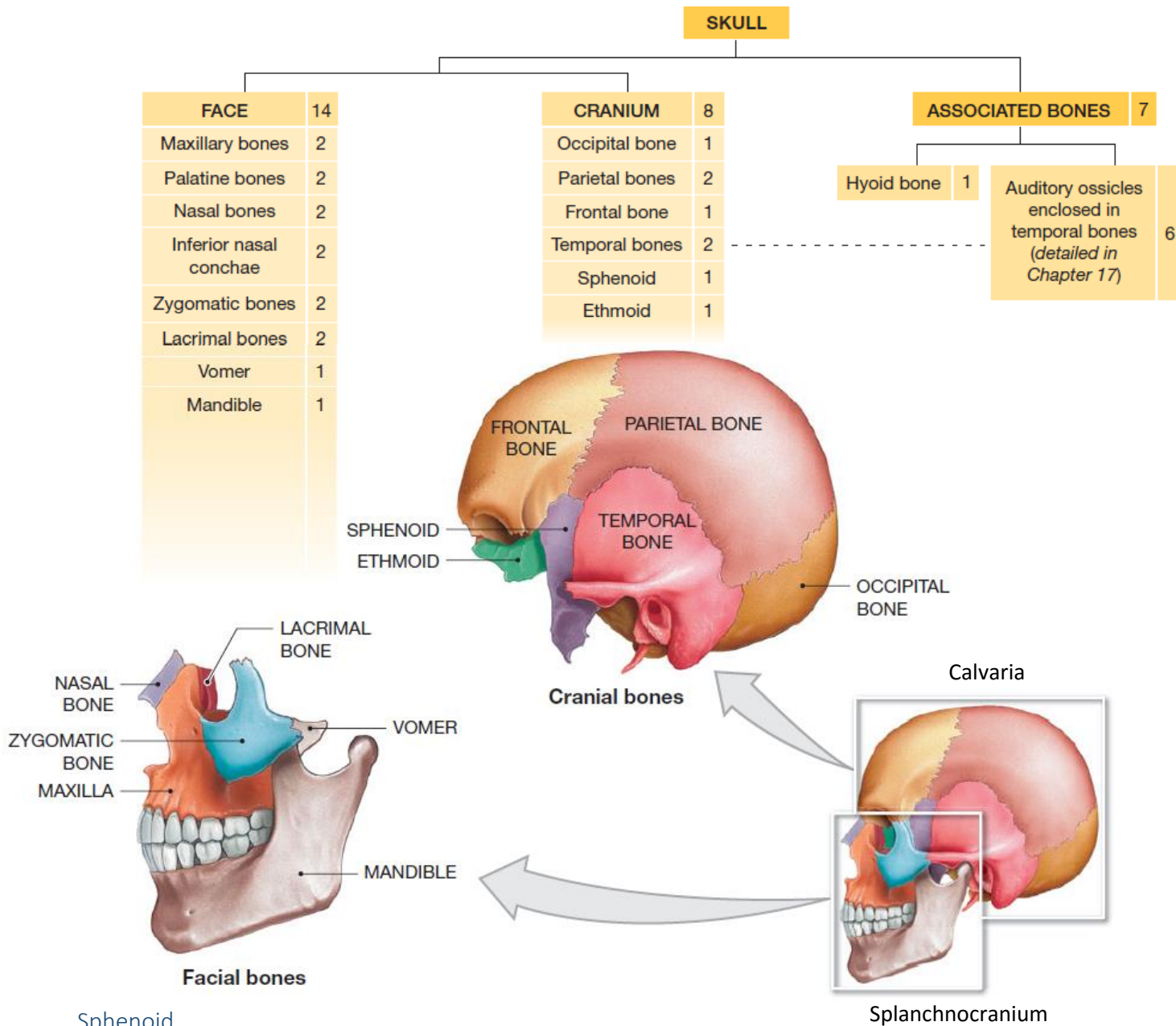


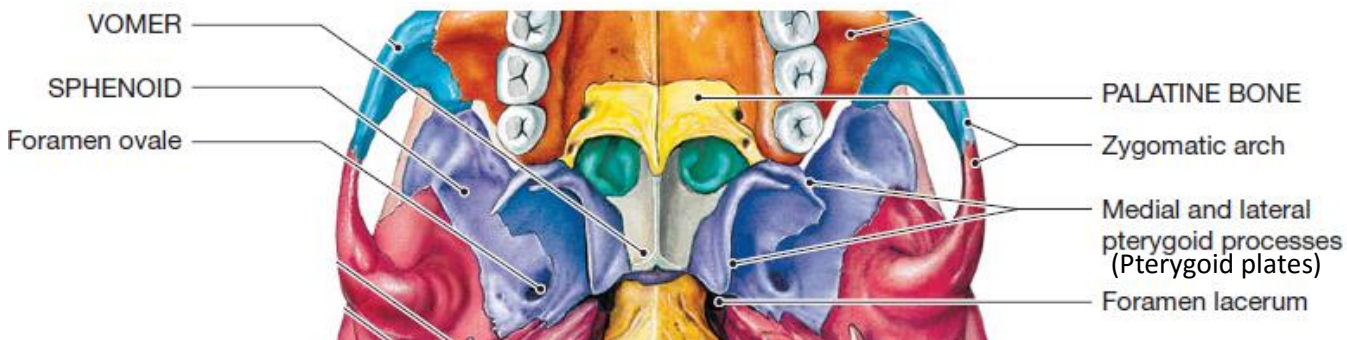
# The Skull

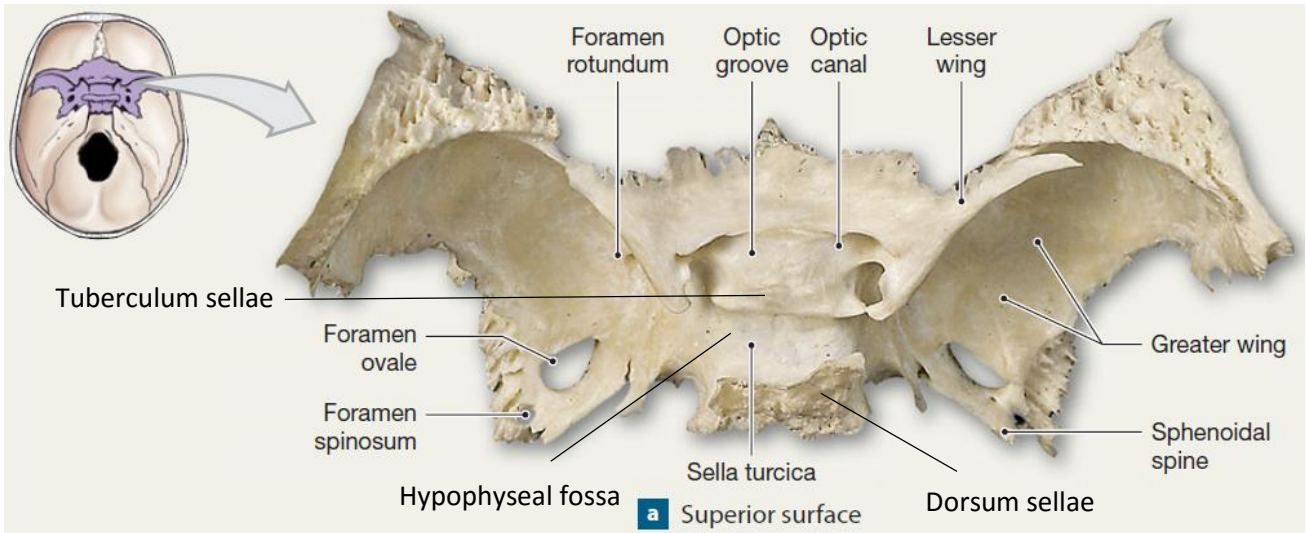
## Bones

