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FOURTH EDITION

# quick medical terminology

A SELF-TEACHING GUIDE

- Expand your working medical vocabulary
- Work at your own pace to master the latest terms and techniques
- Learn all the essential Greek and Latin building blocks

SHIRLEY SOLTESZ STEINER

# **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.

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## 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 (') is placed after the syllable bearing the heavier stress or accent; the secondary stress mark (') follows a syllable having a somewhat lighter stress, as in *com·men·da·tion* (kom'<sup>1</sup> ən·dā'<sup>2</sup> 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 unstressed vowel representing the sound spelled <i>a</i> in <i>above</i> <i>e</i> in <i>sicken</i> <i>i</i> in <i>clarity</i> <i>o</i> in <i>melon</i> <i>u</i> in <i>focus</i>
f	fit, half	oo	took, full		
g	go, log	p	pit, stop		
h	hope, hate	r	run, poor		
i	it, give	s	see, pass		
ī	ice, write	sh	sure, rush		
j	joy, ledge	t	talk, sit		
k	cool, take	th	thin, both		
l	look, rule	th	this, bathe		

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

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



# The Word-Building Strategy

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

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	stand
hang	wear
under	come
grand	out

---

---

---

yes

two words are  
combined to make  
a meaningful  
compound term

micr  
tel

micr/o  
tel/e

*phon/o*graph  
*gastr/o*/enteric  
*laryng/o*/spasm

a word root plus  
a vowel (a, e, i, o, u)

a combining form

all three

combining form

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.

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/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?

\_\_\_\_\_

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

Your answer? \_\_\_\_\_

11.

Two roots may join together but one of them will be in a special form called the \_\_\_\_\_.

- 12.
- What kind of words are these: microfilm and telecommunication?  
 \_\_\_\_\_
- compound terms  
 a combining form  
 (a root plus a vowel)  
 a whole word
- What word parts are these terms made of? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
- 13.
- Many medical terms are made of a combining form, a word root, and an ending. In the term *micr/o/scop/ic*,
- the combining form is \_\_\_\_\_;  
 the ending is \_\_\_\_\_;  
 the root is \_\_\_\_\_;
- Is there another word root? \_\_\_\_\_
- What might it be? \_\_\_\_\_
- 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.
- ending
- The meaning of *blast* is changed by its \_\_\_\_\_.

yes  
the endings added to  
the root changed its  
meaning

porter  
one who carries

suffix

im-, sup-,  
trans-

prefix

prefix    root    suffix

meaning  
word

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.

---

---

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.

---

---

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 \_\_\_\_\_.

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 \_\_\_\_\_.

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:

un-

manage

-able

---

---

---

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

25.

Explain why *-itis* in tendonitis is called a suffix.

---

---

OK, let's review what you've covered.

26.

root

The fundamental base from which meaningful terms grow or are formed is called the \_\_\_\_\_.

27.

prefix

A meaningful word or unit placed in front of a root or word is a \_\_\_\_\_.

28.

suffix

A syllable or word part joined to the end of a root or word and changes its meaning is a \_\_\_\_\_.

29.

combining form

When a vowel (a, e, i, o, u) is added to a word root, the word part resulting is called the \_\_\_\_\_ \_\_\_\_\_.

30.

compound word

When two or more word roots combine to form a meaningful word, that word is called a \_\_\_\_\_.



# List of Illustrations

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

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## **Unit 1**

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

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## **Unit 2**

- 2.1 The Upper Respiratory Tract
- 2.2 The Head

---

## **Unit 3**

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

---

## **Unit 4**

- 4.1 The Male Reproductive Organs (Midline Section)
- 4.2 The Female Reproductive Organs (Midline Section)
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- 4.4 Anomaly, Aneurysm, Hernia, Ptosis
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- 10.1 The Eye
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- 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*)

megal/o (*enlarged*)

path/o (*disease*)

-algia (*pain*)

-ology (*study of*)

-ectomy (*excision of*)

-osis, -a, -y (*condition*)

-itis (*inflammation of*)

of, usually abnormal)

-ologist (*one who studies, a specialist*)

-ostomy (*forming a new opening*)

-otomy (*incision into*)

-tome (*instrument that cuts*)

1.

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

acr/o \_\_\_\_\_ / \_\_\_\_\_.

arms, legs, and head

acr, acr/o

extremities or limbs

arms, legs, head

acr/o

oversized, big, or  
enlarged

enlargement of,  
oversized, or  
enlarged

2.

Extremities are the parts of the body farthest from the center of the body. You could say these parts are located on the extreme ends of the main body. What parts are they?

\_\_\_\_\_.

3.

Extremities in the human body are also known as limbs. When referring to the arms or legs we use the word acr/o. What term could designate the head as an extremity?

\_\_\_\_\_.

4.

When you read a term containing acr or acr/o (the combining form), it should make you think of \_\_\_\_\_.

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 \_\_\_\_\_.

Write the combining form of the word root meaning extremities.

\_\_\_\_\_

6.

*Megal/o* means enlarged or oversized. A word containing *megal/o* means the part or organ of the body is \_\_\_\_\_.

\_\_\_\_\_.

7.

The suffix *-y* denotes a condition, usually abnormal. Acr/o/megal/y means the patient's abnormal condition involves extremities that are \_\_\_\_\_.



**Figure 1.1 Acromegaly**

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

acro/megaly

skin  
inflammation of the  
skin

Dermatitis  
Dermatologist

acr/o/dermat/itis  
acrodermatitis  
ak rō der' ma tī' tis

acrodermatitis

inflammation of  
extremities  
skin

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

9.

Occasionally you may see a person with very large hands, feet, nose, and chin. The abnormal condition may be \_\_\_\_\_ / \_\_\_\_\_.

10.

Here are two new suffixes:

-*ologist* means one who studies, a specialist  
-*itis* means inflammation of (something)  
*dermat/o* refers to the skin.

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

Dermatologist means \_\_\_\_\_.

Now, circle the suffix in each term.

11.

Acrodermatitis is a term meaning inflammation of the skin of the extremities. A person displaying red, inflamed hands may have a condition of \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

12.

A busy homemaker may experience an inflammatory condition of her hands and lower arms. The physician may describe this abnormal condition as \_\_\_\_\_.

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 \_\_\_\_\_.

abnormal blueness of  
the extremities

cyan or cyan/o

-osis

-osis

condition  
extremities

acr/o/cyan/osis  
acrocyanosis  
ak rō sī ə nō'sis

acrocyanosis

the condition of  
blueness of the  
extremities

-osis

cyan/osis  
cyanosis  
sī ə nō'sis

14.

*Cyan/o* means blue or blueness. The suffix *-osis* denotes an abnormal condition. *Cyan/osis* means an abnormal condition of blueness.

What do you think *acr/o/cyan/osis* means? \_\_\_\_\_  
\_\_\_\_\_.

The part of the medical term that tells you the color blue is present is \_\_\_\_\_.

The part of the medical term denoting that an abnormal condition exists is the suffix \_\_\_\_\_.

15.

To denote an abnormal condition, use the suffix \_\_\_\_\_.

*Acrocyanosis* may be defined as the abnormal \_\_\_\_\_  
of blueness of the \_\_\_\_\_.

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

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

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 \_\_\_\_\_.

18.

*Acrocyanosis* means \_\_\_\_\_  
\_\_\_\_\_.

19.

*Dermat/osis* denotes an abnormal skin condition. The suffix that means abnormal condition is \_\_\_\_\_.

20.

*Osis* is a suffix meaning (usually abnormal) condition. Now, build a term that means an abnormal condition of blueness:

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

dermat/osis  
dermatosis  
der ma tō'sis

skin

dermat/ome  
dermatome  
derm'ə tōm

a condition of bluish  
discoloration of the  
skin

a disease or abnormal  
condition of the skin

cyan/o/derm/a  
cyanoderma  
sī ə nō der'mä

leuk or leuk/o

a condition of white  
skin, or abnormally  
white skin

leuk/o/derm/a  
leukoderma  
loo kō der'mä

21.

Build a term meaning a skin condition (abnormal, of course):  
\_\_\_\_\_ / \_\_\_\_\_.

22.

The Greek word *tomos* means a piece cut off. From this word we have many words that refer to cutting: ectomy (cut out), otomy (cut into), -tome (an instrument that cuts). A dermatome is an instrument that cuts \_\_\_\_\_.

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

24.

Dermat, dermat/o refer to the skin. Cyan/o/derm/a means

\_\_\_\_\_

Dermat/osis means  
\_\_\_\_\_.

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

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

26.

*Leuk/o* means white or abnormally white. In the term leuk/o/derm/a, the part that means white is \_\_\_\_\_.

27.

Leukoderma means  
\_\_\_\_\_.

28.

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

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

the study of cells

white blood cell

leuk/o/cyt/e  
leukocyte  
lōō' kō sīt

leuk/emia  
leukemia  
lōō kē' mē ā

acr/o  
megal  
y

a condition of oversized heart, or enlargement of the heart

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

29.

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

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 \_\_\_\_\_.

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.

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

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 \_\_\_\_\_.

34.

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

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

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

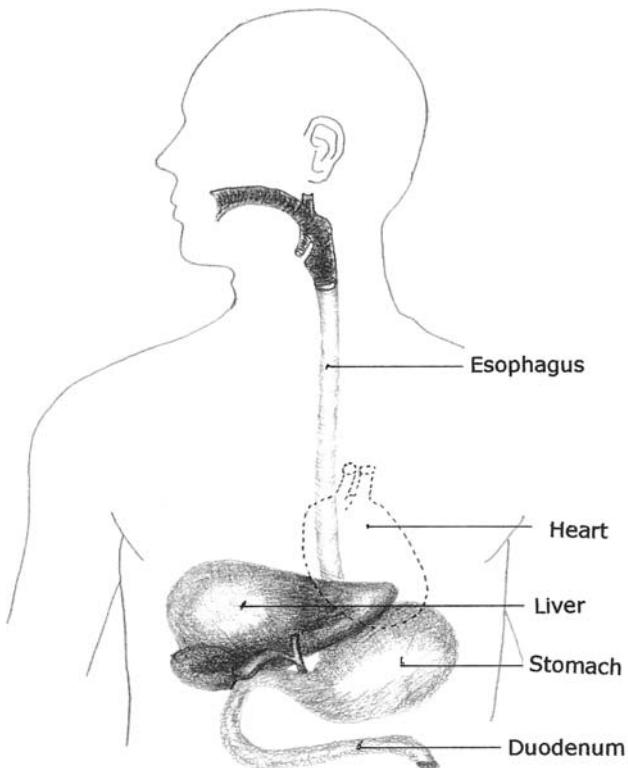


Figure 1.2 Upper Digestive Tract (and Heart)

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





sickness, illness

44. Another word for disease is \_\_\_\_\_.

evidence, or exhibition

45. Manifestation is a display, or \_\_\_\_\_, of disease.

causes

46. Etiology is the scientific study of \_\_\_\_\_ of disease.

structural  
functional  
disease

47. Pathology is the scientific study of \_\_\_\_\_ and \_\_\_\_\_ changes in the body produced by \_\_\_\_\_.

## disease

48. Select the best term for each definition. Write your choice in the space provided.

### manifestation

Evidence or proof of disease is

### Etiology

Evidence, or proof, of disease is \_\_\_\_\_.

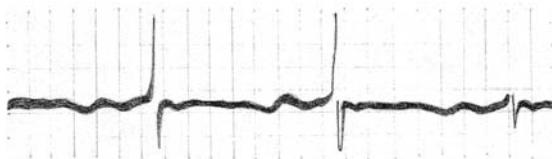
### pathology

The main difference between the two models is the way they handle the boundary conditions.

path/o-ologist  
pathologist  
path ol' ə jist

49. The suffix *-ology* means the study of, the suffix *-ologist* means one who studies (and becomes an expert). One who studies structural and functional changes in the body produced by disease is a \_\_\_\_\_ / \_\_\_\_\_.

cardi/ologist  
cardiologist  
kär dē ol' ə jist



### **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.

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

cardiologist

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

heart

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

52.

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

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

cardi/o means

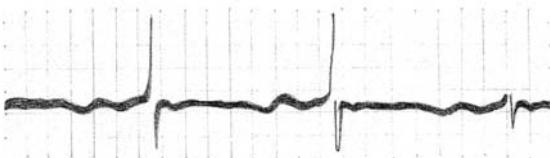
53.

The electrocardiogram is a record obtained by electrocardiography. 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

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.)

cardialgia

stomach

-algia

stomach

to cut out, excise, or  
remove surgically

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

55.

The suffix *-algia* means pain. Form a word that means heart pain:

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

heart

pain

56.

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

57.

Gastralgia means pain in the stomach.

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

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

58.

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

The suffix *-ectomy* means \_\_\_\_\_.

gastr/ectomy  
gastrectomy  
gas trek' tō mē

59.

When a patient's stomach ulcer perforates, the surgeon may need to remove part of the stomach. The medical term for the procedure is

(stomach)

(excision of)

### **gastrectomy**

gastr/itis  
gastritis  
gas trī' tis

duoden/um  
duodenum  
dōō ūd' nəm (or  
dōō ū dē' nəm)

gastr

## stomach and duodenum

gastr/o/duoden/  
ostomy  
gastroduodenostomy  
gas' trō dōō ō de nos'  
tō mē

a surgical procedure to form a new opening between the stomach and duodenum

60.

Cancer of the stomach may require a surgeon to remove all or part of the patient's stomach. This procedure is a \_\_\_\_\_.

61.

Form a word that means inflammation of the stomach.

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

62.

The stomach empties its contents into the first section of the intestine, called the duodenum. *Duoden* is the word root for

---

What is the root for stomach? \_\_\_\_\_.

63.

The suffix *-ostomy* means a procedure to form a new opening. Gastr/o/duoden/ostomy means forming a new opening between the \_\_\_\_\_ and \_\_\_\_\_.

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

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

65.

WV

When an abnormal condition exists between the stomach and the duodenum, a surgeon may need to perform a **gastroenterostomy**, which means \_\_\_\_\_.

---

---

duodenum  
dū ō dē' num

-otomy  
duoden/otomy  
duodenotomy  
dōō od ə not' ə mē

-itis  
duoden/itis  
duodenitis  
dōō od ə nī' tis

of, or pertaining to,  
mother; of, or  
pertaining to, father

duoden/al  
duodenal  
dōō ō dē' nəl

duoden/ostomy  
duodenostomy  
dōō od ə nos' tō mē

gastroduodenostomy

-ostomy

66.

The suffix -ectomy means excision of; -ostomy means forming a new opening. The form *-otomy* means incision into. A duo/den/otomy is an incision into the \_\_\_\_\_.

67.

The suffix for incision into is \_\_\_\_\_.

If a physician makes an incision into the wall of the duodenum, the doctor has performed a \_\_\_\_\_ / \_\_\_\_\_.

68.

The suffix for inflammation is \_\_\_\_\_.

The word for inflammation of the duodenum is  
\_\_\_\_\_ / \_\_\_\_\_.

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 \_\_\_\_\_.

70.

In the sentence “Duodenal carcinoma was present,” the word meaning of, or pertaining to, the duodenum is  
\_\_\_\_\_ / \_\_\_\_\_.

71.

The suffix -ostomy means making a new opening. The word to form a new opening into the duodenum is  
\_\_\_\_\_ / \_\_\_\_\_.

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

stomach

duodenum

new opening

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

duoden/o \_\_\_\_\_

changes due to disease

path/o \_\_\_\_\_

record of

gram/o \_\_\_\_\_

cell

cyt/o \_\_\_\_\_

electric

electr/o \_\_\_\_\_

cause

eti/o \_\_\_\_\_

enlarged, oversized

megal/o \_\_\_\_\_

blueness

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

-al \_\_\_\_\_

inflammation of

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

(abnormal) condition

-osis, -a, -y \_\_\_\_\_

form a new opening

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

cutting instrument

-tome \_\_\_\_\_

incision into

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

pain

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

one who studies

-ologist \_\_\_\_\_



## 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.

- |   |  |
|---|--|
| <input type="text"/> 1. Megalocardia        | a. Study of, or pertaining to, causes (of disease)                                   |
| <input type="text"/> 2. Cardiology          | b. A specialist in the field of skin diseases  |
| <input type="text"/> 3. Duodenostomy        | c. A condition of blueness of the extremities  |
| <input type="text"/> 4. Leukemia            | d. Enlargement of the heart  |
| <input type="text"/> 5. Dermatologist       | e. A surgical procedure forming a new opening in the duodenum                        |
| <input type="text"/> 6. Electrocardiography | f. Display, evidence of disease  |
| <input type="text"/> 7. Acromegaly          | g. One who specializes in the study of structural and functional changes in the body |
| <input type="text"/> 8. Gastritis           | h. Pain in the stomach   |
| <input type="text"/> 9. Dermatome           | i. Inflammation of the stomach   |
| <input type="text"/> 10. Manifestation      | j. Recordings of electrical waves of the heart                                       |
| <input type="text"/> 11. Gastroduodenostomy | k. An abnormal condition of enlarged extremities                                     |
| <input type="text"/> 12. Etiology           | l. A surgical instrument for cutting skin  |
| <input type="text"/> 13. Acrocyanosis       | m. A surgical operation to make a new opening between the stomach and duodenum       |
| <input type="text"/> 14. Pathologist        | n. The study of disease of the heart   |
| <input type="text"/> 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 ( <i>gland</i> )	laryng/o ( <i>larynx</i> )
arthr/o ( <i>joint</i> )	lip/o ( <i>fat</i> )
carcin/o ( <i>malignancy</i> )	malac/o ( <i>soft</i> )
cele/o, o/cele ( <i>hernia</i> )	morph/o ( <i>structure of</i> )
cephal/o ( <i>head</i> )	muc/o ( <i>mucus</i> )
chondr/o ( <i>cartilage</i> )	onc/o ( <i>tumor</i> )
cost/o ( <i>ribs</i> )	ost/o, oste/o ( <i>bone</i> )
dent/o ( <i>tooth</i> )	plast/o ( <i>repair</i> )
emes/is ( <i>vomiting</i> )	trach/e ( <i>trachea</i> )
hist/o ( <i>tissue</i> )	troph/o ( <i>development</i> )
en-, endo- ( <i>in, inside, within</i> )	-al, -ar, -ic ( <i>of, or pertaining to</i> )
ex-, ex/o- ( <i>outside, out</i> )	-oid ( <i>resembling</i> )
hyper- ( <i>excessive</i> )	-oma ( <i>tumor</i> )
hypo- ( <i>under</i> )	-ism ( <i>medical condition, disease</i> )
inter- ( <i>between</i> )	

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.

prefix

hyper

thyroid gland

Here's a suggestion:

Hyperthyroidism means the patient has a medical condition resulting from excessive activity of the thyroid gland.

hyper/emesis

hyperemesis

hī' per em' ē sis

hyperemesis

hyper/troph/y

hypertrophy

hī' per' trō fē

hypertrophy

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?).

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 \_\_\_\_\_.

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? \_\_\_\_\_.

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.

---

---

---

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 \_\_\_\_\_.

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

Muscles also can overdevelop or \_\_\_\_\_.  
(a verb form)

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



muc/oid

mucoid

myoo' koid

23.

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

resembling mucus

24.

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

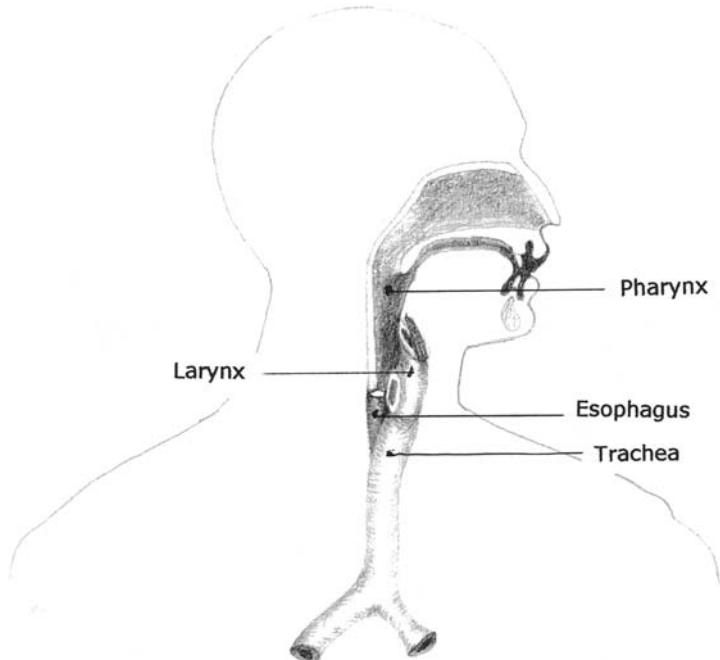
mucoid

lipoid

25.

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

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)

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*.

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

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

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.

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

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

\_\_\_\_\_.

larynx

laryng/itis  
laryngitis  
lair an jɪ' tɪs

inflammation of the  
larynx

(kō los' tō mē)

a new (permanent)  
opening into the  
colon

-ostomy

(trā kē ot' ō mē)  
an incision into, or  
temporary opening  
into, the trachea, or  
windpipe

31.

-otomy

The suffix meaning a temporary opening, or incision into, is \_\_\_\_\_.

32.

-ostomy

Which suffix would you use to indicate creation of a new (permanent) opening? \_\_\_\_\_.

-otomy

Which suffix means making an incision into, or creating a temporary opening? \_\_\_\_\_.

creation of a new  
(permanent) opening  
into the colon

33.

incision into, or  
temporary opening  
into, the trachea

Colostomy means \_\_\_\_\_.

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

fat, fatty

lip/o \_\_\_\_\_

spleen

splen/o \_\_\_\_\_

skin

derm/o \_\_\_\_\_

larynx

laryng/o \_\_\_\_\_

mucus

muc/o \_\_\_\_\_

cancer, malignant

carcin/o \_\_\_\_\_

35.

Now do the same with the following suffixes.

SUGGESTED ANSWERS:

incision into, temporary      a new (permanent)  
opening                        opening into

like, or resembling              development

of or pertaining to              vomiting

tumor                          excision of

development

-trophy \_\_\_\_\_

excision of

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

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 \_\_\_\_\_

36.

Complete the following:

under, less  
over, excessive

Hypo- is a prefix meaning \_\_\_\_\_.

Hyper- is a prefix meaning \_\_\_\_\_.

37.

Build a medical term for each of the following:

muc/oid

resembling mucus \_\_\_\_\_ / \_\_\_\_\_.

splen/ic

aden/ectomy

excision of a gland \_\_\_\_\_ / \_\_\_\_\_  
gland excision of

hyper/trophy

hypo/derm/ic

under the skin \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ ..

laryng/ostomy

larynx / new opening

a condition of excess development, oversized

of, or pertaining to,  
under the skin

38.

Here are two terms to define.

