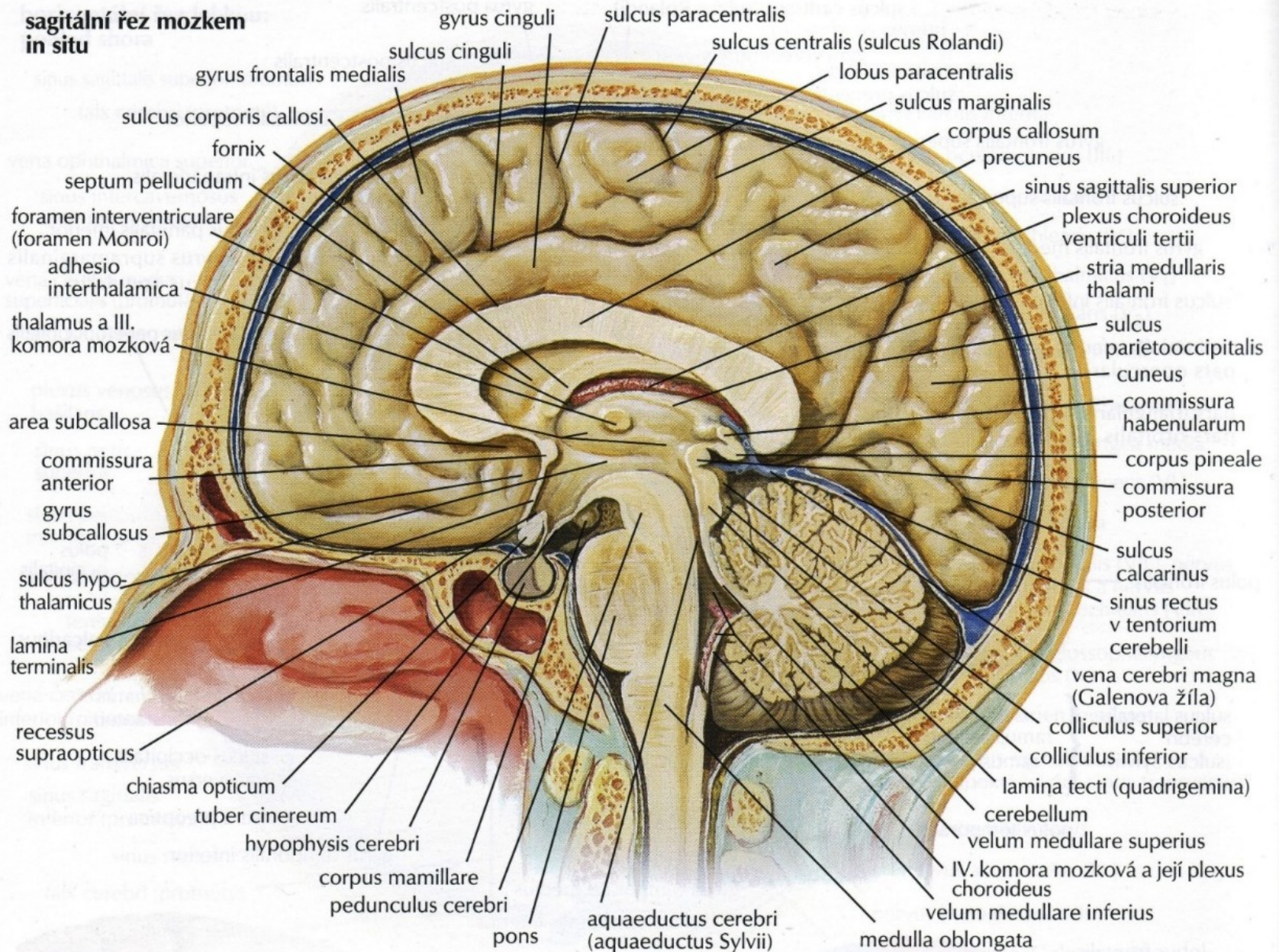


Chambers, meninges and blood supply of CNS



**sagitální řez mozkiem
in situ**



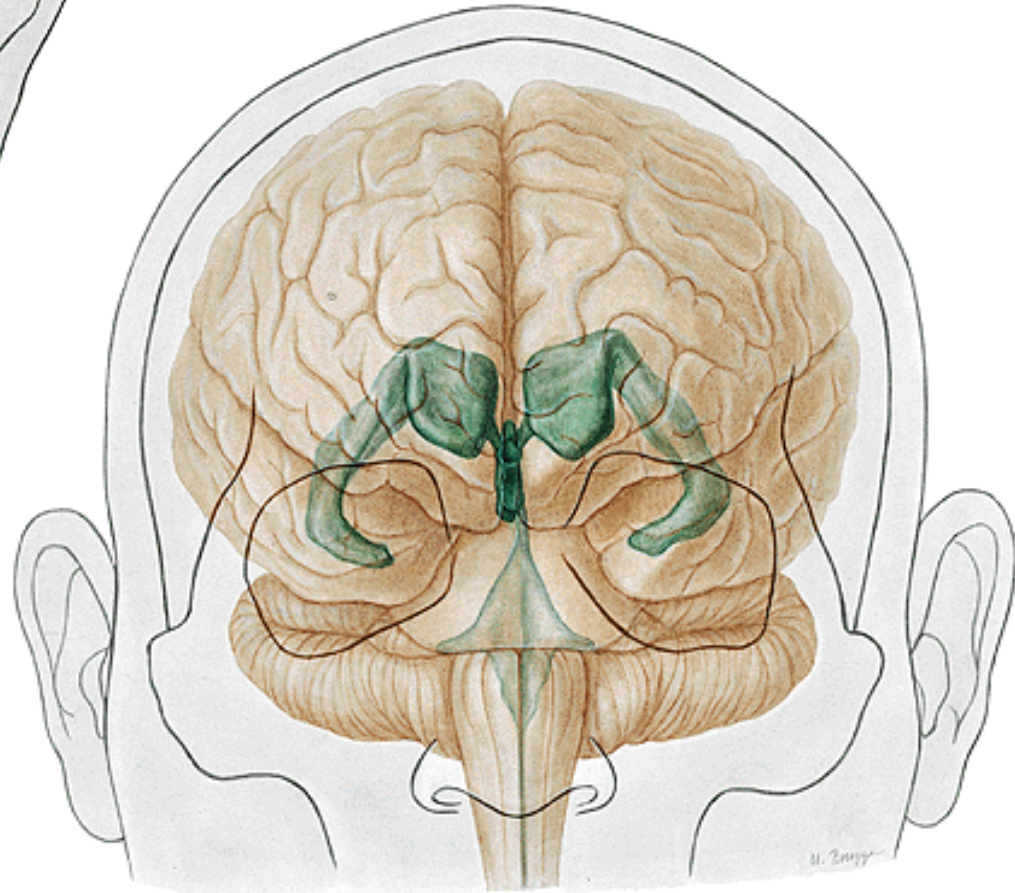
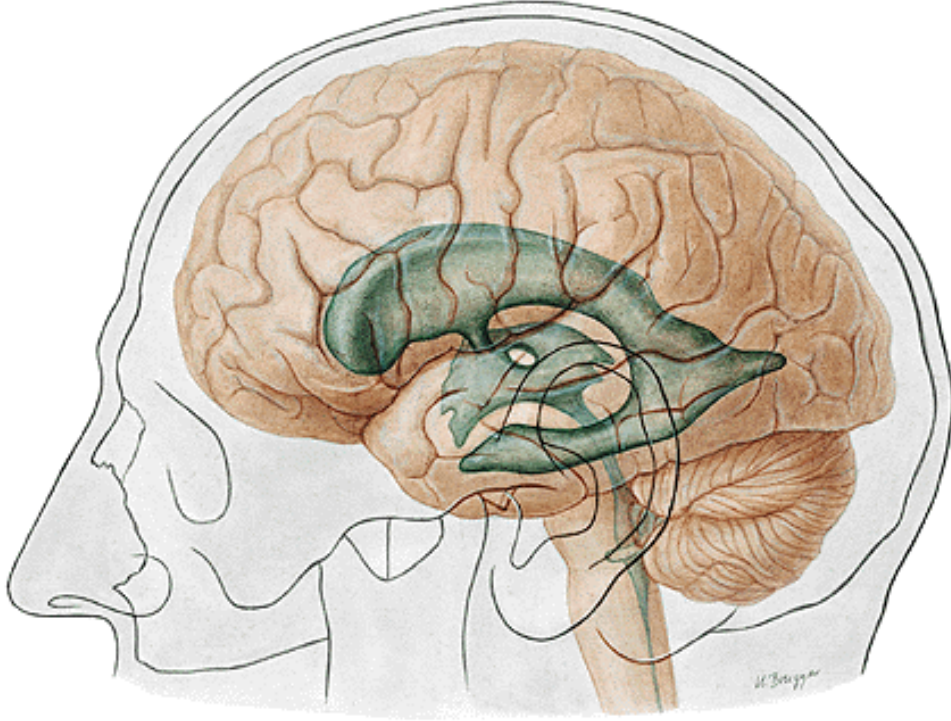


cornu frontale

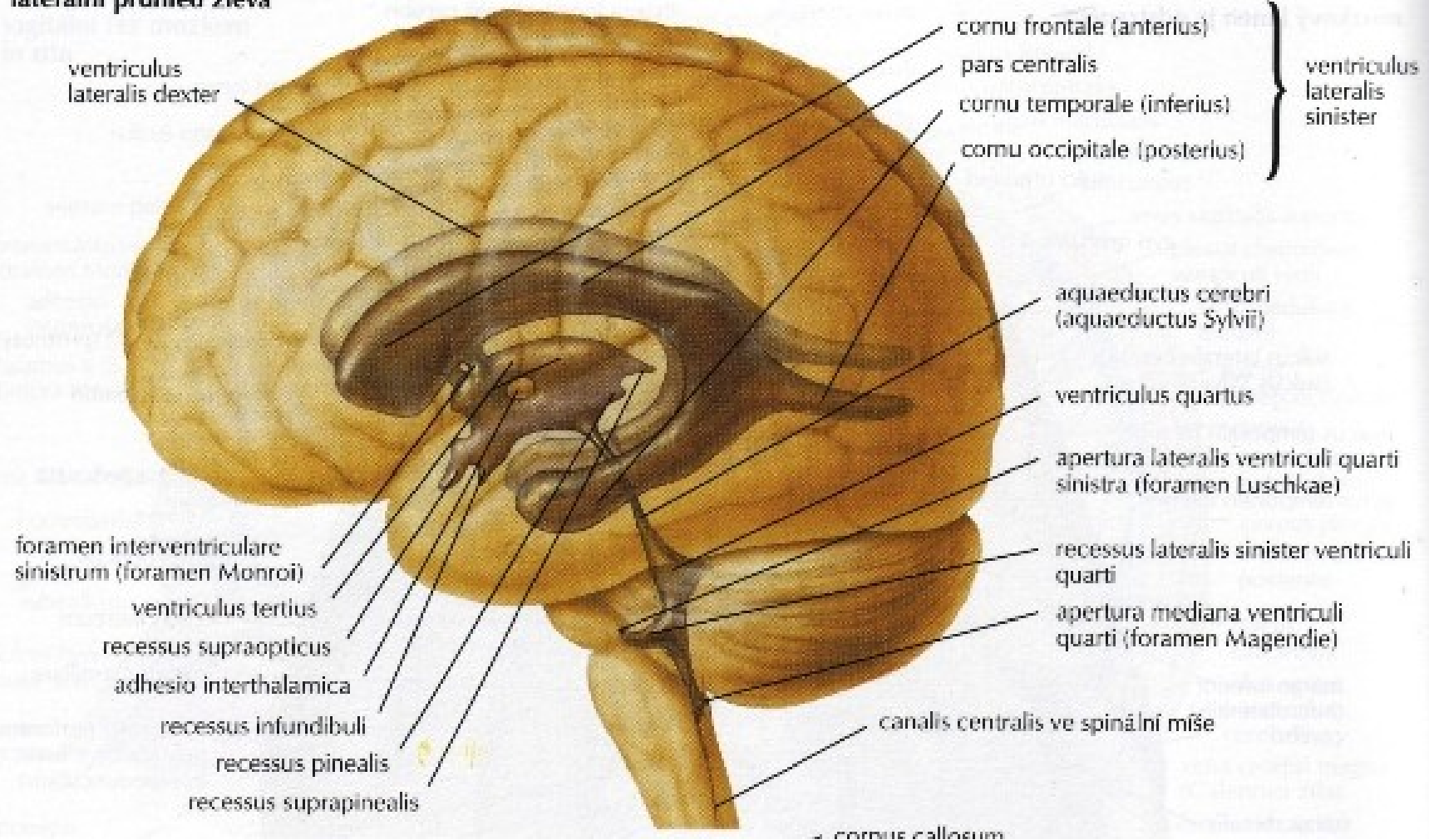
pars centralis

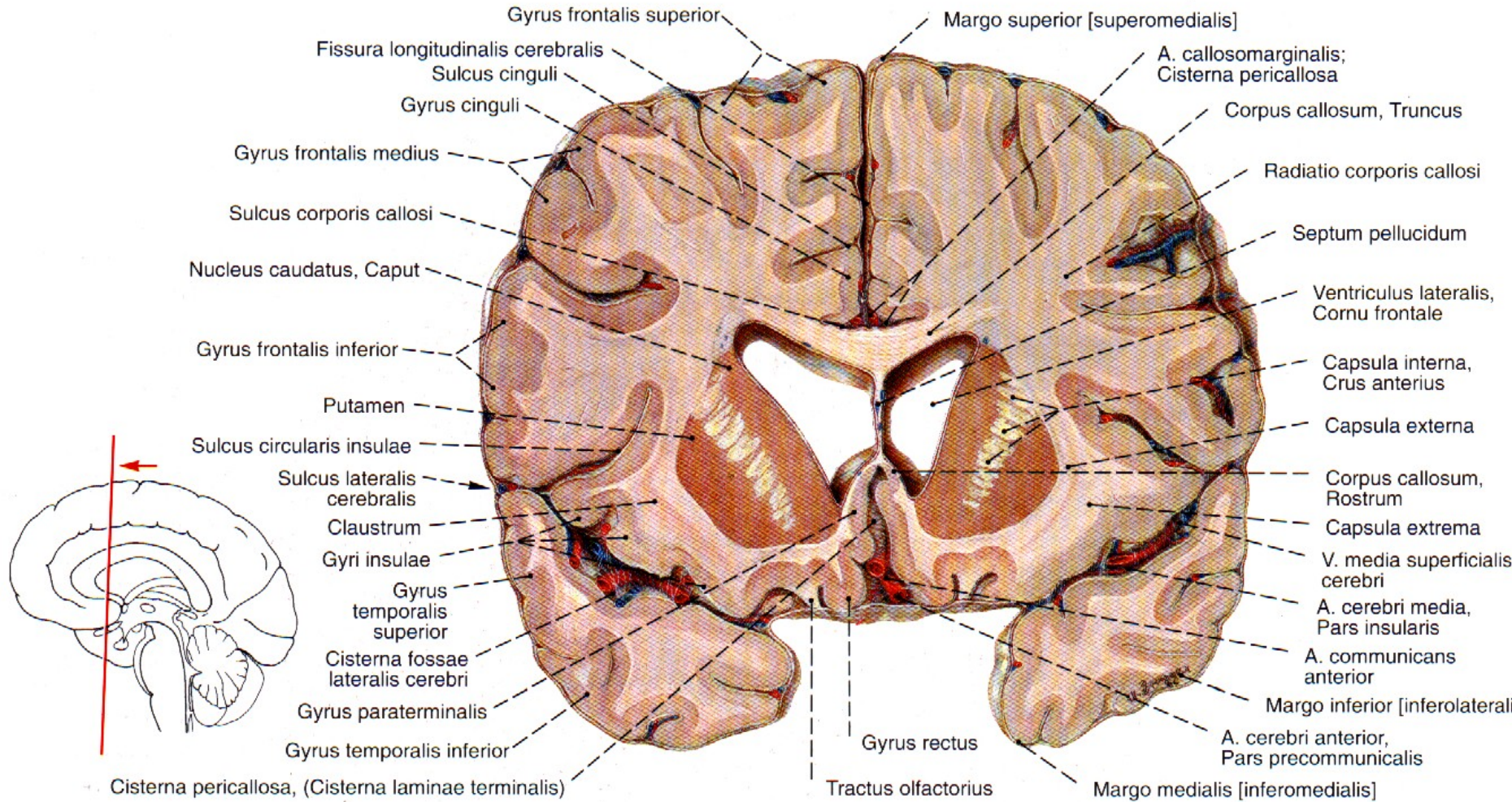
cornu occipitale

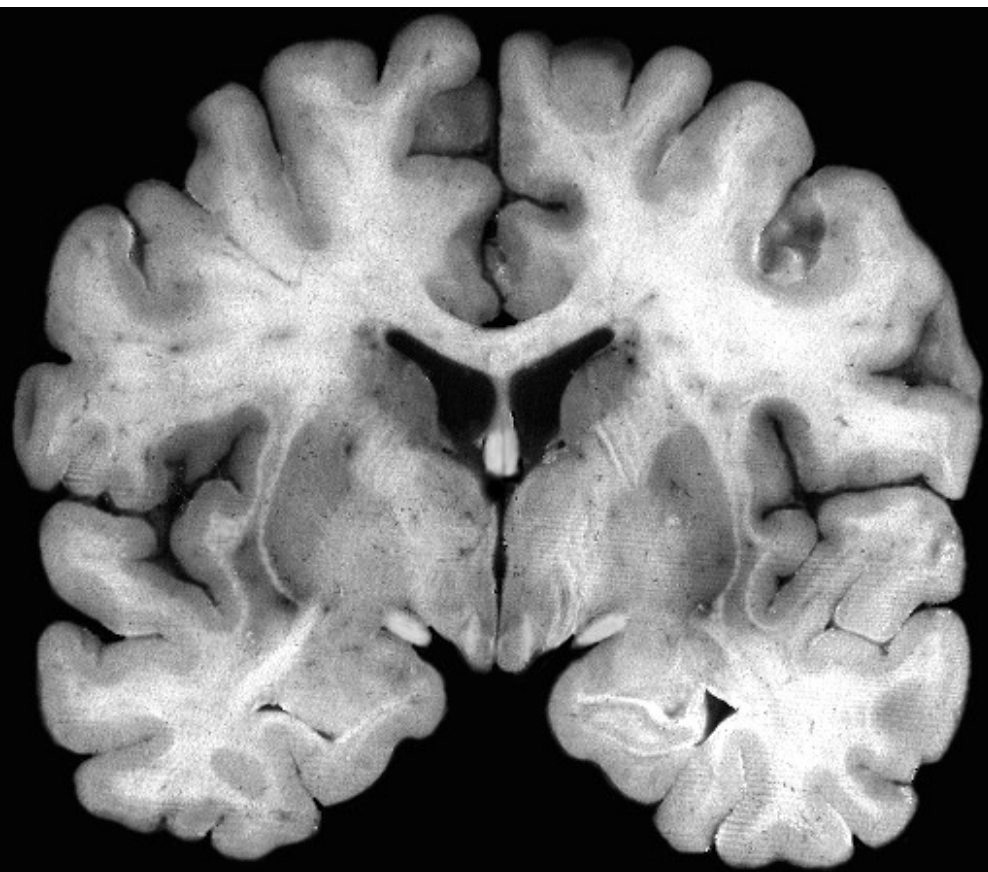
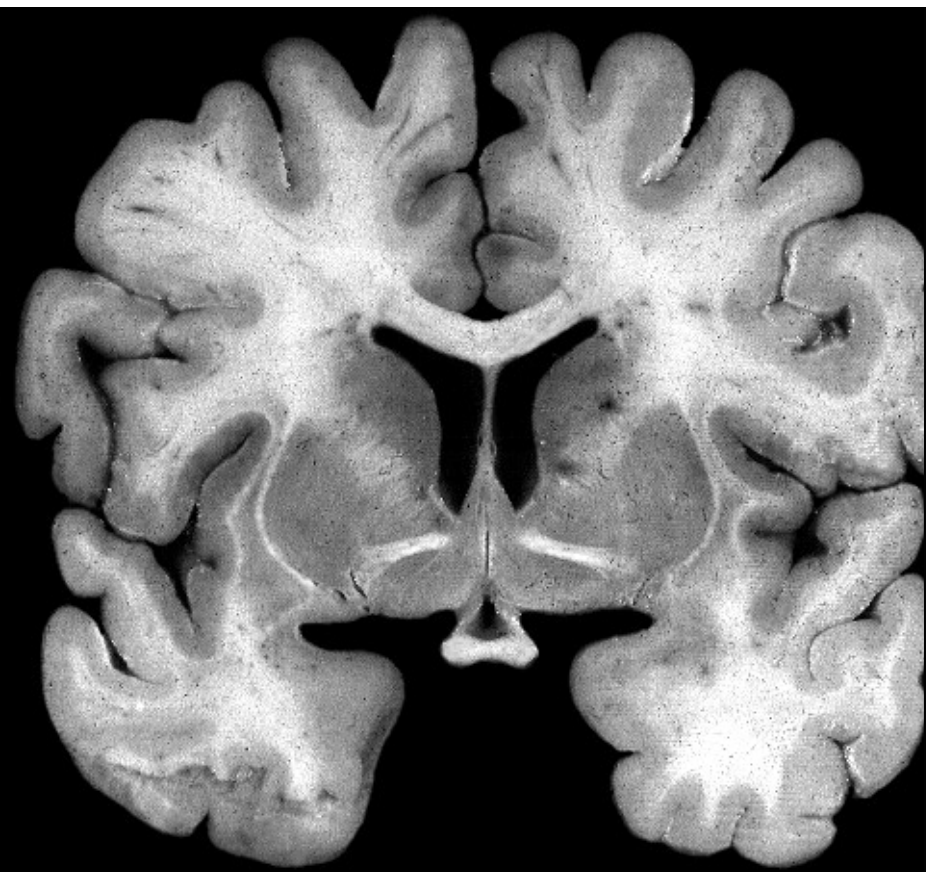
cornu temporale

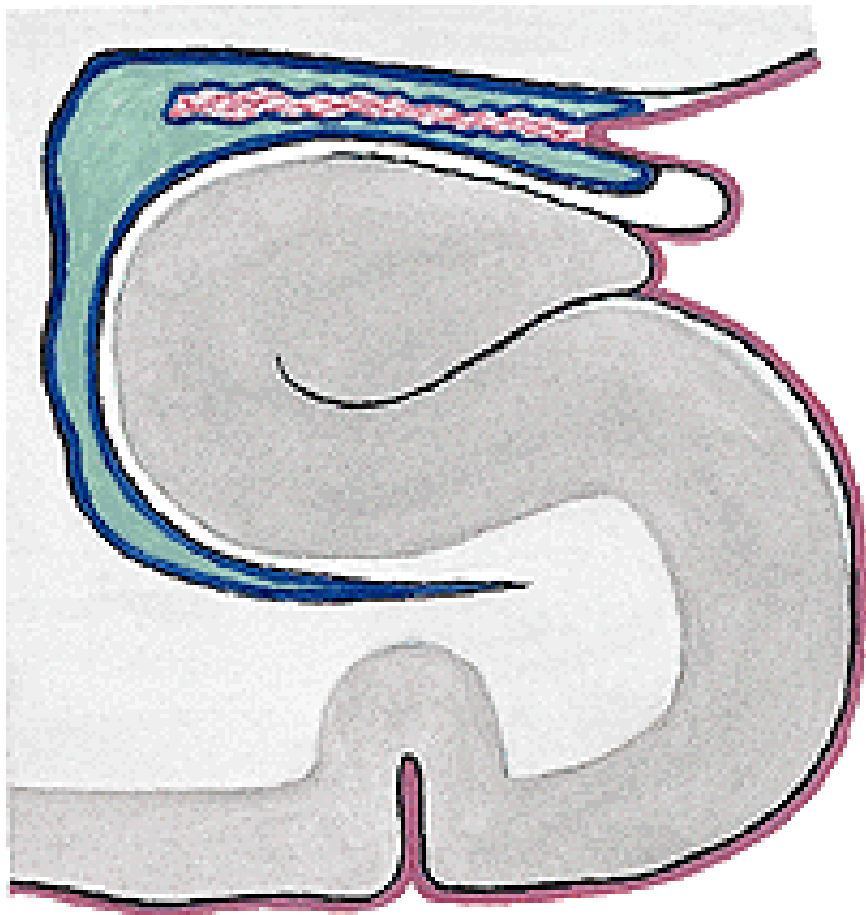
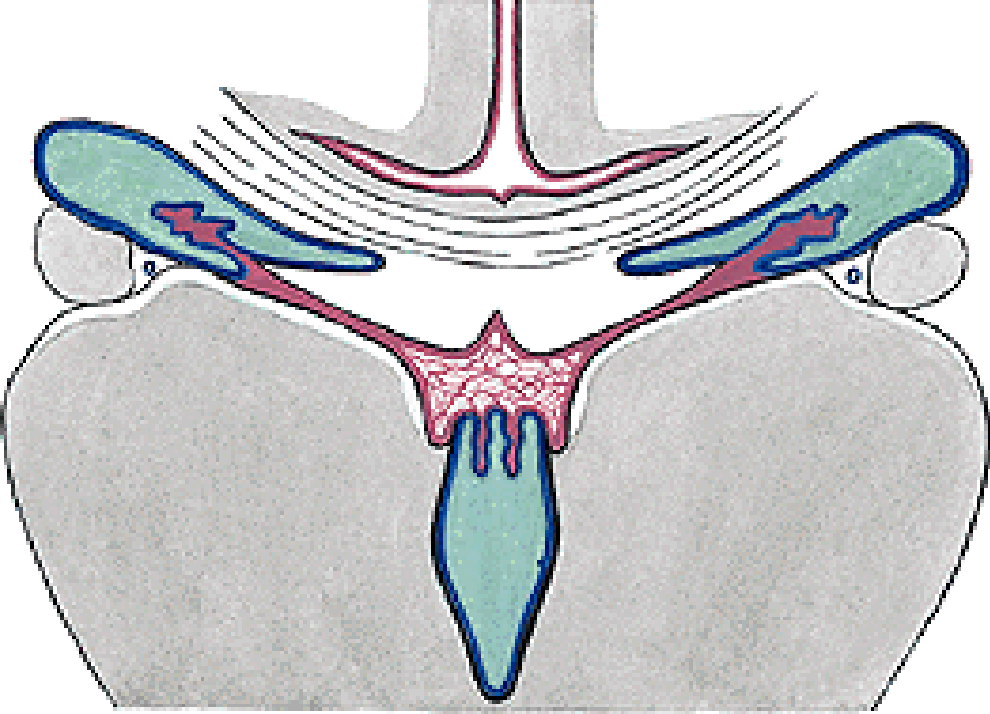


