



اساسيات الطب

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٢٠١٧

كلية طب الموصل

المحاضرة الاولى

الدكتور هيثم

Medical Terminology

Main Objective:

Learn Medical Terminology

Even to a native English speakers, new medical students often bewildered by strange medical Terms, its spelling and pronunciation

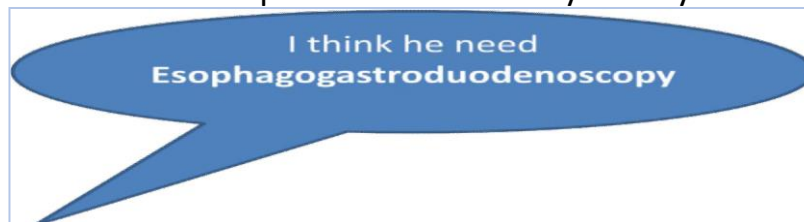
Why ?

Approximately 75% of Medical Terms are based on either Greek or Latin

Origins of medical language

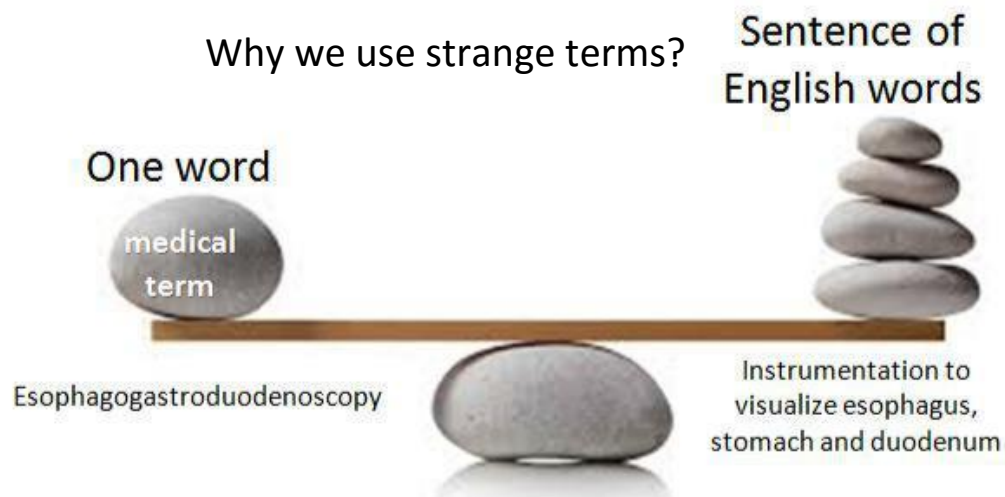
Current medical vocabulary includes terms **built from Greek and Latin word parts**, some which were used by Hippocrates and Aristotle over 2000 years ago.

Use proper medical terminology to communicate with other health care professionals Example of medical term you may hear from your colleague



What?????????

Don't be shocked. The subjects is simpler than what you think !!!!!. You need to learn the principles of building and analyzing medical term.



Objectives of the course

Upon completion of this unit you will be able to:

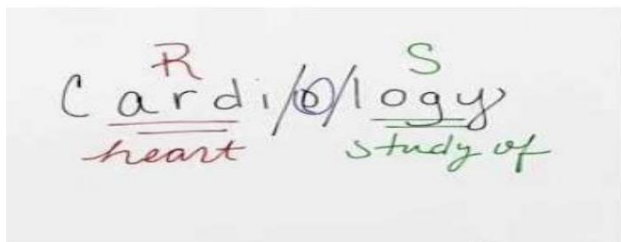
- ↳ Identify and define the four component of medical terms
- ↳ Analyze and define medical terms
- ↳ Build medical terms for given definitions

Word Parts / Building Blocks of medical term

Medical terms are built from word parts with some or all of the following components:

1. Word roots
2. Suffixes
3. Prefixes
4. Combining vowels
5. combining forms

How to Define Medical Terms



Terms can easily be defined by determining the meaning of their parts.

