

Al-Furat Al-Awsat technical university

College of Medical Rehabilitation and Prosthetics

Medical Rehabilitation Department and Prosthetics



# MEDICAL TERMINOLOGY

Al-Furat Al-Awsat Technical University

**\*\*College of Medical Rehabilitation and Prosthetics\*\***

Assistant Lecturer Shaimaa Al-Hammami

**2025/2026**

Week	Topics
1 <sup>st</sup>	Introduction to Medical Terminology, Define and historical of medical terminology.
2 <sup>nd</sup>	Basic Elements of a Medical Word, Word root Examples combining form.
3 <sup>rd</sup>	Common prefix and suffixes.
4 <sup>th</sup>	Overview of Anatomy and Physiology.
5 <sup>th</sup>	Anatomical Position, Body Planes and Body Cavities.
6 <sup>th</sup>	Clinical, Radiologic, and Diagnostic Procedures.
7 <sup>th</sup>	Digestive System
8 <sup>th</sup>	Integumentary System
9 <sup>th</sup>	The Musculoskeletal System
10 <sup>th</sup>	The Reproductive System
11 <sup>th</sup>	Respiratory System

12 <sup>th</sup>	The Urinary System
13 <sup>th</sup>	The Cardiovascular System
14 <sup>th</sup>	Blood , Lymph and Immune Systems
15 <sup>th</sup>	Nervous system

## Learning Objectives

**By the end of this lectures, students will be able to:**

- 1- Define what medical terminology means.
- 2- Examine the rules for building medical terms..
- 3-Differentiate prefixes and roots that deal with body parts.
- 4- Identify the main components of medical terms: **prefixes**, **roots**, and **suffixes**

# Lecture 1

## Introduction to Medical Terminology

### Introduction

Medical terminology is the professional language used by healthcare workers to describe the human body, Its functions, diseases, procedures, and medical equipment.

It is based mainly on Greek and Latin words and helps professionals communicate clearly and precisely.

A medical terminology system is a way to create a common language for medical professionals. This language helps medical staff communicate more effectively and it makes documentation easier.

Medical terminology allows medical professionals to communicate more easily with each other, and with other medical professionals allowing them to be more effective in their practice.

## Importance of Medical Terminology :

Medical terminology is essential in healthcare because it ensures clear, accurate, and universal communication between all members of the medical team about a patient's condition, diagnosis, and treatment. Since medical terms are derived from Greek and Latin, they are understood internationally, regardless of the local language. , it save time and space in documentation and reduces medical errors.

## Examples:

Term	Meaning	Application
Amputation	Surgical removal of a limb	Done before prosthetic fitting
Prosthesis	Artificial device replacing a missing limb	Used as replacement limb
Orthosis	External device supporting or correcting deformity	Provides support or correction
Rehabilitation	Process of restoring ability	Includes physiotherapy and prosthetic training
Gait	Manner of walking	Evaluated in gait analysis
Residual limb	Remaining part after amputation	Important for socket fitting
Alignment	Correct positioning of prosthetic components	Ensures balance and comfort

## Lecture 2

### Basic Elements of a Medical Word, Word root Examples combining form

#### \*\*Word Structure\*\*

Medical terms are built from four-word parts. Those word parts are **prefix**, **word roots**, **suffix**, and **combining vowel**. When a word root is combined with a combining vowel, the word part is referred to as a combining form.

- 1- **\*\*Prefix\*\*** – the prefix appears at the beginning of a medical term and usually indicates a location, direction, type, quality, or quantity.

#### Examples

In the word: re/play (“re” is the **prefix**)

In the medical term: intra/ven/ous (“intra” is the **prefix**)

Prefixes often indicate:

**Number:** such as bi-meaning two

**Position:** such as sub-, meaning under

**Direction:** such as intra-, meaning within

**Time:** such as Brady-, meaning slow

**Negation:** such as a- and an-, meaning without

### Medical Prefixes - Numbers & Amounts

Mono-	One
Uni-	One
Bi-/Di-/Diplo-	Two
Tri-	Three
Qua(dr/r/t)-	Four
Semi-	Half
Hemi-	Half, One Side
Equi-/Iso-	Equal
Eu-	Normal
Normo-	Normal



**Monocle**



**Unicycle**



**Bicycle**



**Tricycle**



**Quadrilateral**



**Semicolon**



- 2- **\*\*Root\*\*** – The root gives a term its essential meaning. Nearly all medical terms contain at least one root. When a prefix is absent, the term begins with a root.

