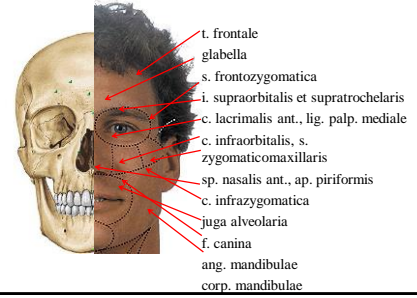


Clinical anatomy of the head

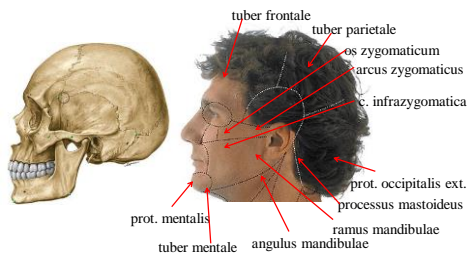
MUDr. Marek Joukal, Ph.D.

Department of Anatomy

Palpable structures on the head



Palpable structures on the head



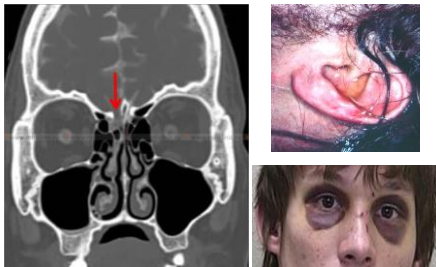
Firmed and weakened places of the skull



Basal centre of the skull

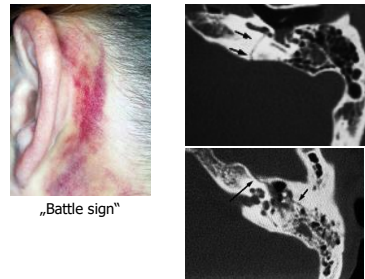
Middle bands (frontal and dorsal)

Lateral bands (frontal and dorsal)

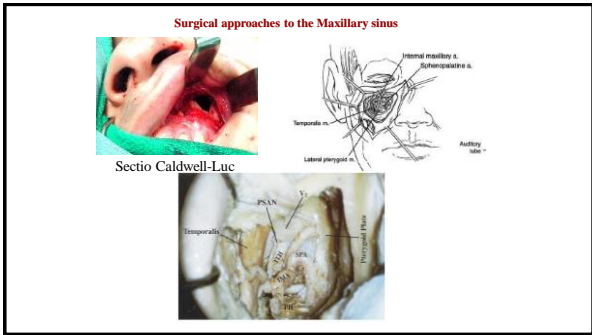
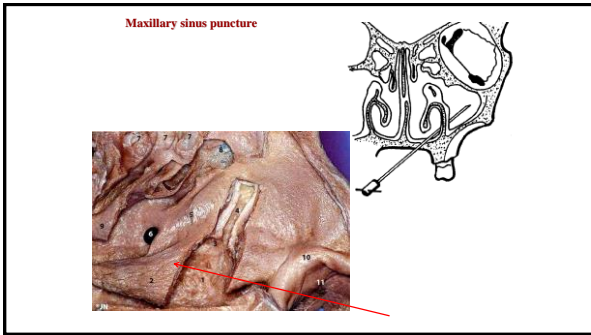
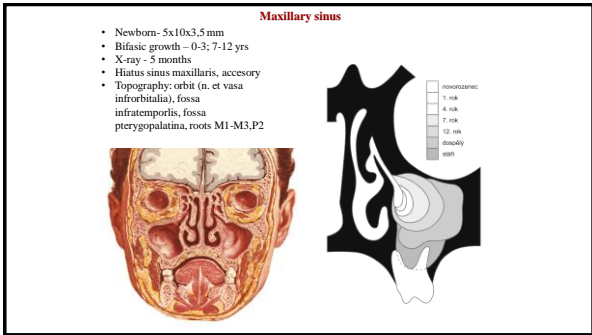
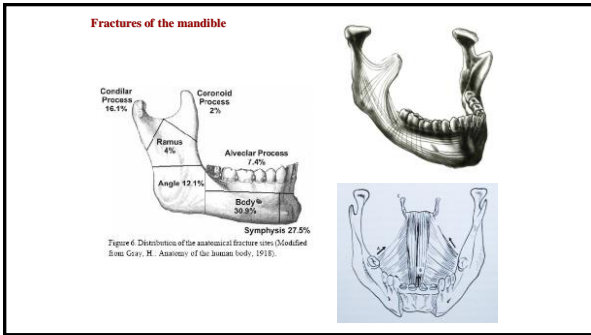
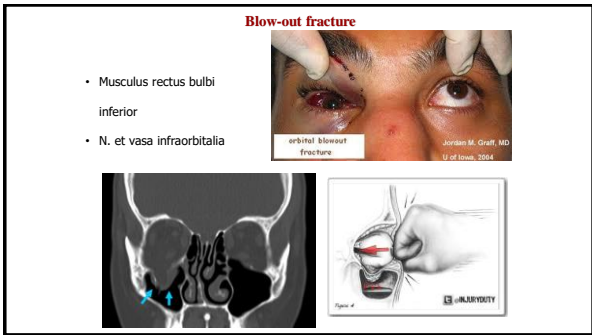
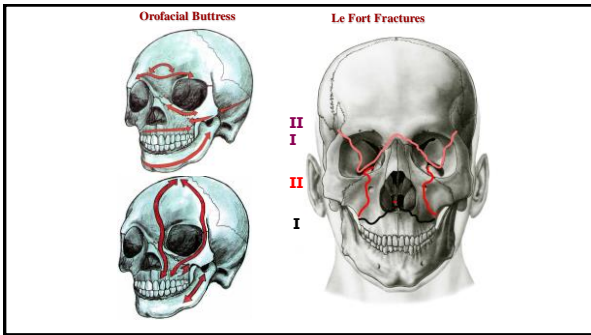


