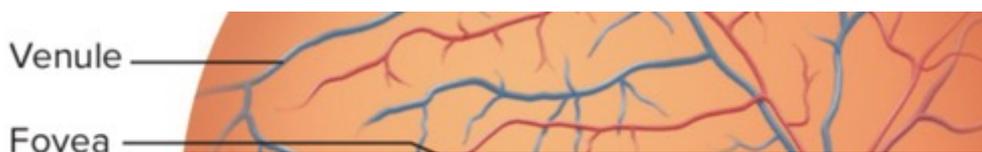
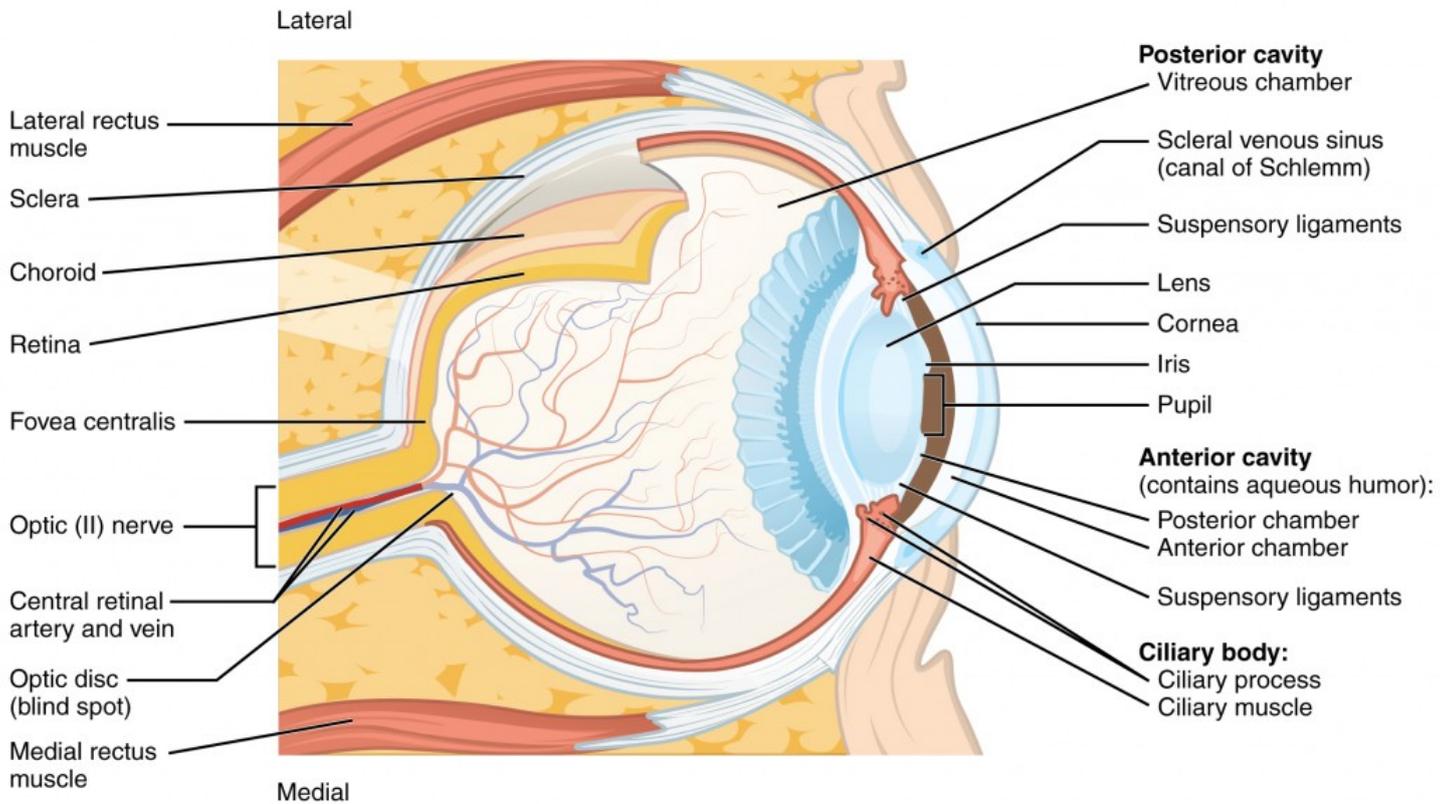
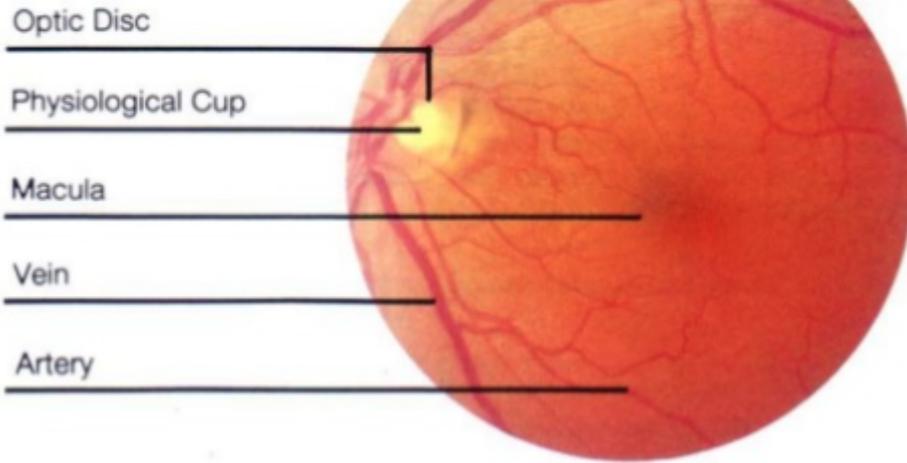
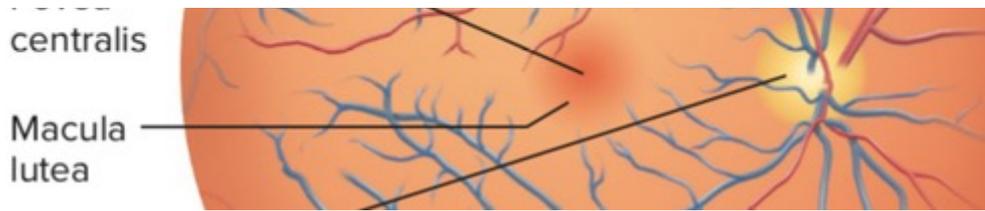


