

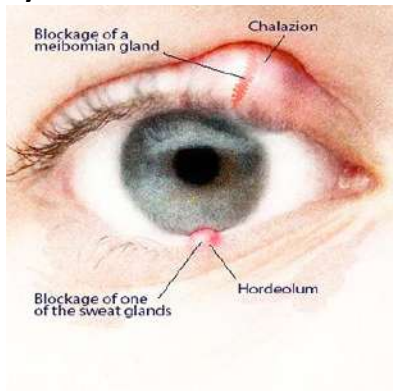
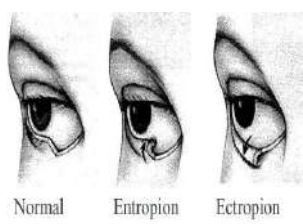
## Special Senses Guided Notes

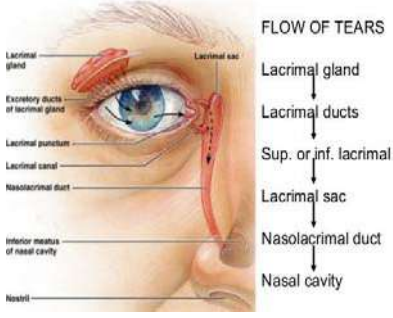
### PART 1 of 2: THE EYE

**FUNCTION=** To SEE! (to receive images and transmit them to the brain)

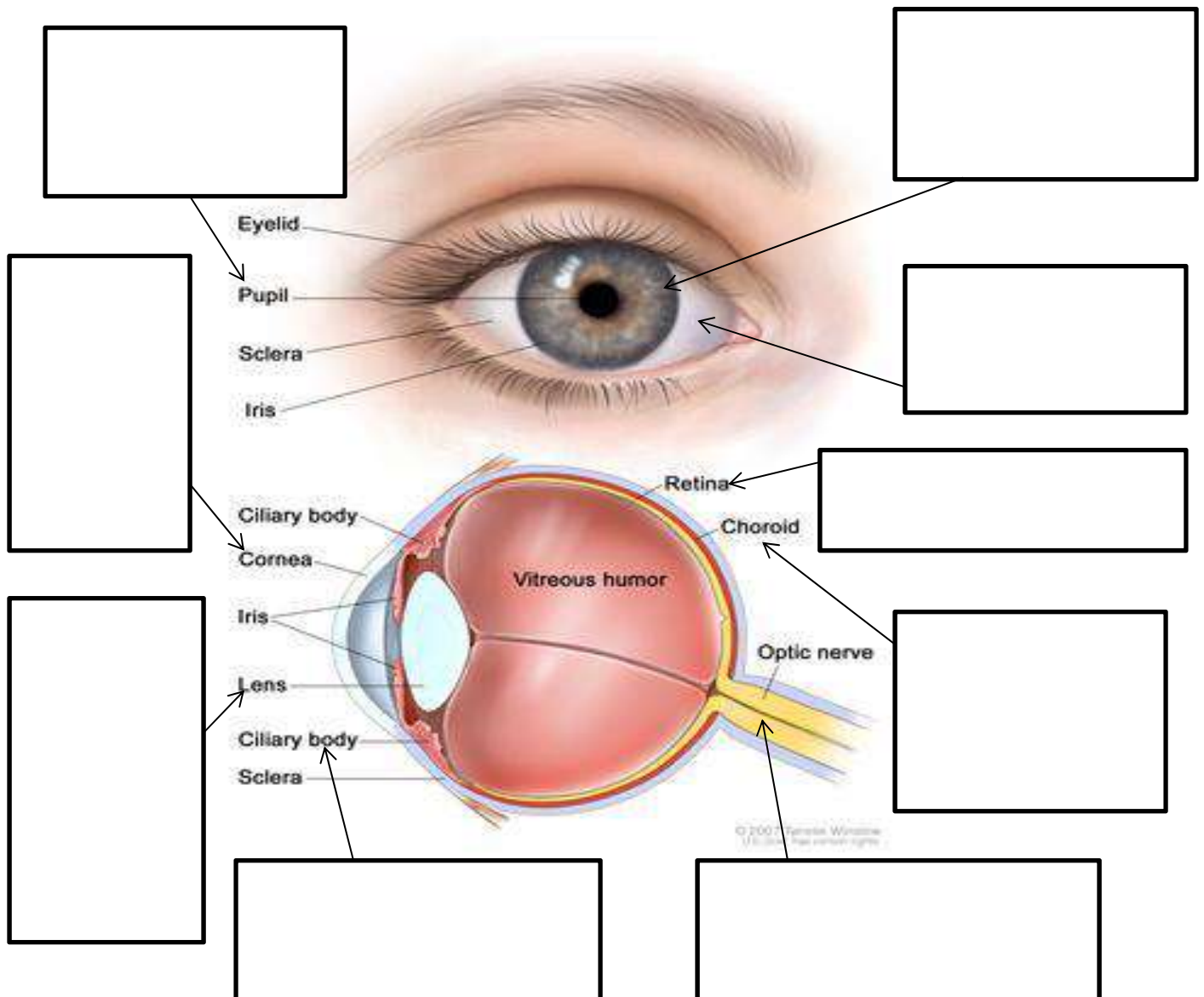
<b>Optic-</b>	<b>Ocular –</b>
<b>Extraocular-</b>	<b>Intraocular-</b>