Racoon eyes

Temporal bone fractures

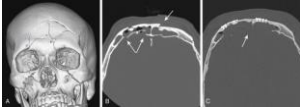
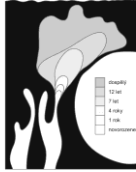


„Battle sign“



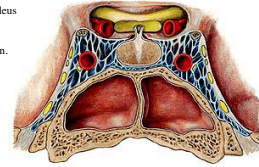
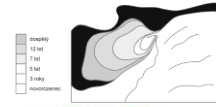
Frontal sinus

- Recessus frontalis
- X-ray- 2 yrs
- Invasion to the frontal bone: 5-8 yrs
- Adolescence: 17x28x27 mm
- The roof of the orbit (doubled)
- Topogphy: fossa cerebri anterior, orbit
- Fractures

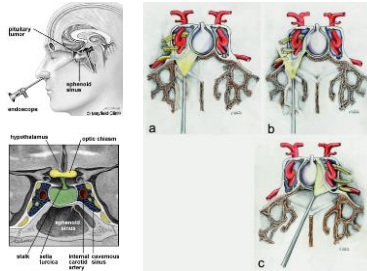


Sphenoid sinus

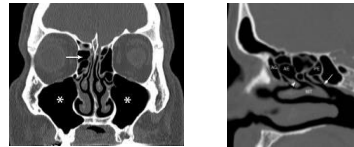
- Newborn: blunt sac
- Pneumatisation after 3rd yr
- 7. yr: sella turcica
- 18 yrs: 23x20x17 mm
- Variable spread: alla major, clivus, processus pterygoideus med., os palatinum
- Topography: sella turcica, n. II, a. carotis interna, sinus cavernosus



Transsphenoid approach

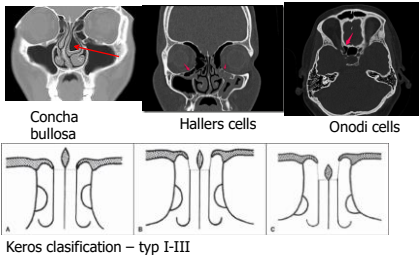


Ethmoid sinuses

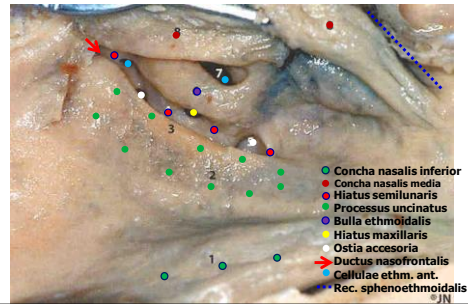


- Clinical division: anterior (AEC) and posterior ethmoid cells (PEC)
 -basal lamella - „grundlamella“
 AEC: meatus nasi medius
 Birth: 2x4x2 mm
 18 yrs: 20x22x10 mm
 PEC: meatus nasi superior
 4 m gestation
 18 yrs: 20x20x10 mm

