Throughout its history, the English language has become enriched by borrowings from other languages, particularly Latin, Greek, and French. As the French language itself is a modified form of Latin, many of these borrowed words ultimately come from Greek, since many words from this language had passed into Latin. One such French word is **migraine**. The word is derived from Latin *hemicrania*, which borrowed from the Greek *he mikrania*, pain on one side of the head, from the prefix *hemi-*, half, and *kranion*, skull.

The ancient Greeks used to smear poison on their arrowheads for use in hunting, and this poison was called *toxicon pharmakon* (*toxon*, bow, archery; *pharmakon*, drug); thus, the meaning of the modern word toxic. A **toxicologist** is one skilled in the study of poisons, while a **toxophilite** is a lover (*philos*) of archery.

The suffix –*osis* indicates an abnormal condition: **neurosis, psychosis** (*psych*, mind). When affixed to a combining form indicating an organ or part of the body, it usually indicates a non-inflammatory diseased condition: **nephrosis, gastrosis** (*gaster*, stomach). Following the combining form CYT-, cell, it means an abnormal increase in number of the type of cell indicated: **leukocytosis, erythrocytosis**. Following the combining form for an adjective, it indicates the abnormality characterized by the meaning of the adjective: **stenosis**: narrowing of a passage; **sclerosis**: hardening of tissues; **cyanosis**: bluish discoloration of a part.

There are a few words ending in –*osis* that have specialized meanings: **anastomosis**: a surgical or pathological connection between two passages; **exostosis**: a bony growth arising from the surface of a bone; **aponeurosis**: a sheet of tissue connecting muscles to bones; **symbiosis**: the living together in close association of two organisms of different species; **antibiosis**: the association between two organisms when one is harmful to the other. The adjectival form for words in –*osis* is –*otic*: **neurosis, neurotic; psychosis, psychotic**.

The word **etiology** is from the Greek noun *aitia*, cause, origin, with the suffix form –*logy*. The etiology of a disease or abnormal condition is its cause or origin. In medical dictionaries it is abbreviated ETIOL.

Learning the language of medical terminology is like learning any other language: the vocabulary must be systematically memorized. This will help you go build a vocabulary which will enable you to recognize at a glance the meaning of most of the words in common use in today’s medical terminology.

Have fun☺
LESSON 1: Greek Nouns and Adjectives

Directions:
A. Analyze and define each of the following words. In this, and in succeeding exercises, analysis should consist of separating the words into prefixes (if any), combining forms, and suffixes (if any), giving the meaning of each. Define the word. Note the difference between nouns and adjectives. Consult the handouts or the medical dictionary for the current meaning of these words.

1. a/bio/sis ______________________________________ __________________________
   abiosis ________________________________________________________________

2. an/alg/ia ______________________________________ __________________________
   analgia ________________________________________________________________

3. an/alges/ia ____________________________________ __________________________
   analgesia ______________________________________________________________

4. an/alges/ic 1 __________________________________________________________
   analgesic 1 ____________________________________________________________

5. angi/osten/osis __________________________________________ ______________
   angiostenosis ______________________________ _____________________________

6. angi/oste/osis _________________________________ ___________________________
   angiosteosis ______________________________ _____________________________

7. anti/tox/in ____________________________________ ___________________________
   antitoxin ______________________________________________________________

8. arteri/oimalac/ia ____________________________________________ ____________
   arteriomalacia __________________________________________________________

9. arthr/o scler/osis ____________________________________________ ____________
   arthrosclerosis ______________________________ _____________________________

10. bio/tox/in _____________________________________________________________
    biotoxin ________________________________________________________________

11. cephal/alg/ia __________________________________________________________
    cephalalgia ____________________________________________________________

12. dys/arthr/osis __________________________________________________________
    dysarthrosis __________________________________________________________

13. encephal/alg/ia _________________________________________________________
    encephalalgia __________________________________________________________

14. encephal/osis ___________________________________________________________
    encephalosis ___________________________________________________________
15. end/oste/um ____________________________
   endosteum ____________________________
16. epi/crani/um __________________________
   epicranium __________________________
17. erythr/ooyt/osis ______________________
   erythrocytosis ________________________
18. exo/card/i/a __________________________
   exocardia ____________________________
19. hemi/alg/ia __________________________
   hemialgia ____________________________
20. hyper/alg/esi/a ______________________
    hyperalgiesia _______________________  
21. hyp/alg/esi/a _________________________
    hypalgesia __________________________
22. leuk/ocyte __________________________
    leukocyte __________________________
23. lith/iasis ____________________________
    lithiasis ____________________________
24. nephr/olith/iasis _____________________
    nephrolithiasis ______________________
25. neur/itis ____________________________
    neuritis ____________________________
26. oste/oar-thritic ______________________
    osteoarthritis ______________________
27. perineuritis __________________________
    peri/neur/itis _______________________
28. peri/oste/um _________________________
    periosteum __________________________
29. toxicosis ______________________________
    toxi/cosis __________________________

1 Adjectives ending in –ic or –tic often are used as nouns with the meaning of an agent or drug used for some purpose. Sometimes such words are used to refer to a person suffering from a certain disability: neurotic, paraplegic.
B. Give the word derived from Greek elements meaning each of the following.

1. Inflammation around a blood vessel ____________________________
2. (Abnormal) softening (of the tissues) of the kidney ______________________________
3. Hardening of the arteries ______________________ ____________________________
4. Pertaining to the heart ________________________ _____________________________
5. The state of living together ___________________ ______________________________
6. The membrane around the heart __________________ ___________________________
7. Poisonous ______________________________________ _______________________
8. (Abnormal) narrowing (of a passage) ______________ ___________________________
9. (Abnormal) rapidity of heart (action) _____________________________
10. Pain of a nerve _______________________________ _________________________

C. Give a clear, concise definition of each of the following italicized words.

1. Bradycardia may be an innocuous constitutional trait running in the family.

2. The clinical picture presented by encephalitis depends upon the area of the central nervous system involved, rather than the type or kind of virus which causes the damage.

3. Malignant nephrosclerosis is differentiated from glomerulonephritis by the rapidity of onset of severe hypertension, quickly followed by renal involvement.

4. The disturbance of calcium and phosphorus metabolism caused by vitamin D deficiency causes beriberi in infants and children and osteomalacia in adults.

5. In such varied and unique situations as a quarter-mile run, parturition, an epileptic seizure, an episode of pain, or an emotional disturbance, a transient leukocytosis of 20,000 to 30,000 cells per cubic millimeter may be found. (normal is 5,000 – 10,000)

6. The earliest known diseases to which prehistoric man was exposed were necrosis, exostoses, and other bony lesions, the arthritides (-ides is plural for –itis), including rheumatoid arthritis and spondylitis deformans, and diseases of the teeth.
D. Answer each of the following questions.

1. What is the meaning of *antibiosis*? What is an *antibiotic*?

2. What is *endocardium*? The *epicardium*?

3. What is the *endoneurium*? The *epineurium*?

4. What is meant by an *endotoxin*? An *exotoxin*?

5. What is *epinephrine*? Why was it so named? What is another name for it?

6. What is meant by the *etiology* of a disease?

7. What is the name given to a person who is an expert in each of the following fields?
   - The heart ______________________________
   - The nervous system _______________________
   - Poisons ________________________________