

The Orbit 1

- 1- bilateral structures below the Anterior Cranial Fossa and Ant. to middle cranial fossa → **Orbit**
- 2- Shape of bony orbit → **Pyramidal**
- 3- orbit opening Anteriorly [Base] → Face, and Aper Extending in postero medially direction.
- 4- Contents of the orbit → ① **Eyeball** ② Extra ocular ms ③ intraocular ms
④ **Lacrimal Apparatus** ⑤ **FAT** ⑥ **ophthalmic veins + Artery**
⑦ **Nerve** → 2nd, 3rd, 4th, 6th, Branches of 5th, Sympathetic Fibers, Ciliary Ganglion.
- 5- Roof of the orbit → ① Orbital plate of Frontal Bone ② Lesser wing of sphenoid
- 6- which structure separates the orbital cavity from the Ant. cranial Fossa and frontal lobe? → **orbital plate of frontal bone**
- 7- Lateral wall of the orbit → ① **Greater wing** ② **orbital plate of zygomatic**
- 8- Floor of the orbit → ① **orbital plate of Maxilla** ② **vertical process of palatine bone**
which structure separates orbital cavity from the maxillary sinuses → **orbital plate of Maxilla**.
- 9- Horizontal plate of palatine bone participates in **post. third of hard palate**
- 10- Vertical plate of palatine bone participates in → ① **Floor of the orbit** ② **medial wall of pterygo-palatine fossa**
- 11- Medial wall of the orbit → (Ant. to post.) → 1- **Frontal process of maxilla**.
2- **Lacrimal Bone** 3- **Ethmoid Bone**
- 12- which structures participates in formation lacrimal sac (lacrimal groove) → **Frontal Process of maxilla + Lacrimal Bone**
- 13- which structures separates the orbital cavity from the Ethmoidal Air sinus? → **orbital plate of Ethmoid**
↳ note, it's thin wall. × opening into the orbital cavity*
- 14- Foramen that transmits supraorbital N. + BV → **supra orbital Foramen**
- 15- Foramen that transmits infraorbital N. + BV → **infra orbital Foramen**
- 16- Situated on the floor of the orbital cavity → **infra orbital groove**
↳ Note → transmit infra orbital nerve.
- 17- Transmits Anterior + Posterior ethmoidal Nerves + BV → **Ant. + post. Ethmoidal Foramen**
- 18- ↳ Note → Ant. + post. Ethmoidal Nerves branched from → **Nasociliary**.
- 19- inferior orbital fissure → communicates with 2 fossa → ① **infra temporal fossa**
↳ located btw → **Maxilla + Greater wing of sphenoid** ② **pterygo palatine fossa**
↳ it's transmits → **inf. ophthalmic vein, maxillary N + zygomatic N.**
- 20- superior orbital fissure → communicates with → **middle cranial fossa**
↳ located btw → **lesser wing + Greater wing of sphenoid**
- 21- Transmits → **ophthalmic Nerve Branches, 3rd, 4th, 6th cranial, superior ophthalmic V.**

orbit 1

- 1- optic canal → located in → lesser wing of sphenoid
↳ communicates with → middle cranial fossa
↳ transmits ophthalmic A. + optic nerve
- 2- Nasolacrimal → located in → Anteriorly in medial wall
↳ communicates with → Nose
↳ transmits the → Nasolacrimal duct
- * muscles of the Eye
- Extrinsic muscles (Extra-ocular)
↳ Eye ball movement + Raising upper eyelid
- Intrinsic muscles
↳ shape of lens + size of pupil.
- [1] Superior Rectus
origin → common tendinous ring (sup. part). Control the shape of lens.
insertion → in front of equator.
Nerve supply → sup. division of oculomotor
Action → Elevation + Adduction
- [2] Inferior Rectus
origin → common tendinous Ring (inf. part)
insertion → in front of equator.
Nerve supply → inf. division of 3rd CN.
Action → depression + adduction.
- [3] Medial Rectus
origin → Common tendinous Ring (Medially)
insertion → in front of equator
Nerve supply → inf. division of 3rd CN.
Action → Adduction
- [4] Lateral Rectus
origin → common tendinous Ring (Laterally)
insertion → in front of equator
Nerve supply → Abducent 6th CN.
Action → Abduction
- [5] Inferior Oblique
origin → Anterior part of medial wall
insertion → Lateral part of post. equator
Nerve supply → inf. division of 3rd CN.
Action → Flexion + abduction.
- [6] Superior Oblique
origin → post. part of the Roof
insertion pass through + rectus then insert post. to equator
Nerve supply → 4th CN, trochlear
Action → depression + abduction
- [7] Levator palpebrae superioris →
origin → post. part of Roof
insertion → Skin of upper eyelid + tarsal plate
Nerve supply 3rd CN → sup. division
Action → Raising Eyelid (Upper Eyelid).
- * Nerves to orbit
sensory - 1- Ophthalmic Branches Motors - 1- Oculomotor
2- Optic
+ infranorbital nerve
↳ supply lower eyelid
- 2- Trochlear
3- Abducent

Orbit I

Summary

15- Fibrous ring which surrounds the optic canal and part of the superior orbital fissure → **Common tendinous Ring**
↳ Note → It's the common origin of the Four Recti ms.

↳ Surround medial Margin of the superior orbital fissure.

16- Structures lies within common tendinous Ring →
superior + inferior division of 3rd CN. + optic N. + ophthalmic A.
abducens + nasociliary.

17- Structures lies outside common tendinous Ring →
superior + inf. ophthalmic veins, trochlear N., lacrimal N., frontal
infra orbital N + A. + zygomatic N. Branch of maxillary N.

18- Iris has two muscles → sphincter pupillae, dilator pupillae

19- Ciliary muscle supplied by → para sympathetic via 3rd CN.

20- 3rd + 4th CN pass through → lateral Part of cavernous sinus.

21- intracranial masses or swelling may cause → temporal lobe herniation

22- Temporal lobe herniation may caused by → increase intra cranial pressure
↳ That cause compress intracranial structure → impinge 3rd CN
Result in dilated pupil.

23- The first clinical sign of compression of oculomotor Nerve (parasymp.)
innervation phos. constrictor pupillae ↓ side ipsilateral pupil dilation ↗

↳ From parasympathetic → oculomotor parasympathetic

Constriction you will see ↓ pupil low dilation seen up to 2, 3 mm ↓