



សាកលវិទ្យាល័យ ពុទ្ធិសាស្ត្រ

UNIVERSITY OF PUTHISAstra

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UNIVERSITY OF PUTHISAstra

Faculty of Medicine

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Lecturer/s: Ouk Rim, MD, BEL, MBA

English in Medical Term

Chapter 1: *Introduction to Word Parts*

Outline:

1. Introduction of word parts

2. The four word parts

2.1. Word Roots

2.2. Prefixes

2.3. Suffixes

2.4. Combining vowel

3. Combining form

4. Analyze defining medical term

5. Building medical terms

1.Introduction of word parts

- Medical terminology is the professional language of those who are directly or indirectly engaged in the art of healing. Most medical terms have Greek or Latin origins, though some are derived from modern language, particularly German, French, and English. In general, terms dealing with diagnosis and surgery have Greek origins, whereas anatomical terms have Latin origins. An understanding of the structure of medical terms, and an ability to break down a medical terminology into its parts helps you get the most out of using a medical dictionary, and makes dealing with medical terminology less challenging than it first appears.
- Medical terms are formed from the word **roots**, **prefixes**, **suffixes**, and **combining vowels**.

- **Primary Medical Terms**

Primary terms are a new feature in this edition to enable you to prioritize terms in your study of medical terminology.

- **Word Parts Are the Key**

Introduction to word parts and how they create complex medical terms.

2. The four word parts

2.1-Word Roots

- The word root is the word parts that is the core of the word.
The word root contains the fundamental meaning of the word. When a vowel, usually the letter "o," is added to the end of a word root, this is now referred to as a "combining form."

2.1-Word Roots (continues)

Examples:

In the word.....Play/er, (Player)

play is the word root.

In the medical term.....arthr/itis, (arthritis)

arthr (which means *joint*) is the word root.

In the medical term.....hepat/itis, (hepatitis)

hepat (which means *liver*) is the word root.

2.2.Prefixes

Prefixes is a word that attached to the beginning of a word root to modify its meaning. It's usually indicate a **number, time, position, direction, or negation.**

Often indicate :

- *a number* such as **bi-** , meaning two
- *position*, such as **sub-** , meaning under
- *direction*, such as **intra-** , meaning within
- *time*, such as **brady-** , meaning slow .
- *or negation*, such as **a-** , meaning without .

2.2.Prefixes (continues)

Examples:

In the word.....re/play (replay)
re- is the prefix.

In the medical term.....sub/hepat/ic (subhepatic)
sub- (which means *under*) is the prefix.
Hepat is the word root for *liver*.
-ic is the suffix for *pertaining to...*
The medical term *subhepatic* means *pertaining to under the liver*

In the medical termintra/ven/ous (intravenous)
intra- (which means *within*) is the prefix.
ven (which means *vein*) is the word root.
-ous (which means *pertaining to*) is the suffix.
The word *intravenous* means *pertaining to within the vein*.

2.3. Suffix

Suffix is a word that attached to the end of a word root to modify its meaning.

Frequently indicate:

- *a procedure*, such as **-scopy**, meaning visual examination, or **-tomy**, meaning surgical incision.
- *a condition*, such as **-itis**, meaning inflammation or a disease, such as **-oma**, meaning tumor.

Example:

In the word.....*play/er* (Player)

-er is the suffix.

In the medical term.....*hepat/ic* (hepatic)

-ic (which means *pertaining to*) is the suffix.

hepat is the word root for *liver*, therefore *hepatic* means *pertaining to the liver*.

In the medical term.....*hepat/itis* (hepatitis)

-itis (which means *inflammation*) is the suffix.

The term *hepatitis* means *inflammation of the liver*.

2.4. Combining vowel

Combining vowel is a word part, usually an *o*, used to ease pronunciation.

Vowels are speech sounds represented by the letters *a, e, i, o, u*, and sometimes *y*.

Examples:

In the word..... *men/o/pause* (menopause)

o is the combining vowel used between two word root

In the medical term..... *arthr/o/pathy* (arthropathy)

o is the combining vowel used between the word root *arthr* and the suffix *-pathy* (which means disease)

In the medical term..... *sub/hepat/ic* (subhepatic)

the combining vowel is not used between the prefix *sub-* and the word root *hepat*.

2.4. Combining vowel (continues)

The combining vowel is :

- Used to connect two **word roots**
- Used to connect **a word root** and **a suffix**
- Not used to connect **a prefix** and **a word root**.

3. Combining form

A combining form is a word root with the combining vowel attached, separated by a vertical slash.

Examples: arthr/o (which means *joint*)
 oste/o (which means *bone*)
 ven/o (which means *vein*)

The combining form is not a word part per se; rather it is the word root and the combining vowel. *For learning purposes word roots are presented together with their combining vowels as combining forms throughout the text.*

EXERCISE 1:

Match the phrases in the first column with the correct terms in the second column.

___1. attached at the beginning of a word root.	a. Combining vowel
___2. usually an o.	b. prefix
___3. all medical terms contain at least one.	c. Combining form
___4. attached at the end of a word root.	d. Word root
___5. word root with combining vowel attached.	e. suffix

Write your answer of exercise1 here:

1	2	3	4	5

EXERCISE 2:

Answer: T for true and F for false

- ___ 1. There are always prefixes at the beginning of medical term.
- ___ 2. A combining vowel is always used when connecting a word root and a suffix that begins with the letter o.
- ___ 3. A prefix modifies the meaning of the word.
- ___ 4. A combining vowel is used to ease pronunciation.
- ___ 5. I is the most commonly used combining vowel.
- ___ 6. The word root is the core of a medical term.
- ___ 7. A combining vowel is used between a prefix and a word root.
- ___ 8. A combining form is a word part.
- ___ 9. A combining vowel is used when connecting a word root and a suffix if the suffix begins with the letter g.

4. Analyze defining medical term

4.1)-Analyzing

To analyze medical terms, divide them into word parts and label each word part and each combining form. Follow the procedure below:

4.1.1. Divided the term into word parts with vertical slashes.

Example: oste/o/arthr/o/pathy

4.1.2. Label each word part by using the following abbreviations.

WR WORD ROOT
P PREFIX
S SUFFIX
CV COMBINING VOWEL

Example: WR CV / WR CV / S
oste/ o / arthr/ o / pathy

3. Label the combining forms.

Example: WR CV / WR CV / S
oste/ o / arthr/ o / pathy
 CF CF

Analyze the following medical term:

Osteopathy

Answer: WR CV S
oste / o / pathy
 CF

4. Analyze defining medical term (continues)

4.2)- Defining

To define medical terms, apply the meaning of each word part contained in the term.

Begin by defining the suffix, then move to the beginning of the term to complete the definition. (This method does not apply to all medical terms.)

Apply this rule to find the definition of oste/o/arthr/o/pathy. Begin by defining the suffix **-pathy**, then move to the beginning of the term.

Use the box below to find the meanings of the word parts. Oste/o/arthr/o/pathy means _____

Answer: disease of the bone and joint

4.2)-Defining (con't)

Word

Roots	Definition	Suffixes	Definition
Arthr	joint	-itis	inflammation
Hepat	liver	-ic	pertaining to
Ven	vein	-ous	pertaining to
Oste	bone	-pathy	disease

Prefixes

Intra-	within
Sub-	under

Combining Vowel

o

4.2)-Defining (con't)

EXERCISE 3:

Using the box below to identify the word parts and their meanings, analyze and define the following terms.

WR CV WR CV S

Example: oste/ o / arthr / o / pathy *disease of bone and joint*

CF

CF

1.Arthritis

2.Hepatitis

3.Subhepatic

4.Intravenous

5.Arthropathy

6.Osteitis

5. Building medical terms

To build medical terms, place word parts together to form words.

Using the box above as a references, complete the following steps to build the medical term for *disease of a joint*.

Step 1: Find the word part for *disease*. Write the word part in the correct space below.

Step 2: Find the word part for *joint*. Write the word part in the correct space below.

Step 3: The suffix does not begin with a vowel, so a combining vowel is needed. Insert the combining vowel *o* in the correct space below.

_____ / _____ / _____
WR / CV / S

Answer: arthropathy

EXERCISE 4:

Using the box above as a reference; build medical terms for the following definitions, and completing exercise 4.

Example: disease of the joint

arthr/o /pathy

WR /CV/ S

1. Inflammation of the joint

_____/_____
WR / S

2. Pertaining to the liver

_____/_____
WR / S

3. Pertaining to under the liver

_____/_____/_____
P / WR / S

4. Pertaining to within the vein

_____/_____/_____
P / WR / S

5. Inflammation of the bone

_____/_____
WR / S

6. Inflammation of the liver

_____/_____
WR / S

7. Disease of the bone and joint

_____/_____/_____/_____/_____
WR / CV / WR / CV / S

English in Medical Term

Chapter: 2

Body Structure, Color, and Oncology

Outline

1. ANATOMY

- 1-1. Organization of the body
- 1-2. Body cavity

2. WORD PARTS

- 2-1. Combining Forms for Body Structure
- 2-2. Combining Forms Commonly Used with Body Structure Terms
- 2-3. Combining Forms for Terms that Describe Color
- 2-4. Prefixes
- 2-5. Suffixes

3. MEDICAL TERMS

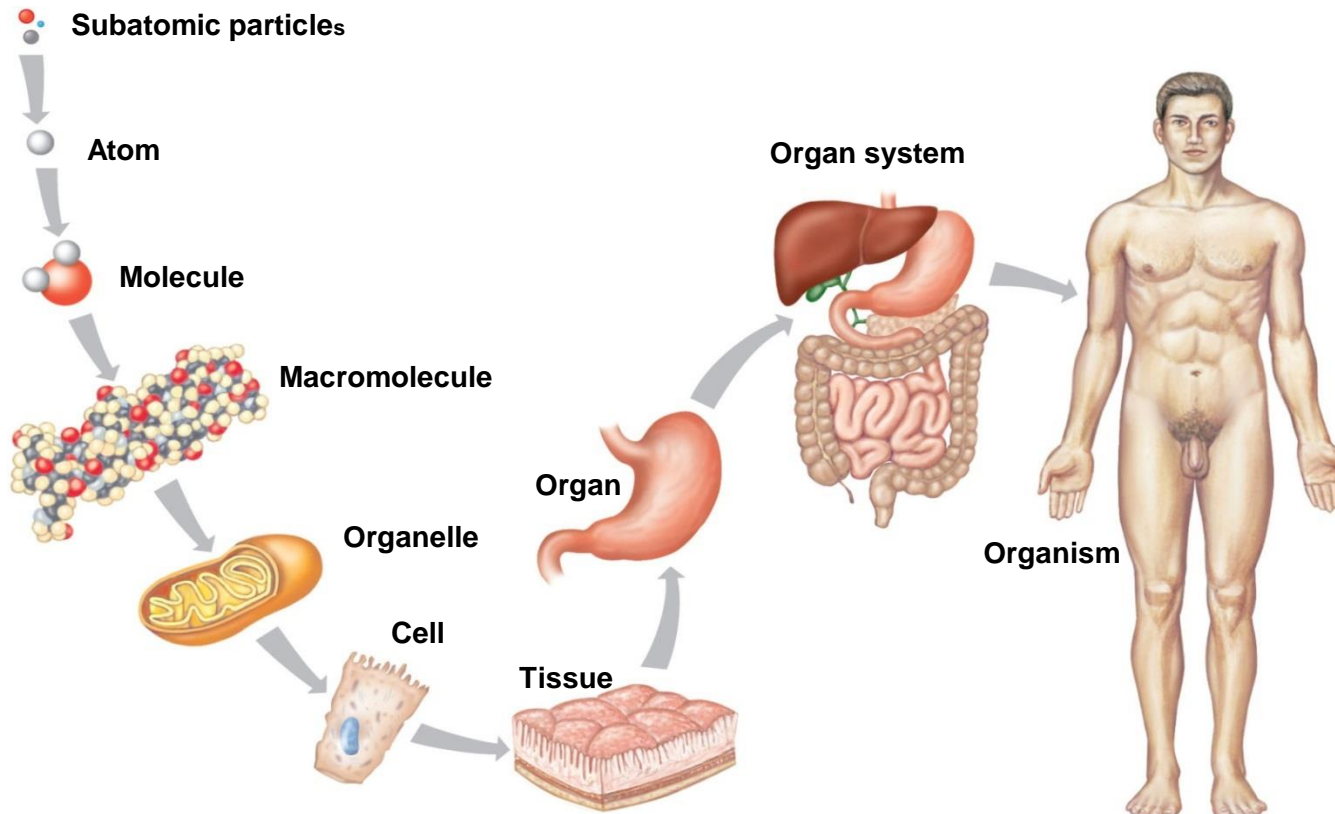
- 3-1. Oncology
- 3-2. Oncology Terms
 - Built from Word Parts
 - Not Built from Word Parts
- 3-3. Body Structure Terms
 - Built from Word Parts
- 3-4. Abbreviations

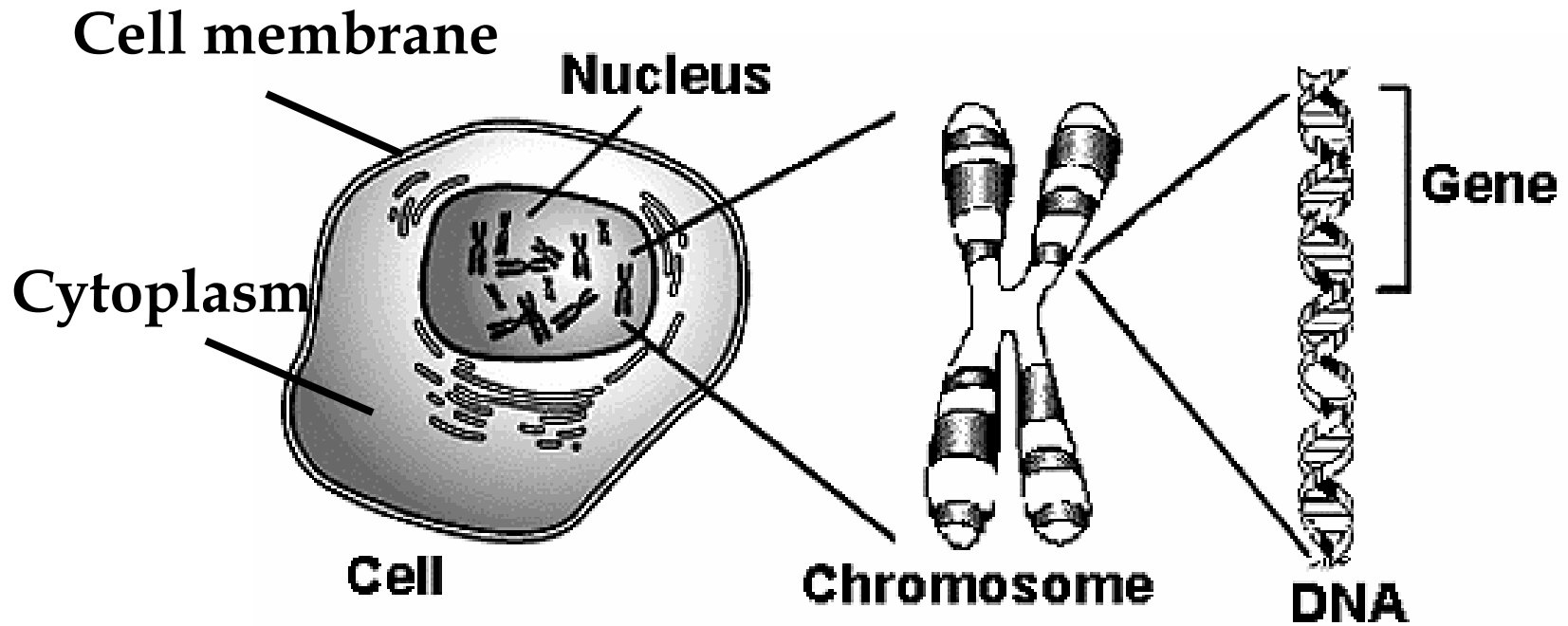
1. ANATOMY

1-1. Organization of the body

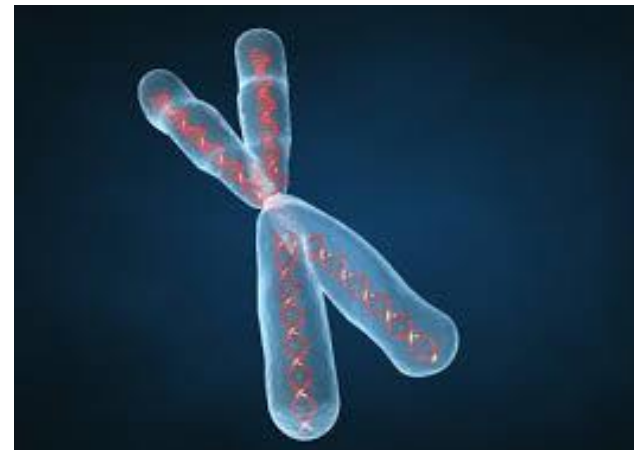
The structure of the human body falls into the following four categories: cells, tissues, organs, and systems. Each structure is a highly organized unit of smaller structures.

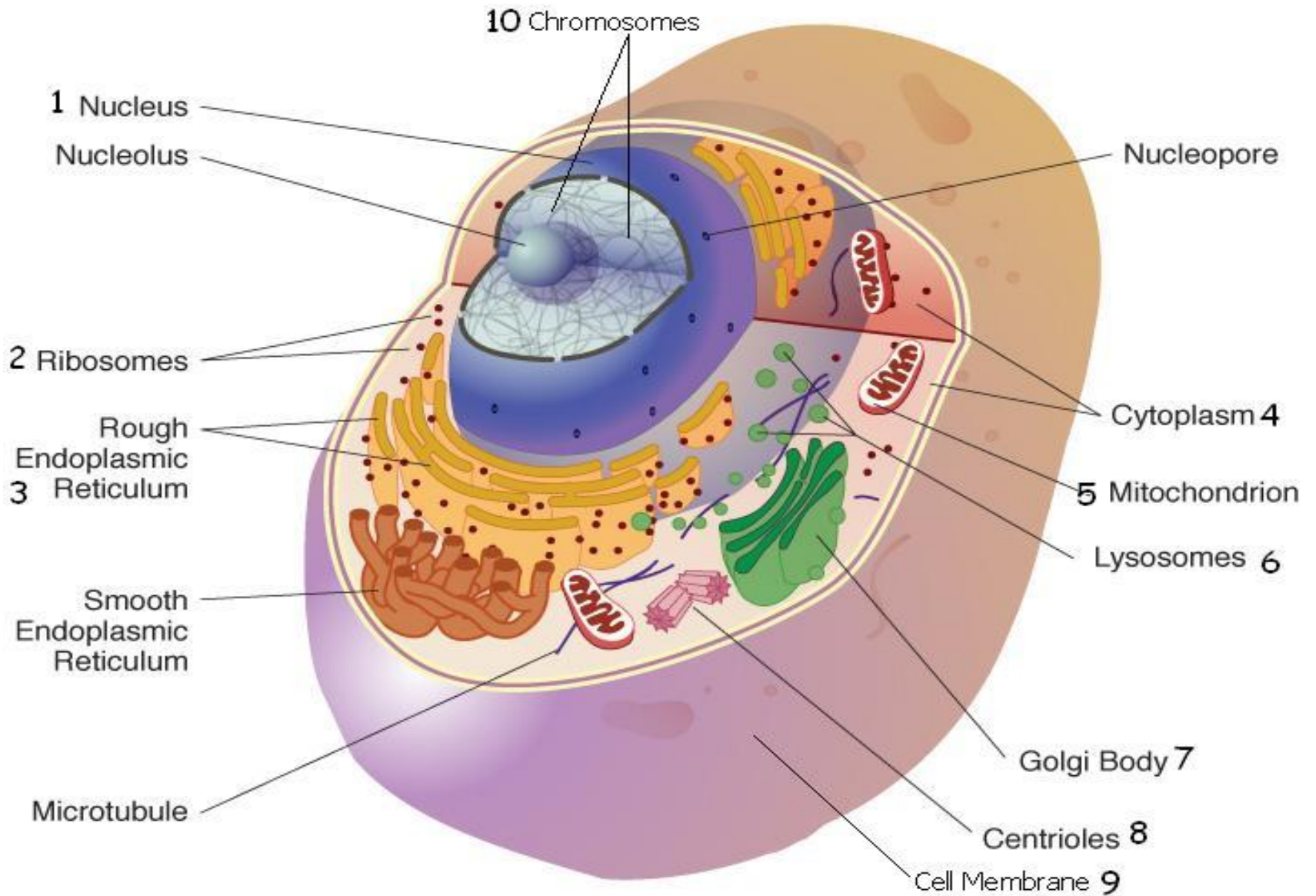
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(Figure 2-1)
Body cell.





a)- Cell : basic unit of all living thing (Figure 2-1)

The human body is composed or trillion, of cells, which vary in size and shape according to function.

- **Cell membrane:** forms the boundary of the cell
- **Cytoplasm:** gel-like fluid inside the cell
- **Nucleus:** largest structure within the cell, usually spherical and centrally located. It contains chromosomes for cellular reproduction and is the control center of the cell.
 - ✓ **Chromosomes:** located in the nucleus of the cell, There are 46 chromosomes in all normal human cell , with the exception of mature sex cells, which have 23.
 - ✓ **Genes:** regions within the chromosome. Each chromosome has several thousand genes that determine hereditary characteristic.
 - ✓ **DNA (deoxyribonucleic acid):** comprises each gene; is a chemical that regulates the activities of the cell

b)- Tissue: group of similar cells that performs a specific task

- **muscle tissue:** composed of cells that have a special ability to contract, usually producing movement
- **nervous tissue:** found in the nerves, spinal cord, and brain, It is responsible for coordinating and controlling body activities.
- **connective tissue:** connects, supports, penetrates, and encases various body structures. Adipose (fat) and osseous (bone) tissues and blood are types of connective tissue.
- **epithelial tissue:** the major covering of the external surface of the body; forms membranes that line body cavities and organs and is the major tissue in glands

c)-organ: two or more kinds of tissues that together perform special body functions, For example, the skin is an organ composed of epithelial, connective, muscle, and nerve tissue.

d)-system: group of organs that work together to perform complex body functions. For example, the cardiovascular system consists of the heart, blood vessels, and blood. Its function is to transport nutrients and oxygen to the cells and remove carbon dioxide and other waste products.

1-2. Body Cavities

The body is not a solid structure, as it appears on the outside, but has five cavities (**Figure 2-2**) each containing an orderly arrangement of the internal organs.

- **cranial cavity:** space inside the skull (**cranium**) containing the brain.
- **spinal cavity:** space inside the spinal column containing the spinal cord.
- **thoracic, or chest, cavity:** space containing the heart, aorta, lungs, esophagus, trachea, and bronchi.
- **abdominal cavity:** space containing the stomach, intestines, kidneys, liver, gallbladder, pancreas, spleen, and ureters.
- **pelvic cavity:** space containing the urinary bladder, certain reproductive organs, parts of the large intestine, and the rectum.
- ❖ **abdominopelvic cavity:** both the pelvic and abdominal cavities.

EXERCISE 1

Match the terms in the first column with the correct definitions in the second column.

___ 1. chromosomes	<i>a. type of connective tissue</i>
___ 2. nucleus	<i>b. regions within the chromosome</i>
___ 3. cytoplasm	<i>c. covers external body surface, lines body cavities and organs</i>
___ 4. cell	<i>d. gel-like fluid inside the cell</i>
___ 5. muscle	<i>e. contains chromosomes</i>
___ 6. nerve	<i>f. coordinates body activities</i>
___ 7. epithelial	<i>g. usually produces movement</i>
___ 8. bone	<i>h. contain genes</i>
___ 9. genes	<i>i. chest cavity</i>
___ 10. DNA	<i>j. a chemical that regulates the activities of the cell</i>
	<i>k. basic unit of all living things</i>

EXERCISE 2

Match the terms in the first column with the correct definitions in the second column.

___ 1. spinal cavity	a. group of organs functioning together
___ 2. thoracic cavity	b. chest cavity
___ 3. organ	c. composed of two or more tissues
___ 4. cranial cavity	d. found in the skin
___ 5. pelvic cavity	e. space inside the skull
___ 6. system	f. contains the stomach
___ 7. abdominal cavity	g. contains the urinary bladder
	h. contains the spinal cord

2. WORD PARTS

Begin building your medical vocabulary by Learning the word parts listed next. The list may appear long to you; however, the many exercises that follow are designed to help you understand and remember the word parts.

Reminder: the word root is the core of the word. The combining form is the word root with the combining vowel attached, separated by a vertical slash

2-1. Combining Forms for Body Structure

Combining Form

Definition

aden/o.....	gland
cyt/o.....	cell
epitheli/o.....	epithelium
fibr/o.....	fiber
hist/o.....	tissue
kary/o.....	nucleus
lip/o.....	fat
my/o.....	muscle
neur/o.....	nerve
organ/o.....	organ
sarc/o.....	flesh, connective tissue
system/o.....	system
viscer/o.....	internal organs

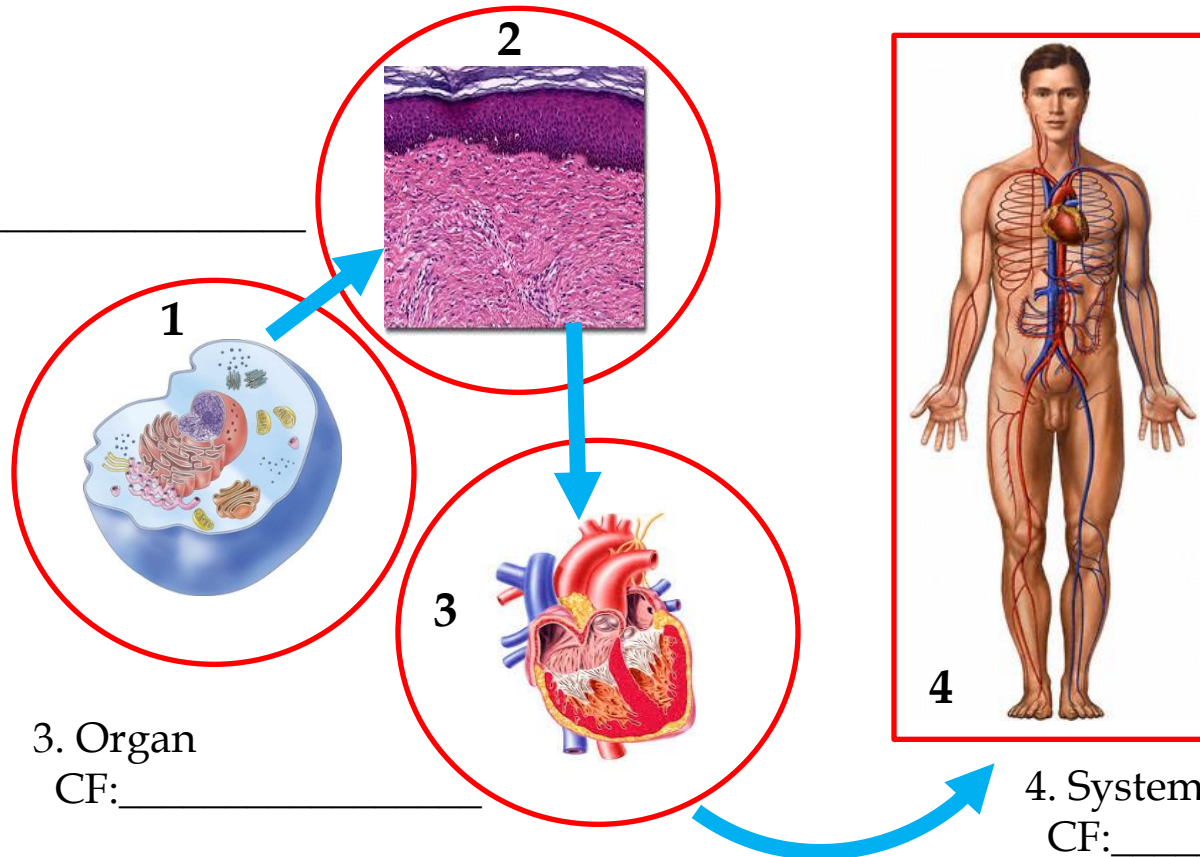
Epithelium

Originally meant **surface over** the nipple. **Epi** means **upon**, and **thela** means **nipple** (or projecting surfaces of many kinds).

- Learn the anatomic locations and definitions of the combining forms by completing exercises 3 and 4 and Exercise Figures A and B.

2. Tissue
CF: _____

1. Cell
CF: _____

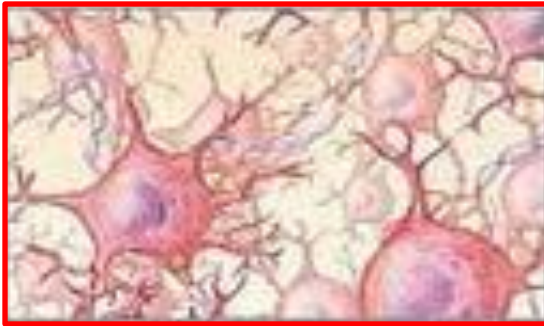


Exercise Figures A

Fill in the blanks with combining forms in this diagram of the organization of the body.

Nerve

1. CF: _____



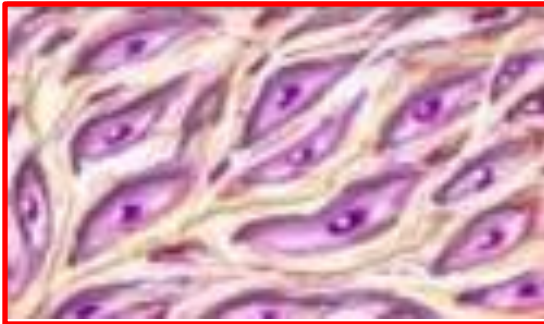
Epithelium

3. CF: _____



Connective

2. CF: _____



Muscle

4. CF: _____



(Types of Tissue)

Exercise Figures B

Fill in the blanks with combining forms in this diagram of types of tissue.

Exercise 3

Write the definitions of the following combining forms.

1. sarc/o _____

2. lip/o _____

3. kary/o _____

4. viscer/o _____

5. cyt/o _____

6. hist/o _____

7. my/o _____

8. neur/o _____

9. organ/o _____

10. system/o _____

11. epitheli/o _____

12. fibr/o _____

13. aden/o _____

EXERCISE 4

Write the combining form for each of the following.

1. internal organs _____

2. epithelium _____

3. organ _____

4. nucleus _____

5. cell _____

6. tissue _____

7. nerve _____

8. muscle _____

9. fat _____

10. system _____

11. connective tissue, flesh _____

12. fiber _____

13. gland _____

2-2. Combining Forms Commonly Used with Body Structure Terms

Combining Form	Definition
cancer/o, _____ carcin/o	cancer (a disease characterized by the unregulated, abnormal growth of new cells)
eti/o _____	cause (of disease)
gno/o _____	Knowledge
iatr/o _____	physician, medicine (also means treatment)
lei/o _____	smooth
onc/o _____	tumor, mass
path/o _____	disease
rhabd/o _____	rod-shaped, striated
somat/o _____	body

Cancer

Carcin and **cancer** are derived from Latin and Greek words meaning **crab**. They originated before the nature of malignant growth was understood. One explanation was that the swollen veins around the diseased area looked like the claws of a crab.

Learn the related combining forms by completing exercises 5 and 6.

EXERCISE 5

Write the definitions of the following combining forms.

1. onc/o _____

2. carcin/o _____

3. eti/o _____

4. path/o _____

5. somat/o _____

6. cancer/o _____

7. rhabd/o _____

8. lei/o _____

9. gno/o _____

10. iatr/o _____

Exercise 6

Write the combining form for each of the following.

1. disease : _____

2. tumor, mass : _____

3. cause (of disease) _____

4. cancer a. _____

b. _____

5. body : _____

6. smooth : _____

7. rod-shaped, striated : _____

8. knowledge : _____

9. physician, medicine : _____

2-3. Combining Forms for Terms that Describe Color

Combining Form	Definition
chlor/o.....	green
chrom/o.....	Color
cyan/o.....	blue
erythr/o.....	red
Leuk/o.....	white
melan/o.....	black
xanth/o.....	yellow

Erythro

- Aristotle noted “ two colors of blood ” and applied the term **erythro** to the dark red blood.

Learn the color combining forms by completing exercises 7 and 8.

Exercise 7

Write the definitions of the following combining forms.

1. cyan/o _____

2. erythr/o _____

3. leuk/o _____

4. xanth/o _____

5. chrom/o _____

6. melan/o _____

7. chlor/o _____

Exercise 8

Write the combining form for each of the following.

1. blue : _____

2. red : _____

3. white : _____

4. black : _____

5. yellow : _____

6. color : _____

7. green : _____

Reminder: prefixes are placed at the beginning of word roots to modify their meanings.

2-4. Prefixes

Prefix	Definition
dia-	through, complete
dys-	painful, abnormal, difficult, labored
hyper-	above, excessive
hypo-	below, incomplete, deficient
meta-	after, beyond, change
neo-	new
pro-	before

Learn the prefixes by completing exercises 9 and 10.

EXERCISE 9

Write the definitions of the following prefixes.

1. neo- _____

2. hyper- _____

3. meta- _____

4. hypo- _____

5. dys- _____

6. dia- _____

7. pro- _____

Exercise 10

Write the prefix for each of the following

1. new _____

2. above, excessive _____

3. below, incomplete, deficient _____

4. beyond, after, change _____

5. abnormal, painful, labored, difficult _____

6. through, complete _____

7. Before _____

Reminder: suffixes are placed at the end of word roots to modify their meanings.

2-5. Suffixes

Suffix	Definition
-al, -ic, -ous..... -cyte..... <i>(Note: cyte ends in an e when used as a suffix.)</i> -gen..... -genesis..... -genic..... -logist..... -logy..... -oid..... -oma..... -osis.....	pertaining to Cell substance or agent that produces or causes origin, cause producing, originating, causing one who studies and treats (specialist, physician) study of resembling tumor, swelling abnormal condition (means <i>increase</i> when used with blood cell word roots)

Suffix (Con't)	Definition (Con't)
-pathy.....	disease
-plasia.....	condition of formation, development, growth
-plasm.....	growth, substance, formation
-sarcoma.....	malignant tumor
-sis.....	state of
-stasis.....	control, stop, standing

Some *suffixes* are made of a *word root* plus a suffix; they are presented as suffixes for ease of learning. For example, **-pathy** is made up of the *word root path* and the *suffix -y*. When analyzing a word, divide the suffixes as learned. For example, a word such as **somatopathy** should be divided *somat/o/pathy* and **not** *somat/o/path/y*.

Exercise 11

Match the suffixes in the first column with their correct definitions in the second column.

___ 1. -logy	a. producing, originating, causing
___ 2. -osis	b. cell
___ 3. -pathy	c. specialist, physician
___ 4. -plasm	d. new
___ 5. -al, -ic, -ous	e. disease
___ 6. -stasis	f. substance, growth, formation
___ 7. -oid	g. pertaining to
___ 8. -cyte	h. resembling
___ 9. -genesis	i. study of
___ 10. -logist	j. control, stop, standing
___ 11. -oma	k. substance that produces
___ 12. -gen	l. abnormal condition
___ 13. -sarcoma	m. condition of formation, development, growth
___ 14. -plasia	n. tumor, swelling
___ 15. -genic	o. state of
___ 16. -sis	p. origin, cause
	q. malignant tumor

Sarcoma has been used since the time of ancient Greece to describe any fleshy tumor. Since the introduction of cellular pathology, the meaning was restricted to mean a **malignant connective tissue tumor**.

Exercise 12

Write the definitions of the following suffixes.

1. -logist _____
2. -pathy _____
3. -logy _____
4. -ic _____
5. -stasis _____
6. -cyte _____
7. -osis _____
8. -ous _____
9. -plasm _____
10. -al _____
11. -plasia _____
12. -oid _____
13. -gen _____
14. -genic _____
15. -oma _____
16. -genesis _____
17. -sarcoma _____
18. -sis _____

3. MEDICAL TERMS

3-1. Oncology

Oncology is the study of tumors. Tumors develop from excessive growth of cells from a body part. Tumors, or masses, are benign (noncancerous) or malignant (Cancerous). The names of tumors are often made of the word root for the body part and the suffix -oma, as in the term my/oma.

Oncology terms are introduced in this chapter because of their relation to cells and cell abnormalities. This is an introductory list only. More oncology terms appear in sub-sequent chapters and are presented with the introduction of the related body parts.

3-2. Oncology Terms

3-2-1. Built from Word Parts

The medical terms listed below are built from the word parts you have already learned. Using this knowledge, you will analyze, define, and build medical terms in the following exercises. At first the list of terms may seem long to you; however, many of the word parts are repeated in many of the words, You will soon find that knowing parts of terms makes learning the words easy, Further explanation of terms beyond definitions of their word parts, if needed, is included in parentheses.

Practice two things in your dealings with disease: either help or do not harm the patient.

Hippocrates 460-375 Be

Term	Definition
Adenocarcinoma (ad-e-no-kar-si-no-ma)	cancerous tumor composed of glandular tissue
Adenoma (ad-e-no-ma)	tumor composed of glandular tissue (benign)
Carcinoma (Ca) (kar-si-no-ma) ...	cancerous tumor (malignant) (Exercise Figure C)
Chloroma (klo-RO-ma)	tumor of green color (malignant, arising from myeloid tissue)
Epithelioma (ep-i-the-le-O-ma)	tumor composed of epithelium
Fibroma (fi-BRO-ma)	tumor composed of fiber (fibrous tissue)

Term (Con't)	Definition (Con't)
fibrosarcoma (fi-bro-sar- KO-ma)	malignant tumor composed of fiber (fibrous tissue)
leiomyoma (li-o-mi-O-ma)	tumor of smooth muscle (benign)
leiomyosarcoma (li-o-mi-O-sar- KO-ma)	malignant tumor of smooth muscle
lipoma (li-PO-ma)	tumor composed of fat (benign tumor)
liposarcoma (lip-o-s.ar-KO-ma)	malignant tumor composed of fat

Term (Con't)	Definition (Con't)
Melanocarcinoma (mel-a-no-kar-si- NO-ma)	cancerous black tumor (malignant)
Melanoma (mel-a-NO-ma)	black tumor (primarily of the skin) (Exercise Figure C)
Myoma (mi-O-ma)	tumor composed of muscle (benign)
Neoplasm (NE-o-plazm)	new growth (of abnormal tissue or tumor)
Neuroma (nu-RO-ma)	tumor composed of nerve (benign)

Term (Con't)	Definition (Con't)
Rhabdomyoma (rab-dO-mi-O-ma)	tumor of striated muscle (benign)
Rhabdomyosarcoma (rab-do-mi-o-sar-KO-ma)	malignant tumor of striated muscle (Exercise Figure C)
Sarcoma (sar-KO-ma)	tumor composed of connective tissue (such as bone or cartilage) (highly malignant) (Exercise Figure C)

(NOTE: **sarc/o** also is presented in this chapter as a word root.)

Practice saying each of these terms aloud. Refer to the Pronunciation Guide below for explanation of the pronunciation key. To hear the terms, access the PRONOUNCE IT activity for this chapter on the Student CD that accompanies this text. Or, to hear the terms and their definitions with a CD player or computer, obtain the Pronunciation CD designed for use with this text.

Learn the definitions and spellings of the -oncology terms built from word parts by completing exercises 13, 14, and 15.

EXERCISE 13

Analyze and define the following terms. Refer to Chapter 1, p. 6, to review analyzing and defining techniques. **This is an important exercise; do not skip any portion of it.**

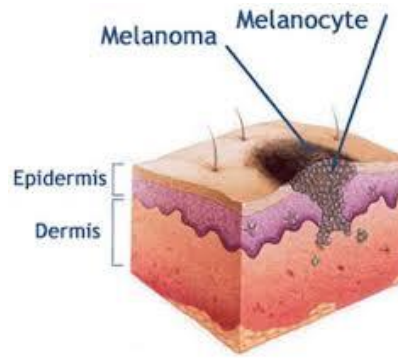
WR CV WR CV S

Example: **lei / o / my / o / sarcoma** malignant tumor of smooth muscle
 └──┬──┘ └──┬──┘
 CF CF

1. sarcoma _____



_____ / _____ of the breast
1. cancer / tumor



_____ / _____
2. black / tumor



_____ / _____ of the femur
3. connective / tumor tissue



_____ / _____ / _____ / _____ / _____
4. striated / cv / muscle / cv / malignant tumor

Exercise Figure C

Fill in the blanks to complete labeling of these diagrams of types of cancers.

2. melanoma _____
3. epithelioma _____
4. lipoma _____
5. neoplasm _____
6. myoma _____
7. neuroma _____
8. carcinoma _____
9. melanocarcinoma _____
10. rhabdomyosarcoma _____
11. leiomyoma _____
12. rhabdomyoma _____
13. fibroma _____
14. liposarcoma _____
15. fibrosarcoma _____
16. adenoma _____
17. adenocarcinoma _____
18. chloroma _____

TABLE 2-1

PRONUNCIATION GUIDE

- The following is a simple guide to use for practicing pronunciation of the medical terms. The pronunciations are only approximate; however, they are adequate to meet the needs of the beginning student.
- In respelling for pronunciation, words are minimally distorted to indicate phonetic sound.

Example: doctor (**dok-tor**)
 gastric (**gas-trik**)

- Diacritical marks are used over vowels to indicate pronunciation. The macron (—) is used to indicate the *long* vowel sounds.

Example: donate (**dō-nate**)
 hepatoma (hep-a-**tō**-ma)
ā as in *ate, say*
ē as in *eat, beet, see*
ī as in *I, mine, sky*
ō as in *oats, so*
ū as in *unit, mute*

- Vowels with no markings have the short sound.

Example: discuss (dis-kus)
medical (med-i-kal)
a as in *at, lad*
e as in *edge, bet*
i as in *itch, wish*
o as in *ox, top*
u as in *sun, come*

An accent mark indicates the stress on a certain syllable. The primary accent is indicated by capital letters, and the secondary accent (which is stressed, but not as strongly as the primary accent) is indicated by **italics**.

Example: altogether (*all-tū*-GETH-er)
pancreatitis (*pan*-krē-a-*Tl*-tis)

When analyzing terms that have a suffix containing a word root, it may appear, as in the **word neoplasm**, that the word is composed of only a **prefix** and a **Suffix**. Keep in mind that the word does have a word root but that it is embedded in the suffix. S(WR) indicates that the word root is embedded in the suffix.

Exercise 14

Build medical terms for the following definitions by using the word parts you have learned. If you need help, refer to p. 8 to review Word-building techniques. **Once again, this is an integral part of the learning process; do not skip any part of this exercise.**

Example: a tumor composed of fat: lip / oma
WR / S

1. black tumor _____ / _____
WR / S
2. cancerous tumor _____
WR / S
3. new growth _____
P / S(WR)
4. tumor composed of epithelium _____
WR / S
5. tumor composed of connective tissue _____
WR / S
6. cancerous black tumor _____
WR / CV / WR / S

7. tumor composed of nerve cells _____
WR / S
8. tumor composed of muscle _____
WR / S
9. malignant tumor of striated muscle _____
WR / CV / WR / CV / S
10. tumor of smooth muscle _____
WR / CV / WR / S
11. tumor of striated muscle _____
WR / CV / WR / S
12. malignant tumor of smooth muscle _____
WR / CV / WR / CV / S

13. malignant tumor composed of fat : _____

WR / CV / S

14. tumor composed of fiber : _____

(fibrous tissue)

WR / S

15. malignant tumor composed of fiber : _____

(fibrous tissue)

WR / CV / S

16. tumor composed of glandular tissue: _____

WR / S

17. cancerous tumor composed of _____

glandular tissue

WR / CV / WR / S

18. tumor of green color : _____

WR / S

Exercise 15

Spell each of the oncology terms build from word parts. Have someone dictate the terms on pp. 22-23 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____	11. _____
2. _____	12. _____
3. _____	13. _____
4. _____	14. _____
5. _____	15. _____
6. _____	16. _____
7. _____	17. _____
8. _____	18. _____
9. _____	19. _____
10. _____	

3-2.Oncology Terms (Con't)

3-2-2. Not Built from Word Parts

Medical terms not built from word parts cannot be correctly defined by applying the meanings of the word parts. The terms are learned by memorizing the whole word by using recall and spelling exercises.

- The oncology terms in this List are not built from word parts, the terms are commonly used in the medical world and you will need to know them. In some of the words, you may recognized a word parts; however, these terms cannot be literally translated to find the meaning. New knowledge may have changed the meaning of the term since they were coined, some terms are eponyms, some are acronym, and some have no apparent explanation for their name. Memorization is used in the following exercises to learn the terms.

