

## Medical Language

### Course

*Principles of Health Science*

### Unit

*Communication*

### Essential Question

*When should students use Medical Terminology?*

### TEKS

*130.202(c)1C, 1F, 2B, 2D*

### Prior Student Learning

*none*

### Estimated time

*3 hours*

### Rationale

Medical language is used by all members of the healthcare team. It is essential for students to develop the knowledge of medical language.

### Objectives

Upon completion of this lesson, the student will be able to

- demonstrate use of precise medical language to clearly communicate ideas;
- accurately interpret, transcribe, and communicate using medical terminology; and
- interpret technical material.

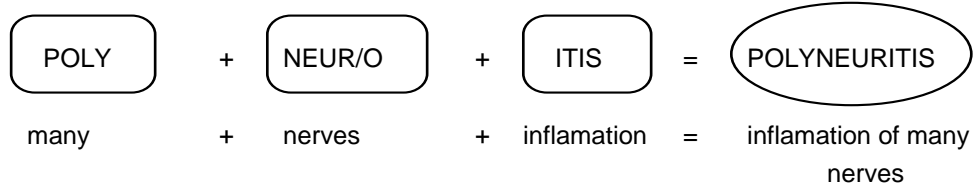
### Engage

Dr. Smith enters the nurse's station and begins to dictate notes that say Mrs. Jones needs to have an exploratory laparotomy, but he suspects he will end up doing a bilateral salpingoophorectomy. Before the surgery he wants a CXR, EKG, CBC and ABG done, stat. You suddenly feel thankful that Mrs. Anderson spent so much time teaching you medical terminology.

### Key Points

- I. It is nearly impossible for even the most experienced healthcare professional to be familiar with every medical term. However, knowledge of prefixes, suffixes, and root words is essential. It is vital that every healthcare professional be familiar with commonly used medical terminology. A medical dictionary is an excellent reference for unfamiliar terms. A *Physician's Desk Reference* (PDR) is a reliable dictionary for medications.
- II. Word Parts/Building Blocks – most medical terms are formed by a combination of basic word parts. An understanding of how these parts work together makes interpreting medical language easier.
  - A. Prefixes – usually indicate location, time, or number and come at the beginning of a word
  - B. Suffixes – usually indicate the procedure, disease, or condition and come after the root word
  - C. Root Words – usually indicate the part of the body involved
  - D. Combining Vowel
    1. usually “o”
    2. attached to the root word
    3. makes medical terms easier to pronounce
    4. is NOT used a when suffix begins with a vowel
    5. IS used when suffix begins with a consonant

Prefix + Root Word + Suffix = Medical Term



### III. Common Medical Prefixes

a-, an-	negative, without
ab-	away from
ad-	towards
anti-	against
ante-	before
bi-	two, both
brachy-	short
brady-	slow
dys-	painful, difficult
dors-	back
endo-	inside
epi-	above, upon
hemi-	half
hyper-	excessive, above, more than
hypo-	decrease, below, less
inter-	between, among
intra-	within, inside
macro-	large, big
mal-	bad
micro-	small
neo-	new
para-	beside or below
peri-	around
poly-	many
post-	after
sub-	below
super-	above
tachy-	fast

#### IV. Common Medical Suffixes

-algia	painful
-asthenia	weakness
-cele	hernia
-centesis	surgical puncture
-ectomy	removal
-itis	inflammation/infection
-gram	picture
-malacia	abnormal softening
-megaly	enlargement
-necrosis	death of tissue
-ology	study of
-osis	abnormal condition
-ostomy	surgical opening
-otomy	surgical incision
-orrhea	flow
-pathy	disease
-plasty	surgical repair
-rrhaphy	suture
-sclerosis	abnormal hardening
-scope	instrument to view
-stenosis	narrowing

#### V. Common Medical Root Words

acro	extremities	aden	gland
angi/o	vessel	arteri/o	arterio
arthr/o	joint	brachi	arm
cardi/o	heart	carp	wrist
cerebr/o	brain	cervi/c	neck
chondr/o	cartilage	col/o	large intestines/colon
cost/o	ribs	cyst/o	sac/bladder
cyte	cell	enter/o	small intestines
gastr/o	stomach	hemo/hemat	blood
hepat	liver	hyster/o	uterus
lapar	abdomen	laryng	larynx (voice box)
latero	side	lip/o	fat
mamm/o	breast	mast/o	breast
medial	middle	myel/o	spinal cord/bone marrow
my/o	muscle	nas/o	nose
nephr/o	kidney	neur/o	nerve
oophor	ovary	oste/o	bone
ot/o	ear	plegia	paralysis
pneum/o	lung/air	procto	rectum
rhino	nose	salpingo	fallopian tube
tend/o	tendon	thorac	chest
trachi	trachea (wind pipe)		

VI. Just as in the English language, occasionally we use abbreviations to expedite writing orders and notes. Many of the abbreviations come from diagnostic testing, such as laboratory tests and different types of x-rays. Many of the therapy units have also adopted common abbreviations.

