



**Medical terminology** is a special vocabulary used by health care professionals for effective and accurate communication. Because it is based mainly on Greek and Latin words, medical terminology is consistent and uniform throughout the world.

### Word Parts

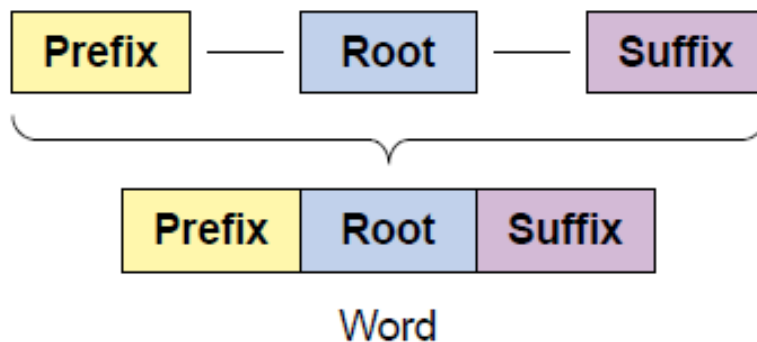
The fundamental unit of each medical word is the **root**. This establishes the basic meaning of the word and is the part to which modifying prefixes and suffixes are added.

A **suffix** is a short word part or series of parts added at the end of a root to modify its meaning. In this lecture suffixes are indicated by a dash before the suffix, such as *-itis*.

A **prefix** is a short word part added before a root to modify its meaning. In this lecture prefixes are indicated by a dash after the prefix, such as *pre-*.

Shown diagrammatically:

Words are formed from roots, prefixes, and suffixes.



The simple word **learn** can be used as a root to illustrate. If we add the suffix **-er** to form **learner**, we have “one who learns.” If we add the prefix **re-** to form **relearn**, we have “to learn again” .

**Not all roots** are complete words. In fact, most medical roots are derived from other languages and are meant to be used in combinations. The **Greek** word *cardia*, for example, meaning “**heart**,” gives us the root *cardi*. The **Latin** word *pulmo*, meaning “**lung**,” gives us the root *pulm*. In a few instances, both the **Greek and Latin** roots are used.

We find both the Greek root *nephr* and the Latin root *ren* used in words pertaining to the kidney.

**Note** that the same root may have different meanings in different fields of study. The root *myel* means “**marrow**” and may apply to either the bone marrow or the spinal cord. The root *scler* means “**hard**” but may also apply to the white of the eye. *Cyst* means “a filled **sac**” but also refers specifically to the **urinary bladder**.

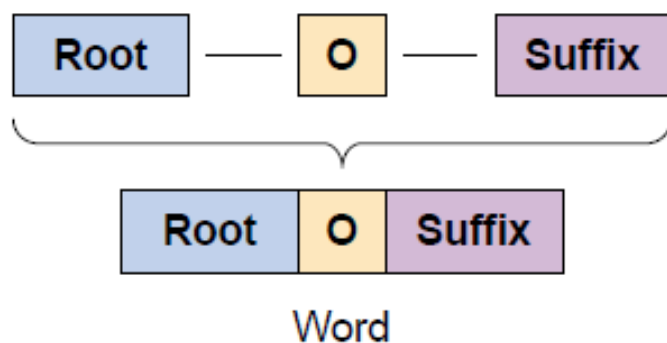
**Compound words** contain more than one root. The words *eyeball*, and *wheelchair* are examples. Some compound medical words are *cardiovascular* (pertaining to the heart and blood vessels), *urogenital* (pertaining to the urinary and reproductive systems), and *lymphocyte* (a white blood cell found in the lymphatic system).

### Combining Forms

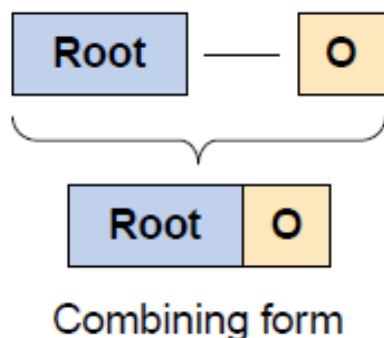
When a suffix beginning with a consonant is added to a root, a vowel (usually an o) is inserted between the root and the suffix to aid in pronunciation.