### Examples:

In the word: play/er (play is the word root)

In the medical term: arthr/itis (arthr – meaning “joint” – is the word root)

Some words contain more than one-word root. The order is generally dictated by common practice. As you practice throughout this course, you will learn more about how to determine the order of word roots.

In medical terminology, the root may indicate a body part or body system or colors.

- **cardial** – heart
- **pancreatitis** – pancreas
- **cyanosis** – blue

A medical word may be simply be a root or it may be a combination of word elements.

- **sclera** – white of the eye
- **electr/o/cardi/o/gram** – 2 roots and a suffix

- 3- **\*\* Suffix\*\*** – The suffix appears at the end of a term and may indicate a specialty, test, procedure, function, disorder, or status. Otherwise, the suffix may simply define whether the word is a noun, verb, or adjective.

### Examples:

In the word: king/om (“-om” is the suffix)

In the medical term: **\*Amputation\*** → “amput-” (root) + “-tion” (suffix) When defining a medical term, you often begin with the meaning of the suffix. For example: hepat/itis would be defined as “inflammation of the liver.” Changing the suffix, changes the meaning of the word.

- **dent/al** – —all means pertaining to
- **dent/ist** – —ist|| means specialist

#### 4- **\*\*Combining Vowel\*\***

The combining vowel is a word part – most often an o – that helps pronunciation.

The combining vowel is placed to connect two-word roots or to connect a word root and a suffix. **DO NOT** place a combining vowel to connect a prefix and a word root. Not all medical terms will have combining vowels.

#### Examples

-Hemat\o\logy Hematology

-Gastr\o\logy Gastrology

## Medical Terminology

### Simplifying it....

#### Prefix = Beginning (Descriptive)

- Location, Direction, Number, Quantity, Amount, Size, Color, Etc.

#### Root = Middle (Subject)

- Often pertains to a body part or system

#### Hyperthyroidism

(Prefix) (Root) (Suffix)

Over/In Excess Thyroid Gland Condition

Condition in which the thyroid gland is overactive

#### Suffix = Ending (Meaning)

- Disease, Disorder, Condition, Procedure, Process, Specialty, Test, Etc.
-

## **\*\*Common Prefixes, Roots, and Suffixes .**

### Examples

Component	Meaning	Example	Meaning of Example
Prefix: hyper-	over, excessive	hypertonia	increased muscle tone
Prefix: hypo-	under, below	hypotonia	decreased muscle tone
Root: myo	muscle	myopathy	muscle disease
Root: osteo	bone	osteopathy	bone disease
Suffix: -logy	study of	neurology	study of nerves
Suffix: -itis	inflammation	arthritis	joint inflammation

### **\*\*Review Questions\*\***

- 1- What are the three main parts of a medical term?
- 2- Give examples of prefixes, roots, and suffixes.
- 3- Define: prosthesis, orthosis, gait.

### **\*\*References\*\***

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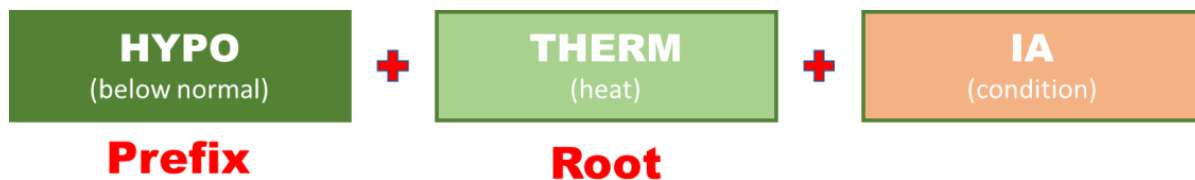
## **Lecture 3**

### **Common prefix**



# Medical Prefixes Table

Category	Prefixes	Meaning in English	Example in English
Negation	-an , -a, -Un	without, not	anemia
Negation	-in , -im	not	inactive
Position	-pro , -pre , -ante	before	prenatal
Position	-epi	upon, over	epidermis
Position	-sub , -intra , -hypo	under, within	hypoglycemia
Position	-inter	between	intercostal
Measurement	-medi	middle	medial
Measurement	-post	after, behind	postoperative
Measurement	-retro	behind, backward	retrograde
Measurement	-micro	small	microscope
Measurement	-macro	large	macroscopic
Measurement	-hyper	excessive	hypertension
Numbers	-poly , -multi	many	multicellular
Numbers	-primi	first	primigravida
Numbers	-uni , -mon	one	mononuclear
Numbers	-di , -bi	two	bilateral
Numbers	-tri	three	triceps
Numbers	-quadri	four	quadriceps
Time	-pre	before	prenatal
Time	-post	after	postnatal



## 1. Negative Prefixes (Show Opposites or Negation)

These prefixes make a word negative or opposite in meaning.

