

Introduction

Dissecting medical terms

Because many medical terms derive from Greek and Latin, learning medical terminology is like learning a new language. Understanding these terms can be easier if you know how to analyze key elements and identify word associations.

Most medical terms are a combination of two or more parts. If you can successfully interpret each part, you can usually grasp the essential meaning of the word. Thus, interpreting the meaning of a medical term requires knowledge of common medical **roots, prefixes, and suffixes.**

- ❖ **A root** is the essential component of a word. Many medical roots signify a disease, procedure, or body part. Some roots appear at the beginning of a word, whereas others appear after a prefix, before a suffix, or between a prefix and a suffix. In addition, two or more roots may be combined to form a word, as in *cardi-o-pulmonary* and *cardi-o-vascular*. The letter *o* is the most commonly used combining vowel.

Here are some examples of roots used in different positions:

- a root at the beginning of a word—**angio**edema (**angi** is a root that means vessel)
- a root in the middle of a word—ence**phal**ic (**cephal** is a root that means head)
- a root at the end of a word—sclero**derma** (**derm** is a root that means skin)
- a combination of roots—**photo**therapy (**photo** is a root that means light; **therapy** is a root that means treatment).

- ❖ **A prefix** consists of one or more letters attached to the beginning of a root. Many prefixes used for medical terms are also applied to standard English vocabulary. To determine the meaning of a prefix in a medical term, consider a familiar word that begins with the same prefix. For example, the prefix ***anti-*** has the same meaning—*against*—in both *antislavery* and *antihistamine*, literally *against slavery* and *against histamine* (the compound that produces allergic reactions).

- ❖ **A suffix** is one or more letters attached to the end of a root. When a suffix begins with a consonant, a combining vowel, such as ***o***, is placed before the suffix. Common use of suffixes in medical terminology includes adding a ***-y*** to a word to denote a procedure, such as *gastroscopy*, which means *endoscopic examination of the stomach*. Similarly, adding ***-ly*** to a word denotes an act or process; for example, *splenomegaly*, which means *the abnormal enlargement of the spleen*.

Common prefixes, roots, and suffixes

Knowing these common prefixes, roots, and suffixes will help you decipher medical terms.

❖ common prefixes

Word component (<u>prefixes</u>)	Meanings	Examples
Meta	beyond, change	metaphase (second stage of cell division)
Hypo	below	Hypotention (Reduction of Blood pressure)
Hyper	Excessive	Hyperglycemia (excessive blood sugar)
A ,an	no/not(little)	anemia no,not (little) blood
Aut (o)-	Self	Autolysis (destruction cell by own self)
Dia-	Complete	Diagnosis (state of complete knowledge)
Dys-	Painful or difficult menses	Dysphagia (difficult or painful swallowing)
Exo-	Outside	Exocrine(secretion outside)
micr(o)-	Small	microbe (tiny organism)
Mono	One	monochromatic (having only one color)
morph(o)-	Shape	morphology (study of the form and structure of organisms)
Multi	many	multifocal (arising from many locations)
olig(o)-	few, little	oliguria (too little urine)
par(a)-	near, beside, accessory to	paracentesis (puncture of a cavity for aspiration of fluid)
Peri	around	pericecal (around the cecum)
Poly	much, many	polydipsia (excessive thirst)
Post	behind, after	postoperative (after surgery)
Pre	before, in front	preanesthesia (before anesthetic is given)
Pro	favoring, supporting	procoagulant (promotes coagulation)
Pseudo	False	pseudocyst (a cavity resembling a true cyst)
re	back, contrary	recurrent fever (fever that returns after a remission)

semi	Half	semiflexion (position of a limb midway between extension and flexion)
Sub	under	subclinical (without symptoms)
supra	above, upon	supraorbital (above the orbit)
tetra	Four	tetralogy (group of four)
trans-	across, through	transdermal (entering through the skin)

Common prefixes, roots, and suffixes**❖ common prefixes**

Word component (<u>prefixes</u>)	Meanings	Examples
Ab	away from	abduct (move away from)
Ad	Toward	adduct (move toward)
Ante	before, forward	anterior (front of the body)
Anti	against	antibody (immune response to an organism)
end(o)-	inward	endoscope (a device used to examine a body cavity)
eu	normal, health	euthyroid (normal thyroid function)
ex	outside	exfoliation (peeling of layers)
hetero	other, different	heterogeneous (different characteristics)
intra	within, into	intramuscular (into the muscle)
juxta	near	juxta-articular (near a joint)
macr(o)-	Large	macrophage (type of cell)
mal	bad, abnormal	malformation (abnormally formed)
mega-	great, large	megacolon (enlarged colon)

