Introduction to Medical Terminology

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Chapter Outline

Learning Outcomes

After completing this chapter, you should be able to:

1. Explain why it is important to understand medical terms.

2. Define each of the three basic word parts.

3. Explain how word parts are put together to make a medical term, and give examples.

4. Understand medical terms by analyzing their parts.

5. Understand how to add combining vowels and plural endings to medical terms.

6. Use the pronunciation key to learn how to pronounce medical terms.

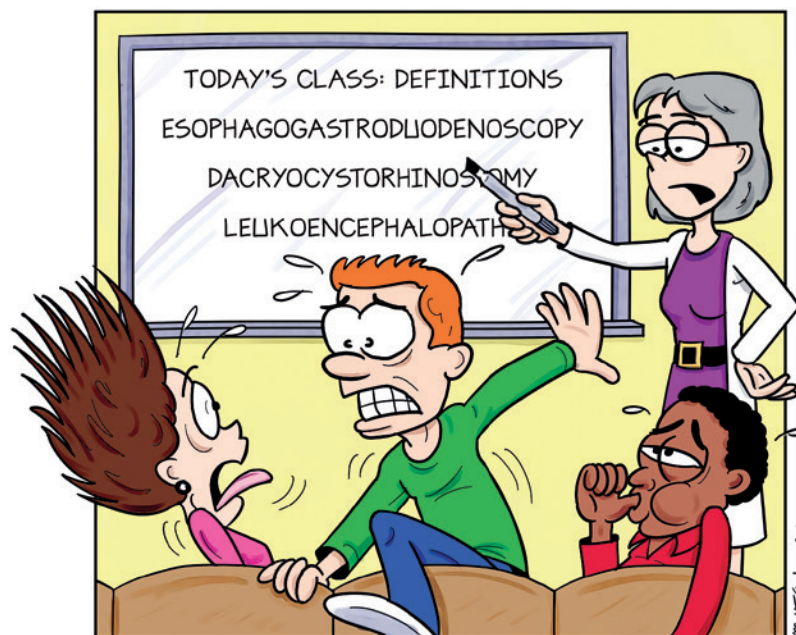7. Successfully complete all chapter exercises.

■ INTRODUCTION

Every profession has a range of special terms used by practitioners in that field. As someone who may work in a health-related area, you will need to read, write, speak, and understand medical terms as they are used daily in medical fields. Understanding medical terms is also a gateway to learning about the human body. When learning medical terms, you are learning much more than just *words*—you are learning fundamental concepts about the body in health and disease.

Why use medical terms? Why not just use everyday language? For example, why not say *stomach ache* instead of *gastritis*? As you will soon see, medical terms are much more precise than everyday words. What you refer to as a stomach ache *might* be the pain caused by gastritis (stomach inflammation), but this general term could also refer to the symptoms of other conditions, such as a peptic ulcer (sore on the stomach lining), ulcerative colitis (inflammation of the colon with open sores), or peritonitis (inflammation of the peritoneum, the tissue that covers the abdominal organs). These medical terms mean very different things to health care professionals. There usually is no simple, word-for-word "plain English" translation of any medical term that conveys its full medical meaning. You have to learn the correct terms to fully understand medical conditions.

The good news, however, is that medical terminology is not nearly as difficult to learn as it may seem at first **(Figure 1-1)**. For example, did you notice that three of the medical terms for conditions causing stomach pain all end in *-itis*? Once you know that the word part *-itis* means *inflammation,* you are well on your way to understanding the meaning of those three terms. In fact, many common medical terms end in *-itis,* so learning that one word ending allows you to understand dozens of terms. Although you do need to memorize many word parts to understand medical terminology, after you learn how terms are built from common parts, your understanding will grow quickly. The focus of this text is to help you learn new terms and expand your vocabulary.

Figure 1-1

■ DERIVATION OF MEDICAL TERMS

It's easier to learn medical terms when you understand where the basic word parts come from and how medical terms are derived. The earliest medical practitioners generally wrote, spoke, and read Greek and Latin, because these were the languages of science and education for more than 2000 years. Although few people in health care today study Greek or Latin, medical language is still based on these languages.