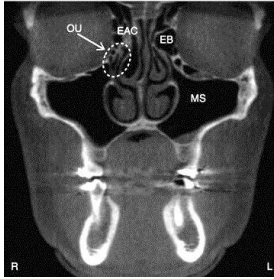
Ethmoid cells - variations



Paranasal openings



Ostiomeatal unit (complex)

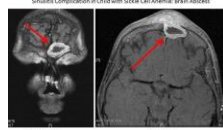


- Infundibulum ethmoidale
- Processus uncinatus
- Hiatus semilunaris
- Bulla ethmoidalis
- Meatus nasi medius

Sinusitis complication



Cranial: osteomyelitis

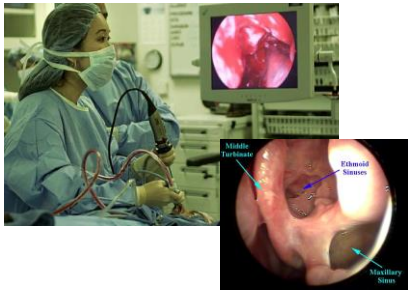


- Intracranial:
- meningitis
 - empyem
 - absces
 - Trombosis of cavernous sinus

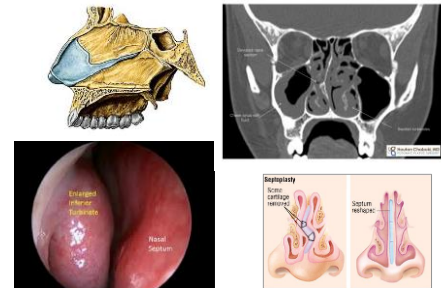


Orbital: orbitocellulitis, absces, neuritis n. II

FESS – Functional endoscopic sinus surgery

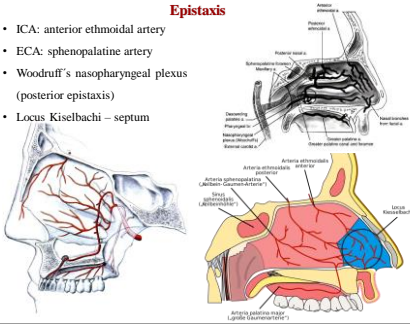


Nasal septum deviation

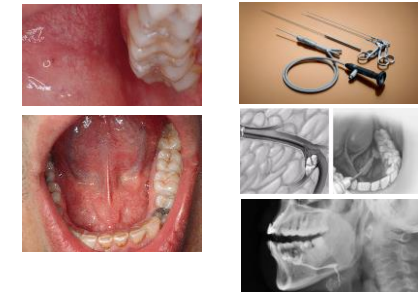


Epistaxis

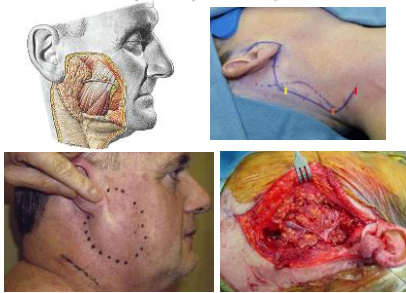
- ICA: anterior ethmoidal artery
- ECA: sphenopalatine artery
- Woodruff's nasopharyngeal plexus (posterior epistaxis)
- Locus Kieselbachi – septum



