

Word Elements

A medical word consists of some or all of the following elements:

- Word root
- Combining form
- Suffix
- Prefix.

How you combine these elements and whether all or some of them are present in a medical word determine the meaning of a word.

Medical terminology is not difficult to learn when you understand how the elements are combined to form a word. To develop a medical vocabulary, you must understand the elements or parts that form the medical words.

Word Roots

A word root is the main part of a word; all medical words have at least one word root. In the words teacher, teaches, teaching, the word root is **teach**. In the words speaker, speaks, speaking, the word root is **speak**.

e.g.: Identify the roots in the following words:

Word	Root
reader	read
spending	spend
playful	play

Note: A word root may be used alone or combined with other elements to form another word with a different meaning.

Review the following examples to see how roots are used alone or with other elements to form words. The meaning of each term in the right hand column is also provided.

Root as a Complete Word	Root as a Part of a Word
Alcohol	Alcoholism (condition marked by impaired control over alcohol use)
Sperm	Spermicide (agent that kills sperm)
Thyroid	Thyroidectomy (excision of the thyroid gland)

In medical words, the root usually indicates a body part (anatomical structure). For example, the root in cardi/al, cardi/ac, and cardi/o/gram is cardi and it means heart.

COMMON ROOTS OF MEDICAL TERMS	
ROOT	REFERS TO
card/i/o	Heart
derm/o, dermat /o	Skin
ger /o, geront /o	Aged
hem /o, hemat /o	Blood
neur /o	A nerve cell, the nervous system
oste /o	Bone
path /o	Disease
psych /o	Mind

You will find that the roots in medical words are usually derived from Greek or Latin words. Some examples include **dent** in the word **dent/ist**, **pancreat** in the word **pancreat/itis**, and **dermat** in the word **dermat/o/logist**. *Dent* means *tooth*, *pancreat* means *pancreas*, and *dermat* means *skin*.

Combining Forms

A combining form (CF) is created when a word root is combined with a vowel. This vowel is usually an **o**. The vowel has no meaning of its own, but enables two word elements to be linked.

Like the word root, the CF is the basic part on which other elements are added to build a complete word. In this text, a combining form will be listed as word root/vowel, such as **dent/o** and **gastr/o**.

A word root + a vowel (usually an **o**) forms a new element known as a combining form (CF). A combining vowel is attached to the word root in order to make a word easier to pronounce.

Suffixes

A suffix is a word element located at the end of a word. Substituting one suffix for another suffix changes the meaning of the word. In medical terminology, a suffix usually indicates a procedure, condition, disease, or part of speech.

Although the suffix is last in a medical term, it most often comes first in its definition. e.g: *Appendicitis means "inflammation (-itis) of the appendix."* Therefore, the suffix, in this case **-itis**, provides us with the first word of the defining phrase. A suffix that stands alone will be preceded by a hyphen (-).

COMMON SUFFIXES OF MEDICAL TERMS	
SUFFIX	MEANING
-algia	pain
-derm	Skin
-dynia	pain
-itis	inflammation
-logy	Study of, specialty of
-path/y	Disease

Three Rules of Word Building

There are three important rules of word building:

Rule 1: A word root links a suffix that begins with a vowel.

Rule 2: A combining form (root + o) links a suffix that begins with a consonant.

Rule 3: A combining form (root + o) links a root to another root to form a compound word. (This rule holds true even if the next root begins with a vowel.)

Rule 1: A word root links a suffix that begins with a vowel.

e.g: Link the following roots with suffixes, each of which begins with a vowel.

Word Root	Suffix	Medical Term
tonsill	-itis	tonsill/itis
gastr	-ectomy	gastr/ectomy
arthr	-itis	arthr/itis

Rule 2: A combining form (root + o) links a suffix that begins with a consonant.

e.g: Change the following roots to combining forms and link them with suffixes that begin with a consonant.

Word Root	Suffix	Medical Term
scler	-derma	scler/o/derma
mast	-dynia	mast/o/dynia
arthr	-plasty	arthr/o/plasty

Rule 3: A combining form (root + o) links a root to another root to form a compound word. (This rule holds true even if the next root begins with a vowel.)

oste + chondr + -itis becomes **oste/o/chondr/itis**

oste + chondr + -oma becomes **oste/o/chondr/oma**

gastr + enter + -itis becomes **gastr/o/enter/itis**

e.g.:

1- Form a word with **carcin** and **-oma**. Answer: **carcin/oma**

2- Summarize the rule that applies in this frame.

Answer: rule 1: A word root links a suffix that begins with a vowel.

e.g: from the previous word elements, define:

1. **Psychology: the study of mental processes and behavior.**
2. **Pathology: the study of disease processes.**
3. **Hematology: the study of blood and blood disorders.**

Suggested questions:

- 1- Define the following medical terms:
(Alcoholism, Appendicitis, Pathology).
- 2- Give the meaning of the following roots and suffixes:
(-algia, hemo, -pathy).
- 3- What are the rules of word building?
- 4- Form a medical term out of the following roots and suffixes:
(chondr , -itis), (mast, -dynia), (gastr, -ectomy).
- 5- Match each of the following roots and suffixes in the first column with the appropriate meaning in the second column:

Column 1	Column 2
neuro	pain
-derm	Specialty of
-dynia	Nerve cell
gero	Skin
-logy	age