

CHAPTER

2

Prefixes and Suffixes in Medical Terms

After studying this chapter, you will be able to:

- 2.1 Define common medical prefixes
- 2.2 Define common medical suffixes
- 2.3 Describe how word parts are put together to form words

Medical Prefixes and Suffixes

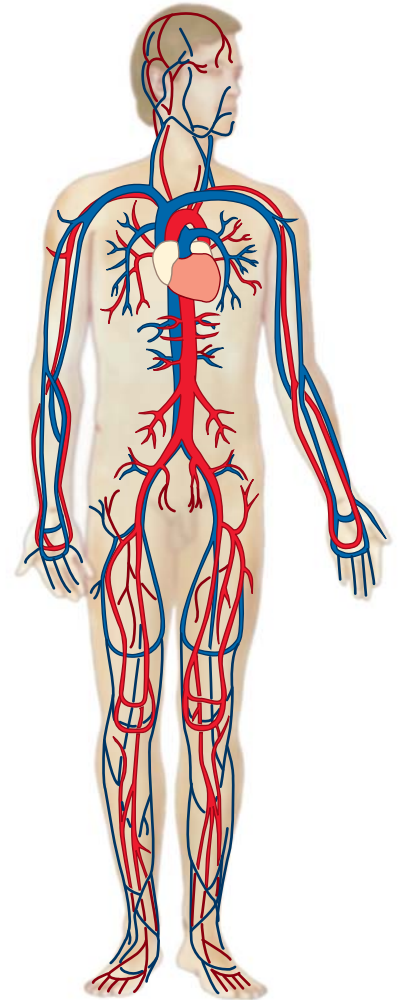
In Chapter 1, you learned about the four basic word parts—word roots, combining forms, prefixes, and suffixes, and you learned the important medical roots and combining forms. In this chapter, you learn the important medical prefixes and suffixes and how word parts are put together to form medical terms.

Prefixes

Prefixes are word parts that modify the meaning of the word or word root. They attach to the beginning of words. Prefixes tend to indicate size, quantity, position, presence of, and location. When trying to understand a word with a prefix, you can take apart the word, find the meaning of each part, and then determine the meaning of the entire word. For example, terms for paralysis include *paraplegia*, *hemiplegia*, and *quadriplegia*. By taking apart the three terms, you can deduce the meaning of each of these three medical terms.

- para- = abnormal; involving two parts + -plegia = paralysis
- hemi- = half
- quadri- = four

Sometimes you need to reason out a meaning that is not quite the prefix plus the root but is a meaning that makes sense. *Paraplegia* is paralysis of the two lower limbs; *hemiplegia* is paralysis of one side; and *quadriplegia* is paralysis of all four limbs. The meaning “limbs” is not contained specifically in the prefix but it is understood from the combination of the numbers in the prefix’s meaning and the root meaning paralysis—so “two paralysis” is paralysis of the two lower limbs (since you cannot have paralysis of just the upper limbs).



To learn more about paralysis and what is being done to cure it, go to the National Spinal Cord Injury Association’s Web site (www.spinalcord.org).

PREFIXES	MEANING	EXAMPLE
a-	without	<i>asepsis</i> [ā-SĚP-sīs], without living organisms
ab-, abs-	away from	<i>abduct</i> [āb-DŮKT], to draw away from a position
ad-	toward, to	<i>adduct</i> [ā-DŮKT], to draw toward the body, as a limb
ambi-	both, around	<i>ambidextrous</i> [ām-bē-DEKS-trūs], having ability on both the right and left sides (said of the hands)
an-	without	<i>anencephalic</i> [ān-ěn-sĚ-FĀL-ĭk], without a brain
ana-	up, toward	<i>anaphylactic</i> [ĀN-ā-fĭ-LĀK-tĭk], exaggerated reaction to an antigen or toxin
ante-	before	<i>antemortem</i> [ĀN-tē-mōr-těm], before death
anti-	against	<i>antibacterial</i> [ĀN-tē-bāk-TĚR-ē-āl], preventing the growth of bacteria
apo-	derived, separate	<i>apobiosis</i> [āp-ō-bĭ-Ō-sīs], death of a part of a living organism
aut(o)-	self	<i>autoimmune</i> [āw-tō-ĭ-MYŪN], against an individual's own tissue
bi-	twice, double	<i>biparous</i> [BĪP-ā-rūs], bearing two young
brachy-	short	<i>brachyoesophagus</i> [BRĀK-ē-ě-sōf-ā-gūs], abnormally short esophagus
brady-	slow	<i>bradycardia</i> [brād-ē-KĀR-dē-ā], abnormally slow heartbeat
cata-	down	<i>cataplexy</i> [KĀT-ā-plěk-sě], sudden extreme muscle weakness
circum-	around	<i>circumoral</i> [sěr-kŭm-ŌR-āl], around the mouth
co-, col-, com-, con-, cor-	together	<i>codominant</i> [kō-DŌM-ĭ-nānt], having an equal degree of dominance (said of two genes)
contra-	against	<i>contraindicated</i> [kōn-trā-ĭn-dĭ-KĀ-těd], not recommended
de-	away from	<i>demyelination</i> [dē-MĪ-ě-lĭ-NĀ-shŭn], loss of myelin
di-, dif-, dir-, dis-,	not, separated	<i>disarticulation</i> [dĭs-ār-tĭk-yŭ-LĀ-shŭn], amputation of a joint
dia-	through	<i>diaplacental</i> [dĭ-ā-plā-SĚN-tāl], passing through the placenta

