

Nur-MT-Lec1-

Introduction to Medical Terminology

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- **Medical terms** are specialized vocabulary used by health care providers
- Medical words composed of word parts, and consisting of some or all the following elements:
 - Word root (WR) or Stem
 - Combining form (CF)
 - Suffix
 - Prefix
- Discuss the four parts of medical terms
- Recognize word roots and combining forms
- Identify medical prefixes and suffixes

- Define common medical prefixes
- Define common medical suffixes
- Identify common medical root forms and combining words.
- Identify some of the most common medical terms

Medical Terminology

- Medical terminology is key to the clinical process and clinical documentation.
- Becoming familiar with medical terminology is like learning a new language.
- Basic rules for building terms will help you both build and translate many different words.
- You must be able to put words together or build words from their parts.

Understanding Medical Terms

- Medical terms are made of **Latin and Greek word bases**, and are similar in many languages;
- we will cover the English equivalent in this curricula.
- It is impossible to memorize all the thousands of medical terms.
- However, you can figure out the meaning of many different words simply by analyzing the word parts.

Basic Word Parts

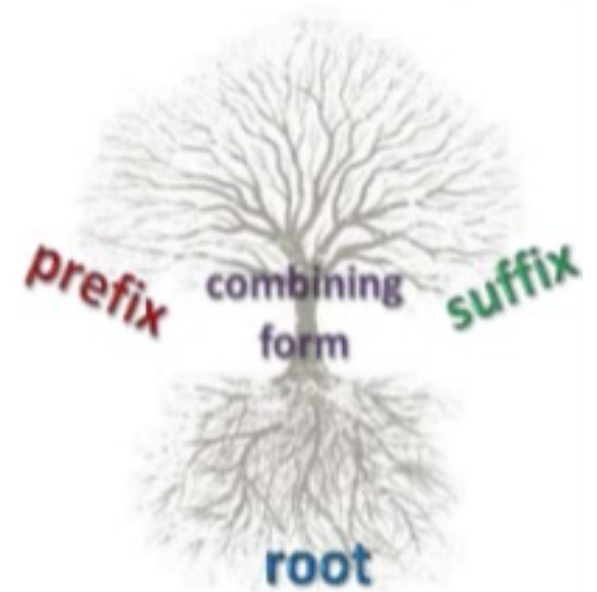
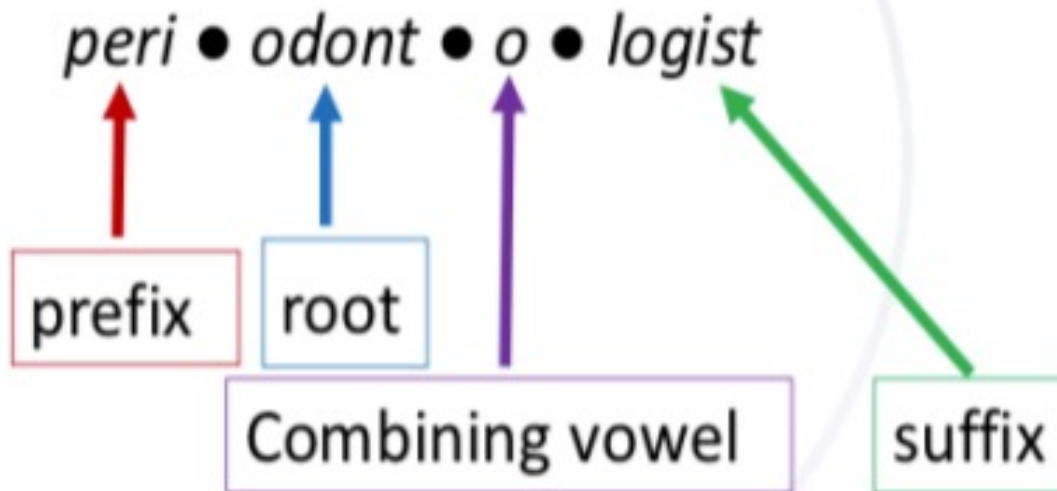
- Many common medical terms can be broken down into the following components:
- **Root:** A root is the base of the word, on which everything else is built.
- To the root word, we can add an **affix**, or a component that modifies its meaning or creates a new word.
- The common medical terminology affixes include **prefixes, suffixes and combining forms.**
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Basic Word Parts

