



**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 transversi

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!