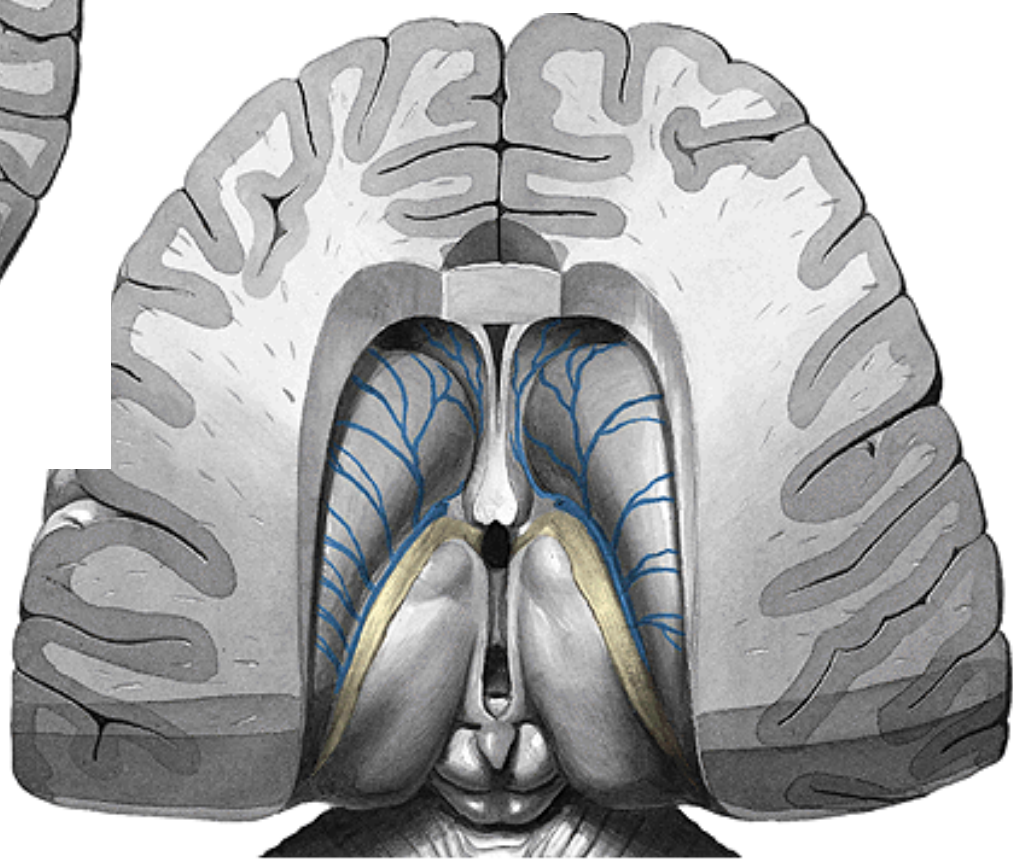
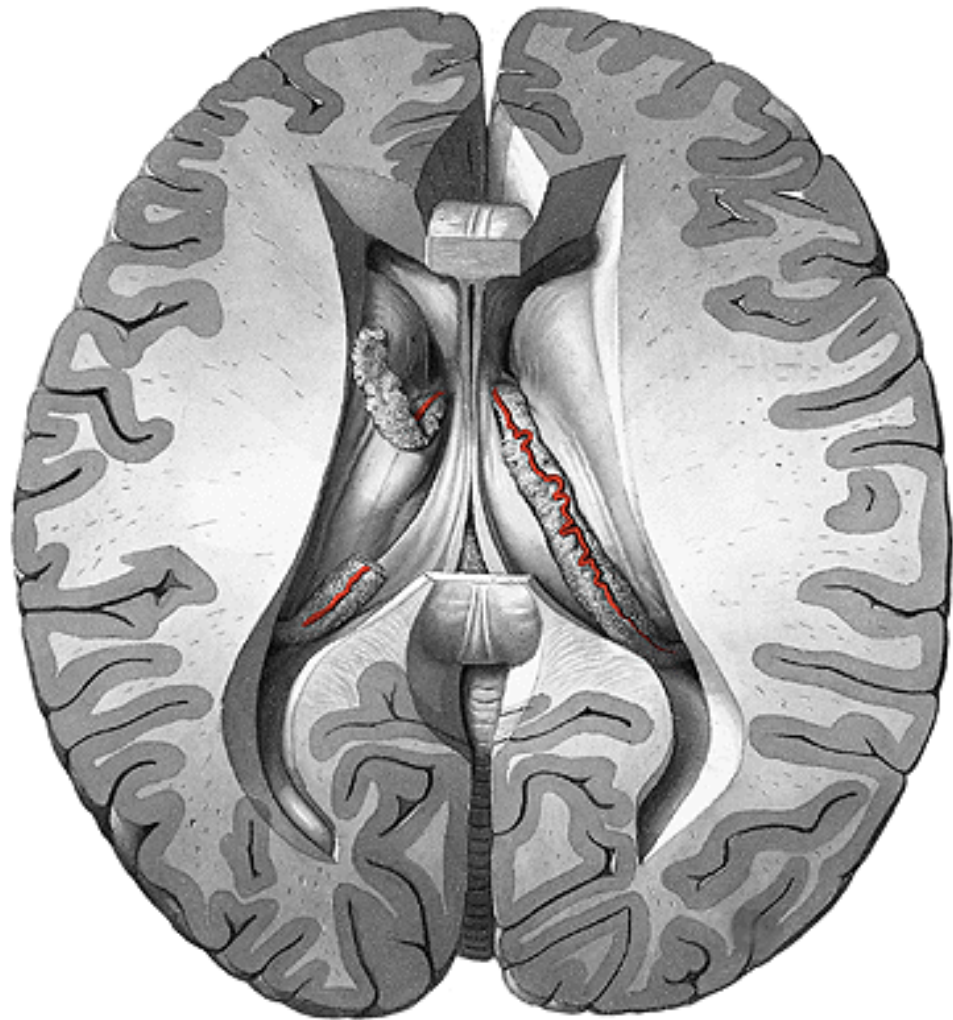
laterální průhled zleva

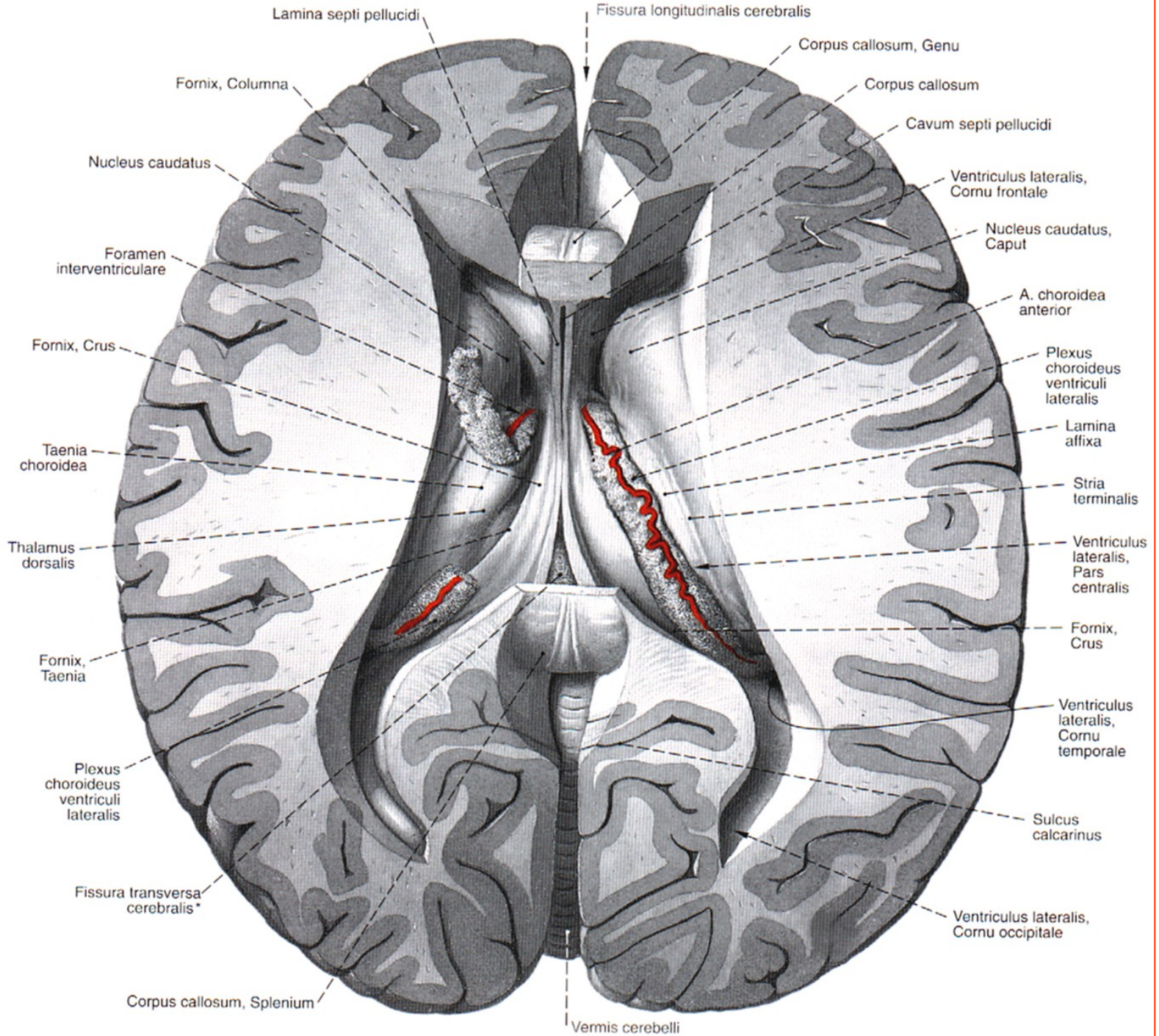


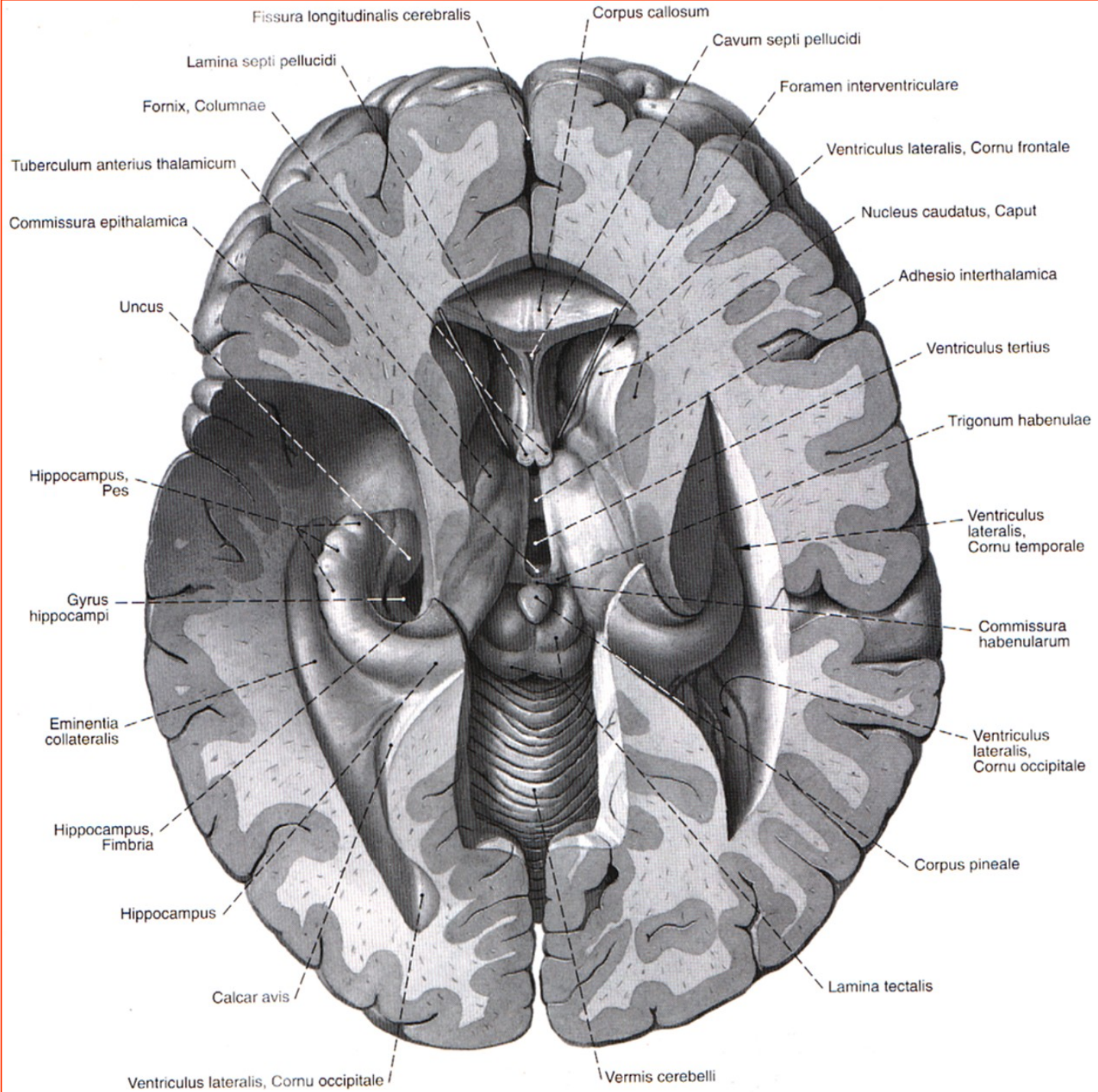


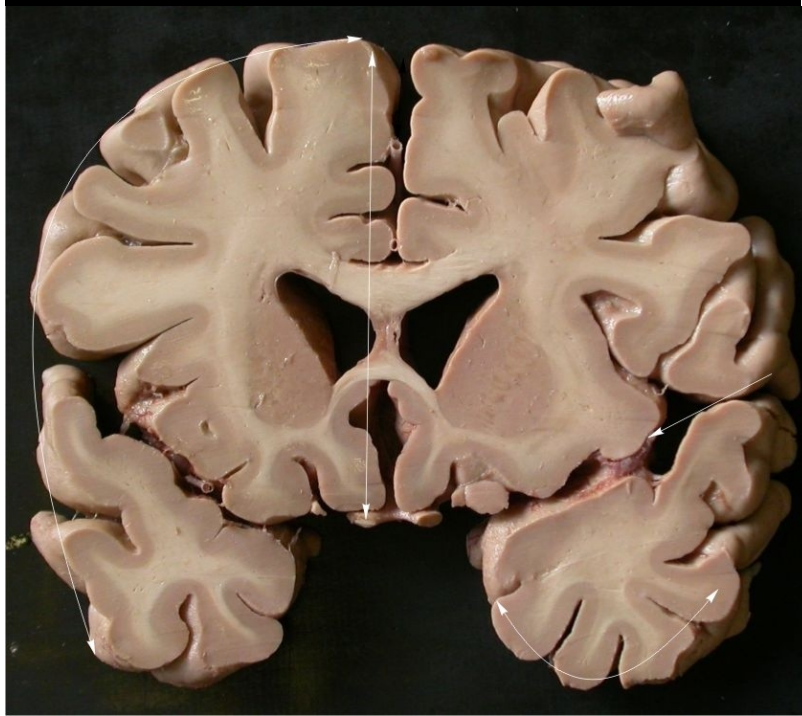
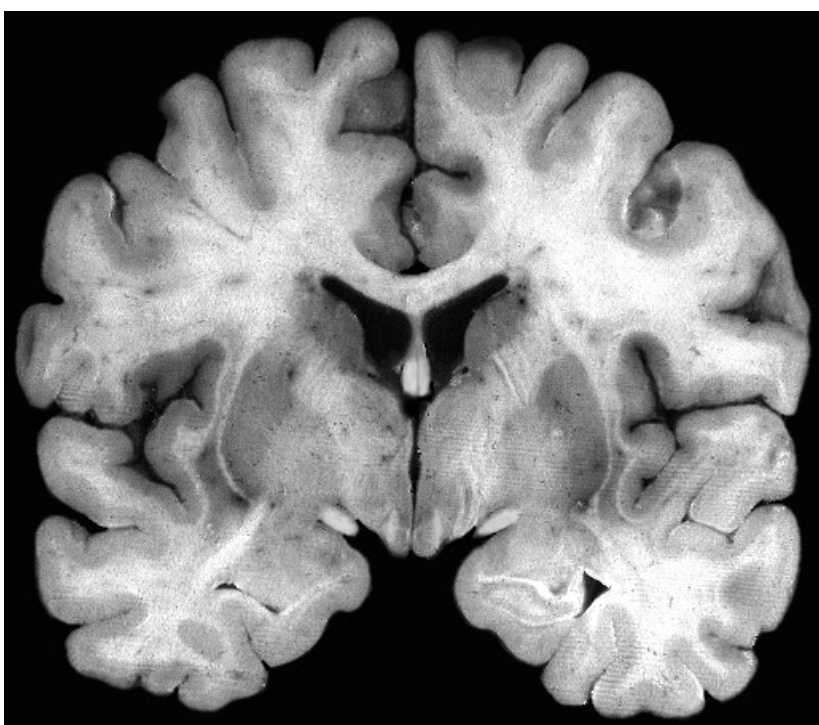
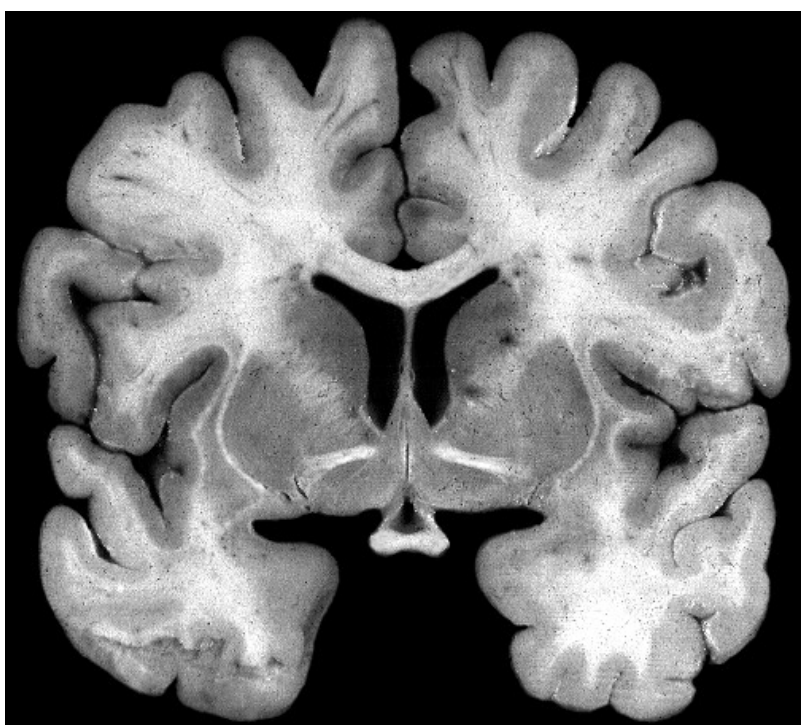




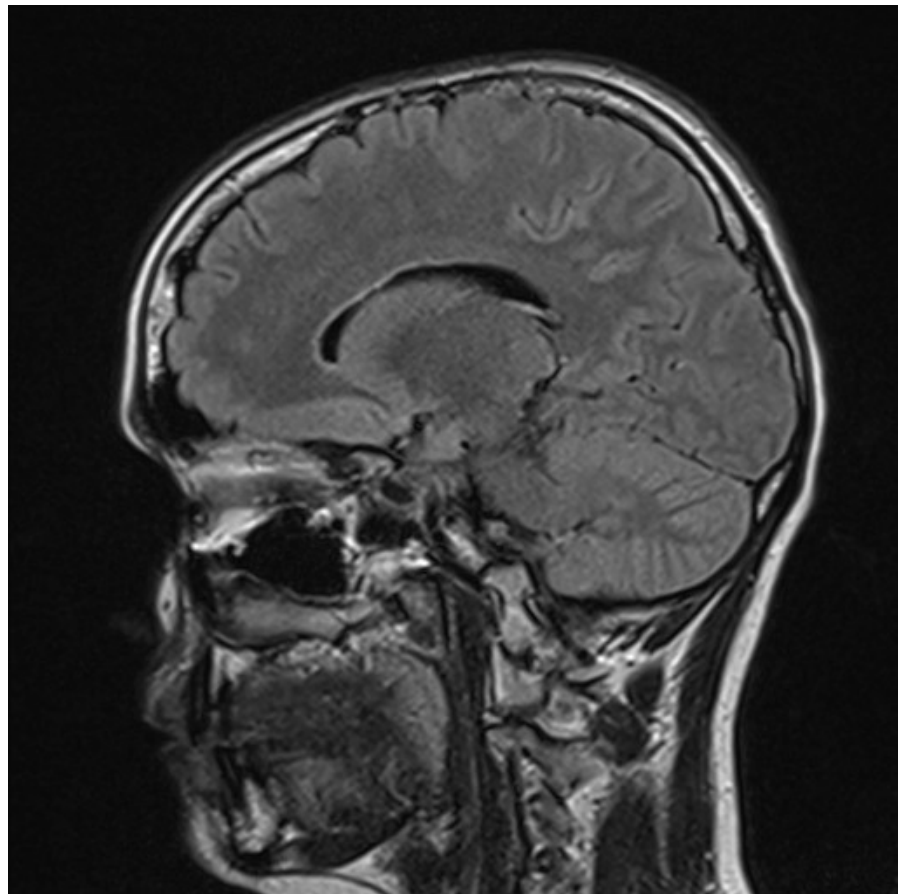
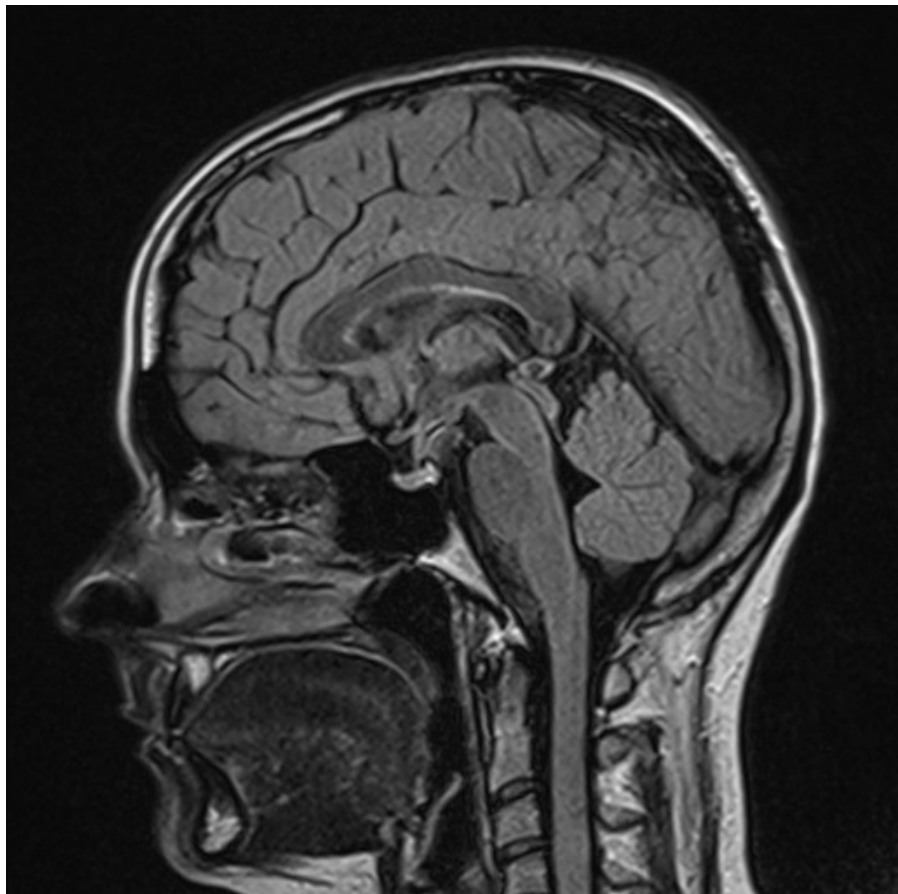