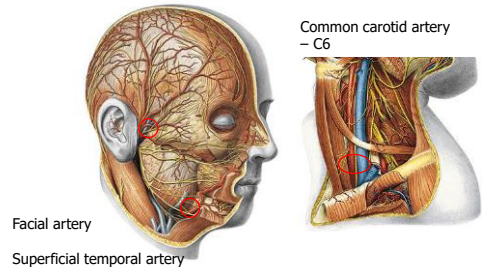
Salivary glands



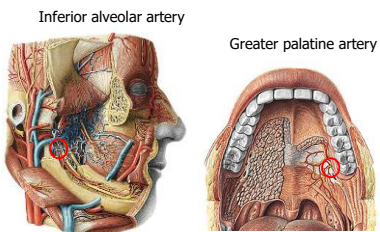
Superficial parotidectomy



Arterial compression points

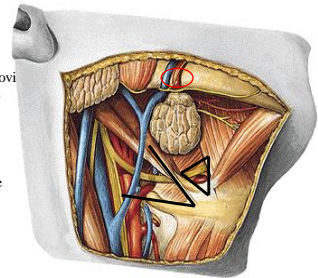


Arterial compression points

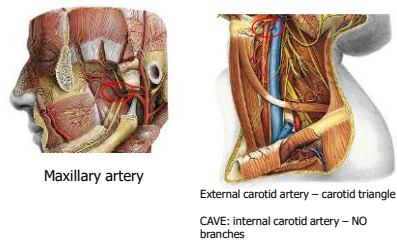


Arterial ligatures

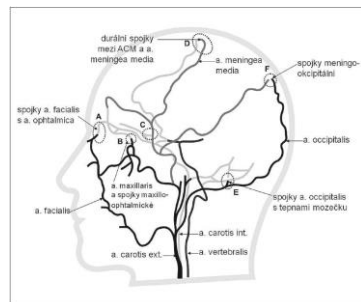
- Lingual artery :
- trigonum Pirogovi
 - Béclard's angle
- Facial artery:
- trigonum submandibulare



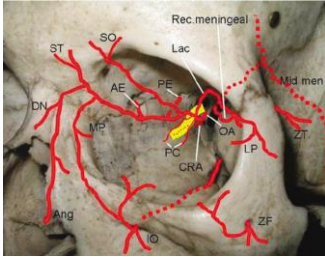
Arterial ligatures



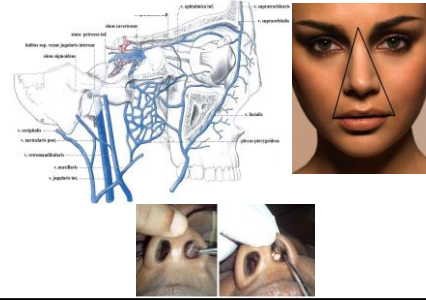
Collateral cerebral blood circulation



Internal and external carotid anastomoses



Venous anastomoses



- nodi lymphatici occipitales
- nodi lymphatici retroauriculares
- nodi lymphatici parotidei
- nodi lymphatici submandibulares
- nodi lymphatici submentales
- nodi lymphatici retropharyngei

