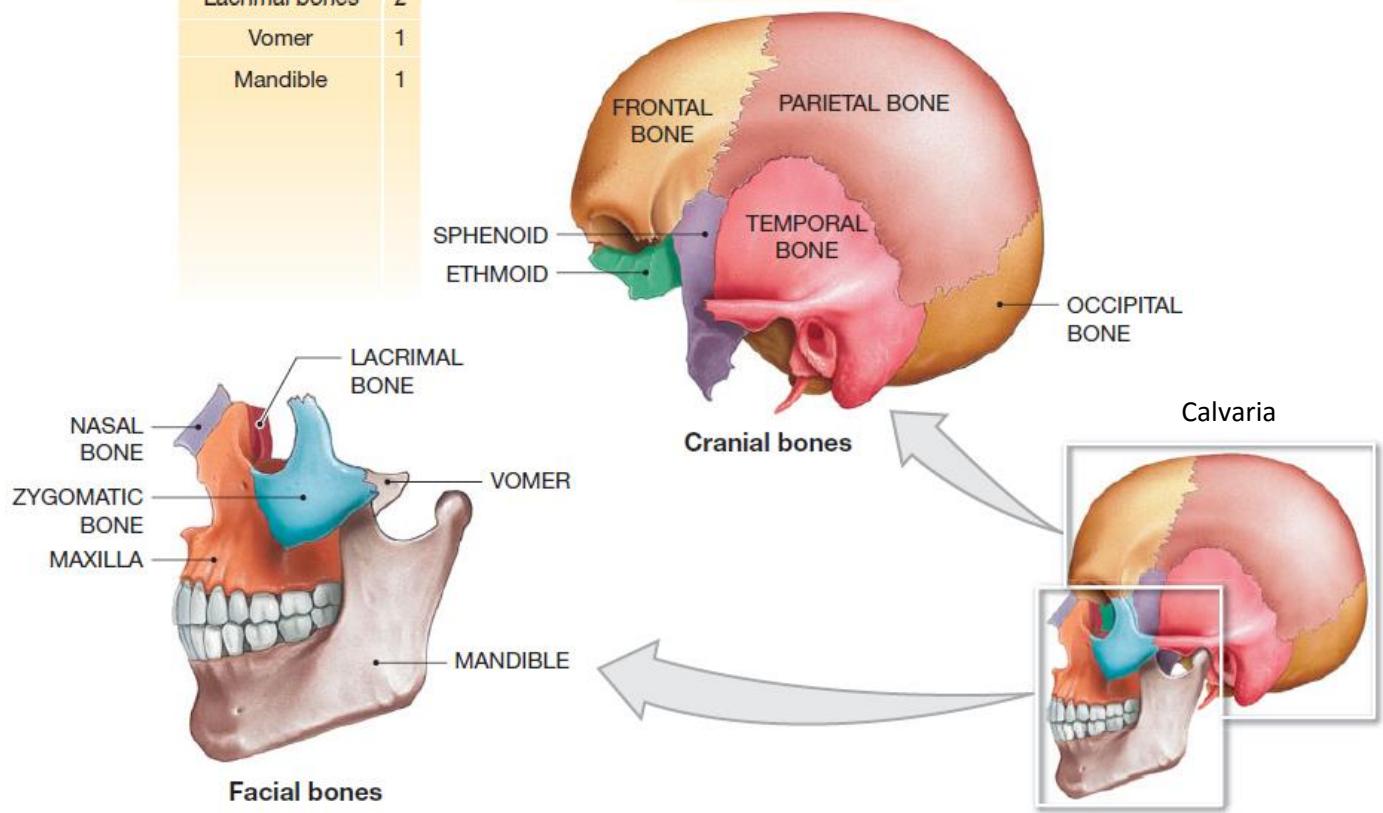


The Skull

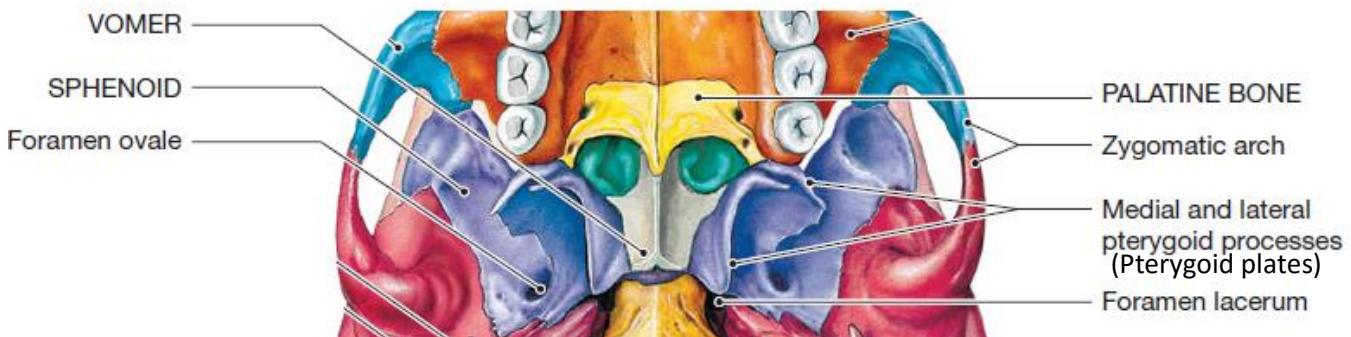
Bones

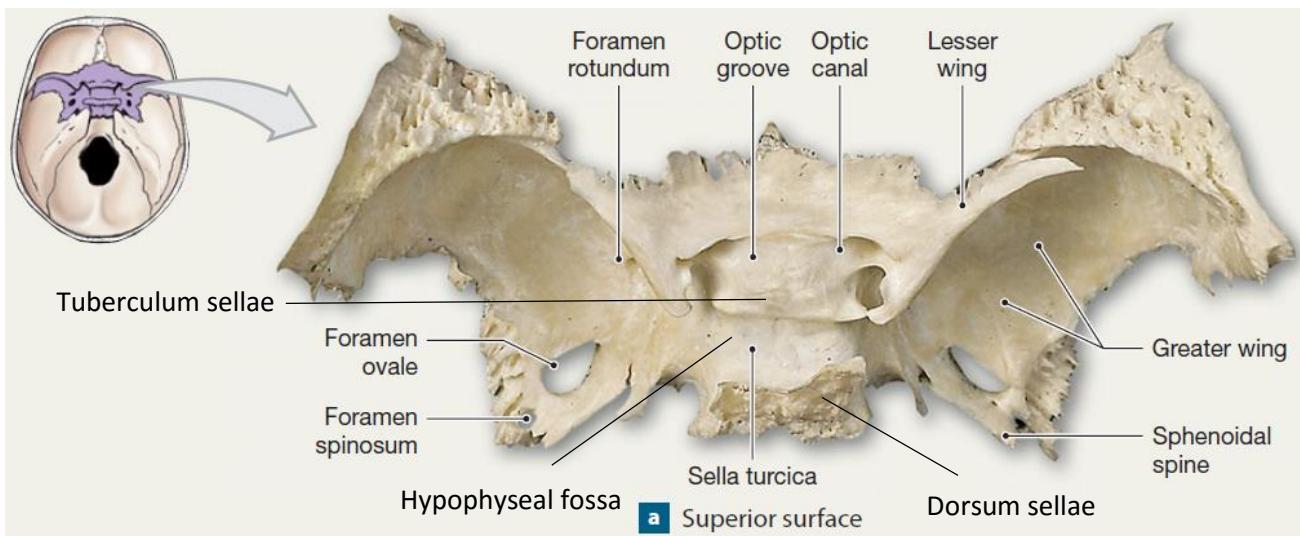
- Diploe is spongy bone separating two plates of compact bone
- Contains red bone marrow so expands when blood cells are in demand

| SKULL | | | | | |
|------------------------|----|----------------|---|---|---|
| FACE | 14 | CRANIUM | 8 | ASSOCIATED BONES | 7 |
| Maxillary bones | 2 | Occipital bone | 1 | Hyoid bone | 1 |
| Palatine bones | 2 | Parietal bones | 2 | Auditory ossicles enclosed in temporal bones (detailed in Chapter 17) | |
| Nasal bones | 2 | Frontal bone | 1 | 6 | |
| Inferior nasal conchae | 2 | Temporal bones | 2 | | |
| Zygomatic bones | 2 | Sphenoid | 1 | | |
| Lacrimal bones | 2 | Ethmoid | 1 | | |
| Vomer | 1 | | | | |
| Mandible | 1 | | | | |



