

CHAPTER

2

Word Parts and Word Building Rules

LESSON ONE: MATERIALS TO BE LEARNED

Parts of a Medical Term
Listings of Word Parts
Prefixes, Word Roots with Combining Forms, and Suffixes

LESSON TWO: PROGRESS CHECK PART A

Matching
Spelling and Definition
Defining Medical Word Elements
Building Medical Words

LESSON TWO: PROGRESS CHECK PART B

Matching
Spelling and Definition
Building Medical Words
Defining Medical Terms

OBJECTIVES

After completion of this chapter and the exercises, the student should be able to:

1. List the basic parts of a medical term.
2. Define the terms *word root*, *combining vowel*, *combining form*, *prefix*, and *suffix*.
3. State the rules for building medical terms.
4. Divide medical words into their component parts.
5. Build medical words using combining forms, prefixes, and suffixes.
6. Use multiple word roots in a compound word.

LESSON ONE

Materials to Be Learned

PARTS OF A MEDICAL TERM

Words, including medical terms, are composed of three basic parts: word roots, prefixes, and suffixes. How the parts are combined determine their meaning. Changing any part of a word changes its meaning. Spelling and pronunciation also are very important because some medical terms sound similar, and some sound exactly alike but are spelled differently and therefore have different meanings. For example, the word *phagia* (fay-jee-ah) means eating or swallowing, and the word *phasia* (fay-zee-ah) means without speech.

Examples of words that are pronounced exactly alike but spelled differently are the terms *ileum* (ill-ee-um) and *ilium* (ill-ee-um). Ileum is part of the small intestine, but ilium is part of the hipbone.

1. *Prefix*: the word or element attached to the *beginning* of a word root to modify its meaning. Not all medical words have a prefix. A prefix keeps its same meaning in every

term in which it is used. *When defining a medical term that has both a prefix and a suffix, define the suffix first, the prefix second, and the word root last.*

Note in the following example how the meaning of the word changes: **peri-** = prefix for around, **cardi** = root word for heart, and **-itis** = suffix for inflammation.

Term: pericarditis

Definition: inflammation around the heart (muscle)

2. *Word root:* the meaning or core part of the word. Medical terms have one or more roots. By adding prefixes and suffixes to a word root, the meaning of a word is changed. Most medical words have at least one word root, and some have several. Word roots are joined by a combining vowel. A word root will have the same meaning in every word that contains it. When a word root is joined to a suffix, or to other root words to make a compound word, it requires the use of a combining vowel.

3. *Combining vowel:* usually an o and occasionally an i, used between compound word roots or between a word root and a suffix. Combining vowels make word pronunciation easier. When a vowel is added to a root word, it is called a *combining form*. It is usually marked with a diagonal, e.g., **arthr/o**.

Combining vowels are kept between compound words even if the second word root does begin with a vowel, e.g., gastr/o_{entero}/logy. Compound words are two or more root words joined with a combining vowel. Compound words also may have a suffix, which is joined to the word by a combining vowel. When the suffix begins with a vowel (usually an i), the combining vowel on the root word is dropped. When the suffix begins with a consonant, the combining vowel is kept. Examples are:

- **mening/o** (root word and combining vowel) and **-itis** (suffix). The word is spelled *meningitis*, dropping the o. The term means inflammation of the meninges.
- **hem/o** (root word and combining vowel) and **-rrhage** (suffix). The word is spelled *hemorrhage*, keeping the o. The term means escape of blood from the vessels. If the suffix and the combining vowel are the same vowel, the duplicate vowel is also dropped, e.g., **cardi/o** (root word for heart) and **-itis** (suffix). The word is spelled *carditis* (only one i is used). It means inflammation of the heart (muscle).

4. *Suffix:* the word part or element attached to the end of a root word to modify its meaning. Not all root words have a suffix, and some words have two suffixes, e.g., **psych/o/log/ic/al**. When a medical term has two suffixes (as *psychological* does), they are joined and considered one suffix, that is, **-ic/al** = **-ical**. Some suffixes are attached to a prefix only, e.g., **dia-** (prefix) and **-rrhea** (suffix), or *diarrhea*. When they form a complete word, as in this example (*diarrhea*), the resulting word may be considered a root word, depending on its use.

The literal meaning of a word may be shortened through usage, by common consent, or when understood without being expressed.

