# **Quick Medical Terminology:**

A Self-Teaching Guide 4th Edition

**Shirley Soltesz Steiner, R.N., M.S.** 



John Wiley & Sons, Inc.

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#### For

Dorothy Elizabeth Wilson Soltesz who is my mom and best friend.

Mildred Hall who is my godmother and may not know how much she influenced my growing up years. Mildred assured me I had what it takes to go to college, get an education, and create a better life.

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## To the Reader

#### What It Is and Who It's For

So you want to learn the language of medicine. Great! Everything you need for learning medical terminology is right in your hands. The language of medicine is precise and technically oriented. It is among the great tools of the mind for better understanding and more accurate communication between all practitioners of the life sciences. Learning this special language is your opportunity to be among them. *Quick Medical Terminology* can prepare you for a new job or even a new career in one of the nation's fastest growing job markets, Health Care and Allied Health Services.

In *Quick Medical Terminology* you'll learn to pronounce, spell, and define medical terms used in today's health care settings. You will use a word-building strategy that helps you discover connections and relationships among word roots, prefixes, and suffixes. You'll learn the meaning of each part of a complex medical term and be able to put the parts together and define the term. Very quickly you'll develop a large repertoire of useful medical terms, much greater than the 500-plus terms presented in this text.

Quick Medical Terminology is an enjoyable way to learn the very special language of medicine by yourself, at your own pace. If you speak and understand English and have a high school education or equivalent, you'll quickly learn the basics and much more.

### **How to Use This Program**

We suggest you use the following steps to approach your learning.

#### Step 1. Pre- and Post-Testing

If it's worth learning, isn't it worth knowing you have succeeded? You will find two Final Self-Tests in the back of your guide. We suggest you take one test before you begin your study and take another after you have completed all your lessons. Pre- and post-testing shows you how much you have learned. Either one of the final tests may be used first.

#### Step 2. Self-Instructional Unit

This self-teaching guide lets you proceed at a pace that is right for you. It provides everything you need to complete each of the ten instructional units, which include:

*Introduction and Mini-Glossary.* The first page of each unit introduces you to what you will cover and provides a Mini-Glossary of the terms and word parts you'll be learning. You may want to refer to it as you proceed through the lesson.

**Numbered frames.** Numbered frames are the building blocks of each unit. A frame presents a small amount of information and expects you to read and think about that information. Then it asks you to respond to it.

The way you respond may be:

- to select a medical term or definition from a list of suggested answers.
- to write a medical term for a given definition.
- to draw a conclusion and write it in your own words.

#### Example

*Emesis* is a term that means vomiting. A term that means excessive vomiting is *hyperemesis*. Underline the part of the medical term meaning excessive.

Α	gallbladder	attack	can	cause	excessive	vomiting.	Write	the	term	that	describes	this
un	pleasant co	ndition										

#### Example

Myelo / dysplasia means defective development of the spinal cord.

Chondro means cartilage. What does chondro / dysplasia mea	an?

Answers. As you work through the unit, you'll find the correct answers on the left-hand side of the page. It's a good idea to use a folded piece of paper to cover the answer until you give your own. Your answer will be correct most of the time, but when your answer doesn't match ours, be sure you know why it doesn't. You may need to go back and review a few frames before continuing.

**Pronunciation Guide.** When you work with a medical term for the first time, the answer column guides your pronunciation of the new term. Take the opportunity to practice pronouncing each new term correctly several times. Say it aloud or subverbally (saying it to yourself).

#### Example

chondrodysplasia (kon'dro dis pla'zhe)

Review Exercises. Some units are longer than others, so to help you plan your breaks, we designed several short learning sequences into each unit. A brief

Review Exercise occurs at the end of a learning sequence. If you need a break, stop after a Review Exercise. Proceed at a pace that is right for you. We urge you to complete an entire unit before calling it a day.

**Summary Exercise.** Each of the ten instructional units ends with a Summary Exercise. This final exercise pulls together all the new terms you worked with in the unit. Using the pronunciation guide alongside each term in the list, take the opportunity to practice pronouncing each term correctly and defining it aloud or subverbally. It really works! You might ask a friend to pronounce each term in the list so you can practice spelling it when you hear it.

[This is a good classroom exercise for instructor-guided spelling practice, pronunciation practice and defining the terms.]