Eye/ear

RIGHT EYE

Normal Fundus

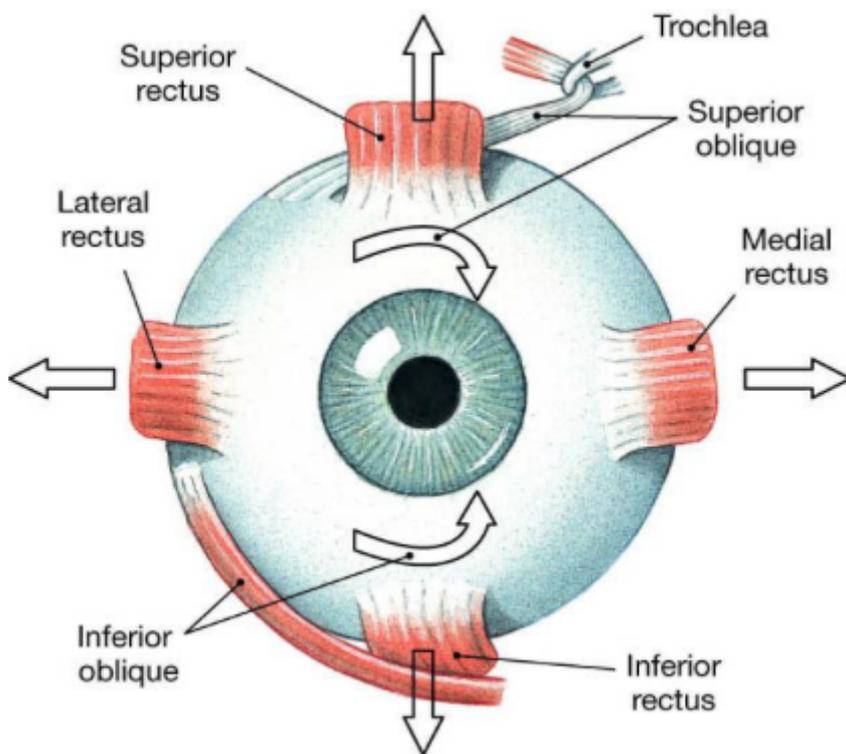




Fovea = within the macula

Fovea = high density of rods - highest visual acuity

When we look directly at something, we turn our eyes to direct the refracted image onto the fovea.



