

Medical Terminology Basics

HASPI Medical Anatomy & Physiology 01c

Practice Activity

Background

Name(s): _____

Period: _____ Date: _____

The study of anatomy focuses on the structure of the human body. This can include a focus on microscopic structures such as cells and tissues, or large-scale structures such as organs. On the other hand, the study of physiology focuses on how these structures work and function. Obtaining a solid knowledge of anatomy is crucial to understanding the physiology of each structure in the human body. This is not as easy as it sounds!

Learning anatomy requires A LOT of memorization. Just learning the name and location of the 600+ muscles in the human body can be overwhelming, and that is only one body system. The ability to understand and use common terms related to anatomy will make it easier to memorize the large quantity of anatomical terminology. The following TIPS can be utilized when studying anatomy:

1. Learn the Common Terminology

Focus on learning common prefixes, suffixes, and root words. This will help you learn how to break down words that may not be familiar.

For example, **IF** you understand that:

Cardi/o = heart

-itis = inflammation

Myo- = muscle

THEN even though you have never seen or learned about **myocarditis**, you can use the terms you understand to break the word down and figure out that:

**Myocarditis =
An inflammation of the
heart muscle**

2. Use Study Aids



There are a HUGE variety of useful study aids available for learning anatomy. Anatomy flashcards, anatomy coloring books, and internet sites with interactive anatomy reviews are abundant. **USE THEM!**

The following anatomy website from the University of Minnesota contains interactive reviews, quizzes, and games for all of the body systems:

<http://msjensen.cehd.umn.edu/webanatomy/>

3. Practice, Review, Drill, and Study

The only way to really learn anatomy is study it, and then review it again, and again, and again. Use any and all review materials you can obtain, and don't procrastinate! Getting behind in learning anatomical terminology will become overwhelming, and this is not a subject you can cram! The volume of information in anatomy is enormous, and the worst thing you can do is get behind in your review of terms.

Let's Start with TIP #1 – How to Learn the Common Terminology

In order to communicate effectively in the healthcare industry, it is important to familiarize yourself with its language. Memorizing specific medical terms can be overwhelming, which is why it is easier to learn the meaning of word components. Being able to recognize the meaning of components will greatly reduce the amount of memorization needed. Most medical terms contain a root word with a prefix and/or a suffix attached. A term could also consist of two root words combined. In addition, combining forms (the vowel following a root word) usually consist of a root word + a vowel such as **o** or **i** like in **cardi/o**.



<http://www.medicalterminology.ca/picture/21103-12.jpg>

Examples

	Root Word	Prefix + Root	Root + Suffix	Prefix + Root + Suffix	Root + Root
Word Part(s)	Cardi/o	Tachy- + cardi/o	Cardi/o + -ology	Electro- + cardi/o + -gram	Neur/o + cardi/o
Medical Term	Cardiac	Tachycardia	Cardiology	Electrocardiogram	Neurocardiac
Meaning	Pertaining to the heart	Condition of a fast heart	Study of the heart	Electric record of the heart	Pertaining to the nerves and heart

Four Basic Rules of Building Medical Terms

Follow these four rules when creating and/or defining medical terms:

RULE	EXAMPLE	MEANING
When using two root words, a combining vowel is used to separate the words.	my/o + cardi/o myocardiac	Pertaining to the heart muscle
Medical terms cannot end with a combining form vowel. It must be dropped and a suffix added.	brachy- + cardi/o brachycardia	Condition of a slow heart
Prefixes are ALWAYS attached to the BEGINNING of the medical term.	peri- + cardi/o pericardial	Pertaining to the outside of the heart
Suffixes are ALWAYS attached to the END of the medical term. If the suffix starts with a vowel, no combining form vowel is needed.	cardi/o + -um cardium	Heart tissue

Materials

Medical Dictionary
Prefix Cards - yellow
Root Cards - green
Suffix Cards - blue

Procedure

This activity will give you a head start in memorizing terms for your anatomy & physiology course. Obtain a set of provided prefix, suffix, and root cards.

Part A - Creating Medical Terms: Prefix + Root

NOTE: Some of the words you create may not actually be real medical terms, but this activity will still begin to familiarize you with the medical prefixes, roots, and suffixes.

1. Use the YELLOW prefix cards and the GREEN root cards. Randomly lay down a prefix card and a root card.
2. Record the prefix, along with its meaning in Table 1. Record the root, along with its meaning in Table 1.
3. Combine the prefix and root to form the medical term, followed by combining the prefix and root meanings to form the definition for the medical term. Record both in Table 1.