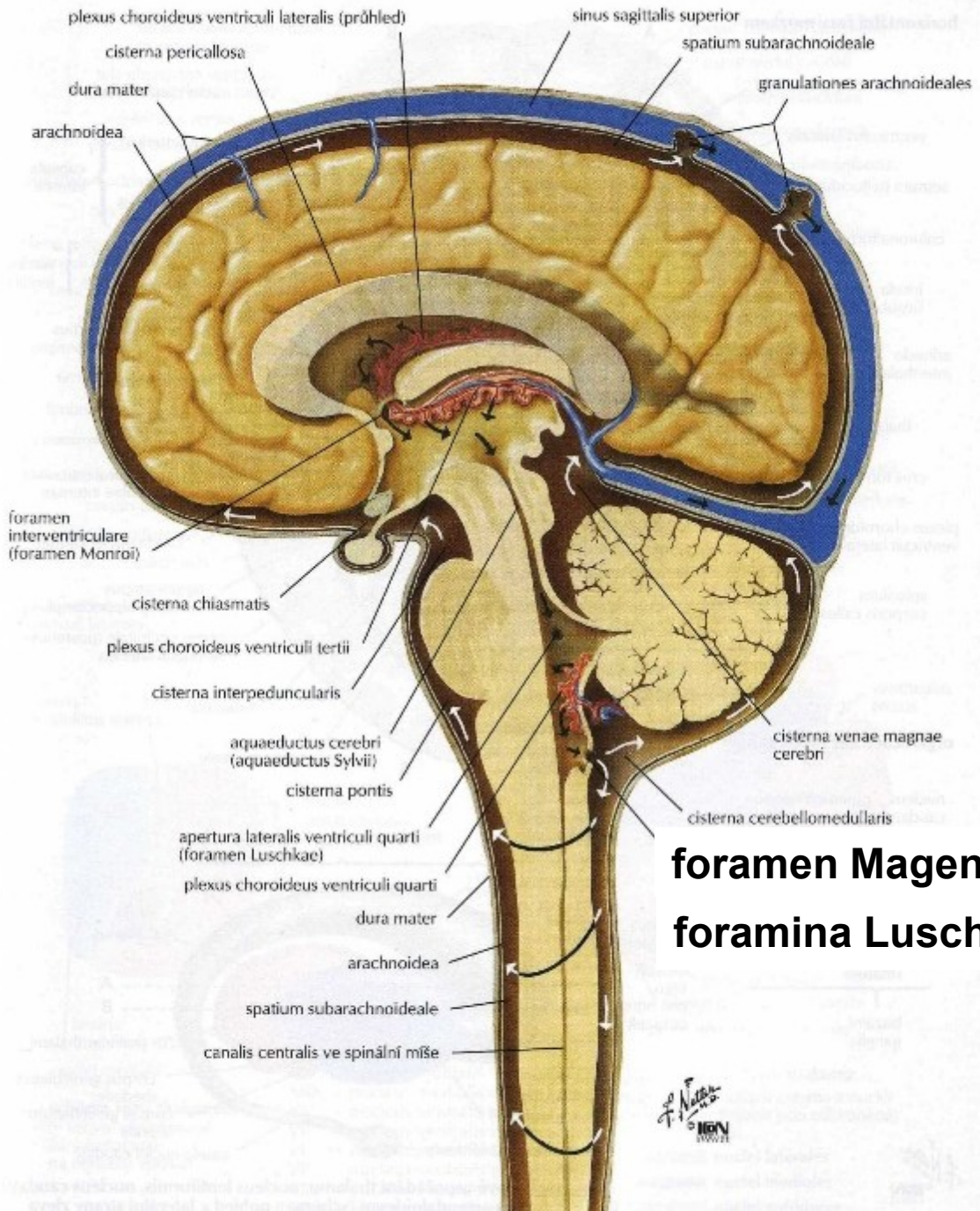






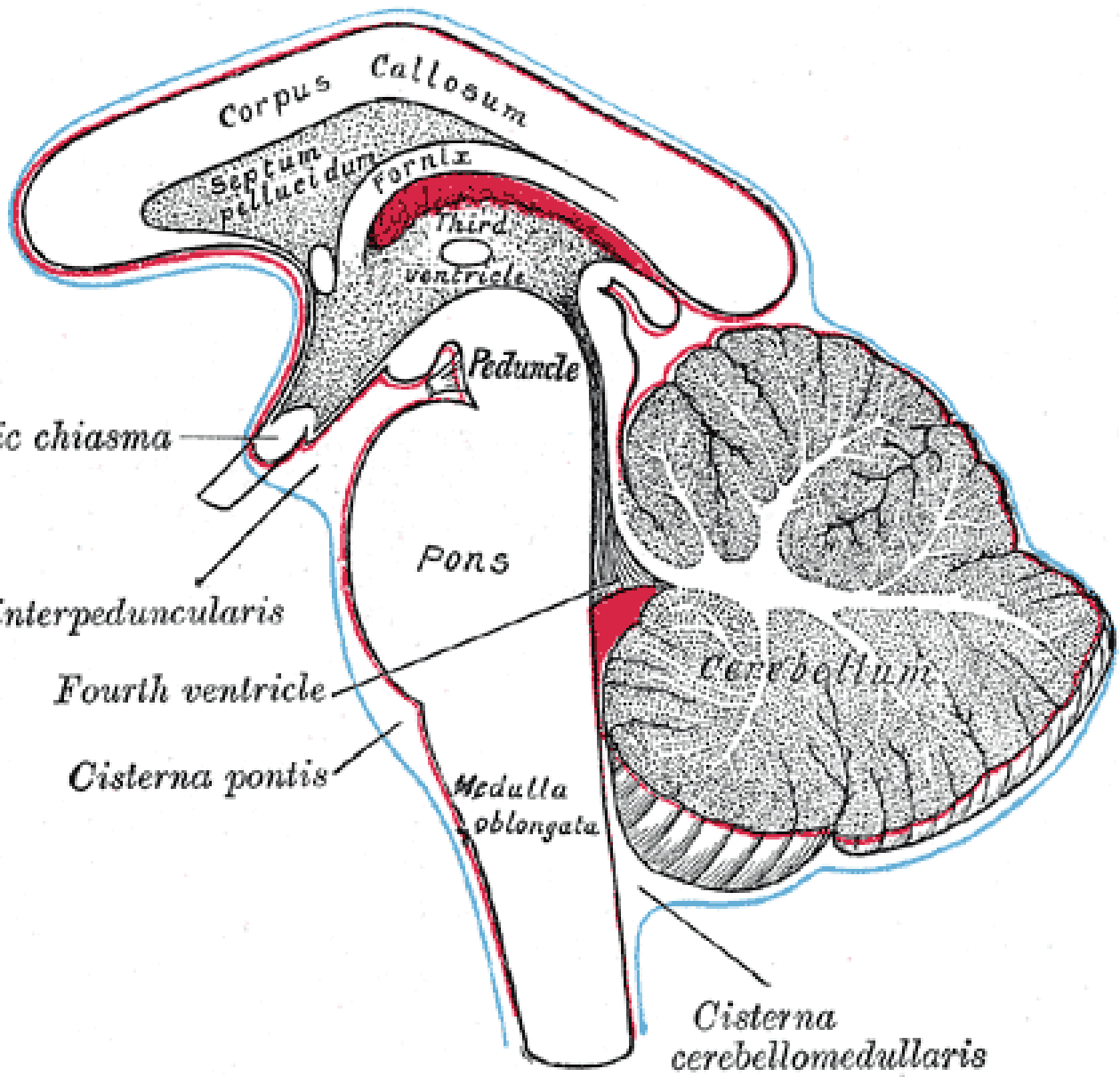
CT





foramen Magendie
foramina Luschkae

F. Netter
 M.D.
 © 1989
 W.B. Saunders



Corpus Callosum

Septum pellucidum

Fornix

Third ventricle

Peduncle

Optic chiasma

Pons

Cisterna interpeduncularis

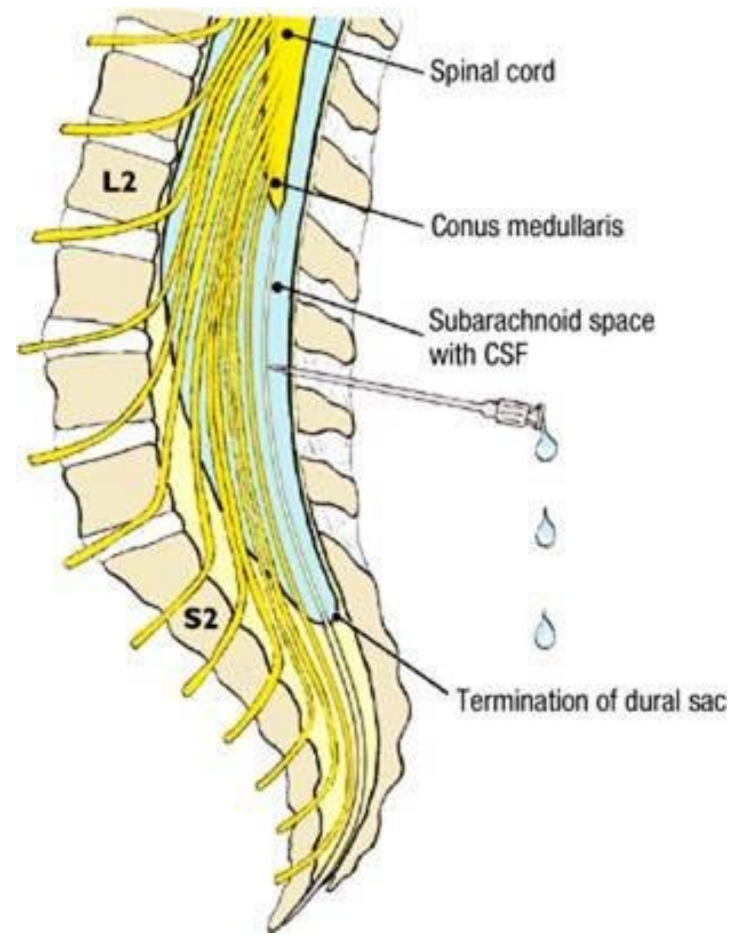
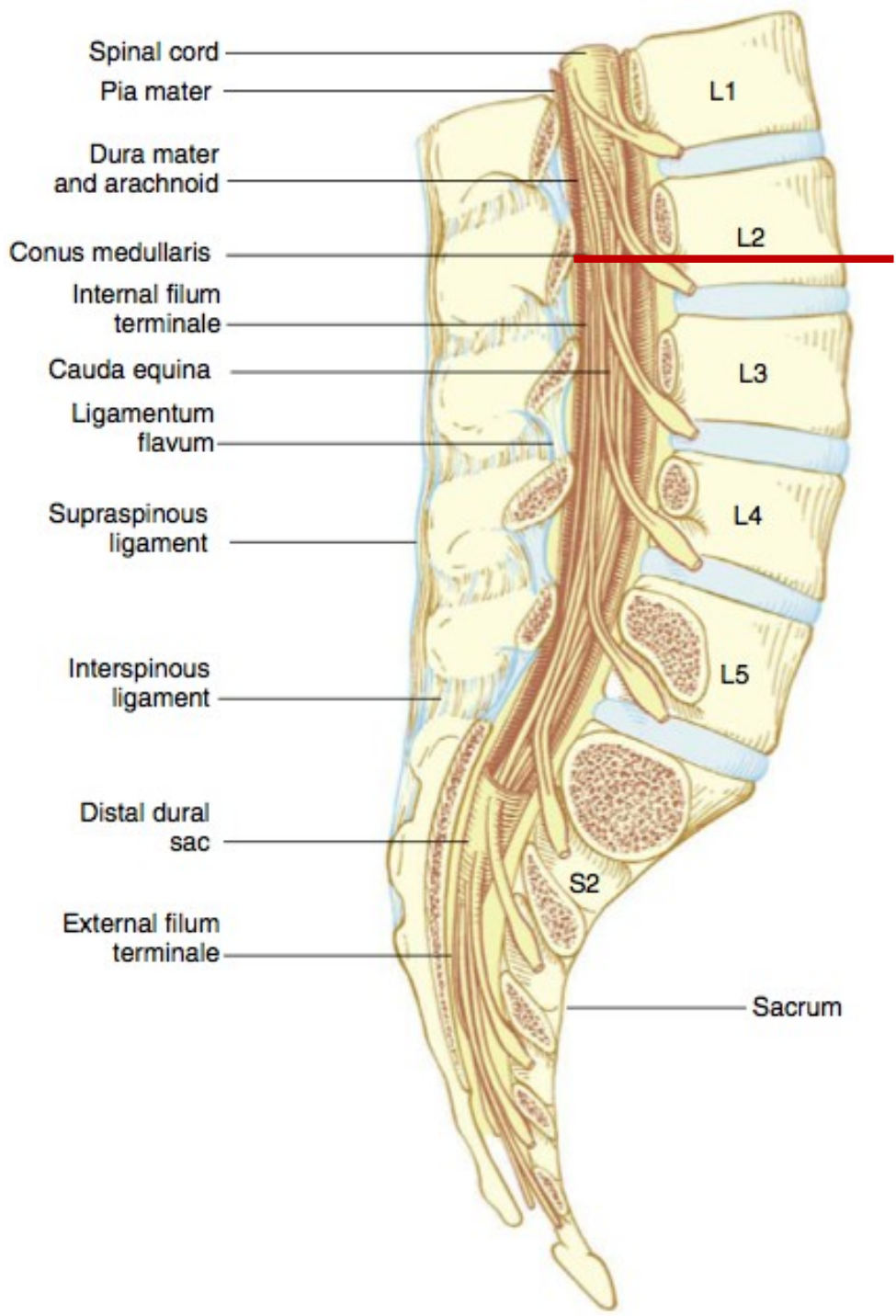
Fourth ventricle

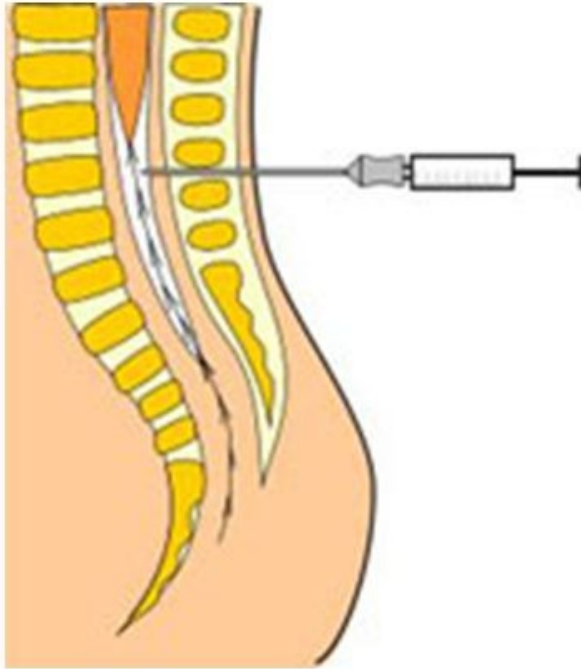
Cisterna pontis

Medulla oblongata

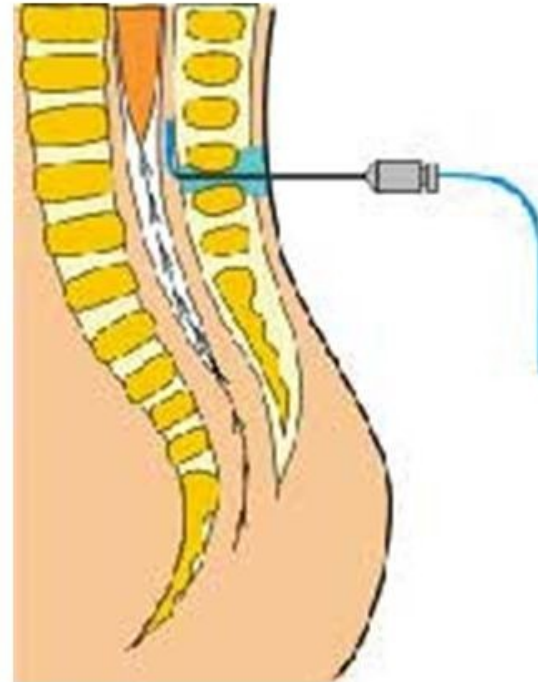
Cerebellum

Cisterna cerebellomedullaris

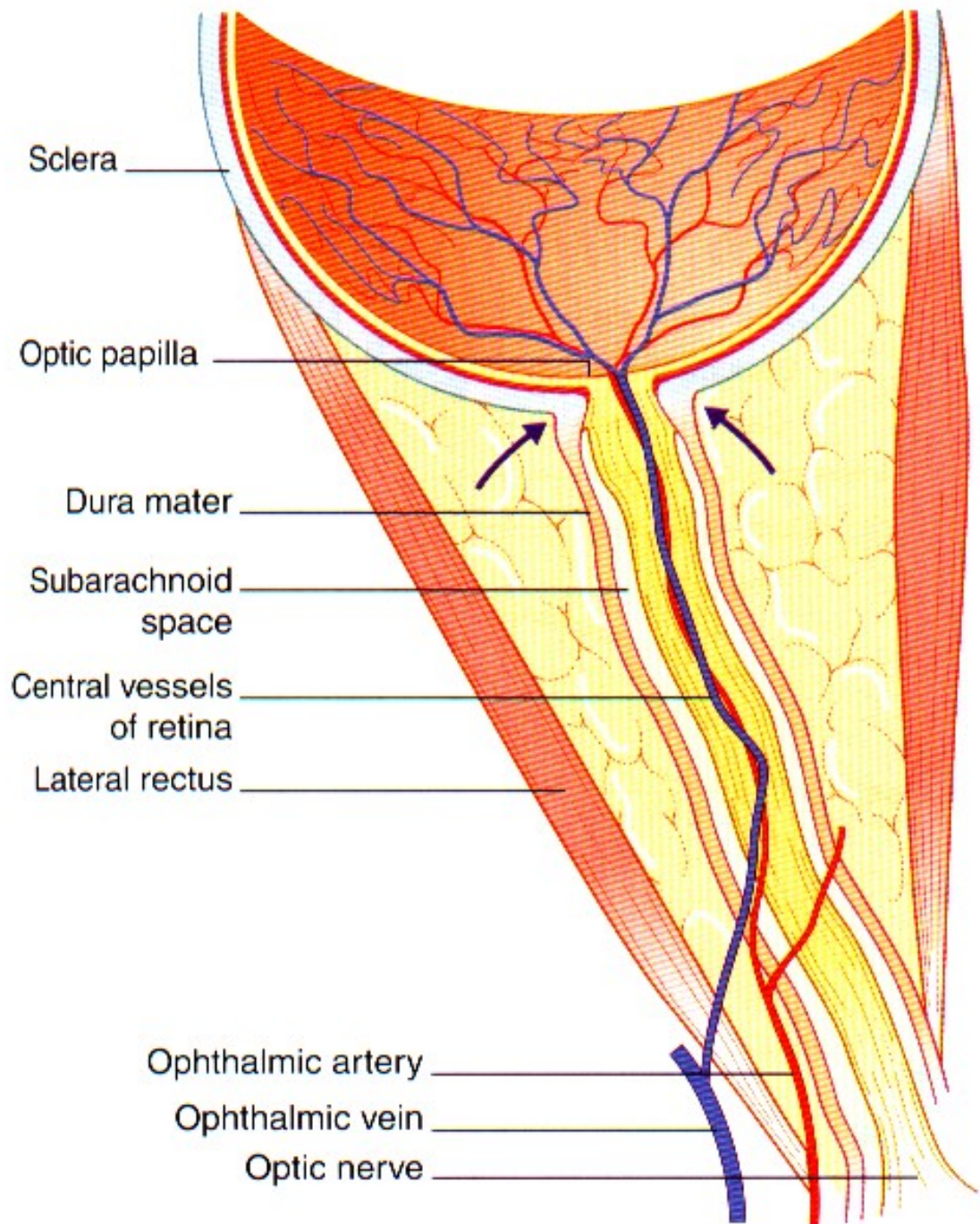




Subarachnoid (spinal) block



Epidural administration (anaesthesia)



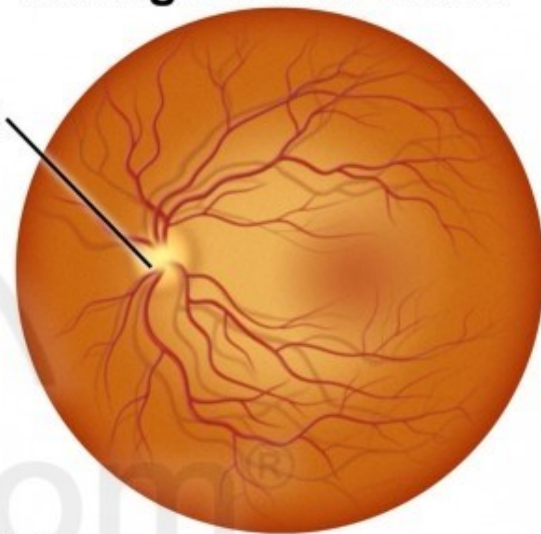
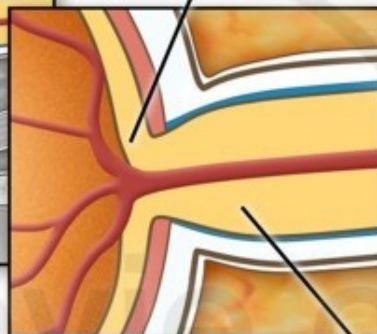
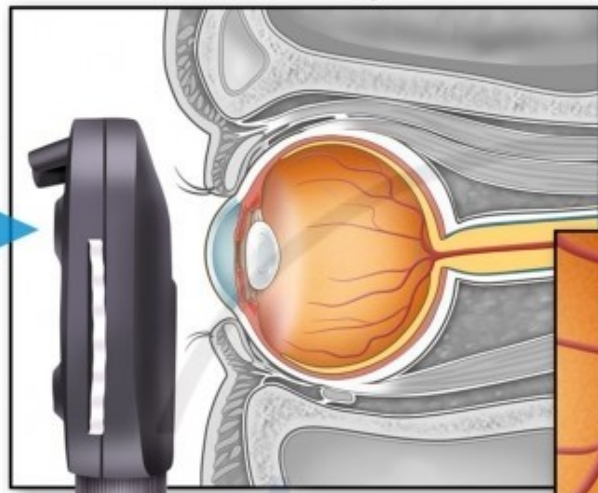
Increased pressure of CSF alongside of optic nerve – compression of v. centralis retinae – **Papilledema (papilloedema)**

Fundus Exam - Normal vs. Papilledema

Normal eye

Normal retina as seen during fundus exam

Physician looks through ophthalmoscope

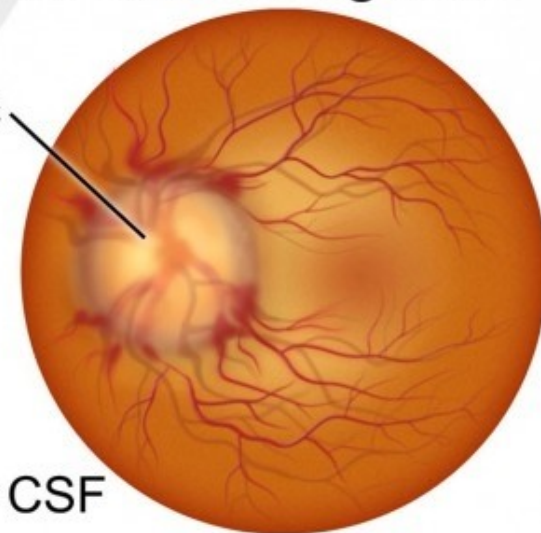
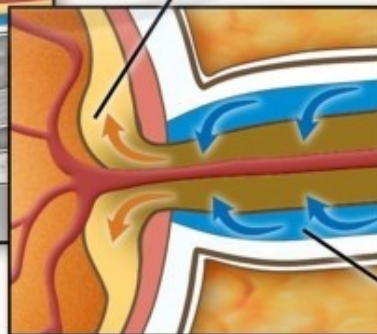
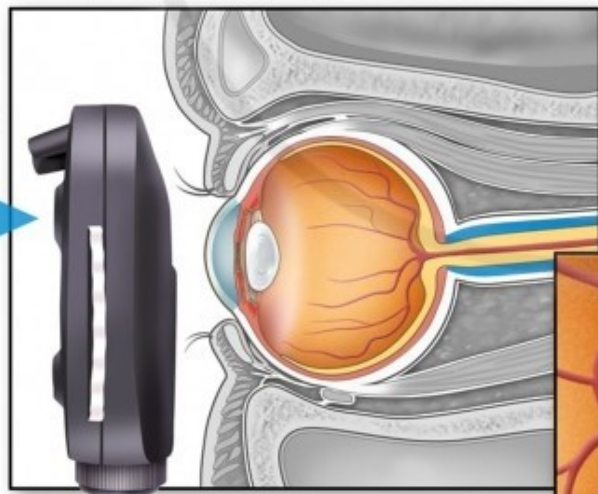