Hypertrophy means \_\_\_\_\_

Hypodermal means \_\_\_\_\_

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

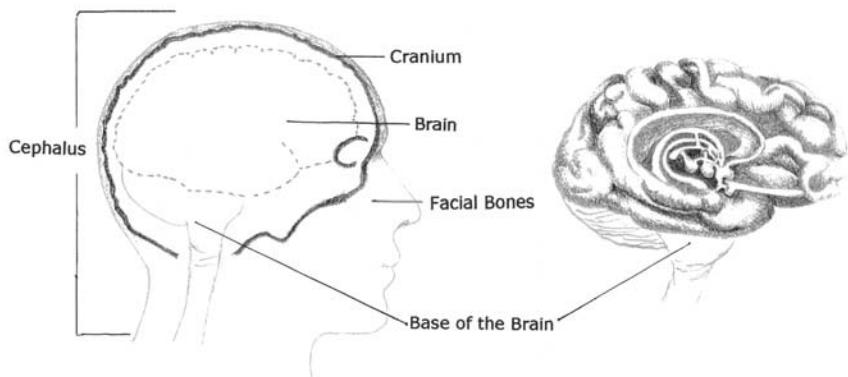


Figure 2.2 The Head

*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  
cephalalgia  
(sef ə lal' jē ä)

cephalalgia  
and cephalgia

headache

of, or pertaining to, the  
head

cephal/ic  
cephalic  
sə fal' ik

cephalic

inside the head (the  
brain)

brain

encephal/itis  
en sef ə lɪ' tɪs  
encephal/oma  
en sef' ə lō' mä

inflammation within  
the heart

41.

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

42.

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

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

43.

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

44.

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

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?

\_\_\_\_\_.

46.

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

47.

Using the word root for head, build words meaning the following:  
inflammation of the brain

\_\_\_\_\_ / \_\_\_\_\_.  
                    brain                    inflammation of

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

48.

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

49.

ex-, exo-

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-

What part of the term means completely outside of? \_\_\_\_\_.

exo/genous  
ex' oj' ə nus

Something originating completely outside of an organism, cell, or organ is called \_\_\_\_\_ / \_\_\_\_\_.

outside                          produced or originating

endo/genous  
en' doj' ə nus

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

exhale means \_\_\_\_\_.

cut out

excise means \_\_\_\_\_.

breathe out (it also means to die or breathe out for the last time)

expire means \_\_\_\_\_.

52.

Write two forms of a prefix for each of the following.

en-, endo-

in, inside of, within \_\_\_\_\_, \_\_\_\_\_.

ex-, exo-

out, completely outside of \_\_\_\_\_, \_\_\_\_\_.

53.

brain

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.

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

encephalocele

a condition of softened  
brain tissue

encephal/o/malac/ia  
encephalomalacia  
en sef' a lō mä la' zhə

encephalomalacia

oste/itis  
osteitis  
os tē ī' tis

a condition of softened  
bone tissue

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

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

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 \_\_\_\_\_.

56.

Malac/ia is a word meaning soft, or softened, tissue.

Encephal/o/malac/ia means \_\_\_\_\_.

57.

Malac/o is the combining form for soft, or softened. The term  
meaning softened brain tissue is \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

brain tissue

softened

ia

a condition of

58.

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

59.

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

60.

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

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

62.

A disorder of the parathyroid gland can cause calcium to be withdrawn from bones. The resulting condition may be called \_\_\_\_\_.

osteomalacia

oste/oma

osteoma

os tē ō' mā

a tumor inside (the center canal of the bone)

63.

A hard outgrowth on any bone could be a bone tumor. In medical terms, it would be referred to as an \_\_\_\_\_ / \_\_\_\_\_.

surgical repair of a joint(s)

arthr/o/plast/y

arthroplasty

arth' rō plas' tē

arthro/plasty

arthr/itis

arthritis

ärth rī' tis

arthr/otomy

arthrotomy

ärth rot' ō mē

64.

*Arthr/o* refers to joints; *plast/y* means surgical repair of. What does arthr/o/plast/y mean? \_\_\_\_\_.

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) y

66.

If a child is born without a joint, sometimes one can be formed by a surgical procedure called \_\_\_\_\_ / \_\_\_\_\_.

67.

Form a word that means inflammation of a joint:

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

joint inflammation of

68.

Now form a word that means incision into a joint:

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

joint temporary opening



---

76.

teeth  
teeth

spaces between the  
teeth

dent/algia  
dentalgia  
den tal' jē a

dent/oid  
dentoid  
den' toid

A *dent/ist* takes care of \_\_\_\_\_. A *dent/ifrice* is used for cleaning \_\_\_\_\_.

Interdental spaces means \_\_\_\_\_.

77.

Try making a few new words. Pain in the teeth, or a toothache, is called \_\_\_\_\_ / \_\_\_\_\_.

A word that means tooth-shaped or resembling a tooth is \_\_\_\_\_ / \_\_\_\_\_.

78.

Try these. Pathogenic means something that produces disease.

What is a pathogenic organism? \_\_\_\_\_

What does pathology mean? \_\_\_\_\_

Therefore, pathological means \_\_\_\_\_.

(If you're not sure, use  
your dictionary.)

Excessive vomiting is  
evidence of a  
diseased condition.

A graphic representation  
of brain activity  
(EEG) is necessary to  
determine the cause  
of brain disease (or  
something similar in  
your words).

79.

Explain each of the following statements in simple language.

Hyperemesis is a manifestation of a pathological condition. \_\_\_\_\_

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

repair of (restoration or  
plastic surgery)

hernia (protrusion of a part from its natural cavity)

in, within, inside  
out, completely  
outside of

## arthro/plasty

inter/costal

### chondro/malacia

oste/oma

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.

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

82

Here are some easy ones.

**end-**, **endo-** is a prefix meaning

ex- exo- is a prefix meaning

83.

Build a medical term for each of the following.

restoration of a joint \_\_\_\_\_ / \_\_\_\_\_.

softening of cartilage \_\_\_\_\_ / \_\_\_\_\_.

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

encephalo/cele	herniation of the brain _____ / _____.
dent/oid	resembling teeth _____ / _____.
ceph/algia	headache _____ / _____.
arthr/otomy	incision into a joint _____ / _____.

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.

85.

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

Onc/o refers to \_\_\_\_\_.

Hist/o refers to \_\_\_\_\_.

Path/o refers to \_\_\_\_\_.

Morph/o refers to \_\_\_\_\_.

86.

Complete each definition.

Morphology is the study of the \_\_\_\_\_ of an organ or part.

Histology is the study of microscopic \_\_\_\_\_ making up a part or structure.

Oncology is the study of \_\_\_\_\_.

Pathology is the study of \_\_\_\_\_ 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

tumors

tissues (of a part, organ)

changes (due to disease)

structure (of an organ, part)

structure

tissues

tumors

changes

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' ö mē)

carcinoma (kär sin ö' mā)

cephalalgia (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' ö jē)

osteitis (os tē i' tis)

osteomalacia (os' tē ö mā lā' zhə)

pathologist (path ol' ö jist)

endosteoma

(en dos tē ö' mā)

exogenous

(eks oj' ə nus)

histology (his tol' ö 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' ö jē)

mucoid (myoo' koid)

thyroidectomy

(thī roy dek' tō mē)

tracheotomy (trā kē ot' ö 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.

- |  |  |
|--|--|
| <input type="text"/> 1. Osteomalacia   | a. Overdevelopment                                   |
| <input type="text"/> 2. Intercostal    | b. Study of microscopic tissues                      |
| <input type="text"/> 3. Emesis         | c. Surgical removal of cartilage                     |
| <input type="text"/> 4. Adenoma        | d. Between the ribs                                  |
| <input type="text"/> 5. Laryngotomy    | e. Surgical repair of a joint                        |
| <input type="text"/> 6. Lipoid         | f. Softening of bone tissue                          |
| <input type="text"/> 7. Cephalalgia    | g. Herniation of brain tissue                        |
| <input type="text"/> 8. Morphology     | h. Tumor of glandular tissue                         |
| <input type="text"/> 9. Carcinogenic   | i. Headache  |
| <input type="text"/> 10. Encephalocele | j. Incision into the larynx                          |
| <input type="text"/> 11. Arthroplasty  | k. Pertaining to producing cancer                    |
| <input type="text"/> 12. Oncologist    | l. Resembling fat                                    |
| <input type="text"/> 13. Hypertrophy   | m. Vomiting, to vomit                                |
| <input type="text"/> 14. Chondrectomy  | n. Medical specialist dealing with tumors            |
| <input type="text"/> 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<br>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<br><i>underactive thyroid</i>     | _____ thyroid _____ |
| 15. Originating or produced completely<br>outside of an organ or organism | _____ genous        |

**ANSWERS****Part 1**

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

**Part 2**

1. Thyroidectomy
2. Adenitis
3. Carcinoma
4. Hyperemesis
5. Mucoid
6. Oncologist
7. Colostomy
8. Encephalitis
9. 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 ( <i>abdomen</i> )	metr/o, meter ( <i>measure</i> )
cephal/o ( <i>head</i> )	ot/o ( <i>ear</i> )
chol/e ( <i>bile, gall</i> )	pelv/i ( <i>pelvis</i> )
cocc/i ( <i>coccus</i> )	phob/ia ( <i>fear</i> )
crani/o ( <i>cranium, skull</i> )	py/o ( <i>pus</i> )
cyst/o ( <i>bladder, sac</i> )	rhin/o ( <i>nose</i> )
dipl/o ( <i>double</i> )	staphyl/o ( <i>grape</i> )
hydro ( <i>water</i> )	strept/o ( <i>chain</i> )
lith/o ( <i>stone, calculus</i> )	therap/o ( <i>treatment</i> )
	thorac/o ( <i>thorax</i> )
ab- ( <i>away from</i> )	-ar ( <i>pertaining to</i> )
ad- ( <i>toward</i> )	-centesis ( <i>puncture of a cavity</i> )
	-genesis, gen/o ( <i>produce, originate</i> )
	-meter ( <i>measuring instrument</i> )
	-orrhea ( <i>flow, discharge</i> )

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).

away from

1.

The prefix *ab-* means from or away from.

Abnormal means \_\_\_\_\_ normal.

from or away from

2.

The prefix *ab-* means \_\_\_\_\_.

wandering from (the  
normal course of  
events)

3.

*Ab/errant* uses the prefix *ab-* before the English word for wandering. What do you think the term *ab/errant* means? \_\_\_\_\_

4.

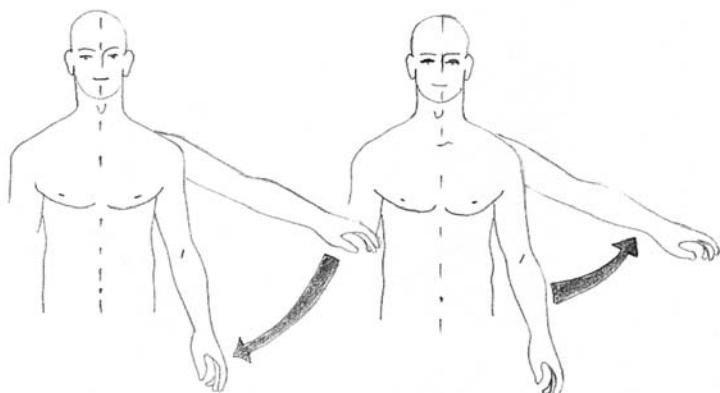
*ab/errant*  
*aberrant*  
*ab er' ant*

*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.

aberrant

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/hesions

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

movement away from  
the midline

sticking or joining  
together

a structure that wanders  
from the normal

a condition away from  
normal

movement toward a  
midline

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

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

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

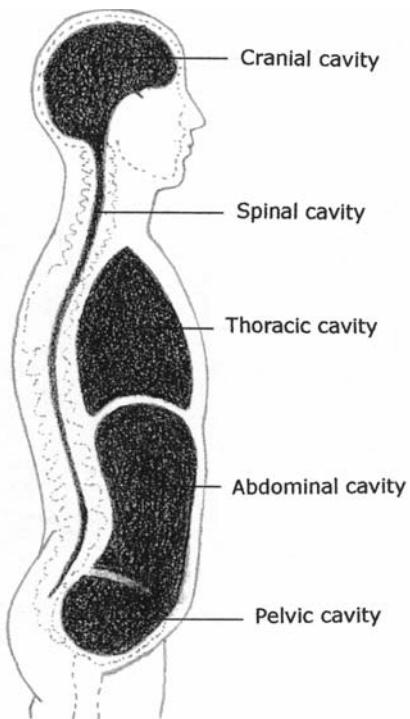
abduction \_\_\_\_\_.

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

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

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

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 intervals.

chambers and provide cushions against shocks. The cavities allow body organs to assume various sizes and shapes. The *cranial cavity* and *spinal cavity* are continuous and house the brain and spinal cord. The *thoracic cavity* contains the lungs and major blood vessels and other structures. The *abdominal cavity* is where the stomach, liver, spleen, and intestines are found. The lower portion of the abdominal cavity is set apart as the *pelvic cavity*. Here's where the female reproductive organs, urinary bladder, and male ducts may be found.

Cranium (crani/o)                      Thorax (thorac/o)  
Abdomen (abdomino/o)                Pelvis (pelv/i)

Refer to the illustration above to help you complete many of the following frames.

belly  
abdominal cavity  
or abdomen  
ab dō' men  
of  
or pertaining to the  
abdomen, or  
abdominal cavity

abdomin/o/centesis  
abdominocentesis  
ab dom' i nō sen tē' sis

abdominocentesis

cardi/o/centesis  
cardiocentesis  
kär' dē ō sen tē' sis

15.

*Abdomin/o* is used to form words about the abdominal cavity or belly. When you see abdomin/o in a word, you think of the \_\_\_\_\_.

Abdomin/al is an adjective that means \_\_\_\_\_.

16.

*Abdomin/o/centesis* means tapping or puncturing the abdomen to remove fluid. This is a surgical puncture of a cavity. The word for surgical puncture of the abdominal cavity is \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

abdomen                                  puncture of a cavity

17.

*Centesis*, or surgical puncture of a cavity, is a word in itself. Build a term meaning surgical puncture or tapping of the abdomen: \_\_\_\_\_.

18.

When fluid has accumulated in the abdominal cavity, it can be drained off by a procedure called \_\_\_\_\_.

19.

Try this. The word for surgical puncture of a heart chamber is \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

heart                                  puncture of a cavity

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 \_\_\_\_\_ / \_\_\_\_\_.  
  
21.

The word for temporary incision into a bladder is

bladder / incision into (temporary)

cyst/itis

Inflammation of a bladder is \_\_\_\_\_.

cystitis

The word for surgical removal of a bladder is \_\_\_\_\_.

cyst/ectomy

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,

*cyst* means bladder;

*-itis* means inflammation of.

inflammation of the  
bladder

Therefore cystitis means \_\_\_\_\_.

*Dermat* means skin;

*-ologist* means a specialist (one who studies).

one who studies the  
skin, or a skin  
specialist

Therefore dermatologist means \_\_\_\_\_.

puncture of the  
abdominal cavity (to  
drain fluid)

*Abdomino* means abdomen;

*-centesis* means surgical puncture of a cavity (to drain off fluid).

Therefore abdominocentesis means \_\_\_\_\_.

pertaining to the abdomen and thorax (bony cage forming the chest cavity)

**abdomin/o/thorac/ic**  
**abdominothoracic**  
ab dom' ə nō thō rā'  
sik

**thorac/ic**  
**thoracic**  
thō rā' sīk

thorac/otomy  
thoracotomy  
thōr'əkot'əmē

thorac/o/centesis  
thoracocentesis  
thōr'əkōsen tē'sis

thorac/o/plast/y  
thoracoplasty  
thôr'əkô plas'tē

cyst/o/plast/y  
cystoplasty  
sis' tō plas' tē

water, fluid, or a watery fluid

23

Take a look at Illustration 3.2.

The bony cage that forms the chest cavity is called the *thorax*. What does abdomin/o/thorac/ic mean? \_\_\_\_\_  
\_\_\_\_\_.

24.

25.

26

Write a term meaning incision into the chest cavity:  
\_\_\_\_\_ / \_\_\_\_\_.

27.

28

A word for the surgical repair of the chest cage is \_\_\_\_\_ / \_\_\_\_ / plast / y.

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 \_\_\_\_\_.

the cranial cavity

head, including  
cranium and facial  
bones

of or pertaining to  
the head

cranial cavity

hydro/cephal/us  
hydrocephalus  
hī' drō sə fal' us

hydrocephalus

abnormal fear

hydro/phob/ia  
hydrophobia  
hī drō fō' bē ə

hydrophobia

hydro/therapy  
hydrotherapy  
hī' drō ther' ə pē

hydrotherapy

31.

Go back to Illustration 3.2. The space inside the head is called \_\_\_\_\_.

Cranium means skull. Cephal/o is the combining form  
meaning \_\_\_\_\_.

Therefore, cephalic means \_\_\_\_\_.

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 \_\_\_\_\_.

33.

A disease characterized by an enlarged head due to an increased  
amount of fluid in the cranial cavity is called \_\_\_\_\_ / \_\_\_\_\_ / us.

water                          head

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 \_\_\_\_\_.

35.

Hydro/phob/ia means having an abnormal fear of water. *Phobia*  
means \_\_\_\_\_.

36.

An abnormal fear of water is \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

water                          abnormal fear

Some parents are abnormally afraid to have their children swim or  
even ride in a boat. These parents suffer from \_\_\_\_\_.

37.

*Therapy* means treatment. Treatment by means of water is \_\_\_\_\_ / \_\_\_\_\_.

water                          treatment

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.

pelvimetry  
pel vim' ə trē

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 \_\_\_\_\_.

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' ū 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)

## cerebrum

cerebr/al  
cerebral  
ser ē' brəl

spin/al  
spinal  
spī' nəl

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

44.

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

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

46.

47.

Cerebr/o/spinal refers to the brain and spinal cord. What part of the word means pertaining to the spinal cord?

48

49

### Review Exercise

#### SUGGESTED ANSWERS:

head pelvis

bladder sac bony vault skull

bladder, sacrum, vertebrae, skull  
abdomen, chest cavity, rib cage

abdomen measurement      chest cavity 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  
bony chest cage, thorax  
bony vault (brain), skull  
abdomen, abdominal cavity

metr/o \_\_\_\_\_  
thorac/o \_\_\_\_\_  
crani/o \_\_\_\_\_  
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  
pelvimetry  
thoracoplasty  
abdominocentesis  
cystectomy  
hydrotherapy

crani/o \_\_\_\_\_  
pelv/i \_\_\_\_\_  
thorac/o \_\_\_\_\_  
abdomin/o \_\_\_\_\_  
cyst/o \_\_\_\_\_  
hydro- \_\_\_\_\_

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.

cocc/i  
kok' sē

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).

dipl/o/cocc/i

strept/o/cocc/i

staphyl/o/cocc/i

53.

There are three main types of a coccus bacteria:

cocci growing in pairs are

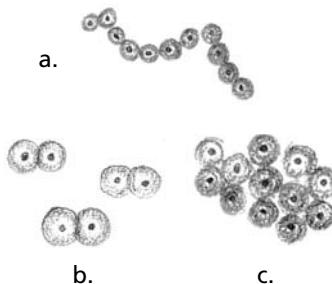
dipl / o / \_\_\_\_\_ / \_\_\_\_\_;

cocci growing in twisted chains are

strept / o / \_\_\_\_\_ / \_\_\_\_\_;

cocci growing in clusters are

staphyl / o / \_\_\_\_\_ / \_\_\_\_\_.



**Figure 3.3** Coccii Bacteria

b.

c.

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

strept/o/cocc/i  
strep' tō kok sē

staphyl/o/cocc/i  
staphylococci  
staf' i lō kok sī

staphylococci

pertaining to  
producing pus

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

## **pyogenic**

## pyogenic

discharge of pus

py/orrhea  
pyorrhea  
pī ō rē' ē

## **pyorrhea**

## **pyorrhea**

ear

ot/orrhea  
otorrhea  
ō tōrē' ē



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

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

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



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

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

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

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

otorrhea

ot/algia  
otalgia

otalgia  
ō tal' jē ə

nose

rhin/itis  
rhinitis  
rī nī' tis

rhin/orrhea  
rhinorrhea

rhinorrhea

rhin/o/plasty  
rhinoplasty

rhin/otomy  
rhinotomy

67.

Otorrhea may be a sign of ot/itis media (middle). Ot/itis media means \_\_\_\_\_  
\_\_\_\_\_.

This disease involves discharge, inflammation, pain, and deafness.  
What's the term for discharge from the ear? \_\_\_\_\_

68.

Otitis usually causes ear pain. Write the medical term for  
\_\_\_\_\_ / \_\_\_\_\_.  
ear                          pain

69.

Small children often complain of an earache. The medical term for  
pain in the ear is \_\_\_\_\_.

70.

Rhinorrhea means discharge from the nose. Rhin/o is used in terms  
about the \_\_\_\_\_.

71.

Taking what is necessary from rhin/o, form a term meaning inflam-  
mation of the nose: \_\_\_\_\_ / \_\_\_\_\_.

72.

When your head cold is accompanied by a “runny nose” the med-  
ical term for the symptom is \_\_\_\_\_ / \_\_\_\_\_.  
nose                          discharge

73.

Irritated or diseased sinuses in the head and face may discharge fluid  
through the nose. This is a form of \_\_\_\_\_.

74.

Build a term that means surgical repair of the nose:  
\_\_\_\_\_ / \_\_\_\_ / \_\_\_\_\_

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  
grape-like cluster  
pus  
nose  
double, paired  
ear  
twisted, chain-like  
producing, originating

cocc/us, cocc/i \_\_\_\_\_  
staphyl/o \_\_\_\_\_  
py/o \_\_\_\_\_  
rhin/o \_\_\_\_\_  
dipl/o \_\_\_\_\_  
ot/o \_\_\_\_\_  
strept/o \_\_\_\_\_  
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  
pyogenic  
rhinorrhea  
otalgia  
  
staphylococci  
rhinoplasty

A family of coccus bacteria found growing in pairs \_\_\_\_\_.  
Pertaining to producing pus, or pus-forming \_\_\_\_\_.  
A runny discharge from the nose \_\_\_\_\_.  
Pain in the ear, earache \_\_\_\_\_.  
Bacteria of the coccus family growing in grape-like clusters \_\_\_\_\_.  
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

## 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

— / — / —.

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' ē 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.

