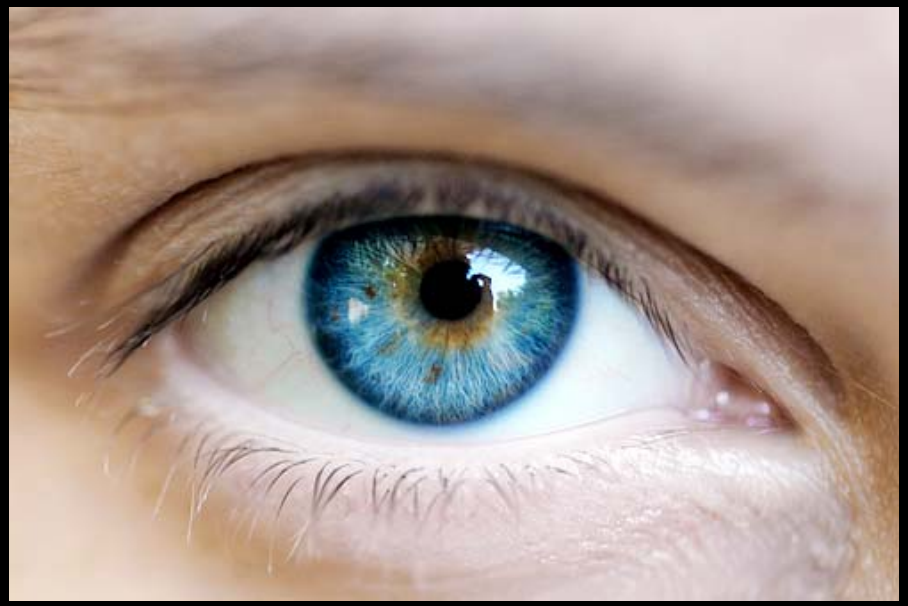
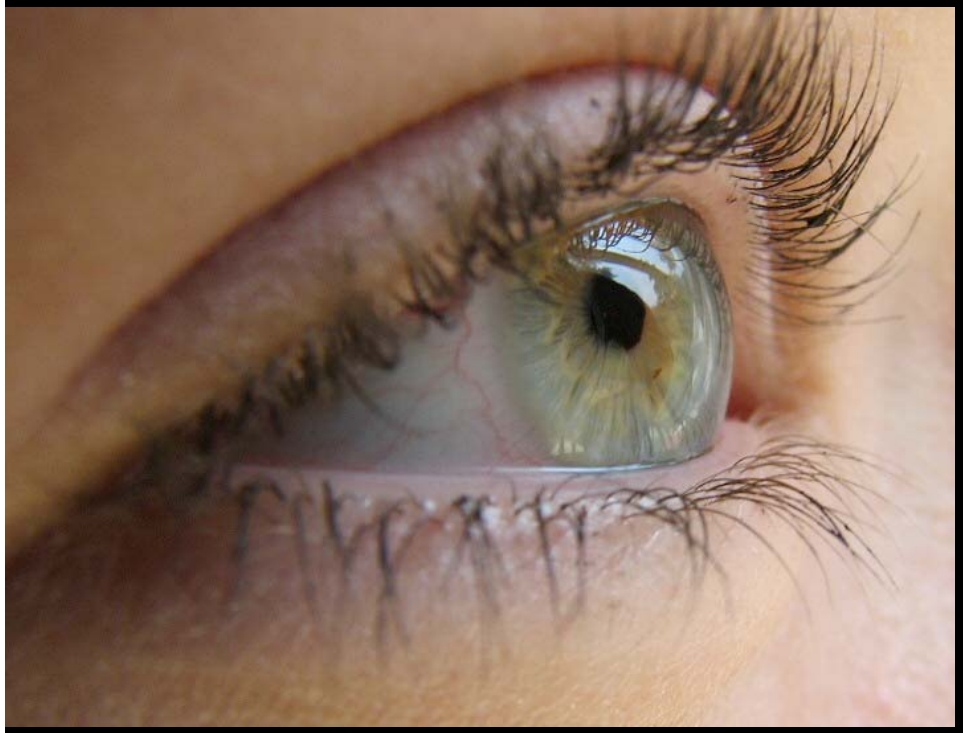
G19: Orbit



Syllabus - Pg. 41

Objectives

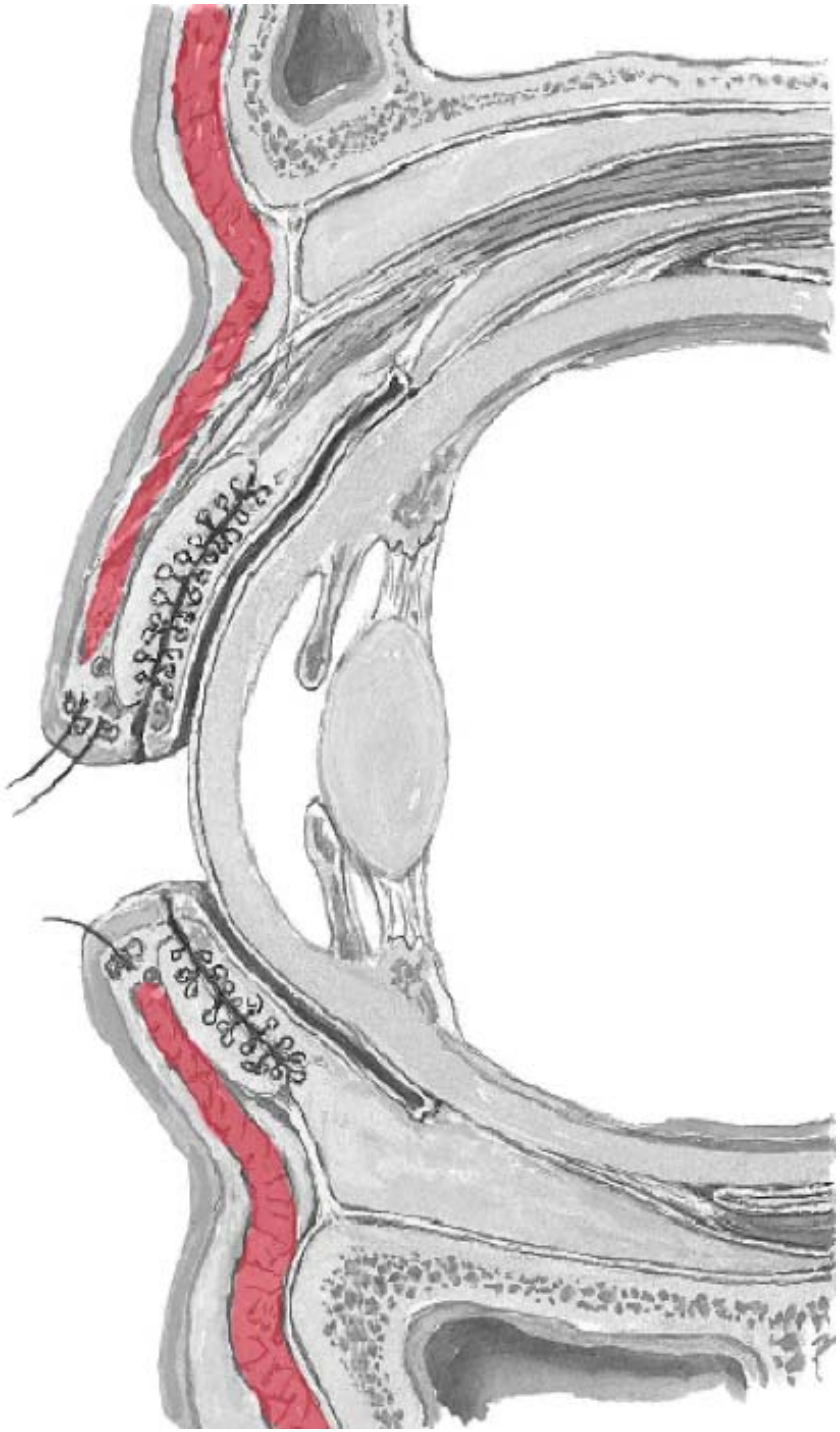


1. Eyelid and Conjunctiva
2. Lacrimal apparatus
3. Eyeball layers
4. Extraoccular muscles
5. Vasculature of the orbit
6. Innervatin of the orbit

1) Eyelid

Orbicularis oculi m.

Pg. 41-42

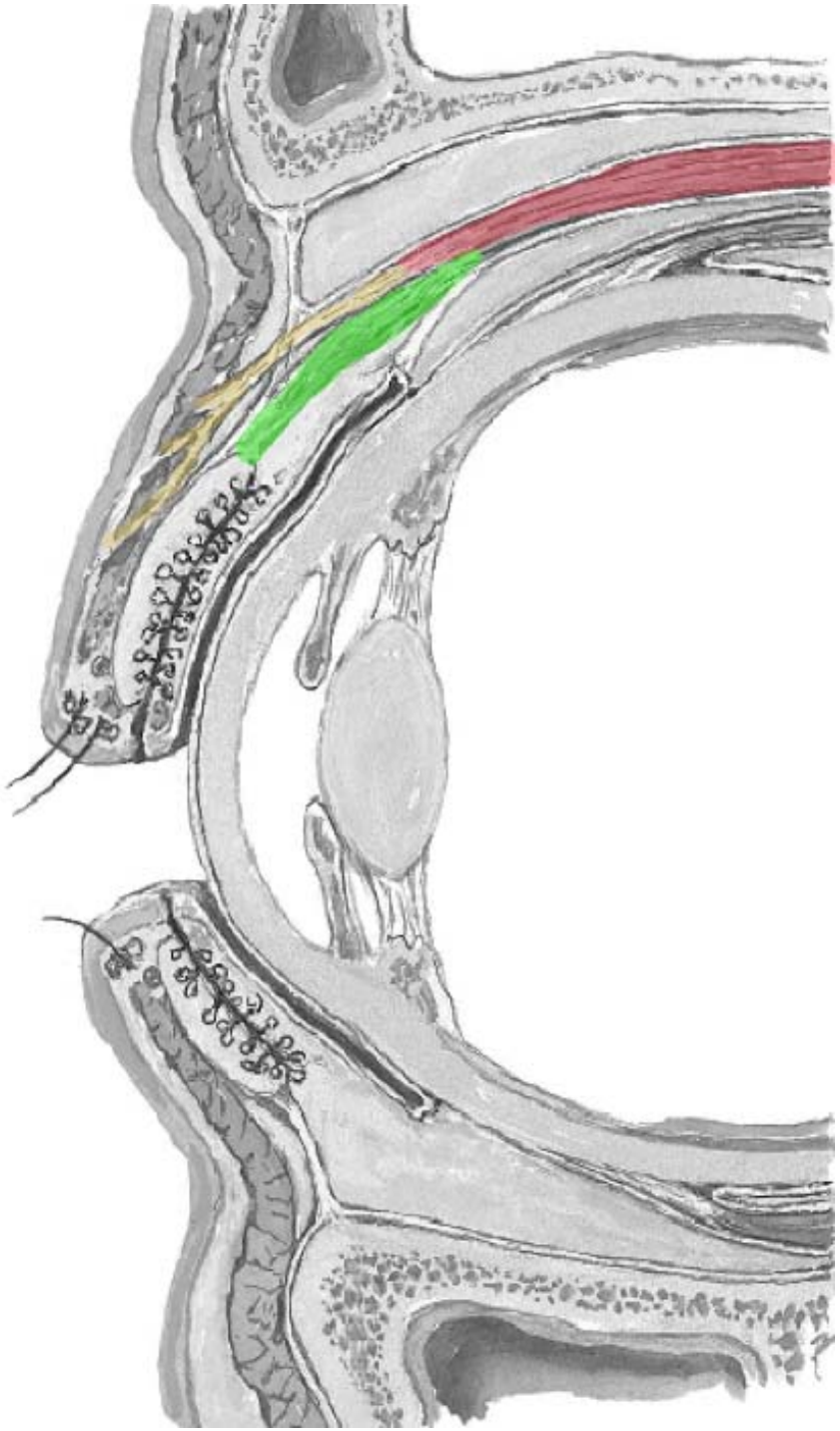


1) Eyelid

Levator palpebrae superioris m.

Superior tarsal m.

Pg. 41-42

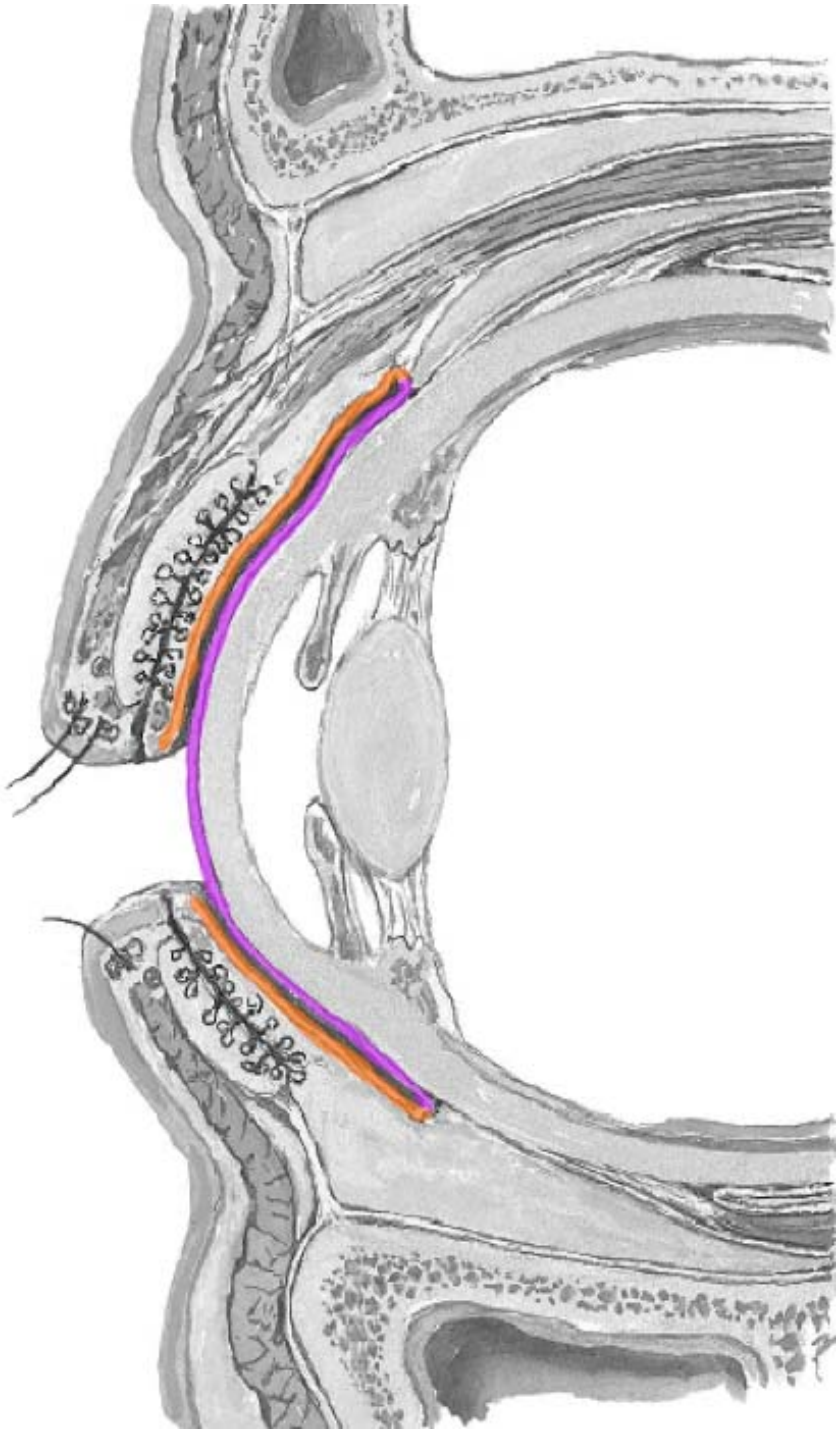


1) Eyelid

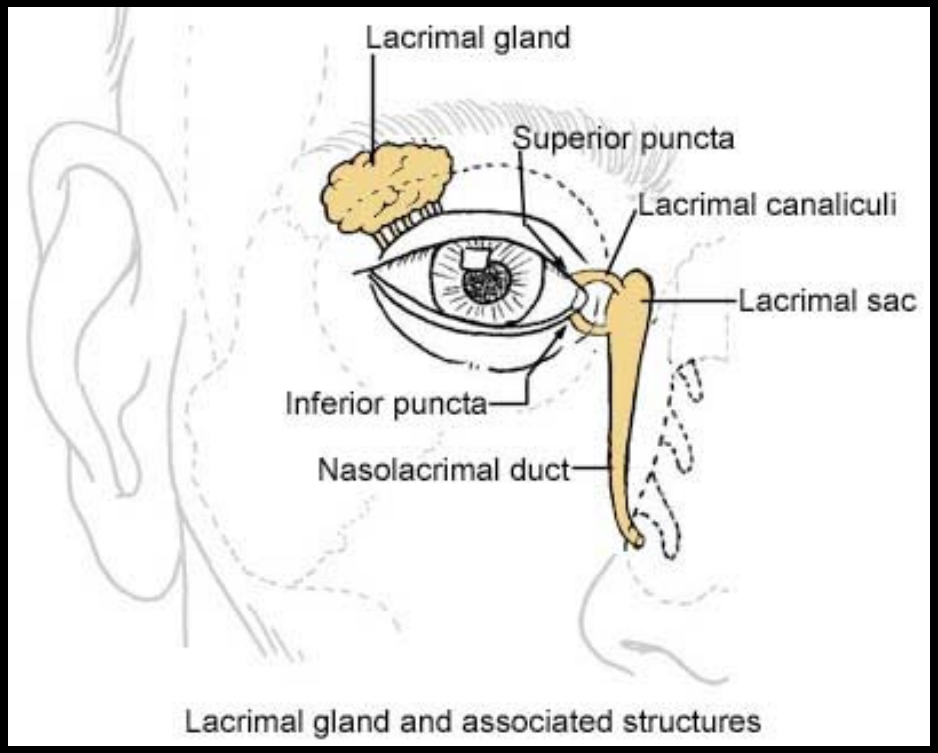
Conjunctiva

- Palpebral
- Bulbar

Pg. 41-42



2) Lacrimal Apparatus

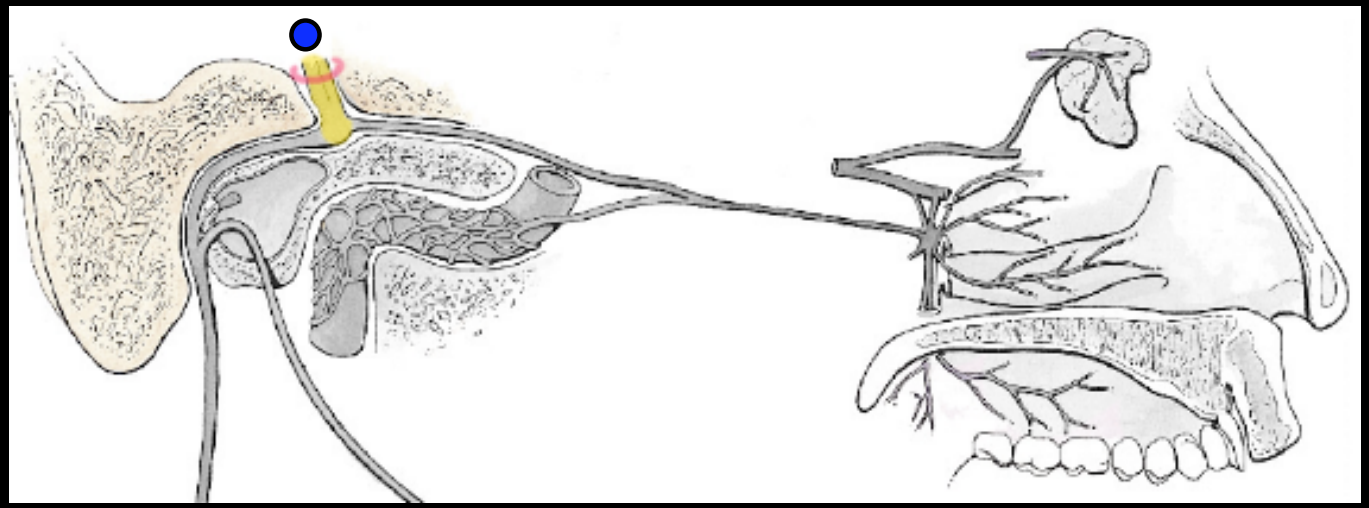


Lacrimal gland and associated structures

VM para CN VII

Pg. 41-42

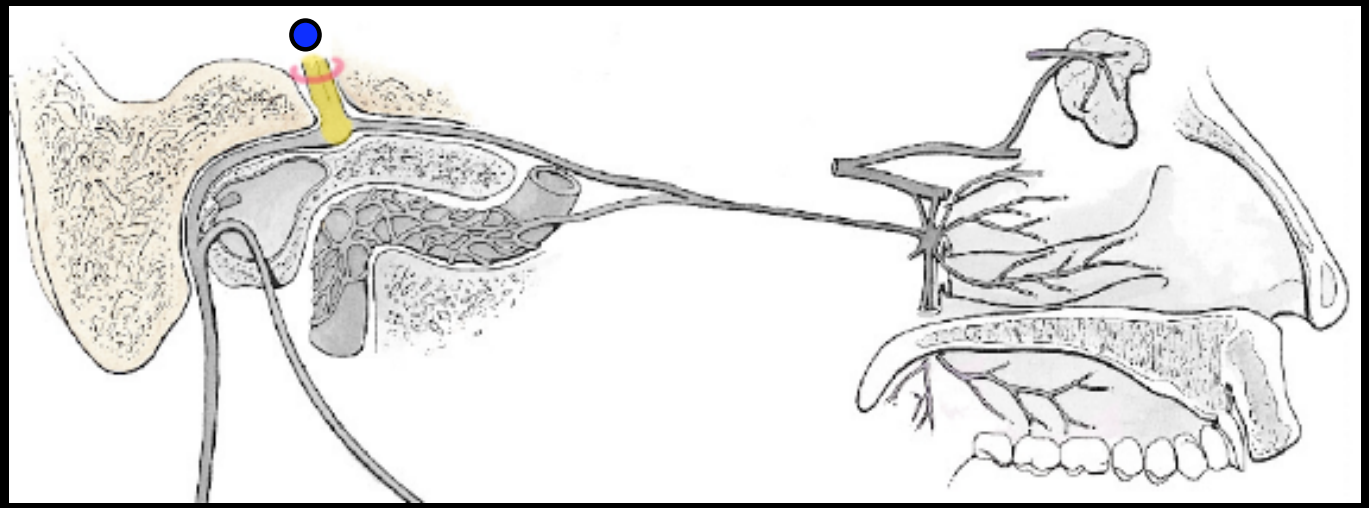
2) Lacrimal Apparatus



Superior salvatory nucleus

Pg. 41-42

2) Lacrimal Apparatus

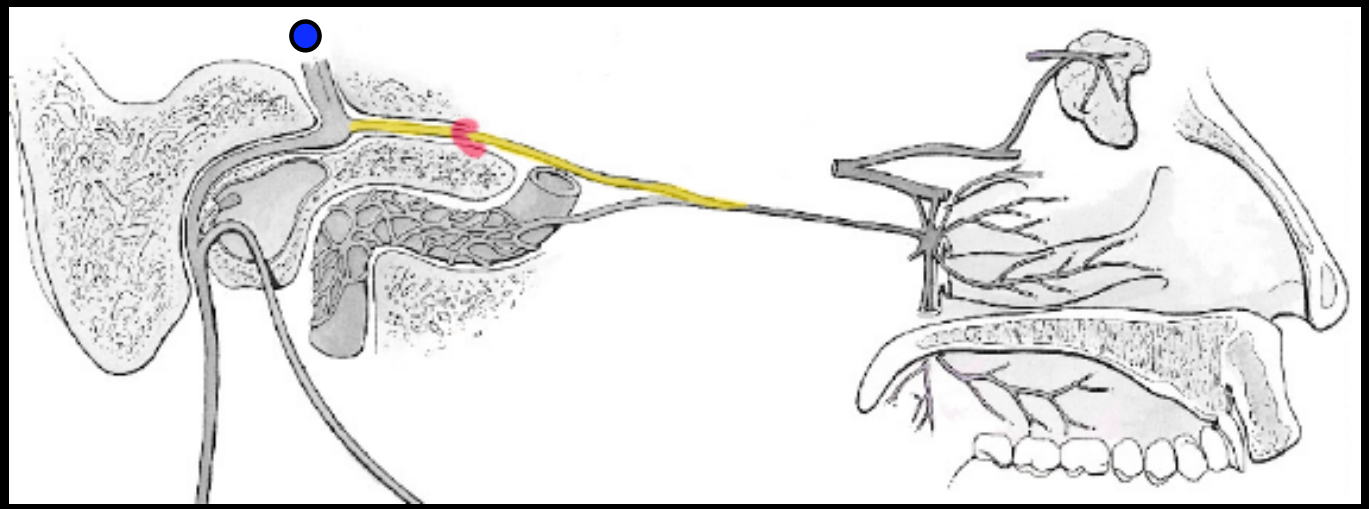


Facial n. (CN VII)