Read left to right, but define by interpreting the suffix, then the prefix, then the combining form.

e.g. Define **heminephrectomy**?

prefix	Root	suffix
hemi-	neph	-ectomy
(Half)	(Kidney)	(Removal)

Then **heminephrectomy** means Remove half of kidney

Word root

The word root is the central and foundation of the medical term Usually indicates the part of the body involved All medical terms must have one or more word roots

Gastr-	=	Stomach
Cardi-	=	Heart
Arth-	=	Joint
Ophthal-	=	Eye
Nephr-	=	Kidney



combining vowel

- ∑ Usually an 'o' and occasionally an 'i'
- ∑ Has no meaning of its own
- ∑ Makes pronunciation easier
- ∑ Can be found between word roots
- ∑ Can be found between word roots and a suffix

When a vowel is added to a root word, it is called a combining form

Examples of combining form according to systems

1- Combining form for Body Systems Cardiovascular

❖	angi/o	vessel
❖	aorto/o	aorta
❖	arteri/o	artery
❖	cardi/o	heart
❖	coron/o	heart
❖	phleb/o	vein
❖	ven/o	vein

2- Combining form for Body Systems Digestive

❖	an/o	anus
❖	append/o	appendix
❖	cholecyst/o	gallbladder
❖	col/o	colon
❖	duoden/o	duodenum
❖	esophag/o	esophagus

❖	gastr/o	stomach
❖	hepat/o	liver
❖	ile/o	ileum
❖	jejun/o	jejunum
❖	or/o	mouth
❖	pancreat/o	pancreas
❖	pharyng/o	pharynx
❖	proct/o	anus and rectum
❖	rect/o	rectum
❖	sigmoid/o	sigmoid
❖	stomat/o	mouth

3- Combining form for Body Systems Endocrine

❖	adren/o	adrenal
❖	hypophys/o	pituitary
❖	oophor/o	ovary
❖	ovari/o	ovarian
❖	orchi/o	testis
❖	pancreat/o	pancreas
❖	parathyroid/o	parathyroid
❖	pituitar/o	pituitary
❖	thym/o	thymus
❖	thyroid/o	thyroid

4- Combining form for Body Systems Reproductive

❖	cervic/o	cervix
❖	vagin/o	vagina
❖	hyster/o	uterus
❖	mamm/o	breast
❖	uter/o	uterine
❖	oophor/o	ovary
❖	salping/o	fallopian tube
❖	balan/o	penis
❖	orch/o	testis
❖	prostat/o	prostate
❖	scrot/o	scrotum

5- Combining form for Body Systems Skeletal

❖	arthr/o	joint
❖	chondr/o	cartilage
❖	cost/o	rib
❖	crani/o	skull
❖	ligament/o	ligament
❖	my/o	muscle
❖	muscul/o	muscle
❖	myel/o	bone marrow
❖	oste/o	bone
❖	pelv/o	pelvis
❖	vertebr/o	vertebra

6- Combining form for Body Systems Respiratory

❖	alveol/o	alveolar
❖	bronch/o	bronchial tube
❖	cyan/o	blue
❖	laryng/o	larynx
❖	nas/o	nose
❖	rhin/o	nose
❖	pharyng/o	pharynx
❖	phren/o	diaphragm
❖	pneumon/o	lung
❖	tonsill/o	tonsils
❖	trache/o	trachea

7- Combining form for Body Systems Urinary

❖	cyst/o	urinary bladder
❖	nephr/o	kidney
❖	ren/o	renal
❖	pyl/o	renal pelvis
❖	ureter/o	ureter
❖	urethr/o	urethra

8- Combining form for Body Systems Nervous

❖	cerebell/o	cerebellum
❖	cerebr/o	cerebrum

❖	encephal/o	brain
❖	medull/o	medulla
❖	myel/o	spinal cord
❖	neur/o	nerve

9- Combining form for Body Systems Miscellaneous

❖	aur/o	ear
❖	ot/o	ear
❖	cutane/o	skin
❖	derm/o	skin
❖	myring/o	eardrum
❖	ocul/o	eye
❖	onych/o	nail
❖	ophthalm/o	eye
❖	pil/o	hair
❖	retin/o	retina
❖	trich/o	hair
❖	ungu/o	nail

Prefixes

Syllable located at the beginning of a word Changes the meaning of the word Usually indicates a number, time, position, direction, color, size etc. or sense of negation

Number	Nuli-	×	Multi-	Nuli-para
Time	Pre-	×	Post-	Pre-term
Position	Epi-	×	Sub-	Epi-dermis
Direction	Pro-	×	Retro-	Pro-spective
Color	Leuko	×	Melan	Leuko-cyte
Size	Hyper	×	Hypo	Hyper-trophy