PREFIXES	MEANING	EXAMPLE
dys-	abnormal; difficult	<i>dysfunctional</i> [dĭs-FŪNK-shŭn-ăł], functioning abnormally
ect(o)-	outside	<i>ectopic</i> [ĕk-TŌP-ĭk], occurring outside the normal place, as a pregnancy occurring outside of the uterus
end(o)-	within	<i>endoabdominal</i> [ĔN-dŏ-ăb-DŌM-ĭ-năł], within the abdomen
epi-	over	<i>epicondyle</i> [ĕp-ĭ-KŌN-dĭł], projection over or near the condyle
eu-	well, good, normal	<i>eupepsia</i> [yŭ-PĔP-sĕ-ă], normal digestion
ex-	out of, away from	<i>exhale</i> [ĔKS-hăł], breathe out
exo-	external, on the outside	<i>exogenous</i> [ĕks-ŌJ-ĕ-nŭs], produced outside of the organism
extra-	without, outside of	<i>extracorporeal</i> [ĕks-tră-kŏr-PŌ-rĕ-ăł], outside of the body
hemi-	half	<i>hemiplegia</i> [hĕm-ĭ-PLĔ-jĕ-ă], paralysis on one side of the body
hyper-	above normal; overly	<i>hyperactive</i> [hĭ-pĕr-ĂK-tĭv], abnormally restless and inattentive
hypo-	below normal	<i>hypoglycemia</i> [hĭ-pŏ-glĭ-SĔ-mĕ-ă], low blood sugar
infra-	positioned beneath	<i>infrasternal</i> [ĭn-fră-STĔR-năł], below the sternum
inter-	between	<i>interdental</i> [ĭn-tĕr-DĔN-tăł], between the teeth
intra-	within	<i>intramuscular</i> [ĭN-tră-MŪS-kyŭ-lăr], within the substance of the muscles
iso-	equal, same	<i>isometric</i> [ĭ-sŏ-MĔT-rĭk], of the same dimensions
mal-	bad; inadequate	<i>malabsorption</i> [măł-ăb-SŌRP-shŭn], inadequate absorption
meg(a)-, megal(o)-	large	<i>megacephaly</i> [mĕg-ă-SĔF-ă-lĕ], abnormal enlargement of the head
mes(o)-	middle, median	<i>mesoderm</i> [MĔZ-ŏ-dĕrm], the middle layer of skin
meta-	after	<i>metacarpus</i> [MĔT-ă-KĂR-pŭs], bones attached to the carpus

