

# 1

## Basic Word Roots and Common Suffixes

*In Chapter 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

#### Root Words

acr/o (extremities)

cardi/o (heart)

cyan/o (blue)

cyt/o (cell)

dermat/o, derm/o (skin)

duoden/o (duodenum)

electr/o (electrical)

eti/o (cause)

gastr/o (stomach)

gram/o (record)

leuk/o (white)

megal/o (enlarged)

path/o (disease)

#### Suffixes

-algia (pain)

-ectomy (excision of)

-itis (inflammation of)

-ologist (one who studies, a specialist)

-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

\_\_\_\_\_ / \_\_\_\_\_.

acr/o

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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?  
arms, legs, and head \_\_\_\_\_
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* \_\_\_\_\_
4.  
When you read a term containing *acr* or *acr/o* (the combining form), it should make you think of \_\_\_\_\_.  
extremities or limbs
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 \_\_\_\_\_.  
arms, legs, head  
Write the combining form of the word root meaning extremities.  
*acr/o* \_\_\_\_\_
6.  
*Megal/o* means enlarged or oversized. A word containing *megal/o* means the part of the body or organ is \_\_\_\_\_.  
oversized, big, 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 \_\_\_\_\_.  
oversized or enlarged



**Figure 1.1** Acromegaly

acr/o/megal/y  
acromegaly  
ak rō meg' a lē

8.  
Figure 1.1 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/or chin. The abnormal condition may be \_\_\_\_\_ / \_\_\_\_\_.

skin  
inflammation of the  
skin

10.  
Here are new suffixes/root words:  
-ologist means one who studies, a specialist  
-itis means inflammation of (something)  
dermat/o refers to the skin.  
A dermat/ologist is a specialist in the field of medicine who specializes in treating disease of the \_\_\_\_\_.

Dermat/itis means \_\_\_\_\_.

Underline the word root in the following medical terms. Now, circle the suffix in each term.

Dermatitis  
Dermatologist

Dermatitis  
Dermatologist

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 patient 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 \_\_\_\_\_.  
acr/o refers to \_\_\_\_\_.  
dermat is the root for \_\_\_\_\_.

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14.  
*Cyan/o* means blue or blueness. The suffix *-osis* 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? \_\_\_\_\_  
\_\_\_\_\_
- cyan or cyan/o      The part of the medical term that tells you the color blue is present 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      Acrocyanosis may be defined as the abnormal \_\_\_\_\_  
extremities      of blueness of the \_\_\_\_\_.
16.  
Blueness of the extremities is usually due to a reduced amount of oxygen supply to the hands and feet and can be considered normal in a newborn. 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 \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- acr/o/cyan/osis*  
acrocyanosis  
ak rō sī ə nō'sis
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 \_\_\_\_\_.
- acrocyanosis
- the abnormal condition of blueness of the extremities      18.  
Acrocyanosis means \_\_\_\_\_  
\_\_\_\_\_.
19.  
*Dermat/osis* denotes an abnormal skin condition. The suffix that means abnormal condition is \_\_\_\_\_.
- osis
20.  
The suffix *-osis* means (usually abnormal) condition. Now, build a term that means an abnormal condition of blueness: \_\_\_\_\_ / \_\_\_\_\_.
- cyan/osis  
cyanosis  
sī ə nō'sis

dermat/osis  
dermatosis  
der ma tō'sis

21.  
Build a term meaning an abnormal skin condition:  
\_\_\_\_\_ / \_\_\_\_\_.

skin

22.  
The Greek word *tomos* 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 \_\_\_\_\_ / \_\_\_\_\_.

an abnormal condition  
of bluish discolor-  
ation 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 people 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  
lōō kō der' mä

28.  
Some people have much less color in their skin than is normal. Their skin is white. They may have \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

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29.

*Cyt/o* refers to a cell or cells. *-ology* is a suffix that means the study of.

the study of cells

What does *cyt/ology* mean? \_\_\_\_\_

30.

There are several kinds of cells in blood. One kind is the *leuk/o/cyte*. A leukocyte is a \_\_\_\_\_.

white blood cell

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/o/cyt/e*  
leukocyte  
lōō' kō sīt

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 a cancer of the blood. A term meaning literally *white blood* is \_\_\_\_\_ / \_\_\_\_\_.

*leuk/emia*  
leukemia  
lōō kē' mē ə

33.

In the term *acromegaly*, the combining form used for extremities is \_\_\_\_\_, the word root for oversized is \_\_\_\_\_, and the suffix meaning *condition of* is \_\_\_\_\_.

*acr/o*  
megal  
y

34.

