

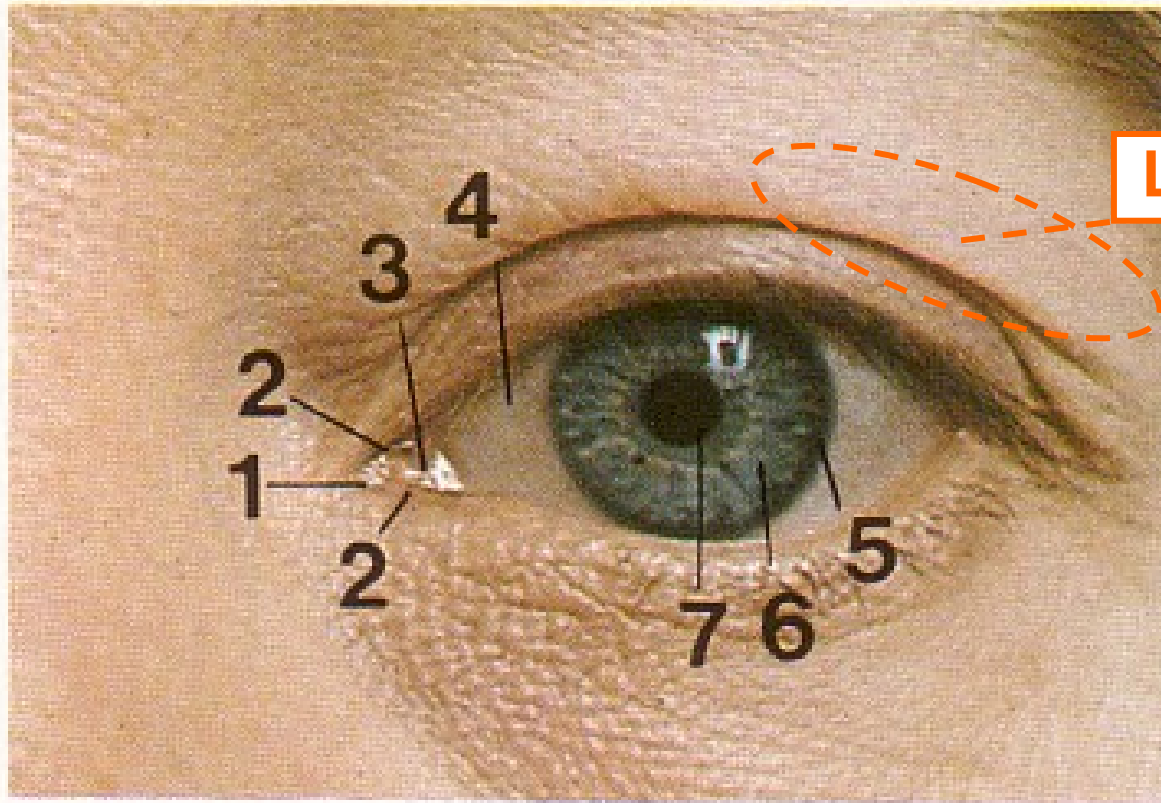


*...Fun last lab for me!
How happy I am to see!!*

BI 358 Discussion 11: Vision Lab w/Eye Dissections

- I. Announcements*** Final papers due next Tuesday, March 17th, in Pat's box, 77 Klamath < 5 pm. Q?
- II. Anatomy & Physiology of the Eye***
LN Dierks & RE Hammond, Carolina Biological 1980
CC Francis & AH Martin 1975
RMH McMinn & RT Hutchings 1977
DA Morton, KD Peterson & KH Albertine 2007
LS Sherwood 2006
- III. Lab Tests + Eye Dissections***

Eye (L) Surface Anatomy



A

Lacrimal gland!

A Left eye

- 1 Lacrimal caruncle
- 2 Lacrimal papilla
- 3 Plica semilunaris
- 4 Sclera
- 5 Limbus (corneoscleral junction)
- 6 Iris
- 7 Pupil