Please note the following two premises when studying:

1. Many columns carry the heading “word root.” This is taken to mean that items under this column can be the word root itself or a word root with /o, that is, a combining form. This practice is to avoid excess repetition of the term “combining form” throughout the book.

CONFUSING MEDICAL TERMINOLOGY

-stasis Versus -stalsis

-stasis = control, stop, e.g., hemostasis (he-mo-sta-sis) refers to the interruption of blood flow or arrest of bleeding by the physiological properties of vasoconstriction and coagulation or by surgical means

-stalsis = contraction, e.g., peristalsis (per-uh-stawl-sis) refers to successive waves of involuntary contraction passing along the walls of a hollow muscular structure (as the esophagus or intestine) and forcing the contents onward

2. About 3–5% of the medical terms in this book that have not been presented in the lessons are included in the practice exercises. This is designed to:
- Encourage students to use the dictionary because the practice exercises are all open-book.
 - Provide students an opportunity to practice dividing those words into their respective components according to the rules in the book.
 - Give the instructor a choice whether to include these additional words.

Some textbooks on medical terminology use the same technique; others do not. Feedback from students and instructors will be noted. Word parts combine in various ways, as can be seen in the accompanying table.

Word Parts	Examples	Medical Terms
prefix + word root	anti- (prefix meaning against) + thyroid (root word for thyroid gland)	<i>antithyroid</i> <ul style="list-style-type: none"> • literal definition: against the thyroid • actual usage: (agent) suppressing thyroid activity
word root + suffix	gastr (word root for stomach) + -ic (suffix meaning pertaining to)	<i>gastric</i> <ul style="list-style-type: none"> • definition: pertaining to the stomach
combining form (word root + combining vowel) + suffix	cardi (root word for heart) + /o (a combining vowel) + -logy (suffix meaning study of)	<i>cardiology</i> <ul style="list-style-type: none"> • definition: study of the heart
prefix + suffix	an- (prefix meaning no, without) + -emia (suffix meaning blood)	<i>anemia</i> <ul style="list-style-type: none"> • literal definition: without (or no) blood • actual usage: decreased number of red blood cells or decreased hemoglobin in the cells
prefix + root word + suffix	epi- (prefix meaning above, over) + gastr (root word for stomach) + -algia (suffix meaning pain)	<i>epigastralgia</i> <ul style="list-style-type: none"> • literal definition: pain above the stomach • actual usage: pain in the upper region of the abdomen
compound word* + suffix	ot/o (root word for ear) + rhin/o (root word for nose) + laryng/o (root word for throat or larynx) + -logy (suffix meaning study of)	<i>otorhinolaryngology</i> <ul style="list-style-type: none"> • definition: the branch of medicine dealing with diseases of the ear, nose, and throat

* Two or more root words connected with a combining vowel.

LISTING OF WORD PARTS

You may or may not know most of the words presented in the table. Do not be concerned if you don't. There will be plenty of opportunity to learn more about them. In the next section, you are provided with listings of word parts. Many of the prefixes, combining forms, word roots, and suffixes are indicated. Eventually, you will have to be familiar with all of them. Here are some steps that will help you to learn:

1. Go through the lists of word parts once or twice.
2. Check your knowledge by covering all but the first column and see if you can provide meanings for some of the words.

CONFUSING MEDICAL TERMINOLOGY

ante- Versus anti-

ante- = before, forward, e.g., antepartum (an-te-par-tum) refers to occurring before childbirth

anti- = against, counter, e.g., anticoagulant (an-te-ko-ag-u-lant) is an agent that slows down the clotting process