LIST A

pelvis

stone, calculus

gall, bile

pus

skull

head

measure

nose

ear

chainlike

grapelike

double

chest

bladder, sac

abdomen

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  
calculus, stone  
discharge, flow  
surgical puncture  
abnormal fear

therapy \_\_\_\_\_  
lith \_\_\_\_\_  
orrhea \_\_\_\_\_  
centesis \_\_\_\_\_  
phobia \_\_\_\_\_

surgical puncture  
abnormal fear  
calculus, stone  
treatment  
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.

of or pertaining to the duodenum  
pertaining to the stomach  
pertaining to the lumbar area (of the spine)  
pertaining to the heart

SUFFIXES	EXAMPLE	MEANING
-al	duoden/al	_____
-ic	gastr/ic	_____
-ar	lumb/ar	_____
-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)  
abdominal (ab dom' i nəl)  
abdominocentesis  
(ab dom' i nō sen tē' sis)  
abduction (ab duk' shun)  
adduction (ad duk' shun)  
cardiocentesis  
(kär' dē ō sen tē' sis)  
cephalic (ce fal' ik)  
cholecystectomy  
(kō' lē sis tek' tō mē)  
cholezystitis (kō' lē sis tī' tis)  
cholelithotomy  
(kō' lē lith ot' ē mē)  
craniectomy (krā nē ek' tō mē)  
cranioplasty (krā' nē ū plas' tē)

craniotomy (krā nē ot' ū mē)  
cranium (krā' nē um)  
cystitis (sis tī' tis)  
cystocele (sis' to sēl)  
cystotomy (sis tot' ē mē)  
diplococci (dip' lō kok' sī)  
hydrocephalus (hī' drō sə fal' us)  
hydrophobia (hī' drō fo' bē ē)  
hydrotherapy (hī' drō ther' ē pē)  
lithogenesis (lith' ū jen' ē sis)  
lithotomy (lith ot' ū mē)  
otalgia (ō tal' jē a)  
otitis (ō tī' tis)  
otorrhea (ō tō rē' ē)  
pelvic (pel' vik)  
pelvimetry (pel vim' ē trē)

pyogenic (pī ō jen' ik)	streptococci (strep' tō kok' sī)
pyorrhea (pī ū rē' ā)	thoracic (thōrā' sic)
rhinitis (rī nīt̄' sis)	thoracocentesis (thōr' ā kō sen tē' sis)
rhinolith (rīn' nō lith)	thoracoplasty (thōr' ā kō plas' tē)
rhinoplasty (rīn' nō plas tē)	thoracotomy (thōr' ā kot' ā mē)
rhinorrhea (rīnōrē' ā)	
staphylococci (staf' ī 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. Oitalgia
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  
bradycardia  
bradē kär' dē ə

slowness of movement

pain on movement or movement pain

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

kinesialgia

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

1.

*Brady* is used in words to mean slow.

*Brady/cardia* means \_\_\_\_\_ heart action.

2.

The term for abnormally slow heart action is

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

3.

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

4.

*Kinesi/algia* means \_\_\_\_\_

\_\_\_\_\_.

5.

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

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

6.

After your first horseback ride, almost any movement causes a condition called \_\_\_\_\_.

7.

The suffix *-ology* means study of. (Remember ologist?) The study of muscular movements is

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

movement

study of

8. Kinesiology is the study of movement. The study of muscular movement during exercise is known as the scientific field of \_\_\_\_\_.
9. The whole science of how the body moves is embraced in the field of \_\_\_\_\_.
10. Brady/kinesia means \_\_\_\_\_.
11. *Tachy-* is used in words to show the opposite of slow. Thus tachy/cardia means \_\_\_\_\_.
12. Write the medical term for an abnormally fast heartbeat:  
\_\_\_\_\_ / \_\_\_\_\_.
13. *Pne/o* comes from the Greek word *pneia* (breathe). *Pne/o* anywhere in a word means \_\_\_\_\_.
14. When *pne/o* begins a word, the “p” is silent. When *pne/o* 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)
15. Brady/pnea means \_\_\_\_\_.  
A word for rapid breathing is \_\_\_\_\_ / \_\_\_\_\_.
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 \_\_\_\_\_.

kinesiology

kinesiology

abnormally slow movement

abnormally fast or rapid heart action

tachy/cardia  
tachycardia  
tak ə kär' dē ə

breathe or breathing

will  
brad ip nē' ə  
silent

slow breathing

tachy/pnea  
tachypnea  
tak ip nē' ə

tachypnea

tachypnea

17.

Muscle exercise increases the amount of carbon dioxide in the blood. This speeds respiration and produces \_\_\_\_\_.

without breathing

18.

The prefix *a-* literally means without. Thus apnea means \_\_\_\_\_

apnea  
ap' nē ē

19.

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 \_\_\_\_\_.

apnea

20.

If the level of carbon dioxide in the blood falls very low, temporary cessation of breathing results. This is called \_\_\_\_\_.

bradypnea

21.

If breathing is merely very slow, it is called \_\_\_\_\_.

tachypnea  
a-

22.

When breathing is abnormally fast, it is called \_\_\_\_\_.  
The prefix meaning without is \_\_\_\_\_.

dys/pne/a  
dyspnea  
disp' nē ə

23.

The prefix *dys-* means painful, bad, or difficult. *Dys/troph/y* literally means bad development. Write a word for difficult breathing:  
\_\_\_\_\_ / \_\_\_\_\_.

dys-

24.

Dys/men/orrhea means painful menstruation. The prefix for painful, bad, or difficult is \_\_\_\_\_.

poor or painful  
digestion

25.

*Pepsis* (*peps/o*) is the Greek word for digestion. *Dys/peps/ia* means

dys/peps/ia  
dyspepsia  
dis pep' sē ə

26.

Eating under tension may cause painful or poor digestion. This is called \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

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.

Refer to the table below to work through the next thirteen frames.

---

<b>Some Combining Forms</b>	
angi/o	vessel, blood & lymphatic
arteri/o	artery
fibr/o	fibrous, fiber
hem/o, hemat/o	blood
malac/o	soft, softened
lip/o	fat
my/o	muscle
neur/o	nerve or neuron
scler/o	hard
<b>Some Suffixes</b>	
-lysis	declining, dissolution
-spasm	twitch, twitching
-blast	germ or immature
-osis	condition of
-oma	tumor
-ia, -y	these endings make the term a noun

---

**Table 1**

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

neur/o/fibr/oma  
neurofibroma  
nyoo' rō' fī brō' mä  
angi/o/fibr/oma  
angiofibroma  
an' jē ō fī brō' mä

neur/o/lys/is  
neurolysis  
nyoo roh' e sis

angi/o/lys/is  
angiolysis  
an jee ol' i sis

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

arteri/o/scler/osis  
arteriosclerosis  
a softened artery  
arteriomalacia  
ar ter' ē ö mö lä' zha

arteri/o/spasm  
arteriospasm  
ar ter' ē ō spa' zm  
  
lip/o/lys/is  
lipolysis  
lip ol' i sis

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

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

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

---

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

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

38.  
Build a word meaning a hardened condition of the arteries:  
          /           /           /

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

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

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

hem/angi/itis

hemangiitiis

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.

LIST A

artery

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

fibrous connective tissue

fibr/o \_\_\_\_\_

blood

hem/o, hemat/o \_\_\_\_\_

fat

lip/o \_\_\_\_\_

soften

malac/o \_\_\_\_\_

muscle

my/o \_\_\_\_\_

nerve

neur/o \_\_\_\_\_

harden

scler/o \_\_\_\_\_

blood and lymph vessel

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.

LIST A

destruction of

-lysis \_\_\_\_\_

twitching

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

tumor

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

inflammation of

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

germ cell (immature)

-blast \_\_\_\_\_

condition of

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

science, or study of

-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.

a condition of hardening of the arteries

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

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

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

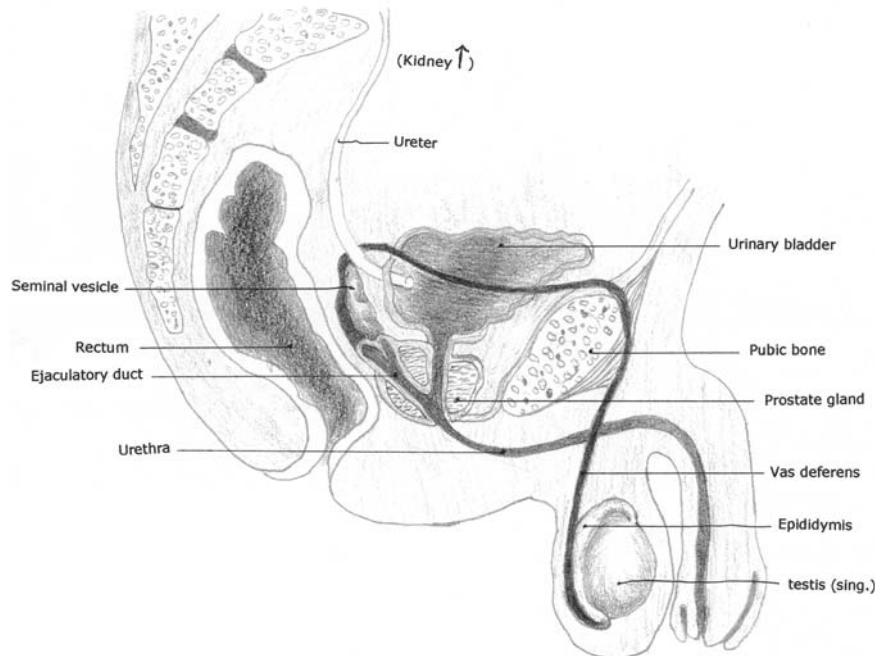
fibrous muscle tumor \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

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

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

Take a break.

arterio/scler/osis  
hemat/oma  
angio/spasm  
myo/fibr/oma  
or fibromyoma  
neuro/blast  
lipo/lysis



**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 spermatazoon (spermat/o)  
testis (orchid/o)  
prostate (prostat-, prostat/o)

ureter (ureter/o)  
urethra (urethr/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.

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

excision of a testicle,  
testis

orchid/itis  
orchiditis  
or ki dī' tīs

orchid/otomy  
orchidotomy  
or kid ot' ō mē

crypt  
kript'

46.

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

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

47.  
A crypt/ic remark is on  
belief is obscure. The w  
\_\_\_\_\_.

crypt/orchid/ism  
cryptorchidism  
krip' ôr' kid ism

49

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

undescended testes is called \_\_\_\_\_ / \_\_\_\_\_ / ism.  
\_\_\_\_\_ / \_\_\_\_\_ / testicle.  
hidden

hidden testicle

cryptorchidism

orchid/o/(pexy)

formation of  
spermatozoa, sperm,  
or male germ cells

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

spermat/o/blast  
spermatoblast  
sper mat' ə blast

spermat/oid  
spermato<sup>id</sup>  
sper' mä toid

muscle  
vessel  
nerve

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

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.

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 \_\_\_\_\_.

52.

*Blast-* means immature.

*-Lysis* means dissolution or destruction.

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

How about these:

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

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

53.

Summarize what you learned:

my/o         means \_\_\_\_\_,  
angi/o         means \_\_\_\_\_,  
neur/o         means \_\_\_\_\_.

54.

Again.

spasm         means \_\_\_\_\_,  
blast/o         means \_\_\_\_\_,  
scler/o         means \_\_\_\_\_,  
fibr/o         means \_\_\_\_\_,  
lysis         means \_\_\_\_\_.

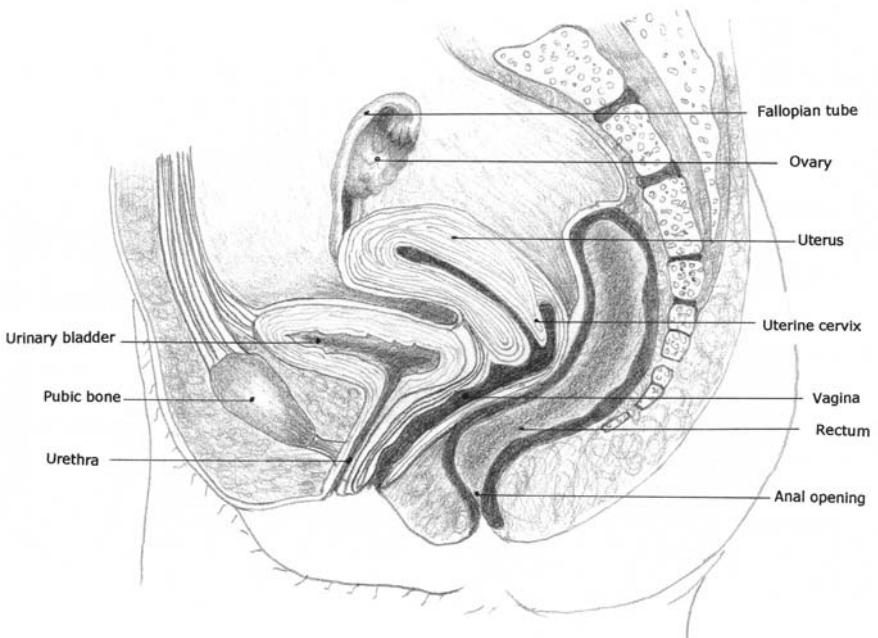
55.

And these.

spermatozoa (sperm)  
blood  
blood  
formation of, or  
origination

spermat/o means \_\_\_\_\_,  
hemat/o means \_\_\_\_\_,  
hem/o means \_\_\_\_\_,  
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.

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.

egg (a cell that will become an ovum)

excision or surgical removal of the ovary

oophor/itis  
oophoritis  
ōō för ī' tis

oophor/ectomy  
oophorectomy  
ōō för ek' tō mē

oophor/oma  
oophoroma  
ōō för ō' ma

57.

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? \_\_\_\_\_

58.

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

59.

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

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

- fixation (of) 60.  
oophor/o/pexy Oophor/o/pexy means fixation of a displaced ovary. -Pexy is a suffix meaning \_\_\_\_\_.
- oophoropexy 61.  
oo' för ô pek' sē When an ovary is displaced, a surgical procedure to fix it back in its 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/itis Salping/o is used to build terms that refer to the fallopian tube(s). A salpingoscope is an instrument used to examine the \_\_\_\_\_.
- salpingitis 64.  
sal pin jī' tis Using what you need of salping/o, build a word meaning inflammation of a fallopian tube, \_\_\_\_\_ / \_\_\_\_\_;
- salping/ectomy 65.  
salpingectomy  
sal pin jek' tō mē excision of a fallopian tube, \_\_\_\_\_ / \_\_\_\_\_;
- salping/ostomy 66.  
salpingostomy  
sal pin gos' tō mē a permanent opening into a fallopian tube, \_\_\_\_\_ / \_\_\_\_\_.
- game and good  
(pronounce them) 67.  
hard (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)
- “o” and “a” 68.  
A hard “g” precedes the vowels \_\_\_\_\_ and \_\_\_\_\_.

germ and giant  
(pronounce them)

soft (pronounce them)  
“e” and “i”

laryng~~e~~ctomy  
lar in jek' tō mē  
pharyngalgia  
far ing gal' jē a  
pharyngitis  
far in ji' tis  
salpingo-oophorectomy  
sal pin' gō oo fōr ek'  
tō mē

salping/o-/oophor/ itis  
salpingo-oophoritis  
sal' pin gō oo fōr i' tis

Use a hyphen between  
two like vowels when  
joining word roots

inflammation of the  
vagina

vaginal spasm  
colp/otomy  
colpotomy  
kōl pot' ō mē

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)

69.

In salpingian, laryngitis, and pharyngectomy, the “g” is given a \_\_\_\_\_ sound because it precedes the vowels \_\_\_\_\_ and \_\_\_\_\_.  
(soft/hard)

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.

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

72.

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

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

73.

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

74.

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

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

colp/o/plasty (you pronounce)

colp/o/scope  
colposcope  
kôl' pô skôp

uterus

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:

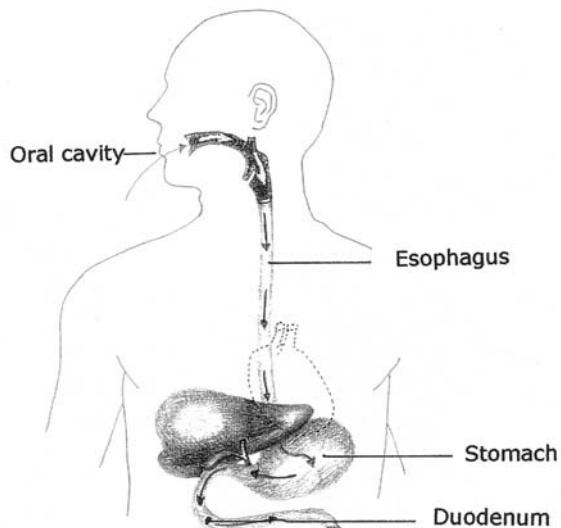
an incision into the uterus, \_\_\_\_\_;

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.

hystero/salpingo/oophor/ectomy

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.

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.

**LIST A**

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

oophor/o \_\_\_\_\_  
spermato/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:

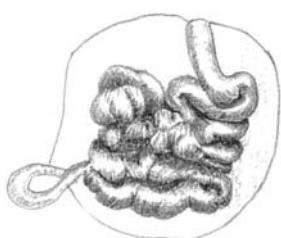
**Figure 4.4**



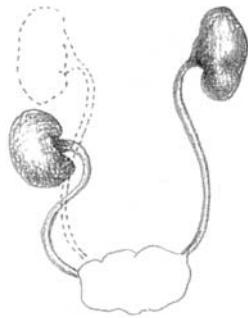
A. \_\_\_\_\_



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



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



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

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

- sinking down, prolapse,  
or sagging
- hyster/o/ptosis
- hyster/o/ptosis  
hysteroptosis  
his' ter op tō' sis
- hernia
- ptosis
- aneurysm
- anomaly
- normal
- wall
- rule
- blood vessel
83.  
Hyster/o/ptosis means prolapse (sagging) or sinking down of the uterus. Ptosis (pronounced tō' sis) is a word that means \_\_\_\_\_.
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 \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.
- 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.
- anomaly      hernia      aneurysm      ptosis
- Protrusion of an organ or part through the wall of the cavity in which it is normally enclosed. \_\_\_\_\_
- The prolapse, or sagging, of an organ or part from its normal position. \_\_\_\_\_
- The abnormal ballooning out of a blood vessel at a weak point. \_\_\_\_\_
- 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.
- Ptosis is the sagging of an organ or part from its \_\_\_\_\_ position.
- Hernia is the protrusion of an organ or part through the \_\_\_\_\_ of a cavity that normally contains it.
- Anomaly is an irregularity. It is an organ or structure that is contrary to the \_\_\_\_\_.
- 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)

herniated (verb)

aneurysm (noun)

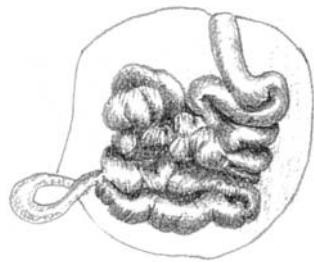
nephro/ptosis

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

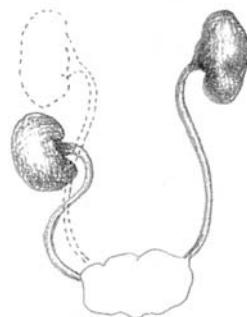
When an organ or part protrudes through the wall of the cavity that normally contains it, we say it has \_\_\_\_\_.

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

*Nephro*/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 \_\_\_\_\_

**Figure 4.5** Label each illustration above.

88.

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

We suggest something like these:

aneurysm: an abnormal ballooning out of a blood vessel at a weak point.

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

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

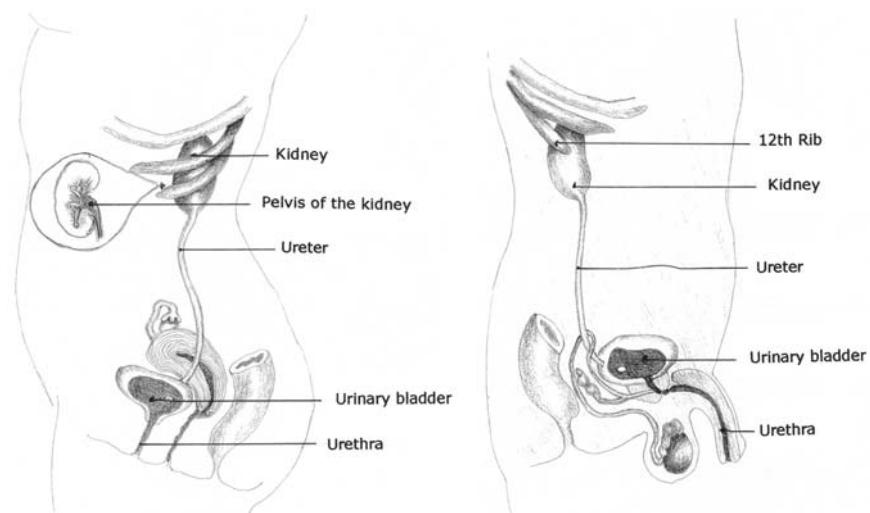
hernia: protrusion of an organ or part through the wall that normally contains it.

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 (pyle/o)
bladder (cyst/o)	ureter (ureter/o)
urethra (urethr/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.

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? \_\_\_\_\_.

ur  
ur/o

renal pelvis

pyel/itis  
pyelitis  
pī ə li' tis

pyel/o/plasty  
pyeloplasty  
pī' e lō plas tē

abnormal condition of  
the renal pelvis and  
kidney

pyel/o/nephritis  
pyelonephritis  
pī' lō nef rī' tis

91.

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

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.

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

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  
yoo' re' ter oh' pih eh' lih' tis

ureter/o/cyst/ostomy  
ureterocystostomy  
yoo ré' ter ô sis tos' tō  
mē

ureter/orrhaphy  
ureterorrhaphy  
yer rē ter ôr' ə fē

neph<sup>r</sup>/orrhaphy  
nephrorrhaphy  
nef rôr' ə fē

cyst/orrhaphy  
cystorrhaphy  
sis tôr' ə fē

neur/orrhaphy  
neurorrhaphy  
nyoo 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):

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

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,

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

urethr-

suturing of the urethra  
(to repair)

urethr/otomy  
urethrotomy  
yer ə throt' ə m

urethr/o/spasm  
urethrospasm  
yer rē' thrō spasm

cyst/orrhagia  
cystorrhagia  
sis tō rä' jē ə

ureter/orrhagia  
ureterorrhagia  
yer rē' ter ō rä' jē ə

How does the dictionary define these terms?

99

Look back at Illustrations 4.6 & 4.7. What is the function of the urethra? \_\_\_\_\_  
\_\_\_\_\_

What is the word root for urethra? \_\_\_\_\_

Urethr/orrhaphy means \_\_\_\_\_  
\_\_\_\_\_.

100.

Form a word that means incision into the urethra,  
\_\_\_\_\_ / \_\_\_\_\_;

spasm of the urethra,  
\_\_\_\_\_ / \_\_\_\_ / \_\_\_\_\_.

101.

Another complex word part is -orrhagia, which can be used as a suffix when it follows a word root. *Orrhagia* means bursting forth of blood (as in hemorrhage).

Build a word that means bursting forth of blood from the bladder,  
\_\_\_\_\_ / \_\_\_\_\_;

hemorrhage of the ureter,

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.

