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# **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

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## 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.

A gallbladder attack can cause excessive vomiting. Write the term that describes this unpleasant condition. \_\_\_\_\_

**Example**

*Myelo / dysplasia* means defective development of the spinal cord.

*Chondro* means cartilage. What does chondro / dysplasia mean? \_\_\_\_\_

**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 (ˈ) is placed after the syllable bearing the heavier stress or accent; the secondary stress mark (ˈ) follows a syllable having a somewhat lighter stress, as in *com·men·da·tion* (komˈ ən·dāˈ 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	yōō	use, few
ä	palm, father	o	odd, hot	v	vain, eve
b	bat, rub	ō	open, so	w	win, away
ch	check, catch	ô	order, jaw	y	yet, yearn
d	dog, rod	oi	oil, boy	z	zest, muse
e	end, pet	ou	out, now	zh	vision, pleasure
ē	even, tree	ōō	pool, food	ə	the schwa, an
f	fit, half	oo	took, full		unstressed vowel
g	go, log	p	pit, stop		representing the
h	hope, hate	r	run, poor		sound spelled
i	it, give	s	see, pass		<i>a</i> in <i>above</i>
ī	ice, write	sh	sure, rush		<i>e</i> in <i>sicken</i>
j	joy, ledge	t	talk, sit		<i>i</i> in <i>clarity</i>
k	cool, take	th	thin, both		<i>o</i> in <i>melon</i>
l	look, rule	th	this, bathe		<i>u</i> in <i>focus</i>

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* (butˈn) and *sudden* (sudˈn), 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.

1.

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

2.

In this example, the words suffix, prefix, affix, and fixation have fix as their \_\_\_\_\_.

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:

overhang

overcome

understand

grandstand

outcome,

etc.

over

hang

under

grand

stand

wear

come

out

---

---

---

- yes  
two words are  
combined to make  
a meaningful  
compound term
5.  
Is teaspoon a compound word? \_\_\_\_\_  
Explain your answer.  
\_\_\_\_\_  
\_\_\_\_\_
6.  
A word root and a whole word may form a compound word. But the root must be in its *combining form*. 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  
micr/o  
tel/e
- What are the word roots? \_\_\_\_\_;  
What are the combining forms? \_\_\_\_\_.
7.  
Underline the combining form in each of the following words:
- phon/o/graph*  
*gastr/o/enteric*  
*laryng/o/spasm*
- phon/o/graph      gastr/o/enter/ic  
laryng/o/spasm
8.  
The combining form in compound words is made up of a \_\_\_\_\_ plus a \_\_\_\_\_.
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?  
\_\_\_\_\_
- a combining form
10.  
Compound terms may be composed of which of the following?  
a) two or more whole words  
b) a whole word and a word root  
c) a word root combining form and a word
- all three
- Your answer? \_\_\_\_\_
11.  
Two roots may join together but one of them will be in a special form called the \_\_\_\_\_.
- combining form

12.  
What kind of words are these: microfilm and telecommunication?  
\_\_\_\_\_
- compound terms  
a combining form  
(a root plus a vowel)  
a whole word
13.  
Many medical terms are made of a combining form, a word root,  
and an ending. In the term *micr/o/scop/ic*,  
the combining form is \_\_\_\_\_;  
the ending is \_\_\_\_\_;  
the root is \_\_\_\_\_;  
Is there another word root? \_\_\_\_\_  
What might it be? \_\_\_\_\_
- micr/o  
-ic  
micr-  
scop-
14.  
There are two word roots in *micr/o/scop/ic*. The root *micr* 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 *scop* because  
the ending *-ic* begins with a \_\_\_\_\_.
- vowel
15.  
Build a term from the combining form *electr/o*, the word root *stat*,  
and the ending *-ic*.  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_
- electrostatic
16.  
In the word *hydroelectric*,  
electr is the \_\_\_\_\_;  
hydro is the \_\_\_\_\_;  
-ic is the \_\_\_\_\_.
- word root  
word  
ending
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.  
The meaning of *blast* is changed by its \_\_\_\_\_.
- ending



yes  
the endings added to  
the root changed its  
meaning

18.  
A *suffix* 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 *-able* is added to the end of *read* it forms the new word *read-able*. *-Able* is a meaningful unit added to the end of a word, creating a new word. So *-able* 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 \_\_\_\_\_.

prefix

22.  
In the word dis/*please*, *dis-* 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 \_\_\_\_\_ of the \_\_\_\_\_.

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



# List of Illustrations

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

## **Unit 1**

- 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)
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- 4.5 Hernia, Ptosis, Anomaly, Aneurysm
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- 9.1 The Female Reproductive Organs (Midline Section)
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- 9.3 Embryos at 5, 6, and 8 Weeks
- 9.4 Fetus in Utero, Beginning 9th Week
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## **Unit 10**

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

# 1 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)

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)

megalo (enlarged)

path/o (disease)

-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 or organ of the body 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 \_\_\_\_\_.  
enlargement of, oversized, or enlarged



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

skin  
inflammation of the  
skin

10.  
Here are two new suffixes:  
-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.

Write what each means.

Dermatitis  
Dermatologist

Dermatitis means \_\_\_\_\_.

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



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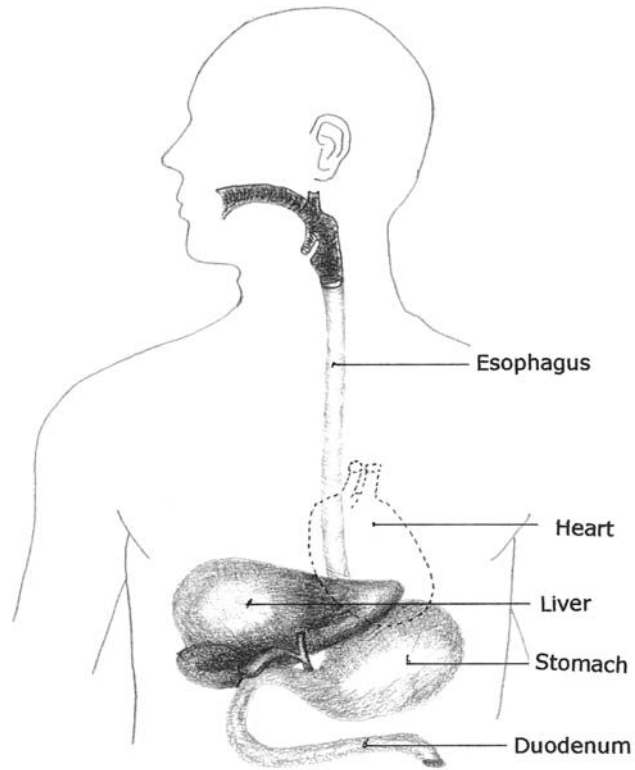
	14. <i>Cyan/o</i> means blue or blueness. The suffix <i>-osis</i> denotes an abnormal condition. <i>Cyan/osis</i> means an abnormal condition of blueness.
abnormal blueness of the extremities	What do you think <i>acr/o/cyan/osis</i> means? _____.
cyan or cyan/o	The part of the medical term that tells 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	<i>Acrocyanosis</i> may be defined as the abnormal _____ of blueness of the _____.
<i>acr/o/cyan/osis</i> <i>acrocyanosis</i> <i>ak rō sī ə nō'sis</i>	16. 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. <i>Acrocyanosis</i> means _____.
-osis	19. <i>Dermat/osis</i> denotes an abnormal skin condition. The suffix that means abnormal condition is _____.
cyan/osis cyanosis <i>sī ə nō'sis</i>	20. <i>Osis</i> 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. <i>Leuk/o</i> 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 _____ / _____ / _____ / _____.

## 6 QUICK MEDICAL TERMINOLOGY

---

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 “blood cancer.” 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 kār' dē ä



**Figure 1.2** 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)

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

megalocardia or  
cardiomegaly



enlarged, oversized	megal/o _____
skin	derm/o, dermat/o _____
abnormal condition of	-osis (-a, -y) _____
inflammation of	-itis _____
cutting instrument	-tome _____

41.

Now build a medical term for each of the following:

acro/megal/y	a condition of oversized extremities _____ / _____ / _____ extremities oversized
leuko/cyte	a white cell _____ / _____
dermat/itis	inflammation of the skin _____ / _____
megalo/cardi/a OR cardio/megal/y	a condition of enlarged heart _____ / _____ / _____

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.

exhibition, display,  
evidence      *Manifestation* is proof of impaired bodily health. It's a display, exhibition, or evidence of disease.

changes (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.

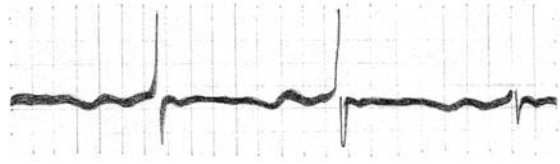
43.

The cause of the patient's disease is not yet known (and may remain unknown).	If a physician says that a patient's disease is of unknown etiology, what would that mean to you? _____ _____ _____.
-------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------

## 10 QUICK MEDICAL TERMINOLOGY

---

- 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 47.  
functional Pathology is the scientific study of \_\_\_\_\_ and  
disease \_\_\_\_\_ 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<br>_____. |          |               |         |
- path/ologist 49.  
pathologist The suffix *-ology* means the study of, the suffix *-ologist* means one  
path ol' ə jist who studies (and becomes an expert). One who studies structural  
and functional changes in the body produced by disease is a  
\_\_\_\_\_ / \_\_\_\_\_.
- cardi/ologist 50.  
cardiologist Some physicians specialize in heart disease. The specialist  
kär dē ol' ə jist who determines that a heart is deformed is a  
\_\_\_\_\_ / \_\_\_\_\_.
- |       |            |
|-------|------------|
| heart | specialist |
|-------|------------|



**Figure 1.3** Electrocardiography (ECG)

*Electrocardiography* is a method of recording electrical currents traversing the heart muscle just prior to each heart beat. An Electrocardiogram is a graphic record of heart action currents that are obtained by electrocardiography.

51.

cardiologist

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

52.

a record of electrical  
waves given off by  
the heart (or  
equivalent)

Complete the meaning of electr/o/cardi/o/gram:

Gram means a record or recording, electr/o means \_\_\_\_\_

\_\_\_\_\_

heart

cardi/o means \_\_\_\_\_

53.

electr/o/cardi/o/gram  
electrocardiogram  
ē lek' trō kär' dē ə  
gram

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

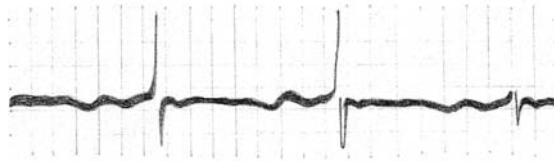
heart

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 \_\_\_\_\_ (ECG).

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 pain

cardialgia

56.

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

57.

Gastralgia means pain in the stomach.

stomach

*Gastr* is the root for \_\_\_\_\_.

-algia

The suffix for pain is \_\_\_\_\_.

58.

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

stomach

to cut out, excise, or  
remove surgically

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. <i>Duoden</i> is the word root for _____.
gastr	What is the root for stomach? _____.
stomach and duodenum	63. The suffix <i>-ostomy</i> 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 _____ _____ _____

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 duo/den/otomy is an incision into the _____.
-otomy duoden/otomy duodenotomy dōō od ə not' ə mē	67. The suffix for incision into is _____. If a physician makes an incision into the wall of the duodenum, the doctor has performed a _____ / _____.
-itis duoden/itis duodenitis dōō od ə nī' tis	68. The suffix for inflammation is _____. The word for inflammation of the duodenum is _____ / _____.
of, or pertaining to, mother; of, or pertaining to, father	69. Duoden/al means of or pertaining to the duodenum. -al is a suffix meaning of, or pertaining to. Therefore matern/al means _____ and patern/al means _____.
duoden/al duodenal dōō ō dē' nəl	70. In the sentence "Duodenal carcinoma was present," the word meaning of, or pertaining to, the duodenum is _____ / _____.
duoden/ostomy duodenostomy dōō od ə nos' tō mē	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 _____. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <span>stomach</span> <span>duodenum</span> <span>new opening</span> </div>
-ostomy	73. 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
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 Unit 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)

acrodermatitis

(ak rō der' ma tī' tis)

acromegaly (ak rō meg' a lē)

cardialgia (kār dē al' jē a)

cardiologist (kār dē ol' ə jist)

carditis (kār dī' tis)

cyanoderma (sī ə nō der' mā)

cyanosis (sī ə nō' sis)

cytology (sī tol' ə jē)

gastrectomy

(gas trek' tō mē)

gastritis (gas trī' tis)

gastroduodenostomy

(gas' trō dōō ō de nos' tō mē)

leukemia (lōō kē' mē ə)

leukocyte (lōō' kō sīt)

leukoderma (lōō kō der' mā)

dermatologist

(der ma tol' ə jist)

dermatome (derm' ə tōm)

dermatosis (der ma tō' sis)

disease (diz ēz')

duodenal (dōō ō dē' nəl)

electrocardiogram

(ē lek' trō kār' dē ə gram)

etiological (ē' tē ō loj' i kəl)

gastralgia (gas tral' jē a)

manifestation

(man' ə fes tā' 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 Unit 2, take the Unit 1 Self-Test that follows.

---

## Unit 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. Dermatorne          | 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     |





# 2 More Word Roots, Suffixes, and Prefixes

*In Unit 2 you will cover more sophisticated terms, word roots, and suffixes, and you'll begin using prefixes. Teaching sequences in this unit aim to expand your learning by combining words you covered in Unit 1 with some new ones. We introduced new ideas as well as useful medical terms to improve retention and make your practice exercises interesting. Now, let's get started.*

## Mini-Glossary

aden/o (gland)

arthr/o (joint)

carcin/o (malignancy)

cele/o, o/cele (hernia)

cephal/o (head)

chondr/o (cartilage)

cost/o (ribs)

dent/o (tooth)

emes/is (vomiting)

hist/o (tissue)

laryng/o (larynx)

lip/o (fat)

malac/o (soft)

morph/o (structure of)

muc/o (mucus)

onc/o (tumor)

ost/o, oste/o (bone)

plast/o (repair)

trach/e (trachea)

troph/o (development)

en-, endo- (in, inside, within)

ex-, ex/o- (outside, out)

hyper- (excessive)

hypo- (under)

inter- (between)

-al, -ar, -ic (of, or pertaining to)

-oid (resembling)

-oma (tumor)

-ism (medical condition, disease)

Before you begin Unit 2, complete the Review Sheet for Unit 1. It will help you get a running start as you continue your studying. You'll find review sheets beginning on page 247.

1.  
Examine the terms hyper/trophy, hyper/emia, and hyper/emesis. *Hyper-* means excessive, more than normal amount. *Hyper-* placed in front of trophy, emia, and emesis changes the meaning of the terms. Therefore, *hyper-* is a \_\_\_\_\_ (prefix/suffix?).
- prefix
2.  
Hyper/thyroid/ism is a medical condition of the thyroid gland resulting in excessive thyroid gland activity. The prefix expressing higher than normal activity of the thyroid gland is \_\_\_\_\_.
- hyper
3.  
The suffix *-ism* indicates there is a medical condition involving some specified thing or body part. In the case of hyper/thyroid/ism the medical condition involves what body part? \_\_\_\_\_.
- thyroid gland
4.  
Hyper- means something is excessive. Thyroid tells you what part is involved. The suffix *-ism* means there is a resulting medical condition. In your words, explain the meaning of the term hyper/thyroid/ism.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- Here's a suggestion:  
Hyperthyroidism means the patient has a medical condition resulting from excessive activity of the thyroid gland.
5.  
*Emesis* is a word that means vomiting. A word that means excessive vomiting is \_\_\_\_\_ / \_\_\_\_\_.  
Gallbladder attacks can cause excessive vomiting. This, too, is called \_\_\_\_\_.
- hyper/emesis  
hyperemesis  
hī per em' ə sis  
hyperemesis
6.  
Hyper/trophy means overdevelopment; *troph/o* comes from the Greek word for nourishment. Note the connection between nourishment and development. Overdevelopment is called \_\_\_\_\_ / \_\_\_\_\_ / *y*.  
a condition of excessive development
- hyper/troph/y  
hypertrophy  
hī per' trō fē
- hypertrophy
- Muscles also can overdevelop or \_\_\_\_\_.  
(a verb form)

7.  
Many organs can overdevelop. If the heart overdevelops, the condition is called cardiac \_\_\_\_\_.
8.  
The prefix *hypo-* is just the opposite of *hyper-*. The prefix for under or less than normal is \_\_\_\_\_.
9.  
Derm/o refers to the \_\_\_\_\_. The suffix *-ic* means of, or pertaining to. Hypo/derm/ic means pertaining to under the \_\_\_\_\_.
10.  
A hypodermic needle is short because it goes just under the skin. A shot given superficially is administered with a \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ needle.  
under skin pertaining to
11.  
*Aden/o* is used in words that refer to glands. Build a word that means inflammation of a gland:  
\_\_\_\_\_ / \_\_\_\_\_.  
gland inflammation of
12.  
Since ectomy means excision (or surgical removal of), the word for surgical removal of a gland is \_\_\_\_\_ / \_\_\_\_\_.  
gland surgical removal
13.  
If a gland is like a tumor, part or all of it may be excised. Excision of a gland is \_\_\_\_\_.
14.  
The suffix *-oma* means tumor. Form a word that means tumor of a gland:  
\_\_\_\_\_ / \_\_\_\_\_.
15.  
Try this. Sometimes the thyroid gland develops a tumor. A patient's history might read, "... because of the presence of a thyroid adenoma, thyroidectomy is indicated." What is a thyroid/ectomy?  
\_\_\_\_\_  
\_\_\_\_\_.
- hypertrophy
- hypo-
- skin
- skin
- hypo/derm/ic  
hypodermic  
hī pō der' mik
- aden/itis  
adenitis  
ad ə nī' tis
- aden/ectomy  
adenectomy  
ad ə nek' tō mē
- adenectomy
- aden/oma  
adenoma  
ad ə nō' mā
- surgical removal, or  
excision, of the  
thyroid gland

16.

The suffixes *-ic*, *-al*, and *-ar* mean of, or pertaining to, the attached word.

spleen

A splenic tumor is a tumor of the \_\_\_\_\_.

tonsil

A tonsillar tumor is a tumor pertaining to the \_\_\_\_\_.

in the duodenum

Where would you expect to find a duodenal tumor? \_\_\_\_\_.

17.

*Carcin/o* is the root for cancer. The suffix *-oma* means tumor. A carcinoma is a \_\_\_\_\_.

cancerous tumor

18.

A carcinoma may occur in almost any part of the body. A cancerous tumor of the spleen is called \_\_\_\_\_ carcinoma.

splenic

carcinoma

Cancer of the tonsil is tonsillar \_\_\_\_\_.

of, or pertaining to

The suffixes *-ic*, *-ar*, and *-al* mean \_\_\_\_\_.

19.

An adenoma is a glandular tumor; *-oma* means \_\_\_\_\_.

tumor

A lip/oma is a tumor of fatty tissue.

fat, fatty tissue

*Lip/o* is the combining form for \_\_\_\_\_.

lip/oma

20.

A fatty tumor is called a \_\_\_\_\_ / \_\_\_\_\_.

lipoma

li po' ma

21.

Lipoma is a fatty tumor; *-oid* is a suffix meaning like or resembling. Using the word root for fatty tissue, build a term that means fatlike, or resembling fat: \_\_\_\_\_ / \_\_\_\_\_.

lip/oid

lipoid

lip' oid

22.

The word lipoid is used in chemistry and pathology. It describes a substance that looks like fat, dissolves like fat, but is not fat. Cholesterol is an alcohol that resembles fat; therefore, cholesterol is a \_\_\_\_\_ / \_\_\_\_\_ substance.

lip/oid

fat

like

muc/oid  
mucoid  
myōō' koid

23.

*Muc/oid* means resembling mucus. There is a substance in connective tissue that resembles mucus. This is called a \_\_\_\_\_ / \_\_\_\_\_ substance.

24.

resembling mucus

There is a protein in the body that is said to be mucoid in nature. Mucoid means \_\_\_\_\_.

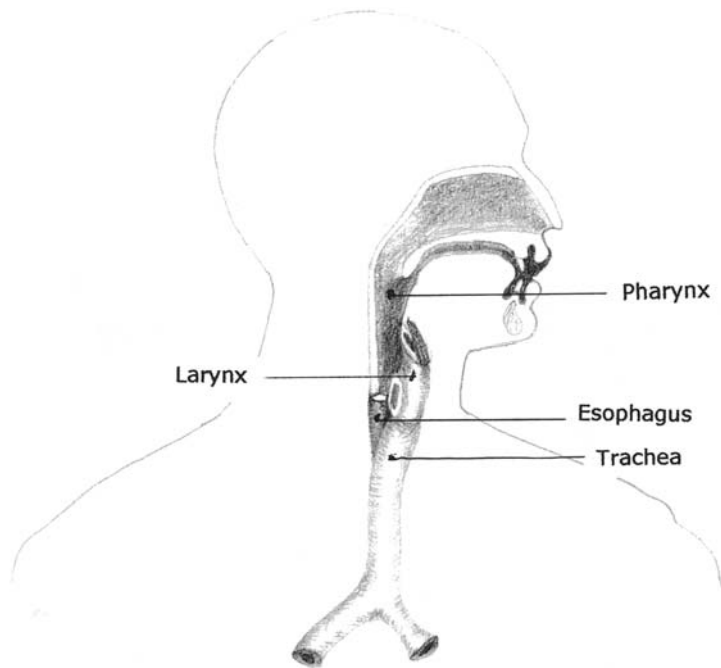
25.

mucoid

A substance that resembles mucus is best described as \_\_\_\_\_.

lipoid

A substance resembling fatty tissue is called a \_\_\_\_\_ substance.



**Figure 2.1** The Upper Respiratory Tract

The Respiratory Tract conducts oxygen-rich air to the lungs where oxygen can be readily absorbed by the blood. It removes carbon dioxide-laden air to the external atmosphere. The *pharynx* filters

and warms the air we breathe and conducts it into the *larynx*. The larynx protects against inadvertent inhaling of solid matter and contains the vocal cords, the mechanism of sound production. Leading from the larynx is the windpipe, more correctly known as the *trachea*.

Pharynx (pharyng/o)      Trachea (trache/o)

Larynx (laryng/o)

larynx

laryng/itis

laryngitis

lair an jī' tis

inflammation of the  
larynx

26.

The larynx or *voice box* contains the vocal cords. *Laryng/o* is the combining form for building words referring to the voice box, also called the \_\_\_\_\_.

Build a term meaning inflammation of the larynx.

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

27.

After a bad cold, a patient may develop laryngitis, which means

\_\_\_\_\_.

28.

Now, you'll add a few new suffixes to your growing vocabulary. An obstruction of the colon may require a new opening into the colon that will be *permanent*.

(kō los' tō mē)

a new (permanent)  
opening into the  
colon

*Col*, *col/o* refer to the colon, or large bowel. The suffix *-ostomy* means a new (permanent) opening into.

Col/ostomy means \_\_\_\_\_  
\_\_\_\_\_.

-ostomy

29.

The suffix for a new (permanent) opening is \_\_\_\_\_.

30.

Take a look at Illustration 2.1. An obstruction of the windpipe makes breathing very difficult, or even impossible. In an emergency, a physician may make an incision into the windpipe to permit a free flow of air to the patient's lungs.

(trā kē ot' ō mē)

an incision into, or  
temporary opening  
into, the trachea, or  
windpipe

*Trache*, *trache/o* refer to the trachea, or *windpipe*. The suffix *-otomy* means incision into, or a *temporary* opening.

Trache/otomy means \_\_\_\_\_  
\_\_\_\_\_.

31.  
The suffix meaning a temporary opening, or incision into, is \_\_\_\_\_.
- otomy
32.  
Which suffix would you use to indicate creation of a new (permanent) opening? \_\_\_\_\_.
- ostomy
- Which suffix means making an incision into, or creating a temporary opening? \_\_\_\_\_.
- otomy
- creation of a new (permanent) opening into the colon
33.  
Colostomy means \_\_\_\_\_.
- incision into, or temporary opening into, the trachea
- Tracheotomy means \_\_\_\_\_.
34.  
Time for a quick review. Using the suggested answers, write a meaning for each of the following word roots.
- SUGGESTED ANSWERS:
- |                   |        |
|-------------------|--------|
| fat, fatty        | mucus  |
| larynx            | skin   |
| cancer, malignant | spleen |
- lip/o \_\_\_\_\_
- splen/o \_\_\_\_\_
- derm/o \_\_\_\_\_
- laryng/o \_\_\_\_\_
- muc/o \_\_\_\_\_
- carcin/o \_\_\_\_\_
- fat, fatty
- spleen
- skin
- larynx
- mucus
- cancer, malignant
35.  
Now do the same with the following suffixes.
- SUGGESTED ANSWERS:
- |                                  |                                |
|----------------------------------|--------------------------------|
| incision into, temporary opening | a new (permanent) opening into |
| like, or resembling              | development                    |
| of or pertaining to              | vomiting                       |
| tumor                            | excision of                    |
- development
- excision of
- trophy \_\_\_\_\_
- ectomy \_\_\_\_\_



## 28 QUICK MEDICAL TERMINOLOGY

incision into,  
temporary opening  
a new (permanent)  
opening into  
of, or pertaining to  
like, or resembling  
vomiting  
tumor

-otomy \_\_\_\_\_

-ostomy \_\_\_\_\_

-ic, -ar, -al \_\_\_\_\_

-oid \_\_\_\_\_

-emesis \_\_\_\_\_

-oma \_\_\_\_\_

This is a good place to stop and take a short break.

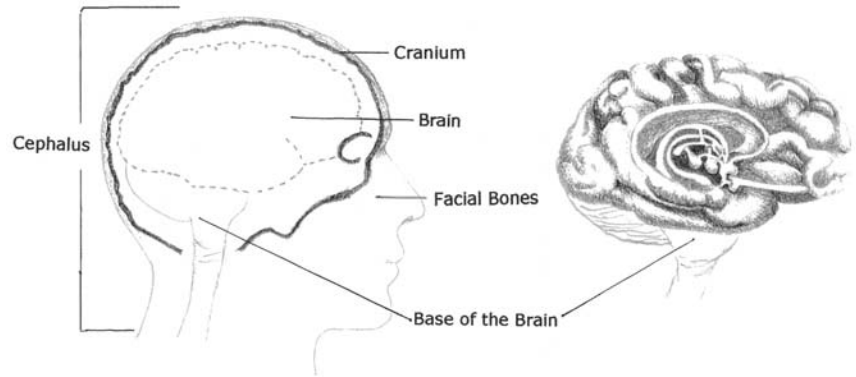


Figure 2.2 The Head

*Cephalus* is a term that refers to the entire head. It is composed of both the cranium and facial bones. The *cranium* (or skull) is a bony vault protecting the contents of the head. The face is the front portion of the head and includes the eyes, nose, mouth, forehead, cheeks, and chin. The cranium encloses the *cerebrum*, also known as the brain. The brain is the center of sensory awareness and movement, emotions, rational thought and behavior, foresight and planning, memory, speech, language, and interpretation of language.

Cephalus, head including skull and facial bones (cephal/o)

Cranium (crani/o)

Cerebrum (cerebr/o)

Use the illustration of the head to help you with the frames that follow.

39.

Welcome back. At this stage of word-building, students sometimes find they have one big headache. Both ceph/algia and cephal/algia mean pain in the head. The combining form and root for head are \_\_\_\_\_ and \_\_\_\_\_.

cephal/o  
ceph

40.

To indicate pain we use -algia. Any headache may be called

_____	/	_____	or
head		pain	
_____	/	_____	
head		ache	

ceph/algia or  
cephal/algia  
cephalgia  
(sef ə lal' jē ä)

41.  
The word root and combining form for head is *ceph*, *cephal/o*. Two words for pain in the head are \_\_\_\_\_.

cephalalgia  
and cephalgia

42.  
Cephalalgia means \_\_\_\_\_.

headache

of, or pertaining to, the head

Cephal/ic means \_\_\_\_\_.

43.  
A case history reporting head wounds due to an accident might read, “\_\_\_\_\_ / \_\_\_\_\_ lacerations were present.”

cephal/ic  
cephalic  
sə fal’ ik

44.  
A tumor located on the head might be noted as a \_\_\_\_\_ tumor.

cephalic

Prefix	Meaning
en-, endo-	in, inside, within
ex-, exo-	out, outside completely

Use the table to help with the frames that follow.

45.  
Cephal/o means head. What does *encephal/o* mean? \_\_\_\_\_.

inside the head (the brain)

46.  
Since the brain is enclosed inside the head’s bony vault, *encephal/o* means the organ inside the head, or the \_\_\_\_\_.

brain

47.  
Using the word root for head, build words meaning the following:  
inflammation of the brain  
\_\_\_\_\_ / \_\_\_\_\_.  
brain inflammation of

encephal/itis  
en sef ə lī’ tis

encephal/oma  
en sef’ ə lō’ mā

brain tumor \_\_\_\_\_ / \_\_\_\_\_.  
brain tumor of

48.  
What does endocarditis mean? \_\_\_\_\_.

inflammation within the heart

49.  
Refer to Frame 44 for help. Select a prefix meaning out, or completely outside of: \_\_\_\_\_.  
en-, endo- or ex-, exo-
50.  
*Exo/genous* means originating completely outside of an organ or part. *Genous* takes its meaning from a Latin word meaning to produce or originate.
- exo-  
exo/genous  
ex' oj' ə nus  
endo/genous  
en' doj' ə nus
- What part of the term means completely outside of? \_\_\_\_\_.
- Something originating completely outside of an organism, cell, or organ is called \_\_\_\_\_ / \_\_\_\_\_.  
outside produced or originating
- Now build a word that indicates something is produced or originates from within a cell or organism:  
\_\_\_\_\_ / \_\_\_\_\_.  
within produced or originating
51.  
Try these. Here are some common English words often used in the medical world. Write what each means.
- hale (breathe)      cise (cut)      spire (breathe)
- breathe out  
cut out  
breathe out (it also means to die or breathe out for the last time)
- exhale means \_\_\_\_\_.
- excise means \_\_\_\_\_.
- expire means \_\_\_\_\_.
52.  
Write two forms of a prefix for each of the following.
- en-, endo-  
ex-, exo-
- in, inside of, within \_\_\_\_\_, \_\_\_\_\_.
- out, completely outside of \_\_\_\_\_, \_\_\_\_\_.
53.  
The Greek word for hernia is *kele*. From this we derive the combining forms *cele/o* or *o/cele*. Encephal/o/cele is a word meaning herniation of \_\_\_\_\_ tissue.
- brain

encephal/o/cele  
encephalocele  
en səf' a lō sēl

54.  
Any hernia is a protrusion of a part from its natural cavity. Herniation is expressed by cele. A protrusion of brain tissue from its natural cavity is an \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
brain (inside the head) hernia

encephalocele

55.  
Increased fluid inside the head sometimes causes herniation at the base of the brain. Herniation of the brain in medical language is called an \_\_\_\_\_.

a condition of softened  
brain tissue

56.  
Malac/ia is a word meaning soft, or softened, tissue. Encephal/o/malac/ia means \_\_\_\_\_.

encephal/o/malac/ia  
encephalomalacia  
en səf' a lō mā la' zhə

57.  
*Malac/o* is the combining form for soft, or softened. The term meaning softened brain tissue is \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / ia.  
brain tissue softened a condition of

encephalomalacia

58.  
An accident causing brain injury could result in softened brain tissue, called \_\_\_\_\_.

oste/itis  
osteitis  
os tē ī' tis

59.  
*Oste* is the root referring to bone. A word meaning inflammation of the bone is \_\_\_\_\_ / \_\_\_\_\_.

a condition of softened  
bone tissue

60.  
What do you think oste/o/malac/ia means? \_\_\_\_\_.

oste/o/malac/ia  
osteomalacia  
os' tē ō mā lā' zhə

61.  
Insufficient calcium in a young person's diet may lead to gradual softening and bending of bones. This disorder is called \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
bone softened condition

- osteomalacia \_\_\_\_\_.
62.  
A disorder of the parathyroid gland can cause calcium to be withdrawn from bones. The resulting condition may be called \_\_\_\_\_.
- oste/oma  
osteoma  
os tē ō' mā \_\_\_\_\_ / \_\_\_\_\_.
63.  
A hard outgrowth on any bone could be a bone tumor. In medical terms, it would be referred to as an \_\_\_\_\_.
- a tumor inside (the  
center canal of the  
bone) What does end/oste/oma mean? \_\_\_\_\_  
\_\_\_\_\_.
- surgical repair of a  
joint(s) \_\_\_\_\_.
64.  
*Arthr/o* refers to joints; *plast/y* means surgical repair of. What does *arthr/o/plast/y* mean? \_\_\_\_\_  
\_\_\_\_\_.
- arthr/o/plast/y  
arthroplasty  
arth' rō plas' tē \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
65.  
Think of a plastic surgeon building a new nose or doing a face lift. These are surgical repairs or restoration. When a joint has lost its ability to move, movement can sometimes be restored by an \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- joint repair or restore (process/procedure)
- arthro/plasty \_\_\_\_\_ / \_\_\_\_\_.
66.  
If a child is born without a joint, sometimes one can be formed by a surgical procedure called \_\_\_\_\_ / \_\_\_\_\_.
- arthr/itis  
arthritis  
ärth rī' tis \_\_\_\_\_ / \_\_\_\_\_.
67.  
Form a word that means inflammation of a joint: \_\_\_\_\_ / \_\_\_\_\_.
- joint inflammation of
- arthr/otomy  
arthrotomy  
ärth rot' ō mē \_\_\_\_\_ / \_\_\_\_\_.
68.  
Now form a word that means incision into a joint: \_\_\_\_\_ / \_\_\_\_\_.
- joint temporary opening



teeth	76.
teeth	A <i>dent</i> /ist takes care of _____. A dent/ifrice is used for cleaning _____.
spaces between the teeth	Interdental spaces means _____.
dent/algia	77.
dentalgia	Try making a few new words. Pain in the teeth, or a toothache, is called _____ / _____.
den tal' jē a	
dent/oid	A word that means tooth-shaped or resembling a tooth is _____ / _____.
dentoid	
den' toid	
	78.
	Try these. Pathogenic means something that produces disease.
	What is a pathogenic organism? _____
	What does pathology mean? _____
(If you're not sure, use your dictionary.)	Therefore, pathological means _____.
	79.
Excessive vomiting is evidence of a diseased condition.	Explain each of the following statements in simple language.
	Hyperemesis is a manifestation of a pathological condition. _____
A graphic representation of brain activity (EEG) is necessary to determine the cause of brain disease (or something similar in your words).	Electroencephalography (EEG) is often the first step toward a diagnosis of encephalopathy. _____
	_____
	_____



80.

It's time to review again. Using the suggested answers, write the meaning of each of the following terms.

SUGGESTED ANSWERS:

bone	joint
cartilage	rib
head	soft, soften
hernia	tooth, teeth

joint  
hernia  
head  
cartilage  
rib  
tooth, teeth  
soft, soften  
bone

arthr/o \_\_\_\_\_  
cele/o \_\_\_\_\_  
cephal/o \_\_\_\_\_  
chondr/o \_\_\_\_\_  
cost/o \_\_\_\_\_  
dent/o \_\_\_\_\_  
malac/o \_\_\_\_\_  
ost-, oste-, oste/o \_\_\_\_\_

81.

These word parts are used as suffixes.

repair of (restoration or  
plastic surgery)

-plasty means \_\_\_\_\_.

hernia (protrusion of a  
part from its natural  
cavity)

-cele means \_\_\_\_\_.

82.

Here are some easy ones.

in, within, inside  
out, completely  
outside of

end-, endo- is a prefix meaning \_\_\_\_\_.

ex-, exo- is a prefix meaning \_\_\_\_\_.

83.

Build a medical term for each of the following.

arthro/plasty

restoration of a joint \_\_\_\_\_ / \_\_\_\_\_  
joint plastic surgery of

inter/costal

between the ribs \_\_\_\_\_ / \_\_\_\_\_  
between ribs

chondro/malacia

softening of cartilage \_\_\_\_\_ / \_\_\_\_\_  
cartilage softened

oste/oma

bony tumor \_\_\_\_\_ / \_\_\_\_\_  
bone tumor of

encephalo/cele	herniation of the brain _____ / _____. inside the head                      hernia of
dent/oid	resembling teeth _____ / _____. teeth                      resembling
ceph/algia	headache _____ / _____. head                      pain
arthr/otomy	incision into a joint _____ / _____. joint                      temporary opening

84.

You just learned the suffix -oma, meaning tumor. Now, here are three more very useful terms often used in discussion of tumors.

Read each definition. Then underline a key word or two to help you remember what the term means.

*Oncology* is the branch of medicine dealing with tumors.

*Morphology* is the biological science dealing with the structure of an organ or part of the body.

*Histology* is the study of the microscopic tissues that make up a part or a structure.

*Pathology* is the study of changes in structure and function caused by disease.

Here are our  
suggestions:

tumors, branch of  
medicine

structure of an organ,  
part

microscopic tissues of a  
part

changes caused by  
disease

85.

Complete each of the following statements. Look back at the definition if necessary.

tumors	Onc/o refers to _____.
tissues (of a part, organ)	Hist/o refers to _____.
changes (due to disease)	Path/o refers to _____.
structure (of an organ, part)	Morph/o refers to _____.

86.

Complete each definition.

structure	Morphology is the study of the _____ of an organ or part.
tissues	Histology is the study of microscopic _____ making up a part or structure.
tumors	Oncology is the study of _____.
changes	Pathology is the study of _____ caused by disease.

87.

Complete each of the following definitions:

histologist      One who studies the tissue *structure* under a microscope is a \_\_\_\_\_.

oncologist      A specialist in the care and treatment of patients with *tumors* is an \_\_\_\_\_.

morphologist      One who studies the *structure* of living organisms is a \_\_\_\_\_.

pathologist      A specialist who studies *changes* in structure and function resulting from disease is a \_\_\_\_\_.

88.

Here are more than 30 medical terms you worked with in Unit 2. Read each one. Say it aloud several times and explain what it means *aloud* (so your ears and brain can hear what you learned).

adenectomy (ad ə nek' tō mē)

adenitis (ad ə nī' tis)

adenoma (ad ə nō' mā)

arthroplasty (ärth' rō plas' tē)

arthrotomy (ärth rot' ō mē)

carcinoma (kär sin ō' mā)

cephalgia (sef ə lal' jē ä)

cephalic (se fal' ik)

chondritis (kon drī' tis)

colostomy (kō los' tō mē)

dentalgia (den tal' jē ä)

encephalitis (en sef ə lī' tis)

encephalocele (en sef' ə lō sēl)

encephaloma (en sef' ə lō' mā)

oncology (on kol' ō jē)

osteitis (os tē ī' tis)

osteomalacia (os' tē ō mā lā' zhə)

pathologist (path ol' ō jist)

endosteoma

(en dos tē ō' mā)

exogenous

(eks oj' ə nus)

histology (his tol' ō jē)

hyperemesis (hī per em' ə sis)

hypertrophy (hī per' tro fē)

hypodermic (hī pō der' mik)

intercostal (in ter kos' t'l)

laryngitis (lair an jī' tis)

lipoid (lip' oid)

lipoma (lī pō' mā)

morphology (mor fäl' ō jē)

mucoid (myōō' koid)

thyroidectomy

(thī roy dek' tō mē)

tracheotomy (trā kē ot' ō mē)

Take a short break and then test yourself with the Unit 2 Self-Test, next page.

---

## Unit 2 Self-Test

### Part 1

From the list on the right, select the correct meaning for each of the following terms. Write the letters in the space provided.

- |                         |                                                      |
|-------------------------|------------------------------------------------------|
| _____ 1. Osteomalacia   | a. Overdevelopment                                   |
| _____ 2. Intercostal    | b. Study of microscopic tissues                      |
| _____ 3. Emesis         | c. Surgical removal of cartilage                     |
| _____ 4. Adenoma        | d. Between the ribs                                  |
| _____ 5. Laryngotomy    | e. Surgical repair of a joint                        |
| _____ 6. Lipoid         | f. Softening of bone tissue                          |
| _____ 7. Cephalalgia    | g. Herniation of brain tissue                        |
| _____ 8. Morphology     | h. Tumor of glandular tissue                         |
| _____ 9. Carcinogenic   | i. Headache                                          |
| _____ 10. Encephalocele | j. Incision into the larynx                          |
| _____ 11. Arthroplasty  | k. Pertaining to producing cancer                    |
| _____ 12. Oncologist    | l. Resembling fat                                    |
| _____ 13. Hypertrophy   | m. Vomiting, to vomit                                |
| _____ 14. Chondrectomy  | n. Medical specialist dealing with tumors            |
| _____ 15. Histology     | o. The science of studying the structure of an organ |

**Part 2**

Complete each of the medical terms on the right with the appropriate prefix and/or suffix:

- |                                                                        |                     |
|------------------------------------------------------------------------|---------------------|
| 1. Surgical removal of the thyroid gland                               | Thyroid _____       |
| 2. Inflammation of glandular tissue                                    | Aden _____          |
| 3. Malignant tumor                                                     | Carcin _____        |
| 4. Excessive vomiting                                                  | _____ emesis        |
| 5. Resembling mucus                                                    | Muc _____           |
| 6. Tumor specialist                                                    | Onc _____           |
| 7. Making a new permanent opening into the colon                       | Col _____           |
| 8. Inflammation inside the head                                        | _____ cephal _____  |
| 9. Tumor of fat tissue                                                 | _____ oma           |
| 10. Pertaining to the teeth                                            | Dent _____          |
| 11. To breathe out                                                     | _____ hale          |
| 12. Pertaining to between the ribs                                     | _____ cost _____    |
| 13. A tumor inside the bone canal                                      | _____ oste _____    |
| 14. Medical condition resulting from an <i>underactive</i> thyroid     | _____ thyroid _____ |
| 15. Originating or produced completely outside of an organ or organism | _____ genous        |

**ANSWERS****Part 1**

- f.
- d.
- m.
- h.
- j.
- l.
- i.
- o.
- k.

**Part 2**

- Thyroidectomy
- Adenitis
- Carcinoma
- Hyperemesis
- Mucoid
- Oncologist
- Colostomy
- Encephalitis
- Lipoma

- 
- |        |                    |
|--------|--------------------|
| 10. g. | 10. Dental         |
| 11. e. | 11. Exhale         |
| 12. n. | 12. Intercostal    |
| 13. a. | 13. Endosteoma     |
| 14. c. | 14. Hypothyroidism |
| 15. b. | 15. Exogenous      |



# 3 Basic Anatomical Terms and Abnormal Conditions

*In Unit 3 you will put together at least 50 new medical terms. You'll work with some new prefixes and suffixes and practice using those you covered in earlier units. Although this program doesn't attempt to teach anatomy of the human body, the language of medicine is all about the human body and what affects its parts. So, in this unit you'll bring anatomy and medicine together by focusing on a couple of anatomical areas and some abnormal conditions that affect them.*

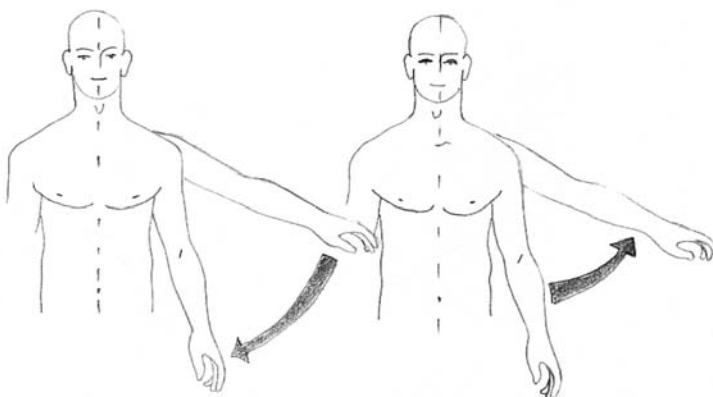
## Mini-Glossary

abdomin/o (abdomen)	metr/o, meter (measure)
cephal/o (head)	ot/o (ear)
chol/e (bile, gall)	pelv/i (pelvis)
cocc/i (coccus)	phob/ia (fear)
crani/o (cranium, skull)	py/o (pus)
cyst/o (bladder, sac)	rhin/o (nose)
dip/l/o (double)	staphyl/o (grape)
hydro (water)	strept/o (chain)
lith/o (stone, calculus)	therap/o (treatment)
	thorac/o (thorax)
ab- (away from)	-ar (pertaining to)
ad- (toward)	-centesis (puncture of a cavity)
	-genesis, gen/o (produce, originate)
	-meter (measuring instrument)
	-orrhea (flow, discharge)



Before you begin Unit 3, take the time to complete the Review Sheet for Unit 2. It will refresh your memory of the terms and word parts you studied. It may surprise you to find out how much you've learned. Try it (page 249).

1.  
The prefix *ab-* means from or away from.  
Abnormal means \_\_\_\_\_ normal.
2.  
The prefix *ab-* means \_\_\_\_\_.
3.  
Ab/errant uses the prefix *ab-* before the English word for wandering. What do you think the term *ab/errant* means? \_\_\_\_\_.
4.  
Ab/errant is used in medicine to describe a structure that wanders from the normal. When some nerve fibers follow an unusual route, they form an \_\_\_\_\_ / \_\_\_\_\_ nerve.
5.  
Aberrant nerves wander from the normal nerve track. Blood vessels that follow an unusual path are called \_\_\_\_\_ vessels.



**Figure 3.1** Adduction/Abduction

- ab/duction  
abduction  
ab duk' shun
6.  
Ab/duct/ion means movement away from a midline. When the arm is raised from the side of the body, \_\_\_\_\_ / \_\_\_\_\_ has occurred.  
away from (midline)                      movement
- abducted
7.  
When children have been kidnapped and taken from their parents, they have been \_\_\_\_\_.
- abducted
8.  
Abduction can occur from any midline. When the fingers of the hand are spread apart, four fingers have been \_\_\_\_\_ from the midline of the hand.
- ad/duction  
adduction  
ad duk' shun
9.  
On the other hand, *ad-* is a prefix meaning toward. Movement toward a midline is \_\_\_\_\_ / \_\_\_\_\_.
- ab-  
ad-
10.  
The prefix meaning from or away from is \_\_\_\_\_. The prefix meaning toward, or toward the midline, is \_\_\_\_\_.
- ad/hesion
11.  
When two normally separate tissues join together, they adhere to each other like adhesive tape. Underline the part of the word that means sticking or joining: ad/hesion.
- ad/hesion  
adhesion  
ad hē' zhun
12.  
Several years ago patients did not walk soon enough after surgery, which sometimes resulted in abnormal joining of tissues to each other. Write the word that means the abnormal joining and healing together of tissues: \_\_\_\_\_ / \_\_\_\_\_.
- adhesions
13.  
Now patients walk the day following an appendectomy. This has nearly eliminated \_\_\_\_\_.

14.

Review Exercise

Complete the following:

away from  
toward

The prefix ab- means \_\_\_\_\_ the midline.

The prefix ad- means \_\_\_\_\_ the midline.