PREFIXES, WORD ROOTS WITH COMBINING FORMS, AND SUFFIXES

TABLE 2-1 Prefixes Commonly Used in Medicine

Prefix	Definition	Word Example	Pronunciation	Definition
a-, an-	no, not, without, lack of, apart	an oxia	an-ok'-se-ah	lack of sufficient oxygen in the blood
ad-	toward, near, to	ad hesion	ad-he'-zhun	union of two surfaces that are normally separate
bi-	two, double	bi cuspid	bi-kus'-pid	having two cusps
de-	down, away from	de generate	de-jen'-er-ate	to change from a higher to a lower form
di-	two, double	di plopia	di-plo-pe-ah	double vision
dia-	through, between	dia lysis	di-al'-i-sis	diffusion of solute molecules through a semipermeable membrane
dif-, dis-	apart, free from, separate	dif fusion	di-fu'-zhun	state or process of being widely spread
dys-	bad, difficult, painful	dys functional	dis-fungk'-zhun-al	disturbance, impairment, or abnormality of an organ
ec-, ecto-	out, outside, outer	ecto derm	ek-to-derm	outermost of the three primitive germ layers of the embryo
end-, endo-	within, inner	endo metrium	en-do-me'-tre-um	mucous membrane lining the uterus
ep-, epi-	upon, over, above	epi dural	ep-i-du-ral	situated upon or outside the dura mater
eu-	good, normal	eu phoria	u-fo'-re-ah	an exaggerated feeling of mental and physical well-being
ex-, exo-	out, away from	ex crete	ek-skreet'	to throw off or eliminate, as waste matter, by normal discharge
extra-	outside, beyond	extra uterine	ek-strah-u'-ter-in	situated or occurring outside the uterus
hyper-	above, beyond, excessive	hyper tension	hi-per-ten'-shun	persistently high blood pressure
hypo-	below, under, deficient	hypo dermic	hi-po-der'-mik	beneath the skin
in-	in, into, not	in fusion	in-fu'-zhun	steeping a substance in water to obtain its soluble principles
mega-	large, great	mega lgia	meg-al-je-ah	a severe pain
meta-	beyond, over, between, change	meta stasis	me-tas'-tah-sis	transfer of a disease from one organ to another not directly connected to it
para-	beside, alongside, abnormal	para colitis	par'-ah-ko-li'-tis	inflammation of the outer coat of the colon
poly-	many, much, excessive	poly cystic	pol'-e-sis'-tik	containing many cysts

TABLE 2-1 Prefixes Commonly Used in Medicine (*continued*)

Prefix	Definition	Word Example	Pronunciation	Definition
post-	after, behind	post natal	post-na´-tal	occurring after birth, with reference to the newborn
pre-	before, in front of	pre menstrual	pre-men´-stroo-al	preceding menstruation
pro-	before, in front of	pro otic	pro-ot´-ik	in front of the ear
super-	above, beyond	super nutrition	soo-per-nu-trish´-un	excessive nutrition
supra-	above, beyond	supra costal	soo-prah-kos´-tal	above or outside the ribs

TABLE 2-2 Word Roots and Combining Forms for Body Parts

Word Part	Definition	Word Example	Pronunciation	Definition
abdomin/o	abdomen	abdomin ocystic	ab-dom´-i-no-sis-tic	pertaining to the abdomen and gallbladder
aden/o	gland	aden itis	ad´-e-ni-tis	inflammation of a gland
an/o	anus	an oplasty	an´-oh-plas-te	plastic repair of the anus
andr/o	men	and roid	an-droid	resembling a man
angi/o	vessel	angi ectomy	an´-je´-ek-to-me	excision of part of a blood vessel or lymph vessel
appendage	attached to or outgrowth	append ectomy	ah-pen-dek´-to-me	excision of the vermiform appendix
appendic/o	appendix	appendic olysis	ah-pen-di-kol´-i-sis	surgical separation of adhesions binding the appendix
arteri/o	artery	arteri ogram	ar-te-re-o-gram´	an x-ray picture of an artery
arthr/o	joint	arthr ocele	ar-thro-sel	a joint swelling
cardi/o	heart	cardi ology	kar-de-ol´-ogy	study of the heart
cephal/o	head	cephal ic	se´-phal-ic	pertaining to the head
cerebr/o	cerebrum (part of the brain)	cerebral	ser´-e-bral	pertaining to the brain
cyst/o	bladder	cyst ocele	sis-toh-seel	hernia of the bladder into the vagina
cyt/o	cell	cyt ology	si´-toh-lögy	study of the body cells
encephal/o	brain	encephal oma	en-sef´-ah-lo-mah	a swelling or tumor of the brain

(continues)

TABLE 2-2 Word Roots and Combining Forms for Body Parts (*continued*)