## 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

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'yoō rizm)                        | myosclerosis (mī ō skler ū sis)                         |
| angioblast (an' jē ū blast)                   | myospasm (mī' ū spa zm)                                 |
| angiosclerosis<br>(an' jē ū sklē rō' sis)     | nephritis (nef ri' tis)                                 |
| anomaly (an om'ə lē)                          | nephrolith (nef' rō lith)                               |
| apnea (ap' nē ə)                              | nephromegaly (nef' rō meg ə lē)                         |
| arteriosclerosis<br>(ar ter' ē ū skler ū sis) | nephroptosis (nef rop tō' sis)                          |
| arteriospasm<br>(ar ter' ē ū spa' zm)         | neurofibroma<br>(nyōō' rō fī brō' mā)                   |
| bradycardia (brad ē kăr' dē ə)                | neurolysis (nyōō rol' ə sis)                            |
| bradypnea (brad ip nē' ə)                     | o-blast (ō'ō blast)                                     |
| colporrhaphy (kōl pōr'ə fē)                   | ophoropexy (ōō' fōr ū pek' sē)                          |
| colposcopy (kōl pōs' kō pē)                   | orchidotomy (or kid ot' ū mē)                           |
| cryptorchidism<br>(krip' ūr kid ism)          | pyelitis (pī ə lī' tis)                                 |
| cystorrhagia (sis tō rā jē ə)                 | pyeloplasty (pī' ə lō plas tē)                          |
| dysmenorrhea<br>(dis' men ūr rē' ə)           | salpingectomy<br>(sal pin jek' tō mē)                   |
| dyspepsia (dis pep'sē ə)                      | salpingo-oophorectomy<br>(sal pin' gō ūō fōr ek' tō mē) |
| dyspnea (disp' nē ə)                          | salpingoscopy (sal pin gos' kō pē)                      |
| hemangiitis (hē man jē ī' tis)                | spermatoblast (sper mat' ū blast)                       |
| hematologist (hē mā tol' ū jist)              | spermatozoid (sper' ma toid)                            |
| hemolysis (hē mol' ə sis)                     | tachycardia (tak ə kăr' dē ə)                           |
| hernia (her' nē ə)                            | tachypnea (tak ip nē' ə)                                |
| hysteropexy (his'ter ū peks' ē)               | ureterolithotomy<br>(yer rē' ter ū lith ot' ū mē)       |
| hysterospasm (his' ter ū spa zm)              | ureterorrhaphy<br>(yer rē ter ūr' ə fē)                 |
| hysterotomy (his ter ot' ū mē)                | ureterotomy (yer ē ter ot' ū mē)                        |
| kinesialgia (kin ē' sē al' jē ə)              | urethralgia (yer ū thral' jē ə)                         |
| kinesiology (kin ē' sē ol' ū jē)              | urethrotomy (yer e throt' ū 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
- 2. Spermatozoid
- 3. Nephroptosis
- 4. Anomaly
- 5. Oophoropexy
- 6. Bradypnea
- 7. Angioblast
- 8. Ureterotomy
- 9. Angiosclerosis
- 10. Hysterotomy
- 11. Myospasm
- 12. Dyspepsia
- 13. Hemolysis
- 14. Kinesiology
- 15. Aneurysm

- a. The study (or science) of motion
- b. A condition of hardening of vessels
- c. Spasm of the urethra
- d. Destruction of blood (cells)
- e. Abnormally slow breathing
- f. Surgical fixation of the ovary in its place
- g. Tumor of nerve and fibrous tissue
- h. Muscle spasm
- i. Structure contrary to the rule
- j. Resembling sperm
- k. Abnormally enlarged kidney
- l. Ballooning out of blood vessel
- m. Painful menstruation (cramps)
- n. Vessel germ cell
- 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

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

pain, ache

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

under, beneath

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

excessive, too much

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

surgical excision of  
incision into

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

bursting forth,  
hemorrhage

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

a noun ending meaning  
condition, condition  
of

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

abnormal condition,  
diseased condition

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

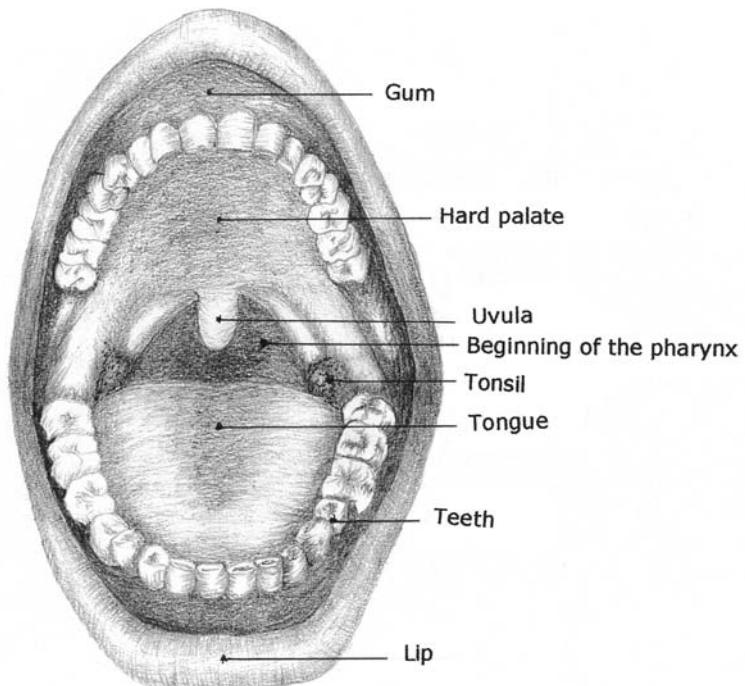
\_\_\_\_\_

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*)

3.

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

4.

inflammation of the  
mouth

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



cheil/otomy  
cheilotomy  
kē' lot' ō mē

cheil/osis  
cheilosia  
kē' lō' sis

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

gingiv/o  
of or pertaining to gums

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

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

11.

Build a term meaning incision into the lips,  
\_\_\_\_\_ / \_\_\_\_\_;

abnormal condition or diseased condition of the lips,  
\_\_\_\_\_ / \_\_\_\_\_.

12.

Now, build a term meaning plastic surgery of the lips and mouth

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
lip                          mouth                          repair

13.

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

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.

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	-

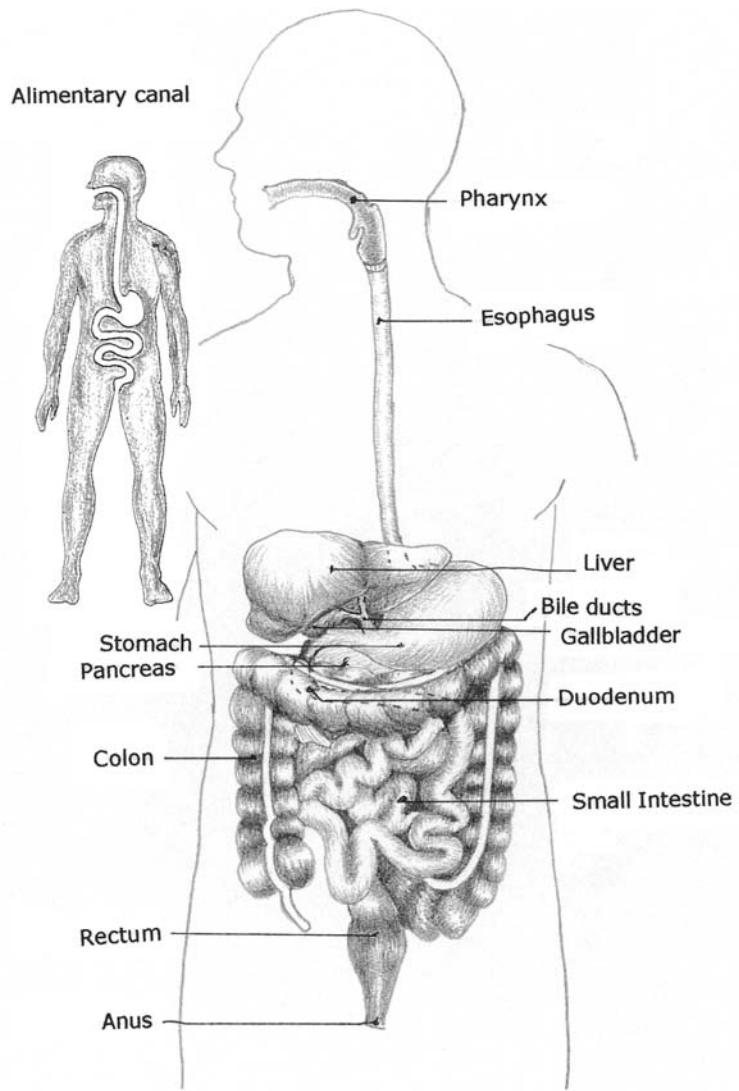


Figure 5.2 The Digestive Tract

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)

- stomach hemorrhage  
inflammation of the stomach  
of, or pertaining to the stomach
- poisoning of the small intestine  
stretching, dilation of the small intestine  
irrigation, washing out of the small intestine
- washing, irrigation of the colon  
dilation, stretching, or expanding of the stomach
- a surgical procedure to fix the colon in its normal place  
herniation of the small intestine  
a surgical procedure to make a new (permanent) opening into the colon
19.  
Here are some easy ones. Gastr/orrhagia means \_\_\_\_\_  
Gastritis means \_\_\_\_\_  
Gastric means \_\_\_\_\_
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.
- enter/o/toxin \_\_\_\_\_  
enter/ectasia \_\_\_\_\_  
enter/o/clysis \_\_\_\_\_
21.  
What do you think col/o/clysis means? \_\_\_\_\_  
What does gastr/ectasia mean? \_\_\_\_\_
22.  
Use Illustration 5.2 as you need to, and try these.  
col/o/pexy means \_\_\_\_\_  
enter/o/cele means \_\_\_\_\_  
col/ostomy means \_\_\_\_\_

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,

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



examination of the  
anus and rectum  
proktos' kō pē

hepat/o

pertaining to the liver  
an abnormal condition  
of enlargement of  
the liver

hepat/o/scop/y  
hepatoscopy  
hep ə tos' kō pē

hepat/otomy  
hepatotomy  
hep ə tot' ə mē

hepat/itis  
hepatitis  
hep ə tī' tis

pertaining to the  
pancreas

pancreat/o/lysis

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

proct/o/scopy —

33.

Back to Illustration 5.2. What is the combining form for liver?

Hepat/ic means \_\_\_\_\_.

Hepatomegaly means \_\_\_\_\_

34.

Build a word meaning inspection (examination) of the liver,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_;

incision into the liver,

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

inflammation of the liver,

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

35.

Here's another new term. Pancreat/ic means \_\_\_\_\_

Underline the part of the term that means dissolution or destruction.

## Pancreat/o/lys/is

36.

inflammation of the pancreas.

# Inflammation of the pancreas,

excision of part or all of the pancreas

excision of part or all of the pancreas,  
/ .

#### incision into the pancreas

incision into the pancreas,  
/

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

gastr/o/enter/o/col/  
ostomy

esophag/o/gastr/  
ostomy

enter/o/chol/e/cyst/  
ostomy

proct/ectasia

duoden/o/chol/e/cyst/  
ostomy

esophag/o/gastr/o/  
scopy

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:

gastroenterocolostomy,

\_\_\_\_\_;

esophagogastrostomy,

\_\_\_\_\_;

enterocholecystostomy,

\_\_\_\_\_.

39.

Try it again:

Proctectasia,

\_\_\_\_\_;

duodenocholecystostomy,

\_\_\_\_\_;

esophagogastroscopy,

\_\_\_\_\_.

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

rect/o \_\_\_\_\_

colon

col/o \_\_\_\_\_

pancreas

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:

a new opening between the esophagus and duodenum

inspection of the anus and rectum (with an instrument)

plastic surgery of the lips

stretching of the esophagus

In your own words, write the meaning of each of the following medical terms.

esophag/o/duoden/ostomy

---



---

proct/oscropy

---



---

cheil/o/plasty

---



---

esophag/o/ectasia

---



---

irrigation of the anus  
and rectum (and  
lower colon; enema)

proct/o/clysis

---

---

pain of the stomach  
and intestine

gastr/o/enter/algia

---

---

incision into the  
pancreas

pancreat/otomy

---

---

tumor of the mouth

stomat/oma

---

---

spasm of the tongue

gloss/o/spasm

---

---

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)  
cheiloplasty (kē' lō plas tē)  
colic (kol' ik)  
colitis (kō lī' tis)  
colostomy (kō los' tō mē)  
dentalgia (den tal' jē ə)  
enterocele (en' ter ō sēl)  
enteroclysis (en ter ok' li sis)  
enterotoxin (en' ter ō tox in)  
esophagogastroscopy  
    (ē sof' ə gō gas tros' kō pē)  
gastrectasia (gas trek tā' zhə)  
gastrorrhagia (gas' trō rä' jē ə)  
gingivectomy  
    (jin ji vek' tō mē)

gingivoglossitis  
    (jin' ji vō glos ī' tis)  
glossospasm (glos' ō spa zm)  
hepatitis (hep a tī' tis)  
hepatomegaly (hep a tō meg' a lē)  
hepatorrhagia (hep a tō rä' jē ə)  
hypoglossal (hī' pō glos' əl)  
pancreatectomy  
    (pan krē a tek' tō mē)  
proctoclysis (prok tok' li sis)  
proctoscopy (prok tos' kō pē)  
rectal (rek' t'l)  
stomatitis (stō mā tī' tis)  
stomatorrhagia (stō mät ō rä' jē ə)

## 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
- 2. Stomatoplasty
- 3. Hepatectomy
- 4. Stomatorrhagia
- 5. Colic
- 6. Enteroclysis
- 7. Glossospasm
- 8. Dental
- 9. Enterotoxin
- 10. Cheilitis
- 11. Colostomy
- 12. Gastrectasia
- 13. Cheiloplasty
- 14. Hepatomegaly
- 15. Proctoscopy

- a. Make a new opening in the colon
- b. Abnormal enlargement of the liver
- c. Of or pertaining to teeth
- d. Intestinal poisoning
- e. Stretching, dilation of the stomach
- f. Spasm of the tongue
- g. Hemorrhage of the mouth
- h. Irrigation of the rectum and anus
- i. Plastic surgery of the mouth
- j. Relating to the colon
- k. Plastic surgery of the lips
- l. Irrigation of the intestine
- m. Surgical removal of (part of) the liver
- n. Examination (looking into) the rectum through the anus with an endoscope
- 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 |



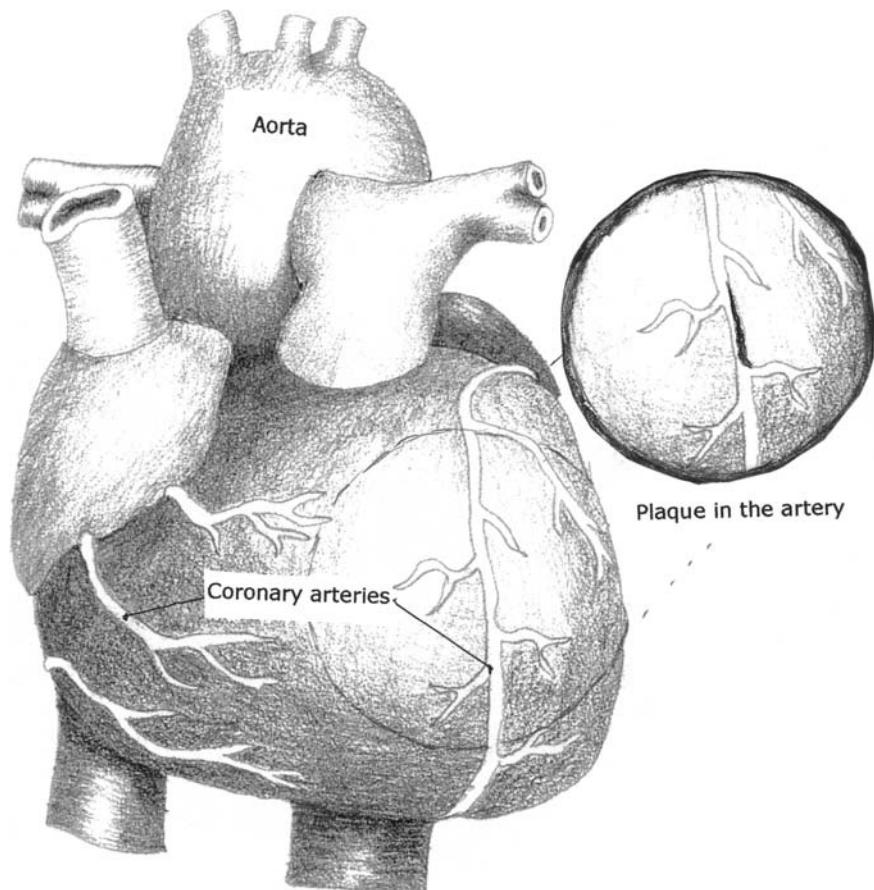
# 6 The Heart

*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)	myel/o (spinal cord, bone marrow)
angi/o (vessel)	phas/o (speech)
arteri/o (artery)	phleb/o (vein)
cardiac arrest (stopped heart)	plas/o (formation)
dactyl/o (fingers)	thrombosis (bloodclot occluding a vessel)
defibrillation (heart shocked to a regular heartbeat)	thrombus (a blood clot)
embolism (obstruction of a blood vessel)	
embolus (foreign particle in the bloodstream)	
esthesia (feeling, sensation)	
fibrillation (very fast, irregular heartbeat)	
a-, an- (absent, without)	poly- (many)
dys- (bad, difficult, painful)	sym-, syn- (together)
-emia (blood)	-orrhexis (rupture, bursting apart)
macro- (large)	-tripsy (rubbing, crushing)
micro- (small, very small)	

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 blood-stream is an \_\_\_\_\_.

embol (ism)  
em' bō lizm

thromb (osis)  
throm bō' sis

thrombosis

embolus

thrombus

coronary thrombosis

defibrillation  
dē fib ri lā' shun

cardiac arrest

defibrillation

4.

When a vessel is suddenly occluded by an embolus, the resulting condition is known as an \_\_\_\_\_ ism.

When a sudden vessel occlusion is caused by a thrombus, the resulting condition is a \_\_\_\_\_ osis.

A blood clot occluding a coronary (heart) vessel is a condition called coronary \_\_\_\_\_.

5.

Embolism is caused by a/an \_\_\_\_\_.

Thrombosis is caused by a/an \_\_\_\_\_.

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 *defibrillation*.

Underline the term that indicates the better outcome:  
cardiac arrest / defibrillation

8.

A very fast, irregular heartbeat, left unchecked, may lead to a complete cessation of heart functioning known as \_\_\_\_\_.

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

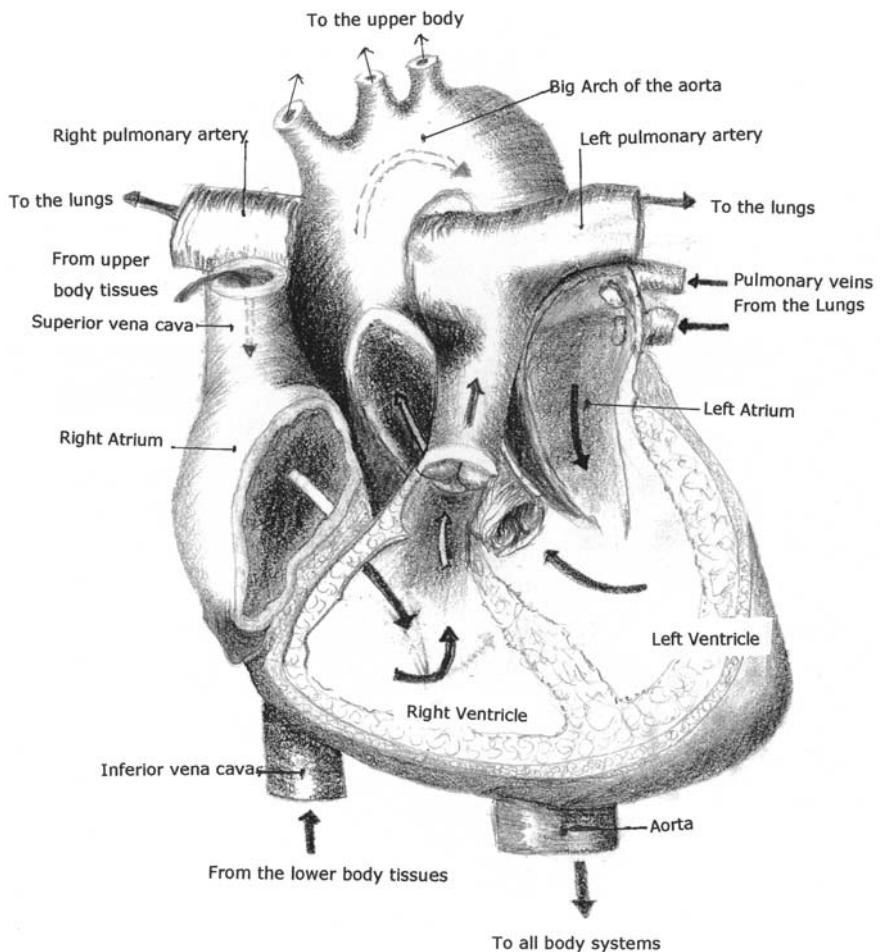
a very fast, irregular heartbeat, \_\_\_\_\_;

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

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

### arteries

phleb/o/scler/osis  
phlebosclerosis  
flēb' ō sklerō'sis

**phleb/otomy**  
**phlebotomy**  
flē bot' ō mē

phleb/itis  
phlebitis  
flē bī' tis

12.

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

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

13

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

then hardening of veins is called

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

14.

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

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

clot

excision of a thrombus  
(clot)

inflammation of a vein  
with thrombus  
formation

thrombus

thromb/osis  
thrombosis  
throm' bō' sis

thromb/o/cyte  
thrombocyte  
throm' bō sīt

thromb/oid  
thromboid  
throm' boid

Cardiac arrest

Coronary thrombosis

Defibrillation

Embolism

Embolus

15.

Thromb/o is the combining form that means clot.

Thromb/o/angi/itis means inflammation of a vessel with formation of a \_\_\_\_\_.

16.

Thromb/ectomy means \_\_\_\_\_.

17.

Thromb/o/phleb/itis means \_\_\_\_\_.

18.

A synonym for clot is \_\_\_\_\_.

19.

Build a word meaning a condition caused by a clot,  
\_\_\_\_\_ / \_\_\_\_\_;

a cell that aids in clotting,

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

resembling a clot,

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

20.

Let's review. Add the correct term to each of the definitions below.

\_\_\_\_\_ is the complete cessation of heart function.

\_\_\_\_\_ is a heart attack caused by a blood clot occluding the coronary blood vessel.

\_\_\_\_\_ is a procedure using an electrical spark to shock the heart and bring about a regular heartbeat.

\_\_\_\_\_ is the sudden obstruction of a blood vessel by an 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 \_\_\_\_\_.  
\_\_\_\_\_.

Enter/orrhexis means \_\_\_\_\_.  
\_\_\_\_\_.

Angi/orrhexis means \_\_\_\_\_.  
\_\_\_\_\_.

rupture of the bladder

rupture of the small intestine

rupture of a blood vessel

cardi/orrhexis

cardiorrhesis

kär dē ō rek' sis

phleb/orrhexis

phleborrhesis

flē bō rek' sis

23.

