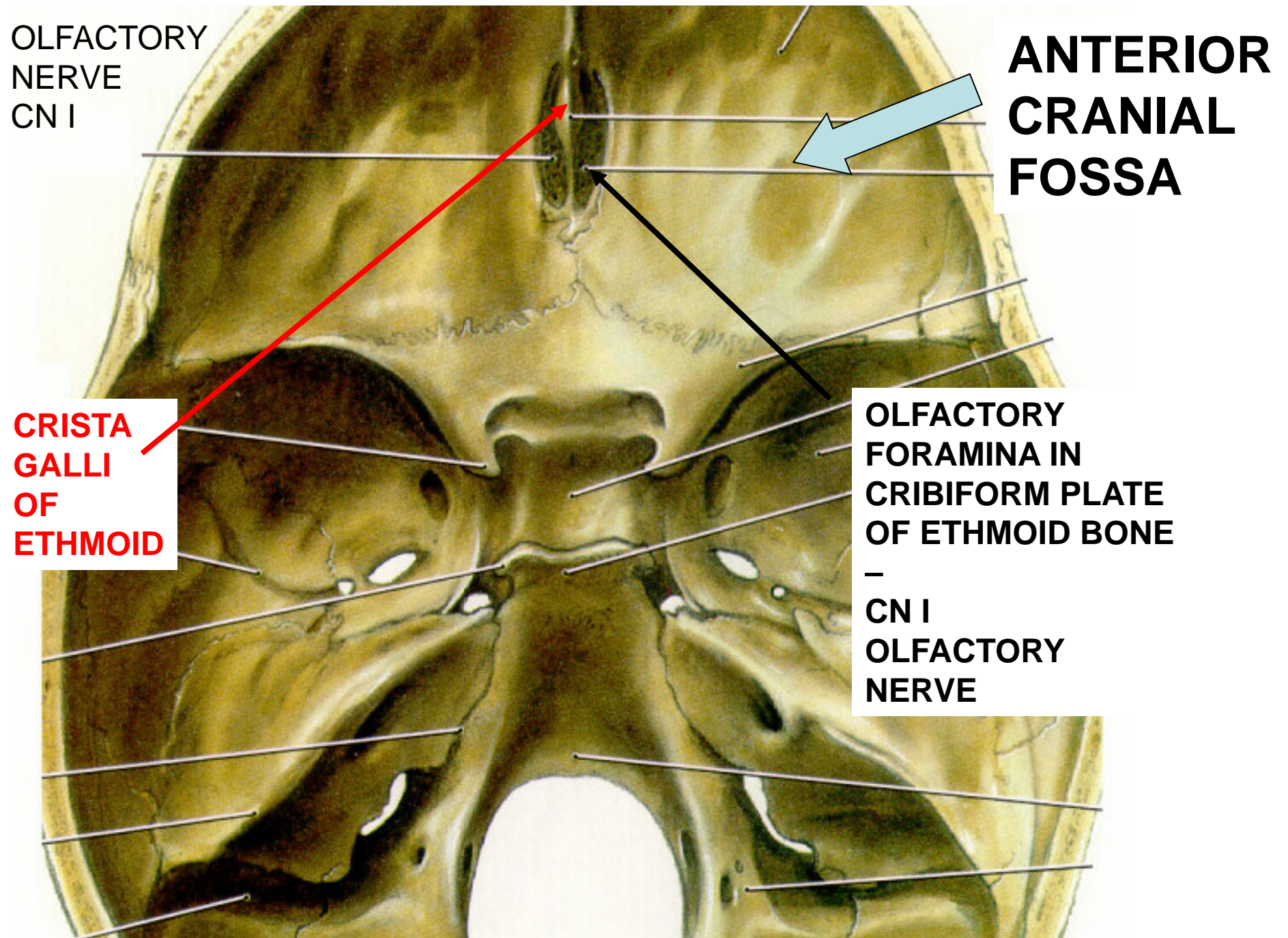


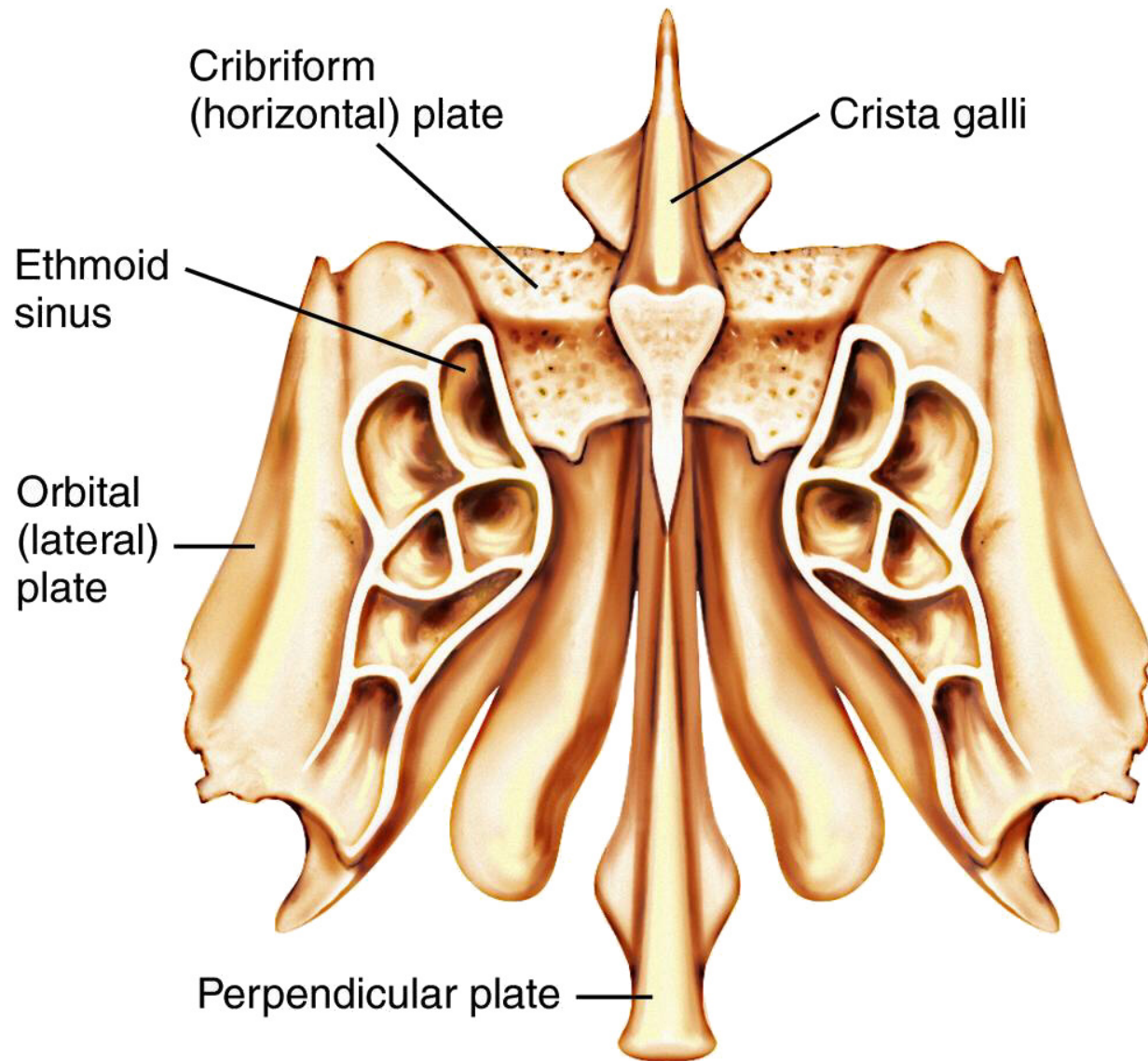
REVIEW OF HEAD AND NECK

CRANIAL NERVES AND EVERYTHING ELSE

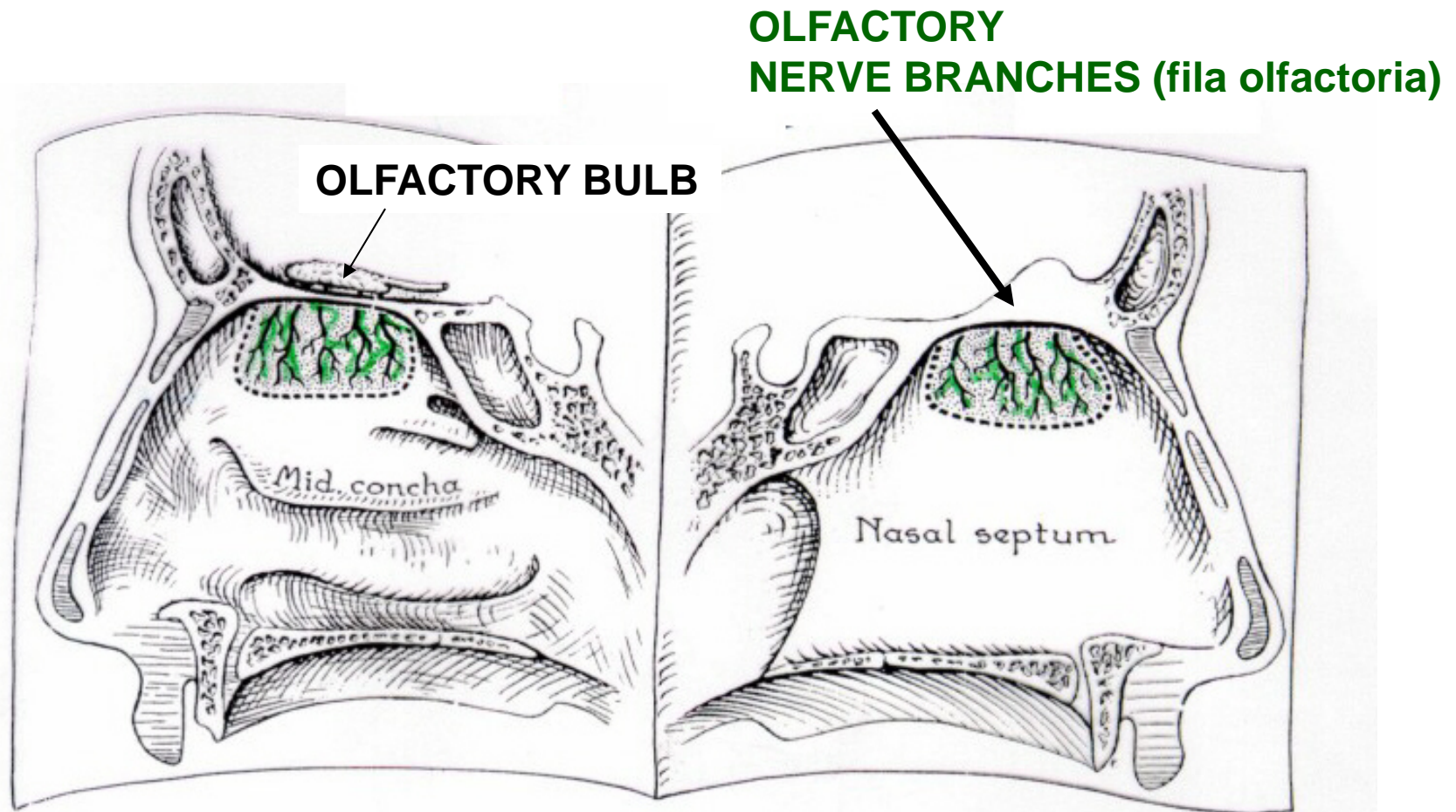


ETHMOID BONE

(posterior
view)