Internal acoustic meatus

Pg. 41-42

2) Lacrimal Apparatus

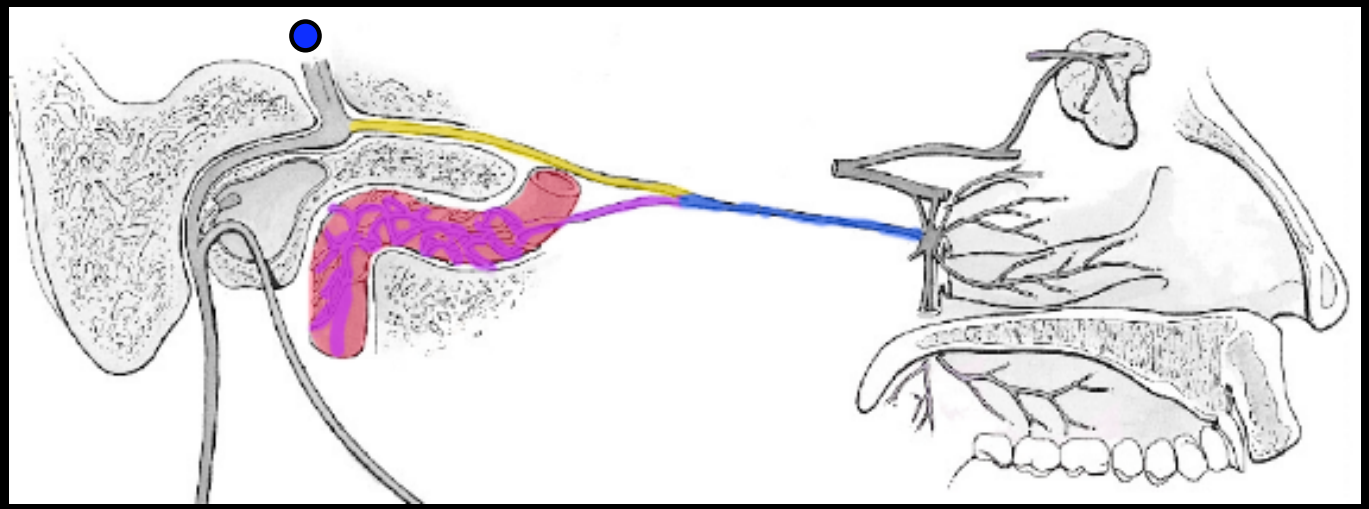


Greater petrosal n.

Greater petrosal hiatus

Pg. 41-42

2) Lacrimal Apparatus



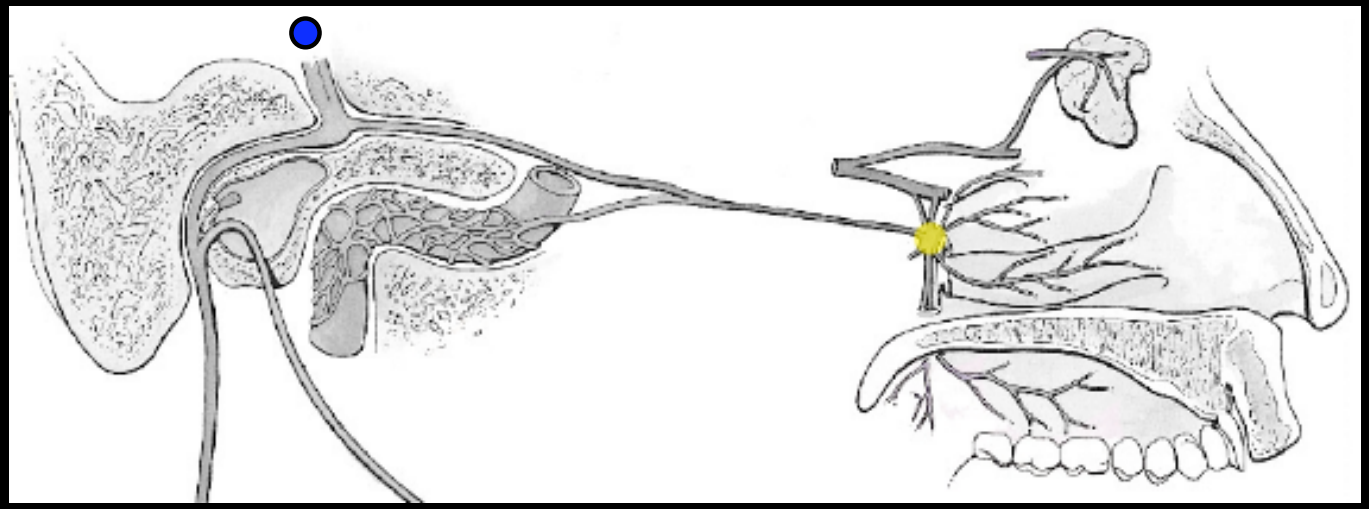
Greater petrosal n.

Deep petrosal n.

} Nerve of the pterygoid canal

Pg. 41-42

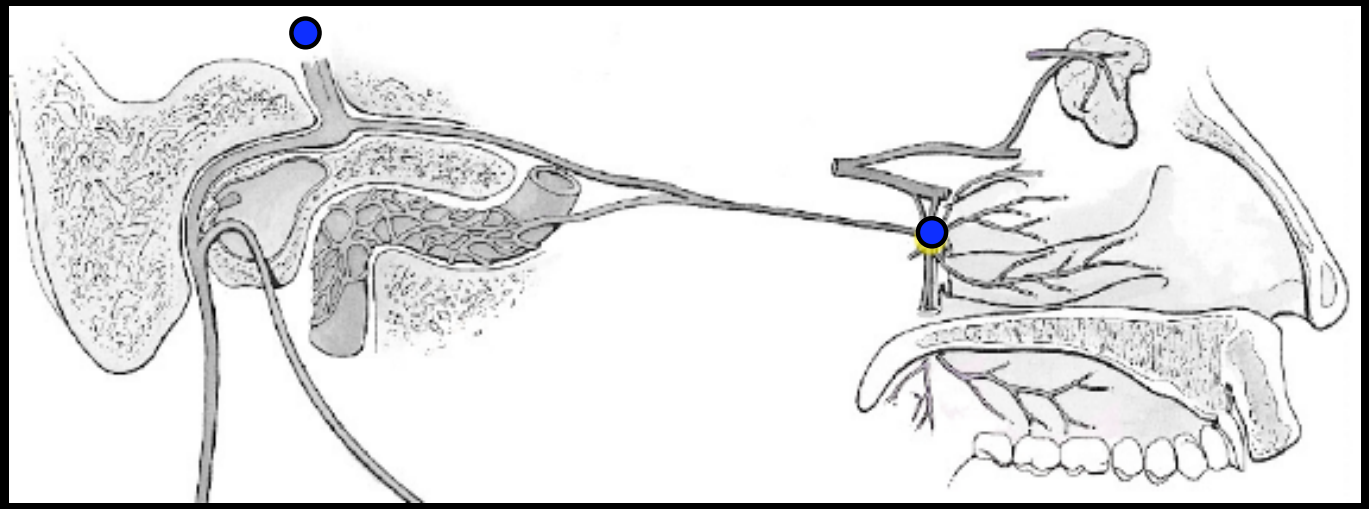
2) Lacrimal Apparatus



Pterygopalatine ganglion

Pg. 41-42

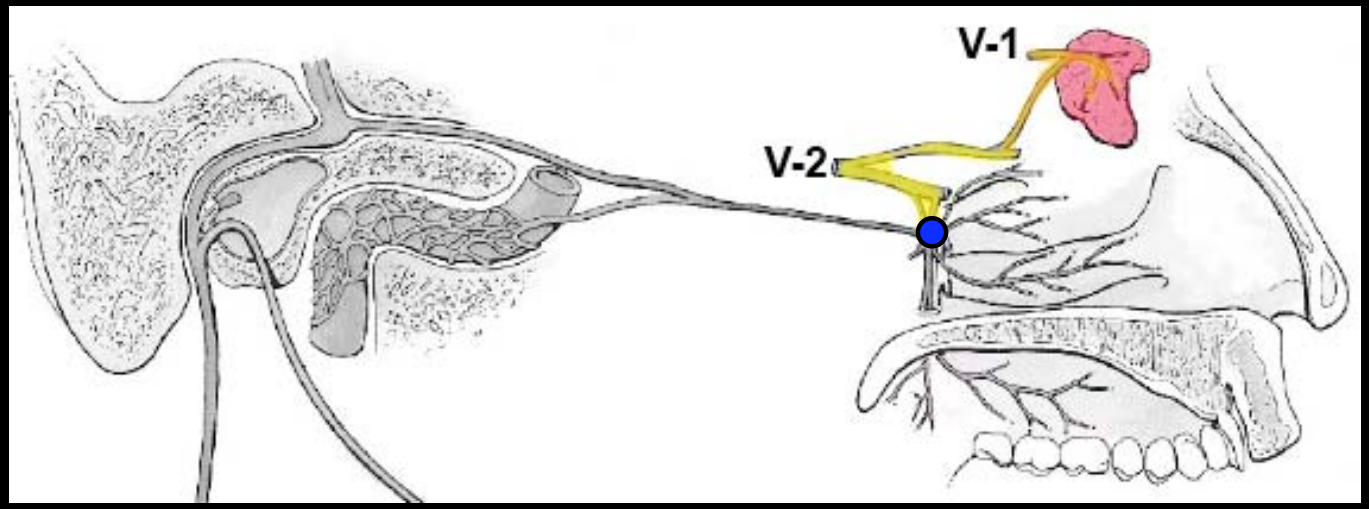
2) Lacrimal Apparatus



Pterygopalatine ganglion

Pg. 41-42

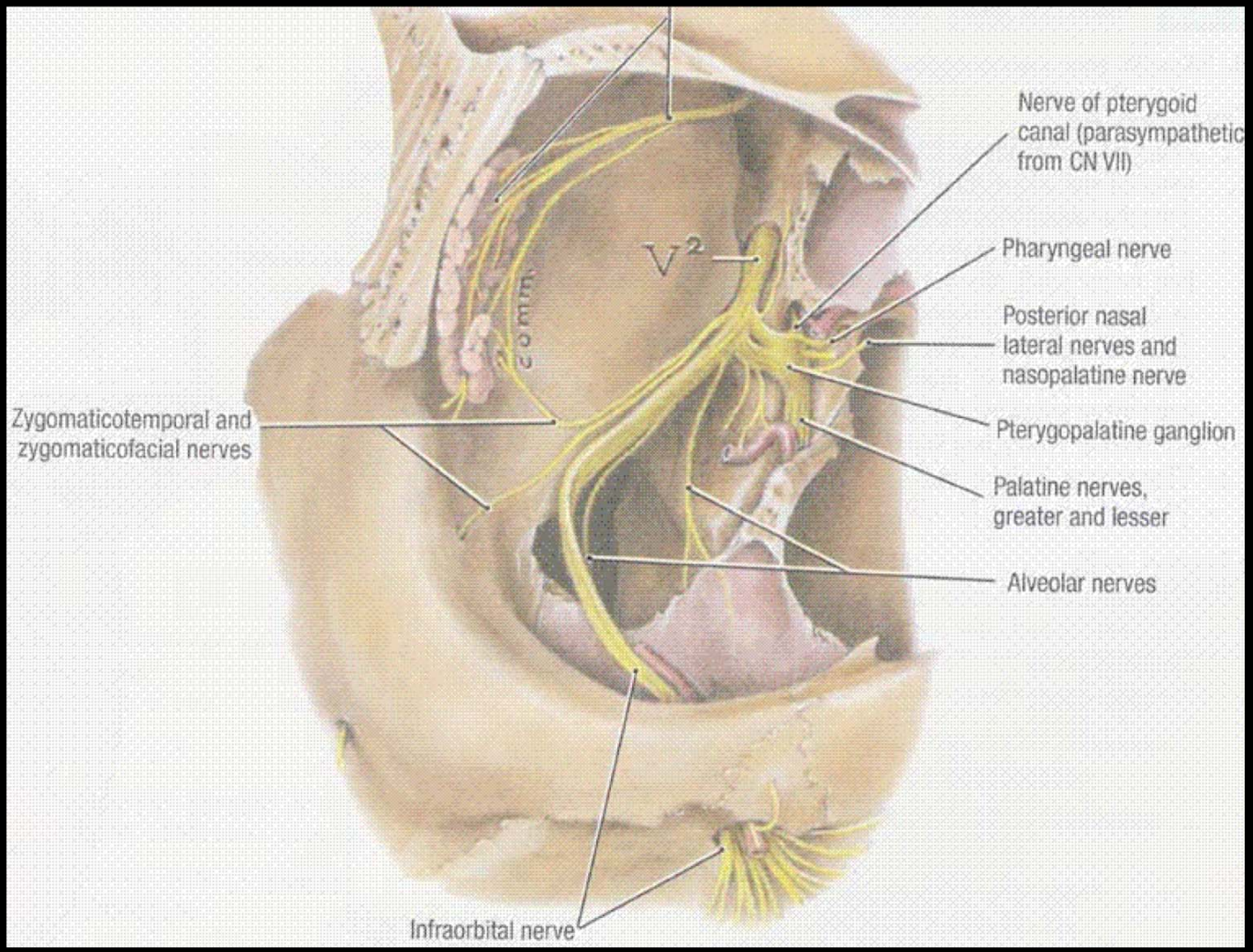
2) Lacrimal Apparatus



Hitchhike on CN V-2 and V-1 to lacrimal gland

Pg. 41-42

2) Lacrimal Apparatus



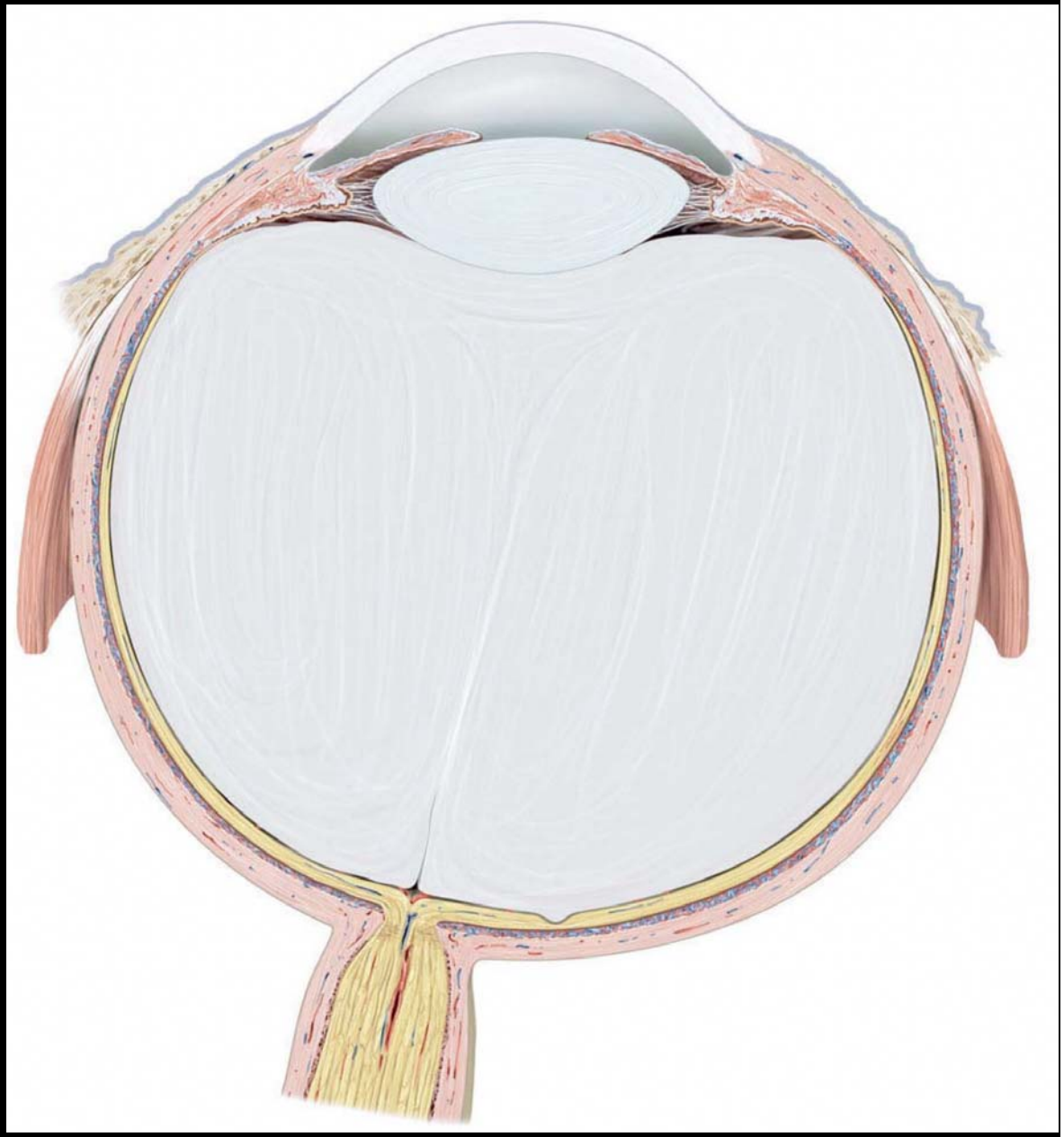
Hitchhike on CN V-2 and V-1 to lacrimal gland