**nli. cervicales
superficiales
nli. cervicales
profundi**

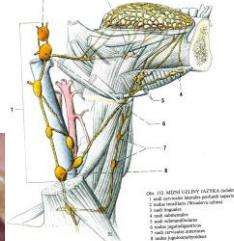


Lymphatic drainage of the tongue

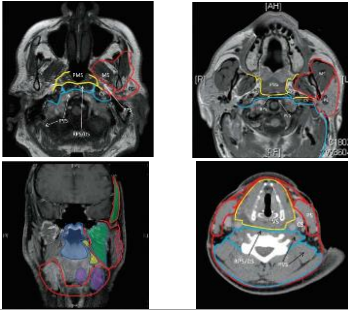
**NL tonsillaris
(Wood)**

**NL jugulodigastricus
(Küttner)**

NL juguloomoioideus



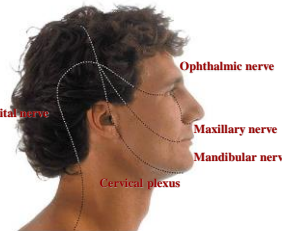
Fascial spaces of the head

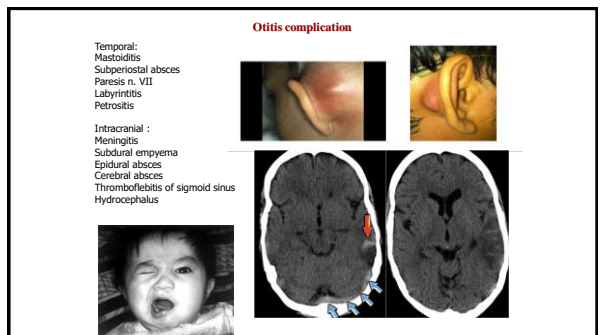
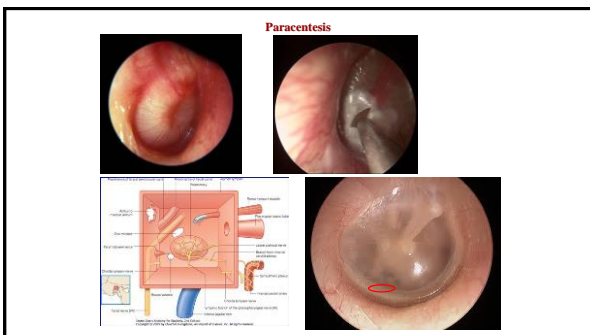
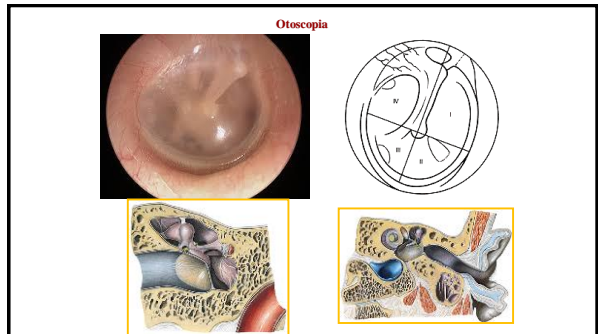
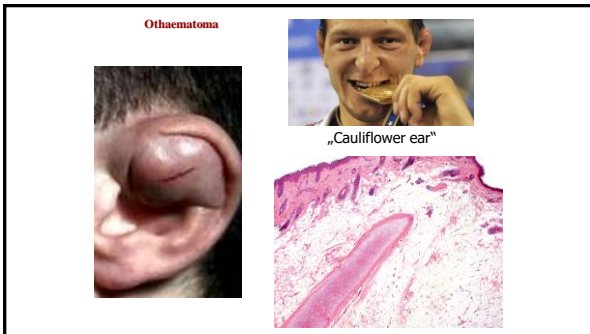
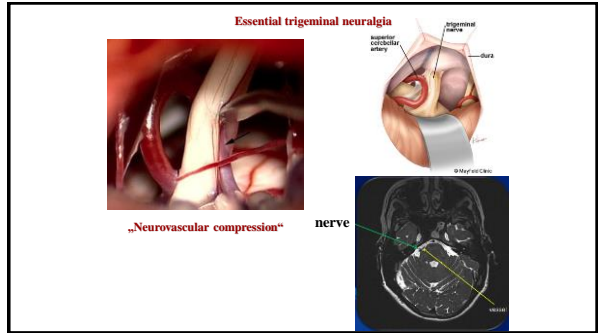
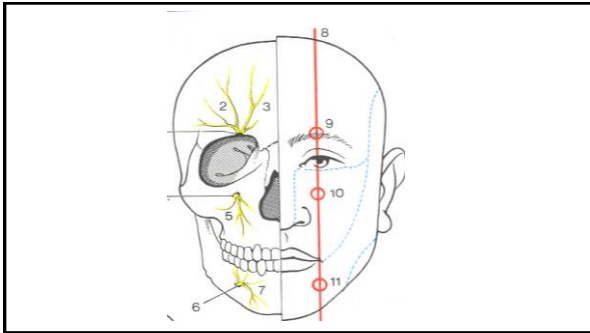