I - OLFACTORY NERVE

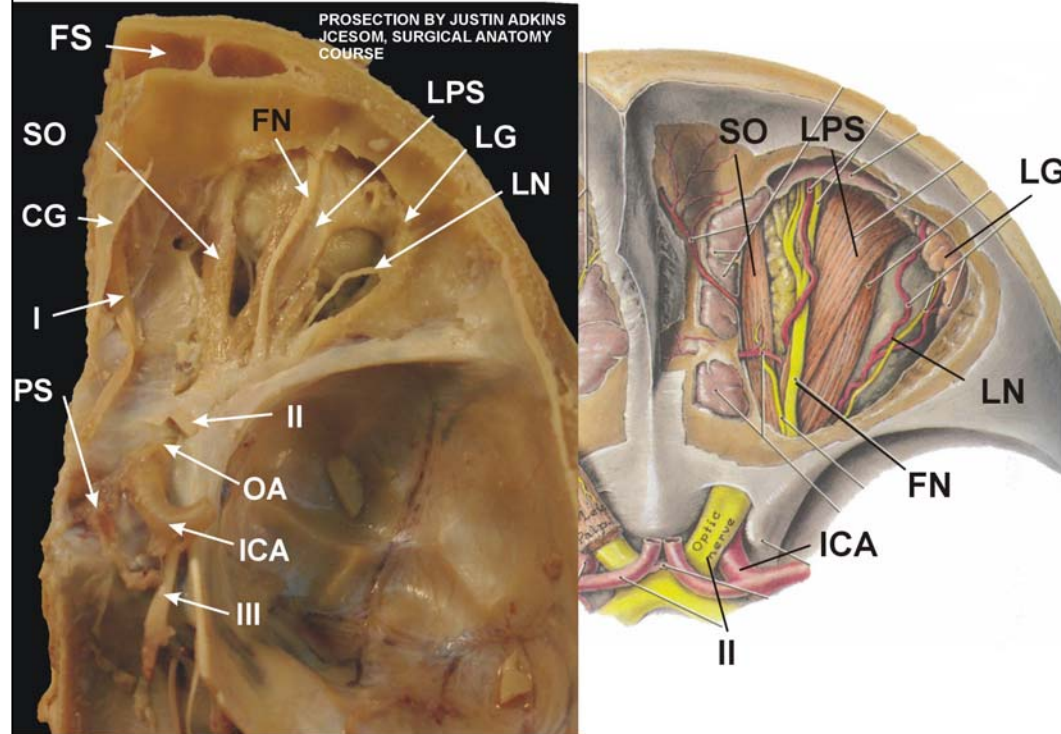


8-2 DISTRIBUTION OF THE OLFACTORY NERVE

DAMAGE - loss of sense of smell

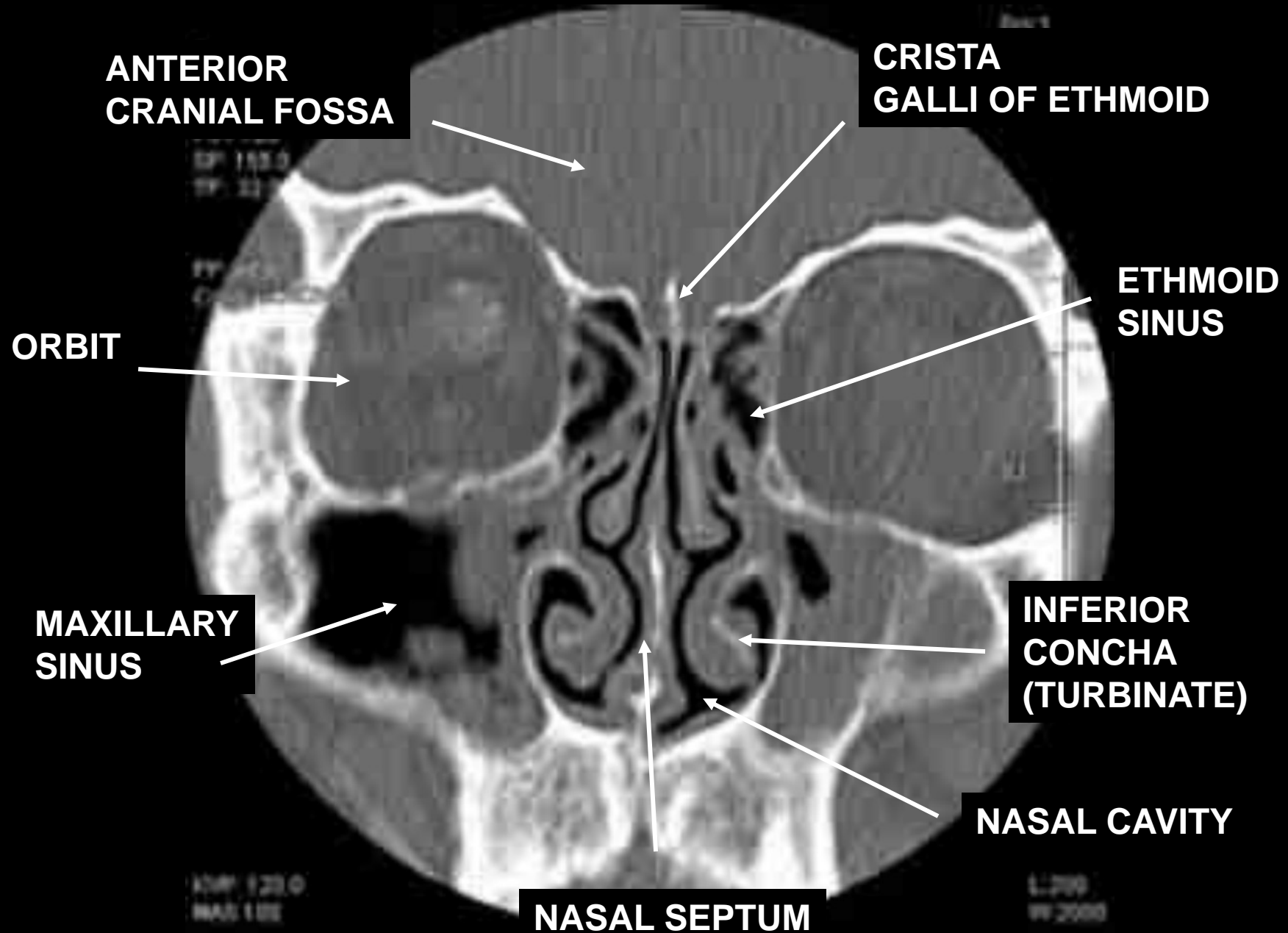
PROSECTION OF ORBIT - SUPERFICIAL DISSECTION

renumbered
283

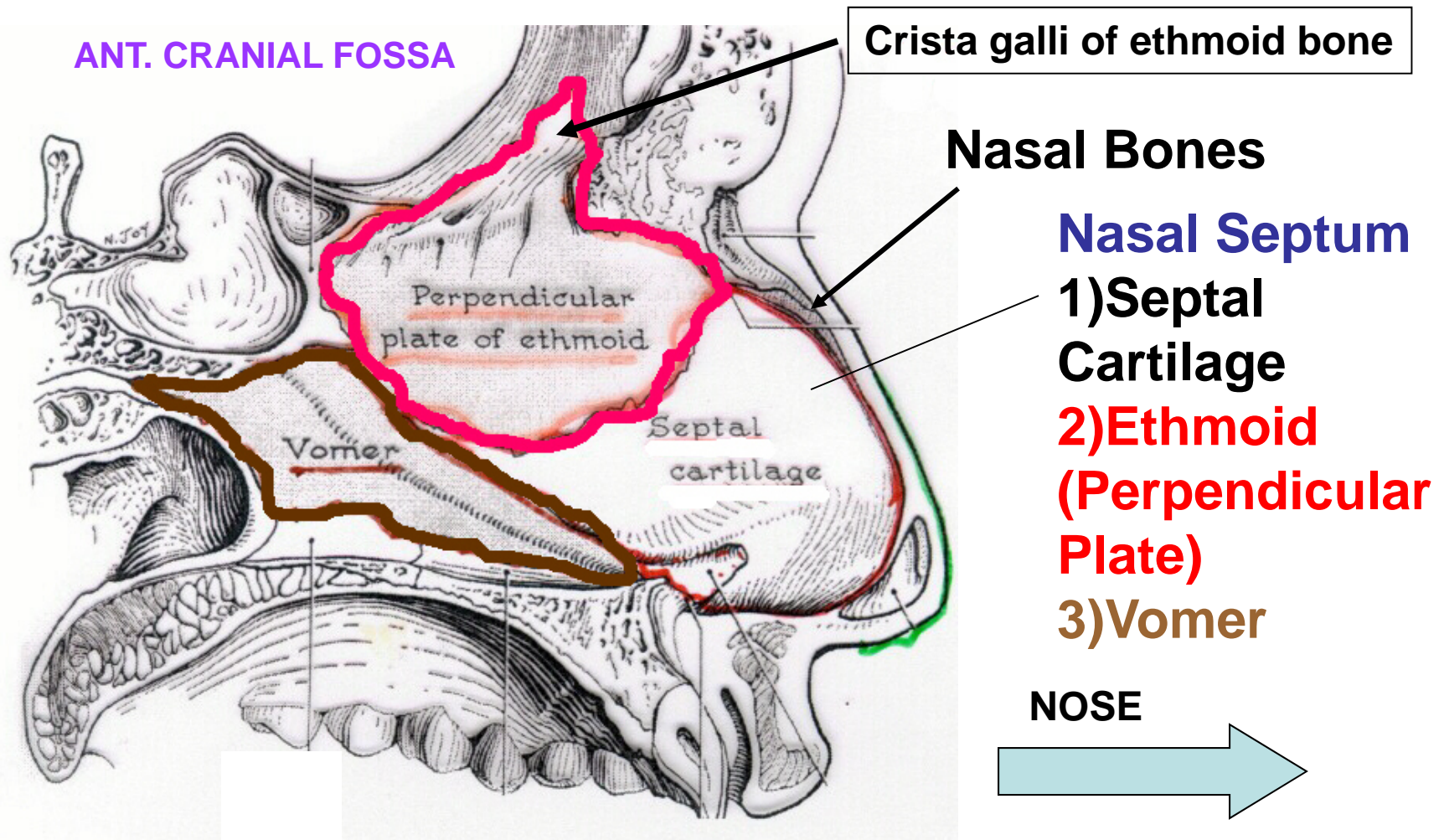


- I - Olfactory tract
- II - Optic nerve
- PS - Pituitary stalk
- CG - Crista galli of ethmoid bone
- SO - Superior oblique muscle
- LPS - Levator Palpebrae Superioris muscle
- FN - Frontal nerve (V1)
- LG - Lacrimal gland
- LN - Lacrimal nerve (V1)
- OA - Ophthalmic artery
- ICA - Internal Carotid artery
- III - Oculomotor nerve
- FS - Frontal Sinus

CT CORONAL PLANE OF HEAD



CLINICAL QUESTION: BLOW TO NOSE PRODUCES LEAKAGE OF FLUID FROM NOSE; FRACTURE CRIBRIFORM PLATE OF ETHMOID



ETHMOID – Fracture of nose can break cribriform plate, floor of Ant. Cranial fossa - **leak CSF from nose**; spread of infection

