

A Poor Man's Tour of Medical Terminology

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INTRODUCTION

Most words used to describe anatomical structures and physiological processes are based upon Latin or Greek roots. The same is true of the words used to describe medical conditions, procedures, and specialties. The following tables list in alphabetical order some prefixes, suffixes and word roots commonly encountered in the study of medical subjects and in medical settings.

This material is not intended as a substitute for more systematic study, nor are all possible prefixes, suffixes and word roots included. But the tables that follow will help you determine the meaning of unfamiliar terms encountered in the study of speech and hearing that have relevance to medicine and medical practice.

ENTRY LEVEL SKILLS

None.

INSTRUCTIONAL OBJECTIVES

When you finish this material, you should be able to do each of the following correctly and without help.

1. Identify prefixes, suffixes and root words commonly encountered in the study of anatomy and physiology.
2. Decode or "deconstruct" such expressions to determine their literal meaning.
3. Create new expressions to amaze your friends and baffle your instructors.

What is Medical Terminology?

The words - or terms - which make up the language of medicine are referred to as the terminology of the medical field, or Medical Terminology. Like every other language, Medical Terminology has changed over time, but the majority of terms are based in Latin or Greek.

How Does Medical Terminology Work?

Most medical terms can be broken down into one or more word parts. For simplicity in explanation, let's say that there are four possible word parts, and any given medical term may contain one, some, or all of these parts:

1. [roots](#),
2. [prefixes](#),
3. [suffixes](#), and
4. [linking or combining vowels](#).

An example of a word with three of the above parts is the medical term **pericarditis**, which means *inflammation of the outer layer of the heart*. Pericarditis can be divided into three parts:

- **peri - card - itis**

Once divided into its essential parts, pericarditis can be translated:

- the prefix **peri** translates to *surrounding*,
- the root **card** translates to *heart*, and
- the suffix **itis** translates to *inflammation*.

Hence, **pericarditis** is *an inflammation of the area surrounding the heart*, or an inflammation of the outer layer of the heart, anatomically known as the pericardium.

Medical terms always consist of at least one [root](#), although they may contain more. The root of a word is that part which contains the essential meaning of the word. An example of this was seen above in the term **pericarditis**. The root of the word - **card** - refers to the heart, so any [prefix](#) or [suffix](#) added to the root (card) will only function to add to the specificity of that word. An example of this would be the prefix **brady**, which means *slow*. If "brady" is added to the root "card", the term **bradycard** - which roughly means *slow heart* - is created. Then, if the suffix **ia** - which means *abnormal state* - is added to "bradycard", the medical term **bradycardia** is formed. The translation of bradycardia (**brady-card-ia**) is **slow - heart - abnormal state**, or the abnormal state of a slow heart rate.

Prefixes (word beginnings)

<u>Prefix</u>	<u>Definition</u>
a-, an-	without, absence of
ante-	prior to, before
anti-	contrary to, against
bi-, bin-	two
bio-	living things
brady-	slow
de-	intense
dia-	thorough or complete
dip-	two
dys-	abnormal, painful
endo-	within, inside of
epi-	over, on top of
eu-	good
ex-, exo-	outward, exterior
ger-	old or aged
hemi-	half
hyper-	over, above, excessive
idio-	unknown
hypo-	under, below, deficient
inter-	between
intra-	within, inside of
macro-	large
meta-	beyond
micro-	small
mon-, mono-	one, singular
multi-	many
nulli-	none
pan-	all, every, total
para-	beside, around, near
ped-	child or youth
per-	through
peri-	surrounding
poly-	many
post-	after, following
pre-, pro-	before, prior to
pseudo-	false
quad-	four
re-	again
sub-	under, below
syn-	joined, together
tachy-	rapid or fast
tetra-	four
trans-	through, across
tri-	three

Suffixes (word endings)