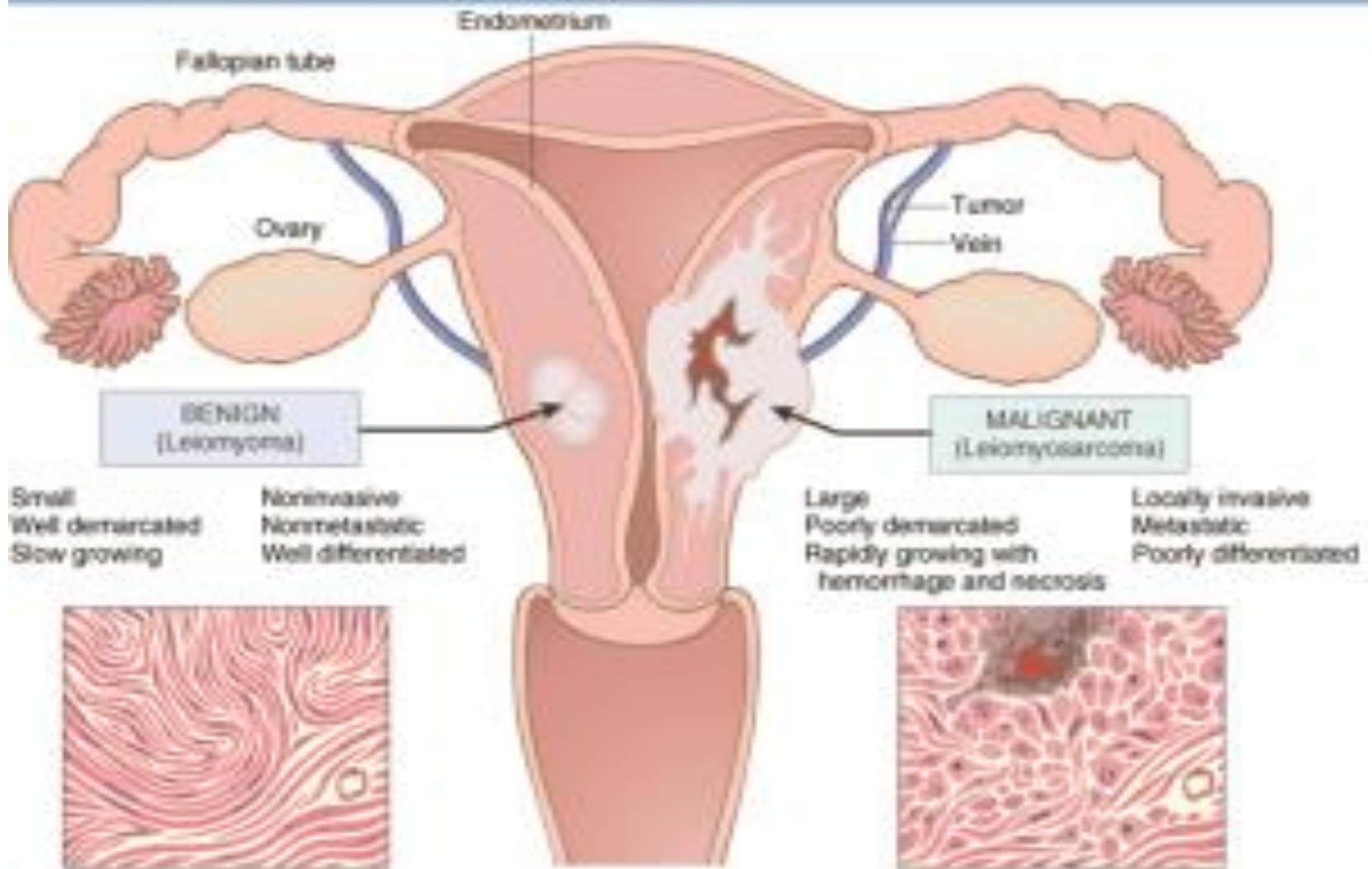
Term	Definition
Benign (bē-NĪN)	not malignant, nonrecurrent, favorable for recovery (Figure 2-3)
carcinoma in situ (in-SĪ-too)	cancer in the early stage before invading surrounding tissue (Figure 2-4)
chemotherapy (chemo) (kē-mō- THER-a-pē)	treatment of cancer with drug

Benign

is derived from the latin word root **bene**, meaning **well** or **good**, as used in **benefit** or **benefactor**.

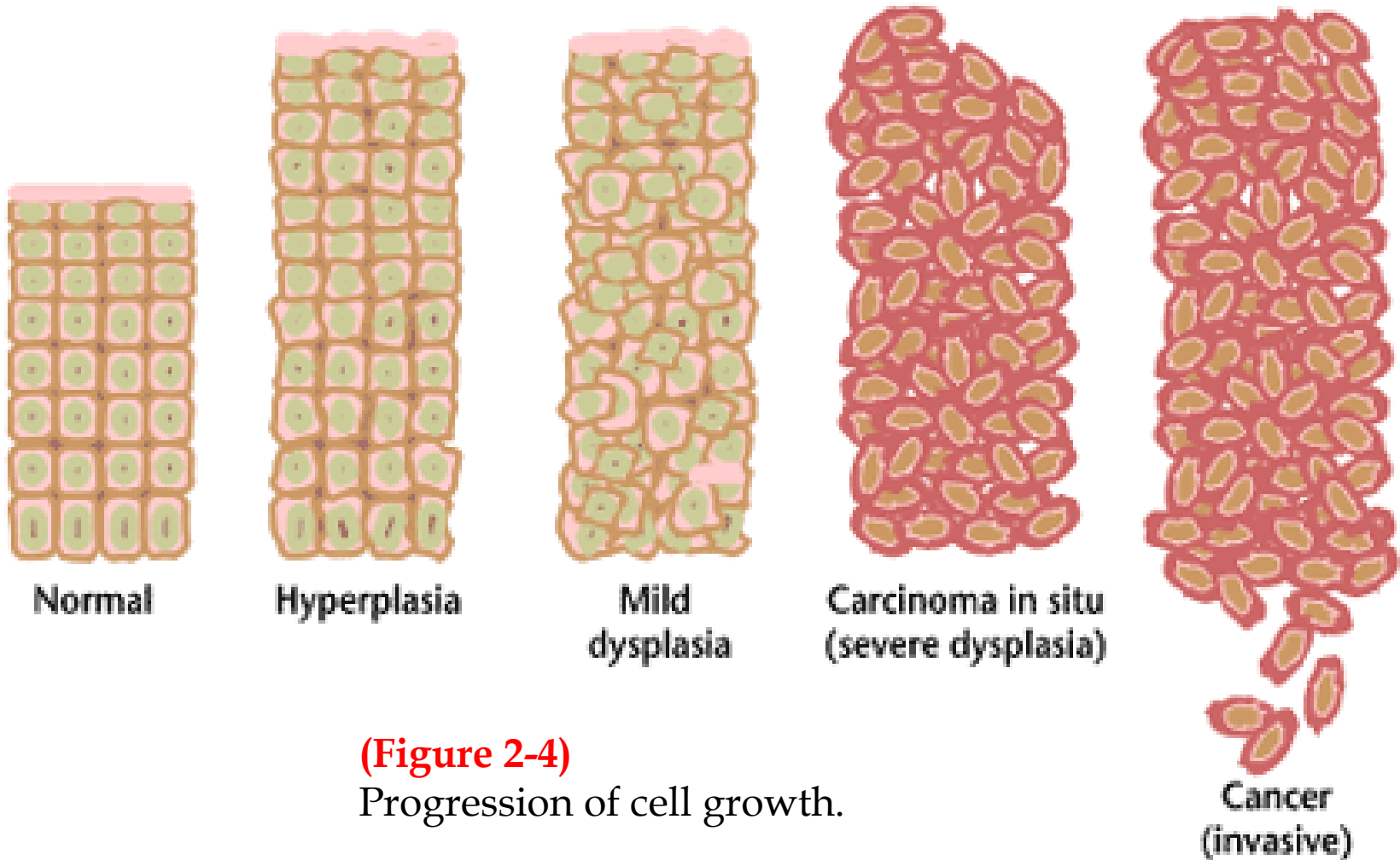
Situ

is from the Latin term **situs**, which means **position** or **place**. Think of **in situ** as meaning “**in place**” or “**not wandering around**”



(Figure 2-3)

Example of benign and malignant tumors.



(Figure 2-4)
Progression of cell growth.

Term (Con't)	Definition (Con't)
encapsulated..... (en-KAP-sū-lā-ted)	enclosed in a capsule, as with benign tumors (Figure 2-6)
Exacerbation..... (eg- <i>zas</i> -er-BĀ-shun)	increase in the severity of a disease or its symptoms
Idiopathic..... (id-ē- ō-PATH-ik)	pertaining to disease of unknown origin

Idiopathic

is derived from the Greek word **idios** meaning **one's own** and **path** or **disease**. The term probably originated from the idea that disease of unknown origin comes from within oneself and is not acquired from without.

Term (Con't)	Definition (Con't)
Inflammation..... (in- fla- MĀ. -shun)	response to injury or destruction of tissue characterized by redness, swelling, heat, and pain
in vitro..... (in VĒ-trō)	within a glass, observable within a test tube
in vivo..... (in VĒ-vō)	within the living body

Inflammatory and Inflammation

are spelled with two *m*'s. *Inflame and inflamed* have one *m*.

Term (Con't)	Definition (Con't)
malignant..... (ma-LIG-nant)	tending to become progressively worse and to cause death, as in cancer (see Figure 2-3)
radiation therapy (RXT).... (rā-dē-A-shun THER-a-pē)	treatment of cancer with a radioactive substance, x-ray, or radiation (also called radiation oncology and radiotherapy)(figure 2-5)
Remission..... (rē-MISH-un)	improvement or absence of signs of disease

Malignant

is derived from the Latin word root **mal** meaning **bad**, as used in **malicious, malaise, malady, and malign.**

Practice saying each of these terms aloud. To assist you in pronunciation, refer to the Pronunciation Guide on p. 25. To hear the terms, access the PRONOUNCE IT activity for this chapter on the Student CD that accompanies this text. Or, to hear the terms and their definitions with a CD player or computer, obtain the Pronunciation CO designed for use with this text.



Figure 2-5

Radiation therapist preparing the patient for radiation therapy



Figure 2-6

An encapsulated benign tumor

Learn the definitions and spellings of the oncology terms not built from word parts by completing exercises 16 and 17.

Exercise 16

Write the definitions for the following terms.

1. benign _____
2. malignant _____
3. remission _____
4. idiopathic _____
5. inflammation _____
6. chemotherapy _____
7. radiation therapy _____
8. encapsulated _____
9. In vitro _____
10. in vivo _____
11. carcinoma in situ _____
12. exacerbation _____

EXERCISE 17

Spell each of the oncology terms not built from word parts. Have someone dictate the terms on pp. 28-30 to you. Study any words you have spelled incorrectly.

1. _____	7. _____
2. _____	8. _____
3. _____	9. _____
4. _____	10. _____
5. _____	11. _____
6. _____	12. _____

3-3. Body Structure Terms

Built from Word Parts

- The following terms are built from the word parts you have already learned. By analyzing, defining, and building the terms in the exercises that follow, you will come to know the terms.

COMPLEMENTARY AND ALTERNATIVE MEDICINE (CAM)

According to the National Institutes of Health, **CAM** is defined as "a group of diverse medical and health care systems, practices, and products that are not presently considered to be a part of conventional medicine."

Complementary medicine is used in conjunction with conventional medicine.

Alternative medicine is used in place of conventional medicine.

Integrative medicine is the combination of mainstream medical therapies and evidenced-based CAM therapies.

Use of CAM has increased dramatically in recent years as health care consumers search for a multitude of ways to treat illness and promote wellness.

CAM terms

Look for the CAM terms appearing throughout the text. Refer to Appendix G for a complete list of CAM definitions.

Term	Definition
Cancerous..... (KAN-ser-us)	pertaining to cancer
Carcinogen..... (kar-SIN -ō-jen)	substance that causes cancer
Carcinogenic..... (kar-sin -ō-JEN - ik)	producing cancer
Cyanosis..... (sī - a-NO-sis)	abnormal condition of blue (bluish discoloration of the skin caused by inadequate supply of oxygen in the blood)

Term	Definition
cytogenic..... (<i>sī-tō-JEN-ik</i>)	producing cells
cytoid..... (<i>Sī-toid</i>)	resembling a cell
cytology..... (<i>si- TOL-ō- jē</i>)	study of cells
cytoplasm..... (<i>Sī-tō-plazm</i>)	cell substance
diagnosis(DX)..... (<i>dī-ag-NŌ-sis</i>)	state of complete knowledge (identifying a disease)
dysplasia..... (<i>dis-PLĀ-zhē-a</i>)	Abnormal development (see Figure 2-4)

Term	Definition
epithelial..... (<i>ep-i- THE-lē-al</i>)	pertaining to epithelium
erythrocyte (RBC)..... (<i>e-RITH-rō-sit</i>)	red (blood) cell (see Exercise Figure E)
erythrocytosis..... (<i>e-rith-rō-si-TŌ-sis</i>)	increase in the number of red (blood) cells
etiology..... (<i>ē-tē-OL-ō-jē</i>)	study of causes (of diseases)
histology..... (<i>his-TOL-ō-jē</i>)	study of tissue
hyperplasia..... (<i>hi-per-PLĀ-zhē-a</i>)	excessive development (number of cells) (Exercise Figure D) (see Figure 2-4)

Term	Definition
hypoplasia..... (hī-pō-PLĀ-zhē-a)	incomplete development (of an organ or tissues)
iatrogenic..... (i-at-rō-JEN-ik)	produced by a physician (the unexpected results from a treatment prescribed by a physician)
iatrology (i-a- TROL-ō-jē)	study of medicine
karyocyte..... (KĀR-e-ō-sit)	cell with a nucleus
karyoplasm..... (KĀR-e-ō-plazm)	substance of a nucleus

Term	Definition
leukocyte (WBC)..... (LŪ-kō-sit)	white (blood) cell (Exercise Figure E)
leukocytosis..... (lŭ-kō-si- TŌ-sis)	increase in the number of white (blood) cells
lipoid..... (LIP-oid)	resembling fat
metastasis (pl. metastases) (mets)..... (me- TAS-ta-sis)	beyond control (transfer of disease from one organ to another, as the transfer of malignant tumors (Figure 2-7)
myopathy..... (mi-OP-a-thē)	disease of the muscle

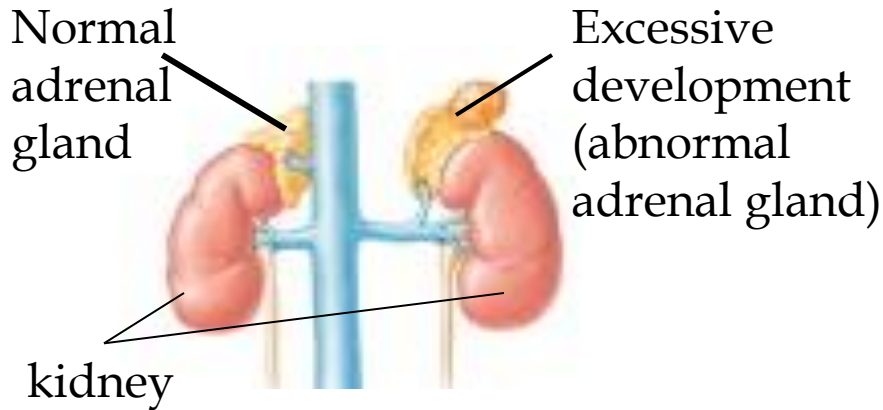
Term	Definition
neopathy..... (nē-OP-a-thē)	new disease
neuroid..... (NŪ-rōyd)	resembling a nerve
oncogenic..... (ong-kō-JEN-ik)	causing tumors
oncologist..... (ong-KOL-ō-jist)	a physician who studies and treats tumors
oncology..... (ong-KOL-ō-jē)	study of tumor (a branch of medicine concerned with the study of malignant tumors)
pathogenic..... (path-ō-JEN-ik)	producing disease
pathologist..... (pa-THOL-ō-jist)	a physician who studies disease (examines biopsies and performs autopsies to determine the cause of disease or death)

Term	Definition
pathology..... (pa-THO-ō-jē)	study of disease (a branch of medicine dealing with the study of the causes of disease and death)
prognosis (Px)..... (prog- NŌ- sis)	state of before knowledge (prediction of the outcome of disease)
somatic..... (sō-MAT-ik)	pertaining to the body
somatogenic..... (sō-ma-tō-JEN-ik)	originating in the body (organic as opposed to psychologic)
somatopathy..... (sō-ma-TOP-a-thē)	disease of the body

Term	Definition
somatoplasm..... (sō-MAT-ō-plazm)	body substance
systemic (sis-TEM-ik)	pertaining to a (body) system (or the body as a whole)
visceral..... (VIS-er-al)	pertaining to the internal organs
xanthochromic..... (zan-thō-KRŌ-mik)	pertaining to yellow color
xanthosis..... (zan - THŌ-sis)	abnormal condition of yellow (discoloration)

Oncology and Oncologic are used to name the medical specialty and hospital nursing units devoted to the treatment and care of cancer patients.

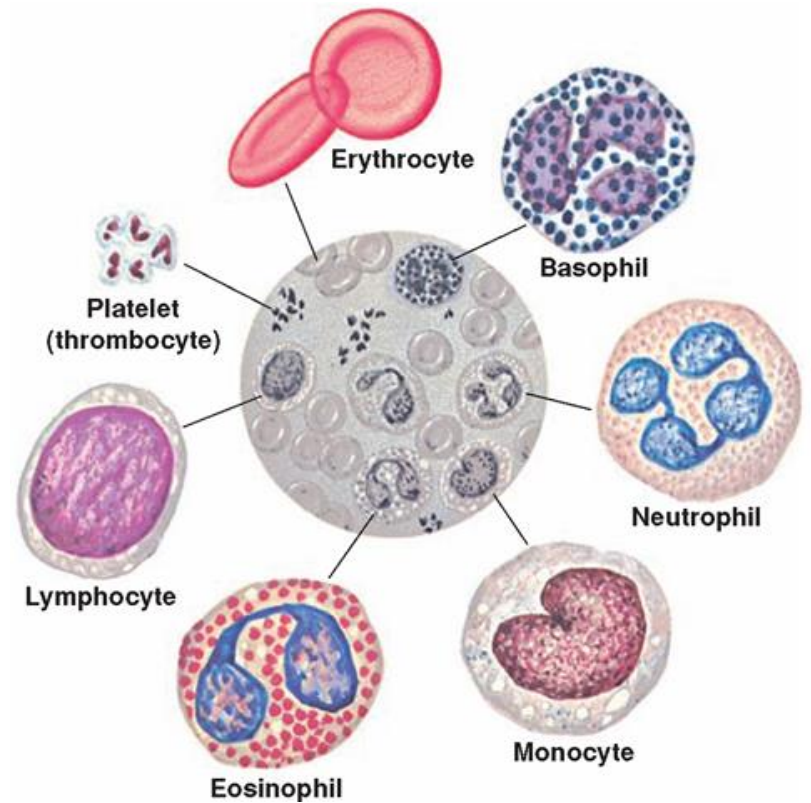
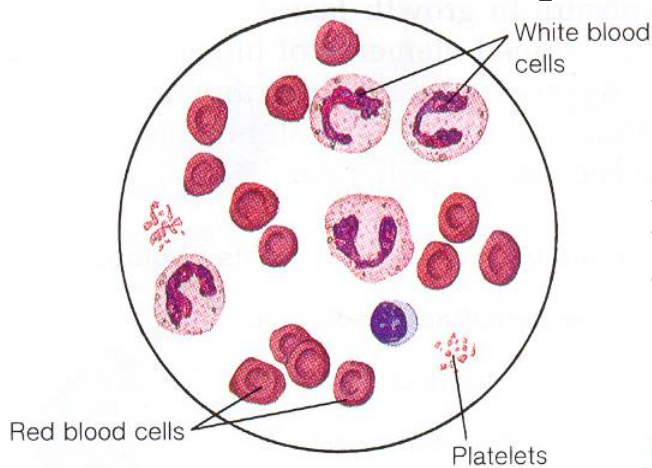
Prognosis was used by Hippocrates to mean the same then as now: **to foretell the course of a disease.**



Exercise Figure D

Fill in the blanks to label the diagram

_____ / _____ / _____
 excessive / development



Exercise Figure E

Fill in the blanks to label the diagram of blood cells.

1. _____ / _____ / _____
 red / cv / cell(s)
2. _____ / _____ / _____
 white / cv / cell(s)

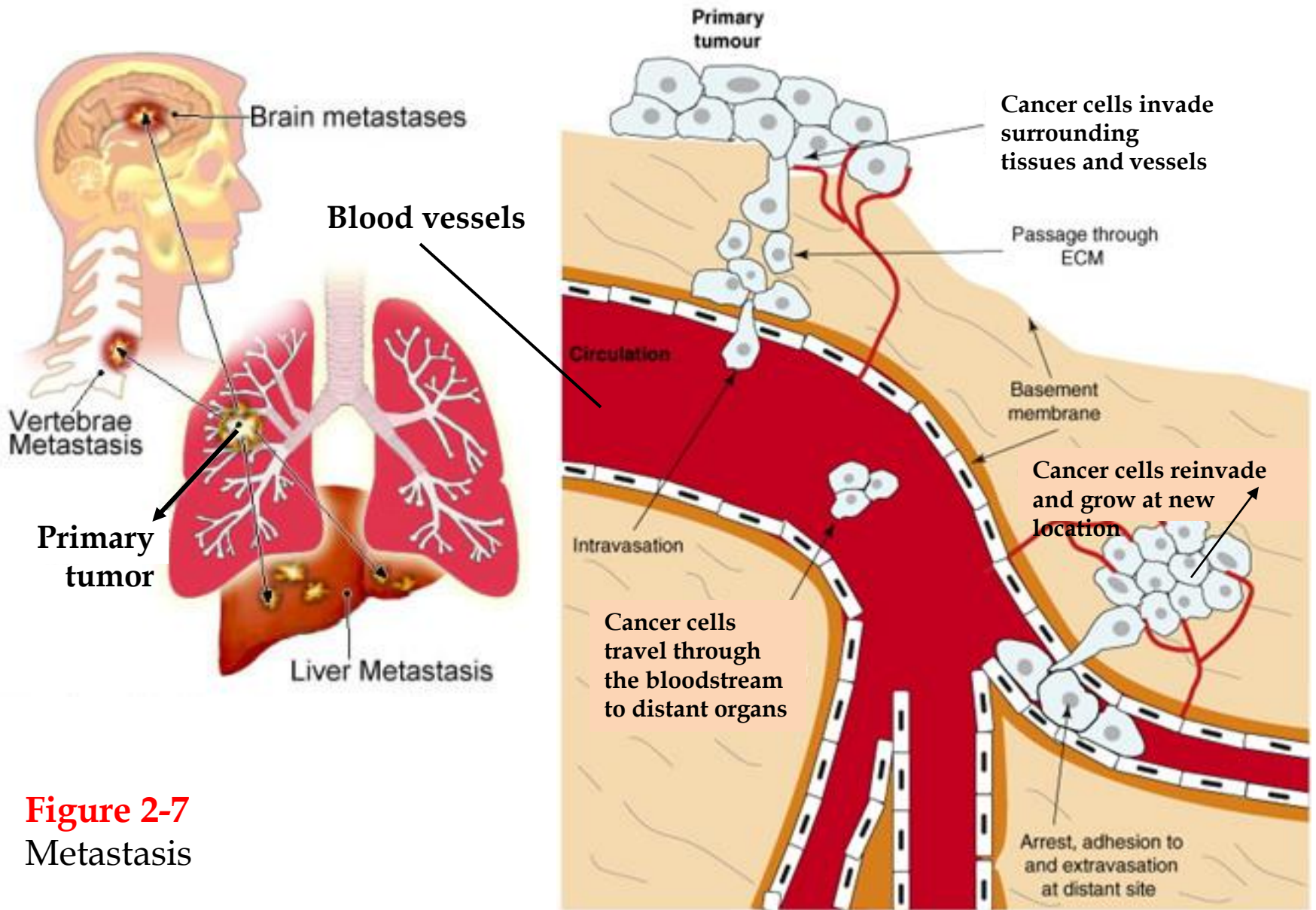


Figure 2-7
Metastasis

Learn the definitions and spellings of the complementary terms by completing exercise 18,19, and 20.

Exercise: 18

Analyze and define the following complementary terms.

WR CV S

Example: path / o / genic : producing disease .
CF

1. cytology _____
2. histology _____
3. pathology _____
4. pathologist _____
5. visceral _____
6. metastasis _____
7. oncogenic _____
8. oncology _____
9. karyocyte _____
10. neopathy _____

11. karyoplasm _____
12. cytogenic _____
13. systemic _____
14. cancerous _____
15. cytoplasm _____
16. carcinogenic _____
17. somatic _____
18. somatogenic _____
19. somatoplasm _____
20. somatopathy _____
21. neuroid _____
22. myopathy _____
23. erythrocyte _____
24. leukocyte _____
25. cyanosis _____

26. epithelial_____
27. lipoid_____
28. etiology_____
29. xanthosis_____
30. xanthochromic_____
31. hyperplasia_____
32. erythrocytosis_____
33. leukocytosis_____
34. carcinogen_____
35. hypoplasia_____
36. cytoid_____
37. oncologist_____
38. dysplasia_____
39. pathogenic_____
40. prognosis_____
41. diagnosis_____
42. iatrogenic_____
43. iatroylogy_____

Exercise 19

Build medical terms for the following definitions by using the word parts you have learned.

Example: producing cells

cyt / o / genic

WR/ CV / S

1. cell substance

: _____

WR / CV / S

2. pertaining to yellow color

: _____

WR / CV / WR / S

3. beyond control

: _____

P / S(WR)

4. new disease

: _____

P / S(WR)

5. study of the cause (of disease):

WR / CV / S

6. substance of a nucleus : _____

WR /CV/ S

7. study of tumors : _____

WR /CV/ S

8. study of disease : _____

WR /CV/ S

9. pertaining to the body : _____

WR / S

10. a physician who studies: _____

diseases

WR /CV/ S

11. disease of the muscle : _____

WR /CV/ S

12. body substance : _____

WR /CV/ S

13. abnormal condition of yellow : _____
WR / S
14. Pertaining to the internal organs: _____
WR / S
15. causing tumors : _____
WR /CV/ S
16. originating in the body : _____
WR /CV/ S
17. disease of the body : _____
WR /CV/ S
18. red (blood) cell : _____
WR /CV/ S
19. resembling a nerve : _____
WR / S
20. pertaining to a (body) system : _____
WR / S

21. white (blood) cell	:	_____
		WR /CV/ S
22. cell with a nucleus	:	_____
		WR /CV/ S
23. resembling fat	:	_____
		WR / S
24. pertaining to cancer	:	_____
		WR / S
25. study of cells	:	_____
		WR /CV/ S
26. excessive development: (of cells)	:	_____
		P / S(WR)
27. resembling a cell	:	_____
		WR / S
28. pertaining to epithelium:	:	_____
		WR / S

29. abnormal condition of blue	:	<hr/>		
		WR	/	S
30. producing cancer	:	<hr/>		
		WR	/CV/	S
31. producing disease	:	<hr/>		
		WR	/CV/	S
32. study of tissue	:	<hr/>		
		WR	/CV/	S
33. increase in the number of red blood) cells	:	<hr/>		
		WR	/ CV/	WR / S
34. incomplete development (of an organ or tissue)	:	<hr/>		
		P	/	S(WR)
35. increase in the number of white (blood) cells	:	<hr/>		
		WR	/CV/	WR / S
36. substance that causes cancer	:	<hr/>		
		WR	/CV/	S

37. physician who studies and treats rumors	:	_____
		WR /CV/ S
38. abnormal development	:	_____
		P / S(WR)
39. study of medicine	:	_____
		WR /CV/ S
40. state of complete knowledge	:	_____
		P / WR / S
41. produced by a physician	:	_____
		WR /CV/ S
42. state of before knowledge	:	_____
		P / WR / S

EXERCISE 20

Spell each of the complementary terms. Have someone dictate the terms on pp. 31-33 to you. Remember to think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____

25. _____

26. _____

27. _____

28. _____

29. _____

30. _____

31. _____

32. _____

33. _____

34. _____

35. _____

36. _____

37. _____

38. _____

39. _____

40. _____

41. _____

42. _____

43. _____

3-4.Abbreviations

Ca.....	carcinoma
Chemo.....	chemotherapy
Dx.....	diagnosis
Mets.....	metastasis
Px.....	prognosis
RBC.....	red blood cell
RXT.....	radiation therapy
WBC.....	white blood cell

Refer to Appendix D for a complete list of abbreviations.

EXERCISE 21

Write the term for each of the abbreviations in the following paragraph.

A 55-year-old white woman was admitted to the oncology unit with a Dx _____ of Ca _____ of the breast, mets _____ to the lung. Her Px _____ was tentative, Laboratory tests, including RBC _____ _____ and WBC _____ _____ counts, were ordered. She will receive both chemo _____ and RXT _____ .

English in Medical Term

Chapter: 3

Directional Terms, Anatomic Planes, Regions, and Quadrants

Outline

OBJECTIVES

1. ANATOMIC POSITION

2. WORD PARTS FOR DIRECTIONAL TERMS .

2-1. Combining Forms for Directional Terms

2-2. Prefixes

2-3. Suffixes

3. DIRECTIONAL TERMS

4. ANATOMIC PLANES

5. ABDOMINOPELVIC REGIONS

6. ABDOMINOPELVIC QUADRANTS

7. ABBREVIATIONS.

OBJECTIVES

On completion of this chapter you will be able to:

1. Write the definitions of the word parts included in this chapter.
2. Build, analyze, define, pronounce, and spell the terms used to describe directions with respect to the body.
3. Define, pronounce, and spell the terms used to describe the anatomic planes.
4. Define, pronounce, and spell the terms used to describe the abdominopelvic regions.
5. Identify and spell the four abdominopelvic quadrants.
6. Interpret the meanings of the abbreviations presented in this chapter.
7. Read medical documents and interpret medical terminology contained in them.

1. ANATOMIC POSITION

In the description of body directions and planes. a position of reference is used.

In the *anatomic position* the body is viewed as erect, arms at the side, with palms of the hands facing forward and feet placed side by side (Figure 3-1).

Whether the patient is standing or lying down face up. the directional terms are the same.

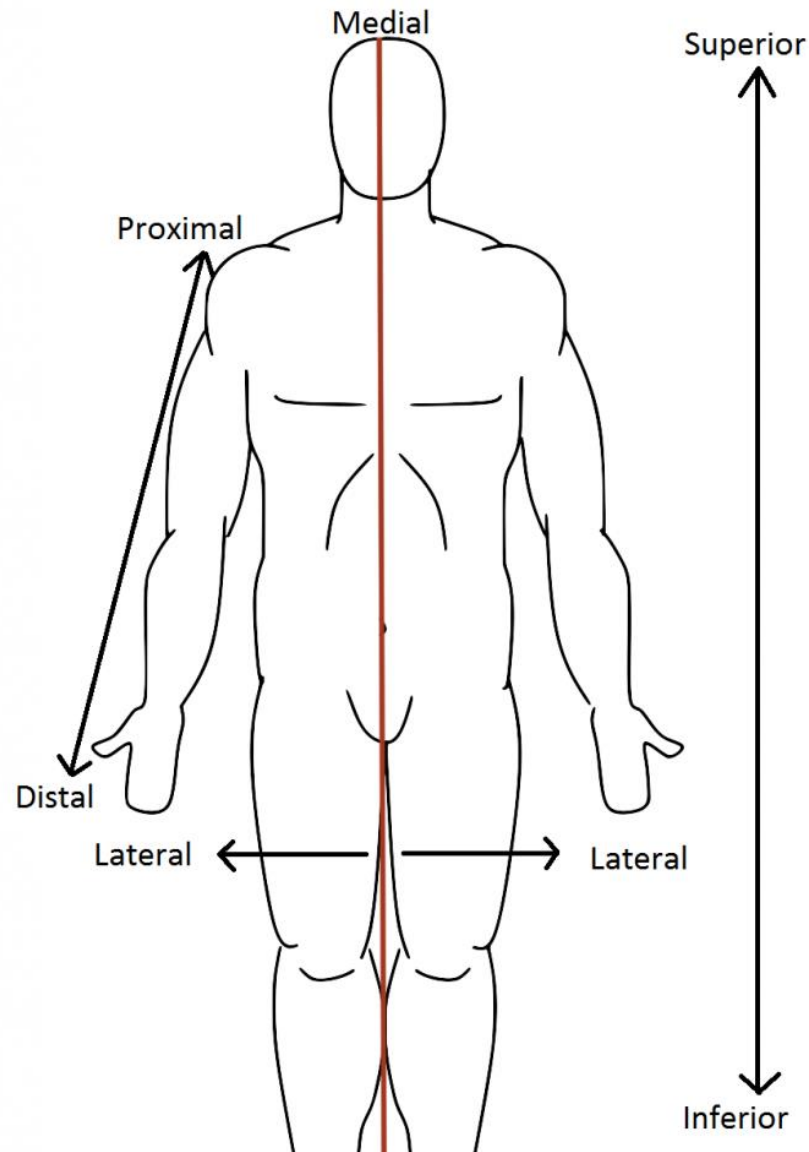


Figure 3-1
Medial and lateral, proximal and distal.

2. WORD PARTS FOR DIRECTIONAL TERMS .

- Study the following word parts and their definitions.

2-1. Combining Forms for Directional Terms

Combining Form	Definition
anter/o.....	front
caud/o.....	tail (downward)
Cephal/o.....	head (upward)
dist/o.....	away (from the point of attachment of a body part)
dors/o.....	back
infer/o.....	below
later/o.....	side
medi/o.....	middle
poster/o.....	back, behind
proxim/o.....	near (the point of attachment of a body part)
super/o.....	above
ventr/o.....	belly (front)

Learn the directional term combining forms by completing exercises 1 and 2 and Exercise **Figure A**.

1. Head CF: _____

2. Front CF: _____

3. Belly CF: _____

4. Back CF: _____

5. Back, behind CF: _____

6. Tail CF: _____

7. Above CF: _____

8. Side CF: _____

9. Middle CF: _____

10. Near CF: _____

11. Away CF: _____

12. Below CF: _____

Leg: point of attachment

Exercise Figure A

Fill in the blanks with directional combining forms.

EXERCISE 1:

Write the definitions for the *following* combining forms.

1. ventr/o _____

2. cephal/o _____

3. later/o _____

4. medi/o _____

5. infer/o _____

6. proxim/o _____

7. super/o _____

8. dist/o _____

9. dors /o _____

10. caud/o _____

11. anter/o _____

12. poster/o _____

EXERCISE 2:

Write the combining form for each of the following.

1. side.....	_____
2. above.....	_____
3. head.....	_____
4. away (from the point of attachment of a body part)...	_____
5. front.....	_____
6. middle.....	_____
7. back.....	_____
8. belly.....	_____
9. tail.....	_____
10. below.....	_____
11. back, behind.....	_____
12. near (the point of attachment of a body part)...	_____

2-2. Prefixes

bi-	two
uni-	one

2-3. Suffixes

-ad.....	toward
-ior.....	pertaining to

- Refer to Appendix A and Appendix B for alphabetized lists of word parts and their meanings.
- Many suffixes mean "pertaining to." You have already learned three of them in Chapter 2: -al, ic, and -ous. You will learn more in subsequent chapters. With practice, you will learn which suffix is most commonly used with a particular word root or combining form.

EXERCISE 3:

Match the prefixes and suffixes in the first column with their correct definitions in the second column.

___ 1. -ad	a. one
___ 2. -ior	b. pertaining to
___ 3. bi-	c. toward
___ 4. uni-	d. two

EXERCISE 4:

Write definitions of the following prefixes and suffixes .

1. -ad

2. -ior

3. bi-

4. uni-

3. DIRECTIONAL TERMS

The following list of terms is built from word parts you have already learned. You will learn the terms by completing the analyzing, defining, and word-building exercises (Figure 3-2).

Term	Definition
anterior(ant) (an- TĒR-ē-or)	pertaining to the front
posterior..... (pos- TĒR-ē-or)	pertaining to the back
inferior (inf)..... (in- FĒR-ē-or)	pertaining to below
Superior (sup)..... (sū-PĒR-ē-or)	pertaining to above
distal (DIS-tal)	pertaining to away (from the point of attachment of a body part)
proximal..... (PROK-si-mal)	pertaining to near (to the point of attachment of a body part)
dorsal (DOR-sal)	pertaining to the back

Term (Con't)	Definition (Con't)
ventral(VEN-tral).....	pertaining to the belly (front)
caudal (KAW-dal).....	pertaining to the tail
cephalic(se-FAL-ik).....	pertaining to the head
anteroposterior (AP)..... (an-ter-ō-pos- TĒk-ē-or)	pertaining to the front and to the back
posteroanterior (PA)..... (pos-ter-ō-an- TĒR-ē-or)	pertaining to the back and to the front
lateral (lat) (LAT-e-ral).....	pertaining to a side
medial(med) (MĒ-dē-al)....	pertaining to the middle
unilateral(ū-ni-LAT-er-al)...	pertaining to one side (only)
bilateral (bī-LAT-er-al).....	pertaining to two sides
mediolateral..... (mē-dē-ō-LAT-er-al)	pertaining to the middle and to the side
mediad (MĒ-dē-ad).....	toward the middle
cephalad(SEF -a-lad).....	toward the head

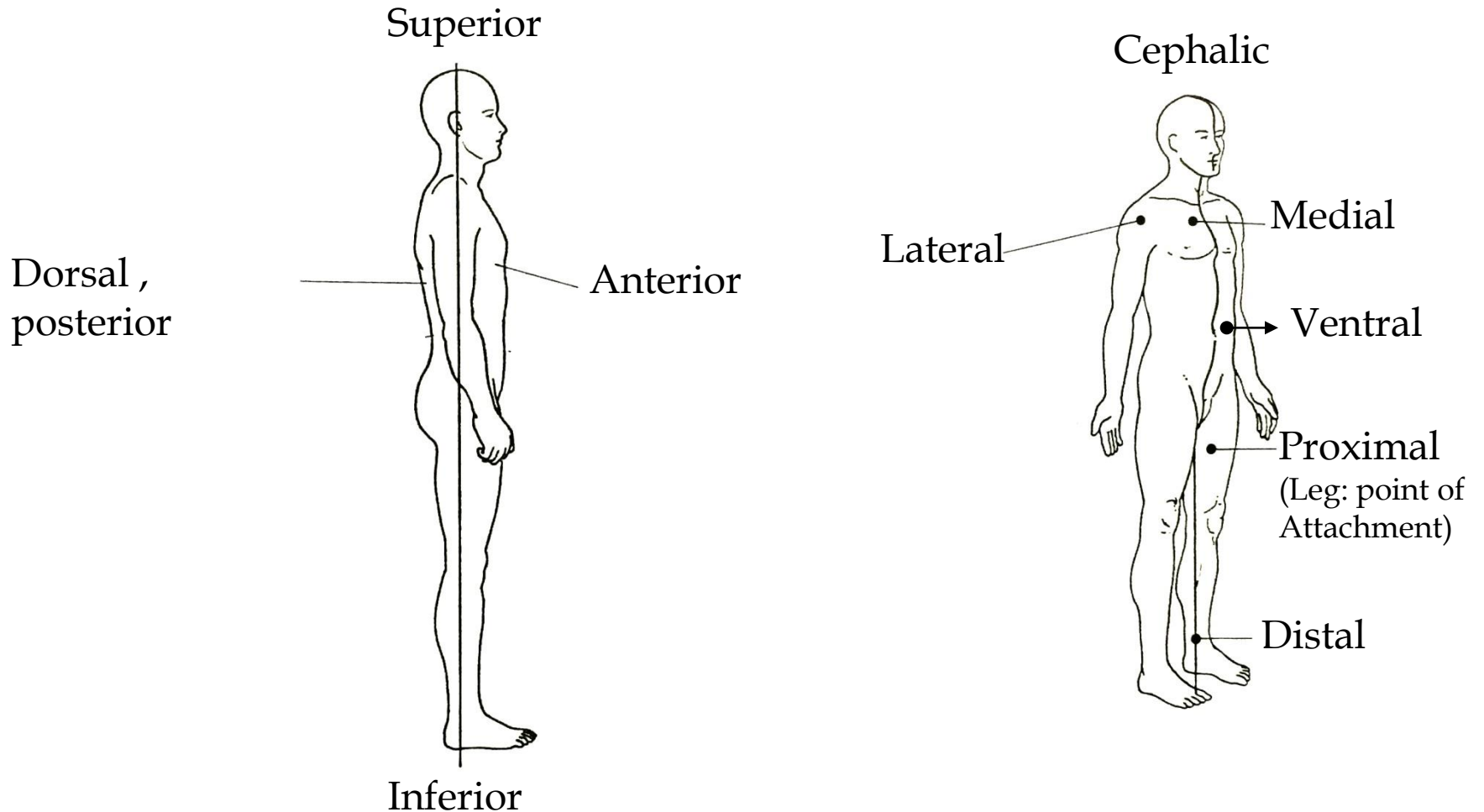


Figure 3-2
Directional terms.

Learn the definitions and spelling of the terms used to describe body directions completing exercises 5, 6, and 7.

EXERCISE 5:

Analyze and define the following directional terms.

1. cephalad _____

2. cephalic _____

3. caudal _____

4. anterior _____

5. posterior _____

6. dorsal _____

7. superior _____

8. inferior _____

9. proximal _____

10. distal _____
11. lateral _____
12. medial _____
13. mediad _____
- 14-. ventral _____
15. posteroanterior _____
16. unilateral _____
17. mediolateral _____
18. anteroposterior _____
19. bilateral _____

EXERCISE 6:

Build directional terms for the following definitions by using the word parts you have learned. Also label the diagram in Exercise Figure B.

1. toward the head

_____ / _____
WR / S

2. pertaining to the head

_____ / _____
WR / S

3. pertaining to the tail

_____ / _____
WR / S

4. pertaining to the front

_____ / _____
WR / S

5. pertaining to the back

_____ / _____ / _____
WR / S WR / S

6. pertaining to above

_____ / _____
WR / S

7. pertaining to below

_____ / _____
WR / S

8. pertaining to near

_____ / _____
WR / S

9. pertaining to away

_____ / _____
WR / S

10. pertaining to side

_____ / _____
WR / S

11. pertaining to the middle

_____ / _____
WR / S

12. toward the middle

_____ / _____
WR / S

13. pertaining to the belly

_____ / _____
WR / S

14. pertaining to the back and
to the front

_____ / _____ / _____ / _____
WR / CV / WR / S

15. pertaining to the middle
and to the side

_____ / _____ / _____ / _____
WR / CV / WR / S

16. pertaining to one side (only)

_____ / _____ / _____
P / WR / S

17. pertaining to the front and
to the back

_____ / _____ / _____ / _____
WR / CV / WR / S

18. pertaining to two sides

_____ / _____ / _____
P / WR / S



Exercise Figure B

Fill in the blanks to label the diagram. 1, _____/_____/_____/_____ beam
 front / cv / back / pertaining to
 from an x-ray machine. 2, _____/_____/_____/_____ beam from an x-ray machine
 back /cv/ front /pertaining to

EXERCISE 7:

Have someone dictate the terms on pp. 49-50 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

18. _____

19. _____

4. ANATOMIC PLANES

Planes are imaginary flat fields used as points of reference to identify the position of parts of the body (Figure 3-3). These terms are not built from word parts. Memorization is the learning method used in the exercises that follow.