Most medical terms are built from word parts. In most cases, you will not learn the original Greek or Latin word but will instead learn a *word root*. This is the basic part of a term and is derived from a Greek or Latin word. For example, the word root *gastr* comes from the Greek word for belly or stomach, *gaster*. A few medical terms built from this word root are gastritis, gastrointestinal, gastroenteritis, gastroesophageal, and gastrostomy **(Figure 1-2)**. As you learn additional roots and word parts, you will find it easy to understand many medical terms.

Some medical terms are not built from word parts but instead have their origins in modern languages. This happens when new technology or treatments are developed. Other terms derive from the name of the person who first identified a condition or developed a procedure. These terms are called **eponyms.** An example of an eponym is *Kaposi sarcoma,* a skin cancer named for Hungarian dermatologist Moritz Kaposi, who originally described the condition in 1872.

■ UNDERSTANDING TERMS THROUGH THEIR PARTS

As you have already learned, most medical terms are built by combining different word parts. Basic word parts include roots, prefixes, and suffixes. These word parts are discussed in detail in this chapter. When you put these parts together to build a medical term, the term's meaning will come from the meanings of its parts. The first medical practitioner to study and write about stomach inflammation, for example, may have been the first to coin the term *gastritis. Gastr-* refers to the stomach, and *-itis* refers to inflammation, so gastritis means inflammation of the stomach.

You can understand the meanings of terms by breaking them down into their parts. Suppose that you have never seen the term *gastrotomy* before. You already know that *gastr* refers to the stomach. If you also know that *-tomy* refers to an incision into something, you can easily figure out that a *gastrotomy* must be an incision made into the stomach.

After you know that *crani* refers to the skull (cranium), can you figure out what a craniotomy is? If you said a craniotomy is an incision into the skull, you are correct.

Word Roots

A **word root** is the core, or main part, of the medical term. Most medical terms have a word root. Think of a word root as the word stem without a prefix or suffix.
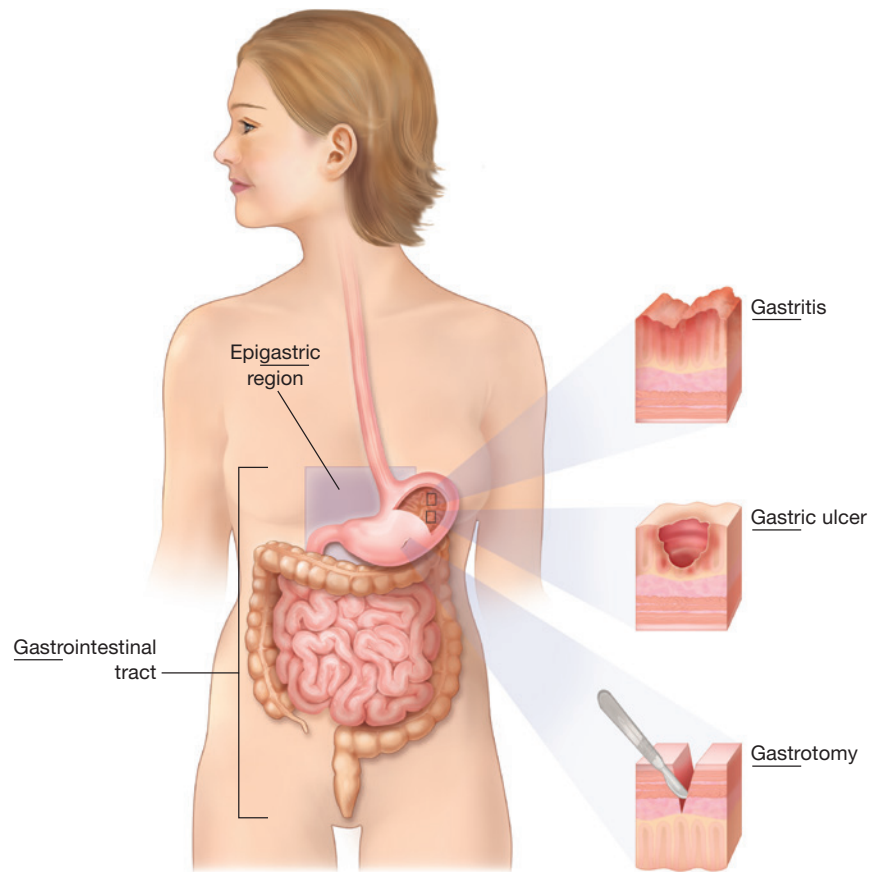
Figure 1-2   From one word root comes many different medical terms.

