

ORBITAL CAVITY



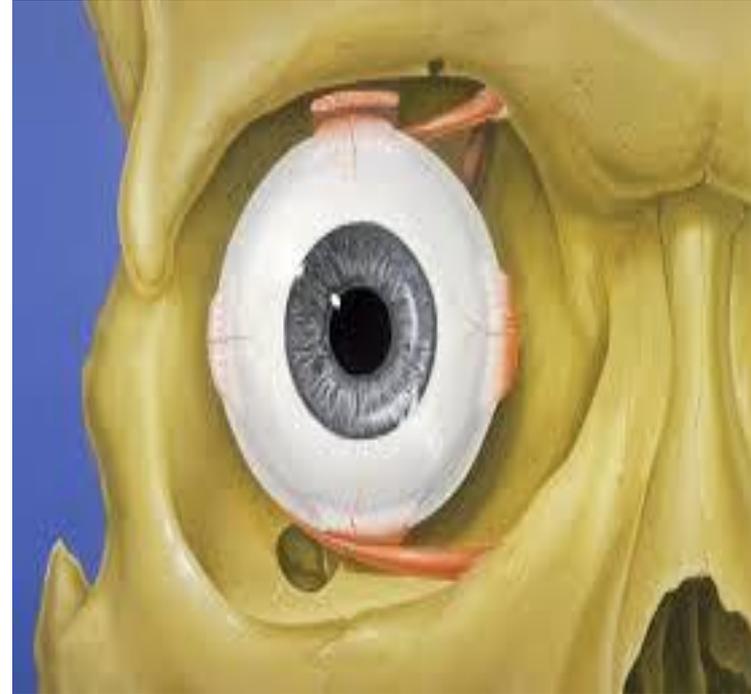
BY
MAHA AFRIDI
2ND YEAR KGMC

DEFINITION

orbit(bony orbit or orbital cavity) is a skeletal cavity comprised of seven bones situated within skull

FUNCTION

Provides mechanical protection to the eye and soft tissue structures related to it



OSTEOLOGY

Orbit is made up of 7 bones:

Maxilla

Frontal bone

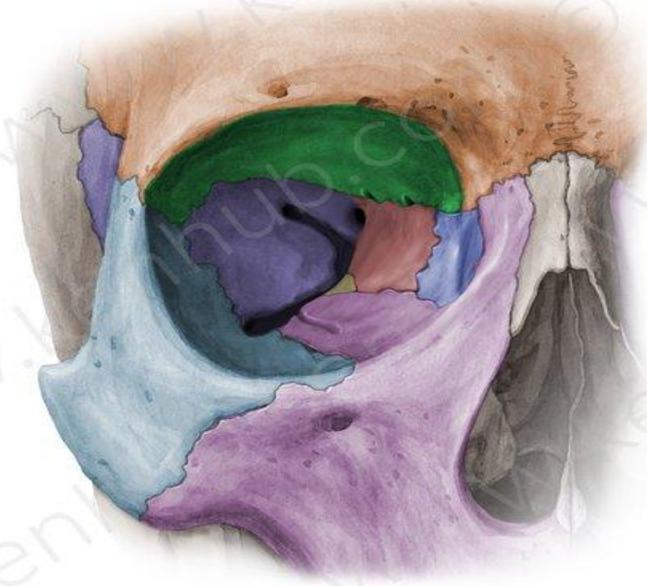
Zygomatic bone

Ethmoid bone

Lacrimal bone

Sphenoid bone

Palatine bone



Mnemonic

Many

Friendly

Zebra

Enjoy

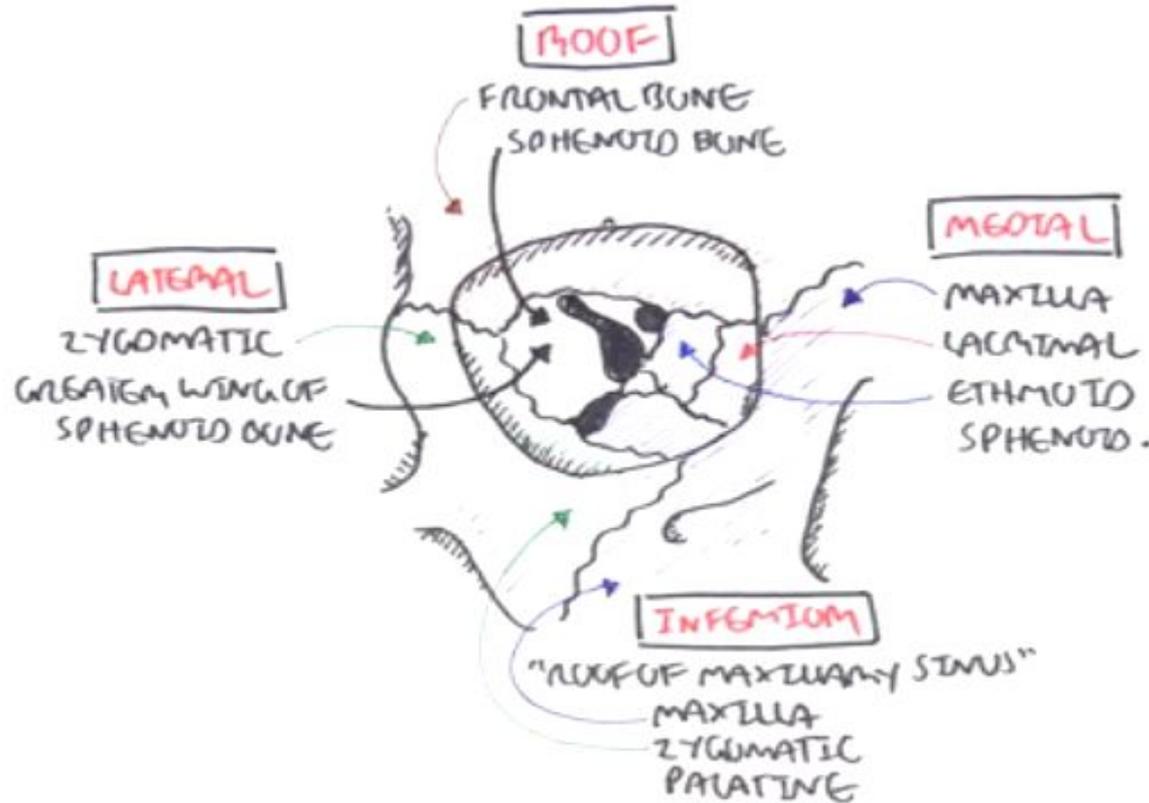
Lazy

Summer

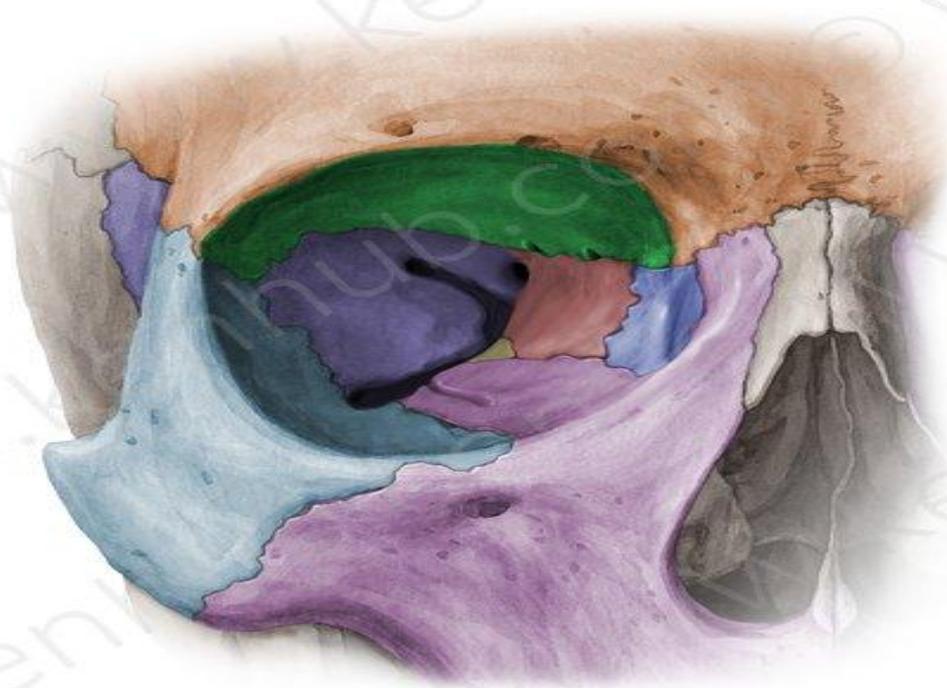
Picnic



Walls of the orbital cavity



Mnemonic (My loose earrings)