Term	Definition
frontal or coronal..... (FRON-tl) (ko-RŌN-al)	vertical field passing through the body from side to side, dividing the body into anterior and posterior portions (Figure 3-4).
sagittal..... (SAJ-i-tal)	vertical field running through the body from front to back, dividing the body into right and left sides (Figure 3-5).
midsagittal (mid - SAJ-i -tal)	divides the body into right and left halves.
transverse (trans-VERS)	horizontal field dividing the body into upper and lower portions (Figure 3-6)

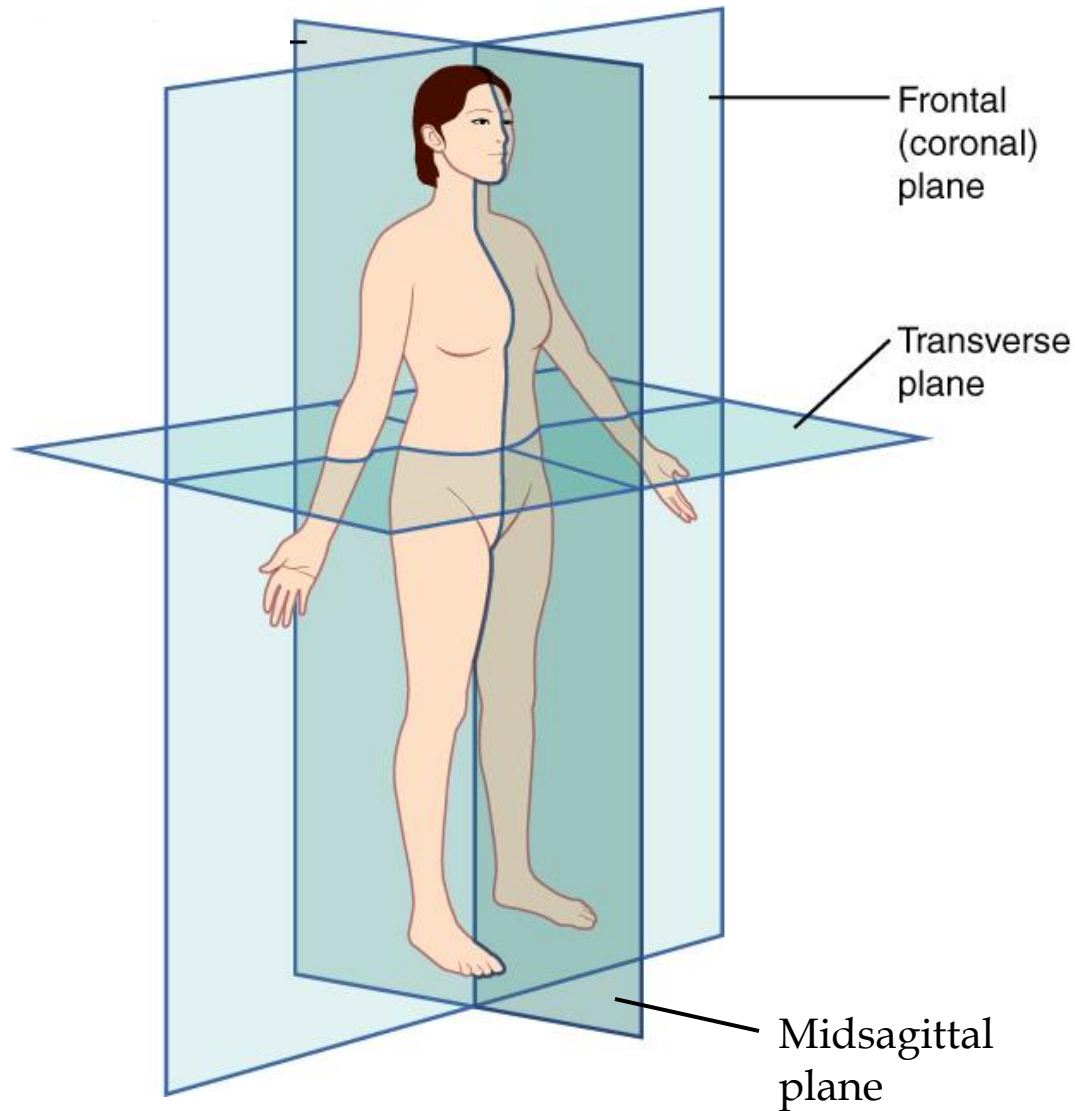


Figure 3-3
Anatomic planes



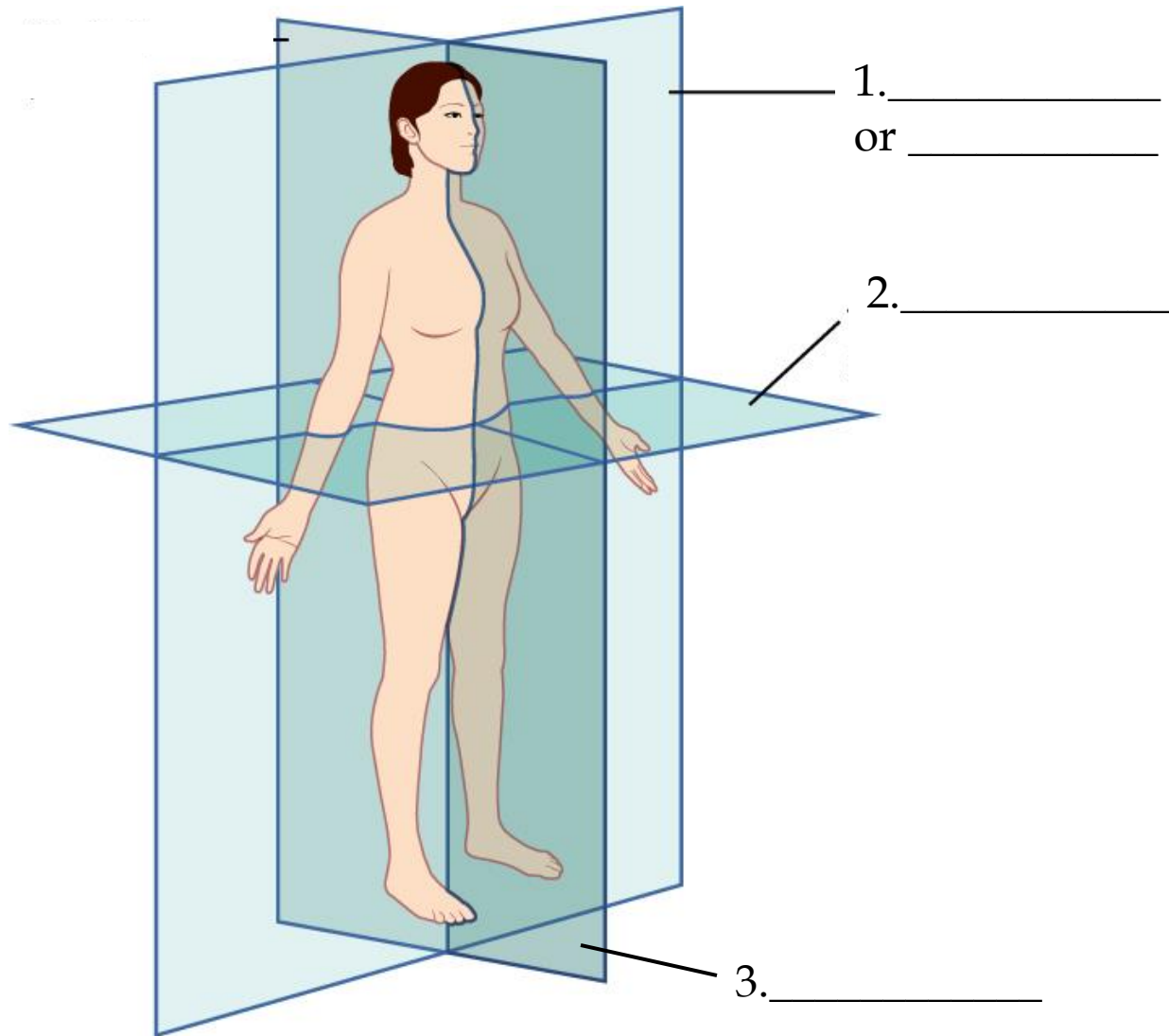
Figure 3-4
Frontal plane
or coronal
plane



Figure 3-5
Sagittal plane



Figure 3-6
Transverse
plane



Exercise Figure C

Fill in the blanks with anatomic planes.

Learn the definitions and spellings of the terms used to describe the anatomic planes by completing exercises 8 and 9 and Exercise Figure C.

EXERCISE 8:

Fill in the blanks with the correct terms.

1. The plane that divides the body into upper and lower portions is the _____ plane.
2. The plane that divides the body into right and left halves is the _____ plane.
3. The plane that divides the body into anterior and posterior portions is the _____ or _____ plane.
4. The plane that divides the body into right and left sides is the _____ plane.

EXERCISE 9:

Spell each of the terms used to describe the anatomic planes. Have someone dictate the terms on pp. 53 and 55 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

5. ABDOMINOPELVIC REGIONS

To assist medical personnel in locating medical problems with greater accuracy and for identification purposes, the abdomen and pelvis are divided into nine regions (Figure 3-7) . Although these terms are made up of word parts, most of the word parts are presented in later chapters; therefore memorization is the learning method used in the exercises that follow. The number indicates the number of regions.

Term	Definition
umbilical region(1)..... (um-BIL-i-kal)	around the navel (umbilicus)
epigastric region(1)..... (ep-i-GAS-trik)	directly above the umbilical region
hypogastric region(1)..... (hi-pō-GAS-trik)	directly below the umbilical region
hypochondriac regions(2)..... (hi -pō- KON-dre-ak)	to the right and left of the epigastric region
lumbar regions(2)..... (LUM-bar)	to the right and left of the umbilical region
iliac regions(2)..... (IL-ē-ak)	to the right and left of the hypogastric region

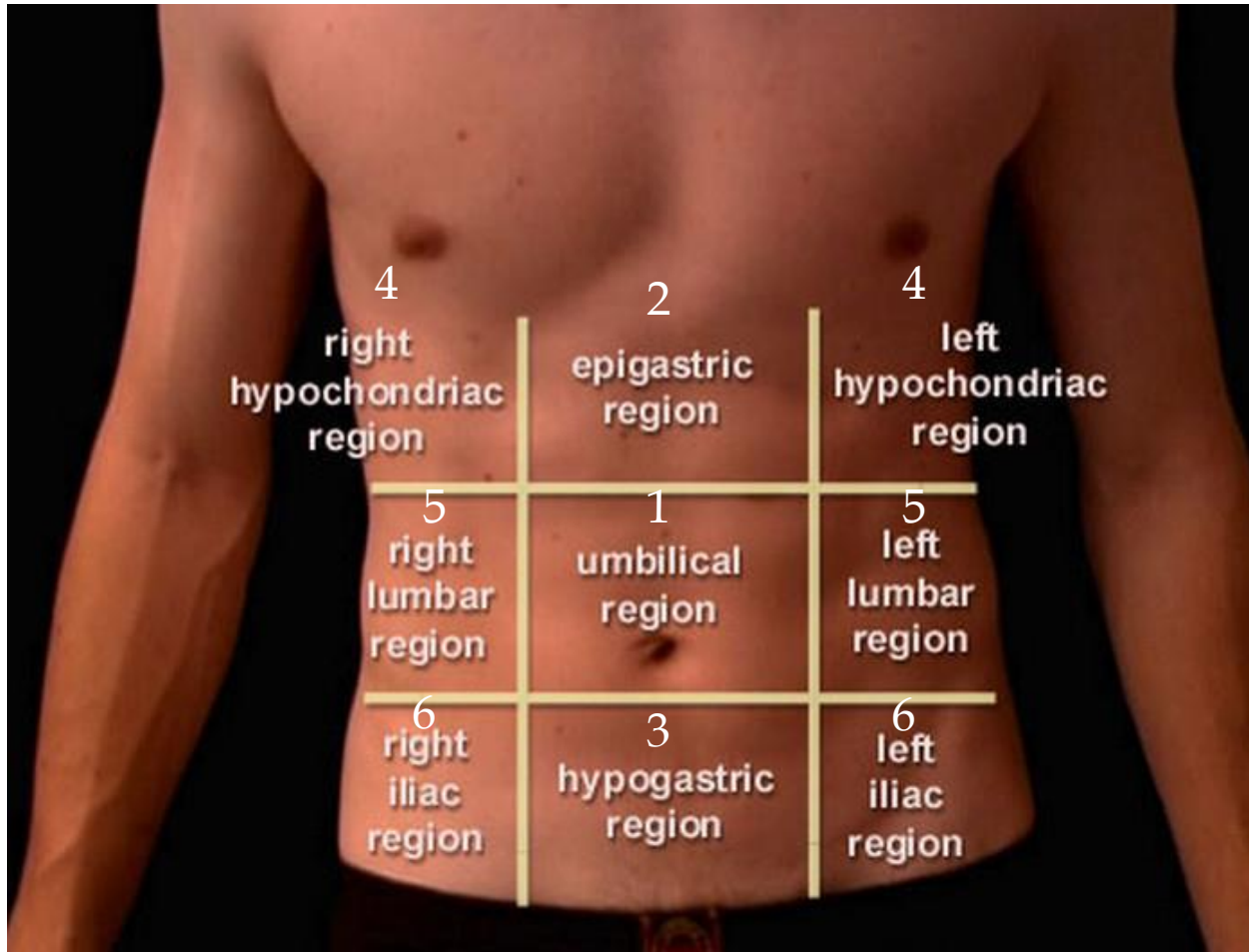


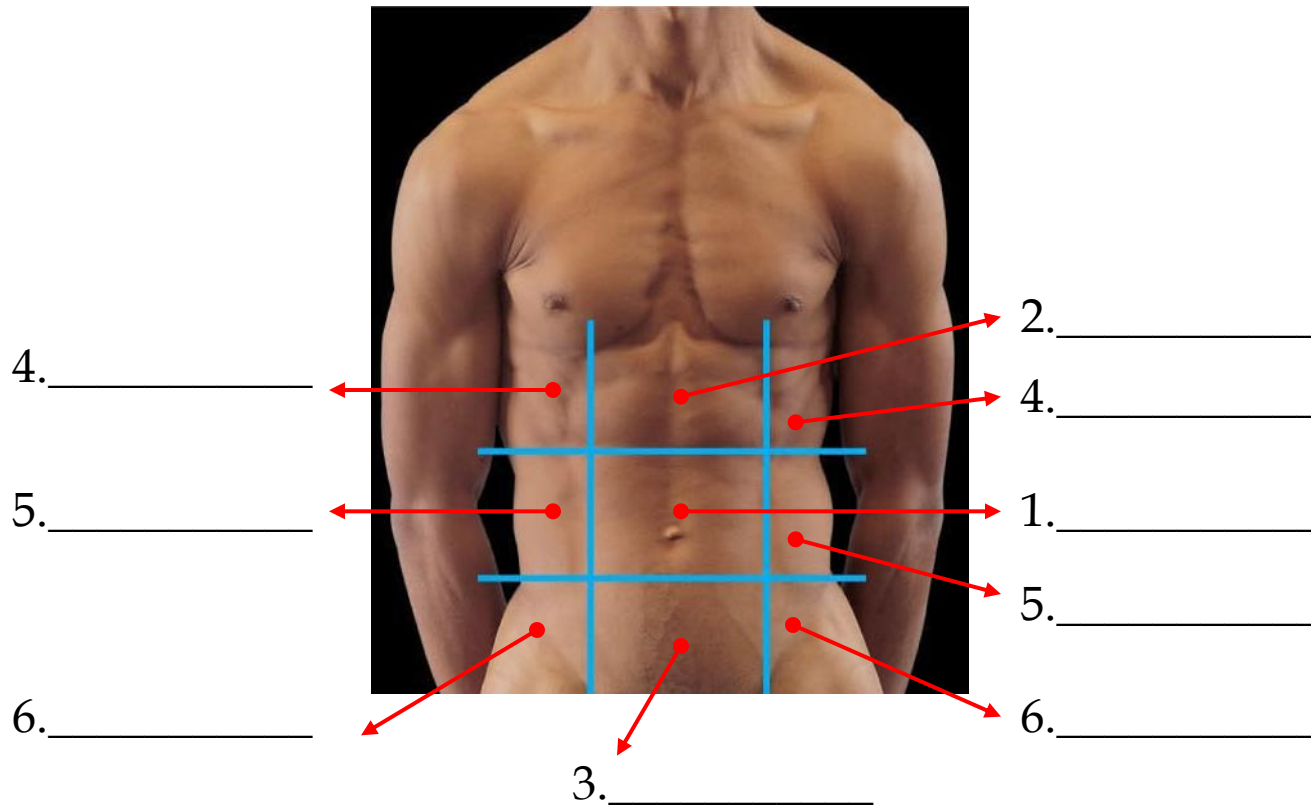
Figure 3-7
Abdominopelvic regions.

Learn the definitions and spellings of the terms used to describe the abdominopelvic regions by completing exercises 10, 11, and 12 and Exercise Figure D.

EXERCISE 10:

Fill in the blanks with the correct terms.

1. The regions to the right and left of the hypogastric region are the _____ regions.
2. The _____ region is directly above the umbilical region.
3. Inferior to the umbilical region is the _____ region.
4. The _____ are the regions to the right and left of the epigastric region.
5. Superior to the hypogastric region is the _____ region.
6. To the right and the left of the umbilical region are the _____ regions.



Exercise Figure D

Fill in the blanks abdominopelvic regions.

EXERCISE 11:

Match the terms in the first column with the correct definitions in the second column.

1. epigastric	a. inferior to the umbilical region
2. hypochondriac	b. superior to the umbilical region
3. hypogastric	c. right and left of the umbilical region
4. iliac	d. right and left of the epigastric region
5. lumbar	e. right and left of the hypogastric region
6. umbilical	f. below the hypogastric region
	g. inferior to the epigastric region

EXERCISE 12:

Spell each of the terms used to describe the abdominopelvic regions. Have someone dictate the terms on pp. 57-58 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

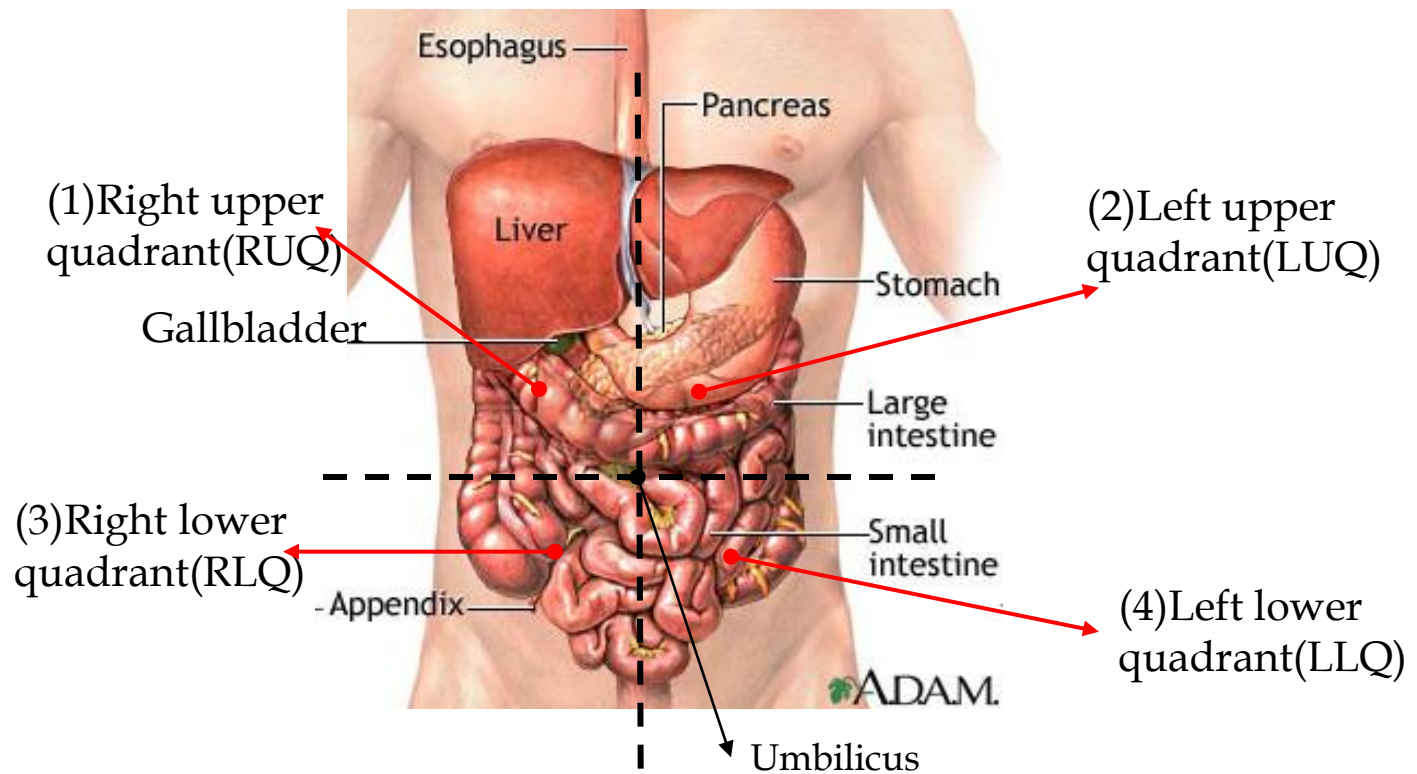
6. ABDOMINOPELVIC QUADRANTS

The abdominopelvic area can also be divided into four quadrants by using imaginary vertical and horizontal lines that intersect at the umbilicus. These divisions are used by health professionals to locate an anatomic position to describe pain, incisions, markings, lesions, and so forth (Figure 3-8). The four divisions are the following:

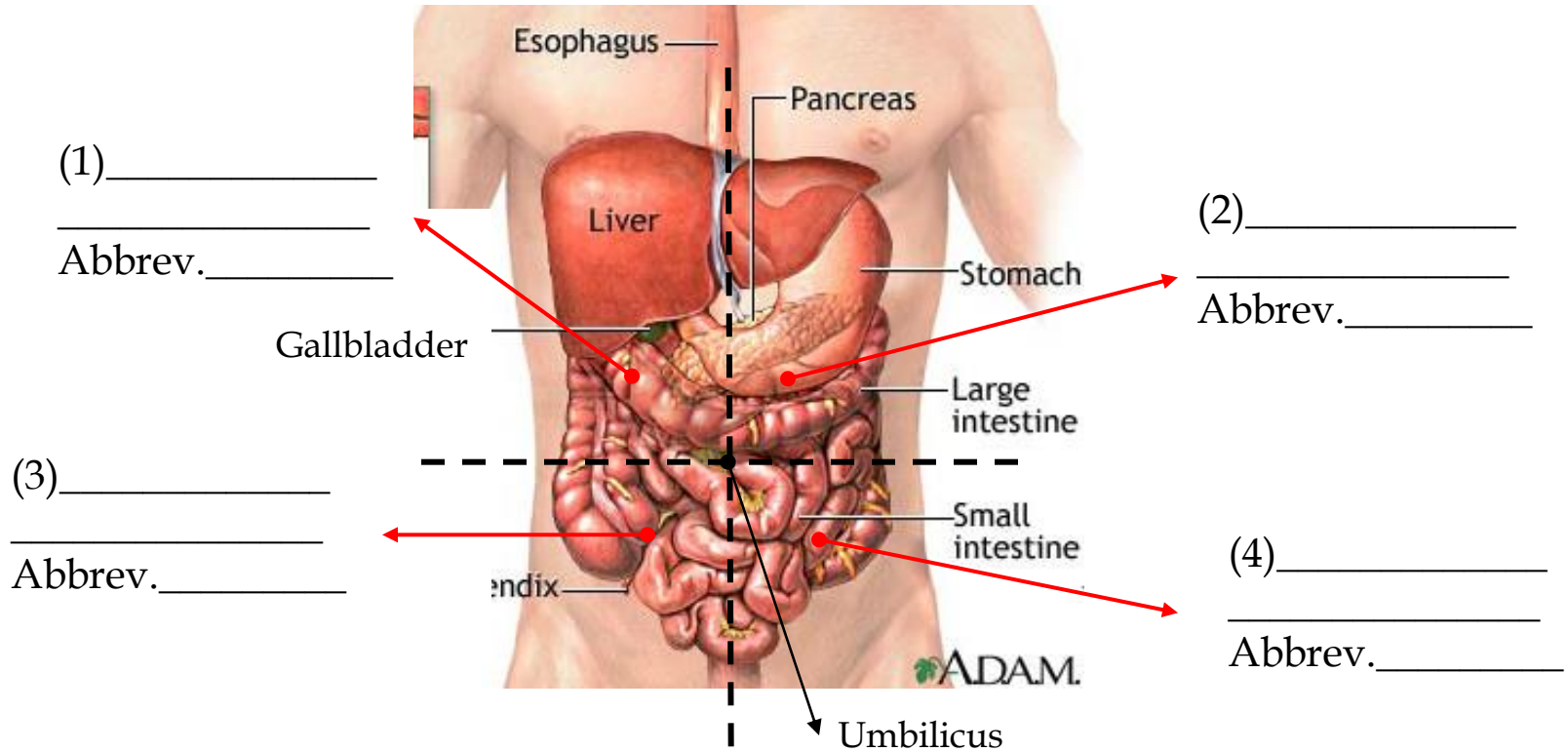
1. right upper quadrant (RUQ)
2. left upper quadrant (LUQ)
3. right lower quadrant (RLQ)
4. left lower quadrant (LLQ)

EXERCISE 13:

learn the abdominopelvic Quadrants by completing Exercise Figure E.



Exercise Figure 3-8
Abdominopelvic quadrants



Exercise Figure E

Fill in the blanks with abdominopelvic quadrants and the abbreviations for each

EXERCISE 14:

Spell each of the terms used to describe the abdominopelvic quadrants.

Have someone dictate the terms on p. 59 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

7. ABBREVIATIONS.

Ant.....	anterior
AP.....	anteroposterior
Inf	inferior
lat.....	lateral
LLQ.....	left lower quadrant
LUQ.....	left upper quadrant
med.....	medial
PA.....	posteroanterior
RLQ.....	right lower quadrant
RUQ.....	right upper quadrant
sup	superior

EXERCISE 15:

Write the meaning of each abbreviation in the space provided.

1. sup _____

2. ant _____

3. inf _____

4. PA _____

5. AP _____

6. med _____

7. lat _____

English in Medical Term

Chapter: 4

Integumentary System

Outline

OBJECTIVES

1. ANATOMY

1-1.Function

1-2. The skin

1-3. Accessory Structures of the skin

2. WORD PARTS .

2-1. Combining Forms for the integumentary system.

2-2. Combining Forms Commonly Used with the integumentary system Terms.

2-3. Prefixes

2-4. Suffixes

3. MEDICAL TERMS

3-1.Disease and Disorder Terms

3-2.Surgical Terms

3-3.Complementary Terms

3-4.Abbreviations

OBJECTIVES

On completion of this chapter you will be able to:

1. Identify organs and structures of the integumentary system.
2. Identify and spell the word parts presented in this chapter.
3. Build and analyze medical terms with word parts presented in this and previous chapters.
4. Define, pronounce, and spell the disease and disorder, surgical, and complementary terms for the integumentary system.
5. Interpret the meanings of the abbreviations presented in this chapter.
6. Read medical documents and interpret medical terminology contained in them.

1. ANATOMY

1-1.Function

The integumentary system is composed of the skin, nails, and glands. The skin forms a protective covering for the body that, when unbroken, prevents entry of bacteria and other invading organisms. The skin also protects the body from water loss and the damaging effects of ultraviolet light other functions include regulation of body temperature and synthesis of vitamin D (Figure 4-1).

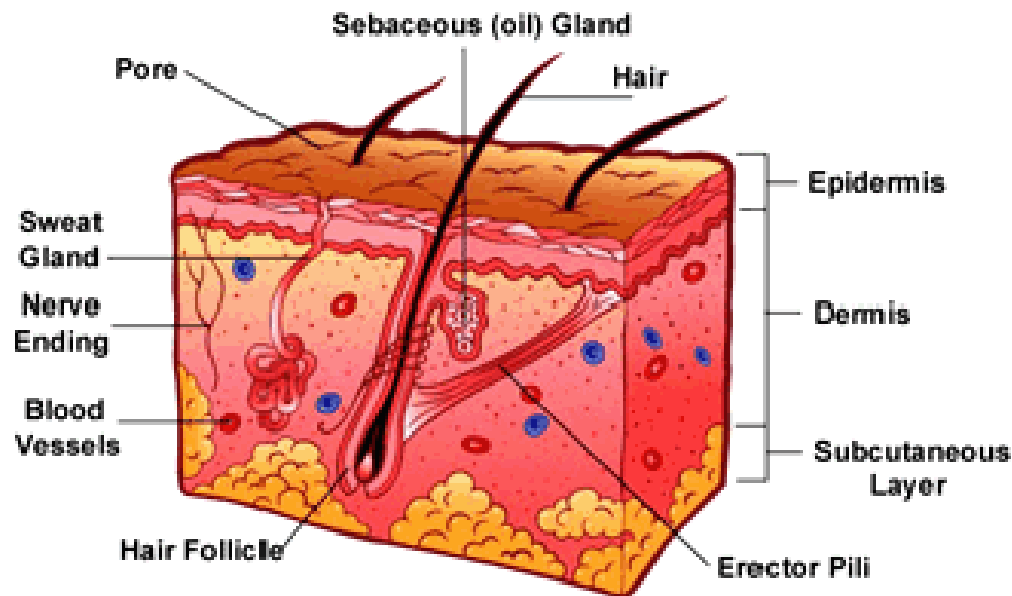


Figure 4-1

(Structure of the skin.)

1-2-The Skin

epidermis	outer layer of skin.
keratin	horny, or cornified, layer composed of protein. It is contained in the hair, skin, and nails.
melanin.....	color, or pigmentation, of the skin
dermis.....	inner layer of skin (also called the true skin)
sudoriferous (sweat) glands...	tiny, coiled, tubular structures that emerge through pores on the skin's surface and secrete sweat
sebaceous glands	secrete sebum (oil) into the hair follicles where the hair shafts pass through the dermis

1-3- Accessory Structures of the Skin

hair..... compressed, keratinized cells that arise from hair follicles; the sacs that enclose the hair fibers

nails..... originate in the epidermis. Nails are found on the upper surface of the ends of the fingers and toes. The white area at the base of the nail is called the *lunula*, or *moon*.

Learn the anatomic structures by completing exercise 1.

EXERCISE 1

Match the terms in the first column with the correct definitions in the second column.

___ 1. dermis	a. coiled, tubular structures
___ 2. epidermis	b. responsible for skin color
___ 3. hair	c. true skin
___ 4. melanin	d. outermost layer of the skin
___ 5. nail	e. white area at the nail's base
___ 6. sebaceous glands	f. originates in the epidermis
___ 7. sudoriferous glands	g. composed of compressed, keratinized cells
	h. secrete sebum

2- WORD PARTS

2-1-Combining Forms for the Integumentary System

Study the word parts and their definitions listed below. Learning will be made easier by completing the exercises that follow.

Combining Form

Definition

cutane/o, derm/o, dermat/o

skin

hidr/o

sweat

kerat/o

horny tissue, hard

(NOTE: kerat/o is also used to refer to the cornea of the eye; see Chapter 12.)

onych/o, ungu/o

nail

seb/o

sebum (oil)

trich/o

hair

- Learn the anatomic locations and meanings of these combining forms by completing exercises 2 and 3 and Exercise Figures A and B.
- Do not be concerned about which word root to use for skin or nail. As you continue to study and use medical terms, you will become familiar with common usage of each word part.

EXERCISE 2

Write the definitions of the following combining forms.

1. hidr/o _____

2. derm/o _____

3. onych/o _____

4. trich/o _____

5. kerat/o _____

6. dermat/o _____

7. seb/o _____

8. ungu/o _____

9. cutane/o _____

EXERCISE 3

Write the combining form for each of the following.

1. hair

2. sweat

3. nail

a. _____

b. _____

4. sebum

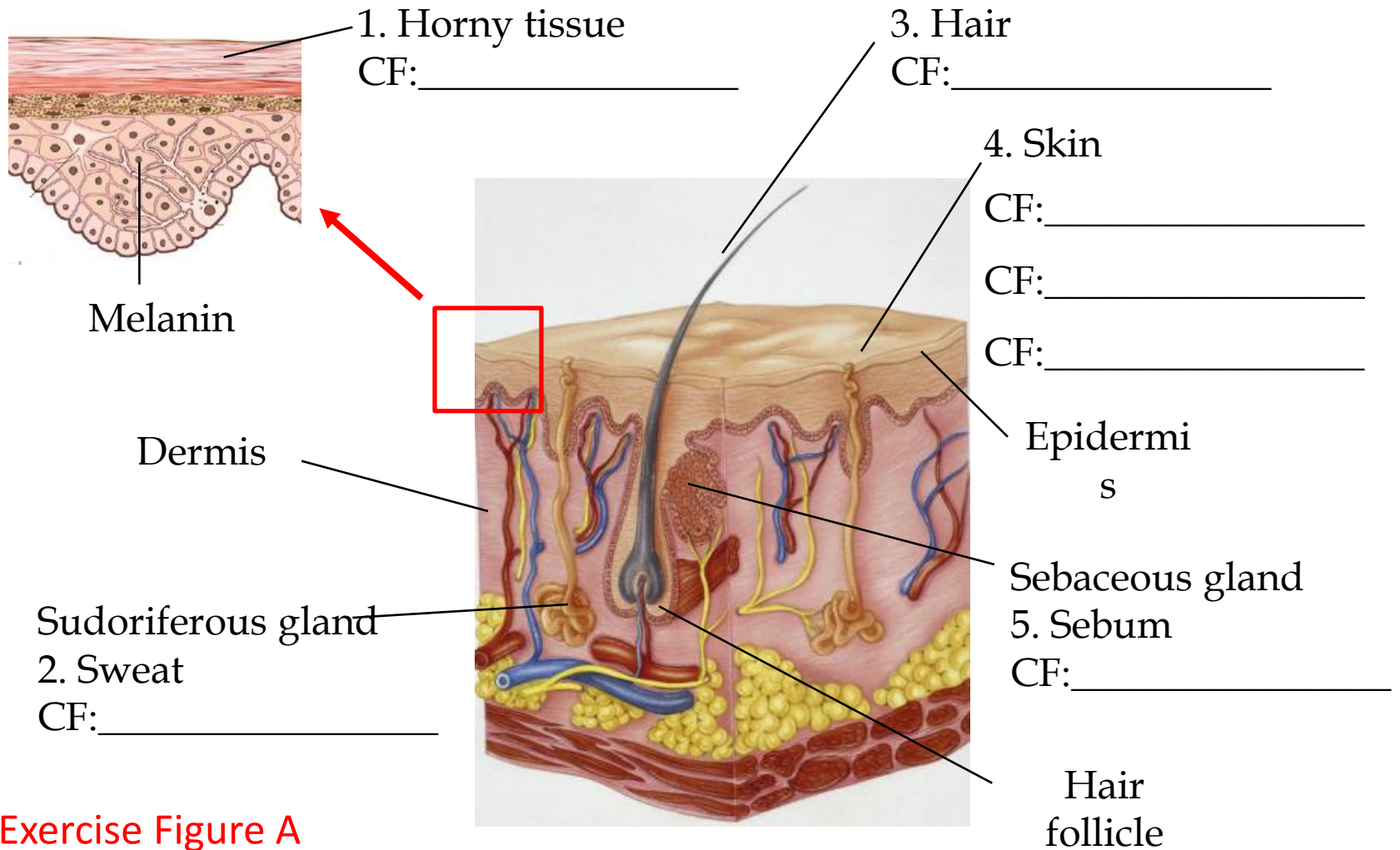
5. skin

a. _____

b. _____

c. _____

6. hard, horny tissue



Exercise Figure A

Fill in the blanks with combining forms in this diagram of a cross section of the skin.

Lunula



Nail

CF: _____

CF: _____

Exercise Figure B

Fill in the blanks with combining forms in this cross section of the finger with nail.

2-2- Combining Forms Commonly Used with Integumentary System Terms

Combining Form	Definition
aut/o.....	self
bi/o.....	life
coni/o.....	dust
crypt/o.....	hidden
heter/o	other
myc/o.....	fungus
necr/o.....	death (cells, body)
pachy/o.....	thick
rhytid/o	wrinkles
staphyl/o.....	grapelike clusters
strept/o	twisted chain
xer/o.....	dry

- Learn the combining forms by completing exercises 4 and 5.
- The prefix bi-, which means two, was presented in Chapter 3. The word root bi means life.

EXERCISE 4

Write the definitions of the following combining forms.

1. necr/o _____
2. staphyl/o _____
3. crypt/o _____
4. pachy/o _____
5. con/o _____
6. myc/o _____
7. bi/o _____
8. heter/o _____
9. strept/o _____
10. xer/o _____
11. aut/o _____
12. rhytid/o _____

EXERCISE 5

Write the combining form for each of the following.

1. Fungus

2. death (cells, body)

3. Other

4. dry

5. thick

6. twisted chains

7. wrinkles

8. grapelike clusters

9. self

10. hidden

11. Dust

12. life

2-3- Prefixes

Prefix

Definition

epi-

on, upon, over

intra-

within

para-

beside, beyond, around

per-

through

sub-

under, below

Learn the prefixes by completing exercises 6 and 7.

Exercise 6

Write the definitions of the following prefixes.

1. sub- _____

2. para- _____

3. epi- _____

4. intra- _____

5. per- _____

Exercise 7

Write prefix for each of the following

1. within

2. under, below

3. on, upon, over

4. beside, beyond, around

5. through

2-4- Suffixes

Suffix

Definition

-a	noun suffix, no meaning
-coccus (pl. cocci)	berry-shaped (form of bacterium)
-ectomy	excision or surgical removal
-ia.....	diseased or abnormal state, condition of
-itis.....	inflammation
-malacia	softening
-opsy.....	view of, viewing
-phagia	eating or swallowing
-plasty	surgical repair
-rrhea	flow, excessive discharge
-tome	instrument used to cut

Refer to Appendix A and Appendix B for alphabetical lists of word parts and their meanings. Learn the suffixes by completing exercises 8 and 9.

EXERCISE 8

Match the suffixes in the first column with the correct definitions in the second column.

- | | |
|----------------|---|
| ___1. -coccus | a. inflammation |
| ___2 -ectomy | b. surgical repair |
| ___3. -itis | c. berry-shaped |
| ___4. -malacia | d. eating or swallowing |
| ___5. -opsy | e. excision or surgical removal |
| ___6. -rrhea | f. instrument used to cut |
| ___7. -phagia | g. thick |
| ___8. -plasty | h. flow, excessive discharge |
| ___9. -tome | i. view of, viewing |
| ___10. -ia | j. softening |
| | k. diseased or abnormal state, condition of |

EXERCISE 9

Write the definitions of the following suffixes.

1. -plasty _____

2. -ectomy _____

3. -malacia _____

4. -itis _____

5. -tome _____

6. -phagia _____

7. -rrhea _____

8. -coccus _____

9. -opsy _____

10. -ia _____

3- MEDICAL TERMS

The terms you need to learn to complete this chapter are listed on the following pages. The exercises at the end of each list will help you learn each word well enough to add it to your vocabulary.

3-1- Disease and Disorder Terms

3-1-1- Built from Word Parts

Term	Definition
dermatitis..... (der-ma-TI-tis)	inflammation of the skin (Figure 4-2, E)
dermatosis..... (der-m a-to-ko-ne-O-sis)	abnormal condition of the skin caused by dust
dermatofibroma..... (der-ma-to-fi-BRO-ma)	fibrous tumor of the skin
hidradenitis..... (bi-drad-e-NI-tis)	inflammation of a sweat gland
leiodermia..... (li-o-DER-me-a)	condition of smooth skin

onychocryptosis..... (on-i-ko-krip-TO-sis)	abnormal condition of a hidden nail (also called ingrown nail)
onychomalacia..... (on-i-ko-ma-LA-she-a)	softening of the nails
onychomycosis..... (on-i-ko-ml-KO-sis)	abnormal condition of a fungus in the nails (see Figure 4-2, B)
onychophagia..... (an-i-ko-FA-je- a)	eating the nails (nail biting)
pachyderma..... (pak-i-DER-ma)	Thickening of the skin
(NOTE: the a ending is a noun suffix and has no, meaning)	

paronychia..... (par-o-NIK-e-a) (NOTE: the a from para- has been dropped. The final vowel in a prefix may be dropped when the word to which it is added begins with a vowel.)	diseased state around the nail (Exercise Figure C)
Seborrhea..... (.rrb-or-E-a)	excessive discharge of sebum
trichomycosis..... (nik-o-mt-KO-sis)	abnormal condition of a fungus in the hair
xeroderma..... (ze-ro-DER-ma) (NOTE: the a ending is a noun suffix and has no meaning.)	dry skin

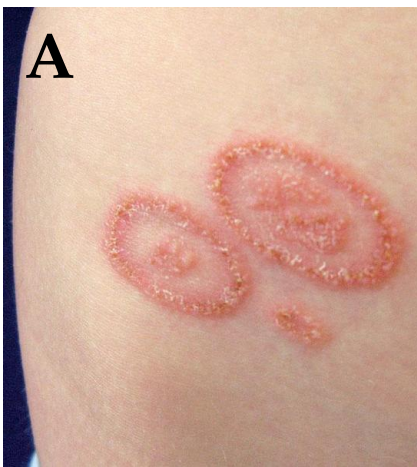
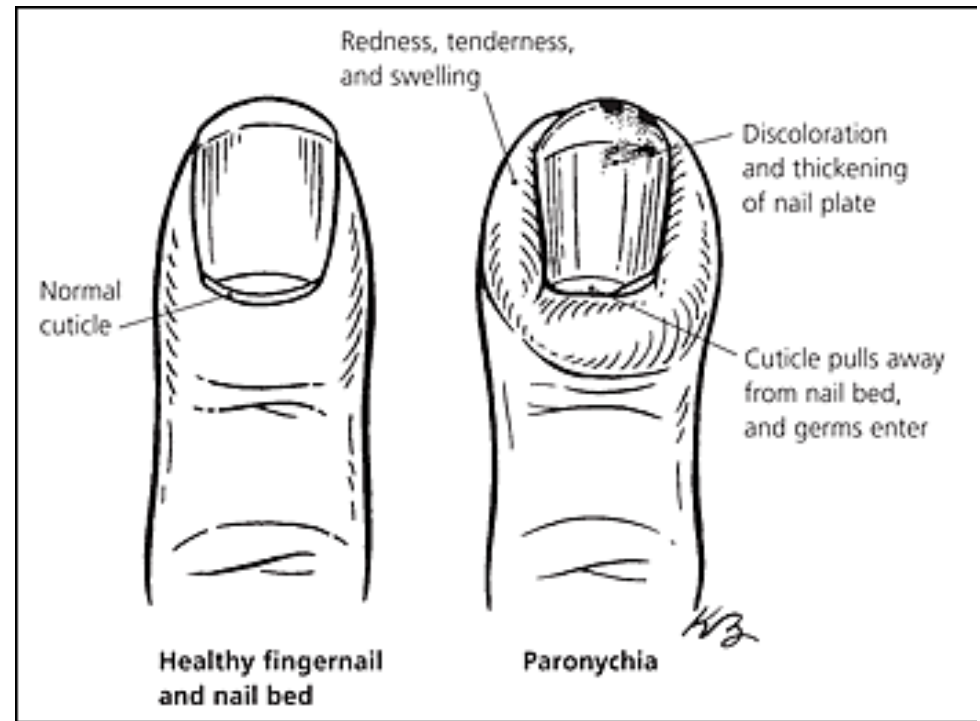


Figure 4-2

Common skin disorders: A, tinea; B, onychomycosis; C, impetigo; D, herpes zoster; E, dermatitis.



Exercise Figure C

Fill in blanks to label the diagram

_____ / _____ / _____
 around / nail / diseased state

6. trichomycosis _____

7. dermatofibroma _____

8. paronychia _____

9. onychocryptosis _____

10. seborrhea _____

11. onychophagia _____

12. xeroderma _____

13. leioderma _____

EXERCISE 11

Build disease and disorder terms for the following definitions by using the word parts

you have learned. If you need help, refer to p. 8 to review word-building techniques.

Example: abnormal condition of a fungus in the hair trich / o / myc / osis

WR/CV/ WR/ S

1. thickening of the skin

_____/_____/_____
WR / WR / S

2. abnormal condition of
a fungus in the nails

_____/_____/_____/_____
WR / CV / WR / S

3. excessive discharge of sebum

_____/_____/_____
WR / CV / S

4. inflammation of the skin

_____/_____
WR / S

5. fibrous tumor of the skin

_____/_____/_____/_____
WR / CV / WR / S

6. softening of the nails

_____/_____/_____
WR / CV / S

7. inflammation of a sweat gland

_____/_____/_____
WR / WR / S

8. abnormal condition of a
hidden nail

_____/_____/_____/_____
WR / CV / WR / S

9. abnormal condition of the skin
caused by dust

_____/_____/_____/_____
WR / CV / WR / S

10. eating the nails

_____/_____/_____
WR / CV / S

11. diseased state around the nail

_____/_____/_____
P / WR / S

12. dry skin

_____/_____/_____/_____
WR / CV / WR / S

13. condition of smooth skin

_____/_____/_____/_____
WR / CV / WR / S

EXERCISE 12

Spell each of the terms used TO DESCRIBE integumentary diseases and disorders. Have someone dictate the terms on pp. 75-77 to you. Think about the word parts before attempting to write the word. Study arty words you have spelled incorrectly.

1. _____

8. _____

2. _____

9. _____

3. _____

10. _____

4. _____

11. _____

5. _____

12. _____

6. _____

13. _____

7. _____

14. _____

3-1- Disease and Disorder Term (Con't)

3-1-2- Not Built from Word Parts

Term

Definition

abrasions..... (a-BRA-zhun)	craping away of the skin by mechanical process or injury
abscess..... (AB-ses)	localized collection of pus
acne..... (AK-ne)	inflammatory disease of the skin involving the sebaceous glands and hair follicles
actinic keratosis..... (ack-TIN-ik) (ker-a-TO-sis)	a precancerous skin condition of horny tissue formation that results from excessive exposure to sunlight It may evolve into a squamous cell carcinoma (Figure 4-3,A).
basal cell carcinoma (BCC)..... (BA-sal) (sel) (kar-si-XO-ma)	epithelial tumor arising from the epidermis.It seldom metastasizes but invades local tissue (Figure 4-3, B). Common in individuals who have had excessive sun exposure.

candidiasis..... (kan-di-DI-a-xis)	an infection of the skin, mouth (thrush), or vagina caused by the yeast-type fungus <i>Candida albicans</i> . Candida is normally present in the mucous membranes; overgrowth causes an infection. Esophageal candidiasis is often seen in patients with AIDS (acquired immunodeficiency syndrome).
carbuncle..... (KAR-bung-kl)	skin infection composed of a cluster of boils caused by staphylococcal bacteria
cellulitis..... (sel-u-LI-tis)	inflammation of the skin and subcutaneous tissue caused by infection, leading to redness, swelling, and fever
contusion..... (kon-TU-zhun)	injury with no break in the skin, characterized by pain, swelling, and discoloration (also called a bruise)
Eczema..... (EK-ze-ma)	noninfectious, inflammatory skin disease characterized by redness, blisters, scabs, and itching



Figure 4-3

Percutaneous lesion and cancers of the skin. A, Actinic keratosis; B, basal cell carcinoma; C, squamous cell carcinoma; D, melanoma; E, Kaposi sarcoma.