3) Eyeball

a) Fibrous layer

b) Choroid layer

c) Retina

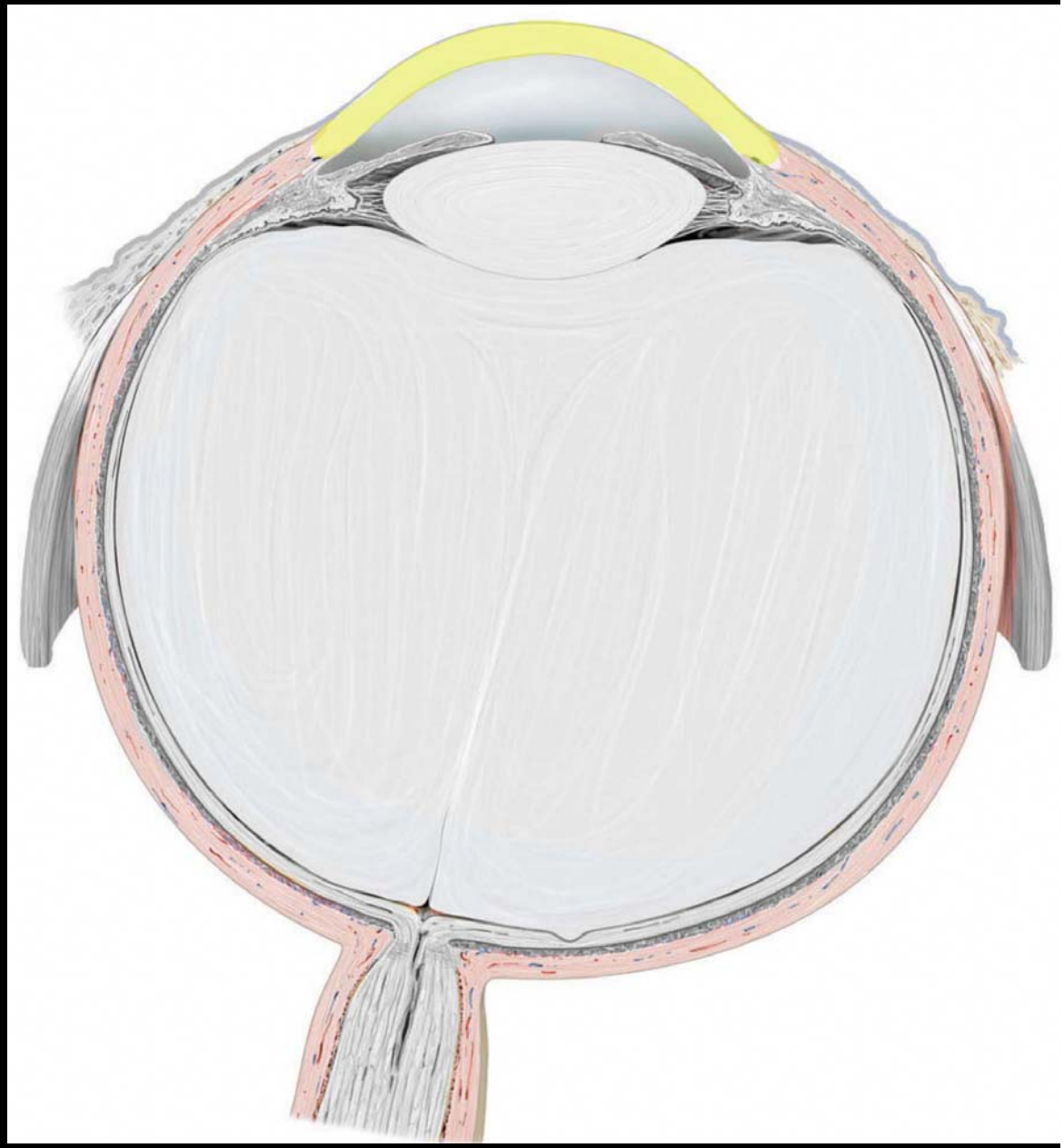


Pg. 43-44

3) Eyeball

a) Fibrous layer

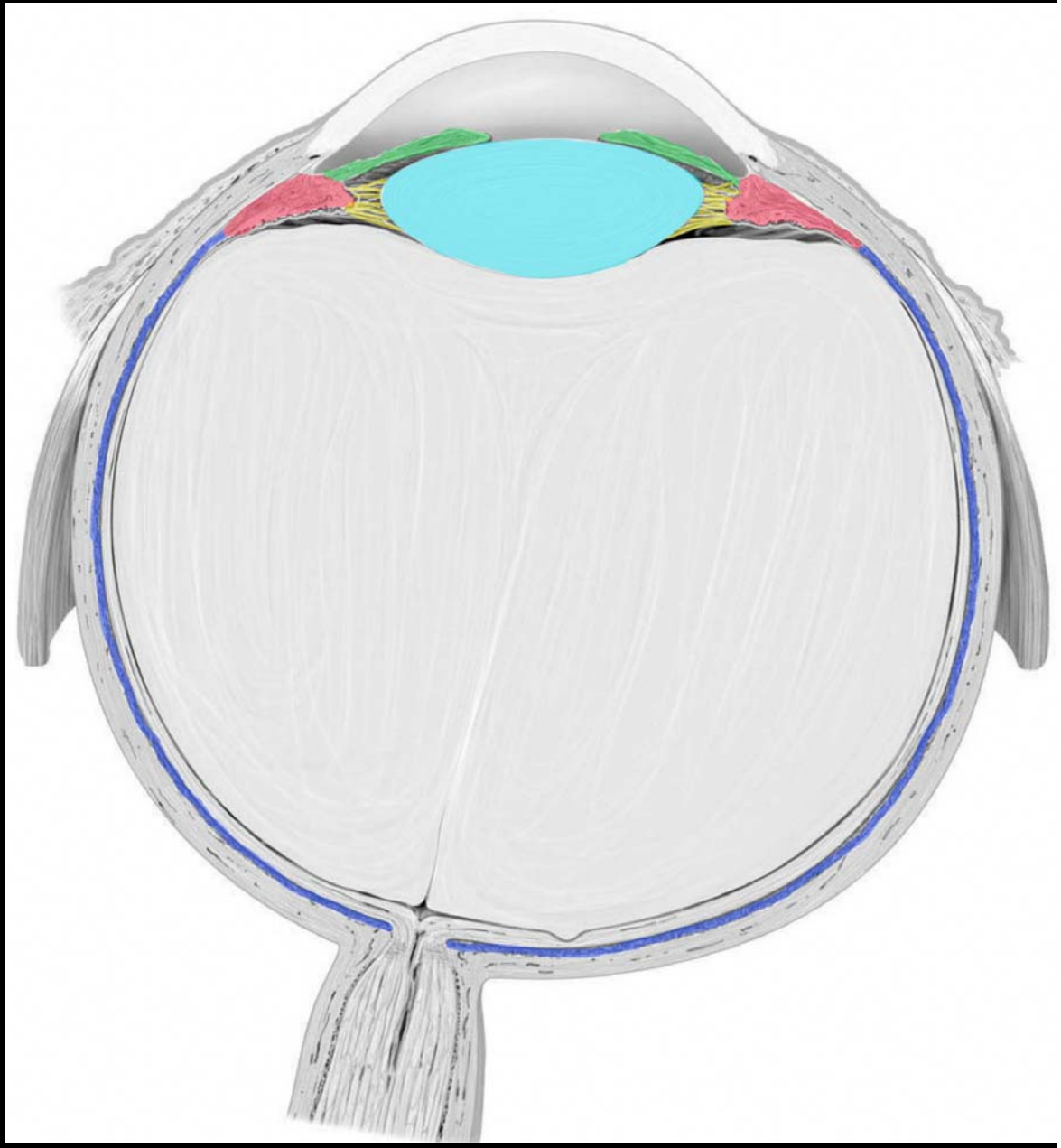
- Cornea (CN V-1)
- Sclera



Pg. 43-44

3) Eyeball

a) Chroid layer

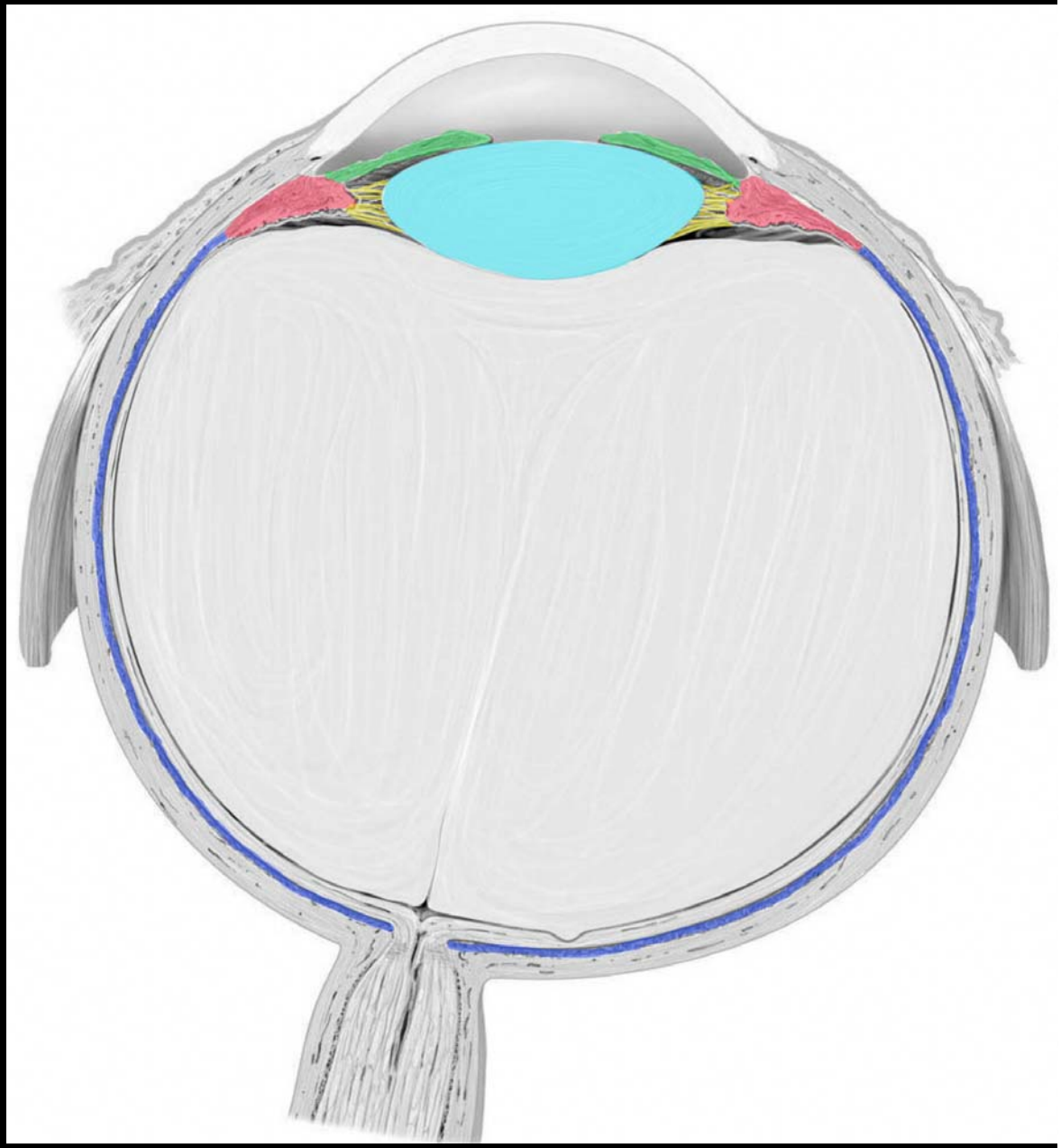


Pg. 43-44

3) Eyeball

a) Chroid layer

- Ciliary m.
  - Suspen. lig.
  - Lens

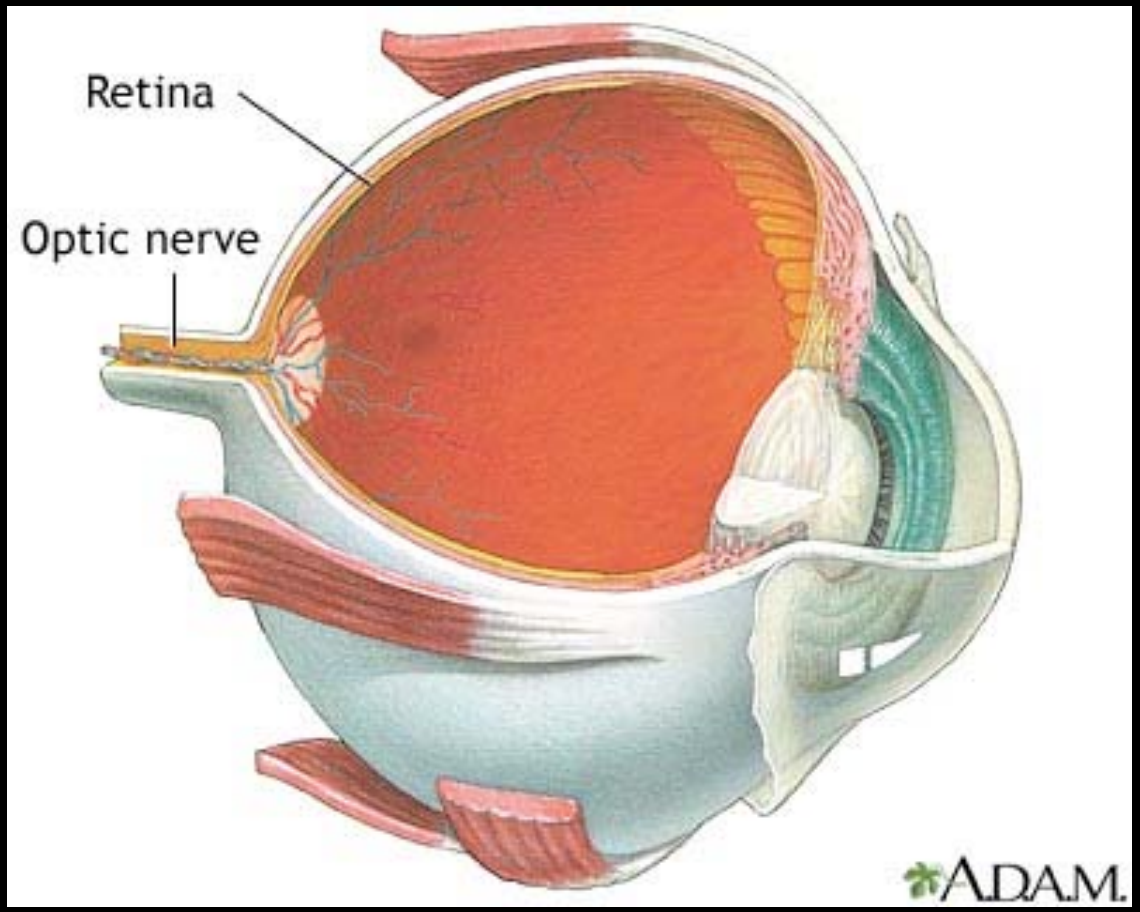


Pg. 43-44

3) Eyeball

a) Chroid layer

- Ciliary m.
  - Suspen. lig.
  - Lens

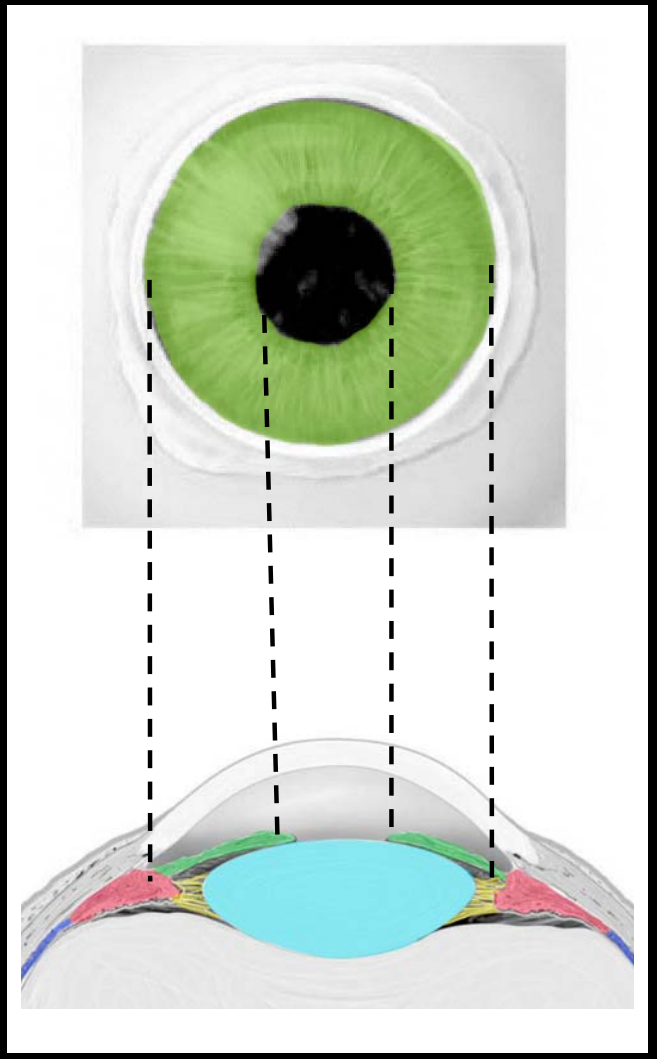


Pg. 43-44

3) Eyeball

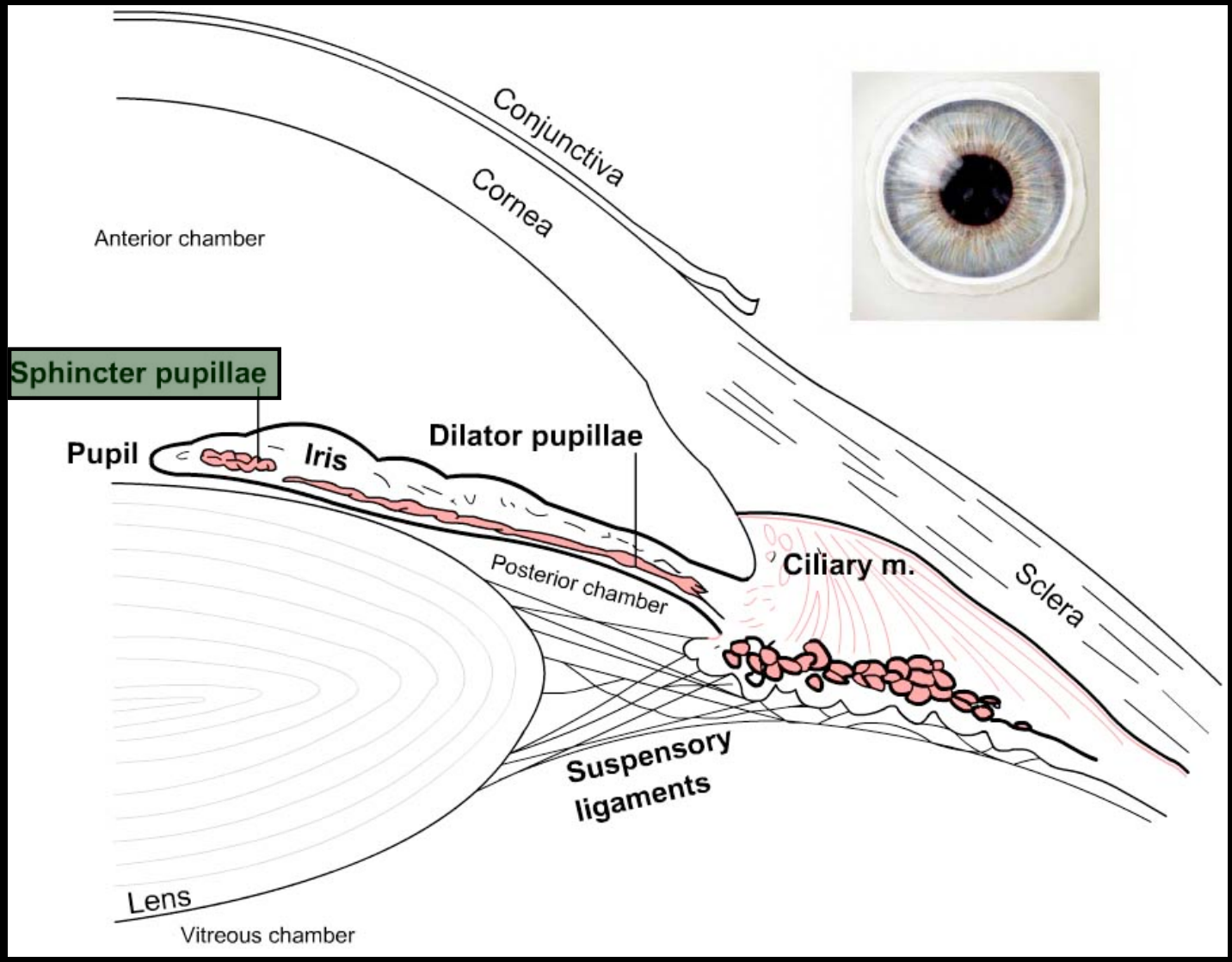
a) Chroid layer

- Iris
  - Pupil



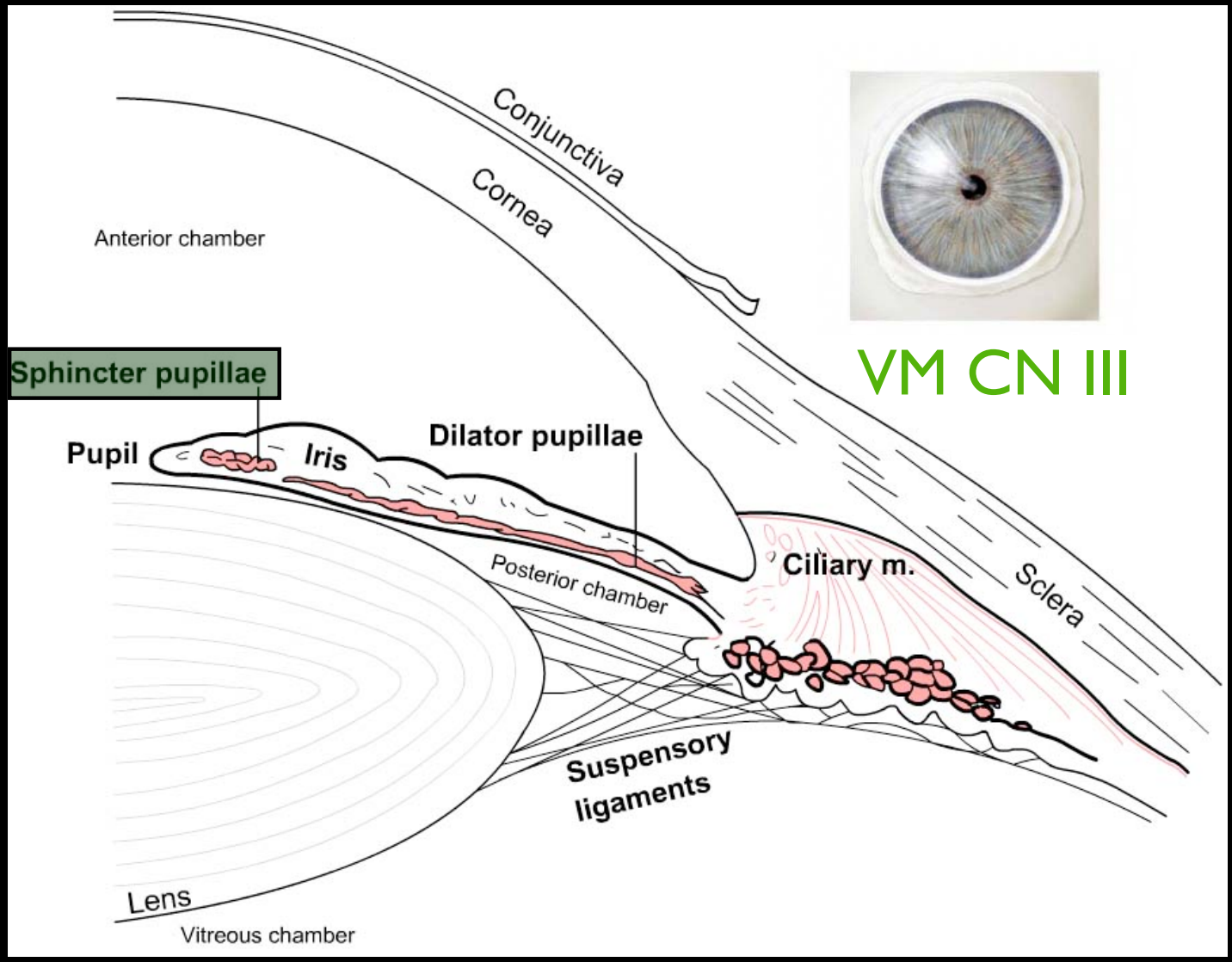
Pg. 43-44

3) Eyeball - Sphincter pupillae m.