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Eyeballs

Eyelids

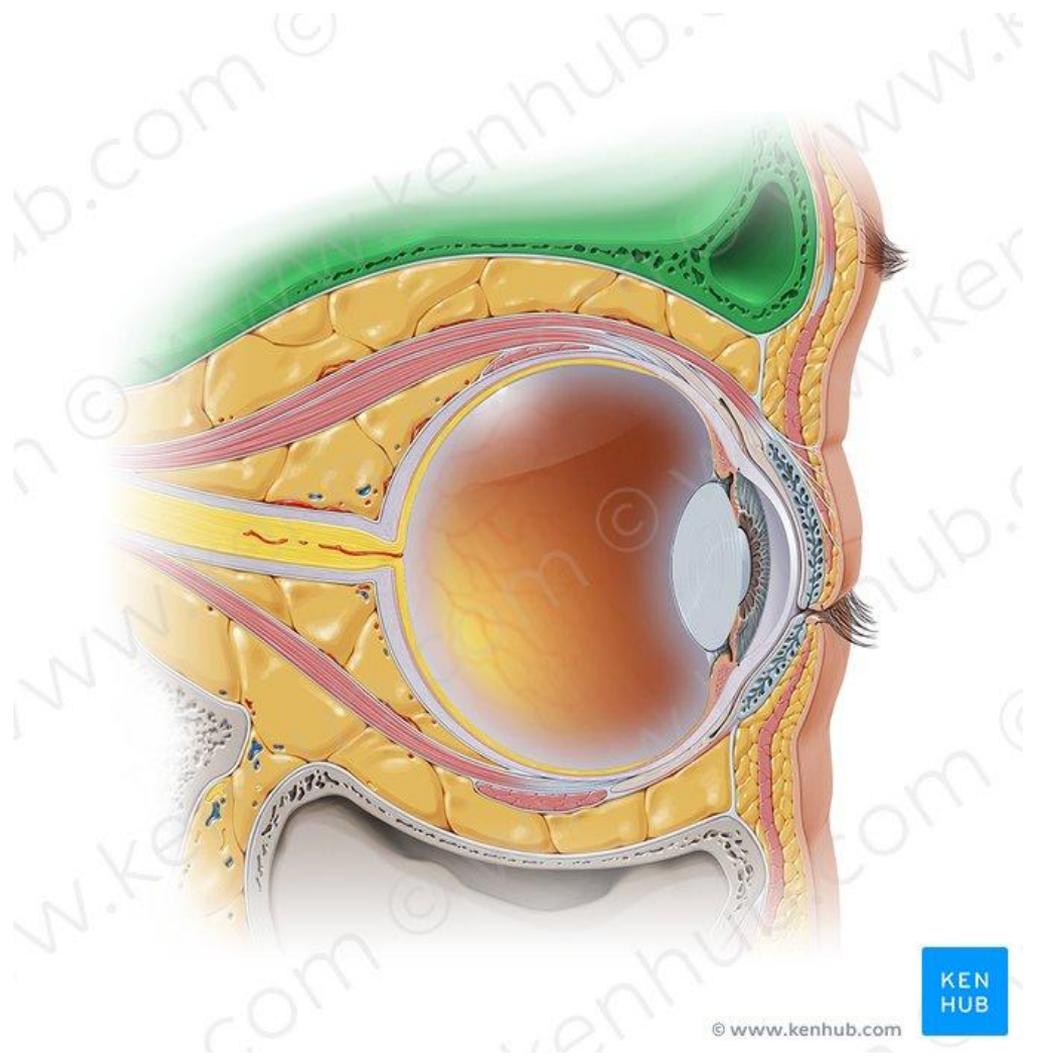
Orbital fascia

Orbital fat

Extraocular muscles

Neurovascular structures

Lacrimal apparatus



1.Eyeball

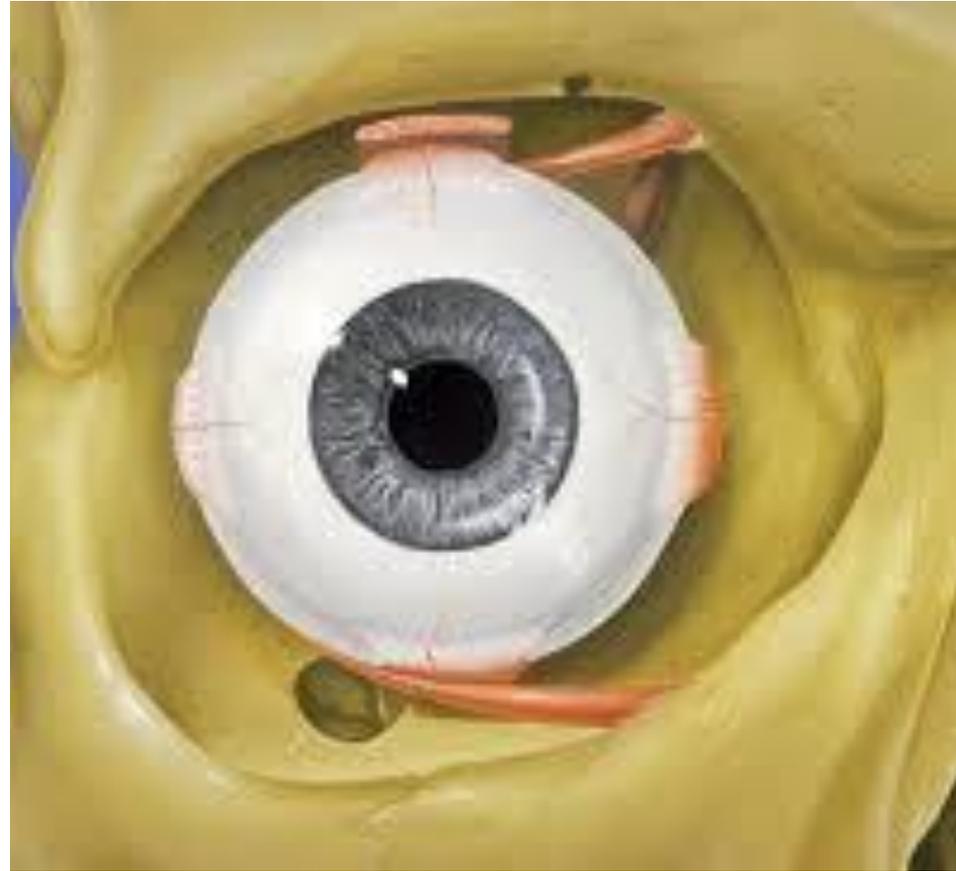
Eyeball is bilateral and spherical organ which lies within bony orbit

Anatomically ,eyeball is divided into three parts

1.fibrous layer

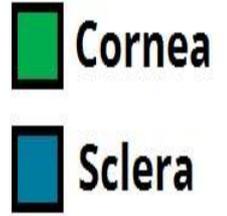
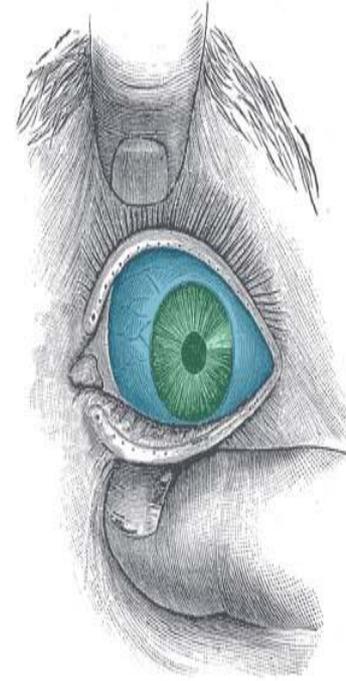
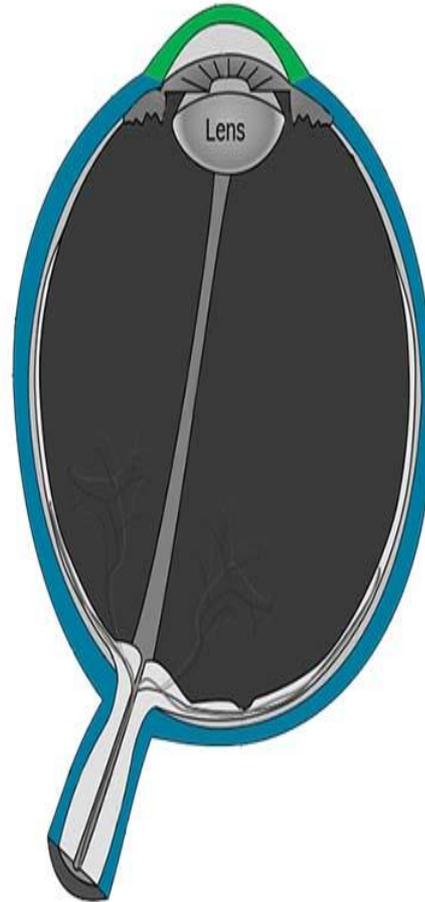
2.vascular layer