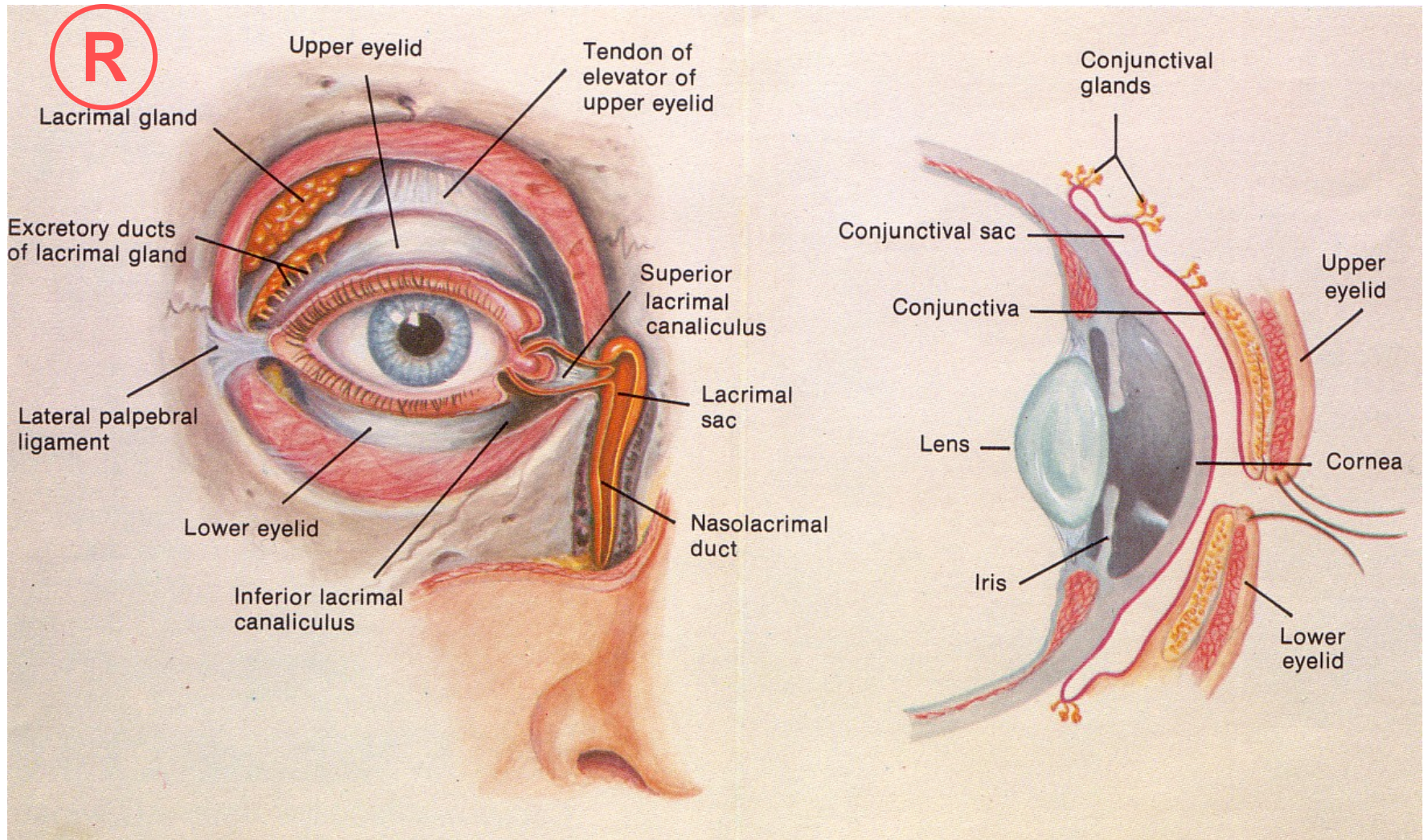
Caruncle = L. wart

Papilla = L. nipple

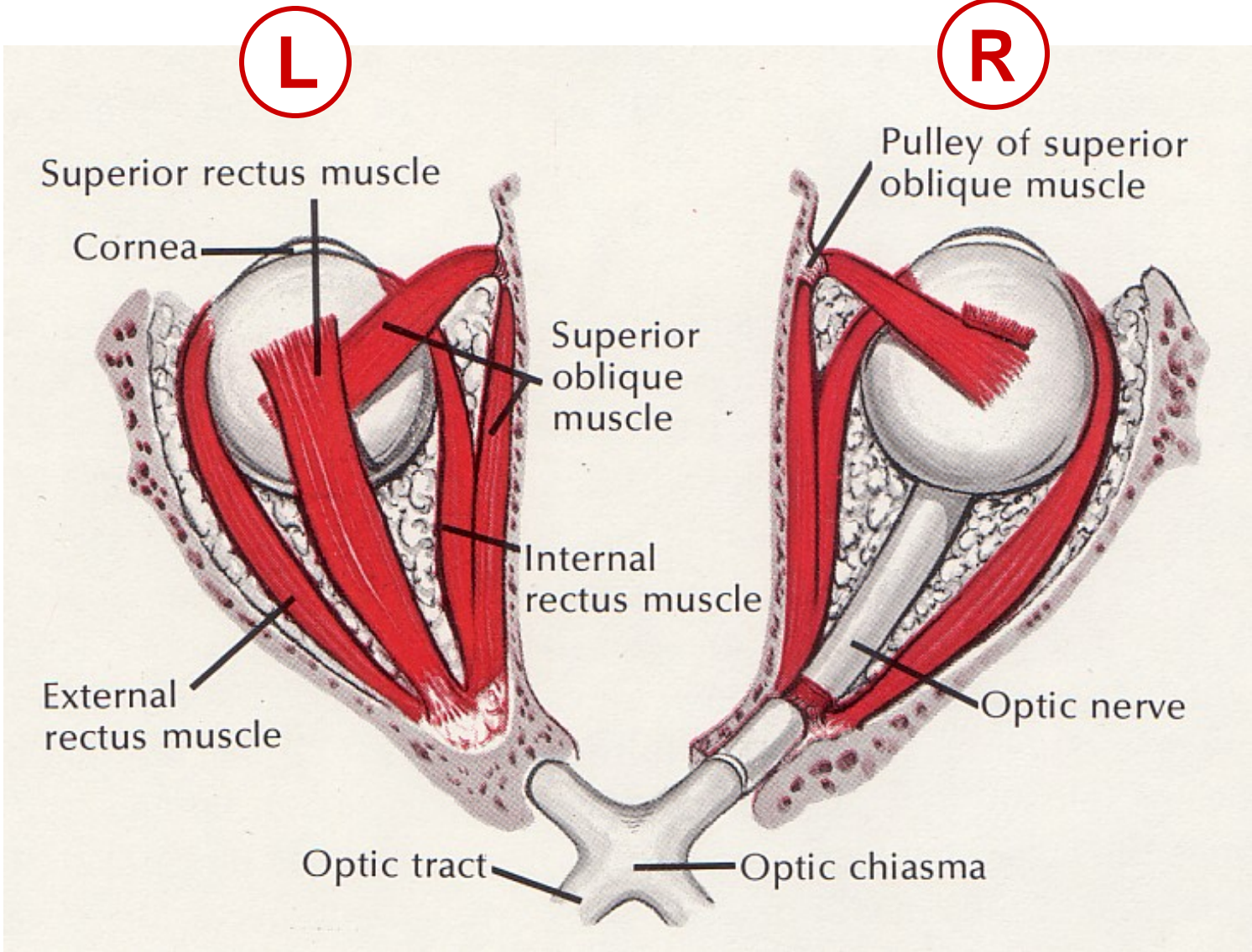
Sclera = L. hard/white

Limbus = L. margin/border

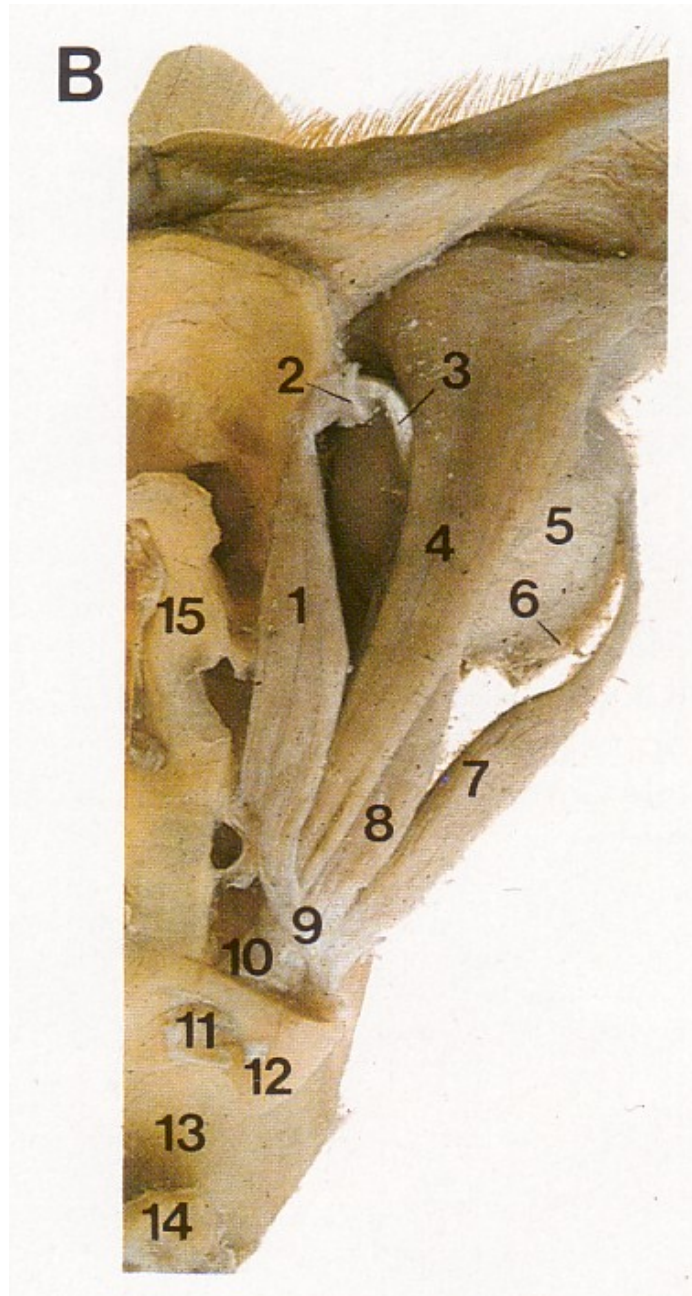
Eye Drops Out Nose? Why?