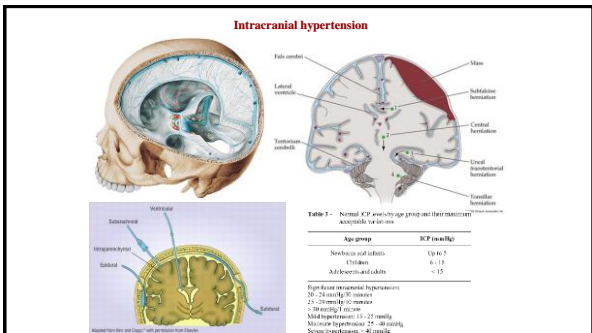
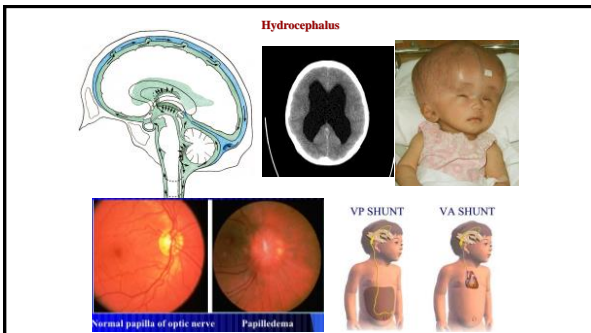
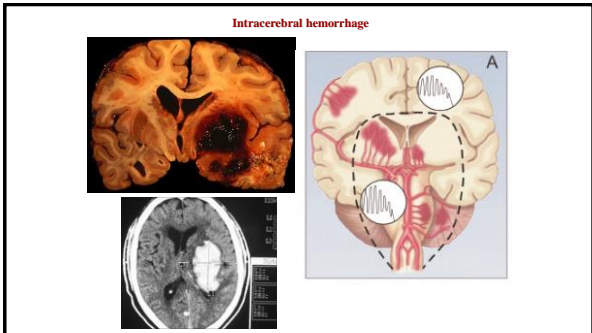
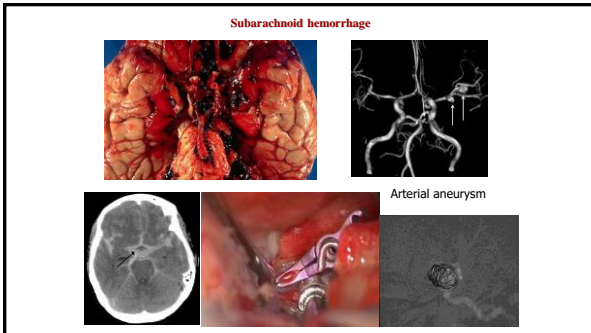
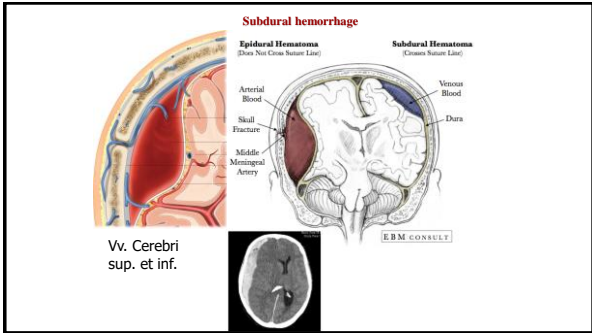
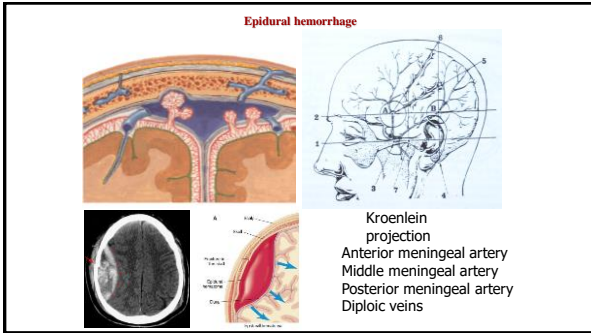
<https://entokey.com/head-and-neck-fascial-spaces/>