<u>Suffix</u>	<u>Definition</u>
-ac, -al, -an, -ar, -ary	pertaining to
-algia	pain
-asthenia	weakness
-aten(verb ending)	to cause to become
-cele	protrusion into
-centesis	surgical puncture to remove fluid
-clasis, -clast	break
-desis	surgical fusion
-dynia	pain
-eal	pertaining to
-ectasis	dilation
-ectomy	surgical removal or excision
-genic	producing or originating or causing
-gram	a written record
-graph	instrument to create a written record
-graphy	the act of creating a written record
-iasis	condition
-ia, -ic	pertaining to
-itis	inflammation of
-lysis	separation, loosening or destruction
-malacia	softening
-megaly	enlargement
-meter	instrument used to measure
-metry	the act of measurement
-oid	resembling
-ologist	person who studies
-ology	the study of
-oma	tumor
-orrhagia	rapidly flowing blood
-orrhaphy	to suture or otherwise repair
-orrhea	flow or discharge
-orrhexis	rupture
-osis	an abnormality
-ostomy	an artificial opening
-otomy	an incision into
-ous	pertaining to
-paresis	partial or slight paralysis
-penia	artificial reduction in number
-pexy	surgical fixation, suspension
-phobia	abnormal fear
-phonia	sound or voice
-physis	growth
-plasty	surgical repair
-plegia	paralysis
-poiesis	formation
-ptosis	drooping or downward displacement
-sarcoma	malignant tumor
-schisis	narrow slit or fissure
-sclerosis	hardening
-scope	a device used for looking
-scopic	pertaining to visual examination
-scopy	the act of visual examination
-sis	state of
-spasm	sudden involuntary contraction
-stat	in place, unmoving
-thorax	the chest
-tipsy, -tripsy	surgical crushing or destruction

-tome	instrument used to cut
-trophy	development, nourishment

Word Roots

<u>Word Root</u>	<u>Definition</u>
acou	hearing
acr	extremities
aden	gland
andr	man, male
angi	blood vessel
ankly	crooked, bent, stiff
anter, anteri, anterior	front, before, prior to
arche	initial, beginning
arthr	joint
artic	connect
atel	imperfect, incomplete
ateri	artery
audi	hearing
auri	ear
carcin	cancer
cardi	heart
carp	wrist
caud	tail or down, tailward or downward
celi	abdominal cavity
cephal	head or up, headward or upward
cerebr	brain
cervic	neck
cheil	lip
chondr	cartilage
chrom	color
col	colon
cor	pupil
cost	rib
crani	skull
crypt	hidden
cutane	skin
cyan	blue
cyst	bladder or sac
cyt	cell
dacyr	tear
derm, derma, dermat	skin
dextr, dexter	right (as opposed to left)
disease	a group of symptoms and signs
dist	away from
dors	back (as opposed to front)
electr	electrical
encephal	brain
enter	intestine
epitheli	skin
erythr	red
esophag	esophagus
eti	cause
fenestr	window
gast	stomach
gingiv	gum
gloss	tongue

glyc, glycos	sugar
gnos	knowledge
gyn, gynec	woman, female
hem	blood
hepat	liver
heter	other, different
hist	tissue
homo	same, consistent
hyster	uterus
iatr	physician
ile	ileum
incidence	in diagnosis, the rate of new cases
infer, inferi, inferior	below
ir, irid	iris of the eye
isch	blockage or deficiency
kerate	cornea; hard or horny tissue
kinesi	movement, motion
kyph	hump
lacrim	tear
lamina	shelf or plate
lapar	abdominal wall of cavity
laryng	larynx (voice box)
later	side
leuk	white
lingue	tongue
lord	bent forward
mamm, mast	breast
meatus	opening
medi, media, mesi	middle
melan	black
menisc, meniscus	crescent-shaped
mort, morti, mortus	dead
my, myos	muscle
myc	fungus
myel	spinal cord
myring	eardrum
nas	nose
nat	birth
necr	death, dead
nephr	kidney
neur	nerve
occlude	to close or shut
occult	concealed, covered
ocul, op, ophthalm	eye
onc	tumor
onych	nail
opt	vision
or	mouth
orchid	testicle
oste	bone
ot	ear
pachy	thick
palip	the palm of the hand
path	disease
peps	digestion
percus	to hit or strike
petr	stone
phag	swallowing, eating
phalang	finger or toe
phas	speech, speaking
phren	mind