Optic nerve

Eye with papilledema

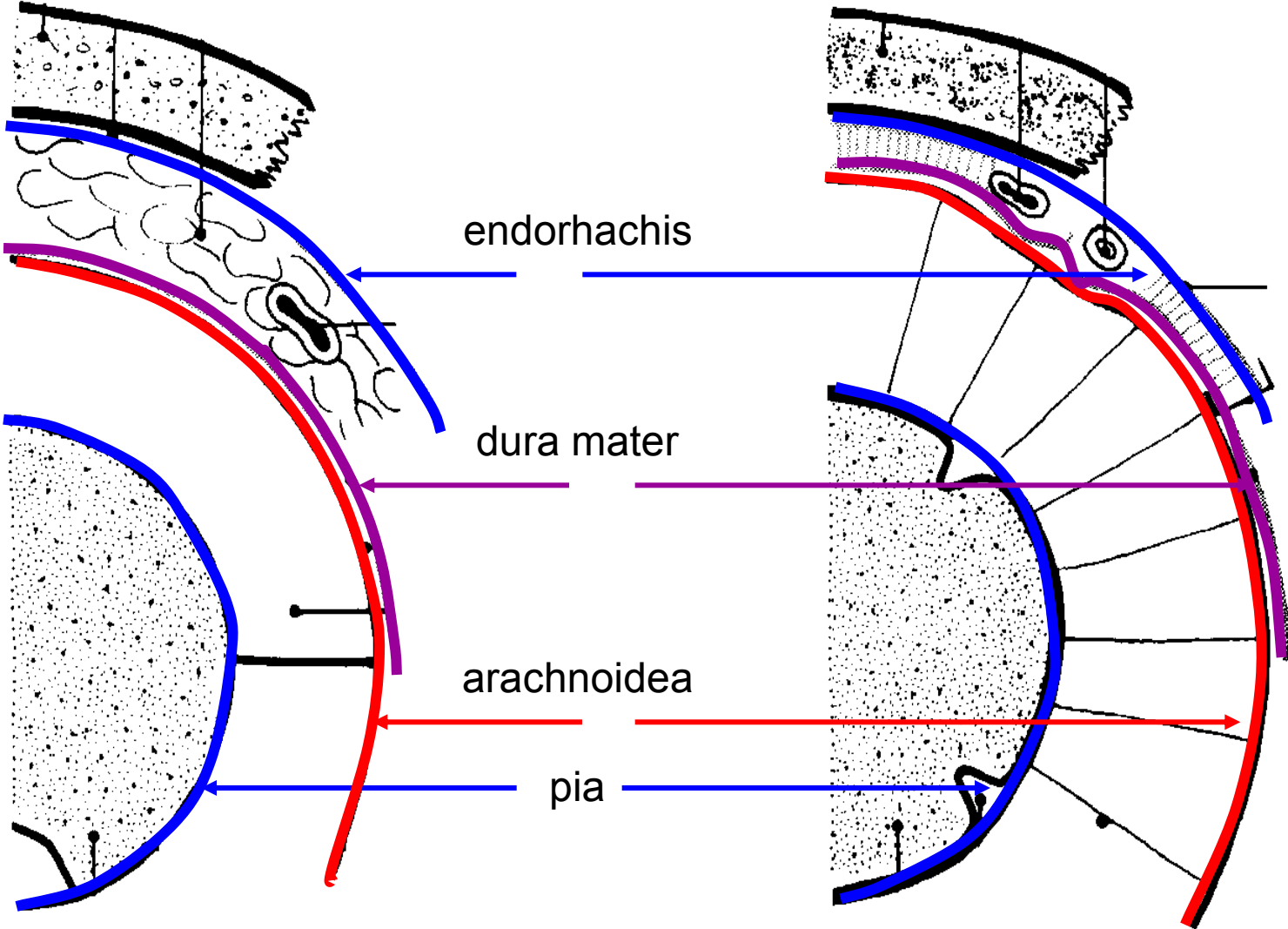
Retina with papilledema as seen during exam

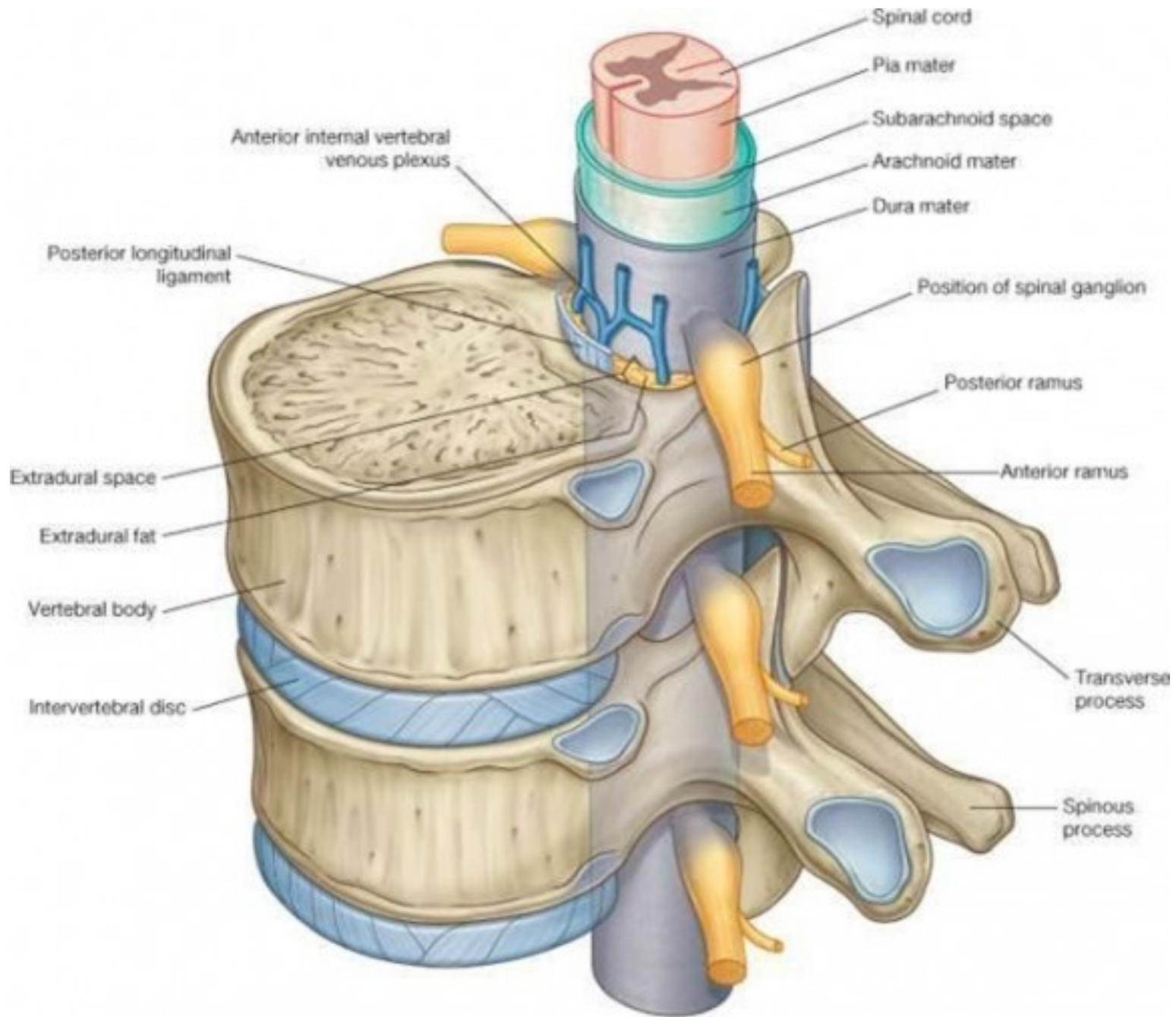
Physician looks through ophthalmoscope



CSF

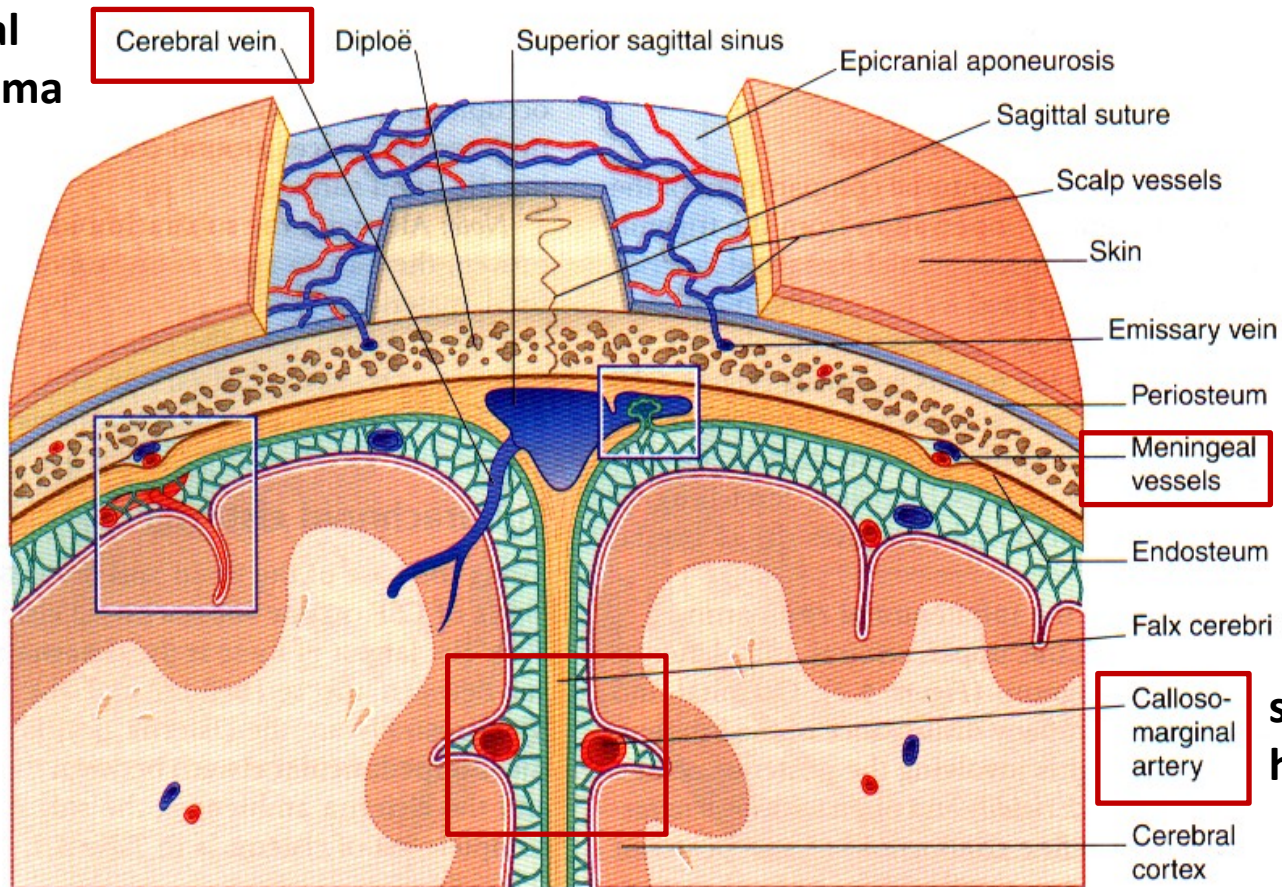
Meninges of CNS





**subdural
hematoma**

A



Cerebral vein

Diploë

Superior sagittal sinus

Epicranial aponeurosis

Sagittal suture

Scalp vessels

Skin

Emissary vein

Periosteum

Meningeal vessels

Endosteum

Falx cerebri

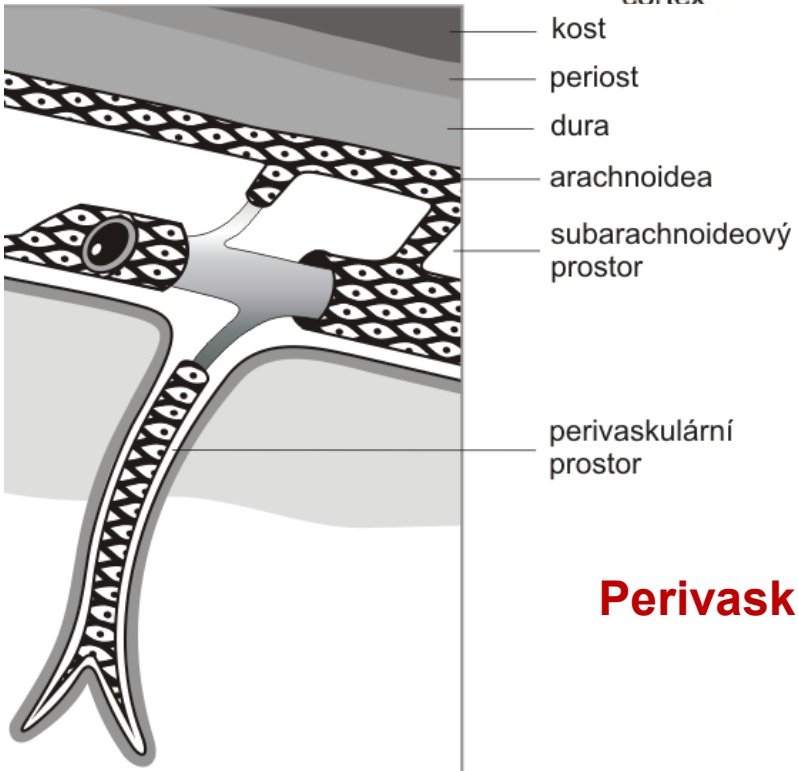
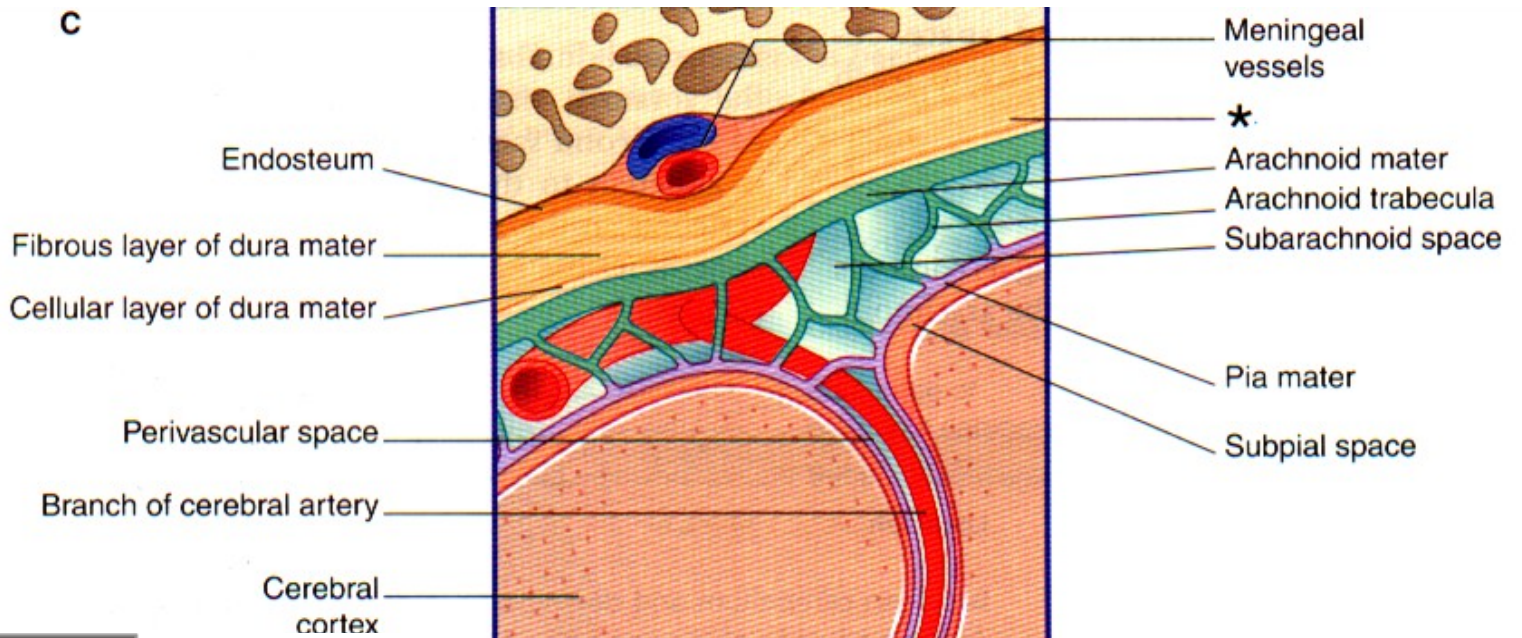
Callosomarginal artery

Cerebral cortex

**epidural
hematoma**

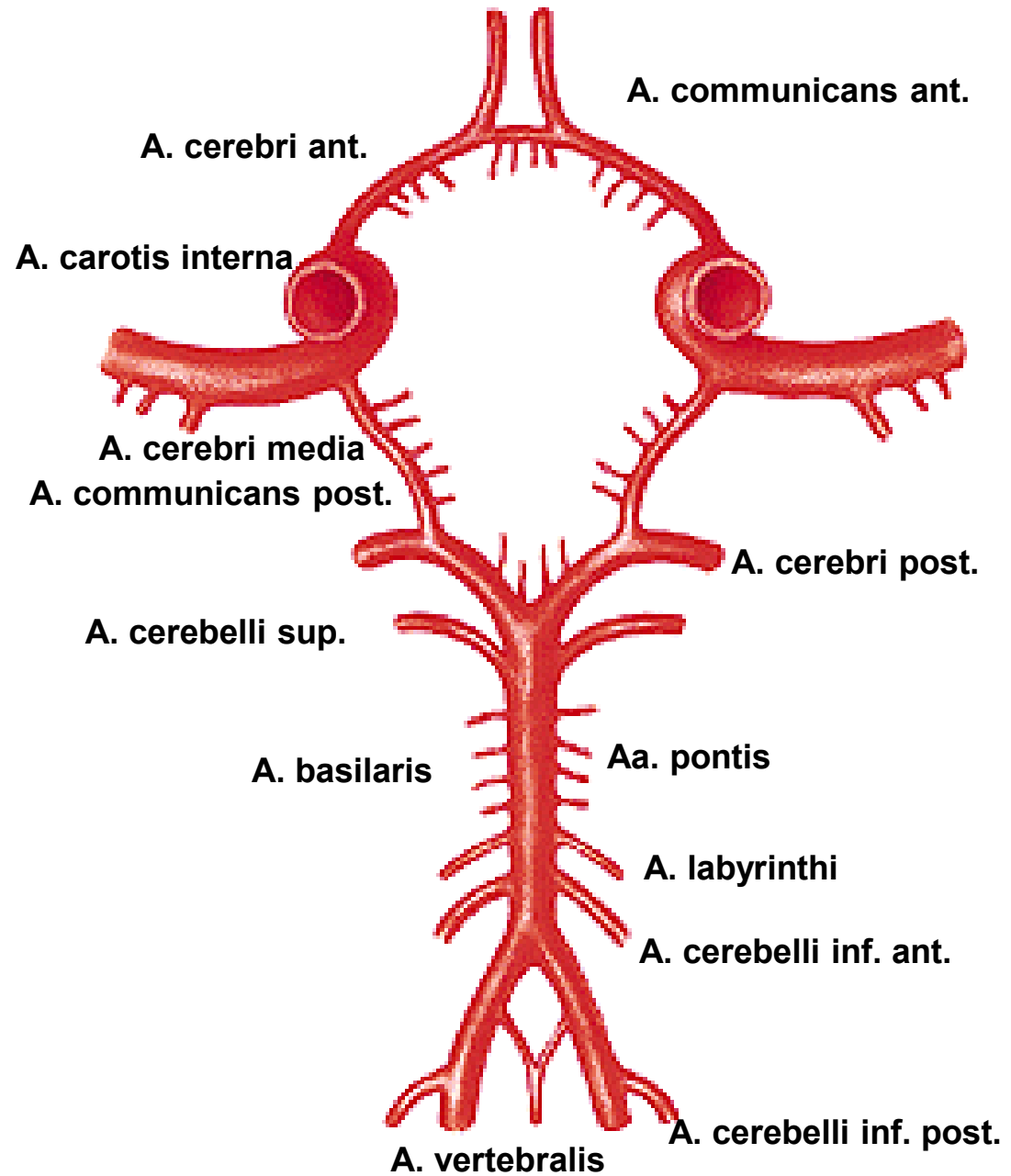
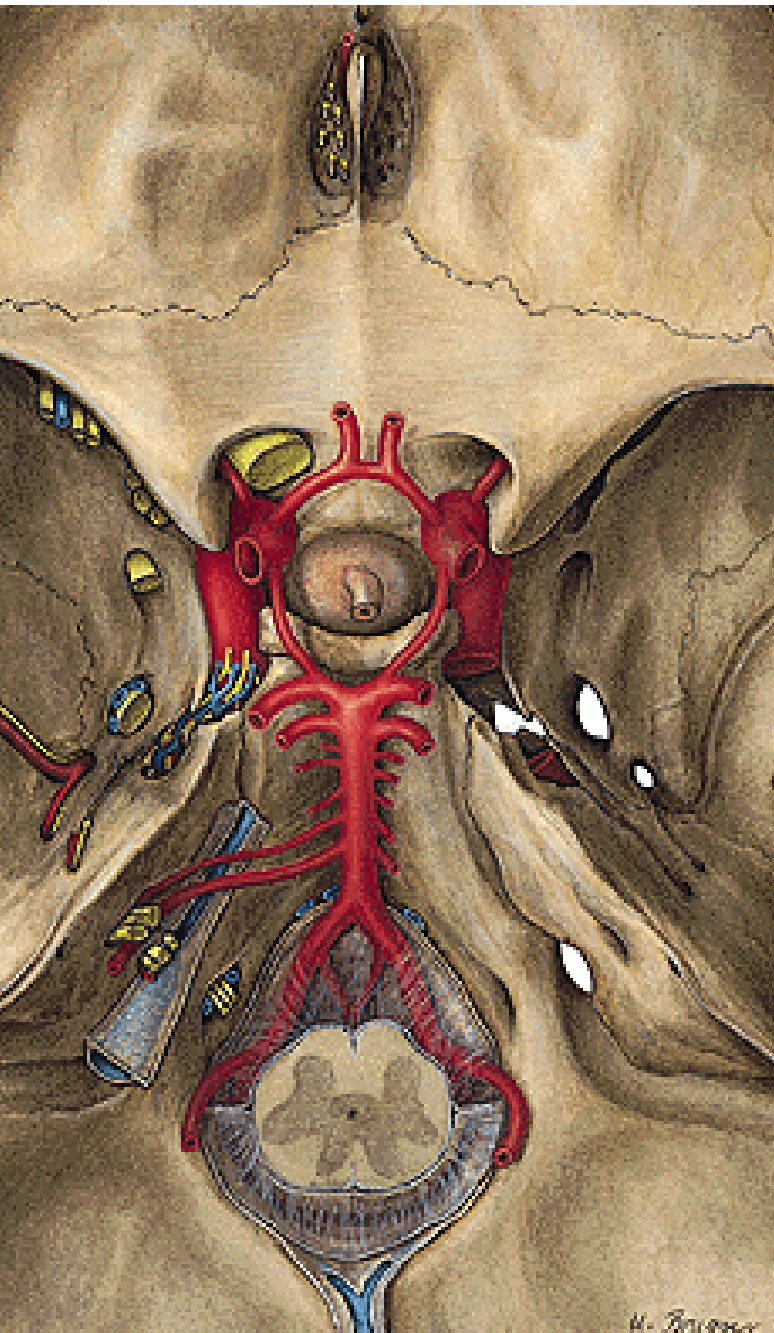
**subarachnoid
hematoma**