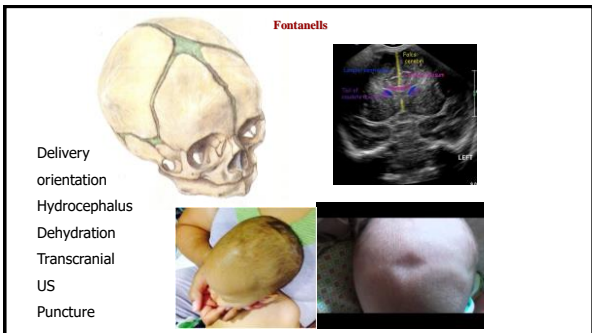
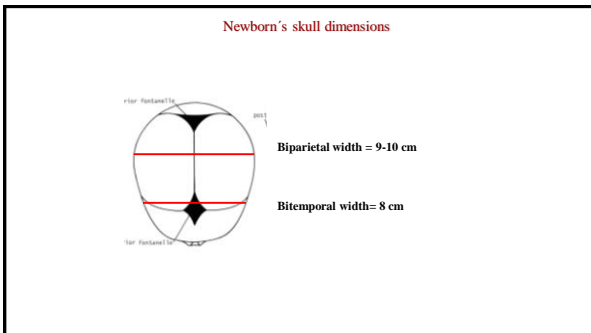
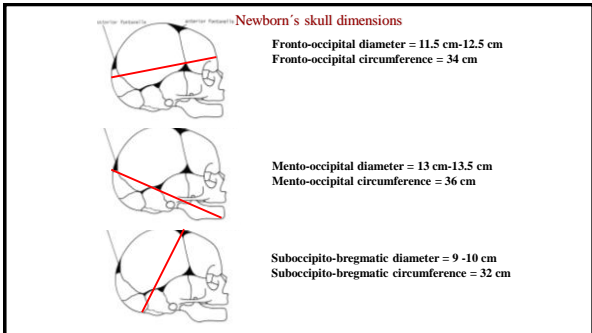
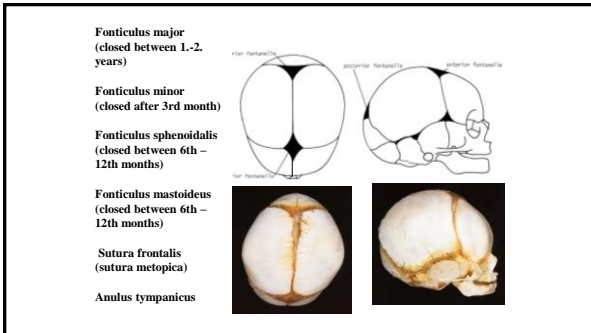
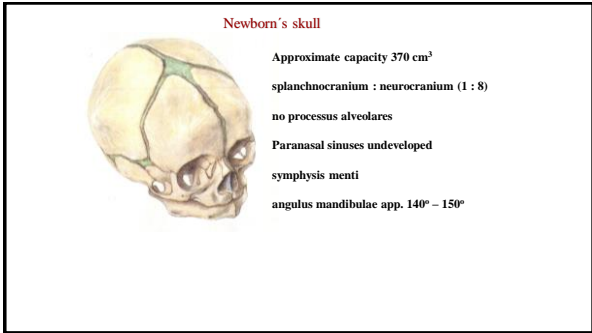
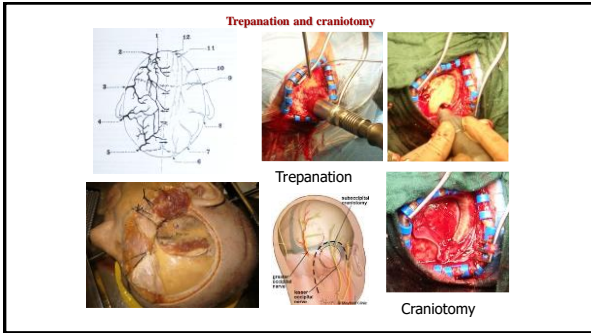
Sensory innervation of the head

Ophthalmic nerve
Greater occipital nerve
Maxillary nerve
Mandibular nerve
Cervical plexus

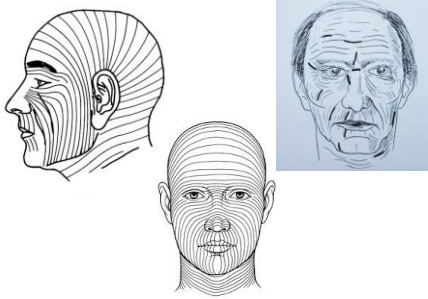








Langer's and Kreissl's lines



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