Word Part	Definition	Word Example	Pronunciation	Definition
enter/o	intestines	enter itis	en- <u>ter</u> -i'-tis	inflammation of the intestine (usually small intestine)
esophag/o	esophagus	esophag ism	e- <u>sof</u> -ah-jism	spasm of the esophagus
gastro/o	stomach	gastro pathy	gas- <u>tro</u> p-ah-the	any disease of the stomach
gloss/o	tongue	gloss odynia	glos'-o- <u>din</u> -e-ah	pain in the tongue
gyne	woman	gyne phobia	jin'-e- <u>fo</u> -be-ah	morbid aversion to women
hem/o	blood	hem atoma	he- <u>ma</u> -toh'-mah	blood clot in an organ or under the skin
hepat/o	liver	hepat ocele	<u>hep</u> -ah-to-sel	hernia of the liver
hyster/o	uterus	hyster olith	<u>his</u> -ter-o-lith'	a uterine calculus (stone)
ile/o	ileum (small intestine)	ile us	<u>il</u> -e-us	intestinal obstruction
irid/o	iris (eye)	irid omalacia	ir'-i-do-mah- <u>la</u> -she-ah	softening of the iris
kerat/o	cornea of eye; horny substance	kerat orrhexis	ker'-ah-to- <u>rek</u> -sis	rupture of the cornea
lamina, lamin/o	thin, flat part of vertebra	lamin otomy	lam'-i- <u>not</u> -o-me	transection of a vertebral lamina
lapar/o	abdominal wall	lapar orrhaphy	lap'-ah- <u>ror</u> -ah-fe	suture of the abdominal wall
lingua	tongue	nigr lingua	ni-gra- <u>ling</u> -gwah	black tongue
lob/o	lobe, as of lung or brain	lob otomy	lo- <u>bot</u> -o-me	cutting of nerve fibers connecting a lobe of the brain with the thalamus
mamm/o	breast	mamm ogram	<u>mam</u> -o-gram	x-ray recording of breast tissue
mast/o	breast	mast itis	mas- <u>ti</u> -tis	inflammation of the breast
my/o	muscle	my ocarditis	mi'-o-kar- <u>dj</u> -tis	inflammation of the heart muscle
myel/o	bone marrow; spinal cord	myel ocyte	<u>mi</u> -e-lo-sit'	immature cell of bone marrow
myring/o	eardrum	myring oplasty	mi- <u>ring</u> -o-plas'-te	surgical reconstruction of the eardrum
nephr/o	kidney	nephr itis	ne- <u>fri</u> -tis	inflammation of the kidney
neur/o	nerve	neur algia	nu- <u>ral</u> -je-ah	pain in a nerve
oophor/o	ovary	oophor ocystosis	o-of'-o-ro-sis- <u>to</u> -sis	formation of an ovarian cyst
ophthalm/o	eye	ophthalm orrhagia	of-thal'-mo- <u>ra</u> -je-ah	hemorrhage from the eye
orchi/o	testicle	orchi opathy	or'-ke- <u>op</u> -ah-the	any disease of the testes

TABLE 2-2 Word Roots and Combining Forms for Body Parts (*continued*)

