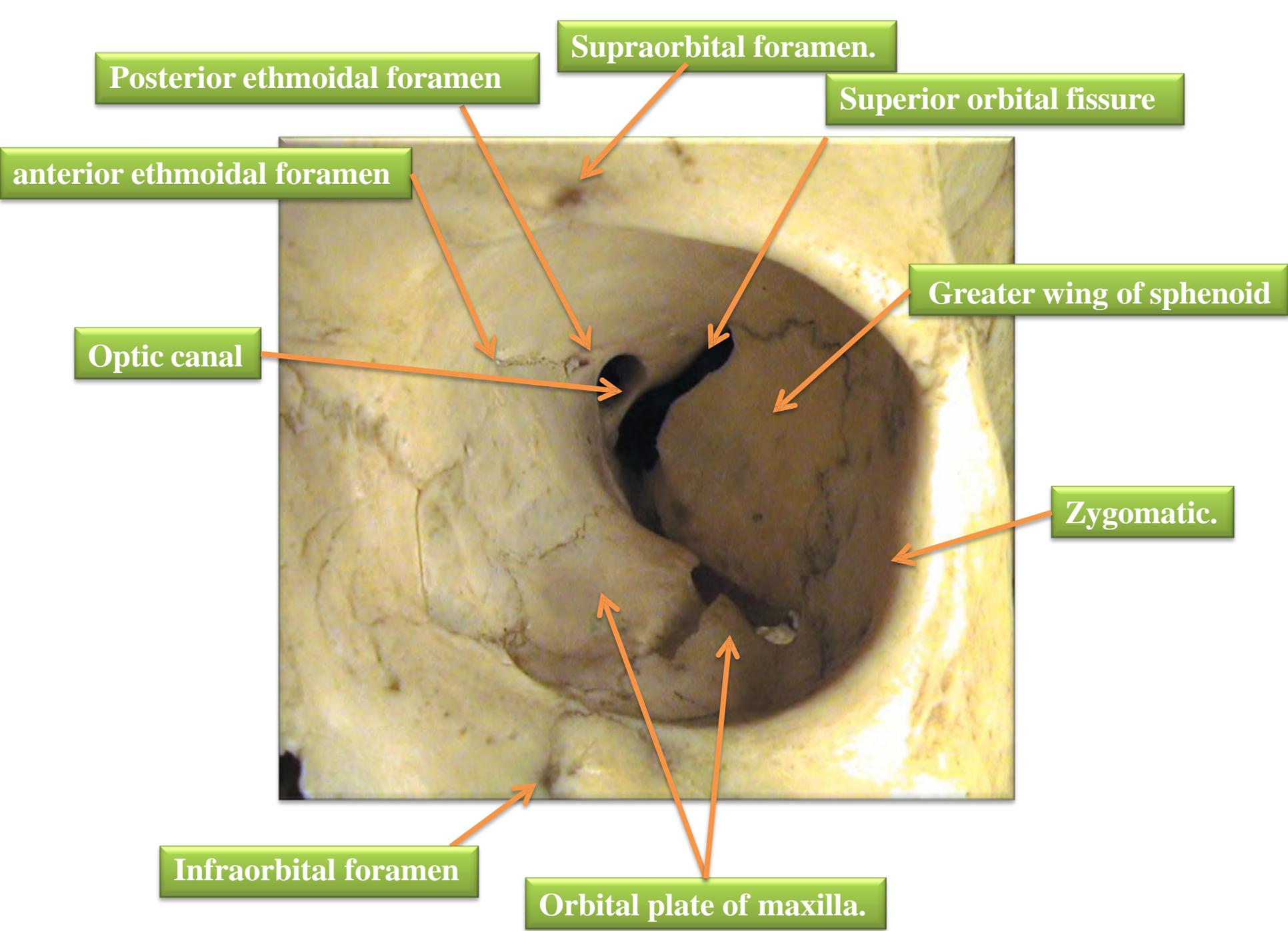
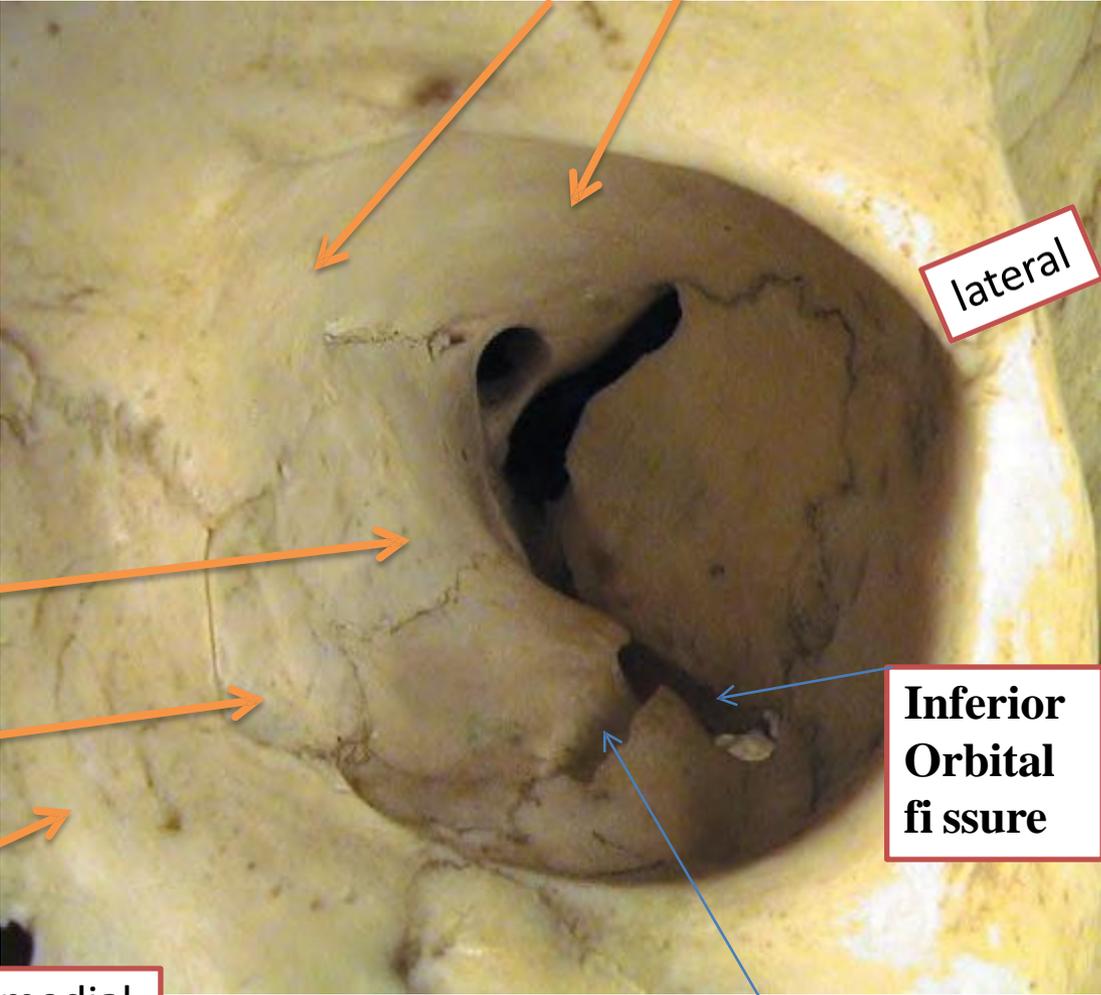