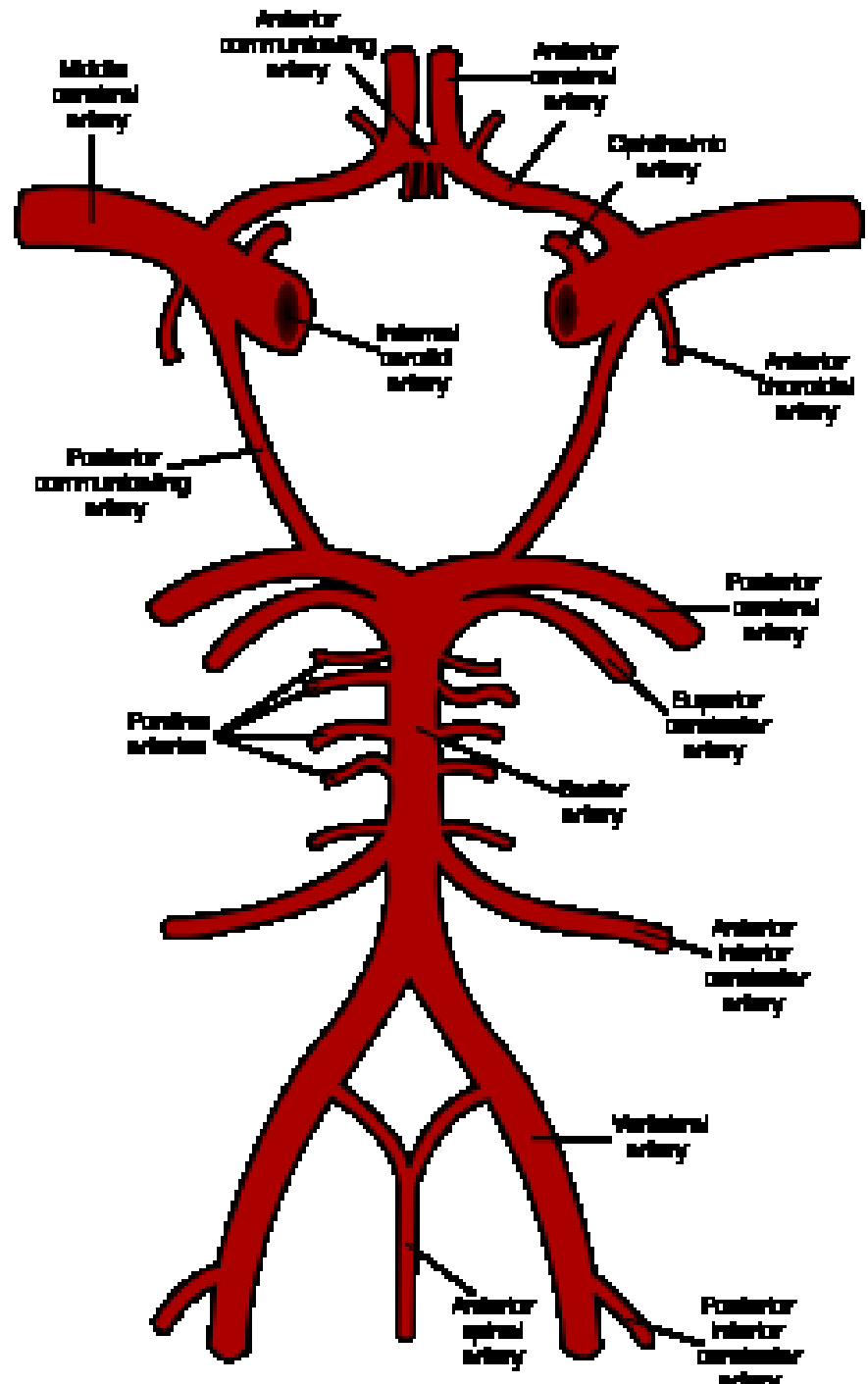
C

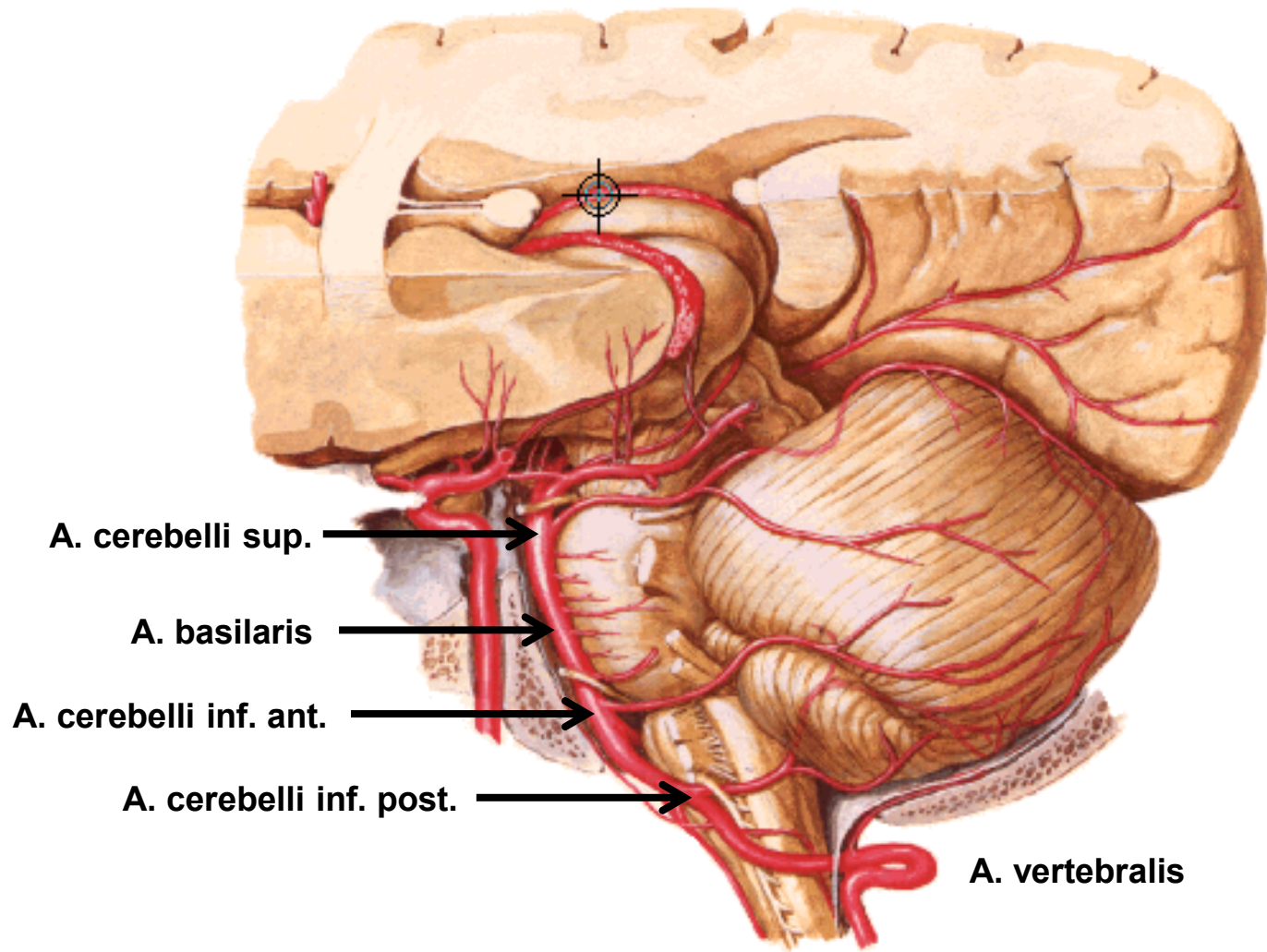


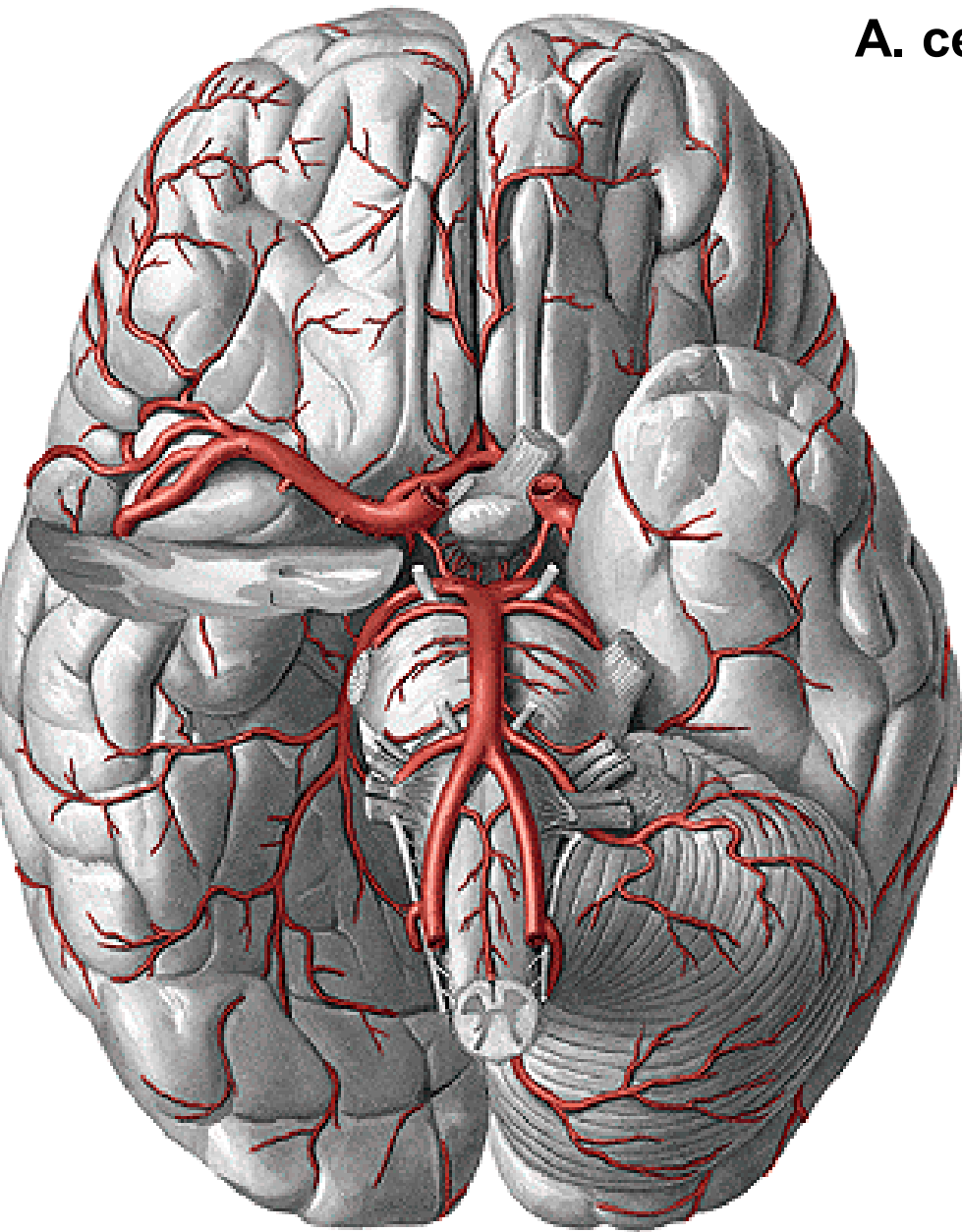
Perivaskular Robinn-Virchow's space

Circulus arteriosus cerebri (Willis)

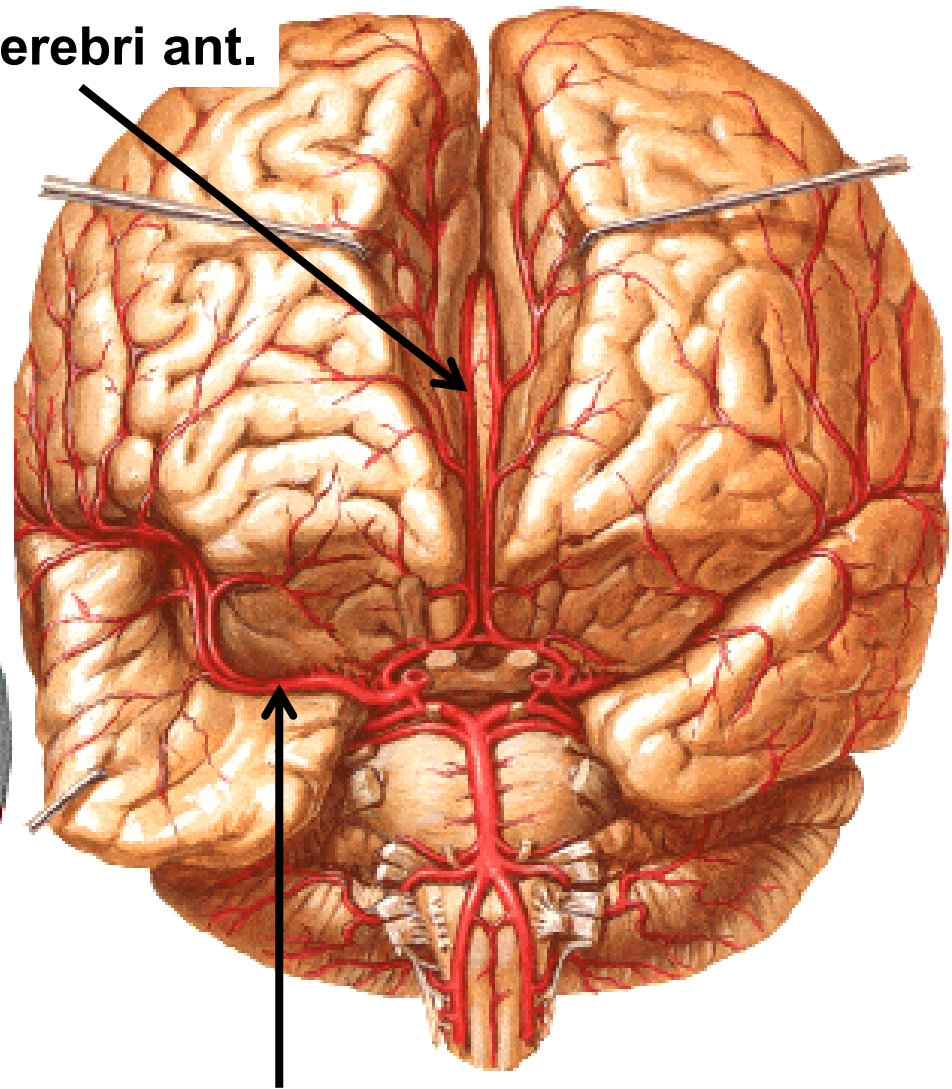




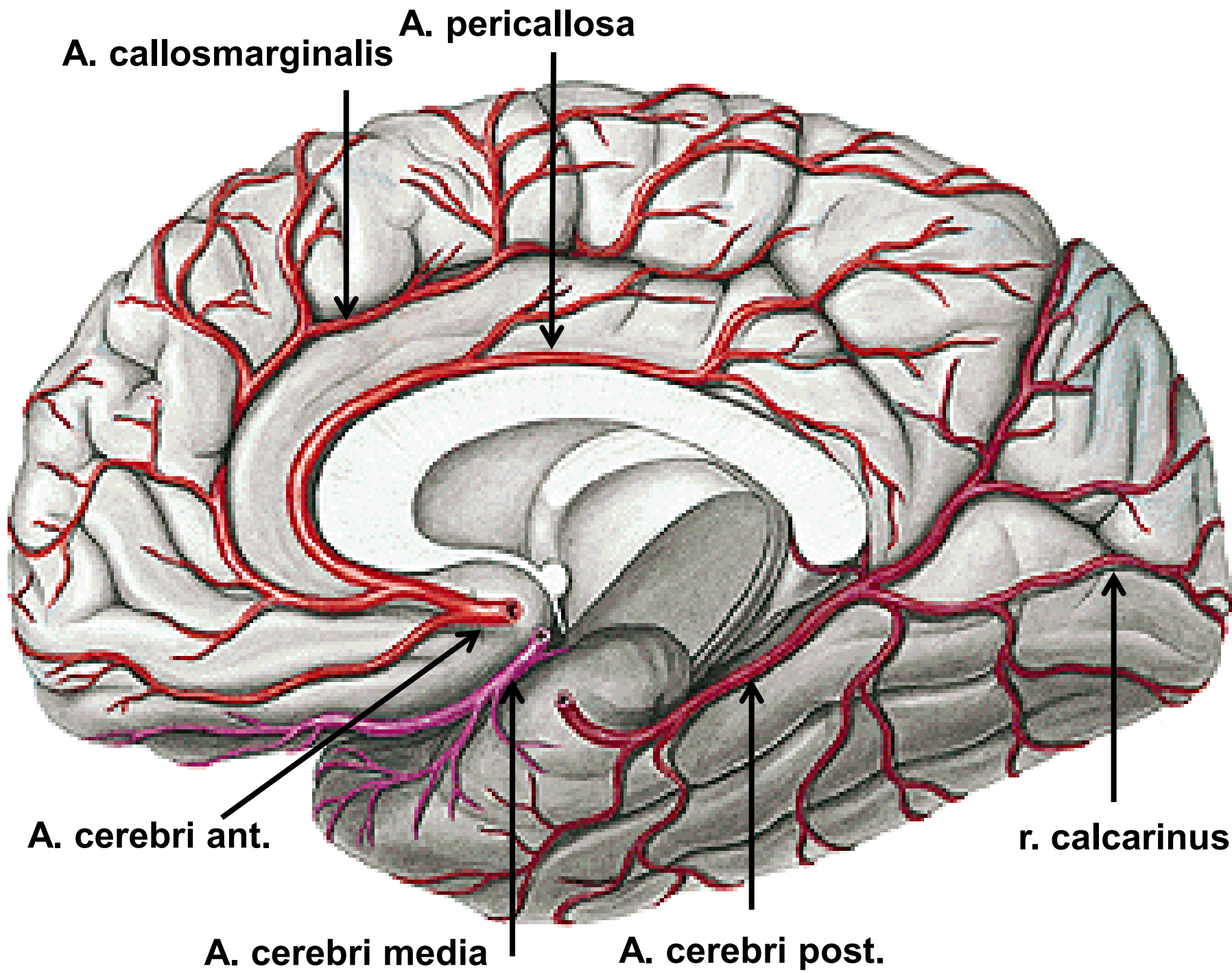




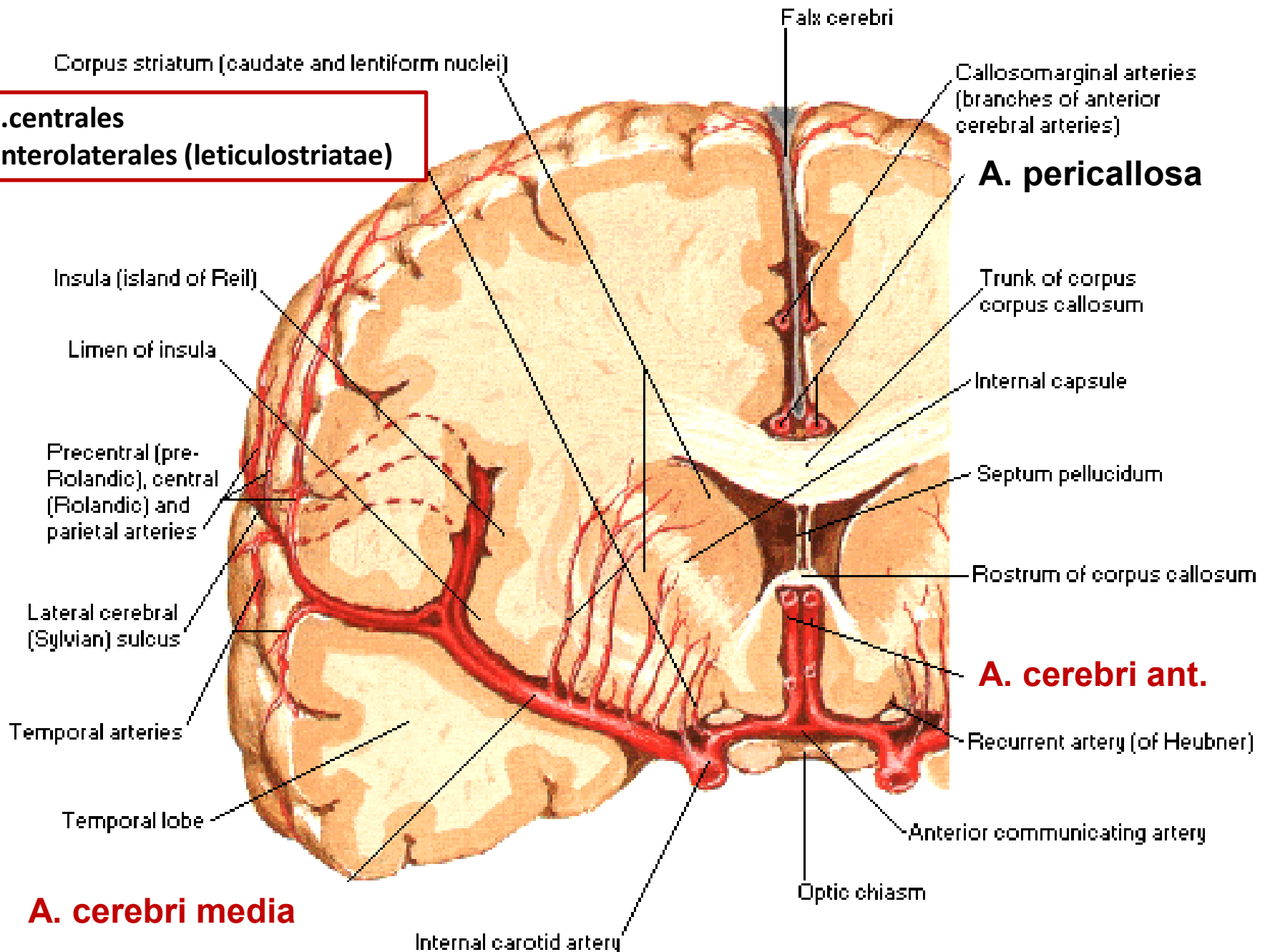
A. cerebri ant.



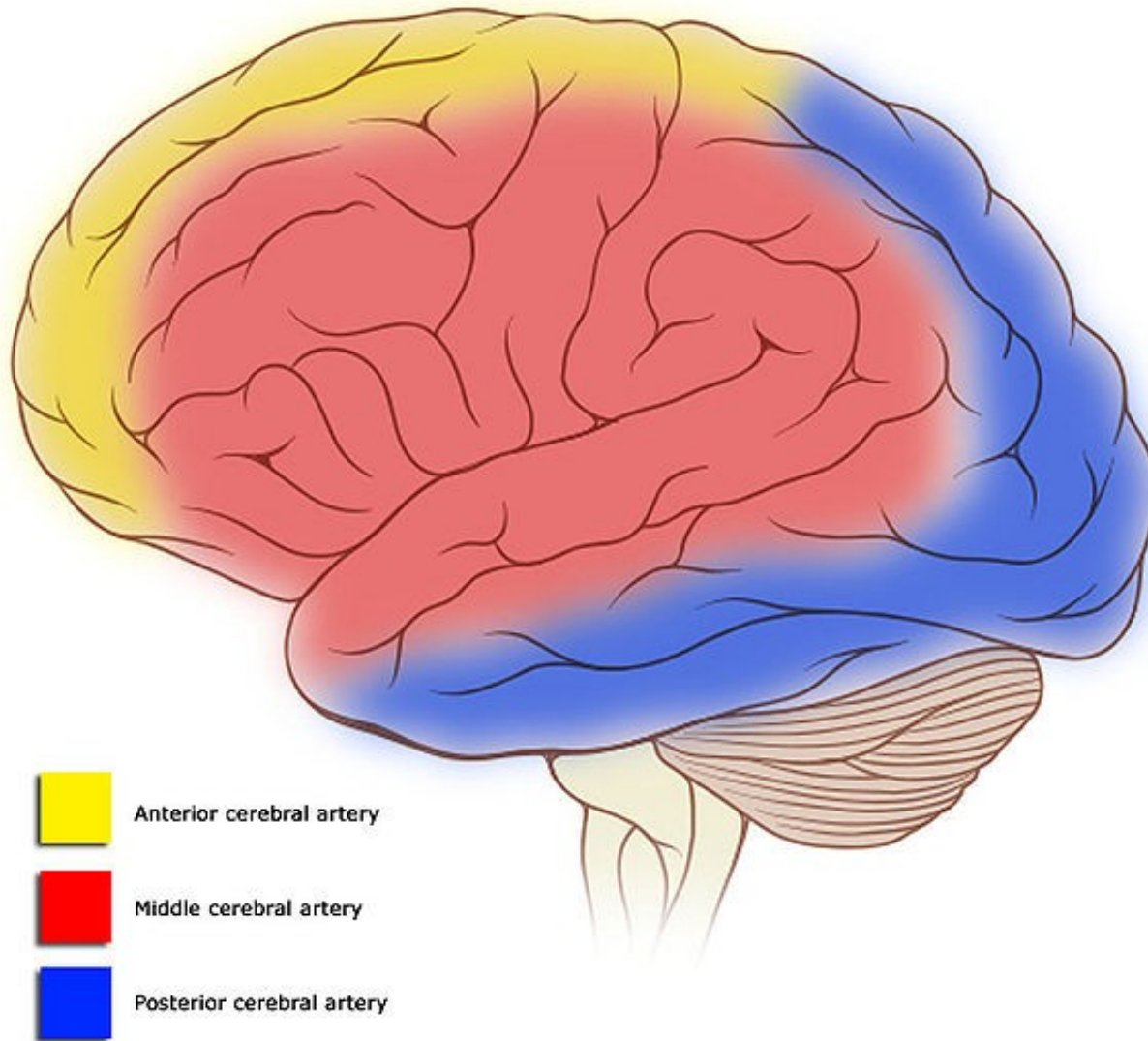
A. cerebri media



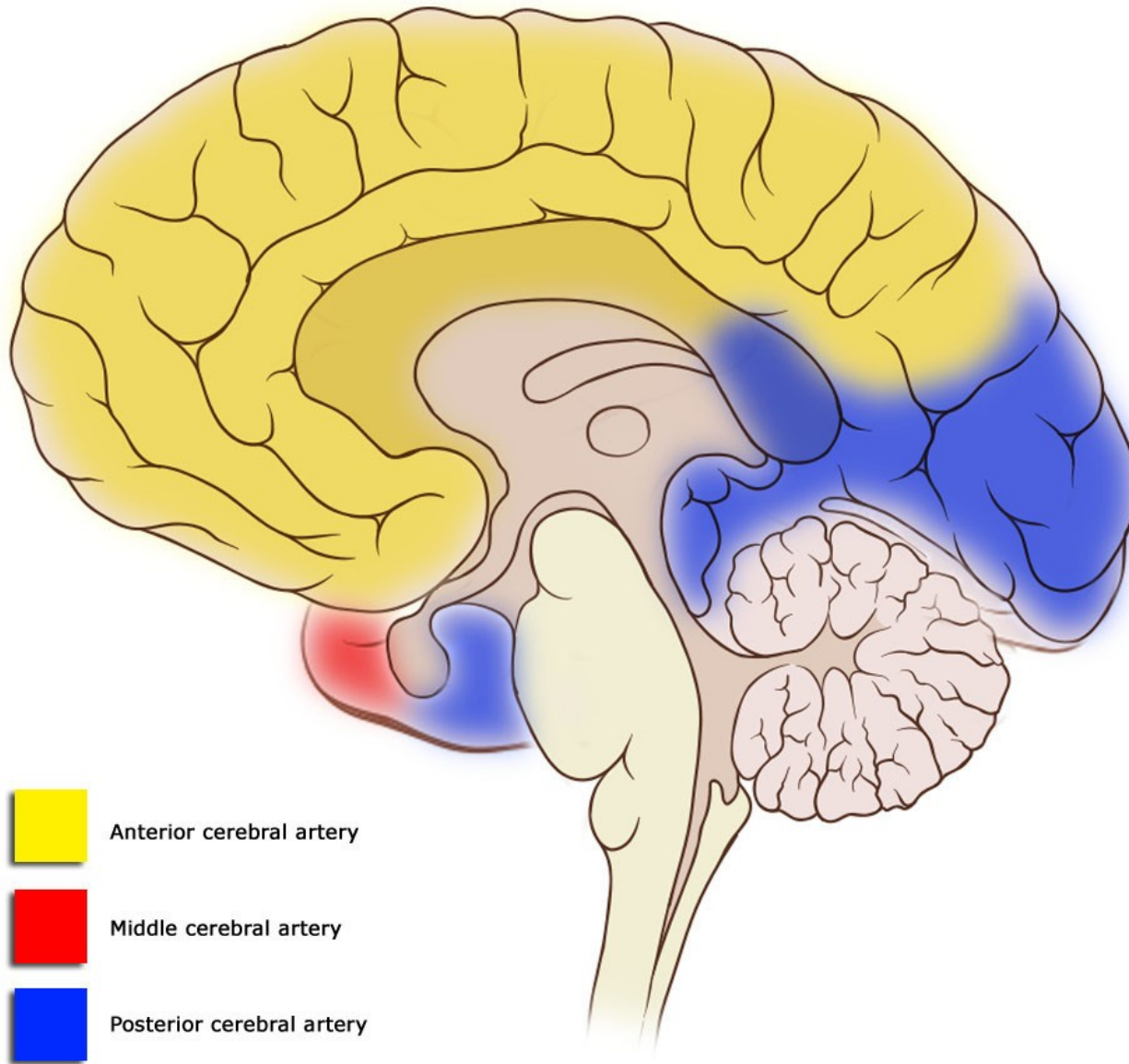
**a.centrales
anterolaterales (leticulostriatæ)**