TABLE 1: PREFIX + ROOT

Prefix & Prefix Meaning	Root & Root Meaning	Medical Term (Combine prefix & root)	Medical Term Definition

Part C - Creating Medical Terms: Prefix + Root + Suffix

NOTE: Some of the words you create may not actually be real medical terms, but this activity will still begin to familiarize you with the medical prefixes, roots, and suffixes.

1. Use the YELLOW prefix cards, GREEN root cards, and the BLUE suffix cards. Randomly lay down a prefix, root, and a suffix card.
2. Record the prefix, along with its meaning in Table 3. Record the root, along with its meaning in Table 3. Record the suffix, along with its meaning in Table 3.
3. Combine the prefix, root, and suffix to form the medical term, followed by combining the prefix, root, and suffix meanings to form the definition for the medical term. Record both in Table 3.

TABLE 3: PREFIX + ROOT + SUFFIX

Prefix & Prefix Meaning	Root & Root Meaning	Suffix & Suffix Meaning	Medical Term (Combine prefix, root, & suffix)	Medical Term Definition

Part D - Defining Medical Terms: Prefix + Root

1. Use the YELLOW prefix cards, the GREEN root cards, and a medical dictionary.
2. Medical terms containing a prefix and root word have been provided in Table 4.
3. Split each medical term into a prefix and root word.
4. Record the prefix, along with its meaning in Table 4. Record the root, along with its meaning in Table 4.
5. Combine the prefix and root meanings to form the definition for the medical term. Record in Table 4.

TABLE 4: DEFINING PREFIX + ROOT

Prefix & Prefix Meaning	Root & Root Meaning	Medical Term (prefix & root)	Medical Term Definition
		cirrhosis	
		dextrogastric	
		ectoderm	
		erythrocyte	
		intervertebral	
		midcarpal	
		peroral	
		subhepatic	
		postnasal	
		prochondral	

Part E - Defining Medical Terms: Root + Suffix

1. Use the GREEN root cards, the BLUE suffix cards, and a medical dictionary.
2. Medical terms containing a root word and a suffix have been provided in Table 5.
3. Split each medical term into a root word and a suffix.
4. Record the root, along with its meaning in Table 5. Record the suffix, along with its meaning in Table 5.
5. Combine the root and suffix meanings to form the definition for the medical term. Record in Table 5.

TABLE 5: DEFINING ROOT + SUFFIX

Root & Root Meaning	Suffix & Suffix Meaning	Medical Term (root & suffix)	Medical Term Definition
		hepatitis	
		arthralgia	
		myasthenia	
		amniocentesis	
		urethratresia	
		leukemia	
		nephrolith	
		osteomalacia	
		acromegaly	
		rhinorrhea	

Part F - Defining Medical Terms: Prefix + Root + Suffix

1. Use the YELLOW prefix cards, GREEN root cards, the BLUE suffix cards, and a medical dictionary.
2. Medical terms containing a prefix, root word, and a suffix have been provided in Table 6.
3. Split each medical term into a prefix, root word, and a suffix.
4. Record the prefix, along with its meaning in Table 6. Record the root, along with its meaning in Table 6. Record the suffix, along with its meaning in Table 6.
5. Combine the prefix, root, and suffix meanings to form the definition for the medical term. Record in Table 6.

TABLE 6: PREFIX + ROOT + SUFFIX

Prefix & Prefix Meaning	Root & Root Meaning	Suffix & Suffix Meaning	Medical Term (Combine prefix, root, & suffix)	Medical Term Definition
			orthodontist	
			polyadenitis	
			hypochondriac	
			electroencephalogram	
			erythrocytopenia	
			hyperglycemia	
			hemianalgesia	
			hydronephrosis	
			megalocephalitis	
			fibromyalgia	

Part G - Defining Medical Terms: Root + Root

1. Use the GREEN root cards and a medical dictionary.
2. Medical terms containing two root words have been provided in Table 7.
3. Split each medical term into two root words.
4. Record the roots, along with its meaning in Table 7.
5. Combine the root meanings to form the definition for the medical term. Record in Table 7.

TABLE 7: DEFINING ROOT + ROOT

Root & Root Meaning	Root & Root Meaning	Medical Term (Root & Root)	Medical Term Definition
		Gastrointestinal	
		Cardiovascular	
		arteriosclerosis	
		Cardiopulmonary	
		cerebrospinal	
		Cholecystogram	
		Dermatomycosis	
		Osteosarcoma	
		pharyngealesophageal	
		Cerebrovascular	

Medical Terminology Game

Now that you have familiarized yourself with the cards, follow the directions to play the review game in a group of 3-6 students.