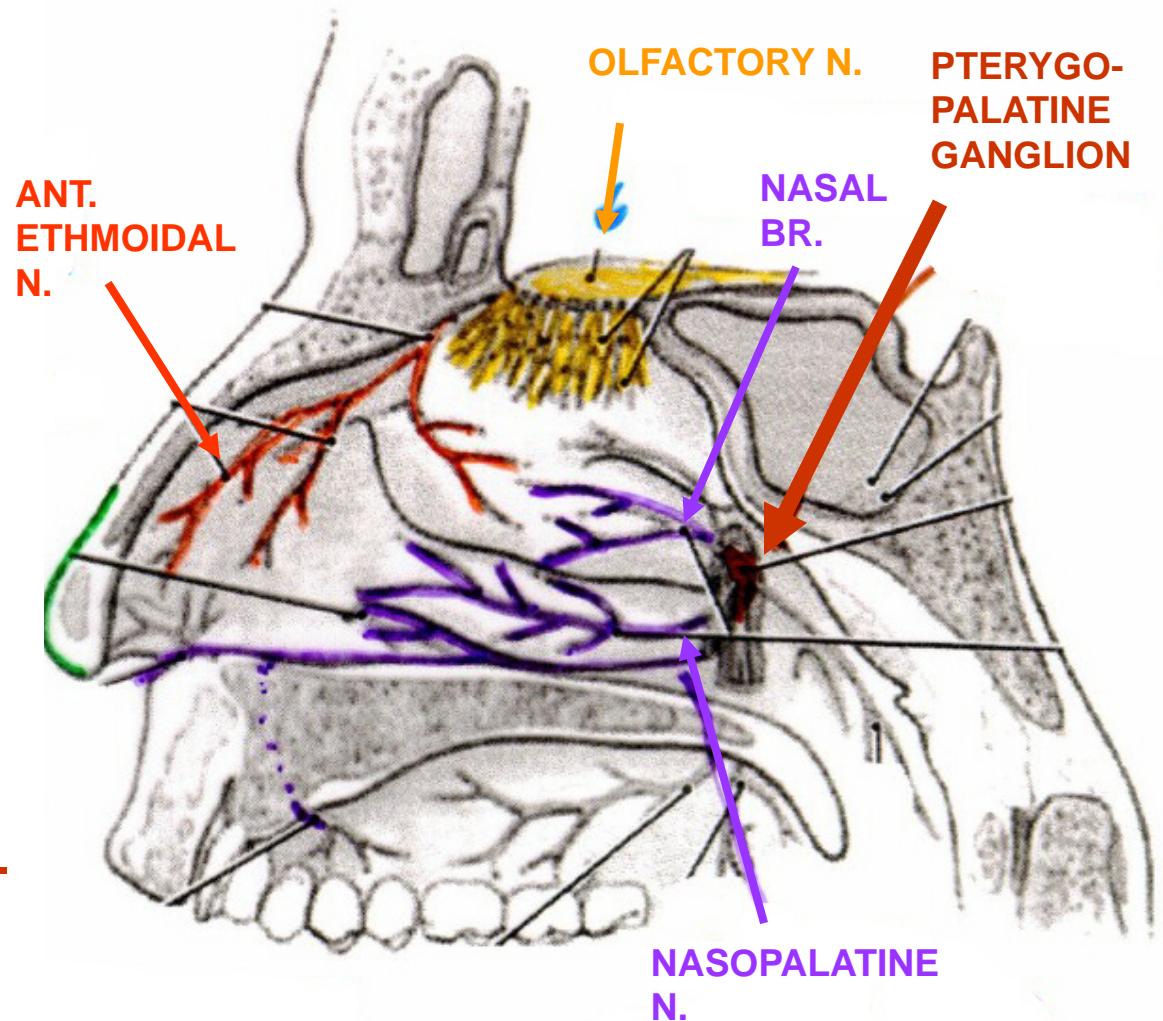
NERVES of NASAL CAVITY

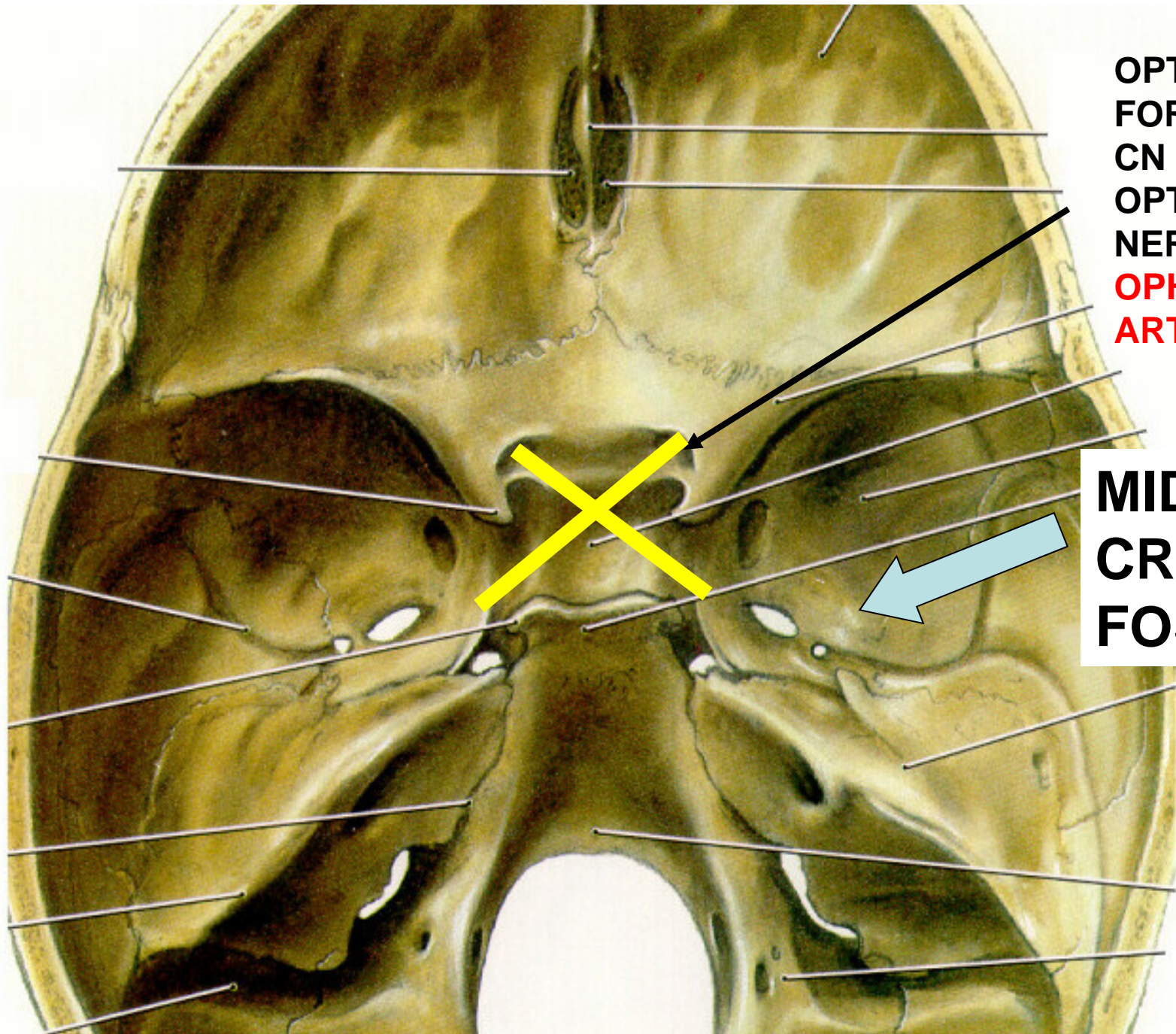
Nerves

1. Olfactory N. - SVA
smell; Olfactory Area

2. General Sensation
GSA - touch, pain, etc.
- V1 Anterior Ethmoidal N.
[- V2 Nasal Branches
- V2 Nasopalatine N.]

3. Mucous Glands of
nose -
Parasympathetics - VII -
Facial N. by
Pterygopalatine
Ganglion (hitchhike
with branches of V2)



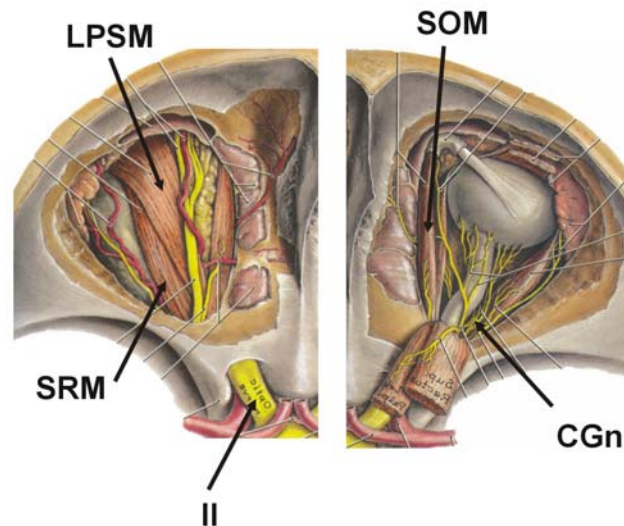
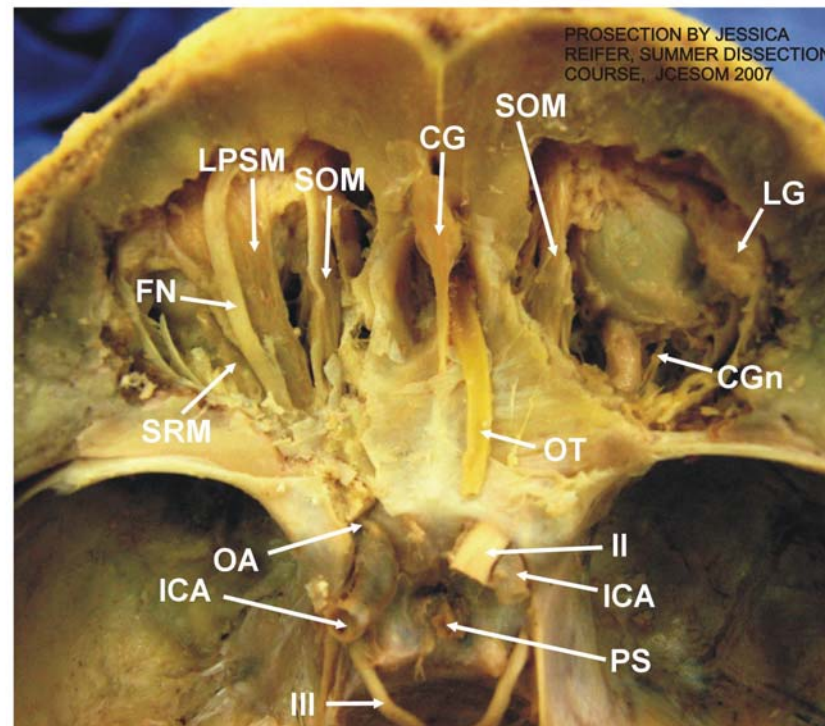