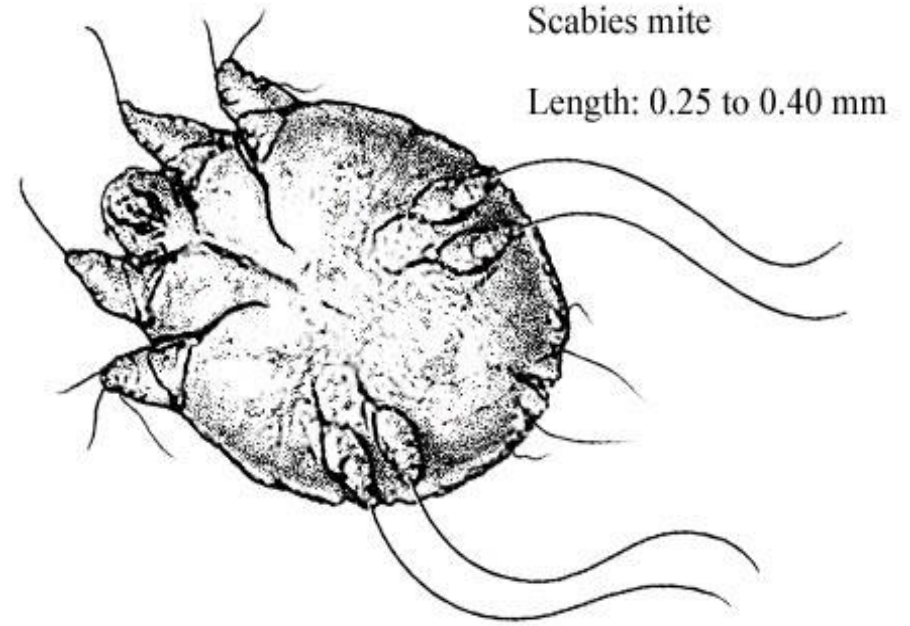
fissure..... (FISH-ur)	slit or crack like sore in the skin
furuncle (FER-ung-kl)	painful skin node caused by staphylococcal bacteria in a hair follicle'(also called a boil)
gangrene..... (GANG-gren)	death of tissue caused by loss of blood supply followed by bacterial invasion
herpes..... (HER-pep)	inflammatory skin disease caused by herpes virus characterized by small blisters in clusters. Many types of herpes exist Herpes simplex, for example, causes fever blisters, herpes zoster, also called shingles, is characterized by painful skin eruptions that follow nerves inflamed by the virus (see Figure 4-2, D).

impetigo..... (im-pe-TI-go)	superficial skin infection characterized by pustules and caused by either staphylococci or streptococci (see Figure 4-2, C)
kaposi sarcoma..... (KAP-o-se) (sar-KO-ma)	a cancerous condition starting as purple or brown papules on the lower extremities that spreads through the skin to the lymph nodes and internal organs. Frequently seen with AIDS.
laceration (las-er-A-shun)	torn, ragged-edged wound
lesion..... (LE-zhun)	any visible change in tissue resulting from injury or disease. It is a broad term that includes sores, wounds, ulcers, and tumors.
pediculosis..... (pe-dik-u-LO-sis)	invasion into the skin and hair by lice

psoriasis (so-RI-a-sis)	chronic skin condition producing red lesions covered with silvery scales.
scabies..... (SKA-bez)	skin infection caused by the itch mite, characterized by papule eruptions that are caused by the female burrowing in the outer layer of the skin and laying eggs. This condition is accompanied by severe itching (Figure 4-4).
scleroderma..... (skle-ro-DER-ma)	a disease characterized by chronic hardening (induration) of the connective tissue of the skin and other body organs.
shingles..... (SHIN-gls)	development of painful, inflamed blisters that follow the nerve routes. Caused by the same virus that causes chickenpox (see Figure 4-2, D) (also called herpes zoster).



A



B

The Scabies Mite



Figure 4-4

A, Scabies; B, scabies mite.

squamous cell carcinoma (SqCCa)..... (SQWA-mus) (sel) (kar-si-NO-ma)	a malignant growth that develops from scale-like epithelial tissue. On the skin it appears as a firm, red, painless bump. The most frequent cause is chronic exposure to sunlight (see Figure 4-3, C).
systemic lupus erythematosus (SLE)..... (sis-TEM-ik)(LU-pus) (e-rith-ma-TO-sus)	a chronic inflammatory disease involving the skin, joints, kidneys, and nervous system. This autoimmune disease is characterized by periods of remission and exacerbations. It also may affect other organs.
tinea..... (TIN-e-a)	fungus infection of the skin (see Figure 4-2) (also called <i>ringworm</i>)
urticaria..... (ur-ti-KA-re-a)	an itching skin eruption composed of wheals of varying size and shape. It is usually related to an allergy (also called <i>hives</i>).

Learn the definitions and spellings of the terms by completing exercises 13, 14, 15, and 16.

Exercise 13

Fill in the blanks with the correct disease and disorder terms.

1. A chronic inflammatory disease affecting the skin, joints, and other organs is

_____.

2. A(n) _____ is a localized collection of pus.

3. A cracklike sore in the skin is called a(n) _____.

4. The scraping away of the skin by mechanical process or injury is called a(n)

_____.

5. _____ is a chronic skin condition characterized by red lesions covered with silvery scales.

6. An inflammatory skin disease characterized by small blisters in clusters is called

_____.

7. _____ is the name given to the invasion of the skin and hair by lice.
8. A fungus infection of the skin, also known as ringworm, is called _____.
9. An injury with no break in the skin and characterized by pain, swelling, and discoloration is called a(n) _____.
10. _____ is the name given to tissue death caused by a loss of blood supply followed by bacterial invasion.
11. Any visible change in tissue resulting from injury or disease is called a _____.
12. _____ is a cancerous condition starting as purple or brown papules on the lower extremities.
13. A horny tissue formation that results from excessive exposure to sunlight and is precancerous is called _____.
14. A cluster of boils caused by staphylococcal bacteria is a _____.

15. An inflammatory skin disease that involves the oil glands and hair follicles is called _____.
16. _____ is the name given to a torn, ragged-edged wound.
17. A painful skin node caused by staphylococcal bacteria in a hair follicle is called a(n) _____.
18. A malignant growth that develops from scale like epithelial tissue is known as _____ carcinoma.
19. Inflammation of the skin and subcutaneous tissue caused by infection and creating redness, swelling, and fever is called _____.
20. _____ is the name given to a superficial skin infection characterized by pustules and caused by either staphylococci or streptococci.

21. _____ is a noninfectious inflammatory skin disease characterized by redness, blisters, scabs, and itching.
22. A skin inflammation caused by the itch mite is called _____.
23. _____ is an itching skin eruption composed of wheals.
24. An epithelial tumor commonly found on the face of individuals who have had excessive sun exposure is _____ carcinoma.
25. _____ is a disease characterized by induration of the connective tissue.
26. _____ is an infection of the mouth, skin, or vagina caused by *Candida albicans*.
27. A condition of painful, inflamed blisters that follow nerve routes is called _____.

EXERCISE 14

Match the words in the first column with their correct definitions in the second column.

- | | |
|----------------------------|---|
| ___1. abrasion | a. death of tissue caused by loss of blood supply and entry of bacteria |
| ___2. abscess | b. crack like sore in the skin |
| ___3. acne | c. cluster of boils |
| ___4. actinic keratosis | d. induration of connective tissue |
| ___5. basal cell carcinoma | e. noninfectious inflammatory skin disease having redness, blisters, scabs, and itching |
| ___6. carbuncle | f. scraped-away skin |
| ___7. cellulitis | g. involves sebaceous glands and hair follicles |
| ___8. contusion | h. painful skin node caused by staphylococci in a hair follicle |
| ___9. eczema | i. inflammation of skin and subcutaneous tissue with redness, swelling, and fever |
| ___10. fissure | j. localized collection of pus |
| ___11. furuncle | k. injury characterized by pain, swelling, and discoloration |
| ___12. gangrene | l. precancerous skin condition caused by excessive exposure to sunlight |
| ___13. scleroderma | m. epithelial tumor commonly found in individuals who have had excessive sun exposure |
| | n. red lesions with silvery scales |

EXERCISE 15

Match the words in the first column with the correct definitions in the second column.

- | | |
|--------------------------------------|---|
| ___ 1. herpes | a. skin inflammation caused by the itch mite |
| ___ 2. impetigo | b. fungus infection of the skin |
| ___ 3. Kaposi sarcoma | c. red lesions covered by silvery scales |
| ___ 4. laceration | d. inflammatory skin disease having clusters |
| ___ 5. lesion | e. chronic inflammatory disease involving the skin, joints, kidney, and nervous system |
| ___ 6. pediculosis | f. cancerous condition that starts as brown or purple papules on the lower extremities |
| ___ 7. psoriasis | g. composed of wheals |
| ___ 8. scabies | h. torn, ragged-edged wound |
| ___ 9. squamous cell carcinoma | i. superficial skin condition having pustules and caused by staphylococci or streptococci |
| ___ 10. systemic lupus erythematosus | j. infection of the skin, mouth, or vagina caused by a yeast- type fungus |
| ___ 11. tinea | k. invasion of the hair and skin by lice |
| ___ 12. urticaria | l. visible change in tissue resulting from injury or disease |
| ___ 13. candidiasis | m. a malignant growth that develops from scale like epithelial tissue |
| ___ 14. shingles | n. lesions caused by herpes zoster virus |
| | o. crack like sore in the skin |

EXERCISE 16

Spell each of the terms not built from word parts that are used to describe integumentary diseases and disorders. Have someone dictate the terms on pp. 79 and 81-82 to you. Study any words you have spelled incorrectly.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____
27. _____

3-2- Surgical Terms

3-2-1 Built from Word Parts

Term

biopsy (bx).....
(BI-op-se)

dermatoautoplasty.....
(*der*-ma to-AW-to-*plas-te*)

dermatoheteroplasty
(*der*-ma-to-HET-er- *plas-te*)

dermatoplasty.....
(DER-ma-to-*plas-te*)

onychectomy.....
(on-i-KEK-to-me)

rhytidectomy.....
(rit-i-DEK-to-me)

rhytidoplasty.....
(RIT-i-do-*plas-te*)

Definition

view of life (the removal of living tissue from the body to be viewed under the microscope)

surgical repair using one's own skin (skin graft) (also called autograft)

surgical repair using skin from others (skin graft) (also called allograft)

surgical repair of the skin

excision of a nail

excision of wrinkles (also called facelift)

surgical repair of wrinkles

Learn the definitions and spellings of the surgical terms by completing exercises 17, 18, and 19.

EXERCISE 17

Analyze and define the following surgical terms.

WR CV S

Example: dermat/ o /plasty surgical repair of the skin
 CF

1. rhytidectomy _____
2. biopsy _____
3. dermatoautoplasty _____
4. onychectomy _____
5. rhytidoplasty _____
6. dermatoheteroplasty _____

EXERCISE 18

Build surgical terms for the following definitions by using the word parts you have learned.

Example: surgical repair using one's own skin dermat / o / aut / o / plasty
WR /CV/ WR /CV/ S

1, excision of wrinkles

_____/_____
WR / S

2. view of life (removal of living tissue from the body)

_____/_____
WR / S

3. surgical repair using skin from others

_____/_____/_____/_____/_____
WR / CV / WR / CV / S

4. excision of a nail

_____/_____
WR / S

5. surgical repair of wrinkles

_____/_____/_____
WR / CV / S

6. surgical repair of the skin

_____/_____/_____
WR / CV / S

Exercise 19

Spell each of the surgical terms. Have someone dictate the term on p. 86 to you. Think about the word parts before attempting to write each word. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

3-3- Complementary Terms

3-3-1- Built from Word Parts

Term

dermatologist.....
(der-ma-TOL-o-jist)

dermatology.....
(der-ma-TOL-o-je)

dermatome.....
(DER-ma-tom)

(NOTE when two consonants
of the same letter come
together, one is sometimes
dropped.)

Definition

a physician who studies and treats skin
(diseases)

study of the skin (a branch of medicine that
deals with the diagnosis and treatment of
skin diseases)

instrument used to cut skin.

Term**Definition**

epidermal..... (ep-i-DER-mal)	pertaining to upon the skin
erythroderma..... (e-rith-ro-DER-ma) (NOTE the a ending is a noun suffix and has no meaning.)	red skin (abnormal redness of the skin)
hypodermic..... (bi-po-DER-mik)	pertaining to under the skin
intra-dermal..... (in-tra-DER-mal)	pertaining to within the skin
keratogenic..... (ker-a-to JEN-ik)	originating in horny tissue

Term

leukoderma.....

(lu-ko-DER-ma)

(NOTE the a ending is a noun
suffix and has no meaning.)

necrosis.....

(ne-KRO-sis)

percutaneous.....

(per-ku-TA-ne-us)

Staphylococcus.....

(pl. staphylococci) (staph)

(stafil-o-KOK-us, stafil-o-KOK-si)

Definition

white skin (less color than normal)

abnormal condition of death (cells and
tissue die because of disease)

pertaining to through the skin

berry-shaped (bacteria) in grapelike clusters
(these bacteria cause many skin diseases)

(Exercise Figure D)

Term

Definition

streptococcus (pl. streptococci)

(strep) berry-shaped (bacteria) in twisted chains
(strep-to-KOK-us, strep-to-KOK-si) (Exercise Figure E)

subcutaneous(subQ)..... pertaining to under the skin
(sub-ku-TA-ne-us)

ungual..... pertaining to the nail
(UNG-gwal)

xanthoderma..... yellow skin (also called jaundice)
(zan-tho-DER-ma)

(NOTE: the a ending is a noun
suffix and has no meaning.)

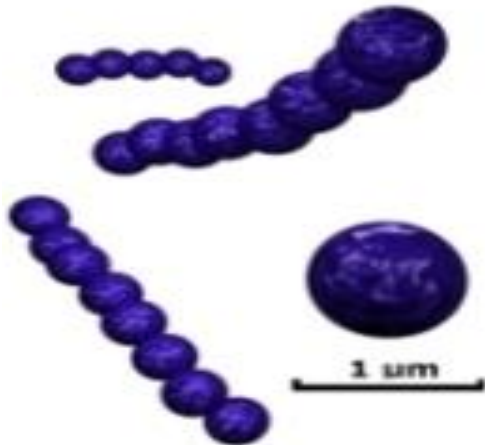
Learn the definitions and spellings-of the complementary terms by completing exercises 20, 21, and 22.



Exercise Figure D

Fill in the blanks to complete labeling of the diagram.

_____ / _____ / _____ bacteria
Grape like clusters / CV / berry-shaped (plural)



Exercise Figure E

Fill in the blanks to complete labeling of the diagram.

_____ / _____ / _____ bacteria
twisted chains / CV / berry-shaped (plural)

EXERCISE 20

Analyze and define the following complementary terms

P / WR / S

Example: intra / derm /al pertaining to within the skin

1. unguis _____

2. dermatome _____

3. streptococcus _____

4. hypodermic _____

5. dermatology _____

6. subcutaneous _____

7. staphylococcus _____

8. keratogenic _____

9. dermatologist _____

10. necrosis _____

11. epidermal _____

12. xanthoderma _____

13. erythroderma _____

14. leukoderma _____

15. percutaneous _____

EXERCISE 21

Build complementary terms for the integumentary system by using the word parts you have learned.

Example: pertaining to under the skin hypo / derm / ic

P / WR / S

1. study of the skin

_____/_____/_____
WR / CV / S

2. abnormal condition of death
(of cells and tissue)

_____/_____
WR / S

3. instrument used to cut skin

_____/_____
WR / S

4. pertaining to the nail

_____/_____
WR / S

5. berry-shaped bacteria in grape
like clusters

_____/_____/_____
WR / CV / S

6. a physician who studies and
treats skin (diseases)

_____/_____/_____
WR / CV / S

7. pertaining to within the skin

_____ / _____ / _____
P / WR / S

8. pertaining to upon the skin

_____ / _____ / _____
P / WR / S

9. pertaining to under the skin

_____ / _____ / _____
P / WR / S

10. berry-shaped bacteria in
twisted chains

_____ / ____ / _____
WR /CV/ S

11. originating in the horny tissue

_____ / ____ / _____
WR /CV/ S

12. white skin

_____ / ____ / _____ / _____
WR /CV/ WR / S

13. red skin

_____ / ____ / _____ / _____
WR /CV/ WR / S

14. yellow skin

_____ / ____ / _____ / _____
WR /CV/ WR / S

15, pertaining to through the skin

_____ / _____ / _____
P / WR / S

Exercise 22

Spell each of the complementary terms. Have someone dictate the terms on pp. 88-89 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

3-3- Complementary Terms (Con't)

3-3-2-Not Built from word parts

Term	Definition
adipose..... (AD-i-pos)	fat, fatty
albino..... (al-BI-no)	an individual with pigment deficiency in the eyes, hair and skin. A hereditary disorder (Figure 4-5).
allergy..... (AL-er-je)	hypersensitivity to a substance
alopecia..... (al-o-PE-she-a)	loss of hair (Figure 4-6)
cicatrix..... (SIK-a-triks)	scar
cyst..... (sist)	a closed sac containing fluid or semisolid material (Table 4-1)

Term

cytomegalovirus (CMV).....
(si-to- meg-a-lo-VI-rus)

debridement.....
(da-BRED-mon)

dermabrasion.....
(derm-a-BRA-zhun)

diaphoresis.....
(di-a-fo-RE-sis)

echymosis.....
(ek-i-MO-sis)

Definition

a herpes-type virus that usually causes disease when the immune system is compromised

removal of contaminated or dead tissue and foreign matter from an open wound

procedure to remove skin scars with abrasive material, such as sandpaper

profuse sweating

escape of blood into the tissues, causing superficial discoloration; a "black and blue mark

Term

edema.....
(e-DE-ma)

emollient.....
(e-MOL-yent)

erythema.....
(er-i-THE-ma)

induration.....
(in-du-RA-shun)

jaundice
(JAWN-dis)

keloid.....
(KE-loyd)

leukoplakia.....
(lu-ko-PLA-ke-a)

Definition

puffy swelling of tissue from the accumulation of fluid.

agent that softens or soothes the skin.

redness

abnormal hard spot(s)

condition characterized by a yellow tinge to the skin (xanthoderma)

overgrowth of scar tissue (Figure 4-7)

condition characterized by white spots or patches on mucous membrane, which may be precancerous



Figure 4-5
White hair and pale skin of albino






Figure 4-6
Alopecia totalis (loss of hair from the scalp) with absence of eyelashes.

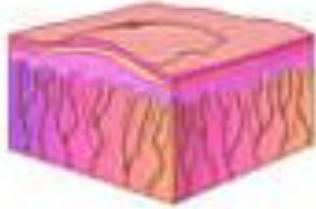
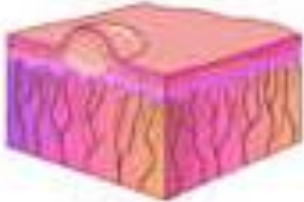
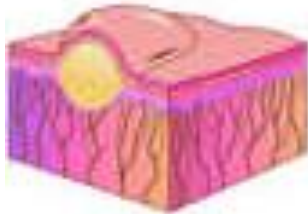
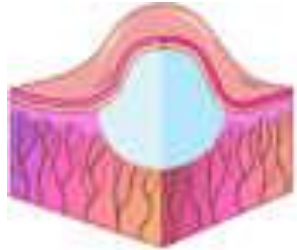


Figure 4-7
Burn keloid

TABLE 4-1

Common Skin Lesions

Lesion	Definition	Cutaway Sections	Example
Macule	flat, colored spot on the skin		freckle
Papule	small solid skin elevation		skin tag basal cell carcinoma
Nodule	a small knot like mass		lipoma Metastatic carcinoma rheumatoid nodule

Lesion	Definition	Cutaway Sections	Example
Wheal	round, itchy elevation of the skin		urticaria (hive)
Vesicle	small elevation of epidermis containing liquid		shingles (Herpes roster) Herpes simplex contact dermatitis
Pustule	elevation of the skin containing pus		impetigo acne
Cyst	a closed sac containing fluid or semisolid material		acne

Term

Definition

macule..... (MAK-ul)	flat, colored spot on the skin (see Table 4-1)
nevus(pl. nevi)..... (NE-vus, NE-vi)	circumscribed malformation of the skin, usually brown, black, or flesh colored. A congenital nevus is present at birth and is referred to as a birthmark (see Figure 4-9, B) (also called a mole).
nodule..... (NOD-ul)	a small knot like mass that can be felt by touch (see Table 4-1)
pallor..... (PAL-or)	pallor
Papule..... (PAP-ul)	small, solid skin elevation (Table 4-1) (also called <i>pimple</i>)
petechia (pl. petechiae)..... (pe-TE-ke-a, pe-TE-ke-e)	pinpoint skin hemorrhages

Term	Definition
pruritus..... (pru-Ri-tus)	severe itching
purpura (PER-pu-ra)	disorder characterized by hemorrhages into the tissue, giving the skin a purple-red discoloration
pustule..... (PUS-tul)	elevation of skin containing pus (see Table 4-1)
ulcer..... (UL-ser)	eroded sore on the skin or mucous membrane
verruca..... (ver-RU-ka)	circumscribed cutaneous elevation caused by a virus (see Figure 4-9, A) (also called wart)
Vesicle..... (VES-i-kl)	small elevation of the epidermis containing liquid (see Table 4-1) (also called blister)

Term

virus.....

(VI-ras)

Wheal.....

(hwel)

Definition

an infectious agent

transitory, itchy elevation of the skin with a white center and a red surrounding area; a wheal is an individual urticaria (hive) lesion (see Table 4-1)



Figure 4-8

Skin ulcer



A



B

Figure 4-9

A, Verruca (wart); B, nevus (mole)

Learn the definitions and spellings of the terms by completing exercises 23 through 26.

EXERCISE 23

Fill in the blanks with the correct terms.

1. Another name for scar is _____.
2. Profuse sweating is called _____.
3. The term for an agent that softens or soothes the skin is _____.
4. The medical term for wart is _____.
5. _____ is the name for a flat, colored skin spot.
6. A yellow- skin condition is known as _____
7. The condition of white spots or patches on mucous membrane is called _____.
8. _____ are pinpoint hemorrhages of the skin.
9. An eroded sore is called a(n) _____.
10. A(n) _____ is an overgrowth of scar tissue.

11. Another name for paleness is _____.
12. Superficial skin discoloration caused by escaping blood is referred to as _____.
13. An individual with pigment deficiency is called a(n) _____.
14. A small knotlike mass that can be felt by touch is called a(n) _____.
15. Another term for fat is _____.
16. A closed sac containing fluid or semisolid material is called a(n) _____.
17. Severe itching is called _____.
18. Another name for redness is _____.
19. The condition of tissue hemorrhages giving the skin a purple-red discoloration is known as _____.
20. _____ is another name for mole.
21. The removal of dead or contaminated tissue from an open wound is called _____.
22. The term for loss of hair is _____.

23. Hyper sensitivity to a substance it ailed a(n) _____.
24. A small, solid skin elevation is called a(n) _____.
25. A transitory skin elevation with a white center and a red surrounding area is a(n) _____.
26. A(n) _____ is a skin elevation containing pus.
27. A blister is also called a(n) _____.
28. _____ is the procedure that uses abrasive material to remove scars.
29. A(n) _____ is an infectious agent.
30. An abnormal hard spot(s) is called _____.
31. _____ is the swelling of tissue.
32. _____ is a herpes-type virus.

EXERCISE 24

Match the words in the first column with their correct definitions in the second column.

- | | |
|--------------------|--|
| ___1. adipose | a. loss of hair |
| ___2. albino | b. superficial discoloration caused by blood escaping into the tissues |
| ___3. allergy | c. yellow color to the skin |
| ___4. alopecia | d. closed sac containing fluid |
| ___5. cicatrix | e. removal of dead tissue from an open wound |
| ___6. debridement | f. agent that softens or soothes the skin |
| ___7. nodule | g. profuse sweating |
| ___8. dermabrasion | h. hypersensitivity to a substance |
| ___9. diaphoresis | i. hard spot(s) |
| ___10. cyst | j. scar |
| ___11. ecchymosis | k. redness |
| ___12. emollient | l. procedure to remove skin scars by using abrasive material |
| ___13. erythema | m. fat |
| ___14. jaundice | n. small knot |
| ___15. edema | o. an individual with pigment deficiency |
| ___16. induration | p. patches |
| | q. swelling of tissue |

EXERCISE 25

Match the terms in the first column with their correct definitions in the second column.

- | | |
|-------------------------|--|
| ___ 1. keloid | a. mole |
| ___ 2. leukoplakia | b. severe itching |
| ___ 3. macule | c. wart |
| ___ 4. nevus | d. condition of white spots or patches on mucous membranes |
| ___ 5. pallor | e. hemorrhages in tissue giving skin a red- purple color |
| ___ 6. papule | f. skin elevation containing pus |
| ___ 7. petechiae | g. overgrowth of scar tissue |
| ___ 8. pruritus | h. small elevation of epidermis containing liquid |
| ___ 9. purpura | i. individual urticaria lesion |
| ___ 10. pustule | j. flat, colored spot on skin |
| ___ 11. ulcer | k. small, solid skin elevation |
| ___ 12. verruca | l. paleness |
| ___ 13. vesicle | m. an infectious agent |
| ___ 14. wheal | n. pinpoint skin hemorrhages |
| ___ 15. virus | o. eroded sore on the skin or mucous membrane |
| ___ 16. cytomegalovirus | p. profuse sweating |
| | q. herpes-type virus |

EXERCISE 26

Spell each of the complementary terms. Have someone dictate the terms on pp. 92, 93, and 95 to you. Study any words you have spelled incorrectly.

- | | |
|-----------|-----------|
| 1. _____ | 17. _____ |
| 2. _____ | 18. _____ |
| 3. _____ | 19. _____ |
| 4. _____ | 20. _____ |
| 5. _____ | 21. _____ |
| 6. _____ | 22. _____ |
| 7. _____ | 23. _____ |
| 8. _____ | 24. _____ |
| 9. _____ | 25. _____ |
| 10. _____ | 26. _____ |
| 11. _____ | 27. _____ |
| 12. _____ | 28. _____ |
| 13. _____ | 29. _____ |
| 14. _____ | 30. _____ |
| 15. _____ | 31. _____ |
| 16. _____ | 32. _____ |

3-4- Abbreviations

BCC.....	basal cell carcinoma
bx.....	biopsy
CMV.....	cytomegalovirus
SLE.....	systemic lupus erythematosus
SqCCA.....	squamous cell carcinoma
Staph.....	staphylococcus
Strep.....	streptococcus
SubQ.....	subcutaneous

Refer to Appendix D for a complete list of abbreviations.

Exercise 27

Write the meaning for each of the abbreviations in the following sentences.

1. The most common form of skin cancer is BCC _____
_____.
2. It is rare to see cutaneous CMV _____ infections.
3. SLE _____ is a chronic relapsing disease, often with long periods of remission.
4. Long-term exposure to sunlight is by far the most frequent cause of SqCCA _____.
5. The bx _____ results were negative.
6. The medication was administered by subQ _____ injection.
7. Staph _____ bacterium was cultured from the abscess
8. The culture confirmed a strep _____ infection of the throat.

English in Medical Term

Chapter: 5

Respiratory System

Outline:

OBJECTIVES

1-ANATOMY

1-1.Function.

1-2.Organs of the Respiratory System

2- WORD PARTS

2-1. Combining Forms of the Respiratory System.

2-2. Combining Forms Commonly Used with Respiratory System Terms.

2-3. Prefixes.

2-4. Suffixes.

3- MEDICAL TERMS

3-1. Disease and Disorder Terms

3-2. Surgical Terms

3-3. Diagnostic Terms

3-4. Complementary Terms

3-5. Abbreviations

OBJECTIVES

On completion of this chapter you will be able to:

1. Identify the organs and other structures of the respiratory system.
2. Define and spell the word parts presented in this chapter.
3. Build and analyze medical terms with word parts presented in this and previous chapters.
4. Define, pronounce, and spell the disease and disorder, diagnostic, surgical, and complementary terms for the respiratory system.
5. Interpret the meanings of the abbreviations presented in this chapter.
6. Read medical documents and interpret medical terminology contained in them.

1- ANATOMY

The respiration system comprises the nose, pharynx, larynx, trachea, bronchi, and lungs. The upper respiratory tract includes the nose, pharynx, and larynx. The lower respiratory tract includes the trachea, bronchi, and lungs (Figure 5-1).

1-1. Function

- The function of the respiratory system is the exchange of oxygen (O_2) and carbon dioxide (CO_2) between the atmosphere and body cells. This process is called *respiration* or *breathing*.

During **external respiration**, air containing oxygen passes through the respiratory tract. beginning with the nose, pharynx, larynx, trachea, and finally, bronchi to the lungs (**inhalation** or **inspiration**). There, oxygen passes from the sacs in the lungs, called **alveoli**, to the blood in tiny blood vessels called **capillaries**. At the same time, carbon dioxide passes back from the capillaries to the alveoli and is expelled through the respiratory tract (**exhalation** or **expiration**) (Figure 5-2). During internal respiration. the body cells take on **oxygen** from the blood and simultaneously give back **carbon dioxide**, a waste produced when food and oxygen combine in cells. The carbon dioxide is transported by the blood back to the lungs for exhalation.

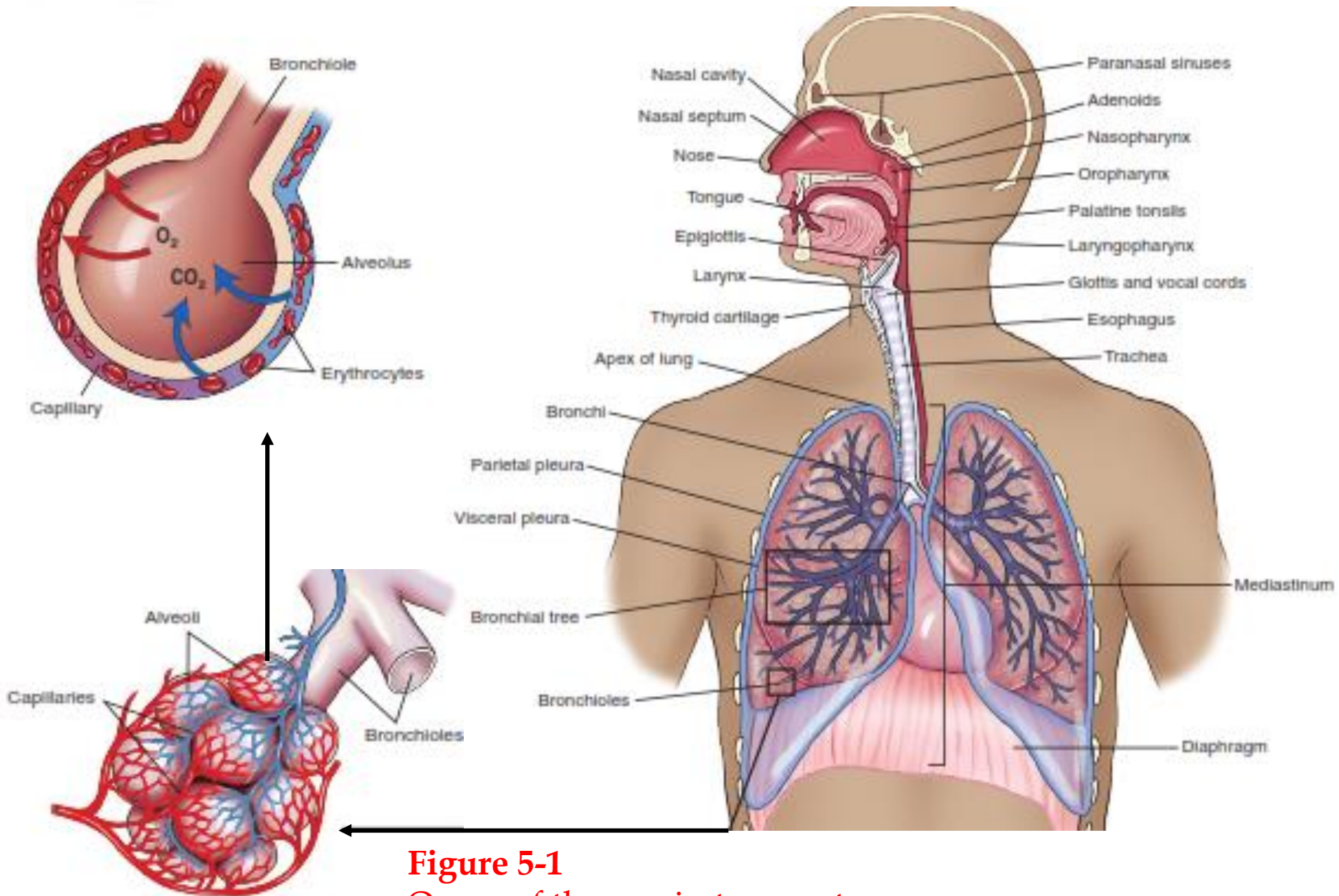


Figure 5-1
Organ of the respiratory system

Prepared by Dr.OUK RIM-English in
 Medical Term-2012

1-2. Organs of the Respiratory System

- a) nose..... lined with mucous membrane and fine hairs; it acts as a filter to moisten and warm the entering air.
- b) nasal septum..... partition separating the right and left nasal cavities.
- c) paranasal sinuses... air cavities within the cranial bones that open into the nasal cavities.
- d) pharynx (also called the throat).... serves as a food and air passageway. Air enters from the nasal cavities and/or mouth and passes through the pharynx to the larynx. Food enters the pharynx from the mouth and passes into the esophagus.

- e) adenoids..... lymphoid tissue located on the posterior wall of the nasal cavity (also called **pharyngeal tonsils**)
- f) tonsils..... lymphoid tissue located on the lateral wall at the junction of the oral cavity and oropharynx.
- g) larynx..... location of the vocal cords. Air enters from the pharynx (also called the **voice box**).
- h) epiglottis..... flap of cartilage that automatically covers the opening of the larynx and keeps food from entering the larynx during swallowing.

- i) trachea..... passageway for air to the bronchi from the larynx; (also called the **windpipe**).
- j) bronchus..... one of two branches from the trachea that conducts air
(*pl.* bronchi) into the lungs, where it divides and subdivides. The branchings resemble a tree; therefore, they are referred to as a **bronchial tree**.
- k) bronchioles..... smallest subdivision of the bronchial tree.
- l) alveolus (*pl.* alveoli). air sacs at the end of the bronchioles. Oxygen and carbon dioxide are exchanged through the alveolar walls and the capillaries (also a term for the socket in the jaw bones into which the teeth fit).

- m) lungs..... two spongelike organs in the thoracic cavity. The right lung consists of three lobes, and the left lung has two lobes.
- n) pleura..... double-folded serous membrane covering each lung (visceral pleura) and lining the thoracic cavity (parietal pleura) with a small space between, called the pleural cavity, which contains serous fluid.
- o) diaphragm..... muscular partition that separates the thoracic cavity from the abdominal cavity. It aids in the breathing process by contracting and pulling air in, then relaxing and pushing air out.
- p) mediastinum..... space between the lungs. It contains the heart, esophagus, trachea, great blood vessels, and other structures

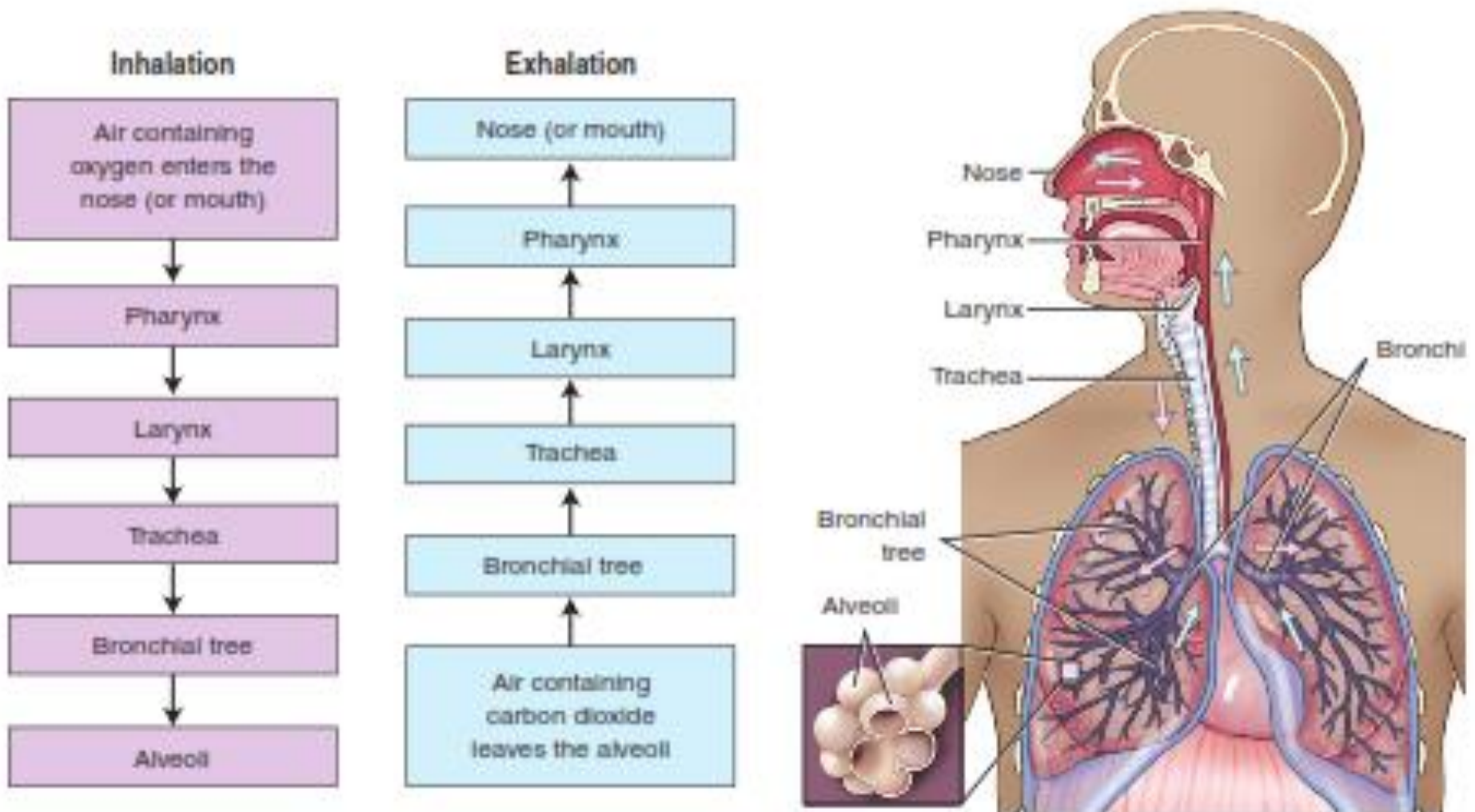


Figure 5-2

Structures of the nasal passages and throat

Figure 5-3
Bronchioles and
alveoli

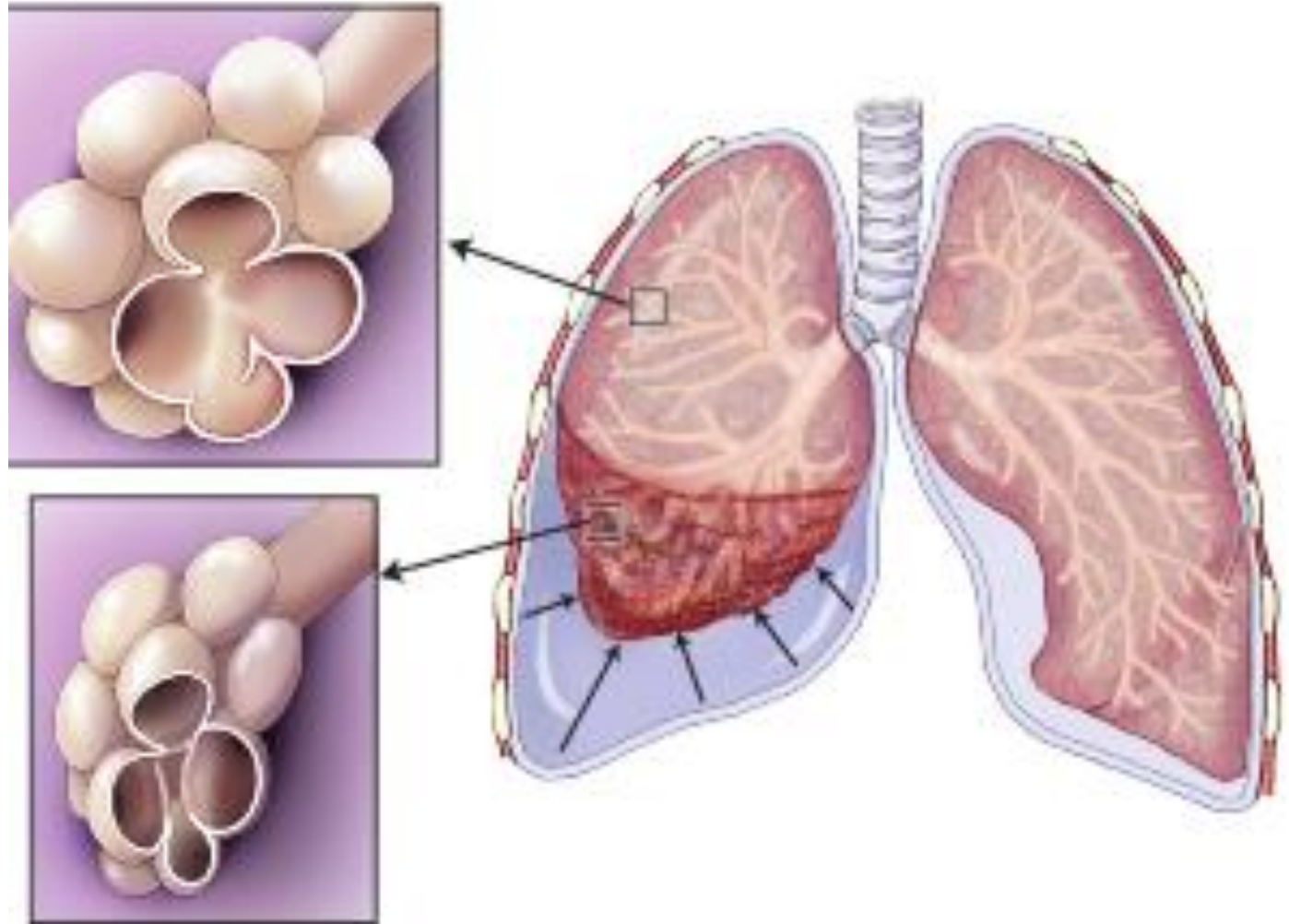


Figure 5-4
Atelectasis showing the collapsed alveoli

EXERCISE 1

Match the terms in the first column with the correct definitions in the second column.

- | | |
|----------------|---|
| ___1. alveoli | a. tubes carrying air between the trachea and lungs |
| ___2. bronchi | b. passageway for air to the bronchi |
| ___3. larynx | c. located in the thoracic cavity |
| ___4. lungs | d. membrane covering the lung |
| ___5. pharynx | e. lymphoid tissue behind the nasal cavity |
| ___6. pleura | f. acts as food and air passageway |
| ___7. adenoids | g. location of the vocal cords |
| ___8. trachea | h. air sacs at the end of the bronchioles |
| | i. keeps food out of the trachea and larynx. |

EXERCISE 2

Fill in the blanks with the correct terms.

1. The partition that separates the right and left nasal cavities is called the _____.
2. The _____ is a flap of cartilage that prevents food from entering the larynx.
3. The smallest subdivisions of the bronchial tree are the _____.
4. The _____ serves as a filter to moisten and warm air entering the body.
5. the thoracic cavity is separated from the abdominal cavity by the _____.
6. The space between the lungs is called the _____.
7. The lymphoid tissue located in the pharynx behind the mouth are called the _____.

2- WORD PARTS

2-1. Combining Forms of the Respiratory System.

Study the word parts and their definitions listed below. Completing exercises that follow will help you learn the terms.