# THE ORBIT



**Orbital plate of frontal bone**



**lateral**

**Orbital plate of ethmoid**

**Lacrimal bone**

**The frontal process of the maxilla**

**Inferior Orbital fissure**

**Nose, medial**

**Infraorbital groove**

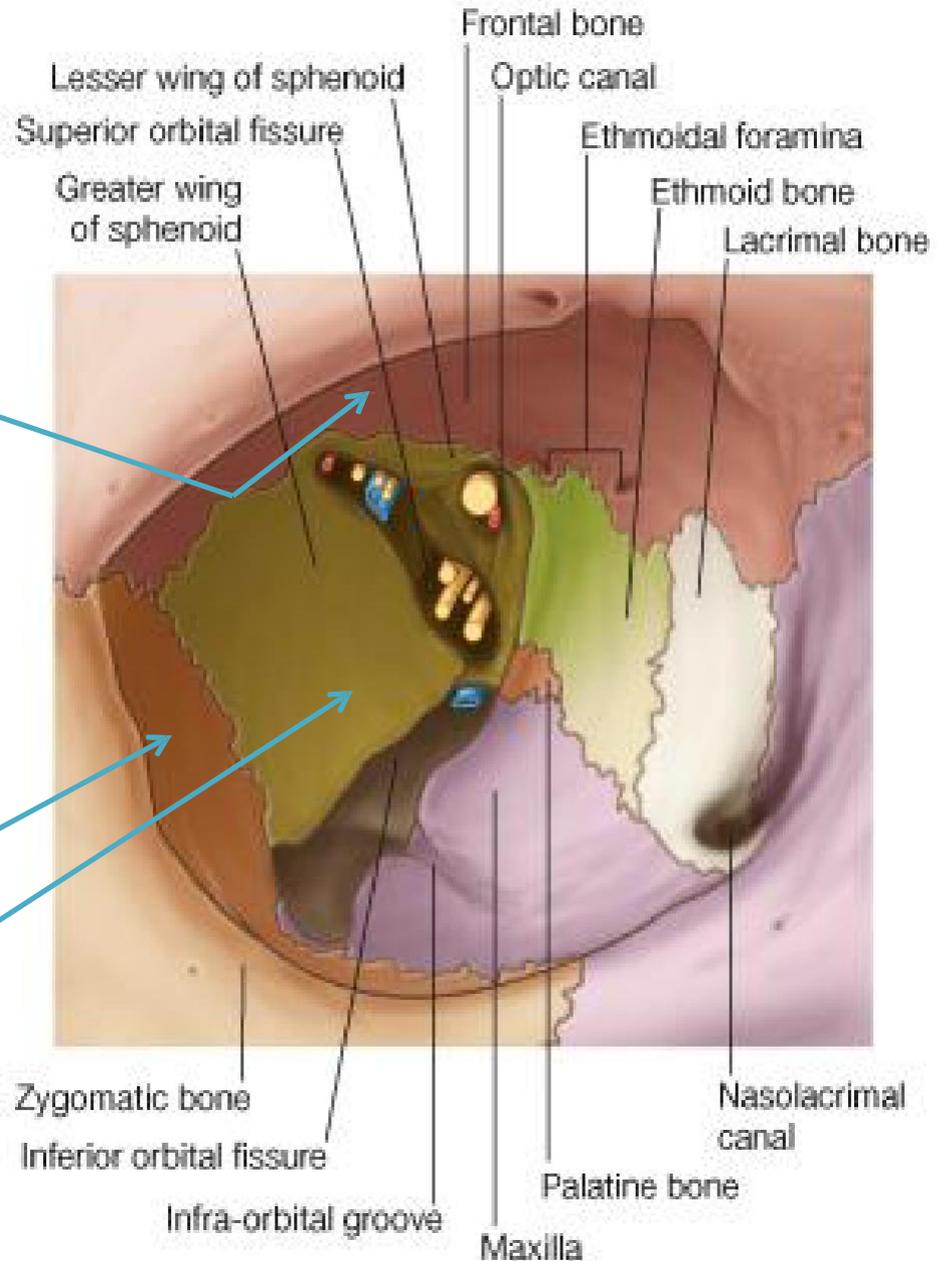
## Bony orbit

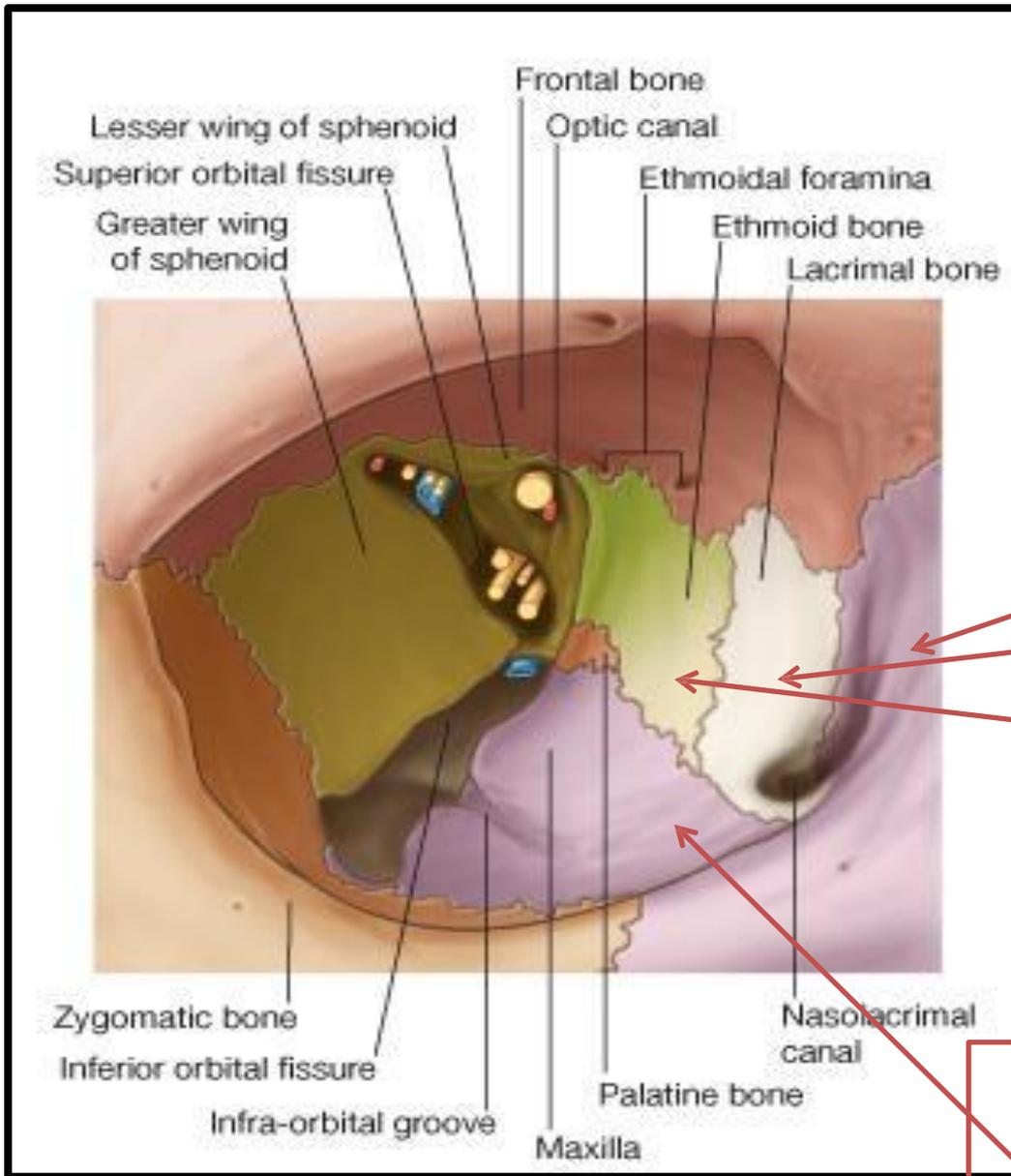
**Roof:** Formed by:

❖ **The orbital plate of the frontal bone**, which separates the orbital cavity from the anterior cranial fossa and the frontal lobe of the cerebral hemisphere

**Lateral wall:** Formed by:

❖ **the zygomatic bone and the greater wing of the sphenoid**





of the orbit is formed principally by the orbital plate of the ethmoid bone **This paper thin** rectangular plate covers the middle and posterior ethmoidal air cells, providing a **route by which infection can spread into the orbit**

**Medial wall:** Formed from before backward by:  
**The frontal process of the maxilla**  
**The lacrimal bone**  
**The orbital plate of the ethmoid )** which separates the orbital cavity from the **ethmoid sinuses(**  
**The body of the sphenoid**

