CHAPTER 1: INTRODUCTION TO MEDICAL TERMS

Building a Medical Terminology Foundation 2e **by Kimberlee Carter; Marie Rutherford; and Connie Stevens**

- 1.1 – Identifying Word Parts in Medical Terms
- 1.2 – Medical Language Rules
- 1.3 – Prefix
- 1.4 – Suffix

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1.1 - Introduction - Word Parts in Medical Terms

Learning Objectives

- Outline the elements used to buildmedical terms
- Analyze, identify, and construct medical words using applicable medical language componentparts
- Explore medical language rules

Word Parts

Medical terms are built from word parts. Those word parts are **prefix**, **word root**, **suffix**, and **combining form vowel**. When a **word root** is combined with a **combining form vowel**, the word part is referred to as a **combining form**.

Word Parts

Word Parts (Text Version)

Make sure you understand key parts of medical terminology. Fill in the blanks using the following words:

- Suffix
- Prefix
- Combining Form
- Word Root

1. _____[Blank 1] word part at the beginning of the term that changes meaning
2. _____[Blank 2] word part at the end of the term that changes meaning
3. _____ [Blank 3] foundational meaning of a word
4. _____ [Blank 4] used to join word parts to ease pronunciation

Check your answers: [1]

Identifying Word Parts in Medical Terms

By the end of this resource, you will have identified hundreds of word parts within medical terms. Let's start with some common medical terms that many non-medically trained people may be familiar with.

Examples

Osteoarthritis
Oste/o/arthr/itis – Inflammation of bone and joint.
Oste/o is a **combining form** that means bone
arthr/o is a **combining form** that means joint
-itis is a **suffix** that means inflammation

Intravenous
Intra/ven/ous – Pertaining to within a vein.
Intra- is a **prefix** that means within
ven/o – is a **combining form** that means vein
-ous is a **suffix** that means pertaining to

Notice, when breaking down words that you place slashes between word parts and a slash on each side of a combining form vowel.

Language Rules

Language rules are a good place to start when building a medical terminology foundation. Many medical terms are built from word parts and can be translated **literally**. At first, literal translations sound awkward. Once you build a medical vocabulary and become proficient at using it, the awkwardness will slip away. For example, suffixes will no longer be stated and will be assumed. The definition of *intravenous* then becomes *within the vein*.

Since you are at the beginning of building your medical terminology foundation, stay literal when applicable. It should be noted that, as with all language rules, there are always exceptions and we refer to those as **rebels**. So, let's begin by analyzing the language rules for medical terminology.

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Notes

1. 1. Prefix, 2. Suffix, 3. Word Root, 4. Combining Form

1.2 - Medical Language Rules

Language Review

Before we begin analyzing the rules, let's complete a short language review that will assist with pronunciation and spelling. In class, you will practice pronunciation with your instructor.

> **Short Vowels**
> a, e, i, o, u, and sometimes y are indicated by lower case.
>
> **Long Vowels**
> A, E, I, O, U are indicated by upper case.
>
> **Consonants**
> Consonants are all of the other letters in the alphabet. b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, and z.

Language Rules for Building Medical Terms

1. When combining two **combining form**s, you *keep* the **combining form vowel**.
2. When combining a **combining form** with a **suffix** that begins with a consonant, you *keep* the **combining form vowel**.

Examples

Gastr/o/enter/o/logy – The study of the stomach and the intestines

- Following **rule 1,** when we join combining form gastr/o (meaning stomach) with the combining form enter/o (meaning intestines), we keep the combining form vowel o.
- Following **rule 2**, when we join the combining form enter/o (meaning intestines) with the suffix -logy (that starts with a suffix and means the study of), we keep the combining form vowel o.

3. When combining a **combining form** with a **suffix** that begins with a vowel, you *drop* the combining form

vowel.

4. A **prefix** goes at the beginning of the word, and ***no combining form vowel*** is used.

Examples

Intra/ven/ous – Pertaining to within the vein

- Following **rule 3**, notice that when combining the combining form ven/o (meaning vein) with the suffix -ous (that starts with a vowel and means pertaining to), we drop the combining form vowel o.
- Following **rule 4**, the prefix intra- (meaning within) is at the beginning of the medical term with no combining form vowel used.

5. When defining a medical word, start with the suffix first and then work left to right stating the word parts. You may need to add **filler** words. As long as the **filler** word does not change the meaning of the word, you may use it for the purpose of building a medical vocabulary. Once you start to apply the word in the context of a sentence, it will be easier to decide which **filler** word(s) to choose.

Examples

Intra/ven/ous – Pertaining to within the vein or Pertaining to within a vein.

- Following **rule 5**, notice that I start with the suffix -ous (that means pertaining to), then we work left to right, starting with the prefix Intra- (meaning within) and the combining form ven/o (meaning vein).
- Notice that we have used two different definitions that mean the same thing.
- In these examples we do not have the context of a full sentence. For the purpose of building a medical terminology foundation, either definition is accepted.

