Medical Terminology

Unit 15
Ophthalmology, Endocrinology, and Medical Specialties

Ophthalm/o = Eye
- Ophthalm/itis: Inflammation of the eye
- Ophthalm/ic: Pertaining to the eye
- Ophthalm/alga, Ophthalm/odynia: Pain in the eye
- Ophthalm/o/meter: Instrument for measuring the eye (curvature of the cornea)
- Ophthalm/o/ptosis, Exophthalmos: Herniation of an eye (abnormal protrusion)
- Ocul/ar: Pertaining to the eye

Opt/o = Vision
- Opt/o/metrist: One who measures visual acuity
- Opt/ic: The cranial nerve for vision (adj.)
- Opt/o/metry: The measurement of vision (Practice assessing vision disorders)
Ophthalmologist
- Physician (MD or DO) specialist in treating diseases of the eye and performing surgery
- Degree from medical school
- Certified Ophthalmic Technician (COT)
  - Technician that assists ophthalmologists with eye exams and helps fit corrective lenses

Optometrist
- Licensed practitioner (OD) limited to eye examinations and prescribing corrective lenses
- Degree from optometry school

-opia = Vision
- Cyan/opia: Defect in vision that causes objects to appear blue
- Xanth/opia: Yellow vision
- Chlor/opia: Green vision
- Erythr/opia: Red vision

-opia = Vision
- My/opia: Nearsightedness
- Hyper/opia: Farsightedness
- Presby/opia: Loss of accommodation, “old vision”
- Dipl/opia: Double vision

Diplo- = Double
- Diplo/cardia: Having a double heart
- Diplo/genesis: Production of double parts or double substances
- Diplo/coccus: Coccus that grows in pairs
- Diplo/bacillus: Bacillus that occurs in pairs

Ambi- = Both, Both sides
- Ambi/later/al: Pertaining to both sides
- Ambi/dextr/ous: Can work well with both hands
- Ambi/opia: Both eyes (ou) form separate images (vision)
- Ambi/valence (n.): Unable to decide, Wavering on both sides
  - Ambi/valent (adj.)

-opter = Visible
- Optos = that which sees
- Di/opter: A unit of measurement of refraction in the eye
  - OS+1D = left eye 1 diopter
- Dia/scope: An instrument for examining through
Tropia = Turning

- Trope = Turning
- When the eyes appear to be turned in an abnormal position, it is called **strabismus** or **squint**

**Eyeshadow**  

When the eyes appear to be turned in an abnormal position, it is called **strabismus** or **squint**

- **Eyes pointing outward**
- **Eyes pointing inward**
- **Eyes pointing upward**
- **Eyes pointing downward**
- **Permanent deviation of the eye around its anteroposterior axis**
- **Exo/tropia**
- **Eso/tropia**
- **Hyper/tropia**
- **Hypo/tropia**
- **Cyclo/tropia**

Phor(ia) = To carry, Bear

- **Dys/phoria**: A feeling of depression. Carry an ill feeling.
- **Eu/phoria**: Feeling of well being
- **Phor/opt/er**: An instrument used to determine the prescription strength needed for corrective lenses
- **Phor/o/meter**: The instrument that measures the tone and pull of the eye-moving (bearing) muscle

Blephar/o = Eyelid

- **Blephar/o/ptosis**: Prolapse of an eyelid
- **Blephar/edema**: swelling of the eyelid
- **Oidein = to become swollen**
- **Blephar/itis**: Inflammation of an eyelid
- **Blephar/otomy**: Incision of an eyelid

Blephar/o = Eyelid

- **Excision of lesions on the eyelid**  
- **Surgical repair of an eyelid**
- **Twitching of an eyelid**
- **Prolapse of an eyelid (droopy eyelid)**
- **Suture of the eyelid**
- **Blephar/ectomy**
- **Blephar/o/plasty**
- **Blephar/o/spasm**
- **Blephar/o/ptosis**
- **Blephar/o/rrhaphy**

Conjunctiv/o = Conjunctiva

- **Conjunctiva is the membrane that:**
  - lines the eyelids → palpebral conjunctiva
  - line the sclera → ocular conjunctiva
- **Conjunctiv/itis**: Inflammation of conjunctiva
Phac/o = Crystalline lens
- Phac/o/cele: Dislocation of the lens
- Phacos = lentil
- Lentils have a biconvex shape just like the crystalline lens of the eye
- Phac/o/emulsification: Ultrasonic treatment to emulsify the lens and to remove the cataract
- Cataracts are opacities of the lens of the eye

Scler/o = Sclera
- Scleras = hard
- Sclera: White, “hard” outer coat of the eye
- Scler/o/sis: Condition of hardness

Scler/o = Sclera
- Pertaining to the sclera (adj.)
- Excision of the sclera (or part)
- Formation of an opening into the sclera
- Inflammation of the sclera
- Scler/al
- Scler/ectomy
- Scler/o/stomy
- Scler/itis