PREFIXES	MEANING	EXAMPLE
micr(o)-	small, microscopic	<i>microplasia</i> [mī-krō-PLĀ-zhē-ă], stunted growth, as in dwarfism
mon(o)-	single	<i>monomania</i> [mōn-ō-MĀ-nē-ă], obsession with a single thought or idea
multi-	many	<i>multiarticular</i> [MŪL-tē-ăr-TĪK-yū-lăr], involving many joints
olig(o)-	few; little; scanty	<i>oligospermia</i> [ōl-ī-gō-SPĚR-mē-ă], low sperm count
pan-, pant(o)-	all, entire	<i>panarthritis</i> [păn-ăr-THRĪ-tīs], arthritis involving all joints
par(a)-	beside; abnormal; involving two parts	<i>parakinesia</i> [păr-ă-kī-NĒ-zhē-ă], motor abnormality
per-	through, intensely	<i>peraxillary</i> [pēr-ĂK-sī-lăr-ē], through the axilla
peri-	around, about, near	<i>periappendicitis</i> [PĚR-ē-ă-pĕn-dī-SĪ-tīs], inflammation of the tissue surrounding the appendix
pluri-	several, more	<i>pluriglandular</i> [plū-rī-GLĀN-dū-lăr], of several glands
poly-	many	<i>polyarteritis</i> [pōl-ē-ăr-tēr-Ī-tīs], inflammation of a number of arteries
post-	after, following	<i>postmortem</i> [pōst-MŌR-tĕm], after death
pre-	before	<i>prenatal</i> [prē-NĀ-tăl], before birth
pro-	before, forward	<i>prodrome</i> [PRŌ-drōm], a symptom or group of symptoms that occurs before a disease shows up
quadra-, quadri-	four	<i>quadriplegia</i> [kwăh-dri-PLĚ-jē-ă], paralysis of all four limbs
re-	again, backward	<i>reflux</i> [RĚ-flŭks], backward flow
retro-	behind, backward	<i>retroversion</i> [rĕ-trō-VĚR-shŭn], a turning backward, as of the uterus
semi-	half	<i>semicomatose</i> [sĕm-ē-KŌ-mă-tōs], drowsy and inactive, but not in a full coma
sub-	less than, under, inferior	<i>subcutaneous</i> [sŭb-kyū-TĀ-nē-ŭs], beneath the skin
super-	more than, above, superior	<i>superacute</i> [sū-pĕr-ă-KYŪT], more acute
supra-	above, over	<i>supramaxillary</i> [sū-pră-MĂK-sī-lăr-ē], above the maxilla

PREFIXES	MEANING	EXAMPLE
syl-, sym-, syn-, sys-	together	<i>symbiosis</i> [sĭm-bē-Ō-sĭs], mutual interdependence
tachy-	fast	<i>tachycardia</i> [TĀK-i-KAR-de-a], rapid heartbeat
trans-	across, through	<i>transocular</i> [trāns-ŌK-yū-lār], across the eye
ultra-	beyond, excessive	<i>ultrasonic</i> [ŭl-trā-SŌN-ĭk], relating to energy waves of higher frequency than sound waves
un-	not	<i>unconscious</i> [ŭn-KŌN-shŭs], not conscious
uni-	one	<i>uniglandular</i> [yū-nĭ-GLĀN-dū-lār], involving only one gland

Suffixes

Suffixes can also be combining forms at the end of terms. In the section “Prefixes,” the example meaning paralysis, *-plegia*, is both a suffix and a combining form. It both attaches to the end of the word and carries the underlying meaning of the word such as *cardioplegia*, paralysis of the heart.

Many suffixes have several variations that can make the compound word a noun, verb, adjective, or adverb. For example:

an intense fear of closed spaces is *claustrophobia* (noun)

relating to or having such a condition is *claustrophobic* (adjective)

Some suffixes form both verbs and nouns so it may be important to look at the sentence in which it appears to determine the exact meaning. For example, *hemorrhage* can mean both “to bleed profusely” (verb) or “profuse bleeding” (noun). In the sentence, “It is possible to hemorrhage profusely from certain injuries,” *hemorrhage* is a verb. In the sentence, “The hemorrhage was caused by an injury to his leg,” *hemorrhage* is a noun.

SUFFIXES	MEANING	EXAMPLE
-ad	toward	<i>cephalad</i> [SĔF-ă-lăd], toward the head
-algia	pain	<i>neuralgia</i> [nū-RĀL-jē-ă], nerve pain
-asthenia	weakness	<i>neurasthenia</i> [nūr-ăs-THĒ-nē-ă], condition with vague symptoms, such as weakness
-blast	immature, forming	<i>astroblast</i> [ĀS-trō-blăst], immature cell
-cele	hernia	<i>cystocele</i> [SĪS-tō-sēl], hernia of the urinary bladder
-cidal	destroying, killing	<i>suicidal</i> [sū-ĭ-SĪD-ăl], likely to kill oneself
-cide	destroying, killing	<i>suicide</i> [SŪ-ĭ-sĭd], killing of oneself; <i>bactericide</i> [băk-TĒR-ē-ō-sĭd], agent that destroys bacteria

