________ 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

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	
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 of the body or organ is
oversized or enlarged	7. The suffix -γ 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. 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
	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.
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. Now, circle the suffix in each term.
<u>Dermat</u> (tis)	Dermatitis
<u>Dermat</u> ologist	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

	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?
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 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 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 /
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 abnormal 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 ə nō'sis	20. The suffix <i>-osis</i> means (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 an abnormal skin condition:/
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/
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 / / 26.
leuk or leuk/o	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 oo 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 l oo ' 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 oo k ē' 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 a cancer of the blood. 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 ə 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

36.

megalocardia or cardiomegaly

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

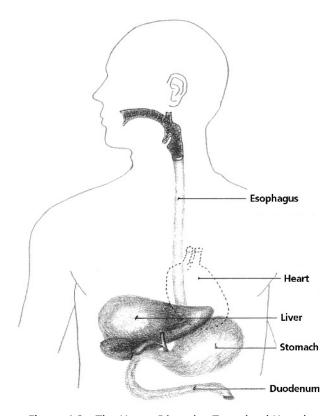


Figure 1.2 The Upper Digestive Tract (and Heart)

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	stomach enlarges so that it condition exists known as /	ord root for stomach. When the crowds other organs, an undesirable / /ia. or / y. enlarged
oversized heart, or enlargement of the heart	38. Megalocardia means	
(the same thing)	What does cardiomegaly m	nean?
	39. The suffix <i>-itis</i> means inflar	nmation.
inflammation of the heart	What does carditis mean? _	
stomach	Both gastr-, gastr/o mean _	
inflammation of the stomach	Gastritis means	
	40. Here's a quick review. Using meaning of each of the foll	ng the suggested answers, write the owing terms.
	SUGGESTED ANSWERS: abnormal condition of blueness cell cutting instrument enlarged, oversized extremities	heart inflammation of skin stomach white
extremities blueness white stomach cell heart	acr/o	

enlarged, oversized skin abnormal condition of inflammation of cutting instrument	megal/o
	41. Now build a medical term for each of the following:
acro/megal/y	a condition of oversized extremities
leuko/cyte	a white cell /
dermat/itis	inflammation of the skin /
megalo/cardi/a or cardio/megal/y	a condition of enlarged heart / / /
It's up to you, of course, but here are some key words.	42. Let's have a change of pace here. Professional health workers use some special words to talk about illness and sick people. Here are just a few you'll find very useful. Read each definition. Then underline a key word or words to help you remember the meaning of the term.
sickness, illness	Disease is a condition in which bodily health is impaired. It means sickness or illness.
<u>exhibition</u> , <u>display</u> , <u>evidence</u>	Manifestation is proof of impaired bodily health. It's a display, exhibition, or physical evidence of disease.
<u>changes</u> (structural and functional)	Pathology is the scientific study of changes in the human body (structural and functional) produced by disease.
causes (ētēology)	Etiology is the scientific study of causes of disease.
	You may refer to the definitions if you need help answering the next few frames.
The cause of the patient's disease is not yet known (and may remain	43. If a physician says that a patient's disease is of unknown etiology, what would that mean to you?
unknown).	

sickness, illness	44. Another word for disease is	
evidence, or exhibition	45. Manifestation is a display, or, of disease.	
causes	46. Etiology is the scientific study of of disease.	
structural functional disease	Pathology is the scientific study of and changes in the body produced by	
	48. Select the best term for each definition. Write your choice in the space provided.	
	pathology etiology manifestation disease	
disease	Another term for illness or sickness is	
manifestation	Evidence, or proof, of disease is	
etiology	The study of causes of disease is	
pathology	The scientific study of changes in the body produced by disease is	
path/ologist pathologist path ol' ə jist	49. The suffix <i>-ology</i> means the study of, the suffix <i>-ologist</i> means one who studies (and becomes an expert). One who studies structural and functional changes in the body produced by disease is a/	
cardi/ologist cardiologist kär dē ol' ə jist	50. Some physicians specialize in heart disease. The specialist who determines that a heart is deformed is a	

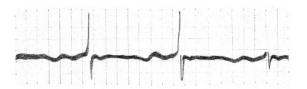


Figure 1.3 Electrocardiogram (ECG)

Electrocardiography is a method of recording electrical currents traversing the heart muscle just prior to each heartbeat. An electrocardiogram (ECG) is a graphic record of heart action currents that are obtained by electrocardiography.

	are obtained by electrocardiography.
cardiologist	51. A heart doctor who reads an electr/o/cardi/o/gram (a record of electrical impulses generated by the heart) is a specialist in heart problems or a/
a record of electrical waves given off by the heart (or equivalent)	52. Complete the meaning of electr/o/cardi/o/gram: Gram means a record or recording, electr/o means
heart	and cardi/o means
electr/o/cardi/o/gram electrocardiogram ē lek' trō kär' dē ə gram	53. The electr/o/cardi/o/gram is a record obtained by electr/o/cardi/o/graph/y. A technician can learn electrocardiography, but it takes a cardiologist to read the electrical / / / / record

