



**The skull  
(cranium)**

**I. Neurocranial skull bones** (protection of the brain)

**II. Splanchnocranial skull bones**  
(form the underlay of the face)

**border** – from the roof of the orbit to the external auditory canal

**Neurocranium (Calvarium and basis cranii)**

**os frontale** – frontal bone

**ossa parietalia** – parietal bones

**os occipitale** – occipital bone

**os sphenoidale** – sphenoid bone

**ossa temporalia** – temporal bones

**os ethmoidale** – ethmoidal bone

**Norma lateralis**

**Norma frontalis**

**calvarium**

**Basis cranii interna**

**Basis cranii externa**

Os frontale

## **Os frontale**

### **Squama frontalis**

sutura coronalis

tubera frontalia

margo supraorbitalis

incisura frontalis

incisura supraorbitalis

arcus superciliaris

glabella

### **Pars nasalis**

sinus frontalis

### **Partes orbitale**

fossa glandulae lacrimalis

foramen ethmoidale anterius

et posterius

Os parietale



## **Ossa parietalia**

sutura coronalis  
sutura sagittalis  
sutura lambdoidea  
sutura squamosa

## **Angulus**

frontalis, sphenoidalis, occipitalis,  
mastoideus

## **Exocranial surface:**

tubera parietalia  
linea temporalis superior  
linea temporalis inferior  
foramen parietale

## **Endocranial surface:**

sulcus sinus sag sup  
sulci arteriae meningeae  
mediae

Os sphenoidale

# Os sphenoidale

**corpus**

**alae minores** (lesser wings)

**alae majores** (greater wings)

**processus pterygoidei**

# Corpus ossis sphenoidalis

sinus sphenoidalis

sulcus praechiasmaticus

sella turcica- fossa hypophysialis  
- dorsum sellae

sulcus caroticus

## **Alae minores**

fissura orbitalis superior

canalis opticus

processus clinoidei

anteriores

## **Alae majores:**

-Have five surfaces

foramen rotundum

foramen ovale

foramen spinosum

fisura orbitalis superior

fisura orbitalis inferior

# **Processus pterygoidei**

lamina lateralis

lamina medialis- hamulus

fossa pterygoidea

canalis pterygoideus

Os occipitale



# Os occipitale

## 1. pars basilaris:

clivus

tuberculum pharyngeum

synchondrosis (synostosis) sphenoccipitalis

## 2. partes laterales:

condyli occipitales

incisura jugularis

canalis (nervi) hypoglossi

### **3. squama:**

#### **Exocranial surface:**

protuberantia occipitalis externa  
crista occipitalis externa  
linea nuchae suprema  
linea nuchae superior  
linea nuchae inferior

#### **Endocranial surface:**

eminentia cruciformis  
crista occipitalis interna  
sulcus sinus sagitalis superioris  
sulcus sinus transversus  
protuberantia occipitalis interna

sulcus sinus sigmoidei  
fossae cerebrales  
fossae cerebellares

foramen magnum

Os ethmoidale

**Os ethmoidale**

**lamina cribrosa**

**crista galli**

**lamina perpendicularis-** part of the nasal septum

**labyrinthi ethmoidales** (cellulae ethmoidales)

**lamina orbitalis** (foramen ethmoidale anterius et posterius)

**concha nasalis media, superior**

Os temporale

# **Os temporale**

**Pars squamosa**

**Pars petrosa (pyramis)**

**Pars mastoidea**

**Pars tympanica**

**Processus styloideus**

## **Pars squamosa:**

- processus zygomaticus- arcus zygomaticus
- fossa mandibularis
- tuberculum articulare

# **Pars petrosa (pyramis)**

## **facies anterior pyramidis**

- apex pyramidis
- impressio trigeminalis
  
- sulcus n. petrosi majoris et minoris



## **Facies posterior**

- porus acusticus internus
  - meatus acusticus internus
  - Entrance of n. facialis
- incisura jugularis (foramen jugulare)