Ir/o, Irid/o = Iris
- Colored part of the eye
- Iritis: Inflammation of the iris
- Corne/o/ir/itis: Inflammation of the cornea and iris
- Scler/o/ir/itis: Inflammation of the sclera and iris
- Ir/ides (Plural)
- Irid/o/cele: Protrusion of the iris (dislocation)
- Irid/algia: Pain in the iris
- Irid/ectomy: Excision of part or all of the iris
- Irid/o/ptosis
- Irid/o/malacia
- Irid/o/rrhexis
- Irid/o/plegia
- Irid/o/paralysis
Retin/o = Retina
- Retin/al: Pertaining to the retina
- Retin/itis: Inflammation of the retina
- Retin/o/pey: Fixation of a detached retina
- Retin/o/plasty: Surgical repair of retina
- Retin/o/scope: Instrument used to examine the refractive error of the eye (retina)
- Retin/o/scoy: The process of using a retinoscope. Also known as “Skiascopy”.

Glaucoma
- A disease of the eye in which the intraocular pressure is increased.
  - Open angle glaucoma
  - Angle closure glaucoma
  - Congenital

Cor/e, Core/o = Pupil
- Cor/ectopia: Pupil out of place
- Core/e/lysis: Destruction of the pupil
- Core/ectasia (is): Dilatation (stretching) of the pupil
- Anis/o/coria: Unequal pupil size
- Core/o/ meter, Pupil/o/ meter: Instrument for measuring the pupil
- Core/o/metry, Pupil/o/metry: Measurement of the pupil
- Core/o/plasty: Plastic surgery of the pupil

Corne/o = Cornea
- Corne/al: (adj.) Pertaining to cornea
- Corne/o/ir/itis: Inflammation of cornea and iris
- Corne/o/scler/al: Pertaining to cornea and sclera

Kerat/o = Cornea
- Kerat/ectasia (is): Forward bulging (dilatation) of the cornea
- Kerat/o/cele: Herniation of the cornea (protrusion of the cornea)
- Kerat/o/plasty: Plastic operation of the cornea (corneal transplant)
- Kerat/o/tomy: Incision of the cornea
  - Radial keratotomy = Making small incision into the cornea to improve vision in myopia
- Kerat/o/rhexis: Corneal rupture
- Kerat/o/scler/itis: Inflammation of cornea and sclera

Cycl/o = Ciliary body
- Cyclos = Circle
- Ciliary body encircles the inside of the iris and controls the iris shape/size
- Cycl/o/plegia (n.): Paralysis of the ciliary body
  - Cycl/o/plegic (adj.)
- Cycl/o/kerat/itis: Ciliary body and cornea inflammation
**Lacrim/o= Tears**
- Lacrim/al: Pertaining to tears
- Lacral gland secretes tears
- Lacral sac collects lacrimal fluids (tears)
- Lacrimation: Tearing, Crying
- Nas/o/lacrim/al: Pertaining to the nasal passages and the tear ducts
- Nasolacrimal duct drains away the tears
- Lacrimal fluid keeps the surface of the eye moistened

**Dacry/o = Tears**
- Dacry/o/rrhea: Excessive lacrimation, Flow of tears
- Dacry/o/cyst/itis: Tear sac inflammation
- Dacry/o/aden/algia: Pain in tear gland
- Dacry/oma: Tumor of the tear duct or gland
- Dacry/o/py/o/rrhea: Discharge of pus from tear gland
- Dacry/o/cyst/o/cele: Herniation of the tear sac
- Dacry/o/lith: Stone in the tear duct

**Onych/o = Nails**
- Onych/o/malac/ia: Softening of the nails
- Onych/o/myc/osis: Fungus infection (condition) of the nails
- Onych/o/phagia: Nail biting (eating)
- Onych/o/crypt/osis: Hidden nail or condition of nail being hidden, Ingrown nail
- Par/onych/ia: Condition of infection in the tissues around the nail

**Trich/o = Hair**
- Trich/o/genous: Promoting hair growth
- Trich/iasis: Formation of hair (in the wrong places)
- Trich/o/glossia (n.): Hairy tongue
- Trich/oid: Resembling hair
- Trich/o/phobia: Abnormal fear of hair
- Trich/o/pathy: Air hair disease
Cyt/o = Cell
- Cyt/o-meter: An instrument for measuring (counting) cells
- Cyt/o/metry: The process of measuring (counting) cells
- Cyt/o/stasis: Stopping or controlling cells
- Cyt/o/scopy: Examination of cells

Phag/o = Eat, Swallow
- Phag/ia: Condition of eating or swallowing
- Phag/o/cyte: A cell that eats microorganisms
- Phag/o/cyt/osis: The process of the cells eating microorganisms
- Cyt/o/phagy = Phag/o/cyt/osis
- Macr/o/phage: A large phagocyte
- Micr/o/phage: A small phagocyte