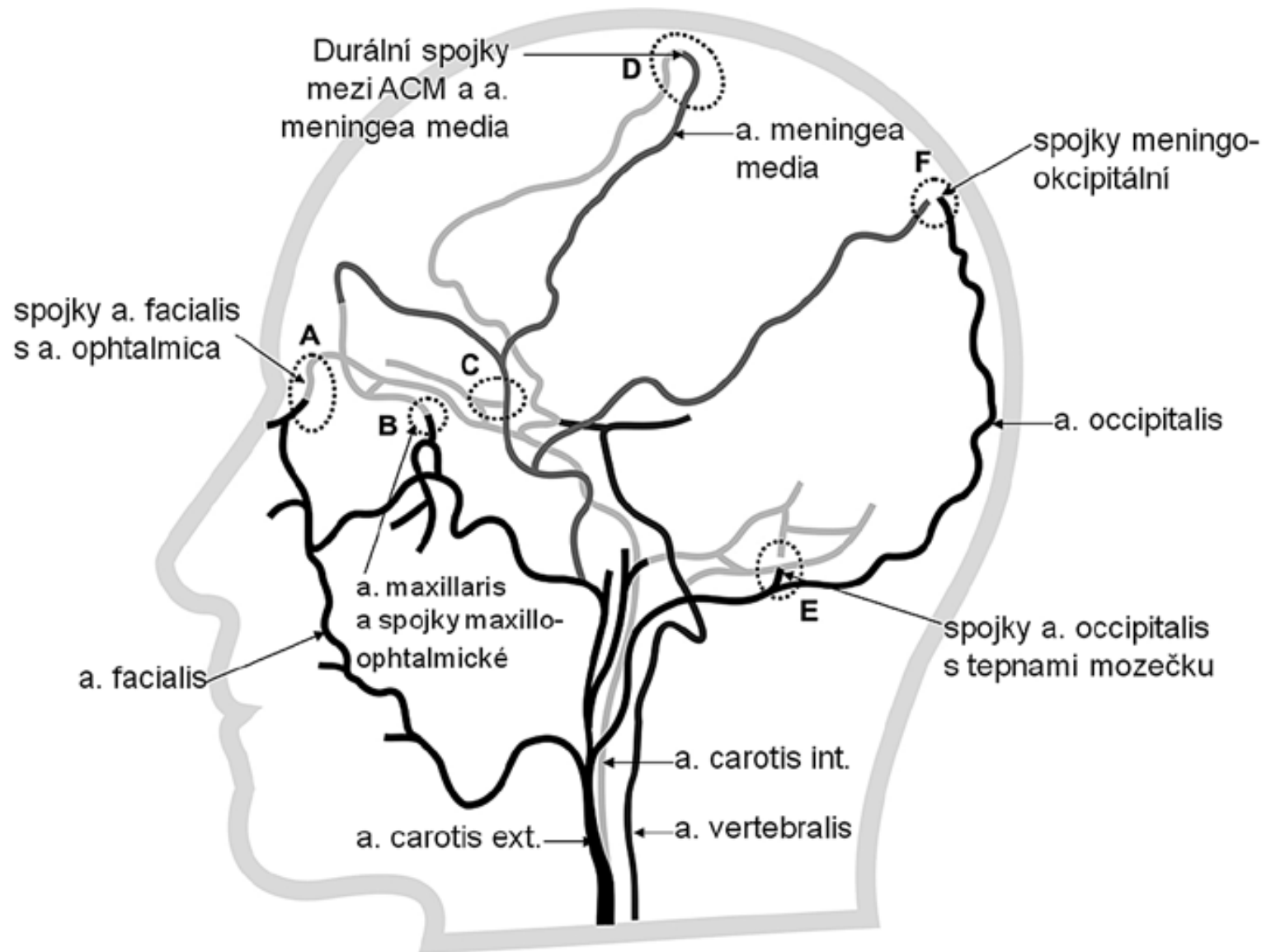


Cortical vascular territories



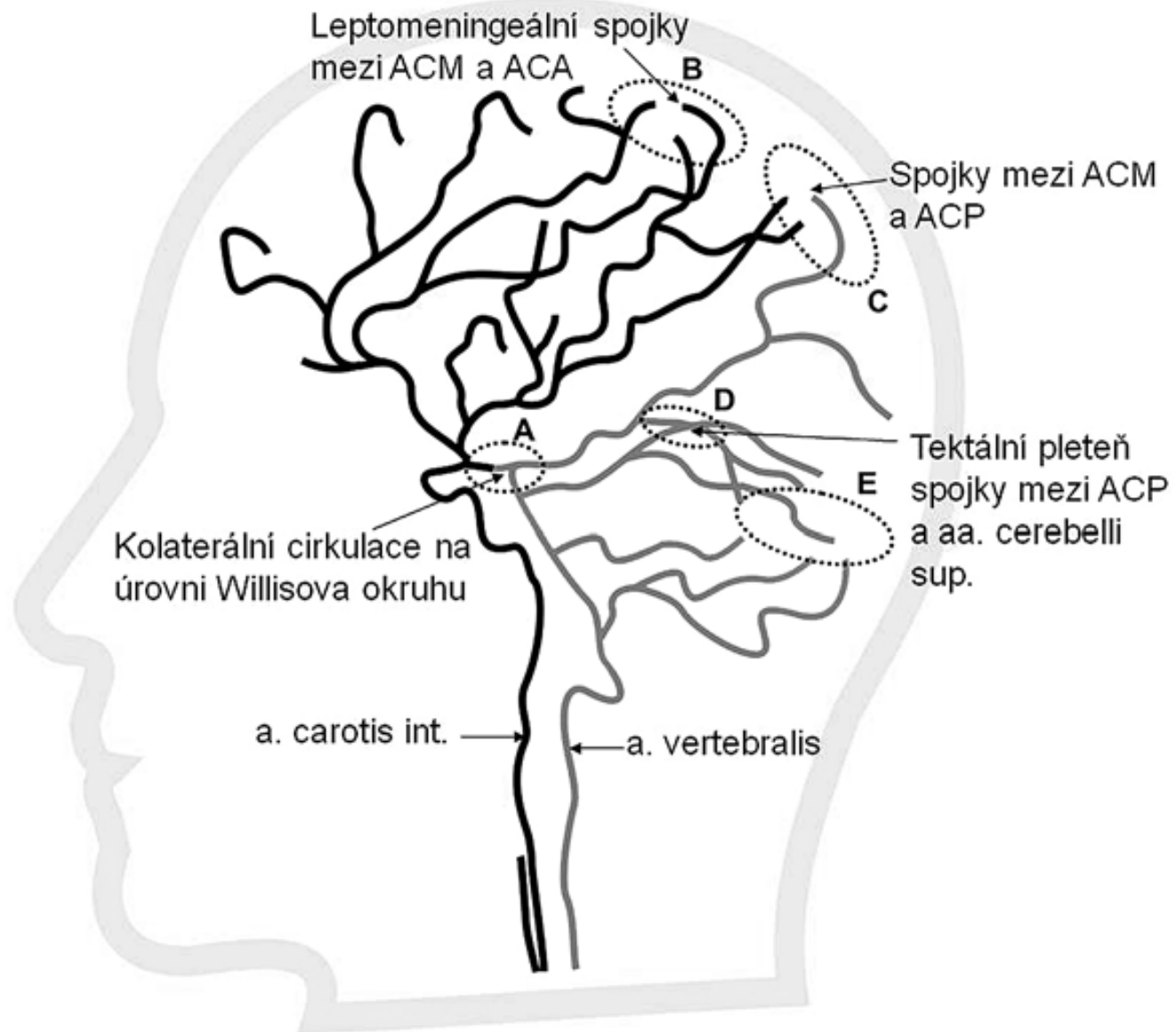
Cortical vascular territories





Extrakraniální systém kolaterální cirkulace

O. Volný, R. Mikulík (2013)
 1 Mezinárodní centrum klinického výzkumu (ICRC), Brno
 2 Anatomický ústav LF MU, Brno
 3 I. neurologická klinika LF MU a FN u sv. Anny v Brně



Intrakraniální systém kolaterální cirkulace

O. Volný, R. Mikulík (2013)

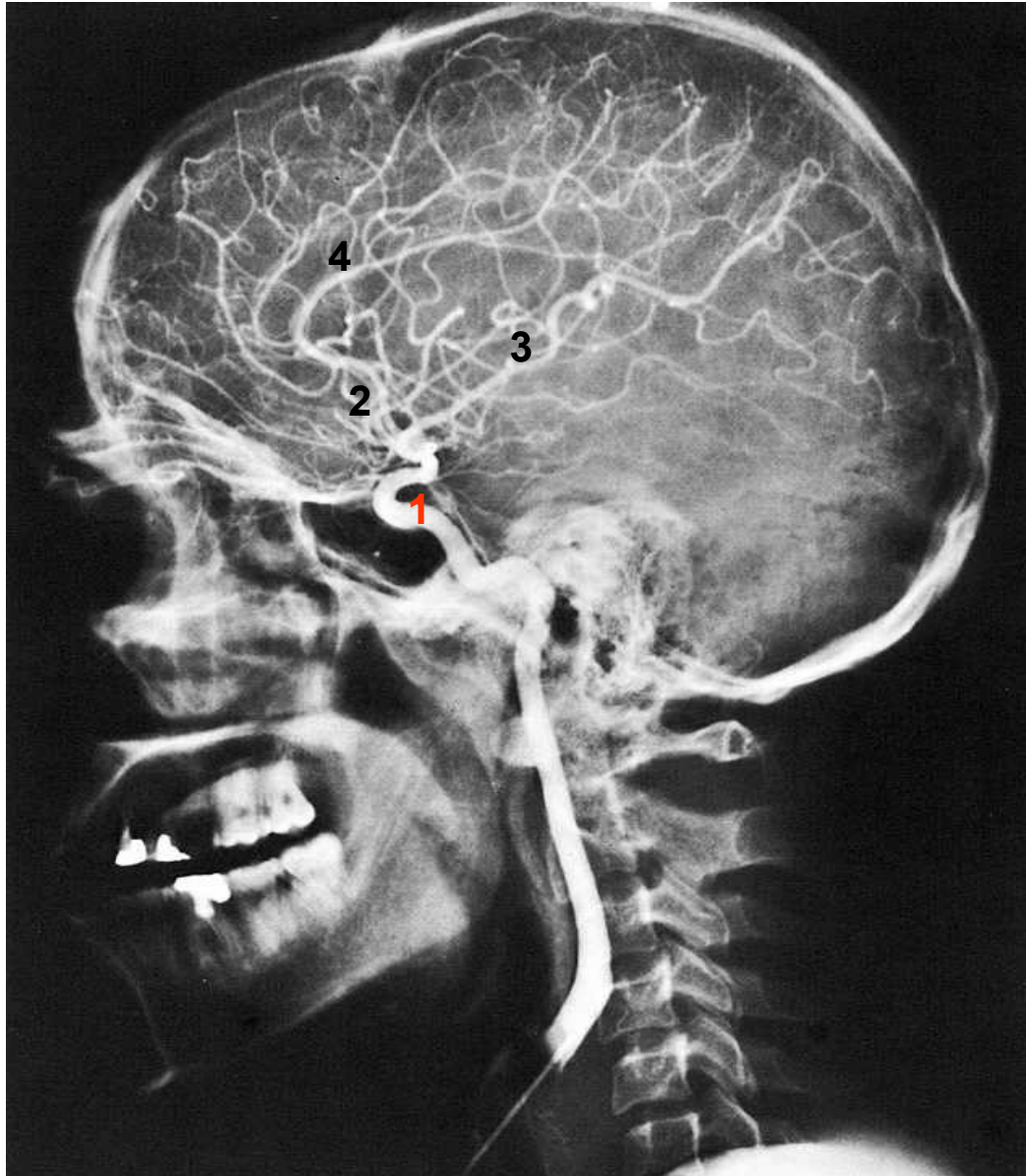
1 Mezinárodní centrum klinického výzkumu (ICRC), Brno

2 Anatomický ústav LF MU, Brno

3 I. neurologická klinika LF MU a FN u sv. Anny v Brně

RTG of head

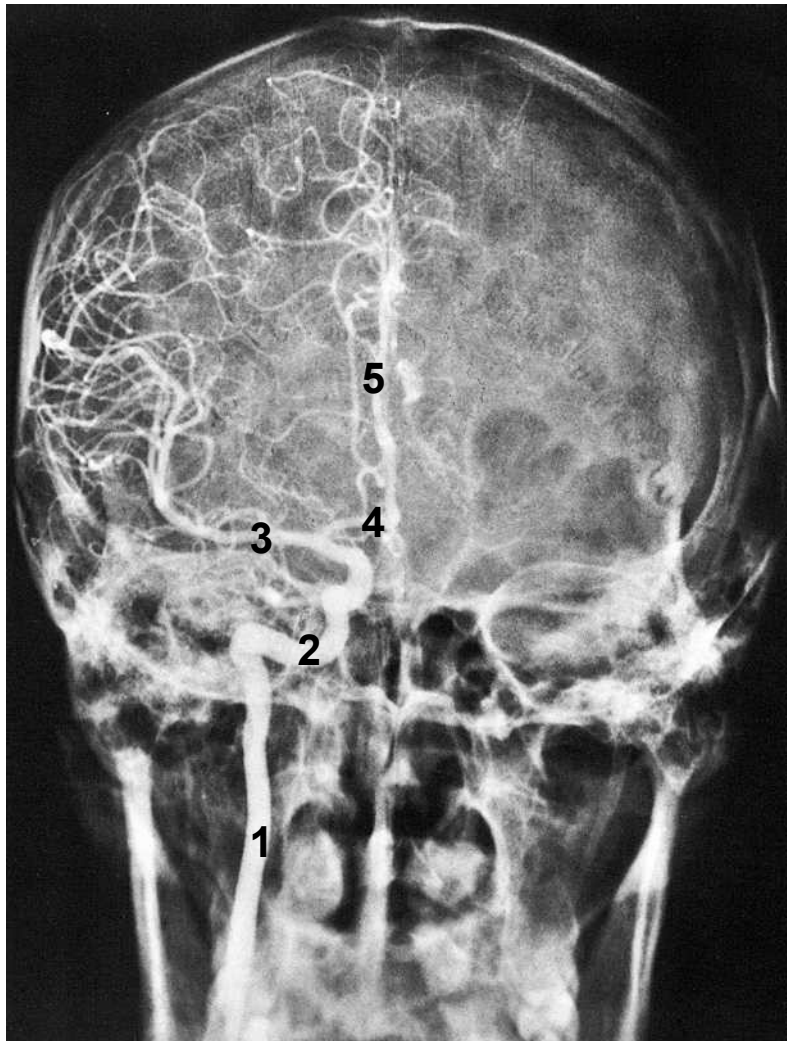
Angiography - a. carotis interna



1. siphon
2. a.cerebri anterior
3. a.cerebri media
4. a.pericallosa

RTG of head

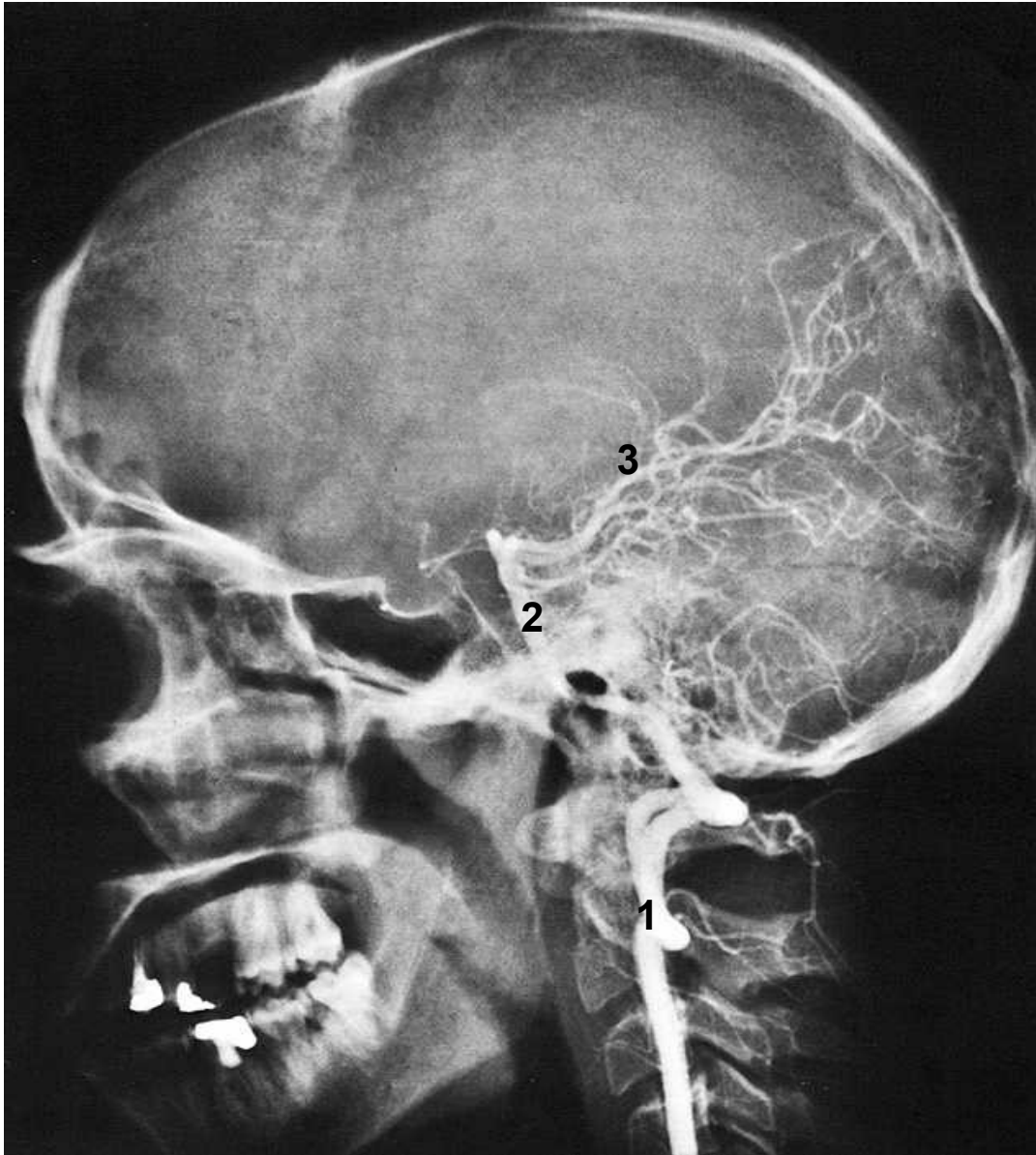
Angiography - a. carotis interna



1. a.carotis interna
2. siphon
3. a.cerebri media
4. a.cerebri anterior
5. a.pericalloso

RTG of head

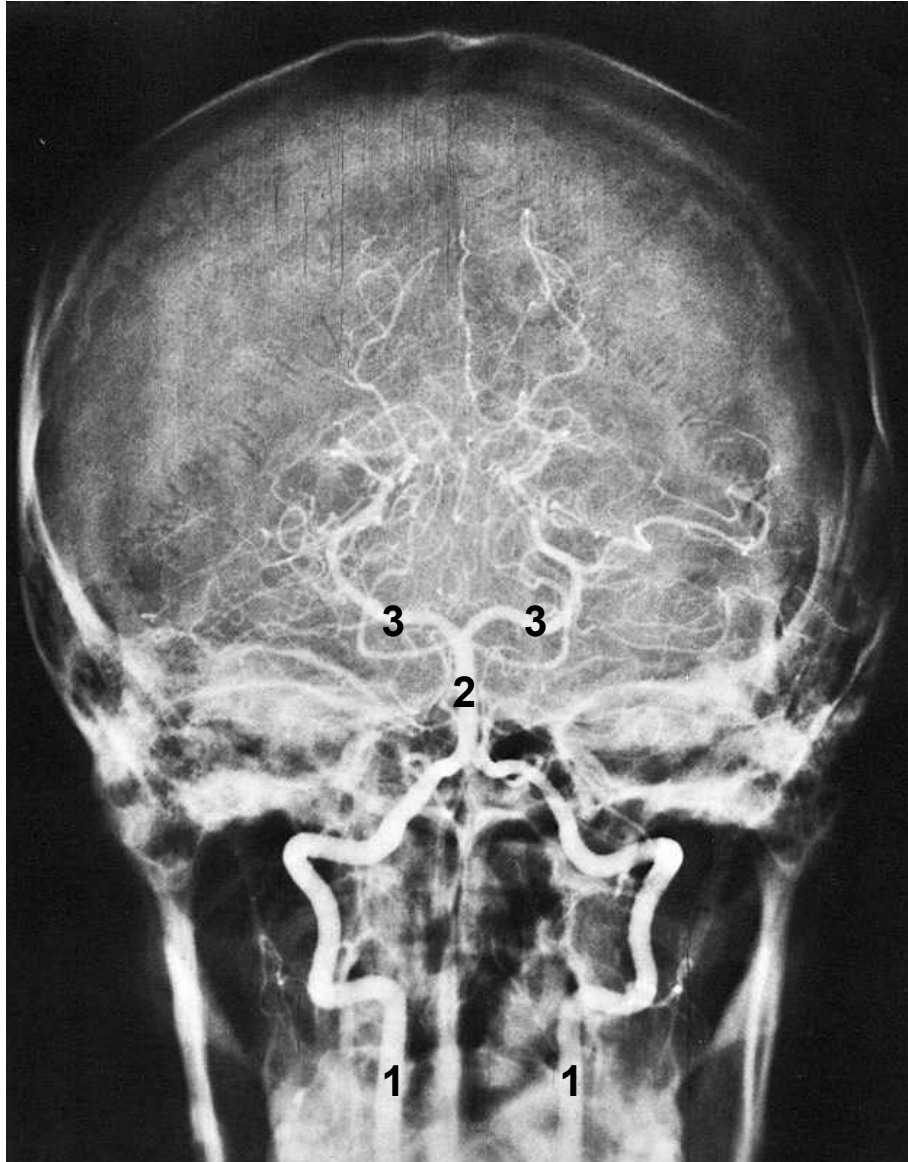
Angiography - a.vertebralis



1. A.vertebralis
2. A.basilaris
3. A.cerebri posterior

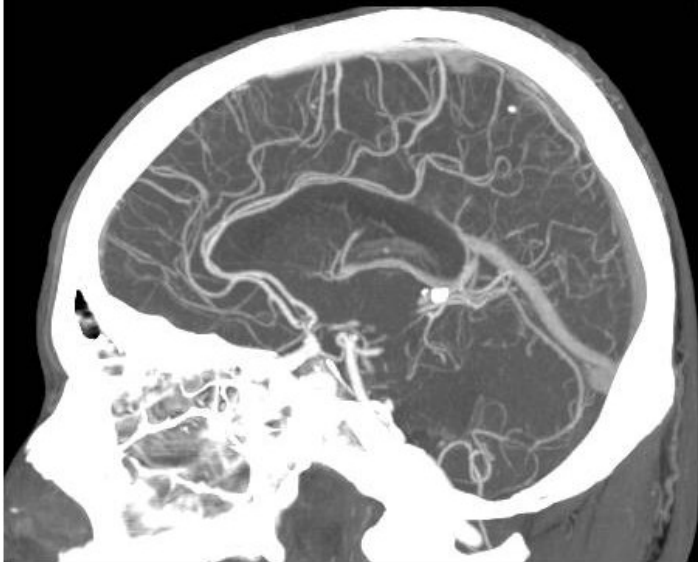
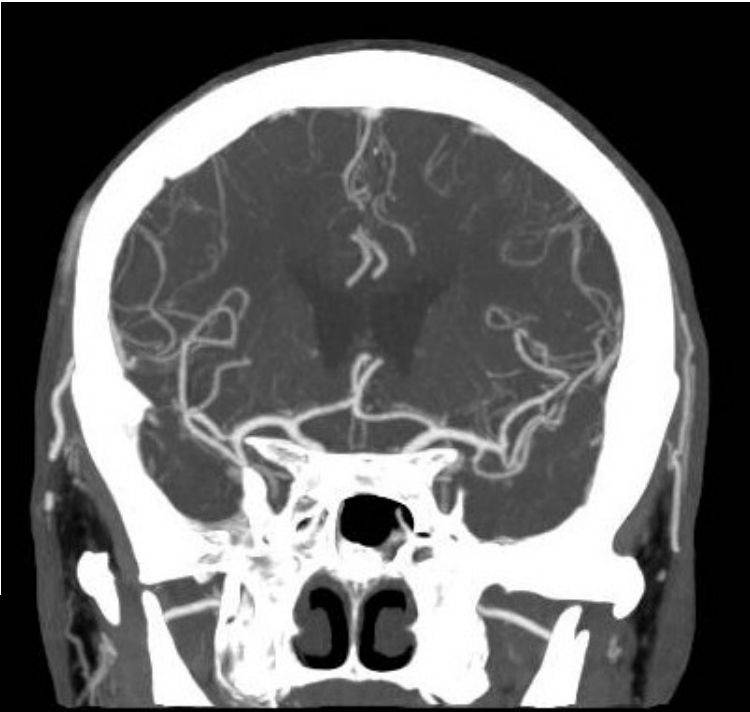
RTG of head

