

Lecture 2

GENERAL PREFIXES

(Word beginning–)

2022–2023

General terminology 27/10/2023 03:23

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Prefixes

Prefix Features

- ✓ Typically helps to further define a word root and make a medical term more specific.
- ✓ Alter the term meaning or form a new word.
- ✓ Not all medical terms contain prefixes.
- ✓ Commonly indicate location, position, direction, color, size, time, number, or negation.
- ✓ Will always precede a hyphen (Prefix-); e.g., pre-, sub-, hyper-, hypo-, bi-, para-, a-.

I. Prefixes pertaining to location

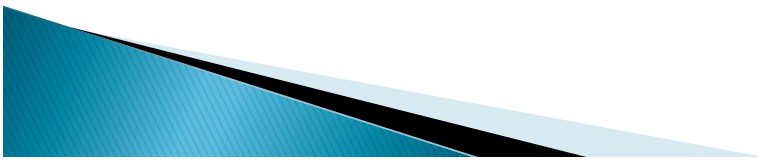
1. **Intra – or in–**: means inside, within or in:

e.g. **intracellular**: means inside cells

e.g., **intramuscular**: means within the muscle.

e.g., **intravenous**: means in the veins.

e.g., **Intramolecular**: Means within the molecule.



2. **Inter–**: means between

e.g. **Intercellular**: means between cells,

e.g., **Intercostals**: means between ribs.

3. **Endo –**: means within or inside

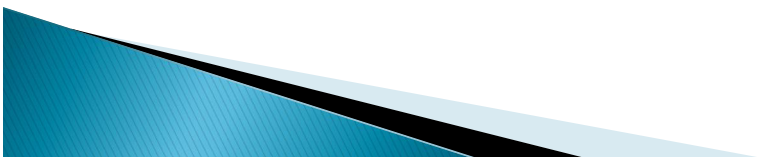
e.g., **Endometriosis**: means inflammation within the uterus.

e.g., **Endocarditis**: means inflammation within the heart (endocardium).

4. **extra–**: outside of

e.g., **extracellular**: outside the cell

e.g., **extravascular**: outside the blood vessels

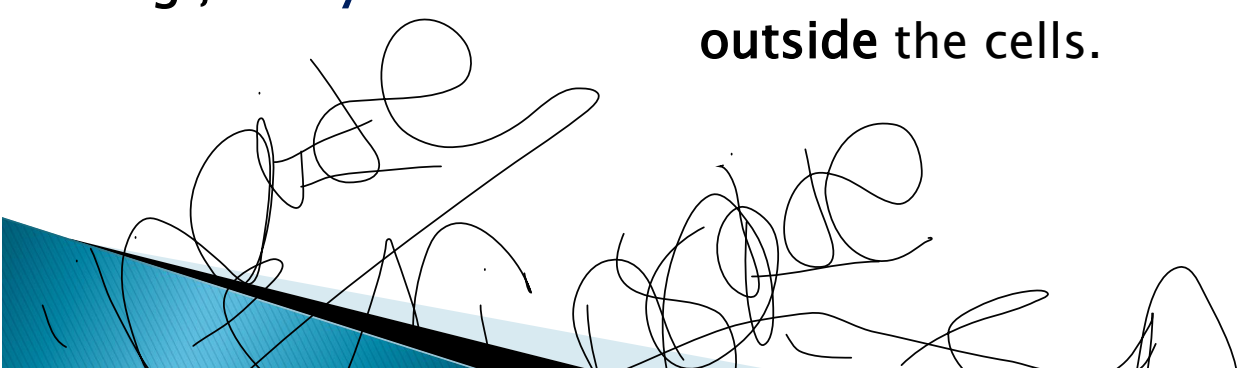


5. Peri-, circum-: means around

- ▶ e.g. **pericarditis**: Inflammation around the heart (inflammation of pericardium),
- ▶ **Periocular**: Around the eye,
- ▶ **Circumduction**: Moving around the joint in a circular motion.



6. Exo- or Ecto-: means outside,

- ▶ e.g. **Ectopic pregnancy**: Pregnancy outside the uterine cavity
 - ▶ e.g., **Ectoparasite**: A parasite outside the body.
 - ▶ e.g., **Ectopic heart beat**: Abnormal heart beat originating outside SA node.
 - ▶ e.g., **Exocytosis**: means release outside the cells.
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7. en-: means inside

- ▶ e.g., **en**cephal: Brain (inside head "cephal"),
- ▶ e.g. **en**cephalitis: brain inflammation.
- ▶ e.g., **en**cephalopathy: pathological changes of the brain inside the skull.