Prefix	Meaning	Example Words
<b>Un-</b>	Not, opposite of	Unhappy, Unfair, Unlucky
<b>Dis-</b>	Reverse, not	Disagree, Disappear, Disconnect
<b>In- / Im- / Il- / Ir-</b>	Not	Incomplete, Impossible, Illegal, Irregular
<b>Non-</b>	Not	Nonstop, Nonexistent
<b>Mis-</b>	Wrongly	Misunderstand, Mislead, Misplace
<b>De-</b>	Away from; Ending	<u>Dehydration</u>

## 2. Number Prefixes (Show Quantity or number)

These prefixes indicate numbers or numerical order.

Prefix	Meaning	Example Words
<b>Mono- Uni</b>	One, single	Monologue, Monochrome
<b>Bi-</b>	Two	Bicycle, Bilateral
<b>Tri-</b>	Three	Tricycle, Triangle,
<b>Quad-</b>	Four	Quadrant, Quadrilateral
<b>Multi-</b>	Many	Multitask, Multicultural, Multinational
<b>Poly-</b>	Many	Polygon, Polyglot, Polyester

### 3. Time , Direction Prefixes (Show Sequence or Repetition)

These prefixes relate to time, sequence, or repetition.

Prefix	Meaning	Example Words
<b>Pre-</b>	Before	Prepaid , Preview
<b>Post-</b>	After	Postgraduate , Postpone
<b>Re-</b>	Again	Rewrite , Rebuild
<b>Ex-</b>	Former	Ex-president, Ex-husband
<b>Ect/o-, Exo-</b>	Outer; Outside	<u>Exocrine gland</u>
<b>End/o-, Ent-, Enter/o-</b>	Within; Inner	<u>Endocrine gland</u>
<b>Epi-</b>	Upon; Outside of	<u>Epidermis</u>
<b>Ex-, Extra-</b>	Beyond	<u>Expiration</u>
<b>Infra-</b>	Beneath; Below	<u>Infratemporal fossa</u>
<b>Inter-</b>	Between	<u>Interstitial fluid</u>
<b>Intra-</b>	Within	<u>Intracellular fluid</u>
<b>Para-</b>	Alongside; Abnormal	<u>Parathyroid glands</u>
<b>Path</b>	Disease	<u>Pathologist</u>
<b>Peri-</b>	Around	<u>Pericardium</u>
<b>Retro-</b>	Backward; Behind	<u>Retroperitoneum</u>
<b>Sub-</b>	Under	<u>Subcutaneous layer</u>
<b>Super-</b>	Above	<u>Superior</u>
<b>Trans-</b>	Across; Through	<u>Transdermal</u>
<b>Anti-</b>	Against	<u>Anticholinergic drugs</u>
<b>Auto-</b>	Self	<u>Autocrine</u>

#### 4. Size & Degree Prefixes (Show Amount or Intensity)

These prefixes indicate size, amount, or importance.

Prefix	Meaning	Example Words
<b>Super-</b>	Above, great	Supermarket , Superstar
<b>Over-</b>	Too much	Overwork , Overheat
<b>Under-</b>	Too little	Underpaid, Underdeveloped
<b>Sub-</b>	Below	Subway, Subzero
<b>Brady-</b>	Slow	<u>Bradycardia</u>
<b>Diplo-</b>	Double	<u>Diploid</u>
<b>Hemi-</b>	Half	<u>Hemihypertrophy</u>
<b>Hetero-</b>	Other; Different	<u>Heterogeneous</u>
<b>Homo-</b>	Same	<u>Homozygous genotype</u>
<b>Hyper-</b>	Above; Beyond; Excessive	<u>Hypertension</u>
<b>Hypo-</b>	Under; Deficient	<u>Hypotension</u>
<b>Iso-</b>	Equal; Like	<u>Isointense</u>
<b>Macro-</b>	Large; Long; Big	<u>Macrophage</u>
<b>Mic-, Micro-</b>	Small	<u>Microglia</u>
<b>Oligo-</b>	Few; Little	<u>Oliguria</u>
<b>Poly-</b>	Many; Excessive	<u>Polyuria</u>
<b>Semi-</b>	Half	<u>Semilunar valves</u>
<b>Tachy-</b>	Fast	<u>Tachycardia</u>