OPTIC
FORAMEN
CN II
OPTIC
NERVE,
OPHTHALMIC
ARTERY

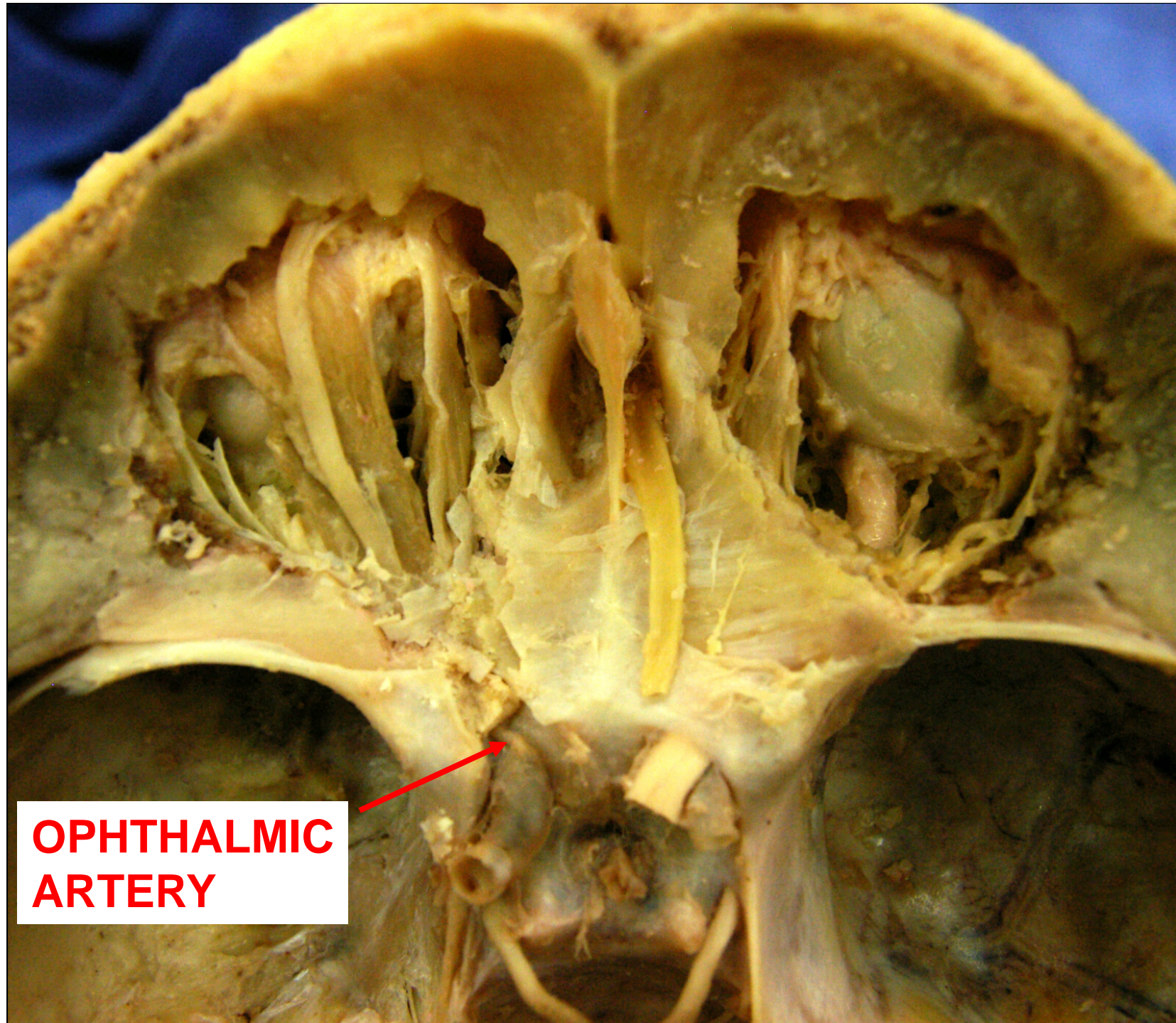
MIDDLE
CRANIAL
FOSSA

ORBIT: SUPERFICIAL AND DEEP DISSECTIONS

287

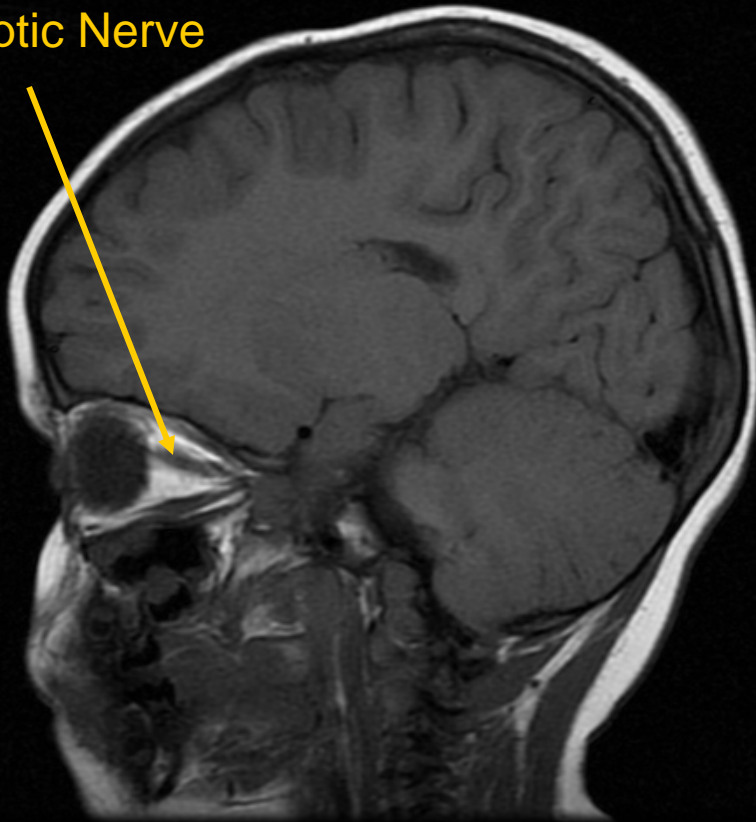


ICA - INTERNAL CAROTID ARTERY
 III - OCULOMOTOR NERVE
 PS - PITUITARY STALK
 II - OPTIC NERVE
 OT - OLFATORY TRACT
 CGn - CILIARY GANGLION
 LG - LACRIMAL GLAND
 CG - CRISTA GALLI
 SOM - SUPERIOR OBLIQUE MUSCLE
 LPSM - LEVATOR PALPEBRAE SUPERIORIS M.
 FN - FRONTAL NERVE
 SRM - SUPERIOR RECTUS MUSCLE
 OA - OPHTHALMIC ARTERY

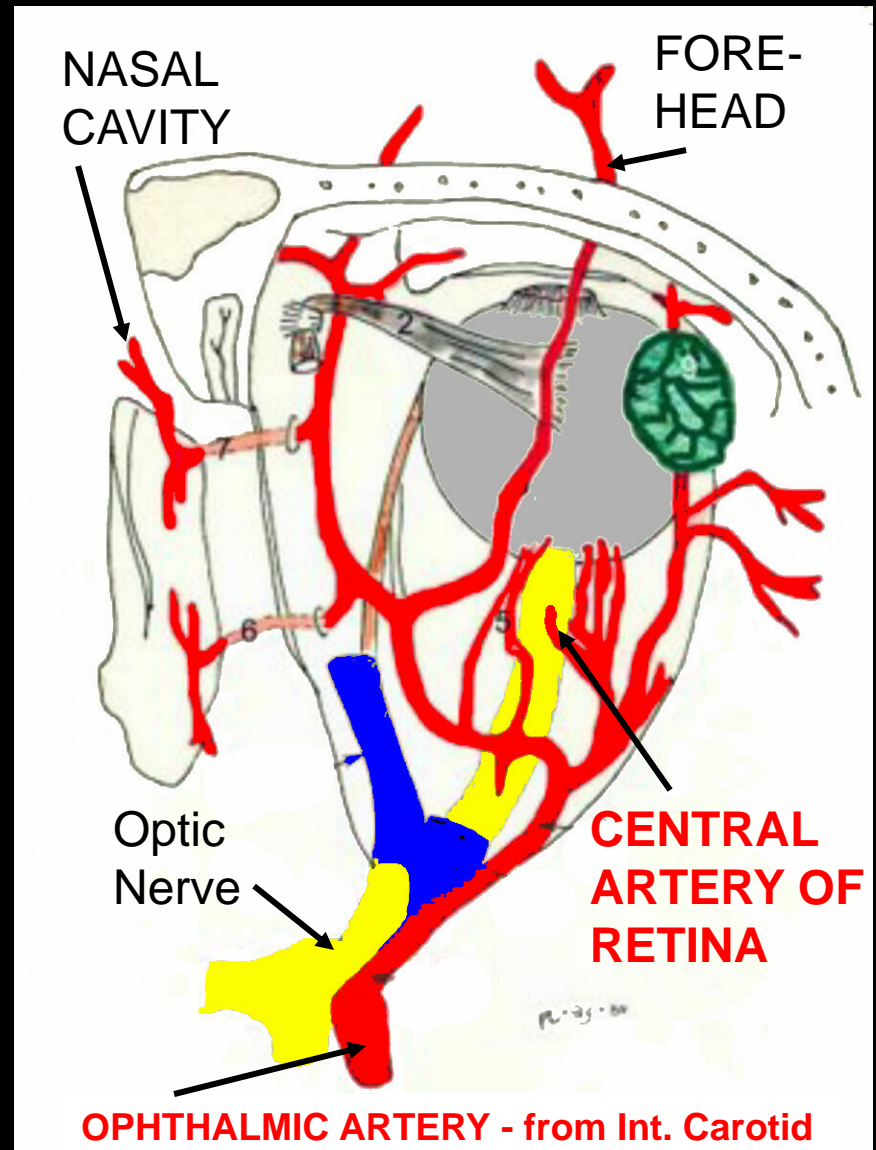


II - OPTIC NERVE

Optic Nerve

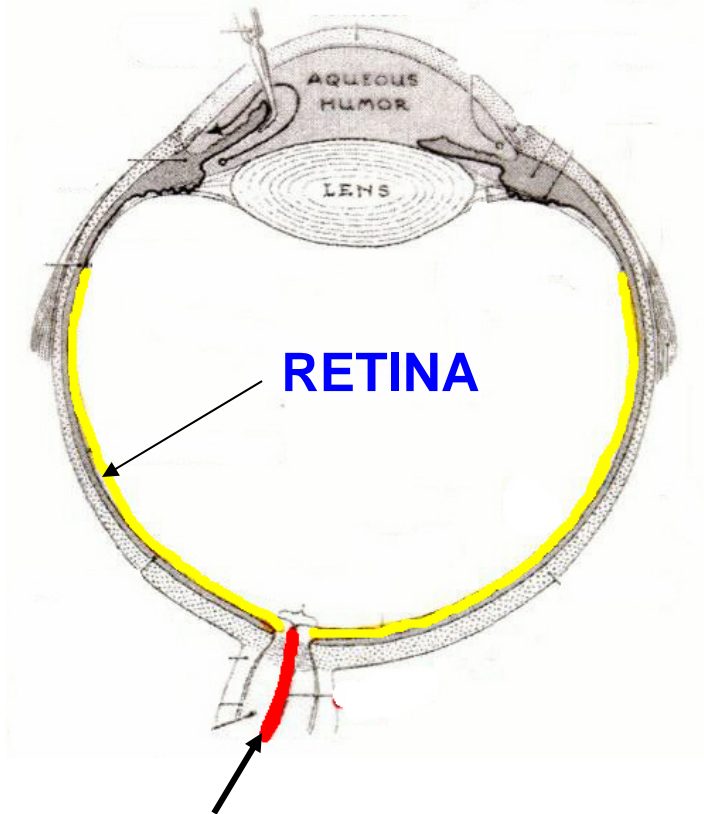


OPHTHALMIC ARTERY ENTERS ORBIT WITH OPTIC NERVE

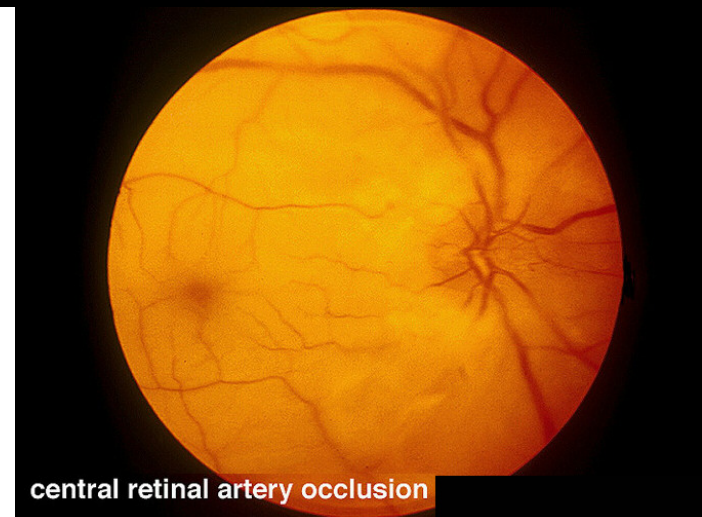
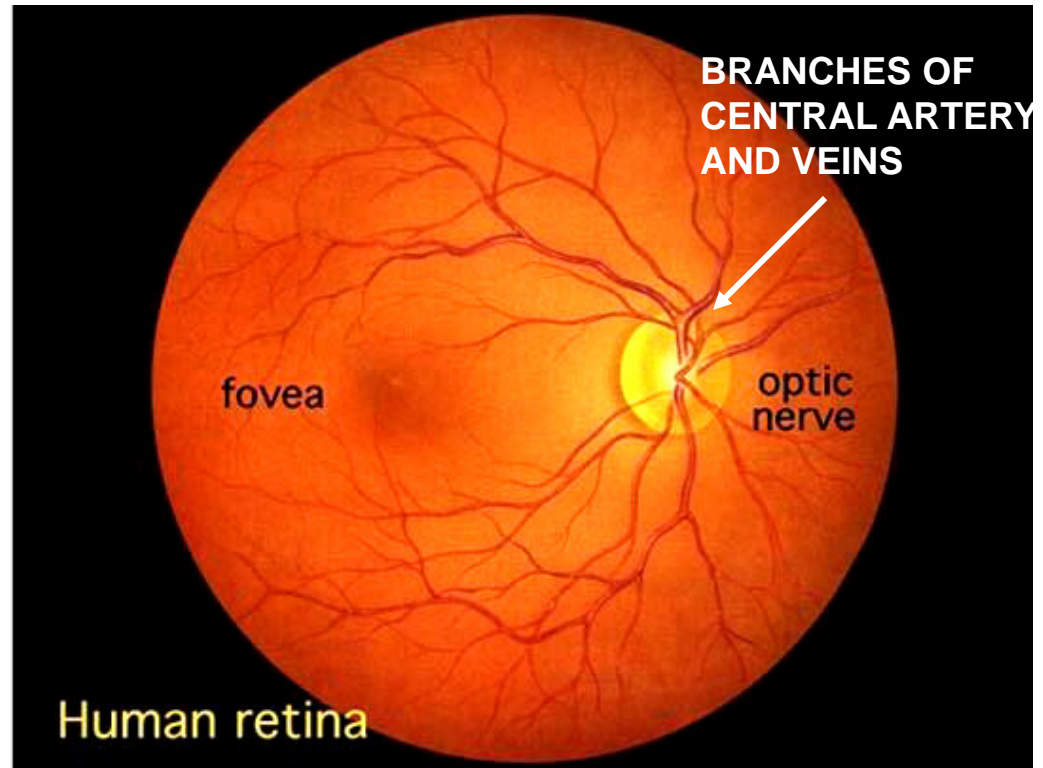