ASAP – as soon as possible  
ABG's– arterial blood gases  
AC – before meals  
Amb – ambulate or to walk  
BP – blood pressure  
BS – blood sugar, bowel sounds, breath sounds  
CBC – complete blood count  
CXR – chest x-ray  
DNP – do not publish  
DNR – do not resuscitate  
EKG – electrocardiogram  
FBS – fasting blood sugar  
GI – gastrointestinal  
ICU – Intensive Care Unit  
Pt – patient, pint  
PT – physical therapy  
ROM – range of motion  
Stat – now  
TPR – temperature, pulse, and respiration  
VS – Vital signs  
W/C – wheel chair

And many more maybe used on certain units.

### **Activity**

- I. Create 3x5 flashcards containing medical prefixes, suffixes, and root words. Quiz a partner, using the flashcards. (this can also be done on the computer and saved on a flash Card website)
- II. Medical Term Drag Races
- III. Complete the Medical Language WS- if you have computer access have students use an internet medical dictionary.

**For other activities dealing with medical terminology, see Medical Terminology Activities**

### **Assessment**

Complete the Medical Language Quiz

**Materials**

3x5 index cards  
pens, markers  
medical dictionaries  
Prefixes  
Suffixes  
Medical Abbreviations

**Accommodations for Learning Differences**

For reinforcement, the student may utilize computer software programs to practice medical terminology.

For enrichment, the student will create a new game to help classmates learn medical language.

For enrichment, the student will participate in the HOSA Medical Terminology competitive event ([www.hosa.org](http://www.hosa.org)).

**National and State Education Standards**

National Health Science Cluster Standards

HLC02.01 Communications

Health care workers will know the various methods of giving and obtaining information. They will communicate effectively, both orally and in writing.

**TEKS**

130.202(c)(1)C interpret technical material related to the health science industry;

130.202(c)(1)F formulate responses using precise language to communicate ideas;

130.202(c)(2)B demonstrate effective communication skills for responding to the needs of individuals in a diverse society; and

130.202(c)(2)D accurately interpret, transcribe, and communicate medical vocabulary using appropriate technology.

**Texas College and Career Readiness Standards**

English/language art

B.1 Identify new words and concepts acquired through study of their relationships to other words and concepts.

B2. Apply knowledge of roots and affixes to infer the meanings of new words.

B3. Use reference guides to confirm the meanings of new words or concepts.

Cross- Disciplinary standards-Foundational Skills

A2. Use a variety of strategies to understand the meanings of new words.

## Medical Term Drag Races

1. Divide the class into equal teams or rows; select 1-2 students as “callers.”
2. Callers go to the front of the room and the students are seated in teams or rows.
3. The first person (front seat) in each row stands, so one member of each team is standing.
4. Using the flashcards, a “caller” will give participants a definition or term. The participants will respond with the corresponding medical term or definition (only students who are standing may call out the answer; if others call out an answer, that team will be disqualified).
5. The participant who calls out the first correct answer will be seated, and the next team member in that row (team) will stand. The other participants remain standing.
6. Next round – the caller gives a new term or definition, and the process is repeated until every member in one team has answered correctly. That team (row) wins.

### **Note:**

Students may get loud during this FUN activity! However, it encourages them to study the terms diligently so they can help their team the next day.

To provide variety, start with the back seat and work forward to the first seat, or mix students up in different rows.

Rules: Only the students who are standing may call out the answer. If others speak out, their team will be disqualified.

## Medical Terminology Worksheet

- I. Identifying Word Parts: Determine the meanings of the following words. Print your answers in the spaces provided. The words have been separated to help you complete this exercise.

