

Medical

Terminology

Lecture 1

Introduction

17/oct/2024

Introduction to Medical Terminology

* Most Medical terms are derived from:
Greek and Latin

ex: Dermatos (Greek) } means skin
cutane (Latin) }

* A Medical word consists of:

- * 1- Medical root
 - * 2- suffix
 - 3- Prefix
 - 4- Combining Form
- } All words should have these
} Not always there

~~~~~\*

- Medical roots: it is the main part

\* Greek roots are used to describe:  
- a Disease - Treatment  
- a condition - Diagnoses

\* Latin roots are used to describe:  
- Anatomical structure

\* All Terms have at least one root  
↳ means there could be more

\* It can appear at

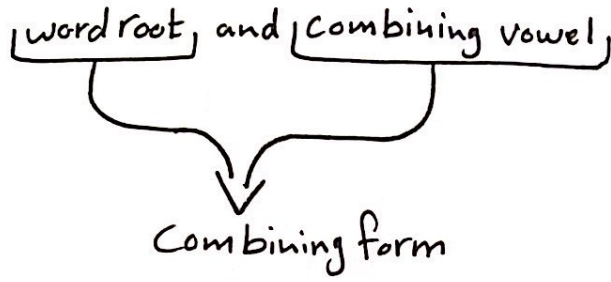
- the beginning of a word
- after a prefix
- before a suffix
- between a prefix and a suffix

\* it may be used alone or combined with other elements  
to form a complete word

ex: "stomat" ~ Greek } mouth      "nephr" ~ Greek } Kidney  
"or" ~ Latin }      "ren" ~ Latin }

# Combining Form:

\* it is the combination of:

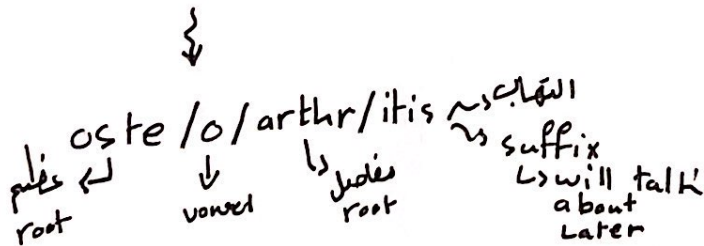


\* A combining vowel could be an "o" or an "i"

- ↳ used to make pronunciation easier
  - ↳ it has NO meaning, but allows elements to connect
  - ↳ represented as: (word root)/(vowel)
- ex: gastr/o  
ō.ɹo ←

- when there is more than 1 root we use a combining vowel to connect them

ex: Osteoarthritis

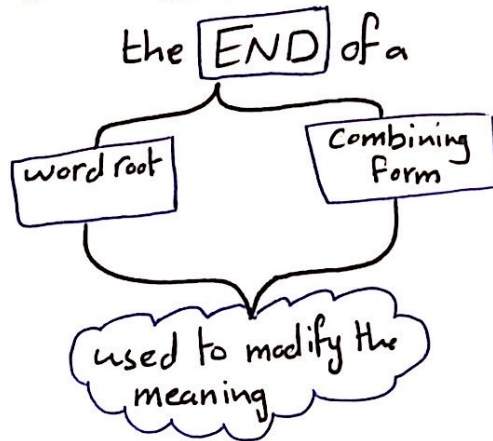


examples:

- erythr/o ~ red
- gastr/o ~ stomach
- hepat/o ~ Liver
- immun/o ~ immune, safe
- nephr/o ~ kidney
- oste/o ~ bone

## \* Suffix :

- Derived from: Greek or Latin
- it is one or More letters added to :



So it describes a :

\* Pathology (disease or abnormality)  
اختلال أو مرض

\* Symptom أعراض / عرض

\* Surgical or diagnostic Procedure إجراء تشخيصي أو جراحي

\* Part of speech جزء من الكلام

ex of suffixes :

[nitis] → التهاب → inflammation

[megaly] → تضخم → Enlargement

[noma] → ورم سرطاني → Tumor

So for example :

\* gastr/megaly → تضخم في المعدة

\* Hepat/itis → التهاب الكبد

--- and so on

# Rules of building Medical words :

## Three basic rules :

### Rule I :

A word root links to a suffix that begins with a vowel  $\rightarrow$  the word at the end

$\rightarrow$  cpa  
alt  
[A, E, I, O, U]

means no need for a combining vowel

ex: gastr/o + itis = gastritis  
 $\downarrow$  vowel  $\downarrow$  see no use of "o"

### Rule II :

A combining form (root + combining vowel) links to a suffix that begins with a consonant  $\rightarrow$  any letter except vowels  $\rightarrow$  [A, E, I, O, U]

ex:

gastr/o + megaly = gastromegaly  
 $\downarrow$  consonant

