

Medical Terminology

Sectional Anatomy for Sonography

DMS-101

Medical Terminology

- Critical component in any field of medicine
- Intricate descriptors for the human anatomy:
 - Components
 - Processes
 - Conditions affecting it
 - Procedures performed upon it

Your mission is to:

- Read (understand what is written)
- Write (spell correctly)
- Speak (pronounce)
- Hear (understand what is spoken)

Present and Future Conditions

- **Diagnosis**
 - Present Condition

- **Prognosis**
 - Future Condition

Time/Severity of a Disease

- **Acute**
 - Short term and sharp
- **Chronic**
 - Long term and returns

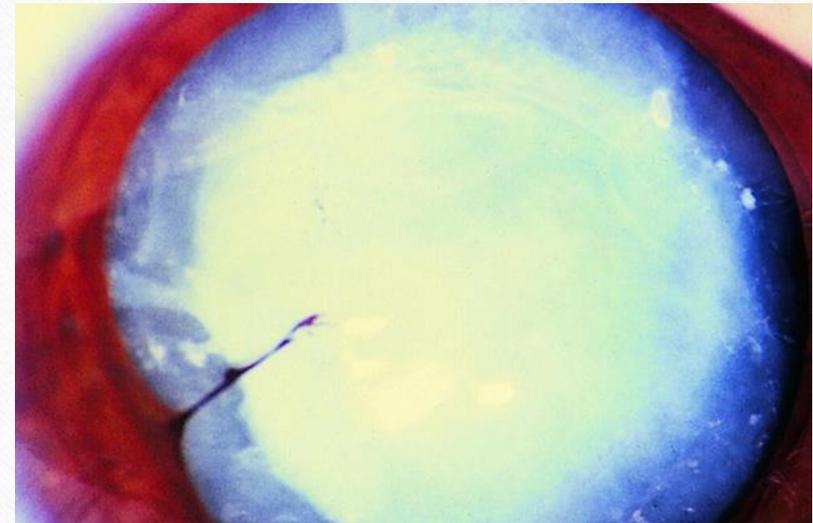
Complaints

- **Sign**
 - Objective
 - Observable signs
- **Symptom**
 - Subjective
 - Patient's explanation

Non-Decodable Terms

Non-decodable Terms

- 90% of healthcare terms can be built from word parts
- 10% are not
 - Cataract
 - Asthma



Cataract

Eponyms

- Alzheimer's Disease
- Achilles tendon



Abbreviations & Symbols

- Abbreviations
 - Simple (ADHD, O₂)
 - Acronyms (AIDS, CABG)
- Symbols (↑, ♀)
- Dangerous abbreviations

Official "Do Not Use" List¹

Do Not Use	Potential Problem	Use Instead
U, u (unit)	Mistaken for "0" (zero), the number "4" (four) or "cc"	Write "unit"
IU (International Unit)	Mistaken for IV (intravenous) or the number 10 (ten)	Write "International Unit"
Q.D., QD, q.d., qd (daily) Q.O.D., QOD, q.o.d, qod (every other day)	Mistaken for each other Period after the Q mistaken for "I" and the "O" mistaken for "I"	Write "daily" Write "every other day"
Trailing zero (X.0 mg)* Lack of leading zero (.X mg)	Decimal point is missed	Write X mg Write 0.X mg
MS	Can mean morphine sulfate or magnesium sulfate	Write "morphine sulfate"
MSO ₄ and MgSO ₄	Confused for one another	Write "magnesium sulfate"

Decodable Terms

Three Components

- **Prefix** – placed at the beginning of a word to modify or change its meaning
- **Root** – central part of a word
- **Suffix** – ending part of a word that modifies the meaning of the word

Combining Form

- Combining form – a combining vowel (most often, “o”) is added to a word root to help with pronunciation
 - Used whenever two consonants from two word parts are joined together
 - Not needed when a vowel is present as part of the next word part
 - Examples: Thermometer, Arthritis, Hypothermia