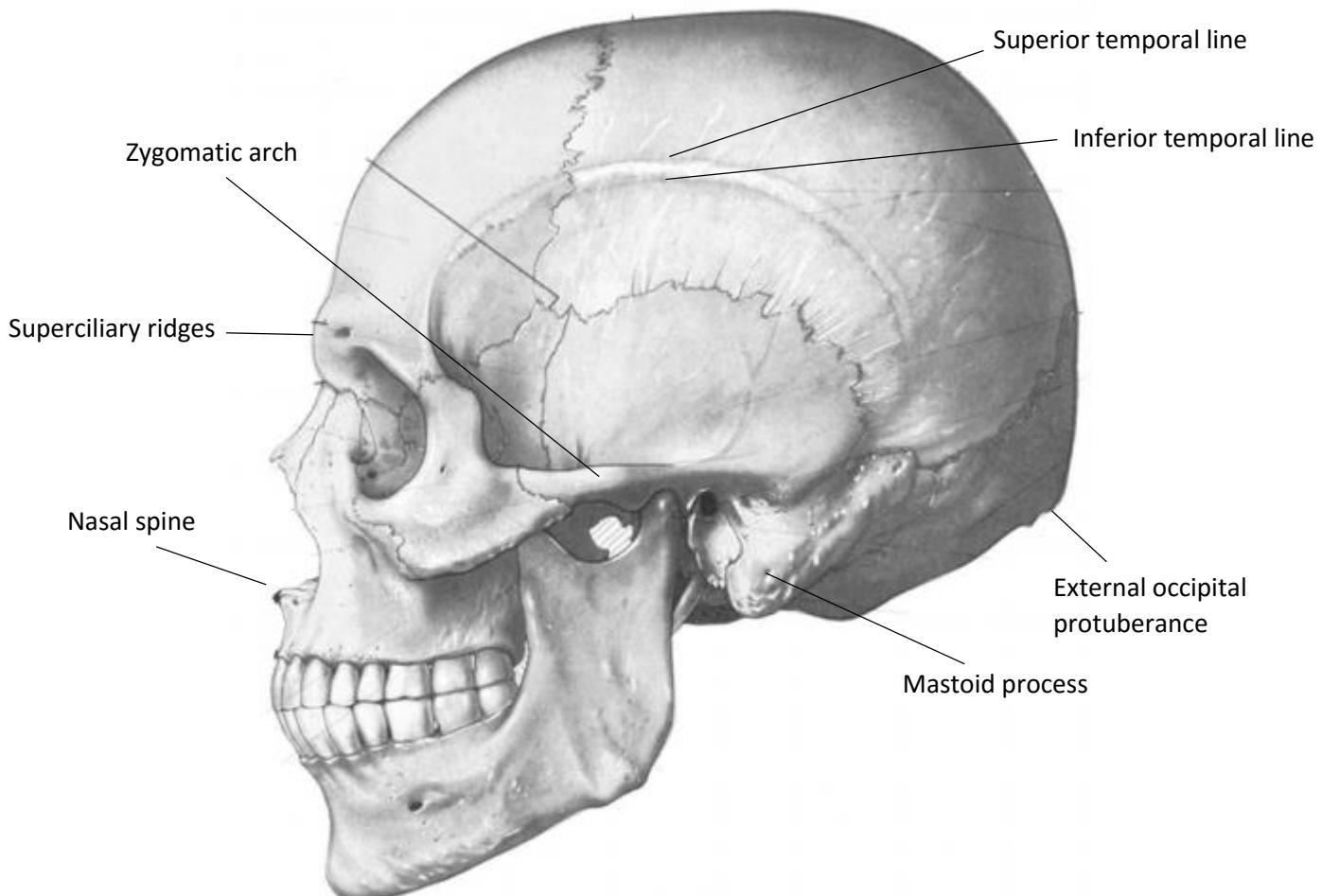
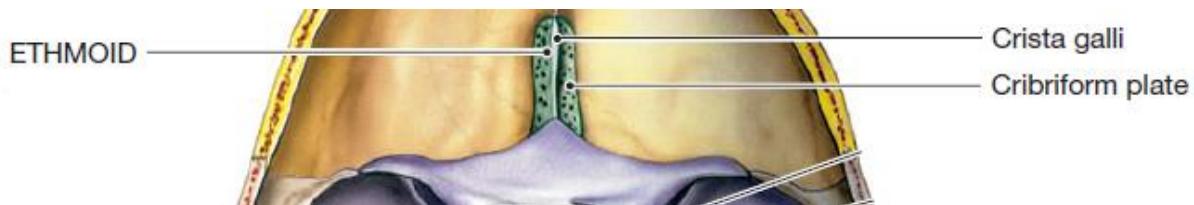
Sphenoid