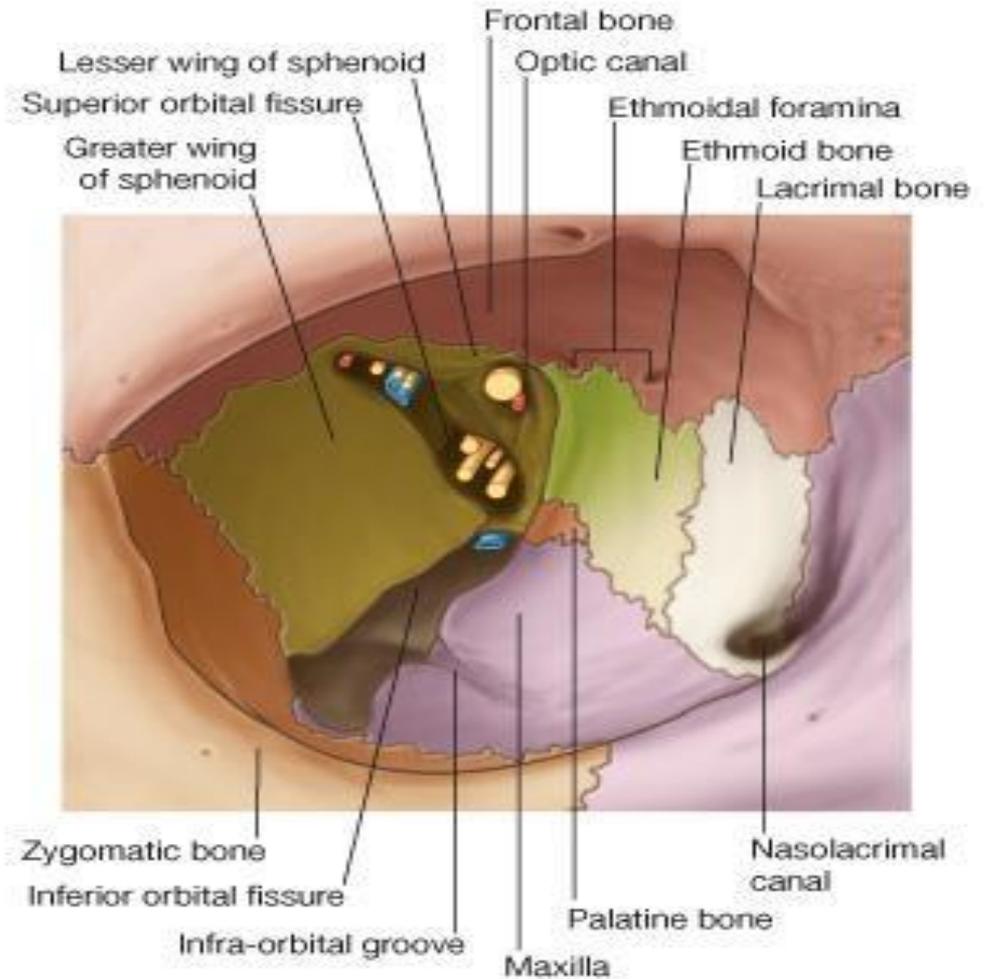
**Floor:** Formed by:  
**the orbital plate of the maxilla,** which separates the orbital cavity from the maxillary sinus

## ***Openings Into the Orbital Cavity***

### **1-Supraorbital notch (Foramen):**

It transmits the supraorbital nerve and blood vessels

**-2Infraorbital groove  
and canal:** Situated they transmit the infraorbital nerve (a continuation of the maxillary nerve) and blood vessels.