OBLIQUES

oBliques aBduct

Superior oblique

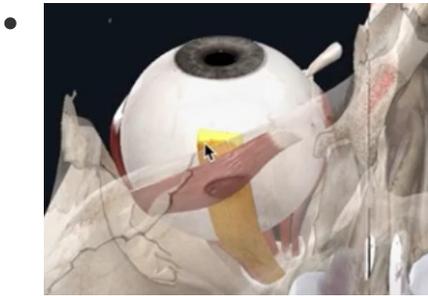
Moves eye 'down and out'

- Lateral
- Intorts
- Depression (downward movement)

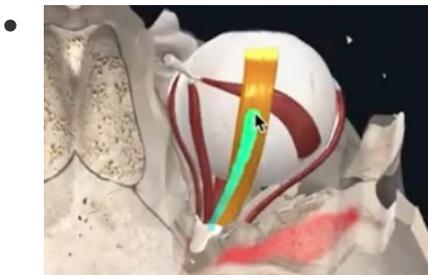
SOLID = superior oblique, lateral, intortion, depression

Rectus muscles = both adduct the eyes

Inferior rectus - depresses, adducts and extorts the eye



Superior rectus - elevates, adducts, and intorts the eye

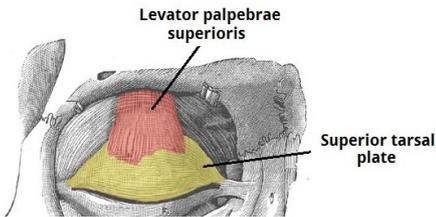


Oculomotor (CN III) palsy = *down and out*

Extraocular Muscle	Innervation	Function	Clinical Assessment (direction to move eye when testing muscle)
Superior rectus	Oculomotor nerve	Elevation, adduction and medial rotation of eyeball	Look out and up
Inferior rectus	Oculomotor nerve	Depression, adduction and lateral rotation of eyeball	Look out and down
Medial rectus	Oculomotor nerve	Adduction of eyeball	Look in (in horizontal plane)
Lateral rectus	Abducens nerve	Abduction of eyeball	Look out (in horizontal plane)
Superior oblique	Trochlear nerve	Depression, abduction and medial rotation of eyeball	Look in and down

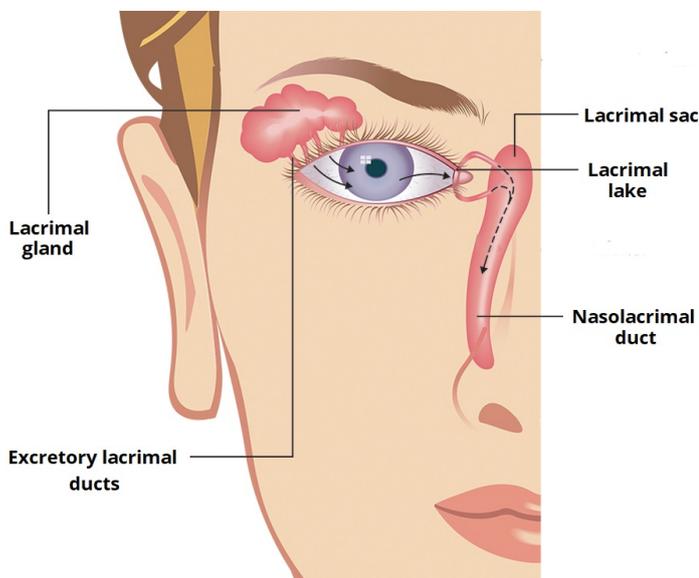
Superior oblique	Trochlear nerve	Depression, abduction and medial rotation of eyeball	Look in and down
Inferior oblique	Oculomotor nerve	Elevation, abduction and lateral rotation of eyeball	Look in and up

Eyelids

- Orbital septum blends into tarsal plates
- Motor:
 - CN III - open eyelid (levator palpebrae)
 - 