Combining Form

Definition

adenoid/o..... adenoids

alveol/o..... alveolus

bronch/i ,bronch/o..... bronchus

(NOTE: both *i* and *o* combining vowels are used with the word root *bronch*.)

diaphragmat/o..... diaphragm

epiglott/o..... epiglottis

laryng/o..... larynx

lob/o..... lobe

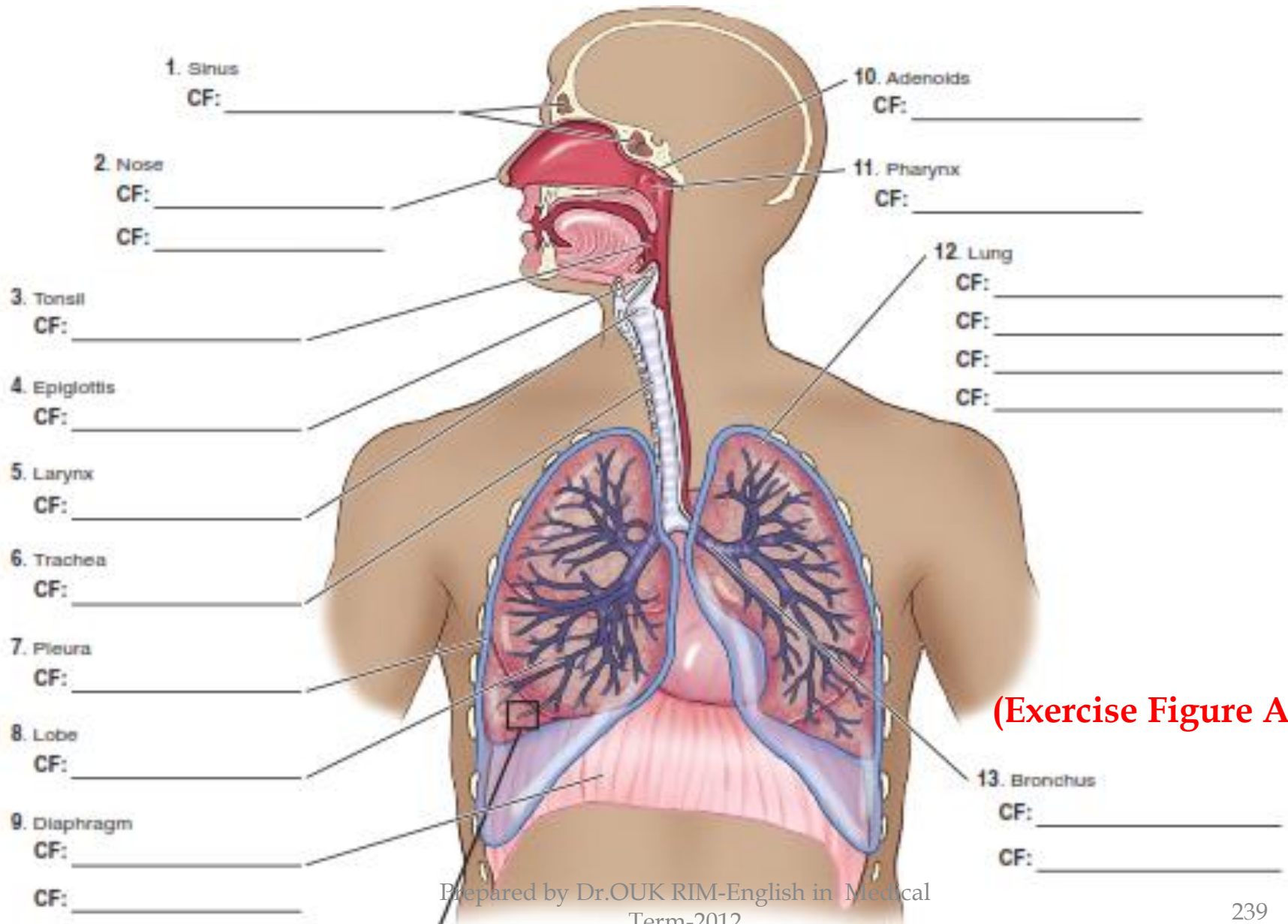
nas/o, rhin/o..... nose

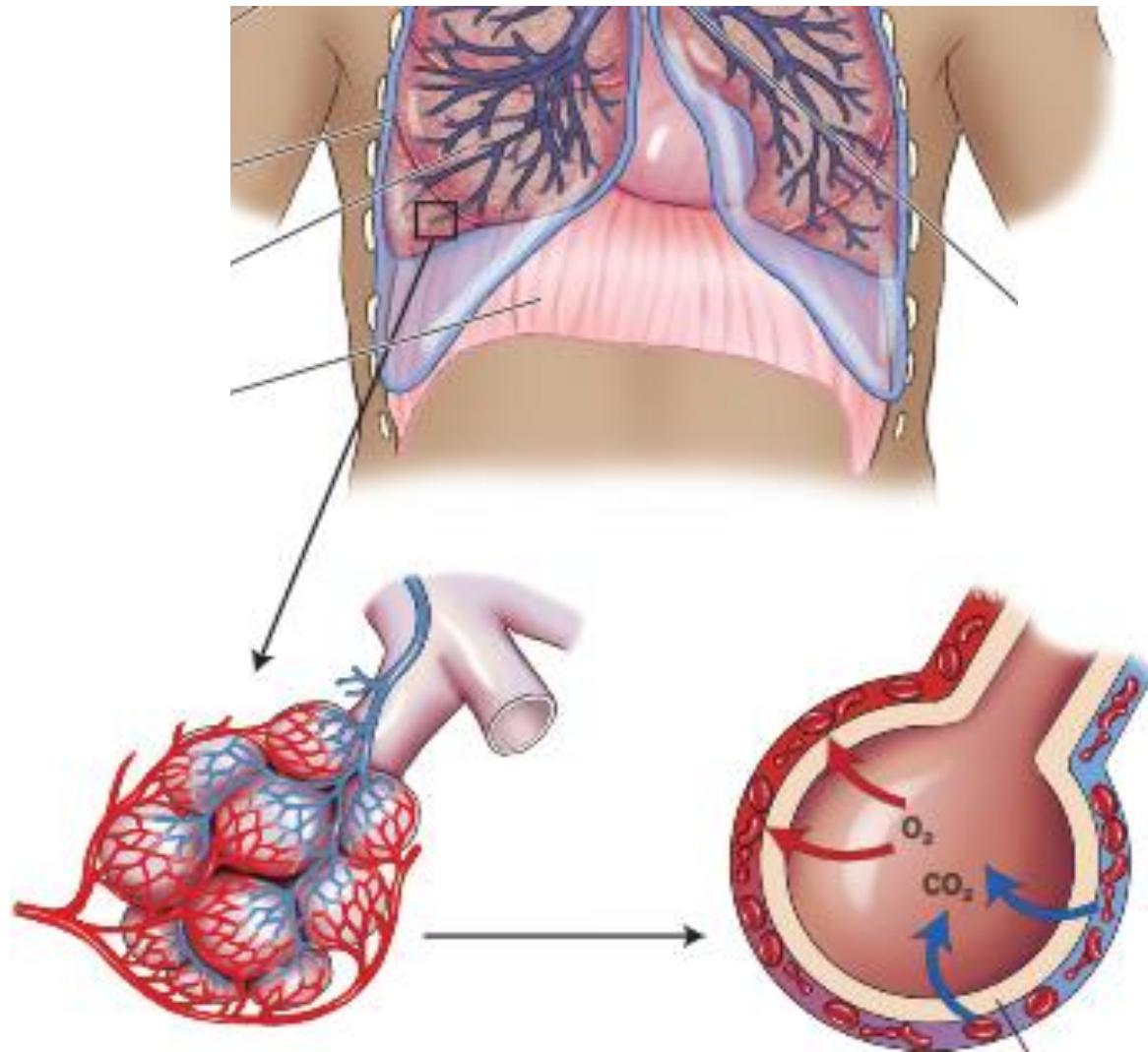
Combining Form (Con't)

Definition (Con't)

pharyng/o.....	pharynx
pleur/o	pleura
pneum/o, pneumat/o	
pneumon/o.....	lung, air
Pulmon/o.....	lung
sept/o.....	septum (wall off, fence)
sinus/o.....	sinus
thorac/o.....	thorax, chest, chest cavity
tonsill/o.....	tonsil
(NOTE: tonsil has one /, and the combining form has two /s.)	
trache/o.....	trachea

Learn the anatomic locations and meanings of the combining forms by completing Exercise Figure A and exercises 3 and 4.





14. Alveolus

CF: _____

Exercise Figure A

Fill in the blanks with combining forms in this diagram of the respiratory system

EXERCISE 3

Write the definitions of the following combining forms.

1. laryng/o _____

2. bronchi/o, bronch/o _____

3. pleur/o _____

4. pneum/o _____

5. tonsill/o _____

6. pulmon/o _____

7. diaphragmat/o _____

8. trache/o _____

9. alveol/o _____

10. pneumon/o _____

EXERCISE 3 (Con't)

Write the definitions of the following combining forms.

11. thorac/o _____

12. adenoid/o _____

13. pharyng/o _____

14. rhin/o _____

15. sinus/o _____

16. lob/o _____

17. epiglott/o _____

18. pneumat/o _____

19. nas/o _____

20. sept/o _____

EXERCISE 4

Write the combining form for each of the following terms.

1. nose

a. _____

b. _____

2. larynx

3. lung, air

a. _____

b. _____

c. _____

4. Lung

5. Tonsil

6. Trachea

7. adenoids

EXERCISE 4 (Con't)

8. pleura

9. diaphragm

10. sinus

11. thorax, chest.

chest cavity

12. alveolus

13. pharynx

14. bronchus

a.

b.

15. Lobe

16. Epiglottis

17. septum

2-2. Combining Forms Commonly Used with Respiratory System Terms.

Combining Form

Definition

atel/o..... imperfect, incomplete

capn/o..... carbon dioxide

hem/o, hemat/o..... blood

muc/o..... mucus

orth/o straight

ox/o, ox/i..... oxygen

(NOTE: both *o* and *i* combining vowels are used with the word root *ox*.)

py/o..... pus

somn/o..... sleep

spir/o..... breathe, breathing

Learn the combining forms by completing exercises 5 and 6.

EXERCISE 5

Write the definitions of the following combining forms.

1. ox/o, ox/i _____

2. spir/o _____

3. muc/o _____

4. atel/o _____

5. orth/o _____

6. py/o _____

7. hem/o, hemat/o _____

8. somn/o _____

9. capn/o _____

EXERCISE 6

Write the combining form for each of the following.

1. breathe, breathing

2. oxygen

a. _____

b. _____

3. imperfect, incomplete

4. straight

5. pus

6. mucus

7. blood

a. _____

b. _____

8. sleep

2-3. Prefixes.

Prefix

a-, an-

(NOTE: an- is used when the word root begins with a vowel.)

endo-

(NOTE: the prefix *intra-*, introduced in chapter 4, also means *within*)

eu-

pan-

poly-

Definition

without or absence of

within

normal, good

all, total

many, much

Learn the prefixes by completing exercises 7 and 8.

EXERCISE 7

Write the definitions of the following prefixes.

1. endo- _____

2. a-, an- _____

3. pan- _____

4. eu- _____

5. poly- _____

EXERCISE 8

Write the prefix for each of the following.

1. within

2. normal, good

3. without or absence of

a. _____

b. _____

4. all, total

5. many, much

2-4. Suffixes.

Suffix

Definition

-algia,	pain
-ar,-ary,-eal.....	pertaining to
-cele.....	hernia or protrusion
-centesis.....	surgical puncture to aspirate fluid (with a sterile needle)
-ectasis.....	stretching out, dilatation, expansion
-emia.....	blood condition
-gram.....	record, x-ray image
-graphy.....	process of recording, x-ray imaging
-meter.....	instrument used to measure
-metry.....	measurement
-oxia	oxygen

Suffix (Con't)

-pexy.....
-phonia
-pnea.....
-rrhagia.....
-scope.....
-scopic.....
-scopy
-spasm.....
-stenosis.....
-stomy.....
-thorax.....
-tomy.....

Definition (Con't)

surgical fixation, suspension
sound or voice
breathing
rapid flow of blood
instrument used for visual examination
pertaining to visual examination
visual examination
sudden, involuntary muscle contraction
(spasmodic contraction)
constriction or narrowing
creation of an artificial opening
chest
cut into or incision

Learn the suffixes by completing exercises 9, 10, and 11.

EXERCISE 9

Match the suffixes in the first column with their correct definitions in the second column.

- | | |
|------------------------|--|
| ___ 1. -algia | a. record, x-ray image |
| ___ 2. -ar, -ary, -eal | b. stretching out, dilatation, expansion |
| ___ 3. -cele | c. surgical puncture to aspirate fluid |
| ___ 4. -centesis | d. measurement |
| ___ 5. -ectasis | e. pertaining to visual examination |
| ___ 6. -emia | f. pertaining to |
| ___ 7. -gram | g. hernia or protrusion |
| ___ 8. -graphy | h. instrument used to measure |
| ___ 9. -meter | i. rapid flow of blood |
| ___ 10. -metry | j. blood condition |
| ___ 11. -scopic | k. pain |
| | l. process of recording, x-ray imaging |

EXERCISE 10

Match the suffixes in the first column with their correct definitions in the second column.

- | | |
|-------------------|---|
| ___ 1. -rrhagia | a. cut into or incision |
| ___ 2. -stomy | b. instrument used for visual examination |
| ___ 3. -tomy | c. rapid flow of blood |
| ___ 4. -oxia | d. constriction or narrowing |
| ___ 5. -pexy | e. sound or voice |
| ___ 6. -phonia | f. creation of an artificial opening |
| ___ 7. -pnea | g. sudden, involuntary muscle contraction |
| ___ 8. -scope | h. chest |
| ___ 9. -scopy | i. oxygen |
| ___ 10. -spasm | j. breathing |
| ___ 11. -stenosis | k. surgical fixation, suspension |
| ___ 12. -thorax | l. visual examination |

EXERCISE 11

Write the definitions of the following suffixes.

1. -thorax _____

2. -ar, -ary, -eal _____

3. -stenosis _____

4. -cele _____

5. -stomy _____

6. -pexy _____

7. -meter _____

8. - spasm _____

9. - algia _____

10. -scopy _____

EXERCISE 11 (Con't)

11. -centesis _____

12. -tomy _____

13. -scope _____

14. -rrhagia _____

15. -ectasis _____

16. -gram _____

17. -pnea _____

18. -graphy _____

19. -metry _____

20. -emia _____

21. -oxia _____

22. -phonia _____

23. -scopic _____

3- MEDICAL TERMS

The terms you need to learn to complete this chapter are listed below. The exercises following each list will help you learn the definition and the spelling of each word.

3-1. Disease and Disorder Terms

3-1-1. Built from word Parts

Term	Definition
adenoiditis..... (ad-e-noyd-I-tis)	inflammation of the adenoid
atelectasis..... (at-e-LEK-ta-sis)	Incomplete expansion (of the lung of a newborn or collapsed lung)(Figure 5-4)
bronchiectasis..... (bron-ki-EK-ta-sis)	Dilation of the bronchi (Exercise Figure B)

Term (Con't)

Definition (Con't)

bronchitis.....
(bron-KI-tis)

inflammation of the bronchi

bronchogenic carcinoma.
(bron-kō-JEN-ik)
(kar-si-NŌ-ma)

Cancerous tumor originating in the bronchus

bronchopneumonia.....
(bron-kō-nū-MŌ-nē-a)

Diseased state of the bronchi and lungs

diaphragmatocele.....
(di-a-frag-MAT-ō-sēl)

Hernia of the diaphragm

epiglottitis.....
(ep-i-glot-l-tis)

inflammation of the epiglottis

Hemothorax.....
(he-mo-THO-raks)

Blood in the chest (pleural space)

Term (Con't)

Definition (Con't)

laryngitis..... (lar-in-JI-tis)	inflammation of the larynx
laryngotracheobronchitis. (LTB) (lar-ing-gō-tra-ke-ō- bron-KI-tis)	inflammation of the larynx, trachea, and bronchi (the acute form is called <i>croup</i>)
Lobar pneumonia..... (LŌ-bar)(nū-MŌ-ne-a)	Pertaining to lobe(s); diseased state of the lung (infection of one or more lobes of lung)
nasopharyngitis..... (nā-zō-far-in-JI-tis)	inflammation of the nose and pharynx
pansinusitis..... (pan-si-nū-SI-tis)	inflammation of all sinuses
pharyngitis..... (far-in-JI-tis)	inflammation of the pharynx

Term (Con't)

Definition (Con't)

pleuritis..... (plū-RĪ-tis)	inflammation of the pleura (also called <i>pleurisy</i>)
pneumatocele..... (nū-MAT-ō-sēl)	hernia of the lung (lung tissue protrudes through an opening in the chest)
pneumoconiosis..... (nū-mō-kō-nē-Ō-sis)	Abnormal condition of dust in the lungs
pneumonia (nū-MŌ-nē-a)	Diseased state of the lung (the infection and inflammation are caused by bacteria such as <i>pneumococcus, staphylococcus, streptococcus, and haemophilus</i> ; viruses; and fungi)
pneumonitis..... (nū-mō-NĪ-tis)	inflammation of the lung

Term (Con't)

pneumothorax.....
(nū-mō-THŌ-raks)

pulmonary neoplasm.....
(PUL-mō-nar-ē)
(NE-ō-plazm)

pyothorax.....
(pī-ō-THŌ-raks)

rhinitis.....
(ri-NI-tis)

rhinomycosis.....
(ri-nō-mi-KŌ-sis)

Definition (Con't)

Air in the chest (pleural space), which causes collapse of the lung (Exercise Figure C)

Pertaining to (in) the lung, new growth (tumor)

Pus in the chest (pleural space) (also called *empyema*)

inflammation of the (mucous membranes) nose

Abnormal condition of the fungus in the nose

Term (Con't)

Definition (Con't)

rhinorrhagia..... (ri-nō-RĀ-jē-a)	Rapid flow of blood from the nose (also called <i>epistaxis</i>)
thoracalgia..... (thō-rak-AL-jē-a)	Pain in the chest
tonsillitis..... (ton-sil-l-tis)	inflammation of the tonsils
tracheitis (trā-kē-l-tis)	inflammation of the trachea
tracheostenosis..... (trā-kē-ō-sten -Ō-sis)	narrowing of the trachea



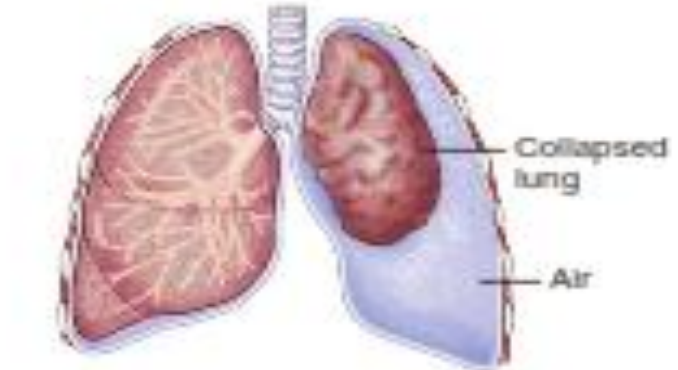
Exercise Figure B

Fill in the blanks to complete labeling of the diagram.

_____ / _____ / _____
bronchus / **CV** / **dilation**
 showing the alveoli

EXERCISE FIGURE C

Fill in the blanks to label the diagram.



1. _____ / _____ / _____
 air / CV / chest cavity



2. _____ / _____ / _____
 blood / CV / chest cavity

Learn the definitions and spellings of the disease and disorder terms by completing exercises 12, 13, and 14.

EXERCISE 12

Analyze and define the following terms.

WR CV S

Example: diaphragmat / o / cele: hernia of the diaphragm
CF

1. pleuritis _____
2. nasopharyngitis _____
3. pneumothorax _____
4. pansinusitis _____
5. atelectasis _____
6. rhinomycosis _____
7. tracheostenosis _____
8. epiglottitis _____

9. thoracalgia _____
10. pulmonary neoplasm _____
11. bronchiectasis _____
12. tonsillitis _____
13. pneumoconiosis _____
14. bronchopneumonia _____
15. pneumonitis _____
16. laryngitis _____
17. pneumotocele _____
18. pyothorax _____
19. rhinorrhagia _____

20. bronchitis _____

21. pharyngitis _____

22. tracheitis _____

23. laryngotracheobronchitis _____

24. adenoiditis _____

25. hemothorax _____

26. lobar pneumonia _____

27. rhinitis _____

28. bronchogenic carcinoma _____

29. pneumonia _____

EXERCISE 13

Build disease and disorder terms for the following definitions with the word parts you have learned.

Example: inflammation of the tonsils

tonsill/itis

WR / S

1. pain in the chest

: _____ / _____
WR / S

2. abnormal condition of fungus
(infection) in the nose .

: _____ / _____ / _____ / _____
WR / CV / WR / S

3. hernia of the lung

: _____ / _____ / _____
WR / CV / S

4. pertaining to the lung; new growth
(tumor)

: _____ / _____ _____ / _____
WR / S P / S(WR)

5. inflammation of the larynx

: _____ / _____
WR / S

6. incomplete expansion
(of the lung) : _____ / _____
WR / S
7. inflammation of the adenoids : _____ / _____
WR / S
8. inflammation of the larynx,
trachea, and bronchi : _____ / _____ / _____ / _____ / _____
WR / CV / WR / CV / WR / S
9. dilation of the bronchi : _____ / _____ / _____
WR / CV / S
10. inflammation of the pleura : _____ / _____
WR / S
11. abnormal condition of dust
in the lung : _____ / _____ / _____ / _____
WR / CV / WR / S
12. inflammation of the lung : _____ / _____
WR / S
13. inflammation of the sinuses : _____ / _____ / _____
P / WR / S

14. narrowing of the trachea : _____ / ____ / _____
WR /CV/ S
15. inflammation of the nose : _____ / ____ / _____ / _____
and pharyns WR / CV / WR / S
16. Pus in the chest (pleural space) : _____ / ____ / _____
WR /CV/ S
17. inflammation of the epiglottis : _____ / _____
WR / S
18. hernia of the diaphragm : _____ / ____ / _____
WR /CV/ S
19. air in the chest (pleural space) : _____ / ____ / _____
WR /CV/ S

20. diseased state of the bronchi : _____ / _____ / _____ / _____
and the lungs WR / CV / WR / S

21. rapid flow of blood from the : _____ / _____ / _____
nose WR / CV / S

22. inflammation of the pharynx : _____ / _____
WR / S

23. blood in the chest cavity (pleural space) : _____ / _____ / _____
WR / CV / S

24. inflammation of the trachea : _____ / _____
WR / S

25. inflammation of the bronchi : _____ / _____
WR / S

26. pertaining to the lobe(s);
diseased state of the lung(s)

: _____ / _____ _____ / _____
WR / S WR / S

27. inflammation of the nose
(mucous membranes)

: _____ / _____
WR / S

28. cancerous tumor originating
in a bronchus

: _____ / _____ / _____
WR /CV/ S

_____ / _____
WR / S

29. diseased state of the lung

: _____ / _____
WR / S

EXERCISE 14

Spell each the disease and disorder terms. Have someone dictate the terms pp. 117-119 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

- | | |
|-----------|-----------|
| 1. _____ | 16. _____ |
| 2. _____ | 17. _____ |
| 3. _____ | 18. _____ |
| 4. _____ | 19. _____ |
| 5. _____ | 20. _____ |
| 6. _____ | 21. _____ |
| 7. _____ | 22. _____ |
| 8. _____ | 23. _____ |
| 9. _____ | 24. _____ |
| 10. _____ | 25. _____ |
| 11. _____ | 26. _____ |
| 12. _____ | 27. _____ |
| 13. _____ | 28. _____ |
| 14. _____ | 29. _____ |
| 15. _____ | 30. _____ |

3-1-Disease and Disorder Terms (Con't)

3-1-2.Not Built from Word Parts

Term

adult respiratory distress
syndrome(ARDS).....
(a-DULT)(RES-pir-a-tor-ē)
(di-STRES)(SIN-drōm)

asthma.....
(AZ-ma)

Chronic obstructive pulmonary
disease (COPD).....
(KRON-ik)(ob-STRUK-tiv)
(PUL-mō-nar-ē)(di-ZĒZ)

Definition

respiratory failure in an adult as a result of disease or injury. Symptoms include dyspnea, rapid breathing, and cyanosis. (It is also called *acute respiratory distress syndrome*).

respiratory disease characterized by paroxysms of coughing, wheezing, and shortness of breath.

A group of disorders that are almost always a result of smoking that obstructs bronchial flow. On or more of the following is present in COPD in varying degrees: emphysema, chronic bronchitis, bronchospasm, and bronchiolitis.

Term (Con't)

coccidioidomycosis.....
(kok-sid-ē-oyd-ō-mi-KŌ-sis)

cor pulmonale.....
(kōr) (pul-mō-NAL-ē)

croup
(krūp)

cystic fibrosis.....
(SIS-tik) (fi-BRŌ-sis)

deviated septum.....
(SEP-tum)

Definition (Con't)

Fungal disease affecting the lung and sometimes other organs of the body (also called *valley fever* or *cocci*).

Serious cardiac disease associated with chronic lung disorders, such as emphysema.

Condition resulting from acute obstruction of the larynx, characterized by a barking cough, hoarseness, and stridor. It may be caused by viral or bacterial infection, allergy, or foreign body. Occurs mainly in children.

Hereditary disorder of the endocrine glands characterized by excess mucus production in the respiratory tract, pancreatic deficiency, and other symptoms.

One part of the nasal cavity is smaller because of malformation or injury.

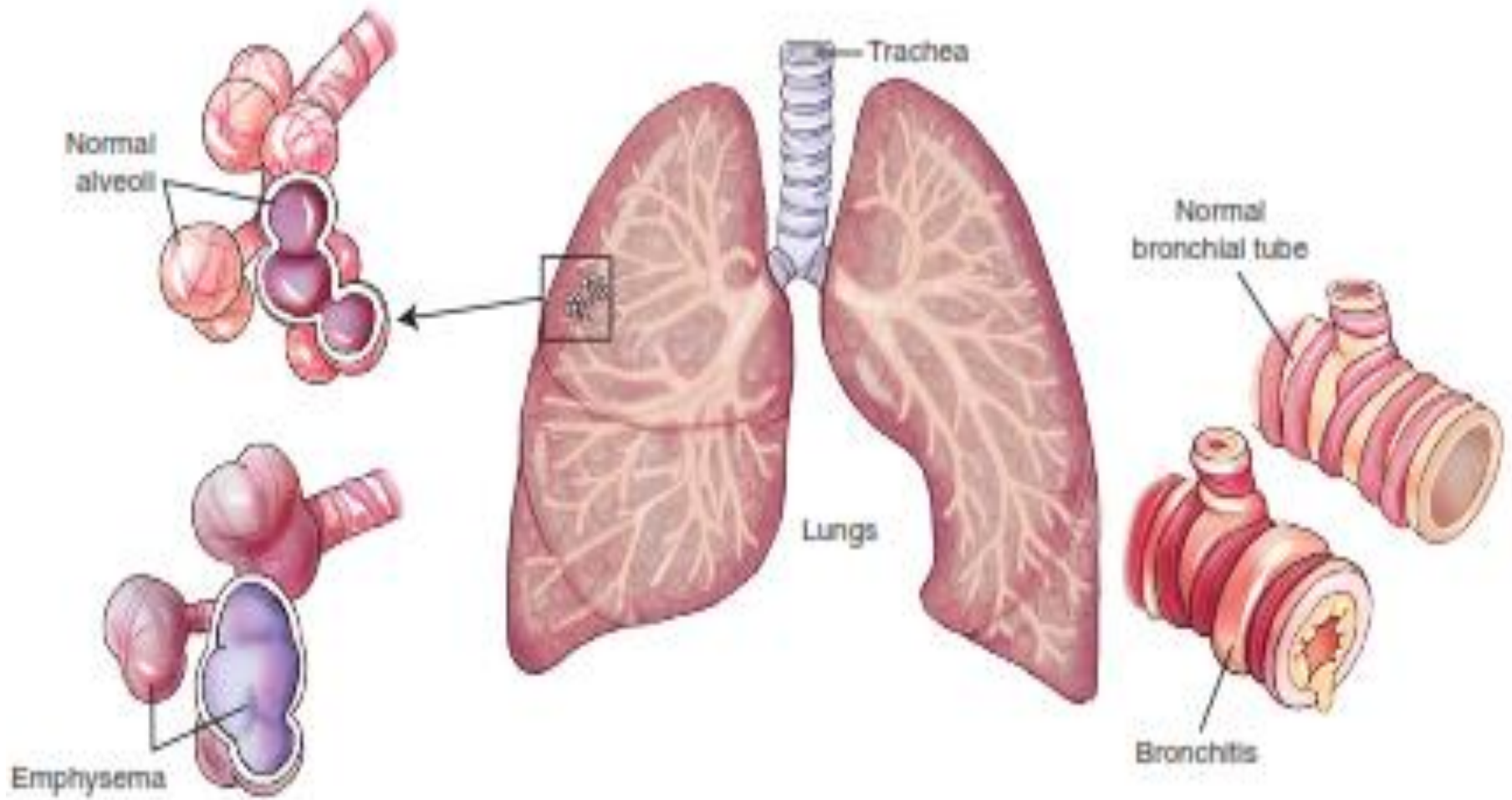
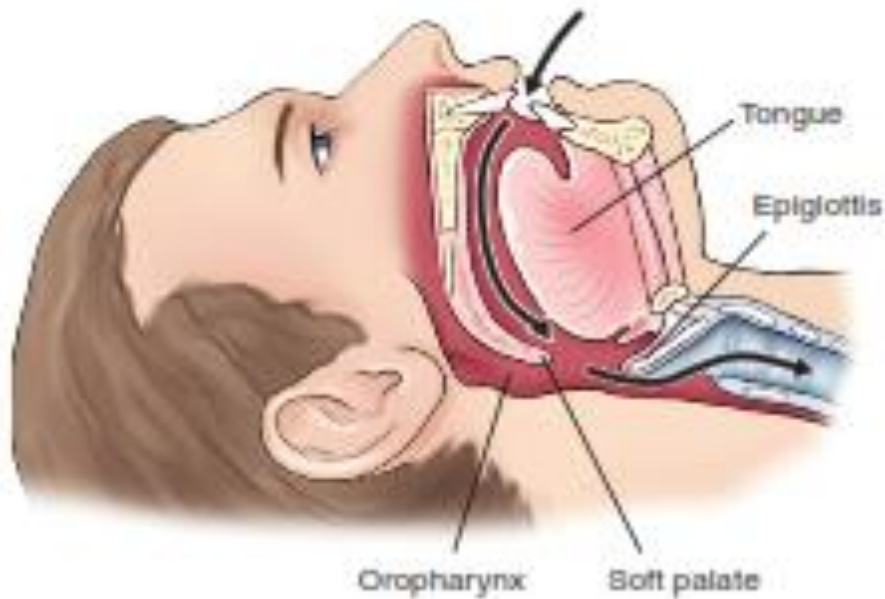


Figure 5-5
Emphysema and bronchitis.

Open airway-awake



Closed airway-asleep



Figure 5-6

Obstructive sleep apnea. During sleep the absence of activity of the pharyngeal muscle structure allows the airway to close.

Term (Con't)

emphysema.....
(em-fi-SĒ-ma)

epistaxis.....
(ep-i-STAK-sis)

influenza.....
(in-flū-EN-za)

Legionnaire disease.....
(lē-je-NĀR) (di-ZĒZ)

obstructive sleep apnea
(OSA).....
(AP-nē-a)

pertussis.....
(per-TUS-sis)

Definition (Con't)

Stretching of lung tissue caused by the alveoli becoming distended and losing elasticity (Figure 5-5).

Nosebleed (synonymous with *rhinorrhagia*).

Highly infectious respiratory disease caused by a virus (also called *flu*).

A lobar pneumonia caused by the bacterium *Legionella pneumophila* .

Repetitive pharyngeal collapse during sleep, which leads to absence of breathing (Figure 5-6).

Respiratory disease characterized by an acute crowing inspiration, or whoop (synonymous with *whooping cough*).



Figure 5-7

Chest radiograph revealing pneumonia in the upper lobe of the right lung (arrow)

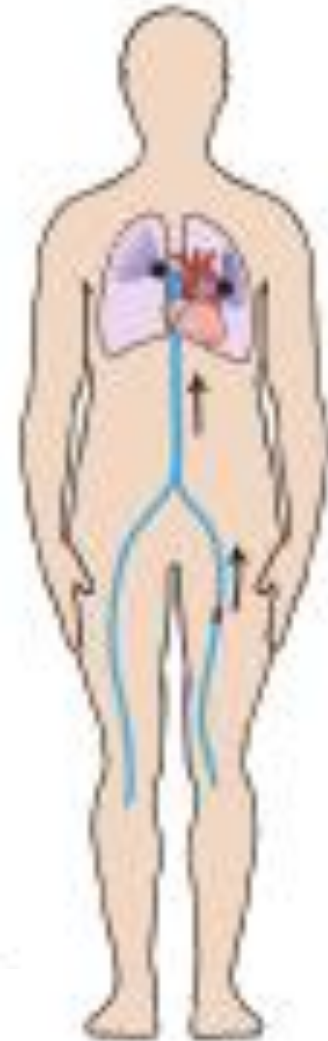
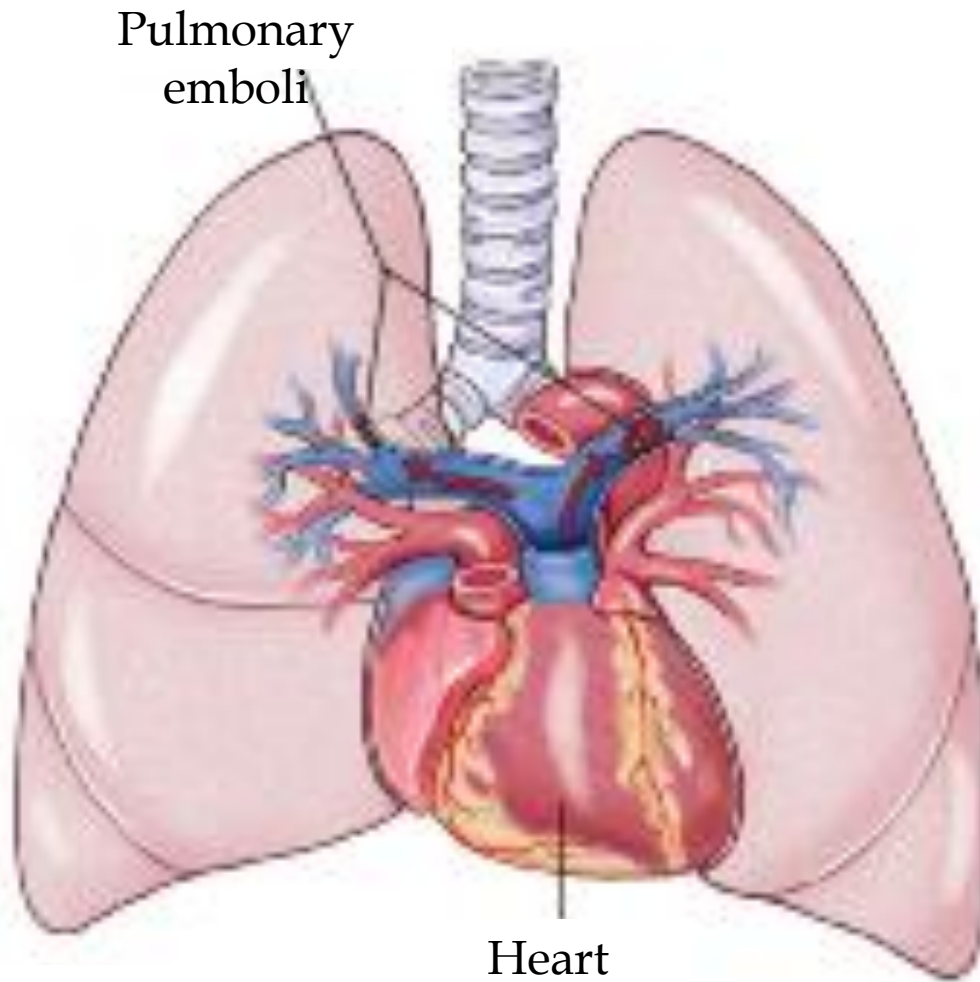


Figure 5-8
Pulmonary embolism

Term (Con't)

pleural effusion.....
(PLŪ-ral)(e-FŪ-zhun)

pneumocystis carinii
(P. carinii) pneumonia(PCP)..
(nū-mō-SIS-tis)(car-i-NĒ-i)

pulmonary edema.....
(PUL-mō-nar-ē)(e-DĒ-ma)

pulmonary embolism
(*pl.* emboli)(PE).....
(PUL-mō-nar-ē)(EM-bō-lizm)

tuberculosis (TB).....
(tū-ber-kū-LŌ-sis)

upper respiratory infection
(URI).(UP-er)(RE-spi-ra-tō-rē)
(in-FEK-shun)

Definition (Con't)

Escape of fluid into the pleural space as a result of inflammation.

A pneumonia caused by P. carinii, a fungus. Common disease in patients with AIDS (Figure 5-7).

Fluid accumulation in the alveoli and bronchioles.

Foreign matter, such as a blood clot, air, or fat clot, carried in the circulation to the pulmonary artery, where it blocks circulation (Figure 5-8).

An infectious disease, caused by an acid-fast bacillus, most commonly spread by inhalation of small particles and usually affecting the lungs.

Infection of the nasal cavity, pharynx, or larynx.

Learn the definitions and spellings of the diagnostic terms by completing exercises 15, 16, 17, and 18.

EXERCISE 15

Fill in the blanks with the correct terms.

1. A disease characterized by lung tissue stretching that results from the alveoli losing elasticity and becoming distended is called_____.
2. _____ is the name given to the escape of fluid into the pleural space as a result of inflammation.
3. cardiac condition that is associated with chronic lung disorders is called_____.
4. A fungal disease affecting the lungs is called_____.
5. _____ is a hereditary disorder characterized by excess mucus production in the respiratory tract.
6. The medical name of the infectious respiratory disease commonly referred to as *flu* is_____.

7. A group of disorders that obstruct the bronchial airflow is known as _____.
8. The medical name for the disease characterized by an acute crowing inspiration is _____.
9. _____ is a condition resulting from an acute obstruction of the larynx.
10. A chronic respiratory disease characterized by shortness of breath, wheezing, and paroxysmal coughing is called _____.
11. A condition in which fluid accumulates in the alveoli and bronchioles is _____.
12. A(n) _____ generally refers to an infection involving the nasal cavity, pharynx, or larynx.
13. Foreign matter, such as a blood clot, air, or fat carried in the circulation to the pulmonary artery, where it blocks circulation to the lungs, is called a(n) _____.

14. _____ is another name for nosebleed.
15. A lobar pneumonia caused by the *Legionella pneumophila*, bacterium is commonly called _____.
16. A pneumonia most commonly found in patients with AIDS is called _____.
17. _____ is one part of the nasal cavity that is smaller than the other because of malformation or injury.
18. The diagnosis for repetitive pharyngeal collapse is _____.
19. An infections disease usually affecting the lungs and caused by inhaling infected small particles is _____.
20. _____ occurs in adults as a result of disease or injury.

EXERCISE 16

Match the terms in the first column with the correct definitions in the second column.

___ 1. asthma	a. alveoli become distended and lose elasticity
___ 2. chronic obstructive pulmonary disease	b. caused by a virus (commonly called <i>flu</i>)
___ 3. coccidioidomycosis	c. hereditary disorder characterized by excess mucus in the respiratory system
___ 4. cor pulmonale	d. characterized by wheezing, paroxysmal coughing and shortness of breath
___ 5. croup	e. nosebleed
___ 6. cystic fibrosis	f. cardiac disease associated with chronic lung disorders
___ 7. emphysema	g. condition resulting from acute obstruction of the larynx
___ 8. epistaxis	h. also called valley fever
___ 9. influenza	i. lobar pneumonia caused by the bacterium <i>Legionella pneumophila</i>
___ 10. Legionnaire disease	j. lung disorder that obstructs the bronchial airflow.

EXERCISE 17

Match the terms in the first column with the correct definitions in the second column.

___ 1. pertussis	a. respiratory failure in an adult
___ 2. pleural effusion disease or injury	b. escape of fluid into the pleural cavity.
___ 3. pulmonary edema	c. fluid accumulation in alveoli and bronchioles
___ 4. pulmonary embolism	d. whooping cough
___ 5. upper respiratory infection	e. foreign material, moved by circulation, that blocks the pulmonary artery
___ 6. deviated septum	f. infection of the nasal cavity, pharynx, or larynx.
___ 7. obstructive sleep apnea	g. common in patients with AIDS
___ 8. P. carinii pneumonia	h. unequal size of nasal cavities
___ 9. tuberculosis	i. repetitive pharyngeal collapse
___ 10. adult respiratory distress syndrome	j. an infectious bacterial disease usually affecting the lungs

EXERCISE 18

Spell the disease and disorder terms. Have someone dictate the terms on pp.

123-125 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

18. _____

19. _____

20. _____

3-2. Surgical Terms

3-2-1. Built from Word Parts

Term

adenoidectomy.....
(ad-e-noyd-EK-to-mē)

adenotome.....
(AD-e-nō-tōm)

(Note: the oid is missing from the word root adenoid in this term.)

bronchoplasty.....
(BRON-kō-plas-tē)

laryngectomy.....
(lār-in-JEK-tō-mē)

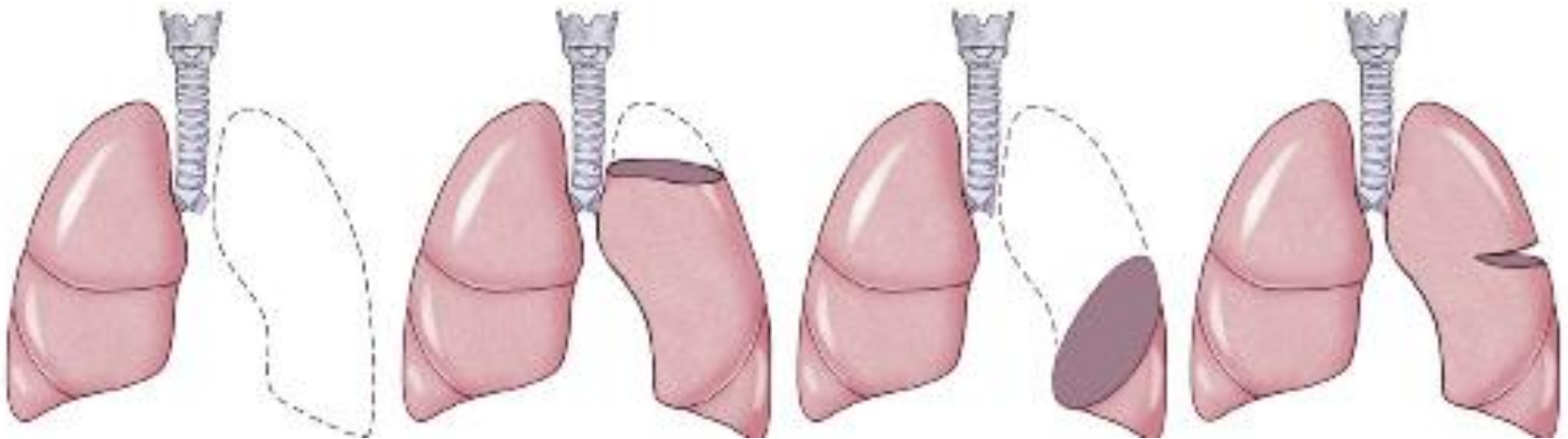
Definition

excision of the adenoids (Exercise Figure D.)

surgical instrument used to cut the adenoids (Exercise Figure D)

surgical repair of a bronchus

excision of the larynx



Pneumonectomy
resection

Segmental resection

Lobectomy

Wedge

Figure 5-9

Types of lung resection. The amount of lung tissue removed with each type of surgery is illustrated

Term (Con't)

laryngoplasty.....
(lar-IN-gō-plas-tē)

laryngostomy.....
(lar-in-GOS-tō-mē)

laryngotracheotomy.....
(lar-in-gō-tra-kē-OT-ō-mē)

lobectomy.....
(lō-BEK-tō-mē)

pleuropexy.....
(plū-rō-PEK-sē)

pneumobrochotomy.....
(nū-mō-bron-KOT-ō-mē)

Definition (Con't)

surgical repair of the larynx

creation of an artificial opening into the larynx

incision of the larynx and trachea

excision of a lobe (of the lung) (Figure 5-9)

surgical fixation of the pleura

incision of a lung and bronchus

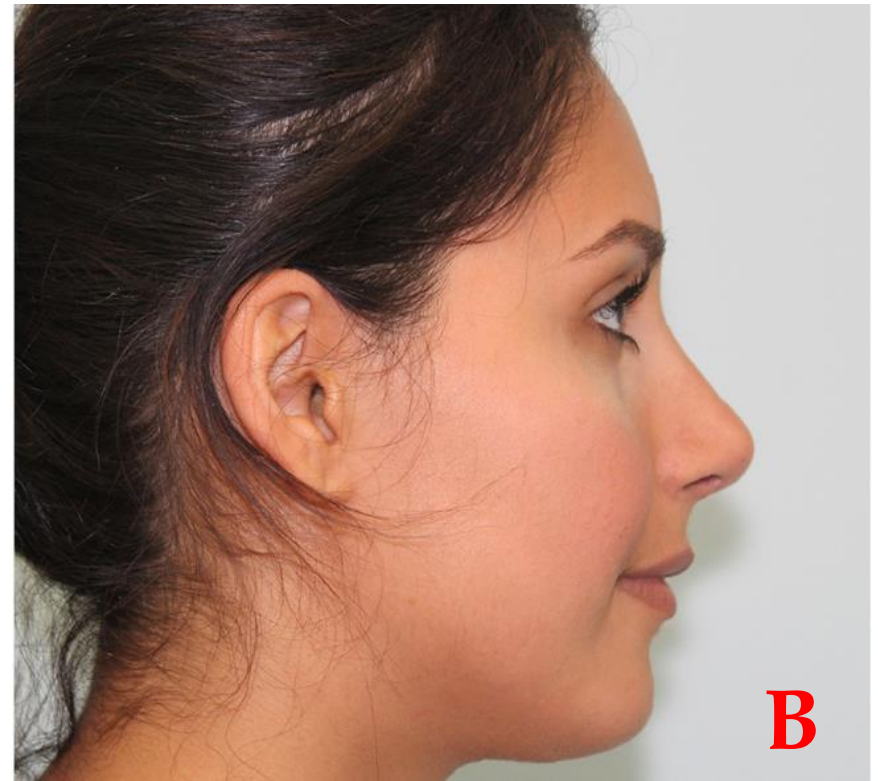


Figure 5-10

Slide view of patient before (A) and after (B) rhinoplasty and chin augmentation

Term (Con't)

pneumonectomy.....
(nū-mō-NEK-tō-mē)

rhinoplasty.....
(RI-nō-plast-ē)

septoplasty.....
(sep-tō-PLAS-tē)

septotomy.....
(sep-TOT-ō-mē)

sinusotomy.....
(si-nū-SOT-ō-mē)

Definition (Con't)

excision of a lung (see Figure 5-7)

surgical repair of the nose (Figure **5-10**)

surgical repair of the (nasal) septum

incision into the (nasal) septum

incision of a sinus

Term (Con't)

Thoracocentesis.....
(thō-rak-ō-sen-TĒ-sis)

Thoracotomy.....
(thō-ra-KOT-ō-mē)

Tonsillectomy.....
(ton-sil-EK-tō-mē)

Tracheoplasty.....
(TRĀ-kē-ō-plas-tē)

Tracheostomy.....
(trā-kē-OS-tō-mē)

Tracheotomy.....
(tra-ke-OT-o-me)

Definition (Con't)

surgical puncture to aspirate fluid from the chest cavity (also called *thoracentesis*) (Exercise Figure E).

incision into the chest cavity.

excision of the tonsils.

surgical repair of the trachea.

creation of an artificial opening into the trachea (Exercise Figure F)

incision into the trachea



Exercise Figure D

Fill in the blanks label the diagram.