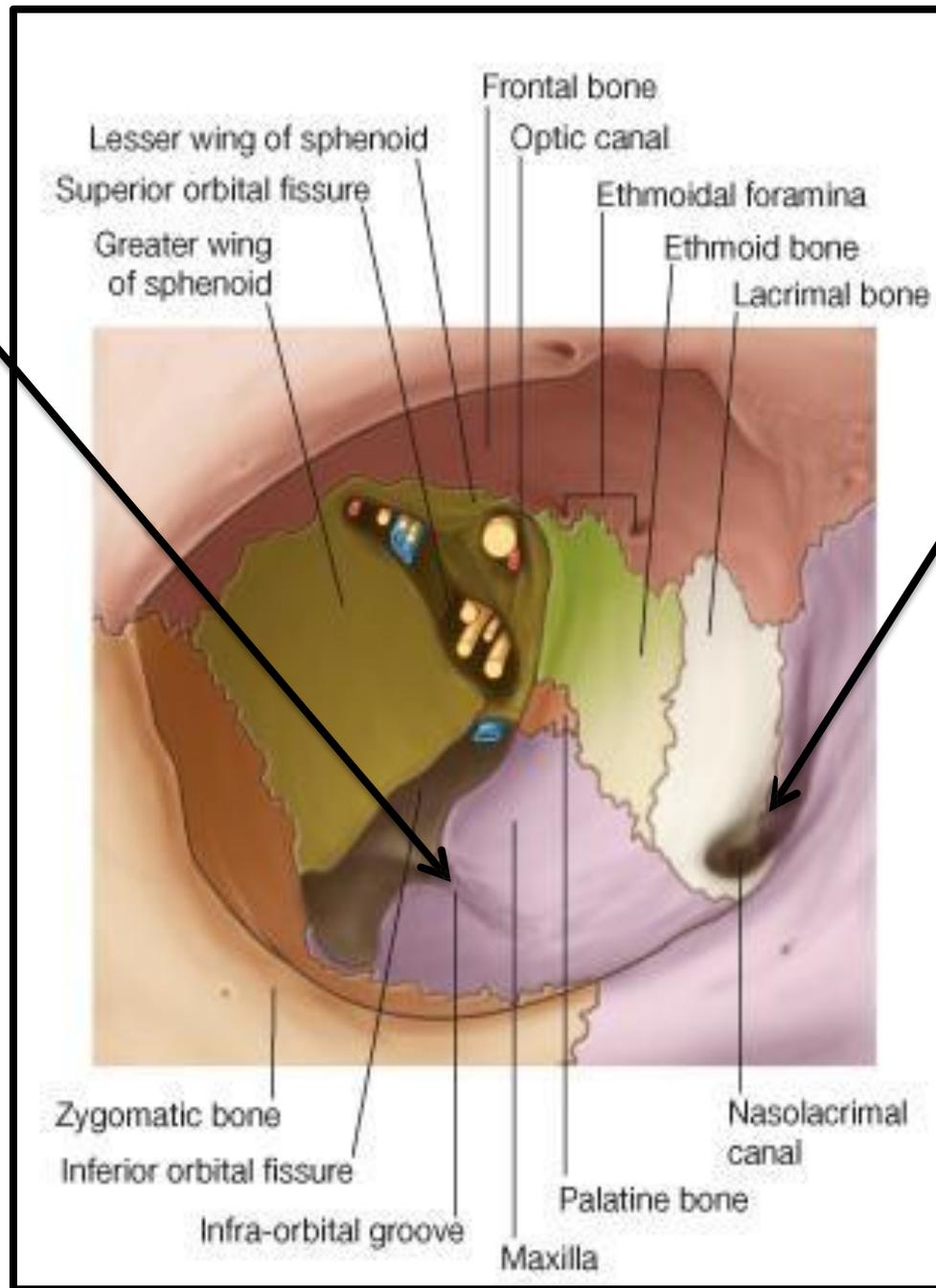


**-3Inferior orbital fissure:**

Located posteriorly between the maxilla and the greater wing of the sphenoid it communicates with the pterygopalatine fossa.

It transmits

- 1the maxillary nerve and its zygomatic branch
- 2the inferior ophthalmic vein and sympathetic nerves.



**-4Nasolacrimal canal:**

Located anteriorly on the medial wall; it communicates with the inferior **meatus of the nose** It transmits **the nasolacrimal duct.**