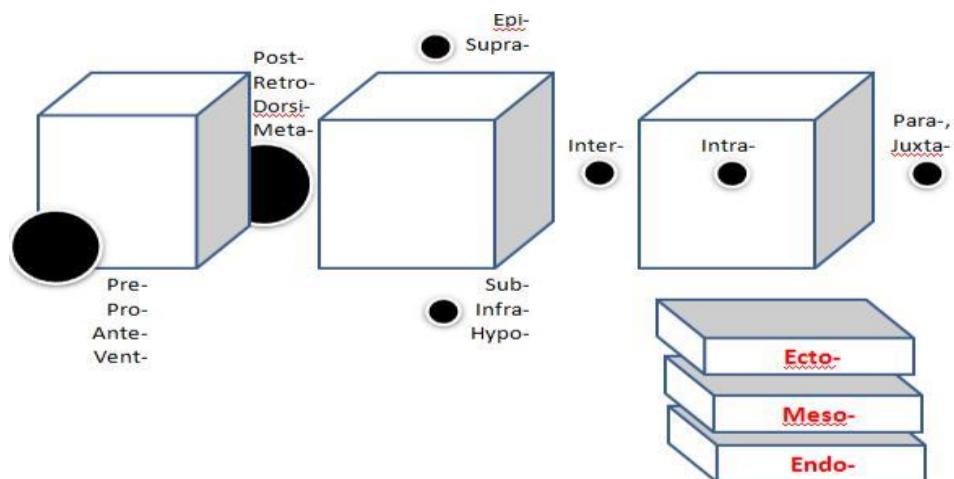
Numerical prefixes

Prefixes	Value	Standard form	Symbol
Tera	1 000 000 000 000	10^{12}	T
Giga	1 000 000 000	10^9	G
Mega	1 000 000	10^6	M
Kilo	1 000	10^3	k
deci	0.1	10^{-1}	d
centi	0.01	10^{-2}	c
milli	0.001	10^{-3}	m
micro	0.000 001	10^{-6}	μ
nano	0.000 000 001	10^{-9}	n
pico	0.000 000 000 001	10^{-12}	p