The diagram shows a cross-section of the upper eyelid. A red muscle, labeled 'Levator palpebrae superioris', is shown originating from the superior tarsal plate and extending upwards. The superior tarsal plate is shown as a yellow structure. Labels include 'Levator palpebrae superioris' and 'Superior tarsal plate'.
 - CN VII - close eyelid (orbiculares oculi)
- Sensation
 - Upper eyelid - V1 (ophthalmic) - supraorbital, supratrochlear, infratrochlear and lacrimal branches
 - Lower eyelid - V2 (maxillary) - infraorbital, zygomaticofacial

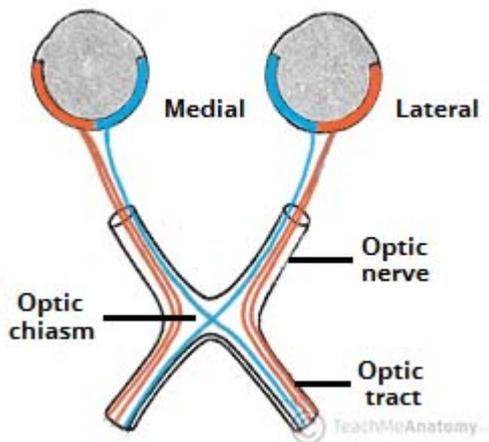
Lacrimal glands



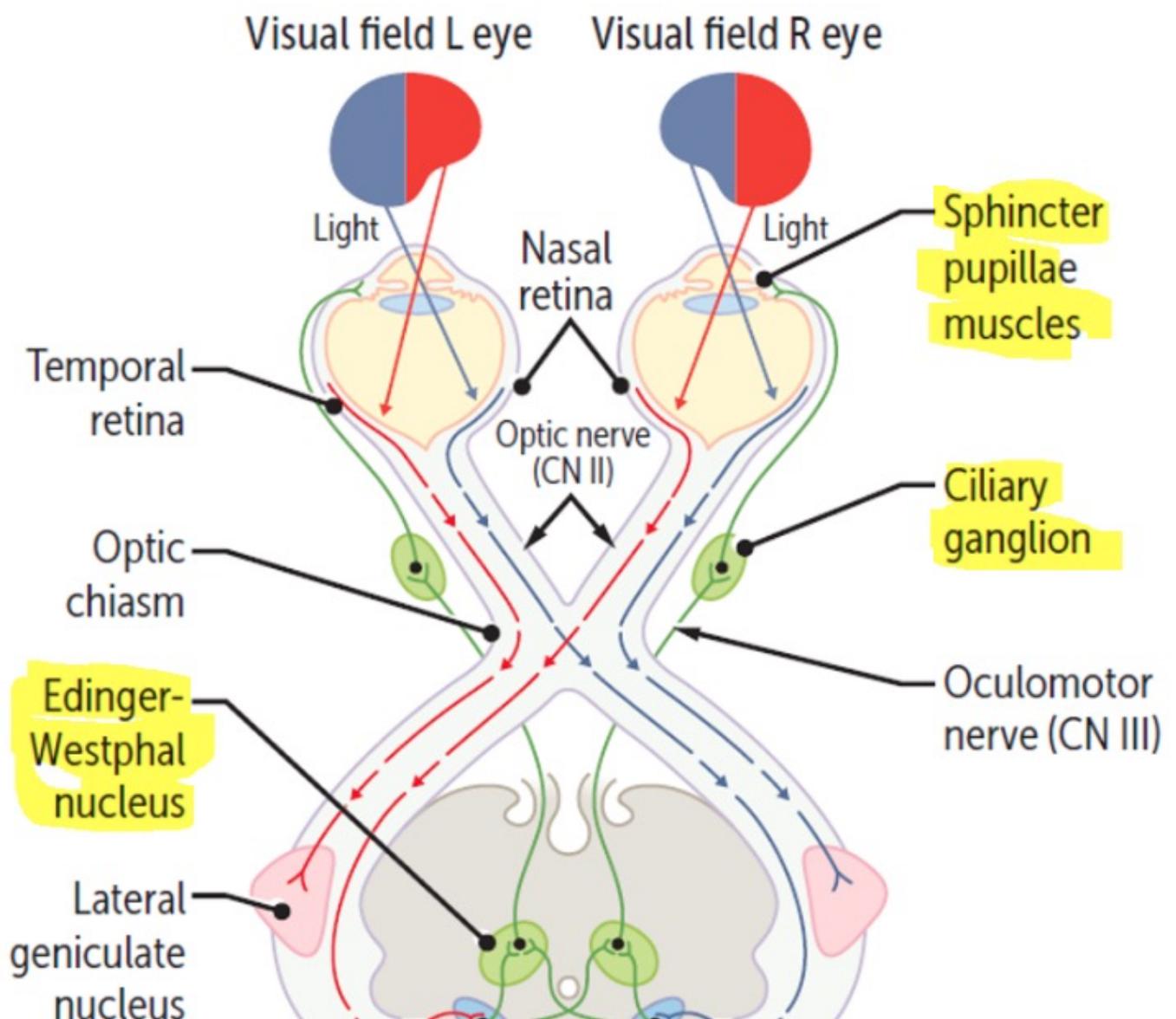
- Lacrimal gland - produces lacrimal fluid, excess of this = tears
 - Located in upper outer aspect of orbit
- Nasolacrimal ducts in medial aspect of orbit - partly located in lacrimal bone and maxilla
 - Drain into INFERIOR meatus