SUFFIXES	MEANING	EXAMPLE
-clasis	breaking	<i>osteoclasia</i> [ŎS-tē-ŎK-lă-sĭs], intentional breaking of a bone
-clast	breaking instrument	<i>osteoclast</i> [ŎS-tē-ŏ-klăst], instrument used in osteoclasia
-crine	secreting	<i>endocrine</i> [ĚN-dŏ-krĭn], gland that secretes hormones into the bloodstream
-crit	separate	<i>hematocrit</i> [HĚ-mă-tŏ-krĭt, HĚM-ă-to-krĭt], percentage of volume of a blood sample that is composed of cells
-cyte	cell	<i>thrombocyte</i> [THRŎM-bŏ-sĭt], blood platelet
-cytosis	condition of cells	<i>erythrocytosis</i> [Ě-RĬTH-rŏ-sĭ-tŏ-sĭs], condition with an abnormal number of red blood cells in the blood
-derma	skin	<i>scleroderma</i> [sklĕr-ŏ-DĚR-mă], hardening of the skin
-desis	binding	<i>arthrodesis</i> [ăr-THRŎD-ĕ-sĭs, är-thrŏ-DĚ-sĭs], stiffening of a joint
-dynia	pain	<i>neurodynia</i> [nŭr-ŏ-DĬN-ĕ-ă], nerve pain
-ectasia	expansion; dilation	<i>neurectasia</i> [nŭr-ĕk-TĂ-zhĕ-ă], operation with dilation of a nerve
-ectasis	expanding; dilating	<i>bronchiectasis</i> [brŏng-kĕ-ĚK-tă-sĭs], condition with chronic dilation of the bronchi
-ectomy	removal of	<i>appendectomy</i> [ăp-ĕn-DĚK-tŏ-mĕ], removal of the appendix
-edema	swelling	<i>lymphedema</i> [lĭmf-ĕ-DĚ-mă], swelling as a result of obstructed lymph nodes
-ema	condition	<i>empyema</i> [ĕm-pĭ-Ě-mă], pus in a body cavity
-emesis	vomiting	<i>hematemesis</i> [hĕ-mă-TĚM-ĕ-sĭs], vomiting of blood
-emia	blood	<i>anemia</i> [an-N-mĕ-ă], deficiency of red blood cells or hemoglobin
-emic	relating to blood	<i>uremic</i> [yŭ-RĚ-mĭk], having excess urea in the blood
-esthesia	sensation	<i>paresthesia</i> [păr-ĕs-THĚ-zhĕ-ă], abnormal sensation, such as tingling
-form	in the shape of	<i>uniform</i> [YŪ-nĭ-fŏrm], having the same shape throughout
-gen	producing, coming to be	<i>carcinogen</i> [kăr-SĬN-ŏ-jĕn], cancer-causing agent
-genesis	production of	<i>pathogenesis</i> [păth-ŏ-JĚN-ĕ-sĭs], production of disease
-genic	producing	<i>iatrogenic</i> [ĭ-ăt-rŏ-JĚN-ĭk], induced by treatment

SUFFIXES	MEANING	EXAMPLE
-globin	protein	<i>hemoglobin</i> [hē-mō-GLŌ-bĭn], protein of red blood cells
-globulin	protein	<i>immunoglobulin</i> [ĭm-yū-nō-GLŌB-yū-lĭn], one of certain structurally related proteins
-gram	a recording	<i>electrocardiogram</i> [e-LEK-tro-kar-de-grām], brain scan
-graph	recording instrument	<i>encephalograph</i> [ĕn-SĔF-ă-lō-grăf], instrument for measuring brain activity
-graphy	process of recording	<i>echocardiography</i> [ĔK-ō-kăr-dē-ŎG-ră-fĕ], graphic record of the electric activity of the heart
-iasis	pathological condition or state	<i>psoriasis</i> [sō-RĪ-ă-sĭs], chronic skin disease
-ic	pertaining to	<i>gastric</i> [GĂS-trĭk], relating to the stomach
-ics	treatment, practice, body of knowledge	<i>orthopedics</i> [ōr-thō-PĔ-dĭks], medical practice concerned with treatment of skeletal disorders
-ism	condition, disease, doctrine	<i>dwarfism</i> [DWŌRF-ĭzm], condition characterized by abnormally small size
-itis (pl., -itides)	inflammation	<i>nephritis</i> [nĕ-FRĪ-tĭs], kidney inflammation; <i>neuritides</i> [nū-RĪT-ĭ-dĕz], inflammations of nerves
-kinesia	movement	<i>bradykinesia</i> [brăd-ĭ-kĭn-Ē-zhĕ-ă], decrease in movement
-kinesis	movement	<i>hyperkinesis</i> [hĭ-pĕr-kĭ-NĔ-sĭs], excessive muscular movement
-lepsy	condition of	<i>cataplexy</i> [KĂT-ă-lĕp-sĕ], condition characterized by seizures of extreme rigidity
-leptic	having seizures	<i>cataleptic</i> [kăt-ă-LĔP-tĭk], person with cataplexy
-logist	one who practices	<i>dermatologist</i> [dĕr-mă-TŎL-ō-jĭst], one who practices dermatology
-logy	study, practice	<i>dermatology</i> [dĕr-mă-TŎL-ō-jĕ], study and treatment of skin disorders
-lysis	destruction of	<i>electrolysis</i> [ĕ-lĕk-TRŎL-ĭ-sĭs], permanent removal of unwanted hair
-lytic	destroying	<i>thrombolytic</i> [thrŏm-bŏ-LĪT-ĭk], dissolving a thrombus
-malacia	softening	<i>osteomalacia</i> [ŎS-tĕ-ō-mă-LĀ-shĕ-ă], gradual softening of bone
-mania	obsession	<i>monomania</i> [mŏn-ō-MĀ-nĕ-ă], obsession with one idea
-megaly	enlargement	<i>cephalomegaly</i> [SĔF-ă-lō-MĔG-ă-lĕ], abnormal enlargement of the head
-meter	measuring device	<i>ophthalmometer</i> [ŏf-thăl-MŎM-ĕ-tĕr], device for measuring cornea curvature