In many cases, you will have to memorize the meanings of word roots. You already know many common word roots, because some everyday words also are derived from them. Keep in mind that sometimes there are two or more word roots with the same meaning. Once you know what the root word means, you'll be able to understand many other words that contain the root word **(Figure 1-2)**. Memorize the meanings of the following common word roots, and then complete the exercises that follow.

Word Root	Meaning
cardi	heart
cerebr	brain, cerebrum
colo, colon	colon (section of large intestine)
crani	cranium, skull
dermat	skin
gastr	stomach
nephr	kidney
neuron	nerve
ost	bone
pulmon	lung
ren	kidney
vas	vessel

■ Exercises: Word Roots

Exercise 1

SIMPLE
RECALL

Write the meaning of the word root given.

1. ost _____

2. cardi _____

3. cerebr _____

4. pulmon _____

5. dermat _____

Exercise 2

SIMPLE
RECALL

Write the correct word root for the meaning given.

1. skull _____

2. heart _____

3. stomach _____

4. colon _____

5. kidney _____

Prefixes

A **prefix** is the word part that comes *before the word root.* Many medical terms are built with prefixes. Prefixes usually add to the meaning of a term by adjusting or qualifying the meaning of the root word.

In this text, hyphens are used to signify prefixes, suffixes, and combining forms to indicate the placement of the word part when used to form a medical term. For example, a hyphen placed after the word part, as in *hypo-,* means the part is a prefix. If *hypo-* means below and *gastric* refers to the belly, what does *hypogastric* mean? Hypogastric means below the belly.

Here is another example. The prefix *post-* means after. *Post-* is the opposite of *pre-.* Thus, the term *postsurgical* refers to something that happens after surgery. For example, postsurgical medications are given after an operation.

Memorize the meanings of the following common prefixes, and then complete the exercises that follow.

Prefix	Meaning
a-, an-	without, not
dys-	painful, difficult, abnormal
inter-	between, among
intra-	inside, within
peri-	around, surrounding
poly-	many, much
post-	after, behind
pre-	before
sub-, infra-	below, beneath
supra-, super-	above

■ Exercises: Prefixes

Exercise 3

SIMPLE RECALL

Write the meaning of the prefix given.

1. dys- _____

2. intra- _____

3. peri- _____

4. post- _____

5. poly- _____

Exercise 4

SIMPLE RECALL

Write the correct prefix for the meaning given.

1. before _____

2. between, among _____

3. without, not _____

4. above _____

5. below, beneath _____

Suffixes

Like prefixes, **suffixes** are attached to a word root, but they come after the root. A hyphen placed before the word part, as in -*ac,* means the part is a suffix. For example, the suffix -*ac* means "pertaining to." Therefore, *cardiac* simply means

"pertaining to the heart." The suffix *-al* also means "pertaining to," so what do you think *cranial* means? Cranial means pertaining to the skull.

Many medical terms are built with suffixes. Suffixes contribute to the meaning of a term by simply adding the meaning of the suffix to the meaning of the word root (and to the meaning of the prefix when one is present).

Memorize the meanings of the following common prefixes, and then complete the exercises that follow.

Suffix	Meaning
-ac, -al, -ary, -ic, -ous	pertaining to
-algia	pain
-ectomy	excision, surgical removal
-gram	record, recording
-ism, -ia	condition of
-itis	inflammation
-ium	pertaining to body region, structure
-logy	study of
-oma	tumor
-tomy	incision

■ Exercise: Suffixes

Exercise 5

ADVANCED RECALL

Match each suffix with its meaning.