Angiography - a.vertebralis



1. A.vertebralis dextra, sinistra
2. A.basilaris
3. Aa.cerebri posteriores

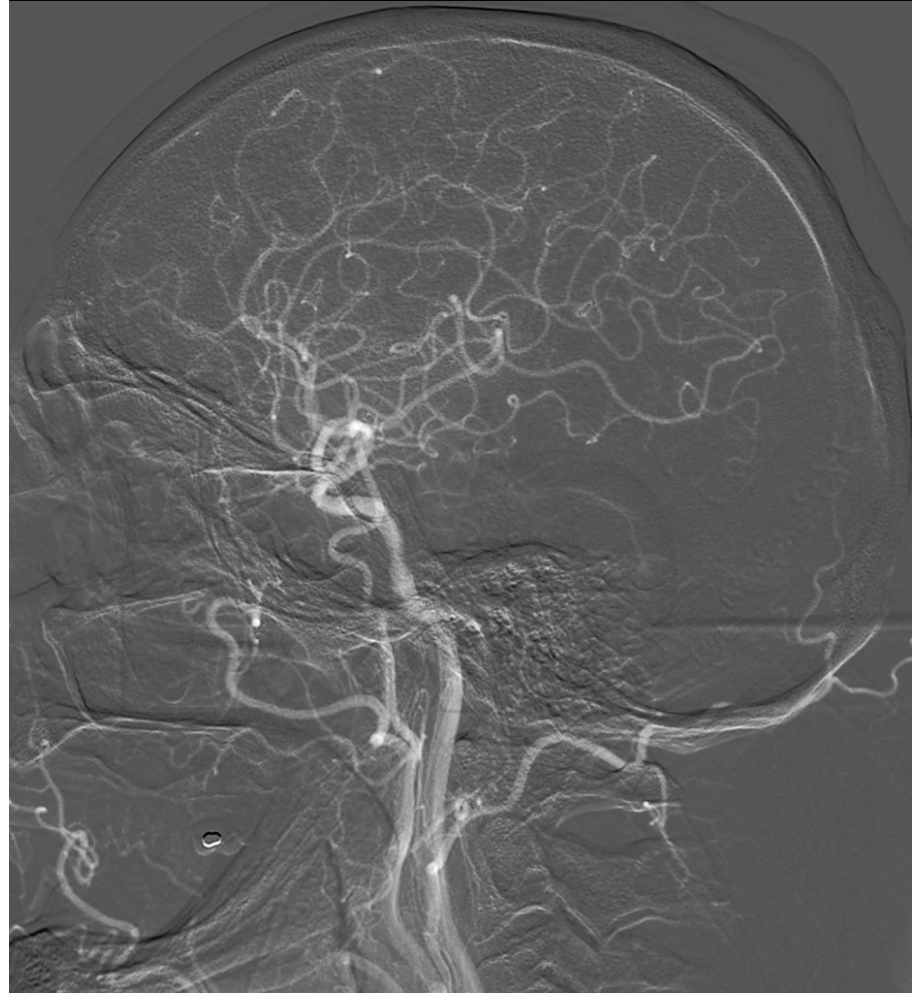
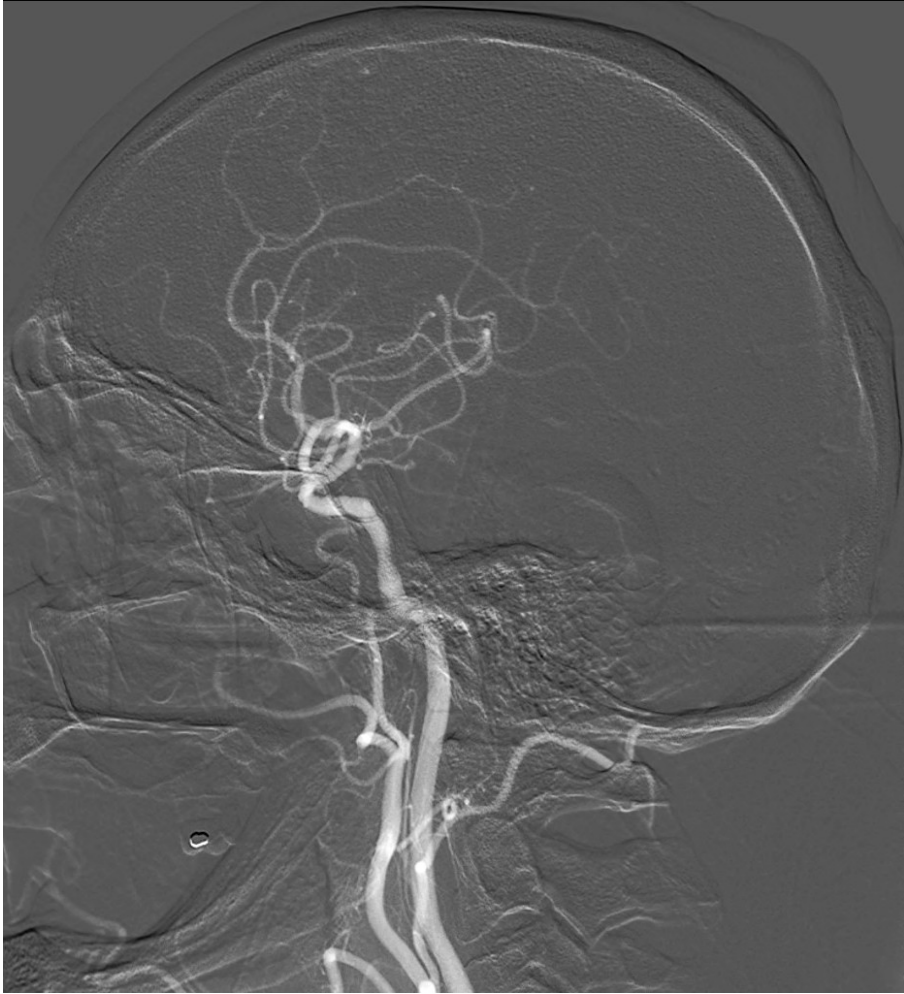
CT angiography (CTA)



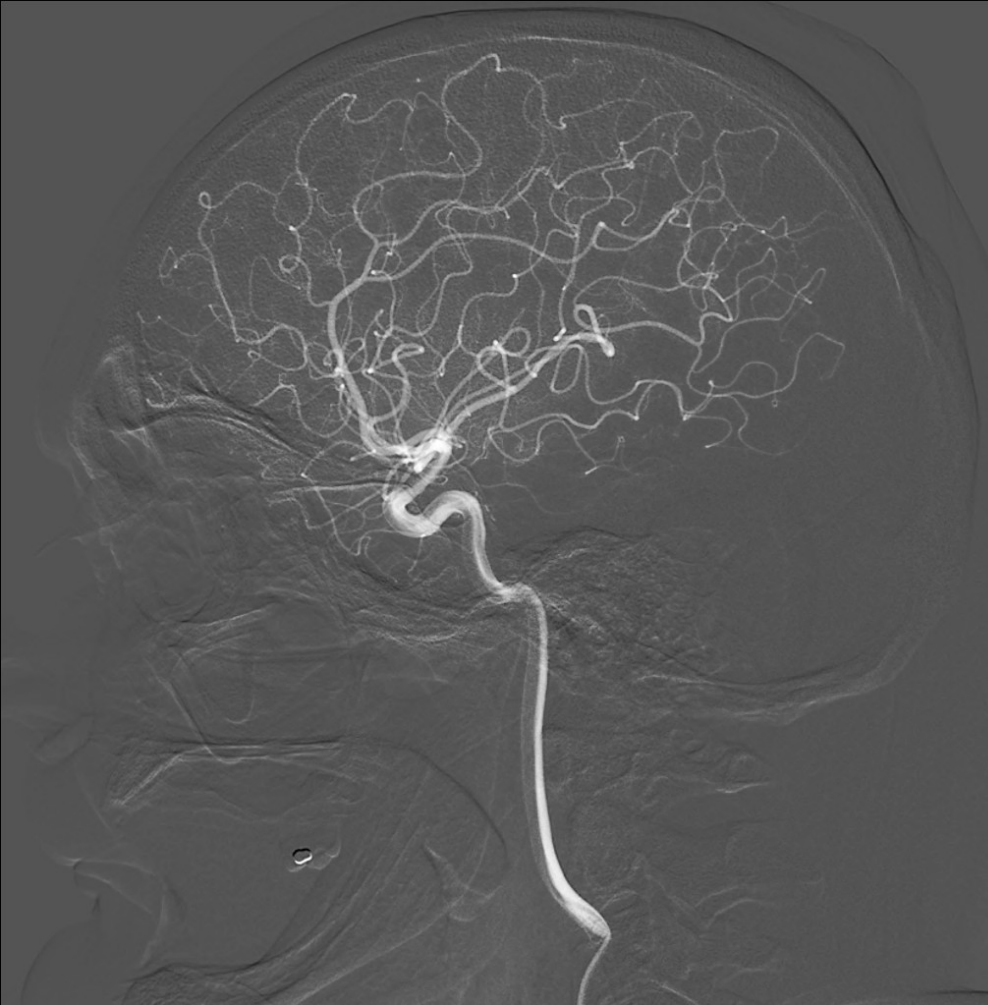
SONOGRAPHY – injection of opaque substance into a. carotis interna



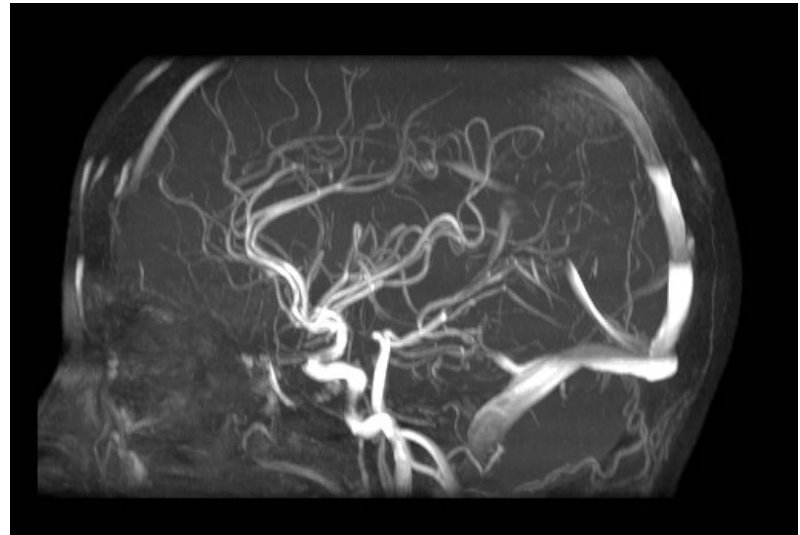
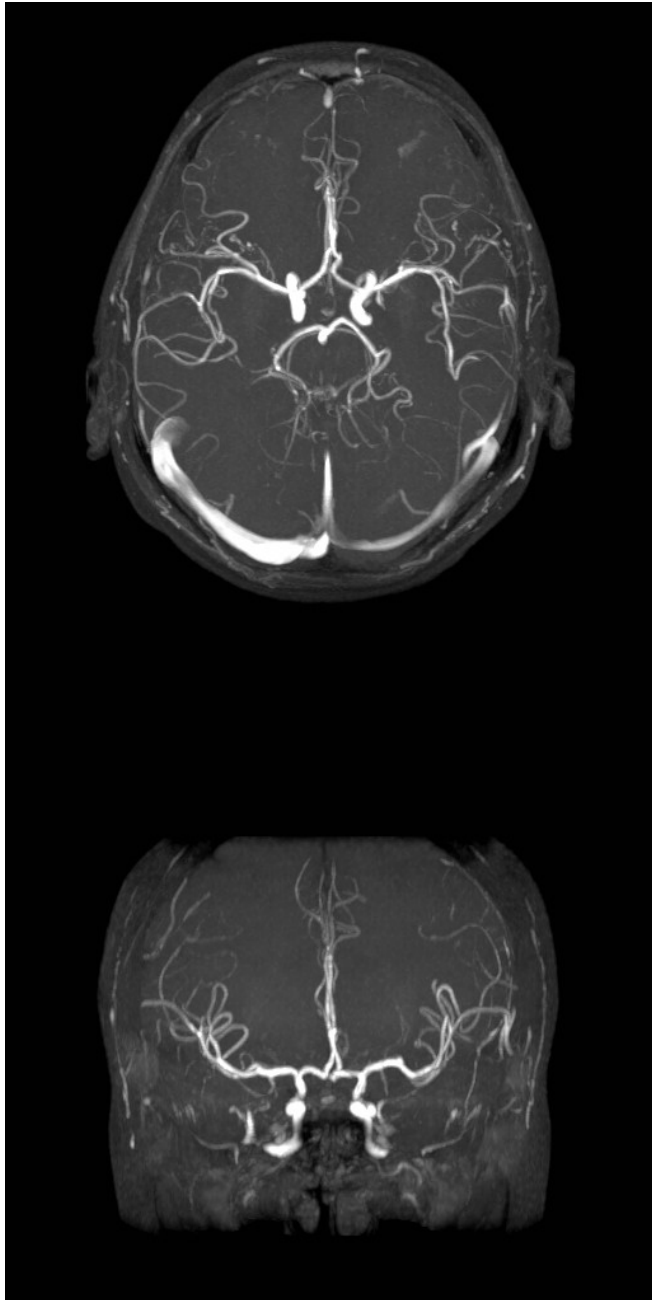
SONOGRAPHY – injection of opaque substance into a. carotis interna



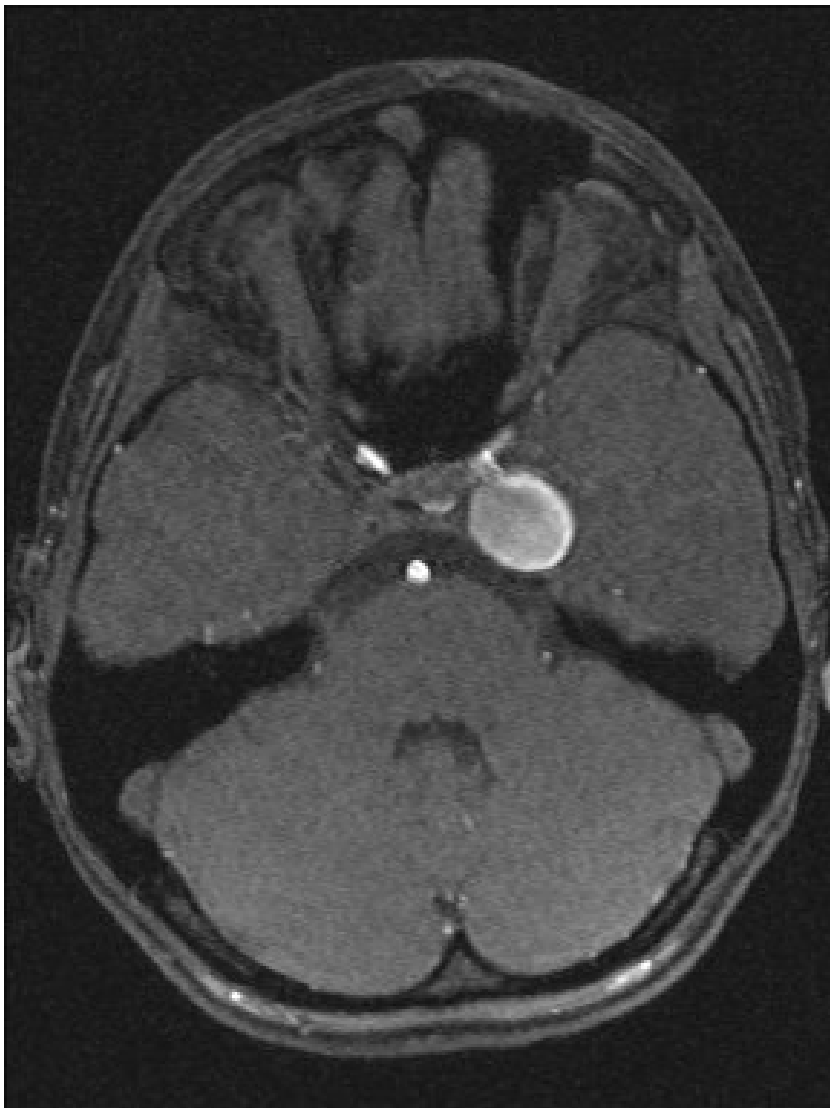
SONOGRAPHY – injection of opaque substance into a. carotis interna



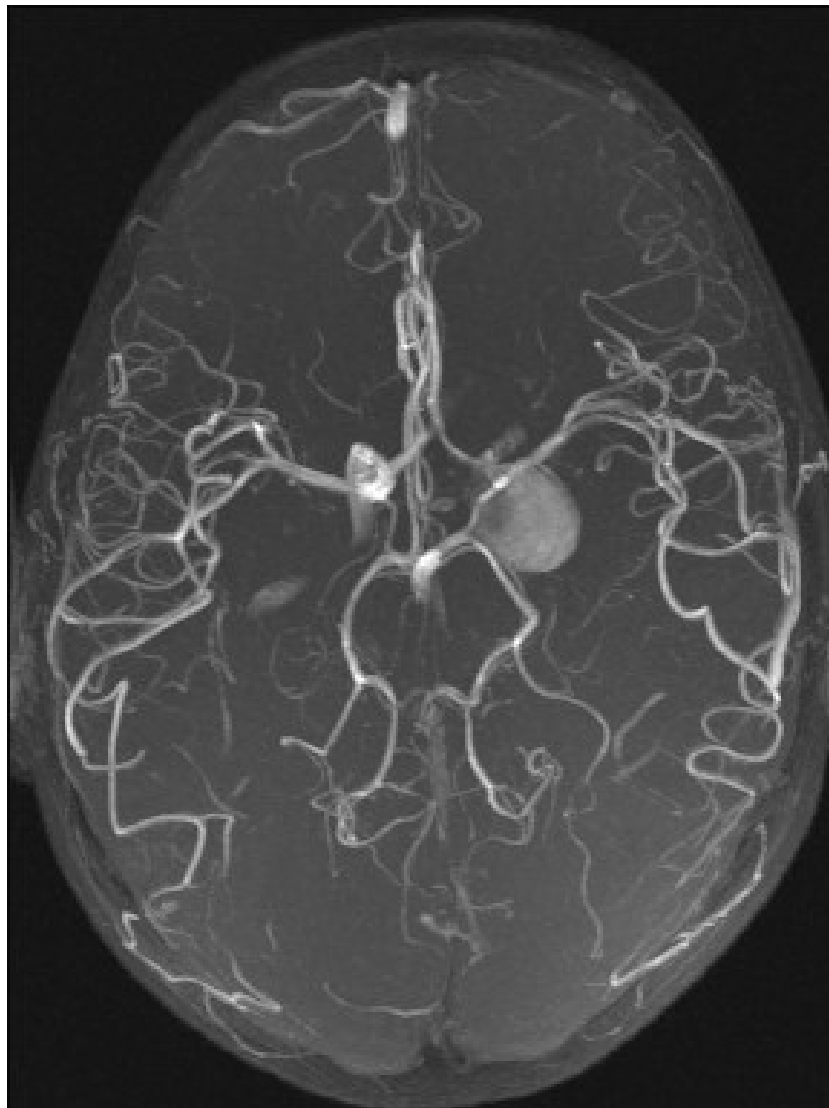
MR angiography (MRA)



Aneurizma

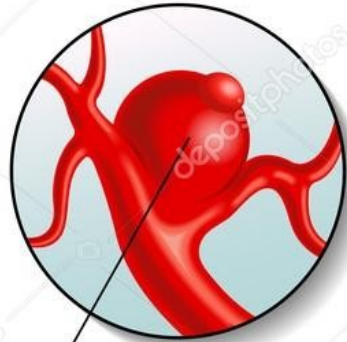
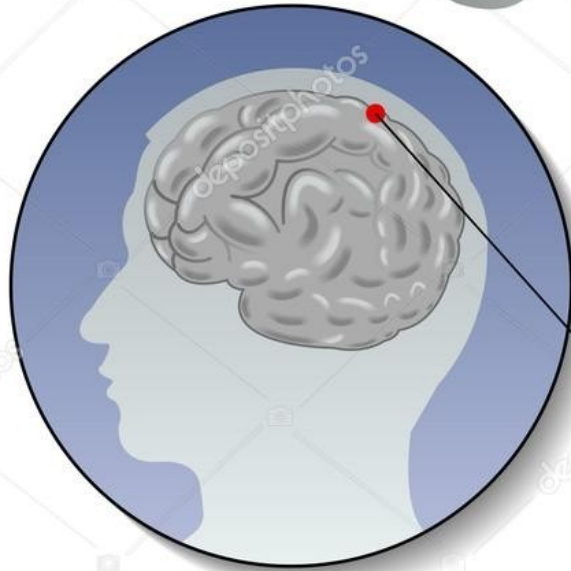
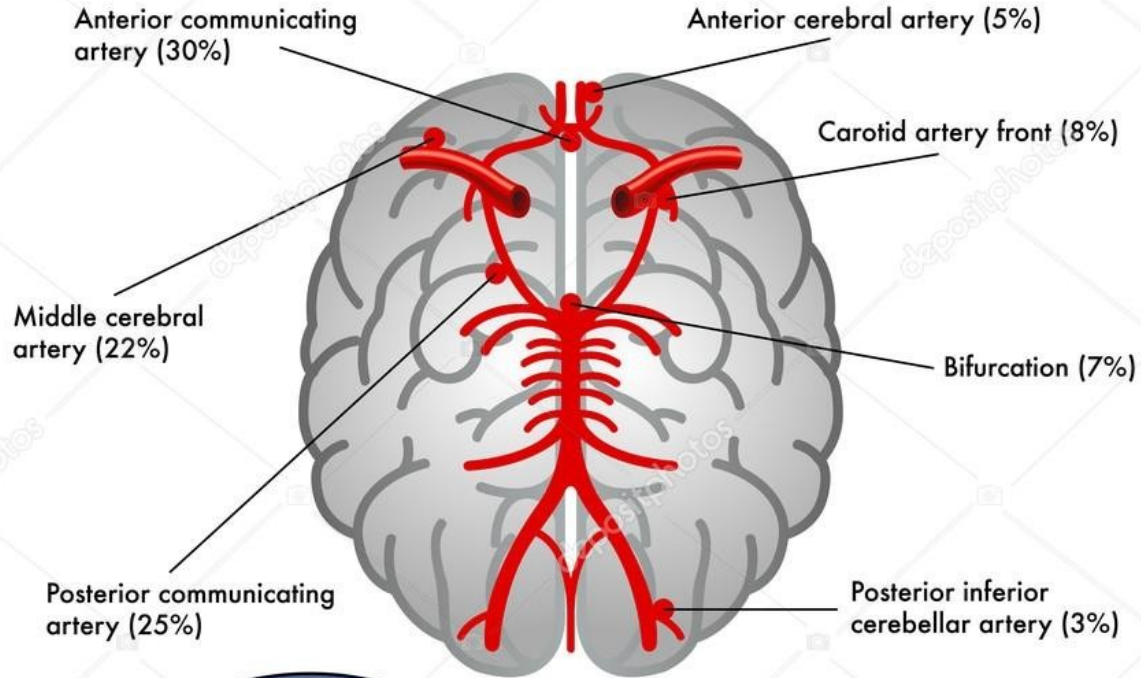


MR angiography (MRA)



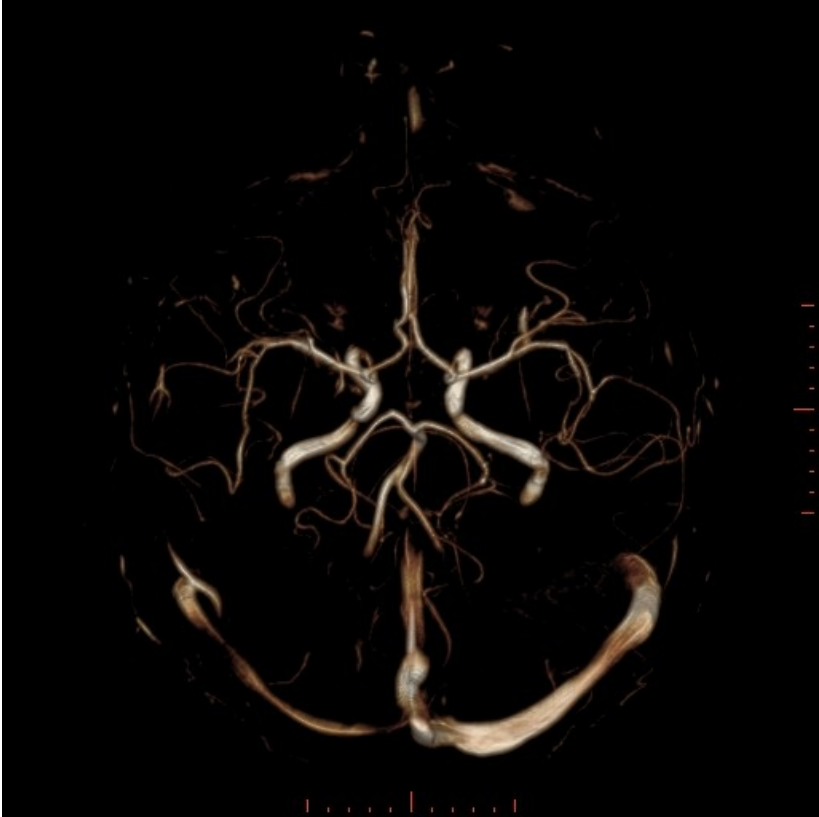
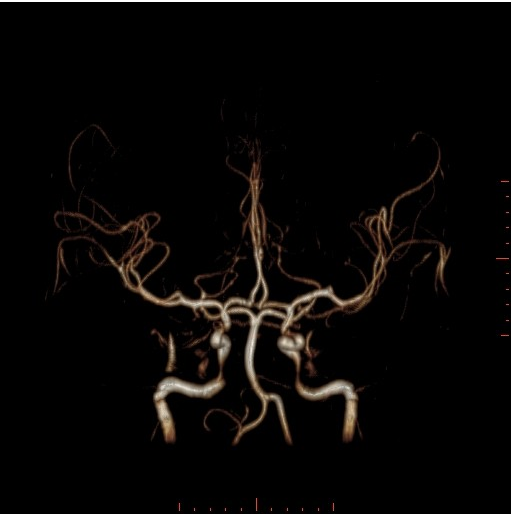
CT angiography (CTA)