In your own words, explain the meaning of the following terms:

movement away from  
the midline

abduction \_\_\_\_\_.

sticking or joining  
together

adhesion \_\_\_\_\_.

a structure that wanders  
from the normal

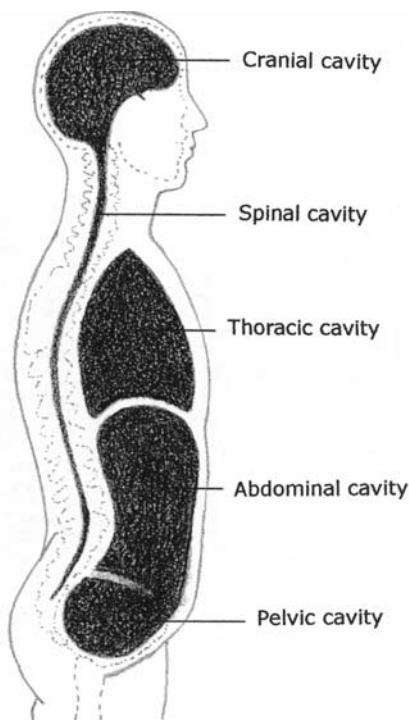
aberrant \_\_\_\_\_.

a condition away from  
normal

abnormal \_\_\_\_\_.

movement toward a  
midline

adduction \_\_\_\_\_.



**Figure 3.2** The Great Cavities

The Great Cavities are closed cavities not open to the outside of the body. Many of the body organs are suspended in these interval



cyst	20.	Abdomin/o/cyst/ic means pertaining to the abdomen and urinary bladder. The word root for bladder is _____.
bladder		Cyst/o is used to form terms that refer to the _____.
cyst/o		To refer to the urinary bladder or any sac containing fluid, use some form of _____ / _____.
cyst/otomy	21.	The word for temporary incision into a bladder is _____ / _____.
cystotomy		bladder / incision into (temporary)
cyst/itis		Inflammation of a bladder is _____.
cystitis		
cyst/ectomy		The word for surgical removal of a bladder is _____.
cystectomy		
	22.	Chances are good that by now you have figured out how word parts go together to create meaning. But let's review a simple rule and some examples.
		Rule: About 90 percent of the time, the meaning of a term can be unscrambled by identifying its component parts in reverse.
		For example,
		<i>cyst</i> means bladder;
inflammation of the		<i>-itis</i> means inflammation of.
bladder		Therefore cystitis means _____.
		<i>Dermat</i> means skin;
one who studies the		<i>-ologist</i> means a specialist (one who studies).
skin, or a skin		Therefore dermatologist means _____.
specialist		_____.
		<i>Abdomino</i> means abdomen;
puncture of the		<i>-centesis</i> means surgical puncture of a cavity (to drain off fluid).
abdominal cavity (to		Therefore abdominocentesis means _____.
drain fluid)		_____.

23.  
Take a look at Illustration 3.2.
- pertaining to the  
abdomen and thorax  
(bony cage forming  
the chest cavity)
- The bony cage that forms the chest cavity is called the *thorax*. What does abdomin/o/thorac/ic mean? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- abdomin/o/thorac/ic  
abdominothoracic  
ab dom' ə nō thō rā'  
sik
24.  
A word that means, literally, pertaining to the abdomen and chest cavity is \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
abdomen thorax pertaining to
- thorac/ic  
thoracic  
thō rā' sik
25.  
*Thorac/o* forms words about the thorax, or chest cavity. A word that means pertaining to the chest cavity is \_\_\_\_\_ / \_\_\_\_\_.  
thorax pertaining to
- thorac/otomy  
thoracotomy  
thōr ə kot' ə mē
26.  
Write a term meaning incision into the chest cavity:  
\_\_\_\_\_ / \_\_\_\_\_.
- thorac/o/centesis  
thoracocentesis  
thōr' ə kō sen tē' sis
27.  
Write a term meaning surgical tapping of the chest cavity to remove fluids: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
thorax puncture of
- thorac/o/plast/y  
thoracoplasty  
thōr' ə kō plas' tē
28.  
A word for the surgical repair of the chest cage is  
\_\_\_\_\_ / \_\_\_\_\_ / plast / y.
- cyst/o/plast/y  
cystoplasty  
sis' tō plas' tē
29.  
Now write a word for surgical repair of a bladder:  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
30.  
A hydro/cyst is a sac (or bladder) filled with watery fluid. *Hydro* is used in words to mean \_\_\_\_\_  
\_\_\_\_\_.
- water, fluid, or a watery  
fluid

the cranial cavity	31. Go back to Illustration 3.2. The space inside the head is called _____.
head, including cranium and facial bones	Cranium means skull. Cephal/o is the combining form meaning _____.
of or pertaining to the head	Therefore, cephalic means _____.
cranial cavity	32. An increased amount of fluid in the head is called hydro/cephal/us. Both the fluid and the brain occupy the same space, called the _____.
hydro/cephal/us hydrocephalus hī' drō sə fal' us	33. A disease characterized by an enlarged head due to an increased amount of fluid in the cranial cavity is called _____ / _____ / <u>us</u> . water head
hydrocephalus	34. Unless arrested, accumulation of watery fluid in the cranial cavity results in deformity of the skull, and brain damage may occur. This condition is called _____.
abnormal fear	35. Hydro/phob/ia means having an abnormal fear of water. <i>Phobia</i> means _____.
hydro/phob/ia hydrophobia hī drō fō' bē ə	36. An abnormal fear of water is _____ / _____ / _____. water abnormal fear
hydrophobia	Some parents are abnormally afraid to have their children swim or even ride in a boat. These parents suffer from _____.
hydro/therapy hydrotherapy hī' drō ther' ə pē	37. <i>Therapy</i> means treatment. Treatment by means of water is _____ / _____. water treatment
hydrotherapy	Swirling water baths are a form of _____.

38.

See Illustration 3.2 again, the bones of the pelvis form the pelvic cavity. A physician measures the size of a woman's pelvic cavity after she becomes pregnant. This procedure is called pelvi/metr/y.

pelvi

The word root for pelvic cavity is \_\_\_\_\_.

metr

The root for measurement is \_\_\_\_\_.

-y

The ending meaning a procedure is \_\_\_\_\_.

39.

To determine whether a woman has a pelvis large enough to avoid trouble during labor, a physician can measure the size of the pelvic cavity. This measurement is called \_\_\_\_\_.

pelvimetry

pel vim' ə trē

40.

a measuring device  
used for pelvimetry  
(or equivalent)

What do you think a pelvimeter is? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

41.

pelvimetry

pelvimeter

pel vim' ə ter

When a physician measures the patient's pelvic cavity, the doctor is making a measurement called \_\_\_\_\_.

The instrument used is a \_\_\_\_\_.

42.

surgical repair of the  
skull or cranium

Crani/o is used in terms referring to the cranial cavity or crani/um, or skull. Crani/o/plast/y means \_\_\_\_\_  
\_\_\_\_\_.

43.

crani/ectomy

craniectomy

krā nē ek' tō mē

crani/otomy

craniotomy

krā nē ot' ō mē

Write a medical term for each of the following:  
a surgical procedure to excise part of the cranium,

\_\_\_\_\_ / \_\_\_\_\_;  
skull excision of

incision into the skull,

\_\_\_\_\_ / \_\_\_\_\_;  
cranium incision into

crani/o/meter

craniometer

an instrument to measure the cranium,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.



of, or pertaining to, the  
brain and skull  
(cranium)

44.  
The cerebrum occupies the cranial cavity. Thinking occurs in the cerebrum (cerebr/o). What is the meaning of crani/o/cerebr/al?  
\_\_\_\_\_  
\_\_\_\_\_

cerebrum

45.  
Have you ever been told to use your “gray matter”? Gray matter controls thinking, feeling, and movement. The gray matter is the largest part of the brain. What is it called? \_\_\_\_\_  
cranium or cerebrum

cerebr/al  
cerebral  
ser ē' brəl

46.  
Write a term meaning of, or pertaining to, the gray matter of the brain: \_\_\_\_\_ / \_\_\_\_\_.  
cerebrum                      pertaining to

spin/al  
spinal  
spī' nəl

47.  
Cerebr/o/spin/al refers to the brain and spinal cord. What part of the word means pertaining to the spinal cord?  
\_\_\_\_\_ / \_\_\_\_\_.

cerebr/o/spin/al  
cerebrospinal  
ser ē brō spī' nəl

48.  
A puncture or tap to remove fluid from the space around the cerebrum and spinal cord is called a spinal tap or  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ puncture.  
cerebrum                      spinal                      pertaining to

49.  
Review Exercise

SUGGESTED ANSWERS:

head	pelvis
bladder, sac	bony vault, skull
abdomen	chest cavity, rib cage
measurement	water, fluid

Using the suggested answers (only if you must), write the meaning of each of the following:

pelvis, pelvic cavity  
water, fluid  
bladder, sac  
head

pelv/i \_\_\_\_\_  
hydro- \_\_\_\_\_  
cyst/o \_\_\_\_\_  
cephal/o \_\_\_\_\_

measurement, meter	metr/o _____.
bony chest cage, thorax	thorac/o _____.
bony vault (brain), skull	crani/o _____.
abdomen, abdominal cavity	abdomin/o _____.

50.  
Try that again.

SUGGESTED ANSWERS:

-therapy	-otomy
-plasty	-metry
-ectomy	-centesis

Some suggestions:  
(Yours may be different.)

Add a prefix or ending to each of the following combining forms and then explain the meaning of the term you created.

craniotomy	crani/o _____
pelvimetry	_____
thoracoplasty	_____
abdominocentesis	_____
cystectomy	_____
hydrotherapy	_____

51.  
Let's try something different. Coccus is a bacteria that causes disease. Cocc/i is the plural of cocc/us. When building terms about a whole family of bacteria called the cocci, we use the word root

cocc- \_\_\_\_\_.

(See Appendix B for more information on the formation of plurals.)

52.  
Pneumonia is caused by the pneumococcus. From this term you know that the germ responsible for pneumonia belongs to the family of bacteria called \_\_\_\_\_ / \_\_\_\_\_ (plural).

cocc/i  
kok' sē

- 53.
- There are three main types of a coccus bacteria:
- cocci growing in pairs are  
dipl / o / cocc / i / \_\_\_\_\_ / \_\_\_\_\_;
- cocci growing in twisted chains are  
strept / o / cocc / i / \_\_\_\_\_ / \_\_\_\_\_;
- cocci growing in clusters are  
staphyl / o / cocc / i / \_\_\_\_\_ / \_\_\_\_\_.

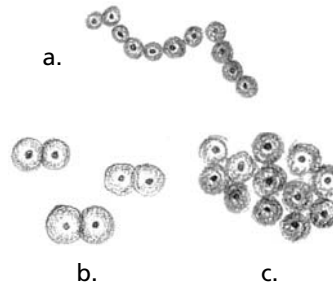


Figure 3.3 Cocci Bacteria

(a. strept) (b. diplo) (c. staphyl)

Bacteria (pl.) of the coccus family are round or spheroidal shaped single cell micro-organisms. Many types of cocci (pl.) exist and cause illness and infection in humans.

- 54.
- Refer to the above frame for help. If you see a twisted chain of cocci when examining a slide under a microscope, you would say they were \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- 55.
- Staphyle* is the Greek word for bunch of grapes. If you should see a cluster of cocci when using a microscope, you would say they were \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- 56.
- The bacteria that cause carbuncles grow in clusters like bunches of grapes. Carbuncles are caused by \_\_\_\_\_ bacteria.
- 57.
- Py/o is used for words involving pus. Genesis (gen/o) is from a Greek word meaning produce or originate. Py/o/gen/ic means \_\_\_\_\_.

py/o/gen/ic  
pyogenic

58.  
Staphylococci produce pus; therefore, these cocci are  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ bacteria.  
pus producing

pyogenic

59.  
Bacteria that contain or produce pus are referred to as  
\_\_\_\_\_ bacteria.

pyogenic

60.  
Boils are purulent (contain pus). This pus is formed by  
\_\_\_\_\_ bacteria.  
pus-producing

discharge of pus

61.  
The suffix *-orrhea* means flow or discharge. Py/orrhea means  
\_\_\_\_\_.

py/orrhea  
pyorrhea  
pī ō rē' ə

62.  
The suffix *-orrhea* refers to any flow or discharge. A flow of pus is  
called \_\_\_\_\_ / \_\_\_\_\_.  
pus discharge

pyorrhea

63.  
Pyorrhea alveolaris is a disease of the teeth and gums. The term that  
tells you pus is being discharged is \_\_\_\_\_.

pyorrhea

64.  
When pus flows from the salivary gland, the disease is called  
\_\_\_\_\_ salivaris (of the salivary gland).

ear

65.  
Ot/orrhea means a discharging ear; *ot-* is the word root for \_\_\_\_\_.

ot/orrhea  
otorrhea  
ō tō rē' ə

66.  
Ot/orrhea is both a symptom and a disease. No matter which is  
meant, the word to use is \_\_\_\_\_ / \_\_\_\_\_.  
ear discharge

- inflammation of the  
(middle) ear
67.  
Otorrhea may be a sign of ot/itis media (middle). Ot/itis media means \_\_\_\_\_.
- otorrhea
- This disease involves discharge, inflammation, pain, and deafness. What's the term for discharge from the ear? \_\_\_\_\_
- ot/algia  
otalgia
68.  
Otitis usually causes ear pain. Write the medical term for \_\_\_\_\_ / \_\_\_\_\_.  
ear pain
- otalgia  
ō tal' jē ə
69.  
Small children often complain of an earache. The medical term for pain in the ear is \_\_\_\_\_.
- nose
70.  
Rhinorrhea means discharge from the nose. *Rhin/o* is used in terms about the \_\_\_\_\_.
- rhin/itis  
rhinitis  
rī nī' tis
71.  
Taking what is necessary from rhin/o, form a term meaning inflammation of the nose: \_\_\_\_\_ / \_\_\_\_\_.
- rhin/orrhea  
rhinorrhea
72.  
When your head cold is accompanied by a "runny nose" the medical term for the symptom is \_\_\_\_\_ / \_\_\_\_\_.  
nose discharge
- rhinorrhea
73.  
Irritated or diseased sinuses in the head and face may discharge fluid through the nose. This is a form of \_\_\_\_\_.
- rhin/o/plasty  
rhinoplasty
74.  
Build a term that means surgical repair of the nose: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- rhin/otomy  
rhinotomy
- Form a word that means incision into the nose: \_\_\_\_\_ / \_\_\_\_\_.

75.

Try these for a quick review.

## SUGGESTED ANSWERS:

twisted, chainlike	double, paired
family of bacteria	producing, originating
pus	grape-like cluster
ear	nose

Using the suggestions above (only if you must), write the meaning of each of the following:

family of bacteria	cocc/us, cocc/i _____
grape-like cluster	staphyl/o _____
pus	py/o _____
nose	rhin/o _____
double, paired	dipl/o _____
ear	ot/o _____
twisted, chain-like	strept/o _____
producing, originating	gen/o _____

76.

Try again. Here are some word parts and combining forms to help you build some familiar medical terms.

rhin/o	cocc/i
ot/o	py/o
-plasty	-orrhea
staphyl/o	gen/o
-algia	dipl/o

Put together a medical term that best defines each of the following descriptions:

diplococci	A family of coccus bacteria found growing in pairs _____.
pyogenic	Pertaining to producing pus, or pus-forming _____.
rhinorrhea	A runny discharge from the nose _____.
otalgia	Pain in the ear, earache _____.
staphylococci	Bacteria of the coccus family growing in grape-like clusters _____.
rhinoplasty	Surgical repair (reconstruction) of the nose _____.

- calculus or stone 77.  
A rhin/o/lith is a calculus or stone in the nose. *Lith/o* is the combining form for \_\_\_\_\_.
- calculi (calculus) or stones 78.  
Lithogenesis means producing or forming \_\_\_\_\_.
- lith/otomy  
lithotomy  
lith ot'ə mē 79.  
Taking what is necessary from lith/o, build a word meaning an incision for the removal of a stone:  
\_\_\_\_\_ / \_\_\_\_\_.  
stone incision into (for)
- gall or bile 80.  
Calculi or stones form in many places in the body. A chol/e/lith is a gallstone. Chole is the word for \_\_\_\_\_.
- chole/lith  
cholelith 81.  
One cause of gallbladder disease is the presence of a gallstone or  
\_\_\_\_\_ / \_\_\_\_\_.  
gall stone
- cholelith 82.  
No matter what its size or shape, irritation and blockage of the gallbladder can be caused by a bile or gallstone, called \_\_\_\_\_.
- gallbladder 83.  
Gall is the fluid stored in the gallbladder. Cholecyst is a medical name for the \_\_\_\_\_.
- chole/cyst/itis  
cholecystitis  
kō' lē sis tī' tis 84.  
When gallstones cause inflammation of the gallbladder, this condition is called  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
gall bladder inflammation
- cholecystitis 85.  
Inflammation of the gallbladder is accompanied by pain and emesis. The condition is called \_\_\_\_\_.
- cholecystitis 86.  
Fatty foods like butter, cream, and whole milk contain fat and should be avoided by patients with an inflammatory condition of the gallbladder, or \_\_\_\_\_.

chole/cyst/otomy  
cholecystotomy  
kō lē sis tot' e mē  
or  
chole/lith/otomy  
cholelithotomy  
kō' lē lith ot' ə mē

87.  
When a cholelith causes cholecystitis, one of two surgical procedures may solve the problem. One is an incision into the gallbladder to remove stones, called a

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
gall stone incision into  
or \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
gall stone incision into

chole/cyst/ectomy  
cholecystectomy  
kō' lē sis tek' tō mē

88.  
More often, the presence of a gallstone calls for excision of the gallbladder, called

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
gall bladder surgical removal

89.  
It's time to review. From List B select the best meaning for each term in List A. Write your choice in the space provided.

pelvis  
stone, calculus  
gall, bile  
pus  
skull  
head  
measure  
nose  
ear  
chainlike  
grapelike  
double  
chest  
bladder, sac  
abdomen

LIST A  
pelv/i \_\_\_\_\_  
lith/o \_\_\_\_\_  
chol/e \_\_\_\_\_  
py/o \_\_\_\_\_  
crani/o \_\_\_\_\_  
cephal/o \_\_\_\_\_  
metr/o \_\_\_\_\_  
rhin/o \_\_\_\_\_  
ot/o \_\_\_\_\_  
strept/o \_\_\_\_\_  
staphyl/o \_\_\_\_\_  
dipl/o \_\_\_\_\_  
thorac/o \_\_\_\_\_  
cyst/o \_\_\_\_\_  
abdomin/o \_\_\_\_\_

LIST B  
measure  
skull  
pus  
pelvis  
head  
gall, bile  
stone, calculus  
chainlike  
double, pairs  
chest, thorax  
bladder, sac  
nose  
abdomen  
grape-like  
ear

away from  
toward  
watery fluid, water

90.  
Complete the following:  
The prefix ab- means \_\_\_\_\_ the midline.  
The prefix ad- means \_\_\_\_\_ the midline.  
The prefix hydro- means \_\_\_\_\_.



91.

Select the best meaning for each of the following word parts.

treatment	therapy _____	surgical puncture
calculus, stone	lith _____	abnormal fear
discharge, flow	orrhea _____	calculus, stone
surgical puncture	centesis _____	treatment
abnormal fear	phobia _____	discharge, flow

92.

Each of the suffixes below means *of, or pertaining to* the word root to which it is attached. Write the meaning of each term.

	SUFFIXES	EXAMPLE	MEANING
of or pertaining to the duodenum	-al	duoden/al	_____
			_____
pertaining to the stomach	-ic	gastr/ic	_____
			_____
pertaining to the lumbar area (of the spine)	-ar	lumb/ar	_____
			_____
pertaining to the heart	-ac	cardi/ac	_____
			_____

93.

Here are more than 40 new medical terms you formed in Unit 3. Read them one at a time and pronounce each aloud. Better yet, ask a friend to say them aloud and you spell them.

aberrant (ab er' ant)	craniotomy (krā nē ot' ō mē)
abdominal (ab dom' i nəl)	cranium (krā' nē um)
abdominocentesis (ab dom' i nō sen tē' sis)	cystitis (sis tī' tis)
abduction (ab duk' shun)	cystocele (sis' to sēl)
adduction (ad duk' shun)	cystotomy (sis tot' ə mē)
cardiocentesis (kär' dē ō sen tē' sis)	diplococci (dip' lō kok' sī)
cephalic (cə fal' ik)	hydrocephalus (hī' drō sə fal' us)
cholecystectomy (kō' lē sis tek' tō mē)	hydrophobia (hī' drō fō' bē ə)
cholecystitis (kō' lē sis tī' tis)	hydrotherapy (hī' drō ther' ə pē)
cholelithotomy (kō' lē lith ot' ə mē)	lithogenesis (lith' ō jen' ə sis)
craniectomy (krā nē ek' tō mē)	lithotomy (lith ot' ō mē)
cranioplasty (krā' nē ō plas' tē)	otalgia (ō tal' jē a)
	otitis (ō tī' tis)
	otorrhea (ō tō rē' ə)
	pelvic (pel' vik)
	pelvimetry (pel vim' ə trē)

pyogenic (pī ō jen' ik)	streptococci (strep' tō kok' sī)
pyorrhea (pī ō rē' ə)	thoracic (thō rā' sik)
rhinitis (rī nī' tis)	thoracocentesis
rhinolith (rī' nō lith)	(thōr' ə kō sen tē' sis)
rhinoplasty (rī' nō plas tē)	thoracoplasty (thōr' ə kō plas' tē)
rhinorrhea (rī nōr rē' ə)	thoracotomy (thōr ə kot' ə mē)
staphylococci (staf' i lō kok' sī)	

Take the Unit 3 Self-Test before going on.

## Unit 3 Self-Test

### Part 1

From the list on the right, select the correct meaning for each of the following terms. Write the letter in the space provided.

- |                          |                                                     |
|--------------------------|-----------------------------------------------------|
| _____ 1. Thoracocentesis | a. Headache                                         |
| _____ 2. Cholelithotomy  | b. Relating to the pelvis, pelvic cavity            |
| _____ 3. Otorrhea        | c. Wandering or out of the normal place             |
| _____ 4. Cystotomy       | d. Tapping or puncturing the chest cavity (thorax)  |
| _____ 5. Abdominalgia    | e. Movement toward the midline                      |
| _____ 6. Cranium         | f. Abnormal fear of water                           |
| _____ 7. Cephalgia       | g. Running or draining from the ear                 |
| _____ 8. Hydrophobia     | h. Incision into the bladder                        |
| _____ 9. Adduction       | i. Producing pus                                    |
| _____ 10. Streptococci   | j. The bony vault surrounding the brain             |
| _____ 11. Pyogenic       | k. Incision for the purpose of removing a gallstone |
| _____ 12. Aberrant       | l. Commonly referred to as a “belly-ache”           |
| _____ 13. Pelvic         | m. Cocci bacteria that grow in chains               |
| _____ 14. Cholecystotomy | n. Surgical repair or restoration of the nose       |
| _____ 15. Rhinoplasty    | o. Incision into the gallbladder                    |

**Part 2**

Complete each of the medical terms on the right with the appropriate word root:

- |                                                              |                |
|--------------------------------------------------------------|----------------|
| 1. Herniation of a bladder                                   | _____ cele     |
| 2. Tapping or puncturing of the heart chamber                | _____ centesis |
| 3. Surgical repair of the bony vault that encloses the brain | _____ plasty   |
| 4. Earache                                                   | _____ algia    |
| 5. Gallstone                                                 | _____ lith     |
| 6. Inflammation of the nose                                  | _____ itis     |
| 7. Measurement of the pelvis                                 | _____ metry    |
| 8. Relating to the thorax                                    | _____ ic       |
| 9. Collection of fluid in the head                           | Hydro _____    |
| 10. Incision into the cranium                                | _____ otomy    |
| 11. Relating to the formation of pus                         | _____ genic    |
| 12. Surgical repair of the chest cage                        | _____ plasty   |
| 13. Instrument for measuring the pelvis                      | _____ meter    |
| 14. Relating to the abdomen                                  | _____ al       |
| 15. Surgical removal of the gallbladder                      | _____          |

**ANSWERS****Part 1**

1. d
2. k
3. g
4. h
5. l
6. j
7. a
8. f
9. e

**Part 2**

1. Cystocele
2. Cardiocentesis
3. Cranioplasty
4. Otalgia
5. Cholelith
6. Rhinitis
7. Pelvimetry
8. Thoracic
9. Hydrocephalus

- |       |                     |
|-------|---------------------|
| 10. m | 10. Craniotomy      |
| 11. i | 11. Pyogenic        |
| 12. c | 12. Thoracoplasty   |
| 13. b | 13. Pelvimeter      |
| 14. o | 14. Abdominal       |
| 15. n | 15. Cholecystectomy |



# 4 The Genitals and Urinary Tract

*Unit 4 is a little longer than the previous ones. Again, you'll be working with roots, prefixes, and suffixes. You'll make more than 50 new medical terms and practice defining them. You'll work with anatomical terms and some medical conditions associated with these areas of the body. There are illustrations showing the anatomy of the urinary tract and genital organs of both male and female. Make these illustrations work for you. Bookmark the pages and refer to them often. Move slowly. When you encounter a difficult example, go back a frame or two and work through it again. Help yourself understand before moving on.*

## Mini-Glossary

angi/o (vessel)	neur/o (nerve)
arter/i/o (artery)	o/o (egg, ovum)
blast/o (embryo)	oophor/o (ovary)
colp/o (vagina)	orchid/o (testes)
crypt/o (hidden)	peps/o, peps/ia (digestion)
fibr/o (fiber)	pne/o (air, breathe)
hem/o, hemat/o (blood)	pyel/o (pelvis of the kidney)
hyster/o (uterus)	salping/o (fallopian tube)
kinesi/o (motion)	scler/o (tough, hard)
lys/o (destruction)	spermat/o (sperm)
men/o (menses)	ureter/o (ureter)
my/o (muscle)	urethr/o (urethra)
nephro/o (kidney)	ur/o (urine)
a-, an- (without)	-blast (embryonic)
brady- (slow)	-y, -ia (noun ending)
dys- (pain)	-orrhagia (hemorrhage)

tachy- (*fast*)-orrhaphy (*suture*)-pexy (*fixation*)-ptosis (*drooping*)-spasm (*twitching*)-sperm (*sperm*)

Did you remember to complete the Unit 3 Review Sheet before beginning this new unit? Practice, practice, practice. It really works (page 251).

slow  
brady/cardia  
brad ē kär' dē ə

1.  
*Brady* is used in words to mean slow.  
Brady/cardia means \_\_\_\_\_ heart action.

brady/cardia  
bradycardia  
brad ē kär' dē ə

2.  
The term for abnormally slow heart action is  
\_\_\_\_\_ / \_\_\_\_\_.

slowness of movement

3.  
*Kinesi-* is used in words to mean movement or motion. Brady/  
kinesia means \_\_\_\_\_.

pain on movement or  
movement pain

4.  
Kinesi/algia means \_\_\_\_\_  
\_\_\_\_\_.

kinesi/algia  
kinesialgia  
kin ē' sē al' jē ə

5.  
When moving any sore or injured part of the body, pain  
occurs. Moving a broken arm can cause pain described as  
\_\_\_\_\_ / \_\_\_\_\_.

kinesialgia

6.  
After your first horseback ride, almost any movement causes a con-  
dition called \_\_\_\_\_.

kinesi/ology  
kinesiology  
kin ē' sē ol' ə jē

7.  
The suffix *-ology* means study of. (Remember ologist?) The  
study of muscular movements is  
\_\_\_\_\_ / \_\_\_\_\_.  
movement study of

kinesiology	8. Kinesi/ology is the study of movement. The study of muscular movement during exercise is known as the scientific field of _____.
kinesiology	9. The whole science of how the body moves is embraced in the field of _____.
abnormally slow movement	10. Brady/kinesia means _____.
abnormally fast or rapid heart action	11. <i>Tachy-</i> is used in words to show the opposite of slow. Thus tachy/cardia means _____.
tachy/cardia tachycardia tak ə kār' dē ə	12. Write the medical term for an abnormally fast heartbeat: _____ / _____.
breathe or breathing	13. <i>Pne/o</i> comes from the Greek word <i>pneia</i> (breathe). <i>Pne/o</i> anyplace in a word means _____.
will brad ip nē' ə silent	14. When <i>pne/o</i> begins a word, the “p” is silent. When <i>pne/o</i> occurs later in a word, the “p” is pronounced; for example, when you pronounce brady/pnea, you _____ pronounce the letter “p.” (will/will not) In the term pneumonia, the “p” is _____. (pronounced/silent)
slow breathing	15. Brady/pnea means _____.
tachy/pnea tachypnea tak ip nē' ə	A word for rapid breathing is _____ / _____.
tachypnea	16. The rate of respiration (breathing) is controlled by the amount of carbon dioxide in the blood. Increased carbon dioxide speeds up breathing and causes _____.



17.  
tachypnea Muscle exercise increases the amount of carbon dioxide in the blood. This speeds respiration and produces \_\_\_\_\_.
18.  
without breathing The prefix *a-* literally means without. Thus apnea means \_\_\_\_\_.
19.  
apnea A/pnea really means temporary cessation of breathing. If the failure to breathe were not temporary, death would result. Temporary cessation of breathing is referred to as \_\_\_\_\_.  
ap' nē ə
20.  
apnea If the level of carbon dioxide in the blood falls very low, temporary cessation of breathing results. This is called \_\_\_\_\_.
21.  
bradypnea If breathing is merely very slow, it is called \_\_\_\_\_.
22.  
tachypnea When breathing is abnormally fast, it is called \_\_\_\_\_.  
a- The prefix meaning without is \_\_\_\_\_.
23.  
dys/pne/a The prefix *dys-* means painful, bad, or difficult. Dys/troph/y literally means bad development. Write a word for difficult breathing:  
dyspnea \_\_\_\_\_ / \_\_\_\_\_.  
disp' nē ə
24.  
dys- Dys/men/orrhea means painful menstruation. The prefix for painful, bad, or difficult is \_\_\_\_\_.
25.  
poor or painful digestion *Pepsis* (peps/o) is the Greek word for digestion. Dys/peps/ia means \_\_\_\_\_.
26.  
dys/peps/ia Eating under tension may cause painful or poor digestion. This is called \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
dyspepsia  
dis pep' sē ə

27.

dyspepsia

Contemplating the troubles of the world while eating is a good way to cause \_\_\_\_\_.

28.

Here's a quick review of what you just covered. From List B select the best meaning for each term in List A. Write your choice in the space provided.

menses  
digestion  
breathe, breathing  
movement

LIST A

men/o \_\_\_\_\_  
peps/o \_\_\_\_\_  
pne/o \_\_\_\_\_  
kinesi/o \_\_\_\_\_

LIST B

digestion  
movement  
menses  
breathe, breathing

29.

Try these.

painful  
very slow  
abnormally fast  
without, absence of

LIST A

dys- \_\_\_\_\_  
brady- \_\_\_\_\_  
tachy- \_\_\_\_\_  
a- \_\_\_\_\_

LIST B

very slow  
painful  
without, absence of  
abnormally fast

30.

Build a word for each of the following definitions using a prefix you just learned.

a/pnea  
tachy/cardia  
brady/kinesia  
dys/pepsia

absence of breath \_\_\_\_\_ / \_\_\_\_\_  
fast heartbeat \_\_\_\_\_ / \_\_\_\_\_  
slow movement \_\_\_\_\_ / \_\_\_\_\_  
painful digestion \_\_\_\_\_ / \_\_\_\_\_

Take a short break before beginning the next segment.



my/o/scler/osis  
myosclerosis  
mī' ō sklə rō' sis

A hardening of muscle tissue is  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

neur/o/fibr/oma  
neurofibroma  
nyōō' rō' fī brō' mā  
angi/o/fibr/oma  
angiofibroma  
an' jē ō fī brō' mā

35.  
A tumor containing muscle and fibrous connective tissue is a my/o/fibr/oma. A tumor containing fibrous connective tissue and nerve tissue is a  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
nerve fibrous tissue tumor

A vessel tumor containing fibrous connective tissue is a(n)  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

neur/o/lys/is  
neurolysis  
nyōō rol' ə sis  
angi/o/lys/is  
angiolytic  
an' jē ol' i sis

36.  
The destruction of muscle tissue is my/o/lys/is.  
The destruction of nerve tissue is  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
The destruction or breaking down of vessels is  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

arteri/o/scler/osis  
arteriosclerosis  
ar ter' ē ō skler ō' sis

37.  
Refer to the table only when you must. Arteri/o is used in words about the arteries. A word meaning hardening of the arteries is  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

arteri/o/scler/osis  
arteriosclerosis  
a softened artery  
arteriomalacia  
ar ter' ē ō mā lā' zha

38.  
Build a word meaning a hardened condition of the arteries:  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
What do you think arteri/o/malac/ia means? \_\_\_\_\_  
\_\_\_\_\_.

arteri/o/spasm  
arteriospasm  
ar ter' ē ō spa' zm

39.  
Build a word meaning arterial spasm:  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

lip/o/lys/is  
lipolysis  
lip ol' i sis

Dissolution (breakdown) of fat is called  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

hem/angi/itis  
hemangiitis  
hē man' jē ī tis  
  
hem/o/lysis  
hemolysis  
hē mol' ə sis  
or another form is  
    hemat/o/lysis  
    hē mə tol' ə sis

hemat/o/logy  
hematology  
hē mə tol' ə jē  
  
hemat/o/logist  
hematologist  
hē mə tol' ə jist

40.  
*Hem/o* refers to blood. A tumor of a blood vessel is a  
hem/angi/oma. (Note dropped o.) An inflammation of a  
blood vessel is

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

Breaking down or dissolution of blood cells is

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

41.  
*Hemat/o* also refers to blood. The study of blood is  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

One who specializes in the science of blood is a

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

42.  
Let's go over the new material again briefly. Match the best definition in List B with the word root in List A. Write your selection in the space provided.

artery  
fibrous connective tissue  
blood  
fat  
soften  
muscle  
nerve  
harden  
blood and lymph vessel

LIST A  
arteri/o \_\_\_\_\_  
fibr/o \_\_\_\_\_  
hem/o, hemat/o \_\_\_\_\_  
lip/o \_\_\_\_\_  
malac/o \_\_\_\_\_  
my/o \_\_\_\_\_  
neur/o \_\_\_\_\_  
scler/o \_\_\_\_\_  
angi/o \_\_\_\_\_

LIST B  
fat  
muscle  
artery  
blood and lymph vessel  
soften  
harden  
fibrous connective tissue  
blood  
nerve

Now match the best definition in List B with the suffix in List A.  
Write the term.

destruction of  
twitching  
tumor  
inflammation of  
germ cell (immature)  
condition of  
science, or study of

LIST A  
-lysis \_\_\_\_\_  
-spasm \_\_\_\_\_  
-oma \_\_\_\_\_  
-itis \_\_\_\_\_  
-blast \_\_\_\_\_  
-osis \_\_\_\_\_  
-ology \_\_\_\_\_

LIST B  
tumor  
science, or study of  
condition of  
twitching  
inflammation of  
destruction of, dissolution  
germ cell (immature)

43.

Build a word for each of the following definitions.

arterio/scler/osis

hemat/oma

angio/spasm

myo/fibr/oma

or fibromyoma

neuro/blast

lipo/lysis

a condition of hardening of the arteries

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

blood tumor \_\_\_\_\_ / \_\_\_\_\_

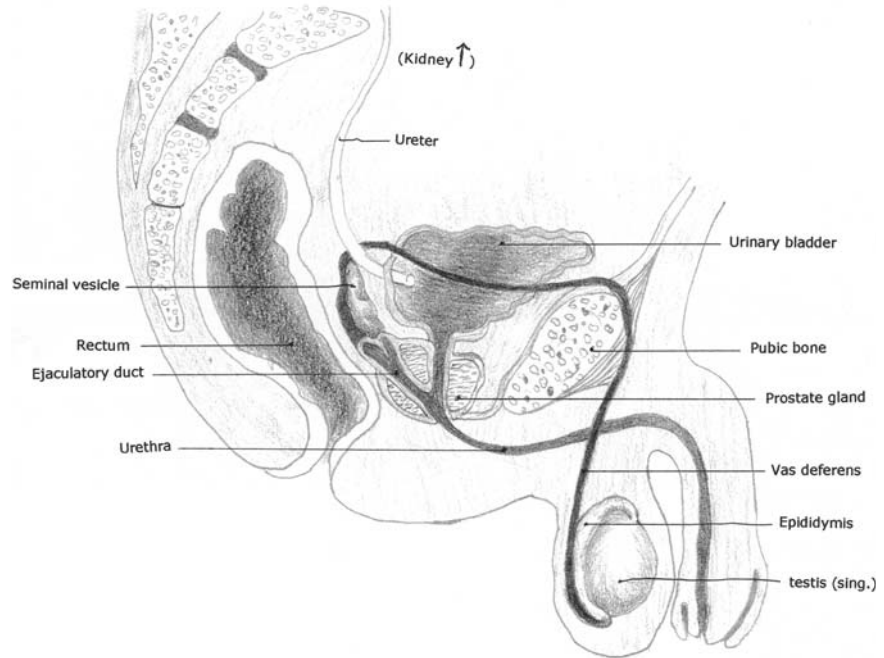
blood vessel spasm \_\_\_\_\_ / \_\_\_\_\_

fibrous muscle tumor \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

nerve tissue germ cell \_\_\_\_\_ / \_\_\_\_\_

breakdown of fat tissue \_\_\_\_\_ / \_\_\_\_\_

Take a break.



**Figure 4.1** The Male Reproductive Organs (Midline Section)

The primary function of the male reproductive system is to produce *sperm cells* and deliver them to the female reproductive system for fertilization of the egg cells. The major organs of the male reproductive system are the paired *testes*, where sperm cells are produced. Surrounding the testis is a comma-shaped structure called the *epididymis*. Mature sperm cells are stored in the epididymis. The *vas deferens* is a long tube that conveys the mature sperm for ejaculation during copulation. It courses from the epididymis up into the body, over the pubic bone, curves to the left, passes the *urinary bladder*, curves again near the *ureter*, and passes downward. Here the vas joins with the duct leading from the *seminal vesicle* and forms the *ejaculatory duct*. The seminal vesicle is a small bladder-like structure that adds secretions to the sperm to form semen. The ejaculatory duct releases the semen and it enters the *urethra* as it exits the urinary bladder. The urethra is a 6 to 8 inch long tube in the male. It passes by the *prostate*, a chestnut-shaped gland surrounding the beginning of the urethra, and enters the penis, to deliver its contents for fertilization of the female egg cell.

Several accessory structures in the diagram show their relationships to the reproductive organs. The ureter can be seen near

the urinary bladder. It delivers urine from the kidney. The last portion of the large intestine is the *rectum*, and the end of the digestive tract is the *anus*.

sperm or spermatozoon (spermat/o)

ureter (ureter/o)

testis (orchid/o)

urethra (urethr/o)

prostate (prostat-, prostat/o)

Review the illustration above, then refer to it as you work through the next 12 frames.

44.

testes (pl.)  
testis (sing.)

The testes are organs that manufacture sperm, the male germ cell; that is, spermatozoa (plural) are formed in the \_\_\_\_\_.

45.

Orchid/algia means pain in a testicle or testis.

excision of a testicle,  
testis

Orchid/ectomy means \_\_\_\_\_.

orchid/itis  
orchiditis  
or ki dī' tis

46.

Build a word meaning inflammation of a testicle,  
\_\_\_\_\_ / \_\_\_\_\_;

orchid/otomy  
orchidotomy  
or kid ot' ō mē

incision into a testis, \_\_\_\_\_ / \_\_\_\_\_.

47.

A crypt/ic remark is one with a hidden meaning. A crypt/ic belief is obscure. The word root for hidden or obscure is \_\_\_\_\_.

crypt  
kript'

48.

Near the time of birth the testes of the fetus normally descend from the abdominal cavity into the scrotum. Sometimes this fails to happen, and the testes are not evident at birth. This condition of undescended testes is called

crypt/orchid/ism  
cryptorchidism  
kript ōr' kid ism

\_\_\_\_\_ / \_\_\_\_\_ / ism.  
hidden testicle

49.

When a testis is hidden in the abdominal cavity, the condition is called \_\_\_\_\_.

cryptorchidism



orchid/o/(pexy)

50.

An operation to repair cryptorchidism is called orchid/o/pexy.  
Circle the part of the term that means to fix a testis in its place.

formation of  
spermatozoa, sperm,  
or male germ cells

51.

*Sperma* is the Greek word meaning seed.

Spermat/o is used in words about spermat/o/zoa or male germ cells (sperm). Spermat/o/genesis means \_\_\_\_\_.

spermat/o/lysis  
spermatolysis  
sperm' ə tol' i sis

52.

*Blast-* means immature.

*-Lysis* means dissolution or destruction.

Give a word meaning the destruction of spermatozoa,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

spermat/o/blast  
spermatoblast  
sper mat' ō blast

How about these:

an immature male cell, germ cell, sperm,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;

spermat/oid  
spermatoid  
sper' mä toid

resembling sperm, \_\_\_\_\_ / \_\_\_\_\_.

muscle  
vessel  
nerve

53.

Summarize what you learned:

my/o	means _____,
angi/o	means _____,
neur/o	means _____.

twitching, spasm  
germ cell (immature)  
hard, hardened  
fibrous  
destruction of

54.

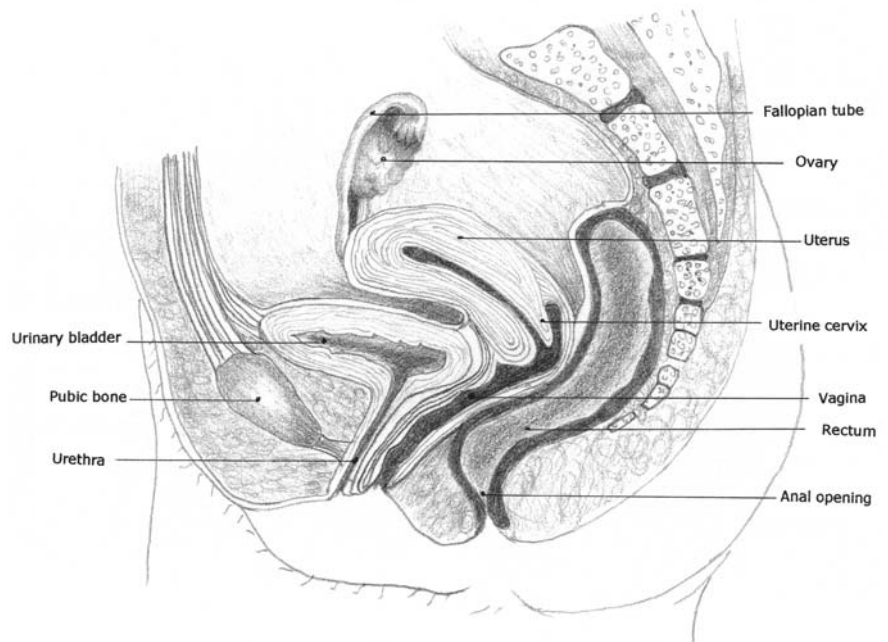
Again.

spasm	means _____,
blast/o	means _____,
scler/o	means _____,
fibr/o	means _____,
lysis	means _____.

55.  
And these.

spermatozoa (sperm)	spermat/o	means _____,
blood	hemat/o	means _____,
blood	hem/o	means _____,
formation of, or origination	genesis	means _____.

Correct any definitions you may have missed; then cover the word roots, read the definitions you have written, and write the appropriate word root in the right-hand margin.



**Figure 4.2** The Female Reproductive Organs (Midline Section)

The female reproductive system is responsible for producing female sex cells for potential union with male sperm cells. In addition, the female reproductive system nurtures the developing embryo and fetus for a nine-month period. The *ovaries* are the female reproductive organs in which egg cells are formed. An egg cell (*ovum*) is liberated into the *fallopian tube* and makes its way to the *uterus*. The uterus is a thick muscular organ that serves as a site

for implantation of a fertilized ovum and nourishment of the embryo and fetus. A long narrow internal space leads from the uterus through a narrow neck called the *uterine cervix*. The cervix opens into the vagina. The *vagina* is a tubular organ approximately four inches in length. It receives the semen from the penis and transmits it to the uterus. It acts as a birth canal from the uterus to the outside for the newborn.

Other organs lie close to the female reproductive organs. Among these are the muscular *urinary bladder* and the *urethra*. The urethra is a short tube leading from the bladder which delivers urine to outside the body. The *rectum* is the last portion of the digestive organs and terminates at the *anus*.

ovary (oophor/o)	urinary bladder (cyst/o)
fallopian tube (salping/o)	urethra (urethr/o)
uterus (hyster/o)	vagina (colp/o)
ovum (o/o)	

Bookmark the illustration above and refer to it as you work through the next 20 frames.

56.

egg (a cell that will  
become an ovum)

The Greek word for egg is *oon*. In scientific words, o/o (pronounce both o's) means egg or ovum. An o/o/blast is an immature \_\_\_\_\_ cell.

57.

excision or surgical  
removal of the ovary

An ovum is discharged from the ovary. The combining form used in words referring to the ovary is *oophor/o*.

What does oophor/ectomy mean? \_\_\_\_\_.

oophor/itis  
oophoritis  
ōō fôr ī' tis

58.

Using what you need from oophor/o, build a word that means inflammation of an ovary: \_\_\_\_\_ / \_\_\_\_\_.

oophor/ectomy  
oophorectomy  
ōō fôr ek' tō mē

59.

*Oophor-* is the root for ovary. Build a term for each of the following: excision of an ovary, \_\_\_\_\_ / \_\_\_\_\_;

oophor/oma  
oophoroma  
ōō fôr ō' ma

tumor of an ovary (ovarian tumor),  
\_\_\_\_\_ / \_\_\_\_\_.

- fixation (of) 60.  
Oophor/o/pexy means fixation of a displaced ovary. -Pexy is a suf-  
fix meaning \_\_\_\_\_.
- oophor/o/pexy 61.  
oophoropexy When an ovary is displaced, a surgical procedure to fix it back in its  
ōō' fôr ô pek' sē normal place is called \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- oophoropexy 62.  
The surgical procedure to correct the position of a prolapsed  
(dropped or sagging) ovary is called an \_\_\_\_\_.
- fallopian tube(s) 63.  
Salping/o is used to build terms that refer to the fallopian tube(s). A  
salpingoscope is an instrument used to examine the  
\_\_\_\_\_.
- salping/itis 64.  
salpingitis Using what you need of salping/o, build a word meaning inflam-  
sal pin jī' tis mation of a fallopian tube, \_\_\_\_\_ / \_\_\_\_\_;  
salping/ectomy  
salpingectomy excision of a fallopian tube,  
sal pin jek' tō mē \_\_\_\_\_ / \_\_\_\_\_;  
salping/ostomy  
salpingostomy a permanent opening into a fallopian tube,  
sal pin gos' tō mē \_\_\_\_\_ / \_\_\_\_\_.
- game and good 65.  
(pronounce them) In words built from laryng/o, pharyng/o, and salping/o, the “g” is  
pronounced as a hard “g” *when followed by an “o” or an “a.”* The “g”  
in good is a hard “g.” For example, in laryngalgia and salpingocele,  
the “g” of the word root is pronounced hard as in \_\_\_\_\_  
\_\_\_\_\_.  
(game/good) or (germ/giant)
- hard (pronounce them) 66.  
In laryngostomy, pharyngotomy, and salpingopexy, the “g” is  
followed by an “o” and is a \_\_\_\_\_  
\_\_\_\_\_ sound.  
(hard/soft)
- “o” and “a” 67.  
A hard “g” precedes the vowels \_\_\_\_\_ and \_\_\_\_\_.

germ and giant  
(pronounce them)

68.

In words built from laryng/o, pharyng/o, and salping/o, the “g” is soft *when followed by an “e” or an “i”*; for example, in laryngectomy and salpingitis, the “g” is soft as in \_\_\_\_\_.

(game/good) or (germ/giant)

soft (pronounce them)  
“e” and “i”

69.

In salpingian, laryngitis, and pharyngectomy, the “g” is given a \_\_\_\_\_ sound because it

(soft/hard)

precedes the vowels \_\_\_\_\_ and \_\_\_\_\_.

laryngectomy  
lar in jek' tō mē  
pharyngalgia  
far ing gal' jē a  
pharyngitis  
far in jī' tis  
salpingo-oophorectomy  
sal pin' gō ōō fōr ek'  
tō mē

70.

