Medical Terminology made easy...

...well, sort of...

What is medical terminology?
- describes
  - parts of the body
  - locations in the body
  - bodily functions (physiology)
  - diseases
  - procedures
  - instruments

Why so complicated?
- Sheer numbers
- Number of fields
- Latin, Greek et al
  - Meaning in the word
- Acronyms
- Eponyms
Medical terminology sources
- Dictionaries
  - Specialized
    - medical syndromes
    - dermatology
  - Acronyms
  - MeSH
- Print
- Online

Key terms
- **Acute**
  - Having a sudden onset, sharp rise, and short course
- **Chronic**
  - Marked by long duration (3 months or more,) by frequent recurrence over a long time, and often by slowly progressing seriousness

Disease
- An impairment of the normal state of the living animal or plant body or one of its parts that interrupts or modifies the performance of the vital functions and is a response
  - to environmental factors (as malnutrition, industrial hazards, or climate),
  - to specific infective agents (as worms, bacteria, or viruses),
  - to inherent defects of the organism (as genetic anomalies),
  - or to combinations of these factors
**Syndrome, Disorder & Condition**

- **Syndrome**
  - A group of symptoms that collectively indicate or characterize a disease, a psychological disorder, or another abnormal condition.

- **Disorder**
  - An abnormal physical or mental condition
  - ailment <an intestinal ~> <a nervous ~> 

- **Condition**
  - A usually defective state of health
  - <a serious heart ~> 

**What is medical terminology?**

- uses a single word to express several concepts
- based on Ancient Greek and Latin

**Medical terms contain**

- prefix
- root
  - contains main meaning of word
- suffix
- combining vowel
User Information Seeking Behavior and Health on the Net Evaluation Schemas

Medical term analysis
- begin with suffix
- then look at prefix or root

Examples:
- gastr - itis = inflammation of the stomach
- hepat - itis = inflammation of the liver
- cardio - logy = study of the heart
- gastro - logy = study of the stomach

Examples with 2 roots
- osteo - arthr - itis
  - inflammation of the bones and joints
- gastro - enter - itis
  - inflammation of the stomach and intestines
Common suffixes

- *itis* disease characterized by inflammation
- *ation* action or process
- *osis* disease or abnormal condition
- *algia* pain
- *oma* tumour
- *yte* cell
- *logy* study of
- *plasia* formation
- *trophy* growth

Ie. Pathological conditions

- *algia* cephalgia - headache
- *stenosis* arteriostenosis - narrowing of an artery
- *rrhexis* splenorrhexis - ruptured spleen
- *oma* osteoma - bone tumour
- *megaly* cardiomegaly - enlarged heart

Diagnostic or surgical procedures suffixes

- *ectomy* tonsillectomy - surgical removal of tonsils
- *graphy* mammography - producing images of the breast
Prefixes
- Where? When? How much?
  - hypo- hypodermic = under the skin
  - ante- antenatal = before birth
  - hyper- hyperglycemia = too much sugar in the blood
  - many others

Measurement prefixes
- Micro
  - Small
- Mega(o) or macro
  - Large
- Aniso
  - Unequal
- Iso
  - equal
- Poly or hyper or multi
  - Many or excess
- Oligo or Hypo
  - Few or under
- Pan
  - All
- A(o) or In
  - none

Description prefixes
- Anky or kyph
  - Bent or crooked
- Sten(o)
  - Narrow
- Short
  - Brachy (o)
- Brady
  - Slow
- Tachy
  - fast
Colour prefixes
- Glauc(o)
- Grey
- Leuc(o) or leuk(o)
- White
- Erythr(o)
- Red
- Cyan(o)
- Blue
- Melan(o)
- Black
- Cirrh(o)
- Yellow
- Chlor(o)
- Green

Roots
- most numerous group
- based on body systems
- 5 levels of organization:
  - cells
  - tissue
  - organ
  - organ system
  - organism

Levels of organization

[Diagram showing levels of organization]
Combining vowel

- easier to pronounce
- mostly 'o'
- lip - o - suction = withdrawal of fat
- can be 'e' or 'i'
- chol - e - lith = gallstone
- dent - i - form = shaped like a tooth

Plurals

- **-is** > **-es**
  - diagnosis > diagnoses
  - neurosis > neuroses

- **-us** > **-i**
  - bronchus > bronchi
  - calculus > calculi
  - but: virus > viruses

More plurals...

- **-ix** > **-ices** (varix, varices)
- **-oma** > **-omata; omas** (adenomata)
- **-nx** > **-nges** (larynx, larynges)
- **-ax** > **aces** (thorax, thoraces)
Even more plurals...

- **-a** > **-ae**
  - scapula > scapulae

- **-um, -on** > **-a**
  - diverticulum > diverticula
  - ganglion > ganglia

Body Systems & Associated Areas of Study or Practice

- musculoskeletal - orthopedics/rheumatology
- integumentary - dermatology
- respiratory - otolaryngology
- digestive - gastroenterology
- cardiovascular - cardiology
- hemic and immune - hematology/immunology
- urogenital - urology/obstetrics & gynecology
- endocrine - endocrinology
- nervous - neurology
- sense organs - ophthalmology/otology

Controlled Vocabularies..

- **UMLS** Unified Medical Language System
- **MeSH** Medical Subject Headings
- **ICD** International Classification of Diseases
- **DRG** Diagnosis-Related Group
- **SNOMED** Systematized Nomenclature of Human Medicine (medical records indexing)