## **Facies inferior pyramidis:**

- apertura externa canalis carotici
- foramen jugulare
- canaliculus mastoideus

## **Processus styloideus**

- foramen stylomastoideum

## **Pars tympanica:**

meatus acusticus externus

porus acusticus externus

## **Pars mastoidea**

processus mastoideus- pneumatizovaná kost-  
cellulae mastoideae

incisura mastoidea, sulcus a. occipitalis

# **Canals in os temporale**

**Canalis caroticus**

**Canalis n. facialis**

# **Splanchnocranium**

**Maxilla**

**Os nasale**

**Os lacrimale**

**Os zygomaticum**

**Vomer**

**Os palatinum**

**Concha nasalis inferior**

**Mandibula**

**Os hyoideum**

Maxilla

**Maxilla**

**Corpus maxillae**

**Sinus maxillaris**

**Processus frontalis**

**Processus zygomaticus**

**Processus alveolaris**

**Processus palatinus**

# **Corpus maxillae**

## **Facies orbitalis**

margo infraorbitalis

sulcus infraorbitalis

canalis infraorbitalis

(canals for nerves and vesel  
for the upper teeth)

## **Facies anterior**

foramen infraorbitale

incisura nasalis

fossa canina

## **Facies nasalis**

- hiatus sinus maxillaris
- sinus maxillaris

## **Facies infratemporalis**

- tuber maxillae  
(canals for nerves and vesel for the upper teeth)



## **Processus frontalis maxillae**

incisura nasalis (apertura piriformis)

## **Processus alveolaris**

alveoli dentales

**Processus zygomaticus**

**Processus palatinus**

Os nasale

**Os nasale**

Apertura piriformis

# Os lacrimale

Os zygomaticum

# Os zygomaticum

## Corpus:

Facies lateralis

Facies orbitalis

Facies temporalis

foramen zygomaticoorbitale

foramen zygomaticofaciale

## Processus:

temporalis- arcus zygomaticus

frontalis

maxillaris

Vomer



Os palatinum

# Os palatinum

**Lamina horizontalis**

sutura palatina transversa

crista nasalis

foramen palatinum majus

## **Lamina perpendicularis**

crista ethmoidalis et conchalis

foramen sphenopalatinum

processus orbitalis et sphenoidalis

## **Processus pyramidalis**

# Concha nasalis inferior

# Mandibula

## **Mandibula**

corpus

ramus mandibulae dx. et sin.

angulus mandibulae

### **Corpus mandibulae:**

fossae digastricae

spina mentalis

linea mylohyoidea

protuberantia mentalis

foramen mentale

processus alveolaris

fovea sublingualis

fovea submandibularis

## **Ramus mandibulae:**

processus condylaris

(caput, collum s fovea pterygoidea)

processus coronoideus

foramen mandibulae

(canalis mandibulae)

tuberositas masseterica

tuberositas pterygoidea

# **Os hyoideum**

Corpus ossis hyoidei

Cornua minora ossis hyoidei

Cornua majora ossis hyoidei



# **SKULL AS A WHOLE**

**Basis cranii interna**

**Fossa cranii anterior**

**Fossa cranii media**

**Fossa cranii posterior**

# Cavum oris

# Orbita

- pyramidal shape

entrance: aditus orbitae

top: canalis opticus

# Orbita

**Otvory:** foramen ethmoidale anterius  
foramen ethmoidale posterius  
  
fissura orbitalis superior  
fissura orbitalis inferior

## **Cavitas nasi ossea:**

**entrance:** apertura piriformis

**exit:** choanae

**Septum nasi osseum**

## **Fossa pterygopalatina:**

**anterior wall:** tuber maxillae

**roof:** greater wings of sphenoid bone

**Posterior wall:** processus pterygoideus

**Medial wall:** lamina perpendicularis

ossis palatini

**Lateral wall:** is free

## **Connections with:**

Fossa cranii media— foramen rotundum

orbita—fissura orbitalis inferior

cavum oris—canalis palatinus major

fossa infratemporalis— lateral wall

Basis cranii externa—canalis pterygoideus

cavum nasi—foramen sphenopalatinum

## **Content:**

ganglion pterygopalatinum

n. maxillaris and its branches

a. Maxillaris - its terminal branches

## **Fossa temporalis:**

### **Connections with:**

orbita - fissura orbitalis inferior

fossa infratemporalis

### **Content:**

m. temporalis



## **Fossa infratemporalis:**

-continuation of the temporal fossa

**Openings:** foramen ovale

foramen spinosum

foramen mandibulare

fissura orbitalis inferior

**Content:** mm. pterygoidei

# **The newborn skull**

## **Typical features of the newborn skull:**

- neurocranium in comparison with splanchnocranium
- fonticuli
- length 11 cm, wide 9 cm, circumference 34 cm

2:1

8:1

**synchondrosis  
sphenoccipitalis**

THANK YOU FOR  
YOUR ATTENTION!