Decodable Terms

Combining form **(in red)** + suffix **(in blue)** =
decodable term

gloss/o + **-itis** = **glossitis**

Decoding 101

- Identify the word parts in a term
- Assign meanings to the word parts
- Reverse the suffix to the front of the term
- Define the term

Decoding: Glossitis

- Identify the word parts in the term:

Glossitis = glossitis

Decoding: Glossitis

- Assign meanings to the word parts

glossitis

tongue/inflammation of

Decoding: Glossitis

- Reverse the meaning of the suffix to the front of your translation

glossitis

inflammation of/tongue

Decoding: Glossitis

- Define the term
- **Glossitis**: inflammation of the tongue

Decoding

- Gastralgia
- **G**astr**a**lgia
- **The stomach**/**p**ain
- **G**astr**a**lgia = pain (of) the stomach

Decoding

- The patient complained of chronic gastralgia (pain of the stomach).
- Is this complaint a sign or a symptom?

Building Your Word Bank: Noun Suffixes

- Structure, thing
-is (ex: hypodermis)
- Structure, thing, membrane
-um (ex: endocardium)
- Small, tiny
-icle, -ole, -ule (ex: cuticle, arteriole, venule)

Building Your Word Bank:

Adjective Suffixes

- Suffixes that mean **pertaining to**:
 - ac cardiac
 - al cervical
 - ar valvular
 - ary coronary
 - eal esophageal
 - ic hypodermic
 - ous subcutaneous

Building Your Word Bank: Pathology Suffixes

-algia - pain

cephaloalgia

-emia - blood

hyperlipidemia

-ia - condition

agastria

-itis - inflammation

tonsillitis

Building Your Word Bank: Pathology Suffixes

-malacia - softening

-megaly - enlargement

-ptosis - prolapse

-sclerosis - hardening

-stenosis - narrowing

chondromalacia

splenomegaly

hysteroptosis

arteriosclerosis

arteriostenosis

Building Your Word Bank: Diagnostic Suffixes

-graphy -recording

mammography

-metry - measurement

spirometry

-opsy - viewing

biopsy

-scopy - viewing

hysteroscopy

Building Your Word Bank: Therapeutic Suffixes

-ectomy - removal

gastrectomy

-plasty - sug. repair

rhinoplasty

-stomy - new opening

colostomy

-tomy - incision

osteotomy

-tripsy - crushing

lithotripsy

Building Your Word Bank:

Instrument Suffixes

-graph – record

electrocardiograph

-meter – measure

thermometer

-scope – view

ophthalmoscope

-tome – instrument to cut

osteotome

-tripter – machine to crush

lithotripter

-trite - instrument to crush

lithotrite

Specialties / Specialists Suffixes

-iatry - process of treatment

psychiatry

-iatrist - one who specializes
in treatment

psychiatrist

-iatics - treatment

pediatrics

-iatrician - one who specializes
in treatment

pediatrician

Quick Quiz

- One who specializes in the study of bones:
 - A. Osteiatrician
 - B. Osteologist
 - C. Osteology
 - D. Osteer

Prefixes

- Prefixes modify a medical term indicating:
 - Absence
 - Location
 - Number/Quantity
 - State

Prefixes

- Are attached directly to the beginning of the term
- May have more than one meaning

Prefixes

a-	apneic
an-	anophthalmia
ante-	anteversion
anti-	antibacterial

A, An – no, without
Ante – forward
Anti – against

Prefixes

dys-

dystrophy

Dys – abnormal

endo-

endoscopy

Endo – within

epi-

epigastric

Epi – above

Prefixes

hyper - hyperglycemia

hypo - hypoglossal

Hyper – excessive

Hypo – below

Prefixes

inter -intervertebral

intra -intradermal

Inter - between

Intra - within

Prefixes

para-, par-

per-

peri-

pre-

paraphilia

percutaneous

pericardium

prenatal

Para, Par - abnormal

(sometimes near)

Per - through

Peri - surrounding

Pre - before

Prefixes

poly- polyneuritis

post- postictal

sub- subhepatic

Poly – many

Post – after

Sub – under, below

Quick Quiz

If a patient came in for a checkup *before* the birth of her baby, it was a/n _____ visit:

- A. antenatal
- B. antinatal
- C. postnatal
- D. perinatal

Quick Quiz

A patient has a rash around his nose. The physician charts it as a _____ rash:

- A. prerhinal
- B. perirhinal
- C. perrhinal
- D. polyrhinal

Combining Forms

aden/o

gland

arthr/o

joint

bi/o

life

carcin/o

cancerous, cancer

cardi/o

heart

Combining Forms

cephal/o

head

cerebr/o

cerebrum

cis/o

to cut

crin/o

to secrete

cyst/o

urinary bladder

Combining Forms

cyt/o

cell

derm/o or dermat/o

skin

electr/o

electricity

encephal/o

brain

enter/o

intestines

Combining Forms

erythr/o

red

gastr/o

stomach

glyc/o

sugar

gynec/o

woman, female

hemat/o or hem/o

blood

Combining Forms

hepat/o

liver

iatr/o

treatment, physician

leuk/o

white

nephr/o

kidney

neur/o

nerve

Combining Forms

onc/o

tumor

ophthalm/o

eye

oste/o

bone

path/o

disease

ped/o

child

Combining Forms

psych/o

mind

radi/o

x-ray

ren/o

kidney

rhin/o

nose

sarc/o

flesh

Suffixes

-ac

pertaining to

-al

pertaining to

-algia

pain

-cyte

cell

-ectomy

excision, removal

Suffixes

-emia

blood condition

-genic

produced by or in

-globin

protein

-gram

record

-ic, ical

pertaining to

Suffixes

-ion

process

-ist

specialist

-itis

inflammation

-logy

process of study

-oma

tumor, mass

Suffixes

-opsy	process of viewing
-osis	condition, usually abnormal
-pathy	disease condition
-scope	instrument to visually examine
-scopy	process of visually examining

Suffixes

-sis

State of, condition

-tomy

Process of cutting

-y

Process, condition

Prefixes

a-, an-	no, not, or without
aut-, auto	self, own
dia-	through, complete
end-, endo-	within
epi-	above, upon
ex-	out

Prefixes

exo-	outside of
hyper-	excessive, above, more
hypo-	deficient, below, under, less
in-	into, in
peri-	surrounding, around
pro-	before, forward

Prefixes

re-	back, backward, again
retro-	behind
sub-	below, under
trans-	across, through

Quick Quiz:

Which term means inflammation of the gland?

- A. Arthritis
- B. Adenitis
- C. Adenoma
- D. Cephalic

Quick Quiz:

- **Term that means study of cells:**
 - A. Cystoscopy
 - B. Cystitis
 - C. Cytology
 - D. Hematology

Quick Quiz:

- Which suffix means to “cut out” or remove?
 - A. -ectomy
 - B. -scopy
 - C. -itis
 - D. -opsy

Singular/Plural Endings

Singular:

- vertebraa
- arthrosis
- appendix
- arthritis
- phalanx
- endocardium
- digitus
- therapy

Plural:

- vertebraea
- arthroses
- appendices
- arthritides
- phalanges
- endocardia
- digiti
- therapies

Pronunciation of Unusual Letter Combinations

eu	euthyroid	“you”
ph	phalanx	“F”
pn	pneumonitis	“N”
ps	psychology	“S”
pt	ptosis	“T”
rh, rrh	rhinitis	“R”
x	xeroderma	“Z”

Quick Quiz:

The Plural of pharynx (the throat) is:

- A. Pharynxes
- B. Pharyngies
- C. Pharynges
- D. Pharynxa

Pronunciation of Terms

- When $\bar{\text{}}$ is above a vowel, the sound is long
 - ā as in āpe
 - ō as in ōpen
- When $\check{\text{}}$ is above a vowel, the sound is short
 - ă as in ăpple
 - ö as in pöt
- The capitalized syllable is emphasized

Pronunciation of Terms

Examples:

adenitis ăd-ĕ-NĪ-tĭs

biology bĪ-OL-ō-jē

cephalic se-FĂL-ik

resection rĕ-SEK-shŭn