❖ common Suffixes

Word component (<u>suffixes</u>)	Meanings	Examples
-algia	pain	neuralgia (nerve pain)
-al	pertaining to	Neural (pertaining to the nerve)
-ectomy	surgical removal	splenectomy (removal of the spleen)
-itis	inflammation	colitis (inflammation of the colon)
-ic	pertaining to	Gastric (pertaining to stomach)
-lys(i)(o)	breakdown	fibrinolysis (breakdown of a clot)
-oma	tumor	blastoma (cancer composed of embryonic cells)
-osis	condition	fibrosis (formation of fibrous tissue)
-plasia	growth	hypoplasia (incomplete development)
-plasty	surgical repair	angioplasty (surgical repair of blood vessels)
-plegia	paralysis	paraplegia (paralysis of lower body)
-poiesis	production	hematopoiesis (production of blood cells)
-rrhea	fluid discharge	diarrhea (frequent soft or liquid bowel movements)
-scope	observe	endoscope (tool for observing the interior of body organs)
-stomy	opening	colostomy (portion of the colon is opened and brought through the abdominal wall)
-taxis	movement	ataxia (uncoordinated movements)
-tomy	incision	thoracotomy (surgical opening of the chest wall)
-tripsy	crushing	lithotripsy (crushing stones in the bladder, kidney, gallbladder, or other organs)

Word component <u>Roots</u>	Meaning	Example
acou	hearing	acoustics (the science of sounds
acr(o)-	extremity, peak	acrodermatitis (inflammation of skin of the extremities)
aden(o)-	gland	adenocoele (cystic tumor in a gland)
Adipo	fat	adipose tissue (fatty)
angi(o)-	vessel	angiography (x-ray of a vessel)
bili	bile	biliary (pertaining to bile or the gallbladder)
blast-	embryonic state	blastocyte (embryonic cell)
brachi(o)-	arm	brachial artery (artery of the upper arm)
brady	slow	bradycardia (slow heart rhythm
calc	heel	calcaneus(heel bone)
carcin(o)-	cancer	carcinoma (malignant growth)
cardi(o)-	heart	cardiac muscle (heart muscle)
cephal(o)-	head	cephalgia (pain in the head)
cerebr(o)-	cerebrum	cerebral embolism (occlusion of a cerebral vessel by a blood clot)
cervic(i)(o)-	neck	cervical plexus (network of cervical nerves)
chondr(o)-	cartilage	chondritis (inflammation of cartilage)
cost(o)-	rib	costochondral (relating to a rib and its cartilage)
cut	skin	cutaneous (relating to skin)
cyst(i)(o)-	bladder	cystitis (inflammation of the urinary .(
cyt(o)-	cell	cytology (cells of study)
derm-	skin	dermatitis (skin inflammation)

enter(o)-	intestine	enterocolitis (inflammation of the intestines and colon
erythr(o)-	red	erythrocytes (red blood cells)
col(i)(o)-	colon	colitis (inflammation of the colon