Eye Muscles Superior View

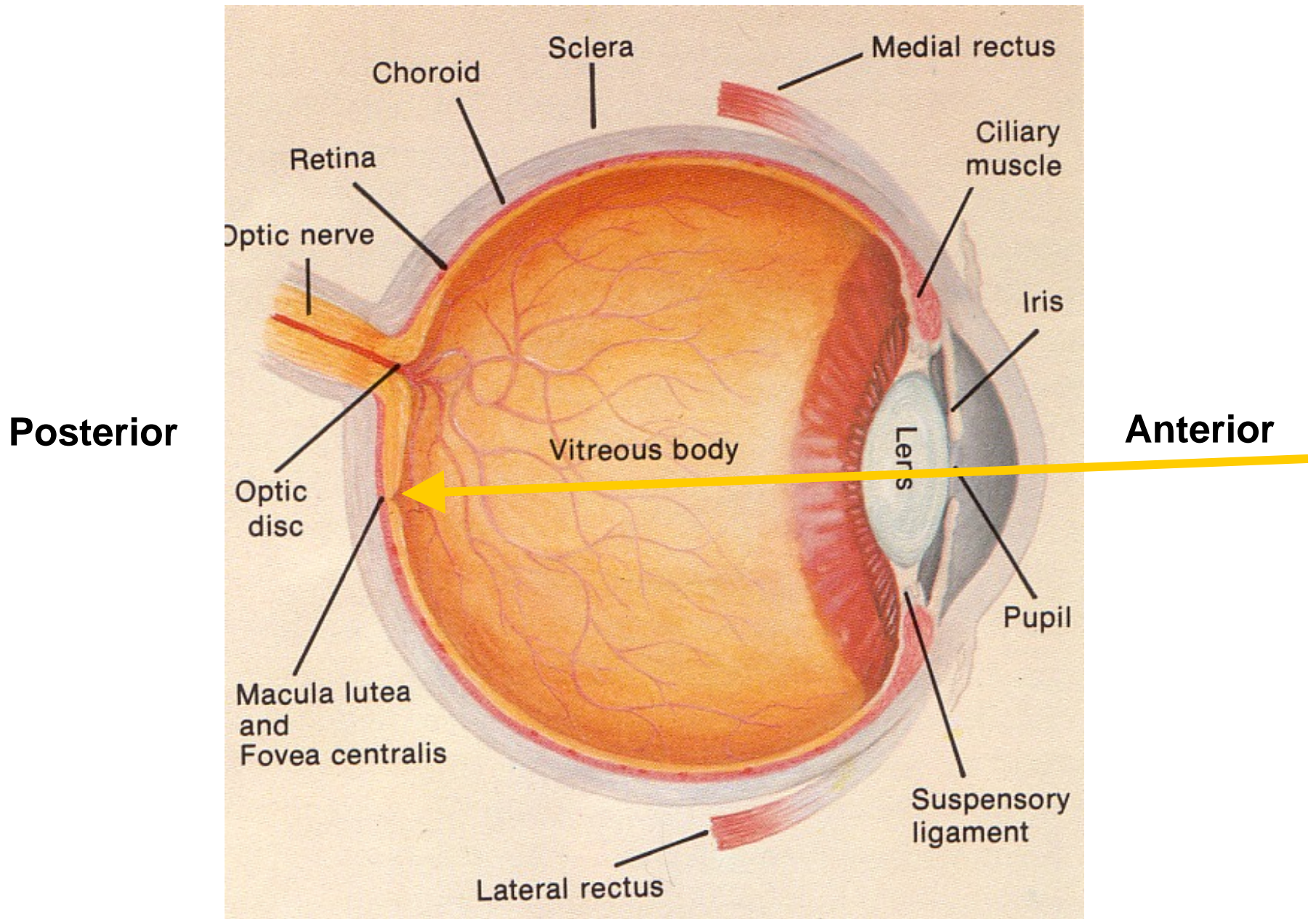


Eye (R) Superior View Dissection

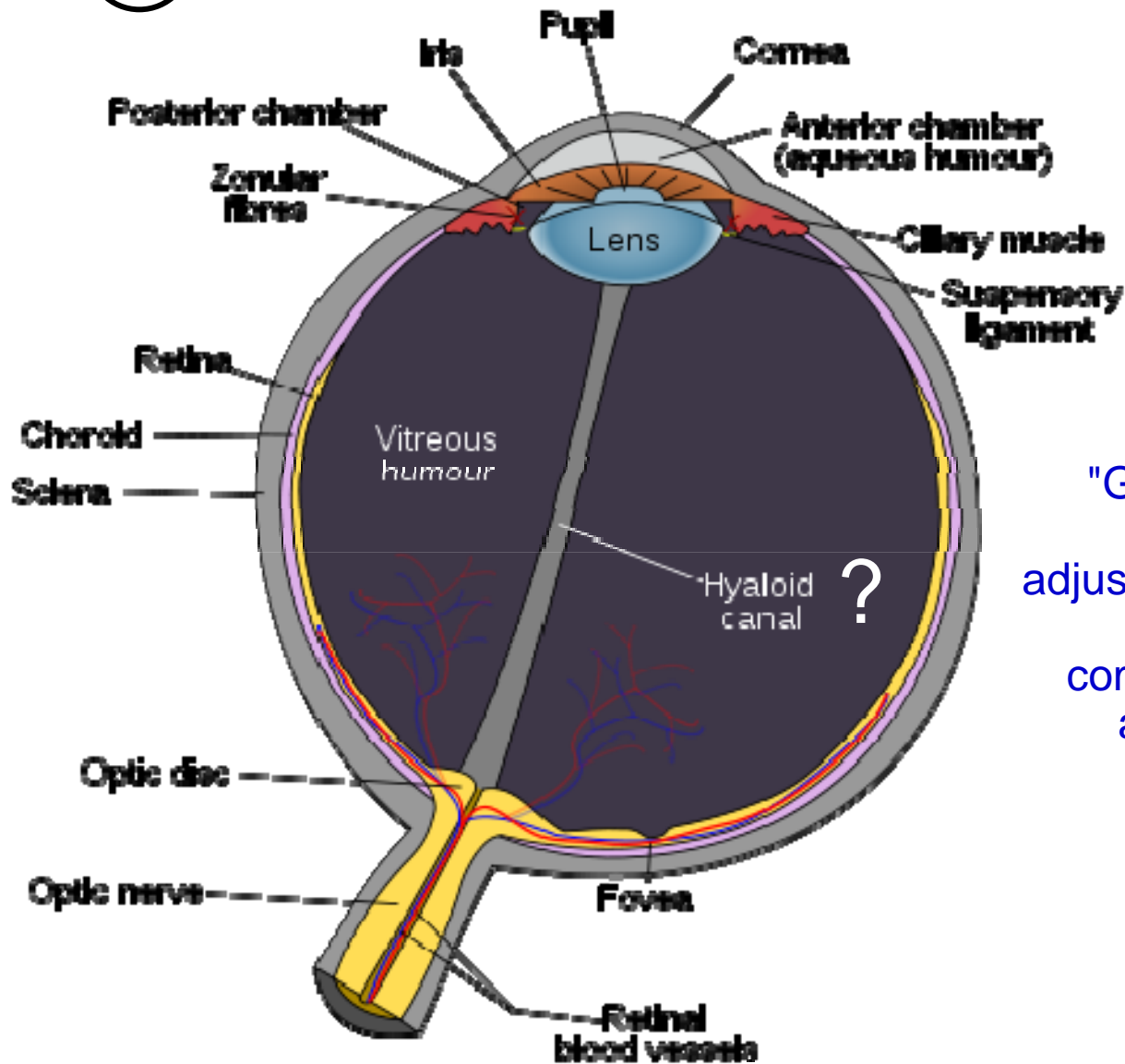


- 1 Superior oblique — **Gr. pulley!**
- 2 Trochlea ←
- 3 Tendon of superior oblique
- 4 Levator palpebrae superioris
- 5 Eyeball
- 6 Inferior oblique
- 7 Lateral rectus
- 8 Superior rectus
- 9 Tendinous ring
- 10 Optic nerve
- 11 Optic canal
- 12 Anterior clinoid process
- 13 Sella turcica (pituitary fossa)
- 14 Posterior clinoid process
- 15 Ethmoidal air cells
- 16 Inferior rectus

Eye (R) Superior View



Eye (R) Superior View Horizontal Dissection



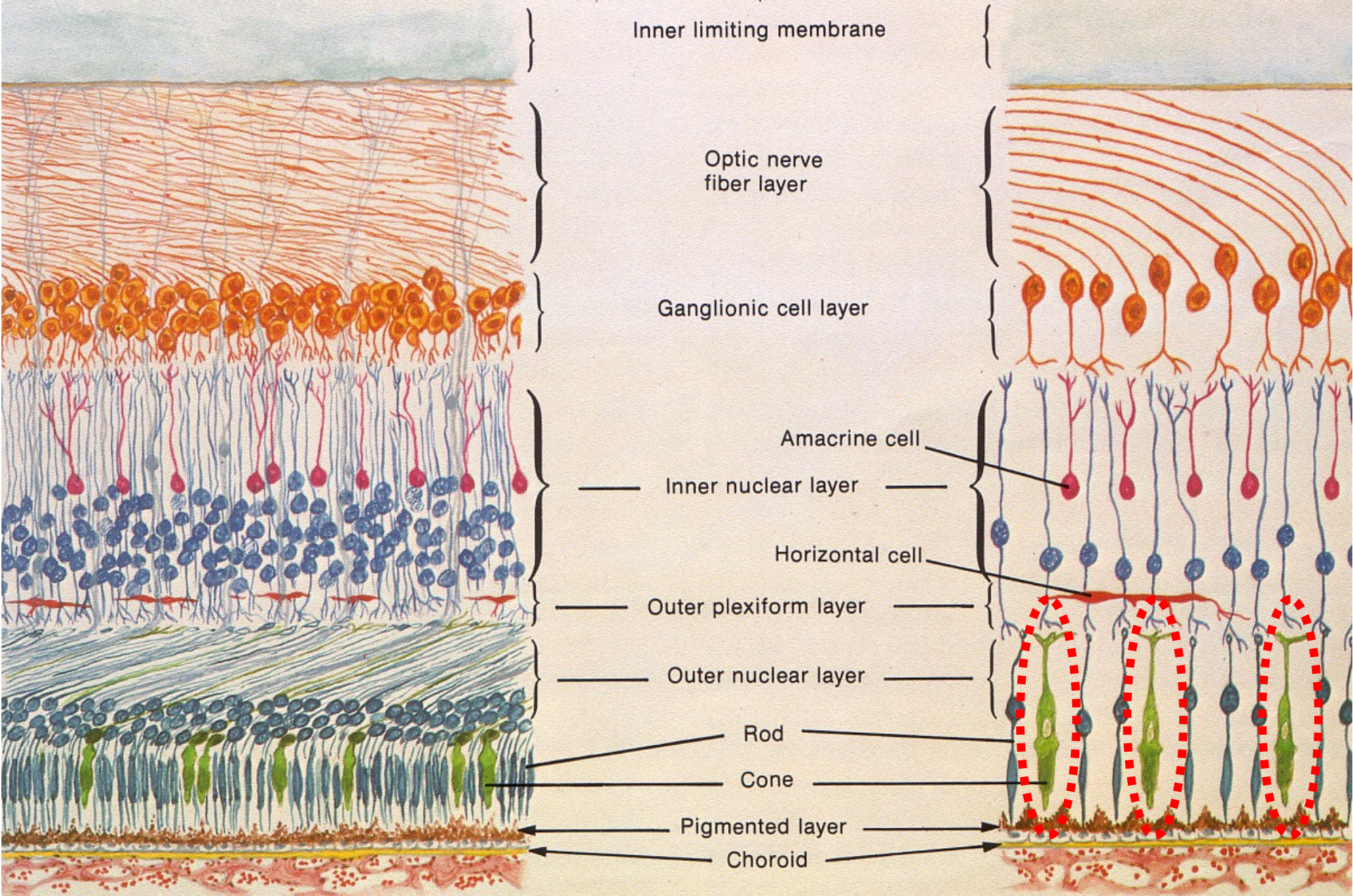
"Glass-like" canal:
Fetal remnant &
adjustable reservoir of
mobile liquid to
compensate during
accommodation!

TPA Stuart, *Journal of Physiology*, Mar 29, 1904!