Now try this. *Cardi/o* means heart. Another suffix meaning condition of is *-a*. What does *megal/o/cardi/a* mean? \_\_\_\_\_

a condition of oversized  
heart, or enlargement  
of the heart

35.

When any muscle exercises, it gets larger. If the heart muscle overexercises, an enlarged condition of the heart may occur.

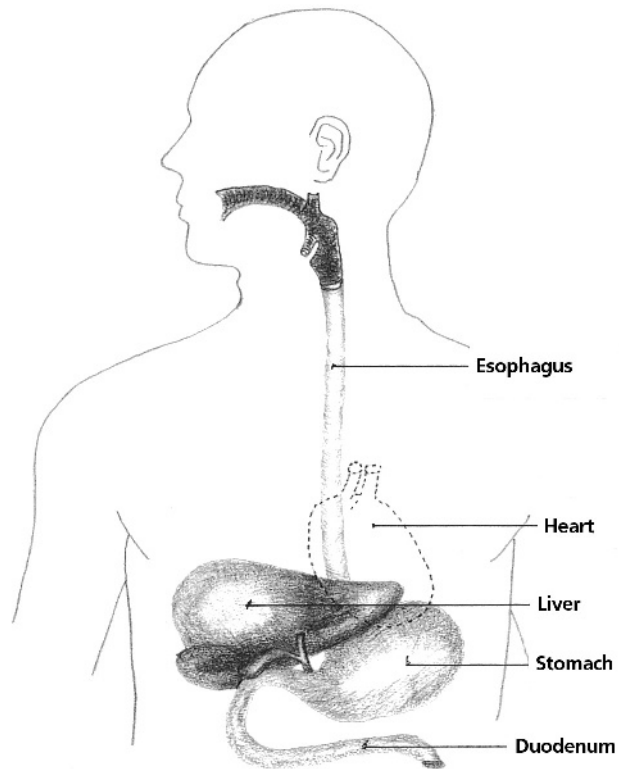
It is described as  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

*megal/o/card/ia*  
megalocardia  
meg ə lō kär' dē ä

megalocardia or  
cardiomegaly

36.

When the heart muscle doesn't receive an adequate supply of oxygen, the heart may beat more often. Inadequate oxygen makes the heart work harder and may lead to an enlarged heart described as



**Figure 1.2** The Upper Digestive Tract (and Heart)

The digestive tract begins with the oral cavity. The teeth pulverize ingested food and soften it. The action of the tongue moves the partly digested food into the *esophagus* by swallowing. Then strong muscular contractions move the food to the *stomach*. In the stomach the food is further processed mechanically and chemically. Then it passes into the highly coiled intestine. The first part of the intestine is called the *duodenum*.

esophagus (esophag/o)	stomach (gastr/o)
duodenum (duoden/o)	heart (cardi/o)

megal/o/gastr/ia  
 megalogastria  
 meg ə lō gas' trē ä  
 or

gastr/o/megal/y  
 gastromegaly  
 gas' trō meg' a lē

oversized heart, or  
 enlargement of the  
 heart

(the same thing)

inflammation of the  
 heart

stomach

inflammation of the  
 stomach

extremities  
 blueness  
 white  
 stomach  
 cell  
 heart

37.

Try this one. *Gastr* is the word root for stomach. When the stomach enlarges so that it crowds other organs, an undesirable condition exists known as

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ /ia.  
 enlarged stomach

or

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ /y.  
 stomach enlarged

38.

Megalocardia means \_\_\_\_\_  
 \_\_\_\_\_.

What does cardiomegaly mean? \_\_\_\_\_

39.

The suffix *-itis* means inflammation.

What does carditis mean? \_\_\_\_\_  
 \_\_\_\_\_

Both gastr-, gastr/o mean \_\_\_\_\_.

Gastritis means \_\_\_\_\_  
 \_\_\_\_\_.

40.

Here's a quick review. Using the suggested answers, write the meaning of each of the following terms.

SUGGESTED ANSWERS:

abnormal condition of	heart
blueness	inflammation of
cell	skin
cutting instrument	stomach
enlarged, oversized	white
extremities	

acr/o \_\_\_\_\_  
 cyan/o \_\_\_\_\_  
 leuk/o \_\_\_\_\_  
 gastr/o \_\_\_\_\_  
 cyt/o \_\_\_\_\_  
 cardi/o \_\_\_\_\_









54.  
A physician specialist can look at a report that looks like this

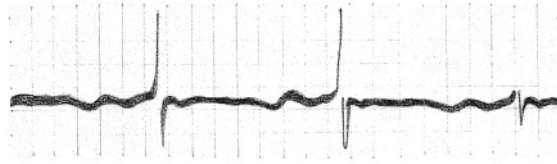


Figure 1.4 Electrocardiogram (ECG)

cardiologist  
electrocardiogram

and learn something about a patient's heart function. This specialist is probably a \_\_\_\_\_ and can read an \_\_\_\_\_ (ECG).

cardi/algia  
cardialgia  
kār dē al' jē a (There is no need to add a vowel to the root *cardi* because *-algia* begins with a vowel.)