Pg. 43-44

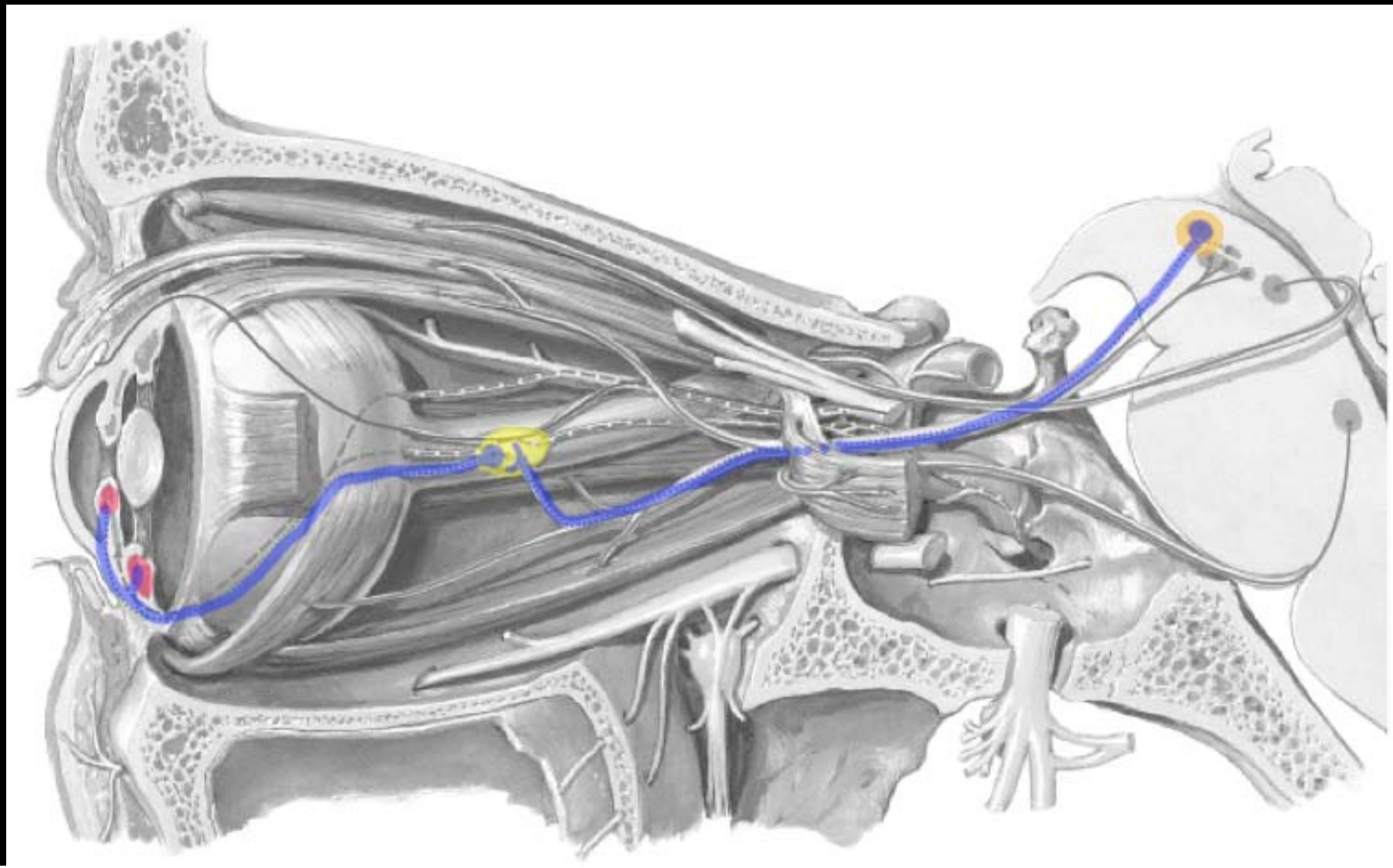
3) Eyeball - Sphincter pupillae m.



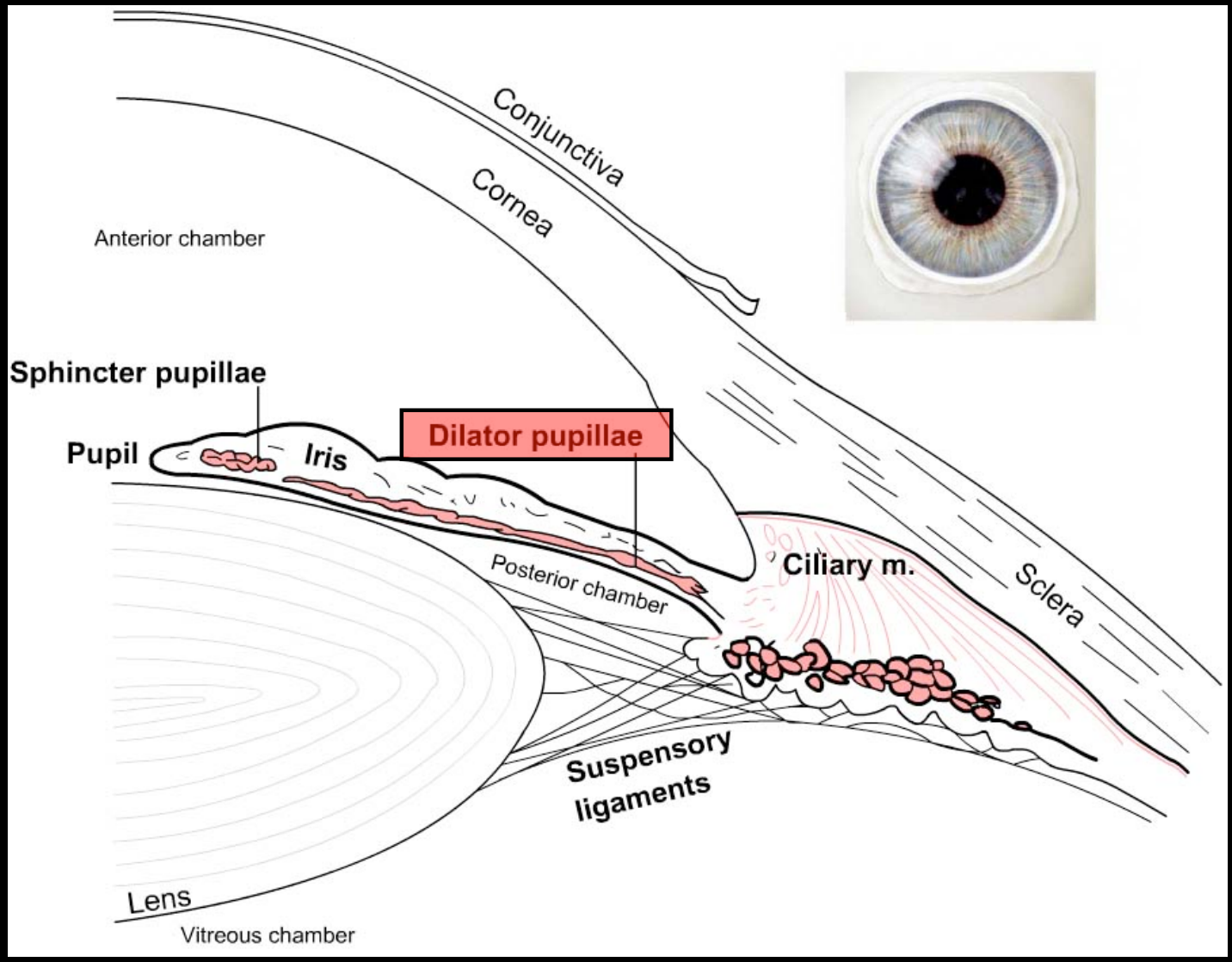
Pg. 43-44

3) Eyeball

a) CN III Parasymp - ciliary mm. and sphincter pup.

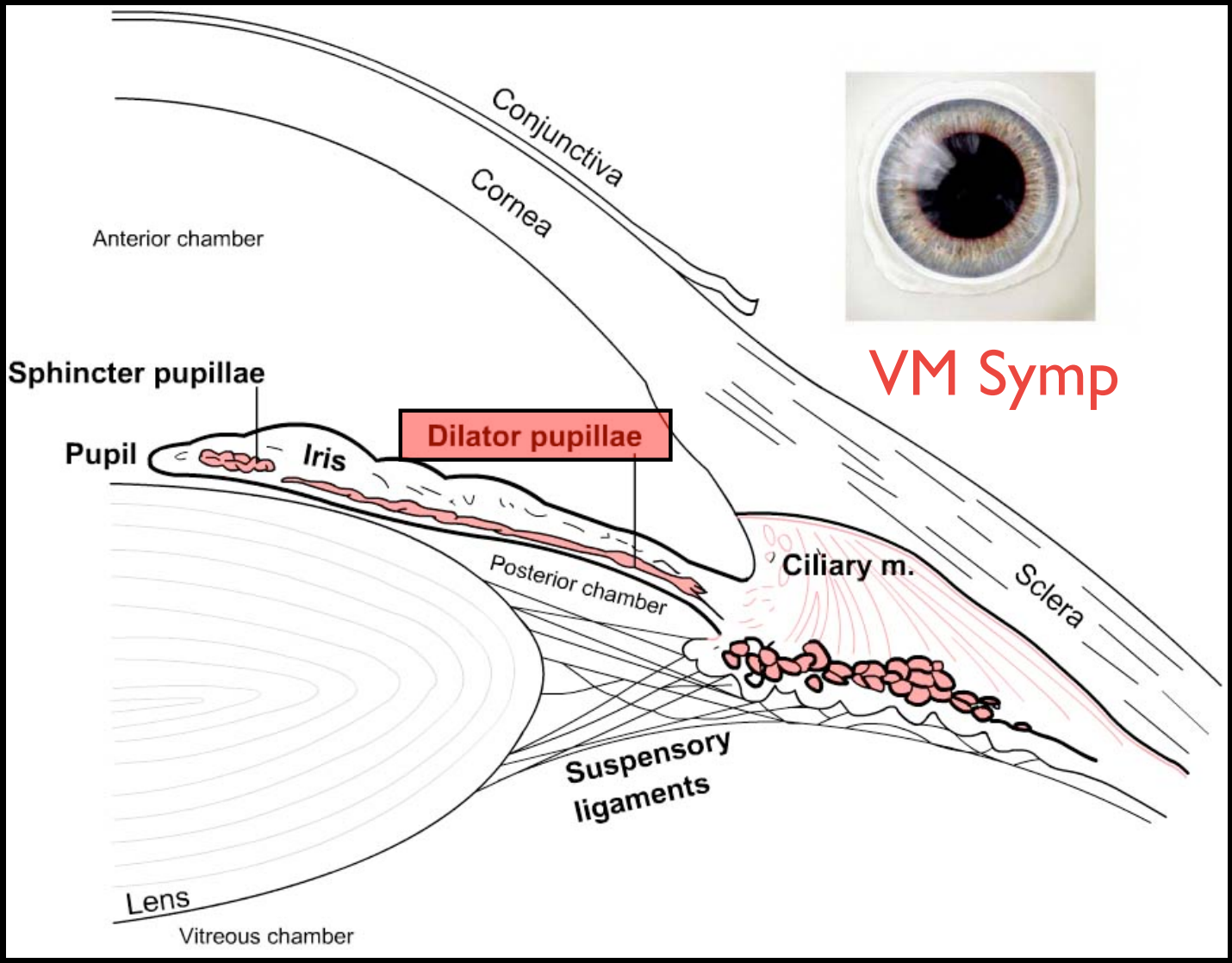


3) Eyeball - Dilator Pupillae m.



Pg. 43-44

3) Eyeball - Dilator Pupillae m.

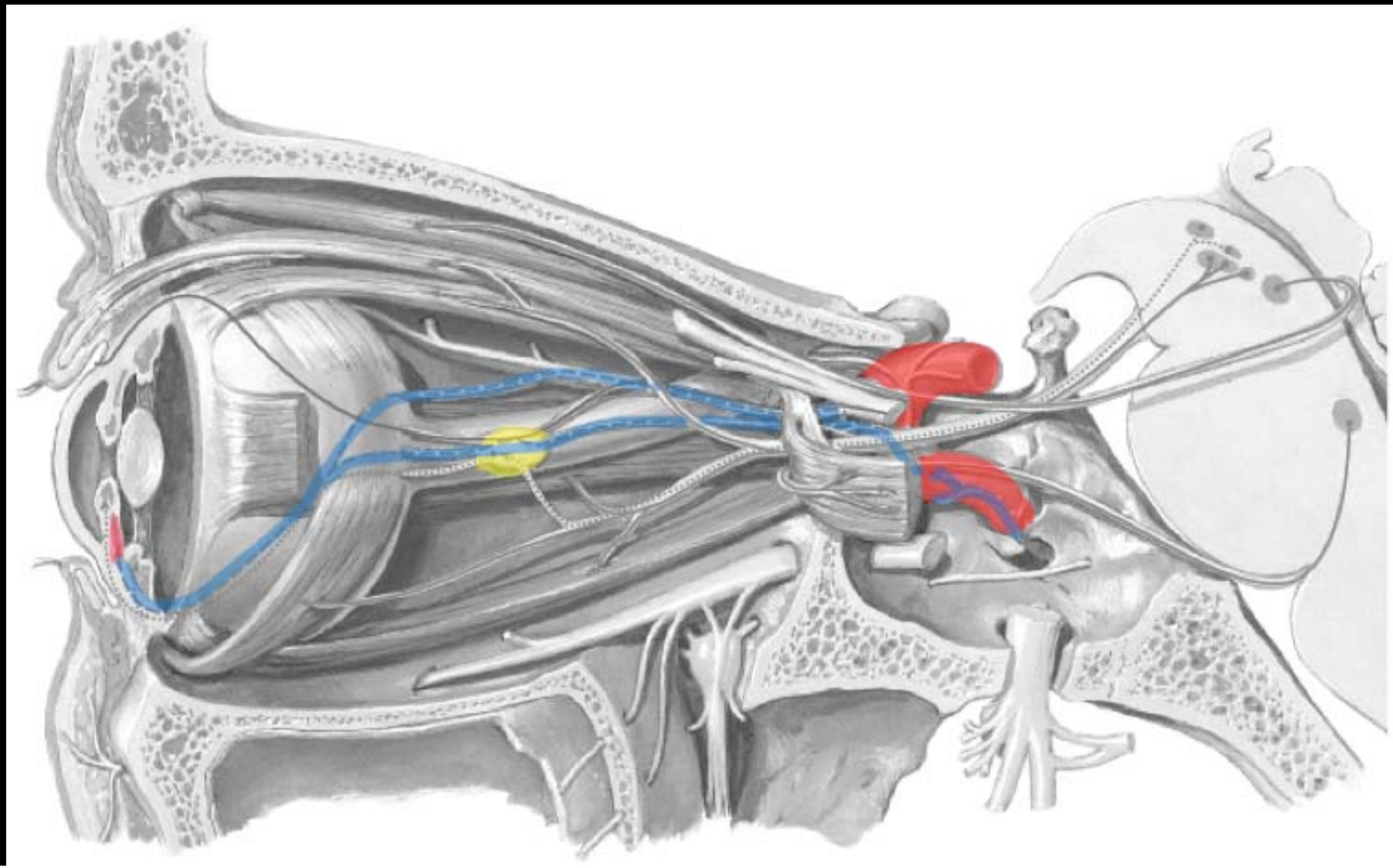


VM Symp

Pg. 43-44

3) Eyeball

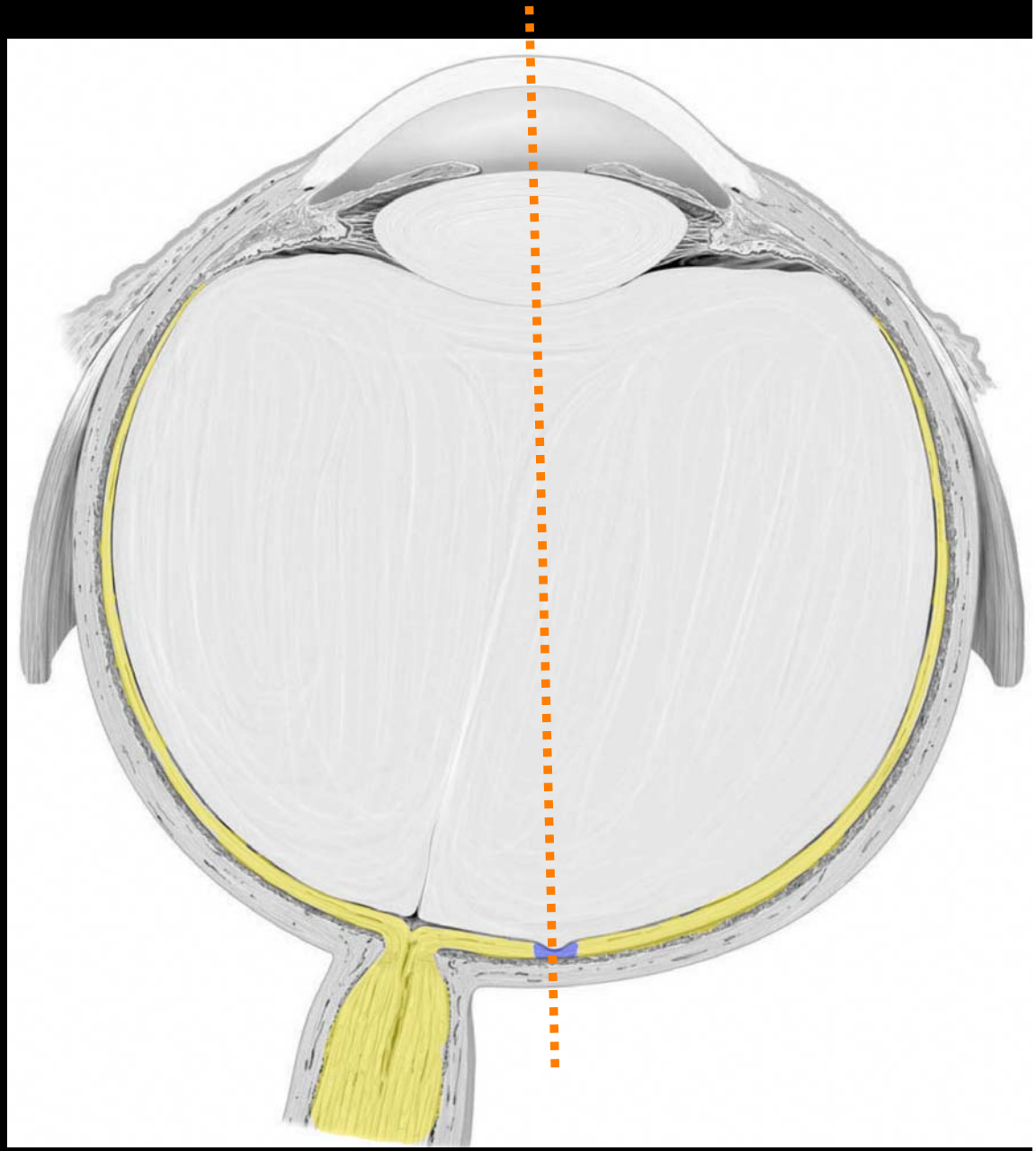
a) CN III Symp - pup. dilator and sup tarsal m.