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1465472/?tool=pmcentrez>

Retinal Layers

Light



Inner limiting membrane

Optic nerve fiber layer

Ganglionic cell layer

Inner nuclear layer

Outer plexiform layer

Outer nuclear layer

Rod

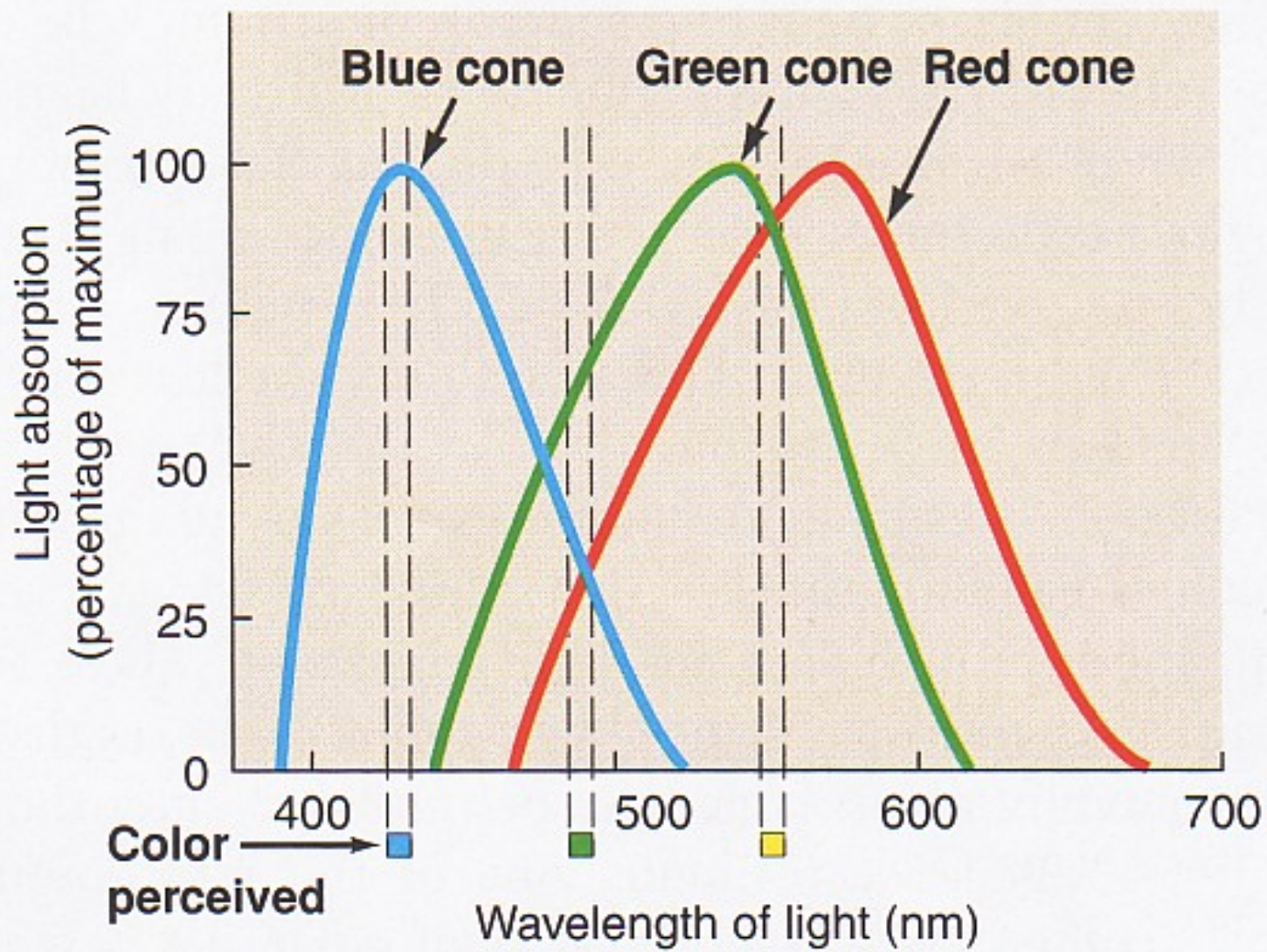
Cone

Pigmented layer

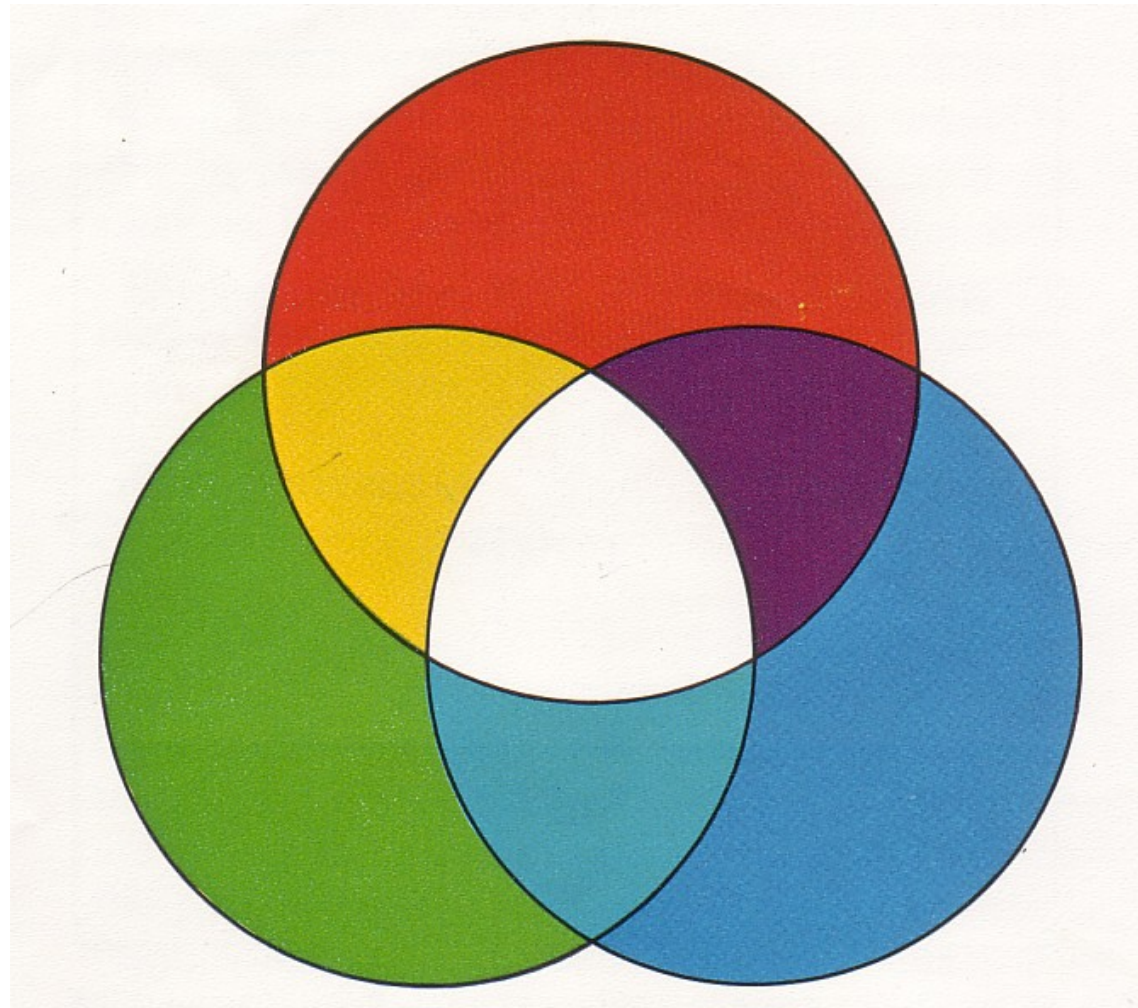
Choroid

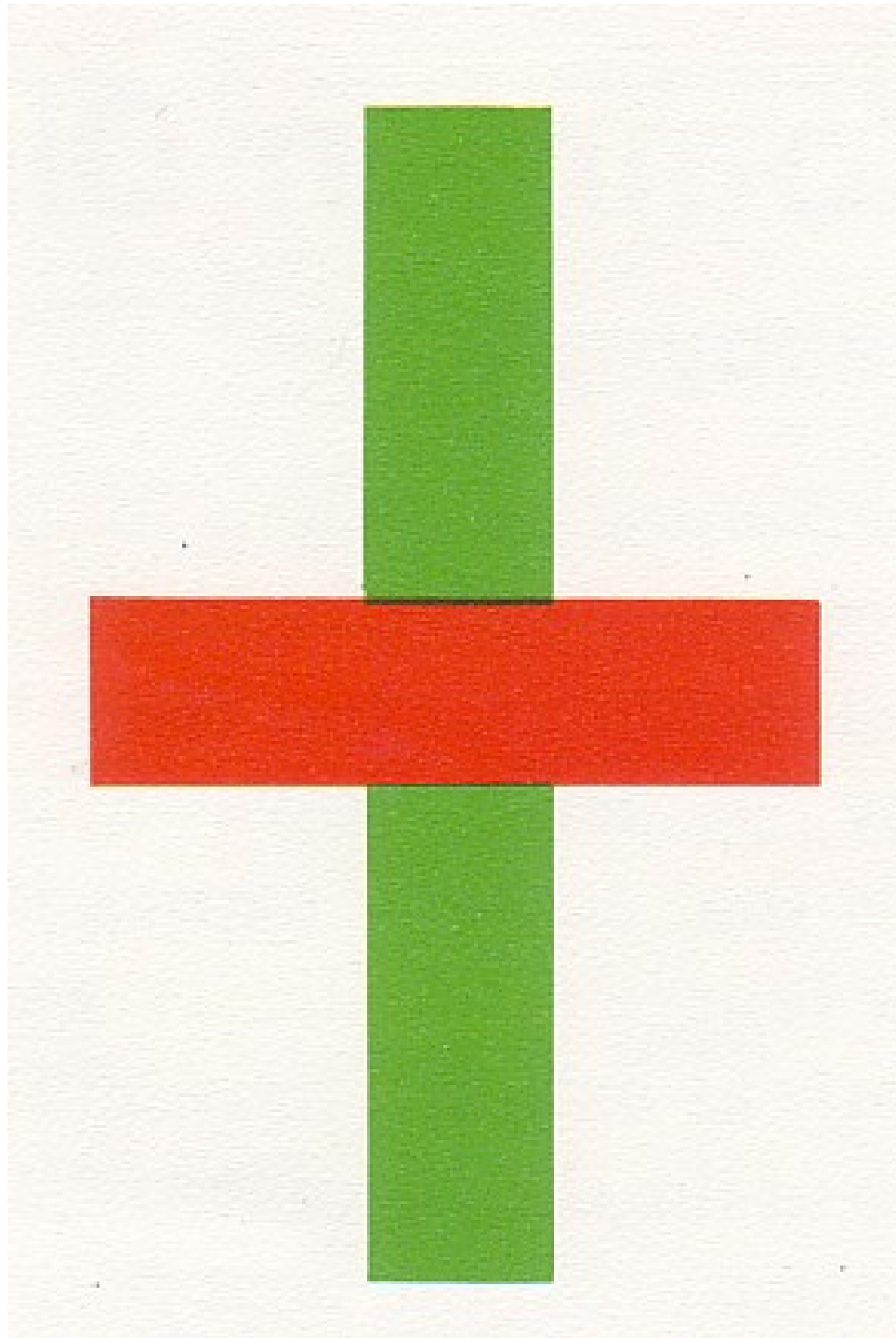
Amacrine cell

Horizontal cell



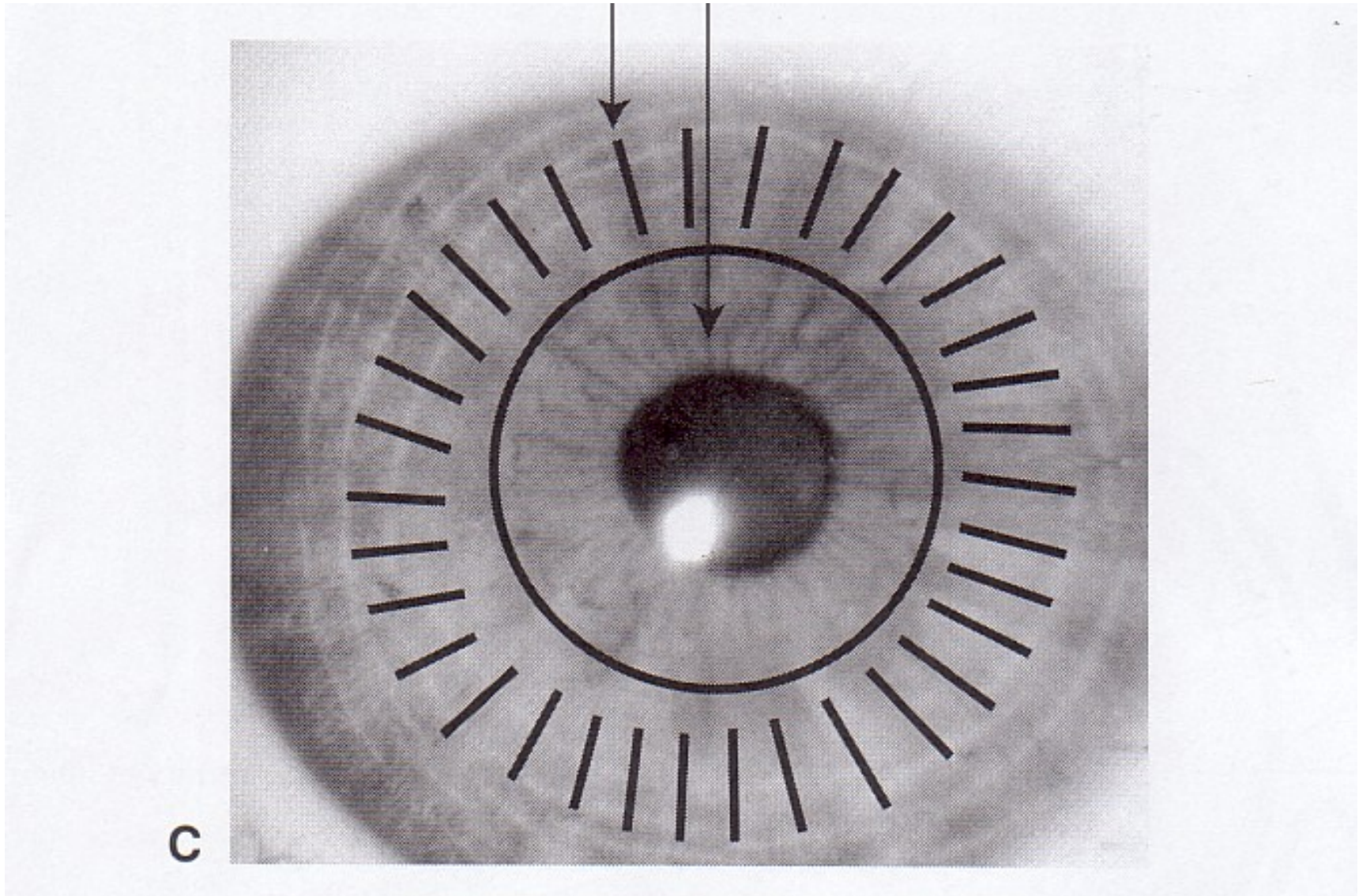
***Intermediate Colors Are Produced
When 1^o Colors Are Superimposed***