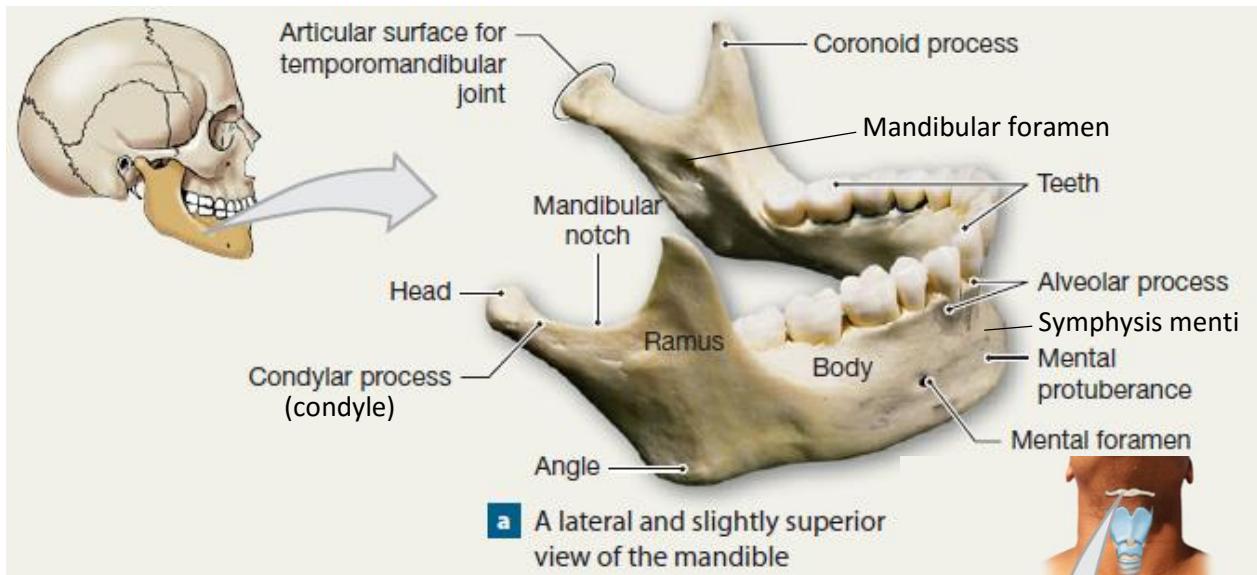


Sella turcica (Turkish Saddle)

- Tuberculum sellae
- Hypophyseal fossa
- Dorsum sellae



Mandible



- Coronoid process attaches to temporal muscle
- Mandible attaches to cranium by a bicondylar joint
- Bones join at symphysis menti
- Mental foramen points backwards to protect nerves

Temporomandibular joint

- Condylar head of ramus of mandible with glenoid fossa of temporal bone
- Cartilaginous disk between allows condyle to slide anteriorly and posteriorly on glenoid fossa