-tomy   -ism   -oma   -ectomy   -al
-ium   -gram   -algia   -itis   -logy

1. incision _____

2. pertaining to body region, structure _____

3. record, recording _____

4. pertaining to _____

5. study of _____

6. pain _____

7. inflammation _____

8. surgical removal _____

9. condition of _____

10. tumor _____

Combining Vowels Added to Roots

Combining vowels are used between word parts. Unlike word roots, prefixes, and suffixes, combining vowels do not have meanings on their own. A **combining vowel** is a vowel (usually o, and sometimes i or e) that is added to the word root to make the term easier to pronounce. Combining vowels are used when attaching a suffix that begins with a consonant to a word root that ends in a consonant. For example, if you add the suffix -*logy* (study of) directly to the word root *dermat* (skin), you would get "dermatlogy"—something that would sound very odd if you tried to say it. For ease of pronunciation, a combining "o" is added to form the word "dermatology." Compare the pronunciation of *dermatlogy* with *dermatology*.

A **combining form** describes the word root with its associated combining vowel. It is often easier to learn combining forms (word root + combining vowel), so this text uses combining forms rather than word roots. For example, instead of learning just the word root *cardi,* you will learn the combining form *cardi/o.* The slash is used to indicate that use of the combining vowel varies depending on the other word part following the word root. Note the difference in the following terms:

peri- + cardi/o + ium = pericardium (tissue around the heart)—the "o" is not used

cardi/o + -logy = cardiology (study of the heart)—the "o" is used

If you tried to put in the combining vowel when it is not needed, you would see the problem when you tried to pronounce the word. For example, using the combining vowel in the term *pericardioum* results in having too many vowels! Similarly, if you left out the combining vowel when it is needed, you would hear the problem when you tried to pronounce the resulting term. For example, spelling *cardilogy* without the combining vowel results in too few vowels!

You may have noticed something about the formation of the term *pericardium* in the first example above. The combining form in this word is *cardi/o,* and the suffix is -*ium.* If you were to simply join the two, you would have two "i"s in the middle, since the word root ends with "i" and the suffix begins with "i." The result would be "pericardiium"—but how would that be pronounced? In cases like this, the rules of language favor common sense for ease of pronunciation. The rule in this case is simple: If a word root (without the optional vowel) ends with the same vowel with which the suffix begins, then the second instance of the vowel is dropped to prevent repetition.

Fortunately, there are only a few rules to learn about how terms are spelled when word parts are put together. We will look at those rules in the next section.

Memorize the spellings of the following common combining forms. Remember that the slash before the combining vowel is used to indicate that the vowel may be used when the combining form is joined to a following word part.

Combining Form	Meaning
cardi/o	heart
cerebr/o	brain, cerebrum
col/o, colon/o	colon (section of large intestine)
crani/o	cranium, skull
dermat/o	skin
gastr/o	stomach
nephr/o, ren/o	kidney
neur/o	nerve, nerve tissue
oste/o	bone
pulmon/o	lung

■ Exercise: Combining Forms

Exercise 6

SIMPLE
RECALL

Write the correct combining form for the meaning given.

  1. nerve, nerve tissue _____

  2. stomach _____

  3. kidney _____

  4. heart _____

  5. cranium, skull _____

  6. bone _____

  7. lung _____

  8. brain, cerebrum _____

  9. skin _____

10. colon _____

Putting the Parts Together

Medical terms are made up of combining forms together with prefixes and/or suffixes. The rules for when to include the combining vowel in forming a term are usually simple:

1. Use the combining vowel when a combining form is joined to a suffix that does not begin with a vowel:

nephr/o (kidney) + -logy (study of) = nephr*o*logy (study of the kidneys)

2. Do not use the combining vowel when a combining form is joined to a suffix that begins with a vowel:

arthr/o (joint) + -itis (inflammation) = arthritis (no *o*) (joint inflammation)

3. If the suffix begins with the *same* vowel with which the combining form ends, do not repeat the vowel:

cardi/o + -itis = carditis (heart inflammation)