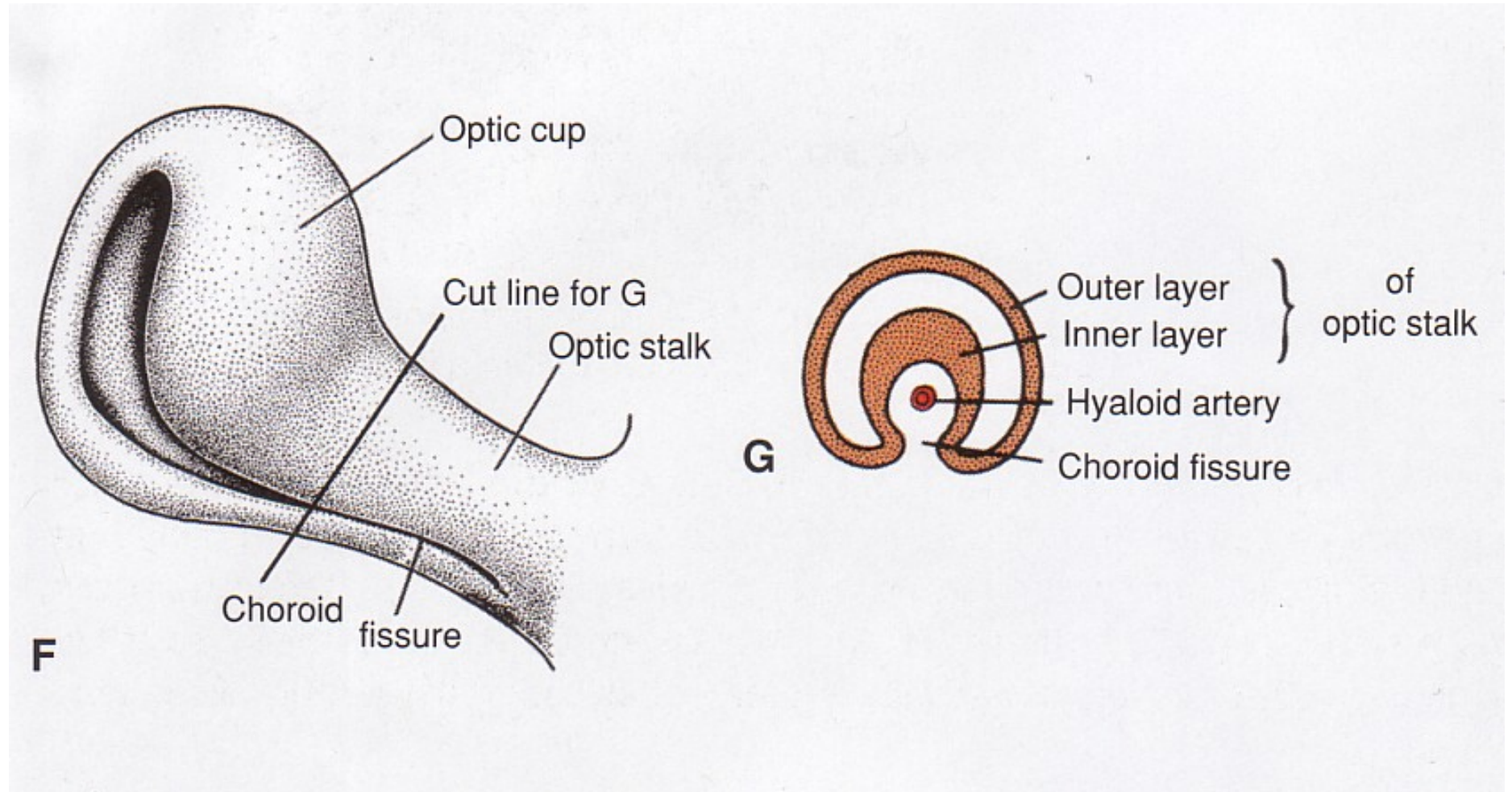


Smooth Muscles of the Iris

Dilator Sphincter

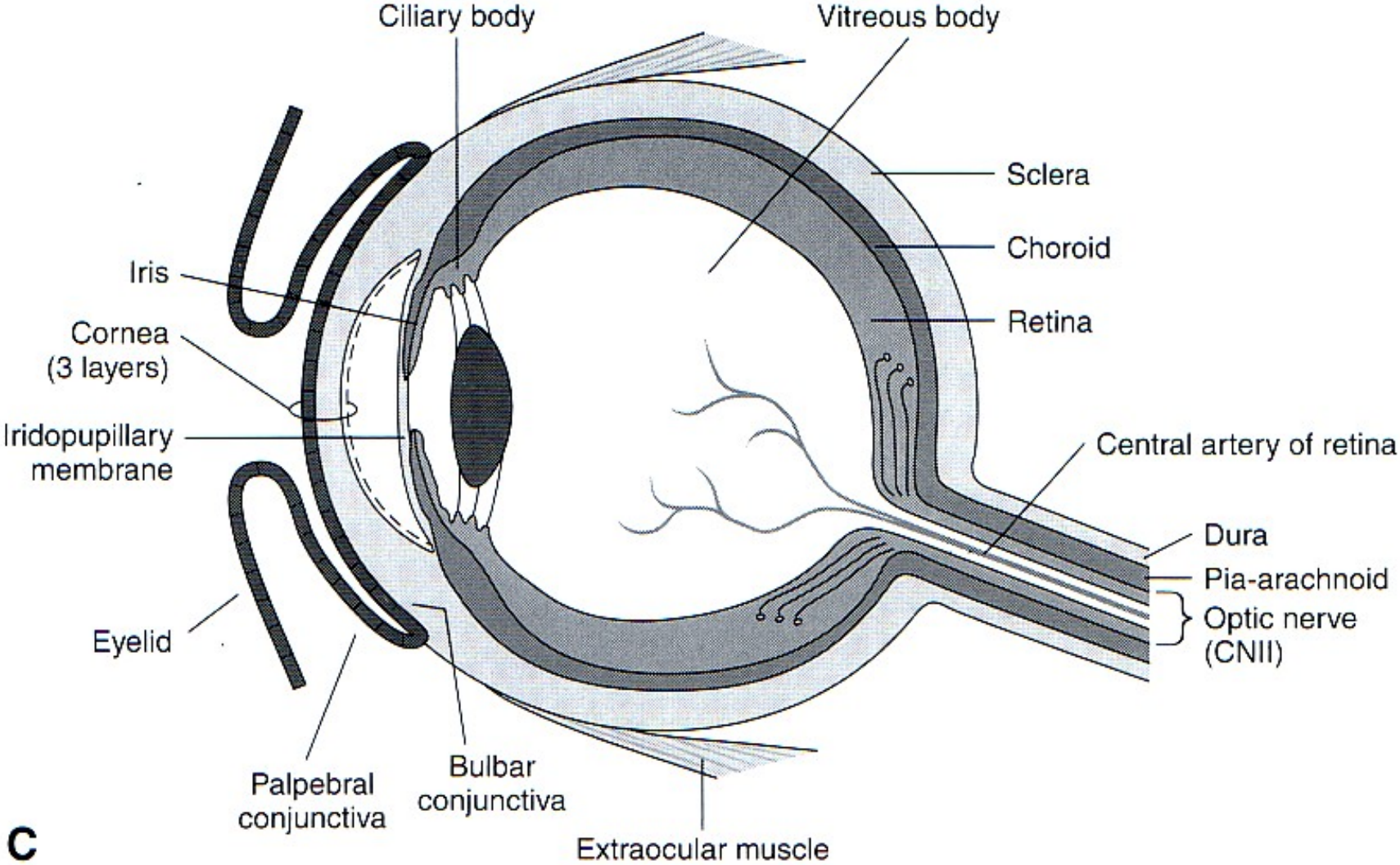


The Optic Cup & Optic Stalk are Evaginations of the Diencephalon

