Medical Terminology



MAHDI. A. JASSIM



Lecture one

MEDICAL TERMINOLOGY

Introduction

Medical terminology might seem like a new language at first since most medical terms have a foundation in the Latin or Greek languages. However, medical terms are always part of the language that includes them. For example, the word artery is English; in French, it is artère, but it is arteria in Spanish and pulsader in German. The word element, arteri, is Greek and means artery. In medical terminology, we use a word root and combine it with other word elements to form medical terms. Once you understand the rules for putting medical terms together, you will find it easy to understand them. You will discover that in learning medical terminology, you are not studying a foreign language but rather increasing your English vocabulary. Let's look at some examples. The root word mast is derived from the Greek word for breast. We can combine it with the suffix -ectomy, which means "removal of." The new word mastectomy means "removal of the breast." Another example is psychology. Psych (from the Greek word for "mind") coupled with -logy tells us that psychology is the study of mental processes and behavior.

When you look at a medical term, think of it as a whole term that can be broken up into pieces. These pieces help to define the word. As mentioned earlier, the suffix -logy means "the study of." You can add that piece to other word roots and form a number of new words. **Pathology** (study of disease), **dermatology** (study of the skin),



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Word Elements

The four types of word elements that make up medical terms are roots, suffixes, prefixes, and combining forms. Medical terms contain one or more of these elements.

- The word root reveals the central meaning of the word and frequently describes a body part. It is the base element from which other related terms may be formed., periarthritis, arthr (joint) is the root.
- Suffixes always come at the end of the word. They add meaning to the root. A few examples of suffixes are -ectomy (removal of), -logy (study of), -itis (inflammation of), -algia (pain), and -oma (tumor). There are numerous suffixes that can be added to various word roots. You only have to learn the suffixes once because they are used repeatedly in medical terminology. For example, once you know that -itis refers to "inflammation of," then you'll know mastitis (inflammation of the breast), gastritis (inflammation of the stomach), and arthritis (inflammation of a joint
- **Prefixes** always come at the beginning of the word and will frequently suggest information about the number of parts, location of the organ, direction, time, or frequency. Generally, a new medical term is formed when a prefix is added to a term. **Hyper** (over, above, excessive), **peri** (around), **tachy** (rapid, fast), **epi** (upon, over), and **tri** (three) are all examples of prefixes.

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a. Analyzing of medical terms

Now that you've been introduced to three of the four main elements that compose medical terms, you must learn how to divide terms into their word elements—roots, suffixes, and prefixes—in order to understand their meanings. See the examples below.

EXAMPLES:	GASTR / ITIS		HYPER / GASTR / IC		
Word	gastr	-itis	hyper	gastr	-ic
	1	1	1	1	↓
Element	root	suffix	prefix	root	suffix
	1	1	↓	1	↓
Element Meaning	stomach	inflammation of	excessive, above	stomach	pertaining to
Word Meaning	inflammat	ion of the stomach	pertaining	to above the	stomach

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Word elements are generally classified as a root, prefix, or suffix. This is not a hard and fast rule, however. Sometimes, you will see a word root being used as a suffix. In the following example, path/o is used as a word root in pathology (study of disease) and then again as a suffix in psychopath (disease of the mind). Example: "path" _ path / o / logy and psych / o / path The fourth element to consider is the combining form, which consists of the word root plus one or more vowels, often an "o." The vowel is required to facilitate pronunciation. The "o" is called the combining vowel . A combining vowel is used between two word roots. It is also used between a root and a suffix when the suffix begins with a consonant.

EXAMPLE: COMBINING BETWEEN ROOTS	G VOWEL: GASTR / O / ENTER / ITIS		
Word	gastr/o	enter	-itis
	1	1	↓
Element	combining form (root + vowel)	root	suffix
	1	1	↓
Element Meaning	stomach	intestines	inflammation of
Word Meaning	inflammation of the stomach and intestines		

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EXAMPLE: COMBINING V ROOT AND SUFFIX	/OWEL: CARD/I / O / LO	OGY	
Word	card/i/o	-logy	
	↓	↓	
Element	combining form (root + vowels)	suffix	
	↓	↓	
Element Meaning	heart	study of	
Word Meaning	study of the heart		

WORD DIVISION MARKS

Each root introduced hereafter will include its most common accompanying vowels or vowel consonant combinations separated by forward slant bars, as shown below:

- 1. psych/o _ mind
- 2. path/o disease
- 3. arthr/o joint
- 4. derm/o, dermat/o skin.

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Singular and Plural Endings

In English, we usually add an s or es to make a word plural. Since many of the medical terms have Greek and Latin origins, the plural endings sometimes follow the rules of these languages. Where English rules are not preferred, plurals are formed in the following

ways:

ullet If the term ends in a , the plural is formed by adding an e to the word.

Example: singular scapula plural scapulae

• When a term ends in ax, change the ax to aces to form the plural.

Example: singular thorax plural thoraces

• To form the plural of a singular term ending in is, change the i to an e.

Example: singular neurosis plural neuroses

If a term ends in ix or ie, change the ending to ices to form the plural.

Example: singular cervix plural cervices

A term ending in um is made plural by changing the um to an a.

Example: singular septum plural septa

• To form the plural of words ending in us , change the us to an i .

Example: singular calculus plural calculi

• If a term ends in y, make it plural by dropping the y and adding ies.

Example: singular biopsy plural biopsies

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Table 1-1 Singular and Plural Word Endings

Singular Ending	Example	Plural Ending	Example
-a	vertebra	-ae	vertebrae
-ax	thorax	-aces	thoraces
-is	diagnosis	-es	diagnoses
-ix, -ex	appendix	-ices	appendices
-um	diverticulum	-a	diverticula
-US	bronchus	i	bronchi
у	ovary	-ies	ovaries



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Table 1-2 Common Roots in Medical Terms

Root	Refers to
arthr/o	joint
bronch/o	bronchus
cardi/o	heart
derm/o, dermat/o	skin
gastr/o	stomach
ger/o, geront/o	aged
hem/o, hemat/o	blood
hep/o, hepat/o	liver
neur/o	a nerve cell, the nervous system
oste/o	bone
path/o	disease
psych/o	mind

Table 1-3 Common Suffixes in Medical Terms

Suffix	Meaning
-ac, -al, -ar, -ia, -ic, -ory	pertaining to
-algia	pain
-centesis	surgical puncture
-cyte	cell
-ectomy	to surgically excise, remove
-graph	to write, record
-ist	one who specializes, agent
-itis	inflammation
-logy	study of, specialty of
-megaly	enlargement
-oma	tumor
-path/y	disease
-scope	an instrument to view



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Table 1-4 Common Prefixes in Medical Terms

Prefix	Meaning
a-, an-	no, not, without
anti-, contra-	against
brady-	slow
cyan-	bluish
dys-	painful, difficult
en-, endo-, intra-	within, inner
epi-	above, upon
ex-, exo-	out, away from
hyper-, supra-	excessive, above
inter-	between
post-	after
pre-	before, in front of
tachy-	fast, rapid