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1.3 - Prefix

Prefixes are located at the beginning of a medical term. The prefix alters the meaning of the medical term. It is important to spell and pronounce prefixes correctly.

Many prefixes that you find in medical terms are common to English language prefixes. A good technique to help with memorization is the following:

- Start by reviewing the most common prefixes.
- Consider common English language words that begin with the same prefixes.
- Compare them to the examples of use in medical terms.

Prefix 'A' Medical Terms

Prefix	Meaning	Example of use in medical terms
a-, an	No, not, without, negates the meaning	**atypical**, **anoxia**
ab-	away from; from	**abduction**
ad-	toward, at, increase, on, toward	**adduction**
ante-	before	**antepartum**
anti-	against, opposing	**antipsychotic**

Prefix 'B' Medical Terms

Prefix	Meaning	Example of use in medical terms
bi-,bin-	two, twice, double	**bilateral**, **binocular**
brady-	slow	**bradycardia**

Prefix 'D' Medical Terms

Prefix	Meaning	Example of use in medical terms
de-	from, down, away from	**dehydrate**
dia-	through, complete	**dialysis**
dys-	painful, abnormal, difficult, laboured	**dysphagia**

Prefix 'E' Medical Terms

Prefix	Meaning	Example of use in medical terms
endo-	within, in	**endotracheal**
epi-	on, upon, over	**epidermis**
eu-	normal, good	**eupnea**

Prefix 'H' Medical Terms

Prefix	Meaning	Example of use in medical terms
hemi-	half	**hemicolectomy**
hyper-	above, excessive	**hyperthyroidism**
hypo-	below, incomplete, deficient, under	**hypoglycemia**

Prefix 'I' Medical Terms

Prefix	Meaning	Example of use in medical terms
inter-	between	**intercostal**
intra-	within, in	**intramuscular**

Prefix 'M' Medical Terms

Prefix	Meaning	Example of use in medical terms
macro-	large, long	**macrocephalus**
meta-	after, beyond, change	**metacarpal bones**
micro-	small	**microscope**
multi-	many	**multipara**

Prefix 'N' Medical Terms

Prefix	Meaning	Example of use in medical terms
neo-	new	**neonate**
nulli-	none	

Prefix 'P' Medical Terms

Prefix	Meaning	Example of use in medical terms
pachy-	thick, thickening, thickened	**pachyderma**
pan-	all, total	**pancytopenia**
para-	beside, beyond, around, abnormal	**parathyroid glands**
per-	through	**percutaneous**
peri-	surrounding (outer)	**peripheral vision**
poly-	many, much	**polymyositis**
post-	after	**postpartum**
pre-	before	**prenatal**
pro-	before	**prognosis**

Prefix 'S' Medical Terms

Prefix	Meaning	Example of use in medical terms
sub-	below, under	**subcutaneous**
supra-	above	**suprascapular**
sym-, syn-	together, joined	**symphysis**

Prefix 'T' Medical Terms

Prefix	Meaning	Example of use in medical terms
tachy-	fast, rapid	**tachycardia**
trans-	through, across, beyond	**transdermal**
tri-	three	**triceps**

Prefix 'U' Medical Terms

Prefix	Meaning	Example of use in medical terms
uni-	one	**unilateral**

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1.4 - Suffix

Suffixes are word parts that are located at the end of words. Suffixes can alter the meaning of medical terms. It is important to spell and pronounce suffixes correctly.

Suffixes in medical terms are common to English language suffixes. Suffixes are not always explicitly stated in the definition of a word. It is common that suffixes will not be explicitly stated when defining a medical term in the workplace. However, when transcribing or reading medical reports, the suffix is always clearly written. In order to properly spell and pronounce medical terms, it is helpful to learn the suffixes.

Suffix 'A' Medical Terms

Suffix	Meaning	Example of use in medical terms
-a	noun ending, no meaning	**leukoderma**
-ac	pertaining to	**cardiac**
-ad	toward	**dorsad**
-al	pertaining to	**lateral**
-algia	condition of pain	**myalgia**
-amnios	amnion, amniotic fluid	**oligohydramnios**
-apheresis	separate	**plasmapheresis**
-ar	pertaining to	**appendicular**
-ary	pertaining to	**coronary**
– asthenia	weakness	**Myasthenia gravis**

Suffix 'C' Medical Terms

Suffix	Meaning	Example of use in medical terms
-carcinoma	cancerous tumour	**adenocarcinoma**
-cele	hernia, protrusion, swelling	**hydrocele**
-centesis	surgical puncture to aspirate fluid	**amniocentesis**
-crine	to secrete	**exocrine**
-cyesis	pregnancy	**pseudocyesis**
-cyte	cell	**leukocyte**

Suffix 'D' Medical Terms

Suffix	Meaning	Example of use in medical terms
-desis	surgical fixation, fusion	**arthrodesis**
-drome	run, running	**syndrome**