SUFFIXES	MEANING	EXAMPLE
-metry	measurement	<i>optometry</i> [öp-TÖM-ě-trē], specialty concerned with measurement of eye function
-oid	like, resembling	<i>cardioid</i> [KÄR-dē-öyd], resembling a heart
-oma (pl., -omata)	tumor, neoplasm	<i>myoma</i> (pl., <i>myomata</i>) [mī-Ō-mă (mī-ō-MĀ-tă)], neoplasm of muscle tissue
-opia	vision	<i>diplopia</i> [ďi-PLŌ-pē-ă], double vision
-opsia	vision	<i>chloropsia</i> [klō-RŎP-sē-ă], condition of seeing objects as green
-opsy	view of	<i>biopsy</i> [BĪ-öp-sē], cutting from living tissue to be viewed
-osis (pl., -oses)	condition, state, process	<i>halitosis</i> [hăl-ĭ-TŎ-sĭs], chronic bad breath
-ostomy	opening	<i>colostomy</i> [kō-LŎS-tō-mē], surgical opening in the colon
-oxia	oxygen	<i>anoxia</i> [ăn-ŎK-sē-ă], lack of oxygen
-para	bearing	<i>primipara</i> [prĭ-MĪP-ăr-ă], woman who has given birth once
-paresis	slight paralysis	<i>monoparesis</i> [mön-ō-pă-RĒ-sĭs], paralysis of only one extremity
-parous	producing; bearing	<i>viviparous</i> [vĭ-VĪP-ă-rŭs], bearing living young
-pathy	disease	<i>osteopathy</i> [ös-tē-ŎP-ă-thē], bone disease
-penia	deficiency	<i>leukopenia</i> [lŭ-kō-PĒ-nē-ă], condition with fewer than normal white blood cells
-pepsia	digestion	<i>dyspepsia</i> [ďis-PĚP-sē-ă], impaired digestion
-pexy	fixation, usually done surgically	<i>nephropexy</i> [NĚF-rō-pĕk-sē], surgical fixation of a floating kidney
-phage, -phagia, -phagy	eating, devouring	<i>polyphagia</i> [pöl-ē-FĀ-jē-ă], excessive eating
-phasia	speaking	<i>aphasia</i> [ă-FĀ-zhē-ă], loss of or reduction in speaking ability
-pheresis	removal	<i>leukapheresis</i> [lŭ-kă-fē-RĒ-sĭs], removal of leukocytes from drawn blood
-phil	attraction; affinity for	<i>cyanophil</i> [SI-ăn-nō-fĭl], element that turns blue after staining
-philia	attraction; affinity for	<i>hemophilia</i> [hē-mō-FĪL-ē-ă], blood disorder with tendency to hemorrhage
-phobia	fear	<i>acrophobia</i> [ăk-rō-FŎ-bē-ă], fear of heights
-phonia	sound	<i>neuraphonia</i> [nŭr-ă-FŎ-nē-ă], loss of sounds
-phoresis	carrying	<i>electrophoresis</i> [ē-lĕk-trō-FŎR-ē-sĭs], movement of particles in an electric field