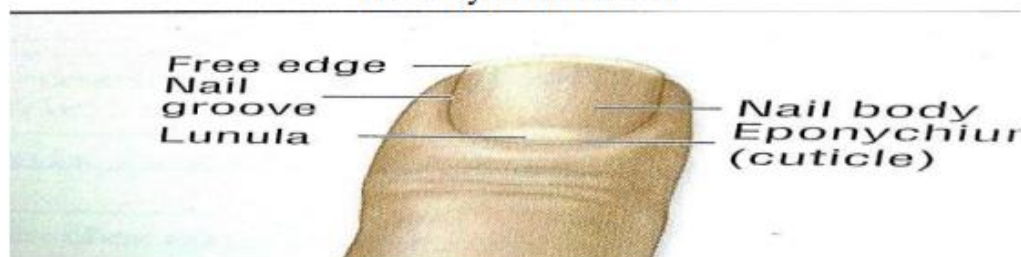
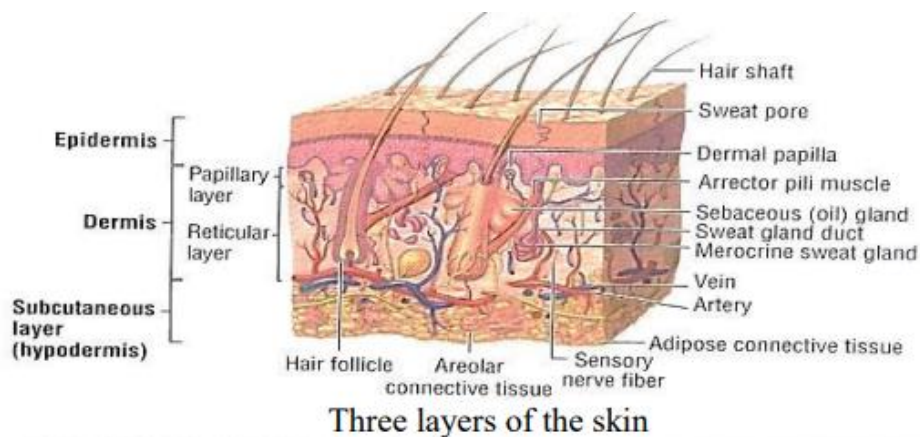
Word component <u>Roots</u>	Meaning	Example
Gastro	Stomach	Gastritis (inflammation of the stomach)
Gest	Carry	Gestation (pregnancy)
Gyn(o)-	Woman, female reproductive organs	Gynecology (study of women's reproductive organs)
Heme(a)(o)- or hemato	Blood	Hematology (study of blood)
Hepat(o)-	Liver	Hepatitis (inflammation of the liver)
Hist(i)(o)-	Tissue	Histography (process of describing tissue and cell)
Ile(o)-	Ileum	Ileostomy (surgical opening in the ileum)
Jejun(o)-	Jejunum	Jejunectomy (excision of the jejunum)
Laryng(o)-	Larynx	Laryngectomy (surgical removal of the larynx)
Lip(o)-	Fat	Lipedema (excess fat and fluid in subcutaneous tissue)
My(o)-	Muscle	Myocarditis (inflammation of heart muscle)
Myc(o)-	Fungus	Mycology (study of fungi and fungal diseases)
Nas(o)-	Nose	Nasal bones that form the upper part of the bridge of the nose (
Nephr(o)-	Kidney	Nephritis (kidney inflammation)
Ocul(o)-	Eye	Oculomotor (eye movement)
Oro	Mouth	Oronasal (mouth and nose)
Oss - or oste(o) -	Bone	Osteomyelitis (inflammation of bone and muscle)
Ot(o) -	Ear	Otitis (ear inflammation)
Path(o)-	Disease	Pathogen (disease-causing organism)
Ped(o)-	Child	Pediatrics (care of children)
Pharmaco	Medicine	Pharmacotherapy (treatment with medication)
Pharyng(o)-	Pharynx	Pharyngitis (sore throat)

Phot(o)-	Light	Phototherapy (treatment by exposure to light)
Plasm(o)-	Liquid part of blood	Plasminogen (protein found in tissues and body fluids)
Psych (o)-	Mind	Psychiatry (study and treatment of mental disorders)
Pulmo(n)-	Lung	Pulmoaortic (pertaining to the lungs and aorta)
Sensi	Perception, feeling	Sensory (pertaining to the senses)
Therm(o)-	Heat	Thermometer (instrument for measuring temperature)
Tachy	Rapid	Tachycardia (heart beat rapid)
Thorac(o)-	Chest	Thoracotomy (surgical opening of the chest wall)
Thromb(o)-	Clot	Thrombectomy (excision of a clot from a blood vessel)
Toxi(o)-	Poison	Toxicosis (poisoning)
Trache(o)-	Trachea	Tracheobronchitis (inflammation of the trachea and bronchi)
Ur(o)-	Urinary, urine	Uropoiesis (formation of urine)

The integumentary system

This system includes :-

1. Skin or integument.
2. Nails.
3. Sweat glands (sudoriferous glands).
4. Oil-producing glands (sebaceous glands).



Integument	Skin and all the elements (within and arise from it)
Epidermis	Outer layer of the skin
Dermis	Layer of the skin beneath the epidermis containing blood vessels, nerves and some glands
Subcutaneous	Bottom layer of the skin

Adipose	containing fatty tissues
Stratum	Layer of tissue, especially a layer of the skin
Keratin	Hard, tough protein that form nails and hair
Melanocyte	Cell in the epidermis that produce melanin
Papillary layer	Thin layer of the dermis (containing small papillae)
Subcutaneous	layer between the dermis and the inner organs.
Hair follicle	Tube-like sac in the dermis out of which the hair shaft develops.
Alopecia	Lack of hair in spots and baldness.
Eccrine glands	Glands that occur all over the body.
Lunula	Half-moon shaped area at the base of the nail plate.
Cuticle	Thin band of epidermis that surround the edge of the nail except at the top.
Apocrine	Glands that appear during and after puberty and secrete sweat as 2 glands from armpits.
Diaphoresis	Excretion of fluid by sweat glands (sweating).
Pemphigus	Autoimmune disease that

	causes skin blistering
Dermatitis	Inflammation of the skin
Pruritus	Itching
Impetigo	A type of pyoderma
Rubella	Disease that causes a viral skin rash.
Exanthemateous	Viral disease that causes a rash on the skin
Onychia	Inflammation of the nail.
Lesion	Wound, damage or injury to the skin.