## Color Prefixes

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PREFIX	MEANING	EXAMPLE OF USE IN MEDICAL TERMS
Chlor/o-	Green	<u>Chlorophyll</u>
Chrom-, Chromato-	Color	<u>Chromosome</u>
Cyano-	Blue	<u>Cyanosis</u>
Erythr/o-	Red	<u>Erythrocyte</u>
Leuk/o-	White	<u>Leukocyte</u>
Melan/o-	Black	<u>Melanin</u>

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### **\*\*Daily Assignment – Medical Terminology**

For each medical term below, ask the students to underline or list the prefix, root, and suffix.

1 .Tachycardia

8- Endoscopy

2 .Hypoglycemia

9. Cardiologist

3 .Bradykinesia

10. Microscopy

4 .Dermatitis

5 .Hypertension

6 .Gastroenterology

7 .Prenatal

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## **Lecture 4**

# **Common Suffixes**

## Common Suffixes

SUFFIX	MEANING	EXAMPLE OF USE IN MEDICAL TERMS
<b>-ac , -eal, -ial , -ity</b>	Pertaining to	<a href="#">Cardiac</a> , <a href="#">Esophageal</a> , <a href="#">Immunity</a>
<b>-emia</b>	Blood condition	<a href="#">Anemia</a>
<b>-ia</b>	Condition	<a href="#">Hemophilia</a>
<b>-ism</b>	Condition	<a href="#">Hypothyroidism</a>
<b>-ites, -itis</b>	Inflammation	<a href="#">Arthritis</a>
<b>-lysis, -lytic</b>	Break down; Destruction; Dissolving	<a href="#">Osteolytic</a>
<b>-malacia</b>	Softening	<a href="#">Osteomalacia</a>
<b>-megaly</b>	Enlargement	<a href="#">Acromegaly</a>
<b>-oma</b>	Tumor	<a href="#">Angiosarcoma</a>
<b>-osis</b>	Condition; Usually abnormal	<a href="#">Endometriosis</a>
<b>-pathy</b>	Disease	<a href="#">Lymphadenopathy</a>
<b>-penia</b>	Deficiency; Lack of	<a href="#">Thrombocytopenia</a>
<b>-plasia, -plastic , -trophy</b>	Growth	<a href="#">Hyperplasia</a> , <a href="#">Hypertrophy</a>
<b>-sclerosis</b>	Hardening	<a href="#">Arteriosclerosis</a>

**-sis**

Condition

[Agranulocytosis](#)

**-stasis**

Level; Unchanging

[Homeostasis](#)

## Procedure Suffixes

SUFFIX	MEANING	EXAMPLE OF USE IN MEDICAL TERMS
<b>-ectomy</b>	Cut out; Removal	<a href="#">Mastectomy</a>
<b>-gram</b>	Record; Picture	<a href="#">Electrocardiogram</a>
<b>-graph</b>	Instrument used to create a record or picture	<a href="#">Electrocardiograph</a>
<b>-meter</b>	Device used for measuring	<a href="#">Sphygmomanometer</a>
<b>-opsy</b>	Visual examination	<a href="#">Biopsy</a>
<b>-scope</b>	For examining	<a href="#">Endoscope</a>

### – Multiple choice

- 1 .A suffix meaning inflammation :      a) **-emia**   b) **-itis**   c) **-ology**
- 2 .A suffix meaning study of :      a) **-logy**   b) **-ectomy**   c) **-oma**
- 3 .A suffix meaning removal (surgical) :      a) **-itis**   b) **-ectomy**   c) **-algia**
- 4 .A suffix meaning pain :      a) **-algia**   b) **-emia**   c) **-gram**
- 5 .A suffix meaning tumor, mass :      a) **-oma**   b) **-itis**   c) **-logy**

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## **Lecture 5**

# **Overview of Anatomy and Physiology**

**Anatomy** : is the study of the structures body.

**Physiology**: is the study of the body's functions.



## **The body systems are:**

- Integumentary System
- Skeletal System
- Muscular System
- Heart
- Blood and Blood Vessels
- Respiratory System
- Digestive System
- Endocrine System
- Immune System
- Urinary System
- Reproductive System
- Nervous System
- Eye
- Ear

