Medical Terminology

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Biology 033

Lecture website: www.lamission.edu/lifesciences
Go to “lecture notes” → Medical Terminology

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Medical Terminology

Introduction (Section A)
Section A

How to Work the Program-
Directions for Use of
Programmed Learning
A.1, A.2, A.3 are called “Frames”. Each frame contains informations or questions.

Cover the answer column on the left with the marker provided on the back cover of the textbook.

Answer the questions and learn through immediate feedback by checking your answers.

You can write the answers in the blank or on a separate paper.
Pronounce the word OUT LOUD. You can listen to the computer program provided in your text book for correct pronunciation.
A single blank space (_____)= one word answer
An asterisk and a blank (*______) = more than one word answer
Double asterisk and a blank (**______) = Use your own words.
Short blank (____)= One short word
Long blank (__________) = One long word
- The clue for length of the words are only for the textbook and not necessarily for your quizzes and tests.
5 Ways to Learn

- Saying
- Hearing
- Seeing
- Writing
- Thinking
Unit 1

The Word-Building System – Introduction to Word Parts Including Word Roots, Suffixes, Prefixes, Parts of Speech, Plural Formation
Word-building System

- Building thousands of words by using a few word parts
- There are exceptions also
Word Root

- The foundation of a word.
- **Port**
  - Trans/port, ex/port, sup/port
- **Fix**
  - Suf/fix, pre/fix, af/fix
- **Gastr**
  - Gastr/itis, Gastr/ectomy, gastr/ic
Combining Form

- **Word root + vowel = Combining form**
- Micr/o = Micr/o
  - Word root  Combining vowel  combining form
- Gastr/o, therm/o, micr/o
- Combining vowel = (a, e, i, o, u, or y)

- Gastr/o/ duoden/o/-ostomy
  - Word root  combining vowel  word root  suffix
Combining Vowel

- Adding a *vowel* (a, e, i, o, u, or y) to a *word root* to create a *combining form* allows 2 or more *word roots* to be joined to form a *compound word*. It also allows a *word root* to be joined with a *suffix* (word ending) to form a *word*. Vowel makes the term easier to pronounce.

- Examples: Cyt/o/meter, micr/o/scope, micr/o/film, micr/o/be, neur/o/spasm, therm/o/meter, micr/o/surgery
Combining form (word root + vowel) is usually used to join a word root to a suffix or other root that begins with a consonant.

Combining form + Suffix = Compound Word

Gastr/o duoden/o -scopy = Gastroduodenoscopy

combining form combining form suffix compound word
A word root, not a combining form, is used to join a word root with a suffix or another word root that begins with a vowel.

\[
\text{Word root} + \text{Suffix} = \text{Word}
\]

\[
\text{Dermat} + \text{itis} = \text{Dermatitis}
\]

word root  suffix  word
Compound Word

- Compound words can be formed when 2 or more word roots are used to build the word. Sometimes word roots are words.

  Word root + word root = **Compound word**

- Chicken + Pox = **Chickenpox**

  Word root      word root         compound word

- Examples: underage, shorthand, download, brainstem
Compound Word

- Compound word can also be formed from a combining form and a whole word.

  Therm/o + meter = Therm/o/meter

  Combining form  word  compound word
Compound Word

- Micr/o + scope
- Micr/o + surgery
- Micr/o + meter

- Hydr/o + phobia
- Hydr/o + cele
- Hydr/o + therapy

- Microscope
- Microsurgery
- Micrometer

- Hydrophobia
- Hydrocele
- Hydrotherapy
Suffix

- **-osis**
- **-ic**
- **-itis**

- Suffix is an ending that follows a word root.
- May be in a noun form or an adjective form
- **Combining form + Word root + Suffix = Compound word**
- **Micr/o scop + -ic**
  Combining form word root suffix
- Examples: therm/o/metr/ic, electr/o/stat/ic, hydr/o/chlor/ic
Suffix

- Word root + Suffix = Noun
  - Anem -ia Anemia

- Word root + Suffix = Adjective
  - Anem -ic Anemic

- Suffix may change the part of the speech between a noun and an adjective
# Suffix

<table>
<thead>
<tr>
<th>Noun</th>
<th>Adjective</th>
</tr>
</thead>
<tbody>
<tr>
<td>-osis</td>
<td>-otic</td>
</tr>
<tr>
<td>-ia</td>
<td>-ic</td>
</tr>
<tr>
<td>-us</td>
<td>-ous</td>
</tr>
<tr>
<td>-um</td>
<td>-ac</td>
</tr>
<tr>
<td>-e</td>
<td>-ar</td>
</tr>
<tr>
<td>-us</td>
<td>-al</td>
</tr>
<tr>
<td>-itis</td>
<td>-itic</td>
</tr>
<tr>
<td>-sis</td>
<td>-tic</td>
</tr>
</tbody>
</table>

| cyanosis | cyanotic |
| anemia   | anemic   |
| mucus    | mucous   |
| ilium    | iliac    |
| condyle  | condylar |
| carpus   | carpal   |
| arthritis| arthritic|
| emesis   | emetic   |
Verbs are words that represent action or a state of being.