Build a word meaning rupture of the heart,

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

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              saliping/o

cyst/o              hepat/o

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

cyst/orrhexis

rupture of the (urinary) bladder

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

hepat/orrhagia

hemorrhage from the liver,

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

rhin/orrhea

flowing from the nose (runny nose),

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

salping/orrhaphy

suturing (or joining) the fallopian tubes,

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

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:

a condition of being  
without feeling

anesthesia \_\_\_\_\_  
\_\_\_\_\_;  
\_\_\_\_\_;

	anesthesiology _____ _____;																
the study or science of removing feeling																	
instrument for measuring feeling or sensation	esthesiometer _____ _____;																
abnormal sensitivity (to pain)	hyperesthesia _____ _____.																
an/esthesi/o/log/ist an' es thēz ē ol' ī jist	27. Analyze the following words (you do the dividing):																
hypo/esthes/ia hī pō es thē' zē ā	anesthesiologist, _____; hypoesthesia, _____.																
without sensitivity to pain an' al jē' zē ā	28. Algesia is a word meaning a sense of pain. What does analgesia mean? _____.																
a-	29. The prefixes <i>a-</i> and <i>an-</i> mean without. Examine the following two lists of words:																
an-	<table border="0"> <tbody> <tr> <td>an/algesia</td> <td>a/biotic</td> </tr> <tr> <td>an/emia</td> <td>a/dermia</td> </tr> <tr> <td>an/encephalus</td> <td>a/febrile</td> </tr> <tr> <td>an/esthesia</td> <td>a/kinesia</td> </tr> <tr> <td>an/onychia</td> <td>a/menia</td> </tr> <tr> <td>an/opia</td> <td>a/menorrhea</td> </tr> <tr> <td>an/uria</td> <td>a/pnea</td> </tr> <tr> <td>an/uresis</td> <td>a/sepsis</td> </tr> </tbody> </table>	an/algesia	a/biotic	an/emia	a/dermia	an/encephalus	a/febrile	an/esthesia	a/kinesia	an/onychia	a/menia	an/opia	a/menorrhea	an/uria	a/pnea	an/uresis	a/sepsis
an/algesia	a/biotic																
an/emia	a/dermia																
an/encephalus	a/febrile																
an/esthesia	a/kinesia																
an/onychia	a/menia																
an/opia	a/menorrhea																
an/uria	a/pnea																
an/uresis	a/sepsis																
	Draw a conclusion: When the word root begins with a consonant, use the prefix _____.																
a-																	
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 less blood	_____emic _____ _____;																

astomia—without a mouth (congenital)

stomia \_\_\_\_\_  
\_\_\_\_\_ ;

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 speaking

dysphasia \_\_\_\_\_ .

pain along the course of a nerve (or equivalent)

32. *Neur/o* is used in words that refer to nerves. *Neur/algia* means

\_\_\_\_\_ .

trips

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 \_\_\_\_\_.

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

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

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

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

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

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

hernia of the spinal  
cord

bone marrow or  
spinal cord

bad, defective (poor or  
abnormal formation)

hyper/plasia  
hyperplasia  
hī' per plā' zha

hypo/plasia  
hypoplasia  
hī' pō plā' zha

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

36.

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

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

37.

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

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

39.

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

40.

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

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' zhā  
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

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 \_\_\_\_\_

	45.
microns mī' krons	The <i>micron</i> (1/1000 mm) is a unit of measurement. Many cocci are 2 microns in diameter. A red blood cell is 7 _____ in diameter.
micr/o/meter micrometer mīkrom' ētər	An instrument for measuring the diameter of something microscopic is a _____ / _____ / meter.
large	46.
	On the other hand, <i>macr/o</i> is the opposite of <i>micr/o</i> . <i>Macr/o</i> is used in words to mean _____.
a large immature cell visible by the naked eye	47.
	Things that are <i>macr/o/scop/ic</i> can be seen with the naked eye. Give a meaning for <i>macroblast</i> . _____
Macr/o/cephal/us mak rō se fal' us	48.
	An abnormally large head is _____ / _____ / _____ / _____.
macr/o/cyte	
	An abnormally large cell is a _____ / _____ / _____.
macr/o/cocc/us	
	A very large coccus is called a _____ / _____ / _____ / _____.
In each case there is a condition of—	49.
abnormally large tongue mak rō glos' ē ə	The suffix -ia indicates a condition. Pronounce each term and write a meaning.
abnormally large ear(s) mak rō' shē ə	Macr/o/gloss/ia _____
abnormally large nose mak rō rin' ē ə	Macr/ot/ia _____
abnormally large lips mak rō kē' lē ə	Macr/o/rhin/ia _____
dactyl dak' til	Macr/o/cheil/ia _____
	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
- synergetic
- a fused joint that moves as one
- syndactylism  
synarthrosis
- together or joined as one
- synarthrosis  
symmetrical  
symbolism  
sympathy
57. Syn/ergetic means working together. Drugs that work together to increase the effects of one another are called \_\_\_\_\_ / \_\_\_\_\_ drugs.
58. Synergetic muscles are muscles that work together. Three muscles work together to flex the forearm. The function of these muscles is described as \_\_\_\_\_.
59. APC tablets are thought by some to be more effective for killing pain than aspirin alone. This is because *aspirin*, *phenacetin*, and *caffeine* are \_\_\_\_\_ drugs.
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? \_\_\_\_\_
- Underline the part of the word that means joined together as one:  
syndactylism  
synarthrosis
61. What does syn/dactyl/ism mean (-ism denotes a medical condition or disease)? \_\_\_\_\_
62. *Syn-* and *sym-* are different forms of the same prefix: *Syn-* and *sym-* mean \_\_\_\_\_.
63. Use the prefix *sym-* when the word root begins with the consonants b, m, or p; use *syn-* in all other cases. Write the prefix for each of the following:
- \_\_\_\_\_ arthrosis  
\_\_\_\_\_ metrical  
\_\_\_\_\_ bolism  
\_\_\_\_\_ physis

<u>syndrome</u>	_____	drome
<u>sympathy</u>	_____	pathy
<u>symbiosis</u>	_____	biosis

joined as one, together  
b, m, p

64.  
Both syn- and sym- mean \_\_\_\_\_

\_\_\_\_\_; sym- is used when followed by the letters \_\_\_\_\_,  
\_\_\_\_\_, 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	
phas/o	
plas/o	
dactyl/o	

algesia \_\_\_\_\_  
a sensation of pain .

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

embolus \_\_\_\_\_  
foreign particle circulating in the blood \_\_\_\_\_

esthesia \_\_\_\_\_  
feeling, sensation \_\_\_\_\_

phas/o \_\_\_\_\_  
speech \_\_\_\_\_

plas/o \_\_\_\_\_  
formation, development \_\_\_\_\_

dactyl/o \_\_\_\_\_  
digits \_\_\_\_\_

66.

Try these.

SUGGESTED ANSWERS:

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

-orrhesis \_\_\_\_\_  
rupture, burst apart \_\_\_\_\_

syn-, sym- \_\_\_\_\_  
together, as one \_\_\_\_\_

dys- \_\_\_\_\_  
defective, difficult, painful \_\_\_\_\_

-orrhagia \_\_\_\_\_  
hemorrhage, burst forth \_\_\_\_\_

macro- \_\_\_\_\_  
large \_\_\_\_\_

-tripsy \_\_\_\_\_  
crushing, rubbing \_\_\_\_\_

---

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

Here are some suggestions:

crushing of a nerve

without sensation of pain

bad formation of the spinal cord

a condition of a blood clot in the coronary artery

pertaining to something too small to see with the naked eye

without speech, speechless

a condition of fingers joined together as one

surgical repair of a hernia

hemorrhage of the liver

without, or absent, pain

complete cessation of heart function

electrical shock of the heart to restore regular rhythm

ruptured blood vessel (vein)

67.

In your own words, write the meaning for each of the following:

neur/o/tripsy

---

an/esthesia

---

myel/o/dys/plasia

---

coronary thrombosis

---

micro/scop/ic

---

a/phasia

---

syn/dactyl/ism

---

herni/orrhaphy

---

hepat/orrhagia

---

an/algesia

---

cardiac arrest

---

defibrillation

---

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 (kär dē ūr rek' sis)  
chondrodysplasia  
    (kon' drō dis plā' zhə)  
cystorrhesis (sis tō rek' sis)  
dactylogram (dak til' ō gram)  
dactylomegaly  
    (dak' til ū 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)  
hysterorrhesis (his' ter ūr rek' sis)  
lithotripsy (lith' ū 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)  
neurotripsy (nyōō' rō trip sē)  
phlebitis (fle bī' tis)  
polyarthritis (pol ē arth rī' tis)  
polyuria (pol ē yer' ū 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. Polyarthritis   | 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. Hysterorrhesis  | 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. Cardiorrhexis
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.*

<b>Signs</b>	<b>Qualifiers</b>	<b>Word Parts</b>
atrophy	acute	anti- ( <i>against</i> )
edema	central	chlor/o ( <i>green</i> )
hypertrophy	chronic	erythr/o ( <i>red</i> )
pulse	generalized	melan/o ( <i>black</i> )
respiration	localized	pyret/o ( <i>fever</i> )
temperature	paroxysmal	xanth/o ( <i>yellow</i> )
	peripheral	

<b>Symptoms</b>	<b>Treatments</b>	<b>Diagnosis</b>
anorexia	active	prodrome
dyspnea	palliative	prognosis
malaise	prophylactic	syndrome
nausea	systemic	
tinnitus		
vertigo		

**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

3.

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

symptom

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

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 \_\_\_\_\_.

98.6

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.

fires

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 \_\_\_\_\_.

above

8.

*Pyret/o* forms words meaning fever. A patient described as pyretic would have a temperature \_\_\_\_\_ 98.6°F.  
(above/below/same as)

sign

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

hypothermia

hyper  
hī per

that which produces  
fever

pyretogen  
pī ret'ō jen

pertains to something  
that produces fever

an agent that works  
against fever

fever reduction

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 \_\_\_\_\_.

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 \_\_\_\_\_.

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)

13.

In an earlier unit you learned that gen/o means to produce or originate. What does pyret/o/gen mean? \_\_\_\_\_

14.

The measles virus produces fever. Therefore, the virus that causes measles is a \_\_\_\_\_.

15.

Pyret/ic means pertaining to fever. What does pyret/o/gen/ic mean? \_\_\_\_\_

16.

*Anti-* means against. Aspirin is an anti/pyret/ic agent. What does antipyretic mean? \_\_\_\_\_

17.

*Lysis* means dissolution or reduction. What does pyret/o/lysis mean? \_\_\_\_\_

- without symptoms
- increase
- tachycardia
- bradycardia
- sign
- 70 to 80
- vital sign
18. A physician writes on a patient's chart, "The patient has a low-grade fever but is otherwise asymptomatic." What does asymptomatic mean? \_\_\_\_\_.
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)
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)
- On the other hand, a pulse less than 60 beats per minute indicates \_\_\_\_\_.
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)
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.
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

central

because it is near the center of the body

near the outer surface of the body

accelerated

an instrument for measuring breathing

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)

25.

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

(central/peripheral)

26.

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

27.

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

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)

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 ē

hyper/pnea

pronounce: hī perp' nē ē

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

very slow breathing

disp' nē ə  
painful (bad) breathing

excessively rapid  
breathing  
hī perp' nē ə

without breathing  
ap' nē ə

hyperpnea  
hī perp' nē ə

bradypnea  
brad ip nē' ə

31.

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

32.

Pronounce dys/pnea. What does it mean? \_\_\_\_\_.

33.

Hyperpyrexia means excessively high temperature (over 106°F). What does hyperpnea mean? \_\_\_\_\_.

34.

A/symptomatic means without symptoms. What does a/pnea mean? \_\_\_\_\_.

(Pronounce it.)

35.

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.

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 ā

Cheyne-Stokes

vital signs

temperature  
pulse  
respiration

symptom  
see, hear, smell, taste,  
feel

vital signs  
pyrexia  
pī rek' sē ā  
hypothermia  
hī pō ther' mē ā  
hyperpyrexia  
hī per pī rek' se ā  
pyretogen  
pī ret' ō gen  
pyretolysis  
pī ret ū lī' sis  
asymptomatic  
ā simp tō mat' ik

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? \_\_\_\_\_.

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.

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 \_\_\_\_\_ \_\_\_\_\_

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.

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

COLUMN B

asymptomatic

vital signs

hyperpyrexia

hypothermia

pyretogen

pyrteolysis

pyrexia

see, hear,

smell,

taste, feel

symptom

43.

Now try these.

COLUMN A

pulse

throbbing of an artery in time with

the heartbeat \_\_\_\_\_

pulse taken at the surface of the body  
\_\_\_\_\_

peripheral

two combining forms for breath, breathing

\_\_\_\_\_ or \_\_\_\_\_

very slow breathing \_\_\_\_\_

difficult breathing \_\_\_\_\_

excessively fast breathing \_\_\_\_\_

another word for breathing \_\_\_\_\_

respiratory arrest, not breathing \_\_\_\_\_

breathing that reaches a climax, then ceases before

beginning again \_\_\_\_\_-

\_\_\_\_\_

COLUMN B

apnea

bradypnea

Cheyne-

Stokes

respiration

dyspnea

hyperpnea

peripheral

pne/o, pne/a

pulse

respiration

pne/o, pne/a

bradypnea

dyspnea

hyperpnea

respiration

apnea

Cheyne-Stokes

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

zan thop' sē ə

chlor/opia

klor ö' pē ə

45.

Cyan/opia means blue vision. Form a word meaning

yellow vision, \_\_\_\_\_/opsia.

green vision, \_\_\_\_\_/opia.

erythr/o/derma

e rith' rō der' mā

melan/o/derma

mel' a nō der' mā

46.

Cyan/o/derma means blue skin. Build a word meaning

red skin, \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

black (discolored) skin, \_\_\_\_\_.

(You draw the lines.)

green (plant) cell  
white (blood) cell  
red (blood) cell

melan/o/blast  
mel' a nō blast  
erythr/o/blast  
e rith' rō blast

a black-pigmented  
malignant tumor

melanocarcinoma  
mel' a nō kär si nō' mä

green  
red  
yellow  
white

47.

Write a meaning for each of the following:

chlor/o/cyte, \_\_\_\_\_  
leuk/o/cyte, \_\_\_\_\_  
erythr/o/cyte, \_\_\_\_\_

48.

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

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

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

49.

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

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

50.

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 \_\_\_\_\_.

51.

Chlor/o means \_\_\_\_\_.

Erythr/o means \_\_\_\_\_.

Xanth/o means \_\_\_\_\_.

Leuk/o means \_\_\_\_\_.

## **Qualifiers**

52.

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.

local

Novocain is a \_\_\_\_\_ anesthetic.  
(local/general)

54.

On the other hand, laughing gas, which puts the patient to sleep, is a \_\_\_\_\_ anesthetic.

general

55

55. Label each of the following as local or general.  
skin rash around the neck and ears

local

---

---

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 clothing covers the skin

---

a small area or part of  
the body

56. A localized condition means \_\_\_\_\_

involving the whole body or many areas at the same time

When a condition is generalized, it means \_\_\_\_\_

general

57

Systemic means pertaining to all body systems, or the whole body rather than one of its parts. It is another word for \_\_\_\_\_.

systemic  
sis tem' ik  
or 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 **decongestant** effect.

## 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 \_\_\_\_\_.

generalized edema

62.

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)

edema

63.

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

Atrophy  
at' rō fē

64.

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

overdevelopment

What does hyper/troph/y mean?

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 vomiting.

## 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? \_\_\_\_\_

### malaise

75

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

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

malaise  
ma lā'z

the vague sensation of  
not feeling well

without an appetite  
an o rek' sē ə

pertaining to something  
that produces or  
stimulates an appetite

orexigenic  
ō reks i gen' ik

anorexia  
an o rek' sē ə

malaise

nausea

emesis

pyrexia

anorexia

76.

A patient with infectious mononucleosis may experience a vague sensation of not feeling well, or feeling ill at ease. The symptom is called \_\_\_\_\_.

77.

Malaise is a symptom because the physician cannot observe malaise and does not experience the patient's sensation. Describe malaise.

78.

Orexia means appetite. What does an/orexia mean? \_\_\_\_\_

79.

Orexi/mania means an abnormal desire (madness) for food or an uncontrollable appetite. What does orexi/genic mean? \_\_\_\_\_

80.

Food that smells good and is appealing to the eye stimulates appetite. We may describe this food and its presentation as \_\_\_\_\_.

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:

A vague sensation of not feeling well is \_\_\_\_\_.

Sickness of the stomach with a desire to vomit is \_\_\_\_\_.

Another word for vomitus is \_\_\_\_\_.

Elevated body temperature is \_\_\_\_\_.

Loss of appetite is \_\_\_\_\_.

malaise  
anorexia

the patient experiences  
the sensation

turning around

symptom  
vertigo  
ver' tī gō

tinnitus  
ti nī' tus

tinnitus  
vertigo

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 \_\_\_\_\_.

84.

Anorexia and malaise are purely subjective symptoms. What does that mean? \_\_\_\_\_

\_\_\_\_\_.

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.

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)

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.

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	green (plant) cell, _____
xanthemia	yellowish blood, _____
melanoblast	black (dark) immature cell, _____
erythroderma	reddened skin, _____
leukocyte	white blood cell, _____
cyanemia	blue-bloodedness, _____

91.

Now try these qualifiers.

hypertrophy	atrophy
general	systemic
local	

general or systemic	pertaining to the entire body _____
hypertrophy	overdevelopment _____
local	pertaining to a small area, or one part, _____
systemic	pertaining to all body systems _____
atrophy	a wasting away, underdevelopment, _____

92.

Here are some objective symptoms.

tinnitus	malaise
emesis	nausea
vertigo	anorexia

vertigo	a sensation of turning around in space _____
nausea	seasickness; inclined to vomit _____
emesis	another word for vomitus _____
tinnitus	ringing in the ears _____
malaise	a vague sensation of not feeling well _____
anorexia	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 \_\_\_\_\_.

diagnosis  
dī ag nō' sis

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

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

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 \_\_\_\_\_.

97.

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

all are relevant

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.

\_\_\_\_\_ 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

(Here's our suggestion) to predict the patient's illness (its course and outcome)

prognosis  
prog nō' sis

to tell what the course and likely outcome of the disease will be

unfavorable  
favorable  
guarded

unfavorable prognosis

diagnosis

prognosis

99.

If an obstetrician is one who is skilled in delivering babies, what is a diagnostician? \_\_\_\_\_  
\_\_\_\_\_.

100.

The prefix pro- means before, or in front of. What do you think is the meaning of prognosis? \_\_\_\_\_  
\_\_\_\_\_.

101.

Acute leukemia often may be fatal within three months. Prediction of the course and outcome of this disease is called a \_\_\_\_\_.

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.

favorable      unfavorable      guarded

Expect the patient to die in 3 to 6 months \_\_\_\_\_.

Recovery will be easy after surgery \_\_\_\_\_.

Recovery will be long and difficult \_\_\_\_\_.

104.

A patient who has little chance of recovering from his disease is said to have an (two words) \_\_\_\_\_

unfavorable/favorable

predicted outcome

105.

When a physician has identified the patient's illness, the physician has made a \_\_\_\_\_.

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)

paroxysmal tachy/cardia

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

(acute/chronic/paroxysmal)      rapid      heart

- chronic
- inflammation that has a slow onset (may be mild) and lasts a long time
- paroxysm  
par' ok sizm
- chronic
- acute
- an inflammation of many nerves, a rapid onset; very painful, short duration
- an inflammation of many joints that starts slowly and lasts a long time
- a condition of having supernumerary fingers (or toes)
- a group of symptoms running along together
113.  
Arteriosclerotic heart disease (ASHD) has a very slow onset. Symptoms may be mild and last a lifetime. ASHD is a/an \_\_\_\_\_ condition.
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: \_\_\_\_\_  
\_\_\_\_\_
115.  
A fit or convulsion is a/an \_\_\_\_\_.  
A long, drawn-out disease is described as \_\_\_\_\_.  
Sharp, severe symptoms, over a short course, describes a/an \_\_\_\_\_ disease.
116.  
Poly- is a prefix meaning many or much; excessive. Explain each of the following:  
Acute polyneuritis means \_\_\_\_\_  
\_\_\_\_\_  
Chronic polyarthritis \_\_\_\_\_  
\_\_\_\_\_  
Polydactylism \_\_\_\_\_  
\_\_\_\_\_
117.  
*Syndrome* is a group of symptoms that occur together and thus characterize a specific disease.  
*Syn* means together; *drome* means running along. Therefore, syndrome literally means \_\_\_\_\_

together

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 \_\_\_\_\_.

syndrome  
sin' drōm

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 \_\_\_\_\_.

symptoms  
together

120.

Alcoholism produces a characteristic group of symptoms called Korsakoff's syndrome. From the name we know that a variety of \_\_\_\_\_ occur \_\_\_\_\_.

syndrome

121.

A group of symptoms occurring together characterize a specific disease. We call this group of symptoms a \_\_\_\_\_.

syndrome

the symptoms run  
along together

122.

Recurrent (and usually progressive) hearing loss, tinnitus, vertigo, and a sensation of fullness in the ears is known as Ménière's \_\_\_\_\_.

Explain why: \_\_\_\_\_

prodrome  
prō' drom

before

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

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)

125.

Sneezing that comes before the chills and fever of a common cold is the \_\_\_\_\_ of the cold.

126.

prodrom (al)  
prō drō' mal

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.

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 \_\_\_\_\_.

128.

diagnosis

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.

129.

active

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 hyperpyrexic 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 \_\_\_\_\_.

cure  
kyōōr

life-threatening

138.

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.

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

Treatment of constitutional symptoms, \_\_\_\_\_.

active

Treatment directed specifically toward a cure, \_\_\_\_\_.

palliative

Treatment to relieve discomfort, \_\_\_\_\_.

prophylactic

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*.

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

morbidity refers to the  
rate of illness;  
mortality refers to the  
death rate

149.