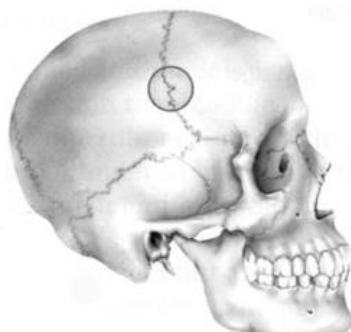
Glenoid fossa



An anterior view of the hyoid bone

Cartilaginous disk

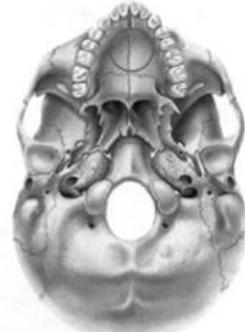
Sutures



Serrate suture

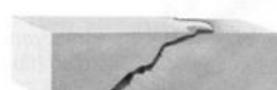


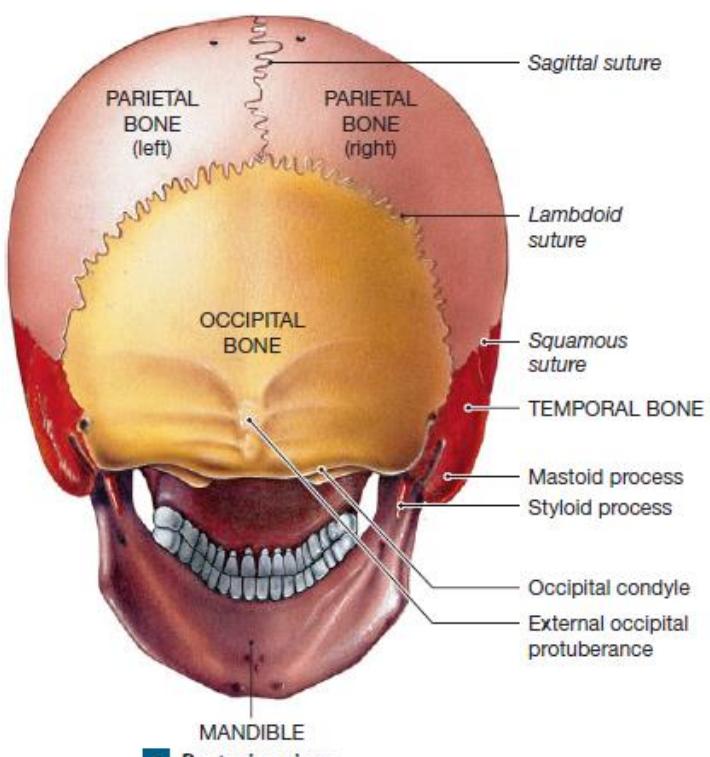
Lap suture



Plane suture

Bone





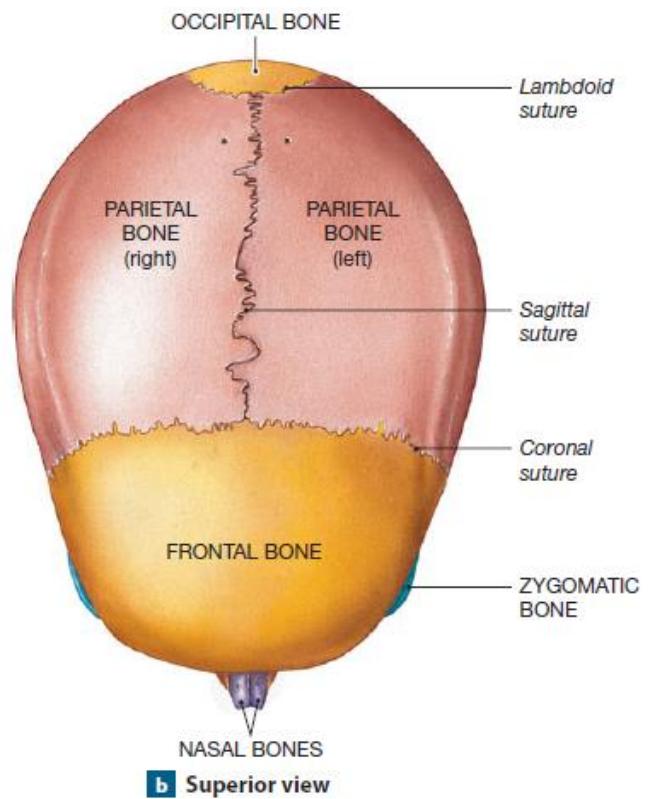
a Posterior view

- Coronal suture
- Sagittal
- Lambdoidal
- Squamosal

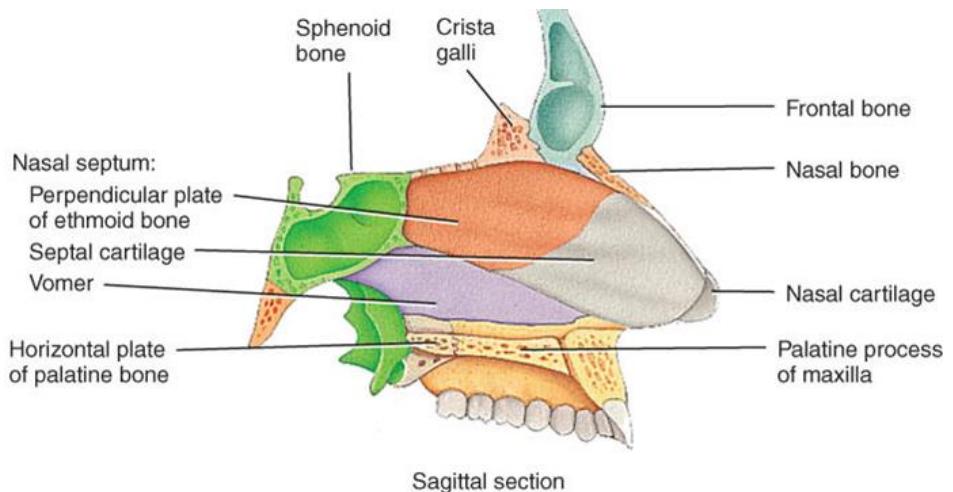
Neonate skulls

- Anterior and posterior fontanelles
- Frontal suture (under age of 5)
- Metopic suture (if present over age of 5)