Thus, when the suffix *-logy*, meaning “study of,” is added to the root *neur*, meaning “nerve or nervous system,” a combining vowel is added:

**neur + o + logy = neurology (study of the nervous system)**



Roots shown with a combining vowel are called **combining forms**.



**A root with a combining vowel is often called a combining form.**

In this text, roots are given with their most common combining vowels added after a slash and are referred to simply as roots, as in *neur/o*. A combining vowel usually is not used if the ending begins with a vowel. The root *neur* is combined with the suffix *-itis*, meaning “inflammation of,” in this way:

**neur + itis = neuritis (inflammation of a nerve)**

There are some exceptions to this rule, particularly when pronunciation or meaning is affected, but you will observe these as you work.

## **Pronunciation**

Phonetic pronunciations are provided in the text at every opportunity, even in the answer keys. Take advantage of these aids. Repeat the word aloud as you learn to recognize it in print. Be aware that word parts may change in pronunciation when they are combined in different ways. The following pronunciation guidelines apply throughout the text.

A vowel (a, e, i, o, u) gets a short pronunciation if it has no pronunciation mark over it, such as:

**i as in bin**

A short line over the vowel gives it a long pronunciation:

**i as in lie**

The accented syllable in each word is shown with capital letters.

Note that pronunciations may vary from place to place. Only one pronunciation for each word is given here, but be prepared for differences.

### Soft and Hard *c* and *g*

A soft *c*, as in *racer*, will be written as *s* (*RA-ser*). A hard *c*, as in *candy*, will be written as (*KAN-d e*). A soft *g*, as in *page*, will be written as *j* (*paj*). A hard *g*, as in *grow*, will be written as *g* (*gro*).

### Silent Letters and Unusual Pronunciations

A silent letter or unusual pronunciation can be a problem, especially if it appears at the start of a word that you are trying to look up in the dictionary. See Table 1-1 for some examples.

#### Symbols

Symbols are commonly used in case histories as a form of shorthand. Some examples are L and R for left and right; ↑ and ↓ for increase and decrease.

**TABLE 1-1 Silent Letters and Unusual Pronunciations**

LETTER(S)	PRONUNCIATION	EXAMPLE	DEFINITION OF EXAMPLE
ch	k	chemical <i>KEM-i-kl</i>	pertaining to chemistry
dys	dis	dystrophy <i>DIS-trō-fē</i>	poor nourishment of tissue
eu	u	euphoria <i>ū-FOR-ē-a</i>	exaggerated feeling of well-being
gn	n	gnathic <i>NATH-ik</i>	pertaining to the jaw
ph	f	pharmacy <i>FAR-ma-sē</i>	a drug dispensary
pn	n	pneumonia <i>nū-MŌ-nē-a</i>	inflammation of the lungs
ps	s	pseudo- <i>SŪ-dō</i>	false
pt	t	ptosis <i>TŌ-sis</i>	dropping
rh	r	rheumatic <i>rū-MAT-ik</i>	pertaining to rheumatism, a disorder of muscles and joints
x	z	xiphoid <i>ZIF-oyd</i>	pertaining to cartilage attached to the sternum

### Words Ending In *x*

When a word ending in *x* has a suffix added, the *x* is changed to a *g* or a *c*. For example, *pharynx* (throat) becomes *pharyngeal* (*fa-RIN-je-al*), to

mean “pertaining to the throat”; *coccyx* (terminal portion of the vertebral column) becomes *coccygeal* (*kok-SIJ-e-al*), to mean “pertaining to the coccyx”; *thorax* (chest) becomes *thoracotomy* (*thor-a-KOT-o-me*) to mean “an incision into the chest.”

### Suffixes Beginning With *rh*

When a suffix beginning with *rh* is added to a root, the *r* is doubled:

hem/o (blood) + -rhage (bursting forth) = hemorrhage (a bursting forth of blood)