### The ‘ADNEXA’ of the EYE

STRUCTURE	FUNCTION/ definition	PATHOLOGIES
<b>Orbit</b>	The “eye socket” –	<b>Fracture -</b>
<b>Eye muscles</b>  Binocular-		<b>Strabismus-</b>  <b>Esotropia-</b>  <b>Exotropia-</b>
<b>Eyelid</b>  	<b>Protect eyes from:</b>  Inner canthus-  Epicanthus-  	<b>Blepharoptosis-</b>  <b>Ectropion-</b>  <b>Entropion-</b>  <b>Hordeolum-</b>  <b>Chalazion-</b>
<b>Eyebrows/lashes</b>		
<b>Conjunctiva</b>		<b>Conjunctivitis-</b> Aka:

 <p><b>Lacrimal Apparatus</b></p> <p>FLOW OF TEARS</p> <p>Lacrimal gland ↓ Lacrimal ducts ↓ Sup. or inf. lacrimal ↓ Lacrimal sac ↓ Nasolacrimal duct ↓ Nasal cavity</p> <p>Labels on diagram: Lacrimal gland Lacrimal sac Excretory ducts of lacrimal gland Lacrimal punctum Lacrimal canal Nasolacrimal duct Inferior meatus of nasal cavity Nostril</p>	<p><b>lacrimal glands-</b></p> <p><b>lacrimal sac-</b></p> <p><b>lacrimal duct-</b></p> <p><b>lacrimation=</b> tear secretion (crying)</p> <p><b>lacrimal canaliculi-</b></p>
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**STRUCTURES OF THE EYEBALL: Describe each structure in its box**



**External Structures:**

- Eyelid
- Pupil
- Sclera
- Iris

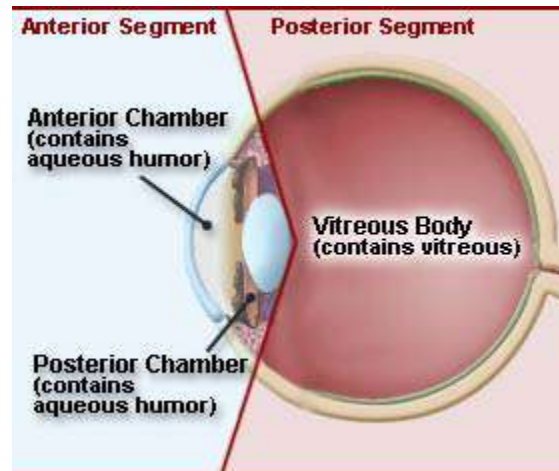
**Internal Structures:**

- Ciliary body
- Cornea
- Iris
- Lens
- Vitreous humor
- Retina
- Choroid
- Optic nerve

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## Segments of the EYE

<b>Anterior</b> 1/3 of the eye Filled with aqueous fluid <b>Aqueous fluid:</b>	<b>Posterior</b> 2/3 of the eye Filled with vitreous humor <b>Vitreous humor:</b>
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## ACTION OF THE EYES

- Accommodation –
- Convergence –
- Emmetropia -
- Refraction:

