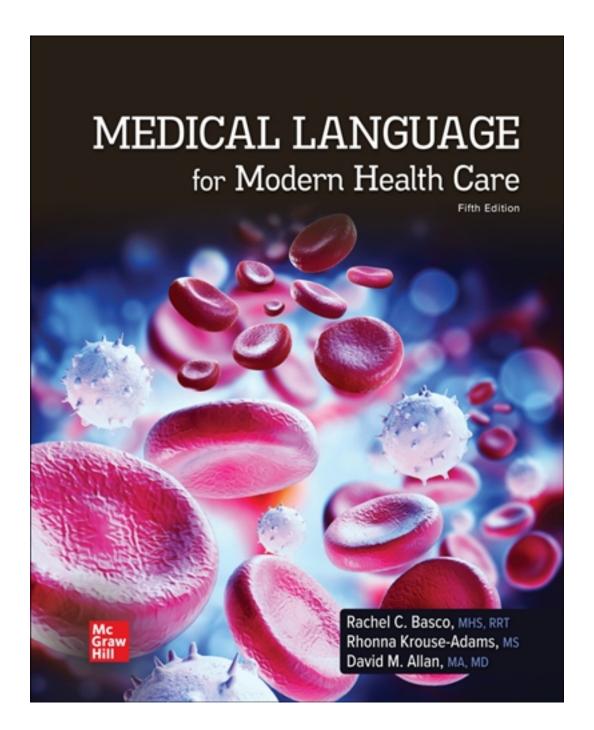
# Solutions for Medical Language for Modern Health Care 5th Edition by Basco

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# Solutions

#### **Chapter 1: The Anatomy of Medical Terms**

### Check Point Section 1.1 Page 3

#### A.

Ans 1: suffix

Ans 2: combining vowel

Ans 3: prefix

Ans 4: combining form

#### B.

Ans 1: B: pneumon-

Ans 2: B: pulmon-

Ans 3: A: -a-

### **Check Point Section 1.2 Page 7**

#### A.

Ans 1: True

Ans 2: True

Ans 3: True

#### В.

Ans 1: C: dentist

Ans 2: A: agoraphobia

Ans 3: E: biology

Ans 4: B: pneumonectomy

Ans 5: D: dermatitis

### Check Point Section 1.3 Page 9

#### A.

Ans 1: C: suprapubic

Ans 2: A: through the skin

Ans 3: C: after delivery

Ans 4: C: tilted backward

#### B.

Ans 1: True

Ans 2: True

Ans 3: False

Ans 4: True

Ans 5: True

### Check Point Section 1.4 Page 10-11

#### Α.

Ans 1: C: apex

Ans 2: D: breech

Ans 3: E: toxin

Ans 4: B: mucus

Ans 5: A: patent

#### B.

Ans 1: B: urethra

Ans 2: D: neurology

Ans 3: C: trapezius

Ans 4: D: malleus

#### **Chapter 1 Review**

#### A.

Ans 1: False

Ans 2: True

Ans 3: False

Ans 4: True

#### В.

Ans 1: C: stomach

Ans 2: A: nerve

Ans 3: B: skin

Ans 4: D: heart

Ans 5: B: joints

Ans 6: C: red

- Ans 7: C: bronchus Ans 8: A: blood
- C.
- Ans 1: J: air, lung
- Ans 2: I: blood
- Ans 3: K: clear spring water
- Ans 4: F: chest
- Ans 5: H: joint
- Ans 6: A: to breathe
- Ans 7: C: clear, sticky secretion
- Ans 8: B: open
- Ans 9: L: poison
- Ans 10: D: tip or summit
- Ans 11: G: skin
- Ans 12: E: buttocks

#### D.

- Ans 1: A: ileum
- Ans 2: B: respiratory
- Ans 3: B: carditis
- Ans 4: C: trapezius
- Ans 5: C: malleolus

#### Ε.

- Ans 1: A: dermatologist
- Ans 2: A: gastroenterology
- Ans 3: C: respiratory
- Ans 4: A: gastritis
- Ans 5: B: arthritis

#### F.

- Ans 1: cardiologist
- Ans 2: ureter
- Ans 3: bladder and kidney
- Ans 4: ileum
- Ans 5: breech
- Ans 6: urethra
- Ans 7: lymph
- Ans 8: trapezium
- Ans 9: malleolus
- Ans 10: ilium