*Unit Self-Test.* Each unit ends with a Self-Test in two parts. Part 1 asks you to match a list of definitions with the correct medical terms. Part 2 asks you to construct the correct medical term for each definition listed. All terms and definitions are covered in the instructional unit you have just completed. Here's another opportunity to see how you're doing.

#### Step 3. Unit Review Sheet

Beginning on page 247, you'll find a two-part Review Sheet for each of the ten units of instruction that make up this self-teaching program. We suggest you begin every new unit (beginning with Unit 2) by completing a Review Sheet for the previous unit. These exercises are an important part of the learning program and will help you recall and practice the terms and definitions of the preceding unit before you begin the next one.

Part 1: Given a term, or word part, write the meaning.

Part 2: Given the definition of a term, write the correct term.

Correct answers are provided.

You may use these Review Sheets anytime, and as often as you wish. We suggest you make several photocopies of each Review Sheet and use them at any time to practice what you've already covered. There is never enough practice.

## **Objectives of the Program**

When you have finished *Quick Medical Terminology*, you will have formed well over 500 medical terms using our word-building strategy combining prefixes, suffixes, and word roots to create complex medical terms.

- 1. You will learn to understand medical terms by breaking them into their component parts and learning the meaning of the parts.
- 2. You will learn to construct medical terms from component parts to express given definitions.
- 3. You will learn to pronounce, spell, and define medical terms used in this book.
- 4. You will be able to apply this word-building strategy to terms covered in this book and others you will come across as you work in a health care setting.

## **Pronunciation Key**

The primary stress mark (') is placed after the syllable bearing the heavier stress or accent; the secondary stress mark (') follows a syllable having a somewhat lighter stress, as in *com·men·da·tion* (kom' ən·dā' shən).

a	add, map	m	move, seem	u	up, done
ā	ace, rate	n	nice, tin	er	urn, term
air	care, air	ng	ring, song	y <del>oo</del>	use, few
ä	palm, father	O	odd, hot	$\mathbf{v}$	vain, eve
b	bat, rub	ō	open, so	w	win, away
ch	check, catch	ô	order, jaw	У	yet, yearn
d	dog, rod	oi	oil, boy	Z	zest, muse
e	end, pet	ou	out, now	zh	vision, pleasure
ē	even, tree	$\overline{00}$	pool, food	ə	the schwa, an
f	fit, half	00	took, full		unstressed vowel
g	go, log	p	pit, stop		representing the
g h	hope, hate	r	run, poor		sound spelled
i	it, give	S	see, pass		a in above
ī	ice, write	sh	sure, rush		e in sicken
j	joy, ledge	t	talk, sit		i in clarity
k	cool, take	th	thin, both		o in melon
1	look, rule	th	this, bathe		u in focus

Source: Slightly modified "Pronunciation Key" in Funk & Wagnalls Standard College Dictionary. Copyright © 1977 by Harper & Row, Publishers, Inc. Reprinted by permission of the publisher.

The schwa (ə) varies widely in quality from a sound close to the (u) in *up* to a sound close to the (i) in *it* as heard in pronunciations of such words as *ballot*, *custom*, *landed*, *horses*.

The (r) in final position as in *star* (stär) and before a consonant as in *heart* (härt) is regularly indicated in the respellings, but pronunciations without (r) are unquestionably reputable. Standard British is much like the speech of Eastern New England and the Lower South in this feature.

In a few words, such as *button* (but'n) and *sudden* (sud'n), no vowel appears in the unstressed syllable because the (n) constitutes the whole syllable.

## The Word-Building Strategy

Quick Medical Terminology teaches you a strategy for word-building. The vocabulary of medicine is large and complex, but you can learn much of it by breaking down a complex term into its meaningful parts and putting together a word from those meaningful parts. Let's begin.

All words have a word root. The *root* is the base or the foundation

of the word, regardless of what other word, unit, or syllable may be attached to it. For example: do is the root of undo and doing. What is the root of import, export, transport, and support? port In this example, the words suffix, prefix, affix, and fixation have fix root 3. What is the root in tonsill/itis, tonsill/ectomy, and tonsill/ar? tonsil 4. Two or more words may be combined to form a meaningful compound word. Using two or more of the following words, create some meaningful compound words: Some Suggestions: over stand overhang hang wear overcome under come understand grand out grandstand outcome, etc.

1.