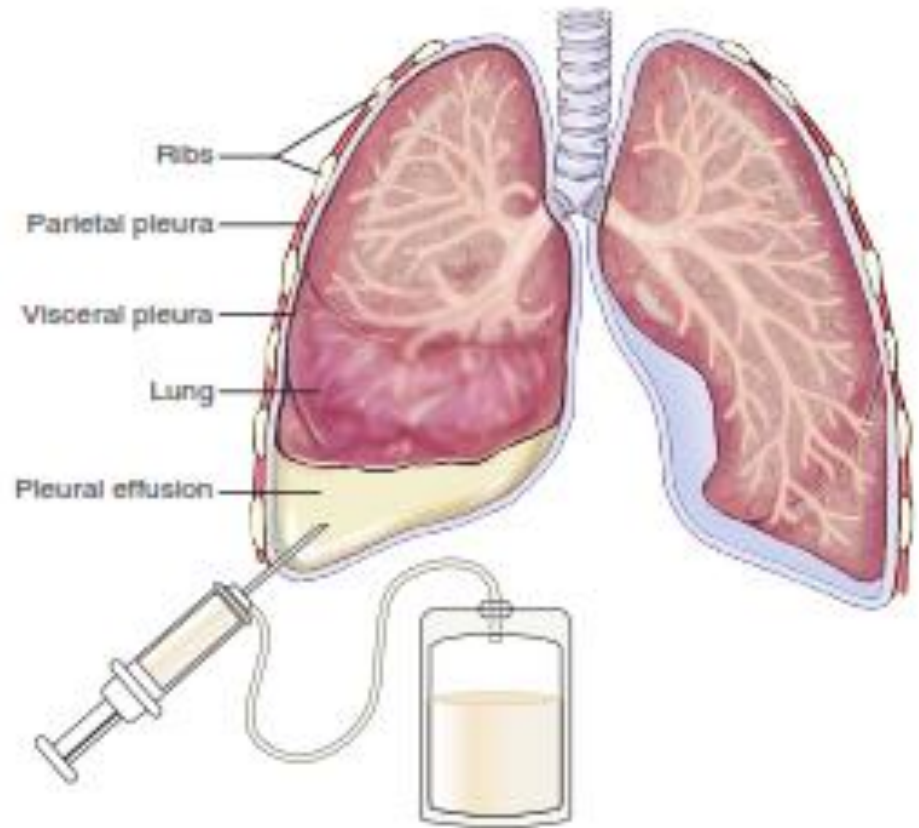
_____ / _____

adenoid / excision

Performed with a(n)

_____ / _____ / _____

adenoid / cv / surgical
instrument used to cut



Exercise Figure E

Fill in the blanks to complete labeling the diagram.

_____ / _____ / _____

chest / CV / surgical puncture to remove fluid

is used for both diagnosis and treatment.



Exercise Figure F

Fill in the blanks to complete labeling the diagram.

_____ / _____ / _____

trachea / CV / creation of an artificial opening
with tube in place.

Learn the definitions and spellings of the surgical terms by completing exercises 19, 20, and 21

Exercise 19

Analyze and define the following surgical terms.

WR S

Example: pneumon/ ectomy : excision of lung_____.

1. tracheotomy_____

2. laryngostomy _____

3. adenoidectomy _____

4. rhinoplasty _____

5. adenotome _____

6. tracheostomy _____

7. sinusotomy _____

8. laryngoplasty _____

9. pneumobronchotomy _____

10. bronchoplasty _____

11. lobectomy _____

12. laryngotracheotomy _____

13. tracheoplasty _____

14. thoracotomy _____

15. laryngectomy _____

16. thoracocentesis _____

17. tonsillectomy _____

18. pleuropexy _____

19. septoplasty _____

20. septotomy _____

EXERCISE 20

Build surgical terms for the following definitions by using the word parts you have learned.

1. surgical repair of the trachea : _____ / _____ / _____

WR / CV / S

2. incision of larynx and trachea : _____ / _____ / _____ / _____

WR / CV / WR / CV / S

3. surgical instrument used to : _____ / _____ / _____

cut the adenoids

WR / CV / S

4. incision into the chest cavity : _____ / _____ / _____

WR / CV / S

5. creation of an artificial : _____ / _____ / _____

opening into the trachea

WR / CV / S

6. excision of the tonsils : _____ / _____
WR / S
7. incision of the trachea : _____ / _____ / _____
WR / CV / S
8. surgical repair of a bronchus : _____ / _____
WR / S
9. excision of the larynx : _____ / _____
WR / S
10. surgical repair of the nose : _____ / _____ / _____
WR / CV / S
11. incision of a sinus : _____ / _____ / _____
WR / CV / S
12. surgical puncture to aspirate
fluid from the chest cavity. : _____ / _____ / _____
WR / CV / S
- or _____ / _____
WR / S
13. excision of the adenoids : _____ / _____
WR / S

14. surgical repair of the larynx : _____ / ____ / _____
WR /CV/ S
15. excision of a lobe (of the lung) : _____ / _____
WR / S
16. incision of a lung and bronchus : _____ / ____ / _____ / _____
WR /CV/ WR /CV/ S
17. creation of artificial opening into the larynx : _____ / ____ / _____
WR /CV/ S
18. excision of a lung : _____ / _____
WR / S
19. incision into the septum : _____ / ____ / _____
WR / CV / S
20. surgical repair of the septum : _____ / ____ / _____
WR / CV / S

Exercise 21

Spell each of the surgical terms, Have someone dictate the terms on pp. 129-130 to you. Think about the word parts before attempting to write the word. Study any word you have spelled incorrectly.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____

3-3. Diagnostic Terms

3-3-1. Built from Word Parts

Term

Definition

Endoscopy

bronchoscope.....
(BRON-kō-skōp)

Instrument used for visual examination of the bronchi (Table 5-1, Figure 5-11, and Exercise Figure G).

bronchoscopy.....
(bron-KOS-kō-pē)

Visual examination of the bronchi (see Exercise Figure G).

endoscope.....
(EN-dō-skōp)

Instrument used for visual examination within (a hollow organ or body cavity).
(Current trend is to use endoscopes for surgical procedures as well as for viewing)

endoscopic.....
(en-dō-SKOP-ic)

Pertaining to visual examination within (a hollow organ or body cavity) (used to describe the practice of pertaining surgeries that use endoscopes)

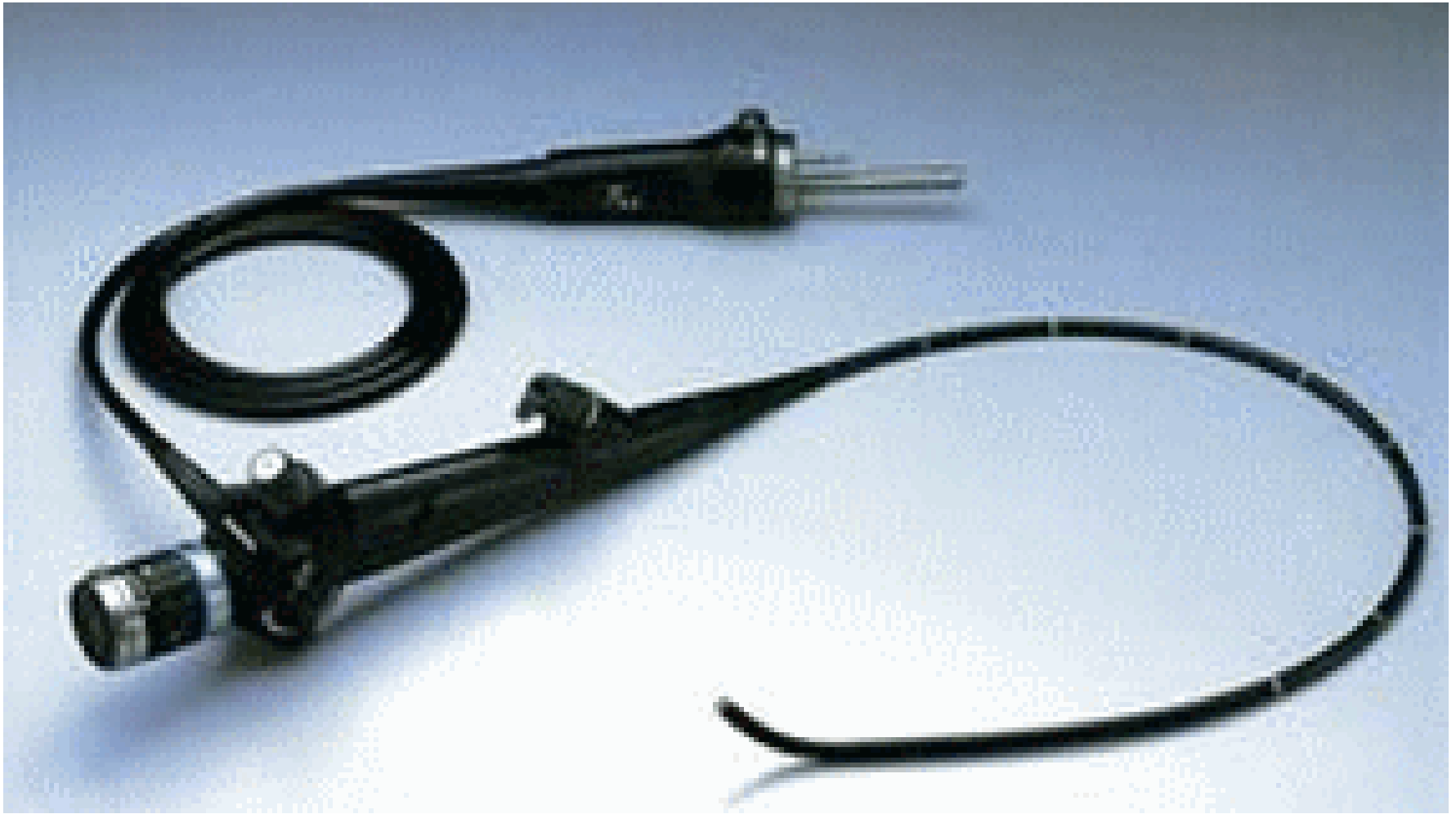


Figure 5-11
Fibrosopic bronchoscope

Term (Con't)

endoscopy.....
(en-DOS-kō-pē)

laryngoscope.....
(lar-IN-gō-skōp)

laryngoscopy.....
(lar-in-GOS-kō-pē)

thoracoscope.....
(tho-RAK-ō-skōp)

thoracoscopy.....
(tho-ra-KOS-kō-pē)

Pulmonary Function

capnometer.....
(kap-NOM-e-ter)

Definition (Con't)

visual examination within (a hollow organ or body cavity).

Instrument used for visual examination of the larynx (Exercise Figure H).

visual examination of the larynx

Instrument used for visual examination of the thorax (Exercise Figure H).

visual examination of the thorax

Instrument used to measure carbon dioxide (levels in expired gas) (Figure 5-12, A).



A cqutech.en.alibaba.com



B

Figure 5-12
A, Capnometer; B, Spirometer

Term (Con't)

oximeter.....
(ok-SIM-e-ter)
(NOTE: the combining vowel is *i*)

Spirometer.....
(spi-ROM-eter)

Spirometry.....
(spi-ROM-e-trē)

Sleep Studies

Polysomnography (PSG).....
(pol-ē-som-NOG-rha-fē)

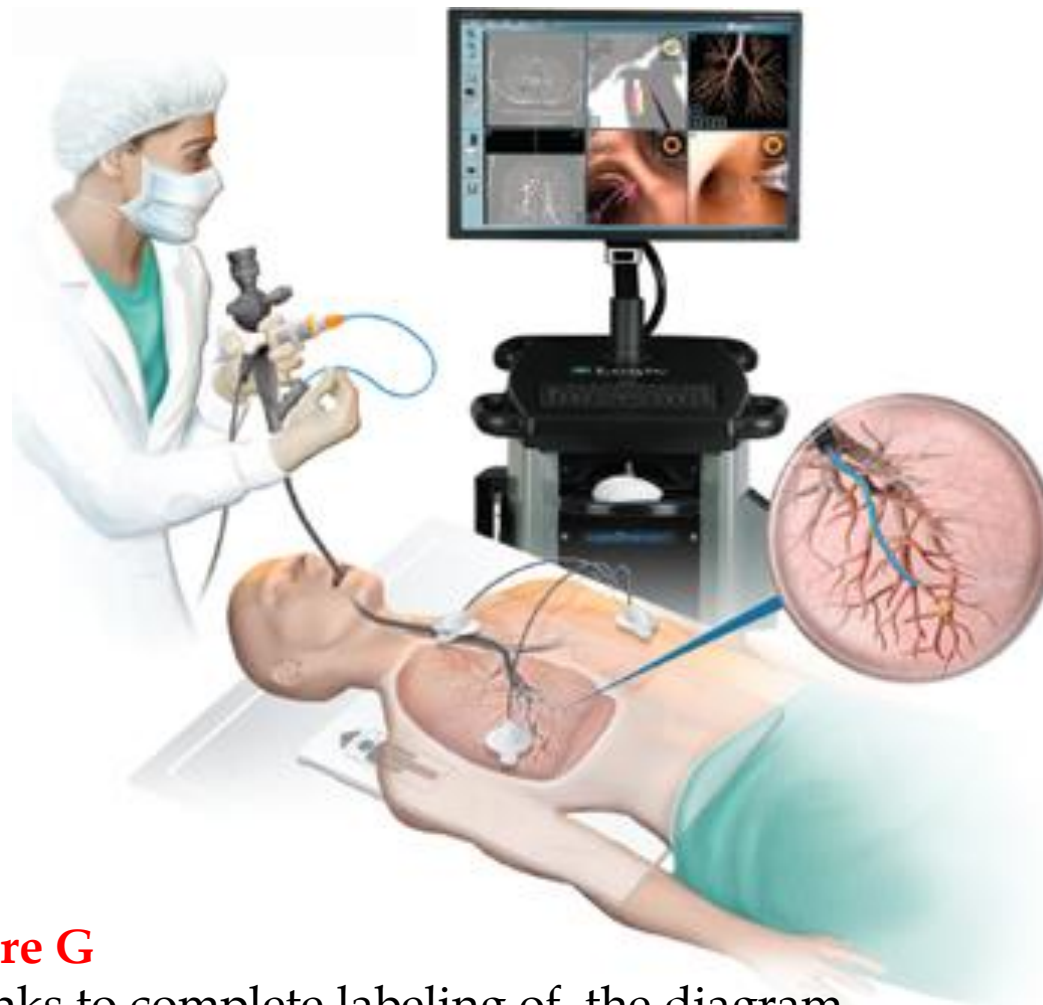
Definition (Con't)

Instrument used to measure oxygen
(saturation in the blood) (see Table 5-1).

Instrument used to measure breathing
(or lung volumes) (Figure 5-12, B).

Measurement of breathing or lung volumes).

Process of recording many (tests) during sleep (performed to diagnose obstructive sleep apnea [see Figure 5-5 and 5-6]). Tests include electrocardiography, electromyography, electroencephalography, air flow monitoring, and oximetry.



Exercise Figure G

Fill in the blanks to complete labeling of the diagram.

_____ / _____ / _____.

bronchi / cv / visual examination

The _____ / _____ / _____ is inserted through

bronchi / cv / instrument used for visual examination.

the nostril into the bronchi.

Learn the definitions and spellings of the diagnostic terms by completing exercises 22, 23, and 24.

EXERCISE 22

Analyze and define the following diagnostic terms.

1. spirometer _____

2. laryngoscope _____

3. capnometer _____

4. spirometry _____

5. oximeter _____

6. laryngoscopy _____

7. bronchoscope _____

8. thoracoscope _____

9. endoscope _____

10. thoracoscopy _____

11. endoscopic _____

12. endoscopy _____

13. polysomnography _____

EXERCISE 23

Build diagnostic terms that correspond to the following definitions by using the Word parts you have learned.

Example: instrument used to measure oxygen ox /i/ meter

WR /CV/ S

1. visual examination of the larynx

: _____ / ____ / _____
WR /CV/ S

2. instrument used to measure breathing

: _____ / ____ / _____
WR /CV/ S

3. instrument used to measure carbon dioxide

: _____ / ____ / _____
WR /CV/ S

4. instrument used for visual examination of the larynx

: _____ / ____ / _____
WR /CV/ S

5. visual examination of the bronchi

: _____ / ____ / _____
WR /CV/ S

6. measurement of breathing

: _____ / ____ / _____
WR /CV/ S

7. instrument used for visual examination of the bronchi

: _____ / ____ / _____
WR /CV/ S

8. visual examination of a hollow organ or body cavity

: _____ / _____ / _____
P / S (WR)

9. instrument used for visual examination of the thorax

: _____ / ____ / _____
WR /CV/ S

10. instrument used for visual
examination of a hollow organ
or body cavity

: _____ / _____
P / S (WR)

11. visual examination of the
thorax

: _____ / ____ / _____
WR /CV / S

12. pertaining to visual
examination of a hollow
organ or body cavity

: _____ / ____ / _____
P /CV/ S (WR)

13. process of recording of
many (tests) during sleep

: _____ / _____ / ____ / _____
P / WR /CV/ S

EXERCISE 24

Spell each of the diagnostic terms. Have someone dictate the terms on pp. 134 and 138 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

3-3. Diagnostic Terms (Con't)

3-3-2. Not Built from Word Parts

Term

Diagnostic Imaging

chest computed tomography(CT)
scan.....
(tō-MOG-ra-fē)

Definition

computerized images of the chest
created in sections sliced from front to
back. Used to diagnose tumors,
abscesses, and pleural effusion.
Computed tomography is used to
visualize other body part such as the
abdomen and brain

Term (Con't)

chest x-ray (CXR).....

ventilation-perfusion scanning
(VPS).....
(ven-ti-LĀ-shun)
(per-FŪ-zhun)

Laboratory

acid-fast bacilli (AFB) smear.....
(AS-id-fast)(bah-SIL-i)

Pulmonary Function

arterial blood gases (ABGs)
(ar-TĒ-rē-al)

Definition (Con't)

an x-ray image of the chest used to evaluate the lungs and the heart (also called a chest radiography)

a nuclear medicine procedure used to diagnose pulmonary embolism and other condition (also called a *lung scan*)

a test performed on sputum to determine the presence of acid-fast bacilli, which cause tuberculosis.

a test performed on arterial blood to determine levels of oxygen, carbon dioxide, and other gases present.

Term (Con't)

pulmonary function tests (PFTS)..
(PUL-mō-ner-ē)

pulse oximetry.....
(ok-SIM-e-trē)

Other

purified protein derivative (PPD)
skin test

Definition (Con't)

a group of tests performed to measure breathing, which is used to determine respiratory function or abnormalities

a noninvasive method of measuring oxygen in the blood by using a device that attaches to the fingertip

a test performed on individuals who have recently been exposed to tuberculosis. PPD of the tuberculin bacillus is injected intradermally. Positive tests indicate previous exposure, not necessarily active tuberculosis.

Learn the definitions and spellings of the diagnostic terms by completing exercises 25, 26, and 27.

Exercise 25

Fill in the blanks with the correct terms.

1. _____ is a nuclear medicine procedure used to diagnose pulmonary embolism and other condition.
2. Computerized images of the chest, created in sections sliced from front to back, are called a(n) _____ scan.
3. _____ is used to evaluate the lungs and the heart.
4. The test performed on arterial blood to determine levels of oxygen, carbon dioxide, and other gases present is called _____.

5. A noninvasive test to measure oxygen in the blood is called _____
_____.

6. A test performed on sputum to diagnose tuberculosis is called
_____.

7. _____ is the name of a
group of tests performed on breathing to determine respiratory function or
abnormalities.

8. _____ is a test that,
when positive, indicates an individual has been exposed to tuberculosis.

Exercise 26

Match the terms in the first column with their correct definitions in the second column.

___ 1. ventilation-perfusion scanning	a. computerized images of the chest
___ 2. chest x-ray	b. a noninvasive method used to measure oxygen in the blood.
___ 3. chest CT scan	c. a blood test used to determine oxygen and other gases in the blood.
___ 4. acid-fast bacilli smear	d. a test for tuberculosis
___ 5. pulse oximetry	e. chest radiograph
___ 6. arterial blood gases	f. a nuclear medicine procedure used to diagnose pulmonary conditions.
___ 7. pulmonary function tests	g. injected intradermally
___ 8. PPD scan test	h. tests performed on breathing
	i. an instrument to measure pulse waves

EXERCISE 27

Spell each of the diagnostic terms. Have someone dictate the terms on pp. 140-141 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

3-4. Complementary Terms

3-4-1. Built from Word Parts

Term	Definition
acapnia (a-CAP-nē-a)	condition of absence (less than normal level) of carbon dioxide (in the blood)
anoxia..... (a-NOK-sē-a)	absence (deficiency) of oxygen
aphonea..... (ā-FŌ-nē-a)	absence of voice
apnea..... (AP-nē-a)	absence of breathing
bronchoalveolar (bron-kō-al-VĒ-ō-lar)	pertaining to the bronchi and alveoli

Term (Con't)

bronchospasm.....
(BRON-kō-spazm)

diaphragmatic.....
(dī-a-frag-MAT-ik)

dysphonia.....
(di-FŌ-nē-a)

dyspnea.....
(DISP-nē-a)

endotracheal.....
(en-dō-TRĀ-kē-al)

eupnea.....
(ŪP-nē-a)

Definition (Con't)

spasmodic contraction in the bronchi

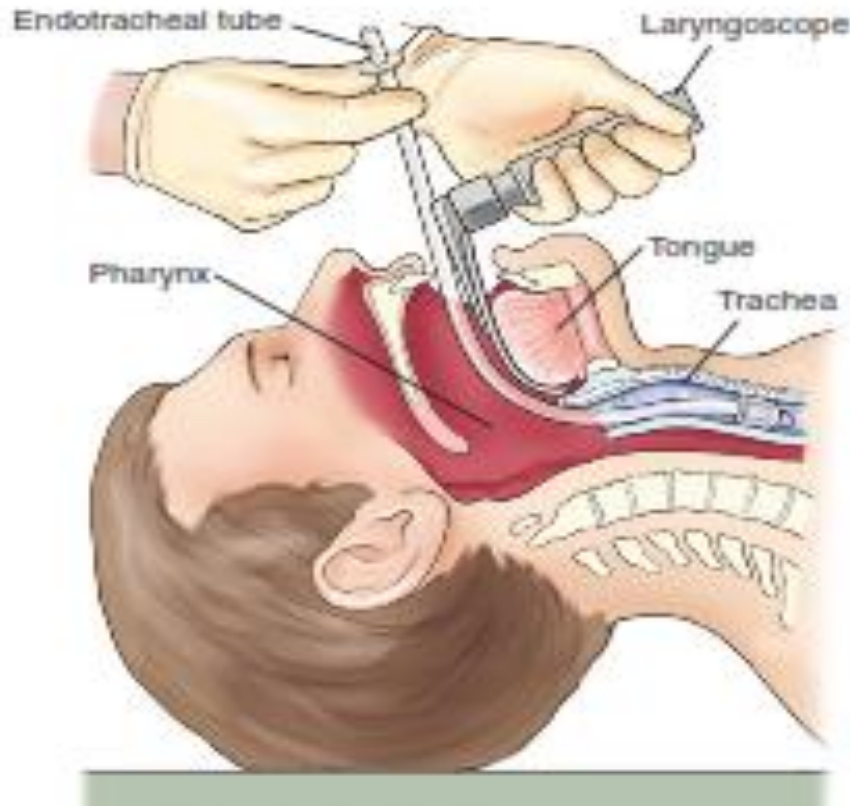
pertaining to the diaphragm

difficult speaking (voice)

difficult breathing

pertaining to within the trachea
(see Exercise Figure H)

normal breathing



Exercise Figure H

Fill in the blanks to complete labeling of the diagram. The physician is inserting a(n)

_____ / _____ / _____. Tube with a(n)

within / trachea / pertaining to

_____ / _____ / _____

larynx / cv / instrument used for visual examination.

Term (Con't)

Definition (Con't)

hypercapnia..... (hī-per-KAP-nē-a)	condition of excessive carbon dioxide (in the blood)
hyperpnea..... (hī-perp-NĒ-a)	excessive breathing
hypocapnia..... (hī-pō-KAP-nē-a)	condition of deficient carbon dioxide (in the blood)
hypopnea..... (hī-pop-NĒ-a)	deficient breathing
hypoxemia..... (hī-po-SĒ-mē-a) (NOTE: the o from hypo has been dropped. The final vowel in a prefix may be dropped when the word to which it is added begins with a vowel.)	deficient oxygen in the blood

Term (Con't)

Definition (Con't)

hypoxia.....
(hī-POK-sē-a)
(NOTE: see note for
hypoxemia)

deficient oxygen (to the tissues)

intrapleural.....
(in-tra-PLUR-al)

pertaining to within the pleura (space
between the two pleural membranes)

laryngeal.....
(lar-IN-jē-al)

pertaining to the larynx

laryngospasm.....
(lar-ING-gō-spazm)

spasmodic contraction of the larynx

mucoid.....
(MŪ-koyd)

resembling mucus

Term (Con't)

Definition (Con't)

mucous.....
(MŪ-kus)

pertaining to mucus

nasopharyngeal.....
(nā-zō-fa-RIN-jē-al)

pertaining to the nose and pharynx

orthopnea.....
(or-THOP-nē-a)

able to breathe only in an upright position

pulmonary.....
(PUL-mō-ner-ē)

pertaining to the lungs

rhinorrhēa.....
(ri-nō-RE-a)

discharge from the nose (as in a cold)

thoracic.....
(tho-RAS-ik)

pertaining to the chest

Exercises 28, 29, and 30 will help you to learn the definitions and spellings of the complementary terms related to the urinary system.

Exercise 28

Analyze and define the following complementary terms.

P WR S

Example: hyper/capn/ia : condition of excessive carbon dioxide (in the blood)

1. laryngeal _____

2. eupnea _____

3. mucoid _____

4. apnea _____

5. hypoxia _____

6. laryngospasm _____

7. endotracheal _____

8. anoxia _____

9. dysphonia _____
10. bronchoalveolar _____
11. dyspnea _____
12. hypocapnia _____
13. bronchospasm _____
14. orthopnea _____
15. hyperpnea _____
16. acapnia _____
17. hypopnea _____

18. hypoxemia _____

19. aphonia _____

20. rhinorrhea _____

21. thoracic _____

22. mucous _____

23. nasopharyngeal _____

24. diaphragmatic _____

25. intrapleural _____

26. pulmonary _____

EXERCISE 29

Build the complementary terms for the following definitions by using the word parts you have learned.

Example: pertaining to bronchi and alveoli: bronch/o/alveol/ar
WR /CV/ WR / S

1. deficient oxygen : _____ / _____
P / S(WR)

2. resembling mucus : _____ / _____
WR / S

3. able to breathe only in
an upright position : _____ / _____ / _____
WR /CV/ S

4. pertaining to within the
trachea : _____ / _____ / _____
P / WR / S

5. absence of oxygen : _____ / _____
P / S(WR)

6. difficult breathing : _____ / _____
P / S(WR)

7. pertaining to the larynx : _____ / _____
WR / S

8. excessive carbon dioxide in the blood : _____ / _____ / _____
P / WR / S

9. normal breathing : _____ / _____
P / S(WR)

10. absence of voice : _____ / _____
P / S(WR)

11. spasmodic contraction of the larynx : _____ / _____ / _____
WR / CV / S

12. deficient carbon dioxide in the blood : _____ / _____ / _____
P / WR / S

13. pertaining to the nose
and pharynx

: _____ / ____ / _____ / _____
WR /CV/ WR / S

14. pertaining to the
diaphragm

: _____ / _____
WR / S

15. absence of breathing

: _____ / _____
P / S(WR)

16. deficient oxygen in
the blood

: _____ / _____ / _____
P / WR / S

17. excessive breathing

: _____ / _____
P / S(WR)

18. spasmodic contraction
of the bronchi

: _____ / ____ / _____
WR /CV/ S

19. deficient breathing : _____ / _____
P / S(WR)

20. condition of absence of carbon
dioxide (in the blood) : _____ / _____
P / WR / S

21. difficulty in speaking (voice) : _____ / _____
P / S(WR)

22. discharge from the nose : _____ / _____ / _____
WR / CV / S

23. pertaining to mucus : _____ / _____
WR / S

24. pertaining to the chest: _____ / _____
WR / S

25. pertaining to within the pleura) : _____ / _____ / _____
P / WR / S

26. pertaining to the lungs: _____ / _____
WR / S

EXERCISE 30

Spell each of the complementary terms. Have someone dictate the terms on pp.142-144 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____
26. _____

3-4. Complementary Terms (Con't)

3-4-2. Not Built from Word Parts

Term	Definition
airway (AR-wā)	passageway by which air enters and leaves the lungs as well as a mechanical device used to keep the air passageway unobstructed
asphyxia (as-FIK-sē-a)	deprivation of oxygen for tissue use; suffocation.
aspirate..... (AS-per-āt)	to withdraw fluid or suction as well as to draw foreign material into the respiratory tract.
bron <u>ch</u> o <u>con</u> strictor..... (bron-kō-kon-STRIK-tor)	agent causing narrowing of the bronchi.
bronchodilator..... (bron-kō-di-LĀ-tor)	agent causing the bronchi to widen.

Term (Con't)

Definition (Con't)

cough..... (kawf)	sudden, noisy expulsion of air from the lungs
hiccup..... (HIK-up)	sudden catching of breath with a spasmodic contraction of the diaphragm (also called <i>hiccough</i>)
hyperventilation..... (hi-per-ven-ti-LĀ-shun)	ventilation of the lungs beyond normal body needs
hypoventilation..... (hi-pō-ven-ti-LĀ-shun)	ventilation of the lungs that does not fulfill the body's gas exchange needs
mucopurulent..... (mū-kō-PŪR-ū-lent)	containing both mucus and pus
mucus..... (MŪ-kus)	slimy fluid secreted by the mucous membranes

Term (Con't)

Definition (Con't)

nebulizer..... (neb-ū-LĪZ-er)	device that creates a mist used to deliver medication for giving respiratory treatment (Figure 5-13)
nosocomial infection..... (nos-ō-KŌ-mē-al)	an infection acquired during hospitalization
paroxysm..... (PAR-ok-sizm)	periodic, sudden attack
patent..... (PĀ-tent)	open (an airway must be patent).
sputum..... (SPŪ-tum)	mucous secretion from the lung, bronchi, and trachea expelled through the mouth.
ventilator..... (VEN-ti-lā-tor)	mechanical device used to assist with or substitute for breathing when patient cannot breathe unassisted (Figure 5-14)



Figure 5-13
Nebulizer



Figure 5-14
Positive pressure ventilator

Learn the definitions and spellings of the complementary terms by completing exercises 31, 32, and 33.

Exercise 31

Fill in the blanks with the correct terms.

1. Another term for ventilation of the lungs beyond normal body needs is _____.
2. A device that creates a mist used to deliver medication for giving respiratory treatment is a(n)_____.
3. A(n)_____ is an agent that causes the air passages to widen.
4. A patient who has difficulty breathing can be attached to a mechanical breathing device called a(n)_____.
5. Another term for suffocation is _____.

6. Material mad up of mucous secretions from the lungs, bronchi, and trachea is called _____.
7. To suction or withdraw fluid is to _____.
8. A(n) _____ is a mechanical device that keeps the air passageway unobstructed.
9. A sudden catching of breath with spasmodic contraction of the diaphragm is called a(n). _____.
10. A sudden ,noisy expulsion of air from the lung is a(n) _____.
11. Material containing both mucus and pus is referred to as being _____.

12. _____ is the name given to ventilation of the lungs that does not fulfill the body's gas exchange needs.
13. An infection acquired during hospitalization is called _____.
14. The term that applies to a periodic sudden attack is _____.
15. An airway must be kept _____ (open) for the patient to breathe.
16. An agent that causes bronchi to narrow is added a(n)_____.
17. _____ is the name given to the slimy fluid secreted by the mucous membranes.

Exercise 32

Match the terms in the first column with their correct definitions in the second column,

___1. airway	a. sudden, noisy expulsion of air from the lungs.
___2. aspirate	b. mechanical device used to keep the air passageway unobstructed
___3. bronchoconstrictor	c. agent that narrows the bronchi
___4. bronchodilator	d. catching of breath with a spasmodic contraction of the diaphragm
___5. cough	e. mucus from throat and lungs
___6. hiccup	f. suffocation
___7. hyperventilation	g. ventilation of the lungs beyond normal body needs
___8. asphyxia	h. to draw foreign material into the respiratory tract.
	i. agent that widens the bronchi.

Exercise 33

Match the terms in the first column with their correct definitions in the second column.

___ 1. hypoventilation	a. open
___ 2. mucopurulent	b. mucous secretion from the lung, bronchi, and trachea expelled through the mouth.
___ 3. mucus	c. Respiratory treatment device that sends a mist.
___ 4. nebulizer	d. mechanical breathing device.
___ 5. nosocomial	e. ventilation of the lungs that does not fulfill the body's gas exchange needs
___ 6. patent	f. periodic, sudden attack
___ 7. sputum	g. agent that widen air passages.
___ 8. ventilator	h. containing both mucus and pus
___ 9. paroxysm	i. slimy fluid secreted by the mucous membranes
	j. hospital-acquired infection.

EXERCISE 34

Spell each of the complementary terms. Have someone dictate the terms on pp.148-149 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

3-5. Abbreviations

Abbreviations	
ABGs.....	arterial blood gases
AFB.....	acid-fast bacilli
ARDS.....	adult respiratory distress syndrome
CF.....	cystic fibrosis
CO ₂	carbon dioxide
COPD.....	chronic obstructive pulmonary disease
CT.....	computed tomography
CXR.....	chest x-ray
flu.....	influenza

3-5. Abbreviations

Abbreviations (Con't)	
LLL.....	left lower lobe
LTB.....	laryngotracheobronchitis
LUL.....	left upper lobe
O ₂	oxygen
OSA.....	obstructive sleep apnea
PCP.....	<i>pneumocystis carinii</i> pneumonia
PE.....	pulmonary embolism
PFTs.....	pulmonary function tests
PSG.....	polysomnography

3-5. Abbreviations

Abbreviations (Con't)	
RLL.....	right lower lobe
RML.....	right middle lobe
RUL.....	right upper lobe
TB.....	tuberculosis
URI.....	upper respiratory infection
VPS.....	ventilation-perfusion scanning

EXERCISE 35

write the meaning of the abbreviations in the following sentences.

1. A variety of tests are used to diagnose COPD _____
_____ including PFTs _____
_____ CXR _____
ABGs _____ and chest CT _____
_____ scan.

2. VPS _____ is very
helpful in diagnosing PF _____.

3. The lobes of the left lung are LUL _____ and
LLL _____ the lobes of the right lung are
RUL _____ RML _____
and RLL _____.

4. AFB _____ smear is used to support the diagnosis of TB _____.
5. PSG _____ is used to confirm the diagnosis of OSA _____.
6. PCP _____ is a fungally induced pneumonia commonly seen as an opportunistic infection attributable to AIDS.
7. respiration is the exchange of O₂ _____ and CO₂ _____ between the atmosphere and body cells.

EXERCISE 36

Write the definition for the following abbreviations.

1. ARDS _____.

2. CF _____.

3. flu _____.

4. LTB _____.

5. URI _____.

English in Medical Term

Chapter: 6

Urinary System

Outline:

OBJECTIVES

1-ANATOMY

1-1.Function.

1-2.Organs of the Urinary System

2- WORD PARTS

2-1. Combining Forms of the Urinary System.

2-2. Combining Forms Commonly Used with Urinary System Terms.

2-3. Suffixes.

3- MEDICAL TERMS

3-1. Disease and Disorder Terms

3-2. Surgical Terms

3-3. Diagnostic Terms

3-4. Complementary Terms

3-5. Abbreviations

OBJECTIVES

On completion of this chapter you will be able to:

1. Identify the organs and other structures of the urinary system.
2. Define and spell the word parts presented in this chapter.
3. Build and analyze medical terms with word parts presented in this and previous chapters.
4. Define, pronounce, and spell the disease and disorder, diagnostic, surgical, and complementary terms for the urinary system.
5. Interpret the meanings of the abbreviations presented in this chapter.
6. Read medical documents and interpret medical terminology contained in them.

1- ANATOMY

1-1. Function

- The urinary system removes waste material from the body, regulates fluid volume, and maintains electrolyte concentration in the body fluid. Organs of the urinary system are the kidneys. ureters. bladder. and urethra (Figures 6- 1 and 6-2).

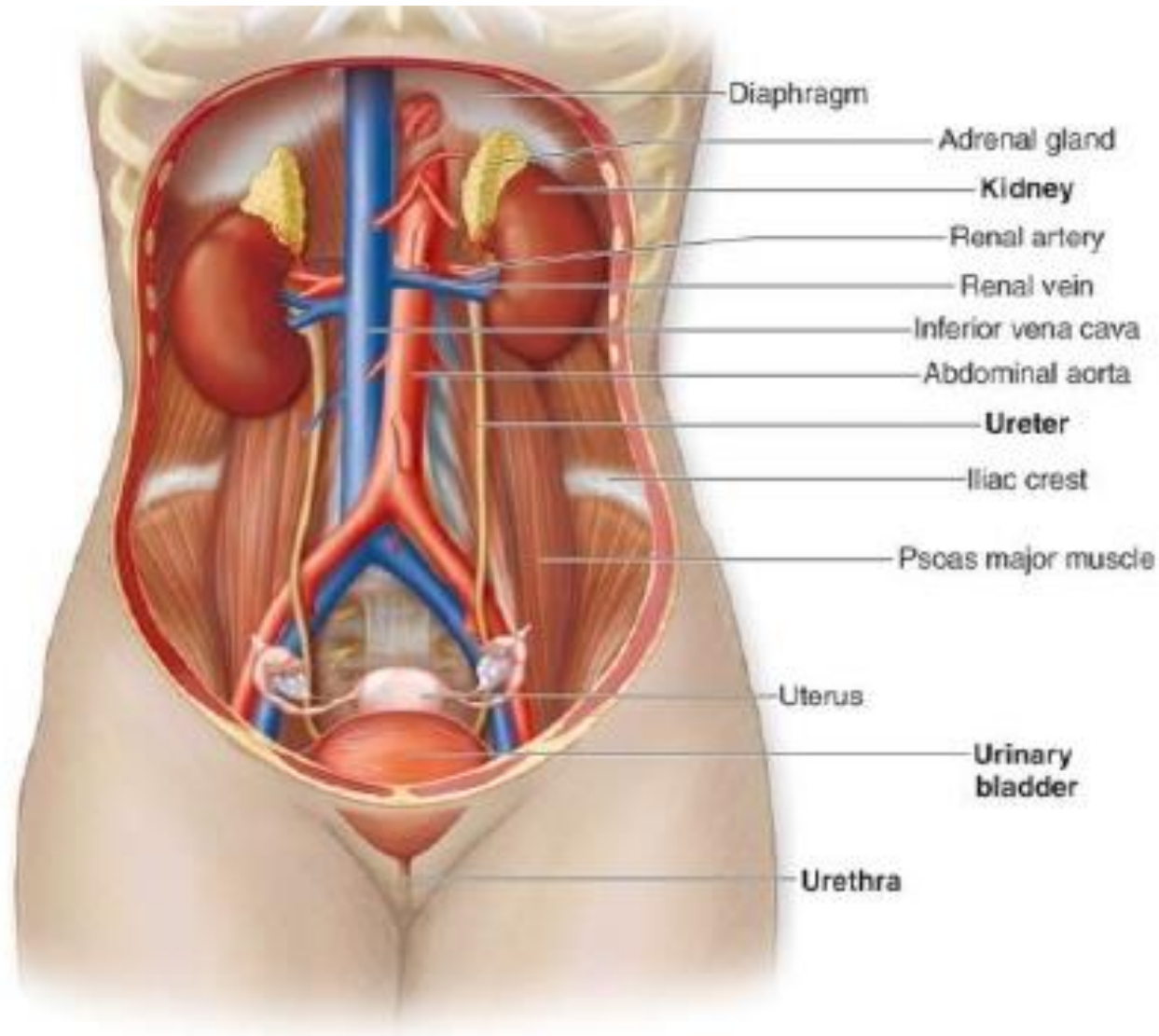


Figure 6-1
The female urinary system and some associated structures.

1-2. Organs of the Urinary System

- a) Kidneys..... two bean-shaped organs located on each side of the vertebral column on the posterior wall of the abdominal cavity behind the parietal peritoneum. Their function is to remove waste products from the blood and to aid in maintaining water and electrolyte balances (see Figure 6-2).
- b) nephron..... urine-producing microscopic structure. Approximately 1 million nephrons are located in each kidney.