OPTIC NERVE

Enters orbit via sphenoidal optic canal
Ophthalmic artery accompanies



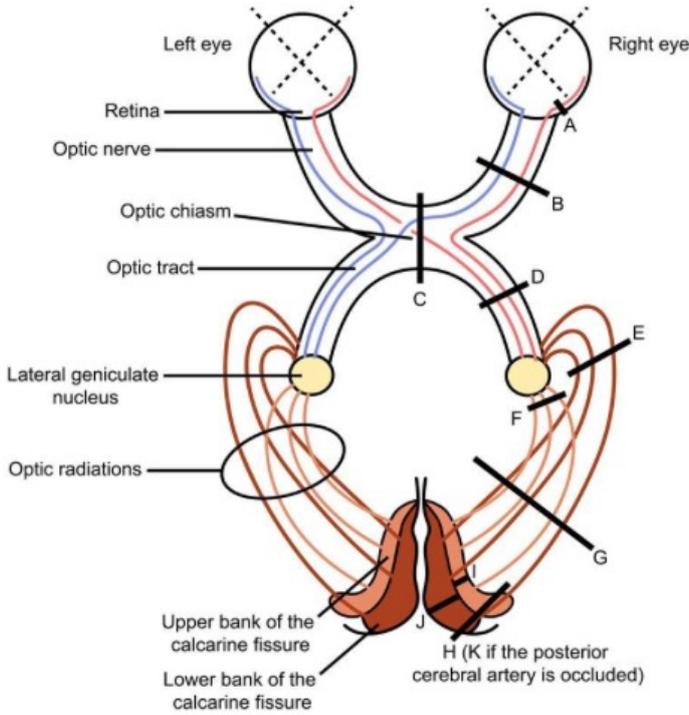
Optic tract → lateral geniculate nucleus (in thalamus) → optic radiation → visual cortex (occipital lobe)



