CHAPTER 2

## Understanding Suffixes

**Lesson Plan**

**120 minutes**

# Lesson 2 Learning Objectives

1. Define and spell the suffixes often used in medical terminology.
2. Identify suffixes in medical terms.
3. Use suffixes to build medical terms that pertain to medical specialties, symptoms, and diseases.

| **Learning Objective** | **Concepts for Lecture** | **Teaching Notes** |
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| **60**  **L O 1** | **1. Define and spell the suffixes often used in medical terminology. (pages 20-36; P P T slides 3-24)**  A. As we learned in Chapter 1, a *suffix* is the word part attached to the end of the word root.  B. Like prefixes, suffixes modify the meaning of a term.  C. The following are some examples of common suffixes.   | **Suffixes** | **Definition** | | --- | --- | | -al | pertaining to | | -ic | pertaining to | | -itis | inflammation | | -logy | study or science of | | -meter | measure, measuring instrument | | -ous | pertaining to | | -pathy | disease | | -scope | viewing instrument | | -scopy | process of viewing |   D. Other suffixes indicate an action or state. The following are some examples of such suffixes.   | **Suffix** | **Definition** | | --- | --- | | -emesis | vomiting | | -emetic | pertaining to vomiting | | -malacia | softening | | -oma | tumor | | -opsy | view of | | -oxia | condition of oxygen | | -phagia | eating or swallowing | | -phasia | speaking | | -phil | loving, affinity for | | -philia | loving, affinity for | | -physis | growth | | -plegia | paralysis | | -stasis | standing still |   E. Some suffixes indicate a condition or disease. They include the following:   | **Suffix** | **Definition** | | --- | --- | | -algia | condition of pain | | -asthenia | weakness | | -atresia | closure or absence of a normal body opening | | -cele | hernia, swelling, protrusion | | -dynia | condition of pain | | -ia | condition of | | -ism | condition or disease | | -itis | inflammation | | -oma | tumor | | -osis | condition of | | -pathy | disease | | -penia | abnormal reduction in number, deficiency | | -phobia | fear | | -plasia | formation, growth | | -rrhagia | abnormal discharge | | -rrhea | discharge | | -rrhexis | rupture | | -sclerosis | condition of hardening | | -spasm | sudden, involuntary muscle contraction |   F. Suffixes can also indicate location, number, or quality. They include the following.   | **Suffix** | **Definition** | | --- | --- | | -a | singular | | -ac | pertaining to | | -ad | toward | | -ade | process | | -ae | plural | | -al | pertaining to | | -ar | pertaining to | | -ary | pertaining to | | -emia | condition of blood | | -hemia | condition of blood | | -ic | pertaining to | | -ous | pertaining to |   G. Medical specialties can also be indicated with suffixes. Those suffixes include the following.   | **Suffix** | **Definition** | | --- | --- | | -iatry | treatment, specialty | | -logist | one who studies | | -logy | study or science of | | -lysis | loosen, dissolve | | -lytic | pertaining to loosen, dissolve | | -practic | practice |   H. Finally, suffixes can indicate a procedure or treatment. They include the following.   | **Suffix** | **Definition** | | --- | --- | | -centesis | surgical puncture | | -clasia | break apart | | -clasis | break apart | | -clast | break apart | | -desis | surgical fixation, fusion | | -ectomy | surgical excision, removal | | -gram | a record or image | | -graph | instrument for recording | | -graphy | recording process | | -ion | process | | -meter | measure, measuring instrument | | -metry | measurement, process of measuring | | -pexy | surgical fixation, suspension | | -phylaxis | protective | | -plasty | surgical repair | | -rrhaphy | suturing | | -scope | a viewing instrument | | -scopy | the process of viewing | | -stomy | surgical creation of an opening | | -tome | cutting instrument | | -tomy | incision, to cut | | -tripsy | surgical crushing |  |  | | --- | |  | | **Teaching Tips**  Review the four different types of word parts before you begin:  **1.** Prefix (P)  **2.** Root (R)  **3.** Combining Form (CF)  **4.** Suffix (S)  **Classroom Activities**  **Suffix Bee:** Create PowerPoint flash cards of suffixes. Have all students stand, and ask one student to define the suffix. If the student is correct, he/she remains standing. If the student is wrong, he/she sits down. Continue until only one student is standing.  Teaching Tips   * Say each new term in class, and have the students repeat them after you. * Stress the importance of using instructional aides to practice pronunciation. * Visual learners will benefit from *seeing* the suffixes in this chapter written on the board.   **Suffix guidelines:**   * + If the suffix begins with a vowel, drop the combing vowel from the combing form and add the suffix.   + If the suffix begins with a consonant, keep the combining vowel and add the suffix to the combining form.   + Keep the combining vowel between two or more roots in a term.   **Teaching Tips**  Allot abundant in-class time for students to really master these suffixes before moving on. These suffixes will provide the foundation for many future terms.  **Verbal Learners/Visual Learners**  Use word association whenever possible to help students remember definitions. Visual learners should doodle on their flash cards. Examples:   * To remember -*meter*—think of a meterstick that helps you measure. * To remember -*plasty* —think of plastic surgery, where you repair a body part. * To remember -*scope*—think of a microscope/periscope, which are instruments you look through. * To remember -*tripsy*—think of “whoopsy, I tripsy-ed and crushed something.” *  *  *  *  *  *  * To remember -*megaly*—think of a megasized item.   **Teaching Tips**  Show the students what they already know. Write several common suffixes on the board (*-logy*, *-ist*, *-ectomy*, *-itis*, *-scope*, *-rrhea*, *-meter*), and ask students to think of words they’ve heard before that use these word parts.  **Classroom Activities**  Pair students for review of terms.  **Did You Know?**  Most medical terms come from Latin and Greek origins.  **Homework Assignments**  Have students complete the Spelling Challenge associated with this chapter.  Study the pronunciation for medical terms in this chapter in the:   * Text in parentheses following the term * Glossary at Medical Terminology Interactive |