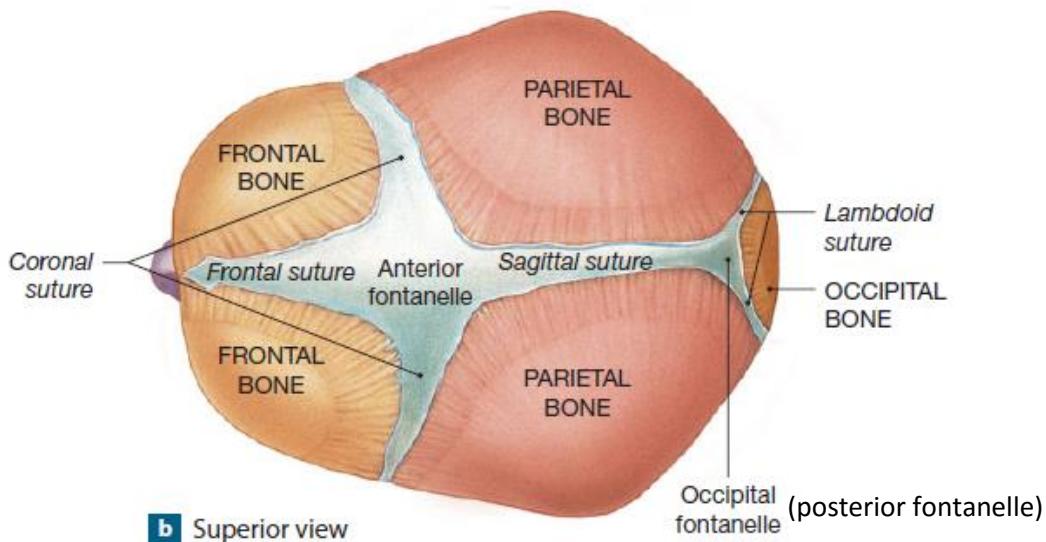
Foramen



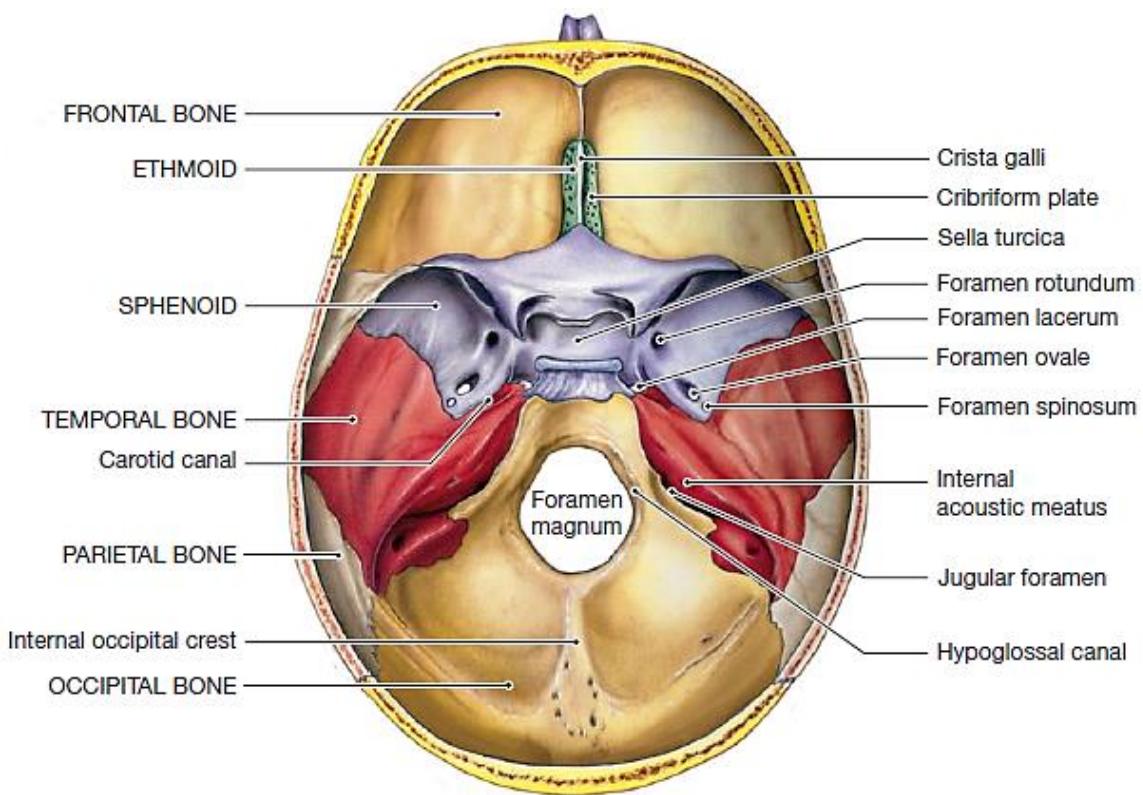
b Superior view



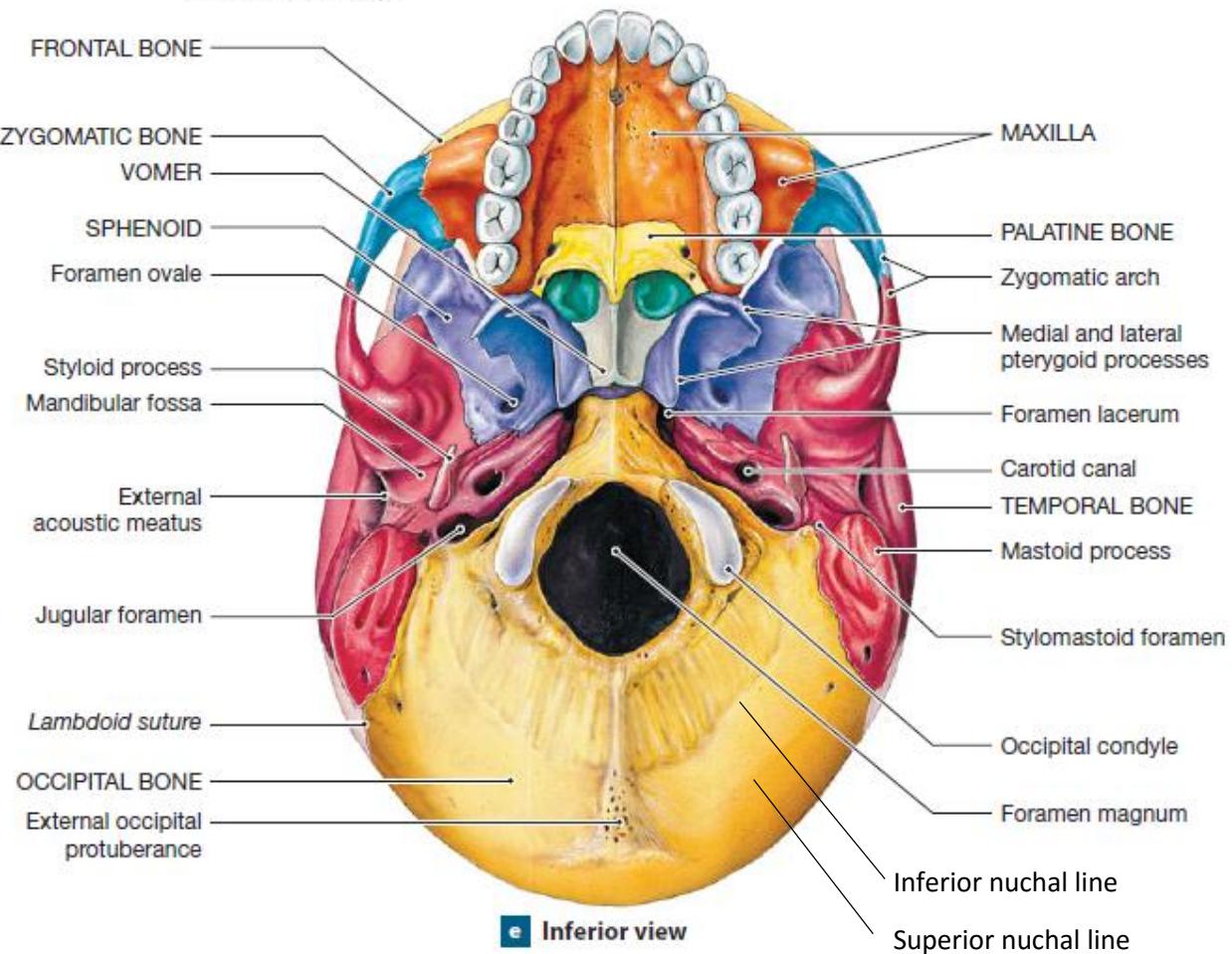
Sagittal section