Pronounce each of the following terms.

laryngectomy	pharyngitis
pharyngalgia	salpingo-oophorectomy

In each of the above terms circle the vowel that makes the “g” soft.

salping/o-/oophor/ itis  
salpingo-oophoritis  
sal' pin gō ōō fōr ī' tis

71.

In compound medical words, if two like vowels occur between word roots, they are separated by a hyphen. Use salpingo-oophorectomy as a model and build a word that means inflammation of the fallopian tube and ovary:

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

Use a hyphen between  
two like vowels when  
joining word roots

72.

Explain when a hyphen (-) is used in compound terms.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

inflammation of the  
vagina

73.

Colp/o is used in words about the vagina. Colpitis means \_\_\_\_\_.

vaginal spasm  
colp/otomy  
colpotomy  
kōl pot' ō mē

74.

A colp/o/spasm is a \_\_\_\_\_.

Incision into the vagina is a \_\_\_\_\_ / \_\_\_\_\_.

colp/o/plasty (you  
pronounce)

colp/o/scope  
colposcope  
kôl' pō skōp

uterus

hysterotomy

hysterospasm

hysteropexy

75.

Build a word meaning surgical repair of the vagina,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;

instrument for examining the vagina,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

76.

Hyster/o is used to build words about the uterus. A hyster/ectomy is an excision, or surgical removal of, the \_\_\_\_\_.

77.

Write words for the following:

an incision into the uterus, \_\_\_\_\_;

a spasm of the uterus, \_\_\_\_\_;

surgical fixation of the uterus, \_\_\_\_\_.

78.

Some terms are composed of many word roots plus a prefix and a suffix. These terms usually list the parts of the body in a special order.

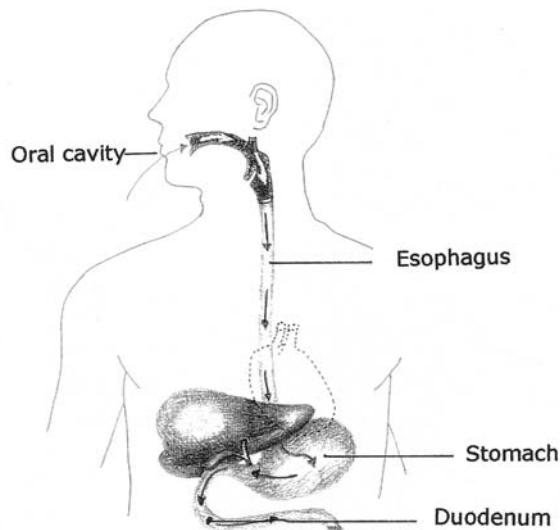


Figure 4.3 Path of EGD Examination

Take a look at Illustration 4.3 above. For example, when you swallow food it passes from the mouth to the esophagus to the stomach

an endoscopic exam of  
the esophagus,  
stomach, and  
duodenum.

to the duodenum. So when a physician takes a look inside the digestive system with an endoscope the procedure is called

esophago / gastro / duoden / oscopy

Describe what the procedure EGD means. \_\_\_\_\_  
\_\_\_\_\_.

79.

See Illustration 4.2, The Female Reproductive Organs. Examination of the female genital system begins at the vulva (external genitalia), then the vagina, and on to the uterus, fallopian tubes, and ovaries.

hystero/salpingo/  
oophor/ectomy

Follow the same order and build a word that means an operation to remove the uterus, fallopian tubes, and ovaries:  
\_\_\_\_\_

80.

Stop here and summarize what you've just covered. Match the best definition in List B with the word root in List A. Write your selection in the space provided.

ovary  
male germ cells  
uterus  
fallopian tubes  
testicle  
vagina  
egg, ovum  
hidden  
surgical fixation  
produce, originate  
resembling  
twitching, spasm  
germ cell, immature cell  
suturing to repair

LIST A  
oophor/o \_\_\_\_\_  
spermat/o \_\_\_\_\_  
hyster/o \_\_\_\_\_  
salping/o \_\_\_\_\_  
orchid/o \_\_\_\_\_  
colp/o \_\_\_\_\_  
o/o \_\_\_\_\_  
crypt \_\_\_\_\_  
-pexy \_\_\_\_\_  
-genesis \_\_\_\_\_  
-oid \_\_\_\_\_  
-spasm \_\_\_\_\_  
-blast \_\_\_\_\_  
-orrhaphy \_\_\_\_\_

LIST B  
fallopian tubes  
vagina  
male germ cells  
egg, ovum  
hidden  
testicle  
ovary  
uterus  
resembling  
twitching, spasm  
suturing to repair  
produce, originate  
germ cell, immature cell  
surgical fixation

81.

Build a word for each of the following:

colp/orrhaphy  
hystero/spasm

suturing (to repair) the vagina, \_\_\_\_\_ / \_\_\_\_\_;  
spasm of the uterus, \_\_\_\_\_ / \_\_\_\_\_;

orchido/pexy	fixation of the testis, _____ / _____;
salpingo/oophor/itis	inflammation of ovary and fallopian tube, _____ / _____ / _____;
spermato/genesis	formation of spermatozoa, _____ / _____;
spermato/blast	(immature) male germ cell, _____ / _____.

82.

Now let's have some fun. Read each term and its meaning. Then study the accompanying illustrations.

*Hernia* is the protrusion of an organ, or part of an organ, through the wall of the cavity that normally contains it; a rupture.

*Ptosis* is the sinking down or sagging of an organ or part (from its normal position).

*Anomaly* is an irregularity. It is an organ or structure that is abnormal or contrary to the general rule.

*Aneurysm* is a localized abnormal dilation of a blood vessel, or ballooning out of the vessel at a weak point.

Write the correct term below each illustration:

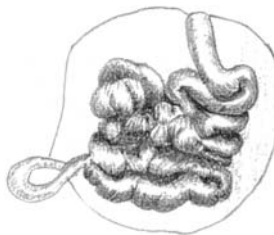
Figure 4.4



A. \_\_\_\_\_



B. \_\_\_\_\_



C. \_\_\_\_\_



D. \_\_\_\_\_

- A. anomaly
- B. aneurysm
- C. hernia
- D. ptosis



sinking down, prolapse, or sagging	83. Hyster/o/ptosis means prolapse (sagging) or sinking down of the uterus. Ptosis (pronounced tō' sis) is a word that means _____.
hyster/o/ptosis	84. Upon examination, a physician may find that a patient's uterus has prolapsed or moved lower in the pelvic region. The medical term describing this condition is _____ / _____ / _____.
hyster/o/ptosis hysteroptosis his' ter op tō' sis	When uterine prolapse occurs, a surgeon may surgically fix the uterus back in its normal place. A hysteropexy would be done to correct or repair the condition known as _____ / _____ / _____.
	85. From the terms provided, select one that best fits each definition.
hernia	anomaly      hernia      aneurysm      ptosis Protrusion of an organ or part through the wall of the cavity in which it is normally enclosed. _____
ptosis	The prolapse, or sagging, of an organ or part from its normal position. _____
aneurysm	The abnormal ballooning out of a blood vessel at a weak point. _____
anomaly	Irregularity in structure of an organ or part; the structure is contrary to the general rule. _____
	86. Fill in the missing words to complete each of the following definitions.
normal	Ptosis is the sagging of an organ or part from its _____ position.
wall	Hernia is the protrusion of an organ or part through the _____ of a cavity that normally contains it.
rule	Anomaly is an irregularity. It is an organ or structure that is contrary to the _____.
blood vessel	Aneurysm is the abnormal ballooning out at a weak point in a _____.

87.

Complete each of the following descriptions by writing the form of the term that fits best.

anomalous (adjective)  
anomaly is OK (noun)

An irregular organ or structure that is contrary to the general rule is said to be \_\_\_\_\_.

herniated (verb)

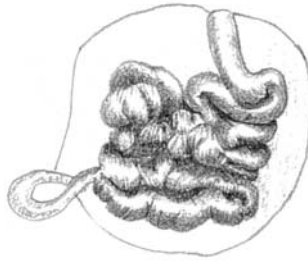
When an organ or part protrudes through the wall of the cavity that normally contains it, we say it has \_\_\_\_\_.

aneurysm (noun)

When a weak spot in the wall of the aorta (artery) balloons out, we call it an aortic \_\_\_\_\_.

nephr/o/ptosis

*Nephr/o* is used in words that refer to the kidney. If a kidney sags from its normal position, the medical condition is referred to as \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.



A \_\_\_\_\_



B \_\_\_\_\_



C \_\_\_\_\_



D \_\_\_\_\_

- A. hernia
- B. ptosis
- C. anomaly
- D. aneurysm

**Figure 4.5** Label each illustration above.

88.

We suggest something like these:  
aneurysm: an abnormal ballooning out of a blood vessel at a weak point.

In your own words, write a brief definition for each of the following terms.

aneurysm: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

anomaly: an organ or structure that is contrary to the rule.

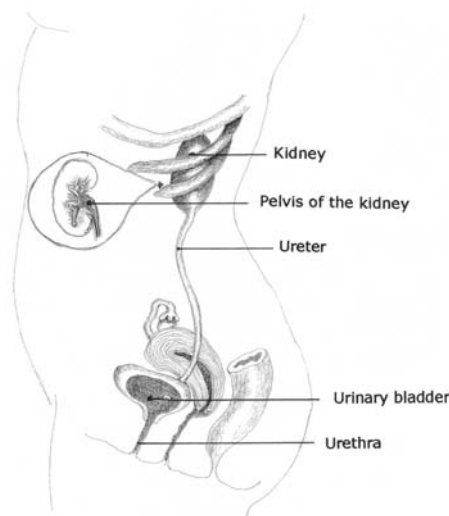
hernia: protrusion of an organ or part through the wall that normally contains it.

ptosis: sagging of an organ or part from its normal location.

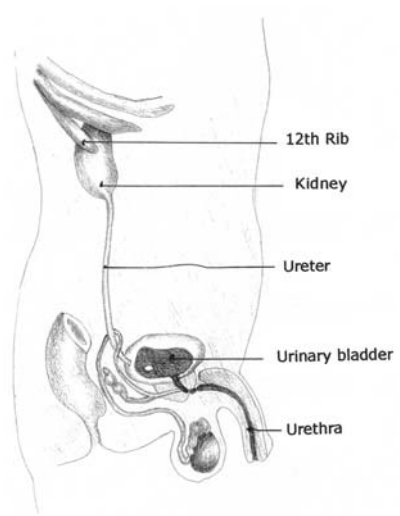
anomaly: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_.

hernia: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_.

ptosis: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_.



**Figure 4.6** The Female Urinary Tract



**Figure 4.7** The Male Urinary Tract

The Urinary System involves elimination of waste, toxic products and surplus materials from the body. It also regulates the water and salt content of the body. The Urinary Tract consists of paired *kidneys* and *ureters*, a single *urinary bladder* and a *urethra*. The main organs of excretion are the kidneys. The kidneys are bean-shaped organs about the size of a fist. They are located on either side of the spinal column and usually extend from the 12th rib. One kidney touches the spleen and the other is slightly below the liver. A ureter exits each kidney at the *renal pelvis*. This tube carries urine to the main storage organ, the urinary bladder. The bladder is a hollow muscular sac located in the midline at the floor of the pelvic cavity. It can hold as much as 700–1000 ml of urine without injury. As it distends, it rises into the abdominal cavity. The tube leading from

the bladder to the exterior is the *urethra*. This tube is about one and a half inches long in the female and about eight inches long in the male as it passes through the penis.

kidney (nephro/o)	renal pelvis (pyelo/o)
bladder (cyst/o)	ureter (ureter/o)
urethra (urethro/o)	urine (ur/o)

89.

Let's go on to a new but related area of the body. Here is a brief summary of the functions of each part of the urinary tract.

kidney:	forms urine;
renal pelvis:	collects urine in the kidney;
ureter:	carries urine to the bladder;
bladder:	stores urine until voiding;
urethra:	discharges urine from the body.

90.

ur  
ur/o

The urinary system is responsible for making urine from waste materials in the blood and carrying urine from the body. What is the word root for urine? \_\_\_\_\_. What is the combining form? \_\_\_\_\_.

91.

renal pelvis

Pyelo/o is the combining form that refers to the \_\_\_\_\_.

pyel/itis

pyelitis

pī ə lī' tis

pyel/o/plasty

pyeloplasty

pī' e lō plas tē

92.

Taking what you need from the combining form for renal pelvis, form a term meaning inflammation of the renal pelvis,

\_\_\_\_\_ / \_\_\_\_\_;

surgical repair of the renal pelvis,

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

93.

abnormal condition of  
the renal pelvis and  
kidney

Pyel/o/nephro/osis means \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

pyel/o/nephro/itis

pyelonephritis

pī' lō nef rī' tis

Form a term that means inflammation of the renal pelvis and kidney:

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

stone or calculus in the  
ureter

ureter/o/lith/otomy  
ureterolithotomy

surgical repair of the  
ureter and renal  
pelvis

ureter/o/pyel/itis  
ureteropyelitis  
yōō rē' ter ō pī ə lī' tis

ureter/o/cyst/ostomy  
ureterocystostomy  
yōō rē' ter ō sis tos' tō  
mē

ureter/orrhaphy  
ureterorrhaphy  
yer rē ter ōr' ə fē

neph/orrhaphy  
nephorrhaphy  
nef rôr' ə fē

cyst/orrhaphy  
cystorrhaphy  
sis tôr' ə fē

neur/orrhaphy  
neurorrhaphy  
nyōō rôr' ə fē

94.

Look at Illustrations 4.6 & 4.7. Ureter/o/lith means \_\_\_\_\_.

Form a term that means incision into the ureter (for removal of a stone):

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
ureter                      calculus                      incision into

95.

Ureter/o/pyel/o/plasty means \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

96.

Form a term meaning inflammation of the ureter and renal pelvis,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

97.

Form a term that means making a permanent opening between the ureter and bladder,

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
ureter                      bladder                      permanent opening

98.

*Orrhaphy* is not really a suffix, but again (for simplification) it can be used as one. Orrhaphy means suturing or stitching (for the purpose of repair, especially after trauma).

Form a word meaning suturing of the ureter,  
\_\_\_\_\_ / \_\_\_\_\_;

suturing of a kidney,  
\_\_\_\_\_ / \_\_\_\_\_;

suturing the bladder,  
\_\_\_\_\_ / \_\_\_\_\_;

suturing of a nerve,  
\_\_\_\_\_ / \_\_\_\_\_.

carries urine out of the body or removes urine from the bladder	99. Look back at Illustrations 4.6 & 4.7. What is the function of the urethra? _____ _____ _____.
urethr-	What is the word root for urethra? _____
suturing of the urethra (to repair)	Urethr/orrhaphy means _____ _____.
urethr/otomy urethrotomy yer ə throt' ə mē	100. Form a word that means incision into the urethra, _____ / _____;
urethr/o/spasm urethrospasm yer rē' thrō spasm	spasm of the urethra, _____ / _____ / _____.
cyst/orrhagia cystorrhagia sis tō rä' jē ə	101. Another complex word part is -orrhagia, which can be used as a suffix when it follows a word root. <i>Orrhagia</i> means bursting forth of blood (as in hemorrhage). Build a word that means bursting forth of blood from the bladder, _____ / _____;
ureter/orrhagia ureterorrhagia yer rē' ter ō rä' jē ə	hemorrhage of the ureter, _____ / _____. ureter                      bursting forth of blood
How does the dictionary define these terms?	102. Di/a is the combining form meaning pass through or secrete freely. Define: (Use your Dictionary.) diuresis _____ diuretic _____ dialysis _____

103.

Let's have a brief review. Select the correct word root or suffix from List B. Write your selection in the space provided in List A.

cyst/o-  
aneurysm  
ureter/o-  
anomaly  
pyel/o-  
urethr/o-  
neur/o-  
hernia  
ur/o-  
nephro/o-  
-plasty  
-ptosis  
-pexy  
-lith  
-orrhaphy  
-ostomy  
-orrhagia  
-spasm

## LIST A

stores urine until voiding \_\_\_\_\_  
ballooning-out vessel \_\_\_\_\_  
carries urine to bladder \_\_\_\_\_  
contrary to the rule, irregular \_\_\_\_\_  
collects urine in the kidney \_\_\_\_\_  
discharges urine from body \_\_\_\_\_  
nerve \_\_\_\_\_  
protrusion through cavity wall \_\_\_\_\_  
urine \_\_\_\_\_  
forms urine \_\_\_\_\_  
surgical repair (make new) \_\_\_\_\_  
drooping, prolapse \_\_\_\_\_  
fixing in place \_\_\_\_\_  
stone, calculus \_\_\_\_\_  
suturing to repair \_\_\_\_\_  
permanent opening \_\_\_\_\_  
hemorrhage \_\_\_\_\_  
twitching, muscle cramp \_\_\_\_\_

## LIST B

nephro/o-  
pyel/o-  
urethr/o-  
ur/o-  
ureter/o-  
cyst/o-  
aneurysm  
anomaly  
hernia  
neur/o-  
-lith  
-plasty  
-ptosis  
-orrhaphy  
-orrhagia  
-ostomy  
-spasm  
-pexy

104.

Build a word for each of the following definitions.

pyelo/nephro/osis

diseased condition of renal pelvis and kidney  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

uretero/lith/otomy

incision to remove calculus from ureter  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

nephro/ptosis

sagging of the kidney  
\_\_\_\_\_ / \_\_\_\_\_

ur/ology

the study of urine and the urinary system  
\_\_\_\_\_ / \_\_\_\_\_

ureter/orrhaphy

suturing, reconnection of the ureter  
\_\_\_\_\_ / \_\_\_\_\_

nephro/plasty

repair (make new) the kidney  
\_\_\_\_\_ / \_\_\_\_\_

cyst/orrhagia

hemorrhage from the urinary bladder  
\_\_\_\_\_ / \_\_\_\_\_

nephro/pexy

surgical fixing of the kidney in its place  
\_\_\_\_\_ / \_\_\_\_\_

105.

Following are 50 of the medical terms you formed in Unit 4. Pronounce each one aloud and spell it on paper.

aneurysm (an'yōō rizm)	myosclerosis (mī ō skler ō' sis)
angioblast (an' jē ō blast)	myospasm (mī' ō spa zm)
angiosclerosis (an' jē ō sklə rō' sis)	nephritis (nef rī'tis)
anomaly (an om' ə lē)	nephrolith (nef' rō lith)
apnea (ap' nē ə)	nephromegaly (nef' rō meg ə lē)
arteriosclerosis (ar ter' ē ō skler ō' sis)	nephroptosis (nef rop tō' sis)
arteriospasm (ar ter' ē ō spa' zm)	neurofibroma (nyōō' rō fī brō' mā)
bradycardia (brad ē kār' dē ə)	neurolysis (nyōō rol' ə sis)
bradypnea (brad ip nē' ə)	o-oblast (ō' ō blast)
colporrhaphy (kōl pōr' ə fē)	oophoropexy (ōō' fōr ō pek' sē)
colposcopy (kōl pōs' kō pē)	orchidotomy (or kid ot' ō mē)
cryptorchidism (krip' ōr kid ism)	pyelitis (pī ə lī' tis)
cystorrhagia (sis tō rä jē ə)	pyeloplasty (pī' ə lō plas tē)
dysmenorrhea (dis' men ōr rē' ə)	salpingectomy (sal pin jek' tō mē)
dyspepsia (dis pep' sē ə)	salpingo-oophorectomy (sal pin' gō ōō fōr ek' tō mē)
dyspnea (disp' nē ə)	salpingoscopy (sal pin gos' kō pē)
hemangiitis (hē man jē ī' tis)	spermatoblast (sper mat' ō blast)
hematologist (hē mā tol' ō jist)	spermatoid (sper' ma toid)
hemolysis (hē mol' ə sis)	tachycardia (tak ə kār' dē ə)
hernia (her' nē ə)	tachypnea (tak ip nē' ə)
hysteropexy (his' ter ō peks' ē)	ureterolithotomy (yer rē' ter ō lith ot' ō mē)
hysterospasm (his' ter ō spa zm)	ureterorrhaphy (yer rē ter ōr' ə fē)
hysterotomy (his ter ot' ō mē)	ureterotomy (yer ē ter ot' ə mē)
kinesialgia (kin ē' sē al' jē ə)	urethralgia (yer ə thral' jē ə)
kinesiology (kin ē' sē ol' ə jē)	urethrotomy (yer e throt' ə mē)

Complete the Unit 4 Self-Test before going to the next unit.



## Unit 4 Self-Test

### Part 1

From the list on the right, select the correct meaning for each of the following terms:

- |                         |                                                    |
|-------------------------|----------------------------------------------------|
| _____ 1. Urethrospasm   | a. The study (or science) of motion                |
| _____ 2. Spermatoid     | b. A condition of hardening of vessels             |
| _____ 3. Nephroptosis   | c. Spasm of the urethra                            |
| _____ 4. Anomaly        | d. Destruction of blood (cells)                    |
| _____ 5. Oophoropexy    | e. Abnormally slow breathing                       |
| _____ 6. Bradypnea      | f. Surgical fixation of the ovary in its place     |
| _____ 7. Angioblast     | g. Tumor of nerve and fibrous tissue               |
| _____ 8. Ureterotomy    | h. Muscle spasm                                    |
| _____ 9. Angiosclerosis | i. Structure contrary to the rule                  |
| _____ 10. Hysterotomy   | j. Resembling sperm                                |
| _____ 11. Myospasm      | k. Abnormally enlarged kidney                      |
| _____ 12. Dyspepsia     | l. Ballooning out of blood vessel                  |
| _____ 13. Hemolysis     | m. Painful menstruation (cramps)                   |
| _____ 14. Kinesiology   | n. Vessel germ cell                                |
| _____ 15. Aneurysm      | o. Kidney out of its normal place (dropped kidney) |
|                         | p. Incision into the uterus (cesarean section)     |
|                         | q. Painful digestion (heartburn)                   |
|                         | r. Incision into the ureter                        |

## Part 2

Complete each of the medical terms on the right with the appropriate missing part:

- |                                                                   |                 |
|-------------------------------------------------------------------|-----------------|
| 1. A condition of hardening of muscle                             | _____ sclerosis |
| 2. Kidney stone                                                   | Nephro _____    |
| 3. Abnormally fast breathing                                      | Tachy _____     |
| 4. Painful menstruation                                           | _____ menorrhea |
| 5. Spasm of the uterus                                            | _____ spasm     |
| 6. Cessation of menses                                            | A _____         |
| 7. Hemorrhage (bleeding) from the bladder                         | _____ orrhagia  |
| 8. Surgical removal of the ovary                                  | _____ ectomy    |
| 9. Incision into the ureter (for the purpose of removing a stone) | _____ lithotomy |
| 10. Surgical removal of the fallopian tube                        | _____ ectomy    |
| 11. Drooping of an organ                                          | P _____         |
| 12. Pain due to motion                                            | _____ algia     |
| 13. Spasm of the vessels                                          | _____ spasm     |
| 14. Protrusion of an organ through a cavity wall                  | H _____         |
| 15. Incision into the urethra                                     | _____ otomy     |

## ANSWERS

### Part 1

1. c
2. j
3. o
4. i
5. f
6. e
7. n
8. r
9. b

### Part 2

1. Myosclerosis
2. Nephrolith
3. Tachypnea
4. Dysmenorrhea
5. Hysterospasm
6. Amenorrhea
7. Cystorrhagia
8. Oophorectomy
9. Ureterolithotomy

- |       |                   |
|-------|-------------------|
| 10. p | 10. Salpingectomy |
| 11. h | 11. Ptosis        |
| 12. q | 12. Kinesialgia   |
| 13. d | 13. Angiospasm    |
| 14. a | 14. Hernia        |
| 15. l | 15. Urethrotomy   |

# 5 The Gastrointestinal Tract

*In Unit 5 you'll make more than 50 new medical terms. Most of the learning material focuses on terms relating to the gastrointestinal tract. Two illustrations provide information you'll need as you work through the learning sequences and exercises. Be sure to bookmark those illustrations and keep them handy. Use them often.*

## Mini-Glossary

cheil/o (lip, lips)

col/o (colon)

dent/o (teeth)

esophag/o (esophagus)

gingiv/o (gums)

gloss/o (tongue)

hepat/o (liver)

pancreat/o (pancreas)

proct/o (anus and rectum)

rect/o (rectum)

stomat/o (mouth)

-clysis (irrigation)

-ectasia (dilation, stretching)

-scope, -scopy (look, examine)

-toxin (poison)

Take a few minutes to complete the Review Sheet for Unit 4 before you begin Unit 5.

1.

You're going to begin this section with a review of suffixes you have already studied and used.

Write the meaning of each of the following:

of, or pertaining to  
surgical repair, make  
new, restore

-ic, -as, -ar \_\_\_\_\_

-plasty \_\_\_\_\_

inflammation of  
twitching, cramping  
pain, ache

-itis \_\_\_\_\_

-spasm \_\_\_\_\_

under, beneath  
excessive, too much

-algia \_\_\_\_\_

-hypo \_\_\_\_\_

-hyper \_\_\_\_\_

surgical excision of  
incision into  
bursting forth,  
hemorrhage

-ectomy \_\_\_\_\_

-otomy \_\_\_\_\_

-orrhagia \_\_\_\_\_

a noun ending meaning  
condition, condition  
of

-a, -ia \_\_\_\_\_

abnormal condition,  
diseased condition

-osis \_\_\_\_\_

2.

This time, write the suffix that satisfies each of the definitions given. Then go back to the last frame to check your answers.

MEANING

SUFFIX

pain, ache

\_\_\_\_\_

excessive, too much

\_\_\_\_\_

surgical incision into

\_\_\_\_\_

inflammation of

\_\_\_\_\_

under, beneath

\_\_\_\_\_

twitching, cramping

\_\_\_\_\_

surgical excision of

\_\_\_\_\_

bursting forth, hemorrhage

\_\_\_\_\_

of, or pertaining to

\_\_\_\_\_

an ending meaning condition

\_\_\_\_\_

abnormal (diseased) condition

\_\_\_\_\_

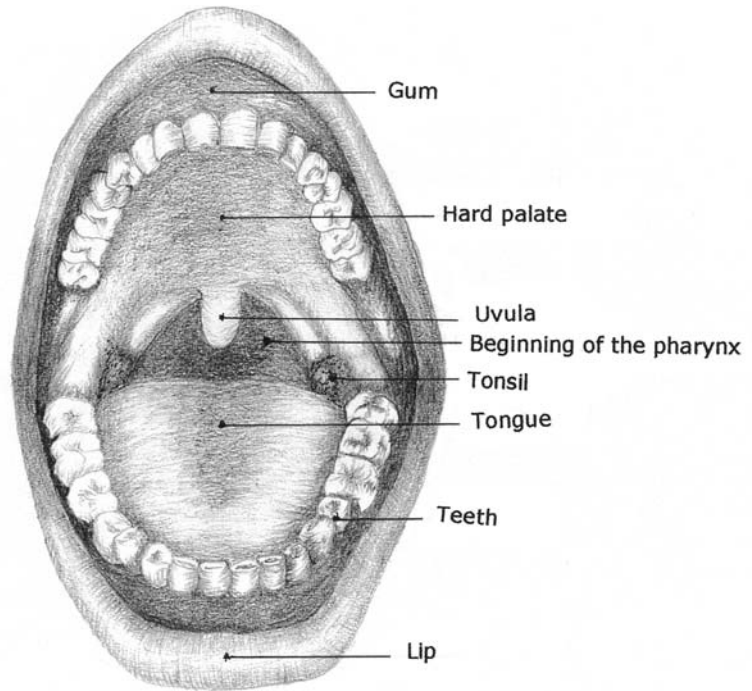


Figure 5.1 The Oral Cavity

The digestive tract begins at the mouth, the oral cavity. The human mouth is concerned with vocalization as well as mastication and swallowing. The anterior portion includes lips, teeth, gums, a muscular tongue, related muscles, salivary glands, a bony palate, and muscles of the cheek wall. All are concerned with wetting, macerating and pulverizing ingested material. The posterior portion of the oral cavity includes the soft palate, tongue, tonsils, and taste-buds.

mouth (stomat/o)  
tongue (gloss/o)

lip (cheil/o)  
gum (gingiv/o)  
tooth (dent/o)

stomat  
stomat/o

3.  
The word root for mouth is \_\_\_\_\_.  
The combining form is \_\_\_\_\_ / \_\_\_\_\_.

inflammation of the  
mouth

4.  
Stomat/itis means \_\_\_\_\_.

surgical repair or  
reconstruction of the  
mouth

stomat/algia

stomatalgia

stō mā tal' jē ə

stomat/orrhagia

stomatorrhagia

stō mat' ō rä' jē ə

Stomat/o/plast/y means \_\_\_\_\_  
\_\_\_\_\_.

5.

Using the word root for mouth, form a word meaning painful  
mouth, \_\_\_\_\_ / \_\_\_\_\_;

hemorrhage of the mouth,

\_\_\_\_\_ / \_\_\_\_\_.  
mouth hemorrhage

6.

Refer to Illustration 5.1.

painful tongue

Gloss/algia means \_\_\_\_\_.

excision of the tongue

Gloss/ectomy means \_\_\_\_\_.

spasm or twitching of  
the tongue

Gloss/o/spasm means \_\_\_\_\_  
\_\_\_\_\_.

gloss/itis

glossitis

glos ī' tis

gloss/al

glossal

glos' əl

7.

Using the word root, build a term meaning inflammation of the  
tongue, \_\_\_\_\_ / \_\_\_\_\_;

pertaining to the tongue, \_\_\_\_\_ / \_\_\_\_\_

8.

What word would you use to describe a medication that is adminis-  
tered under the tongue?

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
under tongue pertaining to

hypo/gloss/al

hypoglossal

hī' pō glos' əl

9.

Go back to Illustration 5.1. The word root for lip is \_\_\_\_\_.

The combining form for lip is \_\_\_\_\_ / \_\_\_\_\_.

cheil

cheil/o

kē' lō

10.

inflammation of the lips

Cheil/itis means \_\_\_\_\_  
\_\_\_\_\_.

plastic surgery of the  
lips

Cheil/o/plast/y means \_\_\_\_\_  
\_\_\_\_\_.

cheil/otomy  
cheilotomy  
kē lot' ō mē

11.  
Build a term meaning incision into the lips,  
\_\_\_\_\_/\_\_\_\_\_;  
abnormal condition or diseased condition of the lips,  
\_\_\_\_\_/\_\_\_\_\_.

cheil/osis  
cheilosis  
kē lō' sis

cheil/o/stomat/o/plasty  
cheilostomatoplasty  
kē' lō stō mat' ō plas tē

12.  
Now, build a term meaning plastic surgery of the lips and mouth  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_.  
lip mouth repair

gingiv/o  
of or pertaining to gums

13.  
The combining form for gums is \_\_\_\_\_.  
Gingival means \_\_\_\_\_.

gingiv/itis  
gingivitis  
jin jī vī' tis  
gingiv/algia  
gingivalgia  
jin jī val' jē ə  
gingiv/ectomy  
gingivectomy  
jin jī vek' tē mē  
gingiv/o/gloss/itis  
gingivoglossitis  
jin' jī vō glos ī' tis

14.  
Build a term meaning inflammation of the gums,  
\_\_\_\_\_/\_\_\_\_\_;  
painful gums,  
\_\_\_\_\_/\_\_\_\_\_;  
excision of gum tissue,  
\_\_\_\_\_/\_\_\_\_\_;  
inflammation of the gums and tongue,  
\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_.

15.  
Here's a quick review. Without referring to the tables, write a meaning for each of the following.

inflammation of the  
gums  
surgical excision of  
the tongue  
toothache  
plastic surgery, repair of  
the lips  
hemorrhage of the  
mouth

gingivitis \_\_\_\_\_  
glossectomy \_\_\_\_\_  
dentalgia \_\_\_\_\_  
cheiloplasty \_\_\_\_\_  
stomatorrhagia \_\_\_\_\_



16.

Using the suggested word roots, make a medical term that fits each definition below.

Some suggested root words

stomat-  
cheil-  
gingiv-  
gloss-  
dent-

glossitis  
cheilosis  
dentalgia  
stomatoplasty  
gingivectomy

inflammation of the tongue \_\_\_\_\_  
abnormal, diseased condition of the lips \_\_\_\_\_  
toothache \_\_\_\_\_  
plastic surgery, repair of the mouth \_\_\_\_\_  
surgical excision of gum tissue \_\_\_\_\_

Take a break. You deserve it.

17.

Again, you will use many suffixes you are already familiar with. Here's an opportunity to refresh your memory. See how many you can correctly define. Write your answers in the space provided.

puncture of cavity, to  
withdraw fluid  
incision into  
form a new (permanent)  
opening  
study of  
surgical fixation of a  
part in its normal  
place  
hernia, herniation  
calculus, stone  
large, enlarged

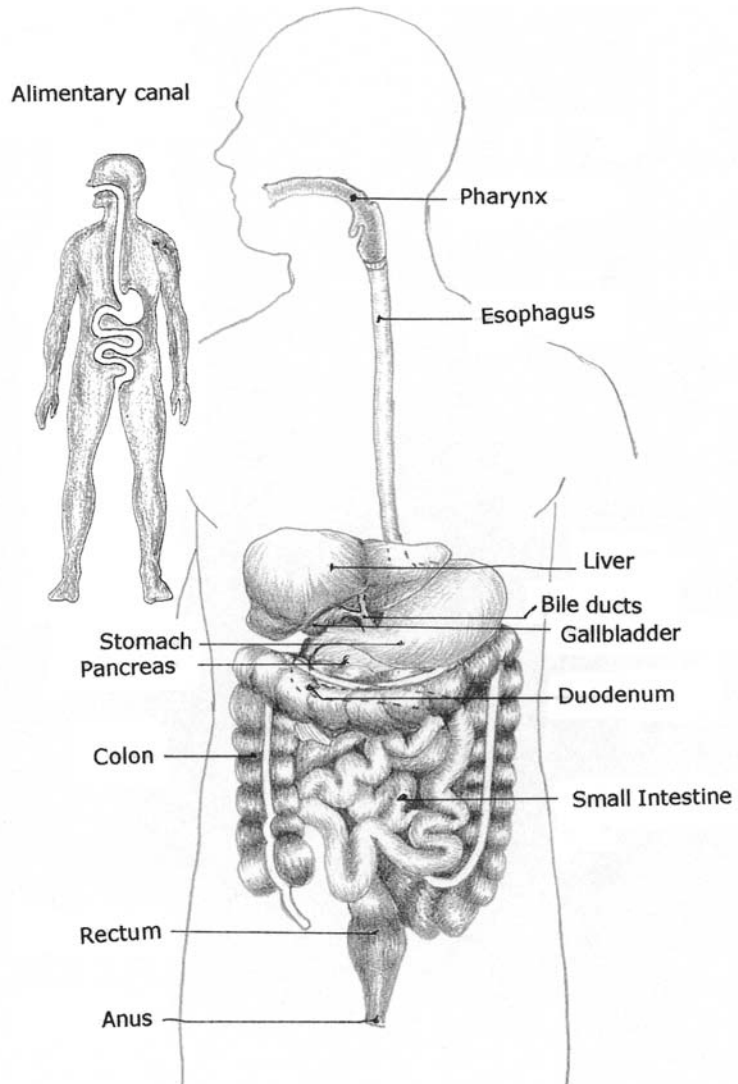
-centesis \_\_\_\_\_  
-otomy \_\_\_\_\_  
-ostomy \_\_\_\_\_  
-ology \_\_\_\_\_  
-pexy \_\_\_\_\_  
-cele \_\_\_\_\_  
-lith \_\_\_\_\_  
-megaly \_\_\_\_\_

18.

Now, complete Table 3 below. You will use it in the next few frames. Write the suffix that satisfies the definition given. Check your answers in the last frame.

**Table 3**

Meaning	Suffix
calculus, stone	- _____
surgical fixation of a part in place	- _____
incision into	- _____
study of	- _____
hernia, herniation	- _____
large, enlarged	- _____
form a new opening (permanent)	- _____
puncture a cavity and draw fluid	- _____



**Figure 5.2** The Digestive Tract

The function of the digestive system is to break down large food particles into smaller ones that can pass across the membranes of cells and be absorbed. The Digestive Tract, also known as the *alimentary canal* consists of a single long tube extending from mouth to anus and opened to the exterior at each end. The canal begins with

the oral cavity. Here the teeth pulverize ingested food. Meanwhile it is softened and partly digested by salivary gland secretions. The tongue aids in mechanical manipulation of the food and literally flips the food into the fibromuscular *pharynx* during swallowing. The *esophagus* moves the food bolus along to the pouch-like *stomach* by peristaltic muscular contractions. Here the food mixes with acid and protein-digesting enzymes and is retained until digested further. Passing from the stomach, the food enters the first part of the small intestine called the *duodenum*. Liver-produced bile, stored in the *gallbladder*, is discharged into the duodenum by *bile ducts*. Digestive enzymes from the *pancreas* enter the duodenum as well. The food bolus continues through the highly coiled 20-foot-long *small intestine*. A great portion of the abdominal cavity is taken up by the many folds and twists of this organ. Small molecular nutrients are extracted and absorbed by cells lining the intestine. These nutrients absorbed throughout the tract are transferred to capillaries and transported to the *liver* by the hepatic portal system for processing and distribution to the body's cells. The *colon* or large intestine can be seen ascending along the anatomical right side, passing across the midline then turning and descending along the left. This organ is mainly concerned with absorption of water, minerals, and certain vitamins. The non-nutritive residue of the ingested food is compacted and moved through the *rectum* and *anal canal* to the outside.

liver (hepat/o)	stomach (gastr/o)
pharynx (pharyng/o)	gallbladder (cholecyst/o)
esophagus (esophag/o)	duodenum (duoden/o)
intestine (enter/o)	colon (col/o)
rectum and anus (proct/o)	pancreas (pancreat/o)
rectum (rect/o)	anus (an/o)

19.  
Here are some easy ones. Gastr/orrhagia means \_\_\_\_\_  
stomach hemorrhage  
Gastritis means \_\_\_\_\_  
inflammation of the  
stomach  
Gastric means \_\_\_\_\_  
of, or pertaining to the  
stomach

20.  
Here are some new suffixes.  
-ectasia means dilation, stretching, or expansion  
-clysis means irrigation, or washing out  
-toxin means poison, or poisoning  
Use Illustration 5.2 and write a meaning for the following medical terms.  
poisoning of the small enter/o/toxin \_\_\_\_\_  
intestine  
stretching, dilation of enter/ectasia \_\_\_\_\_  
the small intestine  
irrigation, washing out enter/o/clysis \_\_\_\_\_  
of the small intestine

21.  
What do you think col/o/clysis means? \_\_\_\_\_  
washing, irrigation of  
the colon  
What does gastr/ectasia mean? \_\_\_\_\_  
dilation, stretching, or  
expanding of the  
stomach

22.  
Use Illustration 5.2 as you need to, and try these.  
col/o/pexy means \_\_\_\_\_  
a surgical procedure to  
fix the colon in its  
normal place  
enter/o/cele means \_\_\_\_\_  
herniation of the small  
intestine  
col/ostomy means \_\_\_\_\_  
a surgical procedure  
to make a new  
(permanent) opening  
into the colon

- gastr/o/enter/ostomy  
gastroenterostomy  
gas' trō en ter os' tō mē
- gastr/o/enter/ic  
gastroenteric  
gas' trō en ter' ik
- enter/o/clysis  
enteroclysis  
en ter ok' li sis
- enter/ectasia  
enterectasia  
en' ter ek tā' jē ə
- poisoning of the small intestine
- puncture of the small intestine, draw fluid
- intestinal hernia
- pertaining to the colon or large intestine
- puncture of the colon, draw fluid
- making a new opening into the colon (permanent)
- col/o/pexy  
colopexy  
kō' lō pek sē
23.  
Form a term describing a surgical procedure that forms a new opening between the stomach and small intestine,  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_ / \_\_\_\_;
- pertaining to the stomach and small intestine,  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_ / \_\_\_\_.
24.  
Refer to Illustration 5.2 again. Build a term meaning washing or irrigation of the small intestine,  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_;
- dilation of the small intestine,  
\_\_\_\_ / \_\_\_\_.
25.  
What do the following terms mean?
- Enter/o/toxin \_\_\_\_\_  
\_\_\_\_\_.
- Enter/o/centesis \_\_\_\_\_  
\_\_\_\_\_.
- Enter/o/cele \_\_\_\_\_  
\_\_\_\_\_.
26.  
Try these.
- Col/ic \_\_\_\_\_  
\_\_\_\_\_.
- Col/o/centesis \_\_\_\_\_  
\_\_\_\_\_.
- Col/ostomy \_\_\_\_\_  
\_\_\_\_\_.
27.  
Build a term meaning surgical fixation of the colon,  
\_\_\_\_ / \_\_\_\_ / \_\_\_\_;

col/o/clysis  
coloclysis  
kō lok' li sis

washing or irrigation of the colon,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;

col/itis  
colitis  
kō lī' tis

inflammation of the colon, \_\_\_\_\_ / \_\_\_\_\_.

28.

rect/o

Refer to Illustration 5.2 again. The combining form for rectum is  
\_\_\_\_\_ / \_\_\_\_\_.

What do each of the following mean?

pertaining to the  
rectum

Rect/al \_\_\_\_\_  
\_\_\_\_\_.

a rectal hernia

Rect/o/cele \_\_\_\_\_  
\_\_\_\_\_.

washing or irrigation of  
the rectum (enema)

Rect/o/clysis \_\_\_\_\_  
\_\_\_\_\_.

rect/o/colitis  
rectocolitis  
rek' tō kō li' tis  
rect/o/cyst/otomy  
rectocystotomy  
rek' tō sis tot' ə mē

29.

Build a word meaning inflammation of the rectum and colon,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;

incision of the bladder through the rectum,

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
rectum bladder incision into

30.

specializes in diseases of  
the anus and rectum

Proctology is the study of diseases of the anus and rectum. A  
proct/o/log/ist is one who \_\_\_\_\_  
\_\_\_\_\_.

proct/o/clysis  
proctoclysis (enema)  
prok tok' li sis

31.

Build a word meaning washing or irrigation of anus and rectum,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;

Pronounce that one several times.

32.

instrument for  
examining the anus  
and rectum  
prok' tə skōp

Write a meaning for each of the following:

proct/o/scope \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

examination of the anus and rectum prok tos' kō pē	proct/o/scopy _____ _____.
hepat/o	33. Back to Illustration 5.2. What is the combining form for liver? _____.
pertaining to the liver	Hepat/ic means _____.
an abnormal condition of enlargement of the liver	Hepatomegaly means _____ _____.
hepat/o/scop/y hepatoscopy hep ə tos' kō pē	34. Build a word meaning inspection (examination) of the liver, _____ / _____ / _____ / _____;
hepat/otomy hepatotomy hep ə tot' ō mē	incision into the liver, _____ / _____;
hepat/itis hepatitis hep ə tī' tis	inflammation of the liver, _____ / _____.
pertaining to the pancreas	35. Here's another new term. Pancreat/ic means _____ _____.
pancreat/o/ <u>lysis</u>	Underline the part of the term that means dissolution or destruc- tion.
pancreat/o/lith pancreatolith pan krē at' ə lith pancreat/itis pancreatitis pan krē a tī' tis pancreat/ectomy pancreatectomy pan krē a tek' tō mē pancreat/otomy pancreatotomy pan krē a tot' ə mē	Pancreat/o/lys/is  36. Build a word meaning a stone or calculus in the pancreas, _____ / _____ / _____; pancreas stone inflammation of the pancreas, _____ / _____; excision of part or all of the pancreas, _____ / _____; incision into the pancreas, _____ / _____.



esophag/o/duoden/  
ostomy  
esophagoduodenostomy  
ē sof' ə gō dōō' ō den  
os' tō mē

37.

When an entire gastrectomy is performed, a new connection (opening) is formed between the esophagus and duodenum. This is called an \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

(Note: Remember to name the anatomical parts in the order in which food passes through them.)

38.

As you rewrite each of the following, analyze it (make your own diagonal divisions) and pronounce it to yourself:

gastr/o/enter/o/col/  
ostomy

gastroenterocolostomy,  
\_\_\_\_\_;

esophag/o/gastr/  
ostomy

esophagogastrostomy,  
\_\_\_\_\_;

enter/o/chol/e/cyst/  
ostomy

enterocholecystostomy,  
\_\_\_\_\_.

39.

Try it again:

Proctectasia,

proct/ectasia

\_\_\_\_\_;

duoden/o/chol/e/cyst/  
ostomy

duodenocholecystostomy,  
\_\_\_\_\_;

esophag/o/gastr/o/  
scopy

esophagogastrosco-  
\_\_\_\_\_.  
scopy

40.

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

SUGGESTED ANSWERS:

colon	lips	rectum
duodenum	liver	anus and rectum
esophagus	mouth	small intestine
gums	pancreas	tongue
stomach		

rectum  
colon  
pancreas

rect/o \_\_\_\_\_  
col/o \_\_\_\_\_  
pancreat/o \_\_\_\_\_

rectum and anus	proct/o _____
lips	cheil/o _____
mouth	stomat/o _____
small intestine	enter/o _____
esophagus	esophag/o _____
gums	gingiv/o _____
tongue	gloss/o _____
liver	hepat/o _____
duodenum	duoden/o _____
stomach	gastr/o _____

41.  
Try these.

#### SUGGESTED ANSWERS

make a new opening	stretching
poison	irrigation
look, examine	

irrigation	-clysis _____
look, examine	-scope, -scopy _____
make a new opening	-ostomy _____
stretching	-ectasia _____
poison	-toxin _____

42.

Here's what we suggest:  
In your own words, write the meaning of each of the following medical terms.

a new opening between the esophagus and duodenum	esophag/o/duoden/ostomy _____ _____
inspection of the anus and rectum (with an instrument)	proct/oscopy _____ _____
plastic surgery of the lips	cheil/o/plasty _____ _____
stretching of the esophagus	esophag/o/ectasia _____ _____

irrigation of the anus and rectum (and lower colon; enema)	proct/o/clysis
	gastr/o/enter/algia
pain of the stomach and intestine	
	pancreat/otomy
incision into the pancreas	
	stomat/oma
tumor of the mouth	
	gloss/o/spasm
spasm of the tongue	

43.

Here are 25 medical terms for practicing your pronunciation. Say the term aloud and then say what it means. Then take the Unit 5 Self-Test.

cheilitis (kē lī' tis)	gingivoglossitis
cheiloplasty (kē' lō plas tē)	(jin' ji vō glos ī' tis)
colic (kol' ik)	glossospasm (glos' ō spa zm)
colitis (kō lī' tis)	hepatitis (hep a tī' tis)
colostomy (kō los' tō mē)	hepatomegaly (hep a tō meg' a lē)
dentalgia (den tal' jē ə)	hepatorrhagia (hep a tō rā' jē a)
enterocele (en' ter ō sēl)	hypoglossal (hī' pō glos' əl)
enteroclysis (en ter ok' li sis)	pancreatectomy
enterotoxin (en' ter ō tox in)	(pan krē a tek' tō mē)
esophagogastrosocopy	proctoclysis (prok tok' li sis)
(ē sof' ə gō gas tros' kō pē)	proctoscopy (prok tos' kō pē)
gastrextasia (gas trek tā' zhə)	rectal (rek' t'l)
gastrorrhagia (gas' trō rā' jē ə)	stomatitis (stō mǎ tī' tis)
gingivectomy	stomatorrhagia (stō mǎt ō rā' jē ə)
(jin ji vek' tō mē)	

---

## Unit 5 Self-Test

### Part 1

From the list on the right, select the correct meaning for each of the following often used medical terms.