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



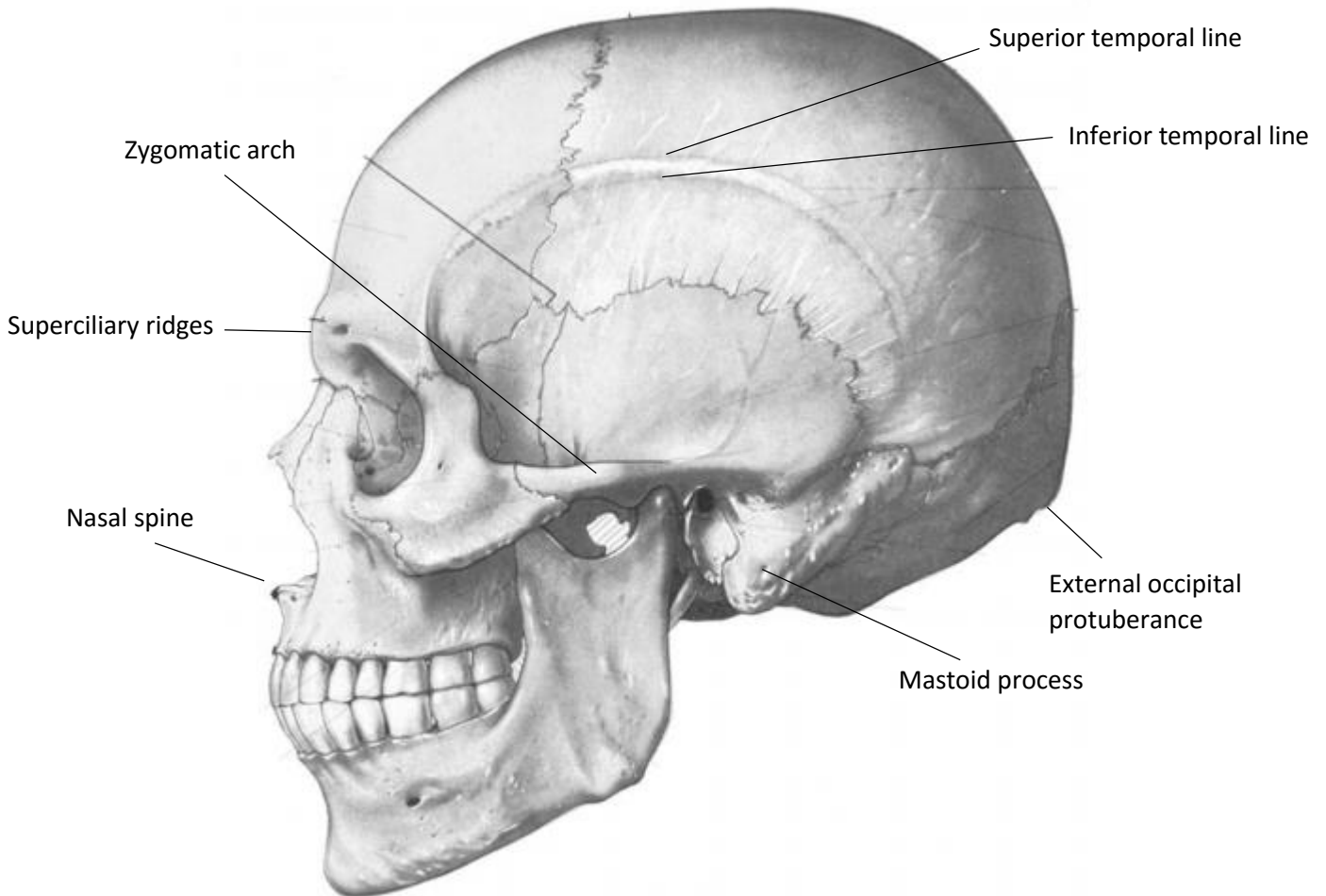
## Sphenoid



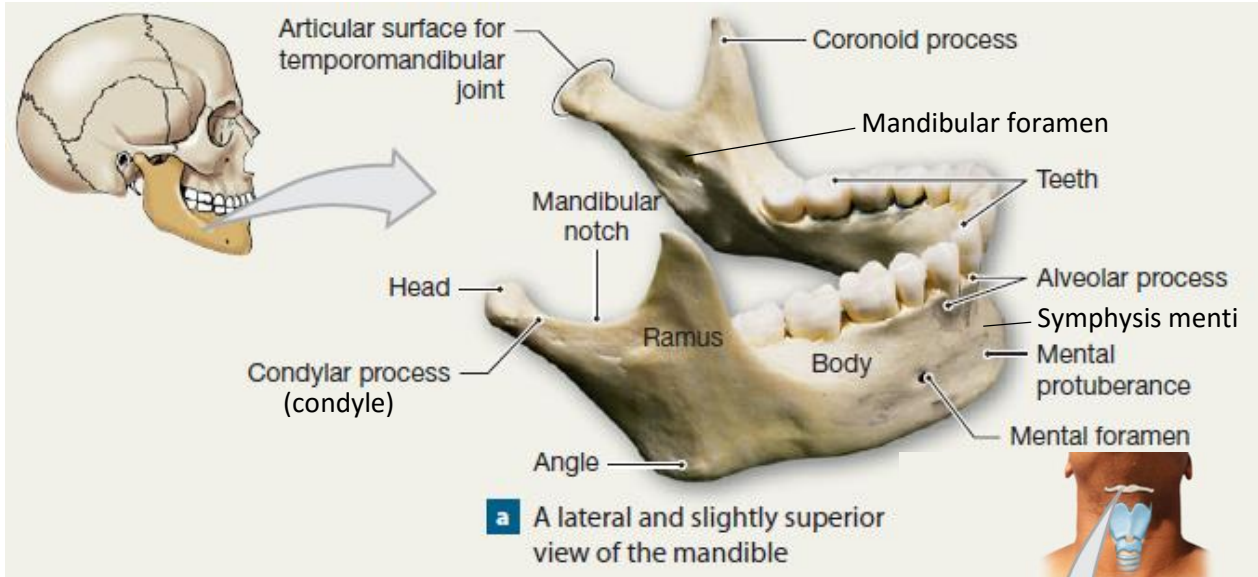


*Sella turcica (Turkish Saddle)*