Suffix 'E' Medical Terms

Suffix	Meaning	Example of use in medical terms
-e	noun ending, no meaning	**neonate**
-eal	pertaining to	**esophageal**
-ectasis	stretching out, dilation, expansion	**bronchiectasis**
-ectomy	excision, surgical removal, cut out	**gastrectomy**
-emesis	vomiting	**hematemesis**
-emia	in the blood	**anemia**
-sis	condition	**diuresis**

Suffix 'G' Medical Terms

Suffix	Meaning	Example of use in medical terms
-gen	substance or agent that produces or causes	**teratogen**
-genic	producing, originating, causing	**carcinogenic**
-gram	the record, radiographic image	**electrocardiogram**
-graph	instrument used to record; the record	**electrocardiograph**
-graphy	process of recording, radiographic imaging	**electrocardiography**

Suffix 'I' Medical Terms

Suffix	Meaning	Example of use in medical terms
-ia	condition of, diseased state, abnormal state	**tachycardia**
-iasis	condition	**choledocholithiasis**
-iatrist	specialist	**psychiatrist**
-iatry	specialty, treatment	**psychiatry**
-ic	pertaining to	**toxic**
-ictal	seizure, attack	**postictal**
-ior	pertaining to	**anterior**
-ism	state of	**hyperthyroidism**
-itis	inflammation	**colitis**

Suffix 'L' Medical Terms

Suffix	Meaning	Example of use in medical terms
-logist	specialist who studies and treats	**oncologist**
-logy	study of	**cardiology**
-lysis	separating, loosening, dissolution	**thrombolysis**

Suffix 'M' Medical terms

Suffix	Meaning	Example of use in medical terms
-malacia	softening	**chondromalacia**
-megaly	enlarged, enlargement	**gastromegaly**
-meter	instrument used to measure	**thermometer**
-metry	measuring, process of measuring	**spirometry**

Suffix 'O' Medical Terms

Suffix	Meaning	Example of use in medical terms
-oid	resembling	**lipoid**
-oma	tumour, swelling	**melanoma**
-opia	vision	**diplopia**
-opsy	viewing, process of viewing	**biopsy**
-sis	abnormal condition, increased number (blood)	**erythrocytosis**
-ous	pertaining to	**intravenous**

Suffix 'P' Medical Terms

Suffix	Meaning	Example of use in medical terms
-paresis	slight paralysis	**hemiparesis**
-pathy	disease	**polyneuropathy**
-penia	abnormal reduction in number	**erythrocytopenia**
-pepsia	digestion	**dyspepsia**
-pexy	surgical fixation, suspension	**colpopexy**
-phagia	swallowing, eating	**dysphagia**
-phobia	aversion, abnormal fear	**photophobia**
-physis	growth	**symphysis**
-plasia	formation, development, growth	**hyperplasia**
-plasm	growth, substance, formation	**cytoplasm**
-plasty	surgical repair	**rhinoplasty**
-plegia	paralysis	**ophthalmoplegia**
-pnea	breathing	**dyspnea**
-poiesis	formation	**leukopoiesis**
-ptosis	prolapse, drooping	**nephroptosis**

Suffix 'R' Medical Terms

Suffix	Meaning	Example of use in medical terms
-rrhage	excessive bleeding	**hemorrhage**
-rrhagia	excessive bleeding,	**rhinorrhagia**
-rrhaphy	repairing, suturing	**cholecystorrhaphy**
-rrhea	discharge, flow	**rhinorrhea**
-rrhexis	rupture	**amniorrhexis**

Suffix 'S' Medical Terms

Suffix	Meaning	Example of use in medical terms
-salpinx	fallopian tube, uterine tube	**pyosalpinx**
-sarcoma	malignant tumour in connective tissue	**rhabdomyosarcoma**
-schisis	split, fissure	**cranioschisis**
-sclerosis	condition of hardening	**arteriosclerosis**
-scope	instrument used for visual examination	**hysteroscope**
-scopic	pertaining to visual examination	**pelviscopic**
-scopy	process of visually examining	**gastroscopy**
-spasm	sudden, involuntary contraction of muscle	**vasospasm**
-stasis	condition of stop, control, standing	**hemostasis**
-stenosis	constriction, condition of narrowing	**ureterostenosis**
-stomy	creation of artificial opening	**nephrostomy**

Suffix 'T' Medical Terms

Suffix	Meaning	Example of use in medical terms
-thorax	chest cavity, chest	**hemothorax**
-tocia	condition of labour, birth	**dystocia**
-tome	instrument used to cut	**dermatome**
-tomy	incision, cut into	**laparotomy**
-tripsy	surgical crushing	**cholecystolithotripsy**
-trophy	nourishment, development	**hypertrophy**

Suffix 'U' Medical Terms

Suffix	Meaning	Example of use in medical terms
-um	structure	**endocardium**
-uria	urine, urination	**nocturia**
-us	no meaning	**microcephalus**

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