- |                         |                                                                             |
|-------------------------|-----------------------------------------------------------------------------|
| _____ 1. Proctoclysis   | a. Make a new opening in the colon                                          |
| _____ 2. Stomatoplasty  | b. Abnormal enlargement of the liver                                        |
| _____ 3. Hepatectomy    | c. Of or pertaining to teeth                                                |
| _____ 4. Stomatorrhagia | d. Intestinal poisoning                                                     |
| _____ 5. Colic          | e. Stretching, dilation of the stomach                                      |
| _____ 6. Enteroclysis   | f. Spasm of the tongue                                                      |
| _____ 7. Glossospasm    | g. Hemorrhage of the mouth                                                  |
| _____ 8. Dental         | h. Irrigation of the rectum and anus                                        |
| _____ 9. Enterotoxin    | i. Plastic surgery of the mouth                                             |
| _____ 10. Cheilitis     | j. Relating to the colon                                                    |
| _____ 11. Colostomy     | k. Plastic surgery of the lips                                              |
| _____ 12. Gastrectasia  | l. Irrigation of the intestine                                              |
| _____ 13. Cheiloplasty  | m. Surgical removal of (part of) the liver                                  |
| _____ 14. Hepatomegaly  | n. Examination (looking into) the rectum through the anus with an endoscope |
| _____ 15. Proctoscopy   | o. Inflammation of the lips                                                 |

**Part 2**

Complete each of the medical terms on the right with the appropriate terms.

1. Under the tongue \_\_\_\_\_
2. Surgical removal of the pancreas \_\_\_\_\_
3. Hemorrhage of the mouth \_\_\_\_\_
4. Inflammation of the lips \_\_\_\_\_
5. Enlarged liver \_\_\_\_\_
6. Stretching or dilation of the stomach \_\_\_\_\_
7. Spasm of the tongue \_\_\_\_\_
8. Plastic surgery of the lips \_\_\_\_\_
9. Intestinal hernia \_\_\_\_\_
10. Inflammation of the liver \_\_\_\_\_
11. Instrument for examining the rectum  
and anus \_\_\_\_\_
12. Pertaining to the rectum \_\_\_\_\_
13. Formation of a new opening in the  
colon \_\_\_\_\_
14. Painful tongue \_\_\_\_\_
15. Irrigation of the rectum and anus \_\_\_\_\_

**ANSWERS****Part 1**

1. h
2. i
3. m
4. g
5. j
6. l
7. f
8. c
9. d
10. o

**Part 2**

1. Hypoglossal
2. Pancreatectomy
3. Stomatorrhagia
4. Cheilitis
5. Hepatomegaly
6. Gastrectasia
7. Glossospasm
8. Cheiloplasty
9. Enterocoele
10. Hepatitis

- |       |                  |
|-------|------------------|
| 11. a | 11. Proctoscope  |
| 12. e | 12. Rectal       |
| 13. k | 13. Colostomy    |
| 14. b | 14. Glossalgia   |
| 15. n | 15. Proctoclysis |



# 6 The Heart

*Unit 6 focuses on the gross anatomy of the heart and how the heart works. You'll create terms relating to abnormal conditions of the heart, and its abnormal functions. You'll also cover some new prefixes and suffixes as shown below.*

## Mini-Glossary

algesia (sense of pain)

angi/o (vessel)

arteri/o (artery)

cardiac arrest (stopped heart)

dactyl/o (fingers)

defibrillation (heart shocked  
to a regular heartbeat)

embolism (obstruction of a  
blood vessel)

embolus (foreign particle  
in the bloodstream)

esthesia (feeling, sensation)

fibrillation (very fast,  
irregular heartbeat)

a-, an- (absent, without)

dys- (bad, difficult, painful)

-emia (blood)

macro- (large)

micro- (small, very small)

myel/o (spinal cord, bone marrow)

phas/o (speech)

phleb/o (vein)

plas/o (formation)

thrombosis (bloodclot occluding a vessel)

thrombus (a blood clot)

poly- (many)

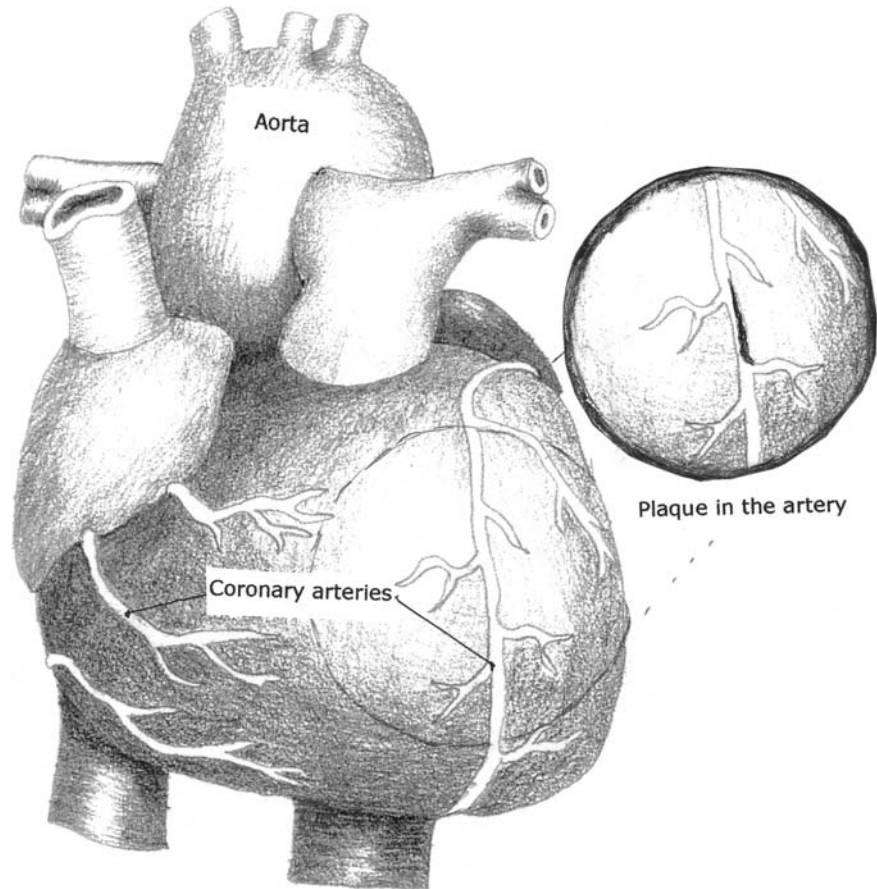
sym-, syn- (together)

-orrhexis (rupture, bursting apart)

-tripsy (rubbing, crushing)



Before you begin Unit 6, take the time to complete the Review Sheet for Unit 5. It will refresh your memory of the terms and word parts you studied. Find out how much you've learned.



**Figure 6.1.** Coronary Arteries—Nourishment to the Heart

The *heart* is the pump of the circulatory system. It is about the size of a fist. It's hollow and cone-shaped, with its apex at the bottom. The heart uses arteries to deliver oxygen-rich blood to the cells, tissues, and organs. Oxygen-depleted blood returns to the heart via the veins. The heart then pumps oxygen-deficient blood to the lungs where it becomes oxygen-enriched and returns to the heart for another circulatory round.

The *coronary arteries* are so-named because they form an upside down "crown" on the surface of the heart. Both left and right arteries arise from small openings in the *aorta* just beyond the left side of

the heart. The two main arteries form many branches and terminate in multitudes of tiny arteries that pass into the heart muscle and supply it with oxygen and nutrients.

*Atherosclerotic plaque* within the coronary artery may reduce blood flow and cause insufficient oxygen to reach the heart muscle. This condition often induces sharp, crushing chest pain. *Coronary thrombosis* means the coronary vessel may be occluded. Consequently, if the heart muscle is severely damaged, *fibrillation* may occur, and/or *cardiac arrest* may follow.

1.

Let's try something different. Some terms referring to abnormal conditions of the heart or blood vessels can be confusing. Read each definition carefully and select the terms that refer to a condition or procedure involving only the heart. Put an X in the box.

☐ thrombus

☒ coronary thrombosis

☐ embolus

☐ embolism

☒ cardiac arrest

☒ fibrillation

☒ defibrillation

☐ *Thrombus* is a circulating blood clot.

☐ *Coronary thrombosis* is a heart attack caused by a blood clot that occludes (closes off) a coronary vessel of the heart.

☐ *Embolus* is a foreign or abnormal particle circulating in the blood, such as a bubble of air, a blood clot, or cholesterol plaque.

☐ *Embolism* is the sudden obstruction of a blood vessel by an embolus.

☐ *Cardiac arrest* is the complete cessation of heart function. (If the heartbeat cannot be restored, the patient dies.)

☐ *Fibrillation* means very fast and irregular heartbeat.

☐ *Defibrillation* means using an electrical spark to shock the heart and bring about a slower and regular heartbeat.

Now review the terms and their meanings again. This time *circle* each term that refers to a condition of the blood or blood vessels.

2.

Try these. A blood clot floating through the blood stream is known as a *thrombus*. When a blood clot occludes a vessel, the condition is called *thrombosis*. The part of the word meaning abnormal or diseased condition is \_\_\_\_\_.

-osis

3.

Refer to the definitions in Frame 1. An embolus is any foreign or abnormal particle circulating in the blood, such as an air bubble, a cholesterol deposit, or even a blood clot. Embolism is the condition caused by an \_\_\_\_\_.

embolus  
em' bō lus

thrombus  
throm' bus  
embolus

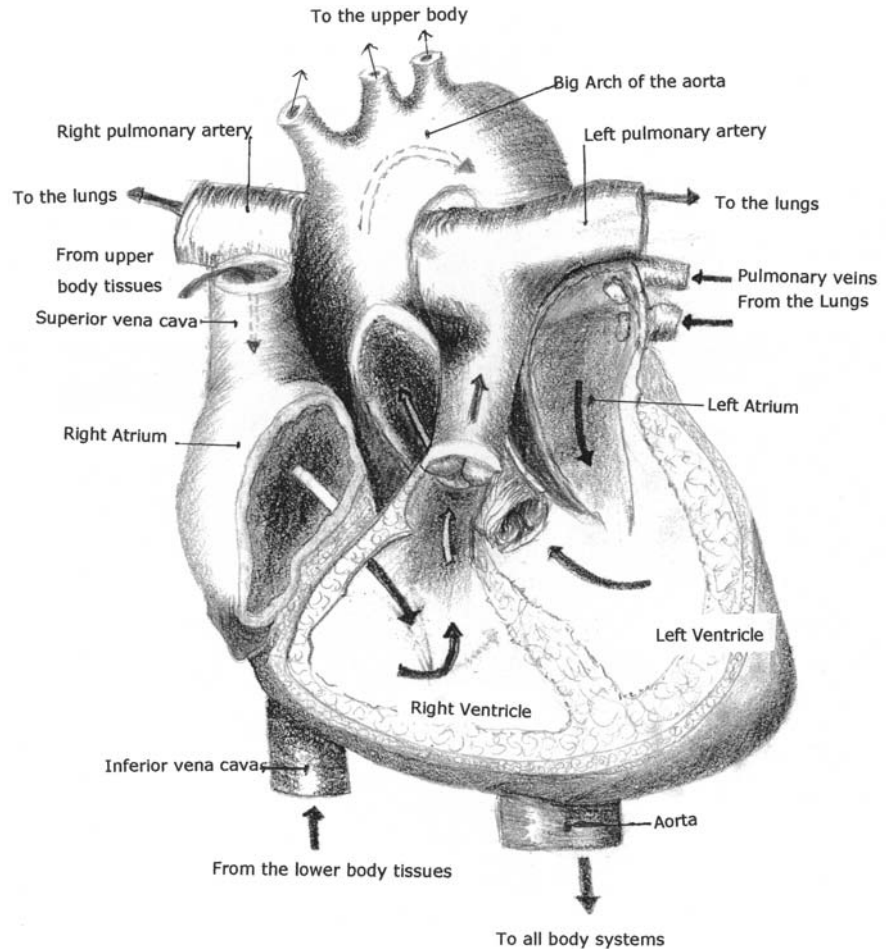
A circulating blood clot is a \_\_\_\_\_. But any foreign particle (including a blood clot) circulating through the bloodstream is an \_\_\_\_\_.

embol (ism) em' bō lizm	4. When a vessel is suddenly occluded by an embolus, the resulting condition is known as an _____ism.
thromb (osis) throm bō' sis	When a sudden vessel occlusion is caused by a thrombus, the resulting condition is a _____osis.
thrombosis	A blood clot occluding a coronary (heart) vessel is a condition called coronary _____.
embolus	5. Embolism is caused by a/an _____.
thrombus	Thrombosis is caused by a/an _____.
coronary thrombosis	6. A sudden blocking or occlusion of the coronary vessel of the heart by a blood clot is a/an _____.
	7. Cardiac fibrillation may result from coronary thrombosis. The heart beats 200 to 400 times a minute and is very irregular. If something is not done quickly, fibrillation will exhaust the heart and it will stop beating altogether.
	On the other hand, using an electrical spark to shock the heart and bring about a slower and regular heartbeat may result in <i>defibrillation</i> .
<u>defibrillation</u> dē fib ri lā' shun	Underline the term that indicates the better outcome: cardiac arrest / defibrillation
cardiac arrest	8. A very fast, irregular heartbeat, left unchecked, may lead to a complete cessation of heart functioning known as _____.
defibrillation	9. A very fast, irregular heartbeat is called fibrillation. Using an electrical spark to shock the heart and bring about a regular heartbeat is called _____.

10.

Write the correct term for each of the following definitions:

thrombus	a blood clot floating through the bloodstream, _____;
defibrillation	using an electrical spark to shock the heart and restore a regular heartbeat, _____;
cardiac arrest	complete cessation of heart functioning, _____;
fibrillation	a very fast, irregular heartbeat, _____;
embolism	sudden blocking or occlusion of a vessel by something that floated in the bloodstream, _____;
coronary thrombosis	sudden blocking of the coronary vessel by a blood clot, _____.



**Figure 6.2** The Cardiovascular System

The *heart* is the muscular pump of the cardiovascular system. It pumps blood to the lungs and body systems and receives blood back for recirculation. Each day, the heart beats about 100,000 times at a rate of approximately 70 beats per minute.

The heart contains four cavities, or chambers: two on the right side (pulmonary heart), two on the left (systemic heart). Pulmonary circulation carries blood to and from the lungs. The systemic circulation supplies oxygen- and nutrient-rich blood to the body cells, tissues, and organs. After completing the systemic circuit, all blood returns to the heart through the two main veins, the *superior vena cava* and the *inferior vena cava*.

These vena cavae meet at the *right atrium*, a thin-walled chamber that serves as a collecting station. From the right atrium, the

blood flows downward into the *right ventricle*, the smaller of the two muscular heart chambers. When the ventricle contracts, blood is forced upward, as in the illustration. It is pumped through the *right and left pulmonary arteries*, which lead to the two lungs. This begins the pulmonary circuit. Blood is pumped to the lungs for oxygenation then returns to the heart for distribution to the body.

Blood from the lungs returns to the *left atrium* of the heart via the *pulmonary veins*. The veins are shown only on the left side of the heart; in the illustration they are hidden on the right side. From the left atrium (a collecting station) blood flows downward and enters the *left ventricle*, which is the larger of the two side-by-side muscular chambers. When the ventricles contract, simultaneously, the oxygenated blood is forced upward from the left ventricle through the big arch and into the aorta. Arteries arising from the aorta reach all parts of the head, upper extremities, thorax, abdomen, pelvic cavity, and lower extremities. The blood nourishes the tissues and returns to the heart to complete the circulation.

artery (arteri/o)	vein (phleb/o)
vessel (angi/o)	lung (pneumon/o)

11.

Arteries are vessels that carry blood *away* from the heart. Veins are vessels that carry blood *back to* the \_\_\_\_\_.

heart

12.

Note: Angi/o is the term used for vessels, whether the vessel is an artery or a vein.

a radiographic picture  
of the heart vessels  
(arteries and veins)

What is a cardioangiogram? \_\_\_\_\_

13.

A combining form for vein is phleb/o. If arteriosclerosis is hardening of the \_\_\_\_\_,

arteries  
phleb/o/scler/osis  
phlebosclerosis  
flēb' ō skler ō' sis

then hardening of veins is called

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
vein                      hardening                      condition

phleb/otomy  
phlebotomy  
flē bot' ō mē

14.

Build a word meaning incision into a vein (venisection or cut down), \_\_\_\_\_ / \_\_\_\_\_;

phleb/itis  
phlebitis  
flē bī' tis

inflammation of a vein, \_\_\_\_\_ / \_\_\_\_\_.

15.  
Thromb/o is the combining form that means clot.  
Thromb/o/angi/itis means inflammation of a vessel with formation of a \_\_\_\_\_.
- clot
16.  
Thromb/ectomy means \_\_\_\_\_.
- excision of a thrombus  
(clot)
17.  
Thromb/o/phleb/itis means \_\_\_\_\_.
- inflammation of a vein  
with thrombus  
formation
18.  
A synonym for clot is \_\_\_\_\_.
- thrombus
19.  
Build a word meaning a condition caused by a clot,  
\_\_\_\_\_ / \_\_\_\_\_;
- thromb/osis  
thrombosis  
throm bō' sis
- a cell that aids in clotting,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;
- thromb/o/cyte  
thrombocyte  
throm' bō sīt
- resembling a clot,  
\_\_\_\_\_ / \_\_\_\_\_.
- thromb/oid  
thromboid  
throm' boid
20.  
Let's review. Add the correct term to each of the definitions below.
- Cardiac arrest \_\_\_\_\_ is the complete cessation of heart function.
- Coronary thrombosis \_\_\_\_\_ is a heart attack caused by a blood clot occluding the coronary blood vessel.
- Defibrillation \_\_\_\_\_ is a procedure using an electrical spark to shock the heart and bring about a regular heartbeat.
- Embolism \_\_\_\_\_ is the sudden obstruction of a blood vessel by an embolus.
- Embolus \_\_\_\_\_ is a foreign or abnormal particle circulating in the bloodstream such as an air bubble, fat globule, or cholesterol plaque.

Fibrillation \_\_\_\_\_ means a very fast (200–400 beats/min) and irregular heartbeat.

Thrombus \_\_\_\_\_ is a blood clot in the blood stream.

In this next section, you are taking on some new suffixes and prefixes.

21.

From the suggested answers select the meaning of each of the combining forms listed below.

SUGGESTED ANSWERS

blood vessel              blood clot  
artery                      vein  
lung(s)

arteri/o \_\_\_\_\_

thromb/o \_\_\_\_\_

phleb/o \_\_\_\_\_

angi/o \_\_\_\_\_

pulmon/o \_\_\_\_\_

It's time to take a short break.

22.

Try this one.

–Orrhexis is a suffix meaning rupture.

Cyst/orrhexis means \_\_\_\_\_

rupture of the bladder \_\_\_\_\_.

rupture of the small Enter/orrhexis means \_\_\_\_\_

intestine \_\_\_\_\_.

rupture of a blood Angi/orrhexis means \_\_\_\_\_

vessel \_\_\_\_\_.

cardi/orrhexis  
cardiorrhexis  
kär dē ō rek' sis

23.

Build a word meaning rupture of the heart,  
\_\_\_\_\_ / \_\_\_\_\_;

phleb/orrhexis  
phleborrhexis  
flē bō rek' sis

rupture of a vein,  
\_\_\_\_\_ / \_\_\_\_\_.



24.

Here's a chance to use all the "orrh" suffixes with some combining forms to help you.

-orrhexis means rupture, bursting apart

-orrhagia means burst forth, hemorrhage

-orrhaphy means repair, suture together, close

-orrhea means flow, discharge

rhin/o            salping/o

cyst/o            hepat/o

Build a medical term to satisfy each of the following definitions.

rupture of the (urinary) bladder

cyst/orrhexis            \_\_\_\_\_ / \_\_\_\_\_;

hemorrhage from the liver,

hepat/orrhagia            \_\_\_\_\_ / \_\_\_\_\_;

flowing from the nose (runny nose),

rhin/orrhea            \_\_\_\_\_ / \_\_\_\_\_;

suturing (or joining) the fallopian tubes,

salping/orrhaphy            \_\_\_\_\_ / \_\_\_\_\_.

suturing (or closing) a  
rupture, hernia

What does herniorrhaphy mean? \_\_\_\_\_  
\_\_\_\_\_.

25.

Fill in the blank to complete these definitions

#### SUGGESTED ANSWERS

-orrhagia            -orrhaphy

-orrhea            -orrhexis

-orrhaphy

\_\_\_\_\_ means repair, close, suture

-orrhagia

\_\_\_\_\_ means burst forth, hemorrhage

-orrhea

\_\_\_\_\_ means discharge, flowing

-orrhexis

\_\_\_\_\_ means rupture, bursting apart

26.

*An-* is a form of the prefix *a-* meaning without. *Esthesia* means feeling or sensation. Give the meaning of the following words:

anesthesia \_\_\_\_\_

a condition of being  
without feeling

\_\_\_\_\_  
\_\_\_\_\_;

the study or science of  
removing feeling      anesthiology \_\_\_\_\_  
\_\_\_\_\_;  
\_\_\_\_\_;

instrument for  
measuring feeling or  
sensation      esthesiometer \_\_\_\_\_  
\_\_\_\_\_;  
\_\_\_\_\_;

abnormal sensitivity  
(to pain)      hyperesthesia \_\_\_\_\_  
\_\_\_\_\_.

27.  
Analyze the following words (you do the dividing):  
an/esthesi/o/log/ist      anesthiologist, \_\_\_\_\_;  
an' es thēz ē ol' ō jist  
hypo/esthes/ia      hypoesthesia, \_\_\_\_\_  
hī pō es thē' zē ə

28.  
Algesia is a word meaning a sense of pain. What does analgesia  
mean? \_\_\_\_\_  
\_\_\_\_\_.

29.  
The prefixes *a-* and *an-* mean without. Examine the following two  
lists of words:  
an/*al*gesia      a/*bi*otic  
an/*em*ia      a/*der*mia  
an/*enceph*alus      a/*febr*ile  
an/*esthes*ia      a/*kines*ia  
an/*onychia*      a/*men*ia  
an/*opia*      a/*menorr*hea  
an/*uria*      a/*pnea*  
an/*uresis*      a/*seps*is

Draw a conclusion: When the word root begins with a consonant,  
a-      use the prefix \_\_\_\_\_.

an-      When the word root begins with a vowel, use the prefix \_\_\_\_\_.

30.  
Put the proper form of the prefix before each of the following roots  
and then write a meaning for each.

*anemic*—a condition of      \_\_\_\_\_emic \_\_\_\_\_  
less blood      \_\_\_\_\_;

astomia—without a \_\_\_\_\_ stomia \_\_\_\_\_;  
mouth (congenital) \_\_\_\_\_;

afebrile—without fever \_\_\_\_\_ febrile \_\_\_\_\_;

anodontia— toothless \_\_\_\_\_ odontia \_\_\_\_\_.

31.

Here's some practice with other prefixes. *Phas/o* means speech. Write a meaning for each of the following:

speechless \_\_\_\_\_ aphasia \_\_\_\_\_;

abnormally fast speech \_\_\_\_\_ tachyphasia \_\_\_\_\_;

abnormally slow speech \_\_\_\_\_ bradyphasia \_\_\_\_\_;

pain or difficulty when \_\_\_\_\_ dysphasia \_\_\_\_\_;  
speaking \_\_\_\_\_.

32.

pain along the course \_\_\_\_\_  
of a nerve (or \_\_\_\_\_  
equivalent) \_\_\_\_\_.

33.

*Tripsis*, from which we get trips/y, is a Greek word that means “rub” or “massage.” *Neur/o/trips/y* means surgical crushing of a nerve. The word root for crushing (usually by rubbing or grinding) is \_\_\_\_\_.

trips

neur/o/trips/y  
neurotripsy  
nyōō' rō trip sē

Tripsis can be carried to the point of crushing or grinding. Surgical crushing of a nerve is called \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

34.

In some cases of cholelithiasis, it may be necessary to crush calculi so they can pass from the gallbladder. A word meaning surgical crushing of gallstones is \_\_\_\_\_

chole/lith/o/trips/y  
cholelithotripsy  
kō lē lith' ō trip sē

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

35.

Myel/itis can mean either inflammation of bone marrow or inflammation of the spinal cord. From the definitions, you may conclude

bone marrow  
spinal cord

that *myel* can be the word root for both \_\_\_\_\_  
and \_\_\_\_\_.

an immature bone  
marrow cell

36.  
The suffix *-blast* means an immature cell (in the process of develop-  
ing). In the term myel/o/blast, the word root myel refers to bone  
marrow. Write the meaning of myel/o/blast: \_\_\_\_\_  
\_\_\_\_\_.

hernia of the spinal  
cord

In myel/o/cele, the word root refers to spinal cord. Write the  
meaning of myel/o/cele: \_\_\_\_\_  
\_\_\_\_\_.

bone marrow or  
spinal cord

37.  
A medical term built on the word root myel may refer to different  
structures of the body. It may refer to either \_\_\_\_\_  
or \_\_\_\_\_.

bad, defective (poor or  
abnormal formation)

38.  
You have learned that dys- means pain, painful. But dys- is a prefix  
that also means bad (defective) or difficult. Try this.  
*Plasia* means formation or change, in the sense of molding during  
the *growing years*. This kind of formation occurs naturally instead of  
being done by a plastic surgeon. Dys/plasia means \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

hyper/plasia  
hyperplasia  
hī' per plā' zha

39.  
A/plasia means failure of an organ to develop properly. A term that  
means overgrowth or excessive development in the formative years  
is \_\_\_\_\_ / \_\_\_\_\_.

hypo/plasia  
hypoplasia  
hī' pō plā' zha

40.  
If overdevelopment is hyperplasia, underdevelopment is expressed as  
\_\_\_\_\_ / \_\_\_\_\_.

chondr/o/dys/plasia  
chondrodysplasia  
kon' drō dis plā' zhə  
bad (defective)  
development of  
cartilage

41.  
Myel/o/dys/plasia means defective development of the spinal cord.  
What does chondr/o/dys/plasia mean? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

oste/o/chondr/o/dys/  
plasia  
osteochondrodysplasia  
os' tē ō kon' drō dis  
plā' zhə  
defective formation of  
bone and cartilage

42.

Write the meaning of osteochondrodysplasia. \_\_\_\_\_  
\_\_\_\_\_.

43.

Here's another quick review before moving on.

## SUGGESTED ANSWERS

-algesia	phas/o
-dys	plas/o
-tripsy	lith/o
	myel/o

Write the suffix or combining form that refers to each of the following words.

myel/o  
phas/o  
-algesia  
lith/o  
-tripsy  
myel/o  
dys-  
plas/o

spinal cord \_\_\_\_\_  
speech \_\_\_\_\_  
sensation of pain \_\_\_\_\_  
calculus \_\_\_\_\_  
rubbing, crushing (procedure) \_\_\_\_\_  
bone marrow \_\_\_\_\_  
painful, difficult, bad \_\_\_\_\_  
formation, development \_\_\_\_\_

44.

Explain the meaning of the following medical terms.

abnormally slow speech  
rubbing, crushing of a  
nerve  
incision to remove a  
gallstone  
radiographic exam of  
the spinal cord  
bad development  
(formation) of  
cartilage  
lack of pain sensation

bradyphasia \_\_\_\_\_  
neurotripsy \_\_\_\_\_  
cholelithotomy \_\_\_\_\_  
myelogram \_\_\_\_\_  
chondrodysplasia \_\_\_\_\_  
analgesia \_\_\_\_\_

- microns  
mī' krons  
micr/o/meter  
micrometer  
mī krom' ə ter
45.  
The *micron* (1/1000 mm) is a unit of measurement. Many cocci are 2 microns in diameter. A red blood cell is 7 \_\_\_\_\_ in diameter.
- An instrument for measuring the diameter of something microscopic is a \_\_\_\_\_ / \_\_\_\_\_ / meter.
- large
46.  
On the other hand, *macr/o* is the opposite of micr/o. Macr/o is used in words to mean \_\_\_\_\_.
- a large immature cell  
visible by the naked  
eye
47.  
Things that are macr/o/scop/ic can be seen with the naked eye. Give a meaning for macroblast. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- Macr/o/cephal/us  
mak rō se fal' us
48.  
An abnormally large head is  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- An abnormally large cell is a  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- macr/o/cyte
- A very large coccus is called a  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- macr/o/cocc/us
49.  
The suffix -ia indicates a condition. Pronounce each term and write a meaning.
- abnormally large tongue  
mak rō glos' ē ə
- Macr/o/gloss/ia \_\_\_\_\_  
\_\_\_\_\_
- abnormally large ear(s)  
mak rō' shē ə
- Macr/ot/ia \_\_\_\_\_  
\_\_\_\_\_
- abnormally large nose  
mak rō rin' ē ə
- Macr/o/rhin/ia \_\_\_\_\_  
\_\_\_\_\_
- abnormally large lips  
mak rō kē' lē ə
- Macr/o/cheil/ia \_\_\_\_\_  
\_\_\_\_\_
- dactyl  
dak' til
50.  
Macr/o/dactyl/ia means abnormally large fingers or toes. The word root for fingers or toes is \_\_\_\_\_.

enlarged digits, or  
another way of saying  
large fingers or toes

dactyl/o

dactyl/itis

dactylitis

dak til ī' tis

dactyl/o/spasm

dactylospasm

dak til' ō spa zm

dactyl/o/gram

dactylogram

dak til' ō gram

abnormally large fingers  
and toes (digits)

fingers or toes (digits)

poly/ur/ia

polyuria

pol ē yer' ē ə

polyneuritis

pol ē nyōō rī' tis

inflammation of many  
nerves

inflammation of many  
joints

pain in several nerves

51.

What does dactyl/o/megaly mean? \_\_\_\_\_.

52.

A finger or toe is called a digit or dactyl. But the combining form for digit is \_\_\_\_\_ / \_\_\_\_\_.

Build a term meaning inflammation of a digit,  
\_\_\_\_\_ / \_\_\_\_\_;

cramp or spasm of a digit,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;

a fingerprint,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

53.

Macr/o/dactyl/ia means \_\_\_\_\_.

Poly/dactyl/ism means too many \_\_\_\_\_.

54.

*Poly-* is a prefix meaning too many or too much. Poly/ur/ia means excessive amount of urine. When a person drinks a lot of fluid, \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ results.

55.

*Path* refers to disease.

Poly/neur/o/path/y means disease of many nerves.

What does poly/neur/itis mean? \_\_\_\_\_.

56.

Write the meaning of the following:

Poly/arthr/itis \_\_\_\_\_;

Poly/neur/algia \_\_\_\_\_.

syn/ergetic synergetic sin er je' tik	57. Syn/ergetic means working together. Drugs that work together to increase the effects of one another are called _____ / _____ drugs.
synergetic	58. Synergetic muscles are muscles that work together. Three muscles work together to flex the forearm. The function of these muscles is described as _____.
synergetic	59. APC tablets are thought by some to be more effective for killing pain than aspirin alone. This is because <i>aspirin</i> , <i>phenacetin</i> , and <i>caffeine</i> are _____ drugs.
a fused joint that moves as one	60. Syn/arthr/osis means an immovable joint; adjoining bones are fused together. When bones of a joint are fused so they all move as one, the condition is syn/arthr/osis. What does it mean? _____
<u>syn</u> dactylism <u>syn</u> arthrosis	Underline the part of the word that means joined together as one: syndactylism synarthrosis
a condition of two or more digits joined together as one	61. What does syn/dactyl/ism mean (-ism denotes a medical condition or disease)? _____
together or joined as one	62. <i>Syn-</i> and <i>sym-</i> are different forms of the same prefix: <i>Syn-</i> and <i>sym-</i> mean _____.
<u>syn</u> arthrosis <u>sym</u> metrical <u>sym</u> bolism <u>sym</u> physis	63. Use the prefix <i>sym-</i> when the word root begins with the consonants <i>b</i> , <i>m</i> , or <i>p</i> ; use <i>syn-</i> in all other cases. Write the prefix for each of the following: ____ arthrosis ____ metrical ____ bolism ____ physis



<u>syn</u> drome	_____ drome
<u>symp</u> athy	_____ pathy
<u>sym</u> biosis	_____ biosis

64.

Both syn- and sym- mean \_\_\_\_\_  
 joined as one, together \_\_\_\_\_; sym- is used when followed by the letters \_\_\_\_\_,  
 b, m, p \_\_\_\_\_, or \_\_\_\_\_; syn- is used in other medical words.

65.

Time to review. Complete each brief definition. Refer to the suggested answers. Write your selection in the space provided.

#### SUGGESTED ANSWERS:

algesia	phas/o
dactyl/o	phleb/o
embolus	plas/o
esthesia	

algesia  
 phleb/o  
 embolus  
 esthesia  
 phas/o  
 plas/o  
 dactyl/o

a sensation of pain \_\_\_\_\_  
 veins \_\_\_\_\_  
 foreign particle circulating in the blood \_\_\_\_\_  
 feeling, sensation \_\_\_\_\_  
 speech \_\_\_\_\_  
 formation, development \_\_\_\_\_  
 digits \_\_\_\_\_

66.

Try these.

#### SUGGESTED ANSWERS:

a-, an-	-orrhagia
dys-	-orrhaphy
macro-	-orrhexis
micro-	syn-, sym-
-orrhea	-tripsy

-orrhexis  
 syn-, sym-  
 dys-  
 -orrhagia  
 macro-  
 -tripsy

rupture, burst apart \_\_\_\_\_  
 together, as one \_\_\_\_\_  
 defective, difficult, painful \_\_\_\_\_  
 hemorrhage, burst forth \_\_\_\_\_  
 large \_\_\_\_\_  
 crushing, rubbing \_\_\_\_\_

micro-	microscopic, very small _____
-orrhea	flowing, discharge _____
a-, an-	without, absent _____
-orrhaphy	suturing (repair of) _____

Here are some suggestions:	67. In your own words, write the meaning for each of the following:
crushing of a nerve	neur/o/tripsy _____
without sensation of pain	an/esthesia _____
bad formation of the spinal cord	myel/o/dys/plasia _____
a condition of a blood clot in the coronary artery	coronary thrombosis _____ _____
pertaining to something too small to see with the naked eye	micro/scop/ic _____ _____
without speech, speechless	a/phasia _____
a condition of fingers joined together as one	syn/dactyl/ism _____
surgical repair of a hernia	herni/orrhaphy _____
hemorrhage of the liver	hepat/orrhagia _____
without, or absent, pain	an/algesia _____
complete cessation of heart function	cardiac arrest _____
electrical shock of the heart to restore regular rhythm	defibrillation _____ _____
ruptured blood vessel (vein)	phleb/orrhexis _____

68.

Here are 30 medical terms for practicing your pronunciation. Say the term aloud and then say what it means. Then take the Unit 6 Self-Test.

analgesia (an' al jē' zē ə)

anemia (an ē' mē ə)

anesthesiologist

(an' es thē zē ol' ō jist)

angiogram (an' gē ō gram)

cardiorrhexis (kār dē ōr rek' sis)

chondrodysplasia

(kon' drō dis plā' zhə)

cystorrhexis (sis tō rek' sis)

dactylogram (dak til' ō gram)

dactylomegaly

(dak' til ō meg' ə lē)

defibrillation (dē fib ri lā' shun)

embolism (em' bō lizm)

embolus (em' bō lus)

esthesiometer

(es thē zē om' ə ter)

hyperesthesia

(hī' per es thē' zhə)

hypoesthesia (hī' pō es thē' zhə)

hypoplasia (hī' pō plā' zhə)

hysterorrhexis (his' ter ō rek' sis)

lithotripsy (lith' ō trip sē)

macrocephalus

(mak' rō se fal' us)

macrocheilia (mak' rō kē' lē ə)

macrotia (mak rō' shē ə)

micrometer (mī krom' ə ter)

neuromyelitis

(nyōō' rō mī il ī' tis)

neurotrippsy (nyōō' rō trip sē)

phlebitis (flē bī' tis)

polyarthrititis (pol ē arth rī' tis)

polyuria (pol ē yer' ē ə)

syndactylism (sin dak' til izm)

thrombosis (throm bō' sis)

thrombus (throm' bus)

---

## Unit 6 Self-Test

### Part 1

From the list on the right, select the correct meaning for each of the following often used medical terms. Put the letter in the space provided.

- |                          |                                                             |
|--------------------------|-------------------------------------------------------------|
| _____ 1. Lithotripsy     | a. Inflammation of a vein                                   |
| _____ 2. Thrombosis      | b. Shocking the heart to restore a normal heartbeat         |
| _____ 3. Polyarthrititis | d. Obstruction of a blood vessel by an embolus              |
| _____ 4. Anesthetist     | e. Abnormally enlarged head                                 |
| _____ 5. Synarthrosis    | f. Absence of pain                                          |
| _____ 6. Phlebitis       | g. Inflammation of many joints                              |
| _____ 7. Hysterorrhexis  | i. A specialist who removes all feeling or sensation        |
| _____ 8. Dactylogram     | j. Crushing of a calculus                                   |
| _____ 9. Analgesia       | k. Bursting apart of the uterus                             |
| _____ 10. Defibrillation | l. Fingerprint                                              |
| _____ 11. Neuromyelitis  | m. Speechless                                               |
| _____ 12. Macrocephalus  | n. Clotted condition of a blood vessel                      |
| _____ 13. Hypoesthesia   | o. Inflammation of the nerves of the spinal cord            |
| _____ 14. Embolism       | p. Less than normal sensation                               |
| _____ 15. Aphasia        | q. Immovable joint, bones of a joint joined together as one |

**Part 2**

Complete each of the medical terms on the right with the appropriate missing part or word.

1. Rupture (bursting apart) of the urinary bladder \_\_\_\_\_
2. Abnormally intense feeling or sensation \_\_\_\_\_
3. Foreign particle occluding a blood vessel \_\_\_\_\_ism
4. Rupture (bursting apart) of the heart \_\_\_\_\_
5. Abnormally large head \_\_\_\_\_
6. Inflammation of many nerves \_\_\_\_\_
7. Pain along the course of a nerve \_\_\_\_\_
8. A stopped heart \_\_\_\_\_(2 wds)
9. Abnormally large fingers \_\_\_\_\_
10. Foreign substance circulating in the bloodstream \_\_\_\_\_
11. Instrument for measuring feeling, sensation \_\_\_\_\_
12. A blood clot circulating in the bloodstream \_\_\_\_\_
13. Crushing destruction of a nerve \_\_\_\_\_
14. Absent the ability to speak, speechless \_\_\_\_\_
15. Fingers grown together as one \_\_\_\_\_

**ANSWERS****Part 1**

1. j.
2. n.
3. g.
4. i.
5. q.
6. a.
7. k.
8. l.

**Part 2**

1. Cystorrhesis
2. Hyperesthesia
3. Embolism
4. Cardiorrhesis
5. Macrocephalus
6. Polyneuritis
7. Neuralgia
8. Cardiac arrest

- |        |                   |
|--------|-------------------|
| 9. f.  | 9. Dactylomegaly  |
| 10. b. | 10. Embolus       |
| 11. o. | 11. Esthesiometer |
| 12. e. | 12. Thrombus      |
| 13. p. | 13. Neurotripsy   |
| 14. d. | 14. Aphasia       |
| 15. m. | 15. Syndactylism  |



# 7 Symptoms, Diagnoses, Treatments, Communication Qualifiers, and Statistics

*In this unit you will learn many terms related to signs and symptoms, diagnoses, treatments, and statistics. Some words will be familiar, but you'll use them in new ways.*

## **Signs**

atrophy  
edema  
hypertrophy  
pulse  
respiration  
temperature

## **Qualifiers**

acute  
central  
chronic  
generalized  
localized  
paroxysmal  
peripheral

## **Word Parts**

anti- (*against*)  
chlor/o (*green*)  
erythr/o (*red*)  
melan/o (*black*)  
pyret/o (*fever*)  
xanth/o (*yellow*)

## **Symptoms**

anorexia  
dyspnea  
malaise  
nausea  
tinnitus  
vertigo

## **Treatments**

active  
palliative  
prophylactic  
systemic

## **Diagnosis**

prodrome  
prognosis  
syndrome

## **Statistics**

morbidity  
mortality

Be sure to complete the Unit 6 Review Sheet before continuing.



Signs and Symptoms

sight  
sound  
smell  
taste  
feel

1.  
What is a sign or a symptom? Let’s take them one at a time. A *sign* is any abnormality of the body a physician may discover on examination of the patient. A *symptom* is also evidence of an abnormality in structure or function. However, the patient experiences a symptom through one or more of the five organs of sense. Can you name them?  
\_\_\_\_\_

2.  
Simply put, a sign or a symptom is evidence there is something wrong. The patient feels, tastes, or hears something that is out of the ordinary and tells the examiner about it. This symptomatic evidence may not be apparent to the examiner. On the other hand, sometimes evidence can be observed by the examiner and also be experienced by the patient. Check the box that indicates whether the evidence described is a sign, a symptom, or both.

	SIGN	SYMPTOM	BOTH	
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	swelling of the wrist
symptom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ringing (tinkling sound) in the ear
symptom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	sourness in the mouth
symptom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ammonia sensation in the nose
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	painful and swollen elbow
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	bleeding from the nose
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	blue discoloration around the eye
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	very rapid breathing
symptom	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pain in the heel
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	chills and fever
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	painful muscle spasm in the leg
both	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	chills, coughing, and runny nose
sign	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	slow heartbeat
sign	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pale complexion
sign	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	eyes closed, not responding to questions or poking

sign  
3.  
An abnormality apparent to an examiner (and sometimes to the patient) is called a \_\_\_\_\_.

4.  
Any change in body function or structure that the patient sees, hears, tastes, smells, or feels (and may not be apparent to an observer) is called a \_\_\_\_\_.
- As you can see, most evidence of illness can be observed by someone other than the patient and may be experienced by the patient as well.

## Vital Signs

5.  
*Vital* means relating to life. A vital sign is evidence a patient is alive. Body temperature, pulse rate, and rate of respiration are vital signs because they provide continuous information about the essential processes of the body. If one of these signs is absent, the patient is dead (or in big trouble). Body temperature, pulse, and respiration are very important indicators and are called \_\_\_\_\_.
6.  
Vital signs can be measured. Temperature (T) loosely refers to body heat above normal. Normal body temperature is 98.6°F. Body temperature increases in a hot environment and during physical exercise. Many diseases, serious and not serious, cause a patient's temperature to rise. Elevated body temperature is called *fever*. Low fever is 99° to 101°F. Moderate fever is 101° to 103°F. High fever is 103° to 105°F. A patient who is afebrile has a normal body temperature, which is approximately \_\_\_\_\_ °F.
7.  
*Pyro* is a word root meaning fire or heat. (Remember the funeral pyres on which the Greeks and Romans burned their dead?) A pyromaniac has a fondness for watching things burn or starting \_\_\_\_\_.
8.  
*Pyret/o* forms words meaning fever. A patient described as pyretic would have a temperature \_\_\_\_\_ 98.6°F.  
(above/below/same as)
9.  
Pyrexia means feverish. Fever is one way the body shows something is wrong. Fever can be observed and measured; therefore, pyrexia is a \_\_\_\_\_ of disease.  
sign/symptom

- hypothermia  
hī pō ther' mē ə
10.  
Hypo/thermia refers to body temperature below normal. A patient's temperature may be lowered safely to about 80° during surgery. This controlled procedure reduces the patient's need for oxygen and makes some surgical procedures safer. The patient's lower body temperature is called \_\_\_\_\_.
- hypothermia
11.  
On the other hand, a person who falls through the ice on a pond in January will surely develop a life-threatening condition also called \_\_\_\_\_.
- hyper  
hī per
12.  
Injury and dehydration can cause a patient's temperature to rise above 106°F. This life-threatening high temperature is known as \_\_\_\_\_ pyrexia.  
(hyper/hypo)
- that which produces  
fever
13.  
In an earlier unit you learned that gen/o means to produce or originate. What does pyret/o/gen mean? \_\_\_\_\_.
- pyretogen  
pī ret' ō jen
14.  
The measles virus produces fever. Therefore, the virus that causes measles is a \_\_\_\_\_.
- pertains to something  
that produces fever
15.  
Pyret/ic means pertaining to fever. What does pyret/o/gen/ic mean? \_\_\_\_\_.
- an agent that works  
against fever
16.  
*Anti-* means against. Aspirin is an anti/pyret/ic agent. What does antipyretic mean? \_\_\_\_\_.
- fever reduction
17.  
*Lysis* means dissolution or reduction. What does pyret/o/lysis mean? \_\_\_\_\_.

- without symptoms 18.  
A physician writes on a patient's chart, "The patient has a low-grade fever but is otherwise asymptomatic." What does asymptomatic mean? \_\_\_\_\_.
- increase 19.  
Now let's talk about another vital sign. Pulse (P) is a rhythmical throbbing of the arterial walls. This throbbing is produced when the heart contracts and forces an increased volume of blood into the vessels. After chasing your dog down the street, you would expect your pulse rate to \_\_\_\_\_.  
(increase/decrease)
- tachycardia 20.  
The normal pulse of an average adult is 70 to 80 beats per minute. Fever usually causes a patient's heart to beat more rapidly. When a patient's pulse is 100 beats per minute or higher the condition is known as \_\_\_\_\_.  
(tachycardia/bradycardia)
- bradycardia On the other hand, a pulse less than 60 beats per minute indicates \_\_\_\_\_.
- sign 21.  
The patient usually does not feel a rapid, slow, or irregular pulse. However, a physician can observe and measure pulse rate; therefore, it is said to be a \_\_\_\_\_.  
(sign/symptom)
- 70 to 80 22.  
Pulse rate depends on size, sex, age, and physical condition. It's higher in women than men. It's higher in children than adults. But we can say that a healthy adult has an average pulse of (Check one.)  
☐ 30 to 50 beats per minute.  
☐ 70 to 80 beats per minute.
- vital sign 23.  
The pulse is usually felt over the radial artery at the wrist. Although pulse is a simple measure, it provides important evidence about the life (and death) status of the patient. Therefore, it is considered a \_\_\_\_\_.

peripheral  
per i' fer al

24.

Periphery means outer surface of the body. It is the part of the body away from the center. A pulse taken at the wrist or ankle is a \_\_\_\_\_ pulse.

(central/peripheral)

central

25.

A pulse taken near the center of the body, where the heart is, is a \_\_\_\_\_ pulse.

(central/peripheral)

because it is near the  
center of the body

26.

A pulse taken with a stethoscope on the chest is a central pulse. Why? \_\_\_\_\_

near the outer surface  
of the body

27.

What does peripheral mean? \_\_\_\_\_

accelerated

28.

Here's the third vital sign. Respiration (R) is breathing. Breathing is a function of the respiratory system. A breath draws in oxygen. The circulating blood carries the oxygen to the tissues and then returns carbon dioxide to the lungs. The lungs breathe out the waste products of carbon dioxide and water. The normal rate of respiration for an adult is 16 to 18 breaths per minute. A respiration rate of more than 25 breaths per minute is \_\_\_\_\_ respiration.

(accelerated/decelerated)

an instrument for  
measuring breathing

29.

Pne/o (pronounced nē o) means breath or breathing.

Pne/o/dynamics means the mechanism of breathing. What does pne/o/meter mean? \_\_\_\_\_

30.

Here's a rule that will help you pronounce words containing the root pne/o, pne/a. When pne/o begins the word, the letter "p" is silent. The letter "p" is pronounced when a prefix comes before it. Pronounce each of the following:

a/pnea

pronounce: ap' nē ə

hyper/pnea

pronounce: hī perp' nē ə

tachy/pnea	pronounce: tak ip nē' ə
brady/pnea	pronounce: brad' ip nē ə
pneumon/ia	pronounce: nū mon' ē ə

31.  
very slow breathing  
Bradycardia means very slow heartbeat. What does brady/pnea mean? \_\_\_\_\_.