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yes	5. Is teaspoon a compound word?
two words are combined to make a meaningful compound term	Explain your answer.
1	6. A word root and a whole word may form a compound word. But the root must be in its <i>combining form</i> . The root plus a vowel (a, e, i, o, u) makes the combining form. Here are two compound terms, micr/o/scope and tel/e/cast.
micr tel	What are the word roots?;
micr/o tel/e	What are the combining forms?
phon/ograph gastr/o/enteric laryng/o/spasm	7. Underline the combining form in each of the following words:  phon/o/graph gastr/o/enter/ic laryng/o/spasm
a word root plus a vowel (a, e, i, o, u)	8. The combining form in compound words is made up of a plus a
a combining form	9. In tel/e/graph and tel/e/phone the root plus a vowel is necessary to make these compound words. What is this special form called?
	<ul><li>10.</li><li>Compound terms may be composed of which of the following?</li><li>a) two or more whole words</li><li>b) a whole word and a word root</li><li>c) a word root combining form and a word</li></ul>
all three	Your answer?
combining form	11. Two roots may join together but one of them will be in a special form called the

	12. What kind of words are these: microfilm and telecommunication?
compound terms	
a combining form (a root plus a vowel) a whole word	What word parts are these terms made of?
	13.  Many medical terms are made of a combining form, a word root, and an ending. In the term micr/o/scop/ic,
micr/o	the combining form is;
-ic	the ending is;
micr-	the root is;
	Is there another word root?
scop-	What might it be?
vowel	14. There are two word roots in micr/o/scop/ic. The root <i>micr</i> is in the combining form because it is attached to a word that begins with a consonant. There is no need to add a vowel to the root <i>scop</i> because the ending <i>-ic</i> begins with a
electrostatic	15. Build a term from the combining form electr/o, the word root stat, and the ending -ic.
	16. In the word hydroelectric,
word root	electr is the;
word	hydro is the;
ending	-ic is the
	17. Endings change the basic meaning of a root or foundation word. Examine the following sentences:  Joe's job was blast-ing the rocks.  Tejo was blast-ed by the cannon.
ending	The meaning of <i>blast</i> is changed by its

yes the endings added to the root changed its meaning	18. A <i>suffix</i> is a word unit or syllable added to the end of a word or root that alters its meaning and creates a new word. In the words plant/er, plant/ed, and plant/ing, are these endings also suffixes? Explain your answer.
porter one who carries	19. You can change the meaning of a word (or root) by adding a suffix. The suffix -er means one who. The word port means to carry. Add the suffix to the word root, write the word, and explain what it means.
suffix	20. When <i>-able</i> is added to the end of <i>read</i> it forms the new word <i>read-able</i> . –Able is a meaningful unit added to the end of a word, creating a new word. So <i>-able</i> is a
im-, sup-, trans-	21. A prefix is a meaningful unit joined to the beginning of a word or root that creates a new term. In the words im/plant, sup/plant, and trans/plant, the prefixes are, and, and
prefix	22. In the word dis/please, <i>dis-</i> is a meaningful unit that comes before the word and changes the meaning of please; dis- is a
	23. Meaningful units that go in front of a root are called prefixes. Meaningful units placed after a root are called suffixes.
	Label the units in this word:
prefix root suffix	un- manage -able
meaning word	24. A suffix or a prefix is called a meaningful unit because when it is attached or added to a root or word it changes the

our suggestion: -itis is a word unit added to the end of a word altering its meaning	25. Explain why -itis in tendonitis is called a suffix.
meaning	OK, let's review what you've covered.
	26
root	26. The fundamental base from which meaningful terms grow or are formed is called the
	27.
	A meaningful word or unit placed in front of a root or word is a
prefix	·
	28.
suffix	A syllable or word part joined to the end of a root or word and changes its meaning is a
	29.
combining form	When a vowel (a, e, i, o, u) is added to a word root, the word part resulting is called the
	30.
compound word	When two or more word roots combine to form a meaningful word, that word is called a

## **List of Illustrations**

### Unit 1

(All illustrations created by Sakrantip Blazicek of Ocala, Florida)

- 1.1 Acromegaly
- 1.2 The Upper Digestive Tract (and Heart)
- 1.3 Electrocardiography (ECG)
- 1.4 Electrocardiogram

