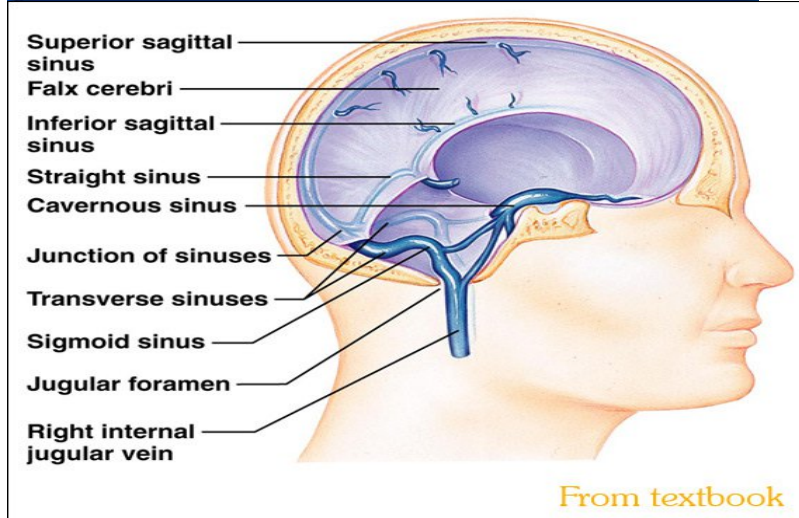
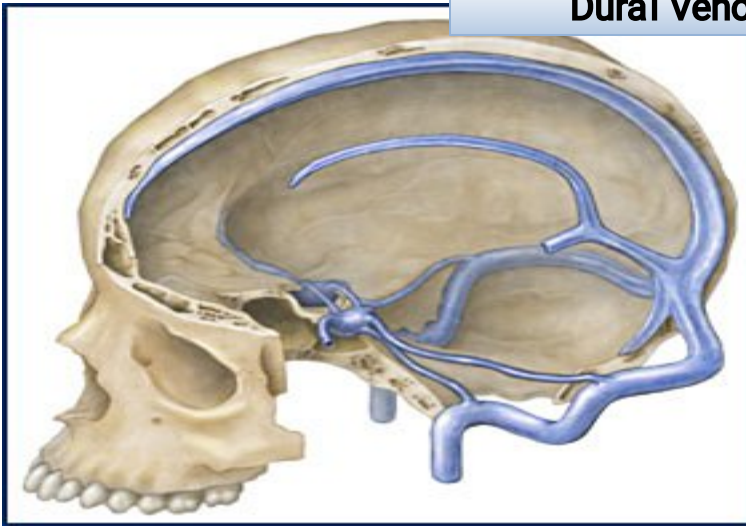
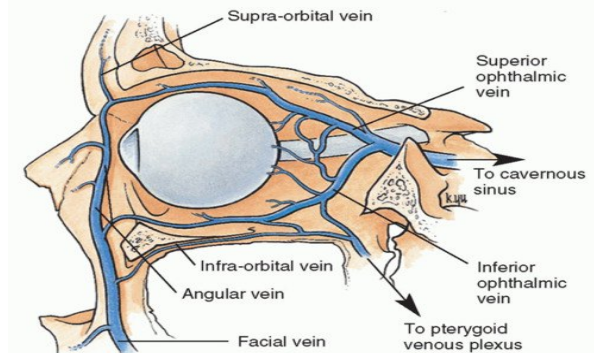


Dural Venous sinus



Superior sagittal sinus

occupies the attached convex margin of falx cerebri
it becomes the **right** transverse venous sinus



there is venous communication between the nasal mucosa and superior sagittal sinus via **emissary** vein that goes through the **foramen cecum** which lies in front of crista galli

Straight sinus:

it becomes the **left** transverse sinus
receives greater cerebral vein

Transverse sinus: becomes sigmoidal sinus

superior +inferior ophthalmic veins : drain into the cavernous sinus

cavernous sinus: drain into superior +inferior petrosal sinuses

superior petrosal: drain into the transverse sinus

inferior petrosal vein: drain into the internal jugular vein

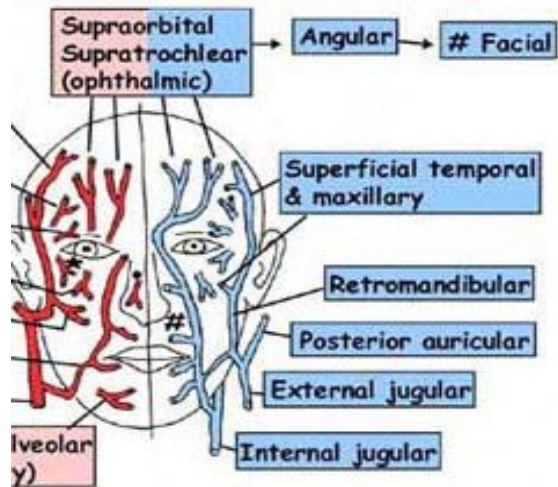
Note: the **sigmoid sinus** is **posteriomedial** to the **mastoid**, so ear infection may lead to sinus thrombophlebitic, otitic hydrophs

Venous drainage and connection:

Inferior orbital vein has several connections

- 1- drain with the superior ophthalmic vein through the superior orbital fissure into the **cavernous sinus**

