotomy
e. refraction

_____ 6. The term akinesia means:
a. movement
b. lack of sensation
c. washing
d. lack of movement
e. incision

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Write terms from the case studies with the following meanings:

7. record obtained by tympanometry _____
8. pertaining to or perceived by the ear _____
9. above a minimum level _____
10. pertaining to sound or hearing _____
11. perception of sounds, such as ringing or tinkling in the ear _____
12. physician who specializes in conditions of the eye _____
13. generic drug name for Versed _____
14. within the eye _____
15. abnormal contraction of the pupil _____
16. below the conjunctiva _____

Abbreviations. Define the following abbreviations:

17. Hz _____
18. BAEP _____
19. IOL _____

Flashcard Starter Set

More than 100 flashcards are included at the back of the text. Add to this collection with your own cards as you work through the text (please be sure to see the Student Resources section for information on creating your own set of flashcards using the Flashcard Generator).

Student Resources and the PASSport to Success®

Different people learn in different ways. Some students learn by reading. Others take in new information by listening to their instructors. You may prefer to write down notes. A simple self-assessment can tell you whether you are a visual, auditory, or kinesthetic learner. When you understand the way that you process information most effectively, you can choose resources that fit your learning style. The PASSport to Success® is a practical system that lets you learn faster, remember more, and achieve success.

GETTING STARTED WITH THE STUDENT RESOURCES AND THE PASSPORT TO SUCCESS®

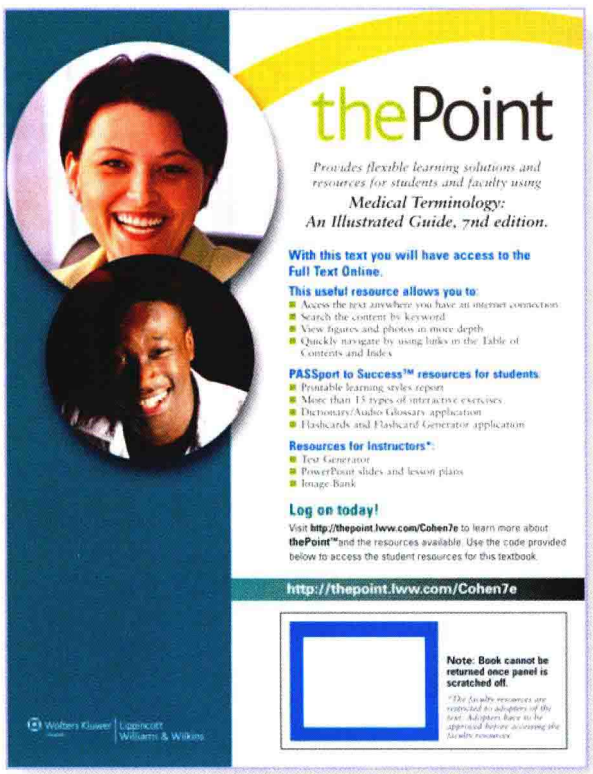
PASSport to Success®

Your journey begins with your textbook, *Medical Terminology: An Illustrated Guide*, 7th edition. The textbook is filled with icons that guide you to resources and activities that are designed for your personal learning style.

PASSport to Success®

Go to the pronunciation glossary on the Student Resources to hear these words pronounced.

Inside the front cover of your textbook, you will find your personal access code. Use it to log on to *thePoint*—the companion Web site for this textbook. On the Web site, you can search and sort learning activities by learning style and choose the ones that will help you understand the material quickly and efficiently.



DISCOVER YOUR LEARNING STYLE!

If you like to study animations, illustrations, and diagrams, you may be a visual learner. If you like to sound out new words or discuss material with other students, you may be an auditory (hearing) learner. If you take a lot of notes during class and benefit from hands-on learning activities, you are probably a kinesthetic (touch) learner.

Most people have both a primary and a secondary learning style—and the PASSport to Success® helps you identify both! Once you know *how* you learn best, you can choose learning activities that will help you master new material more efficiently.

Discovering your learning style is easy—and fun! Here's how to begin:

1. Use your web browser to navigate to http://lww. mypowerlearning.com/login.isf.
2. If this is the first time you are visiting the MyPowerLearning Web site, enter your scratch-off access code from the inside cover of this book into the "Access Code" box and click "Begin!"
3. MyPowerLearning will send you an e-mail with your username and password you will use to log in to MyPowerLearning and complete your Learning Style Assessment (*Don't worry—There are no wrong answers!*).
4. Print and read your own personal learning styles report to better understand how to study most effectively and efficiently.

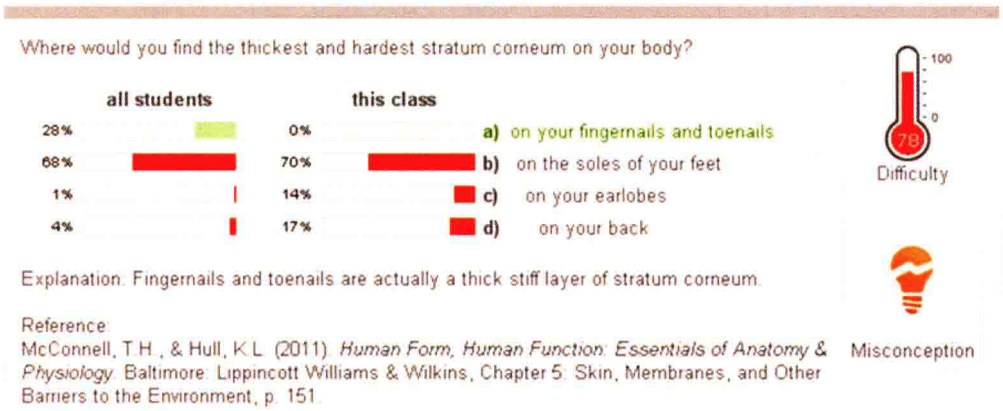
Once you know your own personal learning style, access thePoint.lww.com/Cohen7e on *thePoint*—the companion Web site for *Medical Terminology: An Illustrated Guide*, 7th Edition, which will allow you to search and sort PASSport to Success® activities by learning style to choose the most effective way for you to learn the material. Resources and activities available to students include the following:

- Multiple choice, true–false, and fill-in-the blank questions
- Categories
- Listen & Label and Look & Label
- Word Building
- Zooming In
- Pronounce It
- Spell It
- Sound It
- Hangman
- Crossword Puzzles
- Quiz Show
- Concentration
- Case Studies and Case Study Questions
- Dictionary and Audio Glossary application
- Flashcards and Flashcard Generator applications
- Animations
- Audio Drills (which allow for chapter audio files to be downloaded as MP3 files)
- Chapter Quizzes

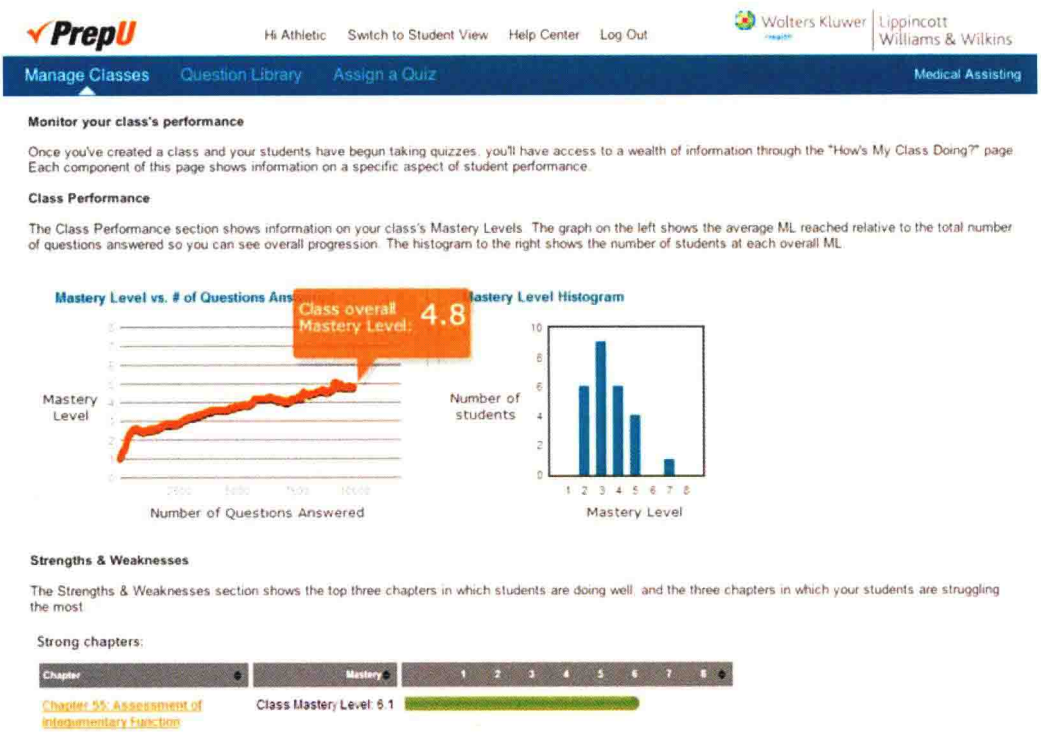
PrepU
Smarter than the average quiz

PrepU: An Integrated Adaptive Learning Solution

PrepU, Lippincott's adaptive learning system, is an integral component of *Medical Terminology: An Illustrated Guide*.



PrepU uses repetitive and adaptive quizzing to build mastery of medical terminology concepts, helping students to learn more while giving instructors the data they need to monitor each student's progress, strengths, and weaknesses. The hundreds of questions in PrepU offer students the chance to drill themselves on medical terminology and support their review and retention of the information they've learned. Each question not only provides an explanation for the correct answer, but also references the text page for the student to review the source material. PrepU for *Medical Terminology* challenges students with questions and activities that coincide with the materials they've learned in the text and gives students a proven tool to learn medical terminology more effectively. For instructors, PrepU provides tools to identify areas and topics of student misconception; instructors can use these rich course data to assess students' learning and better target their in-class activities and discussions, while collecting data that are useful for accreditation.



A learning experience individualized to each student. An adaptive learning engine, PrepU offers questions customized for each student's level of understanding, challenging students at an appropriate pace and difficulty level, while dispelling common misconceptions. As students review and master PrepU's questions, the system automatically increases the difficulty of questions, effectively driving student understanding of medical terminology to a mastery level. PrepU not only helps students to improve their knowledge, but also helps foster their test-taking confidence.

PrepU works! PrepU works, and not just because we say so. PrepU efficacy is *backed by data*:

1. In an introductory nursing course at Central Carolina Technical College, student course outcomes were positively associated with PrepU usage. The students who answered the most PrepU questions in the class also had the best overall course grades.
2. In a randomized, controlled study at UCLA, students using PrepU (for biology) achieved 62 percent higher learning gains than those who did not.

To see a video explanation of PrepU, go to http://download.lww.com/wolterskluwer_vitalstream_com/mktg/prepuvid/prepupromo01.html.

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