## Unit 2

- 2.1 The Upper Respiratory Tract
- 2.2 The Head

### Unit 3

- 3.1 Adduction/Abduction
- 3.2 The Great Cavities
- 3.3 Cocci Bacteria

#### Unit 4

- 4.1 The Male Reproductive Organs (Midline Section)
- 4.2 The Female Reproductive Organs (Midline Section)
- 4.3 Path of EGD Examination
- 4.4 Anomaly, Aneurysm, Hernia, Ptosis
- 4.5 Hernia, Ptosis, Anomaly, Aneurysm
- 4.6 The Female Urinary Tract
- 4.7 The Male Urinary Tract

#### Unit 5

- 5.1 The Oral Cavity
- 5.2 The Digestive Tract

### Unit 6

- 6.1 Coronary Arteries—Nourishment to the Heart
- 6.2 The Cardiovascular System

### Unit 8

- 8.1 Cyst
- 8.2 Polyp
- 8.3 Papilla
- 8.4 Papule
- 8.5 Excresence
- 8.6 Abnormal Tissues
- 8.7 Dorsal/Ventral Surfaces
- 8.8 Midline of the Body
- 8.9 Regions of the Abdomen

#### Unit 9

- 9.1 The Female Reproductive Organs (Midline Section)
- 9.2 The Female Reproductive Organs (Anterior View)
- 9.3 Embryos at 5, 6, and 8 Weeks
- 9.4 Fetus in Utero, Beginning 9th Week
- 9.5 Female Pudenda

#### Unit 10

- 10.1 The Eye
- 10.2 The Lacrimal Apparatus
- 10.3 The Respiratory Tract (Cutaway Views)

# Basic Word Roots and Common Suffixes

In Unit 1 you will work with basic word roots and a handful of common suffixes. (These are listed in the Mini-Glossary, below.) You'll examine many compound medical terms and discover meanings for all the parts. You'll practice adding various endings to roots and combining forms. By study and practice you'll make more than 30 meaningful medical terms.

#### **Mini-Glossary**

acr/o (extremities) eti/o (cause) cardi/o (heart) gastr/o (stomach) cyan/o (blue) gram/o (record) leuk/o (white) cyt/o (cell) dermat/o, derm/o (skin) duoden/o (duodenum) path/o (disease) electr/o (electrical)

-algia (pain)

-ectomy (excision of)

-itis (inflammation of)

-ologist (one who studies, a specialist)

megal/o (enlarged)

-ology (study of)

-osis, -a, -y (condition

of, usually abnormal)

-ostomy (forming a new opening)

-otomy (incision into)

-tome (instrument that cuts)

1.

Acr/o means extremities (arms, legs, and the head). To refer to one or more extremities physicians use words containing

arms, legs, and head	2. Extremities are the parts of the body farthest from the center of the body. You could say these parts are located on the extreme ends of the main body. What parts are they?
	3. Extremities in the human body are also known as limbs. When referring to the arms or legs we use the word acr/o. What term could designate the head as an extremity?
acr, acr/o	<del></del>
extremities or limbs	4. When you read a term containing acr or acr/o (the combining form), it should make you think of
arms, legs, head	5. Each of the terms acr/o/megaly, acr/o/cyan/osis, and acr/o/dermat/itis has a common word root that refers to what parts of the body?,, and
acr/o	Write the combining form of the word root meaning extremities.
oversized, big, or enlarged	6.  Megal/o means enlarged or oversized. A word containing megal/o means the part or organ of the body is
enlargement of, oversized, or enlarged	7. The suffix -y denotes a condition, usually abnormal. Acr/o/megal/y means the patient's abnormal condition involves extremities that are



Figure 1.1 Acromegaly

acr/o/megal/y acromegaly ak rō meg' a lē	8. The illustration on page 2 shows a man with abnormally large hands and head. The term that describes this man's abnormal condition is /
acro/megaly	9. Occasionally you may see a person with very large hands, feet, nose, and chin. The abnormal condition may be
	10. Here are two new suffixes: -ologist means one who studies, a specialist -itis means inflammation of (something) dermat/o refers to the skin.
skin	A dermat/ologist is a specialist in the field of medicine who specializes in treating disease of the
inflammation of the	Dermat/itis means
skin	Underline the word root in the following medical terms.
	Write what each means.
<u>Dermatitis</u>	Dermatitis means
<u>Dermat</u> ologist	Dermatologist means
	Now, circle the suffix in each term.
acr/o/dermat/itis acrodermatitis ak rō der' ma tī' tis	11. Acrodermatitis is a term meaning inflammation of the skin of the extremities. A person displaying red, inflamed hands may have a condition of / /
acrodermatitis	12. A busy homemaker may experience an inflammatory condition of her hands and lower arms. The physician may describe this abnormal condition as
inflammation of extremities skin	13. Remembering that the term acrodermatitis means inflammation of the skin of the extremities, explain the following:  -itis is a suffix that means
extremities	-itis is a suffix that means,