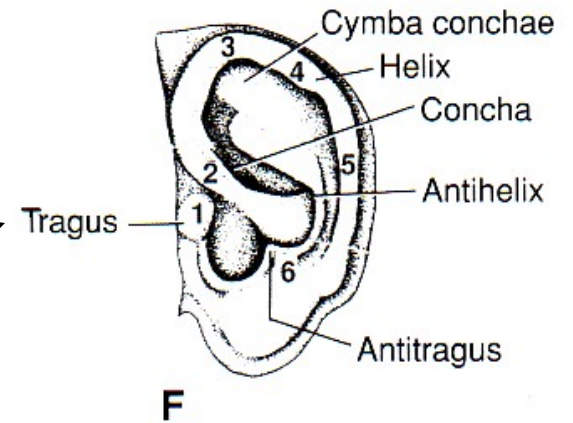
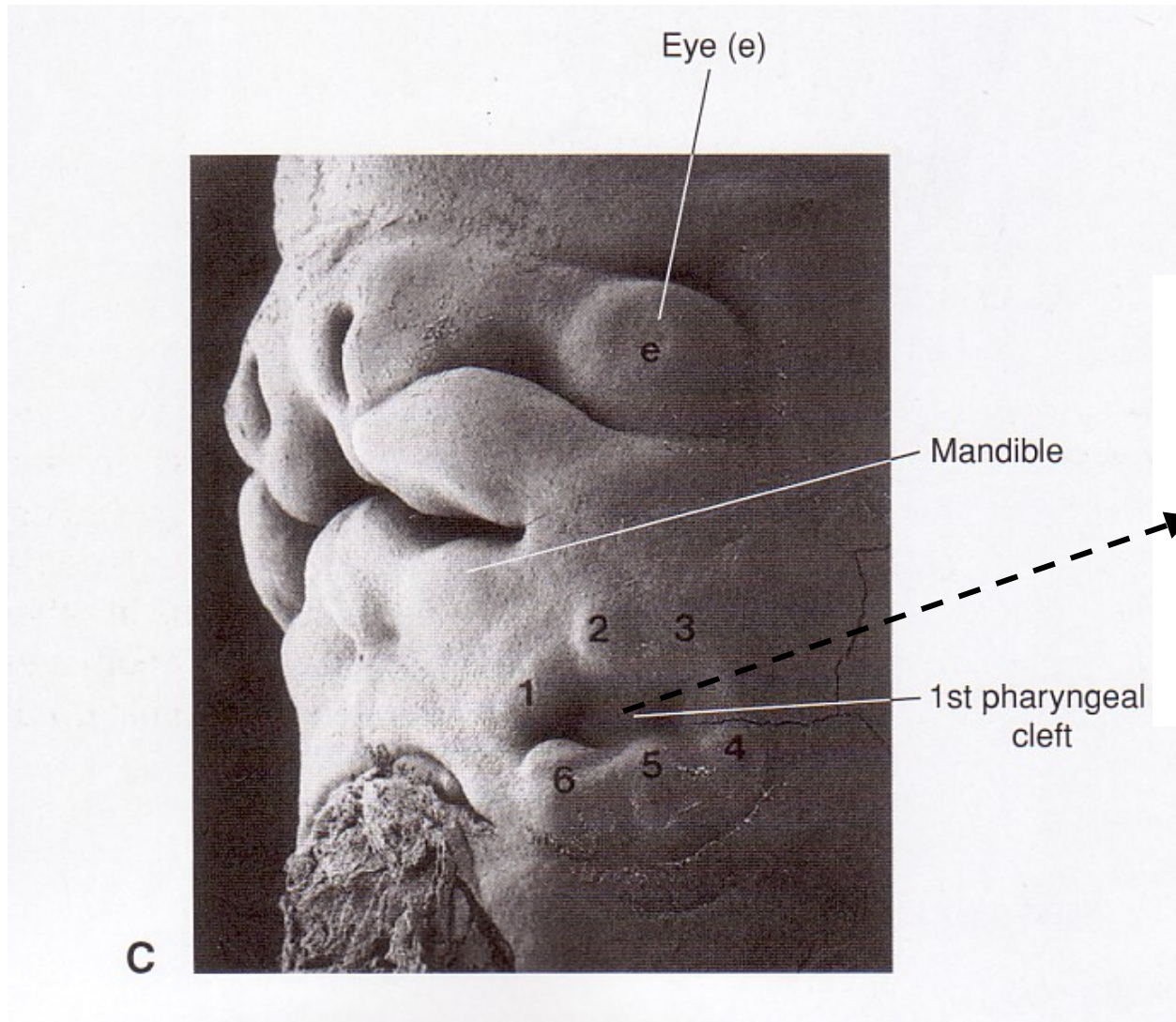


“The Eye Backs Out of the Brain”

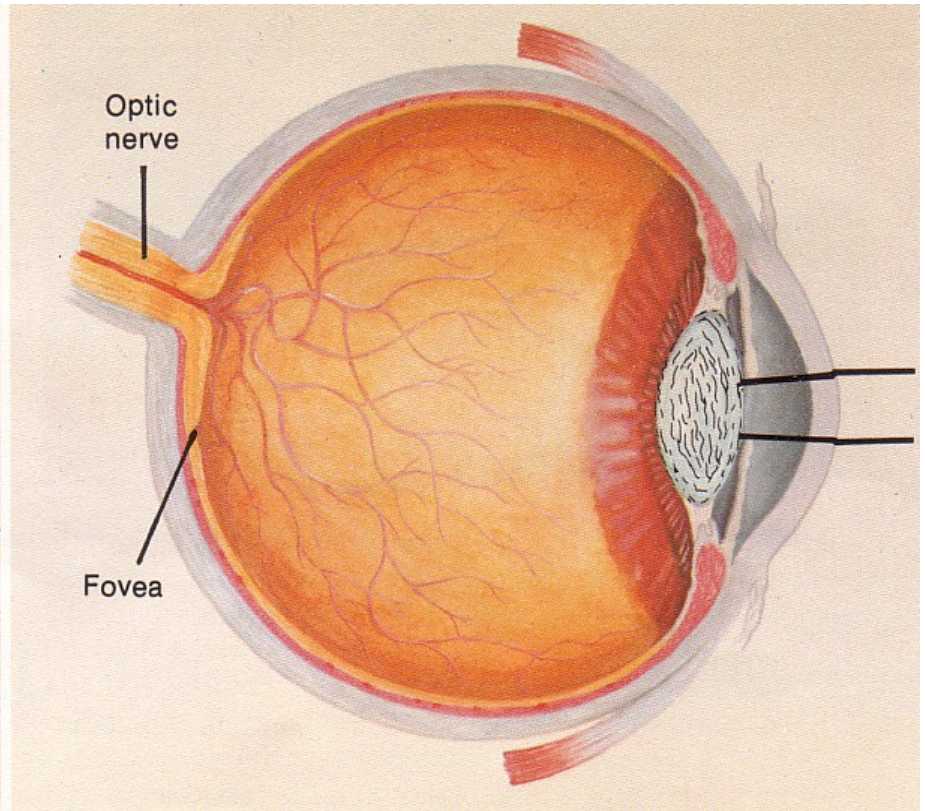
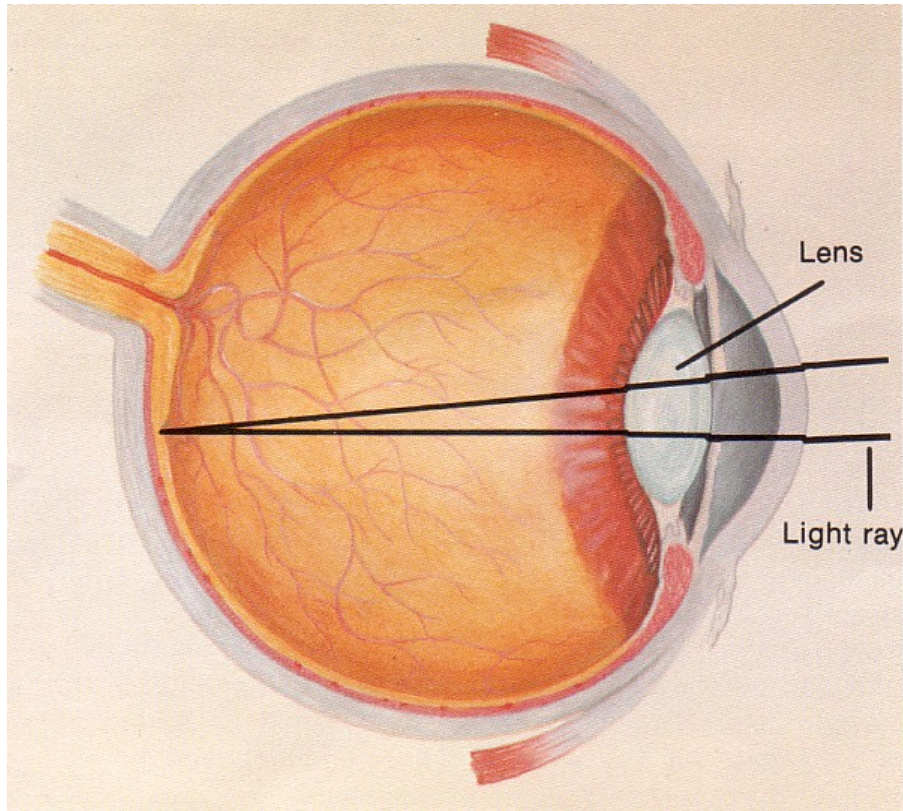
Conjunctiva folds back on itself!