### Pathologies of Refraction

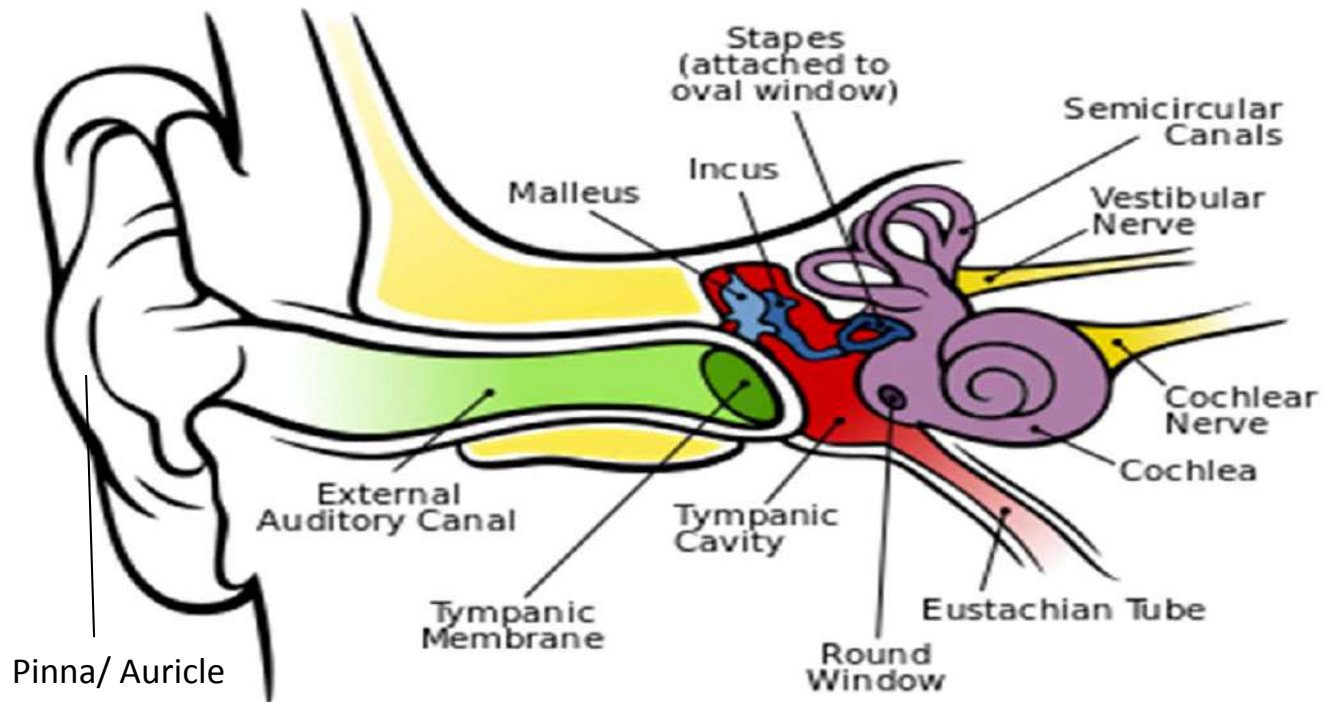
- o **Astigmatism**- condition in which the eye does not focus properly because the cornea is improperly curved
- o **Hyperopia** aka \_\_\_\_\_ - defect in which light rays focus beyond the retina
- o **Myopia** aka nearsightedness -

## OTHER PATHOLOGIES OF THE EYE

<b>Xerophthalmia</b>	
<b>Synechia</b>	
<b>Anisocoria</b>	When the pupils are unequal in size
<b>Scleritis</b>	
<b>Keratitis</b>	Inflammation of the cornea
<b>Corneal abrasion</b>	
<b>Corneal ulcer</b>	An ulcer on the cornea that leaves a cloudy scar
<b>Cataracts</b>	Definition: 
<b>Macular Degeneration</b>	A progressive condition that results in the loss of central vision, but not total blindness.
<b>Nystagmus</b>	
<b>Glaucoma</b>	
<b>Nyctalopia</b>	
<b>Presbyopia</b>	Describes the changes in the eye that occur with aging. (i.e. the lens becomes less flexible, the muscles become weaker)
<b>Strabismus</b>	

## PART 2 of 2: THE EARS

**FUNCTION:** Allow for hearing and balance.



### THREE SEGMENTS

#### 1. THE OUTER EAR:

**STRUCTURES:** What is cerumen?:

Pinna / Auricle –

External Auditory Canal -

#### Pathologies of the Outer Ear:

Impacted cerumen-

Otalgia-

Otomycosis- “swimmers ear”- a fungal infection of the ear canal

Otorrhagia-

## 2. THE MIDDLE EAR: Transmits sound waves to the inner ear

Structure	Function	<b>Pathologies of the Middle Ear:</b>  <b>Myringitis-</b>  <b>Eustachitis-</b>  <b>Otosclerosis-</b> Fusing together of bones in the ear resulting in loss of vibration and, therefore, hearing.  <b>Otitis Media-</b> inflammation of middle ear due to buildup  <b>Serous OM-</b>  <b>Purulent OM-</b>
<b>Tympanic Membrane</b> (Eardrum)		
<b>Auditory Ossicles/ Bones</b>	1. Malleus/hammer,  2. Incus/anvil,  3. Stapes/stirrup	
<b>Eustachian Tubes</b>		

## THE INNER EAR

Structure	Function
Oval Window	
Cochlea	
Cochlear Duct	Located within the cochlea and is filled with fluid that vibrates when sound waves strike it.
Semicircular Canals	Contain <b>endolymph</b> and <b>hairlike cells</b> that bend in response to head movement. These set up impulses in nerves to help maintain balance/equilibrium.
Auditory Nerve	

### Pathologies of the Inner Ear:

**Labrynthitis**

**Vertigo-**

**Meniere's Syndrome**-chronic disease that has 3 main symptoms: vertigo, hearing loss, and tinnitus.

**Tinnitus-**

### Normal Ear Actions

**Air Conduction –**

**Bone Conduction –**

### Hearing Loss

**Deafness –** complete or partial loss of the ability to hear

**Conductive Hearing Loss -**

**Noise-Induced Hearing Loss -**