- Tuberculum sellae
- Hypophyseal fossa
- Dorsum sellae



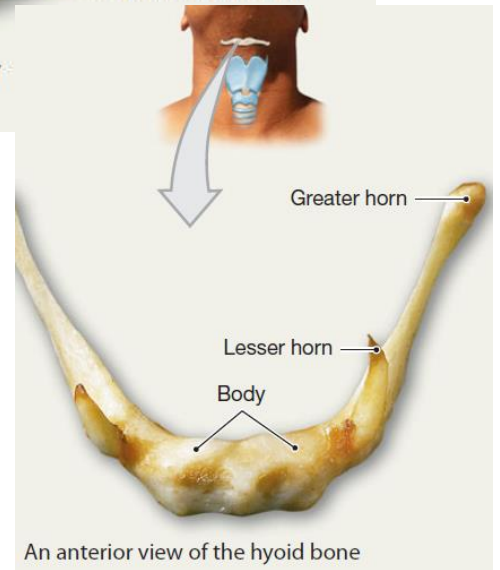
## Mandible



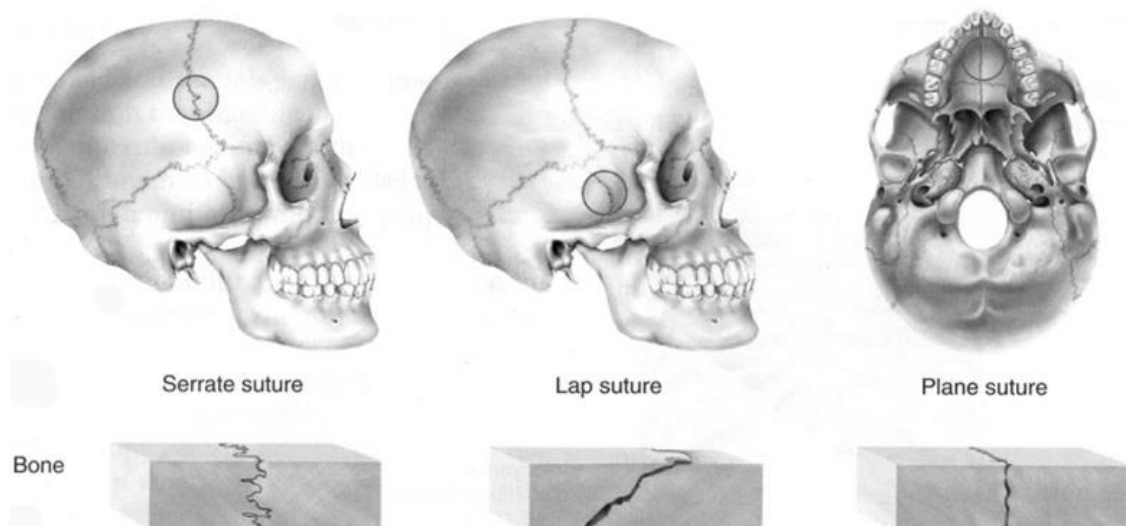
- Coronoid process attaches to temporal muscle
- Mandible attaches to cranium by a bicondylar joint
- Bones join at symphysis menti
- Mental foramen points backwards to protect nerves