## INTEGUMENTARY SYSTEM TERMS

COMBINING		MEANING	EXAMPLE
cutane	skin	<u>cutaneous</u> infection	The patient has a cutaneous infection
derm	skin	<u>epidermal</u> only . skin	An epidermal burn affects the outer layer of the skin
dermat	skin	<u>dermatologist</u>	The dermatologist treated the patient's acne
onych	nail	<u>onycholysis</u> nail	Onycholysis can occur after trauma to the nail
Pil	Hair	<u>pilosebaceous</u>	Acne is an inflammation of the pilosebaceous unit
hidr/o	Sweat glands	hyperhidrosis	excessive sweating

## MUSCULOSKELETAL SYSTEM TERMS

Root words for specific bones and muscles areas of your body.

Root	Meaning	Example
Oste	Bone	Osteitis, osteocyte
Chondr	Cartilage	Chondritis, chondroma, chondrocyte
Arthr	Joint	Arthritis
My , myos	Muscle	Myoma, myositis

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## **Lecture 6**

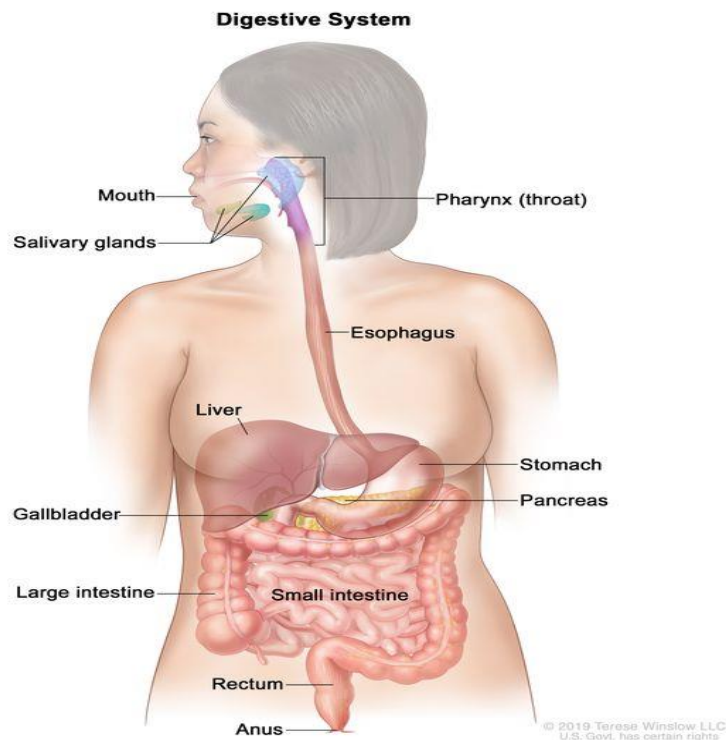
**DIGESTIVE SYSTEM TERMS**

**&**

**RESPIRATORY SYSTEM TERMS**

# DIGESTIVE SYSTEM TERMS

COMBINING	MEANING	EXAMPLE
<b>Stom</b>	Mouth	Stomatitis
<b>Or/o</b>	Mouth	Oral cavity
<b>Bucc/o</b>	cheek	Buccal mucosa
<b>Gastr</b>	Stomach	Gastritis, Gastrectomy
<b>Hepat</b>	Liver	Hepatitis , hepatoma
<b>Chol</b>	Gall, bile	Cholecystitis , cholecystectomy
<b>enter</b>	Small intestine	Enteritis
<b>Coli</b>	Larg intestine	Colitis
<b>Emes</b>	Vomit	Emesis (vomiting), , antiemetic (stopping vomiting)
<b>-rrhea</b>	Flow, discharge	Diarrhea



# RESPIRATORY SYSTEM TERMS

Root	Meaning	Example
<b>Rhin</b>	Nose	Rhinitis
<b>Laryng</b>	Larynx, “voice box”*	Laryngectomy (cutting into, surgically removing the larynx)
<b>Trache</b>	Trachea, “windpipe”	Tracheotomy, tracheostomy (temporary and permanent openings)
<b>Bronch</b>	Lung air passageways	Bronchoscopy (looking into the bronchi)
<b>Pne/u, -pnea</b>	Breath, air, lung	Tachypnea, dyspnea, apnea (accelerated, difficult/painful, cessation of breathing)
<b>Pulmo</b>	Lung	Pulmonary artery

## Diagram of Respiratory System