- c) glomerulus (Pl. glomeruli) cluster of capillaries at the entrance of the nephron. The process of filtering the blood, thereby forming urine, begins here.
- d) renal pelvis funnel-shaped reservoir that collects the urine and passes to the ureter.
- e) hilus..... indentation on the medial side of the kidney where the ureter leaves the kidney
- f) Ureters..... two slender tubes, approximately 10 to 13 inches (26 to 33 cm) long, that receive the urine from the kidneys and carry it the posterior portion of the bladder (see Figure 6-2)

urinary bladder.....	muscular, hollow organ that temporarily holds the urine. As it fills, the thick, muscular wall becomes thinner, and the organ increase in size.
urethra.....	lowest part of the urinary tract, through which the urine passes from the urinary bladder to the outside of the body. This narrow tube varies in length by sex. It is 1.5 inches (3.8 cm) long in the female and 8 inches (20cm) in the male, in whom it is also part of the reproductive system. It carries seminal fluid (semen) at the time of ejaculation (see Figure 6-2).
urinary meatus.....	opening through which the urine passes to the outside

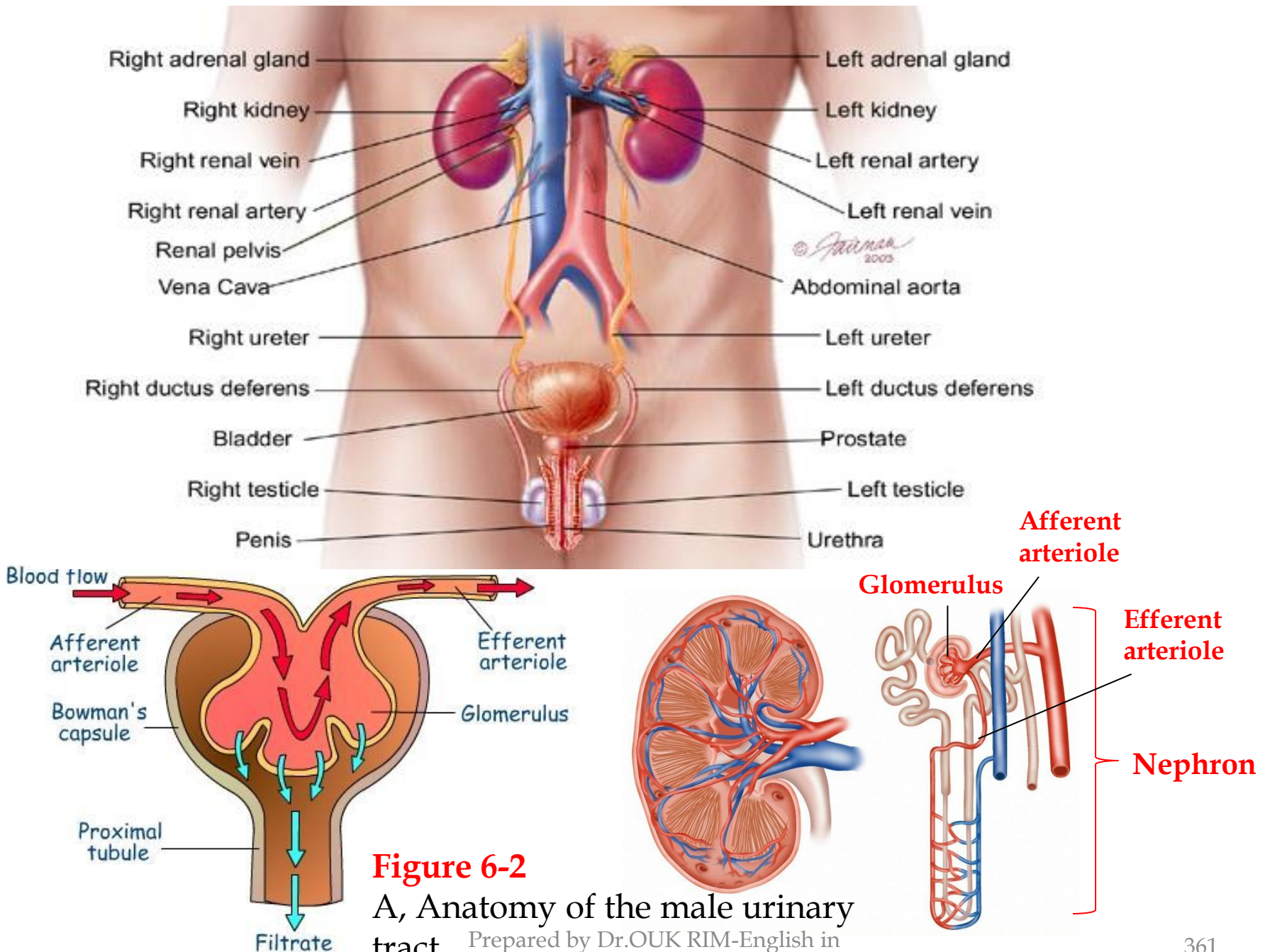


Figure 6-2
 A, Anatomy of the male urinary tract. Prepared by Dr.OUK RIM-English in Medical Term-2012

Cut Section of Kidney

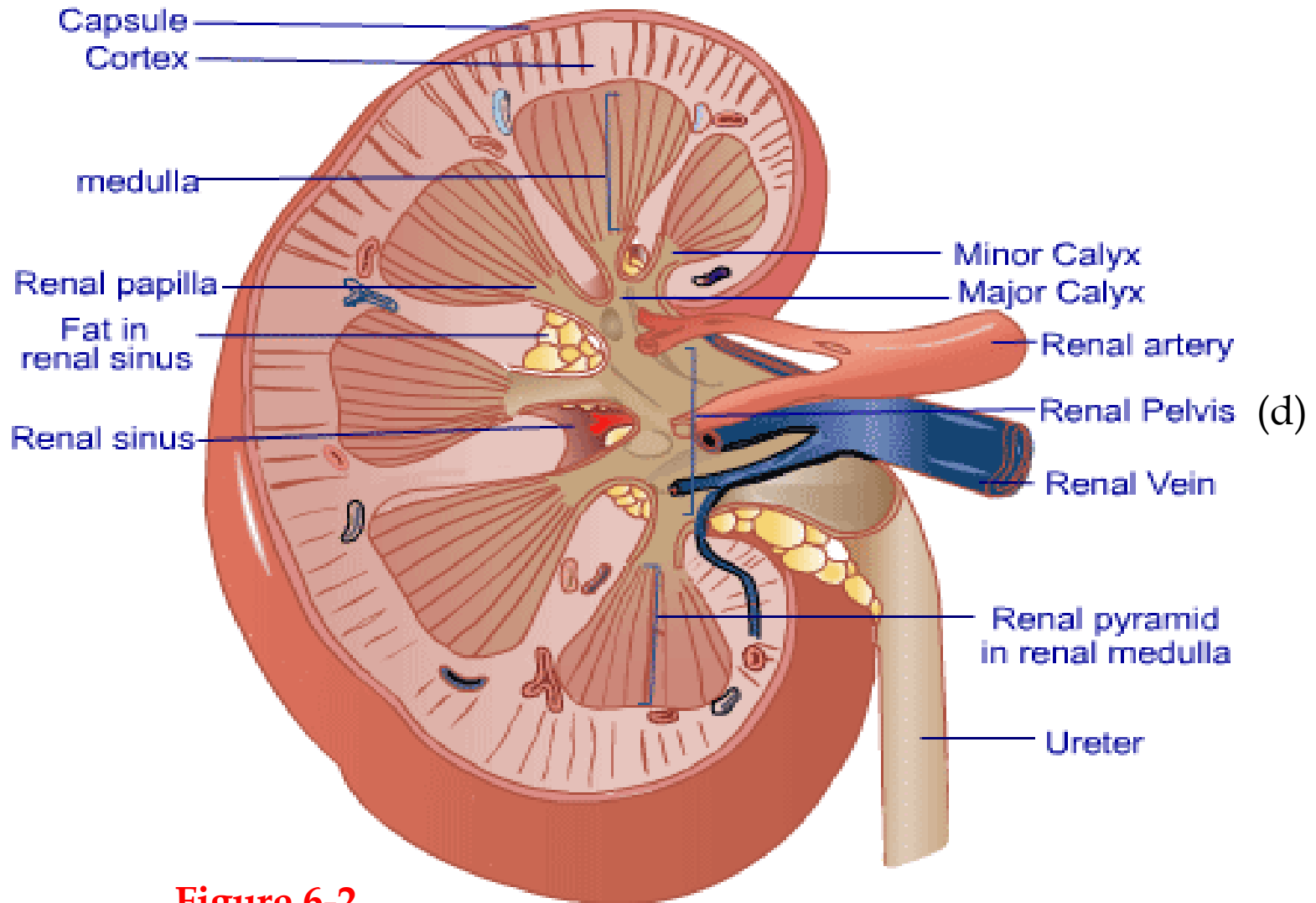
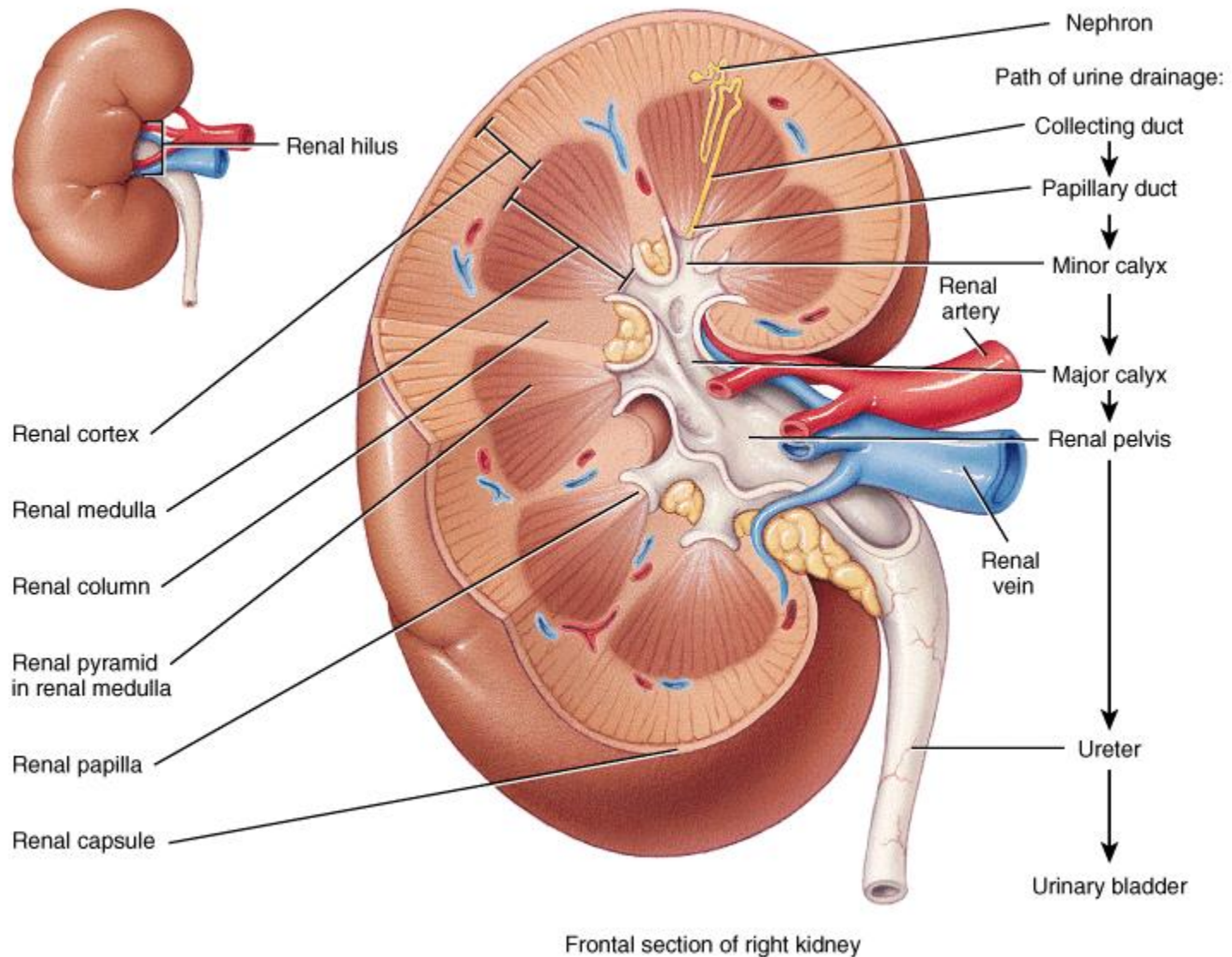


Figure 6-2

B, cut section of the kidney.



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Figure 6-2
B, frontal section of the kidney.

Prepared by Dr.OUK RIM-English in
Medical Term-2012

EXERCISE 1

Match the anatomic terms in the first column with the correct definitions in the second column.

- | | |
|-----------------------|--|
| ___1. kidney(s) | a. stores urine |
| ___2. glomerulus | b. outside opening through which the urine passes |
| ___3. nephron | c. carry urine from the kidney to the urinary bladder |
| ___4. ureters | d. cluster of capillaries in the kidney where the urine begins to form |
| ___5. urinary bladder | e. carries urine from the bladder to the urinary meatus |
| ___6. urinary meatus | f. kidney's urine-producing unit |
| ___7. urethra | g. organs that remove waste products from the blood |

2- WORD PARTS

2-1. Combining Forms of the Urinary System.

Study the word parts and their definitions listed below. Completing exercises 2 and 3 and Exercise Figures A and B will help you learn the terms.

Combining Form

Definition

cyst/o, vesic/o..... bladder, sac

(Note: these refer to the urinary bladder unless otherwise identified.)

glomerul/o..... glomerulus

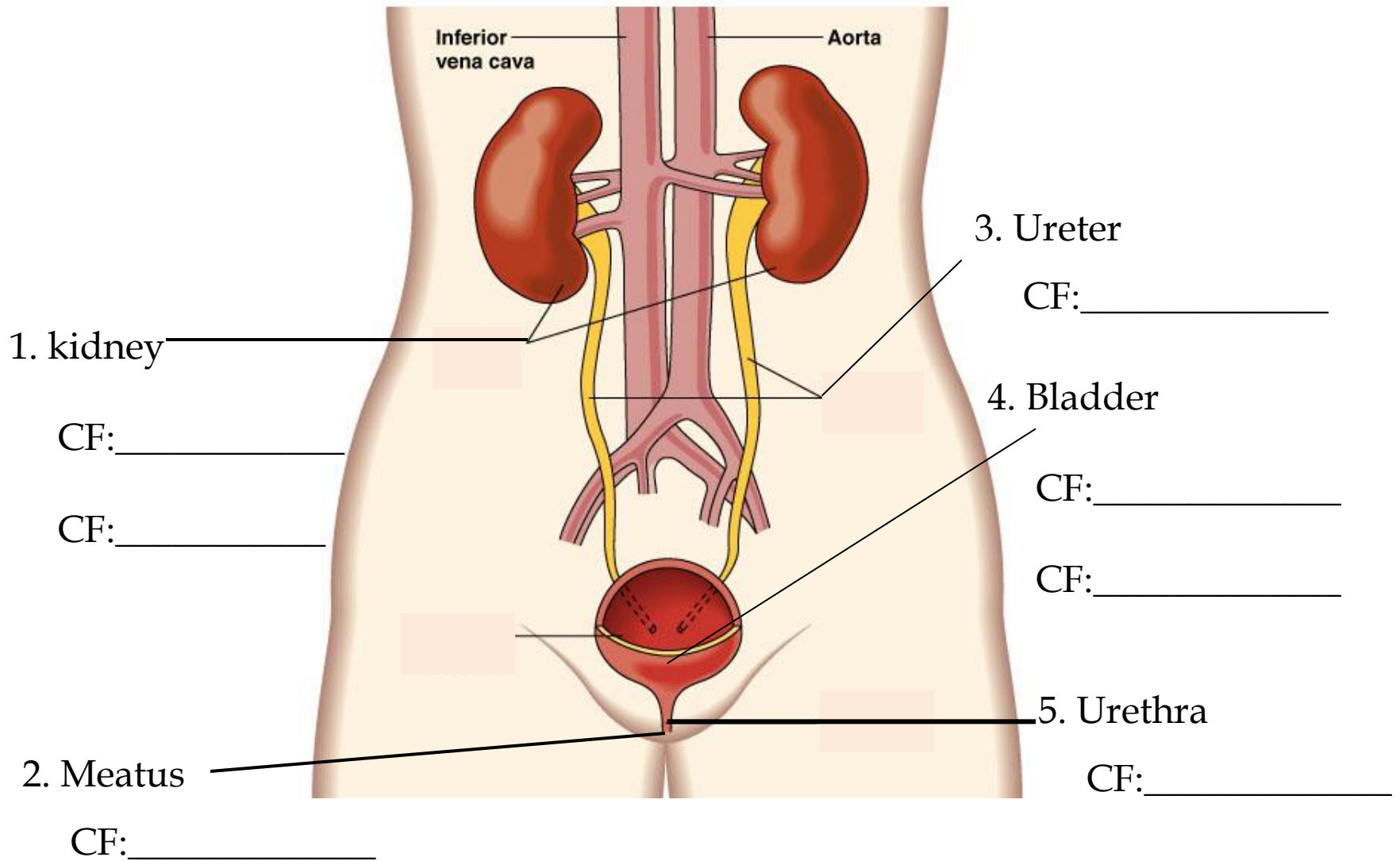
meat/o..... meatus (opening)

nephr/o, ren/o..... kidney

pyel/o..... renal pelvis

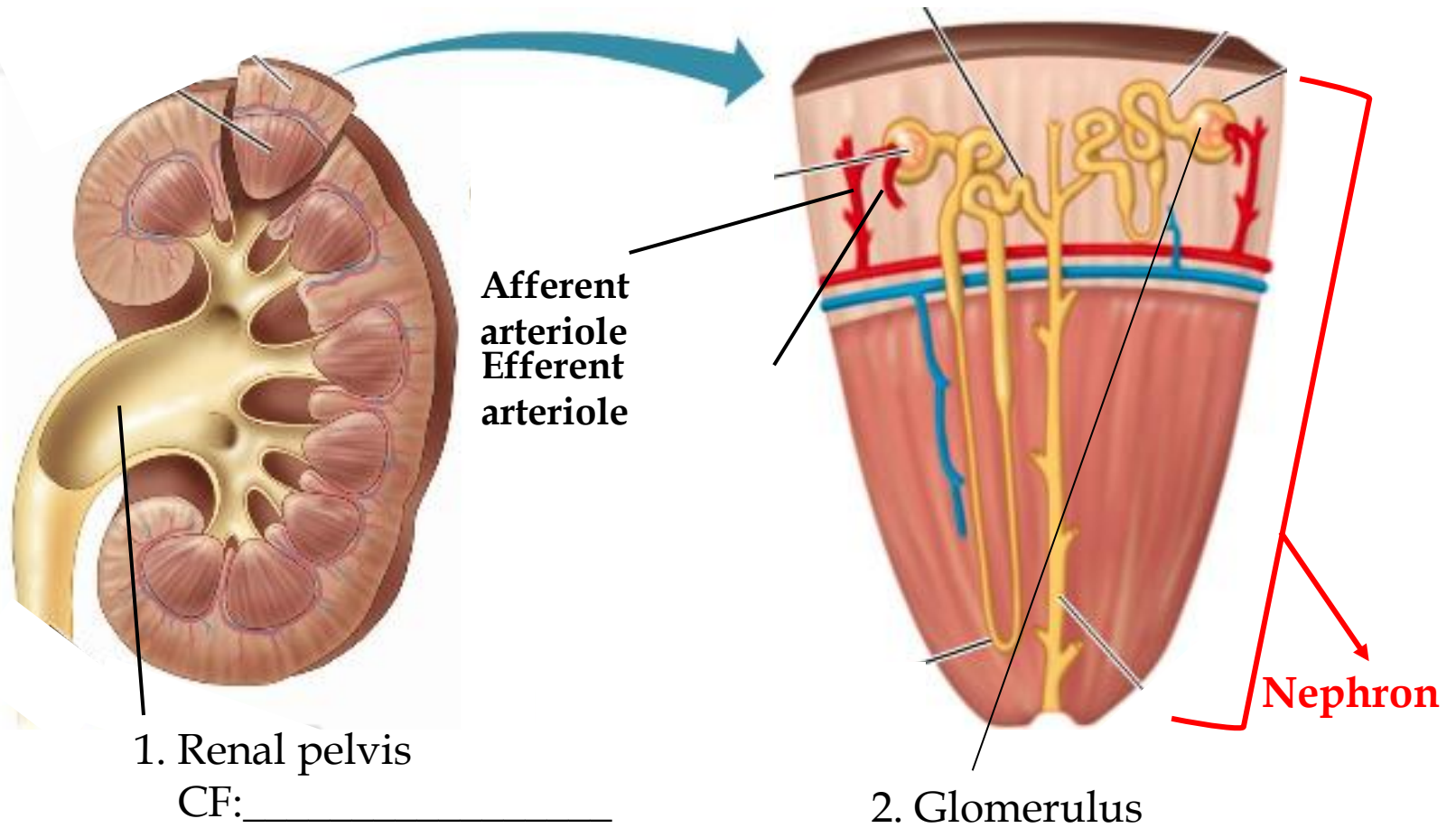
ureter/o ureter

urethr/o urethra



Exercise Figure A

Fill in the blanks with combining forms for the diagram of the urinary system.



CF: _____

Exercise Figure B

Fill in the blanks to label the diagram of the internal kidney structure.

EXERCISE 2

Write the definitions of the following combining forms.

1. glomerul/o _____

2. vesic/o _____

3. nephr/o _____

4. pyel/o _____

5. ureter/o _____

6. cyst/o _____

7. urethr/o _____

8. ren/o _____

9. meat/o _____

EXERCISE 3

Write the combining form for each of the following terms.

1. kidney a. _____

b. _____

2. bladder, sac a. _____

b. _____

3. ureter _____

4. renal pelvis _____

5. glomerulus _____

6. urethra _____

7. meatus _____

2-2. Combining Forms Commonly Used with Urinary System Terms.

Combining Form

Definition

albumin/o.....

albumin

azot/o.....

urea, nitrogen

blast/o

developing cell, germ cell

glyc/o, glycos/o.....

sugar

hydr/o

water

Combining Form

Definition

lith/o..... stone, calculus

noct/i..... night

(note: the combining vowel is i.)

olig/o..... scanty, few

son/o..... sound

tom/o..... cut, section

urin/o, ur/o urine, urinary tract

Learn the combining forms by completing exercises 4 and 5.

EXERCISE 4

Write the definitions of the following combining forms.

1. hydr/o _____

2. azot/o _____

3. noct/i _____

4. lith/o _____

5. tom/o _____

6. albumin/o _____

7. urin/o _____

8. son/o _____

9. glyc/o _____

10. blast/o _____

11. olig/o _____

12. ur/o _____

13. glycos/o _____

EXERCISE 5

Write the combining form for each of the following.

1. sugar

a. _____

b. _____

2. sound

3. urine, urinary tract

a. _____

b. _____

4. water

5. developing cell, germ cell

6. cut, section

7. albumin

8. night

9. urea, nitrogen

10. stone, calculus

11. scanty

2-3. Suffixes.

Suffix

Definition

-iasis, -esis.....	condition
-lysis.....	loosening, dissolution, separating
-megaly.....	enlargement
-ptosis.....	drooping, sagging, prolapse
-rrhaphy	suturing, repairing.
-tripsy.....	surgical crushing
-trophy.....	nourishment, development
-uria.....	urine, urination

Refer to Appendix A and Appendix B for alphabetized lists of word parts and their meaning

Learn the suffixes by completing exercises 6 and 7.

EXERCISE 6

Match the suffixes in the first column with their correct definitions in the second column.

___1. -iasis, -esis

___2. -lysis

___3. -megaly

___4. -rrhaphy

___5. -ptosis

___6. -tripsy

___7. -trophy

___8. -uria

a. nourishment, development

b. urine, urination

c. condition

d. enlargement

e. surgical crushing

f. suturing, repairing

g. drooping, sagging, prolapse

h. stretching out

i. loosening, dissolution, separating

EXERCISE 7

Write the definitions of the following suffixes.

1. -rrhaphy _____

2. -lysis _____

3. -iasis, -esis _____

4. -trophy _____

5. -uria _____

6. -megaly _____

7. -ptosis _____

8. -tripsy _____

3- MEDICAL TERMS

The terms you need to learn to complete this chapter are listed next. The exercises following each list will help you learn the definition and the spelling of each word.

3-1. Disease and Disorder Terms

3-1-1. Built from word Parts

Term	Definition
cystitis..... (sis- TI-tis)	inflammation of the bladder
cystocele..... (SIS-to-sel)	protrusion of the bladder
cystolith (SIS-to-lith)	stone in the bladder (Exercise Figure C)

Term

Definition

glomerulonephritis.....
(glō-mer-ū-lō-ne- FRĪ-tis)

inflammation of the glomeruli of the kidney

hydronephrosis
(hī-dro-ne- FR Ō-sis)

abnormal condition of water in the kidney
(distension of the renal pelvis with urine because
of an obstruction)

nephritis
(ne-FRĪ-tis)

inflammation of a kidney

nephroblastoma.....
(nef-rō-blas-TŌ-rna)

kidney tumor containing developing cell
(malignant tumor) (also called Wilms tumor)

Nephrohypertrophy
(nef-rō-hī-PE R - trō- fē)
(NOTE: the prefix hyper
appears in the middle of
this term.)

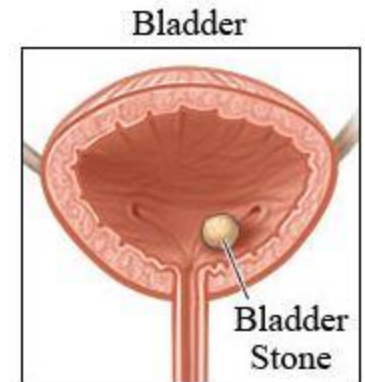
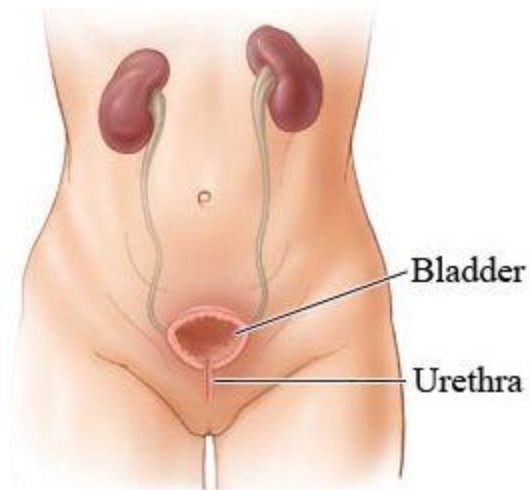
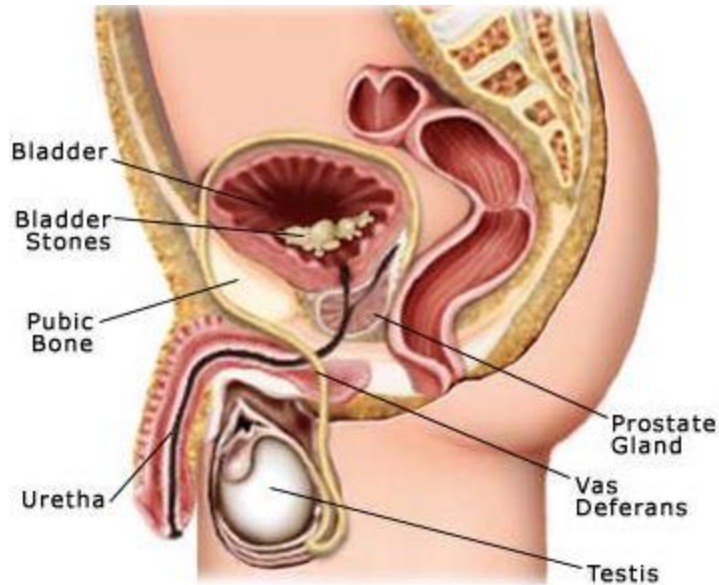
excessive development (increase in size) of the
kidney

Term	Definition
nephrolithiasis..... (nef-rō-lith-l̄-a-sis)	condition of stone(s) in the kidney
nephroma..... (nef-RŌ-ma)	tumor of the kidney
nephromegaly (nef-rō-MEG-a-lē)	enlargement of a kidney
nephroptosis (nef-rop-TŌ-sis)	drooping kidney
pyelitis..... (pī-e-LI-tis)	inflammation of the renal pelvis
pyelonephritis..... (pī-e-lō-ne-FRI-tis)	inflammation of the renal pelvis and the kidney

Term

Definition

uremia..... (ū-RĒ-mē-a)	condition of urine (urea) in the blood (toxic condition resulting from retention of by-products of the kidney in the blood)
ureteritis..... (ū-rē-ter-Ī-tis)	inflammation of a ureter
Ureterocele..... (ū-RĒ-ter-ō-sēl)	protrusion of a ureter
ureterolithiasis (ū-rē-ter-ō-lith- Ī-a-sis)	condition of stones in the ureters
ureterostenosis..... (ū-rē-ter-ō-sten -Ō-sis)	narrowing of the ureter
urethrocystitis (ū-rē-thrō-sis- TĪ-tis)	inflammation of the urethra and the bladder



Exercise Figure C

Fill in the blanks to label the diagram.

_____ / _____ / _____
 bladder / cv / stone



Nephroptosis is also known as a **floating kidney** and occurs when the kidney is no longer held in place and drops out of its normal position. The kidney is normally held in position by connective and adipose tissue, so it is prone to injury and also may cause the ureter to **twist**. Truck drivers and horseback riders are prone to this condition.

Learn the definitions and spellings of the disease and disorder terms by completing exercises 8, 9, and 10.

EXERCISE 8

Analyze and define the following terms.

WR CV WR S

Example: glomerul/o/nephr/itis : inflammation of the glomeruli of the kidney
CF

1. nephroma _____
2. cystolith _____
3. nephrolithiasis _____
4. uremia _____
5. nephroptosis _____
6. cystocele _____
7. nephrohypertrophy _____
8. cystitis _____

9. pyelitis _____
10. ureterocele _____
11. hydronephrosis _____
12. nephromegaly _____
13. ureterolithiasis _____
14. pyelonephritis _____
15. ureteritis _____
16. nephritis _____
17. urethrocystitis _____
18. ureterostenosis _____
19. nephroblastoma _____

EXERCISE 9

Build disease and disorder terms for the following definitions with the word parts you have learned.

Example: inflammation of the ureter

ureter/itis

WR / S

1. enlargement of the kidney

: _____ / _____ / _____
WR / CV / S

2. inflammation of the bladder

: _____ / _____
WR / S

3. excessive development of the kidney

: _____ / _____ / _____ / _____
WR / CV / P / S

4. inflammation of the urethra and bladder :

_____ / _____ / _____ / _____
WR / CV / WR / S

5. protrusion of the bladder

: _____ / _____ / _____
WR / CV / S

14. inflammation of the renal pelvis : _____/_____

WR / S

15. condition of urine (urea) in the blood : _____/_____

WR / S

16. narrowing of the ureter : _____/_____/_____

WR /CV/ S

17. inflammation of the renal pelvis : _____/_____/_____/_____

and the kidney

WR /CV/ WR / S

18. condition of stones in the ureters : _____/_____/_____/_____

WR /CV/ WR / S

19. kidney tumor containing developing : _____/_____/_____/_____

cell (tissue)

WR /CV/ WR / S

EXERCISE 10

Spell each the disease and disorder terms. Have someone dictate the terms pp. 168-169 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

- | | |
|-----------|-----------|
| 1. _____ | 11. _____ |
| 2. _____ | 12. _____ |
| 3. _____ | 13. _____ |
| 4. _____ | 14. _____ |
| 5. _____ | 15. _____ |
| 6. _____ | 16. _____ |
| 7. _____ | 17. _____ |
| 8. _____ | 18. _____ |
| 9. _____ | 19. _____ |
| 10. _____ | 20. _____ |

Figure 6-3
Hypospadias

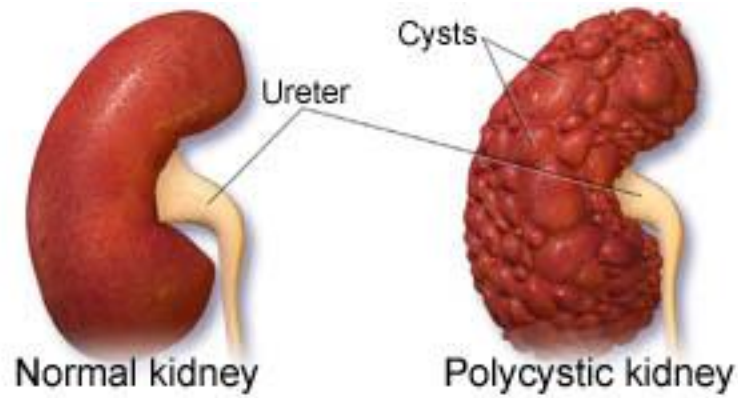
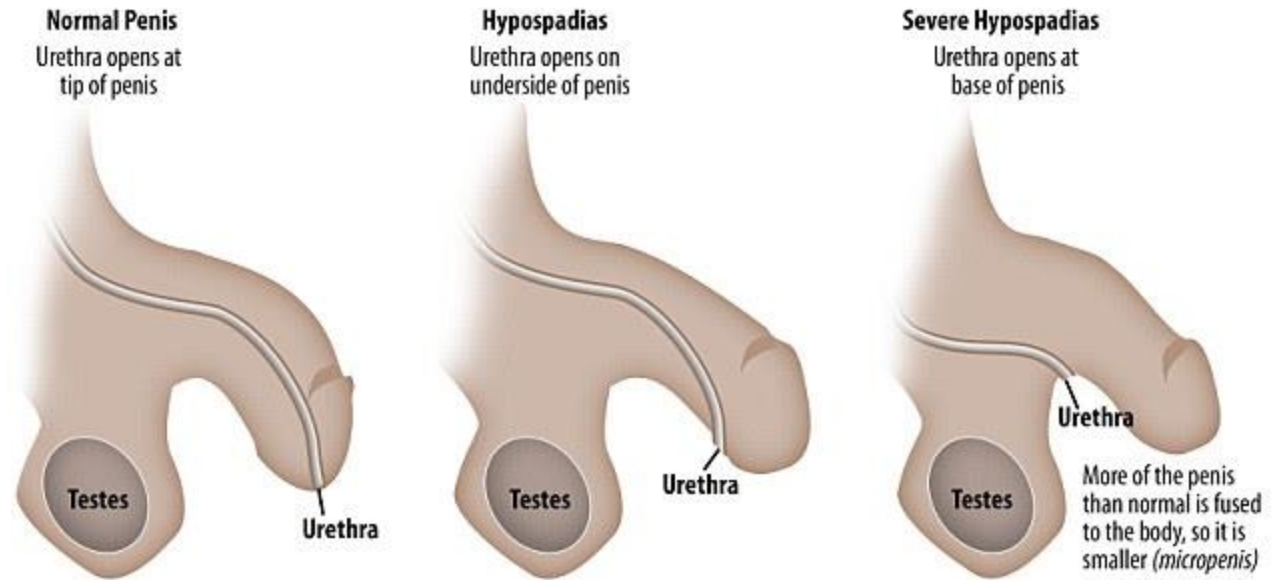


Figure 6-4
Polycystic kidney.

3-1-Disease and Disorder Terms (Con't)

3-1-2.Not Built from Word Parts

Term

Definition

epispadias.....
(ep-i-SPĀ-de-ās)

congenital defect in which the urinary meatus is located on the upper surface of the penis

hypospadias.....
(hī-pō-SPĀ-dē-as)

congenital defect in which the urinary meatus is located on the underside of the penis a similar defect can occur in the female (Figure 6-3)

polycystic kidney disease
(pol-i-SIS-tik) (KID-nē) (di-ZEZ)

condition in which the kidney contains many cysts and is enlarged (Figure 6-4)

Term

Definition

renal calculi.....
(RĒ-nal) (KAL-kū-li)

stones in the kidney

renal hypertension.....
(RĒ-nal) (hī-per-TEN-shun)

elevated blood pressure resulting from kidney disease

Sepsis
(SEP-sis)

a condition in which pathogenic microorganisms, usually bacteria, enter the bloodstream, causing a systemic inflammatory response to the infection (also called septicesmia)

urinary retention.....
(Ū-rin-ā-rē) (rē- TEN-shun)

abnormal accumulation of urine in the bladder because of an inability to urinate

Urinary suppression.....
(Ū-rin-ā-rē) (sū-PRESH-un)

sudden stoppage of urine formation

urinary tract infection (UTI).
(Ū-rin-ā-rē) (trakt)

infection of one or more organs of the urinary tract

Learn the definitions and spellings of the disease and disorder terms by completing exercises 11, 12, and, 13.

EXERCISE 11

Fill in the blanks with the correct terms.

1. Stones in the kidney are also called _____
2. The inability to urinate, which results in an abnormal amount of urine in the bladder, is known as _____
3. The name given to a condition in which a kidney is enlarged and contains many cysts is _____
4. The condition in which the urinary meatus is located on the underside of the penis is called _____.

5. Elevated blood pressure resulting from kidney disease is

_____.

6. Sudden stoppage of urine formation is referred to as _____

_____.

7. _____ is a condition in which the urinary meatus is located on the upper surface of the penis.

8. Infection of one or more organs of the urinary system is called

_____.

9. _____ is a condition in which pathogenic microorganisms enter the bloodstream.

EXERCISE 12

Match the terms in the first column with the correct definitions in the second column.

___ 1. epispadias	a. enlarged kidney with many cysts
___ 2. hypospadias	b. sudden stoppage of urine formation
___ 3. renal calculi	c. urinary meatus on the upper surface of the penis
___ 4. renal hypertension	d. kidney stones
___ 5. polycystic kidney disease	e. inability to urinate
___ 6. urinary retention	f. urinary meatus on the underside of the penis
___ 7. urinary suppression	g. infection of one or more organs of the urinary system
___ 8. urinary tract infection	h. characterized by elevated blood pressure
___ 9. sepsis	i. causes a systemic inflammatory response to infection
	j. excessive amount of urine

EXERCISE 13

Spell the disease and disorder terms. Have someone dictate the terms on pp. 172-173 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

3-2. Surgical Terms

3-2-1. Built from Word Parts

Term	Definition
cystectomy..... (sis-TEK-tō-mē)	excision of the bladder
cystolithotomy..... (sis-tō-li- THOT -ō-mē)	incision of the bladder to remove a stone
cystorrhaphy (sist-OR-a-fe)	suturing the bladder
cystostomy (sis-TOS-tō-mē)	creating an artificial opening into the bladder (Exercise figure D)

Term

Definition

cystotomy

(sis-TOT-ō-mē)

or vesicotomy.....

(ves-i-KOT-ō-mē)

incision of the bladder

Lithotripsy.....

(LITH-ō-trip-sē)

surgical crushing of a stone

(Exercise Figure E)

meatotomy

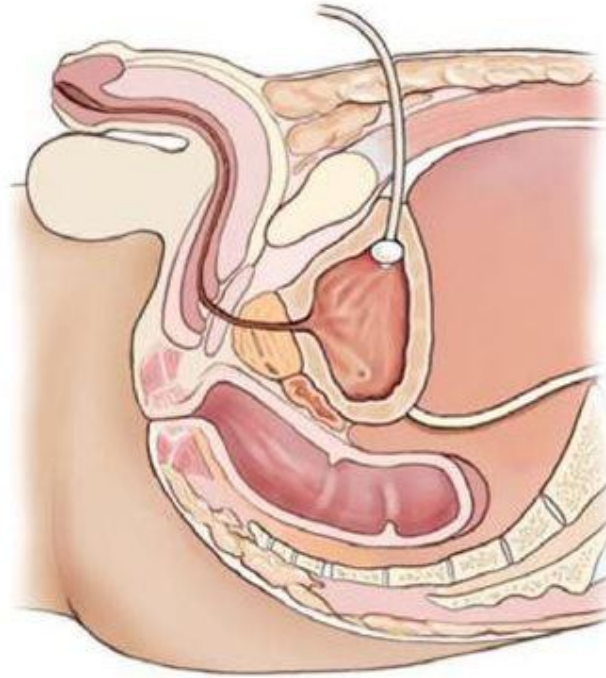
(mē-a-TOT-ō-mē)

incision of the meatus

nephrectomy

(ne-FREK-tō-mē)

excision of a kidney



Exercise Figure D

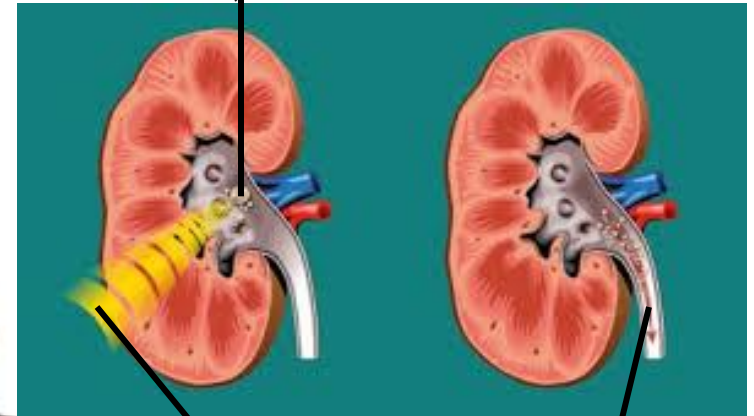
Fill in the blanks label the diagram.

_____ / _____ / _____

bladder/ cv / creation of an artificial opening



(Kidney stone being shattered)



(Focused shock wave)

(Fragments passed through ureter)

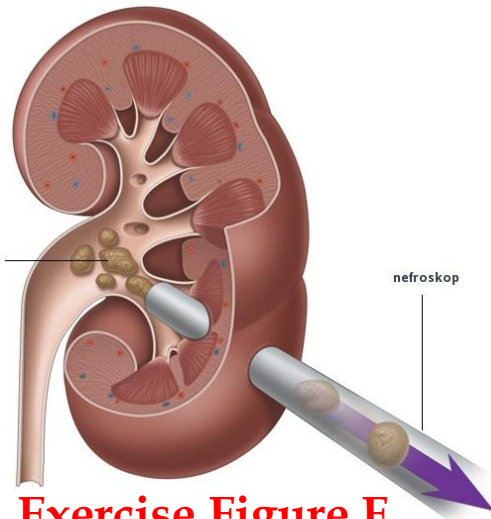
Exercise Figure E

Fill in the blanks to complete the labeling of the diagram.

Extracorporeal shock wave _____ / _____ / _____

Stone / CV / surgical crushing

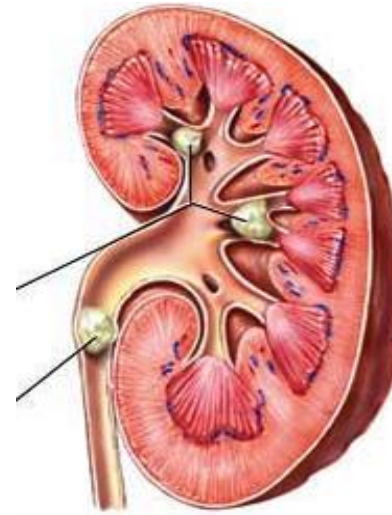
ESWL breaks down the kidney stone into fragments by shock waves from outside the body. The broken fragments are eliminated from the body with the passing of urine.



Exercise Figure F

Fill in the blanks to label the diagram.

_____/_____/_____
 kidney / cv / creation of an artificial opening



Exercise Figure H

Fill in the blanks to label the diagram.

_____/_____/_____
 Ureter / cv / creation of an artificial opening



Exercise Figure G

Fill in the blanks to label the diagram.

_____/_____/_____/_____/_____
 renal pelvis / cv / stone / cv / incision

Term	Definition
nephrolysis..... (ne-FROL-i-sis)	separating the kidney (from other body structures)
nephropexy (NEF-rō-peks-ē)	surgical fixation of the kidney
nephropyelolithotomy (nef-rō-pī-e-lō- THOT-ō-mē)	incision through the kidney to the renal pelvis to remove a stone
nephrostomy..... (nef-ROS-tō-mē)	creation of an artificial opening into the kidney (Exercise Figure F)
pyelolithotomy (pī-el-ō-lith-OT-ō-mē)	incision of the renal pelvis to remove a stone (Exercise Figure G)
pyeloplasty..... (Pī-el-ō-plas-tē)	surgical repair of the renal pelvis

Term

Definition

ureterectomy.....
(u-rē-ter-EK-tō-mē)

excision of a ureter

ureterostomy.....
(ū-rē-ter-OS-tō-mē)

creation of an artificial opening into the ureter (Exercise Figure H)

urethroplasty.....
(ū-RĒ-thrō-pw-tē)

surgical repair of the urethra

vesicourethral suspension.....
(ves-i-kō-ū-RĒ-thral)

suspension pertaining to the bladder and urethra

Learn the definitions and spellings of the surgical terms by completing exercises 14, 15, and 16

Exercise 14

Analyze and define the following surgical terms.

1. vesicotomy _____

2. cystotomy _____

3. nephrostomy _____

4. nephrolysis _____

5. cystectomy _____

6. ureterotomy _____

7. pyelolithotomy _____

8. nephropexy _____

9. cystolithotomy _____

10. nephrectomy _____

11. ureterectomy _____

12. cystostomy _____

13. pyeloplasty _____

14. cystorrhaphy _____

15. meatotomy _____

16. lithotripsy _____

17. urethroplasty _____

18. vesicourethral suspension _____

19. nephropyelolithotomy _____

EXERCISE 15

Build surgical terms for the following definitions by using the word parts you have learned.

1. incision of the urethra : _____ / _____ / _____
WR / CV / S

2. excision of a kidney : _____ / _____
WR / S

3. incision of the renal pelvis to
remove a stone : _____ / _____ / _____ / _____ / _____
WR / CV / WR / CV / S

4. suturing of the bladder : _____ / _____ / _____
WR / CV / S

5. separating the kidney
(from other structures) : _____ / _____ / _____
WR / CV / S

6. creation of an artificial opening : _____ / _____ / _____
into the kidney WR / CV / S

7. Surgical repair of the urethra : _____ / _____ / _____
WR / CV / S

8. excision of the bladder : _____ / _____
WR / S

9. incision of the meatus : _____ / _____ / _____
WR / CV / S

10. incision of the bladder : a. _____ / _____ / _____
WR / CV / S

b. _____ / _____ / _____
WR / CV / S

11. surgical repair of the renal pelvis : _____ / _____ / _____
WR / CV / S

12. excision of the ureter : _____ / _____
WR / S

13. surgical fixation of the kidney : _____/_____/_____
- WR /CV/ S
- 14, incision into the bladder to
remove a stone : _____/_____/_____/_____
- WR /CV/ WR /CV/ S
15. surgical crushing of a stone : _____/_____/_____
- WR / CV / S
16. (suspension) pertaining to
the bladder and urethra : _____/_____/_____/_____
- WR /CV/ WR /S suspension
17. creation of an artificial opening : _____/_____/_____
- WR / CV / S
18. incision through the kidney into : _____/_____/_____/_____/_____/_____/_____
- WR /CV/ WR /CV/ WR/CV/ S
- the renal pelvis to remove a stone

Exercise 16

Spell each of the surgical terms, Have someone dictate the terms on pp. 174-176 to you. Think about the word parts before attempting to write the word. Study any word you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

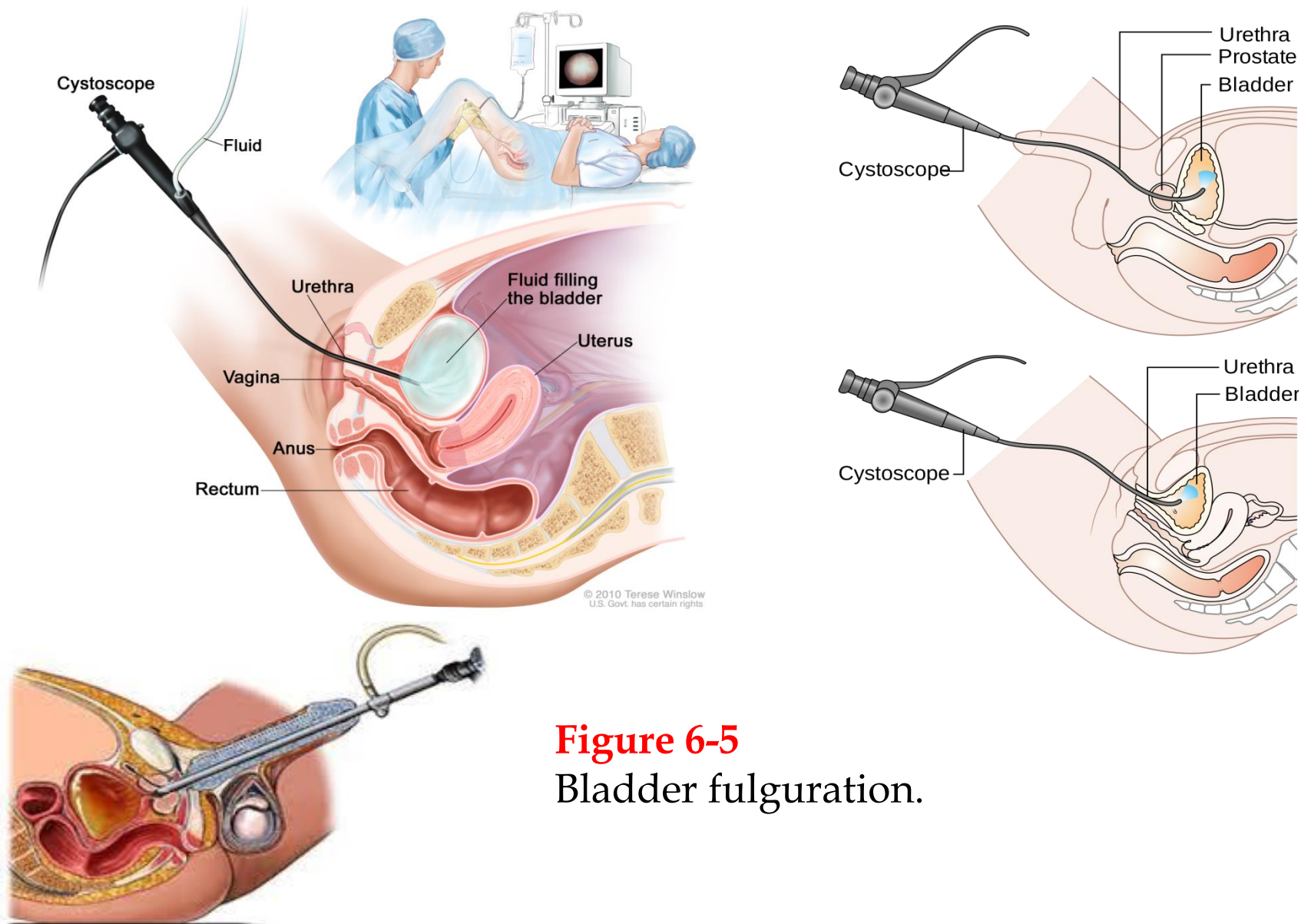
18. _____

19. _____

3-2. Surgical Terms (Con't)

3-2-2. Not Built from Word Parts

Term	Definition
extracorporeal shock wave lithotripsy (ESWL) (ek-stra-kor-POR-ē-al) (LITH-ō-trip-sē)	a noninvasive treatment for removal of kidney or ureteral stone(s). By using ultrasound and fluoroscopic imaging, the stone is positioned at a focal point. Repeated firing of shock waves renders the stone into fragments that pass from the body in the urine (also called shock wave lithotripsy [SWL]) (see Exercise Figure E).
fulguration..... (ful-gū-RĀ-shun)	destruction of living tissue with an electric spark (a method commonly used to remove bladder growths) (Figure 6-5)
renal transplant (RĒ-nal) (trans-plant)	surgical implantation of a donor kidney to replace a nonfunctioning kidney (Figure 6-6)



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Figure 6-5
Bladder fulguration.