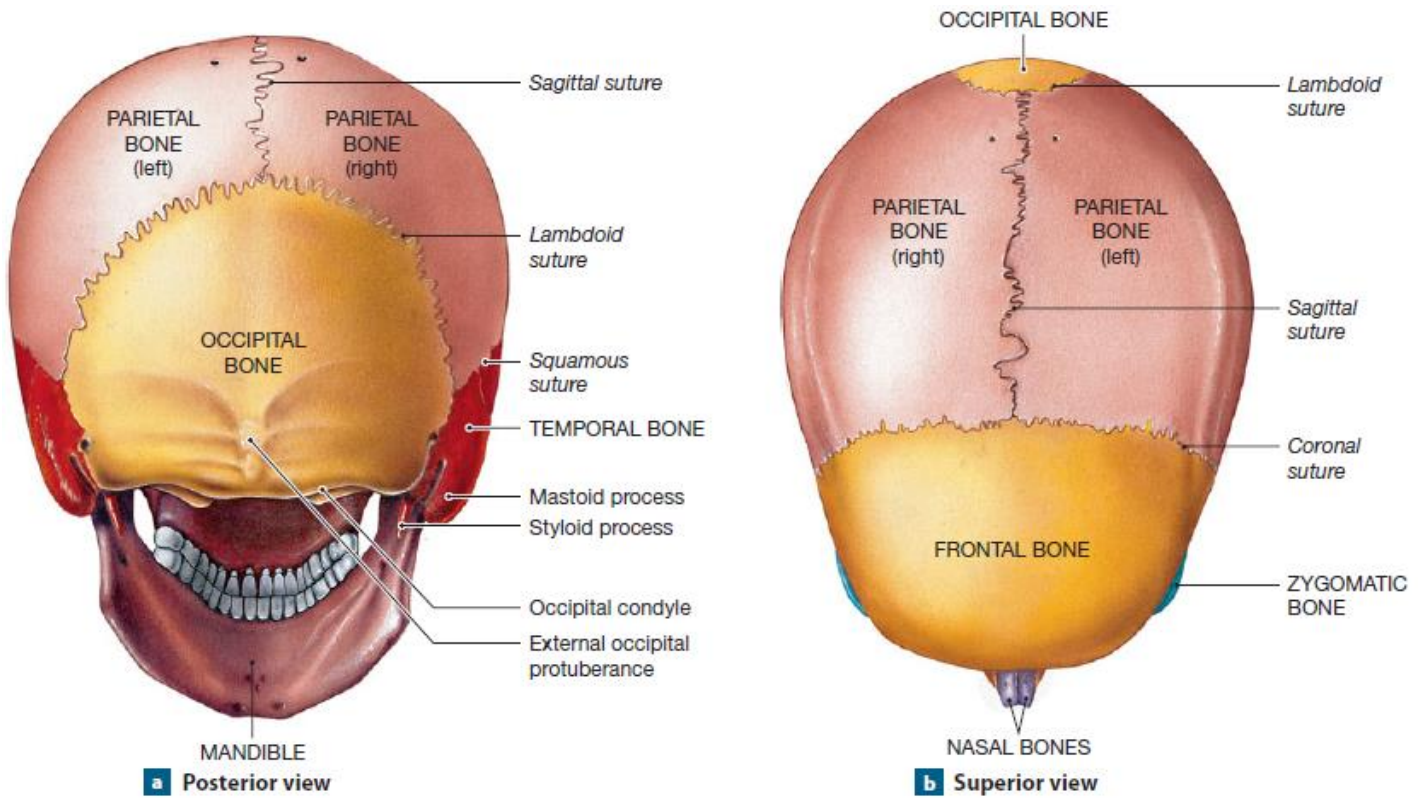
## Temporomandibular joint

- 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



## Sutures





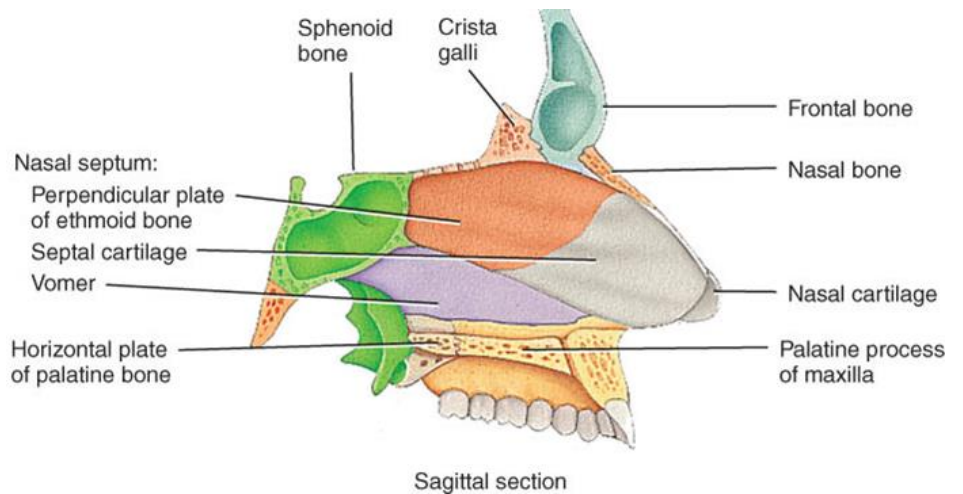
**a** Posterior view

**b** Superior view

- Coronal suture