Eye & External Ear Formation



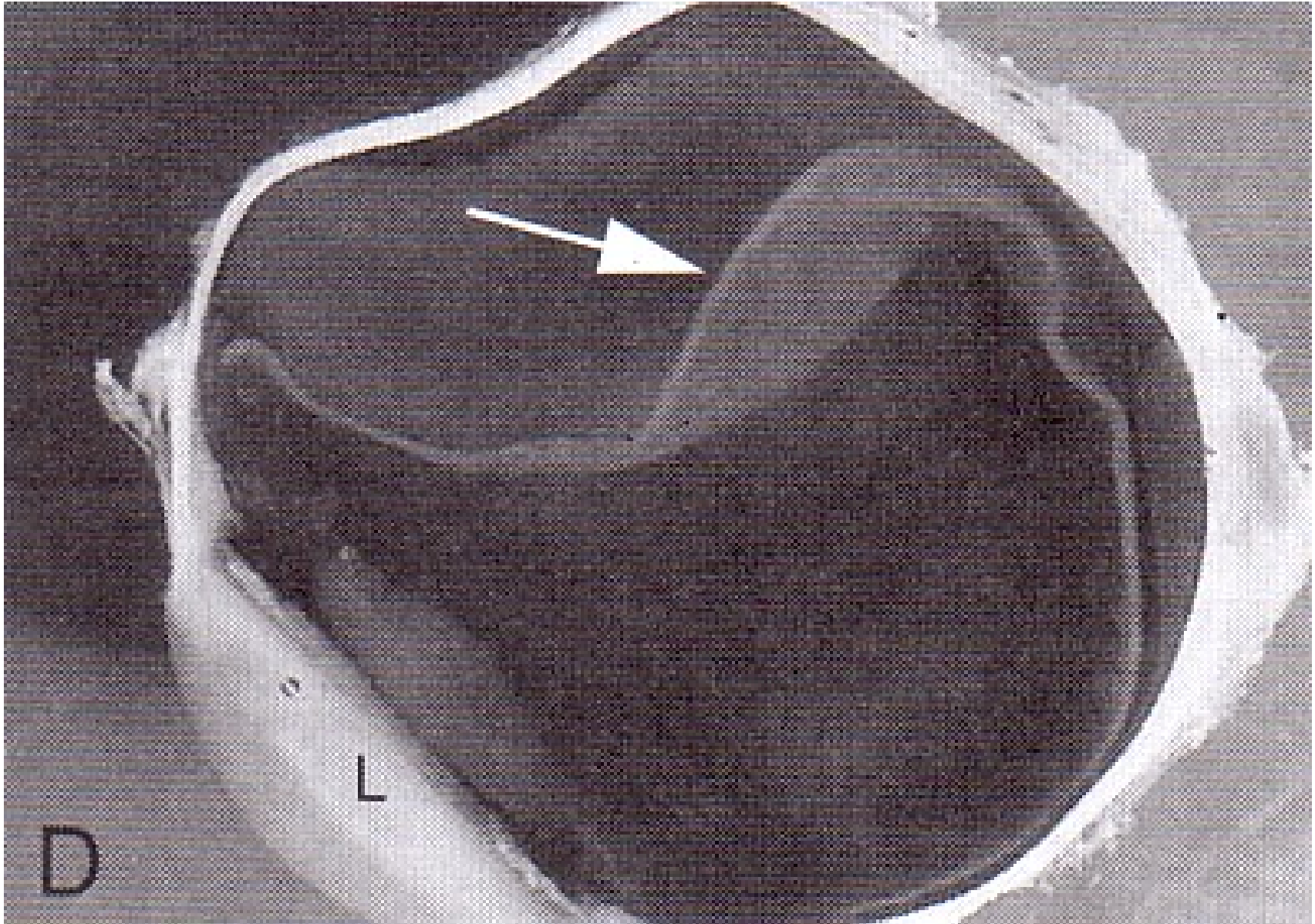
Normal vs. Cataract Lens



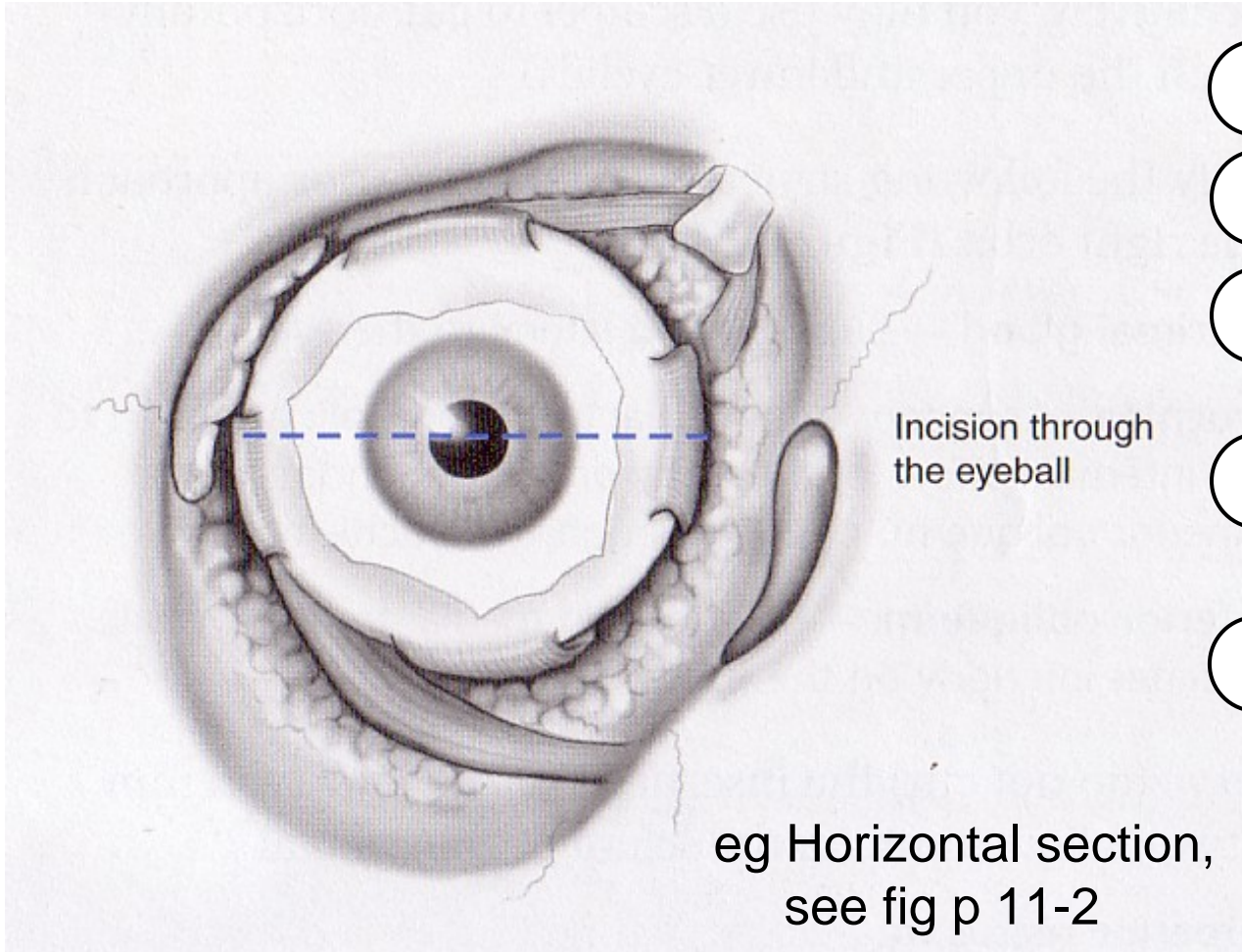
Cataracts in Child



Detached Retina



Lab Eye Tests + Dissection Overview

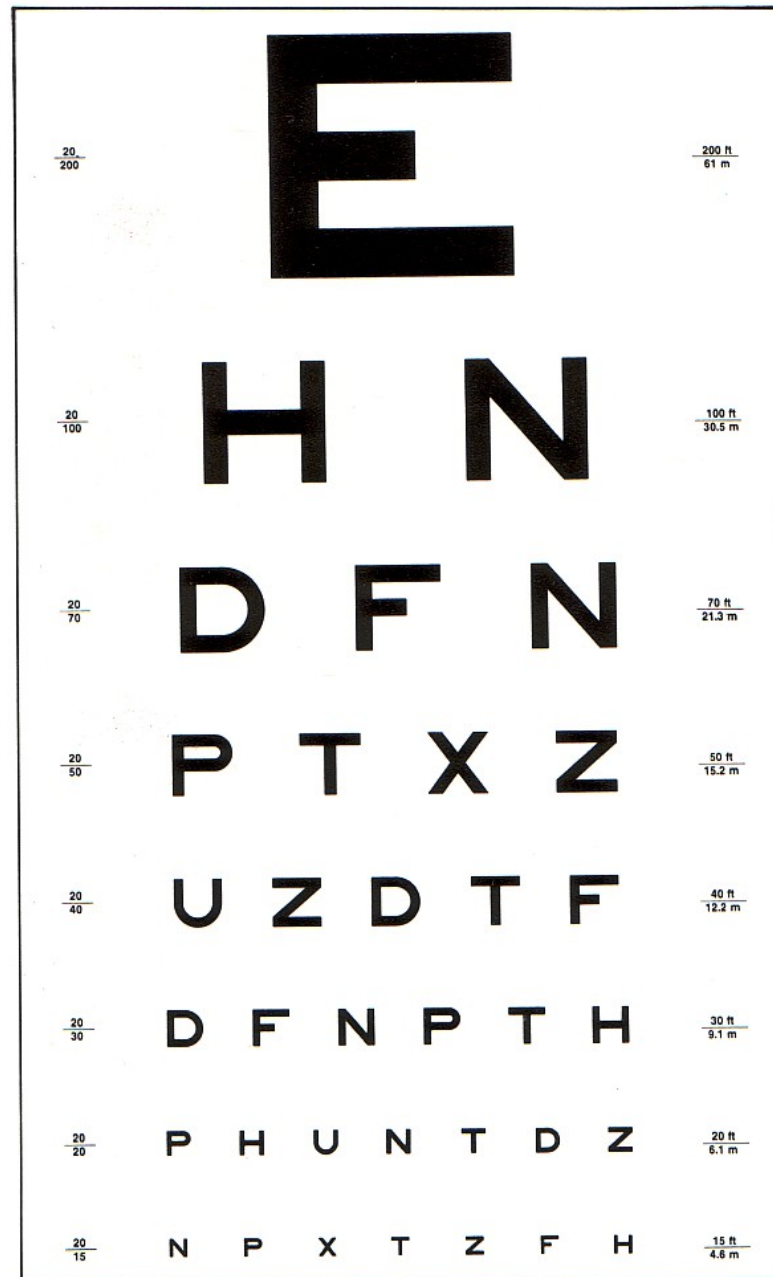


- ① Eye Dominance
- ② Snellen Acuity
- ③ Astigmatism
- ④ Blind Spot Mapping
- ⑤ Dissection of Cow & Pig Eyes
See pp 11-1,11-2