CLINICAL QUESTION: SUDDEN ONSET BLINDNESS IN ONE EYE

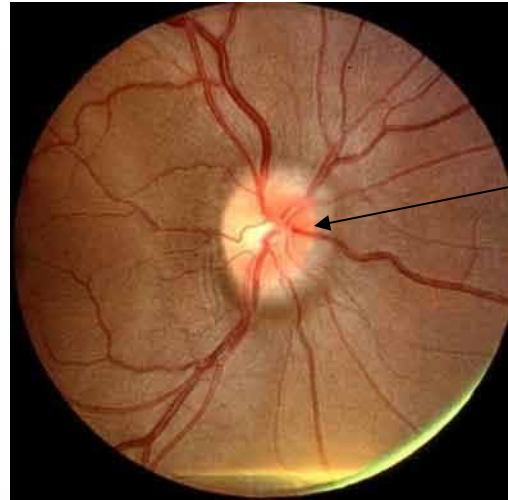
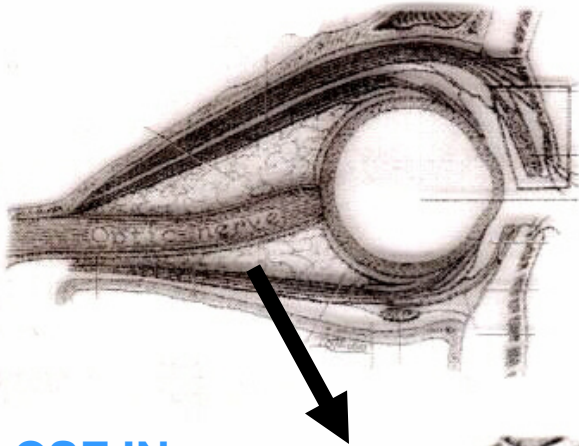
OPHTHALMOSCOPE
VIEW →



**CENTRAL ARTERY OF RETINA -
BRANCH OF OPHTHALMIC ART.
NO ANASTOMOSES; OCCLUSION
RESULTS IN BLINDNESS**

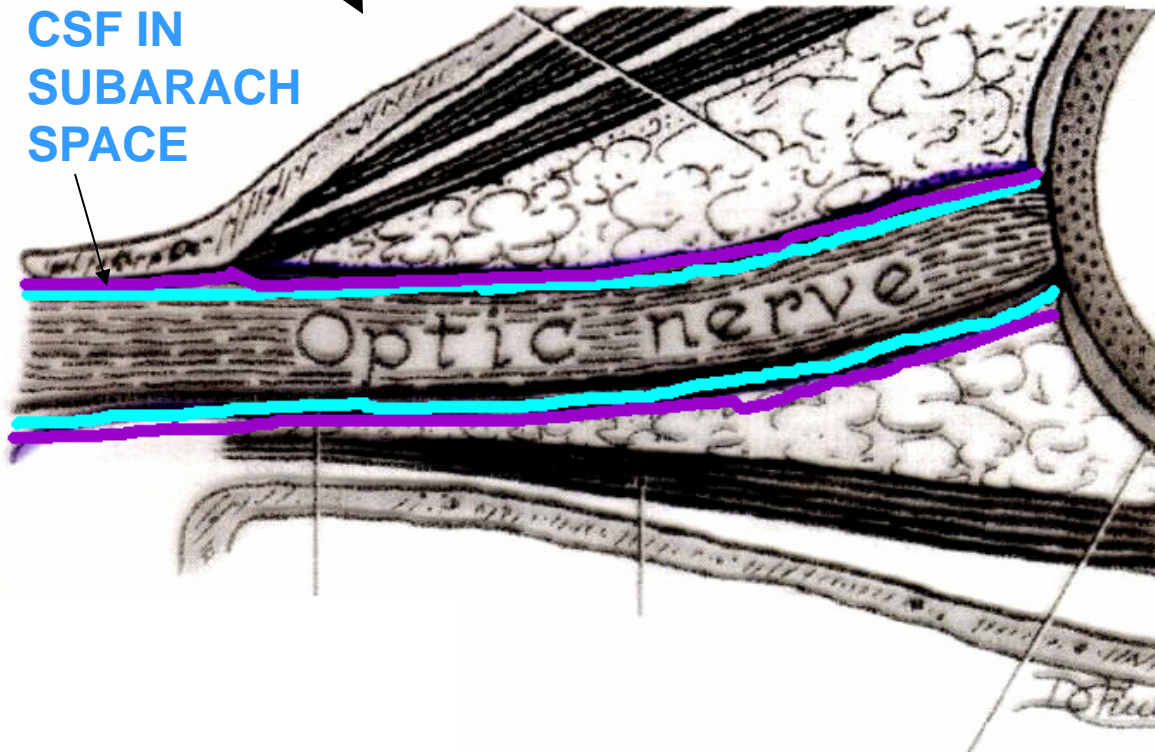


OPTIC NERVE FUNCTION COMPROMISED BY INCREASED CSF PRESSURE



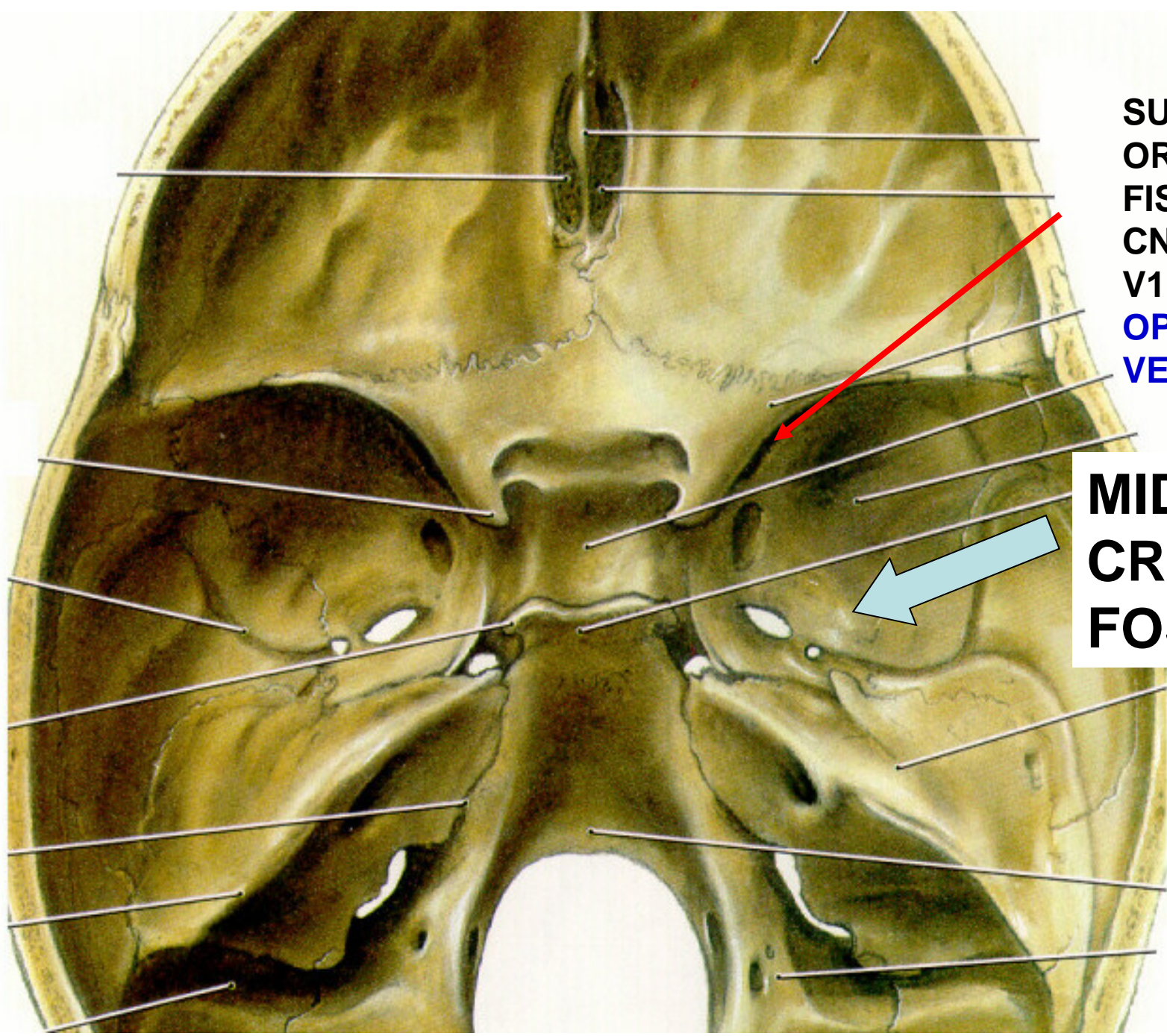
PAPILLEDEMA
- engorgement
of retinal veins
(correspond to
branches of
central artery)

**CSF IN
SUBARACH
SPACE**



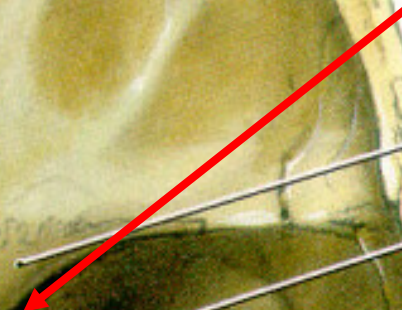
**DURA &
SUBARACHNOID SPACE
(CSF) EXTEND AROUND
OPTIC NERVE;
INCREASE IN CSF CAN
EFFECT VISION**