1. Lapar/otomy– \_\_\_\_\_

Lapar \_\_\_\_\_

otomy \_\_\_\_\_

2. Dys/pnea– \_\_\_\_\_

Dys \_\_\_\_\_

pnea \_\_\_\_\_

3. Hemat/ology– \_\_\_\_\_

Hemat \_\_\_\_\_

ology \_\_\_\_\_

4. Cardi/ologist– \_\_\_\_\_

Cardi \_\_\_\_\_

ologist \_\_\_\_\_

5. Osteo/malacia– \_\_\_\_\_

Osteo \_\_\_\_\_

Malacia \_\_\_\_\_

6. Gastro/scope– \_\_\_\_\_

Gastro \_\_\_\_\_

scope \_\_\_\_\_

Analyzing words: Analyze each word to determine the meaning. Write the meaning of the word on the blank next to the word:

7. Bradycardia— \_\_\_\_\_
8. Laryngitis— \_\_\_\_\_
9. Dysuria— \_\_\_\_\_
10. Thoracentesis— \_\_\_\_\_
11. Craniostomy— \_\_\_\_\_
12. Osteoarthritis— \_\_\_\_\_
13. Bilateral— \_\_\_\_\_
14. Renal— \_\_\_\_\_
15. Nephrosis— \_\_\_\_\_
16. Myocardium— \_\_\_\_\_
17. Gastralgia— \_\_\_\_\_
18. Hepatitis— \_\_\_\_\_
19. Angioma— \_\_\_\_\_
20. Arteriosclerosis— \_\_\_\_\_
21. Neuropathy— \_\_\_\_\_
22. Endocarditis— \_\_\_\_\_
23. Hypogastric— \_\_\_\_\_
24. Leukocyte— \_\_\_\_\_
25. Hysterectomy— \_\_\_\_\_

Medical Terminology Worksheet  
Key

II. Identifying Word Parts: Determine the meanings of the following words. Print your answers in the spaces provided. The words have been separated to help you complete this exercise.

26. Lapar/otomy– \_\_\_\_\_ incision into the abdomen \_\_\_\_\_

Lapar \_\_\_\_\_ abdomen \_\_\_\_\_

otomy \_\_\_\_\_ incision into \_\_\_\_\_

27. Dys/pnea– \_\_\_\_\_ difficult or painful breathing \_\_\_\_\_

Dys \_\_\_\_\_ difficult or painful \_\_\_\_\_

pnea \_\_\_\_\_ breathing \_\_\_\_\_

28. Hemat/ology– \_\_\_\_\_ study of the blood \_\_\_\_\_

Hemat \_\_\_\_\_ blood \_\_\_\_\_

ology \_\_\_\_\_ study of \_\_\_\_\_

29. Cardi/ologist– \_\_\_\_\_ heart specialist \_\_\_\_\_

Cardi \_\_\_\_\_ heart \_\_\_\_\_

ologist \_\_\_\_\_ specialist \_\_\_\_\_

30. Osteo/malacia– \_\_\_\_\_ softening of the bone \_\_\_\_\_

Osteo \_\_\_\_\_ bone \_\_\_\_\_

malacia \_\_\_\_\_ softening of \_\_\_\_\_

31. Gastro/scope– \_\_\_\_\_ instrument used to view the stomach \_\_\_\_\_

Gastro \_\_\_\_\_ stomach \_\_\_\_\_

scope \_\_\_\_\_ instrument used to view \_\_\_\_\_

Analyzing words: Analyze each word to determine the meaning. Write the meaning of the word on the blank next to the word:

32. Bradycardia— slow heartbeat
33. Laryngitis— inflammation or infection of the voice box
34. Dysuria— painful urination
35. Thoracentesis— surgical puncture of the chest
36. Craniostomy— surgical opening of the skull
37. Osteoarthritis— inflammation of the bone and joint
38. Bilateral— both or two sides
39. Renal— pertaining to the kidney
40. Nephrosis— abnormal condition of the kidney
41. Myocardium— heart muscle
42. Gastralgia— stomach pain
43. Hepatitis— inflammation or infection of the liver
44. Angioma— tumor of the vessel
45. Arteriosclerosis— narrowing of the artery
46. Neuropathy— disease of the nerve
47. Endocarditis— infection or inflammation inside the heart
48. Hypogastric— below the stomach
49. Leukocyte— white cell
50. Hysterectomy— removal of the uterus

# Medical Term Quiz

Matching:

- |                   |             |
|-------------------|-------------|
| _____ 1. hyster/o | a. ear drum |
| _____ 2. cephal   | b. vessel   |
| _____ 3. oophor   | c. head     |
| _____ 4. cervic   | d. fat      |
| _____ 5. osteo    | e. joint    |
| _____ 6. myring   | f. lung     |
| _____ 7. pulmon   | g. ovary    |
| _____ 8. vaso     | h. uterus   |
| _____ 9. arthr/o  | i. bone     |
| _____ 10. lipo    | j. neck     |

Write down the meanings of the following medical terms:

- |                     |                     |
|---------------------|---------------------|
| 11. later- _____    | 12. cardi/o- _____  |
| 13. hyper- _____    | 14. dors- _____     |
| 15. hemo- _____     | 16. appendic- _____ |
| 17. cyt- _____      | 18. crani- _____    |
| 19. nephro- _____   | 20. chole- _____    |
| 21. chondr- _____   | 22. enter/o- _____  |
| 23. bi- _____       | 24. neuro- _____    |
| 25. brachi- _____   | 26. mal- _____      |
| 27. myelo- _____    | 28. -plasty _____   |
| 29. endo- _____     | 30. pneum- _____    |
| 31. ren- _____      | 32. micro- _____    |
| 33. peri- _____     | 34. otomy- _____    |
| 35. procto- _____   | 36. hemi- _____     |
| 37. necrosis- _____ | 38. oto- _____      |
| 39. mamm/o- _____   | 40. rhino- _____    |

41. epigastric- \_\_\_\_\_

43. arteriosclerosis- \_\_\_\_\_

45. gastroenteritis- \_\_\_\_\_

47. acromegaly- \_\_\_\_\_

49. laparotomy- \_\_\_\_\_

42. intercostals- \_\_\_\_\_

44. polyuria- \_\_\_\_\_

46. otoscope- \_\_\_\_\_

48. tachycardia- \_\_\_\_\_

50. mastectomy- \_\_\_\_\_

## Medical Term Quiz (Answer Key)

### Matching:

<u>h</u>	1. hyster/o	a. ear drum
<u>c</u>	2. cephal	b. vessel
<u>g</u>	3. oophor	c. head
<u>j</u>	4. cervic	d. fat
<u>i</u>	5. osteo	e. joint
<u>a</u>	6. myring	f. lung
<u>f</u>	7. pulmon	g. ovary
<u>b</u>	8. vaso	h. uterus
<u>e</u>	9. arthr/o	i. bone
<u>d</u>	10. lipo	j. neck

Write down the meanings of the following medical terms:

- |  |                                      |
|--|--------------------------------------|
| 11. later- <u>side</u>                       | 12. cardi/o- <u>heart</u>            |
| 13. hyper- <u>above, more than, increase</u> | 14. dors- <u>back</u>                |
| 15. hemo- <u>blood</u>                       | 16. appendic- <u>appendix</u>        |
| 17. cyt- <u>cell</u>                         | 18. crani- <u>skull</u>              |
| 19. nephro- <u>kidney</u>                    | 20. chole- <u>gall, bile</u>         |
| 21. chondr- <u>cartilage</u>                 | 22. enter/o- <u>small intestines</u> |
| 23. bi- <u>two, both</u>                     | 24. neuro- <u>nerve</u>              |
| 25. brachi- <u>arm</u>                       | 26. mal- <u>mal</u>                  |
| 27. myelo- <u>spinal cord, bone marrow</u>   | 28. -plasty <u>surgical repair</u>   |
| 29. endo- <u>inside</u>                      | 30. pneum- <u>air, lungs</u>         |
| 31. ren- <u>kidney</u>                       | 32. micro- <u>small</u>              |
| 33. peri- <u>around, surrounding</u>         | 34. otomy- <u>surgical incision</u>  |
| 35. procto- <u>rectum</u>                    | 36. hemi- <u>half</u>                |
| 37. necrosis- <u>tissue death</u>            | 38. oto- <u>ear</u>                  |
| 39. mamm/o- <u>breast</u>                    | 40. rhino- <u>nose</u>               |

41. epigastric— above the stomach
42. intercostals— in between the ribs
43. arteriosclerosis— artery hardening
44. polyuria— much urination
45. gastroenteritis— inflammation/infection of the stomach/intestines
46. otoscope— instrument used to view the ear
47. acromegaly— enlargement of the extremities
48. tachycardia— fast heart beat/pulse
49. laparotomy— surgical opening into the abdomen
50. mastectomy— removal of the breast