#### G.

Ans 1: B: visual examination Ans 2: C: surgical fixation Ans 3: A: surgical repair Ans 4: arthroscopy Ans 5: arthrodesis Ans 6: arthroplasty

#### **Case Reports**

#### Α.

Ans 1: C: lungs Ans 2: B: root Ans 3: C: anti-Ans 4: B: root

Ans 5: A: Pneumonia and D: Pulmonologist

#### B.

Ans 1: A: -ist and C. -ician

Ans 2: geneticist Ans 3: C: origin

#### C.

Ans 1: knee Ans 2: patient Ans 3: A. breath

#### D.

Ans 1: dermatitis

Ans 2: gastroenterologic

Ans 3: arthroscopy

Ans 4: No Ans 5: No

# CHAPTER 1 – The Anatomy of Medical Terms The Foundation of Medical Language

#### Chapter 1 Teaching Overview

Your students need to understand the basics of medical terminology, including word elements such as roots and combining forms, suffixes and prefixes. Students need to understand what a combining vowel is and situations in which a combining vowel is necessary. Suffixes and prefixes drastically change the meaning of words. Some suffixes, for example, exist mostly to turn nouns into adjectives, but others help to build words that are symptoms, signs, diagnoses, procedures, or diagnostic tests. Likewise, some prefixes define positions, numbers, and directions. There are unique medical terms which do not deconstruct as well as medical terms that sound alike but have very different meanings. Give students plenty of encouragement and support while working through the initial chapters. The better they grasp the concepts and skills in Chapter 1, the better they will do in all the chapters that follow.

As with all activities in this Instructor Manual, you can and should modify them to best meet the needs of *your* students, *your* schedule, and *your* curricula.

Although medical terminology is English vocabulary, this class has much in common with a foreign language course. Students will be learning how to listen, speak, read, write, and understand medical language. In their future roles as health professionals, not only must they be fluent in medical terminology in order to communicate with other health professionals, they must also know medical language well enough to be able to translate the vocabulary using very simple words when necessary so that a patient or client will understand what is being communicated. Achieving mastery of the material presented in Chapter 1 is the first step in this learning process, which will continue through the students' professional careers.

#### **Teacher to Teacher:**

- Color-coding word elements reinforces how the word parts combine to create meaning. Have students
  practice writing medical terms with colored markers, pencils, or crayons to emphasize the use of the
  word parts.
- Instruct students to make color-coded flashcards for word elements.
- Whenever you see a medical term used incorrectly in print, photocopy or print the error and bring it in to share with students. Discuss the cost and safety risks associated with misuse of medical terminology so students truly understand the importance of precision when using medical language.
- Ask students why medical terminology is important; what would happen if there weren't a standardized medical language.
- Share with students a short list of strategies for being successful in your class.

#### **Chapter Learning Outcomes**

- LO 1.1 Identify and utilize the roots and combining forms to form medical terms.
- LO 1.2 Identify and utilize suffixes and prefixes to build medical terms.
- LO 1.3 Recognize medical terms taken directly from Greek, Latin, or Old English words.
- LO 1.4 Differentiate between medical terms that are spelled and/or pronounced similarly.

**Note:** These activities are designed with ultimate flexibility in mind. When customizing them for your own class, always choose activities that are most relevant to your curriculum, your students, and your teaching goals—especially if you do not have time to implement all the provided activities into your class period.

#### **Chapter 1: The Anatomy of Medical Terms**

Sections 1.1, 1.2, and 1.3



#### **Prepare Your Materials:**

- **Dry erase board** (or smartboard, chalkboard, or butcher's block paper)
- Sections 1.1, 1.2, and 1.3 PowerPoint® presentations Found with the Instructor Resources that can be accessed through the "Library" tab of Connect, and then under "Instructor Resources."
- Sections 1.1, 1.2, and 1.3 Student Note-taking Handouts Create by selecting the "Handouts" option when printing the PowerPoint presentation; select 3 slides per page to print slides with blank lines to the right where students can take notes.
- Sections 1.1, 1.2, and 1.3 Handouts and Instructor Answer Keys: Roots and Combining Vowels; Suffixes; Prefixes – Found at the end of this section of the Instructor Manual, beginning on page 1-12.