SUFFIXES	MEANING	EXAMPLE
-phoria	feeling; carrying	<i>euphoria</i> [yū-FÖR-ē-ă], feeling of well-being
-phrenia	of the mind	<i>schizophrenia</i> [skiz-ō-FRĚ-nē-ă, skit-sō-FRĚ-nē-ă], term for a common psychosis
-phthisis	wasting away	<i>hemophthisis</i> [hē-MÖF-thĭ-sĭs], anemia
-phylaxis	protection	<i>prophylaxis</i> [prō-fĭ-LĀK-sĭs], prevention of disease
-physis	growing	<i>epiphysis</i> [ĕ-PĪF-ĭ-sĭs], part of a long bone distinct from and growing out of the shaft
-plakia	plaque	<i>leukoplakia</i> [lū-kō-PLĀ-kē-ă], white patch on the mucous membrane
-plasia	formation	<i>dysplasia</i> [dĭs-PLĀ-zhē-ă], abnormal tissue formation
-plasm	formation	<i>protoplasm</i> [PRŌ-tō-plăzm], living matter
-plastic	forming	<i>hemoplastic</i> [hē-mō-PLĀS-tĭk], forming new blood cells
-plasty	surgical repair	<i>rhinoplasty</i> [RĪ-nō-plăs-tē], plastic surgery of the nose
-plegia	paralysis	<i>quadriplegia</i> [KWĀH-dri-PLĚ-jē-ă], paralysis of all four limbs
-plegic	one who is paralyzed	<i>quadriplegic</i> [kwăh-dri-PLĚ-jĭk], person who has quadriplegia
-pnea	breath	<i>eupnea</i> [yūp-NĚ-ă], easy, normal respiration
-poiesis	formation	<i>erythropoiesis</i> [ĕ-RĪTH-rō-pöy-Ē-sĭs], formation of red blood cells
-poietic	forming	<i>erythropoietic</i> [ĕ-RĪTH-rō-pöy-ĕt-ĭk], of the formation of red blood cells
-poietin	one that forms	<i>erythropoietin</i> [ĕ-RĪTH-rō-pöy-ĕtĭn], an acid that aids in the formation of red blood cells
-porosis	lessening in density	<i>osteoporosis</i> [ŎS-tē-ō-pō-RŌ-sĭs], lessening of bone density
-ptosis	falling down; drooping	<i>blepharoptosis</i> [blĕf-ă-RŎP-tō-sĭs], drooping eyelid
-rrhage	discharging heavily	<i>hemorrhage</i> [HĚM-ō-răj], to bleed profusely
-rrhagia	heavy discharge	<i>tracheorrhagia</i> [trā-kē-ō-RĀ-jē-ă], hemorrhage from the trachea
-rrhaphy	surgical suturing	<i>herniorrhaphy</i> [HĚR-nē-ŎR-ă-fē], surgical repair of a hernia
-rrhea	a flowing, a flux	<i>dysmenorrhea</i> [dĭs-mĕn-ŎR-ē-ă], difficult menstrual flow

SUFFIXES	MEANING	EXAMPLE
-rrhexis	rupture	<i>cardiorrhexis</i> [kär-dē-ō-RĚK-sīs], rupture of the heart wall
-schisis	splitting	<i>spondyloschisis</i> [spön-dī-LÖS-kī-sīs], failure of fusion of the vertebral arch in an embryo
-scope	instrument (especially one used for observing or measuring)	<i>microscope</i> [MĪ-krō-skōp], instrument for viewing small objects
-scopy	use of an instrument for observing	<i>microscopy</i> [mī-KRÖS-kō-pē], use of microscopes
-somnia	sleep	<i>insomnia</i> [ĭn-SÖM-nē-ă], inability to sleep
-spasm	contraction	<i>esophagospasm</i> [ě-SÖF-ă-gō-spăzm], spasm of the walls of the esophagus
-stalsis	contraction	<i>peristalsis</i> [pěr-ĭ-STĀL-sīs], movement of the intestines by contraction and relaxation of its tube
-stasis	stopping; constant	<i>homeostasis</i> [HÖ-mē-ō-STĀ-sīs], state of equilibrium in the body
-stat	agent to maintain a state	<i>bacteriostat</i> [bäk-TĚR-ē-ō-stăt], agent that inhibits bacterial growth
-static	maintaining a state	<i>hemostatic</i> [hē-mō-STĀT-ĭk], stopping blood flow within a vessel
-stenosis	narrowing	<i>stenostenosis</i> [STĚN-ō-stě-NÖ-sīs], narrowing of the parotid duct
-stomy	opening	<i>colostomy</i> [kō-LÖS-tō-mē], surgical opening in the colon
-tome	cutting instrument, segment	<i>osteotome</i> [ÖS-tē-ō-tōm], instrument for cutting bone
-tomy	cutting operation	<i>laparotomy</i> [LĀP-ă-RÖT-ō-mē], incision in the abdomen
-trophic	nutritional	<i>atrophic</i> [ā-TRÖF-ĭk], of a wasting state, often due to malnutrition
-trophy	nutrition	<i>dystrophy</i> [DĪS-trō-fē], changes that result from inadequate nutrition
-tropia	turning	<i>esotropia</i> [ěs-ō-TRÖ-pē-ă], crossed eyes
-tropic	turning toward	<i>neurotropic</i> [nūr-ō-TRÖP-ĭk], localizing in nerve tissue
-tropy	condition of turning toward	<i>neurotropy</i> [nū-RÖT-rō-pē], affinity of certain contrast mediums for nervous tissue
-uria	urine	<i>pyuria</i> [pī-YŪ-rē-ă], pus in the urine
-version	turning	<i>retroversion</i> [rě-trō-VĚR-zhŭn], a turning backward (said of the uterus)