4. Use the combining vowel when two combining forms are joined together:

my/o (muscle) + cardi/o (heart) + -al = my*o*cardial (pertaining to the heart muscle)

Note that this rule holds true usually even if the second combining form already begins with a vowel:

oste/o (bone) + arthr/o (joint) + -itis = osteoarthritis (inflammation of bone and joint)

    There are a few other special cases where the rules may vary slightly, but these are individual exceptions you will learn later on. Because these rules are generally based on how terms are spelled for ease of pronunciation, get in the habit of saying terms aloud as you see them in this text. Very soon, you will naturally know whether or not to use the combining vowel based on how a term sounds.

1   Introduction to Medical Terminology

■ Exercise: Putting the Parts Together

Exercise 7

TERM
CONSTRUCTION

With the word parts given, write the medical term that matches the given meaning. Be mindful of the spelling of the term.

1. intra- + crani/o + -al = _____ (pertaining to within the skull)

2. sub- + pulmon/o + -ary = _____ (pertaining to below the lungs)

3. cardi/o + -gram = _____ (record of heart activity)

4. oste/o + -algia = _____ (pain in a bone)

5. gastr/o + -tomy = _____ (incision into the stomach)

■ PLURAL ENDINGS

Most nouns in the English language become plural by adding an -s or -es at the end; for example, the plural of *student* is *students.* Some medical terms also add an -s or -es to make a plural, but many do not. They have special endings related to their origins in Greek or Latin. For example, if the singular noun ends in *a* (as in vertebra, referring to one bone in the spine), then the plural ends in *ae* (as in vertebrae, referring to multiple bones in the spine).

The following table shows some of the special plural endings common in medical terms. Note that these special plurals do not occur with *all* terms ending in those letters. For example, the plural of sinus is sinuses. In most cases, you have to learn the plural form when you learn the term.

Rules for Making Plural Medical Terms

| Singular Ending	Rule	Plural Ending	Example
a	keep -a and add -e	ae	vertebra (a spinal bone)→vertebrae
en	drop -en and add -ina	ina	foramen (hole)→foramina
ex	drop -ex and add -ices	ices	pollex (thumb)→polices
ion	drop -ion and add -ia	ia	ganglion (group of nerve cell bodies)→ganglia
is	drop -is and add -es	es	ankylosis (stiff joint)→ankyloses testis (male reproductive gland)→testes
on	drop -on and add -a	a	phenomenon (occurrence or object perceived)→phenomena spermatozoon (male sex cell)→spermatozoa
ix	drop -ix and add -ices	ices	appendix→appendices
ium	drop -ium and add -ia	ia	epithelium (tissue type)→epithelia
um	drop -um and add -a	a	diverticulum (pouch within an organ)→diverticula atrium (upper heart chamber)→atria
us	drop -us and add -i	i	nucleus (structure within a cell)→nuclei embolus (blood clot)→emboli
x	drop -x and add -ges	ges	phalanx (finger bone)→phalanges
y	drop -y and add -ies	ies	biopsy (tissue sample)→biopsies

■ Exercise: Plural Endings

Exercise 8

SIMPLE
RECALL

Write the correct plural form of the singular term given.

