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**Matric Number: 17/MHS01/333**

**Course Title:** Gross Anatomy of Head and Neck
**Course Code:** ANA 301

**Department**: Medicine and Surgery

**Question**
1. Write an essay on the cavernous sinus

2. Discuss the walls of the nose

**Answer**

***Cavernous sinus***

* *It is situated in the middle cranial fossa on each side of the sella turcica*
* *it consist of a venous plexus*
* *each sinus extends anteriorly from the superior orbital fissure to the apex of the temporal bone posteriorly*
* *It is of great clinical importance because of the connection and structures that pass through them*
* *The cavernous sinuses receive blood from the*
1. *cerebral veins*
2. *the superior and inferior ophthalmic veins (from the orbit)*
3. *emissary veins (from the pterygoid plexus of veins in the infratemporal fossa)*

*Structures passing through each cavernous sinus are:*

* *Internal carotid artery*
* *Abducent nerve [VI]*
* *Structures in the lateral wall of each cavernous sinus are, from superior to inferior:*
* *the oculomotor nerve [III]*
* *the trochlear nerve [IV]*
* *the ophthalmic nerve [V1]*
* *the maxillary nerve [V2]*
* *Connecting the right and left cavernous sinuses are the* ***intercavernous sinuses*** *on the anterior and posterior sides of the pituitary stalk*



***Clinical anatomy***

* *These connections provide pathways for infections to pass from extracranial sites into intracranial locations*
* *In addition, because structures pass through the cavernous sinuses and are located in the walls of these sinuses they are vulnerable to injury due to inflammation*

2.

***Boundaries of the Nasal Cavity***

* *The nasal cavity has a:*
* *roof*
* *floor*
* *medial wall*
* *lateral wall*

***The roof*** *:*

* *is curved and narrow, except at its posterior end*
* *it is divided into 3 parts*
* *frontonasal*
* *ethmoidal*
* *sphenoidal*
* *They are named from the bones forming each part*

***The floor:***

* *is wider than the roof*
* *is formed by the;*
* *palatine processes of the maxilla*
* *horizontal plates of the palatine bone*



***The medial wall*** *:*

 *formed by the nasal septum*

***The lateral walls*** *:*

* *are irregular owing to three bony plates, the nasal conchae, which project inferiorly, somewhat like louvers*

***Features on the lateral wall of the nasal cavity***

* *There is the presence of nasal conchae and they curve inferomedially*
* *The nasal conchae include;*
* *Superior nasal concha*
* *middle nasal concha*
* *inferior nasal concha*
* *The conchae or turbinates of many mammals (especially running mammals and those existing in extreme environments) are highly convoluted, scroll-like structures that offer a vast surface area for heat exchange*
* *Underneath each concha in both humans with simple nasal conchae and animals with complex turbinates is a recess or meatus {passage(s) in the nasal cavity}*

***CLINICAL ANATOMY***

***Epistaxis***

* *Epistaxis (nosebleed) is relatively common because of the rich blood supply to the nasal mucosa*
* *In most cases, the cause is trauma and the bleeding is from an area in the anterior third of the nose (Kiesselbach area)*
* *Epistaxis is also associated with infections and hypertension*
* *Spurting of blood from the nose results from rupture of arteries*
* *Mild epistaxis may also result from nose picking, which tears veins in the vestibule of the nose*

***Rhinitis***

* *The nasal mucosa becomes swollen and inflamed (rhinitis) during severe upper respiratory infections and allergic reactions (e.g., hayfever)*
* *Swelling of the mucosa occurs readily because of its vascularity*