Putting It All Together

All medical terms have a word root, which is the element that gives the essential meaning to the word. For example, *card-* is a word root meaning heart. In the word *pericarditis*, the prefix *peri-* and the suffix *-itis* are added to the word root to form the whole word meaning an inflammation (*-itis*) of the area surrounding (*peri-*) the heart (*card-*). The word root can also appear in a combining form, which is the root plus a combining vowel or vowels. For example, *cardiology* is formed from *cardio-* (the word root *card-* plus the combining vowels *-i-* and *-o-*) plus the suffix *-logy* meaning the study of the heart.

MORE ABOUT . . .

Detecting Compound Words

An easy way to define compound words is to start at the end of the word, look at the suffix to determine its meaning, and then look at the word root. The word root will contain a combining vowel if the suffix begins with a consonant. If not, the combining vowel (usually “o”) will be removed. An example is *neuritis*. The suffix *-itis* means “inflammation of.” The word root *neur-*, nerve, does not need a combining vowel because *-itis* begins with a vowel. Therefore, *neuritis* is inflammation of a nerve. To repeat the basic rules: If a suffix begins with a vowel, do NOT use the “o.” If the suffix begins with a consonant, retain the “o.” Then figure out the meaning of any prefixes.

WORD PARTS EXERCISES

Build Your Medical Vocabulary

Using the lists in this chapter and in Chapter 1, write the appropriate prefix, suffix, or combining form in the blank for each word part. The definition of each word part needed is given immediately under the blank. Item 1 is completed as an example.

1. _____ osteo _____ myel _____ itis _____
(bone) (inflammation)
2. _____ cardio _____
(within) (visual examining)
3. _____ dactyly
(together)
4. _____ violet
(beyond)
5. _____ sensitive
(overly)
6. entero _____ _____
(disease) (causing)
7. _____ dermic
(beneath)
8. _____ therapy
(sleep)
9. _____ ost _____
(together) (condition)
10. _____ tonsillar
(above)
11. _____ cranio _____
(half) (cutting)
12. _____ _____
(old people) (fear)
13. _____ glandular
(within)
14. _____ blast
(white)

15. _____
(structure) (study of)
16. arterio _____
(suture)
17. dermat _____
(hemorrhage)
18. _____ flexion
(half)
19. _____ algesia
(heat)
20. fibr _____
(resembling)
21. _____ organism
(tiny)

22. _____ plasm
(new)
23. subcost _____
(pain)
24. blepharo _____
(paralysis)
25. _____ myx _____
(fiber) (tumor)
26. _____ lingual
(under)
27. _____ meno _____
(scanty, little) (a flowing)
28. _____ dipsia
(many, excessive)

Find a Match

Each of the words in the left-hand column contains a word part that matches one of the definitions in the right-hand column. Write the letter of the answer that best fits into the left-hand column. Exercise 26 is completed as an example.

- | | |
|----------------------------|---------------------------|
| 29. <u>o</u> antipsychotic | a. in the shape of |
| 30. _____ polycystic | b. without |
| 31. _____ acephaly | c. enlargement |
| 32. _____ tenosynovitis | d. abnormally low |
| 33. _____ myotrophy | e. nutrition |
| 34. _____ laryngoscope | f. self |
| 35. _____ dysgnosis | g. outside of |
| 36. _____ decontamination | h. inflammation |
| 37. _____ chyliform | i. instrument for viewing |
| 38. _____ autoinfection | j. abnormal |
| 39. _____ cardiomegaly | k. between |
| 40. _____ extrasensory | l. away from |
| 41. _____ intercerebral | m. condition |
| 42. _____ osteoporosis | n. many |
| 43. _____ hyposthenia | o. against |

Find the Word Part

Complete the word for which the definition is given. Add a word part(s) learned in this chapter.