- Sagittal
- Lambdoidal
- Squamosal

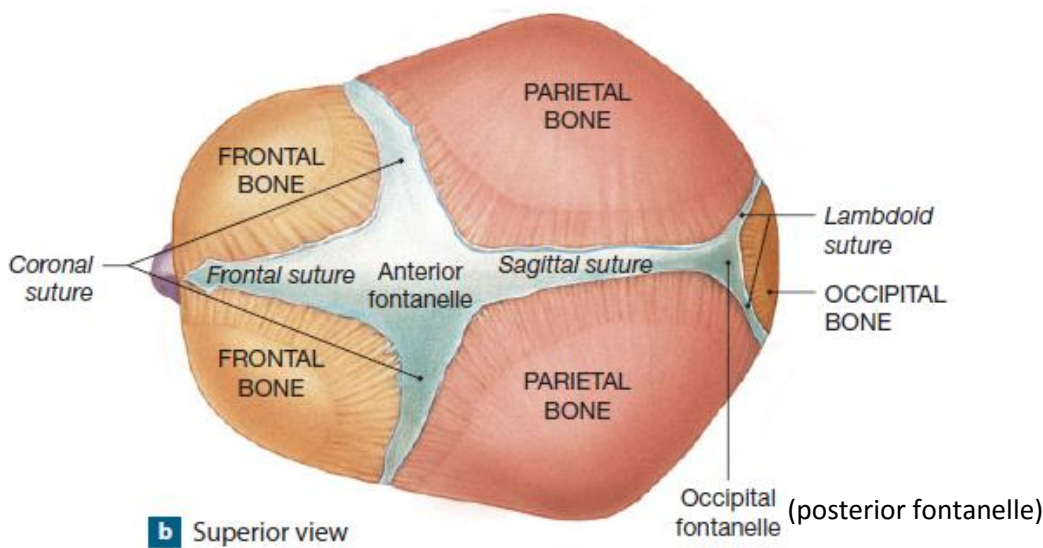
*Neonate skulls*

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

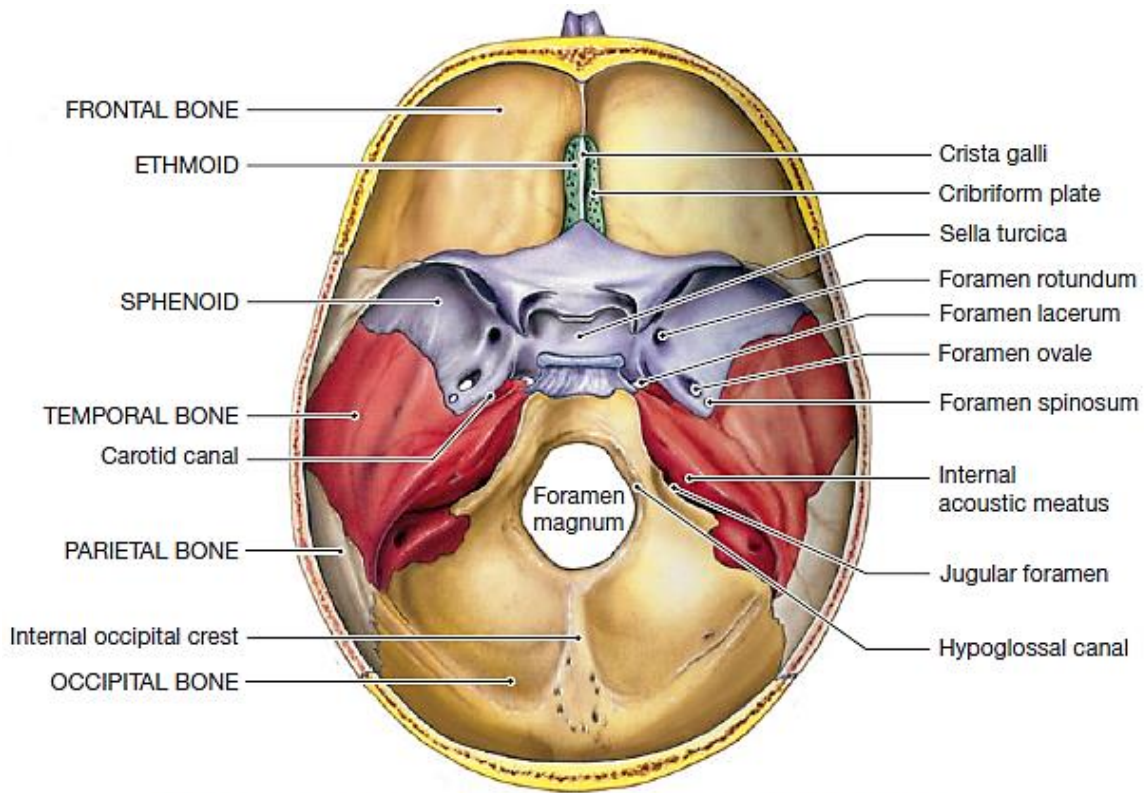


Sagittal section