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	14. <i>Cyan/o</i> means blue or blueness. The suffix <i>-osis</i> denotes an abnormal condition. Cyan/osis means an abnormal condition of blueness.
abnormal blueness of the extremities	What do you think acr/o/cyan/osis means?
	The part of the medical term that tells you the color blue is present
cyan or cyan/o	is
-osis	The part of the medical term denoting that an abnormal condition exists is the suffix
-osis	15. To denote an abnormal condition, use the suffix
condition extremities	Acrocyanosis may be defined as the abnormal of blueness of the
acr/o/cyan/osis acrocyanosis ak rō sī ə nō'sis	Blueness of the extremities is usually due to a reduced amount of oxygen supply to the hands and feet. If the lungs don't take in enough oxygen or the heart doesn't pump enough good blood around the body, the patient's hands and feet may exhibit an abnormal condition described as / /
acrocyanosis	17. When the lungs cannot move enough oxygen into the blood because of asthma, blueness of the extremities may result. This is another cause of
the condition of blueness of the extremities	18. Acrocyanosis means
-osis	19. Dermat/osis denotes an abnormal skin condition. The suffix that means abnormal condition is
cyan/osis cyanosis sī a nō'sis	20. Osis is a suffix meaning (usually abnormal) condition. Now, build a term that means an abnormal condition of blueness:

dermat/osis dermatosis der ma tō'sis	21. Build a term meaning a skin condition (abnormal, of course):
skin	22. The Greek word <i>tomos</i> means a piece cut off. From this word we have many words that refer to cutting: ectomy (cut out), otomy (cut into), -tome (an instrument that cuts). A dermatome is an instrument that cuts
dermat/ome dermatome derm'ə tōm	23. A dermatome is a surgical instrument. When a physician wants a thin slice of a patient's skin for a skin graft, the doctor asks for a
a condition of bluish discoloration of the skin	24. Dermat, dermat/o refer to the skin. Cyan/o/derm/a means
a disease or abnormal condition of the skin	Dermat/osis means
cyan/o/derm/a cyanoderma sī ə nō der'mä	25. Cyanoderma sometimes occurs when children swim too long in cold water. If a patient has a bluish discoloration of the skin, for any reason, the person may exhibit / / /
leuk or leuk/o	26.  Leuk/o means white or abnormally white. In the term leuk/o/derm/a, the part that means white is
a condition of white skin, or abnormally white skin	27. Leukoderma means
leuk/o/derm/a leukoderma l <del>oo</del> kō der' mä	28. Some people have much less color in their skin than is normal. Their skin is white. They may have / /

	29. $Cyt/o$ refers to a cell or cellsology is a suffix that means the study of.
the study of cells	What does cyt/ology mean?
white blood cell	30. There are several kinds of cells in blood. One kind is the leuk/o/cyte. A leukocyte is a
leuk/o/cyt/e leukocyte lōo' kō sīt	31. There are several different kinds of cells in the bloodstream. When a physician wants to know how many "infection-fighting" white blood cells are circulating, the doctor asks the lab technician to count the / /cytes.
leuk/emia leukemia l <del>oo</del> kē' mē ə	32.  Emia is a suffix meaning blood. When a person's blood contains far too many white blood cells, it may indicate a condition sometimes described as "blood cancer." A term meaning literally white blood is/
acr/o megal y	33. In the term <i>acromegaly</i> , the combining form used for extremities is, the word root for oversized is, and the suffix meaning <i>condition of</i> is
a condition of oversized heart, or enlargement of the heart	34. Now try this. <i>Cardi/o</i> means heart. Another suffix meaning condition of is -a. What does megal/o/cardi/a mean?
megal/o/card/ia megalocardia meg a lō kär' dē ä	35. When any muscle exercises, it gets larger. If the heart muscle overexercises, an enlarged condition of the heart may occur. It is described as