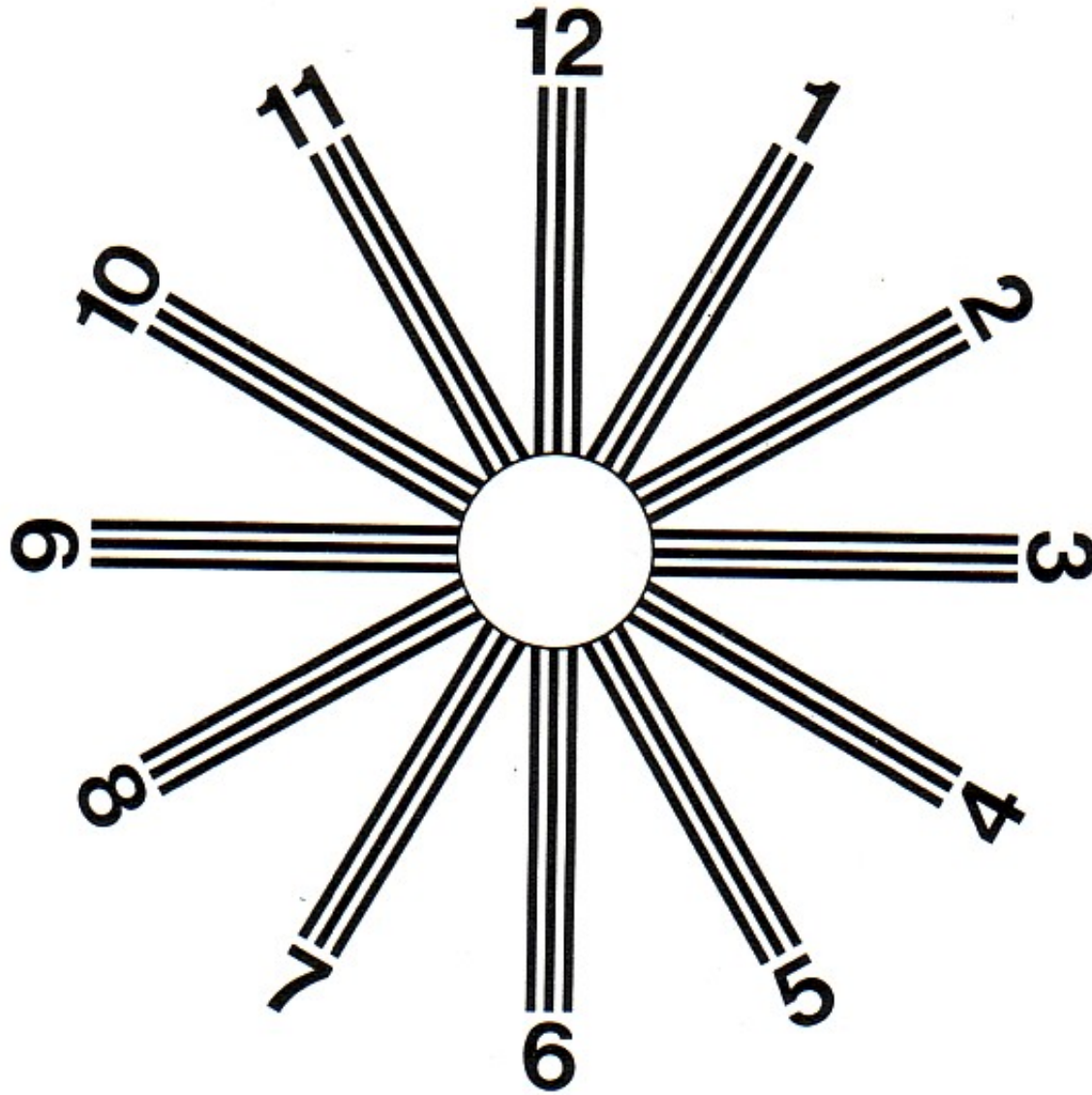
Eye Dominance?



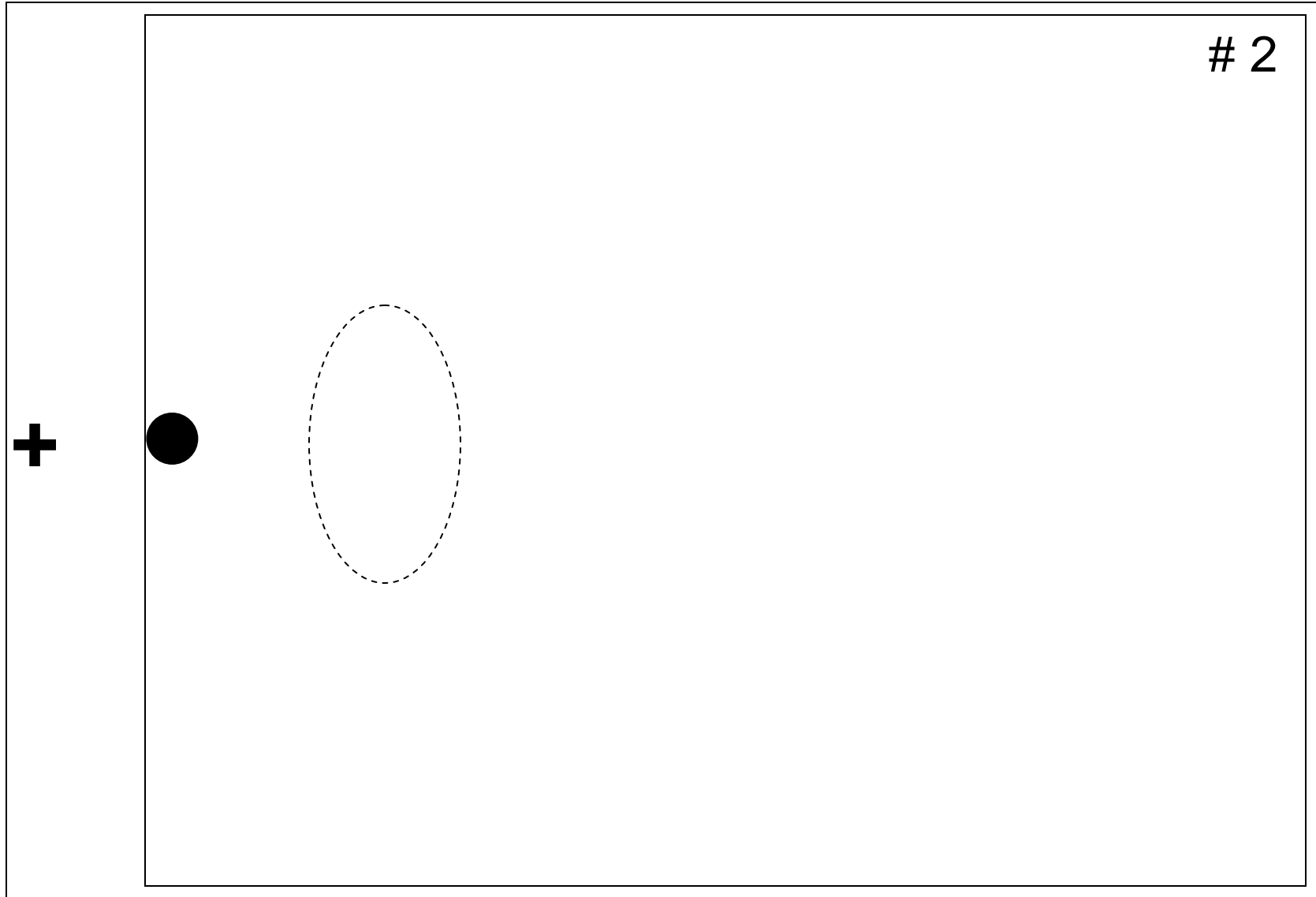
Snellen Visual Acuity Test



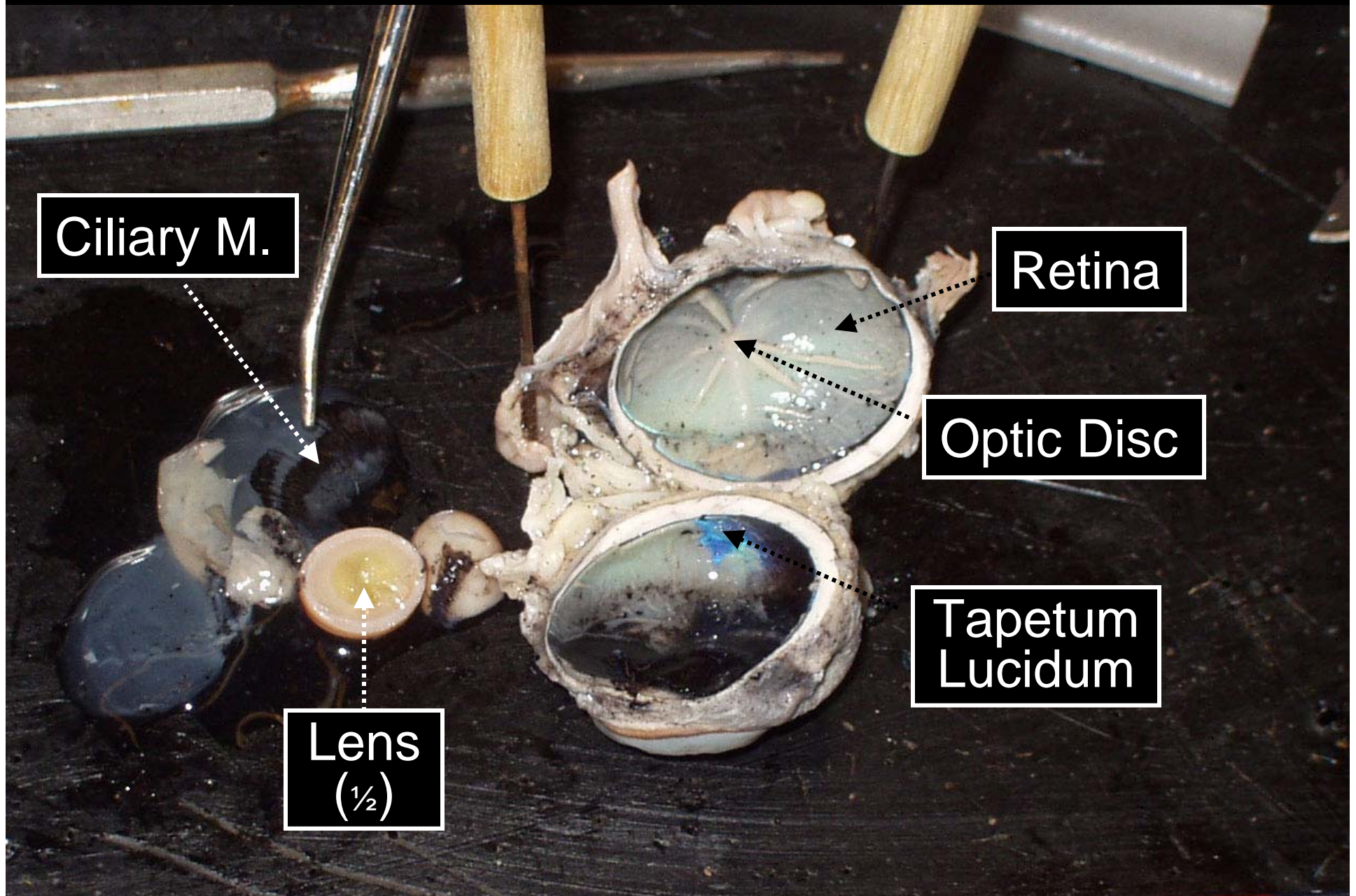
Astigmatism Test



Blind Spot Mapping?



Jennifer Finley's Eye Dissection!



Tapetum Lucidum "Bright Tapestry"
Illuminated Due to Flash Photography