Most common sites of Cerebral Aneurysm

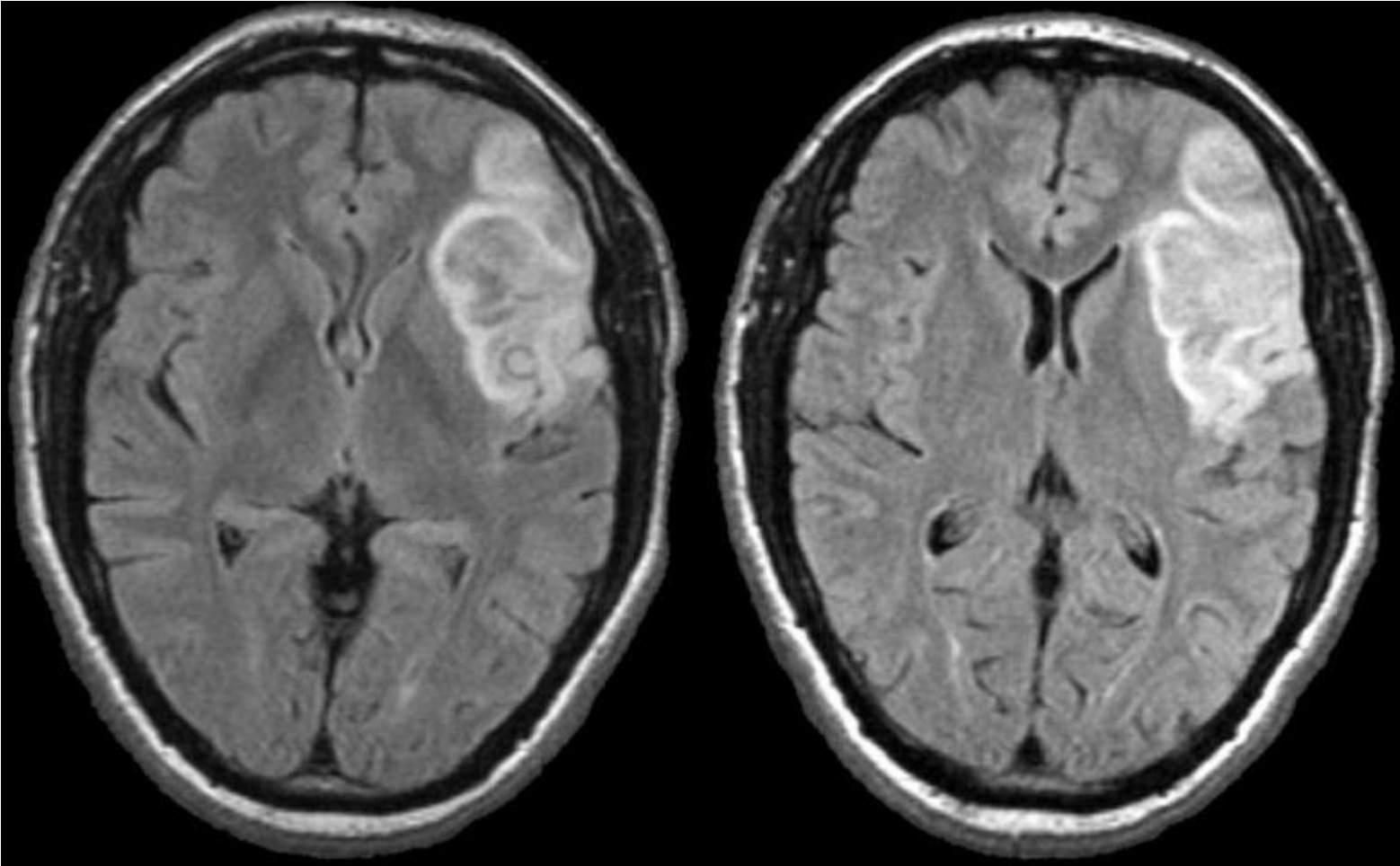


Aneurysm

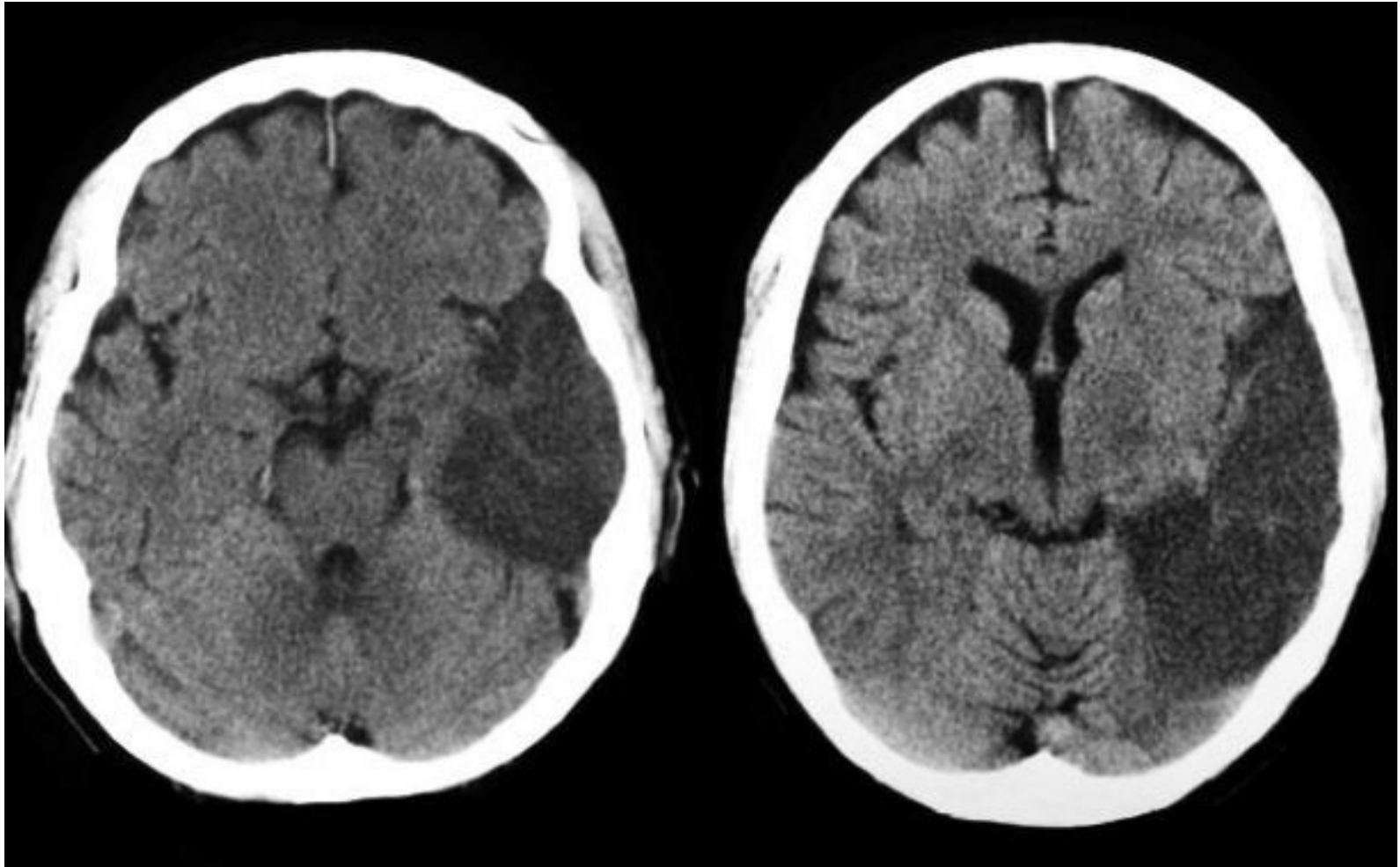
MRA - 3D reconstruction



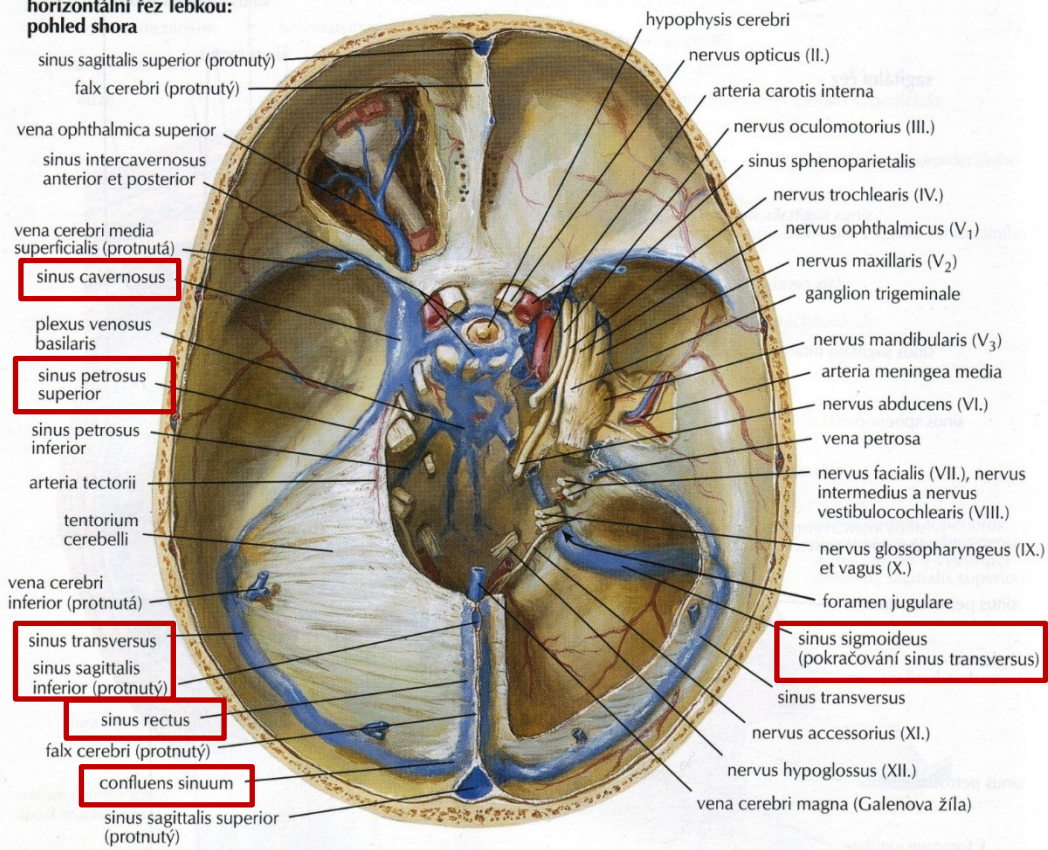
MRI axial FLAIR images of brain show an infarct involving left frontal lobe



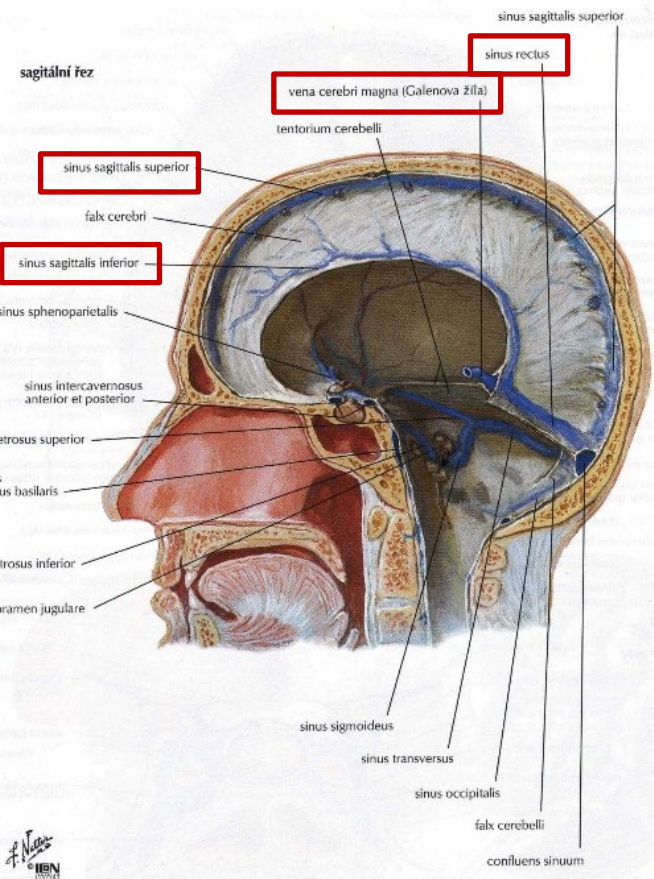
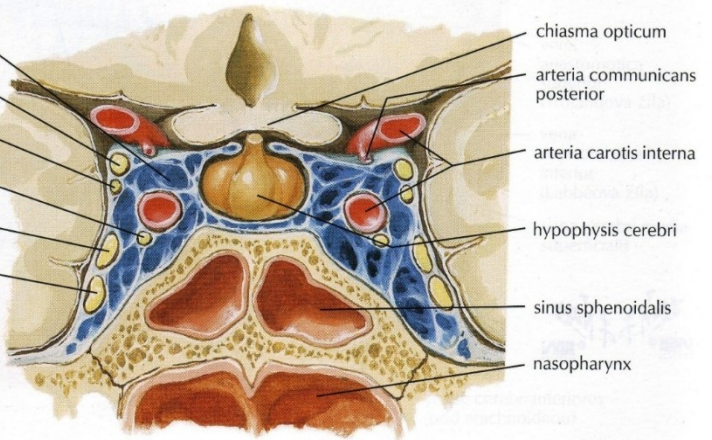
CT study of brain shows an infarct involving the left temporal lobe



horizontální řez lebkou: pohled shora

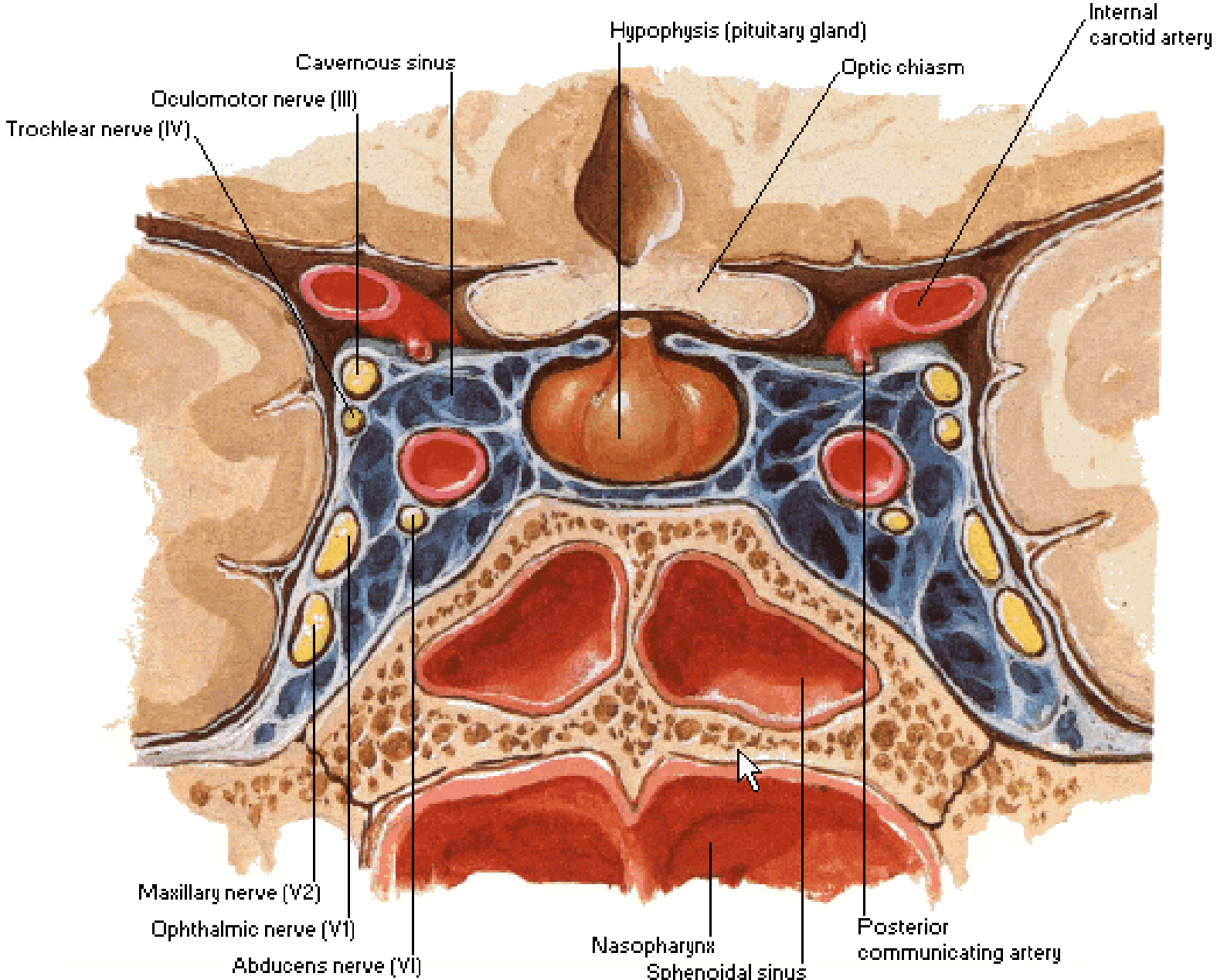


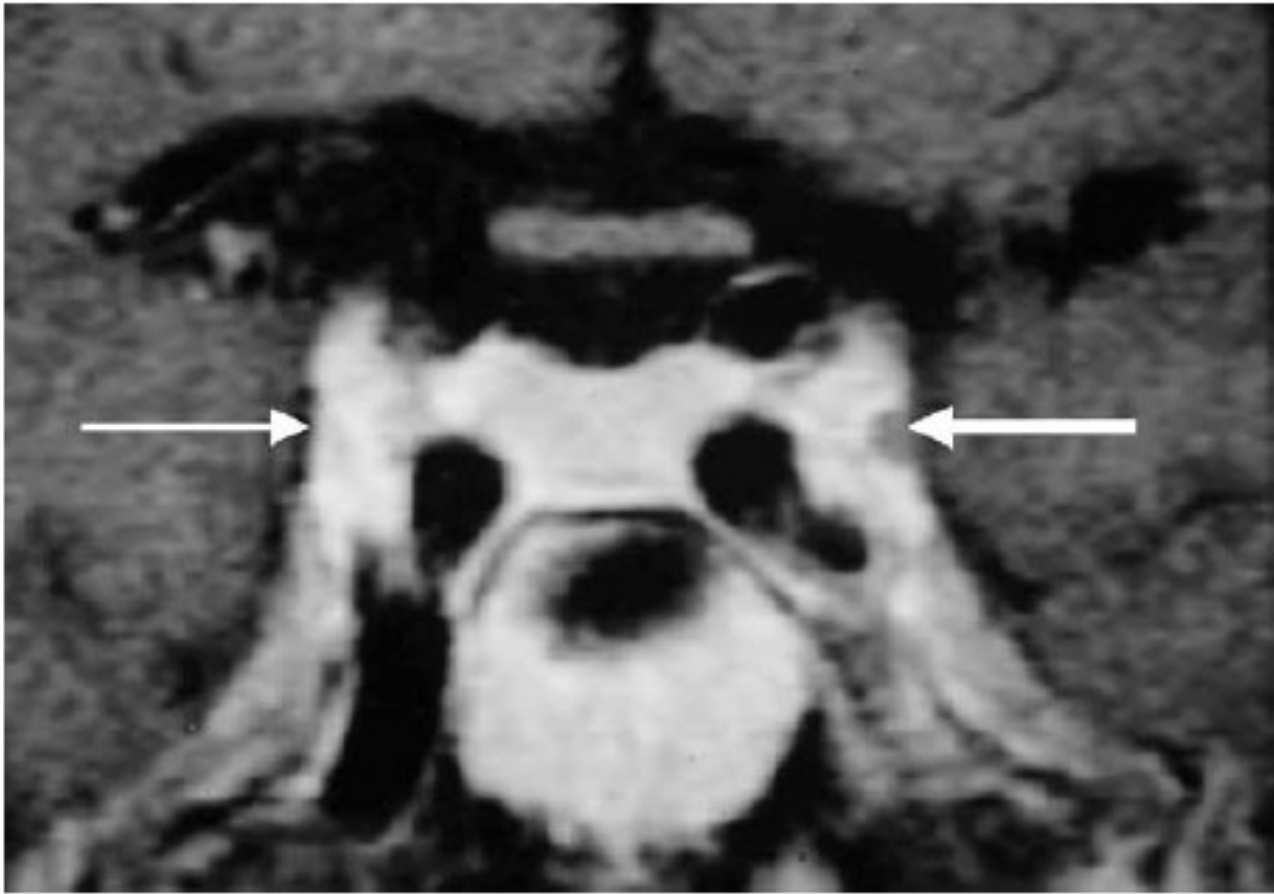
frontální řez přes sinus cavernosus

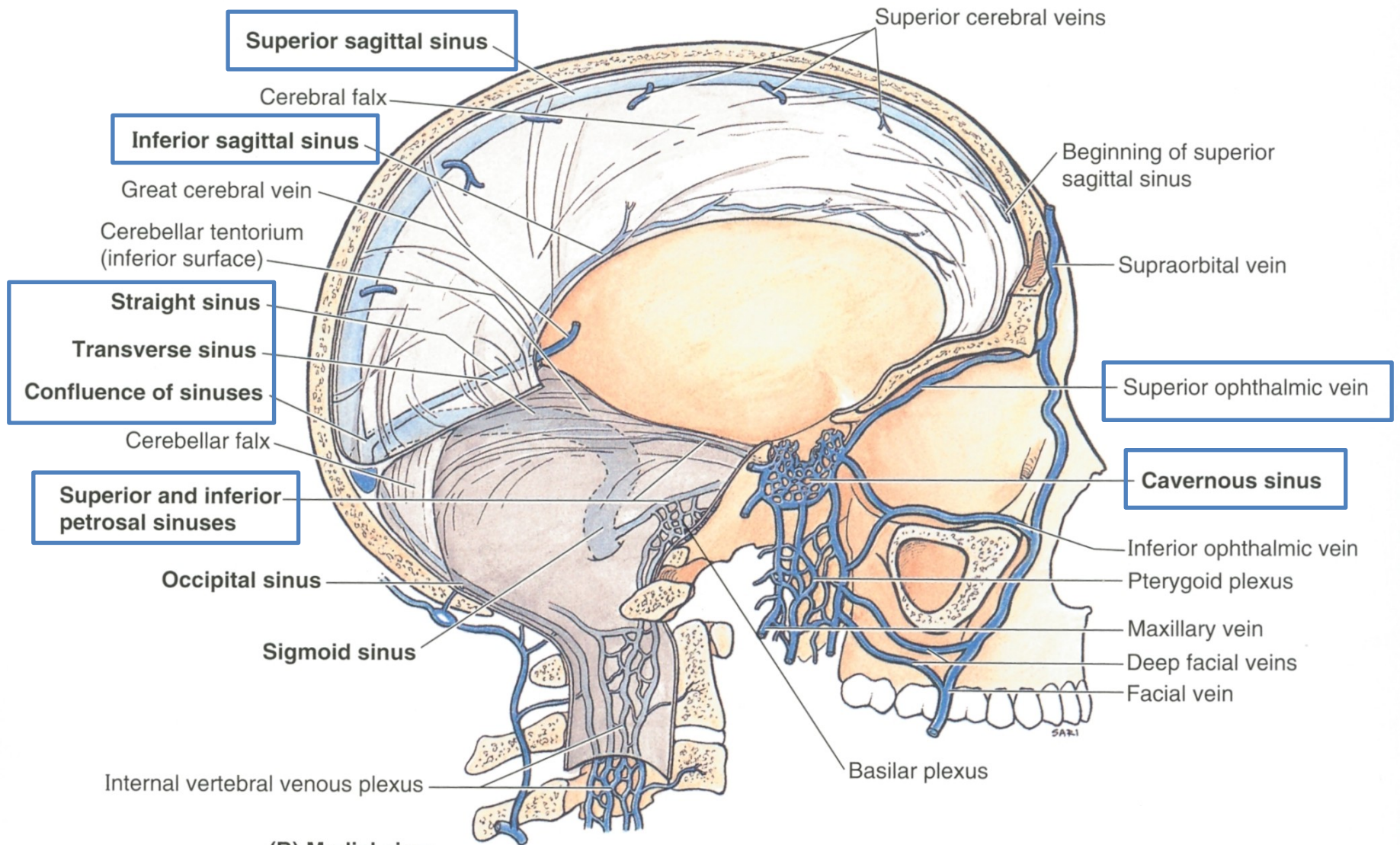


Cavernous Sinus

Coronal Section







(B) Medial view