1. glomerulus (capillary cluster in nephron of kidney) _____

2. varicosis (swollen vein) _____

3. ovum (egg cell) _____

4. larynx (voice box) _____

5. ulcer _____

Study Tip

Spelling: Spelling medical terms correctly in health care is vital **(Figure 1-3)**. For example, misspelling a term in a patient's record could cause confusion or even a dangerous situation if another health care worker misunderstands what you have written. Many terms look nearly alike and may even be pronounced the same. For example, *ileum* (part of the small intestine) and *ilium* (hip bone) look similar and sound alike, but these terms designate two very different parts of the body. Therefore, take the time to learn correct spellings. Complete the spelling exercises in these chapters, being sure to write out the terms in all exercises.
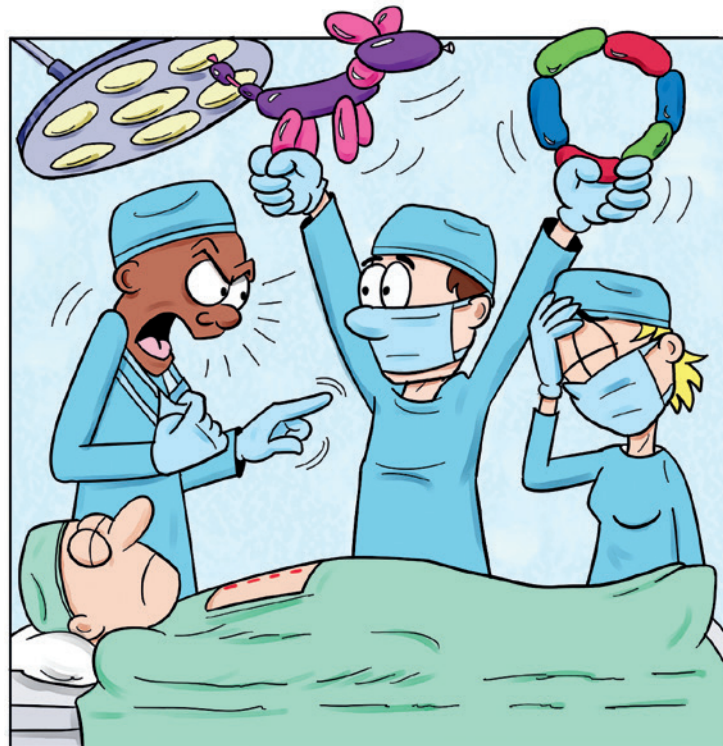
"JENKINS, YOU FOOL! I SAID 'BALLOON STENT,' NOT 'BALLOON STUNT!'"

Figure 1-3

■ PRONUNCIATION KEY

Pronunciations are given for medical terms throughout this text. It is best to learn the pronunciation at the same time you learn the term. Saying each term aloud will help you remember its meaning and spelling.

The pronunciation is indicated with letters of the alphabet and stress marks (′) that indicate which syllable (or syllables) should be accented. Following is a typical example of how stress marks are used to help with pronunciation:

nucleus   nū′klē-ŭs

If you are not familiar with stress marks, think of them as the guide to which syllable to say more forcefully when you pronounce the word. Nucleus is pronounced like this: NU-cle-us. It is not pronounced like this: nu-cle-US.

Here is the key to the different vowel sounds used in pronunciations.

Symbol	Sound as in:
ā	day
a	mat, far
ă	about
ah	father
aw	raw, fall
ē	beet, here
e	bed
ĕ	system
ī	island
i	hip
ĭ	pencil
ō	go, form
o	got
ŏ	oven, motor
ow	cow
oy	boy, oil
ū	prune
yū	cube
u	put
ŭ	up, tough

Here is a key to the sounds of consonants used in pronunciations.

Symbol	Sound as in:
b	bad, tab
ch	child, itch
d	dog, good
f	fit, defect, phase
g	got, bag
h	hit, behold
j	jade, gender, rigid, edge
k	cut, tic
ks	extra, tax
kw	quick, aqua
l	law, kill
m	me, bum
n	no, run
ng	ring
p	pain, top
r	rot, tar
s	so, mess, center
sh	show, wish
t	ten, put
th	thin, with
v	vote, nerve
w	we, tow
y	yes
z	zero, disease, xiphoid
zh	vision, measure

Study Tip

Read, Write, Speak, Listen: Scientists have discovered that using your senses (sight, hearing, touch) reinforces learning and assists in memory. Do not just passively read the terms on the page as you use this text. Practice saying them aloud, listen to their correct pronunciations using the Audio Glossary in the Student Resources on the text's online site.

The following exercise gives some practice in using the pronunciation key to learn how to pronounce unfamiliar words.

■ Exercise: Pronunciation

Exercise 9

AUDITORY

Listen to the pronunciations of the following terms using the Audio Glossary included with the Student Resources on the text's online site. Practice pronouncing each term, referring to the pronunciation guide as needed.