- **Prefix:** A prefix is an element placed at the beginning of a word to adjust or qualify its meaning
- **Suffix:** A suffix is an element placed at the end of a word to adjust or qualify its meaning.
- **Combining form:** A combining form is a form of a word that occurs only in combination with other forms.
- It is usually formed from one or more root words, or with a suffix. Combining forms contain **combining vowels**, such as “o” or “i”

Basic Word Parts

In the word periodontologist



and there are three combining forms:
“peri-”, “odonto-” and “-logist”

Word Part

Example (Meaning)

Word Root

•**cardia** (the heart)

Prefix

•**tachy**cardia (condition of a fast heart rate)

Suffix

•**carditis** (inflammation of the heart)

Combining Forms

•**cardio-myo-pathy** = heart + muscle +
disease =
•**cardiomyopathy** (disease of the heart
muscle)

Roots

Word Roots

- **Core or base** part of the term/
- Provides general meaning of the word
- Will frequently name a body part

oste = bone

cardi = heart

rhino = nose

odonto = teeth

- Examples of words with roots(stem)
 - **hepat** in hepat/itis
 - **tonsill** in tonsill/ectomy
 - **gastr** in gastr/oma
 - **laryng** in laryng/itis

Prefix

- Prefix is word element at the beginning of a word many the same as those used in the English language
- Changes the meaning of a medical word
- Not contained in all medical words
- Usually an indication of ***a number, time, position, measurement, direction, or negation***

- **Examples of words with prefixes**

- **hyper-** in hyper/tension

- **hemi-** in hemi/plegia

- **epi-** in epi/derm/al

- **post-** in post/nat/al

- **inter-** in inter/cost/al

Suffix

- Word element at the end of a word
- Changes the meaning of a medical word Contained in most medical words
- Usually an indication of a *pathology, condition, symptom, therapeutic or diagnostic procedure, or part of speech*
 - **Examples of words with suffixes**
 - **-ectomy** in append/ectomy
 - **-itis** in appendic/itis
 - **-oma** in neur/oma
 - **-tomy** in crani/o/tomy
 - **-scope** in gastr/o/scope
 - **-oma** in gastr/oma

Combining Words

- Combining roots and terms together in the form of combining words makes it possible to pronounce long terms.
- Combining terms use a vowel, usually an “o” (but can also use other letters, such as an “i”).
- Combining vowels combine two word parts:
 - Between two word roots
 - Between word root and suffix

Combining Form (CF)

- Created when a word root is combined with a vowel, known as a *combining vowel*
- Combining vowel usually an *o*, but sometimes an *i* or an *e*
- Difficulty pronouncing certain combinations of word roots requires insertion of a vowel
- No meaning of its own, but a combining vowel enables two or more-word elements to be connected

Combining Vowel Rules

- Just like in any language, there are rules regarding the use of vowels. The rule here pertains to the use of the

combining vowel between a word root and a suffix.

- If the suffix begins with a vowel, do not add a combining vowel. For example, in the word arthritis, “arthr” means joint and “-itis” means inflammation.

Typically, to combine the two we would use the combining vowel “o”, but because the suffix “itis” begins with a vowel, we would not use the “o”. We would just connect the two words together to form the word “arthritis”

- If the suffix begins with a consonant, we *will* use the combining vowel and we would typically use the combining vowel “o”.
- **For example**, in the word arthroscope, “arthr” means joint, and “scope” means examine. Since the suffix begins with a consonant, we would add the combining vowel “o” to connect the two parts together to come up with “arthroscope”.
- Use combining vowels between the word root and suffix, unless the suffix begins with a vowel
 - If the suffix begins with a vowel
- **Do not use a combining vowel**
 - arthritis(not arthroitis)
 - gastrectomy (not gastroectomy)

- **If the suffix begins with a consonant**
- **Use** a combining vowel
- Arthroscope (not arthroscope)
- We typically will use the combining vowel between two root words, even if the second word root begins with a vowel.
- The combining vowel is typically kept between two-word roots.
- This is the case even if the second word root begins with a vowel
 - For example, “gastroenteritis”(not gastrenteritis)

Examples of Combining Forms

- arthr/o – joint
- cardi/o – heart
- dermat/o – skin
- enter/o – small intestine
- gastr/o – stomach
- hemat/o – blood
- nephr/o – kidney
- neur/o- nerve
- ot/o- ear
- pulmon/o – lung
- rhin/o – nose
- ur/o – urine, urinary system

- Examples of words with CFs
 - **mamm/o** in mamm/o/gram
 - **psych/o** in psych/o/logy
 - **laryng/o** in laryng/o/spasm
 - **hepat/o** in hepat/o/megaly

Defining Medical Words

- **Three steps for defining medical words**

1-Define the suffix first.