# Teaching Guide Date: \_\_\_\_\_\_ Chapter 1 – Sections 1.1-1.3

SECTIONS 1.1-1.3	TIME	ACTIVITY & INSTRUCTIONS	MATERIALS	CHAPTER LEARNING OUTCOMES
		7-		Ø
Warm-up & Introduction	10 min	Activity Description: Students read Chapter 1, Section 1.1 in Textbook	Dry-erase board	LO 1.1
		Introducing and Working with Roots		
		<b>Step 1:</b> Write the following words on the board: brontosaurus, brachiosaurus, tyrannosaurus and stegosaurus.		
		Step 2: Ask students what these words represent – response should be —dinosaurs).		
		Step 3: Ask students how they know these are types of dinosaurs. If they have trouble explaining how they know, ask them to look at the words and identify what each word has in common: (saurus). Saurus (meaning lizard) is the root of all those words.		
		Step 4: Now, write the following words on the board: maxisaurus, minisaurus, aquasaurus, nonsaurus, and octosaurus.		
		Step 5: Tell students that these are nonsense words but ask them to try to predict what the meaning of each word might be. Suggestions:  • Maxisaurus = full-size dinosaur  • Minisaurus = small dinosaur  • Aquasaurus = dinosaur of the water  • Nonsaurus = not a dinosaur  • Octosaurus = dinosaur with eight of something (arms, legs, heads)		
		<b>Step 6:</b> Help students see that by knowing the <b>root</b> , they can understand words that have additional parts added to them.		

Lecture	5 min	Section 1.1 Lecture/Discussion Reference the Speaker Notes for each slide to assist you in discussing the talking points. You can view or print "Notes Pages" to use during the lecture for easy reference (in PowerPoint, select "View", then "Notes Page").  • Define a Root • Define a Combining Vowel • Define a Combining Form	Section 1.1 PowerPoint Presentation	LO 1.1
Active Learning & Practice	7 min	Step 1: Distribute Section 1.1 Roots and Combining Vowels Handout found on page 1-12 at the end of this section of the instructor manual. *Answers to Roots and Combining Vowels Handout found on page 1-13 at the end of this section of the instructor manual.  Step 2: Read over the instructions and have students complete the handout alone, in pairs, or in small groups.  Step 3: As a group, go over the answers, explaining any items that were difficult or misunderstood.	Section 1.1 Roots and Combining Vowels Handout	LO 1.1
Review	3 min	<b>Step 1:</b> Go through Check Point Section 1.1 exercises. Explain or clarify anything that is difficult for students.	Textbook, Check Point Section 1.1 exercises	LO 1.1
Homework Assignment		Ask students to bring in five medical terms of their choice and label the roots and combining vowels of each term. Students may use the Internet or other sources to assist them.		LO 1.1

5 min	Activity Description: Section 1.2 Students read Chapter 1, Section 1.2 in Textbook	Dry-erase board	LO 1.2
	Introducing and Working with Suffixes		
	<b>Step 1:</b> Write the following words on the board: baker, bakery, demonstrate, demonstration, fearful, and fearless.		
	Step 2: Ask students to isolate the element of each word that creates the difference in meaning (e.g., "-er," "-ery," "-ate," "-tion," "-full," and "-less").		
	Step 3: Direct students to define each word element. Suggestions: -er – person who does -ery – place that does -ate – cause to be -tion – action of doing -ful – full of -less – without		
	Step 4: Tell students that these word elements located after, and adding meaning to, root words are called suffixes. Ask students to brainstorm other words that use these same suffixes and to explain their meaning in those words.  Suggestions:  -er – singer, driver, computer -ery – refinery, eatery, distillery -ate – liquidate, alleviate, duplicate -tion – resolution, junction, alteration -ful – beautiful, thoughtful, watchful -less – careless, faultless, merciless		
10 min	Section 1.2 Lecture/Discussion Reference the Speaker Notes for each slide to assist you in discussing the talking points. You can view or print "Notes Pages" to use during the lecture for easy reference (in PowerPoint, select "View", then "Notes Page").  • What is a suffix • Classification of suffixes diagnostic surgical pathologic adjectival noun	Textbook, Section 1.2 Section 1.2 PowerPoint Presentation	LO 1.2
		Students read Chapter 1, Section 1.2 in Textbook Introducing and Working with Suffixes  Step 1: Write the following words on the board: baker, bakery, demonstrate, demonstration, fearful, and fearless.  Step 2: Ask students to isolate the element of each word that creates the difference in meaning (e.g., "-er," "-ery," "-ate," "-tion," "-full," and "-less").  Step 3: Direct students to define each word element. Suggestions:	Students read Chapter 1, Section 1.2 in Textbook Introducing and Working with Suffixes  Step 1: Write the following words on the board: baker, bakery, demonstrate, demonstration, fearful, and fearless.  Step 2: Ask students to isolate the element of each word that creates the difference in meaning (e.g., "-er," "-ery," "-ate," "-tion," "-full," and "-less").  Step 3: Direct students to define each word element. Suggestions:

Active	7 min	Step 1: Distribute Section 1.2 Suffixes handout	Section 1.2	LO 1.2
Learning & Practice		found at the end of this section of the instructor manual on page 1-14. *Answers to Suffixes Handout is at the end of this section of the instructor manual on page 1-15.	Suffixes Handout	
		<b>Step 2:</b> Read over the instructions and have students complete the handout alone, in pairs, or in small groups.		
		<b>Step 3:</b> Go over the answers as a group to ensure everyone understands them.		
Review	3 min	<b>Step 1:</b> Have students review Check Point Section 1.2 exercises, discussing the activity in pairs.	Textbook, Check Point Section 1.2	LO 1.2
		Step 2: When students are finished, ask questions based on Section 1.2 PowerPoint presentation. Reinforce correct pronunciation while going over the questions and answers.	exercises	
Homework Assignment		Tell students to bring in five medical terms of their choice and to label the suffix, root(s)/combining form(s) of each term. Students may use the Internet or other sources to assist them.		LO 1.1, 1.2
Warm-up & Introduction	5 min	Activity Description: Students read Chapter 1, Section 1.3 in Textbook	Dry-erase board	LO 1.2
		Introducing and Working with Prefixes		
		Step 1: Write the following words on the board: maxisaurus, minisaurus, aquasaurus, nonsaurus, and octosaurus.		
		Connection Point: The meaning of the root "saurus" is lizard. One can predict the meaning of a word if one knows the meaning of the root word.		
		<ul> <li>Step 2: Remind students that although these are nonsense words, they can make logical predictions about what the words mean.</li> <li>Suggestions: <ul> <li>Maxisaurus = Full-size dinosaur</li> </ul> </li> <li>Minisaurus = small dinosaur</li> <li>Aquasaurus = dinosaur of the water</li> <li>Nonsaurus = something that is not a dinosaur</li> </ul>		
		Octosaurus = dinosaur with eight of something (arms, legs, heads)		

		Step 3: Ask students to isolate the element in each word that creates the difference in meaning ("maxi," "mini, "aqua," "non," "octo").		
		<ul> <li>Step 4: Direct students to define what each of those word elements means. Suggestions:</li> <li>Maxi = full, large</li> <li>Mini = small, tiny, little</li> <li>Aqua = of or pertaining to water</li> <li>Non = not having, not being, etc.</li> <li>Octo = eight</li> </ul>		
		Step 5: Tell students that these word elements located before, and adding meaning to, root words are called prefixes. Ask students to brainstorm other words that use these same prefixes and to explain their meaning in those words. Suggestions:  • Maximum, maximize  • Miniscule, miniskirt, miniseries  • Aquarium, aquatic, aquanaut  • Nondairy, nonfiction, nonsense  • Octopus, octagon, octuplet		
		Step 6: Emphasize that each prefix has its own meaning that clarifies or further describes the root word with which it is used.		
Lecture	10 min	Section 1.3 Lecture/Discussion Reference the Speaker Notes for each slide to assist you in discussing the talking points. You can view or print "Notes Pages" to use during the lecture for easy reference (in PowerPoint, select "View", then "Notes Page").  • What is a prefix • Classification of prefixes position numbers and measurements directions and locations	Textbook, Section 1.3 Section 1.3 PowerPoint Presentation	
Active Learning & Practice	7 min	Step 1: Distribute Section 1.3 Prefixes handout found at the end of this section of the instructor manual on page 1-16. *Answers to Prefixes Handout is at the end of this section of the instructor manual on page 1-17.	Section 1.3 Prefixes Handout	LO 1.2
MaCrow Hill I C. All		Step 2: Read over the instructions and have students complete the handout alone, in pairs,		

		or in small groups.  Step 3: Go over the answers as a group to ensure everyone understands them.		
Review	3 min	Step 1: Have students review Check Point Section 1.3 exercises, discussing the activity in pairs.  Step 2: When students are finished, ask questions based on Section 1.3 PowerPoint presentation. Reinforce correct pronunciation while going over the questions and answers.	Textbook Check Point Section 1.3	
Homework Assignment		Tell students to bring in five medical terms of their choice, and to label the suffix, root(s)/combining form(s) and prefixes of each. Students may use the Internet or other sources to assist them.		LO 1.1, 1.2