Word Part	Definition	Word Example	Pronunciation	Definition
orchid/o	testicle	orchid orrhaphy	or'-ki- <u>dor</u> -ah-fe	surgical fixation of an undescended testis into the scrotum by suturing
oste/o	bone	oste oporosis	os'-te-o-po- <u>ro</u> -sis	abnormal thinning of the skeleton
ot/o	ear	ot itis	o- <u>ti</u> -tis	inflammation of the ear
pancreat/o	pancreas	pancreat ogenous	pan'-kre-ah- <u>toj</u> -e-nus	arising in the pancreas
pharyng/o	pharynx	pharyng ismus	far'-in- <u>jis</u> -mus	muscular spasm of the pharynx
phleb/o	vein	phleb otomy	fle- <u>bot</u> -o-me	incision of a vein
pneum/o	lungs (air or gas)	pneum onectomy	nu'-mo- <u>nek</u> -to-me	excision of lung tissue
proct/o	rectum	proct odynia	prok'-to- <u>din</u> -e-ah	pain in the rectum
prostat/o	prostate gland	prostat itis	pros'-tah- <u>ti</u> -tis	inflammation of the prostate
pyel/o	pelvis of kidney	pyel ectasis	pi'-e- <u>lek</u> -tah-sis	dilation of the renal pelvis
rect/o	rectum and/or anus	recto cele	<u>rek</u> -to-sel	hernial protrusion of part of the rectum into the vagina
ren/i	renal (kidney)	ren iform	<u>ren</u> -i-form	kidney-shaped
rhin/o	nose	rhin itis	ri- <u>ni</u> -tis	inflammation of the mucous membrane of the nose
sacr/o	sacrum	sacr olumbar	sa'-kro- <u>lum</u> -bar	pertaining to the sacrum and loins
salping/o	fallopian tube	salping ocystis	sal-ping'-go-ci- <u>e</u> -sis	development of an embryo in the uterine tube; a tubal pregnancy
splen/o	spleen	splen optosis	sple-nop- <u>to</u> -sis	downward displacement of the spleen
spondyl/o	vertebra	spondyl odymus	spon'-di- <u>lod</u> -i-mus	twin fetuses united by the vertebrae
steth/o	chest	steth ospasm	<u>steth</u> -o-spasm	spasm of the chest muscles
stomat/o	mouth	stomat omalacia	sto-mah-to-ma- <u>la</u> -she-ah	softening of the structures of the mouth
ten/o	tendon	ten dolysis	ten- <u>dol</u> -i-sis	the freeing of tendon adhesions
thorac/a	thorax (chest)	thorac entesis	tho'-rah-sen- <u>te</u> -sis	surgical puncture and drainage of the thoracic cavity
thyr/o	thyroid gland	thyr oxine	thi- <u>rok</u> -sin	a hormone of the thyroid gland that contains iodine
trache/o	trachea	trache oscopy	tra'-ke- <u>os</u> -ko-pe	inspection of the interior of the trachea

(continues)

TABLE 2-2 Word Roots and Combining Forms for Body Parts (*continued*)

Word Part	Definition	Word Example	Pronunciation	Definition
tympan/o	eardrum	tympan um	<u>tim</u> -pah-num	part of the cavity of the middle ear, in the temporal bone
ureter/o	ureter	ureter opathy	u-re´ter- <u>op</u> -ah-the	any disease of the ureter
vas/o	vessel	vas cular	<u>vas</u> -ku-lar	pertaining to blood vessels
ven/i	vein	ven ipuncture	<u>ven</u> ´i-punk-chur	surgical puncture of a vein

TABLE 2-3 Suffixes Used in Surgery

Suffix	Definition	Word Example	Pronunciation	Definition
-age	related to	tri/ age (three)	tre- <u>ahzh</u>	sorting out and classification of casualties to determine priority of treatment
-centesis	surgical puncture	arthro/ centesis (joint)	ar´thro-sen- <u>te</u> -sis	puncture of a joint cavity for aspiration of fluid
-cid	kill	germi/ cid al (germ)	<u>jer</u> -mi-si-dal	destructive to pathogenic microorganisms
-cis	cut, kill, excise	circum/ cision (around)	<u>ser</u> -kum-sizh´un	surgical removal of the foreskin of the penis
-clasis	to break down, refracture	oste/o clasis (bone)	os´te- <u>ok</u> -lah-sis	surgical fracture or refracture of bones
-desis	binding, stabilization	arthr/o desis (joint)	ar´thro- <u>de</u> -sis	surgical fusion of a joint
-ectomy	excision, removal	append/ ectomy	ap´en- <u>dek</u> -to-me	excision of the vermiform appendix
-iatry	healing (by a physician)	psych/ iatry (mind)	si´ki-ah-tre	healing of the mind
-ion	process	excerebrat ion (brain)	<u>ek</u> -ser-e-bra´shun	process of removal of the brain
-lysis	loosen, free from adhesions, destruction	enter/o lysis (intestine)	en´ter- <u>ol</u> -i-sis	surgical separation of intestinal adhesions
-osis	condition of	necr/ osis (death)	ne- <u>kro</u> -sis	death of cells or tissues
-ostomy	mouth, forming an opening	col/ ostomy (colon)	ko- <u>los</u> -to-me	the surgical creation of an opening between the colon and the body surface
-pexy	fixation, suspension	gastro/ pexy (stomach)	<u>gas</u> -tro-pek´se	surgical fixation of the stomach
-plasty	formation, plastic repair	rhino/ plasty (nose)	ri-no-plas´te	plastic surgery of the nose

TABLE 2-3 Suffixes Used in Surgery (*continued*)