55.  
The suffix *-algia* means pain. Form a word that means heart pain:  
\_\_\_\_\_ / \_\_\_\_\_  
heart pain

cardialgia

56.  
When a patient complains of pain in the heart, the symptom is known medically as \_\_\_\_\_.

stomach  
-algia

57.  
Gastralgia means pain in the stomach.  
*Gastr* is the root for \_\_\_\_\_.  
The suffix for pain is \_\_\_\_\_.

stomach  
to cut out, excise, or remove surgically

58.  
Gastr/ectomy means excision (removal) of all or part of the stomach. *Gastr* means \_\_\_\_\_.  
The suffix *-ectomy* means \_\_\_\_\_.

- gastr/ectomy  
gastrectomy  
gas trek' tō mē
59. When a patient's stomach ulcer perforates, the surgeon may need to remove part of the stomach. The medical term for the procedure is \_\_\_\_\_ / \_\_\_\_\_.  
(stomach) (excision of)
- gastrectomy
60. Cancer of the stomach may require a surgeon to remove all or part of the patient's stomach. This procedure is a \_\_\_\_\_.
- gastr/itis  
gastritis  
gas trī' tis
61. Form a word that means inflammation of the stomach:  
\_\_\_\_\_ / \_\_\_\_\_.
- duoden/um  
duodenum  
dōō ōd' nēm (or  
dōō ō dē' nēm)
62. The stomach empties its contents into the first section of the intestine, called the duodenum. *Duoden* is the word root for \_\_\_\_\_.
- gastr
- What is the root for stomach? \_\_\_\_\_
- stomach and  
duodenum
63. The suffix *-ostomy* means a procedure to form a new opening. Gastr/o/duoden/ostomy means forming a new opening between the \_\_\_\_\_ and \_\_\_\_\_.
- gastr/o/duoden/  
ostomy  
gastroduodenostomy  
gas' trō dōō ō de nos'  
tō mē
64. A surgeon may need to remove a portion of a diseased stomach. If the natural connection is removed, then the surgeon must form a new opening between the stomach and duodenum. This procedure is called \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- a surgical procedure to  
form a new opening  
between the stomach  
and duodenum
65. When an abnormal condition exists between the stomach and the duodenum, a surgeon may need to perform a gastroduodenostomy, which means \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.



74.

Let's review what you've covered. Using the suggested answers, write the meaning of each of the following terms.

SUGGESTED ANSWERS:

blueness	duodenum
cell	electrical
cause(s)	enlarged, oversized
changes due to disease	record of

duodenum  
changes due to disease  
record of  
cell  
electric  
cause  
enlarged, oversized  
blueness

duoden/o \_\_\_\_\_  
path/o \_\_\_\_\_  
gram/o \_\_\_\_\_  
cyt/o \_\_\_\_\_  
electr/o \_\_\_\_\_  
eti/o \_\_\_\_\_  
megal/o \_\_\_\_\_  
cyan/o \_\_\_\_\_

75.

Now try it with the suffixes you just learned.

SUGGESTED ANSWERS:

(abnormal) condition of	incision into
cutting instrument	inflammation of
form a new opening	of, or pertaining to
one who studies, specializes in	pain

of, or pertaining to  
inflammation of  
(abnormal) condition  
form a new opening  
cutting instrument  
incision into  
pain  
one who studies

-al \_\_\_\_\_  
-itis \_\_\_\_\_  
-osis, -a, -y \_\_\_\_\_  
-ostomy \_\_\_\_\_  
-tome \_\_\_\_\_  
-otomy \_\_\_\_\_  
-algia \_\_\_\_\_  
-ologist \_\_\_\_\_

76.

Now build some new words.

cyan/osis A condition of blueness is \_\_\_\_\_ / \_\_\_\_\_.  
blueness condition

path/ologist One who studies bodily changes produced by disease is a  
\_\_\_\_\_/ \_\_\_\_\_.  
changes in the body one who studies

duoden/ostomy A surgical procedure that forms a new opening in the duodenum is  
a \_\_\_\_\_ / \_\_\_\_\_.  
duodenum form a new opening

eti/o/logic/al A term meaning of, or pertaining to, the study of causes of disease  
is \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
causes of disease the study of pertaining to

77.