8. Retro-: means behind, backward

- ▶ e.g., **Retro**cardial: means behind heart.
- ▶ e.g., **Retro**sternal : Behind breast bone (sternum).

9. Post-: means behind

- ▶ e.g. **post**nasal: means **behind** the nose or behind the nasal cavity.
- ▶ e.g., **post**costal: means **behind** the ribs.

10. Sub- or hypo-: means under or lower

- ▶ e.g. **Sub**cutaneous (syn. Hypodermic): means under skin or beneath the skin.
- ▶ e.g., **Sub**toxic level: means below toxic level.

11. Dorso-: means back

e.g. **Dorso**cephalic: means back of head.

12. Ventro-: means front

e.g., **Vent**ral side: means front side.

13. Latero-: means side,

e.g. **Bilateral**: means in both sides.

e.g., **Unilateral**: means in one side

14. Epi or supra: means upon or above/superior

e.g., **epi**gastric: upon or above the stomach

e.g., **Supra**renal gland: means gland above the kidney.

15. Antero-: means anterior

e.g. **antero**lateral: means on the anterior and lateral parts.

16. Dextro-: means on the right,

e.g. **dextro**cardia: means having the heart in the right side.

17. Levo: means left

e.g. **levo**rotatory: means a material that rotates the polarized light to the left. (**Opposite: Dextrorotatory**)

18. Medio-: means middle
e.g., **mediolateral**: relating midline and one side.

19. Ad-: means towards,
e.g. **adduction**: means moving a limb towards the
body.

20. Ab-: means away from,
e.g. **abduction**: means moving a limb away from
the body.

21. Apo-: means separate,
e.g. **apoptosis**: means fragmentation of a cell into
separate parts i.e., programmed cell death.

II- Prefixes pertaining to the time

1. Pre- or pro- : before or anterior # post-: after.

e.g., preanaesthetic: before anaesthesia.

e.g., prenatal care: care preceding birth)

e.g., premenstrual: means before menstruation.

e.g., Procephalic: Anterior part of the head.

e.g., Prochondral : before the formation of cartilage

2. Ante-: before

e.g., ante cibum (a.c.): before meal.

e.g., antenatal: before birth.

e.g., antepartum: before delivery.

e.g., antedate: before the expected date.

e.g., Antepartum haemorrhage: bleeding in pregnancy before delivery.

3. Post-: means after

▶ e.g., postnatal: means after birth,

▶ e.g., postpartum: means after labor,

▶ e.g., postmortem: means after death.

▶ e.g., postoperative care: means care after operation.

▶ e.g., post-anesthesia: means after anesthesia.

▶ e.g., Post cibum (p.c.): after meal.

III– Prefixes Pertaining to Negation

1. a– or an–: means without or no

- ▶ e.g. **an**uria: means no urine,
- ▶ e.g., **a**tony: means loss of muscle tone,
- ▶ e.g., **a**febrile: means without fever,
- ▶ e.g., **a**septic: means without infection.
- ▶ e.g., **a**nephric: without or lacking kidneys
- ▶ e.g., **a**nesthesia: without sensation
- ▶ e.g., **a**nencephaly: without brain.

2. Anti-: means against

- ▶ e.g. **anti**emetic: means a drug which stops vomiting,
- ▶ e.g., **anti**diarrheal: means against diarrhea.
- ▶ e.g., **anti**allergic drug: drug against allergy.
- ▶ e.g., **anti**histaminics: drugs opposing the action of histamine.

3. Contra-: means against

- ▶ e.g. **contra**ception: means inhibition of pregnancy.
- ▶ e.g., **contra**indications: means cases in which the drug can't be used.



IV– Prefixes Pertaining to the Amount & Numerical



1. **hyper-**: above normal, excessive, over.

- ▶ e.g., hyperacidity: abnormally high degree of acidity in gastric juice.
- ▶ e.g., hyperglycaemia: above normal level of glucose in the blood.
- ▶ e.g., hyperkalaemia: above normal amount of potassium in the blood.
- ▶ e.g., hypercalcemia: abnormal high concentration of calcium in the blood.
- ▶ e.g., hypercalciuria: excretion of abnormally large amounts of calcium in the urine.
- ▶ e.g., Hyperthyroidism: means increased level of thyroid hormones
- ▶ e.g., hyperemesis: means excessive vomiting,
- ▶ e.g., hypertension: means higher blood pressure.

2. **hypo-**: Below normal or lower than normal.