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

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')

anorexia (an o rek' sē ə)

antipyretic (an tē pī ret' ik)

asymptomatic (ā simp tō mat' ik)

atrophy (at' rō fē)

bradypnea (brad' ip nē ə)

central (sen' trūl)

Cheyne-Stokes respiration  
(chān-stōks)

chlorocyte (klor' ō sīt)

chronic (kron' ik)

cyanoderma (sī ə nō der' mä)

diagnosis (dī ag nō' sis)

dyspnea (disp' nē ə)

edema (e dē' mä)

emesis (em' ə sis)

erythremia (er i thrē' mē ə)

generalized

hematemesis (hē mä tem' ə sis)

hyperpnea (h perp' nē ə)

hyperpyrexia (hī per pī rek' sē ə)

hypothermia (hī pō ther' mē ə)

leukocyte (lōō' kō sīt)

localized

malaise (mä lāz')

melanocarcinoma

(mel' ə nō kär sin ū' mä)

morbidity (mor bid' i tē)

mortality (mor tal' i tē)

nausea (naw' zē ə)

palliative (pal' ē ə tiv)

paroxysmal (par ok sis' mal)

peripheral (per i' fer al)

pneometer (nē om' ə ter)

polyarthritis (pol' ē arth rī' tis)

prodromal (prō drō' mal)

prognosis (prog nō' sis)

prophylactic (prō fi lak' tic)

pulse (pultz')

pyretolysis (pī ret ū li' sis)

pyrexia (pī rek' sē ə)

respiration

symptom

symptomatic

syndrome (sin' drōm)

systemic

tachypnea (tak ip nē' ə)

temperature

tinnitus (ti nī' tus)

vertigo (ver' ti gō)

vital signs

xanthopsia (zan thop' sē ə)

## Unit 7: Self-Test

### Part 1

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

- |                          |                 |  |
|--------------------------|-----------------|--|
| <input type="checkbox"/> | 1. Diagnosis    | a. Pertaining to the whole body, all systems                           |
| <input type="checkbox"/> | 2. Systemic     | b. Very fast breathing   |
| <input type="checkbox"/> | 3. Morbidity    | c. Identification of an illness  |
| <input type="checkbox"/> | 4. Pyretolysis  | d. Fluid in the tissues  |
| <input type="checkbox"/> | 5. Edema        | e. Pertaining to disease rate statistic                                |
| <input type="checkbox"/> | 6. Generalized  | f. Temperature, pulse, and respiration                                 |
| <input type="checkbox"/> | 7. Anorexia     | g. Reduction of fever  |
| <input type="checkbox"/> | 8. Vertigo      | h. A sickness of the stomach; desire to vomit                          |
| <input type="checkbox"/> | 9. Hyperpnea    | i. Pertaining to the whole body, many different parts at the same time |
| <input type="checkbox"/> | 10. Malaise     | j. Wasting away, or underdevelopment                                   |
| <input type="checkbox"/> | 11. Paroxysm    | k. Loss of appetite  |
| <input type="checkbox"/> | 12. Vital signs | l. Sensation of turning around in space                                |
| <input type="checkbox"/> | 13. Syndrome    | m. Vague sensation of not feeling well                                 |
| <input type="checkbox"/> | 14. Nausea      | n. Pertaining to sudden periodic attack                                |
| <input type="checkbox"/> | 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)		epi- (over, surrounding)
end-, endo- (inner, within)		sub-, hypo- (below, under)
meso- (middle)		supra-, super- (above, over)
circum- (around)		infra- (below, beneath)
peri- (around about)		

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 \_\_\_\_\_.

mesoderm  
mēz' ō derm

4.

Which primary germ layer originates all connective tissues and all body musculature? \_\_\_\_\_.

mesoderm

5.

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? \_\_\_\_\_.

ectoderm  
ek' tō derm

6.

Which of the three embryonic germ layers gives rise to the nervous system and the organs of special sense? \_\_\_\_\_.

endoderm  
en' dō derm

7.

The primitive gut tract and its associated glands (organs) develop from which germ layer of the embryo? \_\_\_\_\_.

ectoderm

8.

The skin, including mucous membranes exposed to the environment, is derived from the primary germ layer called the \_\_\_\_\_.

endoderm  
ectoderm  
mesoderm  
mēz' ō derm

9.

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 \_\_\_\_\_.

of, or pertaining to  
outside the cell

10.

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) \_\_\_\_\_  
endoscopy \_\_\_\_\_

cavity)  
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

What does endogenous mean? \_\_\_\_\_

## ectogenous

ek toj' en us

originating or produced

inside of (a cell)

en doj' en us

12.

*To*pos, *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:

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.

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

neoplasm  
nē' ō plazm

17.

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 \_\_\_\_\_.

neoplasm

18.

Neoplasm and tumor are interchangeable terms. They both mean an autonomous new \_\_\_\_\_.

growth of tissue that  
serves no useful  
purpose

19.

*Bio-* means life; *-opsy* means appearance, sight. A biopsy is removing tissue from a living body and examining it under a microscope.

tissue  
examines

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 \_\_\_\_\_.

21.

biopsy

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? \_\_\_\_\_.

22.

malignant

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)

23.

benign

A nonmalignant neoplasm is an abnormal tissue mass growing slowly, not spreading, and not likely to recur. The growth is \_\_\_\_\_.

(malignant/benign)

24.

biopsy

A procedure that determines whether a neoplasm is benign or malignant is a \_\_\_\_\_.

25.

fast

death

A malignant neoplasm is a bad kind that grows \_\_\_\_\_,  
(fast/slowly)  
resists treatment, and threatens to cause \_\_\_\_\_.

26.

malignant

A benign neoplasm is mild (grows slowly), does not spread or recur, and is not \_\_\_\_\_.  
(the other kind)

27.

infiltration

*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.

*Metastasis* means movement of cells (especially cancer cells) from one part of the body to another.

*Meta-* means after, beyond, among, over; *-stasis* 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.

location

Metastasis is the movement of malignant tumor cells from the primary location over to another \_\_\_\_\_.

30.

infiltration or direct extension

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

31.

infiltration  
metastasis

Unlike malignant neoplasms, benign growths do not spread by \_\_\_\_\_ or \_\_\_\_\_.

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  
tumor/neoplasm  
benign  
metastasize

neoplasm/tumor  
biopsy  
infiltration

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' tə 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' zhūn	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.

lesions  
In Alzheimer's disease there are morbid changes in brain tissue. These unhealthy changes in brain structure are also called \_\_\_\_\_.

morbid

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)

chicken pox is a disease; the pox are lesions

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.

- duodenal ulcer
- skinned knees
- scalding burn of the hand
- abrasion of the elbow
- chicken pox
- infected toenail

lesions

39.

Poison ivy leaves may irritate the skin and cause blisters. These unhealthy changes in the structure of the skin are called \_\_\_\_\_.

40.  
lesion Build a word meaning a hurt, an injury, or any unhealthy area of any organ or part: \_\_\_\_\_.
41.  
unhealthy, diseased What does morbid mean? \_\_\_\_\_.
42.  
inflammation of the bladder In earlier units you learned that cyst means bladder.  
Cystitis means \_\_\_\_\_.
- examination of the inside of the bladder Endocystoscopy means \_\_\_\_\_.  
\_\_\_\_\_.
- excision (or removal) of the gallbladder Cholecystectomy means \_\_\_\_\_.  
\_\_\_\_\_.
43.  
sac A cyst is a closed \_\_\_\_\_.  
fluid, semifluid, or solid material It contains \_\_\_\_\_.
- 
- Figure 8.1 Cyst**
44.  
cyst A malfunctioning ovary may develop a closed sac or pouch containing fluid. This is called an ovarian \_\_\_\_\_.
45.  
a cyst containing fluid (water) What is a hydrocyst? \_\_\_\_\_.
- a sac that contains fluid or even solid material Cyst means \_\_\_\_\_.

46.

cystectomy

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

burn, injury, infection

50.

A lesion is an area of \_\_\_\_\_ tissue.

Give some examples of lesions:  
\_\_\_\_\_.

51.

Cyst has two different meanings.

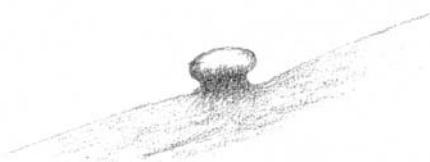
bladder

a sac containing fluid or  
semifluidCyst means \_\_\_\_\_  
a part of the bodyCyst also means \_\_\_\_\_  
an abnormality

52.

tumor/neoplasm  
little foot, or stemA polyp is a specific kind of \_\_\_\_\_.  
A polyp has a \_\_\_\_\_.

53.

*Papilla* is a small nipplelike protuberance or elevation. It may be located anywhere on the body, and may be normal or abnormal.**Figure 8.3** Papilla.small, nipplelike  
structures

Taste buds are small nipplelike structures on the surface of the tongue. They account for the four fundamental taste sensations: sweet, bitter, sour, and salt. Stand in front of a mirror; stick your tongue way out. You will see papillae (plural) on the back of your tongue. Describe them: \_\_\_\_\_.

54.

papilla  
pa pil' ə

The nipple of the mammary gland (breast) is called a mammary \_\_\_\_\_.

55.

pap i lō' mä  
nipplelike*Papilloma* is a hypertrophied papilla covered by a layer of skin. What is the shape of a papilloma?  
\_\_\_\_\_.

56.

pap' yōol

*Papule* is a pimple. It's a red elevated spot on the skin. It's solid and circumscribed. Papular lesions appear on the skin in smallpox, measles, and chicken pox.



**Figure 8.4** Papule.

spots They are elevated red \_\_\_\_\_ on the skin.

circumscribed 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.

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.

kon di lō' mä  
condyloma

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 \_\_\_\_\_.

morbid, unhealthy

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 \_\_\_\_\_.

60.

pa pil' ē (pl.)  
small, nipplelike  
protuberance

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.

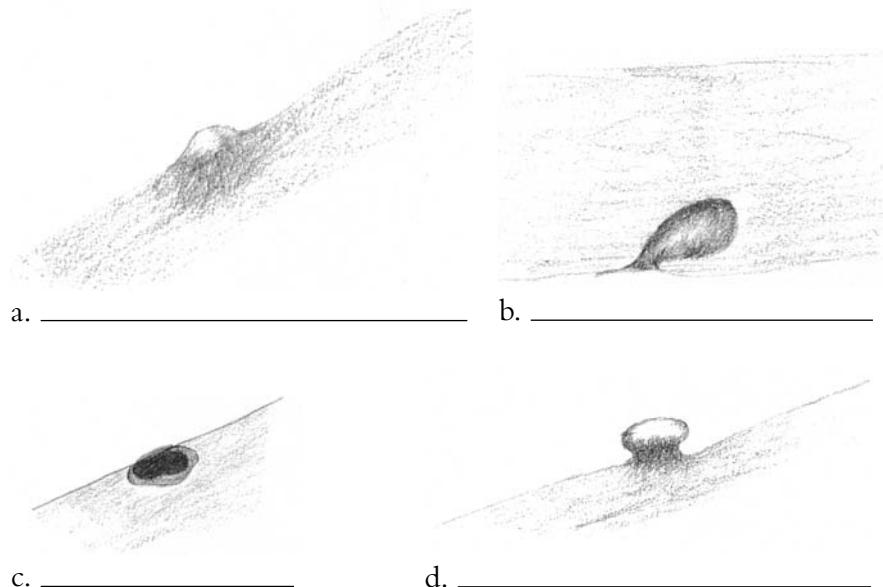


Figure 8.6

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, _____.
excrescence (eks kres' ens)	useless outgrowth, like a wart, _____.
papillae (pa pil' ē)	nipplelike protuberances, _____.
papule (pap' yōol)	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.

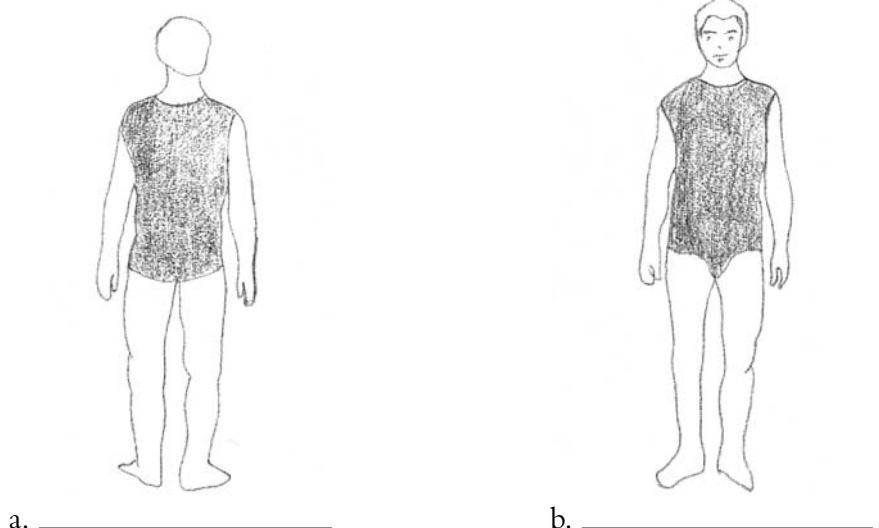
65.

*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. dorsal
- b. ven' tral
- ven' tral

a. \_\_\_\_\_

b. \_\_\_\_\_

Figure 8.7

66.

belly  
back

Ventral, ventr/o means on or near the \_\_\_\_\_. Dorsal, dors/o means on or near the \_\_\_\_\_.

67.

Try these.

backache

Dorsalgia means \_\_\_\_\_.

incision into the belly

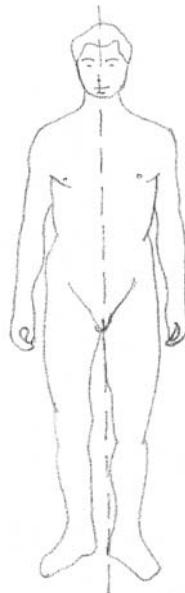
Ventrotomy means \_\_\_\_\_.

of or pertaining to belly  
to back

68.

What do you think ventrodorsad means? \_\_\_\_\_  
\_\_\_\_\_.ventrodorsad  
ven trō dor' sädA 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?  
\_\_\_\_\_.

70.

lateral Which corner of your eye is nearest your ear? \_\_\_\_\_.  
(medial/lateral)

medial Which side of your knee knocks the other knee? \_\_\_\_\_.  
(medial/lateral)

71.

farther Lateral means \_\_\_\_\_ from the midline.  
nearer Medial means \_\_\_\_\_ to the midline.  
on the midline Where is your umbilicus located? \_\_\_\_\_.

72.

nearest 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.

73.

hand Which is distal, your elbow or your hand? \_\_\_\_\_.  
proximal On which end of your finger do you wear a ring? \_\_\_\_\_.  
(distal/proximal)

74.

distal 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)

75.

proximal 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 \_\_\_\_\_.

76.

farthest from the attachment to the trunk The fingers are distal to all other parts of the arm. What does distal mean? \_\_\_\_\_.

nearest to the attachment to the trunk

77.

Describe the location of a part that is proximal:

\_\_\_\_\_.

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

diseased (unhealthy) tissue around the teeth

80.  
What is peri/dent/al (peri/dont/al) gum disease? \_\_\_\_\_  
\_\_\_\_\_.

around

Peri- means \_\_\_\_\_.

around

81.

Circum- is another prefix meaning \_\_\_\_\_. Duct/ion 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:

---

For more information about the study, please contact Dr. [REDACTED] at [REDACTED].

85.

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.

Epi-

*Extra-  
Intra-  
Sub-, hypo-  
Supra-, super-*

upon, over (surrounding or covering)

without, outside of

below, beneath, under

below, beneath, less than normal

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  
beneath, under the  
kneecap

89.  
Again use the definitions to help you. The prefix *infra-* means  
\_\_\_\_\_.  
*Patella* means kneecap. What does *infra/patellar* mean? \_\_\_\_\_  
\_\_\_\_\_.

infra (-mammary)  
sub (-mammary)  
below the breast

Sub/patellar means  
\_\_\_\_\_.  
90.  
Infra- and sub- usually are interchangeable terms. Complete the  
alternate terms and write a meaning:  
\_\_\_\_\_ -mammary  
\_\_\_\_\_ -mammary  
meaning \_\_\_\_\_.

under the tongue  
under the tongue

91.  
Sub- and hypo- are often interchangeable also.  
Sub/lingual means  
\_\_\_\_\_.  
Hypo/glossal means  
\_\_\_\_\_.

below, beneath, less than normal  
infra-,  
hypo-

pertaining to below the breastbone

infrasternal

suprasternal

92.

The prefix sub- means \_\_\_\_\_.  
\_\_\_\_\_. What other two prefixes often are interchangeable and mean the same thing as sub-? \_\_\_\_\_ and \_\_\_\_\_.

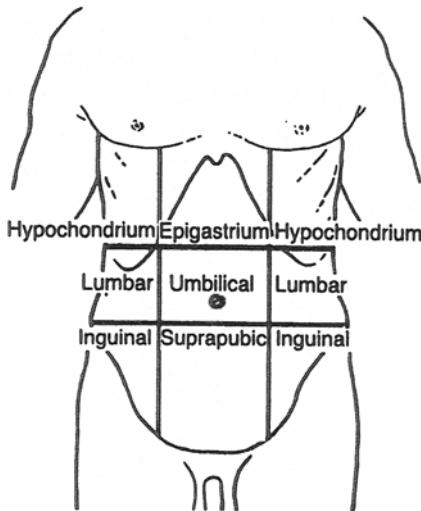
93.

Sternum is the breastbone. Write a meaning for sub/sternal:  
\_\_\_\_\_.

Use another prefix and build another term that means the same thing: \_\_\_\_\_.

94.

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/public 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/pubic, \_\_\_\_\_  
\_\_\_\_\_.

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' mä)

cyst (sist)

distal

dorsal

ectoderm (ek tō derm)

ectopic (ek top' ik)

endocystoscopy

(en dō sis tos' ko pē)

endogenous (en doj' ē 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' mä)
infiltration	papules (pap' yōols)
inframammary (in fra mam' ə rē)	perumbilical (per' ē um bil' i k'l)
lateral	polyp (pol' ip)
lesion	proximal (prox' si mal)
lumbar	subpatellar (sub pa tel' ar)
malignant (ma lig' nant)	suprapubic (su pra pyōō' bik)
medial	tumor
mesoderm (mēz' ū derm)	ventral
metastasis (me tas' ta sis)	

## Unit 8 Self-Test

### Part 1

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

- |                          |                   |  |
|--------------------------|-------------------|--|
| <input type="checkbox"/> | 1. Endocystoscopy | a. Farthest point from trunk attachment    |
| <input type="checkbox"/> | 2. Lesion         | b. Outside layer of germ cells             |
| <input type="checkbox"/> | 3. Circumocular   | c. Not spreading, not malignant            |
| <input type="checkbox"/> | 4. Distal         | d. Pertaining to inside the head vault     |
| <input type="checkbox"/> | 5. Endocranial    | e. Pertaining to around the eye            |
| <input type="checkbox"/> | 6. Epigastric     | f. Slipping into and between normal cells  |
| <input type="checkbox"/> | 7. Biopsy         | g. Pertaining to the area over the stomach |
| <input type="checkbox"/> | 8. Neoplasm       | h. Cells spread to new location, organ     |
| <input type="checkbox"/> | 9. Ectoderm       | i. Removal of tissue for examination       |
| <input type="checkbox"/> | 10. Metastasis    | j. New, abnormal tissue formation          |
| <input type="checkbox"/> | 11. Malignant     | k. Morbid tissue                           |
| <input type="checkbox"/> | 12. Benign        | l. Nearest the attachment to the trunk     |
| <input type="checkbox"/> | 13. Infiltration  | m. A bad kind, tending to threaten death   |
| <input type="checkbox"/> | 14. Proximal      | n. Occurring outside the normal place      |
| <input type="checkbox"/> | 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 ( <i>of or pertaining to</i> )	amni/o, amniot/o ( <i>fetal sac</i> )
-atrophy ( <i>undernourished, wasting</i> )	gravid/a ( <i>with child</i> )
-dynia ( <i>pain, painful</i> )	gyn/o, gynec/o ( <i>woman</i> )
-mania ( <i>madness</i> )	hyster/o ( <i>uterus</i> )
-pathy ( <i>disease</i> )	mamm/o ( <i>breast</i> )
-phobia ( <i>excessive fear</i> )	mast/o ( <i>breast</i> )
primi- ( <i>first</i> )	men/o ( <i>menses, menstruation</i> )
secundi- ( <i>second</i> )	metr/o ( <i>uterus</i> )
nulli- ( <i>none</i> )	para ( <i>bear, bring forth</i> )
multi- ( <i>many</i> )	
	pre- ( <i>before</i> )
	post- ( <i>after</i> )
	oligo- ( <i>little, small, scanty</i> )
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

gī ne fo' bē a  
fear of women

gynecologist  
gī ne kol' ō jist

breast

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	<i>Mamm, mamm/o</i> refers to mammary gland, or breast; <i>mast, mast/o</i> also refers to _____.
mam t̄' sis, mast t̄' sis	7. Mamm/itis and mast/itis both mean _____.
inflammation of the mammary gland (breast)	Mastitis is the term used most often, so we say it is the _____ term.
preferred	8. Break down each of the following preferred terms and write its meaning. Mammography, _____ / _____ / _____ means _____
ma mog' ra fē mamm/o/graphy X ray exam of the breast	Mastectomy, _____ / _____ means _____.
mas tek' tō mē mast/ectomy surgical removal of a 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 _____; m _____ means _____; m _____ means _____.
mastotomy mas tot' ō mē incision into the breast	
mastitis inflammation of the breast	
mastopathy mas top' a thē disease of the mammary gland	
mastoptosis mas top tō' sis	10. Very large breasts that hang down, or droop, are described as pen- dulous. The suffix for hanging or drooping is -ptosis. Construct a word meaning pendulous breast: _____.

gī ne kō mas' tē a  
woman's breast

mam' ō gram  
mammogram  
X ray picture of the  
breast

mam' a rē  
mammary  
pertaining to the  
mammary gland

mam' ō plas tē  
plastic surgery of the  
mammary gland

mast' ad nī tis  
mast' ad nō' ma  
tumor of the mammary  
gland

mas tō kar cin ō' ma  
cancerous tumor of the  
mammary gland

mas tong' kus  
(any) tumor of the  
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:

-gram                -ary

M \_\_\_\_\_

means \_\_\_\_\_

\_\_\_\_\_;

m \_\_\_\_\_

means \_\_\_\_\_

\_\_\_\_\_.

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:

mastadenoma \_\_\_\_\_  
\_\_\_\_\_;

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? \_\_\_\_\_

16.

mast/algia  
mast al' jē ē

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.

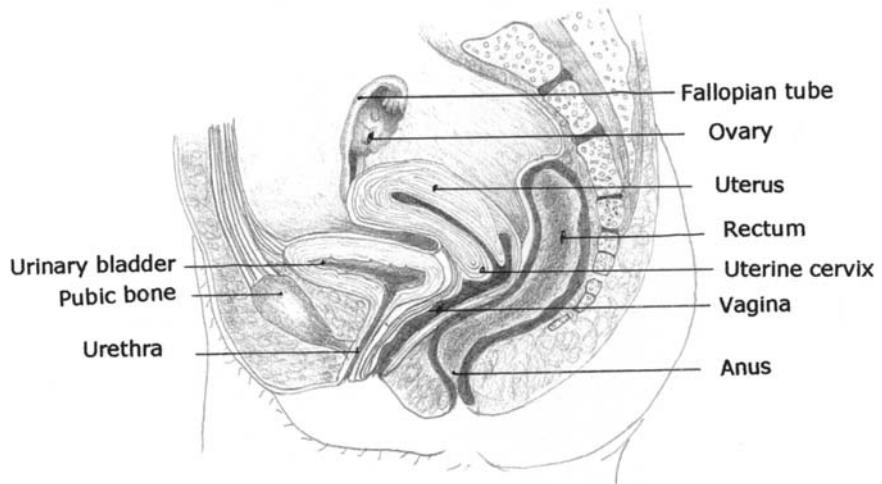
Now try these.

mammography  
mammalgia  
(mastodynia)  
mammology  
gynecophobia  
mammary  
mammoplasty

mammoplasty	mammary
mammology	mammalgia (mastodynia)
mammography	gynecophobia
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, _____.	