44. Any disease of the hair: tricho _____
45. Repair of a nose defect: rhino _____
46. Removal of the appendix: append _____
47. Having a jaw that protrudes abnormally forward: _____ gnathic

48. Disease of the heart: cardio _____
49. Inflammation of the bronchi: bronch _____
50. Outer layer of a cell: _____ blast
51. Rib-shaped: costi _____
52. Bone-forming cell: osteo _____
53. Above the nose: _____ nasal
54. Study of the skin: dermat _____
55. Loss of the voice: _____ phonia
56. Study of tissue: hist _____
57. Inflammation of the ovary: ovar _____
58. Inflammation of the ear: ot _____
59. Specialist in the treatment of disorders of the nervous system: neuro _____
60. Incision into a vein: phlebo _____
61. Study of the mind: psycho _____
62. Enlargement of the spleen: spleno _____
63. Difficulty speaking: dys _____
64. Cancer of the blood: leuk _____
65. Total or partial loss of sensation or awareness: an _____
66. A person with epilepsy: epi _____
67. Study and treatment of the heart: cardio _____
68. Producing disease: patho _____
69. Moving a part away from the midline of the body: _____ duction
70. Abnormally slow heartbeat: _____ cardia
71. Not recommended: _____ indicated
72. Low blood sugar: _____ glycemia
73. Between the layers of the skin: _____ dermal
74. Abnormal enlargement of the head: _____ cephaly
75. Paralysis on one side of the body: _____ plegia
76. Below the sternum: _____ sternal
77. Abnormally restless and inattentive: _____ active
78. Against an individual's own tissue: _____ immune

Separate the Word Parts

Break apart the following words and define each part in the space allowed. You will want to study the list in Chapter 1 before you do this exercise.

79. exocrine _____
80. endocranium _____
81. antidepressant _____

82. somatotropic _____
83. pseudesthesia _____
84. dextrotropic _____
85. algesic _____
86. xiphoid _____
87. litholysis _____
88. cryolysis _____
89. pericardiorrhaphy _____
90. multigravida _____
91. pancytopenia _____
92. salpingitis _____
93. megalomania _____
94. lithiasis _____
95. chromatopsia _____
96. hemiparesis _____

Find Where Word Parts Come From

Match the word part on the left with its etymology on the right. Remember, some of these word parts are from Chapter 1.

- | | |
|---------------------|---------------------------------------|
| 97. ____ xipho- | a. Greek <i>xanthos</i> , yellow |
| 98. ____ ambi- | b. Greek <i>ichthys</i> , fish |
| 99. ____ -graph | c. Latin <i>lac</i> , milk |
| 100. ____ -kinesia | d. Greek <i>melas</i> , black |
| 101. ____ ichthyo- | e. Greek <i>grapho</i> , to write |
| 102. ____ eosino- | f. Greek <i>trophe</i> , nutrition |
| 103. ____ bio- | g. Greek <i>klastos</i> , broken |
| 104. ____ xantho- | h. Greek <i>eos</i> , dawn |
| 105. ____ -phylaxis | i. Greek <i>plasso</i> , to form |
| 106. ____ -trophy | j. Greek <i>chronos</i> , time |
| 107. ____ chrono- | k. Greek <i>xiphos</i> , sword |
| 108. ____ melano- | l. Greek <i>phylaxis</i> , protection |
| 109. ____ -clasis | m. Latin <i>ambi-</i> , around; about |
| 110. ____ -plasia | n. Greek <i>kinesis</i> , movement |
| 111. ____ lacto- | o. Greek <i>bios</i> , life |

USING THE INTERNET

Go to the Centers for Disease Control's site (www.cdc.gov). Click on several of the topics on the site and find at least ten combining forms, suffixes, and prefixes that you learned about in this chapter and in Chapter 1.

Name _____ Date _____

Chapter 2: Word-Building (20 questions—1 pts. each)

Using the following word parts, complete the word that best fits each definition given below. Word parts may be used more than once.

ambi-	bacteri(o)	lith(o)	-pathy
anti-	chrom(o)	-lytic	phot(o)
-algia	cyt(o)	mega	-plasty
-asthenia	-cyte	-megaly	-rrhea
aut(o)-	gyn(o)	path(o)	therm(o)

1. Nerve pain: neur _____
2. Bone repair: osteo _____
3. Study of disease: _____ logy
4. Nerve weakness: neur _____
5. Abnormally enlarged head: _____ cephaly
6. Enlarged heart: cardio _____
7. Dissolving of stones: _____ lytic
8. Caused by bacteria: _____ genic
9. Of both sides: _____ lateral
10. Cell formed in lymph: lympho _____
11. Agent that kills cells: _____ cide
12. Repair of the nose: rhino _____
13. Self-love: _____ philia
14. Production of heat: _____ genesis
15. Pigmented cell: _____ cyte
16. Foot pain: pod _____
17. Female disease: _____ pathy
18. Drug that reduces bleeding: _____ hemorrhagic
19. Sensitivity to light: _____ phobia
20. Nasal discharge: rhino _____