Clinical - slow onset;
headaches

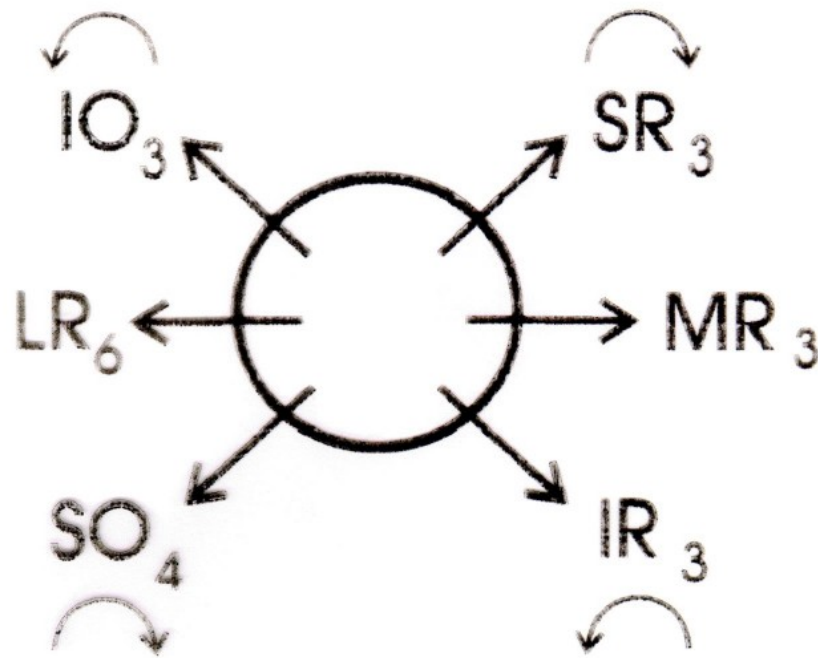
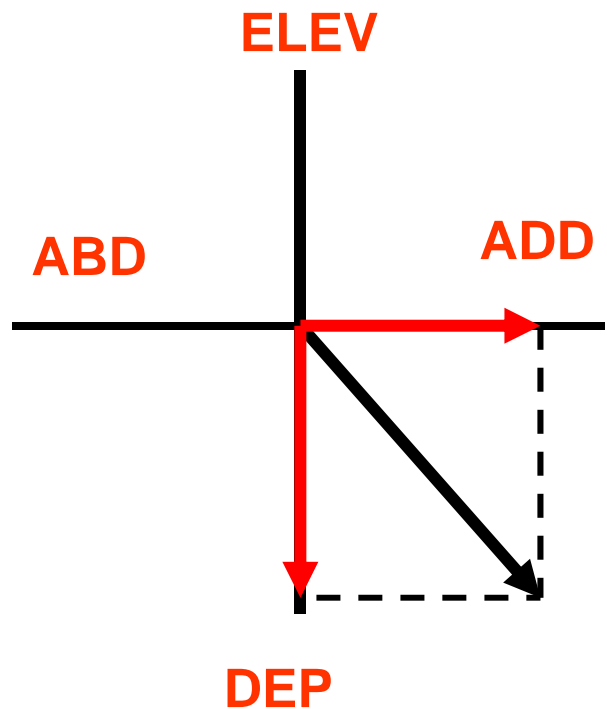


SUPERIOR
ORBITAL
FISSURE –
CN III, IV
V1, VI,
OPHTHALMIC
VEINS

MIDDLE
CRANIAL
FOSSA

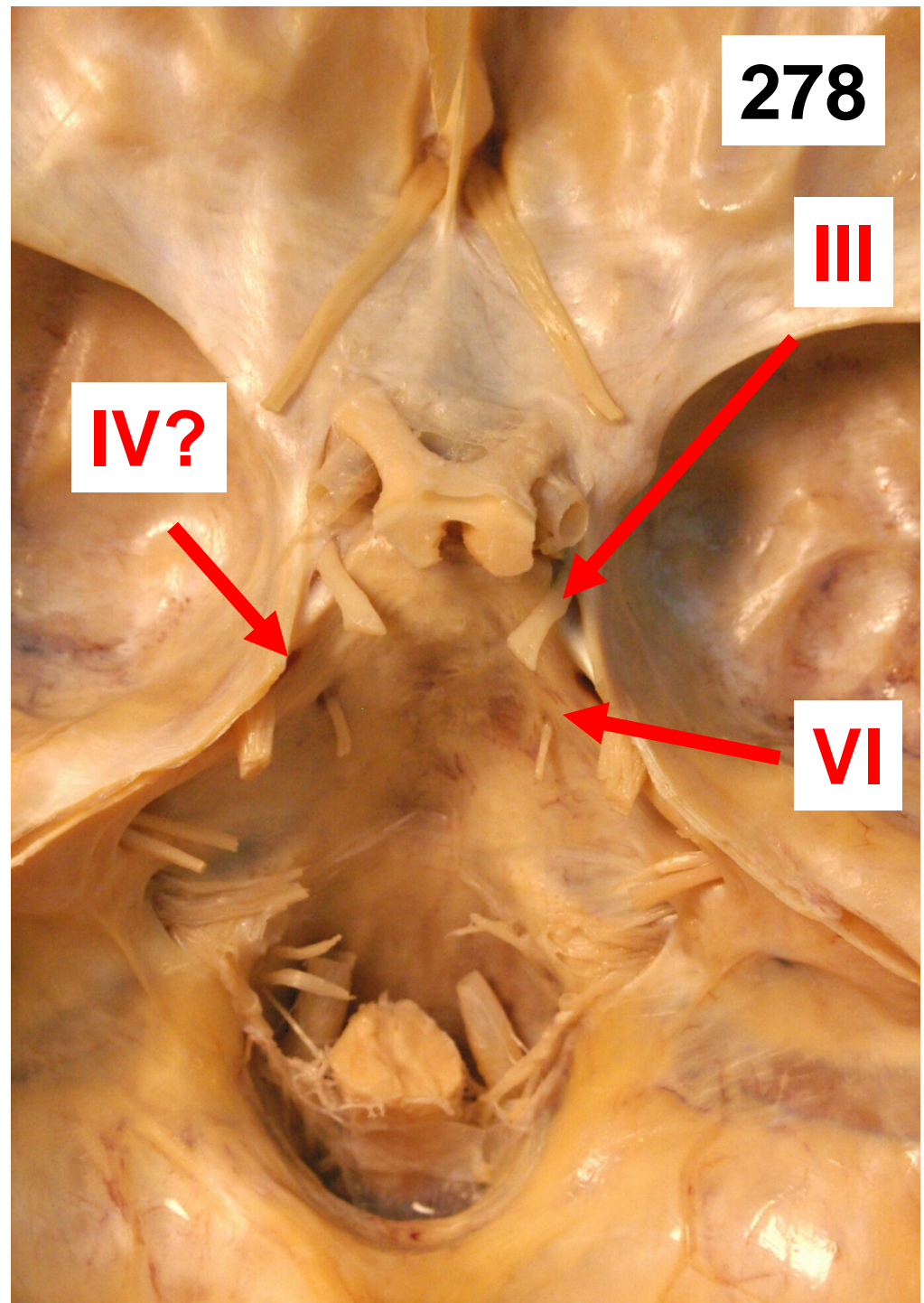
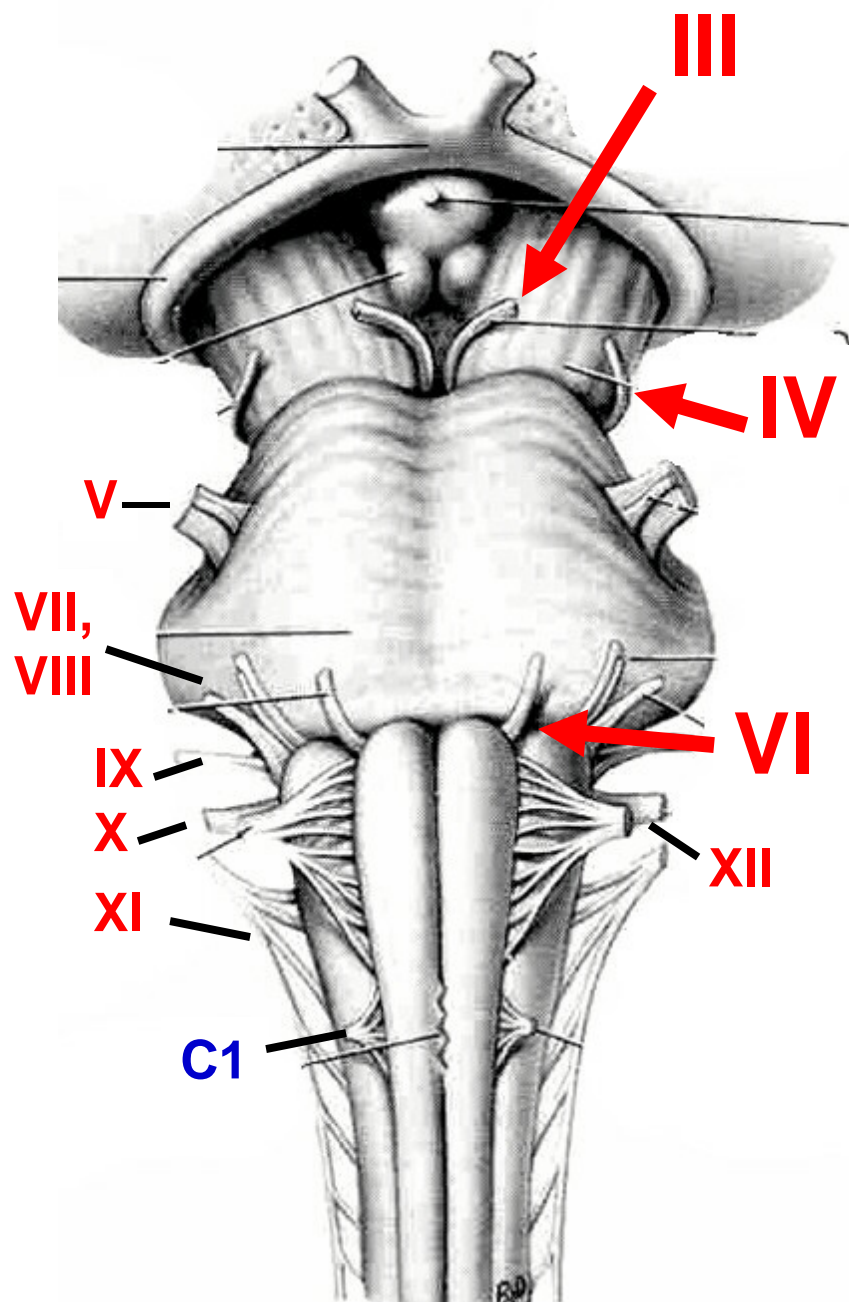