b Superior view



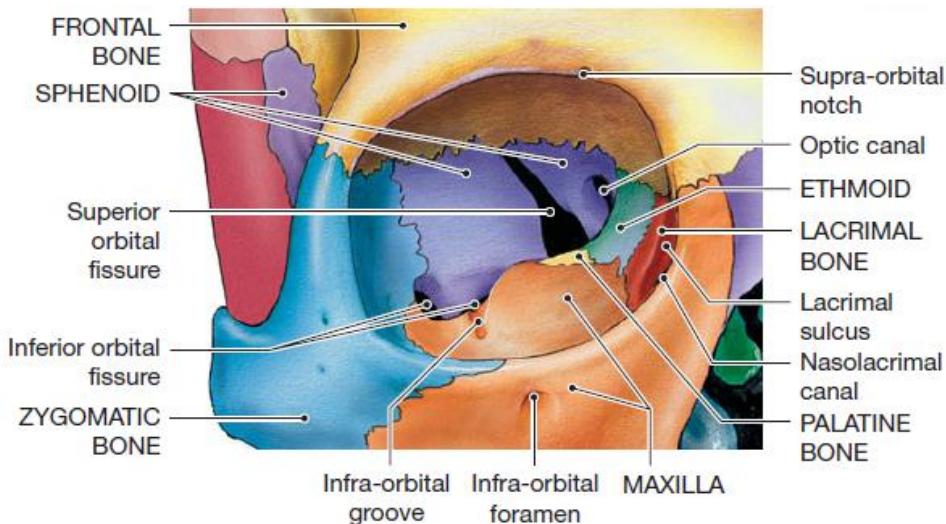
b Superior view of a horizontal section through the skull, showing the floor of the cranial cavity.