Suffix	Definition	Word Example	Pronunciation	Definition
-stasis	stop/control	hemo/ stasis (blood)	he-mo-sta'-sis	stopping the escape of blood by either natural or artificial means
-therapy	treatment	chemo/ therapy (drug)	ke-mo-ther'-ah-pe	treatment of illness by medication
-tomy	incision, to cut into	phlebo/ tomy (vein)	fle-bot-o-me	incision of a vein
-tripsy	to crush	litho/ tripsy (stone)	lith-o-trip'-se	the crushing of a stone in the bladder

TABLE 2-4 Suffixes for Diagnoses and Symptoms

Suffix	Definition	Word Example	Pronunciation	Definition
-algia	pain	cephal/ algia (head)	sef'-a-lal-je-ah	headache
-cele	hernia, swelling	hepat/ cele (liver)	hep-ah-to-sel	hernia of the liver
-dynia	pain	cephal/ dynia (head)	sef'-ah-lo-din-e-ah	pain in the head
-ectasis	dilation, expansion	bronchi/ ectasis (bronchus)	brong'-ke-ek-tah-sis	chronic dilation of one or more bronchi
-emia	blood	poly/cyth/ emia (many)	pol-e-si-the'-me-ah	increase in total red cell mass of the blood
-gen	producing, beginning	carcin/o/ gen (cancer)	car-sin-o-jen	any substance that causes cancer
-gram	record, picture	encephal/o/ gram (brain)	en-sef-ah-lo-gram	the x-ray film obtained by encephalography
-graph	instrument for recording	cardi/o/ graph (heart)	kar-de-o-graf'	an instrument used for recording electrical activity of the heartbeat
-graphy	process of recording	roentgen/o/ graphy	rent'-gen-og-rah-fe	x-ray films (roentgenograms) of internal structures of the body
-iasis	abnormal condition, formation of, presence of	chole/lith/ iasis (gallstone)	ko'-le-li-thi-ah-sis	the presence or formation of gallstones
-itis	inflammation	gastr/ itis (stomach)	gas-tri-tis	inflammation of the stomach

(continues)

TABLE

2-4

Suffixes for Diagnoses and Symptoms (*continued*)

Suffix	Definition	Word Example	Pronunciation	Definition
-logy	study of	bio/ logy (life)	bi- <u>ol</u> -o-je	scientific study of living organisms
-malacia	softening	oste/o/ malacia (bone)	os'-te-o-mah- <u>la</u> -she-ah	softening of the bones resulting from vitamin D deficiency
-megaly	enlargement	hepat/o/ megaly (liver)	hep'-aht-o- <u>meg</u> -ah-le	enlargement of the liver
-meter	instrument for measuring	crani/o/ meter (cranium)	kra'-ne- <u>om</u> -e-ter	an instrument for measuring skulls
-metry	process of measuring	pelvi/ metry (pelvis)	pel- <u>vim</u> -e-tre	measurement of the capacity and diameter of the pelvis
-oid	resemble	lip/ oid (fat)	<u>lip</u> -oid	fatlike; lipid (resembling a fat)
-oma	tumor	aden/ oma (gland)	ad'-e- <u>no</u> -mah	a benign skin tumor in which the cells are derived from glandular epithelium
-osis	abnormal condition	dermat/ osis (skin)	der'-mah- <u>to</u> -sis	any skin disease, especially one not characterized by inflammation
-pathy	disease	nephro/ pathy (kidney)	ne- <u>frop</u> -ah-the	disease of the kidneys
-penia	decrease, deficiency	leuk/o/cyto/ penia (white) (cell)	loo-ko-sit-o- <u>pe</u> -ne-ah	reduction of the number of leukocytes (white blood cells), the count being 5,000/mm ³ or less
-phagia	eating, swallowing	dys/ phagia (difficult)	dis- <u>fa</u> -je-ah	difficulty in swallowing or eating
-phasia	speech	a/ phasia (without)	ah- <u>fa</u> -zhe-ah	defect or loss of the power of expression by speech, writing, or signs, or of comprehending spoken or written words
-phobia	fear	acr/o/ phobia (extremities or top)	ak'-ro- <u>fo</u> -be-ah	morbid fear of heights
-plegia	paralysis	hemi/ plegia (half)	hem'-e- <u>ple</u> -je-ah	paralysis of one side of the body
-ptosis	prolapse, falling, dropping	hyster/o/ ptosis (uterus)	his'-ter-op- <u>to</u> -sis	metroptosis; downward displacement or prolapse of the uterus
-rrhage	burst forth	hem/o/ rrhage (blood)	<u>hem</u> -o-rij	the escape of blood from the vessels; excessive bleeding
-rrhea	discharge, flow	men/o/ rrhea (menses)	men'-o- <u>re</u> -ah	normal menstruation
-rrhexis	rupture	angi/o/ rrhexis (blood vessel)	an'-je-or- <u>ek</u> -sis	rupture of a vessel, especially a blood vessel