2-Define the first part of the word (WR, CF, or prefix).

3-Define the middle part of the word (WR or CF).

Define Medical Words Exercise

1.gastr/itis

2.oste/o/arthr/itis:

3.poly/neur/itis:

1. Gastr/itis: **inflammation of the stomach**

2. Oste/o/arthr/itis: **inflammation of the bone and joint**

3. Poly/neur/itis: **inflammation of many nerves**

Building Medical Words

- **Three rules for building medical words**
 - Rule 1: A WR links a suffix that begins with a vowel.
 - Rule 2: A CF links a suffix that begins with a consonant.
 - Rule 3: A CF links a root to another root to form a compound word.
 - Rule 3 holds true even if the next root begins with a vowel, as in *gastr/o/intestin/al*.

Build Medical Words Exercise

Determine which of the three rules for building medical words applies to the following terms.

1.Arthr/itis

2.Gastr/o/intestin/al

3.Hepat/o/cyte

1.Arthr/itis — Rule 1: A root links a suffix that begins with a vowel.

2.Gastr/o/intestin/al — Rule 3: A CF links a root to another root to form a compound word; a root links a suffix that begins with a vowel.

3.Hepat/o/cyte — Rule 2: A CF links a suffix that begins with a consonant.

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Lab 1

Guidelines to Unusual Plural Forms

Guideline	Singular	Plural
If the singular term ends in the suffix -a , the plural is usually formed by changing the ending to -ae .	bursa vertebra	bursae vertebrae
If the singular term ends in the suffix -ex or -ix , the plural is usually formed by changing these endings to -ices .	appendix index	appendices indices
If the singular term ends in the suffix -is , the plural is usually formed by changing the ending to -es .	diagnosis metastasis	diagnoses metastases
If the singular term ends in the suffix -itis , the plural is usually formed by changing the -is ending to -ides .	arthritis meningitis	arthritides meningitides
If the singular term ends in the suffix -nx , the plural is usually formed by the -x ending to -ges .	phalanx meninx	phalanges meninges
If the singular term ends in the suffix -on , the plural is usually formed by changing the ending to -a .	criterion ganglion	criteria ganglia
If the singular term ends in the suffix -um , the plural usually is formed by changing the ending to -a .	diverticulum ovum	diverticula ova
If the singular term ends in the suffix -us , the plural is usually formed by changing the ending to -i .	alveolus malleolus	alveoli malleoli

arteri/o, ather/o, and arthr/o

- **arteri/o** means artery. Endarterial (end-ar-TEE-ree-al) means pertaining to the interior or lining of an artery (**end-** means within, **arteri** means artery, and **-al** means pertaining to).
- **ather/o** means plaque or fatty substance. An ather-oma (ath-er-OH-mah) is a fatty deposit within the wall of an artery (**ather** means fatty substance, and **-oma** means tumor).
- **arthr/o** means joint. Arthralgia (ar-THRAL-jee-ah) means pain in a joint or joints (**arthr** means joint, and **-algia** means pain).

ectomy, -ostomy, and -otomy

- **-ectomy** means surgical removal. An appendectomy (ap-en-DECK-toh-mee) is the surgical removal of the appendix (**append** means appendix, and **-ectomy** means surgical removal).
- **-ostomy** means the surgical creation of an artificial opening to the body surface. A colostomy (koh-LAHS-toh-mee) is the surgical creation of an artificial excretory opening between the colon and the body surface (**col** means colon, and **-ostomy** means the surgical creation of an artificial opening).
- **-otomy** means cutting or a surgical incision. A colotomy (koh-LOT-oh-mee) is a surgical incision into the colon (**col** means colon, and **-otomy** means a surgical incision).