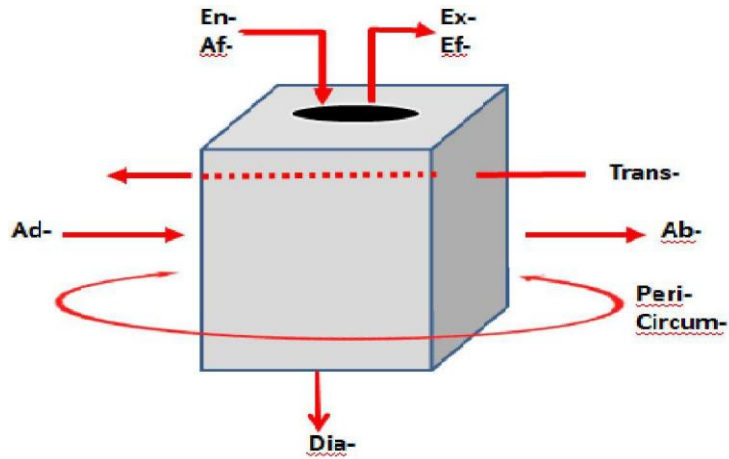
Color prefixes



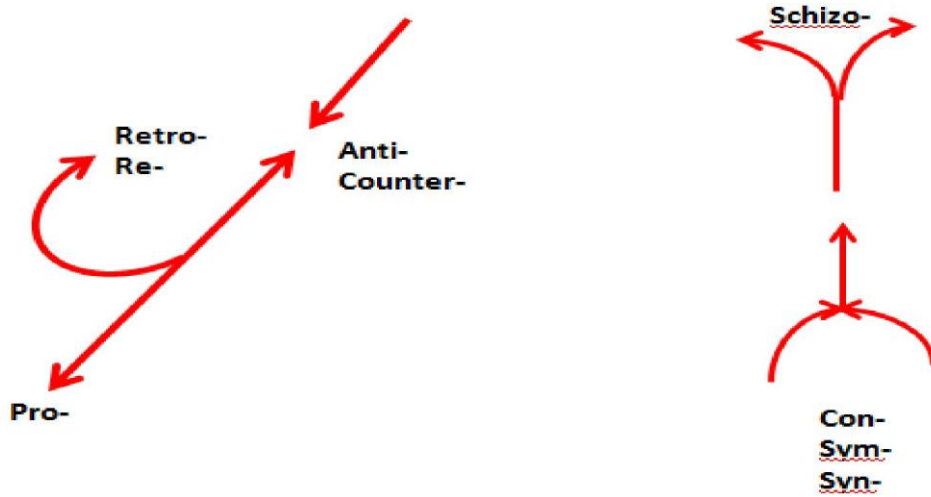
Prefixes of position



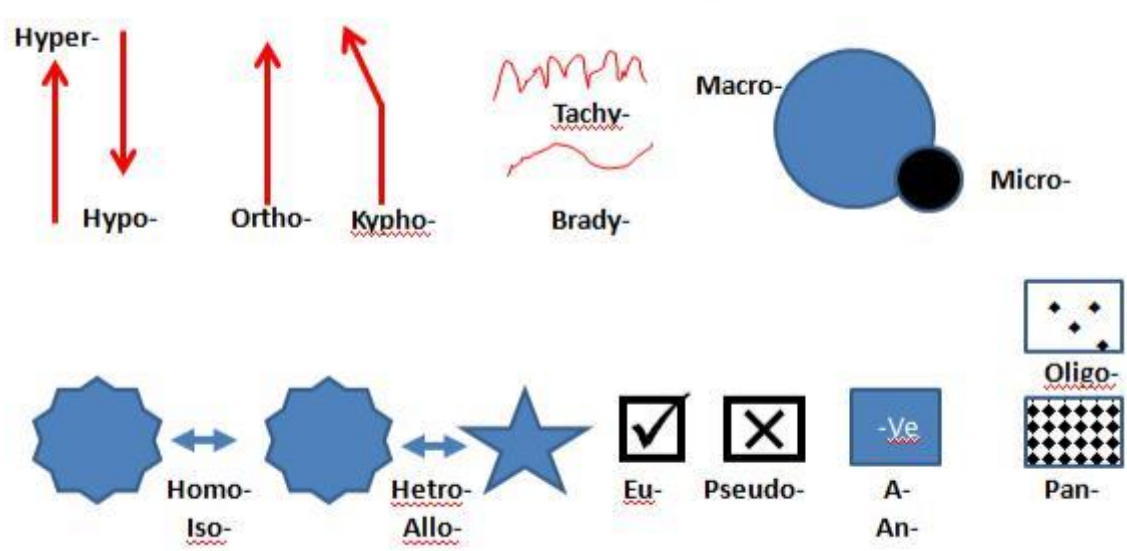
Prefixes of direction



Prefixes of direction



Miscellaneous prefixes



Suffixes

- Suffix is the word part attached to the end of the word root to modify its meaning.
- The suffix usually indicates the surgical procedure, diagnosis & pathology.
- All medical terms must have a suffix.

Surgical suffixes

<p>-Centesis</p>  <p>- Puncture a cavity</p>	<p>-Stomy</p>  <p>Permanent opening</p>	<p>--rrhaphy</p>  <p>Repair by suturing</p>	<p>--pexy</p>  <p>Surgical fixation</p>
<p>--ectomy</p>  <p>Surgical removal</p>	<p>--tomy</p>  <p>Incision</p>	<p>--plasty</p>  <p>Surgical repair</p>	<p>--tripsy</p>  <p>Crushing stone</p>

Diagnostic suffixes

<p>--gram</p>  <p>Recording</p>	<p>-SCOP</p>  <p>Instrument for viewing</p>	<p>-graph</p>  <p>Instrument for recording</p>	<p>-graphy</p>  <p>Process for recording</p>
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Pathology- related suffixes

-algia, -dynia	-osis	-blast	-cidal
			
Pain	A condition of-	Immature forming	killing
-clast	-ectasis	-emesis	-emia
			
Breaking	Abnormal dilatation	Vomiting	Blood

Pluralizing medical term

If singular form of term end in ----- , the plural is usually formed by changing to

Singular	Plural	Example
-a	-ae	Bursa → <u>Bursae</u>
-ex	-ices	Index → Indices
-is	-es	Testis → Testes
-on	-a	Criterion → Criteria
-um	-a	Ovum → Ova
-us	-i	Alveolus → Alveoli
-ma	-mata	Condyloma → <u>Condylomata</u>

Suffixes

Noun

■ -osis	cyanosis
■ -ia	anemia
■ -us	mucus
■ -um	ilium
■ -e	condyle
■ -us	carpus
■ -itis	arthritis
■ -sis	emesis

Adjective

■ -otic	cyanotic
■ -ic	anemic
■ -ous	mucous
■ -ac	iliac
■ -ar	condylar
■ -al	carpal
■ -itic	arthritic
■ -tic	emetic

Suffix – Noun

Examples:

- | | |
|---|---|
| <ul style="list-style-type: none"> ■ -ism = condition, state, of theory ■ -tion = condition ■ -ist = specialist ■ -er = one who ■ -ity = quality | <ul style="list-style-type: none"> • Hyperthyroidism, Darwinism, Mendelism • Contraction, relaxation • Psychiatrist • Radiographer • Sensitivity, conductivity |
|---|---|

Suffixes – Adjective

Examples:

- | | |
|--|--|
| <ul style="list-style-type: none"> ■ -ous = possessing, having, full of ■ -able = ability ■ -ible = ability | <ul style="list-style-type: none"> • Nervous, mucous, serous • Injectable, inflatable • Edible, reducible |
|--|--|

Edited by:- fahad A.

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