1. Deal out an even number of prefix, suffix, and root cards to each player.
2. When it is each player's turn, that person will lay 2 to 3 cards on the table with words facing up. The cards can be laid out as a prefix + root, a root + suffix, a prefix + root + suffix, or a root + root.
3. The rest of the players have 10 seconds to guess the meaning of the term.
4. If a player correctly guesses the meaning of the word, they get to take and keep the cards. If they are able to guess a part of the word (prefix, root, or suffix) they can take and keep just the cards they got right. Each card is one point.
5. If no player can correctly guess the meaning of the term in 10 seconds, the individual who played the cards gets to keep them and obtain the points.
6. The cards cannot be reused once they have been played.
7. The game is over when any one player runs out of cards to play, and the player with the most cards/points wins the game.

Analysis

Use the information you learned during the procedure to answer the following questions.

A Medical Story

Complete the following story CORRECTLY using at least 20 of the medical terms below. Use a medical dictionary if you are unfamiliar with the term. The first part has been started for you.

ambulatory	hypodermic	radiography
diaphoresis	perfusion	periosteodema
prognosis	intramuscular	aspiration
prophylactic	myalgia	hypoxia
pallor	emesis	dysphagia
subcutaneous	myocardial infarction	cardiopulmonary
otorhinolaryngologist	cyanosis	aspiration
ambilateral	tracheostomy	dyspnea

After years of medical school, you are finally a medical doctor! It is your first day at HASPI Medical Hospital working in the emergency room. Your first patients are on their way from a horrible accident only a block away from the hospital...

Translating an Emergency Room Report

The following is an actual emergency room report for a patient. Using a medical dictionary rewrite each portion of the report in "layman terms" to describe to the patient's family what has occurred.

Emergency Room Report

CHIEF COMPLAINT: Colostomy failure.

HISTORY OF PRESENT ILLNESS: This patient had a colostomy placed 9 days ago after resection of colonic carcinoma. Earlier today, he felt nauseated and stated that his colostomy stopped filling. He also had a sensation of "heartburn." He denies vomiting but has been nauseated. He denies diarrhea. He denies hematochezia, hematemesis, or melena. He denies abdominal pain or fever.

PAST MEDICAL HISTORY: As above. Also, hypertension.

ALLERGIES: Fleet enema.

MEDICATIONS: Accupril and vitamins.

REVIEW OF SYSTEMS:

SYSTEMIC: The patient denies fever or chills.

HEENT: The patient denies blurred vision, headache, or change in hearing.

NECK: The patient denies dysphagia, dysphonia, or neck pain.

RESPIRATORY: The patient denies shortness of breath, cough, or hemoptysis.

CARDIAC: Patient denies history of arrhythmia, swelling of extremities, palpitations, or chest pain.

GASTROINTESTINAL: See above.

MUSCULOSKELETAL: The patient denies arthritis, arthralgia, or joint swelling.

NEUROLOGIC: The patient denies difficulty with balance, numbness, or paralysis.

GENITOURINARY: The patient denies dysuria, flank pain, or hematuria.

PHYSICAL EXAMINATION:

VITAL SIGNS: Blood pressure 183/108, pulse 76, respirations 16, temperature 98.7.

HEENT: Cranial nerves are grossly intact. There is no scleral icterus.

NECK: No jugular venous distention.

CHEST: Clear to auscultation bilaterally.

CARDIAC: Regular rate and rhythm. No murmurs.

ADBOMEN: Soft, non-tender, non-distended. Bowel sounds are decreased and high-pitched. There is a large midline laparotomy scar with staples still in place. There is no evidence of wound infection. Examination of the colostomy port reveals no obvious fecal impaction or site of obstruction. There is no evidence of infection. The mucosa appears normal. There is a small amount of non-bloody stool in the colostomy bag. There are no masses or bruits noted.

EXTREMITIES: There is no cyanosis, clubbing, or edema. Pulses are 2+ and equal bilaterally.

NEUROLOGIC: The patient is alert and awake with no focal motor or sensory deficit noted.

MEDICAL DECISION MAKING: Failure of colostomy to function may represent an impaction; however, I did not appreciate this on physical examination. There may also be an adhesion or proximal impaction which I cannot reach, which may cause a bowel obstruction, failure of the shunt, nausea, and ultimately vomiting.

An abdominal series was obtained, which confirmed this possibility by demonstrating air-fluid levels and dilated bowel. The CBC showed WBC of 9.4 with normal differential. Hematocrit is 42.6. I interpret this as normal. Amylase is currently pending.

I have discussed the case with Dr. S, the patient's surgeon, who agrees that there is a possibility of bowel obstruction and the patient should be admitted to observation. Because of the patient's insurance status, the patient will actually be admitted to Dr. D on observation. I have discussed the case with Dr. P, who is the doctor on call for Dr. D. Both Dr. S and Dr. P have been informed of the patient's condition and are aware of his situation.

FINAL IMPRESSION: Bowel obstruction, status post colostomy.