1. varicosis   var′i-kō′sis
2. diverticulum   dī′vĕr-tik′yū-lŭm
3. ankylosis   ang′ki-lō′sis
4. pulmonary   pul′mŏ-nār-ē
5. arthralgia   ahr-thral′jē-ă
6. osteoma   os-tē-ō′mă
7. nephritis   nĕ-frī′tis
8. craniopathy   krā′nē-op′ă-thē
9. gastrectomy   gas-trek′tŏ-mē
10. cardiopulmonary   kahr′dē-ō-pul′mŏ-nār-ē

■ UNDERSTANDING TERMS THROUGH ANALYSIS

Remember that the meaning of a medical term comes from the meaning of the different word parts that together make that term. There is little value in trying to memorize each and every medical term separately. It is much easier to learn the meanings of the parts and then apply those meanings to the many terms that use the same parts.

Analyzing word parts to understand the larger meaning is also useful when you encounter a medical term for the first time and do not have a dictionary or your textbook available. Quite often, you can figure out the meaning of a new term if you know the meaning of its separate word parts.

For example, you already know that the suffix *-itis* means inflammation. Earlier you saw the word *diverticulum,* which is a pouch or sac within an organ—such as diverticula that may occur within the large intestine. Its combining form is *diverticul/o.* From this information, can you make an educated guess what *diverticulitis* means?

Diverticulitis is the inflammation of a diverticulum.

To define a term based on its word parts, complete the following steps in order:

1. Analyze the meaning of the suffix.
2. Analyze the meaning of the prefix.
3. Analyze the meaning of the root or roots.

For example:

intra- (within) + *cerebr/o* (brain) + *-al* (pertaining to)

2   3   1

means pertaining to within the brain

The following exercise will give you more practice understanding terms by analyzing their word parts. As you learn more word parts through studying the chapters of this text, you will find that this becomes a natural process.

■ Exercise: Term Analysis

Exercise 10

TERM CONSTRUCTION

For example:

nephrectomy   *word parts:*   nephr/o, -ectomy
                           meanings: kidney; excision, surgical removal
                           term meaning: surgical removal of kidney

1. arthritis   *word parts:* _____

                meanings: _____

                term meaning: _____

2. pulmonary   *word parts:* _____

                meanings: _____

                term meaning: _____

3. colonitis   *word parts:* _____

                meanings: _____

                term meaning: _____

4. osteal   *word parts:* _____

                meanings: _____

                term meaning: _____

5. cardiotomy   *word parts:* _____

                meanings: _____

                term meaning: _____

■ BUILDING TERMS

You can learn terms by breaking them apart and analyzing the meanings of their parts. It also helps to learn how to put word parts together—to build terms. In the real world, these medical terms almost always already exist, but building them on your own will help you learn more efficiently.

For example, you learned earlier that *cardi/o* is the combining form that means heart. Let's say you wanted to build a medical term that means inflammation of the heart. From what you have learned already, you should be able to build this term and write it here:

_____

The answer, of course, is *carditis*. (Did you remember not to repeat the "i"?) If you look in your medical dictionary, you will find that it is a real medical term. You shouldn't be surprised to learn that it means inflammation of the heart.

The following exercise will give you more practice building terms.

■ Exercise: Building Terms

Exercise 11

TERM
CONSTRUCTION

Using word parts found anywhere in this chapter, construct medical terms for the meanings given. Then, check your medical dictionary to see whether you are correct and have spelled the term correctly.

1. inflammation of the skin   _____

2. pertaining to the area around the heart   _____

3. study of nerves   _____

4. tumor of bone   _____

5. pertaining to the kidney   _____

■ WRAPPING UP

■ Medical terms include the following basic parts:

Word root: main part of the word (*crani*)
Prefix: word part added *before* the root (*intra-*)
Suffix: word part added *after* the root (-*al*)

intra- + crani + -al = intracranial

■ A combining form is a word root with a combining vowel that makes it easier to pronounce the word when a suffix is added to the word root:

cardi/o (combining form) + -logy (suffix) = cardiology

■ To understand a medical term, first analyze its parts. You can usually figure out what the term means from the meanings of its parts.
■ To build medical terms, use your knowledge of the definitions of word roots, prefixes, and suffixes to combine these parts into a word.