Phag/o = Eat, Swallow
- Nail biting
- Hair swallowing
- Air swallowing
- Onych/o/phagy (ia)
- Trich/o/phagy (ia)
- Aer/o/phagy (ia)

Endo- = Inside
- Endo/crine: To secrete inside. Glands that secrete hormones
- Endo/crin/ology: The medical specialty studying the endocrine system
- Endo/crin/ologist: The specialist (physician) in the study of endocrine system

Combining Form: Meaning
- Thyroid/o, thyr/o: Thyroid gland
- Thym/o: Thymus gland
- Adren/o: Adrenal gland
- Pancreat/o: Pancreas
- Oophor/o: Ovary
- Testic/o, Orchid/o, Orchi/o: Testis

Hormones: Glands that produce
- Adren/o/corticoid (cortisone)
- Thyri/o/xine, Thyri/o/xin: Thyroid gland
- Test/o/sterone: Testes
Thyroid
- Hyper/thyroid/ism: Overactive thyroid
- Hypo/thyroid/ism: Underactive thyroid

Adren/o = Adrenal gland
- Adren/o/pathy: Any disease condition of the adrenal glands
- Adren/o/megaly: Enlargement of the adrenal glands
- Adren/o/lysis: Destruction of adrenal tissue
- Adrenal glands are also called Supra/renal glands because they are above the kidneys.
- Supra/renal glands produce epi/nephr/ine.

Pituitary Gland
- Pituitary gland (hypophysis) is an endocrine gland secreting a number of hormones that regulate many bodily processes including growth, reproduction, and various metabolic activities.
  - Anterior lobe
  - Posterior lobe

-emia = Blood condition
- Isch/emia: A condition in which blood flow is interrupted
  - Transient ischemic attack (TIA) = temporary interruption of blood flow in brain
- Leuk/emia: Blood cancer with abnormally increased leukocyte count

-emia = Blood condition
- Reduction in red blood cells
- Too much blood (in one part)
- Urine constituents in the blood
  - Blood in the urine
  - An/emia
  - Hyper/emia
  - Ur/emia
  - Hemat/uria
**Traumat/o = Trauma**
- Trauma = Wound or injury
- Traumatology: The study of caring for wounds
- Traumatic: Pertaining to wounds

**Various injury types**
- Abrasion
- Contusion
- Evulsion
- Puncture
- Fracture
- Laceration
- Scrape
- Bruise
- A tearing away
- Make a hole
- Break
- A cut

**Specialty** | **Specialist** | **Limits of Field**
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Pathology & Pathologist & Diseases-nature & causes
Dermatology & Dermatologist & Skin
Neurology & Neurologist & Nervous system diseases
Gynecology & Gynecologist & Female diseases
Urology & Urologist & Male & urinary diseases
Endocrinology & Endocrinologist & Glands of internal secretion
Oncology & Oncologist & Neoplasms (New growths)
Cardiology & Cardiologist & Heart
Ophthalmology & Ophthalmologist & Eye

**Specialty** | **Specialist** | **Limits of Field**
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Otorhinolaryngology & Otorhinolaryngologist & Ear-Nose-Throat
Obstetrics & Obstetrician & Pregnancy, Childbirth
Geriatrics & Geriatrician & Old age
Pediatrics & Pediatrician & Children
Orthopedics & Orthopedist & Bones and muscles
Psychiatry & Psychiatrist & Mental disorders
Audiology & Audiologist & Hearing function
Radiology & Radiologist & Diagnostic imaging
Chiropractic & Chiropractor & Manipulation therapy
Podiatry & Podiatrist & Diseases of the foot

**Abbreviation**
- ACTH: Adrenocorticotropic hormone
- AOA: American Optometric Association
- COA: Certified Ophthalmic Assistant
- COMT: Certified Ophthalmic Medical Technologist
- COT: Certified Ophthalmic Technician
- D: Dioptr
- EMT: Emergency medical technician
- EMT-P: EMT - paramedic
- ENT: Ear, nose, throat specialist

**Abbreviation**
- FSH: Follicle-stimulating hormone
- Fracture
- Human chorionic gonadotropin
- Light and accommodation
- Light amplification by stimulated emission of radiation
- Milligram (0.001 gram)
- Millimeter (0.001 meter)
- Open-angle glaucoma
- Obstetrician, Obstetrics
Abbreviation

- **od**: Right eye (oculus dexter)
- **OD**: Doctor of optometry
- **os**: Left eye (oculus sinister)
- **ou**: Both eyes (oculus uterque)
- **PERRLA**: Pupils equal, round, reactive to light and accomodation
- **T₃, T₄**: Triiodothyronine, tetraiodothyronine (thyroid function tests)
- **TIA**: Transient ischemic attack
- **TSH**: Thyroid-stimulating hormone