3.inner layer



Fibrous layer

Sclera and cornea

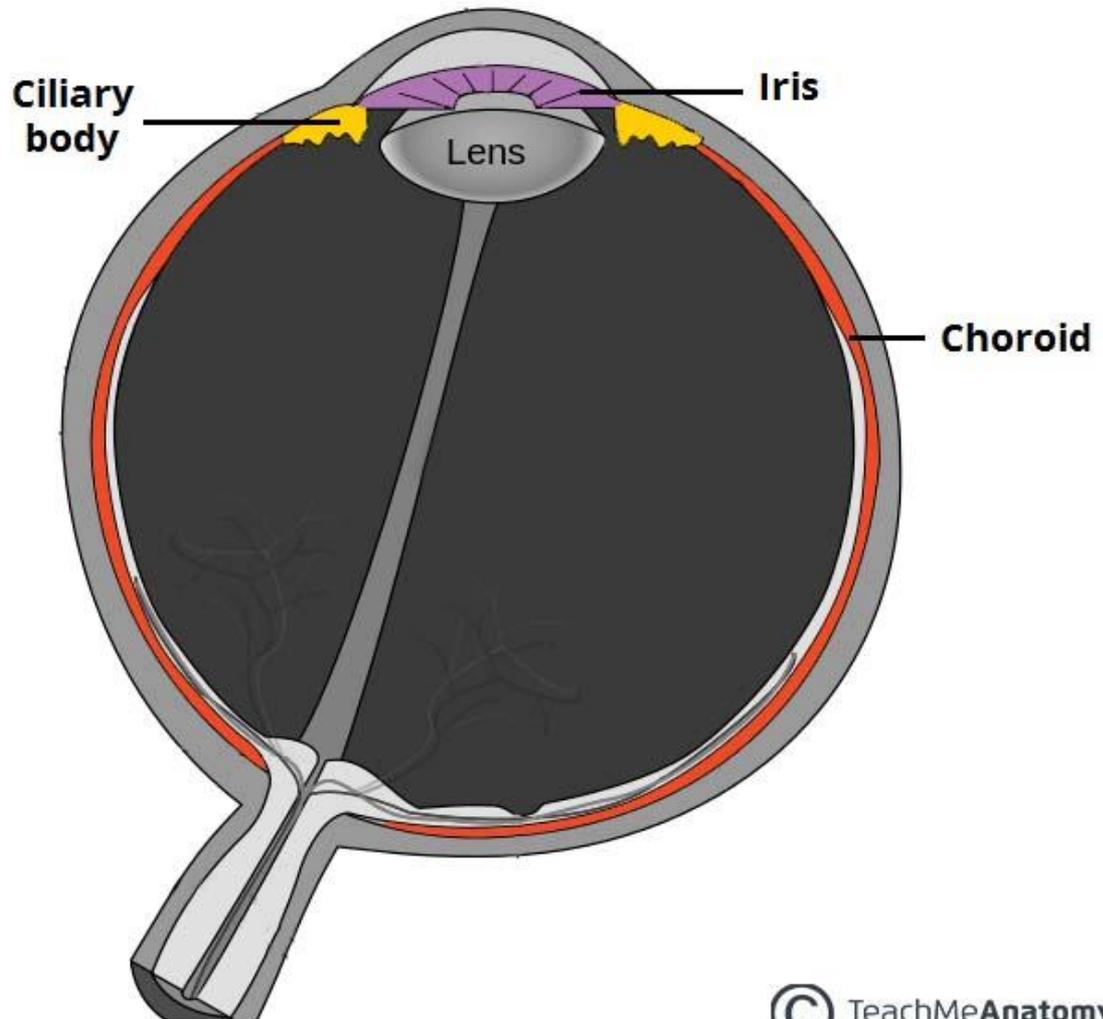


Vascular layer

choroid

ciliary body

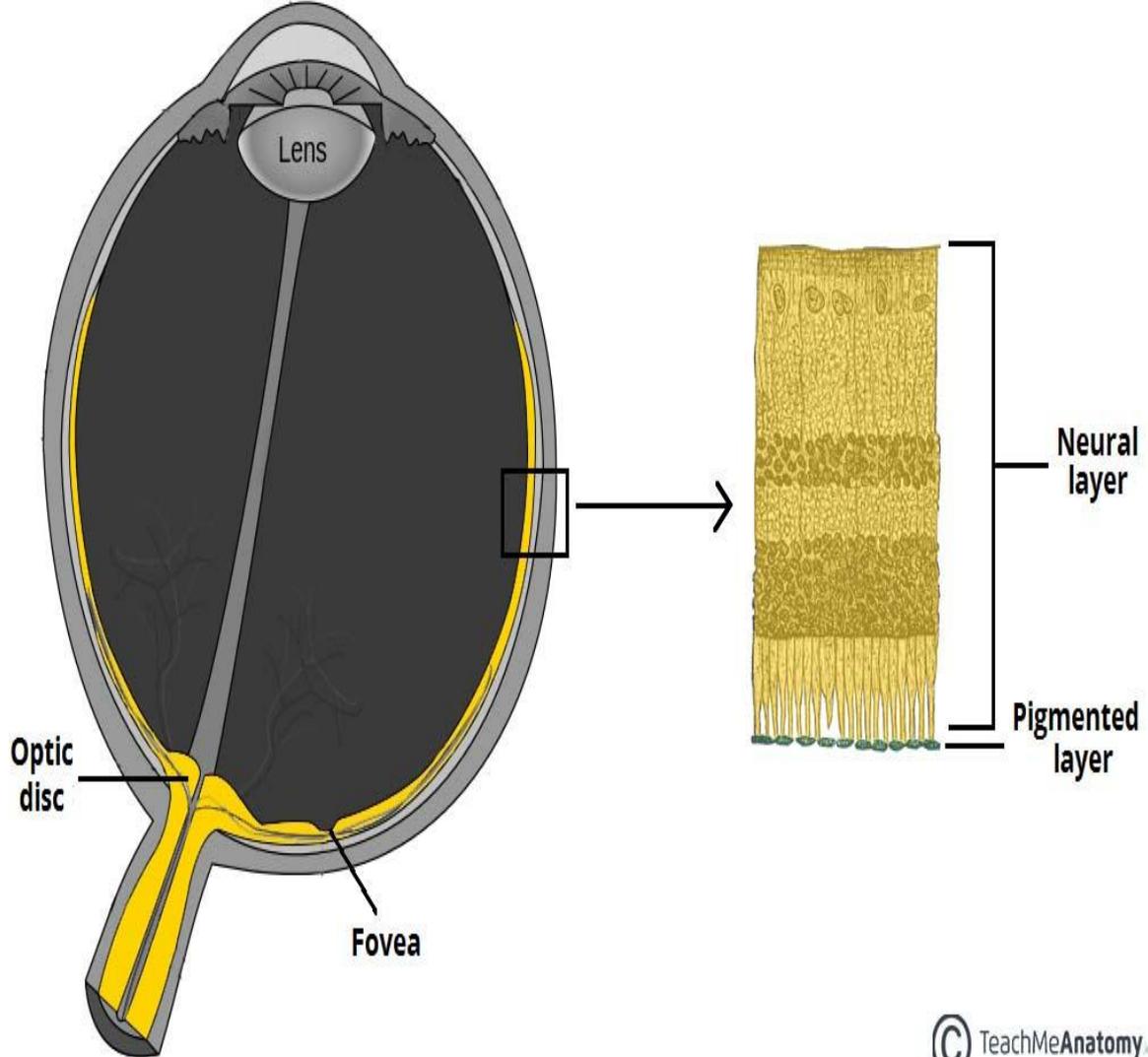
iris



Inner layers

pigmented(outer)
layer

neural(inner)
layer

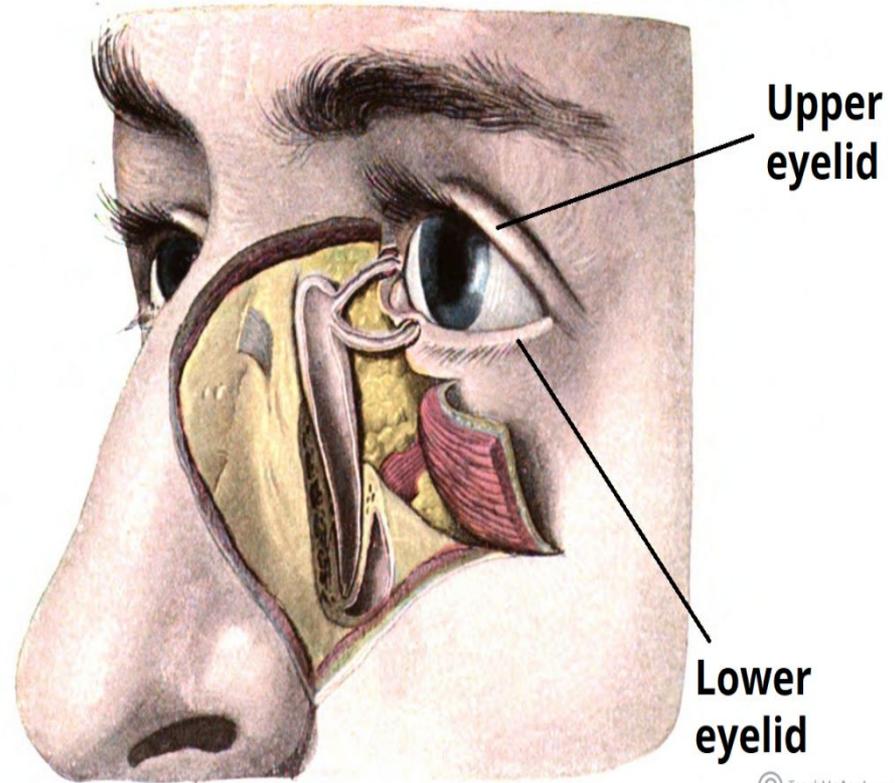


Eyelids

Eyelids are mobile thin folds that cover the eye anteriorly.