| **30**  **L O 2** | **2. Identify suffixes in medical terms. (pages 20-24, 29-30, and 32-35; P P T slides 4-9, 16-17, and 19-24)**  A. When constructing medical terms, suffixes may be added to a root word, combining form, or prefix to make a new term. Knowing common suffixes eases this process, and makes it easier to learn and understand new medical terms.  B. Practice is essential to being able to identify and understand suffixes. Pay particular attention to the first letter in each suffix—and remember that the combining form belongs with the root, not the suffix.  C. The following list offers some examples to review with students in class. See if they can both identify the suffixes and define them.   | **Medical Term** | **Definition** | | --- | --- | | abrasion | the process of scraping away from a surface, such as skin or teeth, by friction | | aphasia | without or absences of speech | | arousal | pertaining to a state of alertness | | exogenous | originating outside the body or an organ of the body, or produced from external causes, such as a disease caused by a bacterial or viral agent foreign to the body | | hematemesis | vomiting of blood | | infection | process whereby a pathogenic microorganism invades the body, reproduces, multiplies, and causes disease | | lithotripsy | surgical crushing of unwanted stones | | osteoclasis | surgical breaking of a bone | | osteomalacia | softening of bone | | quadriplegia | paralysis of four limbs | | thyroidectomy | surgical removal of the thyroid | | **Classroom Activities**  Have a discussion about the following questions:  1. Could you ever have a medical term without a suffix? Why, or why not?  2. Consider the following English terms: *friend*, *fast*, *thank*, *joy*. How could you modify their meaning by adding a few letters to the end? How is this similar to the purpose of a medical suffix?  **Teaching Tips**   * Stress the importance of learning word parts through memorization. * Discuss how research and medical information are effectively shared across the world despite the use of many languages.   **Classroom Activities**  Tell students never to guess at the correct definition of a term. If they don’t know the definition of a term, they should look it up in a medical dictionary to be sure they have an accurate understanding.  **Did You Know?**  A spelling error that changes just one or two letters in a term can completely change its meaning.  **Homework Assignments**  Have students complete the Word Search exercise associated with this chapter.  Study the pronunciation for medical terms in this chapter in the:   * Text in parentheses following the term * Glossary at Medical Terminology Interactive |
| **30**  **L O 3** | 3. **Use suffixes to build medical terms that pertain to medical specialties, symptoms, and diseases. (pages 25-28 and 31-32; P P T slides 12-15 and 18)**  A. Suffixes are used to build medical terms of all types, but among the most specific are those that describe medical specialties and diseases.  B. Some of these suffixes—particularly those related to specialties—may sound familiar, because they are used in other scientific fields.  C. To be able to identify the correct meaning of the suffix in such words, you will need to analyze the definition of the medical word. Use the list below to help students practice in class.   | **Medical Term** | **Definition** | | --- | --- | | arthralgia | pain in a joint | | audiologist | a specialist who studies hearing disorders | | gastritis | inflammation of the stomach | | infection | process whereby a pathogenic microorganism invades the body, reproduces, multiplies, and causes disease | | leukopenia | deficiency of white blood cells | | meningocele | hernia of the meninges of the brain or spinal column that protrudes through an abnormal opening | | osteoma | tumor of the bone | | pathology | study of diseases and the structural and functional changes they cause | | podiatry | treatment of diseases of the feet | | rhinorrhea | discharge from the nose | | **Teaching Tips**  Ask the students to look up the vocabulary terms in this chapter in a variety of different medical dictionaries. Which dictionary is their favorite, and why?  **Kinesthetic Learners**  These learners will benefit from handling the flash cards.  **Teaching Tips**  When a student suggests a word that is not actually a term, this provides a good time to discuss how not all potential word combinations are actual medical terms. For example, a student might suggest *tonsilloplasty* or *gastrolysis*. These words follow the rules for building a term, but are not actual medical terms. Make sure students realize that this will be very frustrating at first, but with practice, they will make fewer and fewer mistakes.  **Critical Thinking Questions**  1. Do you know how you learn best? What type of learner do you think you are, and why?  2**.** What other ways can you think of, besides flash cards, that might help you learn the new terms?  **Classroom Activities**  Form teams in class if there is time, and perform flash card drills in pairs. Go through the entire stack of flash cards once with each student, setting aside any cards that were missed or were difficult for that student. Go through the stack of cards set aside in the first review with each student.  **Verbal Learners**  Pair with another student for review of terms.  Teaching Tips  Analyzing a medical term is a little like detective work. You must investigate every part of the term.  Did You Know?  Most medical terms are formed by assembling various word parts to construct a term.  **Homework Assignments**  Study the pronunciation for medical terms in this chapter in the:   * Text in parentheses following the term * Glossary at Medical Terminology Interactive |
|  | **Homework Assignments**  • Read and review Chapter 2.  • Study the pronunciation for medical terms in this chapter in the parenthetical text following the term and the glossary at Medical Terminology Interactive.  • Study class notes.  • Complete worksheets. | Worksheet 1: Spelling Challenge, True/False, Fill in the Blank, Short Answer, Word Search  Worksheet 2: Building Medical Terms  Worksheet 3: Which Term Does Not Belong?  Worksheet 4: Crossword Puzzle |