### **-5 Superior orbital fissure:**

Located between  
**the greater and lesser wings of the sphenoid**  
it communicates with the  
**middle cranial fossa.**

It transmits *the*  
*lacrimal nerve*  
*the frontal nerve*  
*the trochlear nerve*  
*the oculomotor*  
*nerve*

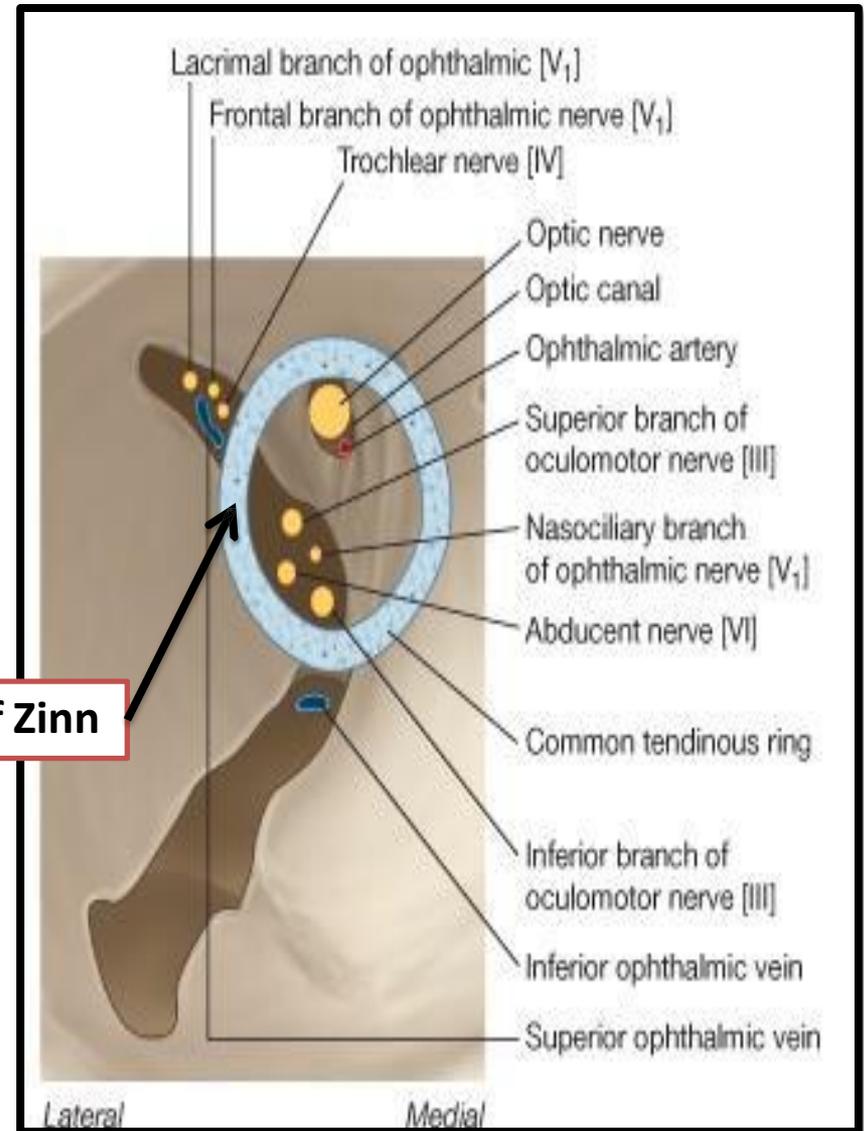
*)upper and lower divisions(  
the abducent nerve, the nasociliary nerve  
the superior ophthalmic vein.*