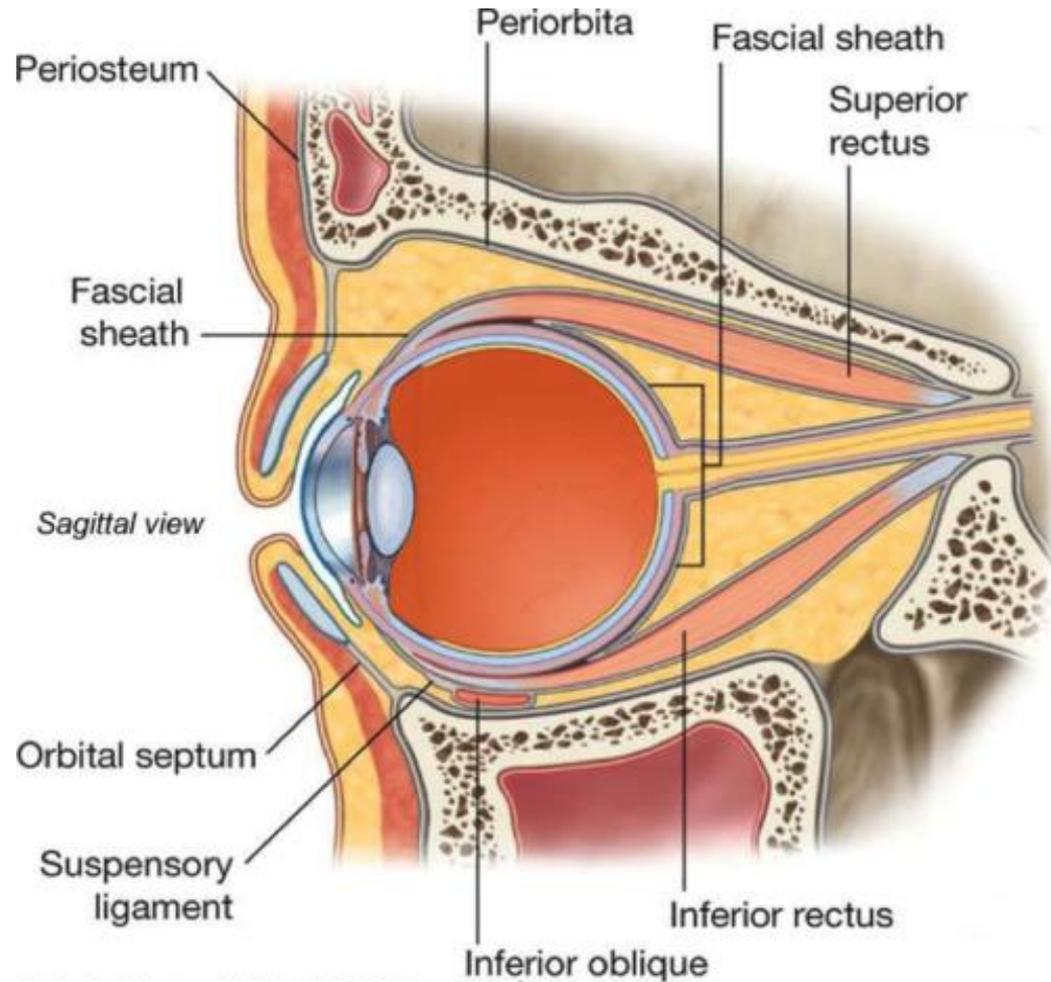
Divides into upper and lower portions

Opening between two portions is called **palpebral opening or aperture**



Orbital fascia and orbital fat

The orbital fascia is the periosteum of bones forming the orbit. It is dense connective tissue which serve as attachment site for muscles, tendons and ligaments and its support structure for the blood supply of orbit bones

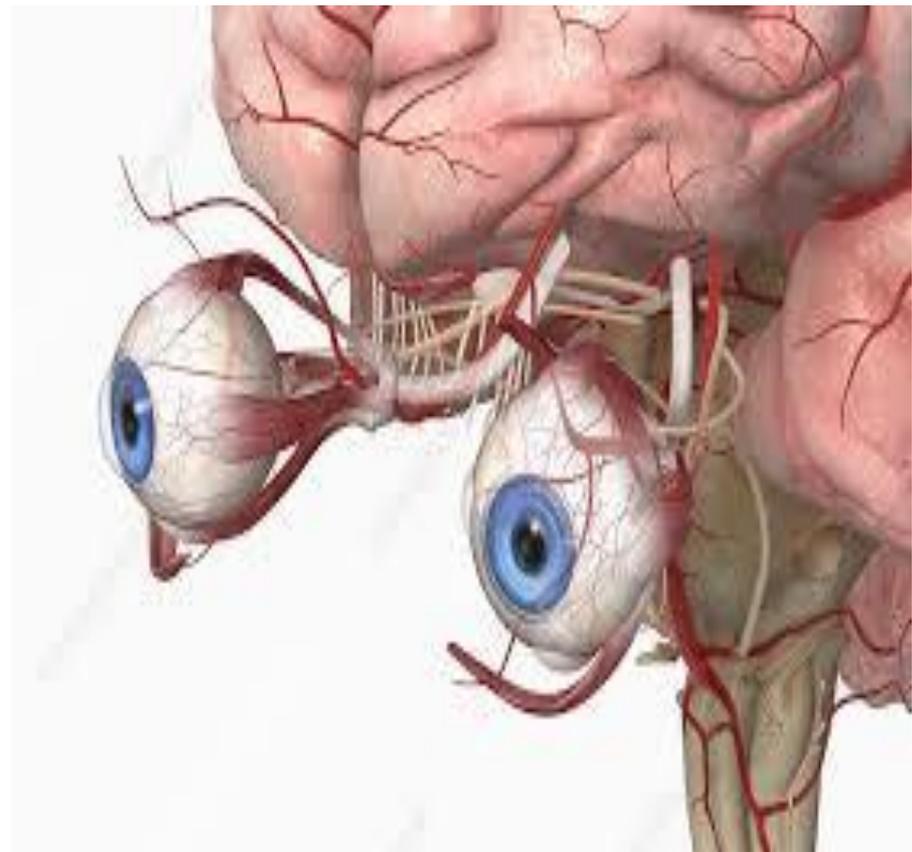


Extraocular muscles

The extraocular muscles are located within orbit but are extrinsic and separate to the eyeball itself.