Pretectal nuclei



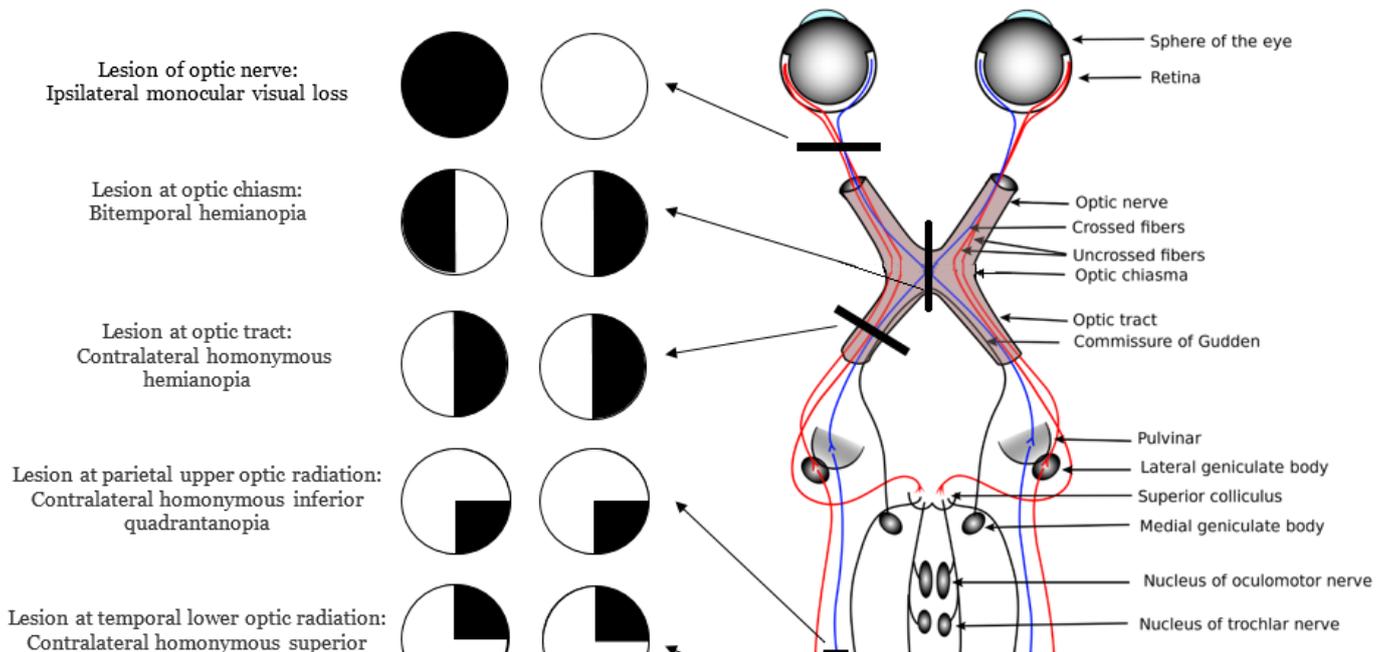
Visual Field Defects

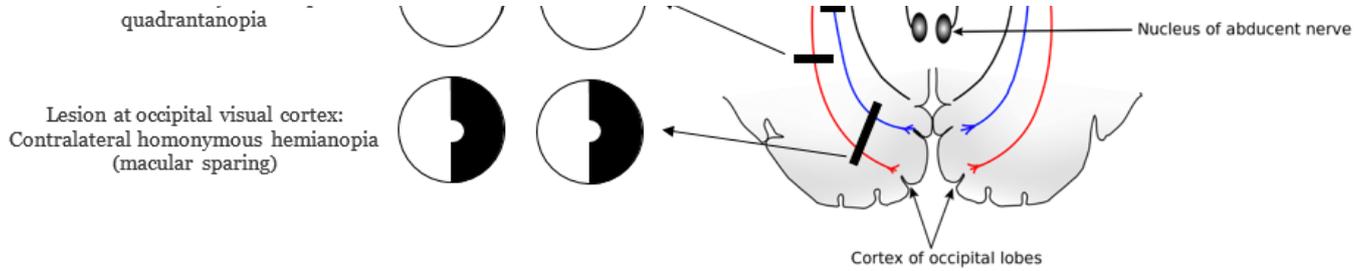


	Visual field deficit	
A) Central scotoma		
B) Monocular vision loss		
C) Bitemporal hemianopia		
D, G, & H) Contralateral homonymous hemianopia		
E & J) Contralateral superior quadrantanopia		
F & I) Contralateral inferior quadrantanopia		
K) Contralateral homonymous hemianopia with macular sparing		

© Lineage

Moises Dominguez



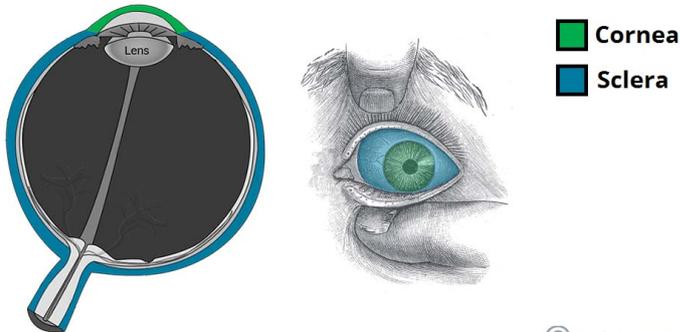


EYE

Layers:

1. **Fibrous** - sclera and cornea are continuous with each other

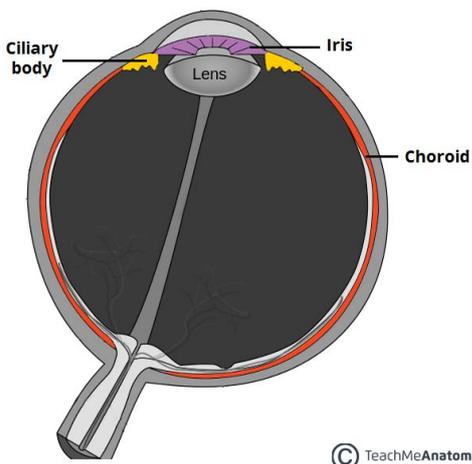
1.