**The annulus of Zinn**

### **6-Optic canal:**

Located in the lesser wing of  
the sphenoid  
it communicates with the  
middle cranial fossa.

**It transmits the optic nerve**  
**and the ophthalmic artery**



## The common tendinous ring

is a fibrous ring which surrounds the optic canal and part of the superior orbital fissure at the apex of the orbit, and gives origin to the four recti

lie within the common tendinous ring

### The optic nerve ophthalmic artery

enter the orbit via the optic canal, and so lie within the common tendinous ring

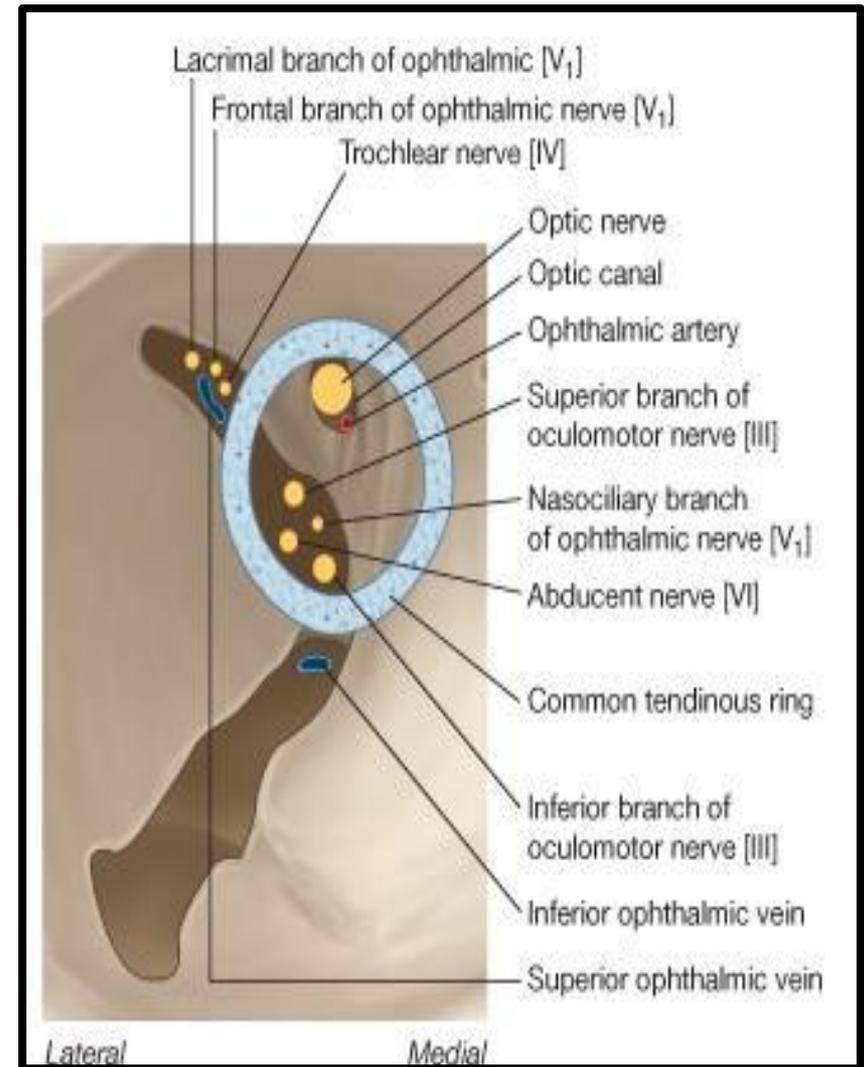
### The superior and inferior divisions of the oculomotor nerve