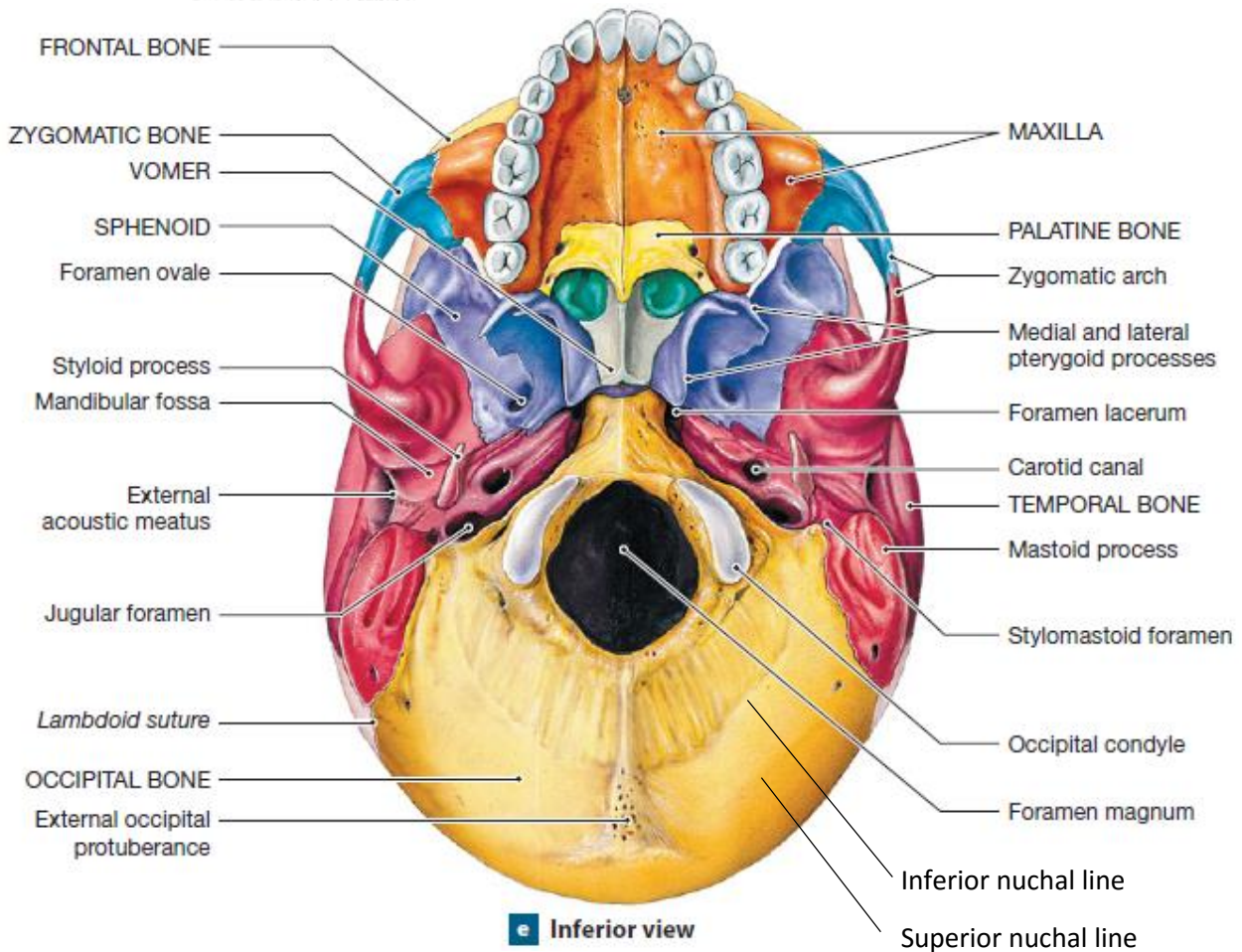
Foramen



**b** Superior view



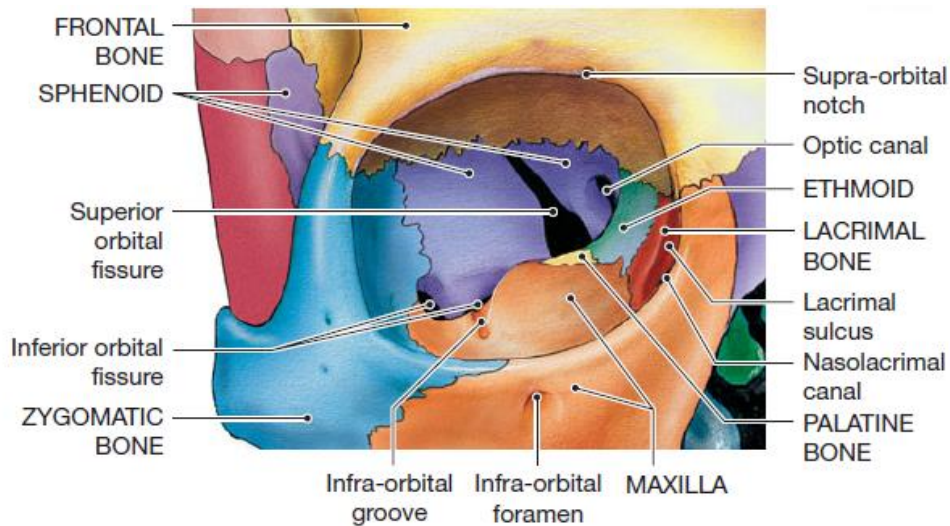
**b** Superior view of a horizontal section through the skull, showing the floor of the cranial cavity.