#### **Chapter 1: The Anatomy of Medical Terms**

Total Time: 20 Minutes

Section 1.4

#### **Prepare Your Materials:**

- Dry erase board (or smartboard, chalkboard, or butcher's block paper)
- Section 1.4 PowerPoint® presentation Found with the Instructor Resources that can be accessed through the "Library" tab of Connect, and then under "Instructor Resources."
- **Section 1.4 Student Note-taking Handouts** Create by selecting the "Handouts" option when printing the PowerPoint presentation; select 3 slides per page to print slides with blank lines to the right where students can take notes.

# **Teaching Guide Chapter 1 – Section 1.4**

<b>SECTION 1.4</b>	TIME	ACTIVITY & INSTRUCTIONS	MATERIALS	CHAPTER
	(V)			LEARNING OUTCOMES
Lecture	5 min	Section 1.4 Lecture/Discussion Students read Chapter 1, Section 1.4 in Textbook Reference the Speaker Notes for each slide to assist you in discussing the talking points. You can view or print "Notes Pages" to use during the lecture for easy reference (in PowerPoint, select "View", then "Notes Page").  • Greek, Latin, and Old English Words	Textbook, Chapter 1, Section 1.4 Section 1.4 PowerPoint Presentation	LO 1.4
Active Learning & Practice	7 min	Ask students to list 5 terms that do not deconstruct  Ask students to identify whether the terms are from Latin, Greek or Old English origin  Dictate 5 sentences containing terms from the list of terms that are alike. Ask students to write the correct terms that that were used in the sentences on a dry erase board. Ask students to hold the boards up so instructor can identify incorrect responses.	Dry-erase board	
Lecture	3 min	Section 1.4 Lecture/Discussion Students read Chapter 1, Section 1.4 in Textbook Reference the Speaker Notes for each slide to assist you in discussing the talking points. You can view or print "Notes Pages" to use during the lecture for easy reference (in PowerPoint, select "View," then "Notes Page").  • Terms that are Alike	Textbook, Chapter 1, Section 1.4 Section 1.4 PowerPoint Presentation	LO 1.4
Active Learning & Practice	2 min	Ask students to give examples of words from the English language that sound the same but have different meanings.		

Review	3 min	Step 1: Have students review Check Point Section 1.4 exercises, discussing the lesson in pairs.  Step 2: When students are finished, ask questions based on Section 1.4 PowerPoint presentation. Reinforce correct pronunciation while going over the questions and answers.	Textbook Check Point Section 1.4 Exercises	LO 1.4
Homework Assignment		Ask students to complete Chapter 1 Review exercises. Review answers next class period to ensure that every student understands the rationale for each answer. Have students read aloud sentences from the Case Reports. Reinforce correct pronunciation while going over the questions and answers.	Textbook Chapter 1 Review Exercises	LO 1.1, 1.2, 1.3, 1.4

#### **Chapter 1 Masters**

- Section 1.1 Roots and Combining Vowels Handout, Page 1-12
- Section 1.2 Suffixes Handout, Page 1-14
- Section 1.3 Prefixes Handout, Page 1-16

#### Answers to Chapter 1 Masters

- Section 1.1 Roots and Combining Vowels Handout Answer Key, Page 1-13
- Section 1.2 Suffixes Handout Answer Key, Page 1-15
- Section 1.3 Prefixes Handout Answer Key, Page 1-17

#### Roots and Combining Vowels Handout: Chapter 1, Section 1.1

**Directions:** For each medical term listed below, put a box around the root word (s) and underline the combining vowel (s). Use a medical dictionary to look up the meaning of the roots and write the definition on the line below each word.