32.  
disp' nē ə  
painful (bad) breathing  
Pronounce dys/pnea. What does it mean? \_\_\_\_\_.

33.  
excessively rapid  
breathing  
hī perp' nē ə  
Hyperpyrexia means excessively high temperature (over 106°F). What does hyperpnea mean? \_\_\_\_\_.

34.  
without breathing  
ap' nē ə  
A/symptomatic means without symptoms. What does a/pnea mean? \_\_\_\_\_.  
(Pronounce it.)

35.  
hyperpnea  
hī perp' nē ə  
Fever and disorders of the lungs or heart may accelerate respiration. Build a word that describes a respiration rate over 25 breaths per minute: \_\_\_\_\_.

36.  
bradypnea  
brad ip nē' ə  
Very slow breathing of 8 to 9 breaths per minute occurs in serious illnesses like uremia, diabetic coma, and opium poisoning. Build a term that means very slow breathing: \_\_\_\_\_.

37.  
A foreboding irregular and unusual pattern of breathing is called Cheyne-Stokes respiration. (Pronounced *chain-stokes*. It's a condition named after two physicians who first described it more than 150 years ago.) Respiration gradually increases in rapidity and volume until the rate reaches a climax (perhaps 60 to 80 breaths per minute). Then breathing subsides and ceases entirely for up to one minute—when respirations begin again. This condition is due to disturbance of the respiratory center in the brain. It is often a forerunner of death—but may last several months, days, or even disappear.

apnea ap' nē ə	38. Cheyne-Stokes respiration is cyclical. The phase of respiration, at 60 to 80 breaths per minute, is called hyperpnea. What term describes the period when all respiration ceases? _____.
Cheyne-Stokes	39. In certain very serious illnesses, an irregular and arrhythmic type of breathing may occur, characterized by both hyperpneic and apneic phases, often followed by death. It is called C_____–S_____ respiration.
vital signs	40. Something is very wrong with the body when a patient's respiration rate exceeds 25 breaths per minute. Respiration rate (R), fever (T), and a rapid pulse (P) are measurable signs of disease. They indicate the status of the whole body and are called _____.
temperature pulse respiration	41. The vital signs are T _____, P _____, and R _____.
	42. Let's review. Select the best meaning from column B for each brief definition in column A. Write your selection in the space provided.
symptom see, hear, smell, taste, feel	COLUMN A bodily change a patient perceives _____ sensory ways symptoms are perceived _____ temperature, pulse, and respiration _____ elevated temperature, fever _____ subnormal body temperature _____ temperature over 106°F _____ something that produces fever _____ reduction, dissolution of fever _____ lack of symptoms _____
vital signs pyrexia pī rek' sē ə hypothermia hī pō ther' mē ə hyperpyrexia hī per pī rek' se ə pyretogen pī ret' ō gen pyretolysis pī ret ō lī' sis asymptomatic ā simp tō mat' ik	COLUMN B asymptomatic vital signs hyperpyrexia hypothermia pyretogen pyretolysis pyrexia see, hear, smell, taste, feel symptom

	43.	
	Now try these.	
	COLUMN A	COLUMN B
pulse	throbbing of an artery in time with the heartbeat _____	apnea
peripheral	pulse taken at the surface of the body _____	bradypnea
pne/o, pne/a	two combining forms for breath, breathing _____ or _____	Cheyne- Stokes
bradypnea	very slow breathing _____	respiration
dyspnea	difficult breathing _____	dyspnea
hyperpnea	excessively fast breathing _____	hyperpnea
respiration	another word for breathing _____	peripheral
apnea	respiratory arrest, not breathing _____	pne/o, pne/a
Cheyne-Stokes	breathing that reaches a climax, then ceases before beginning again _____ - _____	pulse
respiration	_____	respiration

## Color and Other Signs

	44.	
	Color and changes in color of various parts of the body also tell the physician a lot about the patient's condition. Use the information here to build words involving color.	
	leuk/o                white	
	melan/o            black	
	erythr/o            red	
	cyan/o              blue	
	chlor/o             green	
	xanth/o             yellow	
xanth/opsia	45.	
zan thop' sē ə	Cyan/opsia means blue vision. Form a word meaning	
chlor/opsia	yellow vision, _____/opsia.	
klor ō' pē ə	green vision, _____/opsia.	
erythr/o/derma	46.	
e rith' rō der' mā	Cyan/o/derma means blue skin. Build a word meaning	
melan/o/derma	red skin, _____ / _____ / _____.	
mel' a nō der' mā	black (discolored) skin, _____.	
	(You draw the lines.)	



Write a meaning for each of the following:

chlor/o/cyte, \_\_\_\_\_.

leuk/o/cyte, \_\_\_\_\_.

erythr/o/cyte, \_\_\_\_\_.

-Blast means immature cell. Build a word meaning an immature cell of the following colors:

immature black cell, \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
blackimmature cell

immature red cell, \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

Melan/osis means a condition of black pigmentation. Carcinoma is a malignant tumor.

What is a melanocarcinoma? \_\_\_\_\_  
\_\_\_\_\_.

Whenever a hairless mole on the skin turns black and grows larger, a physician should be consulted because there is danger of black mole cancer, or \_\_\_\_\_.

Chlor/o means \_\_\_\_\_.  
Erythr/o means \_\_\_\_\_.  
Xanth/o means \_\_\_\_\_.  
Leuk/o means \_\_\_\_\_.

green  
red  
yellow  
white

## Qualifiers

In medical terminology we often use qualifiers. These are adjectives or adverbs that when used with another word make the meaning of that term more specific. Here are a few frequently used qualifiers. *Local* means a small area or part of the body. *General* means involving the whole body or many different areas or parts of the body at the same time.

53.  
Anesthesia may be considered either local or general. Before extracting a tooth, the dentist injects Novocain to prevent pain. Novocain is a \_\_\_\_\_ anesthetic.  
(local/general)
54.  
On the other hand, laughing gas, which puts the patient to sleep, is a \_\_\_\_\_ anesthetic.  
(local/general)
55.  
Label each of the following as local or general.
- local  
skin rash around the neck and ears,  
\_\_\_\_\_.
- general  
measles macules from stem to stern,  
\_\_\_\_\_.
- local  
acne all over the face,  
\_\_\_\_\_.
- local (two places)  
second-degree scalding burn over the belly and upper thigh,  
\_\_\_\_\_.
- general  
reddish purple spots over the trunk of the body and wherever clothing covers the skin,  
\_\_\_\_\_.
- a small area or part of the body  
involving the whole body or many areas at the same time
56.  
A localized condition means \_\_\_\_\_.
- When a condition is generalized, it means \_\_\_\_\_.
57.  
Systemic means pertaining to all body systems, or the whole body rather than one of its parts. It is another word for \_\_\_\_\_.  
(local/general)
58.  
An antihistamine tablet helps a patient breathe more easily by drying up mucous membranes inside the nose and sinuses. An antihistamine also dries up mucous membranes that line all body cavities. We say it has a \_\_\_\_\_ effect.
- systemic  
sis tem' ik  
or general

## Other Signs

Besides observing color and color changes, a physician inspects the patient carefully for signs and symptoms that will aid in learning about a patient's disease. Here are some observable changes in the body.

59.

fluid

*Edema* refers to fluid in the tissues. It is a condition in which body tissues accumulate excessive \_\_\_\_\_.

60.

the whole body

Fluid in the tissues may be local or general. Localized edema involves a small area of the body; generalized edema involves \_\_\_\_\_.

61.

edema  
e dē' ma

A bee sting produces an accumulation of fluid in the tissues at the bite site. This is called localized \_\_\_\_\_.

62.

generalized edema

Heart failure causes severe disturbance of the body's water balance mechanisms. Excessive fluid may accumulate in the lungs, legs, and abdomen. This condition is called \_\_\_\_\_  
(two words). (localized/generalized)

63.

edema

Excessive accumulation of fluid in the body tissues is called \_\_\_\_\_.

64.

Atrophy  
at' rō fē

Atrophy is another observable sign of disease. It means a wasting away or shrinking of tissues, an organ, or the whole body. Underline the word root meaning development.

Atrophy

What does hyper/troph/y mean?

overdevelopment

65.

It's time to review. Select the best meaning from Column B for each color listed in Column A Write your selection in the space provided.

	COLUMN A	COLUMN B
erythr/o	red _____	cyan/o
leuk/o	white _____	chlor/o
cyan/o	blue _____	erythr/o
chlor/o	green _____	melan/o
xanth/o	yellow _____	leuk/o
melan/o	black _____	xanth/o

66.

Select a suggested answer to complete each of the following definitions.

## SUGGESTED ANSWERS

edema	local
generalized	systemic
hypertrophy	atrophy

generalized

a) \_\_\_\_\_ means pertaining to the whole body or many areas at the same time.

systemic

b) Another term meaning the same as a) above is \_\_\_\_\_.

local

c) An injection of anesthetic under the skin of the forearm to remove a mole is described as a \_\_\_\_\_ anesthetic.

edema

d) Accumulated excess fluid in the tissues of the lower extremities may be a condition of \_\_\_\_\_.

atrophy

e) A wasting away or shrinking of tissues of an organ or a body part is described as \_\_\_\_\_.

hypertrophy

f) \_\_\_\_\_ is the term that describes the opposite of e) above.

## Subjective Symptoms

Objective *signs* such as T, P, and R are *signs* of primary importance in the investigation of an illness. However, the patient's own concerns and impressions also provide valuable information. Changes in the body not apparent to an observer but experienced by the patient are called *symptoms*.

67.

Nausea means sickness of the stomach with a desire to vomit. Since it is an internal feeling evident only to the patient, we call it a

symptom

\_\_\_\_\_.

nausea  
naw' zē ə

68.

Pain, noxious odors, fevers, and some drugs may cause a sickness of the stomach with a desire to vomit, which is called \_\_\_\_\_.

nausea

69.

*Mal de mer* is the French term meaning motion sickness. It is another way to describe the sick feeling of \_\_\_\_\_.

emesis (or vomitus)  
em' e sis

70.

Emesis means vomitus—that which is vomited. An irritation of the vomiting center in the brain produces nausea. As a result, the patient ejects the stomach contents through the mouth. The product of vomiting is \_\_\_\_\_.

vomiting  
emesis

71.

Food poisoning, drugs, and fevers can irritate the vomiting center and thus induce \_\_\_\_\_. The product of vomiting is \_\_\_\_\_.

blood in the vomitus

72.

Chol/emesis means bile in the vomitus. What does hemat/emesis mean? \_\_\_\_\_

pertaining to something  
that induces  
vomiting

73.

In an emergency, there are two quick ways to empty the stomach of its contents: (a) use a tube to “pump” the stomach, or (b) give the patient an emetic. What is an emetic? \_\_\_\_\_

(nausea); the patient feels  
the sensation (not  
observable)

74.

*Nausea* usually precedes *emesis*. Circle the term that is a subjective symptom. Why? \_\_\_\_\_

75.

In a wide variety of illnesses, two symptoms often occur together. We'll take them one at a time.

malaise

*Malaise* is a French word literally meaning ill at ease. Underline the part of the word meaning ill.

- malaise  
ma lā'z
76.  
A patient with infectious mononucleosis may experience a vague sensation of not feeling well, or feeling ill at ease. The symptom is called \_\_\_\_\_.
- the vague sensation of  
not feeling well
77.  
Malaise is a symptom because the physician cannot observe malaise and does not experience the patient's sensation. Describe malaise.  
\_\_\_\_\_  
\_\_\_\_\_.
- without an appetite  
an o rek' sē ə
78.  
Orexia means appetite. What does an/orexia mean? \_\_\_\_\_  
\_\_\_\_\_.
- pertaining to something  
that produces or  
stimulates an appetite
79.  
Orex/mania means an abnormal desire (madness) for food or an uncontrollable appetite. What does orexi/genic mean? \_\_\_\_\_  
\_\_\_\_\_.
- orexigenic  
ō reks i gen' ik
80.  
Food that smells good and is appealing to the eye stimulates appetite. We may describe this food and its presentation as \_\_\_\_\_.
- anorexia  
an o rek' sē ə
81.  
Along with malaise, loss of appetite is a very common symptom in many diseases. Write the term for loss of appetite. \_\_\_\_\_.
82.  
Complete each of the following definitions:
- malaise  
A vague sensation of not feeling well is \_\_\_\_\_.
- nausea  
Sickness of the stomach with a desire to vomit is \_\_\_\_\_.
- emesis  
Another word for vomitus is \_\_\_\_\_.
- pyrexia  
Elevated body temperature is \_\_\_\_\_.
- anorexia  
Loss of appetite is \_\_\_\_\_.

- malaise  
anorexia
83.  
A patient with an infection may experience a vague sensation of not feeling well. A patient with a fever may not have an appetite. When a fever and infection occur at the same time, the patient usually reports these two very subjective symptoms. What are they?  
\_\_\_\_\_ and \_\_\_\_\_.
- the patient experiences  
the sensation
84.  
Anorexia and malaise are purely subjective symptoms. What does that mean? \_\_\_\_\_  
\_\_\_\_\_.
- turning around
85.  
Vertigo means a turning around. The patient experiences the sensation of turning around in space or having objects move about him.
86.  
Vertigo is *not* dizziness, faintness, or lightheadedness. However, the patient may have difficulty maintaining equilibrium, and may describe a sensation of spinning or \_\_\_\_\_ in space.
- symptom  
vertigo  
ver' ti gō
87.  
An infection in the middle ear can cause a patient to experience the sensation of turning around in space or of objects moving about her. This \_\_\_\_\_ is known as \_\_\_\_\_.  
(sign/symptom)
- tinnitus  
ti nī' tus
88.  
Tinnitus is a jingling, or tinkling, sound in the ear. It is often called ringing in the ear.  
Toxicity or sensitivity to a drug like aspirin can cause ringing in the ear. Write the medical term for tinkling sound in the ear:  
\_\_\_\_\_.
89.  
Ménière's syndrome (pronounce ma nē ars') is a recurrent and usually progressive group of symptoms including hearing loss, ringing in the ears, a sensation of fullness or pressure in the ears, and a turning around in space.
- tinnitus  
vertigo
- The term for ringing in the ears is \_\_\_\_\_.  
The sensation of turning about in space is \_\_\_\_\_.

90.

Try these and see how much you've learned. Select the best word from the suggested answers.

## SUGGESTED ANSWERS:

erythroderma	leukocyte
melanoblast	cyanemia
chlorocyte	xanthemia

chlorocyte  
xanthemia  
melanoblast  
erythroderma  
leukocyte  
cyanemia

green (plant) cell, \_\_\_\_\_.  
yellowish blood, \_\_\_\_\_.  
black (dark) immature cell, \_\_\_\_\_.  
reddened skin, \_\_\_\_\_.  
white blood cell, \_\_\_\_\_.  
blue-bloodedness, \_\_\_\_\_.

91.

Now try these qualifiers.

hypertrophia	atrophy
general	systemic
local	

general or systemic  
hypertrophia  
local  
systemic  
atrophy

pertaining to the entire body \_\_\_\_\_.  
overdevelopment \_\_\_\_\_.  
pertaining to a small area, or one part, \_\_\_\_\_.  
pertaining to all body systems \_\_\_\_\_.  
a wasting away, underdevelopment, \_\_\_\_\_.

92.

Here are some objective symptoms.

tinnitus	malaise
emesis	nausea
vertigo	anorexia

vertigo  
nausea  
emesis  
tinnitus  
malaise  
anorexia

a sensation of turning around in space \_\_\_\_\_.  
seasickness; inclined to vomit \_\_\_\_\_.  
another word for vomitus \_\_\_\_\_.  
ringing in the ears \_\_\_\_\_.  
a vague sensation of not feeling well \_\_\_\_\_.  
loss of appetite \_\_\_\_\_.



## Describing Illness

93.

A diagnosis is an identification of an illness. It requires scientific and skillful methods to establish the cause and nature of a sick person's disease. A diagnosis is arrived at by evaluating (a) the history of the person's disease, (b) the signs and symptoms present, (c) laboratory data, and (d) special tests such as X rays and electrocardiograms.

94.

In your English dictionary, you'll find words beginning with *gnos*. They come from the Greek word *gnosis*, meaning knowledge. *Dia* means through. Therefore, *dia/gnosis* literally means

\_\_\_\_\_.

knowing through

95.

Diagnosing an illness means studying it through its signs and symptoms and other available information. When a patient reports chills, feels hot, and has a runny nose, the physician may identify the patient's illness as a head cold. This conclusion would be the

\_\_\_\_\_.

diagnosis  
dī ag nō' sis

96.

A patient complains of pain in her arm after falling off her horse. An X ray shows a broken bone in her forearm. With this information from an X ray, the physician arrives at a \_\_\_\_\_.

diagnosis

identification of a  
patient's illness  
through blood  
(studies)

97.

What do you think hemodiagnosis means? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

98.

Many diseases are complex, so establishing the cause and nature of a sick person's disease requires skill and scientific methods. Which of the following might a physician use to help identify an illness? Check one or more.

all are relevant

- \_\_\_\_\_ personal and family history  
\_\_\_\_\_ signs and symptoms  
\_\_\_\_\_ laboratory data  
\_\_\_\_\_ special tests, such as an X ray or ECG

- one who is skilled in making diagnoses 99.  
If an obstetrician is one who is skilled in delivering babies, what is a diagnostician? \_\_\_\_\_.
- (Here's our suggestion) to predict the patient's illness (its course and outcome) 100.  
The prefix pro- means before, or in front of. What do you think is the meaning of prognosis? \_\_\_\_\_.
- prognosis  
prog nō' sis 101.  
Acute leukemia often may be fatal within three months. Prediction of the course and outcome of this disease is called a \_\_\_\_\_.
- to tell what the course and likely outcome of the disease will be 102.  
What does prognosticate mean? \_\_\_\_\_.
103.  
A prognosis predicts the course and outcome of a disease. Select a term that best fits each outcome described.
- unfavorable favorable unfavorable guarded  
Expect the patient to die in 3 to 6 months \_\_\_\_\_.  
favorable Recovery will be easy after surgery \_\_\_\_\_.  
guarded Recovery will be long and difficult \_\_\_\_\_.
- unfavorable prognosis 104.  
A patient who has little chance of recovering from his disease is said to have an (two words) \_\_\_\_\_ predicted outcome.
- diagnosis 105.  
When a physician has identified the patient's illness, the physician has made a \_\_\_\_\_.
- prognosis 106.  
Prediction of the course and outcome of the disease is a \_\_\_\_\_.

107.

A diagnosis may specify that the disease is acute, chronic, or paroxysmal.

*Acute* means sharp, severe, having a rapid onset and a short course, not chronic.

paroxysm  
par' ok sizm  
and  
paroxysmal  
par ok siz' mal

*Chronic* means long, drawn out. A chronic disease is not acute.

*Paroxysmal* is from the Greek word *paroxysm*. It means a sudden periodic attack or recurrence of symptoms of disease, a fit or convulsion of any kind.

chronic  
kron' ik

108.

Diabetes is a disease that has a long, drawn-out course. Therefore, diabetes is a \_\_\_\_\_ disease.  
(acute/chronic/paroxysmal)

paroxysmal  
par ok sis' mal

109.

Epilepsy is characterized by a sudden onset of symptoms that recur periodically. Therefore, epilepsy is a \_\_\_\_\_ illness.  
(acute/chronic/paroxysmal)

suddenly recurring  
episode of difficult  
breathing

110.

Dys/pnea means difficult breathing. Paroxysmal dyspnea is another way to describe asthma. Explain paroxysmal dyspnea. \_\_\_\_\_  
\_\_\_\_\_.

stomach  
rapid

111.

Gastritis may be acute or chronic. Acute gastritis means inflammation of the \_\_\_\_\_. Its onset is \_\_\_\_\_,  
(rapid/slow)

severe

the pain in the belly is \_\_\_\_\_, and the illness lasts a  
(mild/severe)

short

\_\_\_\_\_ time.  
(short/long)

112.

A patient has a sudden onset of fast heart rate—in excess of 200 beats per minute—and then abruptly the heart rate returns to normal. This has occurred before. The diagnosis would be

paroxysmal tachy/cardia

\_\_\_\_\_  
(acute/chronic/paroxysmal)      rapid      /      heart

chronic	113. Arteriosclerotic heart disease (ASHD) has a very slow onset. Symptoms may be mild and last a lifetime. ASHD is a/an _____ condition.
inflammation that has a slow onset (may be mild) and lasts a long time	114. Inflammatory conditions may be either acute or chronic. Acute tendonitis means the tendon becomes red, hot, and very painful in a few hours. It returns to normal after a day or two of treatment. Describe chronic tendonitis: _____ _____.
paroxysm par' ok sizm	115. A fit or convulsion is a/an _____.
chronic	A long, drawn-out disease is described as _____.
acute	Sharp, severe symptoms, over a short course, describes a/an _____ disease.
an inflammation of many nerves, a rapid onset; very painful, short duration	116. Poly- is a prefix meaning many or much; excessive. Explain each of the following: Acute polyneuritis means _____ _____.
an inflammation of many joints that starts slowly and lasts a long time	Chronic polyarthritis _____ _____.
a condition of having supernumerary fingers (or toes)	Polydactylism _____ _____.
a group of symptoms running along together	117. <i>Syndrome</i> is a group of symptoms that occur together and thus characterize a specific disease. <i>Syn</i> means together; <i>drome</i> means running along. Therefore, syndrome literally means _____ _____.

118.  
For example, Korsakoff's syndrome is a psychosis, ordinarily due to chronic alcoholism. It is characterized by polyneuritis, disorientation, insomnia, muttering delirium, hallucinations, and a bilateral wrist or foot drop. Korsakoff's syndrome is characterized by this group of symptoms that occur \_\_\_\_\_.
- together
119.  
A syndrome is a variety of symptoms occurring together. When symptoms run along together, they present a complete picture of the disease. This is known as a \_\_\_\_\_.
- syndrome  
sin' drōm
120.  
Alcoholism produces a characteristic group of symptoms called Korsakoff's syndrome. From the name we know that a variety of \_\_\_\_\_ occur \_\_\_\_\_.
- symptoms  
together
121.  
A group of symptoms occurring together characterize a specific disease. We call this group of symptoms a \_\_\_\_\_.
- syndrome
122.  
Recurrent (and usually progressive) hearing loss, tinnitus, vertigo, and a sensation of fullness in the ears is known as Ménière's \_\_\_\_\_.
- syndrome
- the symptoms run  
along together
- Explain why: \_\_\_\_\_  
\_\_\_\_\_.
123.  
Pro/drome means running before (a disease). A symptom or group of symptoms may occur a few hours or a few days before the onset of the disease. These early signals are called its \_\_\_\_\_.
- prodrome  
prō' drom
124.  
The prodromal phase of a disease is the interval between the earliest symptoms and the appearance of a rash or fever. These symptoms occur \_\_\_\_\_ the onset of the disease.  
(before/after)
- before
125.  
Sneezing that comes before the chills and fever of a common cold is the \_\_\_\_\_ of the cold.
- prodrome

prodrom (al) prō drō' mal	126. Malaise, anorexia, and sore throat occur one to four days before the fever and rash of measles appear. This early stage of the disease is called the _____al phase.								
	127. It's time to review what you just covered. From the suggested answers, select the best term for each brief definition.								
	<table> <tr> <td>asymptomatic</td><td>acute</td></tr> <tr> <td>prognosis</td><td>prodromal</td></tr> <tr> <td>chronic</td><td>diagnose</td></tr> <tr> <td>syndrome</td><td>paroxysm</td></tr> </table>	asymptomatic	acute	prognosis	prodromal	chronic	diagnose	syndrome	paroxysm
asymptomatic	acute								
prognosis	prodromal								
chronic	diagnose								
syndrome	paroxysm								
diagnose	to identify an illness, _____.								
paroxysm	a sudden, recurrent attack, _____.								
acute	pertaining to severe symptoms and rapid onset, _____.								
prognosis	prediction of course and outcome of illness, _____.								
syndrome	symptoms occurring together as a disease, _____.								
asymptomatic	relating to symptom free, _____.								
chronic	pertaining to a long, drawn-out illness, _____.								
prodromal	earliest phase of signals and symptoms occurring before the onset of the fever or rash associated with a disease _____.								
diagnosis	128. Using scientific and skillful methods of investigation, a physician gathers information about a patient's illness in order to learn the cause and nature of a sick person's disease. Identification of the illness is called a _____.								

## Treatment

Treatment is the medical, surgical, or psychiatric management of a patient's illness. Although there are many different kinds of treatments, we're covering only a few of the most common.

active	129. Active treatment aims for a cure. A patient suffering from appendicitis expects to be cured after an appendectomy. Since surgery removes the patient's appendix and usually cures the patient's disease, it is an _____ treatment.
--------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- active 130.  
An antibiotic attacks the bacteria causing peritonitis. Therefore, antibiotic therapy is considered an \_\_\_\_\_ treatment.
- systemic  
sis tem' ik 131.  
Systemic treatment attacks constitutional signs and symptoms such as pyrexia, shock, and pain. Treatment directed toward control of these life-threatening signs is called \_\_\_\_\_ treatment.
- life-threatening or  
constitutional 132.  
Giving a patient morphine for pain is a systemic treatment that aims to relieve a \_\_\_\_\_ sign or symptom.
- systemic 133.  
Hyperpyrexia is a constitutional sign. Placing a hyperpyrexia child in a basin of ice water reduces the whole body temperature and is therefore a \_\_\_\_\_ treatment.
- palliative  
pal' ē a tiv 134.  
Palliative treatment relieves bothersome symptoms and makes a patient comfortable. Very little the physician can do alters the course of poison ivy dermatitis. The physician may suggest calamine lotion to reduce itching and burning, and therefore, calamine is called a \_\_\_\_\_ treatment.
- prophylactic  
prō fi lak' tic 135.  
Prophylaxis is a treatment modality that focuses on prevention of disease. Your dentist aims to prevent dental caries by applying flouride solution to your teeth. Flouride application is called a \_\_\_\_\_ treatment.
- treatments 136.  
Whether active, symptomatic, palliative, or prophylactic, things the physician does or prescribes to manage a patient's illness are called \_\_\_\_\_.
- relieve symptoms 137.  
Palliative treatment addresses a patient's comfort rather than attempting to cure the disease. The purpose of this kind of treatment is to \_\_\_\_\_.

138.  
cure  
kyōōr  
Active treatment squarely addresses the patient's pathological condition. The physician elects an active treatment modality when a remedy or therapy will \_\_\_\_\_ the disease.
139.  
life-threatening  
Shock, pyrexia, and pain are indications of disease, which if not treated could have very serious consequences. Systemic treatment is directed toward very serious constitutional signs of illness which may be \_\_\_\_\_.
140.  
From the terms listed, select one that best fits each description.
- |              |            |
|--------------|------------|
| active       | palliative |
| prophylactic | systemic   |
- systemic  
active  
palliative  
prophylactic
- Treatment of constitutional symptoms, \_\_\_\_\_.
- Treatment directed specifically toward a cure, \_\_\_\_\_.
- Treatment to relieve discomfort, \_\_\_\_\_.
- Treatment aimed at preventing disease, \_\_\_\_\_.
141.  
There are many remedies and therapies a physician may use to treat a patient's illness. Here are a few of the major classes for you to investigate. Look up therapy in your medical dictionary.
- |                  |                      |
|------------------|----------------------|
| pharmacotherapy  | radiotherapy         |
| physical therapy | electroshock therapy |
| chemotherapy     | psychotherapy        |

---

## Statistics

In medicine and health care, many people keep score. The Health and Human Services Agency (HHS) of the U.S. government and the World Health Organization (WHO) of the United Nations publish statistics showing how many people are affected by certain diseases and how many people die of their illnesses. In order to understand the statistics, there are two important terms to know: *morbidity* and *mortality*.



- morbidity (or sickness)  
mor bid' i tē
142.  
*Morbidity* means a diseased state. A statistic that reports, “50 cases of measles per 10,000 people living in the United States last year” is called a \_\_\_\_\_ rate.
- mortality (or death)  
mor tal' i tē
143.  
*Mortality* means the state of being mortal and, therefore, subject to death. In other words, mortality is a statistic that reports the \_\_\_\_\_ rate.
- all three are mortality statistics
144.  
Which of the following examples expresses a mortality rate? Check each correct example.
- a. \_\_\_\_\_ From 198X to 199X, 3 million people were killed in automobile accidents on U.S. highways.
- b. \_\_\_\_\_ Hepatitis took the lives of 20 people of every 1,000 in Ethiopia in 198X.
- c. \_\_\_\_\_ Thirty thousand children around the world died of leukemia in the last five years.
- death
145.  
The mortality rate is the same as saying the \_\_\_\_\_ rate.
- sickness or disease
146.  
The morbidity rate is expressed as the number of cases of a specific disease found in a specific unit of population during a specific period of time. It shows the rate of \_\_\_\_\_.
- a. reports rate of sickness
147.  
Which of the following examples is a morbidity rate? Check each correct example.
- a. \_\_\_\_\_ In 198X, there were 550 new cases of tuberculosis reported for every 100,000 people living in the United States.
- b. \_\_\_\_\_ In 198X, there were 30 deaths from suicide for every 10,000 people between 35 and 55 years of age living in Colorado.
- morbidity rate
148.  
A statistic that reports the number of cases of a disease in a specific population for a specific period of time is called \_\_\_\_\_.

mortality rate 149.  
A statistic that reports the death rate is called \_\_\_\_\_.

morbidity refers to the rate of illness; mortality refers to the death rate 150.  
What is the difference between a morbidity and a mortality statistic?  
\_\_\_\_\_  
\_\_\_\_\_.

151.  
In this unit you worked with many new terms and learned to use some familiar words in new ways. Fifty of these words are listed here for you to practice your pronunciation and to review their meanings. Pronounce each term, think about its meaning, and then take the Unit 7 Self-Test.

acute (a kūt')	morbidity (mor bid' i tē)
anorexia (an o rek' sē ə)	mortality (mor tal' i tē)
antipyretic (an tē pī ret' ik)	nausea (naw' zē ə)
asymptomatic (ā simp tō mat' ik)	palliative (pal' ē ə tiv)
atrophy (at' rō fē)	paroxysmal (par ok sis' mal)
bradypnea (brad' ip nē ə)	peripheral (per i' fer al)
central (sen' trul)	pneometer (nē om' ə ter)
Cheyne-Stokes respiration (chān-stōks)	polyarthritis (pol' ē arth rī' tis)
chlorocyte (klor' ō sīt)	prodromal (prō drō' mal)
chronic (kron' ik)	prognosis (prog nō' sis)
cyanoderma (sī ə nō der' mā)	prophylactic (prō fi lak' tic)
diagnosis (dī ag nō' sis)	pulse (pultz')
dyspnea (disp' nē ə)	pyretolysis (pī ret ō lī' sis)
edema (e dē' mā)	pyrexia (pī rek' sē ə)
emesis (em' ə sis)	respiration
erythremia (er i thrē' mē ə)	symptom
generalized	symptomatic
hematemesis (hē mā tem' ə sis)	syndrome (sin' drōm)
hyperpnea (h perp' nē ə)	systemic
hyperpyrexia (hī per pī rek' sē ə)	tachypnea (tak ip nē' ə)
hypothermia (hī pō ther' mē ə)	temperature
leukocyte (lōō' kō sīt)	tinnitus (ti nī' tus)
localized	vertigo (ver' ti gō)
malaise (mä lāz')	vital signs
melanocarcinoma	xanthopsia (zan thop' sē ə)
(mel' ə nō kär sin ō' mā)	

## Unit 7: Self-Test

### Part 1

From the list on the right, select the correct meaning for each of the following medical terms.

- |                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| _____ 1. Diagnosis    | a. Pertaining to the whole body, all systems                           |
| _____ 2. Systemic     | b. Very fast breathing                                                 |
| _____ 3. Morbidity    | c. Identification of an illness                                        |
| _____ 4. Pyretolysis  | d. Fluid in the tissues                                                |
| _____ 5. Edema        | e. Pertaining to disease rate statistic                                |
| _____ 6. Generalized  | f. Temperature, pulse, and respiration                                 |
| _____ 7. Anorexia     | g. Reduction of fever                                                  |
| _____ 8. Vertigo      | h. A sickness of the stomach; desire to vomit                          |
| _____ 9. Hyperpnea    | i. Pertaining to the whole body, many different parts at the same time |
| _____ 10. Malaise     | j. Wasting away, or underdevelopment                                   |
| _____ 11. Paroxysm    | k. Loss of appetite                                                    |
| _____ 12. Vital signs | l. Sensation of turning around in space                                |
| _____ 13. Syndrome    | m. Vague sensation of not feeling well                                 |
| _____ 14. Nausea      | n. Pertaining to sudden periodic attack                                |
| _____ 15. Atrophy     | o. Symptoms occurring together                                         |

**Part 2**

Complete each of the medical terms on the right with the appropriate missing part. Some terms are missing all parts!

1. Ringing in the ear \_\_\_\_\_
2. Artery throbbing in time with the heartbeat \_\_\_\_\_
3. Respiratory arrest, not breathing \_\_\_\_\_
4. Outside surface of the body \_\_\_\_\_
5. Pertaining to preventing disease \_\_\_\_\_
6. Sudden recurring attack \_\_\_\_\_
7. Symptom-free \_\_\_\_\_
8. Breathing that reaches a climax, then ceases before beginning again C\_\_\_\_\_ -S\_\_\_\_\_ respiration
9. Pertaining to relieving symptoms but not the disease \_\_\_\_\_
10. Patient perceives change in body or functions \_\_\_\_\_
11. Prediction of course and outcome of a disease \_\_\_\_\_
12. Pertaining to severe symptoms, rapid onset, short course \_\_\_\_\_
13. Reddened skin \_\_\_\_\_
14. Subnormal body temperature under 90°F \_\_\_\_\_
15. Feverishness \_\_\_\_\_

**ANSWERS****Part 1**

1. c
2. a
3. e

**Part 2**

1. Tinnitus
2. Pulse
3. Apnea

- |       |                              |
|-------|------------------------------|
| 4. g  | 4. Peripheral                |
| 5. d  | 5. Prophylactic              |
| 6. i  | 6. Paroxysm                  |
| 7. k  | 7. Asymptomatic              |
| 8. l  | 8. Cheyne-Stokes respiration |
| 9. b  | 9. Palliative                |
| 10. m | 10. Symptom                  |
| 11. n | 11. Prognosis                |
| 12. f | 12. Acute                    |
| 13. o | 13. Erythroderma             |
| 14. h | 14. Hypothermia              |
| 15. j | 15. Pyrexia                  |

# 8 Growth and Development, and Body Orientation

*In this unit you will work with terms relating to growth and development of an embryo and other kinds of growing things. You'll cover terms that provide an orientation to the body, something like a road map, to make anatomical descriptions meaningful.*

## Mini-Glossary

cyst	benign	distal
lesion	infiltration	dorsal
polyp	malignant	lateral
papilla	metastasis	medial
papilloma	neoplasm	proximal
papule		ventral

ecto-, exo- (outer side)  
endo-, endo- (inner, within)  
meso- (middle)  
circum- (around)  
peri- (around about)

epi- (over, surrounding)  
sub-, hypo- (below, under)  
supra-, super- (above, over)  
infra- (below, beneath)

Have you completed the Section 7 Review Sheet? We suggest you do it before you begin. It will really help you learn.

## Growth and Development

1.

Blastos refers to a germ, seed, sprout, or bud. A *blastoderm* is an aggregation of cells showing the first trace of structure in a microscopic organism. It is the most rudimentary form of a developing embryo and is made up of three primary germ cell layers: the *ectoderm*, *endoderm*, and *mesoderm*. From these primordial germ layers the embryo develops and becomes a fetus.

2.

Review these definitions and return to them as you need help with the frames that follow.

Ectoderm is the outer layer of cells in the primary germ layers of the developing embryo. It is the origin of:

- the skin (epidermis)
- the mucous membranes of nose, mouth, and anus (epithelium)
- nervous tissue and sensory organs

Mesoderm is the middle of the three primary germ layers of the embryo. It is the origin of:

- all connective tissues
- all body musculature
- blood, cardiovascular and lymphatic systems
- most of the urogenital system
- the lining of the pericardial, pleural, and peritoneal cavities

Endoderm is the innermost of the three primary germ layers of the embryo, from which are derived:

- the lining of the gut
- its glands (spleen, pancreas, liver)
- component structures of the gut (esophagus, stomach, intestine, colon)
- the respiratory tract

3.

Ectoderm is the outer layer of cells. Endoderm is the innermost of the three germ layers. Mesoderm is the middle layer of three primary germ layers in the developing embryo. Write a meaning for each of the prefixes:

inner, inside  
middle  
outer, outside

endo- means \_\_\_\_\_.  
meso- means \_\_\_\_\_.  
ecto- means \_\_\_\_\_.

4.

mesoderm  
mēz' ō derm

Which primary germ layer originates all connective tissues and all body musculature? \_\_\_\_\_.

5.

mesoderm

The pleura is a watery, mucoid-surfaced membrane enveloping the lungs and lining the walls of the thoracic cavity. From which germ layer does it arise? \_\_\_\_\_.

6.

ectoderm  
ek' tō derm

Which of the three embryonic germ layers gives rise to the nervous system and the organs of special sense? \_\_\_\_\_.

7.

endoderm  
en' dō derm

The primitive gut tract and its associated glands (organs) develop from which germ layer of the embryo? \_\_\_\_\_.

8.

ectoderm

The skin, including mucous membranes exposed to the environment, is derived from the primary germ layer called the \_\_\_\_\_.

9.

endoderm  
ectoderm  
mesoderm  
mēz' ō derm

The innermost of the three primary germ layers of the embryo is the \_\_\_\_\_. The outside layer of cells in the embryo is the \_\_\_\_\_. The middle of the three primary germ layers is the \_\_\_\_\_.

10.

of, or pertaining to  
outside the cell

Now let's try out those new prefixes. Write a meaning for each of the following:  
ectocytic \_\_\_\_\_  
\_\_\_\_\_.



inflammation of inside of the heart	endocarditis _____ _____.
examination by looking inside of (a body cavity)	endoscopy _____ _____.
examination of inside the bladder	endocystoscopy _____ _____.

11.

Gen/o is the combining form to denote originating or production.

Ectogenous means originating outside of a cell or an organism.

Underline the part of the term meaning originating or produced.

ectogenous

ek toj' en us

originating or produced

inside of (a cell)

en doj' en us

Ectogenous

What does endogenous mean? \_\_\_\_\_  
\_\_\_\_\_.

12.

*Topos*, *top/o* means place or location. Sometimes a pregnancy begins in the fallopian tube instead of within the uterus. It is called an ectopic pregnancy.

pregnancy outside of its  
normal location

What is an ectopic pregnancy? \_\_\_\_\_  
\_\_\_\_\_.

ectopic

ek top' ik

13.

A pregnancy beginning in the abdominal cavity instead of the womb is called an \_\_\_\_\_ pregnancy.

14.

Let's review before going on. From the suggested answers, select the best term for each brief definition.

#### SUGGESTED ANSWERS:

ecto-, exo-	endo-, en-, end-
ectopic	endocranial
ectocytic	endogenous
meso-	mesoderm

ecto- (exo-)

meso-

endo- (en- or end-)

outside (prefix), \_\_\_\_\_.

middle (prefix), \_\_\_\_\_.

inside (prefix), \_\_\_\_\_.

mesoderm	middle germ cell layer, _____.
endogenous	originating inside, _____.
ectocytic	pertaining to outside the cell, _____.
ectopic	out of its normal place, _____.
endocranial	pertaining to inside the head, _____.

## Growths and Other Abnormal Tissues

15.

In this section you'll work with more terms relating to growth. Growing means to increase progressively in size. However, growth may be normal and purposeful, or abnormal and useless. Here are some terms used to describe abnormal growth.

16.

neoplasm  
nē' ō plazm

*Neo-* means new; *-plasm* means thing formed. Neoplasm is a new formation of tissue. It is abnormal because it serves no useful function and grows at the expense of a healthy body. Any tissue growing autonomously and that has no useful function is a \_\_\_\_\_.

17.

neoplasm

A tumor is a swelling or enlargement. It is an autonomous new growth of tissue. It is a mass of tissue without a function. Another word for tumor is \_\_\_\_\_.

18.

growth of tissue that  
serves no useful  
purpose

Neoplasm and tumor are interchangeable terms. They both mean an autonomous new \_\_\_\_\_.

19.

tissue  
examines

*Bio-* means life; *-opsy* means appearance, sight. A biopsy is removing tissue from a living body and examining it under a microscope.

To make a diagnosis, a physician usually biopsies a tumor or neoplasm. This means the physician removes a piece of living \_\_\_\_\_ and \_\_\_\_\_ it under a microscope.

20.

A neoplasm (tumor) growing in or on the human body can be classified as either malignant or benign.

*Malignant* means it's of a bad kind, growing worse, resisting treatment, and tending or threatening to produce death.

benign  
bē nīn'  
malignant  
ma lig' nant

*Benign* means it's mild (grows slowly), not spreading, not recurrent, and not malignant. Tumors may be of uncertain behavior, but usually are classified either as \_\_\_\_\_ or \_\_\_\_\_.

biopsy

21.  
To determine what kind of neoplasm a patient has, the physician removes a piece of the living tumor tissue and examines it under a microscope. What is this procedure called? \_\_\_\_\_.

malignant

22.  
A biopsy report indicates a patient's abnormal growth is of a bad kind. It will grow worse (rapidly), resist treatment, and tend to be life-threatening. The diagnosis is \_\_\_\_\_ neoplasm.  
(malignant/benign)

benign

23.  
A nonmalignant neoplasm is an abnormal tissue mass growing slowly, not spreading, and not likely to recur. The growth is \_\_\_\_\_.  
(malignant/benign)

biopsy

24.  
A procedure that determines whether a neoplasm is benign or malignant is a \_\_\_\_\_.

fast

25.  
A malignant neoplasm is a bad kind that grows \_\_\_\_\_,  
(fast/slowly)

death

resists treatment, and threatens to cause \_\_\_\_\_.

malignant

26.  
A benign neoplasm is mild (grows slowly), does not spread or recur, and is not \_\_\_\_\_.  
(the other kind)

infiltration

27.  
*Infiltration* means slipping into and between normal cells of the body.

Malignant tumor cells may spread by slipping into and between normal body cells. Malignant cells multiply rapidly and take up nourishment and space, crowding out the normal cells. This method of spreading is called direct extension or \_\_\_\_\_.

	28.	<i>Metastasis</i> means movement of cells (especially cancer cells) from one part of the body to another.
		<i>Meta-</i> means after, beyond, among, over; <i>-stasis</i> means a standing, a location, or place.
metastasis me tas' tə sis		Malignant tumor cells migrate to another location and take up a standing in another organ or part of the body. This method of spreading the disease is called invasion by _____.
	29.	Metastasis is the movement of malignant tumor cells from the primary location over to another _____.
location		
	30.	There are two methods by which a malignant neoplasm spreads, grows larger, and becomes more threatening. Malignant cells may slip into and between normal cells. This is called _____.
infiltration or direct extension		_____ Or tumor cells may move beyond the primary site and take up a standing in another location of the body. This spreading method is called _____.
metastasis		
	31.	Unlike malignant neoplasms, benign growths do not spread by _____ or _____.
infiltration metastasis		
	32.	Here's a quick review. Select a term from the suggested answers that best fits each brief definition. Write your selection in the space provided.
	malignant	neoplasm/tumor
	tumor/neoplasm	biopsy
	benign	infiltration
	metastasize	
biopsy		remove tissue for examination, _____.
benign		slow growth, not malignant, _____.
neoplasm/tumor		new, abnormal tissue mass, _____.
tumor/neoplasm		tissue mass, no useful purpose, _____.
malignant		fast-growing, threatening death, _____.

infiltration                      slipping into and between normal cells, \_\_\_\_\_.  
metastasize  
(me tās' tǝ sīz)              cells relocate to new location, organ, \_\_\_\_\_.

33.

There are many other terms that mean abnormal conditions, changes, or growths. Here are a few of the more common ones.

34.

*Lesion* is an area of unhealthy (morbid) tissue, such as an injury, wound, burn, or infected patch of skin.

lesion  
lē' zhun

Any morbid change in the structure of an organ or a body part due to injury or disease is called a \_\_\_\_\_.

35.

An infected finger is a lesion because there has been a morbid change in the finger tissues. What does morbid mean?

diseased, unhealthy

\_\_\_\_\_.

36.

In Alzheimer's disease there are morbid changes in brain tissue. These unhealthy changes in brain structure are also called \_\_\_\_\_.

lesions

37.

An injury, a burn, and an infected finger are examples of lesions because the part of the body involved has undergone a \_\_\_\_\_ change. (unhealthy)

morbid

38.

A lesion is any morbid change in the structure of an organ or part due to injury or disease. Check each item that is *not* a lesion.

☒ chicken pox is a disease; the pox are lesions

- ☐ duodenal ulcer
- ☐ skinned knees
- ☐ scalding burn of the hand
- ☐ abrasion of the elbow
- ☐ chicken pox
- ☐ infected toenail

39.

Poison ivy leaves may irritate the skin and cause blisters. These unhealthy changes in the structure of the skin are called \_\_\_\_\_.

lesions

40.  
Build a word meaning a hurt, an injury, or any unhealthy area of any organ or part: \_\_\_\_\_.
- lesion
41.  
What does morbid mean? \_\_\_\_\_.
- unhealthy, diseased
42.  
In earlier units you learned that cyst means bladder.
- inflammation of the bladder
- Cystitis means \_\_\_\_\_.
- examination of the inside of the bladder
- Endocystoscopy means \_\_\_\_\_.
- excision (or removal) of the gallbladder
- Cholecystectomy means \_\_\_\_\_.
43.  
*Cyst* also means a closed sac or pouch that contains fluid, semifluid, or solid material.
- sac
- A cyst is a closed \_\_\_\_\_.
- fluid, semifluid, or solid material
- It contains \_\_\_\_\_.



Figure 8.1 Cyst

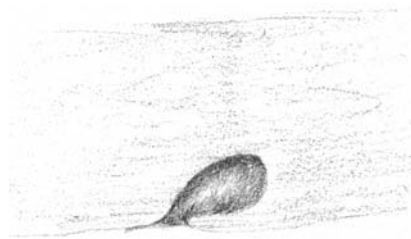
44.  
A malfunctioning ovary may develop a closed sac or pouch containing fluid. This is called an ovarian \_\_\_\_\_.
- cyst
45.  
What is a hydrocyst? \_\_\_\_\_.
- a cyst containing fluid (water)
- Cyst means \_\_\_\_\_.
- a sac that contains fluid or even solid material
- \_\_\_\_\_.

cystectomy

46.  
A physician doesn't usually drain a cyst of its contents because it only would fill again. Instead, a surgeon completely excises the cyst. Write a term meaning surgical removal of a cyst: \_\_\_\_\_.

pol' ip  
malignant

47.  
*Polyp* is a tumor with a little foot, or stem. A polyp is usually a benign tumor. That means it is not \_\_\_\_\_,  
(the other kind)



**Figure 8.2** Polyp.

slowly  
infiltration  
metastasis

it grows \_\_\_\_\_, and it does *not* spread by  
(fast/slowly)  
\_\_\_\_\_ or \_\_\_\_\_.

foot

48.  
A polyp is a specific type of tumor or neoplasm. It's an abnormal, useless new growth that stands on a stem or a little \_\_\_\_\_.

polypectomy

49.  
Vascular organs such as the nose, uterus, and rectum commonly develop polyps. Polyps bleed easily and usually are removed surgically. Build a word for excision of polyps: \_\_\_\_\_.