**e** Inferior view

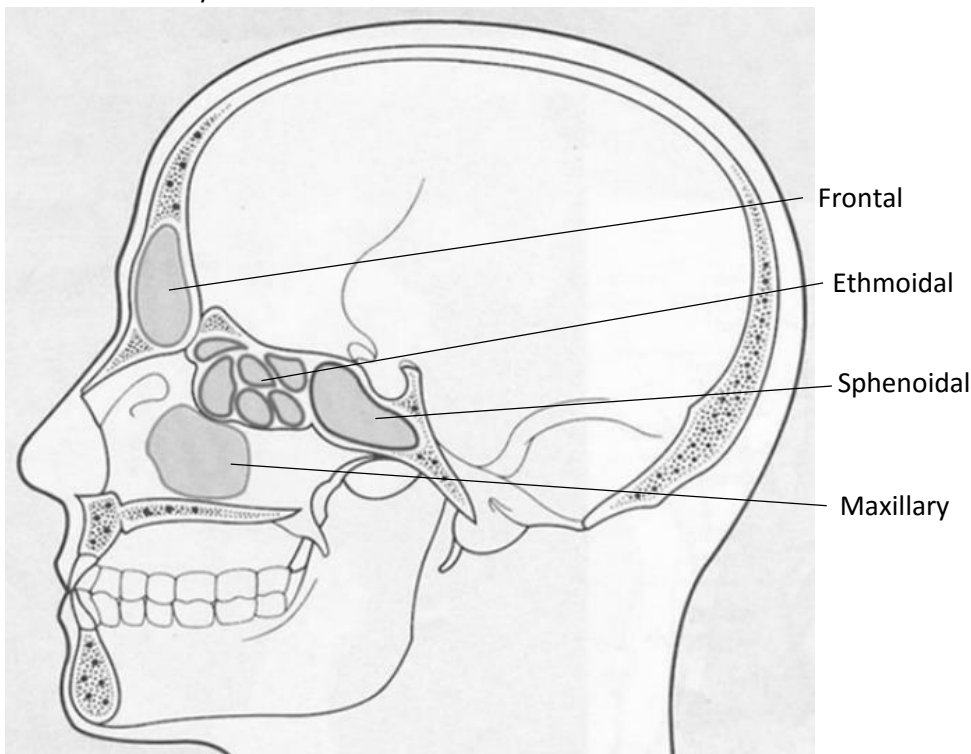
- Foramen magnum allows space for brain stem, medulla oblongata, meninges, vertebral arteries
- Foramen spinosum allows internal maxillary artery to pass through
- Foramen ovale is an opening for the mandibular branch of the trigeminal nerve
- Foramen lacerum is mostly filled with cartilage
- Carotid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

### Orbital



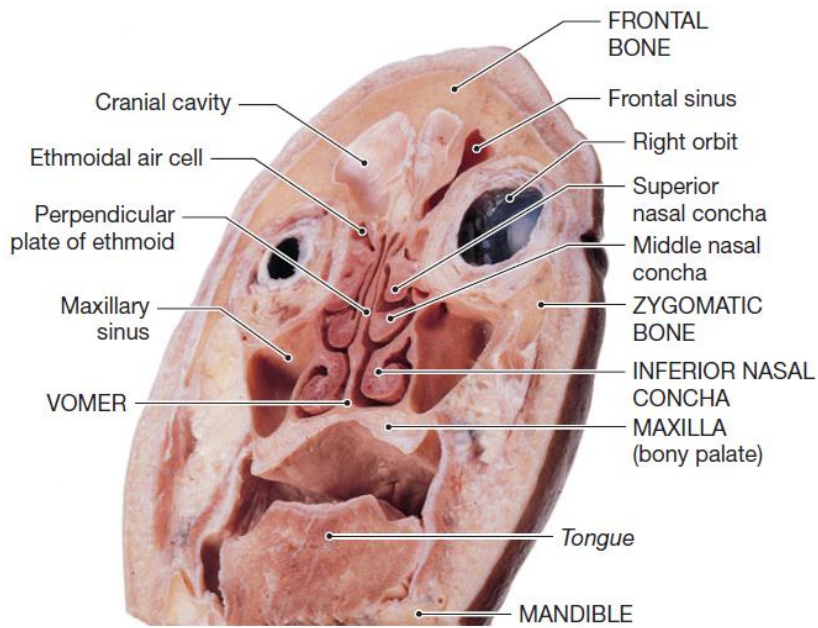
### Para nasal sinuses

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