Chapter Review

Review of Terms

In the following exercises, you will encounter a few medical terms you have not seen in this chapter. Nonetheless, you should be able to answer these questions based on the word parts used in these terms. Review the earlier tables of word part meanings if needed.

Exercise 12

SIMPLE RECALL

Complete each sentence by writing in the correct word.

1. The cerebral cortex is a part of the brain. A subcortical tumor would therefore be located _____ the cortex.

2. A tumor that grows from bone tissue is called a(n) _____.

3. Given that the suffix *-scopy* means visual examination using an instrument, the term for such an examination of the colon is _____.

4. A dermatologist is a specialist physician who treats _____ disorders.

5. A gastric ulcer seems most likely to cause bleeding inside the _____.

6. An intervertebral disk is located _____ two vertebrae (bones of spine).

7. The term *cardiac* means pertaining to the _____.

8. A physician specializing in cardiopulmonary diseases might often require x-rays of a patient's heart and _____.

9. The prefix *an-* means _____.

10. A tumor in lymph tissue (combining form: *lymph/o*) is called a(n) _____.

Exercise 13

COMPREHENSION **Circle the letter of the best answer in the following questions.**

1. Which term refers to surgical removal of the stomach?

   A. gastrotomy
   B. gastrostomy
   C. gastrology
   D. gastrectomy

2. Given that the combining form *my/o* means muscle, which of the following refers to muscle pain?

   A. myogram
   B. myalgia
   C. myocardium
   D. myoma

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3. The term *renal* means

    A. pertaining to the kidney.
    B. pertaining to the skull.
    C. pertaining to the lung.
    D. pertaining to the skin.

4. A patient who is having difficulty breathing may have what kind of problem?

    A. cerebral
    B. gastric
    C. cardiac
    D. pulmonary

5. Referring to surgery, an intraoperative procedure is carried out

    A. before the surgery begins.
    B. during the surgery.
    C. after the surgery.
    D. at any time.

6. Which of the following best defines the term *abacterial*?

    A. full of bacteria
    B. not pertaining to bacteria
    C. eaten by bacteria
    D. resulting from bacterial presence

7. The medical term *dysuria* is most likely to mean

    A. painful urination.
    B. frequent urination.
    C. infrequent urination.
    D. normal urination.

8. The medical term *polyuria* is most likely to mean

    A. painful urination.
    B. frequent urination.
    C. infrequent urination.
    D. normal urination.

9. A patient with a cerebral hemorrhage is experiencing bleeding inside the

    A. kidney.
    B. lungs.
    C. brain.
    D. heart.

10. Even if you have never seen the term *angiogram* (an x-ray record of blood vessels), you can assume the combining form used to make this term is

    A. ang/i.
    B. angi/o.
    C. angiogr/a.
    D. angiogra/o.

Spelling

Exercise 14

SPELLING

Circle the correctly spelled term.

1. cardioitis   cardiitis   carditis

2. phenomena   phenomenons   phenomeni

3. pericardial   perocardial   pericardiol

4. gastroctomy   gastrectomy   gastroectomy

5. nucleuses   nuclae   nuclei

6. ostearthritis   osteoarthritis   ostarthriti

7. cardigraphy   cardography   cardiography

8. vertebrae   vertebraes   vertebriae

9. dermatitis   dermatoitis   dermatotis

10. cardipulmonary   cardiopulmonary   cardopulmonary

Media Connection

Exercise 15

Complete each of the following activities available with the Student Resources. Check off each activity as you complete it, and record your score for the Chapter Quiz in the space provided.

Chapter Exercises

_____ Flash Cards

_____ Concentration

_____ Roboterms

_____ Word Anatomy

_____ True/False Body Building

_____ Quiz Show

_____ Complete the Case

_____ Spelling Bee

_____ **Chapter Quiz**   *Score: _____%*

Additional Resources

_____ Audio Glossary