1. Sclera = majority of eye (white) - connects extra ocular muscles
2. Cornea = transparent connective tissue over anterior part of eye

2. Vascular

o

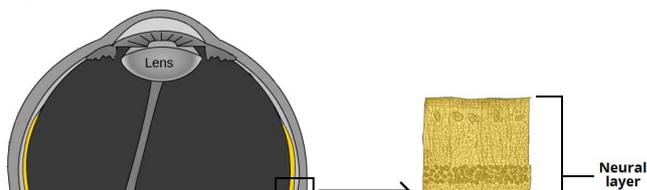


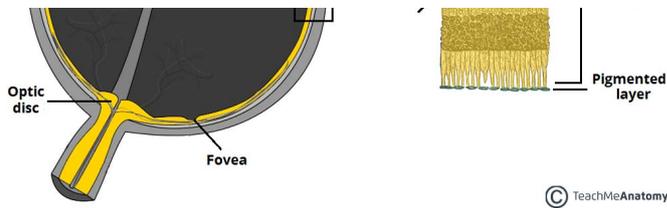
o UVEA:

1. Choroid - layer of vessels and connective tissue
2. Ciliary bodies - responsible for *changing lens shape*
3. Iris - responsible for *diameter of the pupil*

3. Inner layer

1.

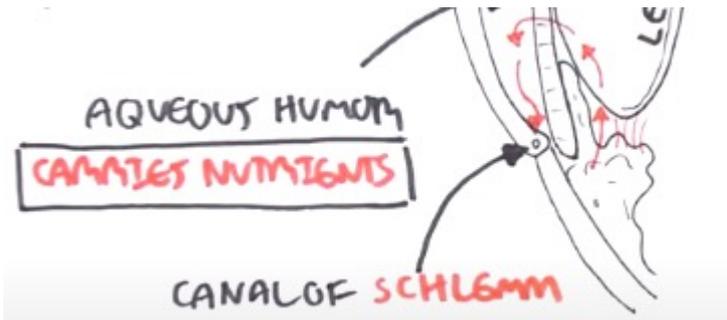




- Retina
 - Outer (pigmented layer)
 - Inner (neural layer)

Aqueous humour

Produced by ciliary bodies → drains via canal of schlemm into anterior chamber



Pupillary size

- Parasympathetic (oculomotor) - constriction (miosis)
 - Oculomotor nerve → to ciliary ganglion → synapse with *short ciliary nerve* → innervate iris → pupillary constriction
- Sympathetic - dilation (mydriasis)

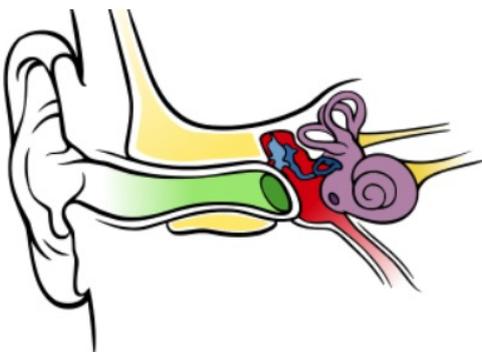
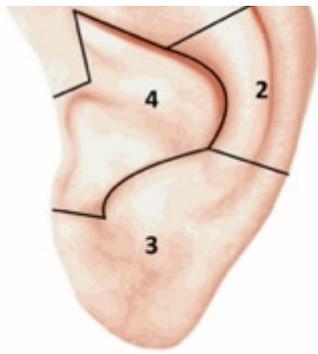


Illustration of the different sections of the ear. External ear represented in green. Middle ear in red with ossicles in blue. Inner ear in purple



1. Auriculotemporal N.



2. Lesser Occipital N.

3. Great Auricular N.

4. Auricular Branch of Vagus N.

Sensory supply of external ear

- Inferior = greater auricular
- Posterosuperior = lesser occipital
- Anterosuperior = auriculotemporal
- Acoustic meatus =
 - Ant/sup = auriculotemporal
 - Post/inf = vagus

