

Preface

Medical terminology is an academic subject with a broad scope, reflecting the structural and functional complexities of the human body at all organisational levels. The book in hand aims to present the principal anatomic and pathological terms pertaining to the organs and structures of the human body, organised by the body system. It serves as a practice book to supplement any health sciences curriculum. It also functions as a key manual for every pre or in-session medical terminology course, as well as a self-study resource. In a nutshell, this book has been written for the student or trainee in medicine, nursing, and allied health sciences who wish to build a solid foundation in medical terminology.

In this book, medical terminology is presented and practised with a focus on:

- organization of medical terms in manageable semantic groups per unit to aid learning and retention,
- etymology of the terms based on Greek and Latin derivations (word roots, prefixes and suffixes),
- presentation of lay equivalents of medical terms so that learners can achieve a dual goal: become confident in using medical terminology and be able to communicate medical information to patients,
- associating medical terms to General English words for easier learning and retention of terms; for example, “abduction of a limb” can be more easily understood if compared with a person’s abduction,
- comparative presentation of terms in different organ contexts, e.g. the fornix of the brain, and the fornix of the vagina; similarly, a commissure may pertain to the brain (corpus callosum), the mouth (oral labial commissures), or the heart (mitral valve commissures),
- pronunciation patterns of medical terms,
- explanation of the spelling of easily confused medical terms or word parts based on etymology, e.g. “-cleisis” (from Greek: to occlude) vs “-clysis” (from Greek: to wash out); matter (=substance) vs mater (Latin for mother; used to denote a meninx),
- specially designed exercises and tasks to reflect the above instructional/learning methodology,
- review exercises to consolidate learning and retention of the medical terminology.

The book is organised into twenty-two (22) units as follows:

1. Understanding medical terminology
2. Common prefixes
3. Common suffixes
4. Anatomical position and directional terms
5. Surface anatomy
6. Review I
7. Organization of the body: systems and organs
8. Integumentary system
9. Skeletal system
10. Muscular system
11. Greek and Latin-derived medical singular and plural forms
12. Pronunciation patterns of medical terms
13. Nervous system
14. Endocrine system
15. Review II
16. Cardiovascular system
17. Respiratory system
18. Digestive system
19. Urinary system
20. Female reproductive system
21. Male reproductive system
22. Review III

Each unit:

- is subdivided into sections according to the organisation of the particular body system,
- includes short, focused texts and audio/video material on anatomy, physiology, and pathophysiology to present terminology in context,
- Provides ample practice with exercises of various formats to allow for variety and creativity,
- features a “whole-unit exercises” section, including consolidation of the acquired knowledge and skills through purposefully selected medical case reports published in medical journals,
- includes a complete terminology list for easy access and review by the student,
- provides opportunities for pair and small-group work promoting collaborative learning.

I hope you will find the “Medical Terminology for International Students” course both useful and enjoyable so that medical terminology will not be “all Greek to you”!



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Common prefixes

Learning Objectives

- To familiarise yourself with common prefixes used to build medical terms.
- To become aware of how prefixes modify the meaning of word roots.
- To become accustomed to pronouncing and spelling medical terms correctly and easily.

Common prefixes

A **prefix** is a word part attached to the **beginning** of a word root to modify its meaning. Prefixes may denote colour, measurement, time, contrast, position and direction.

The tasks in this unit will help you familiarise with common prefixes found in medical terms and enhance your ability to pronounce and spell medical terms correctly and easily.

TASK 1 Look at the words in the box. What do they have in common, and what sets them apart?

anuria polyuria diuresis
dysuria oliguria

TASK 2 Match the words with the given definitions by “translating” the prefix in each term.

- | | |
|--------------------|------------------------------------------------------|
| 1. Anuria | a. excessive or abnormally large production of urine |
| 2. Dysuria | b. excretion of urine |
| 3. Polyuria | c. difficult or painful urination |
| 4. Oliguria | d. suppression of urine formation |
| 5. Diuresis | e. low output of urine |

1. 2. 3. 4. 5.

TASK 3 Read the text below. Identify medical terms containing a prefix. Work in pairs and discuss the meaning of the terms.