TABLE 2-4 Suffixes for Diagnoses and Symptoms (*continued*)

Suffix	Definition	Word Example	Pronunciation	Definition
-sclerosis	hardening	arteri/o/ sclerosis (artery)	ar-te'-re-o-skle- <u>ro</u> -sis	a group of diseases characterized by thickening and loss of elasticity of the arterial walls
-scopy	examination, view	oto/ scopy (ear)	o- <u>tos</u> -ko-pe	examination of the ear by means of the otoscope
-spasm	involuntary contraction, twitching of a muscle	blephar/o/ spasm (eyelid)	<u>blef</u> -ah-ro-spazm	spasm of the eyelids

In summary, the important elements of a medical term are:

1. **Root:** the foundation of the term
2. **Prefix:** the word beginning
3. **Suffix:** the word ending
4. **Combining vowel:** a vowel that links the root word to the suffix or to other root words
5. **Combining form:** a combination of the root word(s) and the combining vowel

The rules for building medical words from these elements are as follows:

1. A prefix is always placed at the beginning of the word.
2. A suffix is always placed at the end of the word.
3. When more than one root word is used, it is a compound word and requires the use of a combining vowel to separate the words, even if the root word begins with a vowel.
4. When defining medical terms, begin with the suffix and read backward.
5. If the word also contains a prefix, define the suffix first, prefix second, and root word(s) last.
6. When using compound words that relate to parts of the body, anatomic position determines which root word comes first.

CONFUSING MEDICAL TERMINOLOGY

an/o Versus **ana-** Versus **an-**

an/o = anal origin or anus, e.g., anorectal (a-no-rek-tal) refers to the anal opening of the rectum

ana- = back, again, up, e.g., anaplasia (an-uh-pley-zhuh) refers to a reversion (back, again) of differentiation in cells and is characteristic of malignant tumors

an- = no, not, or without, e.g., anacusis (an-ah-ku-sis) refers to without hearing

LESSON TWO

Progress Check Part A

MATCHING

Match the following word elements with their meaning:

- | | |
|---------------|-------------------|
| 1. aden/o | a. brain |
| 2. bronch/o | b. uterus |
| 3. encephal/o | c. abdominal wall |
| 4. gloss/o | d. bronchus |
| 5. hyster/o | e. bone |
| 6. irid/o | f. gland |
| 7. lapar/o | g. tongue |
| 8. oste/o | h. iris |

◆ SPELLING AND DEFINITION

Circle the letter of the correct spelling and then define the combining form:

1. (a) oophor/o (b) ophoor/o (c) oorphor/o
Definition: _____
2. (a) prosct/o (b) proct/o (c) prost/o
Definition: _____
3. (a) neuphr/o (b) neprect/o (c) nephr/o
Definition: _____
4. (a) rhinit/o (b) rhin/o (c) rhen/o
Definition: _____
5. (a) orchi/o (b) oorch/o (c) orche/o
Definition: _____
6. (a) salcr/o (b) salp/o (c) sacr/o
Definition: _____
7. (a) salpr/o (b) salping/o (c) salpen/o
Definition: _____
8. (a) myring/o (b) mirang/o (c) myleng/o
Definition: _____
9. (a) pharang/o (b) pharyng/o (c) pragyn/o
Definition: _____
10. (a) spongy/o (b) sphondyl/o (c) spondyl/o
Definition: _____
11. (a) urotor/o (b) uroter/o (c) ureter/o
Definition: _____
12. (a) chondr/o (b) cholondr/o (c) chodol/o
Definition: _____
13. (a) chost/o (b) cost/o (c) costol/o
Definition: _____
14. (a) vast/o (b) vas/o (c) vein/o
Definition: _____
15. (a) ven/o (b) vin/o (c) vein/o
Definition: _____
16. (a) erythr/o (b) eythry/o (c) erythrey/o
Definition: _____