3) Eyeball

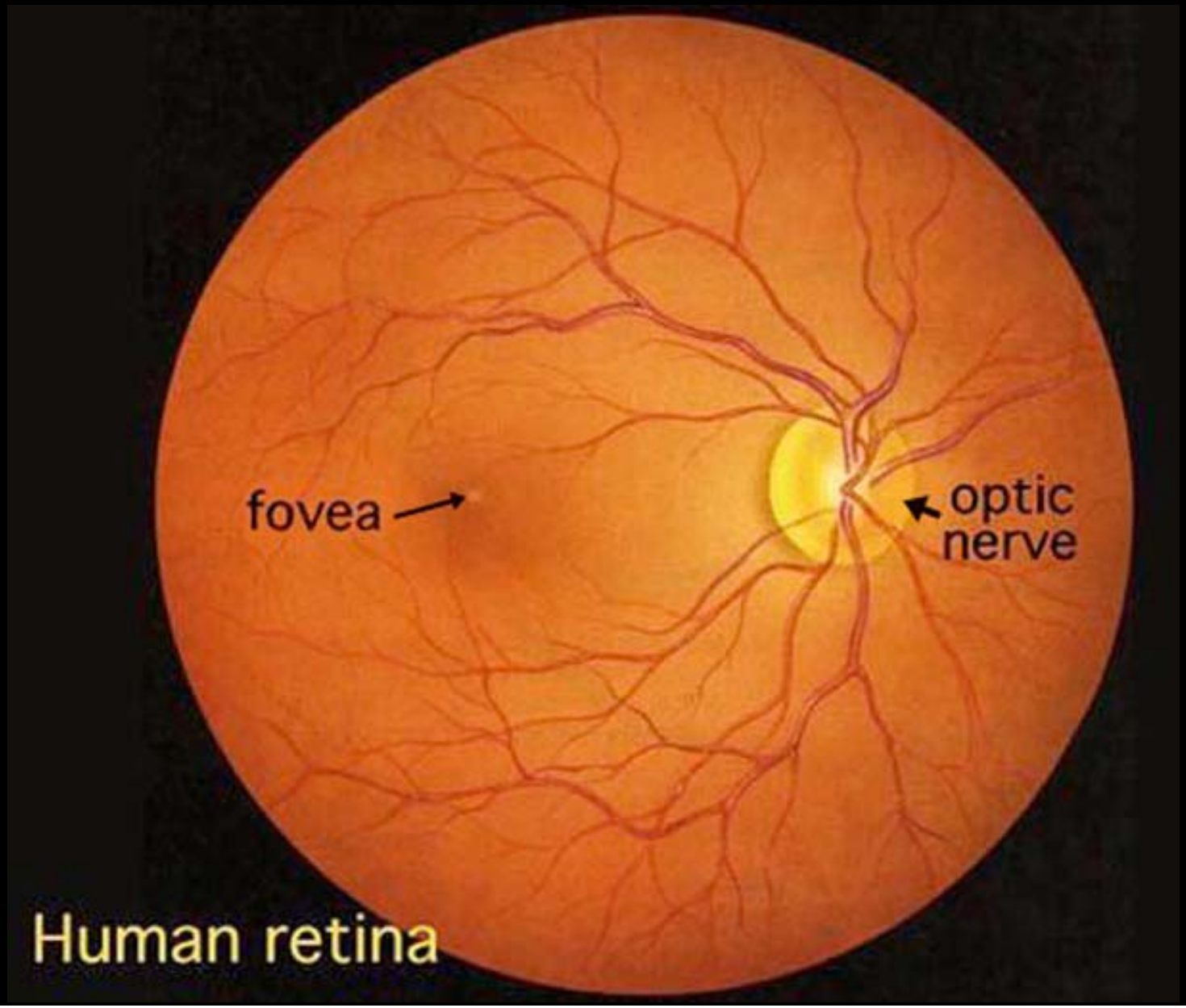
c) Retina

- Fovea centralis



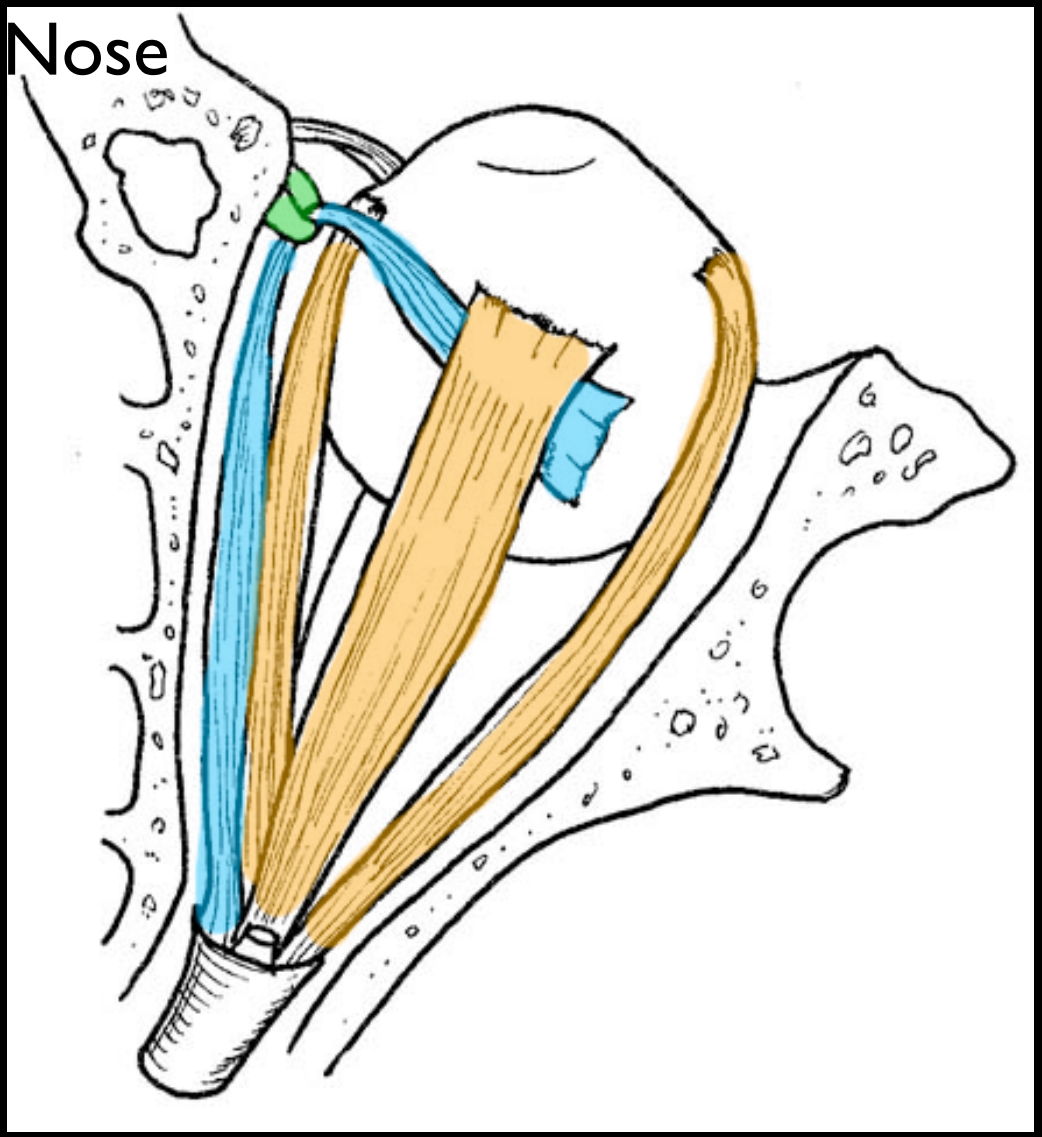
CN II

3) Eyeball



4) Extra-ocular Muscles

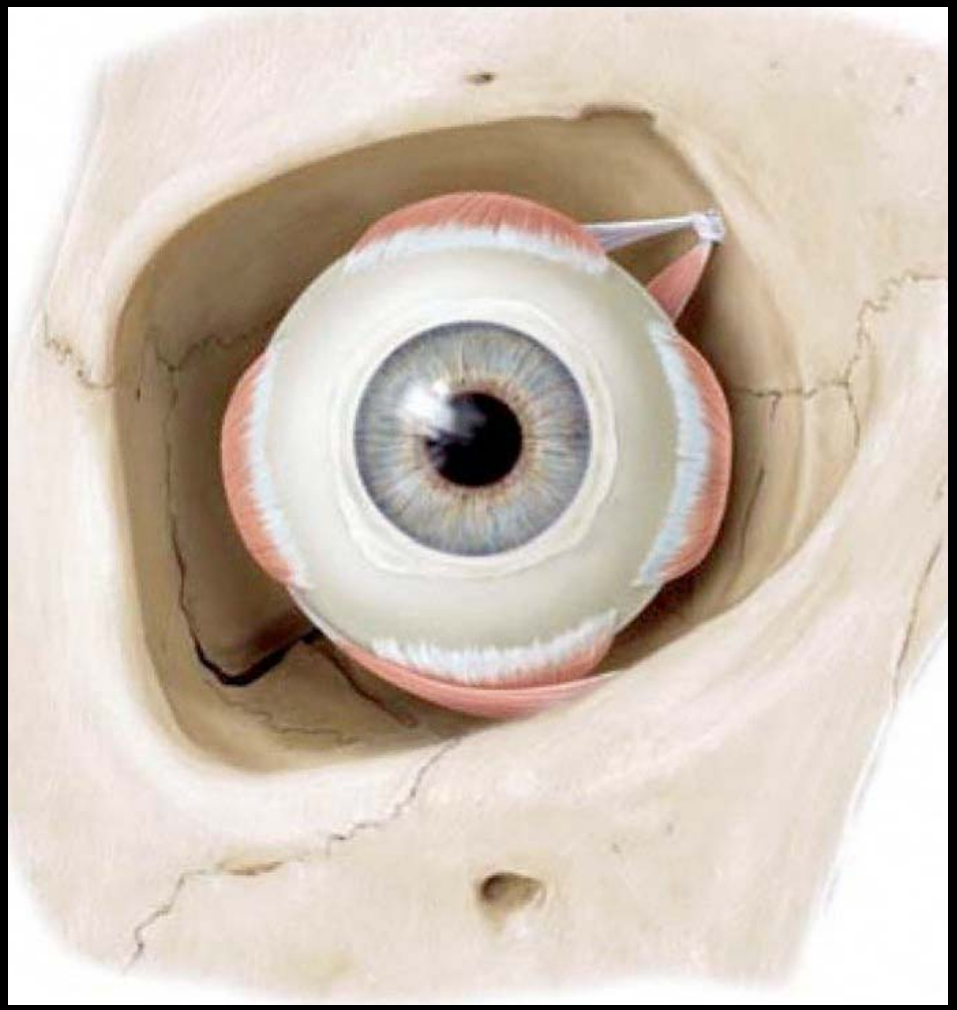
- 4 Rectus
- 2 Oblique



Pg. 45-46

4) Extra-ocular Muscles

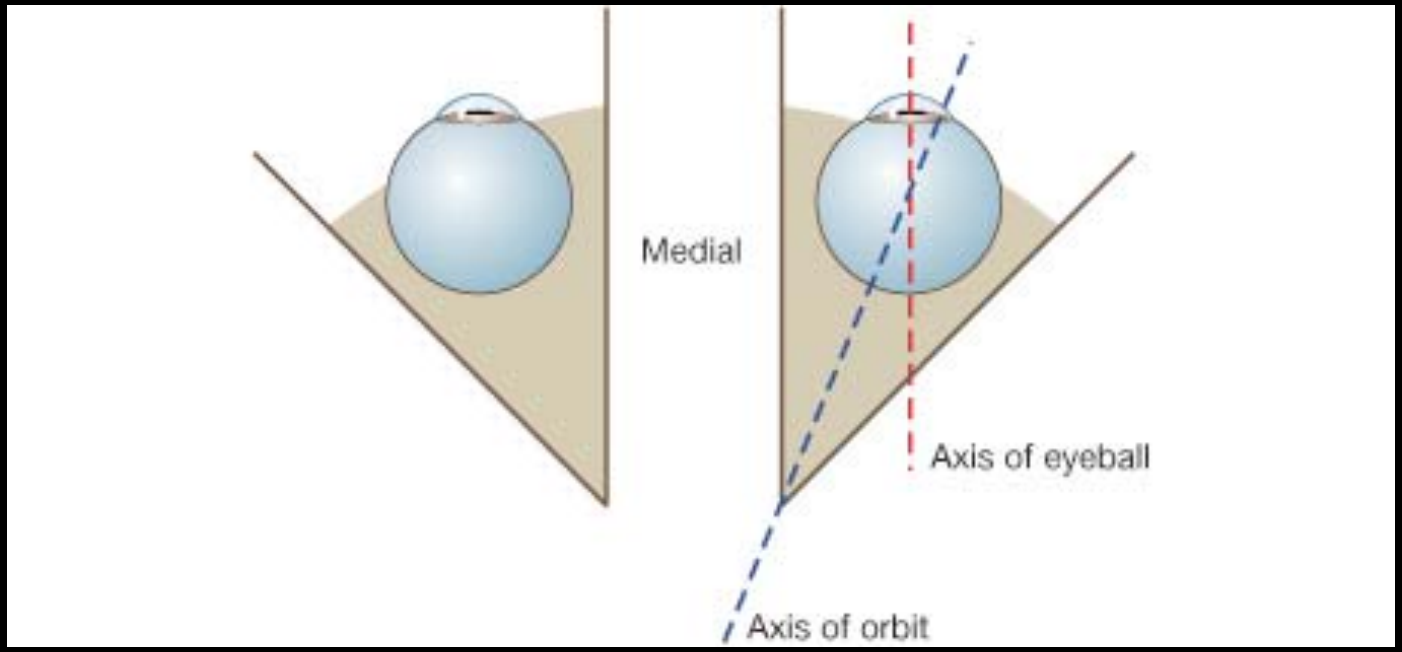
- 4 Rectus
- 2 Oblique



NOSE

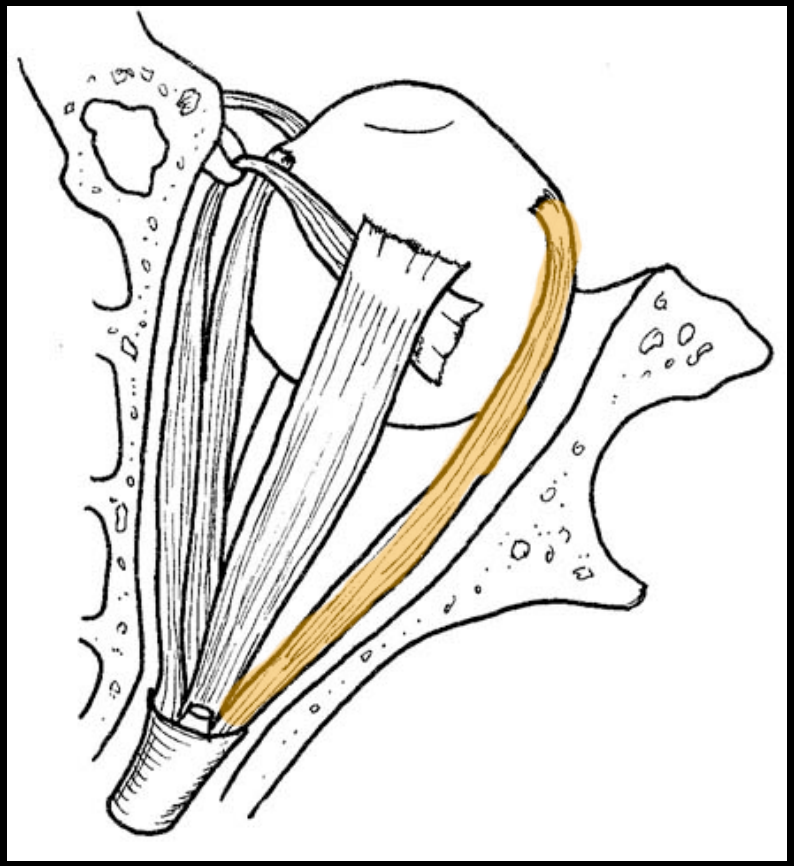
Pg. 45-46

4) Extra-ocular Muscles



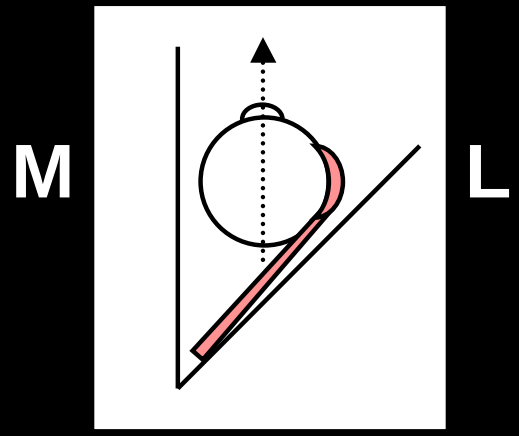
Pg. 45-46

4) Lateral Rectus Muscle



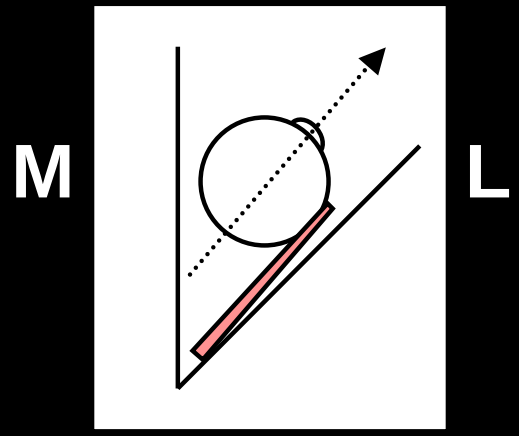
Pg. 45-46

4) Lateral Rectus Muscle



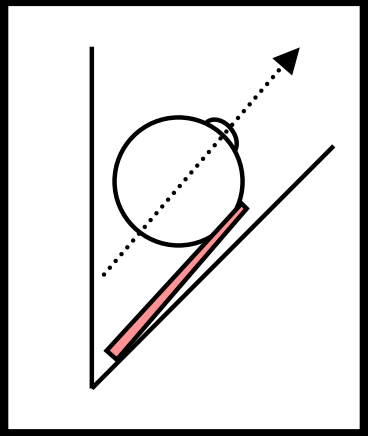
Pg. 45-46

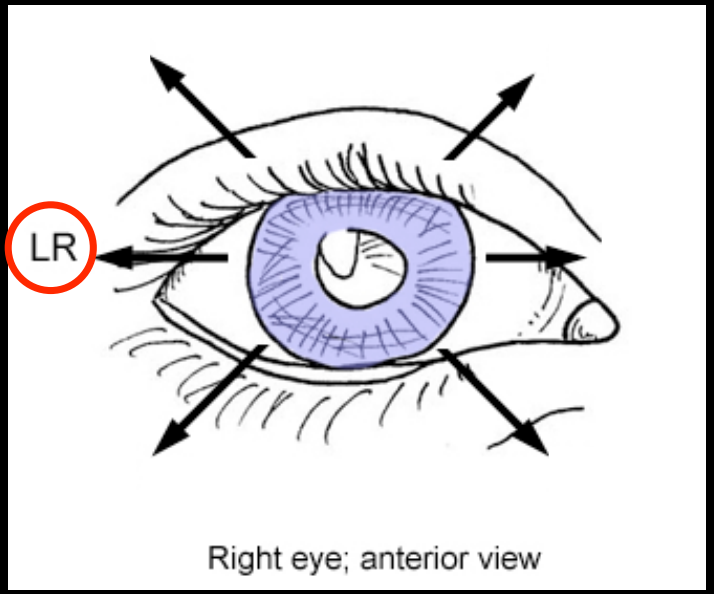
4) Lateral Rectus Muscle



Pg. 45-46

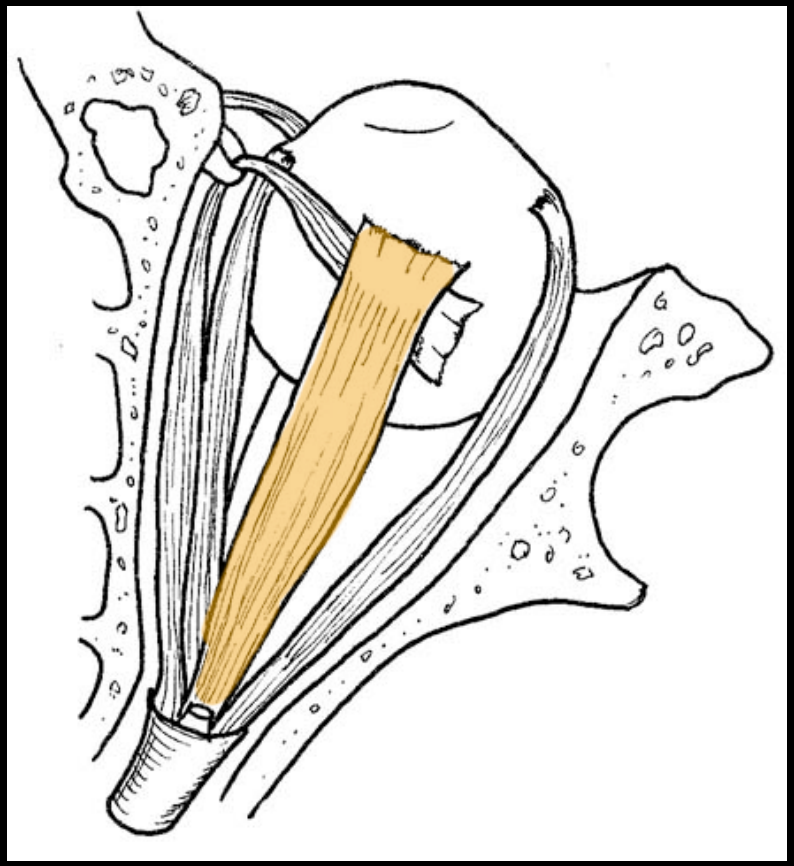
4) Lateral Rectus Muscle



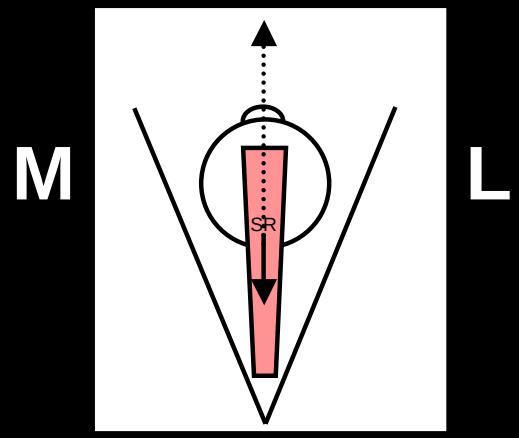


Pg. 45-46

4) Superior Rectus Muscle

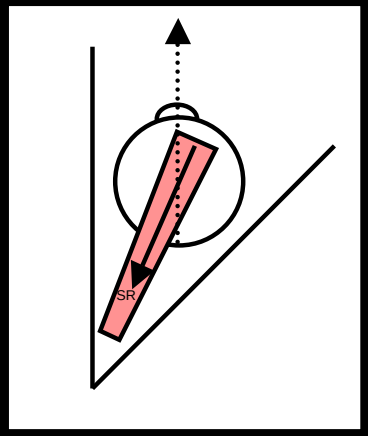


4) Superior Rectus Muscle



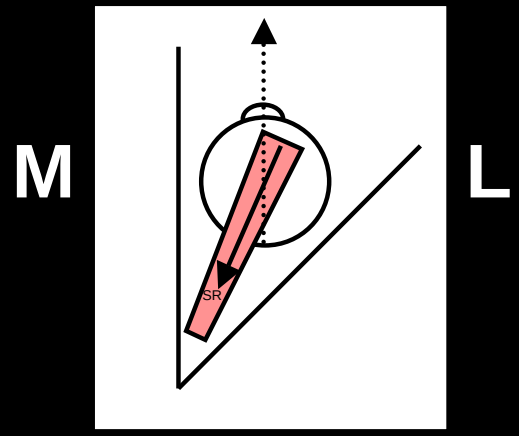
Incorrect

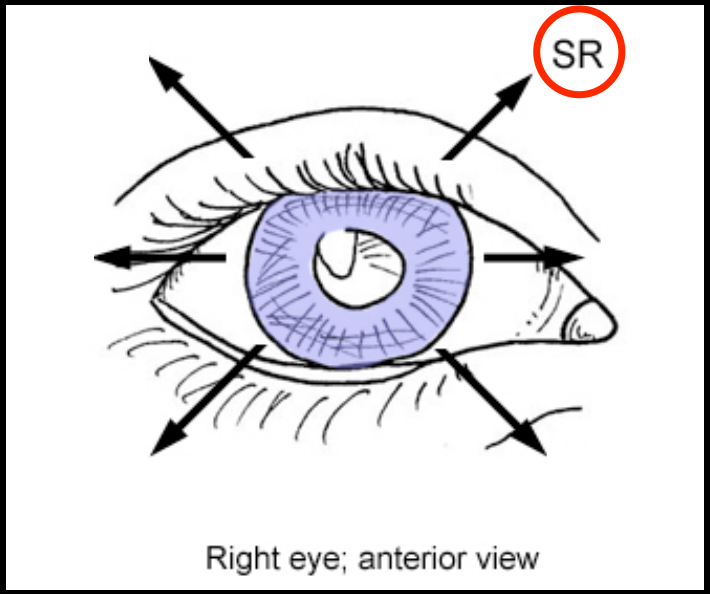
4) Superior Rectus Muscle

M  L

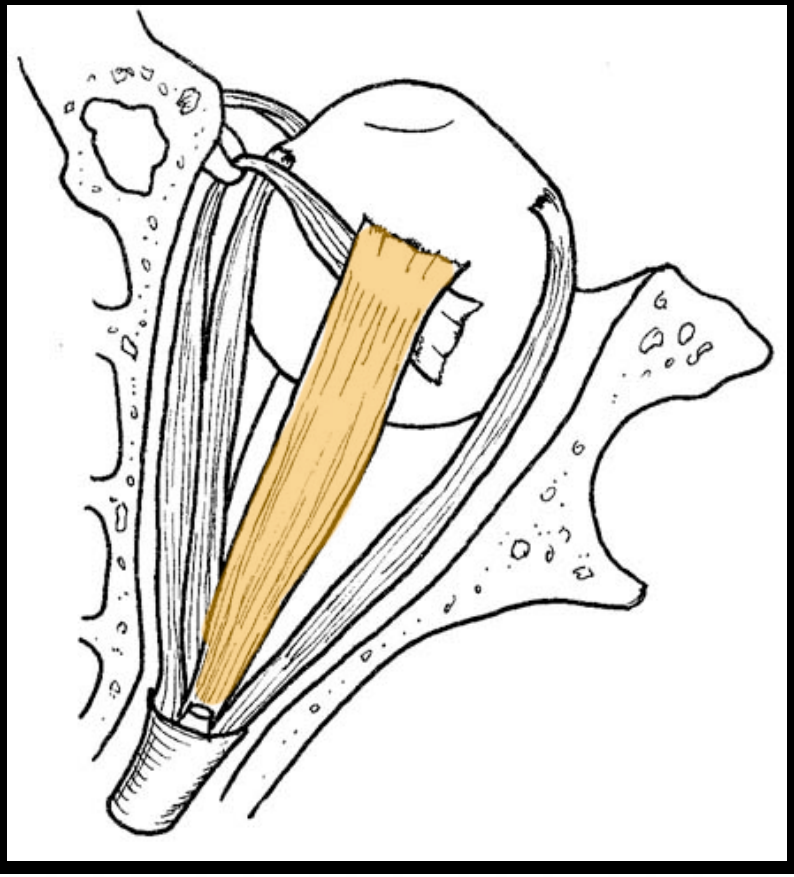
Correct

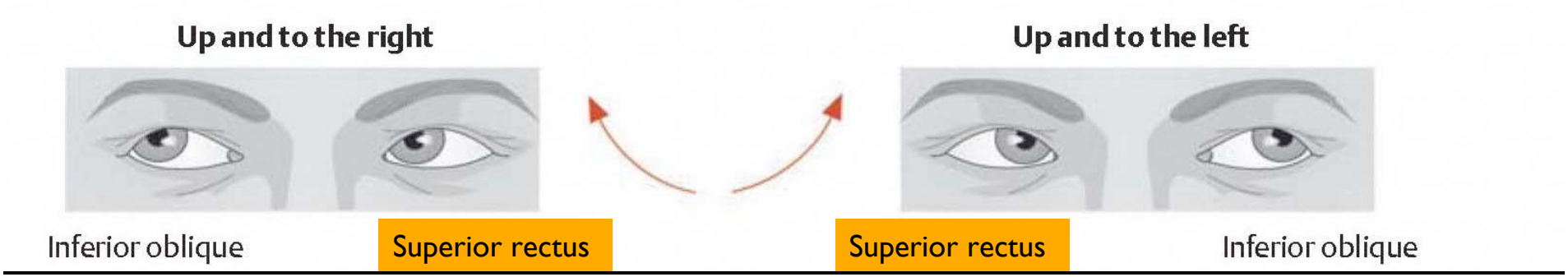