e Inferior view

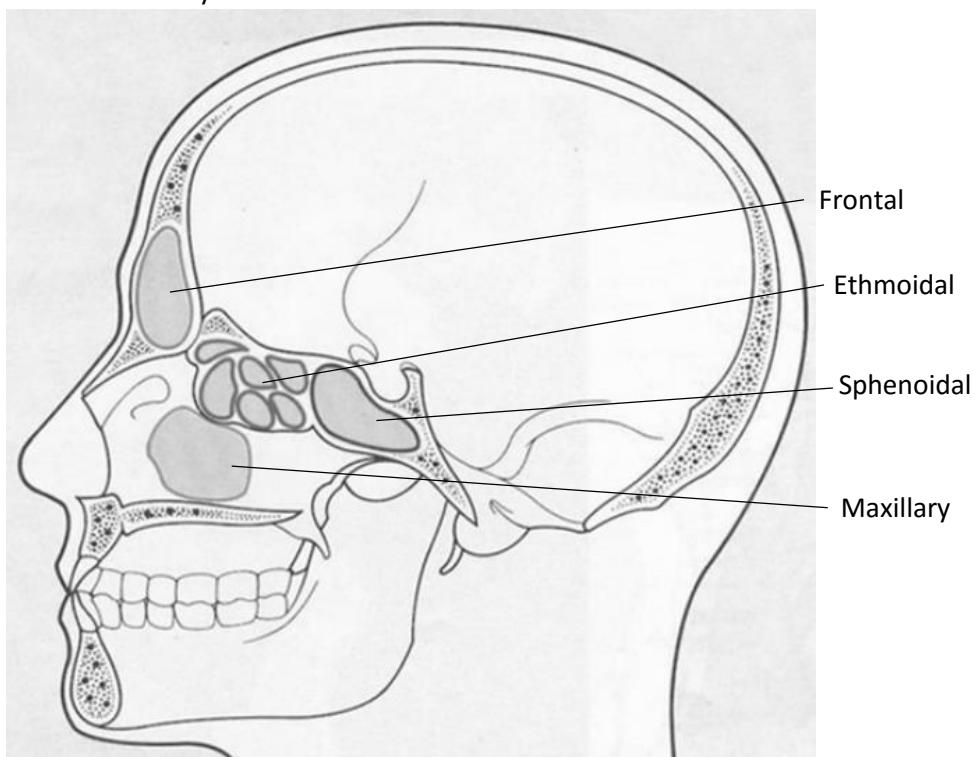
- Foramen magnum allows space for brain stem, medulla oblongata, meninges, vertebral arteries
- Foramen spinosum allows internal maxillary artery to pass through
- Foramen ovale is an opening for the mandibular branch of the trigeminal nerve
- Foramen lacerum is mostly filled with cartilage
- Carotid canal is for internal carotid artery
- Jugular foramen is for jugular vein and for the glossopharyngeal, vagus and accessory cranial nerves

Orbital



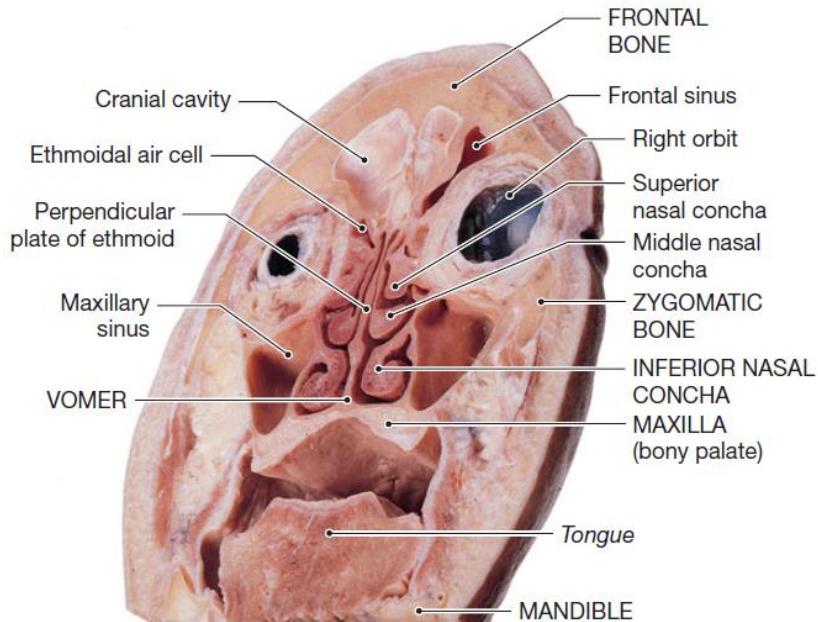
Para nasal sinuses

- In pneumatic bones (bones with large air spaces)
- Maxillary sinus is bilateral



- Communicate with nasal cavity
- Largest communication is semilunar hiatus into maxillary sinus
- Mucous membrane lining

Nasal conchae



b A frontal section through the ethmoidal air cells and maxillary sinuses, part of the paranasal sinuses.

Teeth

- Deciduous teeth are replaced by permanent teeth after infancy

Sex differences

| Men | Women |
|--|--|
| <ul style="list-style-type: none"> • Square orbitals • Orbital rings • Bigger brow ridges • Large muscle attachments • Larger mastoid process • Larger external occipital protuberance • Larger, more robust mandible • Sloping forehead | <ul style="list-style-type: none"> • Circular orbitals • More similar to neonatal • Larger bosses • Vertical forehead • Sharper supraorbital margins • Smaller sinuses • Smaller, lighter mandible • Smaller teeth |