2-



orbital fissure

send branch to **pterygoid plexus** through the inferior

3- communicates with the **facial vein**

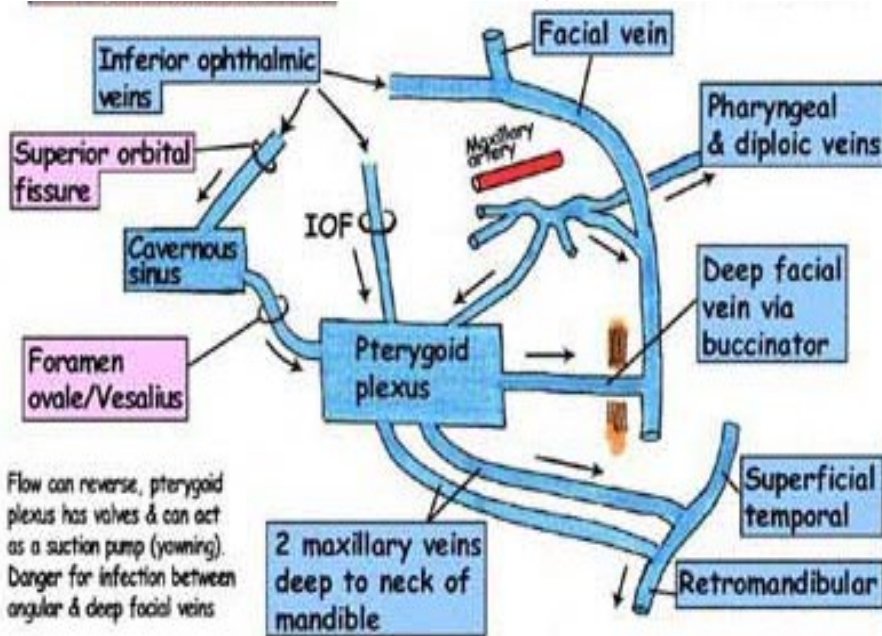
cavernous sinus has connection with pterygoid plexus by **emissary vein** via foramen **ovale**

Pterygoid plexus drain through 2 maxillary veins

Superficial temporal vein + maxillary veins = **retromandibular vein**

Retromandibular vein + posterior auricular vein = **external jugular**

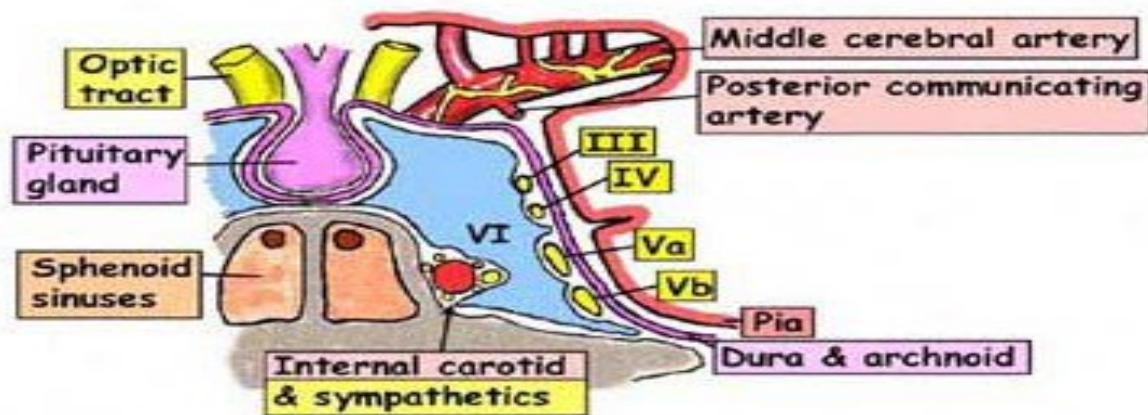
Supraorbital + subratrochlear vein = **angular facial vein**



jugular vein

Facial vein drain into **internal**

Cavernous sinus Syndrome



Cavernous sinus:

Lies along the body of the sphenoid bone

Contains **internal** carotid artery + **abducent VI** nerve pass through middle of the sinus (**related to the lateral wall of ICA**) + **venous** channels

Wall of the cavernous sinus:

Lateral wall: III, IV, Va, vb

Floor: greater wings of the sphenoid bone

Medial wall: sella turcica, pituitary, sphenoid sinus

- Draining into it: Superior/inferior ophthalmic veins, inter-cavernous sinuses, sphenoparietal sinuses, superficial middle cerebral vein
- Draining out of it: Superior/inferior petrosal sinuses, emissary veins to pterygoid plexus

Anterior wall:

ophthalmic vein, **medial** end of the superior ophthalmic fissure

Posterior wall: petrosal veins + emissary vein to the pterygoid plexus

Cavernous sinus receives drainage from the

1. Upper lip
2. Nose
3. Paranasal sinus
4. Nasopharynx
5. Orbits

Drains by 3 veins:

1. Superior petrosal
2. Inferior petrosal then into the **Internal jugular vein**
3. Emissary veins to pterygoid plexus

Cavernous sinus syndrome result from the thrombosis

The most common cause is **ethmoiditis**

The most common microorganism: **coagulase +ve staph aureus**

80 % fatal

Nerves that are involved: II, III, IV, V1

The ophthalmic vein & artery are also involved

Symptoms:

- Fever

- Venous congestion of lid ,retina, conjunctiva

- Exophthalmus

- Photophobia

- Ophthalmoplegia