◆ DEFINING MEDICAL WORD ELEMENTS

Provide the medical root word for the following terms:

- | | |
|------------------|-----------------------|
| 1. man _____ | 9. liver _____ |
| 2. woman _____ | 10. gallbladder _____ |
| 3. heart _____ | 11. mouth _____ |
| 4. head _____ | 12. tongue _____ |
| 5. chest _____ | 13. breast _____ |
| 6. bone _____ | 14. muscle _____ |
| 7. brain _____ | 15. nerve _____ |
| 8. stomach _____ | |

◆ BUILDING MEDICAL WORDS

Using all word elements necessary, build medical words that mean:

1. inflammation of a tendon _____
2. removal of the thyroid gland _____
3. incision into the trachea _____
4. any disease of the intestine _____
5. pain in the nerves _____
6. inflammation in the urinary bladder _____
7. inflammation in a joint _____
8. removal of the spleen _____
9. an eye specialist _____
10. an x-ray picture of a blood vessel _____
11. stones in the gallbladder _____
12. an obstructed artery _____
13. removal of a lung _____
14. an x-ray picture of the spinal cord _____
15. instrument for examining the ear _____
16. incision into a vein _____
17. removal of the prostate gland _____
18. rupture of a vessel in the cerebrum _____
19. inflammation of the esophagus _____
20. incision into the thorax _____
21. excessive sugar in the blood _____

LESSON TWO

Progress Check Part B

 MATCHING

Match the following word elements with their meaning:

- | | |
|-------------|-----------------------------|
| 1. -ectomy | a. tumor |
| 2. -ostomy | b. abnormal condition |
| 3. -otomy | c. rupture |
| 4. -rrhaphy | d. resembling |
| 5. -rrhage | e. discharge |
| 6. -rrhea | f. burst forth |
| 7. -rrhexis | g. cut into |
| 8. -oid | h. suture |
| 9. -oma | i. surgical removal |
| 10. -osis | j. mouth, surgical creation |

 SPELLING AND DEFINITION

Circle the letter of the correct spelling and then define the word element:

- (a) -centesis (b) -centisis (c) -senticis (d) -cinteses

Definition: _____
- (a) -clysis (b) -clasis (c) -claxis (d) -clasy

Definition: _____
- (a) -ectasy (b) -ectosis (c) -ectasis (d) -eclasis

Definition: _____
- (a) -malachi (b) -melacia (c) -malazia (d) -malacia

Definition: _____
- (a) -plegia (b) -plagia (c) -phlagia (d) -pelagia

Definition: _____
- (a) -tosis (b) -ptosis (c) -protosis (d) -tsosis

Definition: _____
- (a) -slerosis (b) -schlerosis (c) -sclerosis (d) -shlerosis

Definition: _____
- (a) -magaly (b) -mejally (c) -magely (d) -megaly

Definition: _____
- (a) -cele (b) -cely (c) -cili (d) -ceal

Definition: _____
- (a) -isis (b) -iasis (c) -iatis (d) -iesis

Definition: _____

◆ BUILDING MEDICAL WORDS

Using all word elements necessary, build medical words that mean:

1. a headache _____
2. taking x-ray films of internal body structures _____
3. inflammation of the stomach _____
4. formation of gallstones _____
5. increase in red cell mass _____
6. softening of the bones _____
7. surgical puncture of a joint _____
8. removal of blood from a vein _____
9. repair of a broken nose _____
10. scientific study of living organisms _____
11. enlargement of the liver _____
12. any skin disease _____
13. excision of the appendix _____
14. healing of the mind _____
15. incision into the brain _____
16. treatment of illness by medication _____
17. stopping the flow of blood _____
18. a substance that causes cancer _____
19. disease of the kidneys _____
20. loss of the power of speech _____

◆ DEFINING MEDICAL TERMS

Define the following medical terms:

1. osteoclasia _____
2. enterolysis _____
3. lithotripsy _____
4. necrosis _____
5. circumcision _____
6. adenoma _____
7. dysphagia _____
8. leukopenia _____
9. hemiplegia _____
10. acrophobia _____