### Rule III :

a combining form links a root to another root forming a compound word even if the next root begins with a vowel

[ so we use a combining vowel to link multiple roots always ]

ex: osteo/arthriti/s  
 $\rightarrow$  osteoarthritis

- rules for linking multiple roots are slightly different from other rules of linking roots and combining forms to suffixes

\* Meanings of certain Suffixes :

① Scope [instrument to view]  
ex: Colonoscope

② rrhea [excessive flow or discharge], ex: Pyorrhea

③ Stenosis [narrowing, stricture]  
ex: arteriostenosis

④ rrhexis [rupture]  
ex: hepatorrhexis

⑤ toxic [poison] ex: hepatotoxic

⑥ Pathy [disease] ex: nephroopathy  
↳ general  
أي مرض

⑦ algia [Pain] ex: neuralgia  
أي ألم ← ألم

⑧ uria [urine, urination]

⑨ ectomy [excision] ex: appendoctomy  
إستئصال

⑩ edema [swelling] ex: cerebraloedema  
انتفاخ

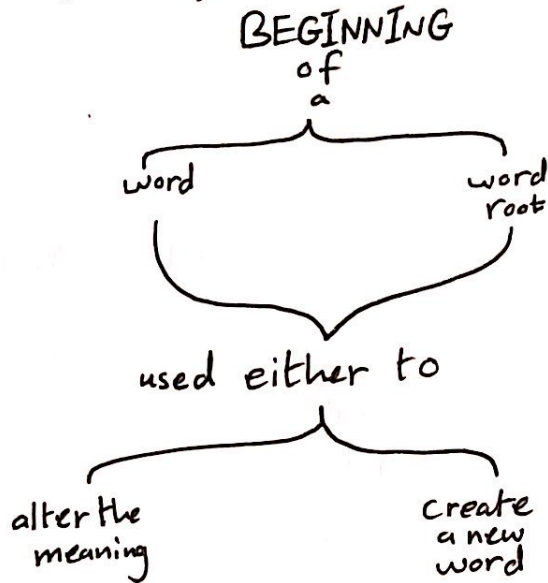
⑪ osis [abnormal condition]  
حالة غير طبيعية

[1-6]  
\* notice that we added a o combining vowel since the suffix begins with a consonant

[7-11]  
\* notice that we didn't use a combining vowel because suffixes start with a vowel [a, e, i, o, u]

# \* Prefixes :

- It is a syllable, attached to the :



\* Not all medical terms have it  
[Not obligatory to have]

It indicates a :

- number
- direction
- time
- negation
- position
- absence

- many of them are used in the English language

## Examples :

- \* mono [one]
- \* bi [two]
- \* tri [three]
- \* Anti [against]
- \* Hyper [excessive]
- \* Hypo [under]
- \* Pre [before]
- \* Post [after]

- \* Homo [same]
- \* Hetero [different]
- \* Eu [normal]
- \* Dys [painful]
- \* Brady [slow]
- \* Tachy [fast]
- \* Epi [above]
- \* Hemi [half]
- \* Para [beside]
- \* Intra [within] ← الدافل
- \* Inter [between] ← بين شيئين
- \* Endo [within] ← الدافل
- \* Ecto [outside]
- \* Endo [toward]

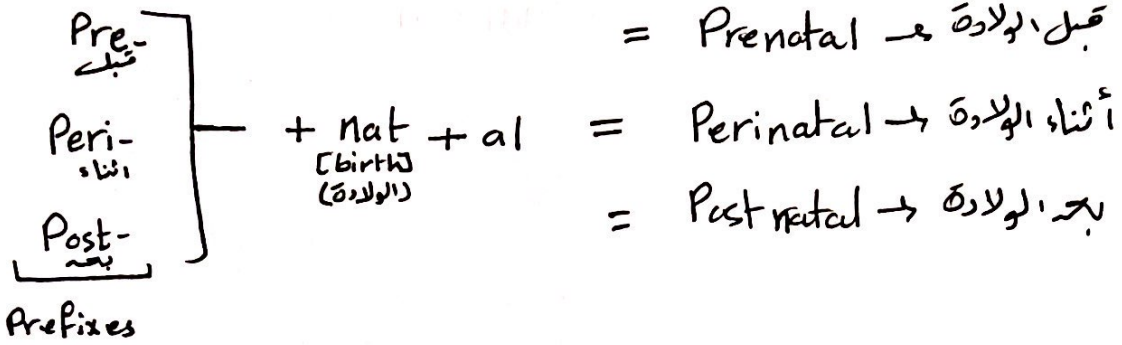
- \* retro [behind]
- \* macro [large]
- \* micro [small]
- \* multi [much]
- \* ab [away from]
- \* ad [within]
- \* circum [around]

ex:

- \* an/esthes/ia → anesthesia  
↑ pro    ↓ root    ↑ suffix
- \* hyper/therm/ia → hyperthermia
- \* intra/muscul/ar → intramuscular
- \* Para/nas/al → Paranasal
- \* Poly/ur/ia → polyuria

\* How prefixes change meaning :

ex:



\* Medical term Interpretation :

- It can be done by defining the term components

1- Suffix -- last part

2- the first part of the word : maybe a

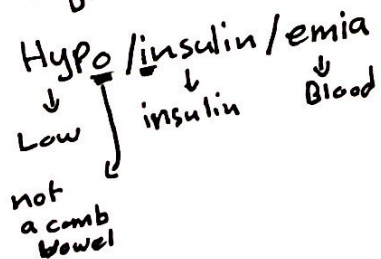


3- the middle parts of the word

Ex: Acrocyanosis : a condition characterized by blue extremities اطراف

|                                                |   |                   |