1.	ARTHROSCOPY
	Meaning:
2.	TRACHEOTOMY
	Meaning:
3.	PULMONOLOGY
	Meaning:
4.	H E M O R R H A G E
	Meaning:
5.	NEUROPATHY
	Meaning:
6.	DERMATOLOGIST
	Meaning:
7.	OSTEOGENESIS
	Meaning:
8.	CARDIOGRAM
	Meaning:
9.	H E M O P N E U M O T H O R A X
	Meaning:
10.	RHINOPLASTY
	Meaning:

#### Instructor Answers: Roots and Combining Vowels: Chapter 1, Section 1.1

**Directions:** For each medical term listed below, put a box around the root words and underline the combining vowels. Use a medical dictionary to look up the meaning of the roots and write the definition on the line below each word.

#### 1. ARTHROSCOPY

Meaning: Visual examination of a joint

#### 2. TRACHEOTOMY

Meaning: Surgical incision into the trachea

#### 3. PULMONOLOGY

Meaning: The study of the lungs.

#### 4. **HEM**ORRHAGE

Meaning: To bleed profusely.

#### 5. **NEUR**OPATHY

Meaning: Disease of nerves and the nervous system.

#### 6. DERMATOLOGIST

Meaning: One who studies the skin, specialist in dermatology.

#### 7. OSTEOGENESIS

Meaning: Formation of new bone.

#### 8. CARDIOGRAM

Meaning: A record of the heart's electrical activity.

#### 9. **HEMOPNEUM**OTHORAX

Meaning: Blood and air in the space that surrounds the lungs in the chest.

#### 10. RHINOPLASTY

Meaning: Surgical repair of the nose.

#### Suffixes Handout: Chapter 1, Section 1.2

**Directions:** For each medical term below, put a box around the suffix. Use a medical dictionary to look up the meaning of the complete term, and then predict the meaning of the suffix based on this definition.

1.	ARTHROCENTESIS  Meaning of the term:
	Suffix Meaning:
2.	CYANOSIS
	Meaning of the term:
	Suffix Meaning:
3.	TRACHEOSTOMY
	Meaning of the term:
	Suffix Meaning:
4.	ENDOCARDITIS
	Meaning of the term:
	Suffix Meaning:
5.	DERMATOLOGY
	Meaning of the term:
	Suffix Meaning:

#### Instructor Answers: Suffixes: Chapter 1, Section 1.2

**Directions:** For each medical term below, underline the suffix. Use a medical dictionary to look up the meaning of the complete term, and then predict the meaning of the suffix based on this definition.

#### 1. ARTHROCENTESIS

Meaning of the term: surgical puncture of a joint space

Suffix Meaning: surgical puncture

#### 2. CYANOSIS

Meaning of the term: abnormal condition of blue skin due to lack of oxygen

Suffix Meaning: abnormal condition

#### 3. TRACHEOSTOMY

Meaning of the term: surgical formation of an opening into the trachea

Suffix Meaning: surgical formation of an opening

#### 4. ENDOCARDITIS

Meaning of the term: Inflammation of the lining of the heart

Suffix Meaning: Inflammation

#### 5. DERMATO<u>LOGY</u>

Meaning of the term: the study of the skin

Suffix Meaning: the study of

#### Prefixes Handout: Chapter 1, Section 1.3

**Directions:** For each medical term below, underline the prefix. Use a medical dictionary to look up the meaning of the complete term, and then predict the meaning of the prefix based on this definition.

1.	EPIDERMIS
	Meaning of the term:
	Prefix Meaning:
2.	BRADYCARDIA
	Meaning of the term:
	Prefix Meaning:
3.	POLYURIA
	Meaning of the term:
	Prefix Meaning:
4.	HYPERTROPHY
	Meaning of the term:
	Prefix Meaning:
5.	INTERCOSTAL
	Meaning of the term:
	Prefix Meaning:

#### Instructor Answers: Prefixes Handout: Chapter 1, Section 1.3

**Directions:** For each medical term below, underline the prefix. Use a medical dictionary to look up the meaning of the complete term, and then predict the meaning of the prefix based on this definition.

#### 1. <u>EPI</u>DERMIS

Meaning of the term: the top layer of the skin

Prefix Meaning: above, over, upon

#### 2. BRADY CARDIA

Meaning of the term: slow heart rate condition

Prefix Meaning: slow

#### 3. POLYURIA

Meaning of the term: excessive production of urine condition

Prefix Meaning: excessive

#### 4. HYPERTROPHY

Meaning of the term: increase in size

Prefix Meaning: above, excessive

#### 5. <u>INTER</u>COSTAL

Meaning of the term: pertaining to between two ribs

Prefix Meaning: between