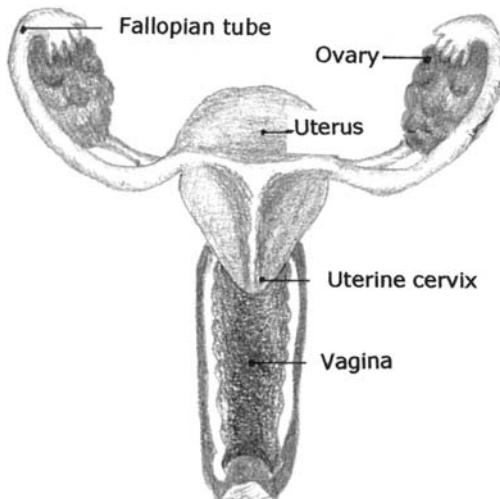
19.

Mamma mē' a, 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:

hysterectomy  
his ter rek' tō mē  
surgical removal of the uterus

-ectomy      -pathy

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 \_\_\_\_\_;

metrorrhrea  
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/metr/ium refers to the inside lining of the uterus.  
 Myo/metr/ium refers to the muscle layer of the uterus.

Build a term meaning inflammation of the inside lining and muscle layers of the uterus:

\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.  
 inside            muscle            uterus            inflammation

30.

Two word roots and their combining forms refer to the uterus.  
 They are \_\_\_\_\_ and \_\_\_\_\_.

31.

The term meaning the whole organ is \_\_\_\_\_. The term referring to the tissues of the organ is \_\_\_\_\_.

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 \_\_\_\_\_.

33.

*Men/orrhea* means free flow of menses, also known as menstruation.  
*Dys/men/orrhea* means \_\_\_\_\_.

34.

*Men/orrh/algia* also means \_\_\_\_\_  
 \_\_\_\_\_.

35.

Try this.

*Men/o/metr/orrhagia* means \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_.

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 \_\_\_\_\_.

endo/myo/metr/itis  
 en dō mī ō mē trī' tis

hyster, hyster/o  
 metr, metr/o

hyster/o  
 metr/o

menstruation  
 men strū ā' shun

dis men ū rē' a  
 difficult or painful  
 menstruation

me nor al' jē a  
 painful flow of menses

men ū mē trō rā' jē ŋ  
 excessive bleeding  
 (hemorrhage) from  
 the uterus during  
 menstruation

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

climacteric  
klī mak' ter ik

climacteric

the climacteric

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 \_\_\_\_\_.

40.

The *critical period* of life marking the beginning of the end of childbearing and ending with the onset of menopause is called the \_\_\_\_\_.

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 \_\_\_\_\_.

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:

	hysterorrhesis	menorrhagia
	amenorrhea	climacteric (female)
	menopause	metratrophy
menopause	permanent cessation of menses, _____.	
amenorrhea	lack of menstruation (temporary), _____.	
hysterorrhesis	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 \_\_\_\_\_.
- pregnancy    Gestation 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.
- gestation (jes tā' shun)    48. Gestation is another word for the condition known as \_\_\_\_\_.  
9    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 \_\_\_\_\_.
- 280    49. Gestation is the process of developing an ovum into a child. It takes approximately \_\_\_\_\_ months, or \_\_\_\_\_ days.
- gestation    50. An ovum develops into a child during a period from conception to birth. This process is called \_\_\_\_\_ and the condition is called \_\_\_\_\_.
- pregnancy    51. During pregnancy an ovum passes through many developmental stages or phases. Taken together, these phases make up the nine-month period called \_\_\_\_\_.
- gestation    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.

The indispensable event that initiates a pregnancy is conception \_\_\_\_\_.

ovum

ō' vum

two

53.

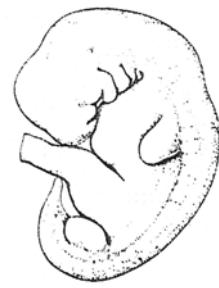
After conception, the earliest phase of development begins with a fertilized \_\_\_\_\_ and lasts \_\_\_\_\_ weeks.

54.

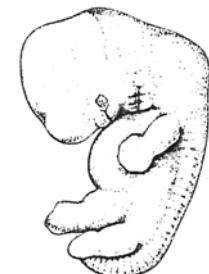
The first two weeks of gestation produce a complex living organism called a/an \_\_\_\_\_.

embryo  
em' brē ō

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

embryo

55.

The second stage of gestation begins with a two-week-old ovum, which is now called an \_\_\_\_\_.

third

eighth

fetus

56.

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 \_\_\_\_\_.

**Figure 9.315**

57.

## organs

human being

## fetus

fē' tūs

57

During this second gestational phase the embryo begins forming arms and legs and principal internal organs.

#### viable fetus

at three months of  
pregnancy  
seven more months  
childbirth

conception  
pregnancy  
embryo

## organs

a human being  
fetus

human being or child  
childbirth

58

By the beginning of the ninth week, the embryo begins to resemble 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.

In the last gestational phase, the fetus in utero develops into a \_\_\_\_\_.

When does this phase begin? \_\_\_\_\_  
\_\_\_\_\_.  
  

---

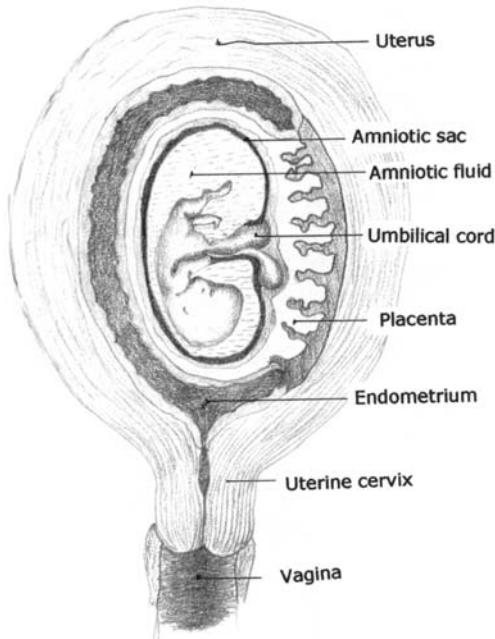
How long does it last? \_\_\_\_\_.

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 \_\_\_\_\_.



**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,

62.

Amniot/itis means inflammation of the amnion. Build a word that means pertaining to the sac that envelops the fetus: \_\_\_\_\_.

amniotic fluid  
am nē ot' ik flū' id

amniotic

am' nē ō sen tē' sis  
puncturing the amniotic  
sac and withdrawing  
some fluid

63.

Centesis is the suffix meaning to puncture a cavity and remove fluid. Explain the meaning of amni/o/centesis: \_\_\_\_\_.

am' nē ō tōm

usually an ultrasound graphic study of the amnion (and its contents)

ol' i gō hī dram' nē os  
scanty amount of amniotic fluid in the sac

excessive amount of amniotic fluid in the sac

amniotic sac or amnion

placenta

1 pound  
1 ounce

64.

Amni/o/tome is an instrument for cutting (puncturing) the amnion. What does amni/o/raphy mean? \_\_\_\_\_

\_\_\_\_\_.

65.

Olig-, oligo- is a prefix meaning little, small, scanty. Oliguria means scanty urination. What does oligo/hydr/amnios mean? \_\_\_\_\_

\_\_\_\_\_.

66.

What do you think polyhydramnios means?

\_\_\_\_\_.

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

\_\_\_\_\_.

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.

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 kūn' da grav' i da

Build a compound medical term meaning a woman in her second pregnancy: \_\_\_\_\_.

secundigravida

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

primigravida

a woman in her second pregnancy, \_\_\_\_\_.

oligohydramnios

a pregnant woman, first time, \_\_\_\_\_.

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, _____.

## 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.

76.

parturition  
labor

At term, when gestation is completed, a spontaneous physiological process begins. It has three stages: dilation, expulsion, and afterbirth. This process is called \_\_\_\_\_ OR \_\_\_\_\_.

77.

dilation  
*dī lā' shūn*

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.

78.

expelled, born

The second stage of labor involves expulsion. The infant passes through the birth canal and is \_\_\_\_\_.

79.

afterbirth

Expulsion of the placenta follows the birth of the child. The expelled placenta is more commonly known as the \_\_\_\_\_.

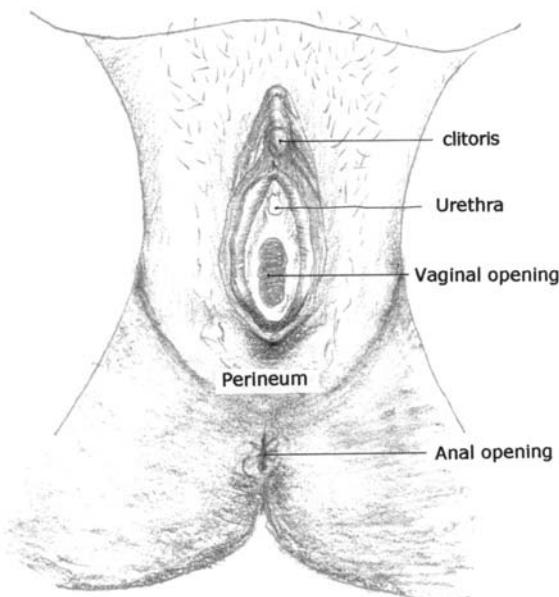
80.

a child is born  
(expelled)

What happens during the expulsion stage, or the second stage of labor? \_\_\_\_\_.

- a few minutes  
the placenta is expelled
- the cervix (neck of the uterus) completely dilates (opens)
- par tyer ish' un labor
- pertaining to after labor is completed
- pertaining to the recent period around childbirth
- pertaining to medical care and supervision of a pregnant woman before childbirth
- prenatal care  
prē nā' tal kair
- labor or parturition
81. How long is the third stage of labor? \_\_\_\_\_.  
What happens in the afterbirth stage of labor? \_\_\_\_\_.
82. After 8 to 12 hours of uterine contractions during the first stage of labor, what has happened?  
\_\_\_\_\_.
83. *Parturition* is another word for childbirth. What other term you just learned also means the process of being born? \_\_\_\_\_.
84. *Antepartum* refers to the entire gestational period before labor begins.  
What does postpartum mean? \_\_\_\_\_.
85. *Neo* means new or recent. *Natus* is a Latin term for birth. What does neonatal mean?  
\_\_\_\_\_.
86. What do you think prenatal care means?  
\_\_\_\_\_.
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         | parturition |
| prenatal care | afterbirth  |
| dilation      | expulsion   |
- 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.

pudendal  
pyoo den' dl

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.

anus  
ā' nus

- perineum  
per i nē' um
90. A baby coming through the birth canal during parturition can over-stretch 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
- episiotomy  
e pēz ē ot' ū mē
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 \_\_\_\_\_.
- suturing repair,  
reconstruction of  
the tissues after an  
episiotomy
92. An incision into the perineum is called \_\_\_\_\_.
- peritoneum  
per i tō nē' um
93. What does episiorrhaphy mean? \_\_\_\_\_  
\_\_\_\_\_.
- peritoneum  
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
- pudenda
95. Select one of the terms that best fits the brief definition. Write it in the space provided.
- peritoneum      episiotomy  
pudenda      perineum
- external female genitalia, \_\_\_\_\_.
- perineum
- the region of the external female genitalia 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, _____.
	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.
involution	The process that returns an enlarged uterus to its normal size after the baby is born is called _____.
	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.
poo er pēr' ē um expelled	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 poo 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 <i>puerperal</i> . _____ _____
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

the process by which the uterus returns to its earlier nonpregnant state after childbirth

nulli/para  
nullipara  
nu lɪp' ə ra

prīm ip' ə ra  
a woman who has given birth to one viable child (an event in the past)

she has given birth to two viable children

primipara  
nullipara  
multipara  
mul tip' ə ra

involution

103.

What is puerperal peritonitis? \_\_\_\_\_.

104.

Involution takes place during puerperium. What does involution mean? \_\_\_\_\_.  
\_\_\_\_\_.

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

106.

A woman who has delivered more than one living child is described as *multipara*. What does *primipara* mean?  
\_\_\_\_\_.

107.

What does an obstetrician mean when he writes in the patient's chart that she is para-2?  
\_\_\_\_\_.

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

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 ö rē' a)	hysterorrhesis
amniocentesis (am' nē ö sen tē' sis)	(his' ter ö 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 ör ē' ə)	mammopexy (mam' ö pek sē)
embryo	mastodynbia (mas tō din' ē ə)
endometrium	mastoncus (mas tong' kus)
(en' dō mē' trē um)	mastopathy (mas top' ə the)
episiotomy (e pēz ē ot' ö mē)	mastoptosis (mas top tō' sis)
fetus	menometrorrhagia
gestation (jes tā' shun)	(men' ö mētrō rā' jē ə)
gynecomastia (gī' ne kō mas' tē ə)	menopause (men' ö pawz)
gynoplasty (jin' ö plas tē)	menorrhalgia (men ö ral' jē ə)
hysterocele (his' ter ö sēl)	menses (men' sēz)
hysteromyoma	menstruation
(his' ter ö mī ö' mä)	(men strū ä' shun)

---

metratrophy (mē tra' trō fē)	polyhydramnios (pä lē hī dram' nē ūs)
metrorrhagia (mē trō rā' jē ā)	postpartum
multipara (mul tip' ā ra)	primigravida (pri' ma grav' ī dā)
myometritis (mī' ū mē trī' tis)	pudenda (pyōō den' də)
neonatal (nē ū nā' tal)	puerperal sepsis (pōō er' per al sep sis)
nullipara (nu lip' ā ra)	puerperium (pōō er pēr' ē um)
oligohydramnios (ol' ē gō hī dram' nē ūs)	spermatozoon (sper' ma tō zō' on)
ovum (ō' vum)	
parturition (pär tyōōr iš' ūn)	
perineum (per ī nē' ūm)	
peritoneum (per ī tō nē' ūm)	
placenta	

## Unit 9 Self-Test

### Part 1

From the right, select the correct meaning for each of the following medical terms.

- 1. Primigravida
- 2. Pudenda
- 3. Hysteropathy
- 4. Mammary
- 5. Mastodynbia
- 6. Amniotic
- 7. Episiotomy
- 8. Endometritis
- 9. Involution
- 10. Metratrophy
- 11. Perineum
- 12. Amenorrhea
- 13. Puerperium
- 14. Hysterorrhesis
- 15. Mammography

- a. X ray study of the breast
- b. Temporary lack of menstruation
- c. Pelvic floor, region from vaginal lip to anus
- d. Process returning uterus to non-pregnant state
- e. Incision of vagina and pelvic outlet
- f. Female external genitals
- g. Pregnant woman, first time
- h. Period after childbirth, when involution takes place
- i. Pertaining to sac holding the fetus and fluid
- j. Rupture of uterus (during labor)
- k. Pertaining to the breast
- l. Uterine atrophy (wasting)
- m. Inflammation of uterine inside lining
- n. Painful breasts
- 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  
inflammation of  
a diseased condition  
instrument that cuts  
dilation, stretching

-orrhaphy \_\_\_\_\_

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

-pathy \_\_\_\_\_

-tome \_\_\_\_\_

-ectasia \_\_\_\_\_

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

-pexy \_\_\_\_\_

pertaining to out of  
normal place

-ectopic \_\_\_\_\_

hernia, herniation

-cele \_\_\_\_\_

drooping, prolapse

-ptosis \_\_\_\_\_

measuring, measuring  
instrument

metr-, -meter \_\_\_\_\_

instrument for examining,  
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

of

of thal' mō

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, ophthalmo 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.

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:

ophthalocele	
of thal' mō sēl	
ophthalmometer	
of' thal mom' e ter	
ophthalmoplegia	
of thal' mo plē' gē a	

ophthalmologist	
of thal mol' ō jist	

ophthalmoscope	
of thal' mō skōp	

double vision

diplopia  
di plō' pē a

double (or paired)  
bacteria  
bluish vision

blef a rop' tō sis  
blephar-  
blephar/o

herniation of the eye (abnormal protrusion), \_\_\_\_\_;

instrument for measuring the eye, \_\_\_\_\_;

paralysis of the eye (eye muscle), \_\_\_\_\_.

6.

The physician who practices the medical specialty concerned with diseases of the eye is an \_\_\_\_\_.

7.

The instrument used for examining the interior of the eyeball through the pupil is an \_\_\_\_\_.

8.

*Dipl/o* means double or paired. *-Opia* is a suffix meaning vision. What does *diplopia* mean? \_\_\_\_\_.

9.

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.

Write a brief meaning for each of the following.

*diplo/bacteria*, \_\_\_\_\_;  
\_\_\_\_\_;  
*cyan/opia*; \_\_\_\_\_.

11.

Blephar/optosis means prolapse (drooping) of an eyelid. The word root for eyelid is \_\_\_\_\_. The combining form is \_\_\_\_\_.

- blef ar e dē' ma  
blepharedema
- blepharedema
- blef' ar ū spazm  
twitching of the eyelid
- blef ar ūr' a fē  
suturing of the eyelid
- blef ar ī' tis  
blepharitis
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.
13. The condition of swollen eyelids due to excess fluid in the eyelids is \_\_\_\_\_.
14. Define each of the following terms:  
blepharospasm means \_\_\_\_\_.  
blepharorrhaphy means \_\_\_\_\_.
15. Build a word that means inflammation of the eyelid,  
\_\_\_\_\_.

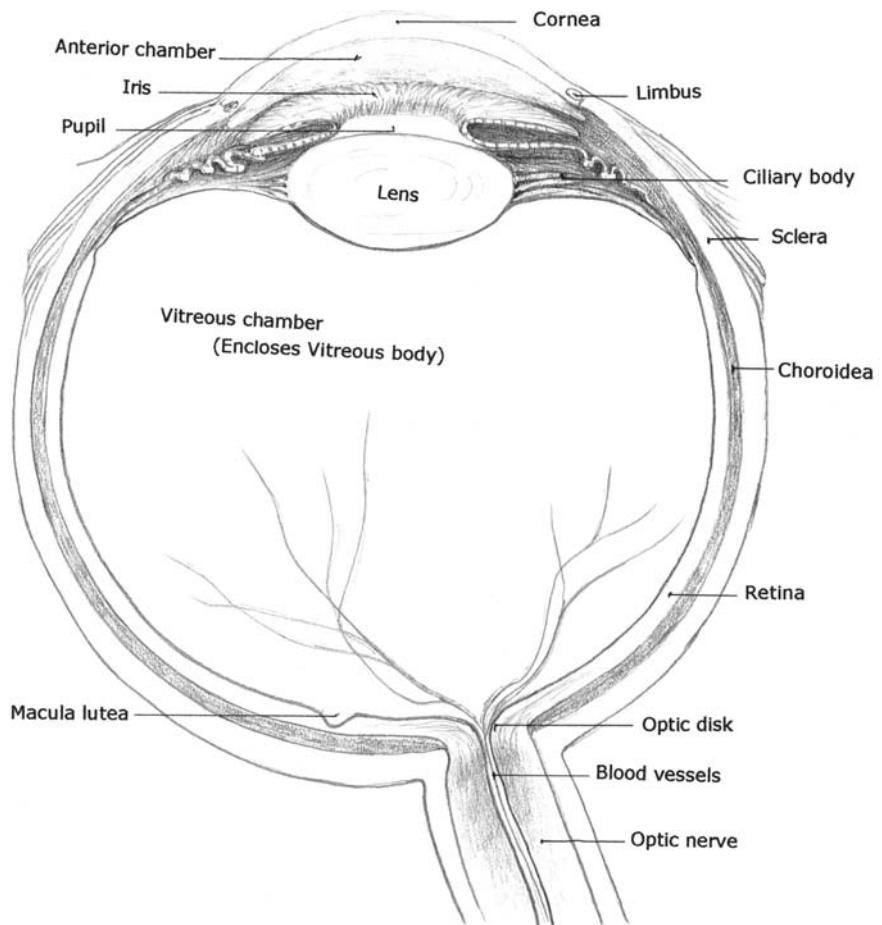


Figure 10.1 The Eye.

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)

kor nē al  
pertaining to the  
cornea  
ker a top' a thē  
disease of the cornea

keratoplasty  
ker' a tō plas tē

kerat, kerat/o

cornea

skler' al  
pertaining to the sclera

skler' ō tōm  
instrument for cutting  
the sclera

sclerectomy  
skle rek' tō mē

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:

corneal \_\_\_\_\_;

kerat/o/pathy \_\_\_\_\_.

17.

Using the combining form *kerat/o*, build a term meaning plastic repair of the cornea: \_\_\_\_\_.

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 \_\_\_\_\_.

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 \_\_\_\_\_.

20.

Corneoscleral means pertaining to an area where the cornea meets the sclera. Write the meaning for each of the following:

scleral \_\_\_\_\_  
\_\_\_\_\_;

sclerotome \_\_\_\_\_  
\_\_\_\_\_.

21.

Sclerectasia means bulging (stretching) of the white of the eye. Build a term meaning excision of a portion of the sclera:

\_\_\_\_\_.

22.

*ī' ris*  
*ir' i dō kor' nē al*  
pertaining to the area  
where the iris and  
cornea meet

*ir' id ū sēl*  
hernia of the iris

*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.

*ir/itus*  
*iritis*  
*ī rī' tis*

*i ri dal' jē ə*  
pain in the iris

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.

iridectomy  
*i ri dek' tō mē*

*Irid/o* is the combining form used to refer to the iris in almost all other words. Iridalgia means \_\_\_\_\_.

25.

cornea  
vision, sight  
iris  
sclera  
eye  
eyelid  
iris

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.

retinal  
*ret' i n'l*  
retinitis  
*ret i nī' tis*  
retinoid  
*ret' i noyd*

*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

ret i nop' a thē  
disease of the retina

(eye), iris

pupil

dilation

kōr ek tō' pē a  
a misplaced pupil

kōr ē om' e trē  
measuring the size of a  
pupil

sī klō pa ral' i sis  
paralysis of the ciliary  
body

sī klō krī' ō ther' a pē  
cyclocryotherapy

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?

---

29.

What does retinopathy mean? \_\_\_\_\_  
\_\_\_\_\_.

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 \_\_\_\_\_.

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? \_\_\_\_\_  
\_\_\_\_\_

32.

Coreoplasty is a surgical procedure for correcting a deformed pupil.

Write a term meaning to measure the size of a pupil. \_\_\_\_\_

---

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? \_\_\_\_\_  
\_\_\_\_\_

34.

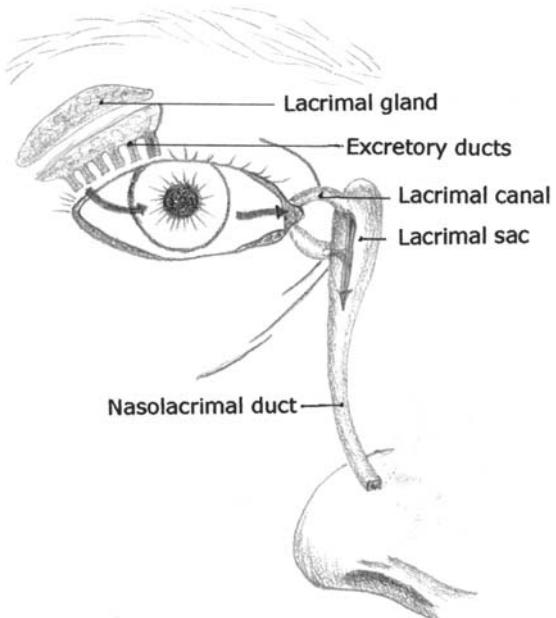
Cyclocryotherapy means freezing of the ciliary body in the treatment of glaucoma. Underline the part of the term referring to freezing: cyclocryotherapy.