|------------------------------------------------|---|-------------------|
| Acr : word root : <sup>أطراف</sup> extremities | } | Combining<br>form |
| o : combining vowel                            |   |                   |
| Cyan : word root : blue                        |   |                   |
| osis : suffix : condition                      |   |                   |

Ex: Hypoinsulinemia





## \* Plural words :

- formed by Adding or Substituting another vowel or syllable at the END of the word

examples:

macula → maculae  
 adenoma → adenomata  
 glomerulus → glomeruli

ovum → ova

spermatozoon → spermatozoa

## \* Rules of singular and Plural :

| Singular | Plural                           | examples                        |
|----------|----------------------------------|---------------------------------|
| -a       | retain <u>a</u> + add <u>e</u>   | ~ → Pleura → Pleur <u>ae</u>    |
| -ax      | Drop <u>x</u> + add <u>ces</u>   | thorax → thorac <u>es</u>       |
| -en      | Drop <u>en</u> + add <u>ina</u>  | lumen → lum <u>ina</u>          |
| -is      | Drop <u>is</u> + add <u>es</u>   | diagnosis → diagnos <u>es</u>   |
| -ix      | Drop <u>ix</u> + add <u>ices</u> | appendix → appendic <u>es</u>   |
| -ex      | Drop <u>ex</u> + add <u>ices</u> | apex → apic <u>es</u>           |
| -ma      | retain <u>ma</u> + add <u>ta</u> | carcinoma → carcinomat <u>a</u> |
| -on      | Drop <u>on</u> + add <u>a</u>    | ganglion → gangli <u>a</u>      |
| -um      | Drop <u>um</u> + add <u>a</u>    | bacterium → bacteri <u>a</u>    |
| -us      | Drop <u>us</u> + add <u>i</u>    | bronchus → bronchi              |
| -y       | Drop <u>y</u> + add <u>ies</u>   | deformity → deformati <u>es</u> |

## \* Eponyms :

- They are medical terms derived from the name of a person
- Many Procedures and tests are also named after the Person who invented or perfected them

### Ex<sup>o</sup> diseases :

- Addison's disease
- Cushing's disease
- Stokes-Adam's disease
- Alzheimer's disease
- Parkinson's disease

### body Parts :

- Bowman capsules
- Wernicke's center or area
- Cowper's glands

### tools :

- Foleys catheter
- Hegar dilators

## \* Acronyms :

- They are medical <sup>تختصرات</sup> abbreviations
- used very frequently in medicine
- They boost efficiency as long as they are used intelligently

## Ex :

ACE → Angiotensin Converting Enzyme

ACTH → AdrenoCorticoTropic Hormone

AIDS → Acquired Immune Deficiency Syndrome

HDL → High Density Lipoprotein

Hx → History

MI → Myocardial Infraction

RBC → Red Blood Cells

RBBB → Right Bundle Branch Block

TB → Tuberculosis → السل .

ADH → Anti-Diuretic Hormone