- ▶ **Hypoglycemia**: means low concentration of glucose in the blood.
- ▶ **Hypokalemia**: abnormal low concentration of potassium ions in the blood.; (kalium: L. name of potassium, -emia = blood).
- ▶ **Hypodermic**: beneath the skin (syn. subcutaneous).
- ▶ **Hypotension**: below normal arterial blood pressure.
- ▶ **Hypoxia**: below normal oxygen tension.

3. **Semi-**: means half, (L. semis = half).

4. **Hemi-**: one-half. (syn. = semi)

▶ **Semicoma**: means half coma (syn. semiconscious).

▶ **Semisynthetic**: partly synthetic and partly natural molecule (as benzthine penicillin).

▶ **Hemiplegia**: paralysis of one half (one side) of the body.

N.B. quadriplegia means paralysis of all four limbs)

▶ **Hemisphere**: half of a spherical structure.

4. **Mono- or uni-**: single or one,

▶ e.g. **Monocyte**: means a single cell,

▶ e.g., **Unidirectional**: means has one direction.

▶ e.g., **Unilateral**: means one side

5. **Bi- or Bis-**: two, di

e.g. **Bilateral**: means two sides.

e.g., **Bisphosphate**: means diphosphate.

e.g., **Bicyclic**: means two cycles.

6. **Tri- or Tris- or terti-**: three

e.g. **Tricuspid valve**: means heart valve that is composed of three parts.

e.g., **Tertiary amines**: Nitrogen surrounded by three alkyl groups (lipid soluble)

7. **Quadri- or Tetra-**: four,

e.g. **Quadriplegia**: means paralysis in all four limbs.

e.g., **Tetracycles**: means four cycles

e.g., **Quaternary amine**: means nitrogen surrounded by four alkyl groups (ionic, water soluble)

8. Penta-: Five

e.g., **Pentane**: means alkane with five carbon atoms.

9. Hexa-: six

e.g., **Hexane**: means alkane with six carbon atoms.

10. Hepta-: seven

e.g., **Heptane**: means alkane with seven C atoms.

11. Octa-: eight

e.g., **Octagon**: means eight angle structure.

. nona-: nine

e.g., **Nonane**: means alkane with nine carbon atoms.

. decata-: ten

e.g., **Decane**: means alkane with ten carbon atoms.

12. Multi- or poly-: means many or much

e.g., **Polyneuritis**: means inflammation in many nerves

e.g., **Multipara**: means multiple pregnancies (4 or more).

e.g., **polyuria**: means excessive urination

13. Homo- or homeo-: means the same,

e.g., **Homomorphic**: means same shape,

e.g., **Homeostasis**: means same normal condition.

e.g., **Homogenous mixture**: means mixture with same appearance.

14. Hetero-: means different,

e.g., **Heterotypic**: means with different types.

e.g., **Heterogenous mixture**: means mixture made of different appearance.

15. Allo-: means different (syn.: , hetero-)

e.g., **Allopathy**: means different disease.

e.g., **Allograft**: means graft (organ transfer) from different individual (donor).

N.B. autograft: an organ transferred by grafting into a new position in the body of the **same** individual

16. Amphi-, diplo- or ambi-: mean double, both
e.g., **Amphiphilic** means molecule having both hydrophilic and hydrophilic parts (surfactant).

e.g., **Diplopia** means: double vision,

e.g., **Ambilateral**: means having two sides.

e.g., **Amphoteric compound**: means compound that can react both as an acid as well as a base.

17. Schizo-: means split or divided,
e.g. **Schizophrenia**: means split mind.

18. Oligo-: means few, little
e.g. **Oligospermia**: means decreased sperm count.
e.g., **Oligouria**: very little urine formation

19. super-: in excess, superior.

e.g., **Superacidity**: means an excess of acid
(syn. hyperacidity)

Exercises

- ▶ Q1: Analyze the following terms into their building blocks (roots and affixes):

	Root	Prefix	Suffix
▶ Hypoglycemia	Ex: Glyc	Hypo-	-emia
▶ Oligouria	Ur	Oligo-	-ia
▶ Bradycardia	Card	Brady-	-ia
▶ Gastroenteritis	Gastr, Enter	-	-itis
▶ Leucopenia	-	Leuco-	-penia
▶ Bactericidal	Bacter	-	-cidal
▶ Hepatitis	Hepat	-	-itis
▶ Hyperkalemia	Kal	Hyper-	-emia
▶ Oligospermia.	Sperm	Olio-	-ia