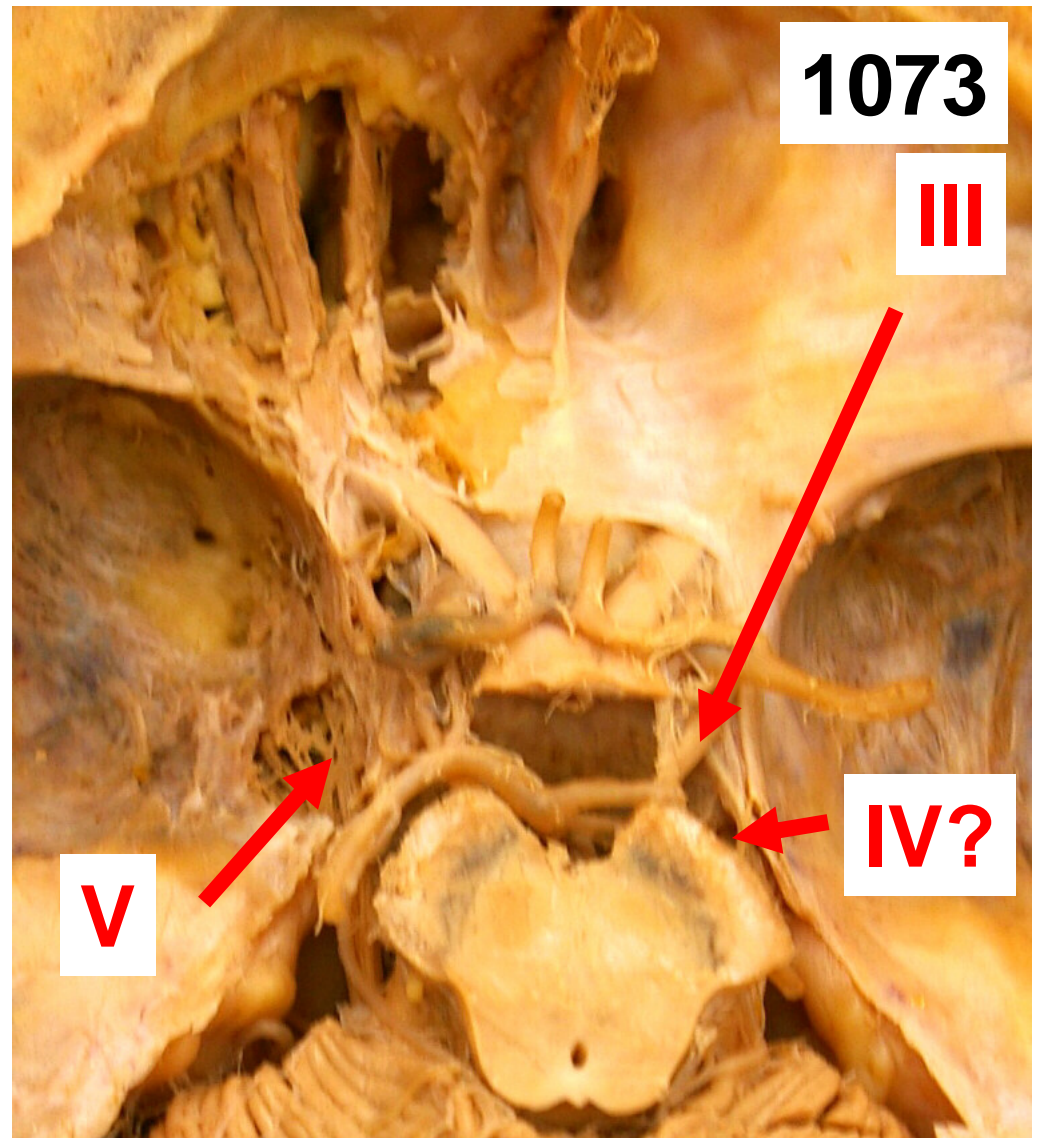
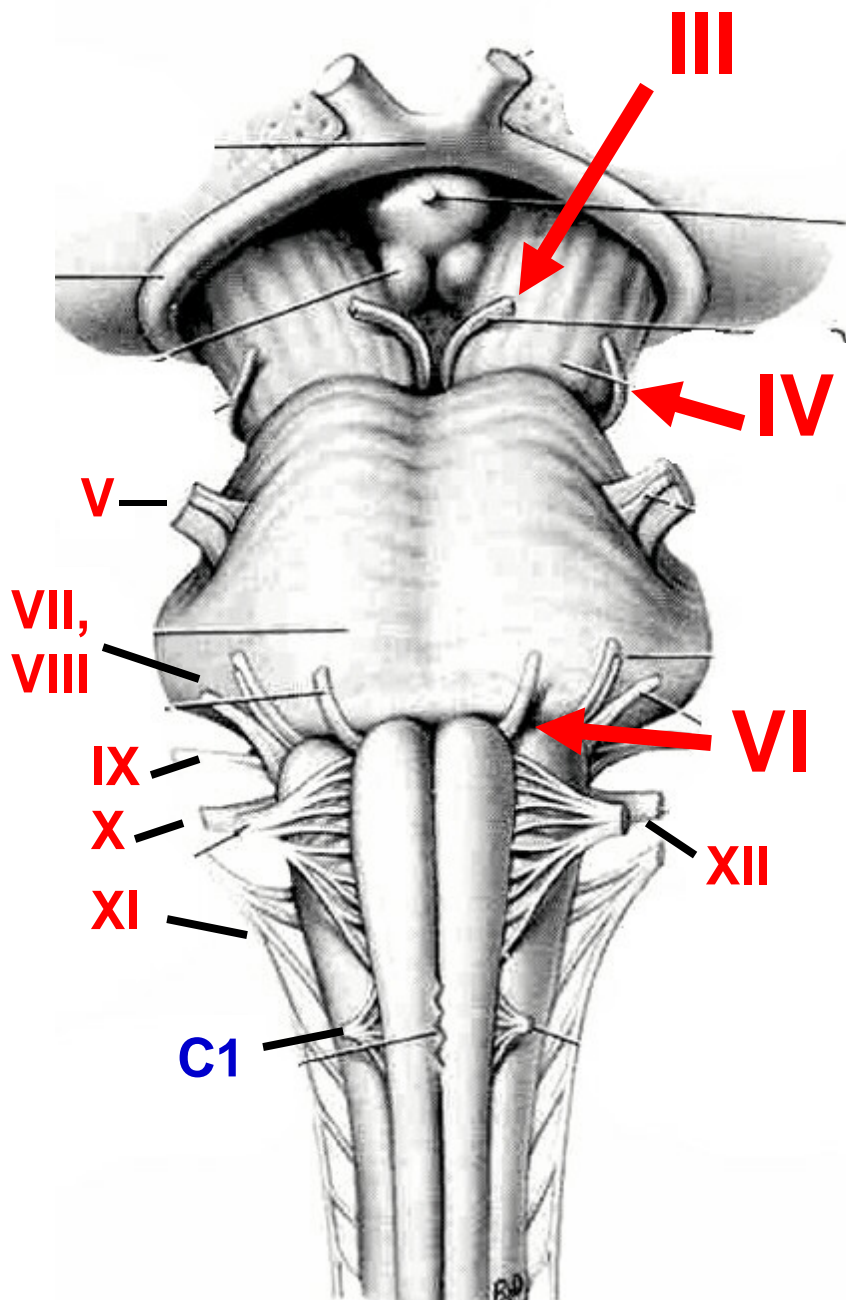
EYE MOVEMENTS DIAGRAM



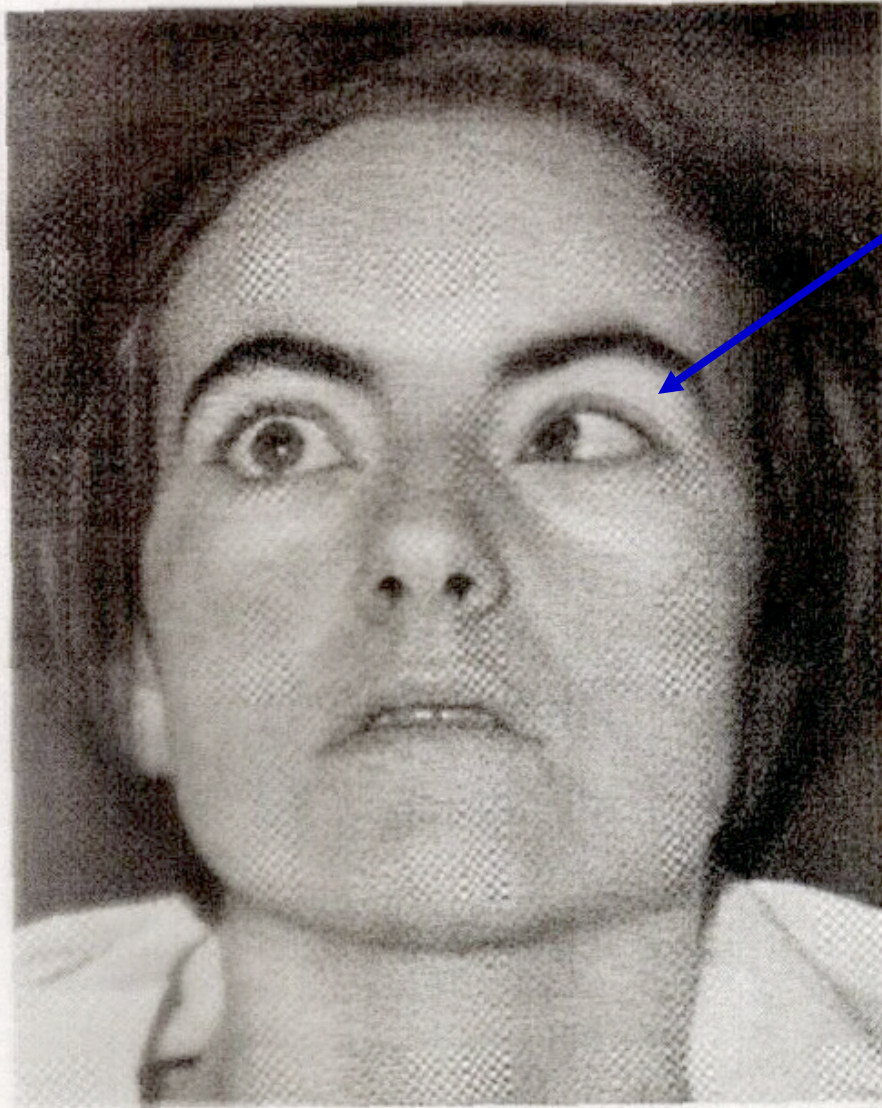
20.5.11

RESTING POSITION OF EYE: DETERMINED BY
BALANCE OF ACTION OF OPPOSING MUSCLES

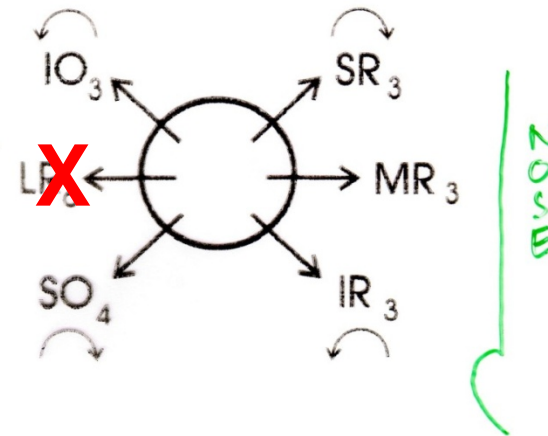




ABDUCENS NERVE DAMAGE



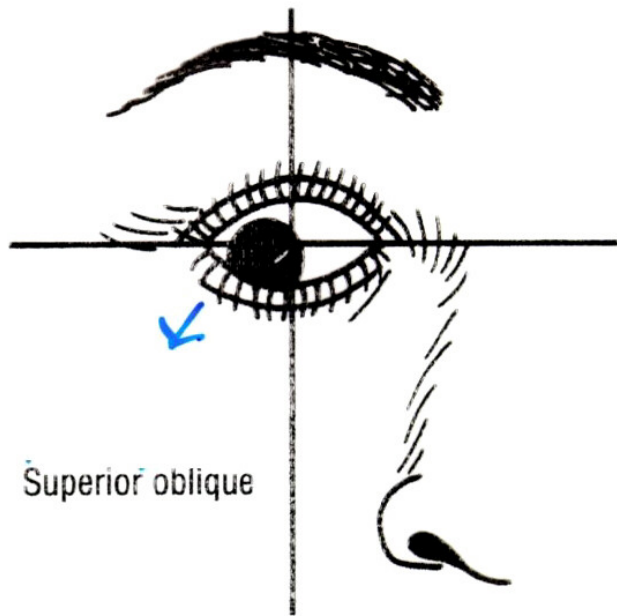
**PATIENT WITH
ABDUCENS (VI)
NERVE DAMAGE**



SYMPTOM: DIPLOPIA

**ABDUCENS (VI): AT REST
MEDIAL STRABISMUS
(CROSS-EYED) DUE TO
DAMAGE/PARALYZE
LATERAL RECTUS**

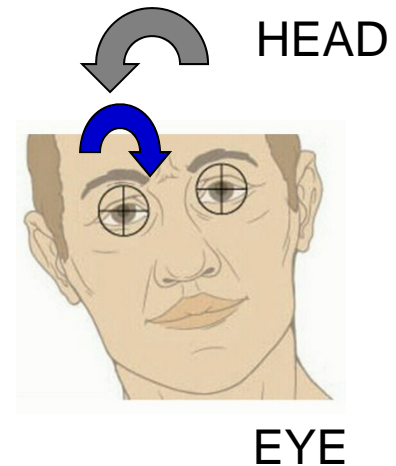
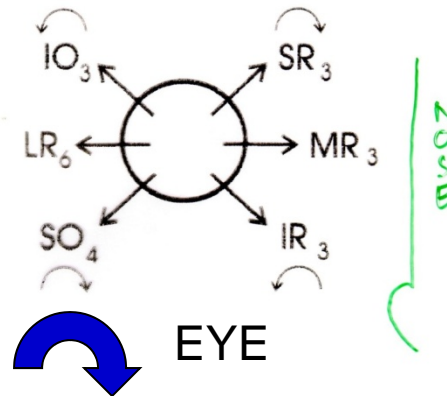
TROCHLEAR (IV) NERVE DAMAGE: INABILITY TO TURN EYE DOWN AND OUT; ALSO HEAD TILT