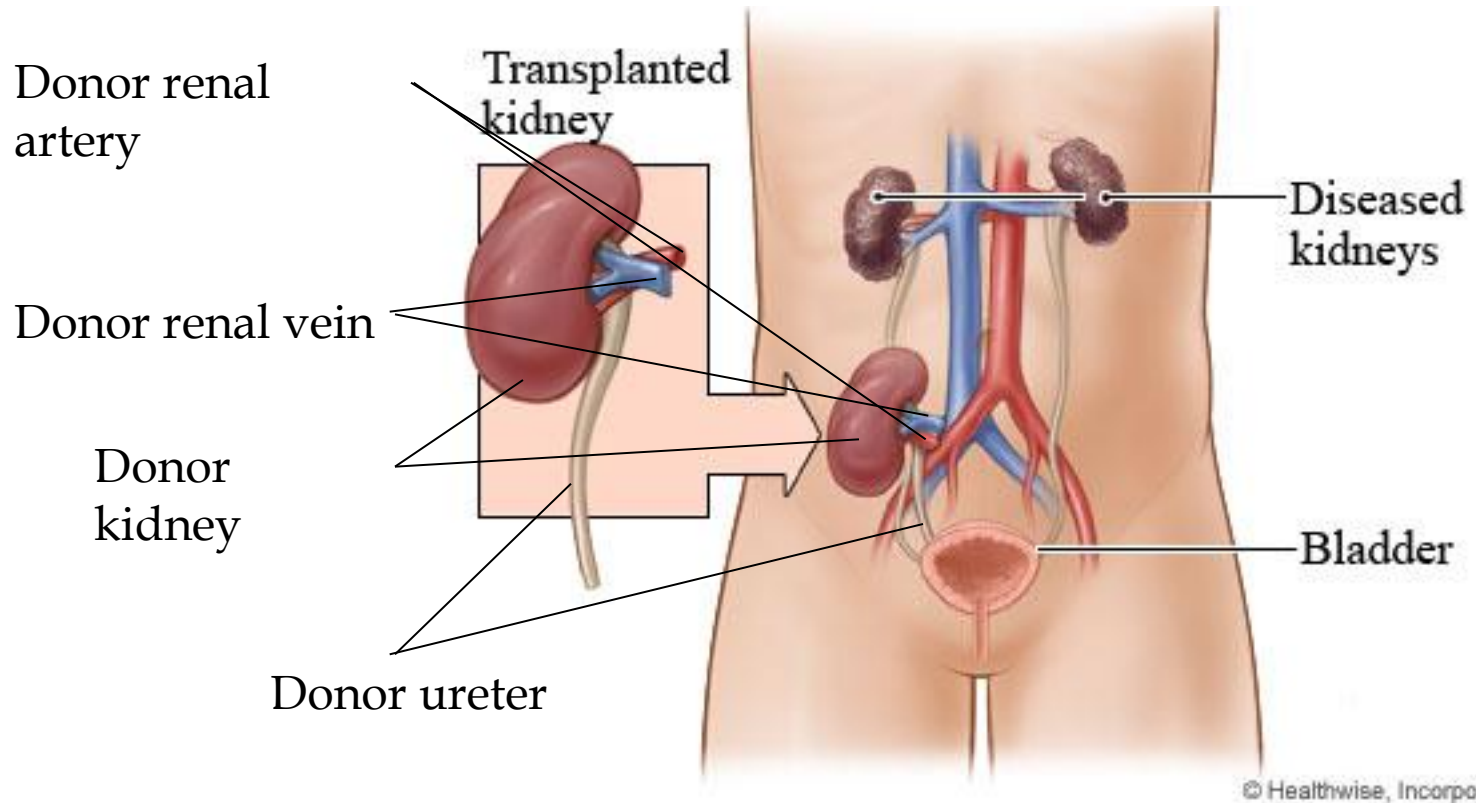


Figure 6-6

Renal transplant showing donor kidney and blood vessels in place, Recipient's kidney is not always removed unless it is infected, is a cause of hypertension, or contains a malignant tumor.

Exercise 17

1. The surgical implantation of a donor kidney to replace a nonfunctioning kidney is called _____.
2. The destruction of living tissue with an electric spark is _____.
3. _____ is a noninvasive treatment for removal of kidney or ureteral stones.

Exercise 18

Match the terms in the first column with their correct definitions in the second column.

___1. fulguration	a. used to replace a nonfunctioning kidney
___2. renal transplant	b. used to remove bladder growths
___3. ESWL	c. used to remove tumors
	d. also called <i>shock wave lithotripsy</i>

Exercise 19

Spell each of the surgical terms. Have someone dictate the terms on this page to you.

Study any words you have spelled incorrectly.

1. _____

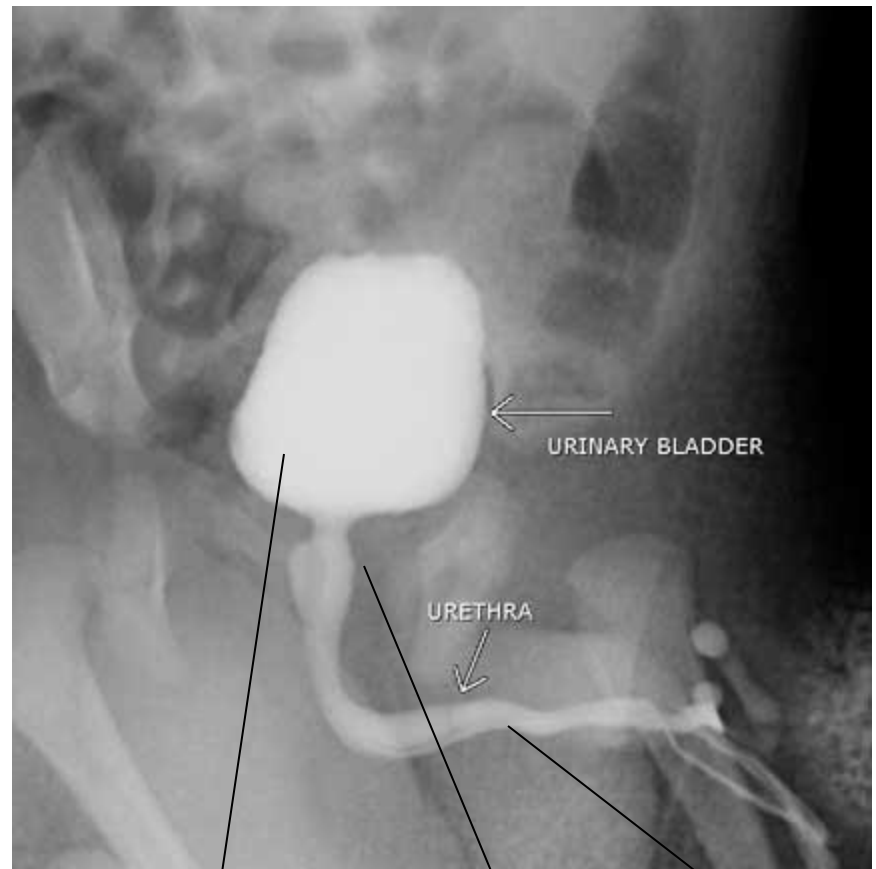
2. _____

3. _____



(Urinary bladder)

Figure 6-7
Cystogram.



(Urinary bladder)

(Area of the
prostate gland)

(Urethra)

Figure 6-8
Voiding cystourethrogram, male.

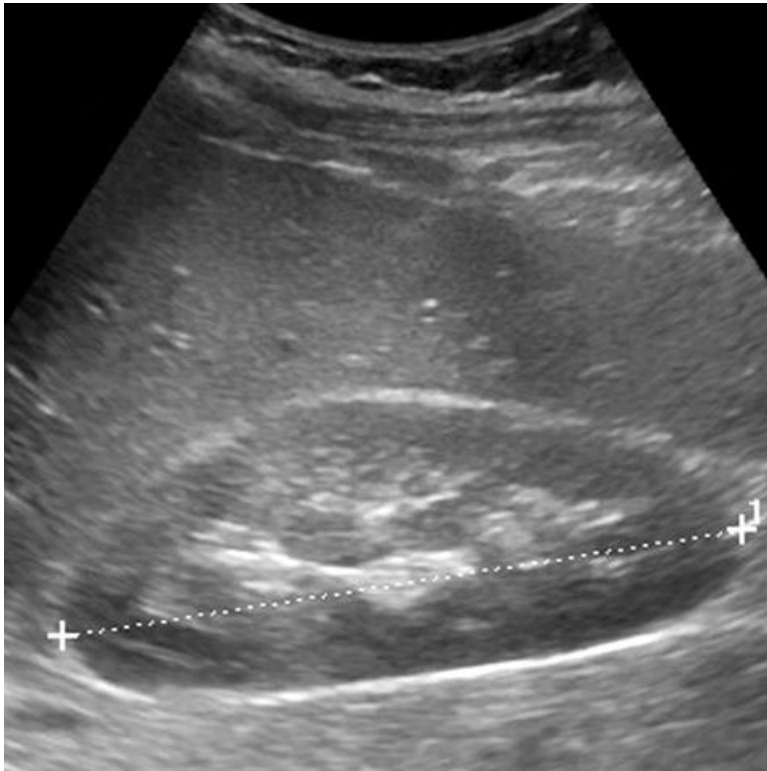


Figure 6-9
Ultrasound
(nephrosonogram) of the
right kidney, sagittal view.

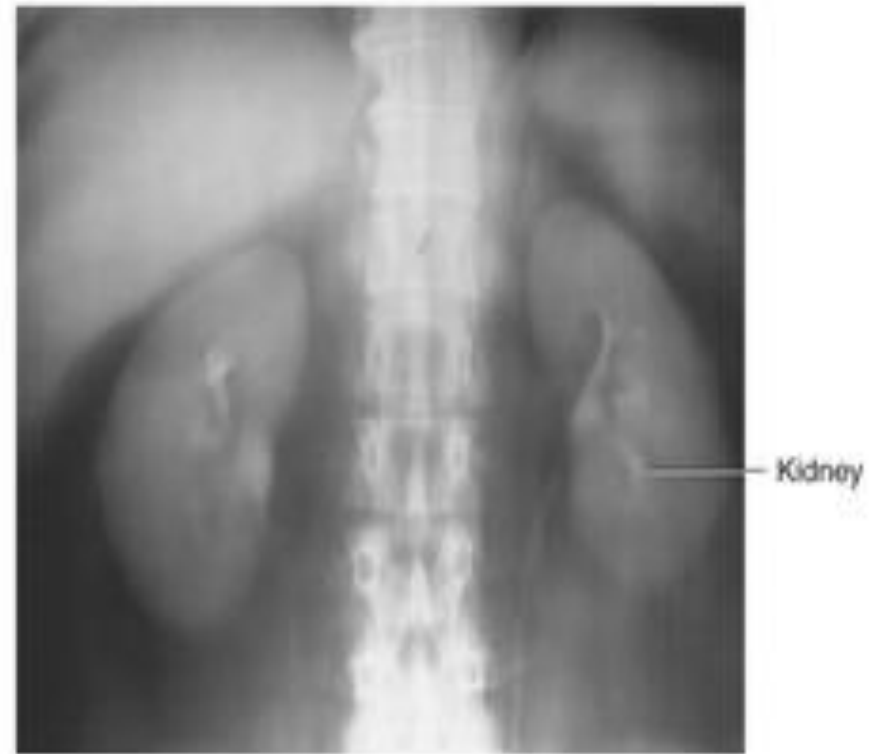


Figure 6-10
Nephrotomogram.

3-3. Diagnostic Terms

3-3-1. Built from Word Parts

Review Table 5-1, Types of Diagnostic Procedures, pp. 135-136 before proceeding.

Term

Definition

Diagnostic imaging

cystogram..... (SIS-tō-gram)	x-ray image of the bladder (Figure 6-7)
cystography (sis-TOG-ra-fe)	x-ray imaging of the bladder
intravenous urogram (IVU).... (in-tra-VĒ-nus) (Ū-rō-gram)	x-ray image of the urinary tract (with contrast medium injected intravenously) (also called intravenous pyelogram)
nephrogram (NEF -rō-gram)	x-ray image of the kidney

Term (Con't)

Definition (Con't)

nephrography.....
(ne-FROG-ra-fē)

x-ray imaging of the kidney

nephrosonography.....
(nef-rō-so-NOG-ra-fē)

process of recording the kidney using sound
(an ultrasound test) (Figure 6-9)

nephrotomogram.....
(nef-rō-TŌ-mō-gram)

(sectional) x-ray image of the kidney
(Figure 6-10)

renogram.....
(RĒ-nō-gram)

(graphic) record of the kidney (produced by
radioactivity after injecting a
radiopharmaceutical, or radioactive
material, into the blood) (a nuclear
medicine test)

Term (Con't)

retrograde urogram.....
(RET- rō-grād) (Ū-ro-gram)

voiding cystourethrography....
(VOID-ing)
(sis-tō-ū-re- THROG-rō-fe)

Endoscopy

cystoscope.....
(SIS-tō-skōp)

cystoscopy.....
(sis- TOS-kō-pe)

Definition (Con't)

x-ray image of the urinary tract (retrograde means to move in a direction opposite from normal) with contrast medium instilled through urethral catheters by a cystoscope (Exercise Figure I)

x-ray imaging of the bladder and the urethra (Figure 6-8). Radiopaque dye is instilled in the bladder. X-ray images are taken of the bladder and during urination of the dye.

instrument used for visual examination of the bladder

visual examination of the bladder

Term (Con't)

meatoscope.....
(mē-ĀT-ō-skōp)

meatoscopy
(mē-ā-TOS-kō-pē)

nephroscope.....
(ne-FROS-kō-pē)

urethroscope.....
(ū- RĒ-thrō-skōp)

Other

urinometer.....
(ū-ri-NOM-e-ter)

Definition (Con't)

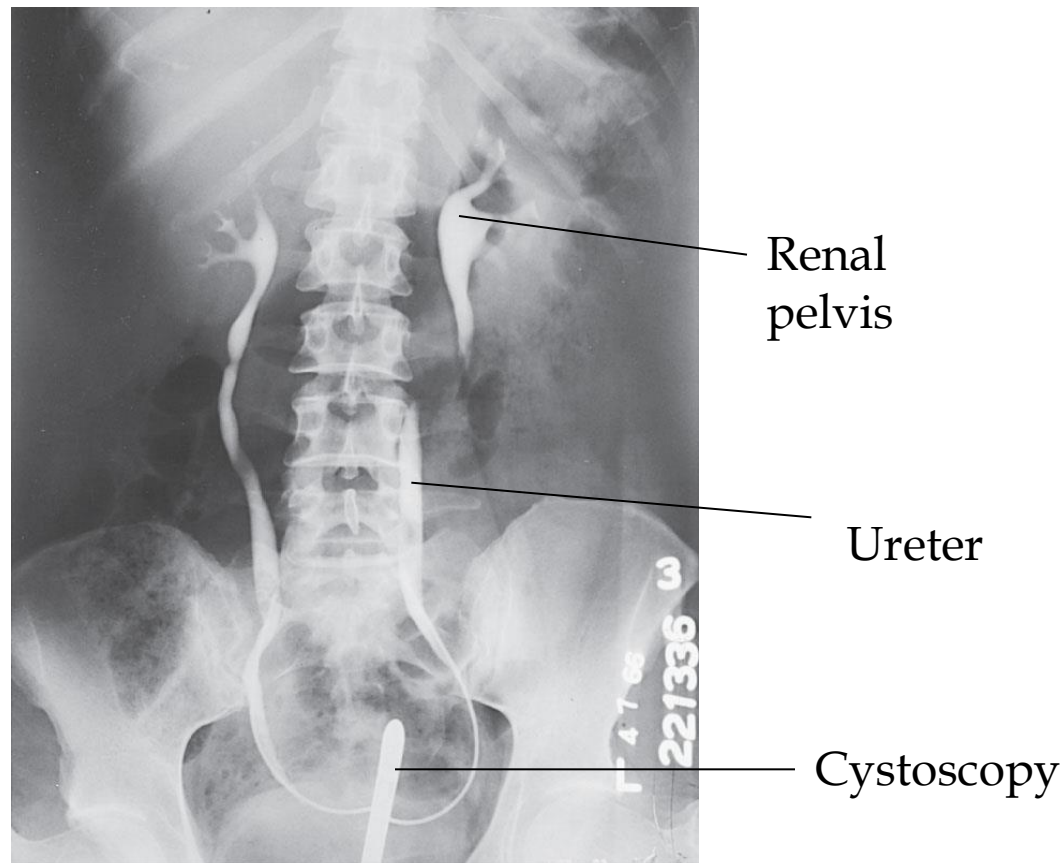
instrument used for visual examination of the meatus

visual examination of the meatus

visual examination of the kidney (Figure6-11)

instrument used for visual examination of the urethra

instrument used to measure (the specific gravity of) urine (Exercise Figure J)

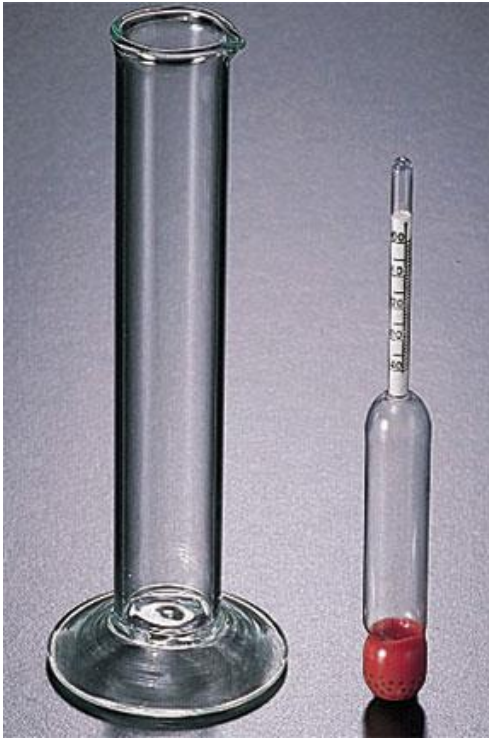


Exercise Figure I

Fill in the blanks to complete labeling of the diagram.

Retrograde _____ / _____ / _____. A urethral
urinary tract / cv / x-ray image

Catheter is passed by a cystoscopy, and contrast material is injected to show urinary system structures.



Exercise Figure J

Fill in the blanks to label the diagram.

_____ / _____ / _____
urine / cv / instrument used to measure

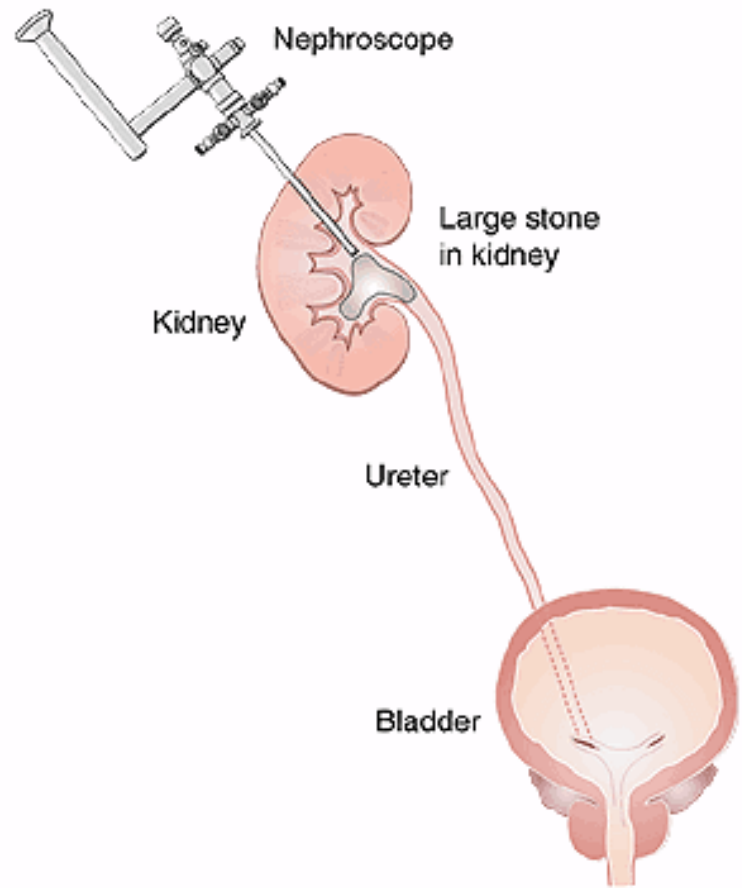
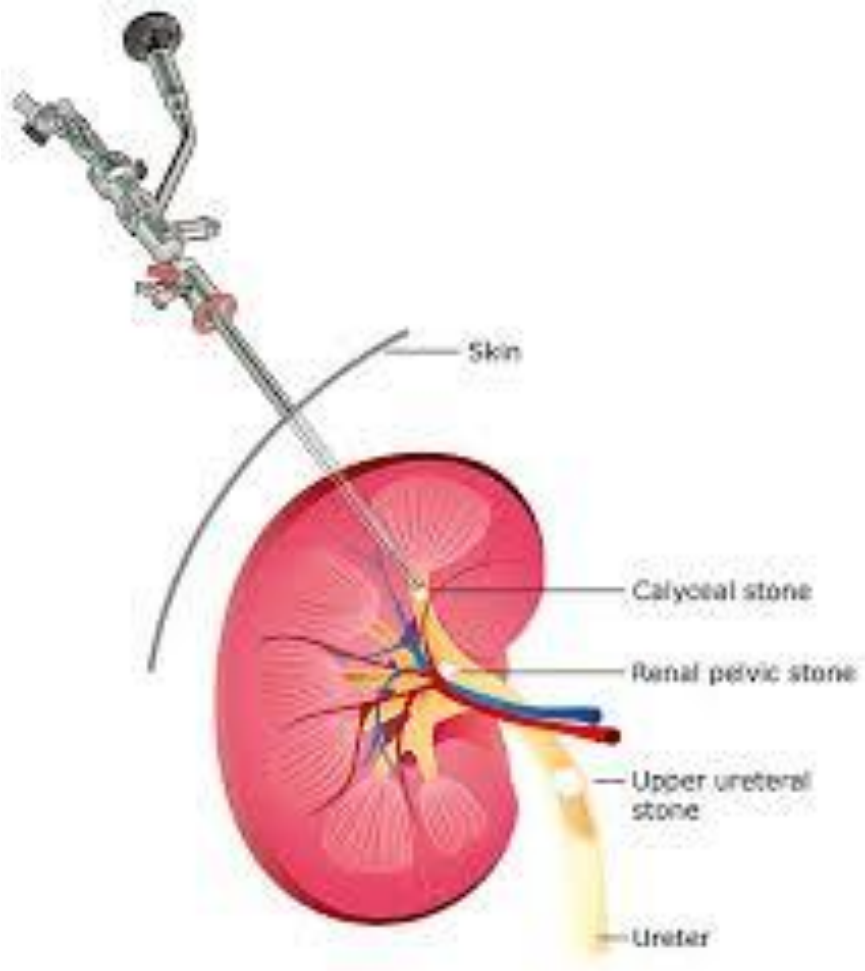


Figure 6-11
Nephroscopy

Learn the definitions and spellings of the diagnostic terms by completing exercises 20, 21, and 22.

EXERCISE 20

Analyze and define the following diagnostic terms.

1. voiding cystourerhrography _____

2. meatoscope _____

3. cystography _____

4. urethroscopy _____

5. nephrosonography _____

6. cystoscope _____
7. nephrotomogram _____
8. cystogram _____
9. meatoscopy _____
10. nephrogram _____
11. cystoscopy _____
12. nephrography _____
13. urinometer _____
14. (intravenous) urogram _____
15. retrograde urogram _____
16. renogram _____
17. nephroscopy _____

EXERCISE 21

Build diagnostic terms that correspond to the following definitions by using the Word parts you have learned.

1. visual examination of
the bladder

: _____ / ____ / _____
WR /CV/ S

2. (sectional) x-ray image of
the kidney

: _____ / ____ / _____ / ____ / _____
WR /CV/ WR /CV/ S

3. x-ray image of the urinary
tract (with contrast medium
injected intravenously)

: Intravenous _____ / ____ / _____
WR /CV/ S

4. instrument used for visual
examination of the meatus

: _____ / ____ / _____
WR /CV/ S

5. instrument used for visual examination of the urethra : _____ / ____ / _____
WR /CV/ S
6. process of x-ray recording the kidney using sound : _____ / ____ / _____ / ____ / _____
WR /CV/ WR /CV/ S
7. x-ray image of the bladder : _____ / ____ / _____
WR /CV/ S
8. visual examination of the meatus : _____ / ____ / _____
WR /CV/ S
9. instrument used for visual examination of the bladder : _____ / ____ / _____
WR /CV/ S
10. x-ray imaging the bladder and the urethra :Voiding _____ / ____ / _____ / ____ / _____
WR /CV/ WR /CV/ S
11. x-ray imaging the bladder : _____ / ____ / _____
WR /CV/ S

12. x-ray image of the kidney : _____ / _____ / _____
WR /CV/ S

13. instrument used to measure
(the specific gravity of) urine : _____ / _____ / _____
WR /CV/ S

14. (graphic) record of the kidney
(produced by radioactivity after
injecting a radio-pharmaceutical
material into the blood) : _____ / _____ / _____
WR /CV/ S

15. x-ray imaging of the kidney : _____ / _____ / _____
WR /CV/ S

16. x-ray image of the urinary tract
(with contrast medium instilled
through the urethral catheters in
a direction opposite from normal) : retrograde _____ / _____ / _____
WR /CV/ S

17. visual examination of the kidney : _____ / _____ / _____
WR /CV/ S

EXERCISE 22

Spell each of the diagnostic terms. Have someone dictate the terms on pp. 179 and 181-182 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

3-3. Diagnostic Terms (Con't)

3-3-2. Not Built from Word Parts

Term

Diagnostic Imaging

KUB (kidney, ureter, and bladder)....

Definition

a simple x-ray image of the abdomen. It is often used to view the kidneys, ureters, and bladder to determine size, shape, and location. Also used to identify calculi in the kidney ureters or bladder or to diagnose intestinal obstruction.

Term (Con't)

Laboratory

blood urea nitrogen (BUN).....
(ū-RE-a) (NĪ-trō-jen)

creatinine.....
(crē-AT-i-nen)

specific gravity (SG)
(spe-SIF-ik) (GRAV-i-tē)

urinalysis (UA).....
(ū-rin- AL-is-is)

Definition (Con't)

a blood test that measures the amount of urea in the blood. Used to determine kidney function. An increased BUN indicates renal dysfunction.

a blood test that measures the amount of creatinine in the blood. An elevated amount indicates impaired kidney function.

a test performed on a urine specimen to measure the concentrating or diluting ability of the kidneys

multiple routine tests performed on a urine specimen

Learn the definitions and spellings of the diagnostic terms by completing exercises 23, 24, and 25.

Exercise 23

Fill in the blanks with the correct terms.

1. The x-ray image of the abdomen used to view the kidneys, ureters, and bladder to determine size, shape, and location is called _____.
2. A test performed on a urine specimen to measure concentrating and diluting ability of the kidneys is called _____.
3. _____ measures the amount of urea in the blood.
4. Multiple routine tests performed on a urine specimen are referred to as a (n) _____.
5. _____ is a blood test that measures the amount of creatinine in the blood.

Exercise 24

Match the terms in the first column with their correct definitions in the second column.

___ 1. specific gravity	a. an x-ray image of the kidneys, ureters, and bladder
___ 2. blood urea nitrogen	b. a blood test used to determine kidney function
___ 3. urinalysis	c. a urine test to measure concentrating or diluting abilities of the kidneys
___ 4. KUB	d. multiple routine tests performed on a urine sample
___ 5. creatinine	e. an x-ray image of the kidneys, urethra, and bladder
	f. a test on blood that if elevated indicates impaired kidney function

EXERCISE 25

Spell each of the diagnostic terms. Have someone dictate the terms on p. 186 to you.

Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

3-4. Complementary Terms

3-4-1. Built from Word Parts

Term

Definition

albuminuria
(al-bū-min-Ū-rē-a)

albumin in the urine (albumin is an important protein in the blood, but when found in the urine, it indicates a kidney problem)

anuria.....
(an-Ū-rē-a)

absence of urine (failure of the kidney to produce urine)

azotemia.....
(āz-ō-TE-mē-a)

(excessive) urea and nitrogenous substances in the blood

diuresis
(dī-ū-RE-sis)

condition of urine passing through (increased excretion of urine)

(NOTE.: the a is dropped from dia- because uresis begins with a vowel.)

Term (Con't)

Definition (Con't)

Dysuria..... (dis-Ū -rē-a)	difficult or painful urination
Glycosuria..... (gli-kō-SŪ-rē-a)	sugar (glucose) in the urine
Hematuria..... (hēm-a-TŪ-rē-a)	blood in the urine
Meatal..... (mē-Ā-tal)	pertaining to the meatus
Nephrologist..... (ne-FROL-ō-jist)	a physician who studies and treats diseases of the kidney
Nephrology..... (ne-FROL-ō-jē)	study of the kidney (a branch of medicine dealing with disease of the kidney)

Term (Con't)

Definition (Con't)

nocturia
(nok-TŪ-rē-a)

night urination

oliguria.....
(ol-ig-U-rē-a)

scanty urine (amount)

polyuria.....
(pol-ē-U-rē-a)

much (excessive) urine

pyuria.....
(pī-U-rē-a)

pus in the urine

urinary.....
(Ū-rin-ā-rē)

pertaining to urine

urologist.....
(ū-ROL-ō-jist)

a physician who studies and treats (diseases of) the urinary tract.

urology.....
(ū-ROL-ō-Jē)

study of the urinary tract. (A branch of medicine dealing with diseases of the male and female urinary systems and the male reproductive system.)

Exercises 26, 27, and 28 will help you to learn the definitions and spellings of the complementary terms related to the urinary system.

Exercise 26

Analyze and define the following complementary terms.

1. nocturia _____

2. urologist _____

3. oliguria _____

4. azotemia _____

5. hematuria _____

6. urology _____

7. polyuria _____

8. albuminuria _____

9. anuria _____
10. diuresis _____
11. Pyuria _____
12. urinary _____
13. glycosuria _____
14. meatal _____
15. dysuria _____
- 16, nephrology _____
17. nephrologist _____

EXERCISE 27

Build the complementary terms for the following definitions by using the word parts you have learned.

1. night urination : _____ / _____
WR / S
2. scanty urine : _____ / _____
WR / S
3. pus in the urine : _____ / _____
WR / S
4. physician who studies
and treats (diseases of)
the urinary tract : _____ / ____ / _____
WR / CV / S
5. much (excessive) urine : _____ / _____
P / S(WR)

6. (excessive) urea and
nitrogenous substances
in the blood

: _____ / _____
WR / S

7. pertaining to urine

: _____ / _____
WR / S

8. blood in the urine

: _____ / _____
WR / S

9. study of the urinary tract :

_____ / _____
WR /CV/ S

10. condition of urine
passing through

(increased excretion of urine) :

_____ / _____ / _____
P / WR / S

11. absence of urine

: _____ / _____
P / S(WR)

12. sugar in the urine : _____ / _____
WR / S

13. difficult or painful
urination : _____ / _____
P / S(WR)

14. albumin in the urine : _____ / _____
WR / S

15. pertaining to the
meatus : _____ / _____
WR / S

16. study of the kidney : _____ / ____ / _____
WR /CV/ S

17. physician who studies
and treats (diseases of)
the kidney : _____ / ____ / _____
WR /CV/ S

EXERCISE 28

Spell each of the complementary terms. Have someone dictate the terms on pp.181-188 to you. Think about the word parts before attempting to write the word. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

16. _____

17. _____

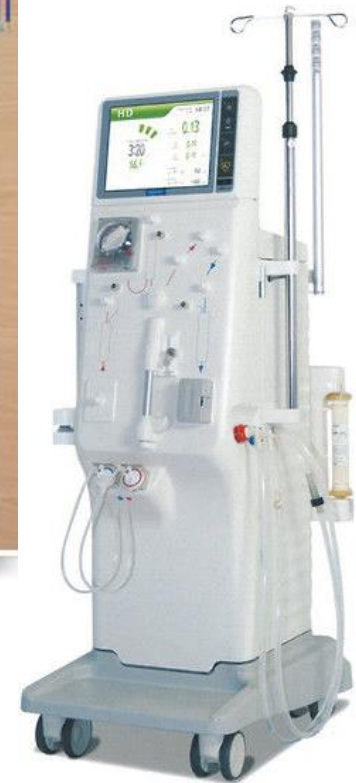


Figure 6-12
Hemodialysis.

3-4. Complementary Terms

Not Built from Word Parts

Term	Definition
catheter (cath)..... (KATH-e-ter)	flexible, tubelike device, such as a urinary catheter, for withdrawing or instilling fluids
distended..... (dis-TEN-ded)	stretched Out (a bladder is distended when filled with urine)
diuretic..... (di-ū-RET-ik)	agent that increases the formation and excretion of urine
enuresis..... (en-ū-RĒ-sis)	involuntary urination (bed-wetting)

Term (Con't)

hemodialysis(HD).....
(hē-mō-di-AL-i-sis)

Incontinence
(in-KON-ti-nens)

Micturate.....
(MIK-tū-rāt)

peritoneal dialysis.....
(pār-i-tō-NĒ-al) (dī-AL-i-sis)

Definition (Con't)

procedure for removing impurities from the blood because of an inability of the kidneys to do so (Figure 6-12)

inability to control bladder and/or bowels

to urinate or void

procedure for removing toxic wastes when the kidney is unable to do so; the peritoneal cavity is used as the receptacle for the fluid used in the dialysis (Figure 6-13)

Term (Con't)

Stricture.....
(STRIK-chūr)

urinal
(Ū-rin-al)

urinary catheterization....
(kath-e-ter-i- ZĀ -shun)

urodynamics
(ū-rō-dī-NAM -iks)

Void.....
(voyd)

Definition (Con't)

abnormal narrowing, such as a urethral stricture.

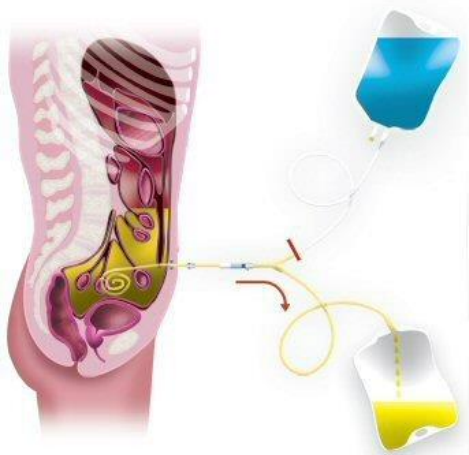
receptacle for urine

passage of a catheter into the urinary bladder to withdraw urine (Exercise Figure K)

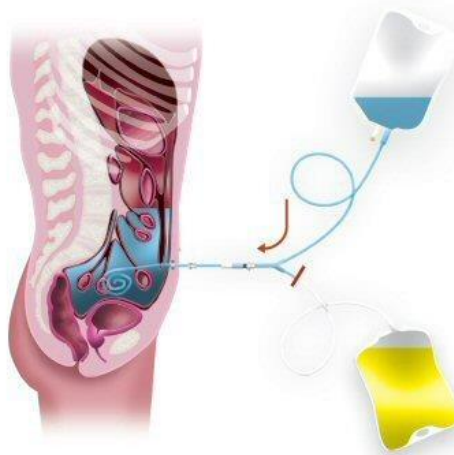
pertaining to the force and flow of urine within the urinary tract.

to empty or evacuate waste material, especially urine.

PD Exchange



DRAIN



FILL

Does not require
the use of blood
to leave your body



DWELL

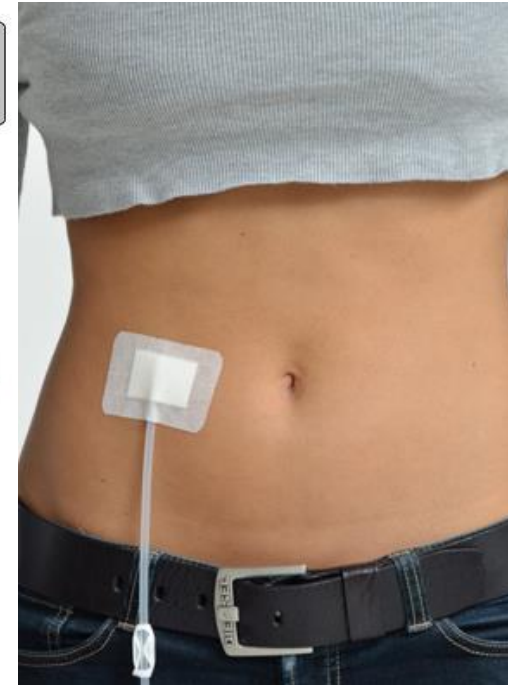


Figure 6-13
Peritoneal
dialysis.

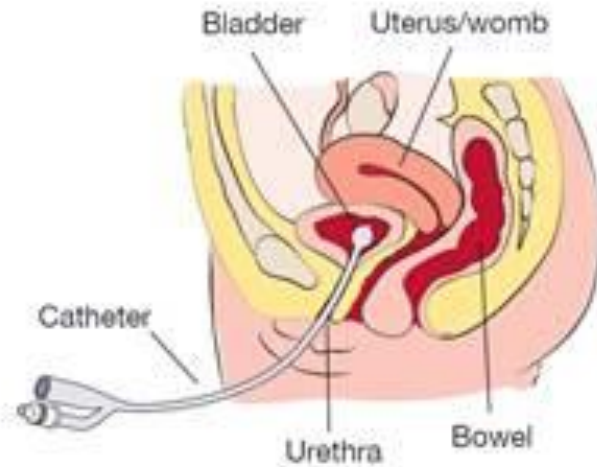


Figure 1 – Female catheter

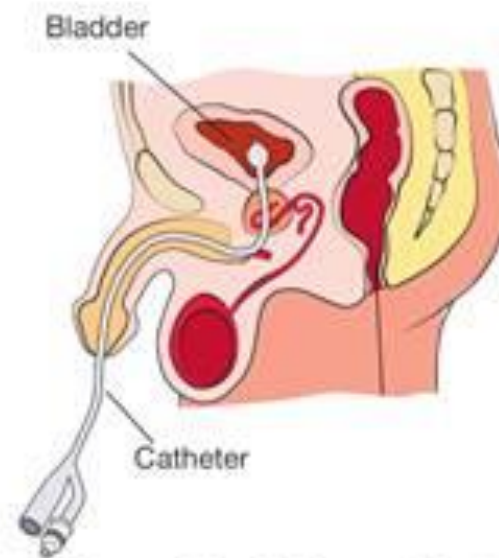


Figure 2 – Male catheter

Figure K

In the blanks to complete labeling of the diagram.

_____ / _____ catheterization. The catheter has been inserted through _____ urine / _____ pertaining to the urethra, and urine has been drained. The balloon on the end of the catheter has been inflated to hold the catheter the bladder for a period. This type of catheter is called a retention catheter.

Learn the definitions and spellings of the complementary terms by completing exercises 29 through 32.

Exercise 29

Fill in the blanks with the correct terms.

1. A receptacle for urine is a(n) _____.
2. The procedure for removing impurities from the blood because of the inability of the kidneys to do so is called _____.
3. A _____ *bladder is stretched out.*
4. A flexible, tubelike device for withdrawing or instilling fluids is a(n) _____.
5. The inability to control the bladder and/or bowels is called _____.

6. The passage of a catheter into the urinary bladder to withdraw urine is a(n) _____.
7. To remove toxic wastes caused by kidney insufficiency by placing dialyzing fluid in the peritoneal cavity is called _____.
8. To void is to _____.
9. An abnormal narrowing is a(n) _____.
10. An agent that increases the formation and excretion of urine is called a(n) _____.
11. Involuntary urination is called _____.
12. _____ is another word for void. or urinate.
13. _____ is the name given to the force and flow of urine.

Exercise 30

Match the terms in the first column with their correct definitions in the second column,

___ 1. catheter	a. increases the formation and excretion of urine.
___ 2. urinary catheterization	b. Overdevelopment
___ 3. distended	c. inability to control the bladder and or bowels.
___ 4. diuretic	d. process for removing impurities from the blood when the kidneys are unable to do so
___ 5. hemodialysis	e. flexible, tubelike device for withdrawing or instilling fluids.
___ 6. incontinence	f. stretched out
___ 7. void	g. passage of a tubelike device into the urinary bladder to remove urine.
	h. to evacuate or empty waste material especially urine

Exercise 31

Match the terms in the first column with their correct definitions in the second column.

___ 1. micturate, or urinate	a. to void liquid waste
___ 2. peritoneal dialysis	b. receptacle for urine
___ 3. stricture	c. force and flow of urine within the urinary tract.
___ 4. urinal	d. absence of urine
___ 5. enuresis	e. use of peritoneal cavity to hold dialyzing fluid in the removal of toxic wastes.
___ 6. urodynamics	f. involuntary urination
	g. narrowing

EXERCISE 32

Spell each of the complementary terms. Have someone dictate the terms on pp.191-192 to you. Study any words you have spelled incorrectly.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

3-5. Abbreviations

Abbreviations	
BUN.....	blood urea nitrogen
Cath.....	catheterization, catheter
ESWL.....	extracorporeal shock wave lithotripsy
HD.....	hemodialysis
IVU.....	intravenous urogram
SG.....	specific gravity
UA.....	urinalysis
UTI.....	urinary tract infection
VCUG.....	voiding cystourethrogram

EXERCISE 33

1. When image is used to diagnose obstructive uropathy, a KCB is usually performed first. An IVU _____ is usually best for confirming or excluding obstruction and determining its level and cause.

For further examination a VCUG _____ may be performed to evaluate the posterior urethra and check for vesicoureteral reflux.

2. SG _____ is one of many tests performed on the urine specimen during a UA _____. It measures the concentration of particles, including water and electrolytes in the urine.

3. BUN _____ is a laboratory test done on a blood sample to determine kidney function.

4. The number, size, and type of stones are important in determining if ESWL _____ is the best method for treating renal calculi.

5. Bladder cath _____ carries the risk of UTI therefore it is sometimes preferable to use other methods for obtaining urine specimens and managing incontinence.

6. Peritoneal dialysis, HD _____, and renal transplant are known as renal replacement therapies.

Reference

Myrna LaFleur Brooks, *Exploring Medical Language, Sixth Edition*, the United States of America, Andrew Allen, 2005