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
cardi/algia cardialgia kär 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 heart
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 d oo od' nəm (or d oo o de' nəm)	62. The stomach empties its contents into the first section of the intestine, called the duodenum. <i>Duoden</i> 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 doo ō de nos' tō mē	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	When an abnormal condition exists between the stomach and the duodenum, a surgeon may need to perform a gastroduodenostomy, which means

duodenum dū ō dē' num	66. The suffix -ectomy means excision of; -ostomy means forming a new opening. The form <i>-otomy</i> means incision into. A duoden/otomy is an incision into the
-otomy duoden/otomy	67. The suffix for incision into is
duodenotomy doo od ə not' ə mē	If a physician makes an incision into the wall of the duodenum, the doctor has performed a /
-itis	68. The suffix for inflammation is
duoden/itis duodenitis doo od ə nī' tis	The word for inflammation of the duodenum is
	69. Duoden/al means of or pertaining to the duodenum.
of, or pertaining to, mother; of, or pertaining to, father	-al is a suffix meaning of, or pertaining to. Therefore matern/al means and patern/al means
duoden/al duodenal d oo ō dē' nəl	70. In the sentence "Duodenal carcinoma was present," the word meaning of, or pertaining to, the duodenum is
duoden/ostomy duodenostomy d oo od a nos' to me	71. The suffix -ostomy means making a new opening. The word to form a new opening into the duodenum is/
gastroduodenostomy	72. Here's one for you to figure out. A duodenostomy can be formed in more than one manner. If it is formed with the stomach, it is called a
S	stomach duodenum new opening 73.
-ostomy	The suffix for forming a new opening is

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

enlarged, oversized cause(s)

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			
electr/o			
megal/o			
cvan/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
-ologist

cyan/osis	76. Now build some new words. A condition of blueness is	eness condition .
path/ologist	One who studies bodily changes processing the body one who studies	
duoden/ostomy	A surgical procedure that forms a a / form a new	new opening in the duodenum is wopening.
eti/o/logic/al	A term meaning of, or pertaining is / /	to, the study of causes of disease the study of pertaining to
	77. While working through Chapter medical terms. Read them one at several times until you can articular rectly. If a friend pronounces each correctly? Try it.	a time and pronounce each aloud ate each term clearly and cor-
	acrocyanosis (ak rō sī ə nō' sis) acrodermatitis (ak rō der' ma tī'tis) acromegaly (ak rō meg' a lē) cardialgia (kär dē al' jē a) cardiologist (kär dē ol' ə jist) carditis (kär dī' tis) cyanoderma (sī ə nō der' mä) cyanosis (sī ə nō' sis) cytology (sī tol' ə jē) dermatologist (der ma tol' ə jist) dermatome (derm' ə tōm) dermatosis (der ma tō' sis) disease (diz ēz') duodenal (dōo ō dē' nəl) electrocardiogram (ē lek' trō kär' dē ə gram)	etiological (ē' tē ō loj' i kəl) gastralgia (gas tral' jē a) gastrectomy (gas trek' tō mē) gastritis (gas trī' tis) gastroduodenostomy (gas' trō dōo ō de nos' tō mē) leukemia (lōo kē' mē ə) leukocyte (lōo' kō sīt) leukoderma (lōo kō der' mā) manifestation (man' ə fes t1' shən) megalocardia (meg ə lō kār' dē ä) megalogastria (meg ə lō gas' trē ä) pathologist (path ol' ə jist) pathology (path ol' ə jē)

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

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
2.	Cardiology
3.	Duodenostomy
4.	Leukemia
5.	Dermatologist
6.	Electrocardiography
7.	Acromegaly
8.	Gastritis
9.	Dermatome
10.	Manifestation
11.	Gastroduodenostomy
12.	Etiology
13.	Acrocyanosis
14.	Pathologist
15.	Gastralgia

- a. Study of, or pertaining to, causes (of disease)
- b. A specialist in the field of skin diseases
- c. A condition of blueness of the extremities
- d. Enlargement of the heart
- e. A surgical procedure forming a new opening in the duodenum
- f. Display, evidence of disease
- g. One who specializes in the study of structural and functional changes in the body
- h. Pain in the stomach
- i. Inflammation of the stomach
- j. Recordings of electrical waves of the heart
- k. An abnormal condition of enlarged extremities
- 1. A surgical instrument for cutting skin
- m. A surgical operation to make a new opening between the stomach and duodenum
- n. The study of disease of the heart
- 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)	

ANSWERS

Part 1	Part 2
1. d	 disease
2. n	cyanoderma
3. e	leukocyte
4. o	megalogastria
5. b	5. manifestation
6. j	6. etiology
7. k	7. gastrectomy
8. i	8. duodenal
9. l	9. cyanosis
10. f	10. cardialgia

15. An abnormal condition of the skin

1	1	. 1	m		11	1	C	ar	'n	it	·i	c
ı								aп	u	ıι	. 1	3

12. a 12. leukoderma

13. c 13. acrodermatitis

14. g 14. cytology

15. h 15. dermatosis