FUNCTION:

They act to control the movement of the eyeball and superior eyelid



Extraocular muscles

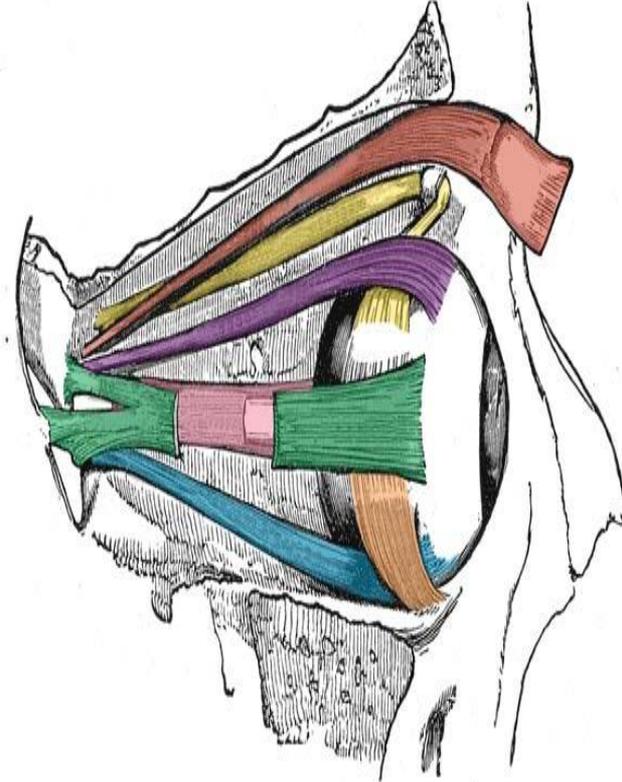
They are 7 in number

1. levator palpebrae superioris

4 recti

muscles (superior, inferior, medial and lateral rectus muscles)

2 oblique muscles (superior and inferior oblique)



- Levator palpebrae superioris
- Superior oblique
- Inferior oblique
- Superior rectus
- Medial rectus
- Lateral rectus
- Inferior rectus