What does vascular mean? This is a good time to use your dictionary.  
\_\_\_\_\_

unhealthy

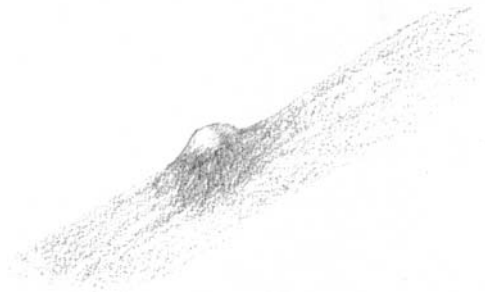
50.  
A lesion is an area of \_\_\_\_\_ tissue.

burn, injury, infection

Give some examples of lesions: \_\_\_\_\_  
\_\_\_\_\_.







**Figure 8.4** Papule.

spots

circumscribed

They are elevated red \_\_\_\_\_ on the skin.

They are solid and \_\_\_\_\_.

57.

*Excrescence*: *ex* means out; *crescence* means to grow. Excrescence is a useless structure growing out of the surface of a part such as a wart or mole.

excrescence

eks kres' ens

The Wicked Witch of the West had a big wart growing on the tip of her nose. A medical term for this disfiguring outgrowth is

\_\_\_\_\_.



**Figure 8.5** Excrescence.

58.

*Condyloma* is a wartlike growth of the skin, usually occurring near the anus. The main difference between an excrescence and a condyloma is where the lesion is located. An excrescence may appear anywhere on the surface of the body (even on the end of your nose). But a wartlike skin growth near the anus is called a \_\_\_\_\_.

kon di lō' mā

condyloma

59.

An excrescence, a papilloma, a condyloma, and a papule are all lesions of the skin. That means the area of the skin involved is considered \_\_\_\_\_.

morbid, unhealthy

pa pil' ē (pl.)  
small, nipplelike  
protuberance

60.

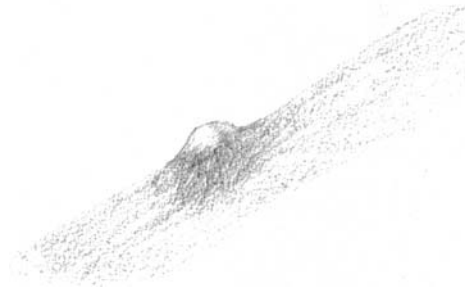
Papillae (plural) may be normal structures on the body that have important functions. A taste bud is a papilla. Describe what it looks like: \_\_\_\_\_.

(For help in learning the plural forms, see Appendix B: *Forming Plurals*.)

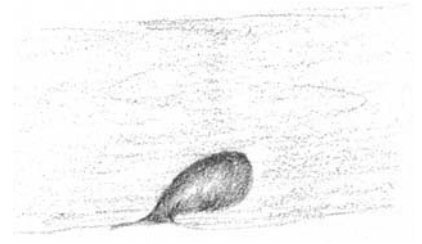
61.

Label each of the following illustrations.

a. papule  
b. polyp



a. \_\_\_\_\_

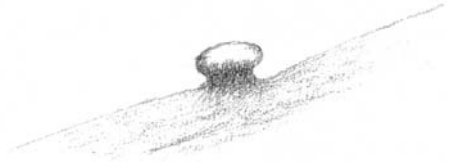


b. \_\_\_\_\_

c. cyst  
d. papilloma



c. \_\_\_\_\_



d. \_\_\_\_\_

Figure 8.6

62.

Complete each definition.

#### SUGGESTED ANSWERS

papillae	condyloma
excrescence	lesion
polyp	papule
cyst	

lesion (lē' zhun)  
polyp (pol' ip)  
condyloma  
(kon di lō' mä)

area of unhealthy (morbid) tissue, \_\_\_\_\_.  
tumor on a stem or little foot, \_\_\_\_\_.  
wartlike growth around the anus, \_\_\_\_\_.

cyst (sist)	bladder, or a closed sac with fluid, _____.
excrecence (eks kres' ens)	useless outgrowth, like a wart, _____.
papillae (pa pil' ē)	nipplelike protuberances, _____.
papule (pap' yōōl)	small, elevated red lesion on the skin, _____.

63.

Here's an independent learning exercise for you. These are words related to treatments and consequences of malignant neoplasms. Look up each one in your medical dictionary. Explore it thoroughly; pronounce it several times. Then write a brief definition for each. Do this exercise even if you think you know what the terms mean. Sometimes you'll be surprised!

abdominal paracentesis

---



---

alopecia

---



---

anastomosis

---



---

cauterization

---



---

chemotherapy

---



---

dehiscence

---



---

necrobiosis

---



---

radiation

---



---

radical resection

## Orientation

64.

Neoplasms, cysts, and lesions occur anywhere on the surface of the body and inside, under, and around organs and structures. Physicians use specific terms to describe where lesions and other morbid conditions are located relative to parts of the body.

65.

*Ventral* means on or near the belly, or the side of the body where the belly is located.

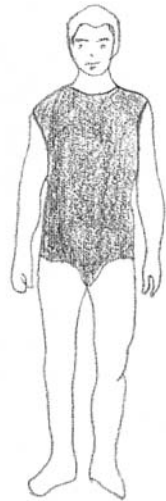
back

*Dorsal* is the opposite of ventral; it means on or near the \_\_\_\_\_.

Label the illustrations.



a. \_\_\_\_\_



b. \_\_\_\_\_

Figure 8.7

- a. dorsal
- b. ven' tral
- ven' tral

66.

Ventral, ventr/o means on or near the \_\_\_\_\_. Dorsal, dors/o means on or near the \_\_\_\_\_.

belly  
back

67.

Try these.

backache

Dorsalgia means \_\_\_\_\_.

incision into the belly

Ventrotomy means \_\_\_\_\_.

68.

of or pertaining to belly  
to back

What do you think ventrodorsad means? \_\_\_\_\_.

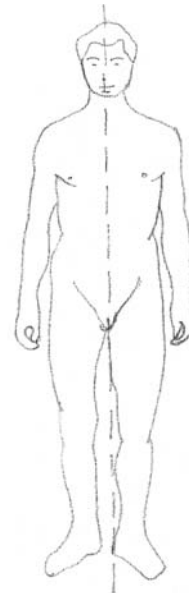
ventrodorsad

ven trō dor' sād

A bullet penetrated the abdominal wall, traveled through the belly, and exited through the back. The bullet's path may be described as \_\_\_\_\_.

69.

The *midline*, or median, is an imaginary line dividing the body into right and left halves.



**Figure 8.8** Midline of the Body.

*Lateral* means farther from the midline.

*Medial* means the opposite.

nearer

Medial means \_\_\_\_\_ to the midline.

nipple

Which is nearer the midline, your shoulder or your nipple?  
\_\_\_\_\_.

- lateral 70. Which corner of your eye is nearest your ear? \_\_\_\_\_.  
(medial/lateral)
- medial Which side of your knee knocks the other knee? \_\_\_\_\_.  
(medial/lateral)
- farther 71. Lateral means \_\_\_\_\_ from the midline.
- nearer Medial means \_\_\_\_\_ to the midline.
- on the midline Where is your umbilicus located? \_\_\_\_\_.
- nearest 72. Let's describe a relative position in another way. *Distal* means remote, or farthest, from the point of attachment to the trunk.  
*Proximal* means the opposite. Proximal means \_\_\_\_\_ to the point of attachment to the trunk.  
(farthest/nearest)
- hand 73. Which is distal, your elbow or your hand? \_\_\_\_\_.
- proximal On which end of your finger do you wear a ring? \_\_\_\_\_.  
(distal/proximal)
- distal 74. Your forearm bone has two ends. Your hand is attached to the \_\_\_\_\_ end.  
(distal/proximal)
- proximal Your upper arm is located on the \_\_\_\_\_ end.  
(distal/proximal)
- proximal 75. A part of the body located nearest its attachment to the trunk is described as \_\_\_\_\_.
- distal A part located farthest from its attachment to the trunk is described as \_\_\_\_\_.
- farthest from the attachment to the trunk 76. The fingers are distal to all other parts of the arm. What does distal mean? \_\_\_\_\_.

77.  
 nearest to the attachment to the trunk \_\_\_\_\_  
 \_\_\_\_\_.

78.  
 Here's a review of what you just covered. Select the best term from the suggested answers to complete each definition.

SUGGESTED ANSWERS:

distal                  proximal  
 medial                lateral  
 ventral                midline  
 dorsal

dorsal                  near, or on the back, \_\_\_\_\_.  
 ventral                near, or on the belly, \_\_\_\_\_.  
 midline                divides body into right and left halves, \_\_\_\_\_.  
 lateral                farther from the midline, \_\_\_\_\_.  
 medial                nearer to the midline, \_\_\_\_\_.  
 distal                farthest from the attachment to the trunk, \_\_\_\_\_.  
 proximal                nearest to the attachment to the trunk, \_\_\_\_\_.

79.  
 Here are some prefixes indicating place or relative position:

*Peri-*, *circum-* means around, about, surrounding,

Write a meaning for each of the following:

pertaining to around the tonsil      Peri/tonsillar \_\_\_\_\_  
 \_\_\_\_\_.

relating to around the belly button      Peri/umbilical \_\_\_\_\_  
 \_\_\_\_\_.

80.  
 diseased (unhealthy) tissue around the teeth      What is peri/dent/al (peri/dont/al) gum disease? \_\_\_\_\_  
 \_\_\_\_\_.

around                Peri- means \_\_\_\_\_.

around	81. Circum- is another prefix meaning _____. <i>Duct/ion</i> means moving.										
moving around	Ab/duct/ion is moving away. Circum/duction means _____.										
circum(-scribed)	82. A wheal (hives) is a round patch of unhealthy skin with a ring of normal tissue at its circumference. A wheal appears as a round red spot. We usually say a wheal is _____-scribed.										
circumscribed	83. A boil also has an outer limit where the circumference of the lesion becomes normal. Because it appears to have a border around its circumference, you may also describe a boil as a _____ lesion.										
relating to around the mouth	84. Perioral and circumoral have the same meaning. Write the meaning: _____.										
pertaining to around or surrounding the kidney	Write a meaning for circumrenal, perirenal: _____.										
	85. Look over the following terms and their meanings and then complete the frames that follow. Come back to this frame whenever you need help.  <table border="0"> <tr> <td><i>Epi-</i></td><td>upon, over (surrounding or covering)</td></tr> <tr> <td><i>Extra-</i></td><td>without, outside of</td></tr> <tr> <td><i>Infra-</i></td><td>below, beneath, under</td></tr> <tr> <td><i>Sub-, hypo-</i></td><td>below, beneath, less than normal</td></tr> <tr> <td><i>Supra-, super-</i></td><td>above, superior, in the upper part of</td></tr> </table>	<i>Epi-</i>	upon, over (surrounding or covering)	<i>Extra-</i>	without, outside of	<i>Infra-</i>	below, beneath, under	<i>Sub-, hypo-</i>	below, beneath, less than normal	<i>Supra-, super-</i>	above, superior, in the upper part of
<i>Epi-</i>	upon, over (surrounding or covering)										
<i>Extra-</i>	without, outside of										
<i>Infra-</i>	below, beneath, under										
<i>Sub-, hypo-</i>	below, beneath, less than normal										
<i>Supra-, super-</i>	above, superior, in the upper part of										
pain in the area of the belly over the stomach	86. The epi/gastric region is the region of the belly over or upon the stomach. Refer to Illustration 8.9. Epi/gastralgia means _____.										



hernia in the area of  
the belly over the  
stomach

Epi/gastrocele means \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

the skin (that covers the  
entire body)

87.  
Epi/cranium refers to the tissues (muscle and skin) that cover and  
surround the cranium. What do you think epi/dermis means? \_\_\_\_\_  
\_\_\_\_\_.

without, outside of  
outside the uterus  
outside the edges or  
outer limits of a  
structure or organ

88.  
Again refer to the definitions in Frame 85. The prefix extra- means  
\_\_\_\_\_.  
Extra/uterine means \_\_\_\_\_.  
Extra/marginal means \_\_\_\_\_  
\_\_\_\_\_.

below, beneath, under  
pertaining to an area  
under, below the  
kneecap

89.  
Again use the definitions to help you. The prefix *infra-* means  
\_\_\_\_\_.  
*Patella* means kneecap. What does infra/patellar mean? \_\_\_\_\_  
\_\_\_\_\_.

beneath, under the  
kneecap

Sub/patellar means \_\_\_\_\_  
\_\_\_\_\_.

infra (-mammary)

90.  
Infra- and sub- usually are interchangeable terms. Complete the  
alternate terms and write a meaning:

\_\_\_\_\_ -mammary

sub (-mammary)

\_\_\_\_\_ -mammary

below the breast

meaning \_\_\_\_\_.

under the tongue

91.  
Sub- and hypo- are often interchangeable also.  
Sub/lingual means \_\_\_\_\_  
\_\_\_\_\_.

under the tongue

Hypo/glossal means \_\_\_\_\_  
\_\_\_\_\_.

below, beneath, less  
than normal  
infra-,  
hypo-

92.

The prefix sub- means \_\_\_\_\_.  
\_\_\_\_\_. What other two prefixes often are interchangeable and mean the same thing as sub- ? \_\_\_\_\_ and \_\_\_\_\_.

93.

pertaining to below the  
breastbone

Sternum is the breastbone. Write a meaning for sub/sternal:

\_\_\_\_\_.

infrasternal

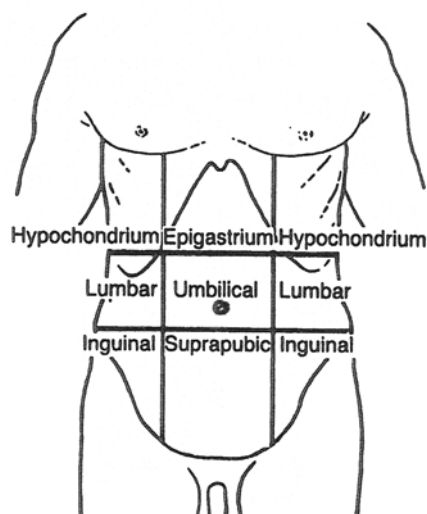
Use another prefix and build another term that means the same thing: \_\_\_\_\_.

94.

suprasternal

Build a term that means pertaining to above the sternum:

\_\_\_\_\_.



**Figure 8.9** Regions of the Abdomen

95.

Refer to Illustration 8.9 to help you complete the next few frames.

96.

Sub/pubis refers to an area beneath the pubic arch (bone). Build a term meaning relating to the area above the pubic arch:

\_\_\_\_\_.

suprapubic

umbilicus or belly  
button

Umbilical is the term meaning relating to the area that is near/  
around the \_\_\_\_\_.

beneath the ribs (These floating ribs are composed mostly of cartilage)

inguinal  
ing' gwi nal

pertaining to around  
the umbilicus

relating to below the  
abdomen

relating to above the  
loin

pertaining to below the  
pubic arch

pertaining to around  
the intestine

pertaining to under the  
skin

relating to outside the  
field of vision

pertaining to over the  
stomach

97.

Chondros means cartilage (of ribs). Literally, hypochondrium means the area \_\_\_\_\_.

98.

Look at Illustration 8.9, Regions of the Abdomen. Lumbar relates to the loin. It is the part of the back and sides between the ribs and the pelvis. What area is below the lumbar region? \_\_\_\_\_.

99.

Write a meaning for each of the following terms.

Peri/umbilical, \_\_\_\_\_.

Sub/abdominal, \_\_\_\_\_.

Supra/lumbar, \_\_\_\_\_.

Infra/pubis, \_\_\_\_\_.

Circum/intestinal, \_\_\_\_\_.

Hypo/dermic, \_\_\_\_\_.

Extra/visual, \_\_\_\_\_.

Epigastric \_\_\_\_\_.

100.

In this unit you worked with 36 new medical terms. Practice pronouncing them. Then take the Unit 8 Self-Test.

benign (bē nīn')

biopsy

circumocular

circumscribed

condyloma (kon di lō' mā)

cyst (sist)

distal

dorsal

ectoderm (ek tō derm)

ectopic (ek top' ik)

endocystoscopy

(en dō sis tos' ko pē)

endogenous (en doj' ə nus)

epigastric (ep ē gas' trik)

---

excrescence (eks kres' ens)	neoplasm (nē ō plazm)
extrasensory (eks tra sen' sō rē)	papilla (pa pil' ə)
hypodermic (hī pō derm' ik)	papilloma (pap i lō' mā)
infiltration	papules (pap' yōōls)
inframammary (in fra mam' ə rē)	periumbilical
lateral	(per' ē um bil' i k'l)
lesion	polyp (pol' ip)
lumbar	proximal (prox' si mal)
malignant (ma lig' nant)	subpatellar (sub pa tel' ar)
medial	suprapubic (su pra pyōō' bik)
mesoderm (mēz' ō derm)	tumor
metastasis (me tas' ta sis)	ventral

## Unit 8 Self-Test

### Part 1

From the right, select the correct meaning for each of the following often used medical terms.

- |                         |                                            |
|-------------------------|--------------------------------------------|
| _____ 1. Endocystoscopy | a. Farthest point from trunk attachment    |
| _____ 2. Lesion         | b. Outside layer of germ cells             |
| _____ 3. Circumocular   | c. Not spreading, not malignant            |
| _____ 4. Distal         | d. Pertaining to inside the head vault     |
| _____ 5. Endocranial    | e. Pertaining to around the eye            |
| _____ 6. Epigastric     | f. Slipping into and between normal cells  |
| _____ 7. Biopsy         | g. Pertaining to the area over the stomach |
| _____ 8. Neoplasm       | h. Cells spread to new location, organ     |
| _____ 9. Ectoderm       | i. Removal of tissue for examination       |
| _____ 10. Metastasis    | j. New, abnormal tissue formation          |
| _____ 11. Malignant     | k. Morbid tissue                           |
| _____ 12. Benign        | l. Nearest the attachment to the trunk     |
| _____ 13. Infiltration  | m. A bad kind, tending to threaten death   |
| _____ 14. Proximal      | n. Occurring outside the normal place      |
| _____ 15. Ectopic       | o. Examination inside the bladder          |

**Part 2**

Write the medical term for each of the following brief definitions.

1. Nipplelike protuberance \_\_\_\_\_
2. New, abnormal tissue without a purpose \_\_\_\_\_
3. Useless structure growing out of the skin (wart) \_\_\_\_\_
4. Spread of cells to new location, organ \_\_\_\_\_
5. Pertaining to on or near the back \_\_\_\_\_
6. Farthest point from trunk attachment \_\_\_\_\_
7. Closed sac or pouch containing fluid \_\_\_\_\_
8. Removal of tissue for examination \_\_\_\_\_
9. Wartlike growth around the anus Con\_\_\_\_\_
10. Slipping into and between normal cells \_\_\_\_\_
11. Not spreading, not malignant \_\_\_\_\_
12. Below the mammary gland \_\_\_\_\_
13. Tumor with a little foot \_\_\_\_\_
14. Nearest point of trunk attachment \_\_\_\_\_
15. Unhealthy, diseased area of tissue \_\_\_\_\_

**ANSWERS****Part 1**

1. o
2. k
3. e
4. a
5. d
6. g
7. i
8. j
9. b

**Part 2**

1. Papilla
2. Neoplasm/tumor
3. Excrescence
4. Metastasis
5. Dorsal
6. Distal
7. Cyst
8. Biopsy
9. Condyloma

- |       |                  |
|-------|------------------|
| 10. h | 10. Infiltration |
| 11. m | 11. Benign       |
| 12. c | 12. Inframammary |
| 13. f | 13. Polyp        |
| 14. l | 14. Proximal     |
| 15. n | 15. Lesion       |

# 9 Gynecology, Pregnancy, and Childbirth

*This unit covers medical terms used in gynecology, pregnancy, and childbirth. This lesson may be difficult at times, so be kind to yourself and go slowly. If you don't get the right answers the first time you work through a sequence, try again before moving on. Here are the whole terms, word roots, prefixes, and suffixes you'll work with.*

## Mini-Glossary

-ary (of or pertaining to)	amni/o, amniot/o (fetal sac)
-atrophy (undernourished, wasting)	gravid/a (with child)
-dynia (pain, painful)	gyn/o, gynec/o (woman)
-mania (madness)	hyster/o (uterus)
-pathy (disease)	mamm/o (breast)
-phobia (excessive fear)	mast/o (breast)
	men/o (menses, menstruation)
	metr/o (uterus)
primi- (first)	para (bear, bring forth)
secundi- (second)	
nulli- (none)	pre- (before)
multi- (many)	post- (after)
	oligo- (little, small, scanty)
climacteric	episiotomy
conception	fetus
embryo	gestation



involution	perineum
labor	peritoneum
menopause	placenta
ovum	pudenda
parturition	puerperium

Do yourself a big favor. Complete the Review Sheet for Unit 8 before you tackle this unit.

---

## Terms of Gynecology

- women

gī' nō plas tē or jin' ō  
plas tē  
plastic surgery of female  
reproductive organs
1.

*Gyn, gynec/o* means woman. Gynecology is the study of the female reproductive organs and breasts. Simply put, it is the field of medicine dealing with diseases of whom? \_\_\_\_\_.

Before continuing, go to Illustration 4.2, The Female Reproductive Organs. Review the illustration and read again the description that follows.
2.

*Gyn/o/pathic* means pertaining to diseases of female reproductive organs. What do you think *gyn/o/plasty* means? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
3.

*Mania* means madness. *Phobia* means excessive fear. Gynecomania is an abnormal sex drive and desire in the male of the species. What do you think *gyne/phobia* means? \_\_\_\_\_.
4.

The physician who specializes in female disorders is called a \_\_\_\_\_.
5.

Human beings are mammals. Mammals have glands that secrete milk for nourishing their offspring. In plain English, mammary gland refers to \_\_\_\_\_.
6.

These next two terms often are interchangeable. However, we use one term more often than the other. In this lesson you'll be using the *preferred terms*. Let's see what this means:
- breast

breast	<i>Mamm</i> , <i>mamm/o</i> refers to mammary gland, or breast; <i>mast</i> , <i>mast/o</i> also refers to _____.
mam ī' tis, mast ī' tis inflammation of the mammary gland (breast) preferred	7. Mamm/itis and mast/itis both mean _____ _____. Mastitis is the term used most often, so we say it is the _____ term.
ma mog' ra fē mamm/o/graphy X ray exam of the breast	8. Break down each of the following preferred terms and write its meaning. Mammography, _____ / _____ / _____ means _____
mas tek' tō mē mast/ectomy surgical removal of a breast	Mastectomy, _____ / _____ means _____.
mastotomy mas tot' ō mē incision into the breast	9. Using the word root or combining form, mast, mast/o, add a suffix from the list and build a preferred term. Write its meaning in the space provided. -otomy      -itis      -pathy M _____ means _____; _____;
mastitis inflammation of the breast	m _____ means _____; _____;
mastopathy mas top' a thē disease of the mammary gland	m _____ means _____.
mastoptosis mas top tō' sis	10. Very large breasts that hang down, or droop, are described as pendulous. The suffix for hanging or drooping is -ptosis. Construct a word meaning pendulous breast: _____.

gī ne kō mas' tē a  
woman's breast

11.

Here's an interesting term that doesn't follow the rules. Let's look at the parts. Gynec/o means woman; mastia means breast.

Gynecomastia literally means \_\_\_\_\_.

In actual use it means abnormally large mammary glands in the male; sometimes they secrete milk.

12.

This time use mamm, mamm/o. Build a term with each of the following suffixes and write its meaning:

mam' ō gram  
mammogram  
X ray picture of the  
breast

-gram            -ary

M \_\_\_\_\_

means \_\_\_\_\_  
\_\_\_\_\_;

mam' a rē  
mammary  
pertaining to the  
mammary gland

m \_\_\_\_\_

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

mam' ō plas tē  
plastic surgery of the  
mammary gland

13.

Mamm/o/pexy means surgical correction (fixation) of large hanging breasts. What does mamm/o/plasty mean? \_\_\_\_\_  
\_\_\_\_\_

14.

Mast/aden/itis means inflammation of the mammary gland. Write a meaning for each of the following:

mast' ad nī tis  
mast' ad nō' ma  
tumor of the mammary  
gland

mastadenoma \_\_\_\_\_  
\_\_\_\_\_;

mas tō kar cin ō' ma  
cancerous tumor of the  
mammary gland

mastocarcinoma \_\_\_\_\_  
\_\_\_\_\_.

15.

The study or science dealing with the physical, chemical, and biologic properties of neoplasms including causation, pathogenesis, and treatment is oncology. What does mastoncus mean? \_\_\_\_\_  
\_\_\_\_\_.

mas tong' kus  
(any) tumor of the  
breast

mast/algia  
mast al' jē ə

16.

Mast/o/dynia means painful breast. Using another suffix you know, build another word that also means pain in the breast:

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

17.

Here's a quick review. Select a term from the suggested answers that best fits each brief definition. Write your selection in the space provided.

mastopathy  
mas top' a thē  
gynecomastia  
mastectomy  
mastoptosis  
mastoncus  
mastopexy  
mas' tō pex' sē

mastectomy      mastopathy  
mastoptosis      gynecomastia  
mastoncus      mastopexy

disease of the mammary glands, \_\_\_\_\_.

women's breasts (on a man), \_\_\_\_\_.

surgical removal of the breast, \_\_\_\_\_.

pendulous breasts, \_\_\_\_\_.

any tumor of the breast, \_\_\_\_\_.

surgical fixation of pendulous breasts, \_\_\_\_\_.

18.

Now try these.

mammoplasty      mammary  
mammology      mammalgia (mastodynia)  
mammography      gynecophobia

mammography  
mammalgia  
(mastodynia)  
mammology  
gynecophobia  
mammary  
mammoplasty

X ray study of the breast, \_\_\_\_\_.

painful breast, \_\_\_\_\_.

science and study of the breast, \_\_\_\_\_.

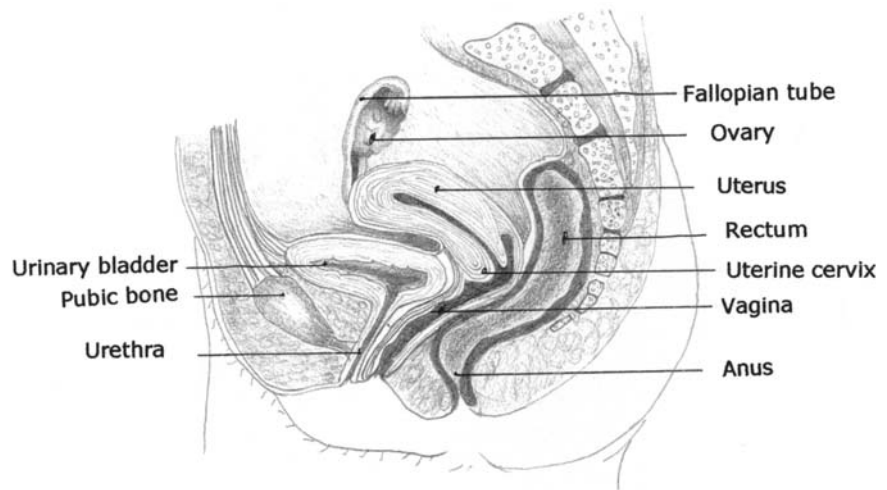
fear of women, \_\_\_\_\_.

pertaining to the breast, \_\_\_\_\_.

surgical reconstruction of the breast, \_\_\_\_\_.

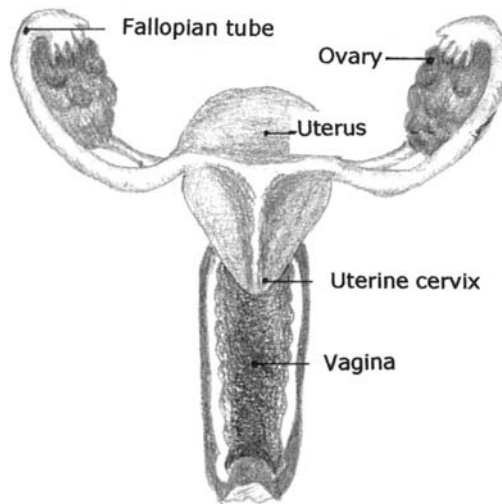
19.

Mamma mē' ə, you're doing very well!



**Figure 9.1** The Female Reproductive Organs (Midline Section).

See Illustration 4.2 for a description of The Female Reproductive System.



**Figure 9.2** The Female Reproductive Organs (Anterior View).

ovary (oophor/o)  
fallopian tube (salping/o)  
uterus (hyster/o, metr/o)  
uterine cervix (cerv/i)  
vagina (vagin/o)

breast (mamm/o, mast/o)  
menses (men/o)  
muscle (my/o)  
bladder (cyst/o)  
urethra (urethr/o)

20.

Here are two more terms with nearly identical meanings. Refer to Illustrations 9.1 & 9.2.

uterus

*Hyster, hyster/o* means uterus. *Metr, metr/o* also means \_\_\_\_\_.

21.

uterus

*Hyster/o* usually refers to the uterus as a whole organ. *Metr/o* usually refers to the tissues of the \_\_\_\_\_.

22.

whole  
tissues

There are exceptions to the rule, but in general *hyster/o* means the uterus as a \_\_\_\_\_ organ. *Metr/o* refers to the \_\_\_\_\_ of the organ.

23.

(muscle) tissues of the  
uterus

*Metr/itis* means an inflammation of the uterine tissues (linings, muscles, etc.). *Metr/o/paralysis* means paralysis of \_\_\_\_\_.

24.

muscle tumor of the  
uterus

*Hyster/o/tomy* means incision into the uterus (perhaps to remove a solid tumor). *My-, myo-* means muscle. What does *hyster/o/my/oma* mean? \_\_\_\_\_.

25.

Using the word roots *hyster, hyster/o*, add a suffix from the list and build a new word. Write its meaning in the space provided:

-ectomy      -pathy

hysterectomy  
his ter rek' tō mē  
surgical removal of the  
uterus

H \_\_\_\_\_  
means \_\_\_\_\_;  
\_\_\_\_\_;

hysteropathy  
his ter op' ō thē  
disease of the uterus

h \_\_\_\_\_  
means \_\_\_\_\_  
\_\_\_\_\_.

26.

Try it again using metr or metr/o. Build a term and then write its meaning:

-scope                      -itis

-atrophy (wasting away, diminishing in size)

metroscope  
mēt' rō skōp  
instrument for  
examining the uterus

M \_\_\_\_\_

means \_\_\_\_\_  
\_\_\_\_\_;

metritis mē trī' tis  
inflammation of uterine  
tissues

m \_\_\_\_\_

means \_\_\_\_\_  
\_\_\_\_\_;

metratrophy  
mē tra' trō fē  
uterine tissue atrophy

m \_\_\_\_\_

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

27.

Use the word roots metr/, metr/o with the following suffixes to make a new word that fits each of the definitions:

-orrhagia means hemorrhage

-orrhea means flow or discharge

metrorrhagia  
mē trō rā' jē ə

uterine hemorrhage \_\_\_\_\_;

metrorrhea  
mē trō rē' ə

discharge from the uterus (mucus or pus) \_\_\_\_\_.

28.

Here are two suffixes that can be confusing:

-orrhexis means rupture (bursting open);

-ocele means hernia or rupture.

The difference between them is the degree of severity of the outcome; the first has a high mortality.

Build a term meaning ruptured uterus (ruptured during labor threatening the mother's life and perhaps the infant's):

hysterorrhexis  
his' ter ō rek' sis

hyster\_\_\_\_\_.

Build a term meaning uterine hernia (to be repaired by a surgeon):

hysterocele  
his' ter ō sēl

hyster\_\_\_\_\_.

29.  
Endo/metrium refers to the inside lining of the uterus.  
Myo/metrium refers to the muscle layer of the uterus.  
Build a term meaning inflammation of the inside lining and muscle layers of the uterus:  
endo/myo/metritis  
en dō mī ō mē trī' tis  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
inside muscle uterus inflammation
30.  
Two word roots and their combining forms refer to the uterus.  
They are \_\_\_\_\_ and \_\_\_\_\_.  
hyster, hyster/o  
metr, metr/o
31.  
The term meaning the whole organ is \_\_\_\_\_. The term referring to the tissues of the organ is \_\_\_\_\_.  
hyster/o  
metr/o
32.  
Now let's look at a uterine function. *Menses*, *men/o* means monthly flow of bloody fluid from the uterus. Menstruation is the function of discharging the menses. Men/o in any word should make you think of \_\_\_\_\_.  
menstruation  
men strū ā' shun
33.  
Men/orrhea means free flow of menses, also known as menstruation. Dys/men/orrhea means \_\_\_\_\_.  
dis men ō rē' a  
difficult or painful  
menstruation
34.  
Men/orrh/algia also means \_\_\_\_\_.  
me nor al' jē a  
painful flow of menses
35.  
Try this.  
Men/o/metrorrhagia means \_\_\_\_\_.  
men ō mē trō rā' jē ə  
excessive bleeding  
(hemorrhage) from  
the uterus during  
menstruation
36.  
*Menopause* is a normal physiological condition of a mature woman. It's an event that ends a woman's menstrual life. This event marks the end of her childbearing period. It means the permanent cessation of \_\_\_\_\_.  
menses  
men' sēs



- children 37.  
Menopause means the permanent cessation of the menses. It marks the end of a woman's capability for bearing \_\_\_\_\_.
- cessation of menses, or  
menopause 38.  
*Climacteric* is a *transitional period* of life sometimes called the change of life. It is a period between ages 45 and 60 when many changes take place in a woman's body. At the end of this transitional period, she no longer experiences menstruation and is no longer capable of bearing a child. The outcome of this transitional period is called \_\_\_\_\_.
- complete cessation of  
menses 39.  
During the female climacteric a key physical change takes place. The ovaries permanently and irreversibly atrophy, ending the reproductive period.  
This *transitional period* of life is called the climacteric. The outcome of this transition period is the \_\_\_\_\_, which means \_\_\_\_\_.
- climacteric  
klī mak' ter ik 40.  
The *critical period* of life marking the beginning of the end of child-bearing and ending with the onset of menopause is called the \_\_\_\_\_.
- climacteric 41.  
Men also experience a decline in sexual activity in their presenile years. This *change of life period* in a man is called the male \_\_\_\_\_.
- the climacteric 42.  
Menopause ends the body's reproductive function. What word describes the transitional period of critical changes that ends in menopause? \_\_\_\_\_.
43.  
It's time to review the word combinations you've learned in this section. From the suggested answers, select a term to go with each definition. Write your selection in the space provided.

	hysteropathy	mammography
	mastodynia	gynecomastia
	metrorrhagia	endometritis
gynecomastia	woman's breast (in a male), _____.	
hysteropathy	uterine disease, _____.	
mastodynia	painful breast, _____.	
endometritis	inflammation inside the uterus, _____.	
mammography	X ray examination of the breast, _____.	
metrorrhagia	uterine hemorrhage, _____.	

44.

Here are a few more.

#### SUGGESTED ANSWERS:

	hysterorrhexis	menorrhagia
	amenorrhea	climacteric (female)
	menopause	metratrophy
menopause	permanent cessation of menses, _____.	
amenorrhea	lack of menstruation (temporary), _____.	
hysterorrhexis	rupture of uterus (during labor), _____.	
climacteric (female)	change of life transition period, _____.	
menorrhagia	painful menstruation, _____.	
metratrophy	wasting (diminishing in size) of the uterus, _____.	

## Pregnancy and Childbirth

In this section you'll learn one term at a time. First you'll read a brief paragraph defining the new term. Then you'll answer questions and complete statements about it showing you understand what it means. Feel free to refer back to the paragraph as you work through the frames that follow.

*Conception* means fertilization. It's an event marked by penetration of the ovum (female egg cell) by a spermatozoon (male germ cell). Conception results in a fertilized ovum. Only a fertilized ovum develops into a human being.

fertilization or conception	45. Penetration of the female egg cell by the male germ cell is known as _____.
ovum	46. Another term for female egg cell is _____.
spermatozoon (sper' ma tō zō' on)	A term meaning male germ cell is _____.
conception	47. Union of an ovum and a spermatozoon is called _____.
fertilized	A child will develop from an ovum only if the ovum is _____.
	<i>Gestation</i> is the period from conception to childbirth during which an ovum passes through several stages of development on the way to becoming a newborn infant. Gestation lasts approximately 9 months, or 280 days from the last menstrual period.
pregnancy	48. Gestation is another word for the condition known as _____.
gestation jes tā' shun	Pregnancy is the condition of a female after conception until the birth of the baby. Pregnancy is another word for the period of time called _____.
9 280	49. Gestation is the process of developing an ovum into a child. It takes approximately _____ months, or _____ days.
gestation pregnancy	50. An ovum develops into a child during a period from conception to birth. This process is called _____ and the condition is called _____.
gestation	51. During pregnancy an ovum passes through many developmental stages or phases. Taken together, these phases make up the nine-month period called _____.
	The earliest gestational phase begins with a fertilized female egg cell. In just two weeks, the ovum divides into two cells, and each cell continues halving until it has become a complex mass of cells.

This mass of cells is now called an *embryo*. It's a living organism ready to continue its development into the next phase.

52.

conception

The indispensable event that initiates a pregnancy is \_\_\_\_\_.

ovum

ō' vum

two

53.

After conception, the earliest phase of development begins with a fertilized \_\_\_\_\_ and lasts \_\_\_\_\_ weeks.

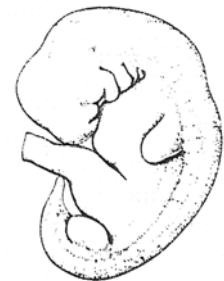
54.

embryo

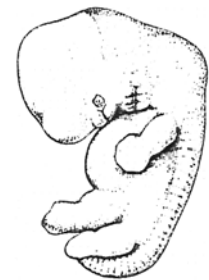
em' brē ō

The first two weeks of gestation produce a complex living organism called a/an \_\_\_\_\_.

The *embryo* begins a second stage of gestation in the third week, which lasts six weeks. In the third week, the embryo begins to acquire structure (head, arms, legs, and a tail), and over the next few weeks it begins forming principal internal organs and body systems. By the end of the eighth week of gestation the embryo looks somewhat like a human and is called a *fetus*.



5 weeks



6 weeks



8 weeks

Figure 9.315

55.

The second stage of gestation begins with a two-week-old ovum, which is now called an \_\_\_\_\_.

embryo

56.

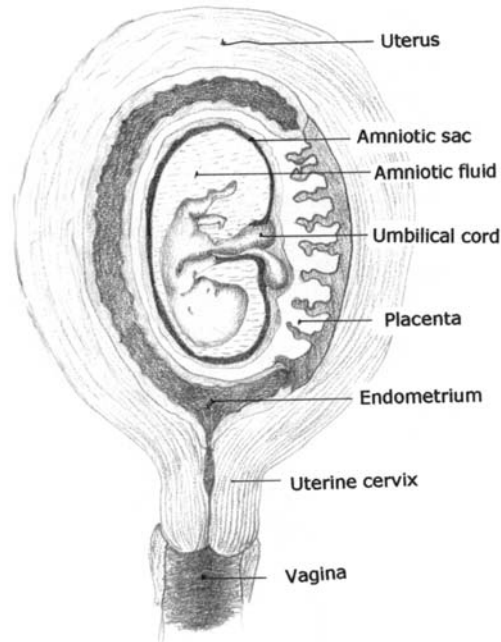
third

eighth

fetus

The embryo begins its second stage of development in the \_\_\_\_\_ week of gestation and continues through the \_\_\_\_\_ week of a new pregnancy. At the beginning of the ninth week, it is called a \_\_\_\_\_.

- organs 57.  
During this second gestational phase the embryo begins forming arms and legs and principal internal \_\_\_\_\_.
- human being 58.  
fetus By the beginning of the ninth week, the embryo begins to resemble  
fē' tus a \_\_\_\_\_ and is called a \_\_\_\_\_.
59.  
A *fetus* begins the last phase of gestation. A fetus is a live offspring while it is in the mother (in utero). It continues developing during the remainder of the gestational period. The fetal stage lasts from the beginning of the third month of gestation to childbirth. A fetus sufficiently developed to sustain life outside the uterus is called a *viable* fetus.
- viable fetus In the last gestational phase, the fetus in utero develops into a \_\_\_\_\_.
- at three months of pregnancy When does this phase begin? \_\_\_\_\_.
- seven more months How long does it last? \_\_\_\_\_.
- childbirth What is the terminating event? \_\_\_\_\_.
60.  
Here's a quick review.
- Penetration of an ovum by a spermatozoon is called \_\_\_\_\_.
  - A nine-month period during which a fertilized ovum becomes a child is called \_\_\_\_\_.
  - In the first two weeks of pregnancy an ovum becomes a complex organism called an \_\_\_\_\_.
  - From the third week to the beginning of the ninth week of pregnancy an embryo develops rudimentary appendages and internal \_\_\_\_\_.
  - After only two months' gestation, the embryo begins to resemble \_\_\_\_\_ and is called a \_\_\_\_\_.
  - A fetus developing in utero for the next seven months becomes a \_\_\_\_\_.
  - Gestation ends with \_\_\_\_\_.
- conception
- pregnancy or gestation
- embryo
- organs
- a human being
- fetus
- human being or child
- childbirth



**Figure 9.4.** Fetus in Utero, Beginning 9th Week.

uterus (hyster/o, metr/o)

amniotic sac (amni/o, amniot/o)

amniotic fluid (liquor amnii)

61.

Here are a few medical terms referring to some structures and conditions relating to pregnancy. *Amnion*, *amni/o*, *amniot/o* refer to a thin transparent sac containing the fetus and the fluid surrounding the fetus. This sac grows rapidly as the fetus inside develops. The amniotic fluid protects the fetus from injury and helps maintain an even temperature.

Within the amniotic sac the fetus is protected from injury and changes in temperature by the *liquor amnii*, or in other words,

amniotic fluid  
am nē ot' ik flū' id

62.

Amniot/itis means inflammation of the amnion. Build a word that means pertaining to the sac that envelops the fetus: \_\_\_\_\_.

amniotic

63.

Centesis is the suffix meaning to puncture a cavity and remove fluid. Explain the meaning of amni/o/centesis: \_\_\_\_\_.

am' nē ō sen tē' sis  
puncturing the amniotic  
sac and withdrawing  
some fluid

am' nē ō tōm

usually an ultrasound  
graphic study of  
the amnion (and its  
contents)

64.

Amni/o/tome is an instrument for cutting (puncturing) the  
amnion. What does amni/ography mean? \_\_\_\_\_

\_\_\_\_\_.

ol' i gō hī dram' nē os  
scanty amount of  
amniotic fluid in  
the sac

65.

*Olig-*, *oligo-* is a prefix meaning little, small, scanty. Olig/uria means  
scanty urination. What does oligo/hydr/amnios mean? \_\_\_\_\_

\_\_\_\_\_.

excessive amount of  
amniotic fluid in the  
sac

66.

What do you think polyhydramnios means?

\_\_\_\_\_.

amniotic sac or amnion

67.

What structure envelops the fetus and contains the fluid protecting  
the fetus? \_\_\_\_\_.

68.

*Placenta* is a structure made up of a network of blood vessels (arteries and veins). The placenta makes an intimate bond with the inside lining of the uterus (endometrium), and attaches to the fetus by the umbilical cord. The fetus absorbs oxygen and nutrients from its mother through the placenta. It excretes carbon dioxide and other wastes through this same vascular structure. The placenta begins to form about the eighth day of gestation, and by the end of the pregnancy weighs about one-sixth the weight of the infant. After the birth of the child, the uterus expels the placenta, now called the *afterbirth*.

The fetus in utero absorbs oxygen and nutrients and excretes carbon dioxide and wastes through a vascular structure called the

\_\_\_\_\_.

placenta

69.

The placenta weighs one-sixth of the weight of the infant. If the baby's birth weight is 6 pounds, 6 ounces, what would you expect the placenta to weigh at the end of pregnancy? \_\_\_\_\_ pound

\_\_\_\_\_ ounce.

1 pound  
1 ounce

en dō mē' trē um  
the inside lining of the  
uterus

70.  
The placenta forms and grows on the endometrium and makes an intimate bond with it. What is the endometrium? \_\_\_\_\_.

placenta  
umbilical cord

71.  
While in utero the fetus grows by getting its nourishment through the \_\_\_\_\_. The fetus is attached to the placenta by the \_\_\_\_\_.

afterbirth

72.  
The placenta is expelled after the baby is born. The placenta is also called \_\_\_\_\_.

pregnant (a current  
condition)

73.  
*Gravida, gravid* refers to a pregnant woman; being heavy with child. Gravidism is the condition of being \_\_\_\_\_.

prī' ma grav' i da  
a woman who is  
pregnant with her  
first child

74.  
*Primi-* means first; *secundi-* means second. Primigravida refers to \_\_\_\_\_.

a woman in her second  
pregnancy

What do you think gravida II means?  
\_\_\_\_\_.

secundigravida  
sē kun' da grav' i da

Build a compound medical term meaning a woman in her second pregnancy: \_\_\_\_\_.

75.  
Here's a quick review. From the suggested answers, select a term to go with each definition. Write your selection in the space provided.

SUGGESTED ANSWERS:

oligohydramnios	primigravida
amniocentesis	secundigravida
amniotic fluid	placenta

secundigravida

a woman in her second pregnancy, \_\_\_\_\_.

primigravida

a pregnant woman, first time, \_\_\_\_\_.

oligohydramnios

scanty fluid in the amnion, \_\_\_\_\_.



placenta	fetus in utero absorbs nutrients and excretes waste through it, _____.
amniotic fluid	<i>liquor amnii</i> , _____.
amniocentesis	puncture of the amnion and removal of fluid, _____.

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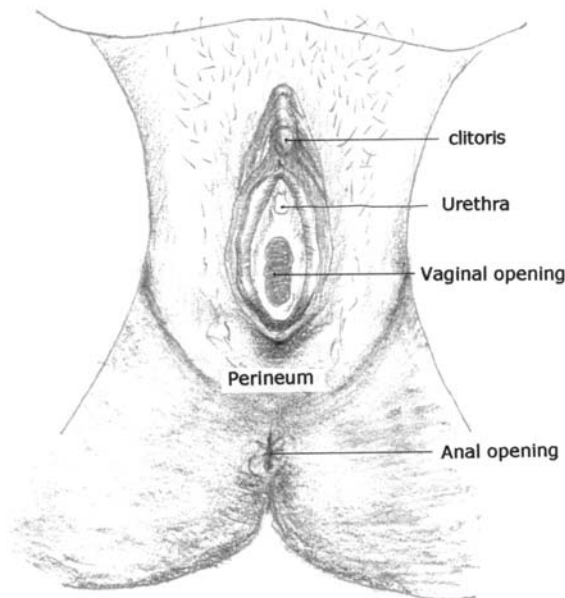
## Labor and Delivery

*Parturition* is more commonly known as *labor*. Parturition is the process by which a baby is born and the placenta expelled from the uterus. This labor, or parturition, has three stages. The first stage is the stage of *dilation*. It is characterized by contractions of the uterine muscle and dilation of the birth canal and cervix—to let the baby out. The second stage is *expulsion*. The baby is born! In the third stage the placenta is expelled. This is the *afterbirth* stage. The average duration of labor is about 13 hours in primagravida women (12 hours in dilation stage, 1 hour in expulsion stage, and a few minutes for the afterbirth). Labor is about 8 hours long in subsequent pregnancies.

parturition labor	76. At term, when gestation is completed, a spontaneous physiological process begins. It has three stages: dilation, expulsion, and afterbirth. This process is called _____ OR _____.
dilation dī lā' shun	77. In the first stage of labor, the uterus contracts rhythmically for 8 to 12 hours. The cervix stretches and opens until it is fully dilated so the baby may pass through the birth canal. This first stage is called the _____ stage.
expelled, born	78. The second stage of labor involves expulsion. The infant passes through the birth canal and is _____.
afterbirth	79. Expulsion of the placenta follows the birth of the child. The expelled placenta is more commonly known as the _____.
a child is born (expelled)	80. What happens during the expulsion stage, or the second stage of labor? _____.

a few minutes	81. How long is the third stage of labor? _____.
the placenta is expelled	What happens in the afterbirth stage of labor? _____.
the cervix (neck of the uterus) completely dilates (opens)	82. After 8 to 12 hours of uterine contractions during the first stage of labor, what has happened? _____.
par tyer ish' un labor	83. <i>Parturition</i> is another word for childbirth. What other term you just learned also means the process of being born? _____.
pertaining to after labor is completed	84. <i>Antepartum</i> refers to the entire gestational period before labor begins. What does postpartum mean? _____.
pertaining to the recent period around childbirth	85. <i>Neo</i> means new or recent. <i>Natus</i> is a Latin term for birth. What does neonatal mean? _____.
pertaining to medical care and supervision of a pregnant woman before childbirth	86. What do you think prenatal care means? _____.
prenatal care prē nā' tal kair	87. Review the terms you just learned before moving on. Select the term that best fits each brief definition. Use the suggestions if you need help.
labor or parturition	<div> <div>labor</div> <div>prenatal care</div> <div>dilation</div> </div> <div> <div>parturition</div> <div>afterbirth</div> <div>expulsion</div> </div>
	medical supervision of a pregnant woman, _____.
	the process of giving birth, _____.

parturition or labor	the act of childbirth, _____.
dilation	first stage of labor, _____.
expulsion	second stage of labor, _____.
afterbirth	third stage of labor, _____.