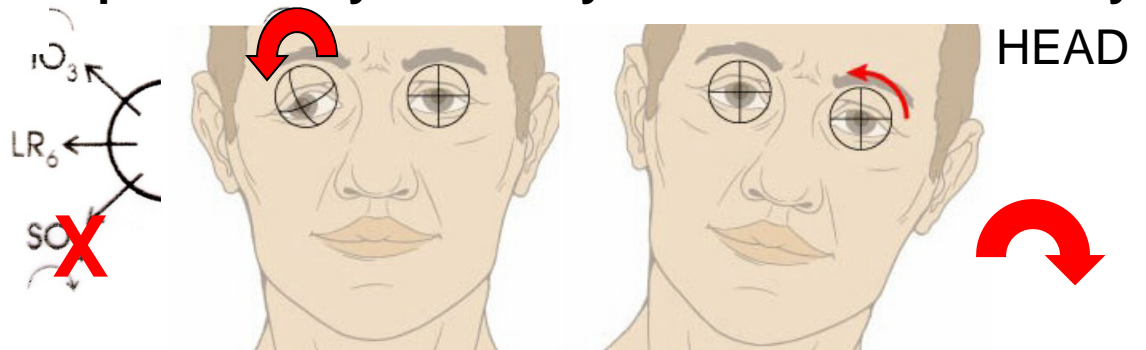
**PATIENT
CANNOT
LOOK DOWN
AND OUT**

**Symptoms - Difficulty
walking down stairs;
HEAD TILTED**

NORMAL



**Rotation - occurs when tilt head; rotate
ipsilateral eye medially when tilt head laterally**



**AFTER IV DAMAGE - eye rotated laterally;
PATIENT TILTS HEAD TO OPPOSITE SIDE so
both eyes rotated (chin toward side of lesion)**

OCULOMOTOR (III) NERVE DAMAGE



AT REST

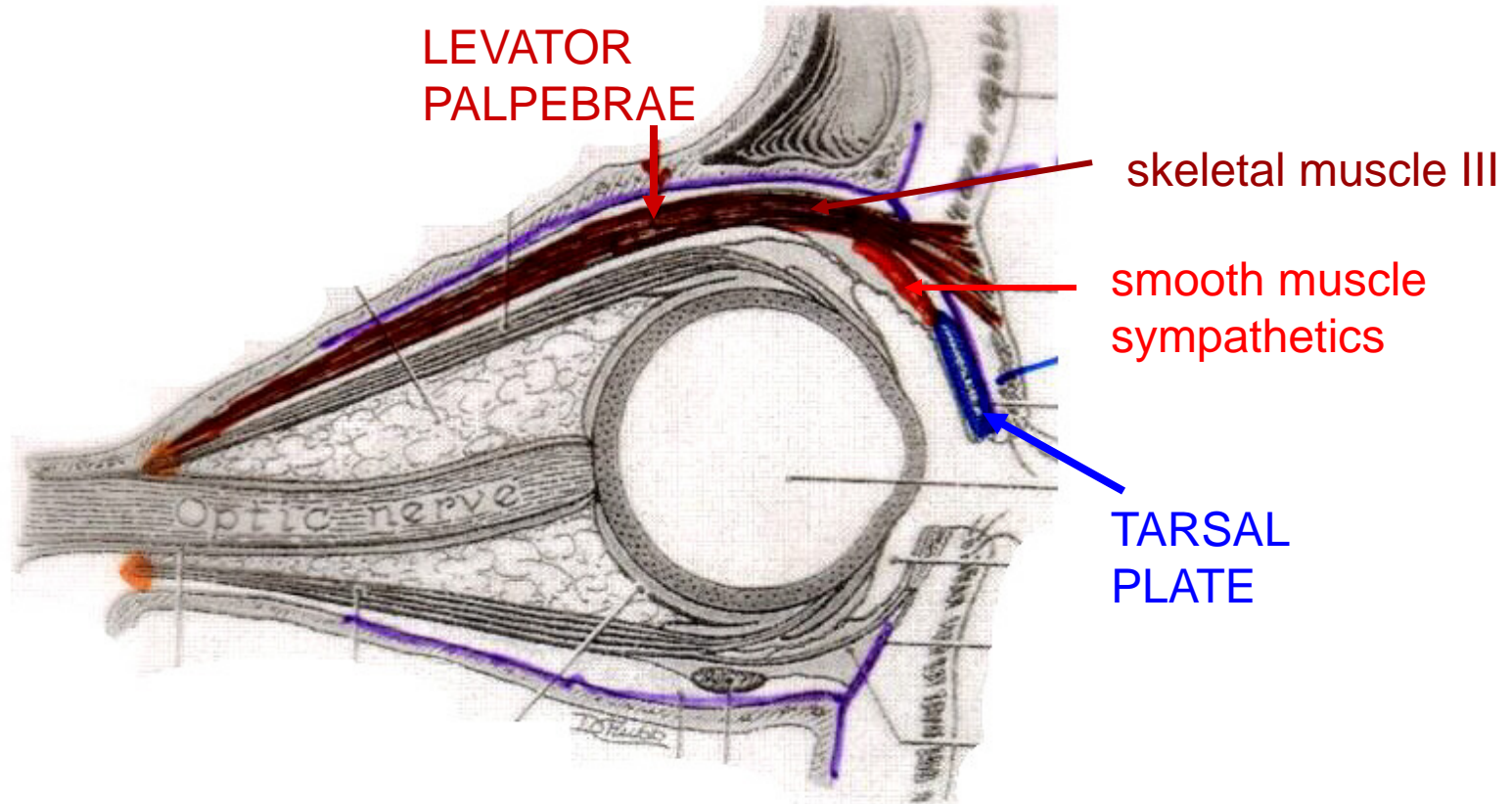
- **LATERAL STRABISMUS** (WALL-EYED) DUE TO PARALYZE MEDIAL RECTUS

ALSO

- **PTOSIS** - DROOPING EYELID- PARALYZE LEV. PALPEBRAE SUPERIORIS

- **DILATED PUPIL** - PARALYZE PUPILLARY CONSTRUCTOR

ANATOMY: LEVATOR PALPEBRAE SUPERIORIS



LEVATOR PALPEBRAE SUPERIORIS MUSCLE - ORIGIN FROM TENDINOUS RING - COMPOSED OF SKELETAL (CN III) & SMOOTH (SYMPATHETICS) MUSCLE PARTS

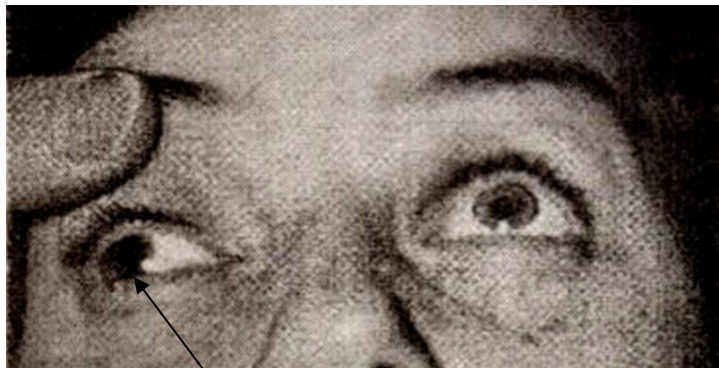
DAMAGE INNERVATION PTOSIS = DROOPING EYELID

Ptosis (drooping of the eyelid)

PTOSIS = DROOPING EYELID; CAN BE SIGN OF DAMAGE TO OCULOMOTOR NERVE (III) OR SYMPATHETICS



SKELETAL MUSCLE PART

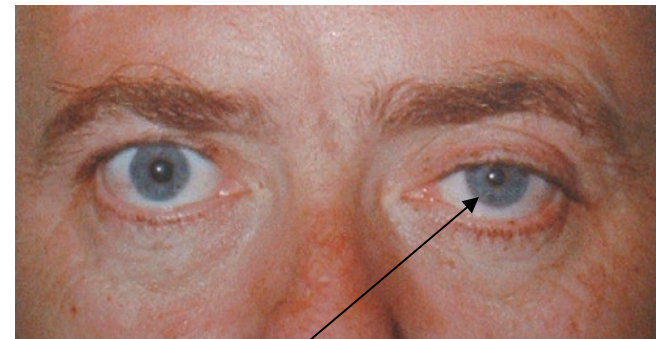


OCULOMOTOR NERVE PALSY

other symptoms:

- Pupil is dilated - denervate pupillary constrictor (mydriasis)
- Also affect Eye movements
- Accomodation

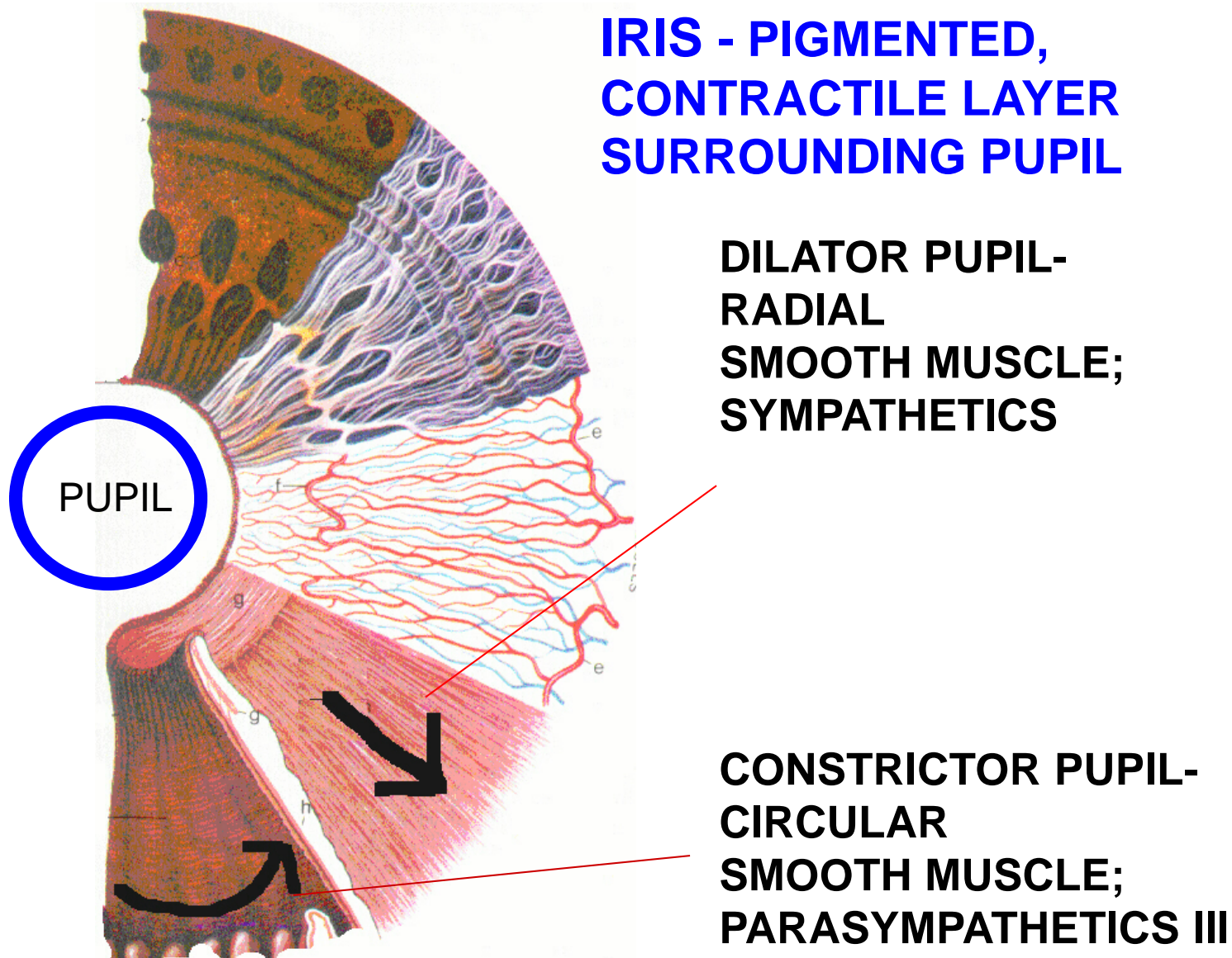
SMOOTH MUSCLE PART



SYMPATHETICS - HORNER'S SYNDROME -

- Miosis - constricted pupil
 - Anhidrosis - lack of sweating
- (Sympathetic pathway: out spinal cord T1 and T2; ascend sympathetic chain; synapse Superior Cervical ganglion; distribute with arteries(Ophthalmic A.))

EYE- STRUCTURE OF EYEBALL- **VASCULAR LAYER**



PARASYMPATHETIC MECHANISM OF ACCOMODATION