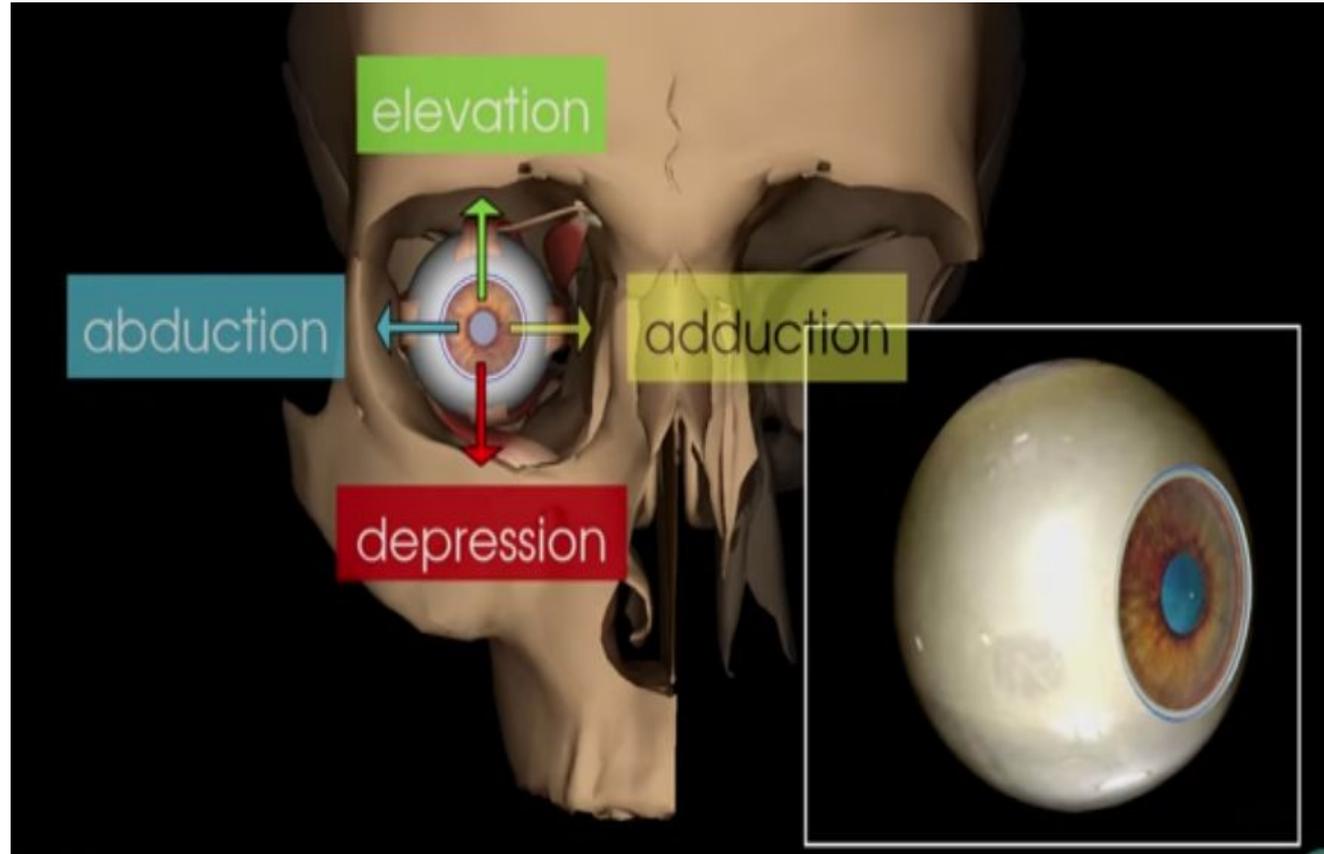
Movements of eyeball

Elevation

Depression

Abduction

adduction



Nerves of the orbit

There are total 5 cranial nerves in orbit

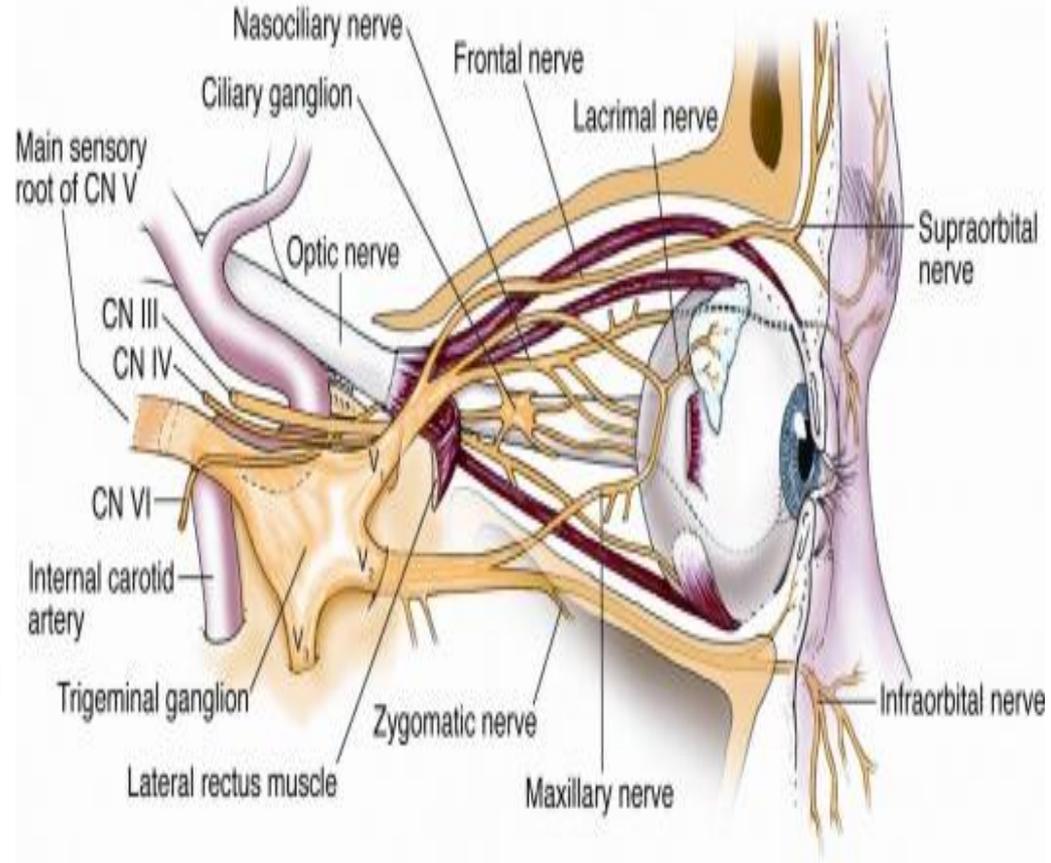
Optic nerve

Occlusomotor nerve

Trochlear nerve

Ophthalmic division of trigeminal nerve

Abducens nerve

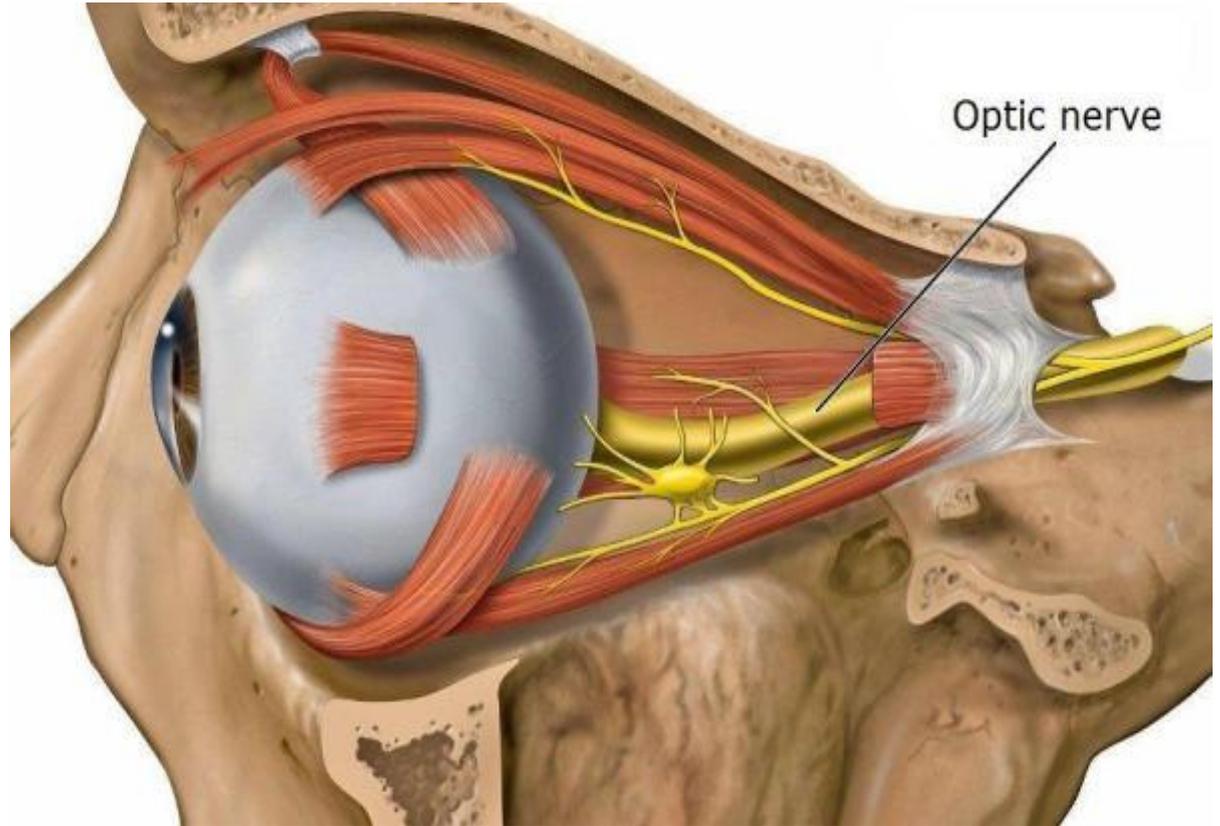


Optic nerve

Enters the orbit through **optic canal**.

Transmits sensory information from eye to brain.

Responsible for formation of **blind spot**.