**Figure 9.5.** Female Pudenda.

urethra (urethr/o)	perineum
vagina (vagin/o)	anus (an/o)

88.

*Pudendum, pudenda* (plural) means the external genitals (sex organs) of a female. These parts are easily observed without manual examination.

Take a look at Illustration 9.5 above.

Build a term meaning pertaining to the female's external genitals:

\_\_\_\_\_.

89.

*Perineum* refers to the structures that make up the pelvic outlet and comprise the pelvic floor. It is the region between the lip at the vaginal opening and anus in a female or between the scrotum and \_\_\_\_\_ in a male.

pudendal  
pyōō den' dl

anus  
ā' nus

- perineum  
per i nē' um
90.  
A baby coming through the birth canal during parturition can overstretch the vagina and the pelvic outlet. A tear (laceration) may occur in the tissues around the pelvic outlet. This pelvic floor structure is called the \_\_\_\_\_.
- perineum
91.  
*Episiotomy* is an incision of the perineum. During the second stage of labor, just before the baby is born, the obstetrician may incise the perineum to avoid a more damaging laceration of the surrounding tissues.  
Episiotomy controls damage to the tissues of the vagina and \_\_\_\_\_.
- episiotomy  
e pēz ē ot' ō mē
92.  
An incision into the perineum is called \_\_\_\_\_.
- suturing repair,  
reconstruction of  
the tissues after an  
episiotomy
93.  
What does episiorrhaphy mean? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- peritoneum  
per i tō nē' um  
per i tō nī' tis  
inflammation of the  
peritoneum
94.  
Here's a term often confused with perineum. *Peritoneum* is a tough membrane covering the viscera (organs in the belly) and lining the abdominal cavity. It clings to the viscera as plastic wrap clings to whatever it covers.  
The membrane that coats the viscera and lines the abdominal cavity is the \_\_\_\_\_.  
perineum/peritoneum  
What is peritonitis? \_\_\_\_\_  
\_\_\_\_\_.
95.  
Select one of the terms that best fits the brief definition. Write it in the space provided.
- |            |            |
|------------|------------|
| peritoneum | episiotomy |
| pudenda    | perineum   |
- pudenda  
external female genitals, \_\_\_\_\_.
- perineum  
the region of the external female genitals between the vaginal lip and anus, \_\_\_\_\_.

peritoneum	a membrane coating the viscera and lining the abdominal cavity, _____.
episiotomy	incision of the perineum to limit injury of the pelvic outlet during childbirth, _____.
involution	96. <i>Involution</i> is a <i>process</i> the body goes through that reduces the uterus to its normal nonpregnant size and condition following childbirth. The process that returns an enlarged uterus to its normal size after the baby is born is called _____.
pōō er pēr' ē um expelled	97. <i>Puerperium</i> is a <i>period of time</i> following the third stage of labor when involution takes place. Involution lasts approximately six weeks. Puerperium begins after the fetus and the placenta have been _____.
six	98. Puerperium lasts until the uterus returns to its size and condition before pregnancy began. This period of time is approximately _____ weeks.
involution	99. After fulfilling its function, the uterus goes through a process of returning to its earlier nonpregnant condition. This process is called _____.
puerperium pōō er pēr' ē um	100. Involution takes place during a six-week period after childbirth. This time period is called the _____.
of or pertaining to the period after childbirth when involution takes place	101. Explain the meaning of the term puerperal. _____ _____ _____.
puerperal (sepsis)	102. <i>Sepsis</i> means the presence of pathogenic organisms or bacteria that cause serious infections. Years ago, prior to effective antibiotic therapy, the greatest single cause of death following childbirth was called <i>childbed fever</i> . Another description of this condition is _____ sepsis. (pertaining to the time when involution takes place)

- inflammation of the  
peritoneum during  
puerperium 103.  
What is puerperal peritonitis? \_\_\_\_\_  
\_\_\_\_\_.
- the process by which  
the uterus returns  
to its earlier  
nonpregnant state  
after childbirth 104.  
Involution takes place during puerperium. What does involution  
mean? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- nulli/para  
nullipara  
nu lip' ə ra 105.  
*Nulli-* is a prefix meaning none. *Para* means to bear a child. Build a  
term that refers to a woman who has never borne a child:  
\_\_\_\_\_ / \_\_\_\_\_.
- prīm ip' ə ra 106.  
a woman who has  
given birth to one  
viable child (an event  
in the past) A woman who has delivered more than one living child is described  
as *multipara*. What does *primipara* mean? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.
- she has given birth to  
two viable children 107.  
What does an obstetrician mean when he writes in the patient's  
chart that she is para-2? \_\_\_\_\_  
\_\_\_\_\_.
- primipara  
nullipara  
multipara  
mul tip' ə ra 108.  
Using the word root *para* and *nulli-*, *multi-*, or *primi-*, build a word  
for each of the following abbreviations.  
para-1, \_\_\_\_\_.  
para-0, \_\_\_\_\_.  
para-4, \_\_\_\_\_.
109.  
It's a good time to review what you just covered. Select a term  
from the suggestions and complete each brief definition.  
nullipara                      parturition  
primigravida                antepartum  
involution                    puerperium
- involution the process taking place after childbirth that reduces the uterus to  
normal size and condition, \_\_\_\_\_.

puerperium	the six-week period after childbirth when involution takes place, _____.
antepartum	the period in a pregnancy occurring before labor, _____.
nullipara	a woman who has never given birth to a viable child, _____.
primigravida	a woman who is pregnant for the first time ever, _____.
parturition	another term for labor, _____.

110.

Here are some terms you may find very interesting. Look them up in your medical dictionary. You'll be surprised at how much you have learned.

acquired	congenital
anomaly	eclampsia
placenta abruptio	placenta previa

111.

Here are 50 new words you worked with in this unit. When you pronounce each term be sure to think about what it means. Then take the Unit 9 Self-Test.

amenorrhea (ä men ō rē' a)	hysterorrhexis
amniocentesis (am' nē ō sen tē' sis)	(his' ter ō rek' sis)
amnion (am' nē on)	involution (in vō lōō' shun)
amniotic fluid (am nē ôt ik flōō' id)	labor
climacteric (klī mak' ter ik)	mammalgia (ma mal' jē ə)
conception (kon sep' shun)	mammary (mam' ə rē)
dysmenorrhea (dis men ōr ē' ə)	mammopexy (mam' ō pek sē)
embryo	mastodynia (mas tō din' ē ə)
endometrium	mastoncus (mas tong' kus)
(en' dō mē' trē um)	mastopathy (mas top' ə thē)
episiotomy (e pēz ē ot' ō mē)	mastopectomy (mas top tō' sis)
fetus	menometrorrhagia
gestation (jes tā' shun)	(men' ō mētrō rā' jē ə)
gynecomastia (gī' ne kō mas' tē ə)	menopause (men' ō pawz)
gynoplasty (jin' ō plas tē)	menorrhagia (men ō ral' jē ə)
hysterocele (his' ter ō sēl)	menses (men' sēz)
hysteromyoma	menstruation
(his' ter ō mī ō' mā)	(men strū ā' shun)

---

metratrophy (mē tra' trō fē)	polyhydramnios
metrorrhagia (mē trō ra' jē ə)	(pā lē hī dram' nē ōs)
multipara (mul tip' ə ra)	postpartum
myometritis (mī' ō mē trī' tis)	primigravida
neonatal (nē ō nā' tal)	(prī' ma grav' i da)
nullipara (nu lip' ə ra)	pudenda (pyōō den' də)
oligohydramnios	puerperal sepsis
(ol' ē gō hī dram' nē ōs)	(pōō er' per al sep sis)
ovum (ō' vum)	puerperium
parturition (pär tyōōr ish' un)	(pōō er pēr' ē um)
perineum (per i nē' um)	spermatozoon
peritoneum (per i tō nē' um)	(sper' ma tō zō' on)
placenta	



## Unit 9 Self-Test

### Part 1

From the right, select the correct meaning for each of the following medical terms.

- |                          |                                                         |
|--------------------------|---------------------------------------------------------|
| _____ 1. Primigravida    | a. X ray study of the breast                            |
| _____ 2. Pudenda         | b. Temporary lack of menstruation                       |
| _____ 3. Hysteropathy    | c. Pelvic floor, region from vaginal lip to anus        |
| _____ 4. Mammary         | d. Process returning uterus to non-pregnant state       |
| _____ 5. Mastrodynia     | e. Incision of vagina and pelvic outlet                 |
| _____ 6. Amniotic        | f. Female external genitals                             |
| _____ 7. Episiotomy      | g. Pregnant woman, first time                           |
| _____ 8. Endometritis    | h. Period after childbirth, when involution takes place |
| _____ 9. Involution      | i. Pertaining to sac holding the fetus and fluid        |
| _____ 10. Metratrophy    | j. Rupture of uterus (during labor)                     |
| _____ 11. Perineum       | k. Pertaining to the breast                             |
| _____ 12. Amenorrhea     | l. Uterine atrophy (wasting)                            |
| _____ 13. Puerperium     | m. Inflammation of uterine inside lining                |
| _____ 14. Hysterorrhexis | n. Painful breasts                                      |
| _____ 15. Mammography    | o. Uterine disease                                      |

**Part 2**

Write the medical term for each of the following brief definitions.

1. Surgical fixation of pendulous breasts \_\_\_\_\_
2. Membrane covering abdominal viscera (organs) \_\_\_\_\_
3. Painful breasts \_\_\_\_\_
4. Change of life period Female \_\_\_\_\_
5. Organism in utero resembling a human \_\_\_\_\_
6. Organ that nourishes fetus in utero \_\_\_\_\_
7. Surgical removal of the breast \_\_\_\_\_
8. Another term for pregnancy \_\_\_\_\_
9. Pertaining to a recently born child \_\_\_\_\_
10. Woman pregnant with her first child \_\_\_\_\_
11. Pendulous breast \_\_\_\_\_
12. Fertilization of an ovum \_\_\_\_\_
13. Labor and delivery of term pregnancy \_\_\_\_\_
14. Pertaining to before the onset of labor \_\_\_\_\_
15. After childbirth when involution takes place P \_\_\_\_\_

**ANSWERS****Part 1**

1. g
2. f
3. o
4. k
5. n
6. i
7. e
8. m
9. d

**Part 2**

1. Mammopexy
2. Peritoneum
3. Mastodynia, mammalgia
4. Female climacteric
5. Fetus
6. Placenta
7. Mastectomy
8. Gestation
9. Neonatal

- |       |                 |
|-------|-----------------|
| 10. l | 10. Primipara   |
| 11. c | 11. Mastoptosis |
| 12. b | 12. Conception  |
| 13. h | 13. Parturition |
| 14. j | 14. Antepartum  |
| 15. a | 15. Puerperium  |

# 10 The Eye and the Respiratory Tract

*Unit 10 is divided into two sections. In the first section you'll work with new terms relating to the eye. You will use some new word roots and combining forms and put them together with many suffixes you are already familiar with. The second section covers new terms relating to the respiratory tract. Review the Mini-Glossary below.*

## **Mini-Glossary**

### **The Eye**

blephar/o (eyelid)  
core, core/o (pupil)  
corne/o, kerat/o (cornea)  
cycl/o (ciliary body)  
dipl/o (paired, double)  
ir, irid/o (iris)  
lacrim/o (tear)  
ophthalm/o (eye)  
retin/o (retina)  
scler/o (sclera)

### **The Respiratory Tract**

bronch/i (bronch/o, bronchus)  
laryng/o (voice box)  
ment/o (chin)  
nas/o (nose)  
pharyng/o (throat)  
pleur/o (covering of the lung)  
pneum/o (air, breathe)  
pneumon/o (lung)  
thorac/o (thorax)  
trache/o (windpipe)

Don't forget to complete the Review Sheet for Unit 9 before beginning Unit 10. Keep up the good work!

1.

Let's refresh your memory. You'll find it helpful to review suffixes you already studied and will use again in the first section. Write the meaning of each of the following. Do your best without looking at the answers.

"charley horse,"  
twitching

-spasm \_\_\_\_\_

suturing, repair

-orrhaphy \_\_\_\_\_

inflammation of

-itis \_\_\_\_\_

a diseased condition

-pathy \_\_\_\_\_

instrument that cuts

-tome \_\_\_\_\_

dilation, stretching

-ectasia \_\_\_\_\_

resembling, like

-oid \_\_\_\_\_

to fix, fixation (into  
normal place)

-pexy \_\_\_\_\_

pertaining to out of  
normal place

-ectopic \_\_\_\_\_

hernia, herniation

-cele \_\_\_\_\_

drooping, prolapse

-ptosis \_\_\_\_\_

measuring, measuring  
instrument

metr-, -meter \_\_\_\_\_

instrument for examin-  
ing, looking inside of

-scope, -scopy \_\_\_\_\_

treatment, treating a  
condition

-therapy \_\_\_\_\_

surgery to restore or  
make new

-plasty \_\_\_\_\_

2.

Now, let's try it the other way. Write the suffix that satisfies the definition given in the table below. Then go back to the first frame and check your answers. You may want to use this table to help you complete the next few frames.

Definition	Suffix
to measure, instrument for measuring _____	
treatment for a condition _____	
inflammation of _____	
dilation, stretch _____	
drooping, prolapse _____	
examine, instrument to look inside _____	
surgery to restore, make new _____	
resembling, like _____	
"charley horse," twitching _____	
a diseased condition _____	
surgically fix into normal place _____	
suture, repair after trauma _____	
instrument for cutting _____	
pertaining to out of normal place _____	
hernia, rupture _____	

## The Eye

of, pertaining to, or  
relating to the eye  
ophthalm-  
ophthalm/o

3.

Here are some new terms. Ophthalmology is the medical specialty concerned with the eye, and its diseases. Ophthalm/o/malacia means an abnormal softening of the eyeball.

What is the word root? \_\_\_\_\_ Write the combining form: \_\_\_\_\_.

4.

*Ophthalm*, *ophthalm/o* are the word root and combining form for terms difficult to spell and pronounce. But if you pronounce the words correctly, the spelling will be easier. For example, oph/thal/mo is pronounced of thal' mō. The oph is pronounced as \_\_\_\_\_. In the word root ophthalm-, ph comes before th, as in the alphabet (p before t). Oph thal mō is pronounced \_\_\_\_\_.

Pronounce it.

of  
of thal' mō

5.

Here's a chance to practice your spelling and pronunciation. Use the combining form *ophthalm/o* and add each of these suffixes to build new words.

-cele	hernia, herniation
-meter	instrument for measuring
-plegia	paralysis

Build a term and then pronounce it carefully:

ophthalmoceles  
of thal' mō sēl  
ophthalmometer  
of' thal mom' e ter  
ophthalmoplegia  
of thal' mo plē' gē a

herniation of the eye (abnormal protrusion), \_\_\_\_\_;

instrument for measuring the eye, \_\_\_\_\_;

paralysis of the eye (eye muscle), \_\_\_\_\_.

6.

ophthalmologist  
of thal mol' ō jist

The physician who practices the medical specialty concerned with diseases of the eye is an \_\_\_\_\_.

7.

ophthalmoscope  
of thal' mō skōp

The instrument used for examining the interior of the eyeball through the pupil is an \_\_\_\_\_.

8.

double vision

*Dipl/o* means double or paired. *-Opia* is a suffix meaning vision. What does *dipl/opia* mean? \_\_\_\_\_.

9.

diplopia  
di plō' pē a

Whenever a pair of eyes fail to record a singular image in the brain, a double image occurs. The medical term for double vision is \_\_\_\_\_.

10.

double (or paired)  
bacteria  
bluish vision

Write a brief meaning for each of the following.

*dipl/o/bacteria*, \_\_\_\_\_;  
\_\_\_\_\_;

*cyan/opia*; \_\_\_\_\_.

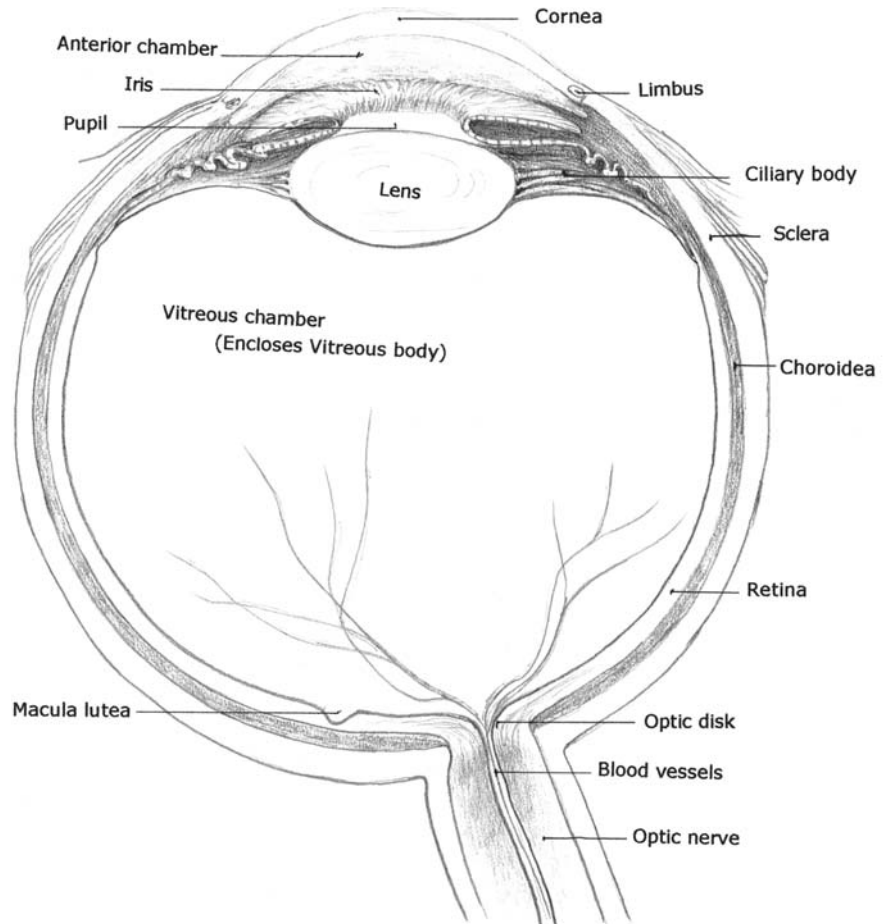
11.

blepharoptosis  
blephar-  
blephar/o

*Blephar/optosis* means prolapse (drooping) of an eyelid. The word root for eyelid is \_\_\_\_\_. The combining form is \_\_\_\_\_.

- blef ar e dē' ma  
blepharedema
12. Blephar/edema means excess fluid in the tissues of the eyelid. Underline the part of the term meaning swelling due to fluid in the tissues: blepharedema.
- blepharedema
13. The condition of swollen eyelids due to excess fluid in the eyelids is \_\_\_\_\_.
- blef' ar ō spazm  
twitching of the eyelid
14. Define each of the following terms:  
blepharospasm means \_\_\_\_\_.
- blef ar ōr' a fē  
suturing of the eyelid
- blepharorrhaphy means \_\_\_\_\_.
- blef ar ī' tis  
blepharitis
15. Build a word that means inflammation of the eyelid, \_\_\_\_\_.





**Figure 10.1** The Eye.

Sight is the most dominant of the human senses. Over 70% of the body's receptors are the specialized photosensitive cells of the eyes. It has been estimated that a third of all the fibers bringing impulses to the central nervous system come from the eye.

The human eye is somewhat like a camera that captures light and focuses it on a light-sensitive area. The wall of the eyeball consists of three coats or layers of tissue. The first layer is the fibrous, rubber-like protective coat called the *sclera*, known as the "white of the eye." The sclera gives the eyeball its shape, and can be seen around most of the eyeball's surface. A continuation of the sclera

and the most anterior segment of this fibrous coat is the cornea. The *cornea* is a transparent structure that bulges and has no blood vessels. It plays a big role in focusing light rays on the retina of the eye. The area called the *limbus* is where the cornea meets the sclera.

The middle layer of the eyeball is the vascular layer called the *choroidea*. It lies between the retinal and the scleral layers. The choroidea contains many blood vessels and includes the iris and the ciliary body. The iris, or the colored part of the eye seen through the cornea, is a fibromuscular body that circumscribes the hole (pupil) in front of the lens. Action of the iris increases and decreases the size of the pupil. Another portion of the choroidea is the ciliary body. This structure is continuous with the iris and contains the ciliary muscle, which controls eye movement. The lens is a tightly packed and encapsulated bunch of special fibers. Along with the cornea, it shares responsibility for bringing images into focus on the retina.

The fluid-filled space between the iris and the cornea is the *anterior chamber*. It contains a fluid material called aqueous humor which services the cells within its environment. A large cavity posterior to the lens is known as the *vitreous chamber*. This cavity contains a clear, gelatinous mass known as the vitreous body. The vitreous body maintains the shape of the eye and gives support to the retina.

The *retina* is the innermost coat of the eye, the neural layer. It lines a bit more than the posterior half of the globe. The retina is a complexly composed network of interlacing layers of blood vessels and photoreceptor cells that come together at the *optic disk*. This is actually a blind spot since there are no photoreceptors here. The optic disk penetrates the wall of the eye and forms the optic nerve which carries impulses to the brain.

When light enters the eye, it passes through the cornea, pupil, and lens, and focuses an image on the retina. At about the center of the retina there is a clearly depressed region with a dense accumulation of photoreceptor cells. This area of the retina providing the sharpest vision is called the *macula lutea*. At the center of macula is the *fovea centralis*. This site represents the center of the greatest visual acuity (clarity of form and color) under lighted conditions.

I hope you enjoyed your tour of the anatomy of the eye.

cornea (kerat/o)

iris (ir, irid, irid/o)

retina (retin/o)

sclera (skler/o)

pupil (cor, core/o)

ciliary body (cycl/o)

16.  
Use Illustration 10.1, The Eye, and the accompanying description. The cornea is the transparent tissue covering the anterior sixth of the eye. *Kerat*, *kerat/o* form words referring to the cornea. Write the meaning of each of the following:
- kor nē al  
pertaining to the  
cornea  
ker a top' a thē  
disease of the cornea
- corneal \_\_\_\_\_;
- kerat/o/pathy \_\_\_\_\_.
17.  
Using the combining form *kerat/o*, build a term meaning plastic repair of the cornea: \_\_\_\_\_.
- keratoplasty  
ker' a tō plas tē
18.  
The cornea is one-sixth of the outer coat of the eyeball. It is the transparent tissue covering the front of the eyeball. The word root and combining form meaning cornea are \_\_\_\_\_.
- kerat, kerat/o
19.  
*Scler/o* refers to the white of the eye. The sclera is the hard fibrous coat forming the outer envelope of the eye. It covers five-sixths of the eyeball. The other anterior sixth is occupied by the \_\_\_\_\_.
- cornea
20.  
Corneoscleral means pertaining to an area where the cornea meets the sclera. Write the meaning for each of the following:
- skler' al  
pertaining to the sclera
- scleral \_\_\_\_\_;
- skler' ō tōm  
instrument for cutting  
the sclera
- sclerotome \_\_\_\_\_.
21.  
Sclerectasia means bulging (stretching) of the white of the eye. Build a term meaning excision of a portion of the sclera: \_\_\_\_\_.
- sclerectomy  
skle rek' tō mē

ī' ris  
ir' i dō kor' nē al  
pertaining to the area  
where the iris and  
cornea meet

ir' id ō sēl  
hernia of the iris

ir/itus  
iritis  
ī rī' tis

i ri dal' jē ə  
pain in the iris

iridectomy  
i ri dek' tō mē

cornea  
vision, sight  
iris  
sclera  
eye  
eyelid  
iris

retinal  
ret' i n'l  
retinitis  
ret i nī' tis  
retinoid  
ret' i noyd

22.

*Iris* means rainbow. The iris is a diaphragm perforated in the center (the pupil). The word roots referring to the donut-shaped color in the eye are *ir*, *irid*, and *irid/o*. What do you think iridocorneal means? \_\_\_\_\_

Iridocele means \_\_\_\_\_

23.

One of the word roots for the iris is *ir*. It has very limited use, but it's always used to express inflammation.

Using the word root *ir* build a word meaning inflammation of the iris: \_\_\_\_\_ / \_\_\_\_\_.

24.

*Irid/o* is the combining form used to refer to the iris in almost all other words. *Iridalgia* means \_\_\_\_\_.

25.

Build a term meaning excision of part of the iris: \_\_\_\_\_.

26.

Write what each of the following word roots or combining forms means.

kerat/o, \_\_\_\_\_.

opia, \_\_\_\_\_.

irid/o, \_\_\_\_\_.

scler/o, \_\_\_\_\_.

ophthalm/o, \_\_\_\_\_.

blephar/o, \_\_\_\_\_.

ir, \_\_\_\_\_.

27.

*Retin/o* refers to the complex membrane lining the inside back surface of the eye. It receives the visual light rays, which the brain interprets and gives meaning. Build a word meaning

pertaining to the retina, \_\_\_\_\_;

inflammation of the retina, \_\_\_\_\_;

resembling the retina, \_\_\_\_\_.

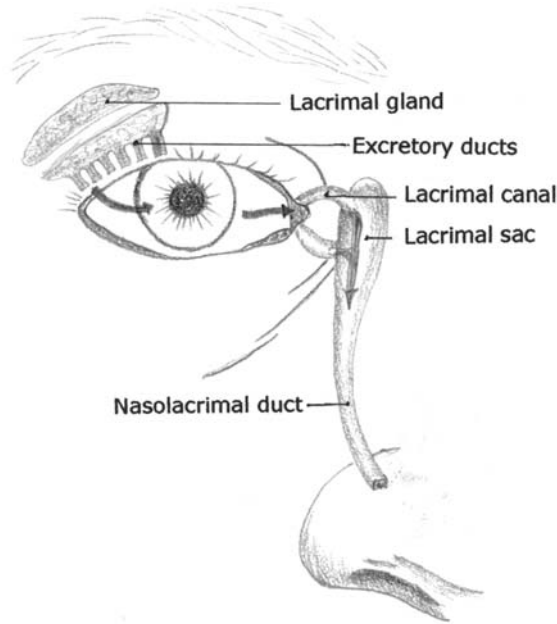
- retinoscope or  
ophthalmoscope  
ret' i nō skōp
28.  
Retinopexy means affixing (or adhering) the retina to the wall of the eyeball for correcting retinal detachment. What would you call an instrument for examining the retina to look for retinopathy?  
\_\_\_\_\_.
- ret i nop' a thē  
disease of the retina
29.  
What does retinopathy mean? \_\_\_\_\_  
\_\_\_\_\_.
- (eye), iris
30.  
The pupil is the circular opening in the center of the iris through which the light rays enter the eye. It is the core or center of the eye. *Cor, core/o* refer to the pupil in the center of the \_\_\_\_\_.  
\_\_\_\_\_.
- pupil  
dilation  
kōr ek tō' pē a  
a misplaced pupil
31.  
An ophthalmologist may use drops in the eye to dilate the pupil before an examination.  
Analyze the term *cor/ectasia*.  
*Cor-* is the root meaning \_\_\_\_\_;  
*ectasia* means \_\_\_\_\_.  
What does *cor/ectopia* mean? \_\_\_\_\_  
\_\_\_\_\_.
- kōr ē om' e trē  
measuring the size of a  
pupil
32.  
Coreoplasty is a surgical procedure for correcting a deformed pupil.  
Write a term meaning to measure the size of a pupil. \_\_\_\_\_  
\_\_\_\_\_.
- sī klō pa ral' i sis  
paralysis of the ciliary  
body
33.  
Take another look at Illustration 10.1, The Eye. The ciliary body controls movement of the eye. The word root for ciliary body is *cycl/o*. It means circle or surrounding.  
What does *cyclo/paralysis* mean? \_\_\_\_\_  
\_\_\_\_\_.
- sī klō krī' ō ther' a pē  
cyclocryotherapy
34.  
Cyclocryotherapy means freezing of the ciliary body in the treatment of glaucoma. Underline the part of the term referring to freezing: cyclocryotherapy.

sī klō ker a tī' tis  
inflammation of the  
cornea and the  
ciliary body

35.

Use Illustration 10.1 for help. Cyclitis means inflammation of the ciliary body. What is the meaning of cyclokeratitis? \_\_\_\_\_

\_\_\_\_\_.



**Figure 10.2** The Lacrimal apparatus.

The human lacrimal apparatus is responsible for producing tears and delivering them to the eye. When an excess is produced, the tears flow into the nasal cavities.

The lacrimal apparatus begins with the *lacrimal gland* seen under the upper lateral eyebrow and extending inward toward the midline. Blinking stimulates the lacrimal gland to secrete lacrimal fluid (tears) that washes the eye. It also contains substances that destroy the cell walls of bacteria, and it moistens the surface of the eye. The fluid passes through a series of excretory ducts and enters a fold of tissue under the upper eyelid. The eyelid then distributes the tears across the eyeball. Excess fluid flows to the medial corner of the eye passing through a tiny opening and entering the *lacrimal canal*. The upper and lower lacrimal canals drain into the *lacrimal sac*. Excess tears move from the lacrimal sac into the *nasolacrimal duct* and pass through an opening into the nose. This is the reason one sniffs when crying.



40.

Try these now. Write the meaning of each of the following word roots:

retina  
pupil  
ciliary body  
eyelid  
cornea  
eye  
sight, vision  
iris

retin/o, \_\_\_\_\_.  
cor/o, core/o, \_\_\_\_\_.  
cycl/o, \_\_\_\_\_.  
blephar/o, \_\_\_\_\_.  
kerat/o (corne/o), \_\_\_\_\_.  
ophthalm/o, \_\_\_\_\_.  
opia, \_\_\_\_\_.  
irid/o, \_\_\_\_\_.



## The Respiratory Tract

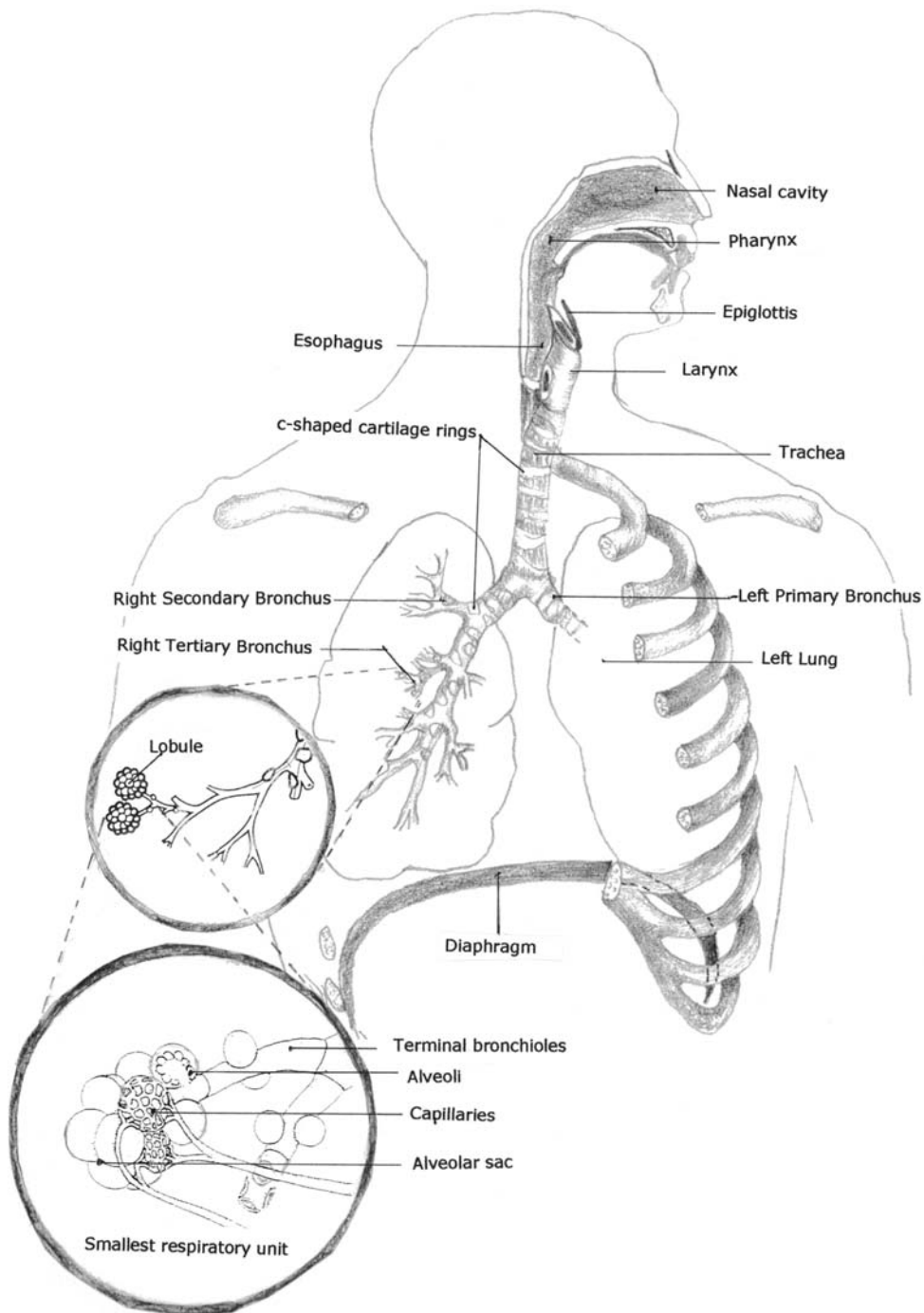


Figure 10.3 The Respiratory Tract.

The respiratory system consists of passageways that receive incoming air and carry it to the *lungs* for exchange of oxygen and carbon dioxide gases. The lungs are the main organs of gas exchange in the body. They are soft, spongy organs enveloped in a tough, wet and slippery transparent membrane called the *pleura*. The lungs are protected by the bony cage of the thorax. Most of the rest of the skeleton of the respiratory tract is cartilaginous, right down to the smallest air passageway. The dome-shaped muscular *diaphragm* provides most of the force necessary for inspiration and expiration of air. One quarter of the force is generated by the intercostal muscles moving the ribs. When the diaphragm contracts and flattens in its space, air enters the lungs. When it relaxes, air is expelled from the lungs.

Air enters the respiratory tract through the oral and nasal cavities. The *nasal cavity* houses the olfactory sense organ used in the sense of smell. The *pharynx* is an open area continuous with the nasal cavity, and its lower end opens to the *esophagus* and *larynx*. These upper passageways warm, moisten and purify the air on its way to the lower respiratory tract.

The *larynx* is an enlarged section of the upper respiratory tract at the top of the trachea. The opening to the larynx is guarded by a leaf-like flap of cartilage called the *epiglottis*. This structure prevents food from entering the respiratory passageway and directs it to the esophagus. Beneath the epiglottis is the opening to the larynx called the *glottis*. The larynx houses the vocal cords, an important component of the larynx used in speaking. For this reason, the larynx is often called the voice box. The vocal cords are composed of elastic fibers that help produce sound when air is forced between them. These sound waves are formed into words by the changing shapes of the pharynx and oral cavity and by using the tongue and lips.

Inferior to the larynx is the *trachea*, the passageway of air to the lungs. The trachea is a flexible cylindrical tube about one inch in diameter and approximately four inches in length. It is composed of 16 to 20 incomplete c-shaped rings of cartilage connected to one another by very elastic ligaments. The cartilage rings provide a semi-rigid support to the wall of the trachea, preventing it from collapsing inward. The trachea extends downward in front of the esophagus and into the thoracic cavity.

The *bronchial tree* consists of the branched airways extending from the trachea to the smallest respiratory unit in the lung. It begins with the left and right *primary bronchi* (pl.) Each primary bronchus enters a lung and then subdivides, forming left and right *secondary bronchi*. We see three secondary bronchi in the

anatomical right lung. The secondary bronchi branch again and the *tertiary bronchi* become *bronchioles*, less than 1 mm in diameter. These bronchioles give off smaller *terminal bronchioles* that represent the end of the air-conducting pathway.

Each *respiratory bronchiole* supplies air to lobules. A lobule is a basic gas exchange complex composed of air cells, called *alveoli*, which are arranged in *alveolar sacs*. The walls of the air cells are surrounded by capillaries. *Capillaries* are networks of pulmonary *arterioles* and pulmonary *venules*. The walls of the capillaries are fused to the structurally similar walls of the alveoli. Oxygen and carbon dioxide rapidly diffuse through the walls of these microscopic cells. The blood readily absorbs the oxygen, and gives up the carbon dioxide which is quickly exhausted to the external atmosphere. These basic units make up most of the lung's volume. Nowhere in the body does the outside world, with all its creatures of microscopic dimension, have such an easy access to the protected interior cavities of the body as it does at the air/blood interfaces in the lungs.

lung (pneumon/o)	diaphragm
nasal cavity (nas/o)	pharynx (pharyng/o)
esophagus (esophag/o)	larynx (laryng/o)
breathe, breathing (pne/o)	air, gases (pneum/o)

trachea (trache/o)	pleura (pleur/o)
--------------------	------------------

bronchus, (bronch/o), whether primary, secondary or tertiary parts of the bronchial tree.

41.

See above to help you identify the word root for each anatomical part. Then write a meaning for each of the following terms.

la rin jī' tis  
inflammation of the  
voice box

laryng/itis means \_\_\_\_\_

plōōr ī' tis  
inflammation of the  
pleura

pleuritis means \_\_\_\_\_;

fair ing' gō plas tē  
plastic surgery of the  
throat

pharyng/o/plasty means \_\_\_\_\_.

42.

la ring' gō sēl  
herniation of the voice  
box

Look again at Illustration 10.3. Seeing the various parts will help you learn. What does laryng/o/cele mean? \_\_\_\_\_.

- laryngectomy  
la rin jek' tō mē
43.  
Build a term meaning surgical removal of the voice box:  
\_\_\_\_\_.
- la ring' gō skōp  
instrument for  
examining the  
voice box
44.  
Write a meaning for each of the following:  
laryngoscope means \_\_\_\_\_  
\_\_\_\_\_.
- la ring' gō spazm  
spasm of the voice box
- laryngospasm means \_\_\_\_\_  
\_\_\_\_\_.
- trā kē ō rā' jē ə  
hemorrhage from the  
windpipe
45.  
See Illustration 10.3 again. *Trachea* means windpipe. Write a brief definition for each of the following new terms:  
tracheorrhagia \_\_\_\_\_  
\_\_\_\_\_.
- trā kē al' jē ə  
pain in the windpipe
- trachealgia \_\_\_\_\_  
\_\_\_\_\_.
- trā kē os' tō mē  
a permanent opening  
into the windpipe
- tracheostomy \_\_\_\_\_  
\_\_\_\_\_.
- trache or trache/o
46.  
Write the word root and combining form for windpipe:  
\_\_\_\_\_.
- brong kos' kō pē  
looking into the  
bronchus
47.  
*A bronchus* is one of the major divisions of the windpipe. The bronchi (plural) direct the air into the lungs. Write a meaning for each of the following:  
bronchoscopy \_\_\_\_\_  
\_\_\_\_\_.
- bron' kō spazm  
spasm of the bronchus
- bronchospasm \_\_\_\_\_  
\_\_\_\_\_.
- brong kī' tis  
inflammation of the  
bronchus or bronchi
- bronchitis \_\_\_\_\_  
\_\_\_\_\_.
- bronch, bronch/o
48.  
The word root and combining form meaning major branches of the windpipe that open into the lungs is \_\_\_\_\_.

49.  
Pleural means pertaining to the covering on the lungs. The pleural membrane completely covers the lungs and clings to it like plastic wrap. Only a few drops of thick fluid keep the lung and the pleura apart.
- plōō rī' tis  
inflammation of the  
pleura
- Pleuritis means \_\_\_\_\_.
50.  
Pleurisy is another word for inflammation of the covering of the lungs. Build a term that means pain in the pleura:
- pleuralgia or  
pleurodynia  
plōō ral' jē ə  
plōō rō din' ē ə
- \_\_\_\_\_.
51.  
Pleurisy may cause excessive fluid to collect within the space between the lung and the pleura. What do you think pleurocentesis means? \_\_\_\_\_
- plōō rō sen tē' sis  
puncture of the pleural  
space and removing  
the fluid
- \_\_\_\_\_.
52.  
Refer to Illustration 10.3 again. The musculomembranous wall separating the abdomen from the chest cavity is the \_\_\_\_\_.
- diaphragm  
dī' a fram
53.  
During inspiration the diaphragm contracts; it flattens out downward, permitting the lungs to move downward and fill with air. Inspiration is breathing \_\_\_\_\_.
- in
- (in/out)
54.  
During expiration the diaphragm relaxes. It resumes its inverted basin shape, squeezing the lungs and expelling the air out of the lungs. Expiration is breathing \_\_\_\_\_.
- out
- (in/out)
55.  
The organ largely responsible for inspiration and expiration is the \_\_\_\_\_.
- diaphragm
56.  
A sudden spasm of the diaphragm usually produces a giggle all around. It is called singultus. Can you guess what it means?
- hiccough, or hiccup  
hik' kof
- \_\_\_\_\_.

singultus sin gul' tus	57. Another term for hiccough is _____.
hē mop' ti sis spitting blood	58. <i>Ptyis</i> means spitting. What does hem/o/ptysis mean? _____.
-ptysis	59. Hemoptysis means spitting blood (arising from hemorrhage of larynx, trachea, bronchi, or lungs). Write the suffix meaning spitting, or spitting up. _____
hē ma tem' a sis expelling blood from the stomach (vomiting blood)	What does hemat/emesis mean? _____.
hem/o, hemat/o	60. Write the two combining forms for blood you just used in frames above. _____ and _____.
hemoptysis	61. Using either suffix, -ptysis or -emesis, build a medical term to express the following definitions:
hematemesis	spitting blood from hemorrhage of the lungs is _____
epistaxis	expelling blood from the stomach is _____
ep i stak' sis rhinorrhagia	62. <i>Epistaxis</i> means nosebleed. What does rhinorrhagia mean? _____.
spitting blood (arising from the larynx, trachea, bronchi, or lungs)	63. Two terms mean severe bleeding from the nose. They are _____ and _____.
vomiting blood (from the stomach)	64. What does hemoptysis mean? _____ _____ _____.
	65. What does hematemesis mean? _____ _____.

epistaxis  
rhinorrhagia

66.  
Nasal hemorrhage is \_\_\_\_\_ or \_\_\_\_\_.

nyōō mat' ik  
pertaining to air or  
gases (or exchange  
of gases)

67.  
*Pneum/o, pneumat/o* mean air, gases, or exchange of gases. What  
does pneumatic mean? \_\_\_\_\_  
\_\_\_\_\_.

brad ip nē' a  
breathing very slowly

68.  
*Pne/o* relates to breathing. Do you remember what bradypnea  
means? \_\_\_\_\_

pne/o (nē ō)

69.  
The combining form referring to inhale and exhale, or in other  
words to breathe, is \_\_\_\_\_.

*Pneum/o, pneumat/o* are combining forms meaning air, gases, or  
exchange of gases. Explain what these terms mean:

an abnormal condition  
of air in a joint

*Pneum/arthr/osis* \_\_\_\_\_  
\_\_\_\_\_

a condition of air in the  
heart

*Pneumato/cardia* \_\_\_\_\_  
\_\_\_\_\_

air in the urine during  
or after urination

*Pneumat/uria* \_\_\_\_\_  
\_\_\_\_\_

pneum-

What is the word root for air or gases? \_\_\_\_\_.

nyōō mol' ō jē  
air or gases

70.  
*Pneum/ology* refers to the science of how the lungs exchange  
\_\_\_\_\_ or \_\_\_\_\_.

not breathing,  
breathing is absent

Apnea means \_\_\_\_\_.

pneumotherapy  
nyōō mō ther' ə pē

71.  
Hydrotherapy means treatment with water. Build a term meaning  
treatment with (compressed) air: \_\_\_\_\_.

pneum/o  
pneumon/o

72.  
*Pneumon, pneumon/o* mean lung. At a quick glance you may confuse  
it with the root for air or gases. Write the combining forms for  
both: \_\_\_\_\_; \_\_\_\_\_.  
air or gases lung

pneumonitis  
nyōō mō nī' tis  
pneumonectomy  
nyōō mōn ek' tō mē

73.  
Pneumonia is a serious disease of the lung. Build a term for each of the following:  
inflammation of the lung \_\_\_\_\_.  
surgical removal of a lung \_\_\_\_\_.

pne/o (nē ō)

74.  
Drawing air into the lungs and pushing air out of the lungs is called breathing. The combining form referring to breathing is \_\_\_\_\_.

nyōō mon' ō graf  
radiographic picture  
of the lungs (chest  
X ray)

75.  
Pneum/o/encephal/o/graphy means X ray examination of spaces within the brain. These X rays are taken following withdrawal of cerebrospinal fluid (via lumbar puncture) and replacement of it with injected air or gas. What is a pneumon/o/graph? \_\_\_\_\_.

breathing, breathe  
air or gas  
lung

76.  
Write a brief meaning for each of the following:  
Pne/o \_\_\_\_\_.  
Pneum/o or pneumat/o \_\_\_\_\_.  
Pneumon/o \_\_\_\_\_.

thorax  
thor' aks

77.  
*Thorax* encloses the chest cavity. It refers to the upper part of the trunk between the neck and the abdomen. The diaphragm separates the abdomen from the \_\_\_\_\_.

thoracic cavity or  
thorax

78.  
The organs of the digestive apparatus are enclosed in the abdomen. The chief organs of the circulatory and respiratory systems are located in the \_\_\_\_\_.

thor a cot' ə mē  
incision into the chest  
cavity  
thor a cō sen tē' sis  
puncture of the chest  
cavity to draw off  
fluid

79.  
*Thorac* and *thorac/o* are the word root and combining form referring to the chest cavity.  
Thoracotomy means \_\_\_\_\_.  
Explain thoracocentesis: \_\_\_\_\_.



hē mō thor' aks  
blood in the chest  
cavity

80.  
Pneumothorax means air in the chest cavity. What does hemothorax mean? \_\_\_\_\_.

81.  
Let's conclude this unit with a review. Using the suggested answers, complete each of the following brief definitions. Write your answer in the space provided.