While working through Chapter 1, you formed the following new medical terms. Read them one at a time and pronounce each aloud several times until you can articulate each term clearly and correctly. If a friend pronounces each term for you, could you spell it correctly? Try it.

acrocyanosis (ak rō sī ə nō' sis)	etiological (ē' tē ō loj' i kəl)
acrodermatitis (ak rō der' ma tī'tis)	gastralgia (gas tral' jē a)
acromegaly (ak rō meg' a lē)	gastrectomy (gas trek' tō mē)
cardialgia (kār dē al' jē a)	gastritis (gas trī' tis)
cardiologist (kār dē ol' ə jist)	gastroduodenostomy (gas' trō dōō ō de nos' tō mē)
carditis (kār dī' tis)	leukemia (lōō kē' mē ə)
cyanoderma (sī ə nō der' mā)	leukocyte (lōō' kō sīt)
cyanosis (sī ə nō' sis)	leukoderma (lōō kō der' mā)
cytology (sī tol' ə jē)	manifestation (man' ə fes t1' shən)
dermatologist (der ma tol' ə jist)	megalocardia (meg ə lō kār' dē ä)
dermatome (derm' ə tōm)	megalogastria (meg ə lō gas' trē ä)
dermatosis (der ma tō' sis)	pathologist (path ol' ə jist)
disease (diz ēz')	pathology (path ol' ə jē)
duodenal (dōō ō dē' nəl)	
electrocardiogram (ē lek' trō kār' dē ə gram)	

Before going on to Chapter 2, take the Chapter 1 Self-Test that follows.



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## Chapter 1 Self-Test

### Part 1

From the list of definitions on the right, select the correct meaning for each of the terms in the left-hand column. Write the letter in the space provided.

- |                              |  |
|------------------------------|--|
| _____ 1. Megalocardia        | a. Study of, or pertaining to, causes (of disease)                                   |
| _____ 2. Cardiology          | b. A specialist in the field of skin diseases  |
| _____ 3. Duodenostomy        | c. A condition of blueness of the extremities  |
| _____ 4. Leukemia            | d. Enlargement of the heart  |
| _____ 5. Dermatologist       | e. A surgical procedure forming a new opening in the duodenum                        |
| _____ 6. Electrocardiography | f. Display, evidence of disease  |
| _____ 7. Acromegaly          | g. One who specializes in the study of structural and functional changes in the body |
| _____ 8. Gastritis           | h. Pain in the stomach   |
| _____ 9. Dermotome           | i. Inflammation of the stomach   |
| _____ 10. Manifestation      | j. Recordings of electrical waves of the heart                                       |
| _____ 11. Gastroduodenostomy | k. An abnormal condition of enlarged extremities                                     |
| _____ 12. Etiology           | l. A surgical instrument for cutting skin  |
| _____ 13. Acrocyanosis       | m. A surgical operation to make a new opening between the stomach and duodenum       |
| _____ 14. Pathologist        | n. The study of disease of the heart   |
| _____ 15. Gastralgia         | o. An abnormal condition of too many white blood cells                               |

**Part 2**

Write a medical term for each of the following:

1. Impaired bodily health \_\_\_\_\_
2. Bluish discoloration of the skin \_\_\_\_\_
3. White cell \_\_\_\_\_
4. Oversized or enlarged stomach \_\_\_\_\_
5. Evidence of disease \_\_\_\_\_
6. The study of causes of an illness \_\_\_\_\_
7. Excision or removal of the stomach \_\_\_\_\_
8. Pertaining to the duodenum \_\_\_\_\_
9. Generalized condition of blueness \_\_\_\_\_
10. Heart pain \_\_\_\_\_
11. Inflammation of the heart \_\_\_\_\_
12. An abnormal condition of white skin \_\_\_\_\_
13. Inflammation of the skin of the extremities \_\_\_\_\_
14. Study of cell(s) \_\_\_\_\_
15. An abnormal condition of the skin \_\_\_\_\_

**ANSWERS****Part 1**

1. d
2. n
3. e
4. o
5. b
6. j
7. k
8. i
9. l
10. f

**Part 2**

1. disease
2. cyanoderma
3. leukocyte
4. megalogastria
5. manifestation
6. etiology
7. gastrectomy
8. duodenal
9. cyanosis
10. cardialgia

- |       |                    |
|-------|--------------------|
| 11. m | 11. carditis       |
| 12. a | 12. leukoderma     |
| 13. c | 13. acrodermatitis |
| 14. g | 14. cytology       |
| 15. h | 15. dermatosis     |

