



AL- Mustaqbal University College

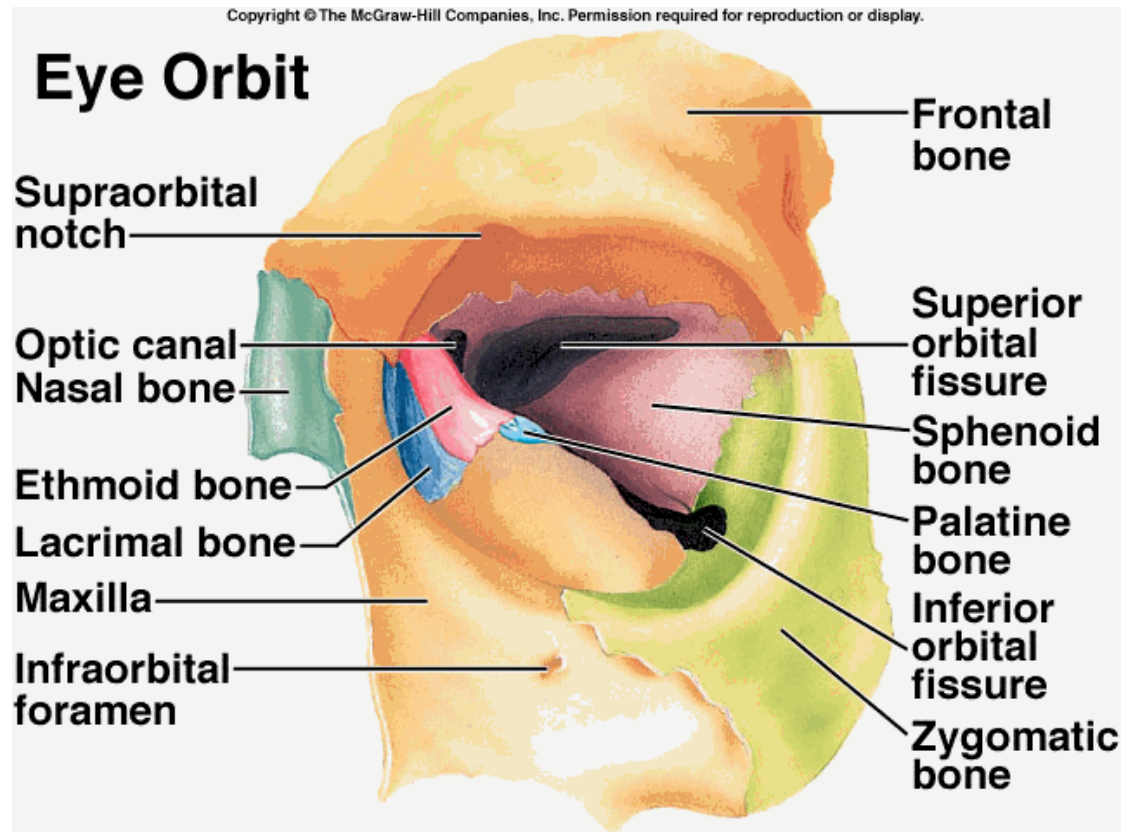
Optometry Department

Lec.4

Anatomical Terminology

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Borders and Anatomical Relations

The orbit can be thought of as a **pyramidal** structure, with the apex pointing posteriorly and the base situated anteriorly. The boundaries of the orbit are formed by seven bones.

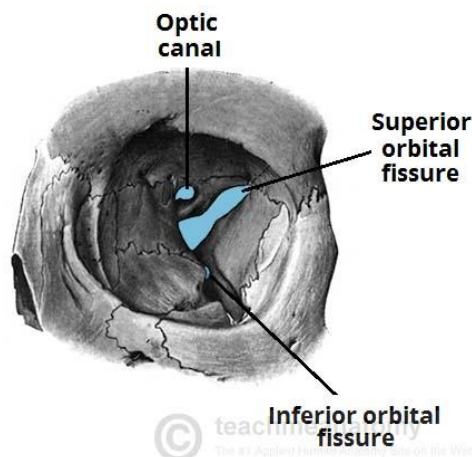
It is also important to consider the anatomical relations of the orbital cavity – this is clinically relevant in the spread of infection, and in cases of trauma.

The borders and anatomical relations of the bony orbit are as follows:

- **Roof** (superior wall) – Formed by the frontal bone and the lesser wing of the **sphenoid**. The frontal bone separates the orbit from the **anterior cranial fossa**.
- **Floor** (inferior wall) – Formed by the maxilla, palatine and zygomatic bones. The maxilla separates the orbit from the underlying maxillary sinus.

- **Medial wall** – Formed by the **ethmoid**, maxilla, lacrimal and **sphenoid** bones. The **ethmoid** bone separates the orbit from the ethmoid sinus.
- **Lateral wall** – Formed by the zygomatic bone and greater wing of the **sphenoid**.
- **Apex** – Located at the opening to the optic canal, the optic foramen.
- **Base** – Opens out into the face, and is bounded by the eyelids. It is also known as the orbital rim

There are three main pathways by which structures can enter and leave the orbit:



1-**Optic canal** – transmits the **optic nerve** and ophthalmic artery.

2-**Superior orbital fissure** – transmits the lacrimal, • frontal, **trochlear** (CN IV), **oculomotor** (CN III), nasociliary and abducens (CN VI) nerves. It also carries the superior ophthalmic vein.

3-Inferior orbital fissure – transmits the zygomatic branch of the maxillary nerve, the inferior ophthalmic vein, and sympathetic nerves. •

There are other minor openings into the orbital cavity. The **nasolacrimal canal**, which drains tears from the eye to the nasal cavity, is located on the medial wall of the orbit. Other small openings include the **supraorbital foramen** and **infraorbital canal** – they carry small neurovascular structures.

THANK YOU