SUGGESTED ANSWERS:

bronchus(i)	pleura
diaphragm	trachea
larynx	singultus
pharynx	epistaxis

larynx  
bronchi  
epistaxis  
trachea  
singultus  
pharynx  
pleura  
diaphragm

voice box, \_\_\_\_\_.  
main branches of the windpipe, \_\_\_\_\_.  
severe nosebleed, \_\_\_\_\_.  
windpipe, \_\_\_\_\_.  
hiccough, \_\_\_\_\_.  
throat, \_\_\_\_\_.  
tough film enveloping the lungs, \_\_\_\_\_.  
muscle controlling breathing, \_\_\_\_\_.

82.  
Try that again.

SUGGESTED ANSWERS:

apneic	hemoptysis
pneumothorax	rhinoplasty
pneumonogram	pneumonia
nasal	pleurodynia

pneumonia  
hemoptysis  
pneumonogram  
pneumothorax  
nasal  
rhinoplasty  
pleurodynia  
apneic

serious lung condition, \_\_\_\_\_.  
spitting blood (arising from trachea), \_\_\_\_\_.  
X ray of the lung(s), \_\_\_\_\_.  
collection of air in the chest cavity, \_\_\_\_\_.  
pertaining to the nose, \_\_\_\_\_.  
a "nose job," \_\_\_\_\_.  
pain in the pleura, \_\_\_\_\_.  
pertaining to absence of breathing, \_\_\_\_\_.

83.

Here's one last exercise to show how far you have come! For each area of medical concern, write the term describing a practicing specialist

	AREA OF MEDICAL CONCERN	SPECIALIST
Pathologist	Bodily changes in structure and function due to disease	_____
Psychiatrist	Mental illness	_____
Dermatologist	Skin and its diseases	_____
Gynecologist	Diseases of women	_____
Cardiologist	Diseases of the heart	_____
Neurologist	Nervous system diseases	_____
Pediatrician	Childhood illnesses	_____
Obstetrician	Pregnancy and childbirth	_____
Ophthalmologist	Diseases of the eye	_____
Urologist	Conditions of urogenitals	_____

84.

Try it again. Describe the area of medical concern for these specialists.

	SPECIALIST	AREA OF MEDICAL CONCERN
Bones and muscles	Orthopedist	_____
Pregnancy and childbirth	Obstetrician	_____
Old age, aging	Geriatrician	_____
Causes of epidemics	Epidemiologist	_____
Skilled diagnosing	Diagnostician	_____
Anesthesia and pain	Anesthesiologist	_____
Urinary and genitals	Urologist	_____
Tumors and treatment	Oncologist	_____
Ear, nose, throat, and voice box	Otorhinopharyngolaryngologist	_____

85.

Here are 50 more medical terms you have worked with in Unit 10. Don't forget to pronounce each one carefully before taking the final Unit 10 Self-Test.

apnea (ap' nē ə)	blepharorrhaphy (blef ar ōr' ā fē)
bradypnea (brad ip nē' ə)	blepharoptosis
blepharedema (blef' ar ə dē' mā)	(blef ar op tō' sis)

bronchitis (brong kī' tis)	ophthalmalgia (of' thal mal' jē ə)
bronchoscopy (brong kos' kō pē)	ophthalmoscope (of thal' mō skōp)
corectasia (kōr ek tā' zē ə)	pharyngitis (fair in jī' tis)
corectopia (kōr ek tō' pē ə)	pharyngotomy (fair in got' ō mē)
coreometer (kōr ē om' e ter)	pleuralgia (plōō ral' jē ə)
coreoplasty (kōr' ē ō plas tē)	pleurisy (plōōr' i sē)
corneal (kor' nē al)	pleurocentesis (plōōr' ō sen tē' sis)
cyclokeratitis (sī' klō ker i tī' tis)	pneumohemothorax (nyōō mō hē mō thōr' aks)
cycloplegia (sī klō plē' jē ə)	pneumonia (nyōō mō' nē ə)
diaphragm (dī' a fram)	retinitis (ret i nī' tis)
diplopia (di plō' pē ə)	retinopathy (ret i nop' ə thē)
epistaxis (ep i stak' sis)	retinoscopy (ret i nos' kō pē)
hemoptysis (hē mop' ti sis)	rhinoplasty (ri' nō plas tē)
iridectomy (ir i dek' tō mē)	sclerectomy (skler ek' tō mē)
iridocoele (ir id ō sēl)	sclerotome (skler' ə tōm)
iridoplegia (ir id ō plē' jē ə)	singultus (sing gul' tus)
iritis (ī rī' tis)	tracheorrhagia (trā kē ō rāj' jē ə)
keratome (ker' ə tōm)	tracheostomy (trā kē os' tō mē)
keratoplasty (ker' ə tō plas tē)	thorax (thor' aks)
keratoscleritis (ker' ə tō skler ī' tis)	thoracocentesis (thōr' ə kō sen tē' sis)
keratotomy (ker a tōt' ō mē)	
laryngeal (la rin' jē al)	
laryngospasm (la ring' gō spazm)	
nasolacrimal (nā zō lak' ri məl)	
nasopharyngitis (nā' zō fair in jī' tis)	

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## Unit 10 Self-Test

### Part 1

From the list on the right, select the correct meaning for each of the following often used medical terms.

- |                          |                                                           |
|--------------------------|-----------------------------------------------------------|
| _____ 1. Pneumonectomy   | a. Nosebleed                                              |
| _____ 2. Keratoscleritis | b. Spitting blood                                         |
| _____ 3. Pleurocentesis  | c. Pertaining to nose and chin                            |
| _____ 4. Corectasia      | d. Stretching (dilation) of the pupil                     |
| _____ 5. Pleuralgia      | e. Puncture of the pleural space to remove fluid          |
| _____ 6. Blepharedema    | f. Pain of the pleura                                     |
| _____ 7. Hemoptysis      | g. Instrument to cut the cornea                           |
| _____ 8. Ophthalmologist | h. Paralysis of the iris                                  |
| _____ 9. Nasomental      | i. Inflammation of cornea and sclera                      |
| _____ 10. Iridoplegia    | j. Resembling the retina                                  |
| _____ 11. Tracheorrhagia | k. Swollen eyelids due to fluid in the tissues            |
| _____ 12. Keratome       | l. Physician who specializes in the study of eye diseases |
| _____ 13. Epistaxis      | m. Hemorrhage from the trachea                            |
| _____ 14. Retinoid       | n. Inflammation of the bronchi                            |
| _____ 15. Bronchitis     | o. Surgical removal of a lung                             |

**Part 2**

Write the medical term for each of the following brief definitions.

1. Air in the chest cavity \_\_\_\_\_
2. Pertaining to nose and tears \_\_\_\_\_
3. Incision into the throat \_\_\_\_\_
4. Hiccough \_\_\_\_\_
5. Instrument to examine the eye \_\_\_\_\_
6. Plastic surgery of the cornea \_\_\_\_\_
7. Double vision \_\_\_\_\_
8. Drooping eyelid \_\_\_\_\_
9. Pain in the covering of the lung \_\_\_\_\_
10. Permanent opening into the windpipe \_\_\_\_\_
11. Inflammation of the iris \_\_\_\_\_
12. Spasm of the voice box \_\_\_\_\_
13. Pertaining to the cornea \_\_\_\_\_
14. Nosebleed \_\_\_\_\_
15. Very fast breathing \_\_\_\_\_

**ANSWERS****Part 1**

1. o
2. i
3. e
4. d
5. f
6. k
7. b
8. l
9. c
10. h
11. m
12. g
13. a
14. j
15. n

**Part 2**

1. Pneumothorax
2. Nasolacrimal
3. Pharyngotomy
4. Singultus
5. Ophthalmoscope
6. Keratoplasty
7. Diplopia
8. Blepharoptosis
9. Pleurodynia
10. Tracheostomy
11. Iritis
12. Laryngospasm
13. Corneal
14. Epistaxis
15. Tachypnea

# Review Sheets

## Unit 1: Review Sheet

### Part 1

Cover the column of words on the right. In the space provided write the meaning of each word part listed in the left column. Check your answers.

Word Part	Meaning	(Hide This Column)
acr/o-	_____	extremity
megal/o-	_____	enlargement
dermat/o-	_____	skin
cyan/o-	_____	blue
derm/o-	_____	skin
leuk/o-	_____	white
-itis	_____	inflammation
cardi/o-	_____	heart
gastr/o-	_____	stomach
cyt/o-	_____	cell
-ologist	_____	one who studies
-algia	_____	pain
-ectomy	_____	excision
-otomy	_____	incision
-ostomy	_____	new opening
duoden/o-	_____	duodenum
electr/o-	_____	electricity
-ology	_____	study of
-osis	_____	condition of
-tome	_____	instrument that cuts
gram/o-	_____	record
eti/o-	_____	cause of
path/o-	_____	disease

Now, do Part 2.

## Part 2

Cover the word parts in the right-hand column. In the space provided write a suffix or word part that expresses the meaning of each word in the left column. Check your answers.

Meaning	Word Part	(Hide This Column)
record	_____	gram/o-
one who studies (suffix)	_____	-ologist
enlargement	_____	megal/o-
electric	_____	electr/o-
white	_____	leuk/o-
incision into (suffix)	_____	-otomy
blue	_____	cyan/o-
instrument that cuts (suffix)	_____	-tome
stomach	_____	gastr/o-
extremity	_____	acr/o-
(abnormal) condition of (suffix)	_____	-osis
changes due to disease	_____	path/o-
new opening formed (suffix)	_____	-ostomy
skin	_____	dermat/o-, dermat
study of (suffix)	_____	-ology
heart	_____	cardi/o-
excision (suffix)	_____	-ectomy
inflammation of (suffix)	_____	-itis
duodenum	_____	duoden/o-
pain (suffix)	_____	-algia
cell	_____	cyt/o-
cause of	_____	eti/o-

## Unit 2: Review Sheet

### Part 1

Cover the column of words on the right. In the space provided write the meaning of the word parts listed in the left column. Check your answers.

Word Part	Meaning	(Hide This Column)
aden/o-	_____	gland
carcin/o-	_____	cancer
malac/o-	_____	soft, softened
-oid	_____	resembling
laryng/o-	_____	larynx
cephal/o-	_____	head
hyper-	_____	excessive, more than normal
-cele	_____	herniation
ost/o-, oste/o-	_____	bone
arthr/o-	_____	joint
chondr/o-	_____	cartilage
cost/o-	_____	rib
lip/o-	_____	fat
inter-	_____	between
dent/o-, dont/o	_____	tooth
-emesis	_____	vomiting
-oma	_____	tumor
-plast/o, -plast/y	_____	repair
hypo-	_____	under, less than normal
troph/o-	_____	development
morph/o-	_____	structure and form
muc/o-	_____	mucus
onc/o-	_____	tumor
hist/o-	_____	tissue(s)
en-, endo-	_____	inside, within
ex-, exo-	_____	out, completely outside



**Part 2**

Cover the column on the right while you work. In the space provided, write the word part or combining form that matches the definition listed in the left column.

Meaning	Word Part	(Hide This Column)
rib	_____	cost/o-
larynx	_____	laryng/o-
development	_____	troph/o-
cancer	_____	carcin/o-
repair (suffix)	_____	-plast/o(/y)
tooth	_____	dent/o-, dont/o
mucus	_____	muc/o-
under, less than normal	_____	hypo-
herniation (suffix)	_____	-cele
soft, softened	_____	malac/o-
gland	_____	aden/o-
tumor (suffix)	_____	-oma
bone	_____	oste/o-
vomiting (suffix)	_____	-emesis
head	_____	cephal/o-
joint	_____	arthr/o-
between (prefix)	_____	inter-
resembling (suffix)	_____	-oid
fat	_____	lip/o-
inside, within (prefix)	_____	en-, endo-
cartilage	_____	chondr/o-
excessive, more than normal (prefix)	_____	hyper-
tissue	_____	hist/o-
structure and form	_____	morph/o-
tumor(s)	_____	onc/o-
out, completely outside (prefix)	_____	ex-, exo-

## Unit 3: Review Sheet

### Part 1

Cover the column of words on the right. In the space provided write the meaning of each word part listed in the left column. Check your answers.

Word Part	Meaning	(Hide This Column)
cyst/o-	_____	bladder
-ar	_____	pertaining to
crani/o-	_____	cranium (skull)
dipl/o-	_____	double
ab-	_____	away from
cocc/i-	_____	coccus
metr/o, meter-	_____	measure
py/o-	_____	pus
-genesis, gen/o-	_____	produce, originate
-orrhea	_____	flow
ot/o-	_____	ear
-centesis	_____	puncture
rhin/o-	_____	nose
lith/o-	_____	stone or calculus
hydro-	_____	water
chol/e-	_____	gall, bile
thorac/o-	_____	thorax or chest
pelv/i-	_____	pelvis
ad-	_____	toward
abdomin/o-	_____	abdomen
therap/o-	_____	treatment
cephal/o-	_____	head, cranium
phob/ia	_____	fear
cardi/o	_____	heart

Now, do Part 2.

**Part 2**

Cover the word parts on the right. In the space provided write a term that expresses the meaning of each word in the left column. Check your answers.

Meaning	Word Part	(Hide This Column)
water, watery fluid	_____	hydro-
flow, discharge (suffix)	_____	-orrhea
abnormal fear	_____	phob/ia
double, pairs	_____	dipl/o-
head	_____	cephal/o
pelvis	_____	pelv/i-
gall, bile	_____	chol/e-
nose	_____	rhin/o-
puncture of a cavity (suffix)	_____	-centesis
pus	_____	py/o-
treatment	_____	therap/o-
toward the midline (prefix)	_____	ad-
produce, originate (suffix, prefix)	_____	-genesis, gen/o-
bladder	_____	cyst/o-
coccus	_____	cocc/i-, cocc/o
measure	_____	metr/o-, meter-
stone or calculus	_____	lith/o-
ear	_____	ot/o-
thorax or chest	_____	thorac/o-
cranium (skull)	_____	crani/o-
away from the midline (prefix)	_____	ab-
abdomen	_____	abdomin/o-

## Unit 4: Review Sheet

### Part 1

Cover the right-hand column. Write the meaning of each word or word part in the left column. Be sure to check your answers.

Word/ Word Part	Meaning	(Hide This Column)
-peps/ia	_____	digestion
neur/o-	_____	nerve
blast/o-	_____	immature cell form, germ cell
a-, an-	_____	without
angi/o-	_____	vessel
-spasm	_____	twitching, spasm
scler/o-	_____	hard, hardened
-tachy	_____	fast
aneurysm	_____	ballooning-out vessel
fibr/o-	_____	fibrous, fiber
lys/o-	_____	destruction, dissolution
pne/o-	_____	breathe, breathing
arteri/o-	_____	artery
men/o-	_____	menses, menstruation
hemat/o-, hemo-	_____	blood
kinesi/o-	_____	movement
spermat/o-	_____	spermatozoon, spermatozoa (plural)
oophor/o-	_____	ovary
-pexy	_____	fixation
salping/o-	_____	fallopian tube
dys-	_____	bad, painful, difficult
hyster/o-	_____	uterus
-ptosis	_____	prolapse, drooping
-brady	_____	slow
anomaly	_____	irregularity, breaks the rule
ur/o-	_____	urine

(Continued on next page)

nephr/o-	_____	kidney
pyel/o-	_____	renal pelvis
ureter/o-	_____	ureter
-orrhaphy	_____	to suture, repair
urethr/o-	_____	urethra
-orrhagia	_____	hemorrhage
colp/o-	_____	vagina
crypt/o-	_____	hidden
orchid/o-	_____	testis, testes (plural)
hernia	_____	protrusion through cavity wall

**Part 2**

<b>Meaning</b>	<b>Word/Word Part</b>	<b>(Hide This Column)</b>
artery	_____	arteri/o-
vessel	_____	angi/o-
uterus	_____	hyster/o-
movement	_____	kinesi/o-
destruction, dissolution	_____	lys/o-
blood	_____	hemat/o-, hem/o-
protrusion through cavity wall	_____	hernia
urine	_____	ur/o-
hard, hardening	_____	scler/o-
slow (prefix)	_____	brady-
fallopian tube	_____	salping/o-
muscle	_____	my/o-
without (prefix)	_____	a-, an-
nerve	_____	neur/o-
surgical fixation (suffix)	_____	-pexy
germ cell (immature)	_____	blast/o-
ballooning-out vessel	_____	aneurysm
ovary	_____	oophor/o-
breathe	_____	pne/o-
digestion	_____	-peps/ia
prolapse, drooping	_____	-ptosis
bad, painful, difficult (prefix)	_____	dys-
spermatozoa (pl.)	_____	spermat/o-
fibrous, fiber	_____	fibr/o-
twitching (suffix)	_____	-spasm
fast, rapid (prefix)	_____	tachy-
hemorrhage (suffix)	_____	-orrhagia
renal pelvis	_____	pyel/o-
vagina	_____	colp/o-
ureter	_____	ureter/o-
kidney	_____	nephro-
irregularity, breaks the rule	_____	anomaly

*(Continued on next page)*

urethra	_____	urethr/o-
to suture, repair (suffix)	_____	-orrhaphy
hidden	_____	crypt/o-
testes (pl.)	_____	orchid/o-
menses, menstruation	_____	men/o-

Congratulations!

## Unit 5: Review Sheet

### Part 1

Cover the right-hand column. Write the meaning of each word or word part in the left column. Be sure to check your answers.

Word/ Word Part	Meaning	(Hide This Column)
stomat/o-	_____	mouth
gloss/o-	_____	tongue
cheil/o-	_____	lips
gingiv/o-	_____	gums
esophag/o-	_____	esophagus
enter/o-	_____	small intestine
-scope	_____	instrument to look, examine
col/o-	_____	colon
rect/o-	_____	rectum
proct/o-	_____	anus and rectum
hepat/o-	_____	liver
pancreat/o-	_____	pancreas
clys/o, -clysis	_____	wash, irrigate
-ectasia	_____	dilation, stretching
-spasm	_____	twitching, cramping
dent/o-	_____	teeth, tooth
toxin	_____	poison, poisoning
hypo-	_____	under, beneath
hyper-	_____	excessive
-algia	_____	pain, ache
-osis	_____	abnormal, diseased condition
-ostomy	_____	surgery to form a new opening (permanent)
-otomy	_____	incision into
-ectomy	_____	surgical removal of
-pexy	_____	surgical fixation of a part in its normal place



**Part 2**

Meaning	Word/Word Part	(Hide This Column)
cramping, twitching	_____	spasm
liver	_____	hepat/o-
excessive (prefix)	_____	hyper-
small intestine	_____	enter/o-
surgical incision into	_____	-otomy
(suffix)		
surgery to form a	_____	-ostomy
new opening		
(suffix)		
pertaining to teeth	_____	dental
rectum and anus	_____	proct/o-
lips	_____	cheil/o-
wash, irrigate (suffix)	_____	-clysis
esophagus	_____	esophag/o-
colon	_____	col/o-
gums	_____	gingiv/o-
mouth	_____	stomat/o-
pain, ache (suffix)	_____	-algia
dilation, stretching	_____	-ectasia
(a suffix)		
pancreas	_____	pancreat/o-
rectum	_____	rect/o-
tongue	_____	gloss/o-
surgical fixation of a	_____	-pexy
part in normal		
place (suffix)		
look, examine (suffix)	_____	-scopy

## Unit 6: Review Sheet

### Part 1

Cover the right-hand column. Write the meaning of each word or word part listed in the left-hand column in the space provided. Be sure to check your answers.

Word/ Word Part	Meaning	(Hide This Column)
phleb/o-	_____	vein
dys-	_____	bad, difficult, painful
-orrhexis	_____	rupture, bursting apart
-esthesia	_____	sensation, feeling
fibrillation	_____	very rapid heartbeat
-algisia	_____	sensation of pain
phas/o-	_____	speech
thrombosis	_____	occlusion of a blood vessel by a blood clot
-tripsy	_____	surgical crushing
plas/o-	_____	formation, development
syn-, sym,	_____	together as one
a-, an-	_____	without, absent
embolus	_____	foreign particle floating in bloodstream
dactyl/o-	_____	fingers, toes, digits
cardiac arrest	_____	cessation of heartbeat
-emia	_____	blood
embolism	_____	vessel occluded, blocked by an embolus
myel/o-	_____	spinal cord, or bone marrow
poly-	_____	many
micro-	_____	very small, microscopic
defibrillation	_____	restoration of regular heartbeat (often with electric shock)
thrombus	_____	blood clot in the bloodstream

**Part 2**

Meaning	Word/Word Part	(Hide This Column)
a blood clot in the bloodstream	_____	thrombus
sensation, feeling	_____	-esthesia
speech	_____	phas/o-
sensation of pain	_____	-algesia
vein	_____	phleb/o-
vessel occluded by an embolus	_____	embolism
restoration of regular heartbeat often by electric shock	_____	defibrillation
foreign particle circulating in the bloodstream	_____	embolus
formation, development in the sense of shaping, molding	_____	plas/o-
rupture, bursting apart (suffix)	_____	-orrhexis
bad, difficult, painful (prefix)	_____	dys-
surgical crushing (suffix)	_____	-tripsy
very, very small (prefix)	_____	micro-
large, seen by human eye (prefix)	_____	macro-
bone marrow or spinal cord	_____	myel/o-
finger or toe, digit	_____	dactyl/o-
many (prefix)	_____	poly-
together as one (prefix)	_____	syn-, sym-
very fast heartbeat	_____	fibrillation
blood (suffix)	_____	-emia

## Unit 7: Review Sheet

### Part 1

Word/ Word Part	Meaning	(Hide This Column)
edema	_____	fluid in the tissues
chronic	_____	long, drawn-out disease
syndrome	_____	symptoms occur together
prognosis	_____	prediction of course and outcome of disease
acute	_____	pertaining to severe symptom, rapid onset, short course
paroxysmal	_____	pertaining to sudden periodic attack
diagnosis	_____	identification of disease
tinnitus	_____	ringing in the ear
malaise	_____	vague sensation of not feeling well
vertigo	_____	sensation of turning around in space
anorexia	_____	loss of appetite
symptom	_____	perceived change in body or functions
pyrexia	_____	feverishness
mortality	_____	pertaining to being mortal
morbidity	_____	pertaining to being diseased
hypertrophy	_____	overdevelopment
atrophy	_____	wasting away, shrinking of an organ
systemic	_____	pertaining to the whole body, all systems

(Continued on next page)

vital signs	_____	T, P, and R
peripheral	_____	pertaining to the outside surface of the body
chlor/o-	_____	green
melan/o-	_____	black
erythr/o-	_____	red
xanth/o-	_____	yellow
prophylactic	_____	pertaining to prevention of disease
prodromal	_____	pertaining to phase of disease before symptoms
nausea	_____	seasickness, inclined to vomit
palliative	_____	pertaining to relief of symptoms, not cure
against (prefix)	_____	anti-
dyspnea	_____	difficult, painful breathing
hypothermia	_____	subnormal temperature, below 90°F

**Part 2**

<b>Meaning</b>	<b>Word/Word Part</b>	<b>(Hide This Column)</b>
symptoms occur together	_____	syndrome
prediction of course and outcome of disease	_____	prognosis
pertaining to severe symptom, rapid onset, short course	_____	acute
wasting away, shrinking of an organ	_____	atrophy
pertaining to the whole body, all systems	_____	systemic
T, P, and R	_____	vital signs
fluid in the tissues	_____	edema
long, drawn-out disease	_____	chronic
pertaining to sudden periodic attack	_____	paroxysmal
identification of disease	_____	diagnosis
ringing in the ear	_____	tinnitus
vague sensation of not feeling well	_____	malaise
sensation of turning around in space	_____	vertigo
loss of appetite	_____	anorexia
perceived change in body or functions	_____	symptom
statistic pertaining to being diseased	_____	morbidity
pertaining to relief of symptoms, not cure	_____	palliative
fever	_____	pyret/o-, pyrexia

*(Continued on next page)*

pertaining to phase of disease before symptoms	_____	prodromal
pertaining to prevention of disease	_____	prophylactic
yellow	_____	xanth/o-
red	_____	erythr/o-
seasickness, inclined to vomit	_____	nausea
black	_____	melan/o-
green	_____	chlor/o-
pertaining to the outside surface of the body	_____	peripheral
breathing reaches a climax, then ceases before starting again	_____	Cheyne-Stokes respiration
difficult, painful breathing	_____	dyspnea
overdevelopment	_____	hypertrophy
statistic pertaining to being mortal	_____	mortality
feverishness	_____	pyret/o-, pyrexia
loss of appetite	_____	anorexia
symptoms occurring before the onset of the disease	_____	prodrome

## Unit 8: Review Sheet

### Part 1

Word/ Word Part	Meaning	(Hide This Column)
supra-, super-	_____	above, over
cyst	_____	closed sac containing fluid
neoplasm	_____	new tissue growth, no purpose
lesion	_____	unhealthy, diseased tissue
infra- ectopic	_____ _____	below, beneath, under outside the normal place
ect/o-	_____	outside
papule, papula	_____	raised red spot, pimple
peri-, circum-	_____	around, about, nearby
ventral	_____	on or near the belly
epi-	_____	over, upon, surrounding
distal	_____	point farthest from trunk
dorsal	_____	on or near the back
epigastric	_____	area of the belly over the stomach
proximal	_____	point nearest to the trunk
papilloma	_____	nipple-shaped tumor on skin
lateral	_____	farther from the midline
infiltration	_____	slipping into and between normal cells
sub-, hypo-	_____	below, beneath
excrecence	_____	outgrowth, wart
medial	_____	nearer to the midline

(Continued on next page)



papilla	_____	small, nipple-like protuberance
condyloma	_____	perianal wartlike growth
benign	_____	not spreading, not malignant
end/o-	_____	inner, inside
malignant	_____	bad kind, threatening death
tumor, neoplasm	_____	new, abnormal tissue growth
metastasis	_____	cells spread to new location
polyp	_____	tumor on a little foot, or stem
circumscribed	_____	as a line drawn around, edge
mes/o-	_____	middle

**Part 2**

<b>Meaning</b>	<b>Word/Word Part</b>	<b>(Hide This Column)</b>
new, abnormal tissue growth	_____	tumor
cells spread to new location	_____	metastasis
middle (prefix)	_____	mes/o-
point nearest to the trunk	_____	proximal
perianal wartlike growth	_____	condyloma
not spreading, not malignant	_____	benign
inner, inside (prefix)	_____	end/o-
bad kind, threatening death	_____	malignant
closed sac containing fluid	_____	cyst
as a line drawn around, edge	_____	circumscribed
area of the belly over the stomach	_____	epigastric
new tissue growth, no purpose	_____	neoplasm
unhealthy, diseased tissue	_____	lesion
beneath the patella	_____	subpatellar, infrapatellar
outside the normal place	_____	ectopic
raised red spot, pimple	_____	papule, papula
around, circular (prefix)	_____	circum-
on or near the belly	_____	ventral
above the pubic arch	_____	suprapubic
below, beneath, under (prefix)	_____	infra-, sub-, hypo-
on or near the back	_____	dorsal

*(Continued on next page)*

slipping into and between normal cells	_____	infiltration
tumor on a little foot over, surrounding (prefix)	_____ _____	polyp epi-
around, about, nearby (prefix)	_____	peri-
under the skin	_____	hypodermic
point farthest from trunk	_____	distal
nipple-shaped tumor on skin	_____	papilloma
farther from the midline	_____	lateral
removal and examination of living tissue	_____	biopsy

## Unit 9: Review Sheet

### Part 1

Word/ Word Part	Meaning	(Hide This Column)
conception	_____	union of ovum and spermatozoon
ovum	_____	female egg cell
peritoneum	_____	thin membrane that coats the viscera and lines the abdominal wall
secundi- fetus	_____ _____	second developing child in utero
spermatozoon	_____	male germ cell
parturition	_____	labor and delivery of term pregnancy
multi- nulli- postpartum	_____ _____ _____	many none time period after giving birth
mastopathy	_____	breast disease
hysterorrhexis	_____	rupture of uterus (life threatening)
metratrophy	_____	uterine atrophy
ante partum	_____	time period before labor
prenatal	_____	before childbirth
oligo- hydramnios	_____ _____	scanty amount of amniotic fluid
mamm/o-, mast/o- amniot/o-	_____ _____ _____	breast amnion (sac for fetus and fluid)
-atrophy	_____	wasting of an organ or part
primipara	_____	a woman who has given birth for the first time

(Continued on next page)

-dynia	_____	pain, painful
-mania	_____	madness
-phobia	_____	excessive fear
-gravida	_____	heavy with child; a pregnant woman
men/o-	_____	menses, menstruation
involution	_____	process of uterus returning to nonpregnant state
climacteric	_____	change of life period
placenta	_____	organ that nourishes fetus in utero
gynecomastia	_____	enlarged breasts in a male
puerperium	_____	period after childbirth; involution takes place
pudenda	_____	female external genitals
gestation	_____	another term for pregnancy
amniocentesis	_____	puncture of amniotic sac and removal of fluid
perineum	_____	pelvic floor; region from vaginal lip to anus in female

**Part 2**

<b>Meaning</b>	<b>Word/Word Part</b>	<b>(Hide This Column)</b>
female external genitals	_____	pudenda
menses, menstruation	_____	men/o-
madness (suffix)	_____	-mania
female egg cell	_____	ovum
wasting of an organ or part (suffix)	_____	-atrophy
another term for pregnancy	_____	gestation
puncture of amniotic sac and removal of fluid	_____	amniocentesis
enlarged breasts in a male	_____	gynecomastia
breast disease	_____	mastopathy
breast (2 combining forms)	_____	mast/o-, mamm/o-
none (prefix)	_____	nulli-
many (prefix)	_____	multi-
developing child in utero	_____	fetus
male germ cell	_____	spermatozoon
cessation of menses	_____	menopause
pregnant woman, first time	_____	primigravida
incision of vagina and pelvic outlet	_____	episiotomy
excessive fear (prefix)	_____	phobia-
pain, painful (suffix)	_____	-dynia, -algia
process of uterus returning to nonpregnant state	_____	involution
rupture of uterus (life threatening)	_____	hysterorrhexis
woman who has given birth to a living child	_____	para
pelvic floor; region from vaginal lip to anus in female	_____	perineum

*(Continued on next page)*

period after childbirth; involution takes place	_____	puerperium
amnion (sac for fetus and fluid)	_____	amni/o-, amniot/o-
organ that nourishes fetus in utero	_____	placenta
few, little, scanty (prefix)	_____	oligo-
before labor	_____	ante partum
change of life period	_____	climacteric
physician specialist in diseases of women	_____	gynecologist
before (prefix)	_____	pre-
after (prefix)	_____	post-
new, recent (prefix)	_____	neo-
labor and delivery of term pregnancy	_____	parturition
X ray examination of breast	_____	mammography
thin membrane that coats viscera and abdominal wall	_____	peritoneum
union of ovum and spermatozoon	_____	conception
uterine atrophy	_____	metratrophy
pain, painful (suffix)	_____	-dynia, -algia
heavy with child; a pregnant woman	_____	gravida

## Unit 10: Review Sheet

### Part 1

Word/ Word Part	Meaning	(Hide This Column)
nas/o-	_____	nose
blephar/o-	_____	eyelid
scler/o-	_____	hard white coat of the eye
pharyng/o-	_____	pharynx, throat
ir, irid/o-	_____	iris, donut-shaped color of the eye
dipl/o-	_____	double, paired
laryng/o-	_____	larynx, voice box
pneumon/o-	_____	lung
bronch/o-	_____	bronchus(i), branches of the trachea
ophthalm/o-	_____	eye
retin/o-	_____	retina, complex membrane on the inside back surface of the eyeball
pleur/o-	_____	pleura, covering on the lungs
core-, core/o-	_____	pupil, circular opening in the center of the eye
pne/o-	_____	breathing, breathe
lacrim/o-	_____	tear, tears
ment/o-	_____	chin
kerat/o-, corne/o-	_____	cornea, transparent covering of anterior one-sixth of the eye
-opia	_____	suffix meaning vision
thorac/o-	_____	thorax, chest
cycl/o-	_____	ciliary body, controls the shape of the iris
pneum/o-	_____	air, gases
trache/o-	_____	windpipe, trachea
singultus	_____	hiccup, hiccough

(Continued on next page)



hemoptysis	_____	spitting of blood derived from the lungs, bronchi
diaphragm	_____	musculo-membranous wall separating the abdomen from the thorax
epistaxis	_____	nosebleed

**Part 2**

<b>Meaning</b>	<b>Word/Word Part</b>	<b>(Hide This Column)</b>
nose	_____	nas/o-
breathing, breathe	_____	pne/o-
iris	_____	ir-, irid/o-
larynx, voice box	_____	laryng/o-
cornea, transparent anterior covering of one-sixth of the eye	_____	kerat/o-, corne/o-
nosebleed	_____	epistaxis
spitting blood derived from the lungs, trachea	_____	hemoptysis
suffix meaning vision	_____	-opia
musculomembranous wall separating the abdomen from the thorax	_____	diaphragm
air, gases	_____	pneum/o-
retina, complex membrane on the inside back surface of the eyeball	_____	retin/o-
pleura, covering on the lungs	_____	pleur/o-
eyelid	_____	blephar/o-
tear, tears	_____	lacrim/o-
windpipe, trachea	_____	trache/o-
pupil, circular opening in the center of the eye	_____	cor-, core-, core/o-
hard white coat of the eye	_____	scler/o-
pharynx, throat	_____	pharyng/o-
bronchus(i), branches of the trachea	_____	bronch/o-
lung	_____	pneumon/o-
ciliary body, controls shape of the iris	_____	cycl/o-

*(Continued on next page)*

thorax, chest	_____	thorac/o-
chin	_____	ment/o-
double, paired	_____	dipl/o-
eye	_____	ophthalm/o-
hiccup, hiccough	_____	singultus

Congratulations on finishing your lessons.

Take the other Final Test after some rest and relaxation.

# Final Self-Test I

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## Instructions

The following two tests will show you how much you have learned about medical terminology. Many of the words on the tests will be new to you; however, using the word parts and the word-building system you have learned, you should be able to give the meaning for all of them. Try these tests and see how well you do. You may want to take one test before reading the book and the other after you finish the book. The comparison will show even more clearly how much medical terminology you have learned.

Each test consists of 50 medical terms. For each term, write out a definition in your own words. Then compare your answers with those following the test. Your definition should include all of the ideas (though not necessarily in the exact words) as the definitions on the answer page.

1. Tachypnea \_\_\_\_\_
2. Oophoritis \_\_\_\_\_
3. Pyelonephrosis \_\_\_\_\_
4. Pathogenic \_\_\_\_\_
5. Bradycardia \_\_\_\_\_
6. Cycloparalysis \_\_\_\_\_
7. Glossoplegia \_\_\_\_\_
8. Megalodontia \_\_\_\_\_
9. Ophthalmoscopy \_\_\_\_\_
10. Bronchopneumonogram \_\_\_\_\_
11. Mammopexy \_\_\_\_\_
12. Cystocele \_\_\_\_\_
13. Cephalometer \_\_\_\_\_
14. Herniorrhaphy \_\_\_\_\_

15. Hyperthyroidism \_\_\_\_\_
16. Bronchiectasis \_\_\_\_\_
17. Mastodynia \_\_\_\_\_
18. Xanthemia \_\_\_\_\_
19. Symptomatology \_\_\_\_\_
20. Etiology \_\_\_\_\_
21. Kinesialgia \_\_\_\_\_
22. Fibroosteoma \_\_\_\_\_
23. Anuria \_\_\_\_\_
24. Lipochondroma \_\_\_\_\_
25. Costectomy \_\_\_\_\_
26. Ureteroenterostomy \_\_\_\_\_
27. Metrorrhagia \_\_\_\_\_
28. Paranephritis \_\_\_\_\_
29. Blepharoptosis \_\_\_\_\_
30. Erythrocyte \_\_\_\_\_
31. Perianal \_\_\_\_\_
32. Endocarditis \_\_\_\_\_
33. Lymphadenoid \_\_\_\_\_
34. Thoracolumbar \_\_\_\_\_
35. Corneiritis \_\_\_\_\_
36. Hysterorrhexis \_\_\_\_\_
37. Thrombogenesis \_\_\_\_\_
38. Hematemesis \_\_\_\_\_
39. Lithotripsy \_\_\_\_\_
40. Oligohydramnios \_\_\_\_\_
41. Prostatic hypertrophy \_\_\_\_\_
42. Hemoptysis \_\_\_\_\_
43. Dorsalgia \_\_\_\_\_

- 44. Endocranial \_\_\_\_\_
- 45. Parturition \_\_\_\_\_
- 46. Adenocarcinoma \_\_\_\_\_
- 47. Esophagogastrostomy \_\_\_\_\_
- 48. Enterohepatitis \_\_\_\_\_
- 49. Malaise \_\_\_\_\_
- 50. Dyspnea \_\_\_\_\_

**Answers to Final Self-Test I**

1. rapid breathing
2. inflammation of an ovary
3. condition (abnormal or diseased) of the pelvis of the kidney
4. that which is capable of causing disease
5. slow heart rate
6. paralysis of the ciliary body
7. paralysis of the tongue
8. excessively large teeth
9. examination of the interior of the eye
10. X ray of the bronchi and lungs
11. surgical fixation of a breast to its normal position
12. hernia of the bladder
13. instrument for measuring the head
14. suturing (repair) of a hernia
15. condition caused by excessive secretion of the thyroid glands
16. dilatation of the bronchi
17. painful breast
18. yellow pigment (color) in the blood
19. the study (science) of disease symptoms
20. the study of causes of disease
21. painful muscular movement
22. tumor of bone and fibrous connective tissue
23. absence of urine
24. tumor of cartilaginous and fatty tissue
25. excision of a rib or ribs
26. make a permanent opening between the ureter and intestine
27. uterine hemorrhage
28. inflammation of tissues around (surrounding) the kidney
29. drooping of an eyelid
30. red blood cell
31. of or pertaining to around the anus
32. inflammation of the inside (lining) of the heart
33. resembling a lymph gland
34. of or pertaining to the chest (thorax) and lower back (lumbar)
35. inflammation of the iris and cornea
36. rupture of the uterus
37. formation (development) of a clot (thrombus)
38. vomiting blood
39. crushing removal of a stone
40. scanty amniotic fluid
41. pertaining to enlargement of the prostate
42. spitting blood (from trachea, bronchi, or lungs)
43. pain in the back
44. of, or pertaining to, the inside of the head
45. labor and childbirth
46. malignant tumor of a gland
47. making a new opening (permanent) between the esophagus and the stomach
48. inflammation of the liver and intestine
49. vague sensation of not feeling well
50. difficult or painful breathing

# Final Self-Test II

1. Mastoptosis \_\_\_\_\_
2. Epistaxis \_\_\_\_\_
3. Amenorrhea \_\_\_\_\_
4. Antipyretic \_\_\_\_\_
5. Nephrolith \_\_\_\_\_
6. Enterectasia \_\_\_\_\_
7. Paroxysmal \_\_\_\_\_
8. Encephalorrhagia \_\_\_\_\_
9. Craniocoele \_\_\_\_\_
10. Anorexia \_\_\_\_\_
11. Gingivoglossitis \_\_\_\_\_
12. Cholecystitis \_\_\_\_\_
13. Abdominalgia \_\_\_\_\_
14. Arteriospasm \_\_\_\_\_
15. Adenosclerosis \_\_\_\_\_
16. Duodenohepatic \_\_\_\_\_
17. Endobronchoscopy \_\_\_\_\_
18. Iridoplegia \_\_\_\_\_
19. Tracheostomy \_\_\_\_\_
20. Syndactyly \_\_\_\_\_
21. Phleborrhexis \_\_\_\_\_
22. Cryptorchidism \_\_\_\_\_
23. Thromboid \_\_\_\_\_



- 24. Electroencephalogram \_\_\_\_\_
- 25. Myelodysplasia \_\_\_\_\_
- 26. Singultus \_\_\_\_\_
- 27. Intercostal \_\_\_\_\_
- 28. Epigastric \_\_\_\_\_
- 29. Urethrocystitis \_\_\_\_\_
- 30. Hypothyroidism \_\_\_\_\_
- 31. Traumatology \_\_\_\_\_
- 32. Pericardiectomy \_\_\_\_\_
- 33. Syndrome \_\_\_\_\_
- 34. Hepatorrhaphy \_\_\_\_\_
- 35. Megalodactylysm \_\_\_\_\_
- 36. Nephropexy \_\_\_\_\_
- 37. Pneumonmelanosis \_\_\_\_\_
- 38. Cerebrovascular \_\_\_\_\_
- 39. Chondromalacia \_\_\_\_\_
- 40. Amniocentesis \_\_\_\_\_
- 41. Inframammary \_\_\_\_\_
- 42. Leukocytolysis \_\_\_\_\_
- 43. Salpingectomy \_\_\_\_\_
- 44. Hemodialysis \_\_\_\_\_
- 45. Metastasis \_\_\_\_\_
- 46. Cyanopia \_\_\_\_\_
- 47. Ophthalmopathy \_\_\_\_\_
- 48. Pneumohemothorax \_\_\_\_\_
- 49. Otorhinolaryngologist \_\_\_\_\_
- 50. Primagravida \_\_\_\_\_

## Answers to Final Self-Test II

1. pendulous, drooping breast
2. nosebleed
3. cessation of menstruation
4. a substance that counteracts (acts against) the effects of a fever
5. a stone (calculus) in the kidney
6. dilatation (stretching) of the small intestine
7. of, or pertaining to, a sudden recurrent onset of a condition (convulsions)
8. hemorrhage within the brain
9. hernia of structures in the skull (cranium)
10. loss of appetite
11. inflammation of the gums and tongue
12. inflammation of the gallbladder
13. painful abdomen
14. spasm (twitching) of an artery
15. condition of hardening of glandular tissue
16. of, or pertaining to, the duodenum and liver
17. examination of the inside of the bronchi
18. paralysis of the iris
19. making a new permanent opening in the trachea
20. webbing or fusion of fingers or toes
21. rupture of a vein
22. condition due to hidden (undescended) testes
23. resembling a blood clot
24. record (picture) of electrical activity in the brain
25. abnormal development of the spinal cord
26. hiccup, hiccough
27. between the ribs
28. of, or pertaining to, area of belly over stomach
29. inflammation of the urethra and bladder
30. condition of insufficient thyroid excretion
31. the study (science) of injuries and their effect on the body
32. excision of tissue around the heart
33. a group of symptoms occurring together
34. suturing (repairing) the liver
35. condition of abnormally large fingers and toes
36. surgical fixation of the kidney in its normal place
37. condition of black lungs, black lung disease
38. of, or pertaining to, the vessels of the brain
39. condition of softened cartilage tissue
40. puncture of the amniotic sac and withdrawing of fluid
41. below the breast
42. destruction of white blood cells
43. surgical removal of the fallopian tube
44. removal of toxic waste products from the blood
45. spreading of a malignant disease to another organ or location
46. blue vision
47. abnormal condition of the eyes
48. air and blood in the chest cavity
49. physician specialist in ear, nose, and voice box diseases
50. a woman pregnant for the first time



# Appendix A:

## Medical Abbreviations

ad libitum (ad. lib.)	As much as wanted; freely
ante cibum (a.c.)	Before meals
bis in die (b.i.d.)	Twice daily
(b.p.)	Blood pressure
cubic centimeter (cc.)	Cubic centimeter(s)
cum (/c)	With
en.	Enema
gram (g.)	Gram or grams
granum (gr.)	Grain or grains
gutta, guttae (gtt.)	Drop or drops
hoc nocte (h.n.)	Tonight
hora somni (h.s.)	At bedtime
l.	Liter(s)
oculus dexter (O.D.)	Right eye
oculus sinister (O.S.)	Left eye
oz.	Ounce
per anum (p.a.)	By, or through, the anus
per os (p.o.)	By, or through, the mouth
post cibum (p.c.)	After meals
pro re nata (p.r.n.)	According to circumstances
quaque die (q.d.)	Every day
quaque hora (q.h.)	Every hour
quater in die (q.i.d.)	Four times daily
signa (sig.)	Let it be labeled
sine (/s)	Without
statim (stat.)	Immediately; at once
suppositoria (suppos.)	Suppository
tabella (tab.)	Tablet
ter in die (t.i.d.)	Three times daily
T.	Temperature



# Appendix B:

## Forming Plurals

The following chart contains information about the formation of plurals from the singular form. Use it to work the frames that follow.

To Form Plurals	
If the singular ending is	The plural ending is
a	ae (pronounce ae as ī)
us	i
um	a
ma	mata
on	a
is	es
ix	ices
ex	ices
ax	aces
	<div> <div>The word root is usually built from the plural forms of words ending in ix, ex, and ax (e.g., radix, radic/es, radic/otomy, radic/i/form).</div> </div>

bursae  
 bur' sī  
 conjunctivae  
 kon junk' tī vē  
 bacilli  
 bæ sil' ē

vertebra  
 ver' tə bra  
 nucleus  
 nōō' klē us  
 cornea  
 kor' nē ə

1.
Form the plural of
  
bursa \_\_\_\_\_;
  
conjunctiva \_\_\_\_\_;
  
bacillus \_\_\_\_\_
2.
Give the singular form of
  
vertebrae \_\_\_\_\_;
  
nuclei \_\_\_\_\_;
  
cornea \_\_\_\_\_

atria  
ā' trē ə

cocci  
kok' sē

ilea  
(you pronounce)  
il' ē ə

3.  
Form the plural of

atrium \_\_\_\_\_;

coccus \_\_\_\_\_;

ileum \_\_\_\_\_.

enema  
en' ə mǎ

bacterium

ovum  
(you pronounce)

cortices  
kor' ti sēz

fibromata  
fī brō' mǎ tǎ

protozoa  
prō' to zō' ə

4.  
Give the singular form of

enemata \_\_\_\_\_;

bacteria \_\_\_\_\_;

ova \_\_\_\_\_.

5.  
Form the plural of

cortex \_\_\_\_\_;

fibroma \_\_\_\_\_;

protozoon \_\_\_\_\_.

stigma  
stig' mǎ  
prognosis  
prog nō' sis  
spermatozoon  
sper mat' ə zō ən

6.  
Give the singular form of

stigmata \_\_\_\_\_;

prognoses \_\_\_\_\_;

spermatozoa \_\_\_\_\_.

appendices  
(you pronounce)

diagnoses  
dī ag nō' sēz

ganglia  
gang' lē ä

7.  
Form the plural of

appendix \_\_\_\_\_;

diagnosis \_\_\_\_\_;

ganglion \_\_\_\_\_.

appendic

8.  
Refer to the table. Give the word root that usually refers to  
the appendix \_\_\_\_\_;

cortic the cortex \_\_\_\_\_;

thorac the thorax \_\_\_\_\_.

(you pronounce)

9.

With this new knowledge, which you found for yourself, build a word meaning inflammation of the appendix,

appendic/itis

a pen di sī' tis

\_\_\_\_\_ / \_\_\_\_\_;

cortic/al

pertaining to the cortex,

kor' ti kəl

\_\_\_\_\_ / \_\_\_\_\_;

thorac/o/centesis

surgical puncture of the thorax,

thor' ə kō sen tē' sis

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

10.

Form the plural of

apices

apex \_\_\_\_\_;

fornices

fornex \_\_\_\_\_;

varices

varix \_\_\_\_\_;

sarcomata

sarcoma \_\_\_\_\_;

septa

septum \_\_\_\_\_;

radii

radius \_\_\_\_\_;

maxillae

maxilla \_\_\_\_\_.

(you pronounce)

11.

There are other ways of forming plurals. They apply to only a few words. When you meet these words and have a question about how their plural forms are built, consult a medical dictionary.





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