### The nasociliary branch of the ophthalmic nerve

### The abducens nerve

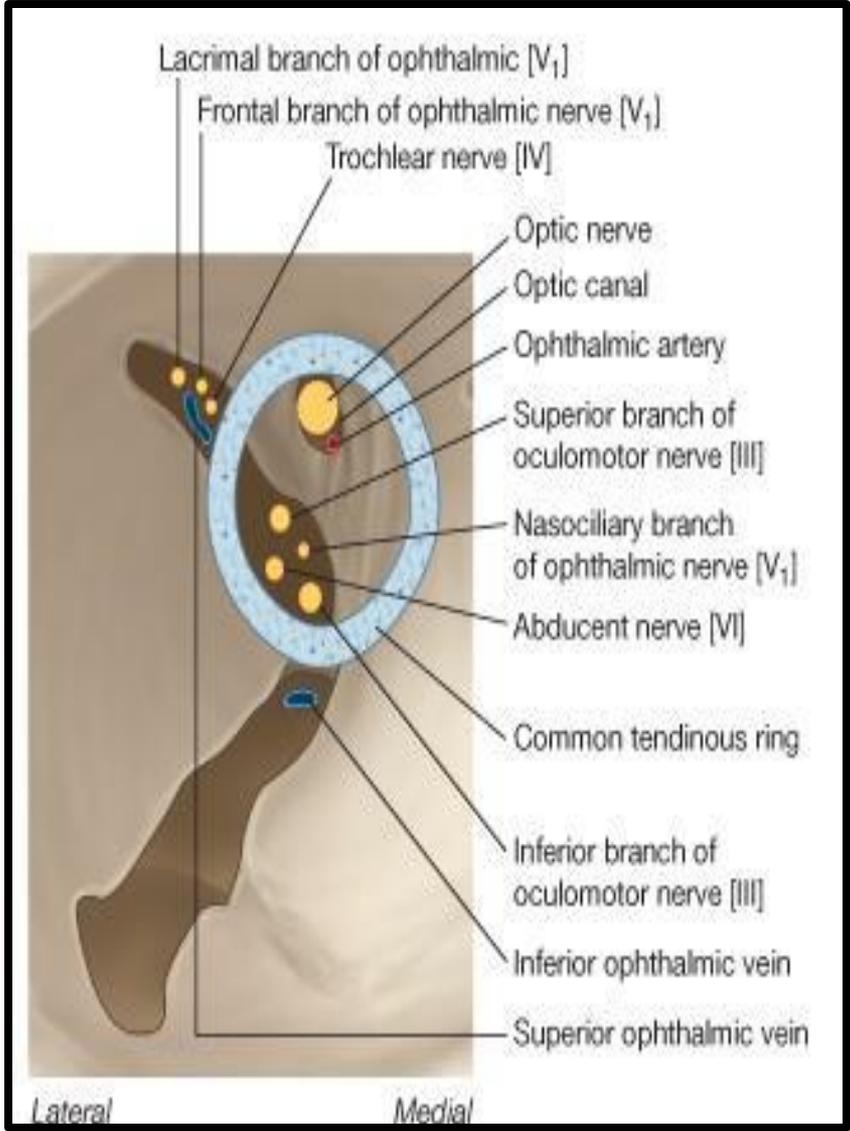
also enter the orbit within the common tendinous ring, but they do so via

### The superior orbital fissure



**lie outside the common tendinous ring**

**The trochlear nerve**  
**The frontal**  
**lacrimal branches of the ophthalmic nerve**  
all enter the orbit through the superior orbital fissure but lie outside the common tendinous ring



Structures which enter the orbit through the inferior orbital fissure lie outside the common tendinous ring.

note

The close anatomical relationship of the optic nerve and other cranial nerves at the orbital apex means that lesions in this region may lead to a combination of visual loss from optic neuropathy and ophthalmoplegia from multiple cranial nerve involvement