Case presentation

A 51-year-old Pakistani man was seen in postoperative intensive care after right parathyroidectomy and mediastinal mass resection for the management of postoperative hypocalcaemia. He had a background history of dyspnea. Examination was unremarkable. Preoperative laboratory evaluation revealed a calcium level of 12.7 mg/dl, phosphate of 1.9 mg/dl, serum albumin of 4.8 g/dl, alkaline

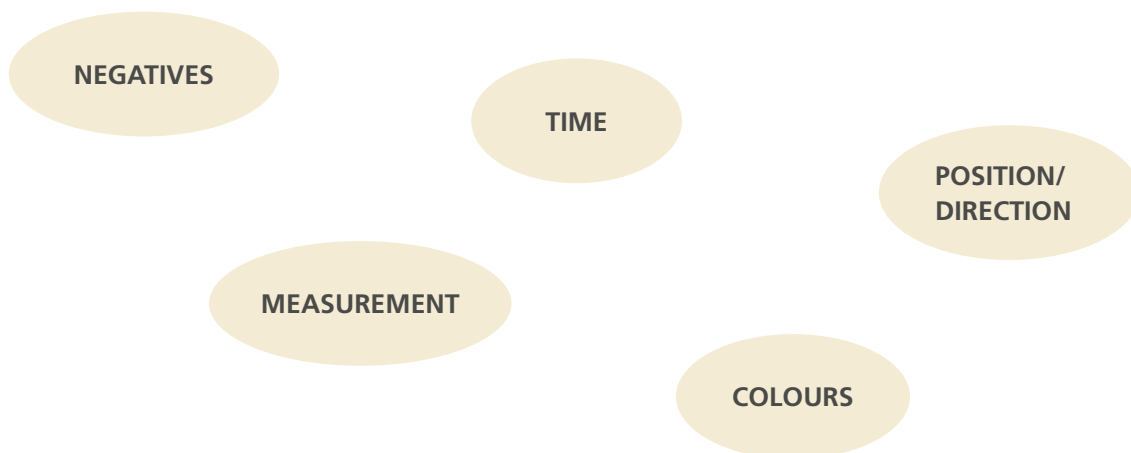
phosphate of 94 U/L, and serum intact parathyroid hormone level 413.8 pg/ml. Further workup revealed a large mediastinal mass, which was diagnosed as atypical carcinoid after Tru-Cut biopsy. He underwent right-sided parathyroidectomy and resection of the mediastinal mass. He was started on everolimus and planned for octreotide therapy.

Text adapted from: Kiran Z, et al. (2017). Incidental metastatic mediastinal atypical carcinoid in a patient with parathyroid adenoma: a case report. Journal of Medical Case Reports, 26;11(1):81. Retrieved from: <https://www.ncbi.nlm.nih.gov/pubmed/28342443>

TASK 4 Study the medical terms in the table below and identify the prefix in each term. Use a slash (/) to separate the prefix from the rest of the word. Discuss in pairs what the prefixes mean and how they modify the meaning of the words.

antibacterial	circumference	adrenal
hemiparesis	bilateral	supraclavicular
epigastric	leukocytosis	semilunar
dyspepsia	melanocyte	postoperatively
diplopia	cyanosis	anemia
prenatal	pancolitis	hypogastric

TASK 5 Complete the mind-maps below with the prefixes you identified in the terms in the table above. Draw arrows and write the prefixes in the corresponding topic.



Prefixes pertaining to “time”

TASK 6 Study the prefixes and their meaning. Work in pairs or small groups and write example terms for each prefix. You may use an electronic medical dictionary to check your ideas.

TABLE 1. Prefixes referring to TIME

Prefix	Meaning	Examples
ante-	before	
pre-	before	
post-	after	
per-	during	
neo-	new, newly	
pro-	forward	

TASK 7 Now, complete the boldface medical terms by adding the prefix corresponding to the given cues.

-**menopausal** woman (referring to the period **after** the termination of menstruation)
-**operative** cholangiography (referring to the time **during** an operation)
-**nate** (a **newly born** baby)
-**natal care** (referring to the period **before** birth) (two prefixes)
-**gnosis** (**forecast** of the probable course of a disease)

Prefixes pertaining to “colour”

TASK 8 Read the medical terms in the box. All of them contain prefixes pertaining to colour.

cyanosis glaucoma leukopenia purpura xanthoma
erythema jaundice melanocyte rubella

TASK 9 Can you match the terms with the following definitions?

1. Cell producing a dark-coloured pigment:
2. Contagious viral disease causing a red rash:
3. A condition of red or purple discoloured spots on the skin:
4. Redness of the skin:
5. Condition causing the eye to look abnormally greyish blue:
6. Yellowish discolouration of the skin or whites of the eyes:
7. Bluish discolouration of the skin:
8. Deposition of yellowish material that can appear anywhere in the body:
9. A decrease in the number of white blood cells:

NOTE: In Greek-derived words, the initial “x” is pronounced /z/, so “xanthoma” is pronounced /zanthoma/. A detailed presentation of the medical terminology pronunciation patterns is made in Unit 12.

Prefixes with a negative meaning

TASK 10 Read the following sentences and identify terms containing prefixes. Identify the prefix in each term and complete the table below as appropriate.

1. The patient was given antibiotics and two days later, he was afebrile.
2. Aniridia is a congenital eye condition in which the iris is not fully formed or totally missing.
3. Cadaveric dissection is a common learning procedure in the gross anatomy lab.