The suffixes -ed or -ing added to the word alter the tense of this verb.
- Past tense: Vomited, Injected
- Present Participle: Vomiting, Injecting
Suffix - Noun

- *-ism* = condition, state, of theory
- *-tion* = condition
- *-ist* = specialist
- *-er* = one who
- *-ity* = quality

Examples:
- Hyperthyroidism, Darwinism, Mendelism
- Contraction, relaxation
- Psychiatrist
- Radiographer
- Sensitivity, conductivity
Suffix - Adjective

- **-ous** = possessing, having, full of
- **-able** = ability
- **-ible** = ability

Examples:
- Nervous, mucous, serous
- Injectable, inflatable
- Edible, reducible
# Suffix: Singular vs. Plural

<table>
<thead>
<tr>
<th>Greek</th>
<th>Singular Suffixes</th>
<th>Plural Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-on</td>
<td>-a</td>
</tr>
<tr>
<td></td>
<td>Spermatozoon, ganglion</td>
<td>Spermatozoa, ganglia</td>
</tr>
<tr>
<td></td>
<td>-ma</td>
<td>-mata</td>
</tr>
<tr>
<td></td>
<td>Carcinoma, lipoma</td>
<td>Carcinomata, lipomata</td>
</tr>
<tr>
<td></td>
<td>-sis</td>
<td>-ses</td>
</tr>
<tr>
<td></td>
<td>Crisis, prognosis</td>
<td>Crises, prognoses</td>
</tr>
<tr>
<td></td>
<td>-nx</td>
<td>-ges</td>
</tr>
<tr>
<td></td>
<td>Larynx, pharynx</td>
<td>Larynges, pharynges</td>
</tr>
</tbody>
</table>
## Suffix: Singular vs. Plural

### Latin

**Singular Suffixes**
- -a
  - Vertebra, conjunctiva
- -us
  - Bacillus, bronchus
- -um
  - Bacterium, ilium
- -is
  - Testis

**Plural Suffixes**
- -ae
  - Vertebrae, conjunctivae
- -i
  - Bacilli, bronchi
- -a
  - Bacteria, ilia
- -es
  - Testes
# Suffix: Singular vs. Plural

## Latin

<table>
<thead>
<tr>
<th>Singular Suffixes</th>
<th>Plural Suffixes</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ex</td>
<td>-ices</td>
</tr>
<tr>
<td>cortex</td>
<td>cortices</td>
</tr>
<tr>
<td>-ix</td>
<td>-ices</td>
</tr>
<tr>
<td>Appendix</td>
<td>appendices</td>
</tr>
<tr>
<td>-ax</td>
<td>-aces</td>
</tr>
<tr>
<td>thorax</td>
<td>thoraces</td>
</tr>
</tbody>
</table>
Practice…

Singular:
- Sarcoma
- Diagnosis
- Phalanx
- Coccus
- Calcaneum
- Vertex
- Cervix
- thorax

Plural:
- Sarcomata
- Diagnoses
- Phalanges
- Cocci
- Calcanea
- Vertices
- Cervices
- thoraces
Prefix

Prefix is a word part that goes in front of a word root, changing the meaning of the word.

- prefix
- ex-
- circum-
- dis-
- trans-
- dixa-
Prefixes:

- **Ex-** + tension = Extension
- **Ex-** + press = Express
- **Dis-** + please = Displease
- **Dis-** + ease = Disease
- **Im-** + plant = Implant
- **Sup-** + plant = Supplant
- **Trans-** + plant = Transplant
Acr/o = Extremities

- **Acr/o = extremities (arms and legs)**
  - Acr = word root
  - O = vowel
  - Acr/o = combining form
- **Acr/o/paralysis**: Paralysis of extremities
- **Acr/o/cyan/osis**: Condition of blue extremities
- **Acr/o/dermat/itis**: Inflammation of skin of the extremities, like red inflamed hands
Megal/o = Enlarged, Large

- megaly = Suffix for “enlarged”

- Acr/o/megaly: Enlargement of the extremities

- Acromegalic Gigantism = A specific disorder of the body with enlargement of the bones of the hands, feet, and head.

- y = Suffix that means “the process or condition”. Makes a word a noun.
Dermat/o = Skin

-logy = (noun) Study of
-logist = (noun) One who studies
-logos = Greek for study

Dermat/o/logist: The person who specializes in diseases of the skin
Dermat/o/logy: The study of skin
Eti/o/logy: Study of the origin of disease
-itis = Inflammation

- **Dermat/itis**: Inflammation of the skin
  - i.e. Contact (allergic reaction) dermatitis, or due to infection, inflammation, trauma

- **Acr/o/dermat/itis**: Inflammation of the skin of the extremities
-osis = Condition, Status, Process

- Dermat/osis: Any skin condition. (abnormal condition). (noun)
- Cyan/osis: Condition of blueness
Cyan/o = Blue, Blueness

- Cyanosis: (noun) Condition of blueness
- Cyanotic: (adj.) Pertaining to a condition of blueness
  - *-tic* = adjective suffix for “pertaining to”
- Acr/o/cyan/osis: Blueness of the extremities
- Cyan/o/derma: Bluish discoloration of the skin
The Layman’s Medical Terms…

Enema
Not a friend

Artery
Study of painting

G.I. Series
Army baseball

Impotent
Distinguished, well known

Terminal Illness
Airport sickness

Varicose
Nearby

Seizure
Roman Emperor

Outpatient
Person who has fainted