phleb	vein
pleg	paralysis
pne	breathing
pneum, pneumat, pneumon	ung, air
poli	gray, gray matter
post, posteri, posterior	behind, back
prevalence	in diagnosis, the total number of cases
proct	rectum
prostat	prostate gland
proxim	near, close
psych	mind
py	pus
rachi	vertebra, spine
rect	rectum
ren	kidney
retin	retina
striat	striped
rhabd	rod-shaped
rhin	nose
rhytid	wrinkles
siccare	dry
sarc	connective tissue, flesh
scler	sclera, the white of the eye
scoli	curved or crooked
sigm	"S" shaped
sign	in diagnosis, a characteristic of a disease
sinistr, sinister	left (as opposed to right)
sinus	cavity
situ	place, situation
somat	body
son	sound
sphygm	pulse
spir	breathing, breathe
stasis	to stop or control
stat, statim	immediately
sten	narrowing
stern	breast bone (sternum)
steth	chest
stomat, stomata	mouth or opening
super, superi, superior	above, on top of
symptom	in diagnosis, a complaint
techno	applied art, science or skill
ten, tendon	tendon
thanat	death
thorac	chest
thromb	blood clot
tom	cut, section
tox, toxic	poison
trache	windpipe (trachea)
trich	hair
troph	development
tympan	middle ear
ur	urine, urinary tract
ven	vein
vertebr	vertebra, spine
viscer	internal organs
vita	life
vitro	glass
xanth	yellow

Linking or Combining Vowels

As was discussed above, a medical term must have at least one root, but does not have to have a prefix and/or a suffix. An example of this is the term **sternocleidomastoid**, which is a muscle that has attachments at the sternum, the clavicle, and the mastoid. The term sternocleidomastoid can be divided into three parts (three roots, in this case): **stern - o - cleid - o - mastoid**. Notice that there are vowels between the three roots. These are **linking or combining vowels**, which serve to make a term easier to pronounce.

The vowel used most of the time is **o**, but other vowels such as **i** and **a** are also used.

Combining vowels are often used between roots and suffixes or roots and other roots, but they are NOT used between prefixes and roots.

APPLICATION

Many words can be deconstructed (and, hence, better understood) by identifying and defining the parts that make up those words. For example, the word otorrhea consists of the prefix ot (meaning "ear") and the suffix orrhea (meaning "flow or discharge"). Thus, "otorrhea" designates a flow or discharge from the ear. Similarly, the phrase auris sinister refers to the left (sinister) ear (auris or auri) and the word dysphagia identifies abnormal (dys) swallowing (phag plus ia, which means "pertaining to"). The word diagnosis means complete (dia) knowledge (gnosis), presumably of a disease.

Use these tables to deconstruct the following sets of terms and to determine how they are similar and how they are different.

1. Aphasia and dysphasia.
2. Etiology and mycology.
3. Aphonia, dysphonia, and dysphagia.
4. Gnosology and toxicology.
5. Hypoacusis and dysacusis.
6. Glossopathy and glossectomy.
7. Laryngectomy and laryngotomy.
8. Otorhinolaryngology and cystology.
9. Audiologist, audiometer and audiogram.
10. Myringoplasty and myringotomy.
11. Tympanoplasty and rectoplasty.
12. atrogenic and diagnosogenic.
13. Myringitis and laryngitis.
14. Thantology and euthanasia.
15. Otoscope and arthroscope.
16. Hemiplegic and quadraplegic.
17. Phlebotomist and psychologist.
18. Electrocardiogram and electro-encephalogram.
19. Bradycardia and tachycardia.

No one has yet done so with any serious intent, but here are some words that could be created using the word parts given below: psychectomy, rhinoid, cryptorrhea, caudasthenia, idioxanthosis, iatrorrhesis, laryngotome,

polymicrolamina, phrenasthenia, and phrenodesis. Can you figure out what they mean? Better yet, can you make up five new, really goofy words?

Better yet, can you make up some new, really goofy words? Listed below are a number of word parts. Fill in the blanks to see what you can come up with.

Number	Prefix	Root	Suffix	Meaning?
1	Para-			
2	Pseudo-			
3		-ankly-		
4		-crypt-		
5			-stat	
6			-scopy	
7	Meta-			
8	Endo-			
9		-crani-		
10		-lingue-		
11			-ologist	
12			-graphy	

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