

# Chapter 5, Medical Terminology

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## 1. Introduction to Medical Terminology

- Effective communication and documentation in healthcare rely on a strong knowledge of medical terminology [\[6\]](#).
- Understanding medical terms, symbols, and abbreviations is crucial for EMTs [\[6\]](#).
- Knowing medical jargon helps in communicating with EMS, healthcare, and public safety teams [\[8\]](#).
- The purpose of medical terminology is to use foundational and anatomical terms for communication [\[2\]](#).
- You can define unknown words by understanding term formation and component definitions [\[7\]](#).

Component	Description
Word Root	Foundation of the word <a href="#">[12]</a>
Prefix	Occurs before the word root <a href="#">[14]</a>
Suffix	Occurs after the word root <a href="#">[16]</a>

Combining Vowels	Vowels that join word roots or other components [17]
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## 2. Anatomy of Medical Terms: Word Roots, Prefixes, and Suffixes

- A word root is the main part or stem of a word [25].
- It conveys the essential meaning and often indicates a body part [27].
- Most terms have at least one word root [28].
- A prefix appears at the beginning of a term [32].
- prefixes usually describe location or intensity [33].
- They give the word root its specific meaning [34].
- suffixes are placed at the end of words [36].
- suffixes usually indicate a procedure, condition, disease, or part of speech [37]
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- Accurate spelling is essential in medical terminology [19].
  - For instance, "-phasia" means speaking, but "-phagia" means eating or swallowing [20].
  - Adding "dys-" (difficult/painful) to "-phasia" makes "dysphasia" (difficulty speaking) [21].
  - Adding "dys-" to "-phagia" makes "dysphagia" (difficulty eating or swallowing) [21].

## 3. Combining Vowels and Word Building Rules

- A combining vowel connects a word root to a suffix or another word root [39].
- The combining vowel helps ease pronunciation [40].
- In most cases, the combining vowel is "o" [40].
- It can also be "i" or "e" when joining a suffix starting with a consonant [40].
- A combining form is the combining vowel shown with the root word [41].

Rule	Application
Prefix is always at the beginning [42]	Example: "dys-" in dysuria [91]
Suffix is always at the end [42]	Example: "-pathy" in nephropathy [88]

Use a combining vowel when a suffix begins with a consonant <a href="#">[43]</a>	Makes pronunciation easier <a href="#">[43]</a>
Use a combining vowel between two word roots <a href="#">[43]</a>	Even if the second root begins with a vowel <a href="#">[43]</a>

## 4. Plural Endings and Special Word Parts

- Changing a singular term to plural follows specific rules [\[45\]](#).
- Sometimes, you can simply add an "s" [\[45\]](#).
- More complicated rules exist for other endings [\[45\]](#).

Singular Ending	Plural Ending	Example
-a	-ae	<a href="#">[46]</a>
-is	-es	<a href="#">[47]</a>
-ex or -ix	-ices	<a href="#">[48]</a>
-in, -im, -um	-a	<a href="#">[48]</a>
-us	-i	Bronchus becomes bronchi <a href="#">[48]</a>

- prefixes can indicate numbers, colors, positions, or directions [\[49\]](#).
- prefixes for numbers include uni, dipli, null, primi, multi, or bi [\[50\]](#).
- word roots for colors include cyano, leuco, uro, cyro, or melano [\[51\]](#).
- prefixes for positions or directions include ab, add, d, circum, preemie, trans, epi, or supra [\[52\]](#).

## 5. Directional and Movement Terms

- directional terms are needed to discuss the specific location of an injury [\[53\]](#).
- They can also describe how pain radiates [\[53\]](#).
- superior means towards the head [\[56\]](#).

- inferior means towards the feet [56].
- lateral is away from the midline [57].
- medial is towards the midline [57].
- proximal is towards the trunk of the body [59].
- distal is away from the trunk or nearer to the free end of an extremity [59].
- Superficial is closer to or on the skin [60].
- Deep is farther inside the body or tissue [60].
- ventral refers to the belly side or anterior surface [61].
- dorsal refers to the spinal side or posterior surface [61].
- palmar is the front region or palm of the hand [62].
- Plantar is the sole of the foot [62].
- apex is the tip of any structure [62].
- flexion is bending a joint [73].
- extension is straightening a joint [73].
- adduction is moving a body part towards the midline [74].
- abduction is moving a body part away from the midline [74].
- Bilateral means appearing on both sides of the midline [76].
- Unilateral means appearing on only one side of the body [78].

## 6. Patient Positions

Position	Description
Prone	Patient is lying face down [80]
Supine	Patient is lying face up [81]
Fowler's	Semi-reclining with head elevated [83]
Semi-Fowler's	Patient sits with back at a 45-degree angle [84]
High Fowler's	Patient is sitting at a 90-degree angle [85]

## 7. Breaking Down Medical Terms: Examples

- You can understand terms by breaking them into parts [87].
- **Nephropathy** has three parts [87].
  - "-pathy" is the suffix meaning disease [88].
  - "o" is the combining form [89].
  - "nephra" is the word root meaning kidney [89].
  - Nephropathy means disease of the kidney [90].
- **dysuria** can be broken down [91].
  - "-ia" is the suffix meaning a condition of [91].
  - "dys-" is the prefix meaning difficult, painful, or abnormal [92].
  - "ur" is the word root meaning urine [94].
  - dysuria means painful urination [94].
- **hyperemesis** has a prefix and a word root [95].
  - "hyper-" is the prefix meaning excessive [96].
  - "emesis" is the word root meaning vomiting [97].
  - hyperemesis means excessive vomiting [97].
- **analgesic** has a suffix, prefix, and word root [99].
  - "-ic" is the suffix meaning pertaining to [99].
  - "an-" is the prefix meaning without or absent of [99].
  - The word root refers to pain [99].
  - analgesic means pertaining to no pain [99].

## 8. Medical Abbreviations, Acronyms, and Symbols

- Medical abbreviations, acronyms, and symbols are used as shorthand for communication [100].
- They allow for faster communication [100].
- Only commonly understood abbreviations should be used [100].
- This minimizes misinterpretations and errors [100].
- The Joint Commission and Institute of Safe Medicine Practices are authorities on abbreviations [101].
- They provide "do not use" lists [101].
- An acronym shortens several words, usually using the first letter of each [102].
- It forms a shorter term pronounced as its own word [103].

- Be familiar with accepted uses in your local jurisdiction [103].
- Only widely understood and accepted symbols should be used [103].

Type	Description
Abbreviations	Shorthand for faster communication [100]
Acronyms	Shortened terms using initial letters, pronounced as a word [102]
Symbols	Shorthand for communication [100]

## 9. Review of Key Concepts

- The word root conveys the essential meaning of a medical term [104].
- prefixes indicate colors, numbers, positions, and directions [105].
- The plural form of "bronchus" is "bronchi" [106].
- Being superior to something means being closer to the head [107].
- Movement of an arm towards the midline is called adduction [108].
- A body part closer to the midline is medial [109].
- ventral identifies a body part on the belly side or anterior surface [110].
- The semi-fowler position means the patient is sitting at a 45-degree angle [110].
- A laceration on the plantar surface is on the sole of the foot [111].
- When using abbreviations, EMTs should use those in their agency, use only medically accepted ones, and use them to shorten documentation [111].