4) Superior Rectus Muscle



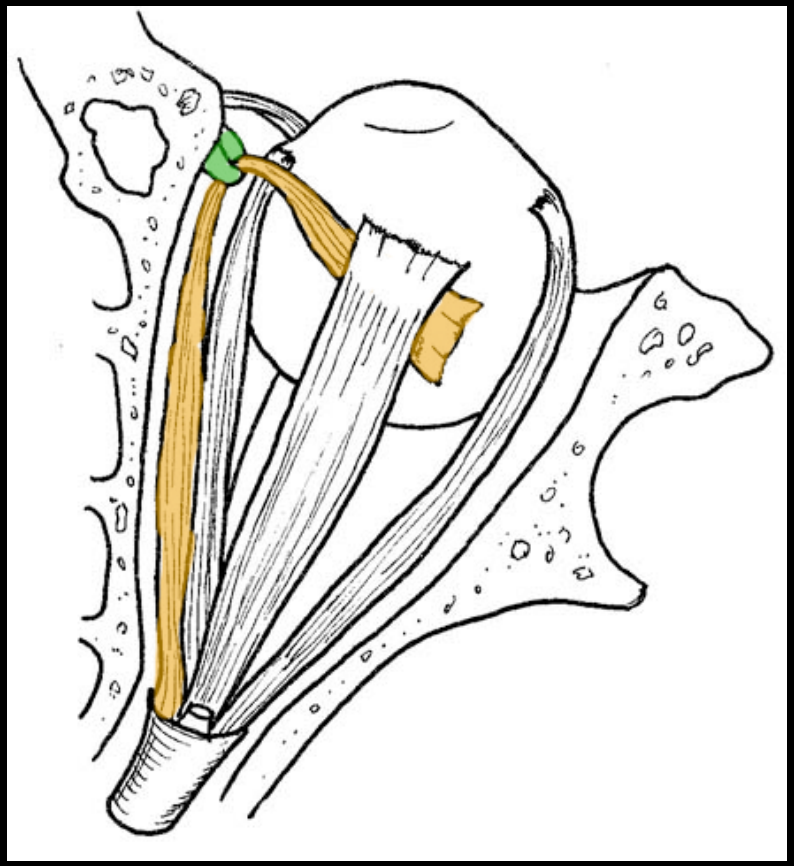


4) Superior Rectus Muscle

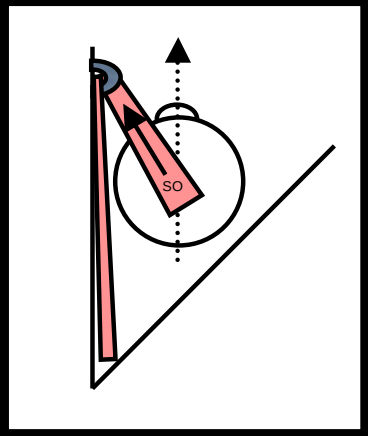




4) Superior Oblique Muscle

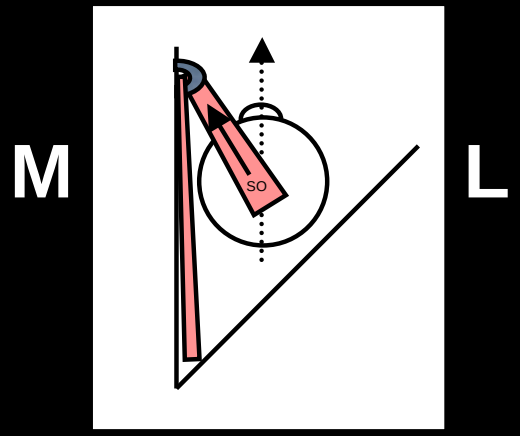


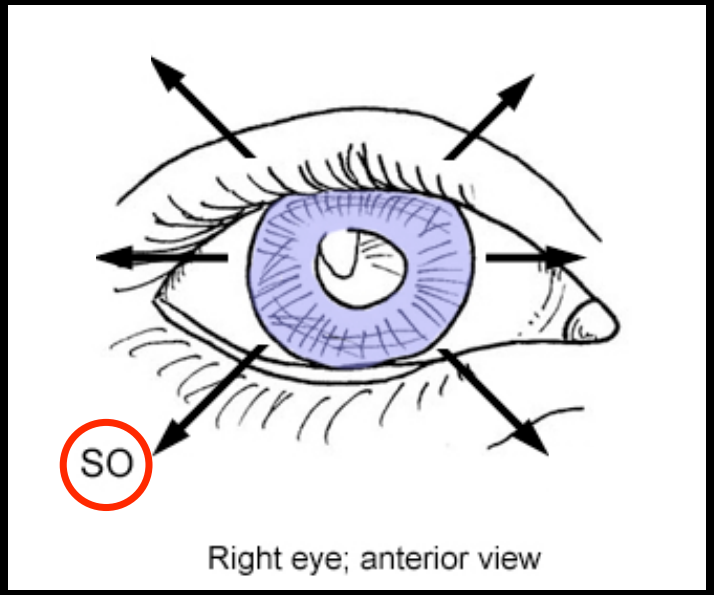
4) Superior Oblique Muscle

M 

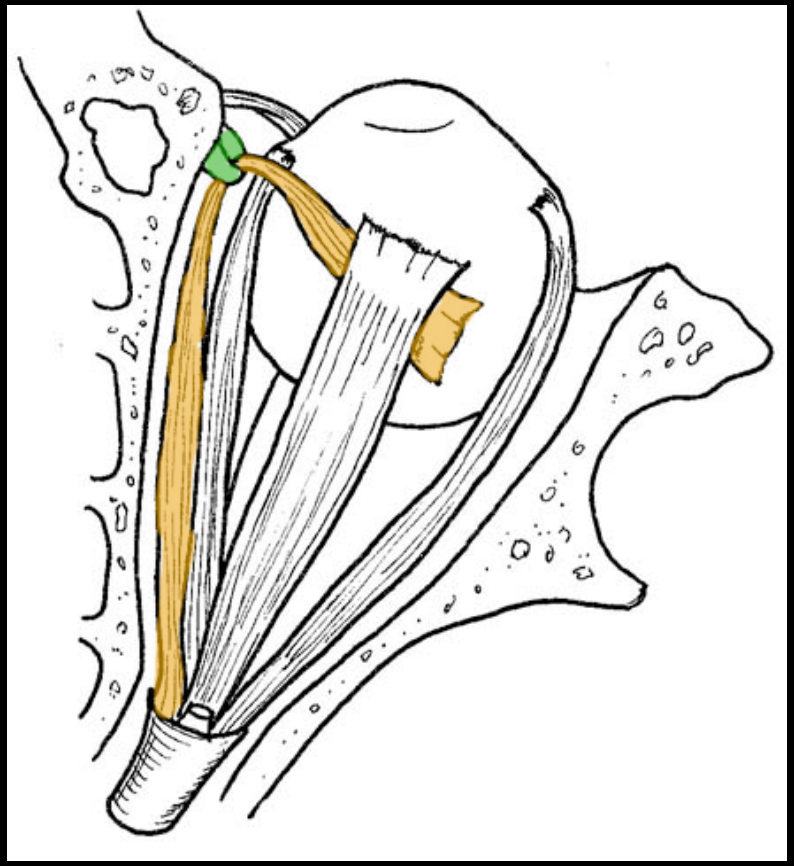
L

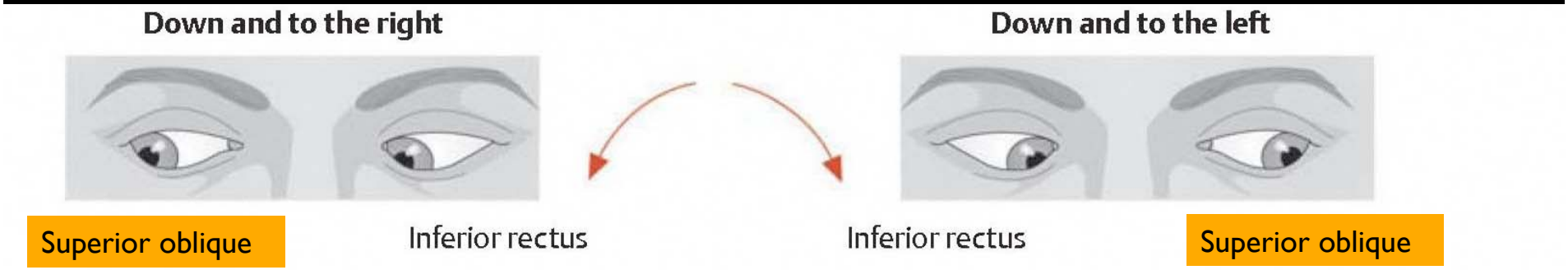
4) Superior Oblique Muscle



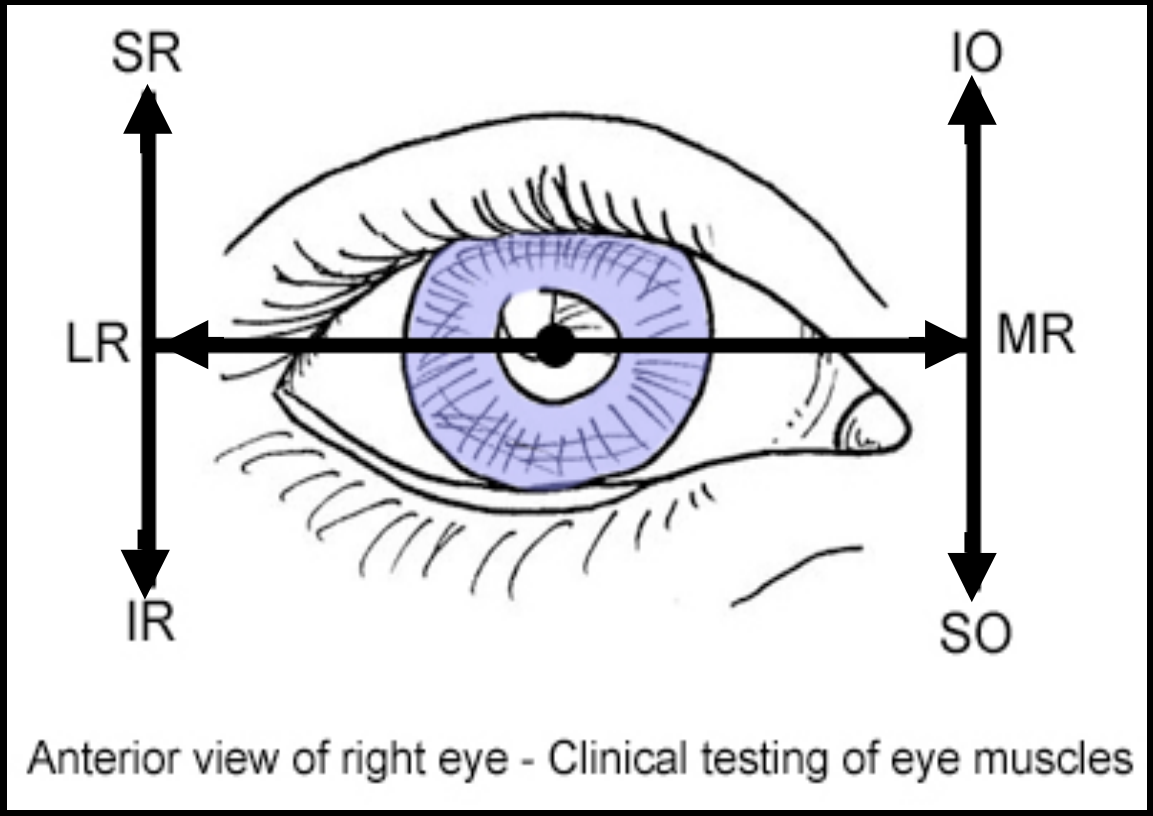


4) Superior Oblique Muscle





Clinical Testing - Eye Muscles



Anterior view of right eye - Clinical testing of eye muscles

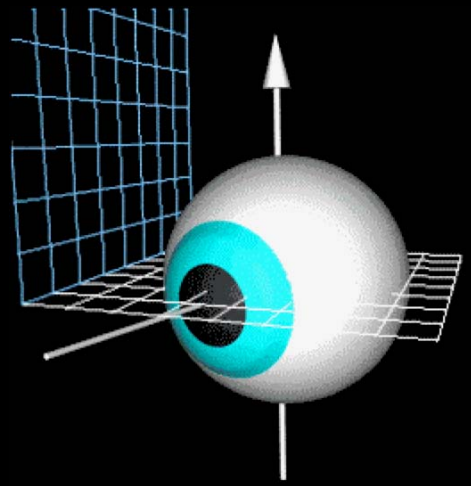
NOSE

Pg. 47-48

Clinical Testing - Eye Muscles

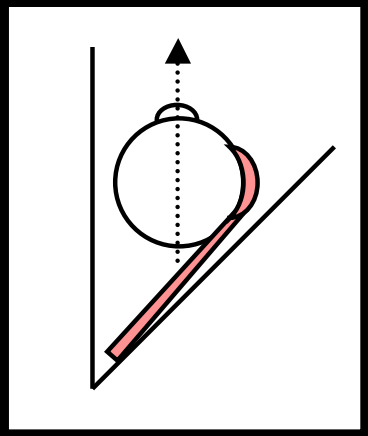
Horizontal Orbital Axis

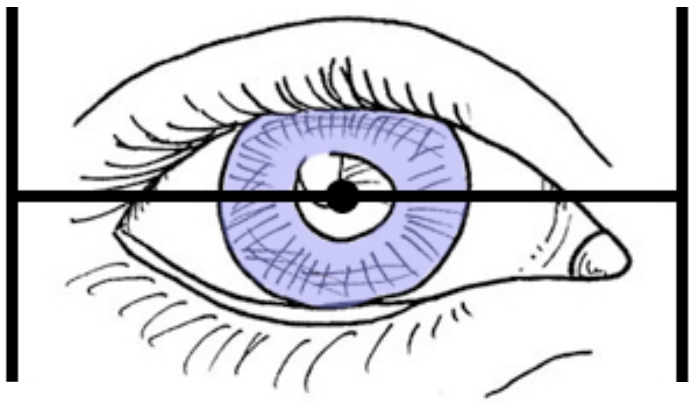
Lateral rectus



Medial rectus

Clinical Testing - Lateral Rectus

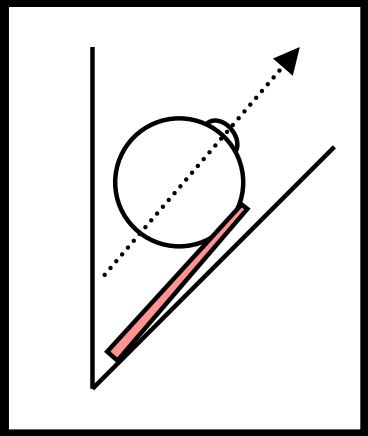


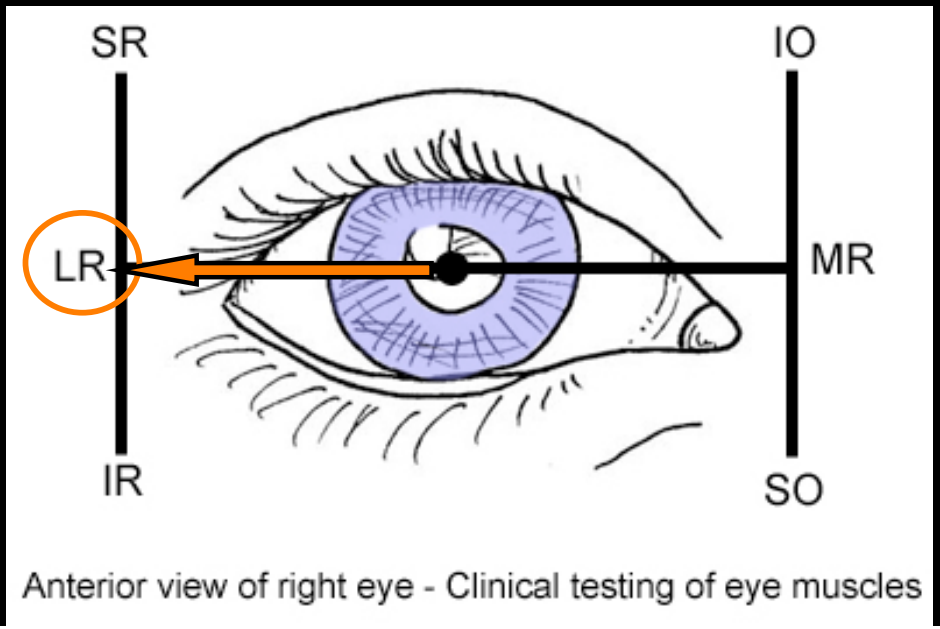


Anterior view of right eye - Clinical testing of eye muscles

NOSE

Clinical Testing - Lateral Rectus





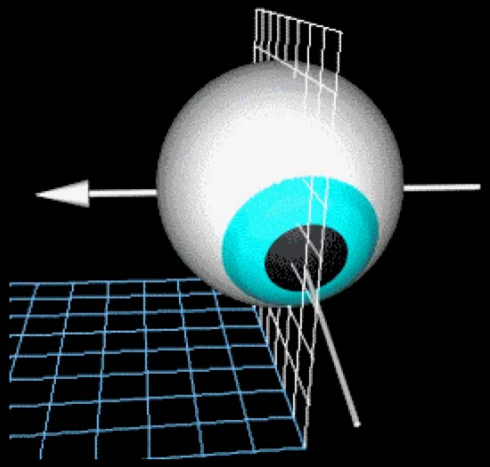
Anterior view of right eye - Clinical testing of eye muscles