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.

lak' ri mal  
relating to tears

lacrimal

lacrimal

nasolacrimal duct

crying

36.

Look again at the illustration. The lacrimal apparatus consists of the gland, the sac, and the duct. The purpose of the lacrimal apparatus is to keep the surface of the eye moist and protected. What do you think lacrimal means? \_\_\_\_\_.

37.

The gland that secretes tears is the \_\_\_\_\_ gland.

The sac that collects the tears is the \_\_\_\_\_ sac.

What is the structure that empties the tears into the nasal cavity?

\_\_\_\_\_.

38.

Tears keep the surface of the eye moistened. Tears are continually being formed and removed. When tears form more quickly than they can be removed by the lacrimal apparatus, we say the person is \_\_\_\_\_.

39.

How about a review? Complete each of the following brief definitions. Use the suggested answers to help you.

SUGGESTED ANSWERS:

iritis	cycloplegia
lacrimal	diplopia
cryocryotherapy	sclerotome
retinoscopy	ophthalmic
coreometry	keratitis
iridocele	keratoplasty

coreometry  
iridocele  
ophthalmic  
retinoscopy  
iritis  
sclerotome  
lacrimal  
keratoplasty  
cycloplegia  
keratitis  
diplopia  
cryocryotherapy

measurement of pupil size, \_\_\_\_\_.  
herniation of the iris, \_\_\_\_\_.  
pertaining to the eye, \_\_\_\_\_.  
examination of the retina, \_\_\_\_\_.  
inflammation of the iris, \_\_\_\_\_.  
instrument for cutting the sclera, \_\_\_\_\_.  
relating to tears, \_\_\_\_\_.  
surgical reconstruction of the cornea, \_\_\_\_\_.  
paralytic ciliary body, \_\_\_\_\_.  
inflammation of the cornea, \_\_\_\_\_.  
double vision, \_\_\_\_\_.  
treatment (of glaucoma) freezing the ciliary body, \_\_\_\_\_.  
\_\_\_\_\_.

40.

Try these now. Write the meaning of each of the following word roots:

retina	retin/o, _____.
pupil	cor/o, core/o, _____.
ciliary body	cycl/o, _____.
eyelid	blephar/o, _____.
cornea	kerat/o (corne/o), _____.
eye	ophthalm/o, _____.
sight, vision	opia, _____.
iris	irid/o, _____.

## The Respiratory Tract

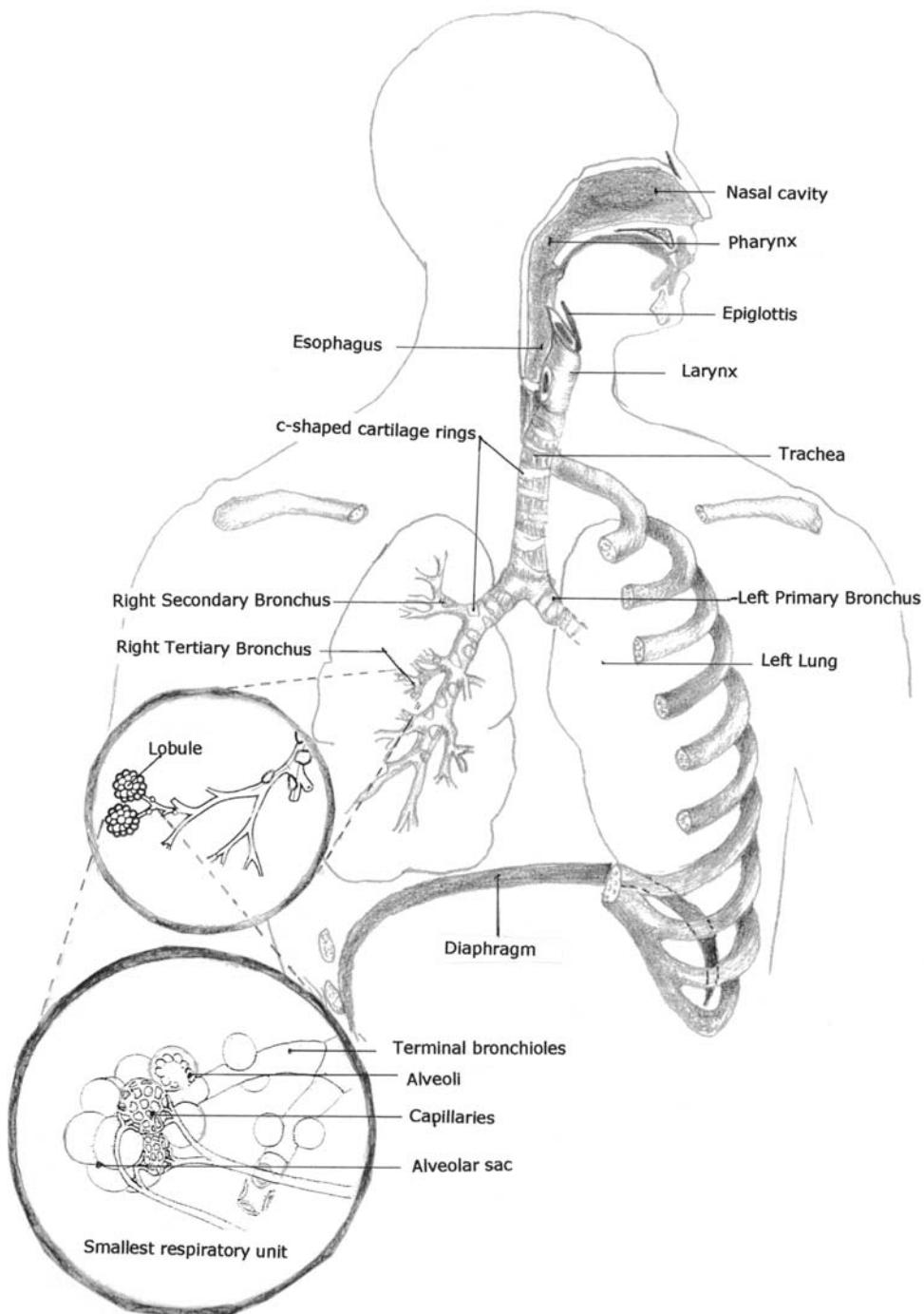


Figure 10.3 The Respiratory Tract.

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.

laryng/itis means \_\_\_\_\_

pleuritis means \_\_\_\_\_

\_\_\_\_\_;

pharyng/o/plasty means \_\_\_\_\_

\_\_\_\_\_.

42.

Look again at Illustration 10.3. Seeing the various parts will help you learn. What does laryng/o/cele mean? \_\_\_\_\_

la rin jī' tis  
inflammation of the  
voice box

ploōr ī' tis  
inflammation of the  
pleura

fair ing' gō plas tē  
plastic surgery of the  
throat

la ring' gō sēl  
herniation of the voice  
box

43.  
 laryngectomy  
 la rin jek' tō mē  
 Build a term meaning surgical removal of the voice box:  
 \_\_\_\_\_.
- la ring' gō skōp  
 instrument for  
 examining the  
 voice box  
 la ring' gō spazm  
 spasm of the voice box  
 Write a meaning for each of the following:  
 laryngoscope means \_\_\_\_\_.  
 laryngospasm means \_\_\_\_\_.
44.  
 trā kē ō rā' jē ə  
 hemorrhage from the  
 windpipe  
 trā kē al' jē ə  
 pain in the windpipe  
 trā kē os' tō mē  
 a permanent opening  
 into the windpipe  
 trache or trache/o  
 See Illustration 10.3 again. *Trachea* means windpipe. Write a brief definition for each of the following new terms:  
 tracheorrhagia \_\_\_\_\_.  
 trachealgia \_\_\_\_\_.  
 tracheostomy \_\_\_\_\_.
45.  
 bron' kō pē  
 looking into the  
 bronchus  
 bron' kō spazm  
 spasm of the bronchus  
 bron' kī' tis  
 inflammation of the  
 bronchus or bronchi  
 bronch, bronch/o  
 Write the word root and combining form for windpipe:  
 \_\_\_\_\_.
46.  
 bronchoscopy \_\_\_\_\_.  
 bronchospasm \_\_\_\_\_.  
 bronchitis \_\_\_\_\_.
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 \_\_\_\_\_.  
 bronchospasm \_\_\_\_\_.  
 bronchitis \_\_\_\_\_.
48.  
 The word root and combining form meaning major branches of the windpipe that open into the lungs is \_\_\_\_\_.

plōō rī' tis  
inflammation of the  
pleura

pleuralgia or  
pleurodynia  
plōō ral' jē ē  
plōō rō din' ē ē

plōō rō sen tē' sis  
puncture of the pleural  
space and removing  
the fluid

diaphragm  
dī' a fram

in

out

diaphragm

hiccough, or hiccup  
hik' kof

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.

Pleuritis means \_\_\_\_\_.  
\_\_\_\_\_.

50.

Pleurisy is another word for inflammation of the covering of the lungs. Build a term that means pain in the pleura:

\_\_\_\_\_.

51.

Pleurisy may cause excessive fluid to collect within the space between the lung and the pleura. What do you think pleurocentesis means? \_\_\_\_\_.

52.

Refer to Illustration 10.3 again. The musculomembranous wall separating the abdomen from the chest cavity is the \_\_\_\_\_.

53.

During inspiration the diaphragm contracts; it flattens out downward, permitting the lungs to move downward and fill with air. Inspiration is breathing \_\_\_\_\_.

(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 \_\_\_\_\_.

(in/out)

55.

The organ largely responsible for inspiration and expiration is the \_\_\_\_\_.

56.

A sudden spasm of the diaphragm usually produces a giggle all around. It is called singultus. Can you guess what it means?

\_\_\_\_\_.

- singultus  
sin gul' tus
57.  
Another term for hiccup is \_\_\_\_\_.
- hē mop' ti sis  
spitting blood
58.  
*Ptysis* means spitting. What does hem/o/ptysis mean? \_\_\_\_\_.
- ptysis
- hē ma tem' a sis  
expelling blood from  
the stomach  
(vomiting blood)
59.  
Hemoptysis means spitting blood (arising from hemorrhage of larynx, trachea, bronchi, or lungs). Write the suffix meaning spitting, or spitting up. \_\_\_\_\_.
- 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
- hematemesis
61.  
Using either suffix, -ptysis or -emesis, build a medical term to express the following definitions:  
spitting blood from hemorrhage of the lungs is \_\_\_\_\_  
expelling blood from the stomach is \_\_\_\_\_
- rīn or ra' jē a  
hemorrhage from the  
nose
- epistaxis  
ep i stak' sis
62.  
*Epistaxis* means nosebleed. What does rhinorrhagia mean?  
\_\_\_\_\_.
- rhinorrhagia
63.  
Two terms mean severe bleeding from the nose. They are  
\_\_\_\_\_ and \_\_\_\_\_.
- spitting blood (arising  
from the larynx,  
trachea, bronchi, or  
lungs)
64.  
What does hemoptysis mean?  
\_\_\_\_\_.
- vomiting blood (from  
the stomach)
65.  
What does hematemesis mean?  
\_\_\_\_\_.



pneumonitis  
nyōō mō nī' tis  
pneumonectomy  
nyōō mōn ek' tō mē

pne/o (nē ō)

nyōō mon' ō graf  
radiographic picture  
of the lungs (chest  
X ray)

breathing, breathe  
air or gas  
lung

thorax  
thor' aks

thoracic cavity or  
thorax

thoracotomy  
incision into the chest  
cavity  
thoracentesis  
puncture of the chest  
cavity to draw off  
fluid

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 \_\_\_\_\_.

74.

Drawing air into the lungs and pushing air out of the lungs is called breathing. The combining form referring to breathing is

\_\_\_\_\_.

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? \_\_\_\_\_

\_\_\_\_\_.

76.

Write a brief meaning for each of the following:

Pne/o \_\_\_\_\_.

Pneum/o or pneumat/o \_\_\_\_\_.

Pneumon/o \_\_\_\_\_.

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 \_\_\_\_\_.

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 \_\_\_\_\_.

79.

*Thorac* and *thorac/o* are the word root and combining form referring to the chest cavity.

Thoracotomy means \_\_\_\_\_  
\_\_\_\_\_.

Explain thoracentesis: \_\_\_\_\_  
\_\_\_\_\_.

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	Otorhinopharyngol-	_____
	laryngologist	_____

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 ā)	blepharorrhaphy (blef ar ūr' ā fē)
bradypnea (brad ip nē' ā)	blepharoptosis (blef ar op tō' sis)
blepharedema (blef' ar ē dē' mā)	

bronchitis (brong kī' tis)	ophthalmalgia
bronchoscopy (brong kos' kō pē)	(of' thal mal' jē a)
corectasia (kōr ek tā' zē ə)	ophthalmoscope
corectopia (kōr ek tō' pē ə)	(of thal' mō skōp)
coreometer (kōr ē om' e ter)	pharyngitis (fair in jī' tis)
coreoplasty (kōr' ē ū plas tē)	pharyngotomy
corneal (kor' nē al)	(fair in got' ū mē)
cyclokeratitis (sī' klō ker i tī' tis)	pleuralgia (plōō ral' jē ə)
cycloplegia (sī' klō plē' jē ə)	pleurisy (plōōr' i sē)
diaphragm (dī' a fram)	pleurocentesis
diplopia (di plō' pē ə)	(plōōr' ū sen tē' sis)
epistaxis (ep i stak' sis)	pneumohemothorax
hemoptysis (hē mop' ti sis)	(nyōō mō hē mō thōr' aks)
iridectomy (ir i dek' tō mē)	pneumonia (nyōō mō' nē ə)
iridocele (ir id ū sēl)	retinitis (ret i nī' tis)
iridoplegia (ir id ū plē' jē ə)	retinopathy (ret i nop' ə thē)
iritis (ī rī' tis)	retinoscopy (ret i nos' kō pē)
keratome (ker' ə tōm)	rhinoplasty (ri' nō plas tē)
keratoplasty (ker' ə tō plas tē)	sclerectomy (skler ek' tō mē)
keratoscleritis (ker' ə tō skler ī' tis)	sclerotome (skler' ə tōm)
keratotomy (ker a tōt' ū mē)	singultus (sing gul' tus)
laryngeal (la rin' jē al)	tracheorrhagia
laryngospasm (la ring' gō spazm)	(trā kē ū rāj' jē ə)
nasolacrimal (nā zō lak' ri mē)	tracheostomy
nasopharyngitis (nā' zō fair in jī' tis)	(trā kē os' tō mē)
	thorax (thor' aks)
	thoracocentesis (thōr' ə kō sen tē' sis)

## 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.

- |                          |                    |   |
|--------------------------|--------------------|---|
| <input type="checkbox"/> | 1. Pneumonectomy   | a. Nosebleed  |
| <input type="checkbox"/> | 2. Keratoscleritis | b. Spitting blood   |
| <input type="checkbox"/> | 3. Pleurocentesis  | c. Pertaining to nose and chin                            |
| <input type="checkbox"/> | 4. Corectasia      | d. Stretching (dilation) of the pupil                     |
| <input type="checkbox"/> | 5. Pleuralgia      | e. Puncture of the pleural space to remove fluid          |
| <input type="checkbox"/> | 6. Blepharedema    | f. Pain of the pleura                                     |
| <input type="checkbox"/> | 7. Hemoptysis      | g. Instrument to cut the cornea                           |
| <input type="checkbox"/> | 8. Ophthalmologist | h. Paralysis of the iris                                  |
| <input type="checkbox"/> | 9. Nasomental      | i. Inflammation of cornea and sclera                      |
| <input type="checkbox"/> | 10. Iridoplegia    | j. Resembling the retina                                  |
| <input type="checkbox"/> | 11. Tracheorrhagia | k. Swollen eyelids due to fluid in the tissues            |
| <input type="checkbox"/> | 12. Keratome       | l. Physician who specializes in the study of eye diseases |
| <input type="checkbox"/> | 13. Epistaxis      | m. Hemorrhage from the trachea                            |
| <input type="checkbox"/> | 14. Retinoid       | n. Inflammation of the bronchi                            |
| <input type="checkbox"/> | 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-		breath, 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)

nephro-		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/o-
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,		wash, irrigate
-clysis		
-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)
		incision into
-otomy		surgical removal of
-ectomy		surgical fixation of a
-pexy		part in its normal place

**Part 2**

<b>Meaning</b>	<b>Word/Word Part</b>	<b>(Hide This Column)</b>
cramping, twitching		spasm
liver		hepat/o-
excessive (prefix)		hyper-
small intestine		enter/o-
surgical incision into (suffix)		-otomy
surgery to form a new opening (suffix)		-ostomy
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 (a suffix)		-ectasia
pancreas		pancreat/o-
rectum		rect/o-
tongue		gloss/o-
surgical fixation of a part in normal place (suffix)		-pexy
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
-algesia		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
dactyl/o-		floating in bloodstream
cardiac arrest		fingers, toes, digits
-emia		cessation of heartbeat
embolism		blood
 		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**

<b>Meaning</b>	<b>Word/Word Part</b>	<b>(Hide This Column)</b>
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- excrescence	below, beneath 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-malignant		inner, inside 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 ectopic
outside the normal place	_____	
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-		second
fetus		developing child in utero
spermatozoon		male germ cell
parturition		labor and delivery of term pregnancy
multi-		many
nulli-		none
postpartum		time period after giving birth
mastopathy		breast disease
hysterorrhesis		rupture of uterus (life threatening)
metratrophy		uterine atrophy
antepartum		time period before labor
prenatal		before childbirth
oligo-		scanty amount of amniotic fluid
hydramnios		breast
mamm/o-, mast/o-		amnion (sac for fetus and fluid)
amniot/o-		wasting of an organ or part
-atrophy		a woman who has given birth for the first time
primipara		

(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
climacteric		nonpregnant state
placenta		change of life period
		organ that nourishes
		fetus in utero
gynecomastia		enlarged breasts in a male
puerperium		period after childbirth; involution takes place
		female external genitals
pudenda		another term for
		pregnancy
gestation		puncture of amniotic sac and removal of fluid
		pelvic floor; region from vaginal lip to anus in female
amniocentesis		
perineum		

**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)	____	hysterorrhesis
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	_____	antepartum
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		kerat/o-, corne/o-
anterior covering of one-sixth of the eye		
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. Corneoiritis \_\_\_\_\_
36. Hysterorrhesis \_\_\_\_\_
37. Thrombogenesis \_\_\_\_\_
38. Hematemesis \_\_\_\_\_
39. Lithotripsy \_\_\_\_\_
40. Oligohydramnios \_\_\_\_\_
41. Prostatic hypertrophy \_\_\_\_\_
42. Hemoptysis \_\_\_\_\_
43. Dorsalgia \_\_\_\_\_

44. Endocranial \_\_\_\_\_
45. Parturition \_\_\_\_\_
46. Adenocarcinoma \_\_\_\_\_
47. Esophagogastrectomy \_\_\_\_\_
48. Enteritis \_\_\_\_\_
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. Craniocle \_\_\_\_\_
10. Anorexia \_\_\_\_\_
11. Gingivoglossitis \_\_\_\_\_
12. Cholecystitis \_\_\_\_\_
13. Abdominalgia \_\_\_\_\_
14. Arteriospasm \_\_\_\_\_
15. Adenosclerosis \_\_\_\_\_
16. Duodenohepatic \_\_\_\_\_
17. Endobronchoscopy \_\_\_\_\_
18. Iridoplegia \_\_\_\_\_
19. Tracheostomy \_\_\_\_\_
20. Syndactyly \_\_\_\_\_
21. Phleborrhesis \_\_\_\_\_
22. Cryptorchidism \_\_\_\_\_
23. Thromboid \_\_\_\_\_

24. Electroencephalogram \_\_\_\_\_
25. Myelodysplasia \_\_\_\_\_
26. Singultus \_\_\_\_\_
27. Intercostal \_\_\_\_\_
28. Epigastric \_\_\_\_\_
29. Urethrocytis \_\_\_\_\_
30. Hypothyroidism \_\_\_\_\_
31. Traumatology \_\_\_\_\_
32. Pericardectomy \_\_\_\_\_
33. Syndrome \_\_\_\_\_
34. Hepatorrhaphy \_\_\_\_\_
35. Megalodactylism \_\_\_\_\_
36. Nephropexy \_\_\_\_\_
37. Pneumonomelanosis \_\_\_\_\_
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 } The word root is usually built
ex	ices } from the plural forms of
ax	aces } words ending in ix, ex, and ax (e.g., radix, radic/es, radic/otomy, radic/i/form).

bursae

bur' sī

conjunctivae

kon junk' tī vē

bacilli

bə 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 ā

cocci

kok' sē

ilea

(you pronounce)

il' ē ā

3.

Form the plural of

atrium \_\_\_\_\_;

coccus \_\_\_\_\_;

ileum \_\_\_\_\_.

4.

Give the singular form of

enemata \_\_\_\_\_;

bacterium \_\_\_\_\_;

ovum

(you pronounce)

ova \_\_\_\_\_.

cortices

kor' tē sēz

fibromata

fi brō' mā tā

protozoa

prō' to zō' ā

5.

Form the pleural of

cortex \_\_\_\_\_;

fibroma \_\_\_\_\_;

protozoon \_\_\_\_\_.

6.

Give the singular form of

stigmata \_\_\_\_\_;

prognoses \_\_\_\_\_;

spermatozoon \_\_\_\_\_.

appendices

(you pronounce)

7.

Form the plural of

appendix \_\_\_\_\_;

diagnosis \_\_\_\_\_;

ganglion \_\_\_\_\_.

8.

Refer to the table. Give the word root that usually refers to

appendic

the appendix \_\_\_\_\_;

cortic the cortex \_\_\_\_\_;  
thorac the thorax \_\_\_\_\_.  
(you pronounce)

appendic/itis  
a pen di sī' tis  
cortic/al  
kor' ti kəl  
thorac/o/centesis  
thor' ə kō sen tē' sis

9.  
With this new knowledge, which you found for yourself, build a word meaning inflammation of the appendix,  
\_\_\_\_\_ / \_\_\_\_\_;  
pertaining to the cortex,  
\_\_\_\_\_ / \_\_\_\_\_;  
surgical puncture of the thorax,  
\_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_.

apices  
fornices  
varices  
sarcomata  
septa  
radii  
maxillae  
(you pronounce)

10.  
Form the plural of

apex \_\_\_\_\_;  
fornex \_\_\_\_\_;  
varix \_\_\_\_\_;  
sarcoma \_\_\_\_\_;  
septum \_\_\_\_\_;  
radius \_\_\_\_\_;  
maxilla \_\_\_\_\_.

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.



# Index of Words and Word Parts

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