Basic Medical Terms to Describe Disease Conditions

A **sign** is objective evidence of disease such as a fever. **Objective** means the sign can be evaluated or measured by the patient or others.

A **diagnosis** (**dye-ag-NOH-sis**) (DX) is the identification of a disease (plural, *diagnoses*). To **diagnose** is the process of reaching a diagnosis.

An **acute** condition has a rapid onset, a severe course, and a relatively short duration.

A **disease** is a condition in which one or more body parts are not functioning normally. Some diseases are named for their signs and symptoms. For example, **chronic fatigue syndrome** (CFS) is a persistent overwhelming fatigue of unknown origin (see Chapter 4).

A **symptom** (**SIMP-tum**) is subjective evidence of a disease, such as pain or a headache. **Subjective** means that it can be evaluated or measured only by the patient.

A **differential diagnosis** (D/DX), also known as a **rule out** (R/O) is an attempt to determine which one of several diseases can be causing the signs and symptoms that are present.

A **chronic** condition is of long duration. Although such diseases can be controlled, they are rarely cured.

An **eponym** (**EP-oh-nim**) is a disease, structure, operation, or procedure named for the person who discovered or described it first. For example, **Alzheimer's disease** is named for German neurologist Alois Alzheimer (see Chapter 10).

A **syndrome** (**SIN-droh-m**) is a set of the signs and symptoms that occur together as part of a specific disease process.

A **prognosis** (prog-**NOH-sis**) is a prediction of the probable course and outcome of a disorder (plural, *prognoses*).

A **remission** is the temporary, partial, or complete disappearance of the symptoms of a disease without having achieved a cure.

An **acronym** (**ACK-roh-nim**) is a word formed from the initial letter of the major parts of a compound term. For example, the acronym **laser** stands for **light amplification by stimulated emission of radiation** (see Chapter 12).

Fissure and Fistula

- A fissure (FISH-ur) is a groove or crack-like sore of the skin. This term also describes normal folds in the contours of the brain.
- A fistula (FIS-tyou-lah) is an abnormal passage, usually between two internal organs or leading from an organ to the surface of the body. A fistula may be due to surgery, injury, or the draining of an abscess.

Ileum and Ilium

- The ileum (ILL-ee-um) is the last and longest portion of the small intestine. Memory aid: ileum is spelled with an e as in intestine.
- The ilium (ILL-ee-um) is part of the hip bone. Memory aid: ilium is spelled with an i as in hip.

Laceration and Lesion

- A laceration (lass-er-AY-shun) is a torn or jagged wound or an accidental cut wound.
- A lesion (LEE-zhun) is a pathologic change of the tissues due to disease or injury.

Mucous and Mucus

- The adjective mucous (MYOU-kus) describes the specialized membranes that line the body cavities.
- The noun mucus (MYOU-kus) is the name of the fluid secreted by these mucous membranes.

Palpation and Palpitation

- Palpation (pal-PAY-shun) is an examination technique in which the examiner's hands are used to feel the texture, size, consistency, and location of certain body parts.
- Palpitation (pal-pih-TAY-shun) is a pounding or racing heart.

pyel/o, py/o, and pyr/o

- **pyel/o** means renal pelvis, which is part of the kidney. Pyelitis is an inflammation of the renal pelvis (**pyel** means renal pelvis, and **-itis** means inflammation).
- **py/o** means pus. Pyoderma is any acute, inflammatory, pus-forming bacterial skin infection such as impetigo (**py/o** means pus, and **-derma** means skin).
- **pyr/o** means fever or fire. Pyrosis, also known as **heartburn**, is discomfort due to the regurgitation of stomach acid upward into the esophagus (**pyr** means fever or fire, and **-osis** means abnormal condition or disease).

Supination and Suppuration

- **Supination** is the act of rotating the arm so that the palm of the hand is forward or upward.
- **Suppuration** is the formation or discharge of pus.

Triage and Trauma

- **Triage** is the medical screening of patients to determine their relative priority of need and the proper place of treatment.
- **Trauma** means wound or injury. These are the types of injuries that might occur in an accident, shooting, natural disaster, or fire.

Viral and Virile

- **Viral** means pertaining to a virus (**vir** means virus or poison, and **-al** means pertaining to).
- **Virile** (VIR-ill) means having the nature, properties, or qualities of an adult male.