NOSE

Clinical Testing - Eye Muscles

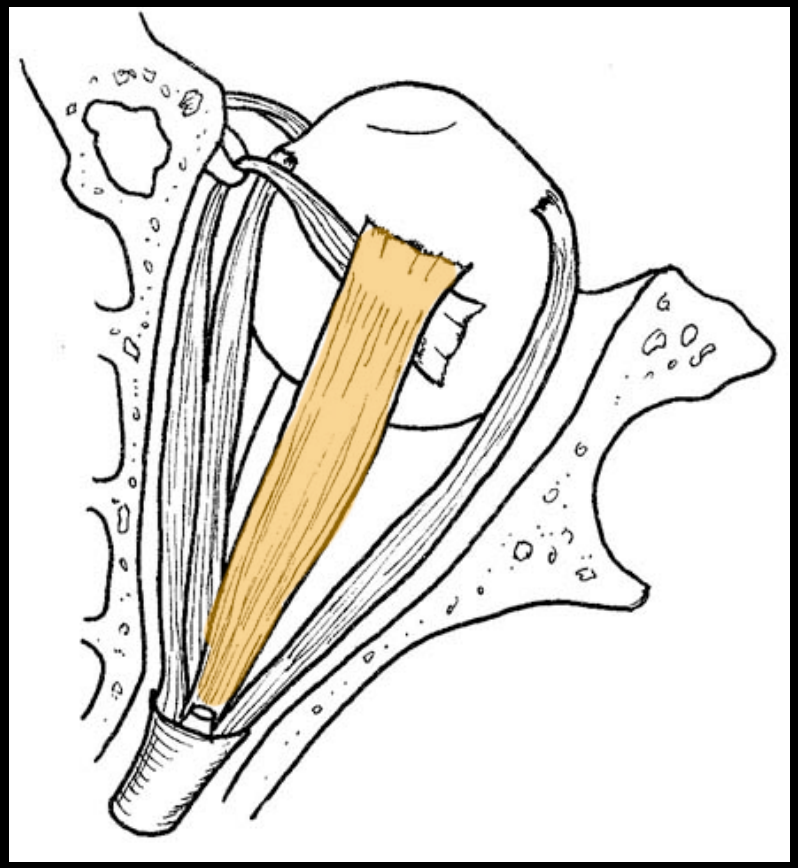
Vertical Orbit Axis

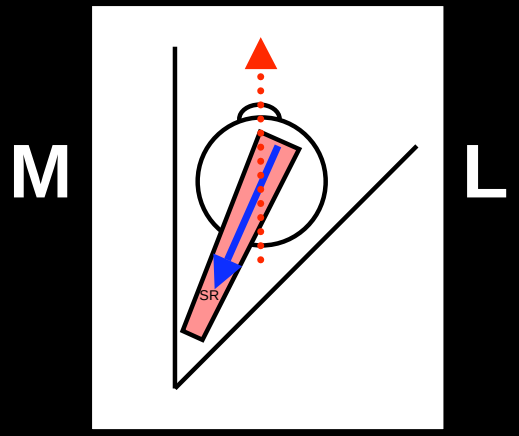
Superior rectus and Superior oblique



Inferior rectus and Inferior oblique

Clinical Testing - Superior Rectus



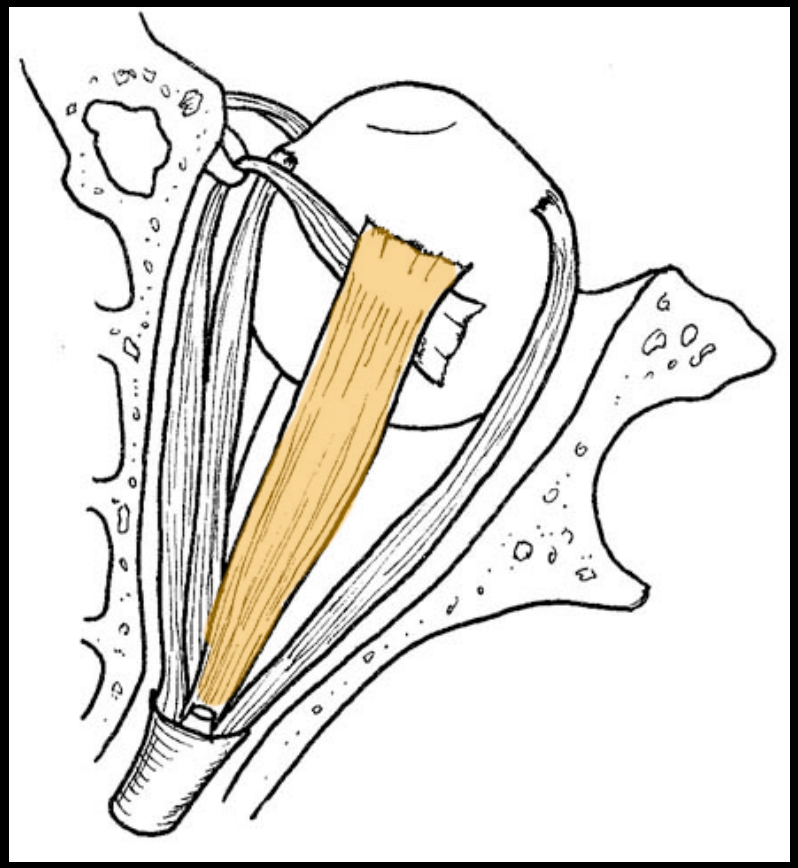


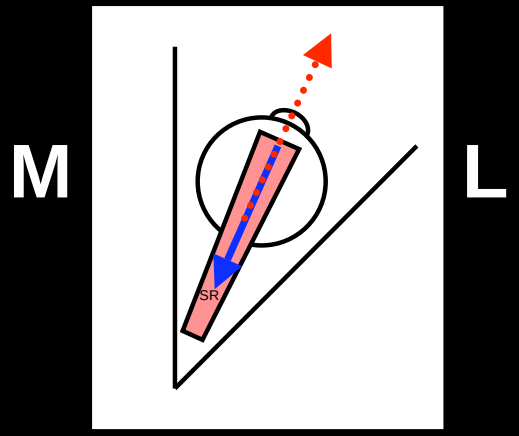
Axis of muscle

Axis of eyeball

NOT PARALLEL

Clinical Testing - Superior Rectus



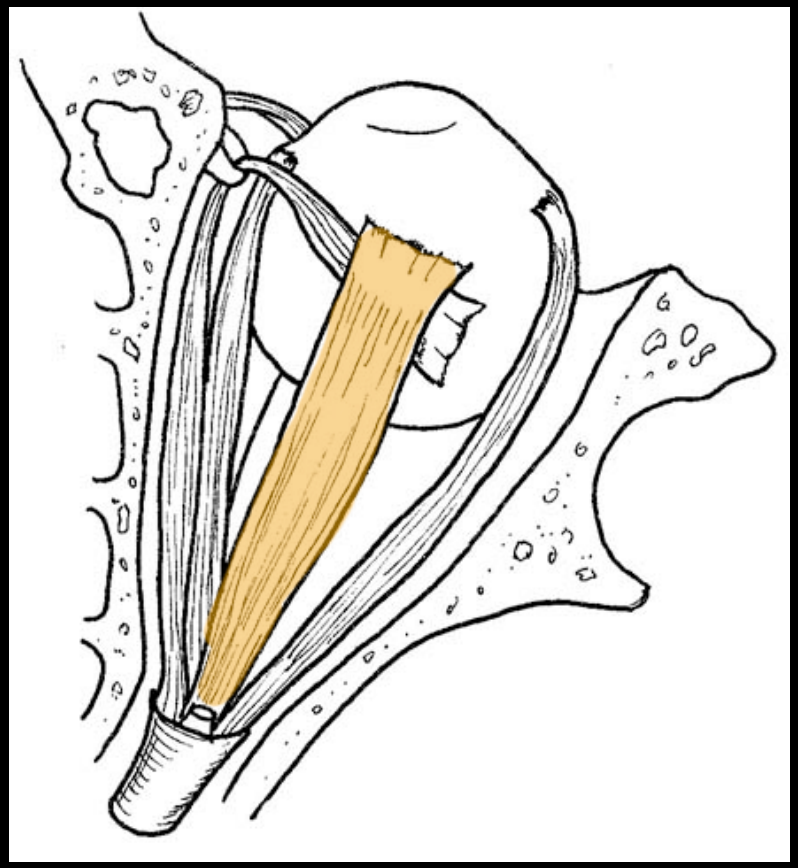


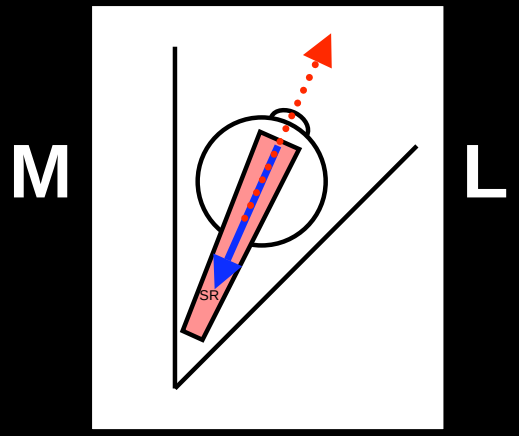
Axis of muscle

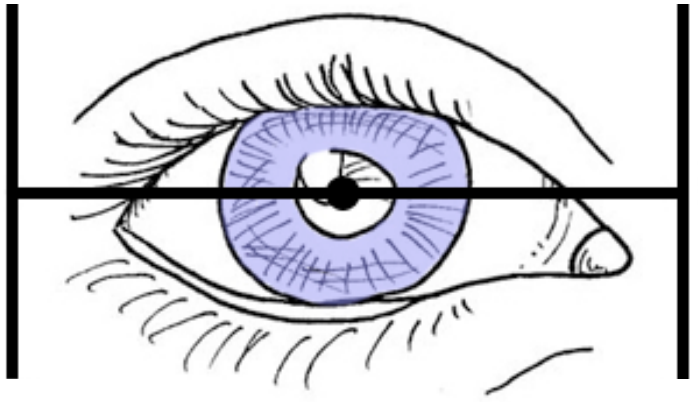
Axis of eyeball

PARALLEL

Clinical Testing - Superior Rectus

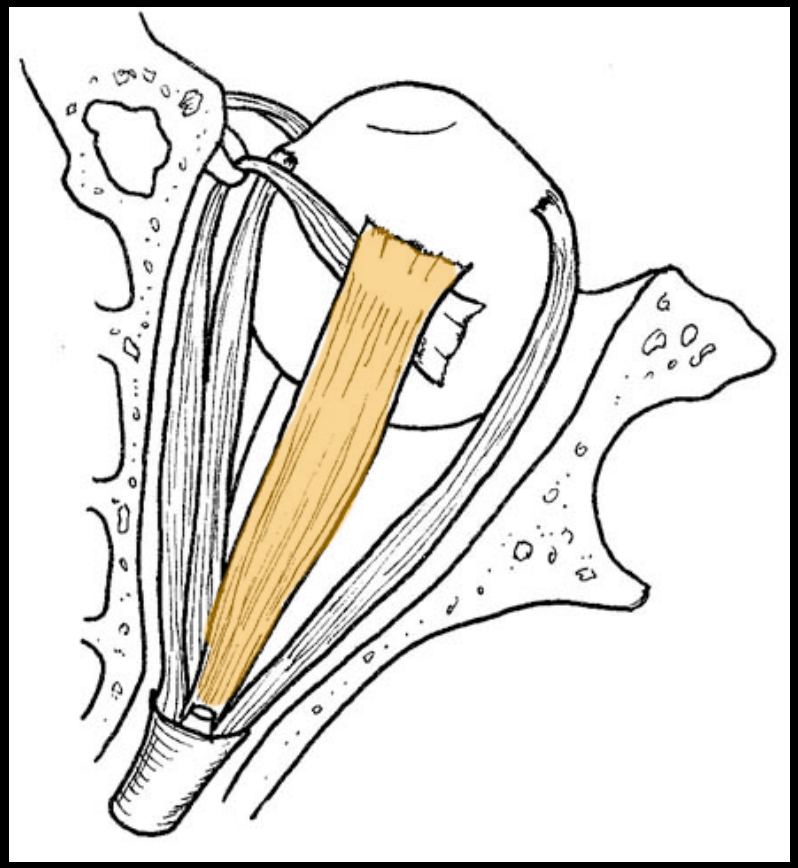


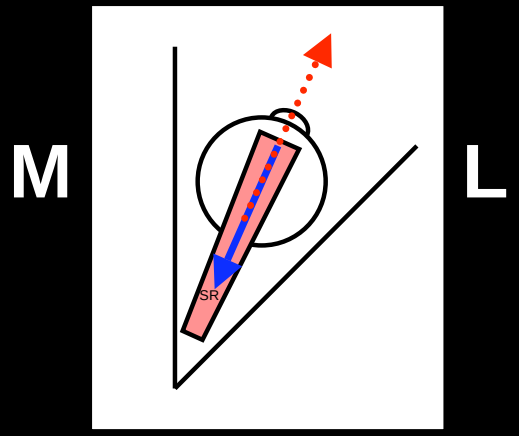


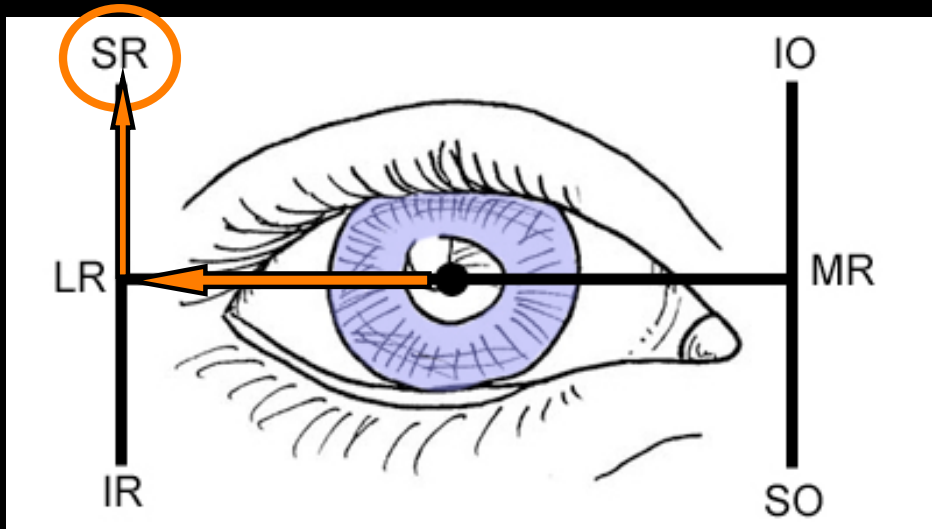


Anterior view of right eye - Clinical testing of eye muscles

Clinical Testing - Superior Rectus

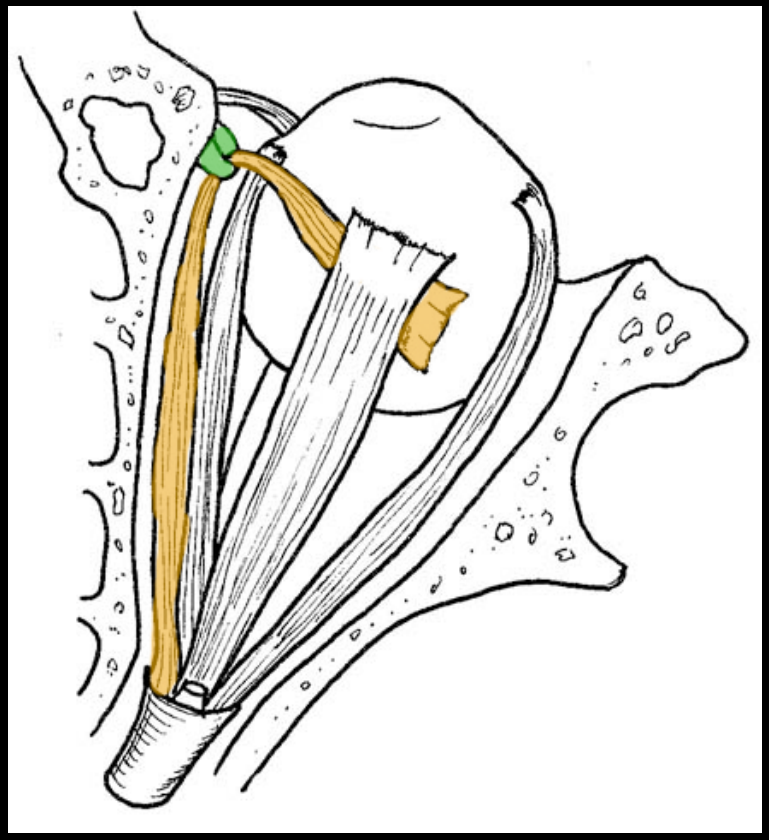


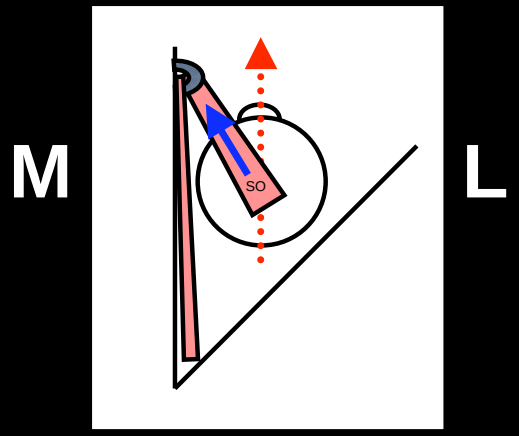




Anterior view of right eye - Clinical testing of eye muscles

Clinical Testing - Superior Oblique



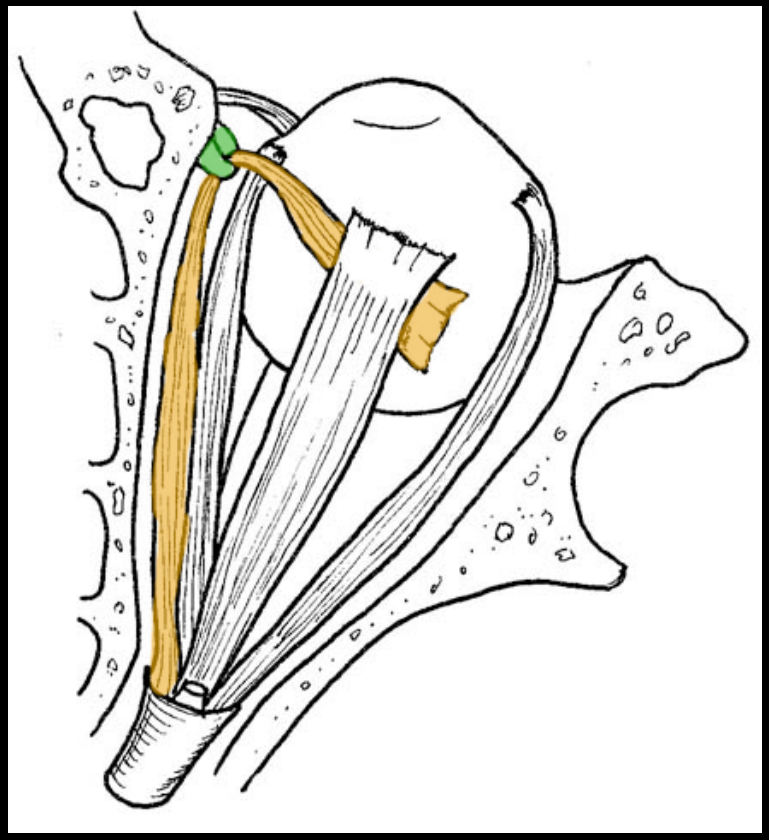


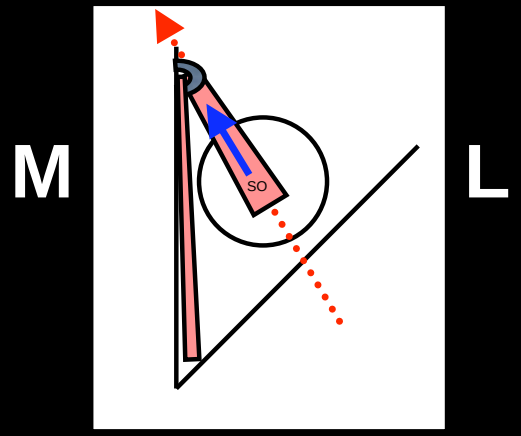
Axis of muscle

Axis of eyeball

NOT PARALLEL

Clinical Testing - Superior Oblique



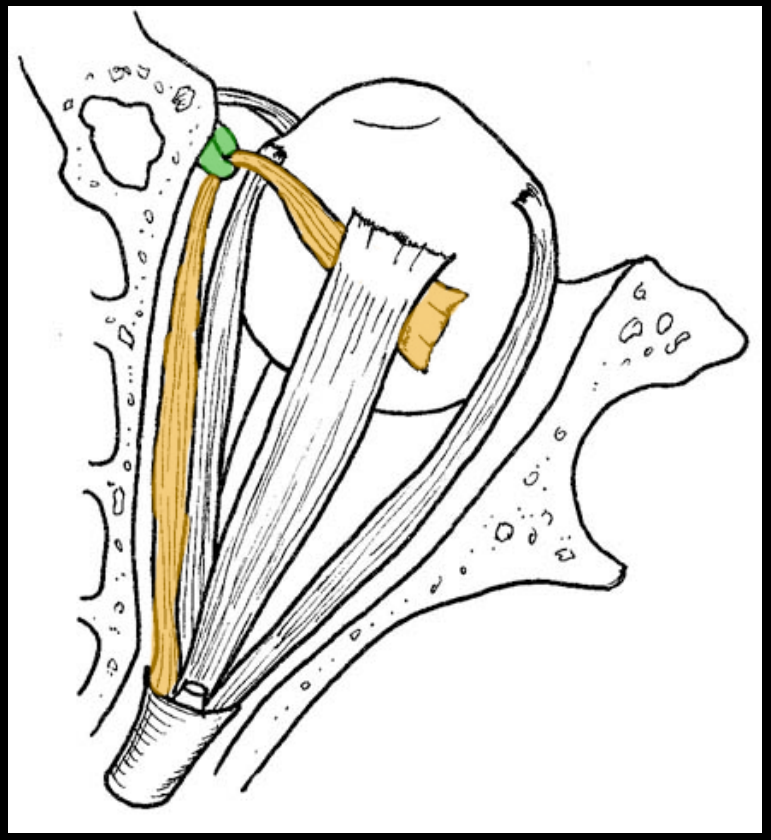


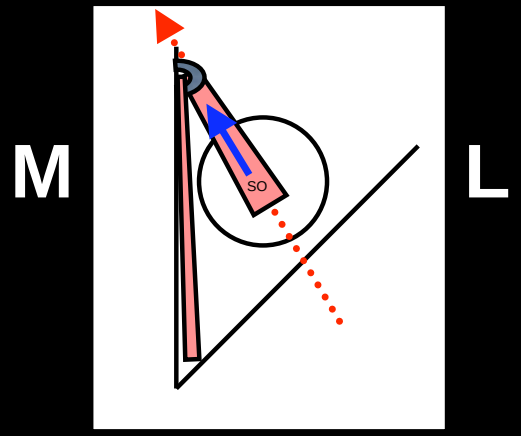
Axis of muscle

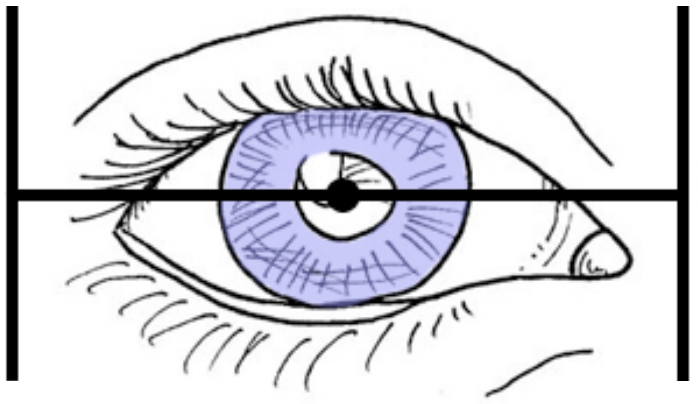