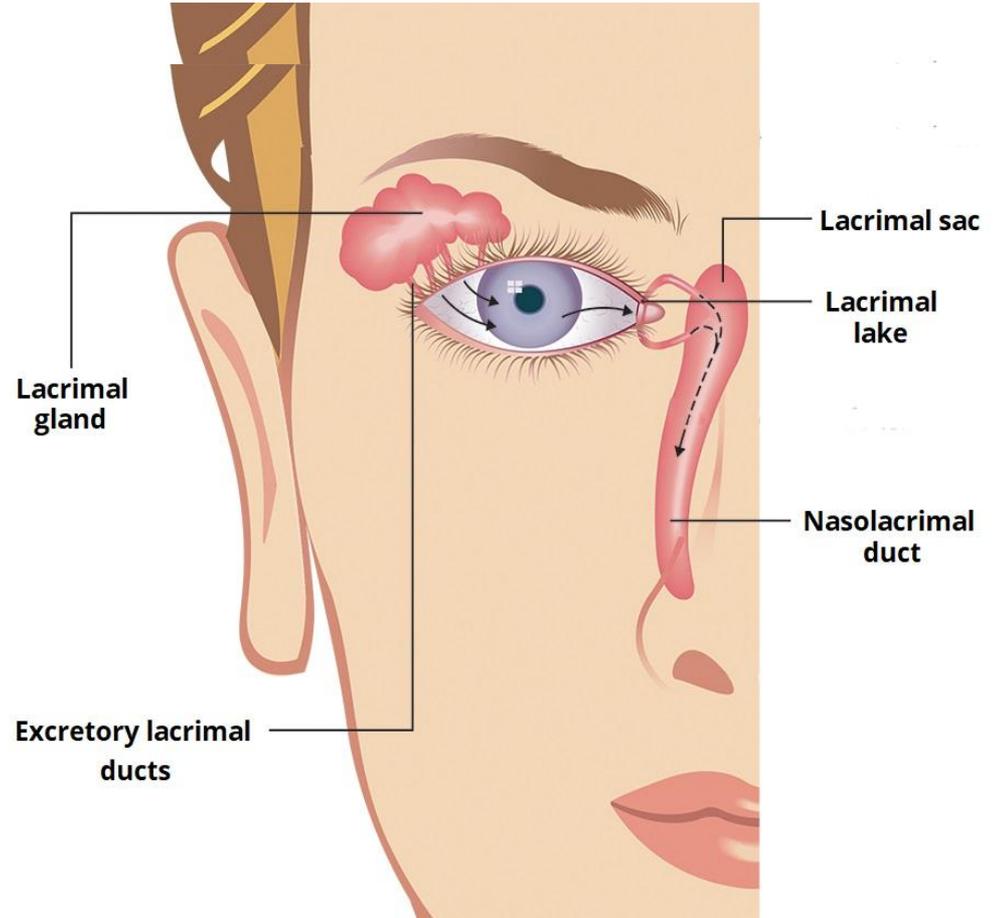


Lacrimal apparatus

Lacrimal apparatus is

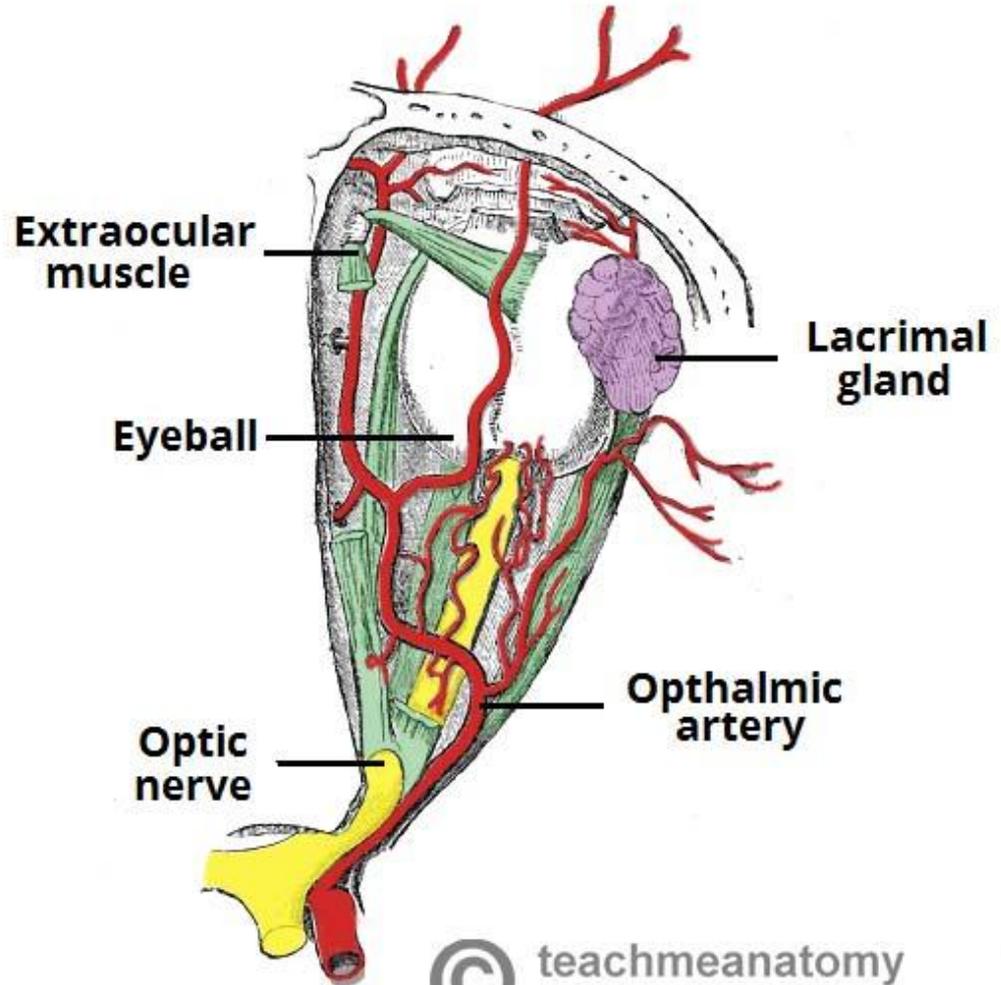
Lacrimal gland which secretes tears and **excretory ducts** which convey fluids to the surface of eye

This apparatus is located in **lacrimal fossa**



Blood supply

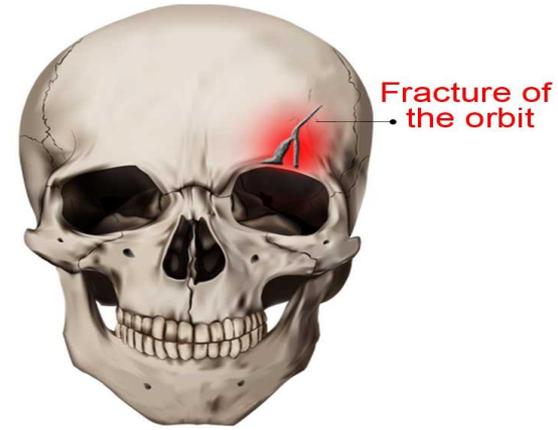
Blood supply of eyes is through ophthalmic artery and vein



Clinical correlates

FRACTURES

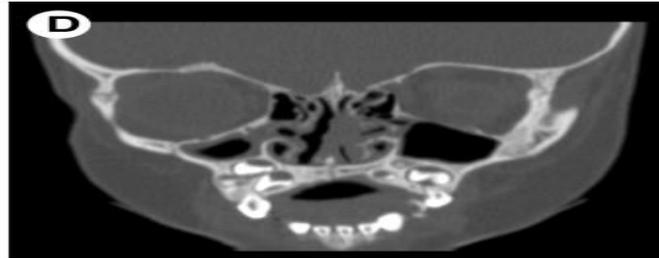
The most common site of fractures of the orbit are **roof**(inferior rectus is dragged into fracture line) and **medial wall**(ethmoid bone is involved) of the orbit



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Roof fracture



*"We are what we
repeatedly do.
Excellence then,
is not an act,
but a habit."*

-Aristotle-

THANK

YOU!