Axis of eyeball

PARALLEL

Clinical Testing - Superior Oblique

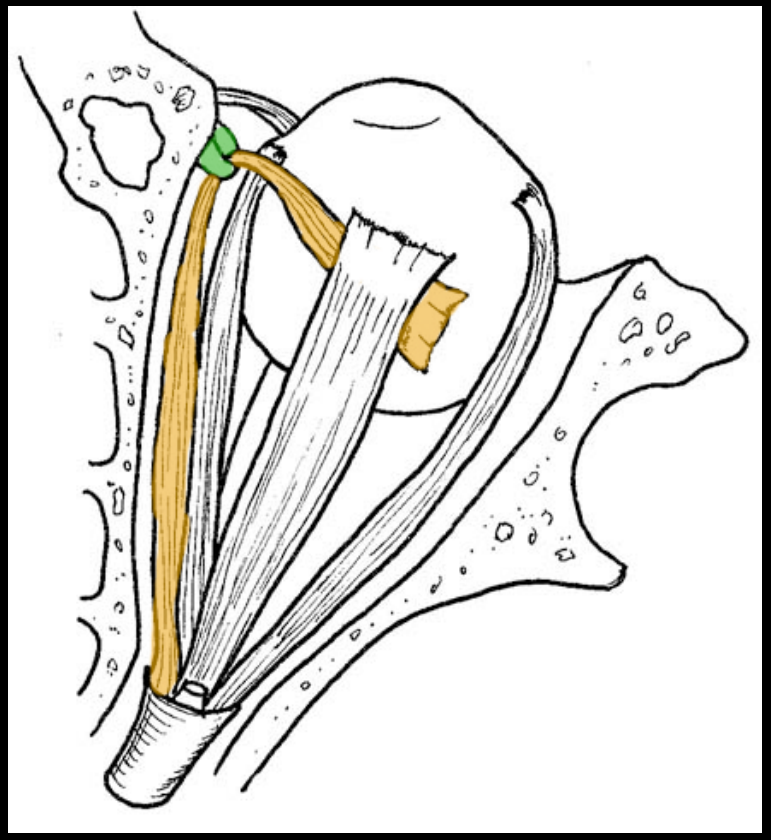


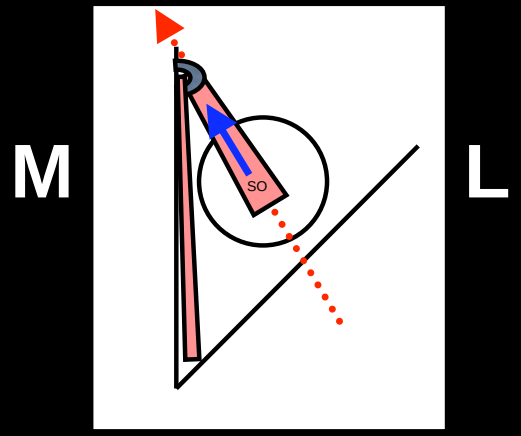


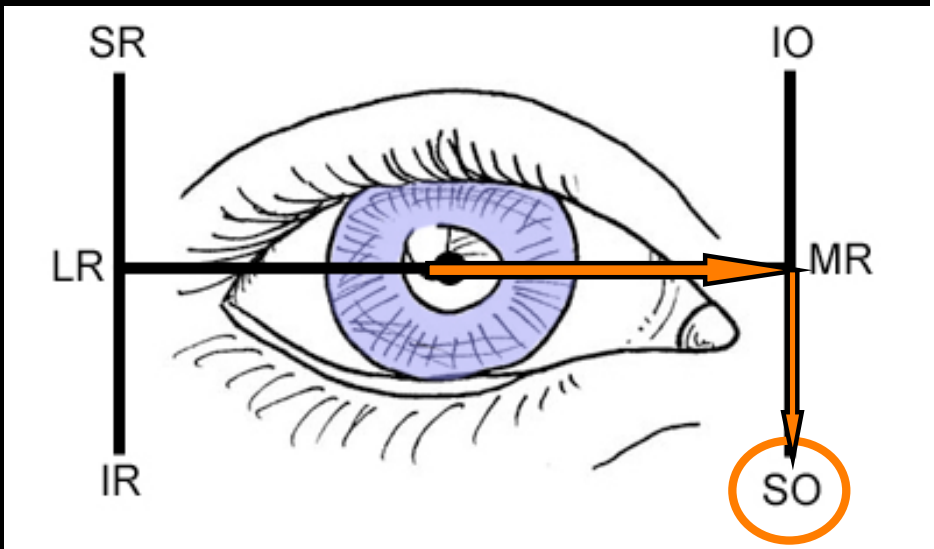


Anterior view of right eye - Clinical testing of eye muscles

Clinical Testing - Superior Oblique

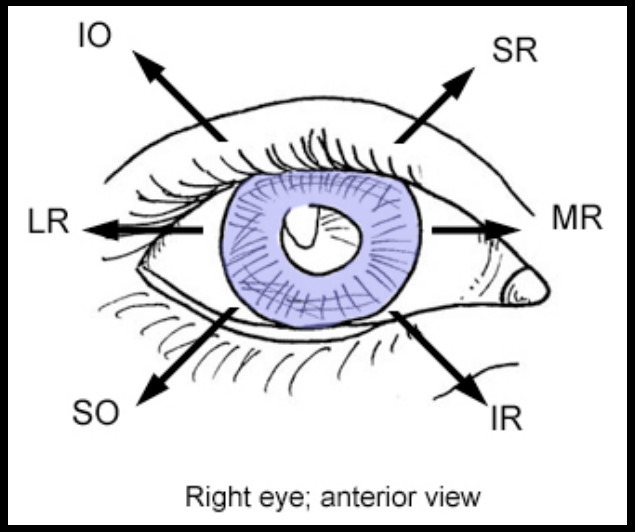






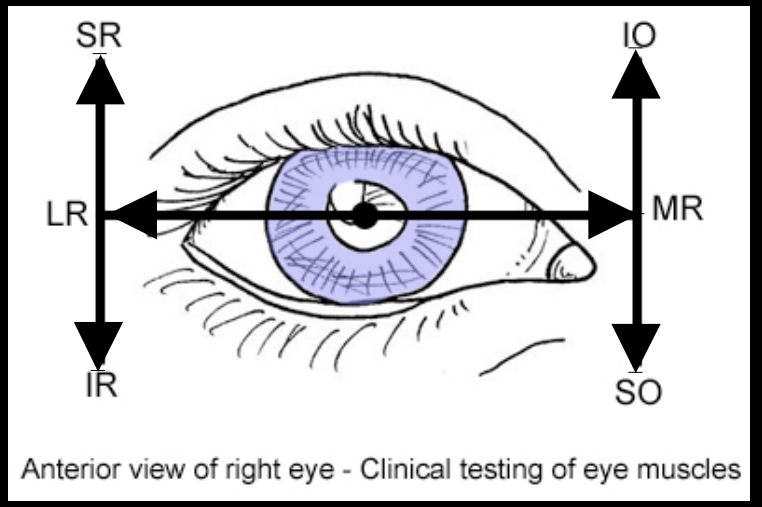
Anterior view of right eye - Clinical testing of eye muscles

Clinical Testing - Superior Oblique



Right eye; anterior view

Anatomical Actions

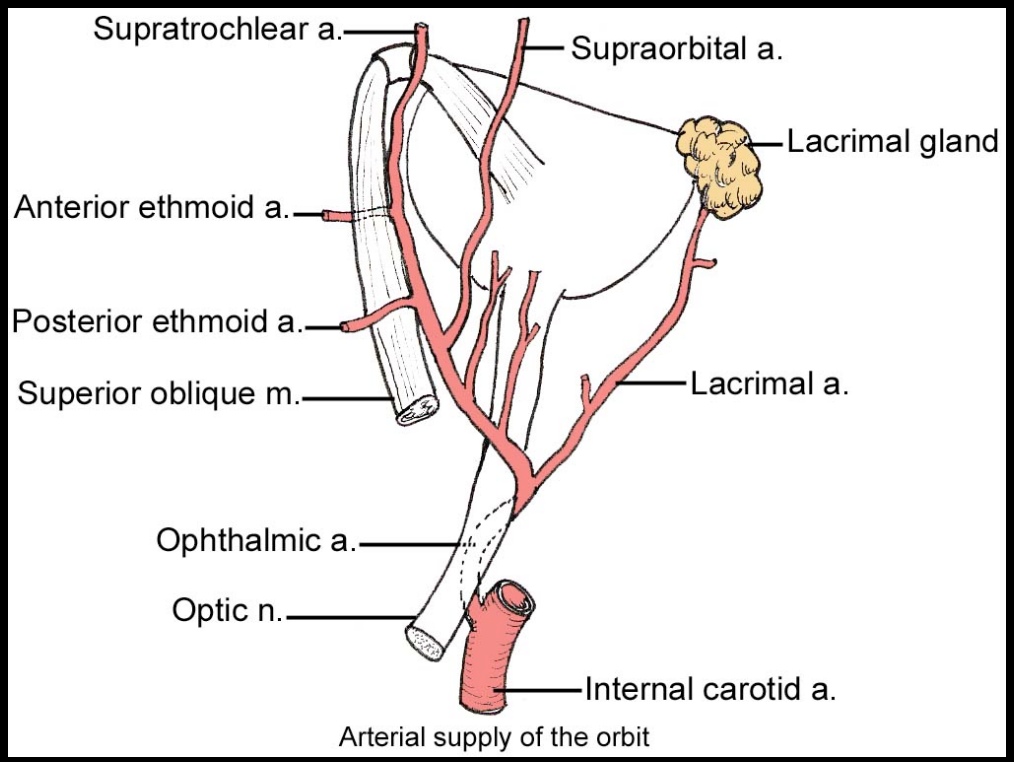


Anterior view of right eye - Clinical testing of eye muscles

Clinical Testing

5) Vasculature of the Orbit

- Internal carotid artery
  - Ophthalmic artery – enters orbit via the optic foramen
    - Central artery of the retina

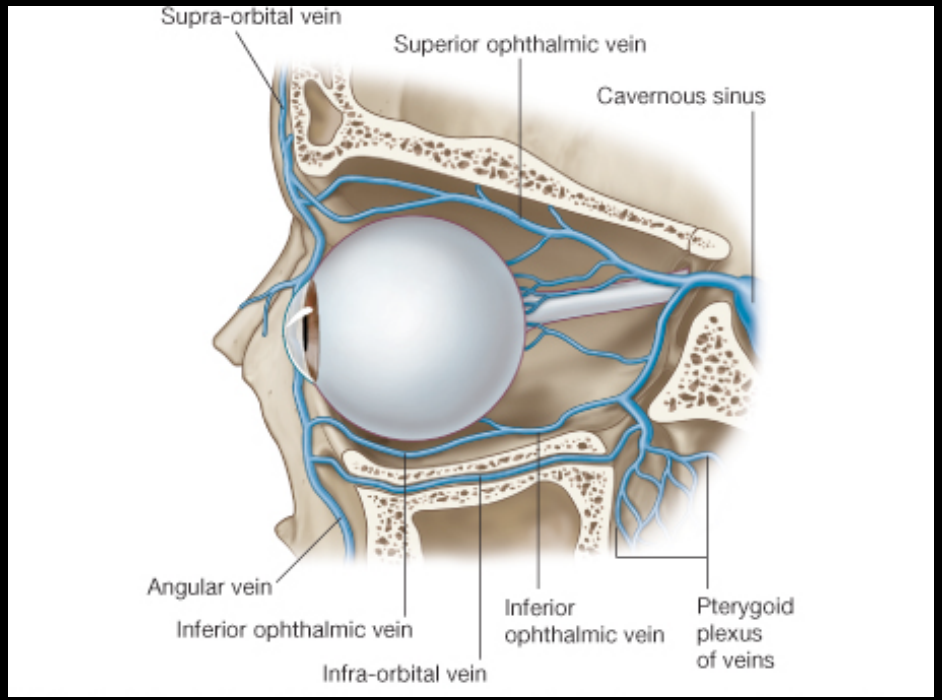


Arterial supply of the orbit

5) Vasculature of the Orbit

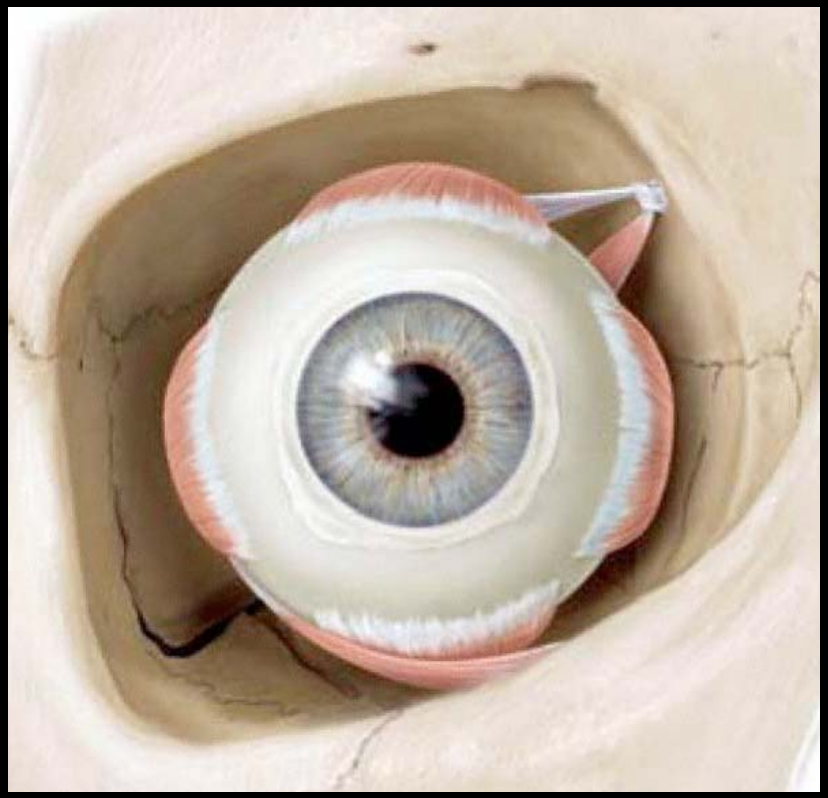
Veins

- Superior ophthalmic vein drains into cavernous sinus
- Inferior ophthalmic vein drains into pterygoid plexus and cavernous sinus
  - Both veins anastamose with the facial vein



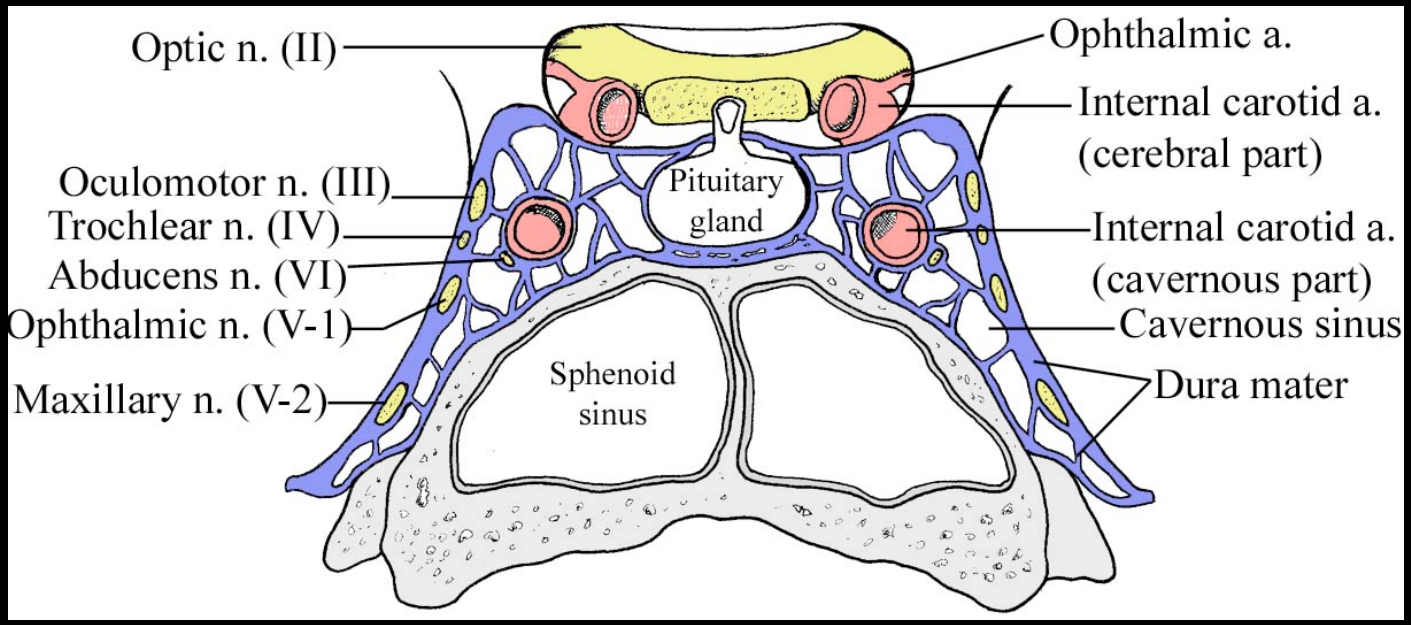
GAFS Fig. 8.93

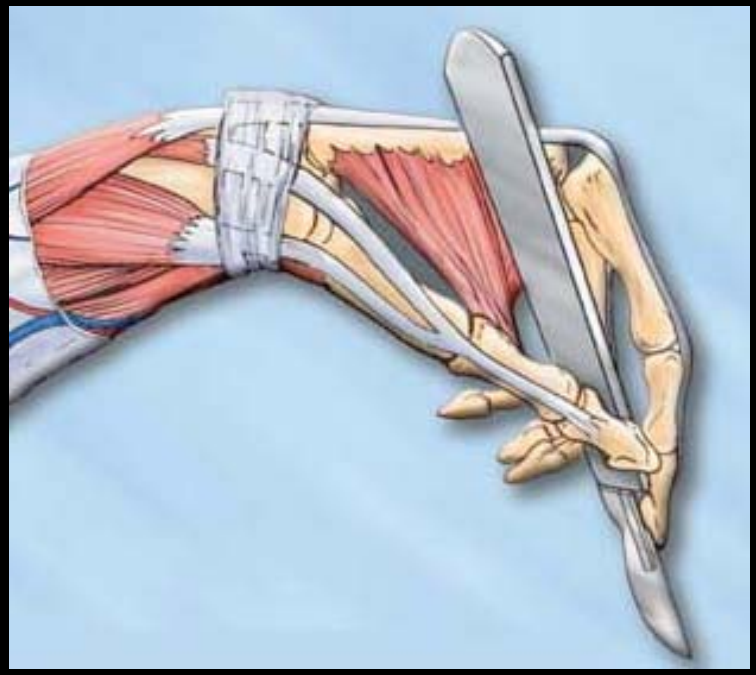
6) Innervation of the Orbit



$LR_6SO_4R_3$

6) Innervation of the Orbit





THANK-YOU