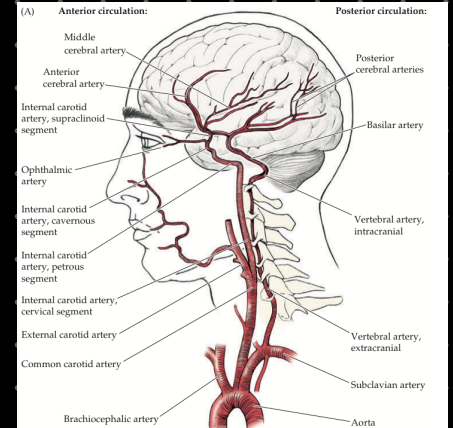
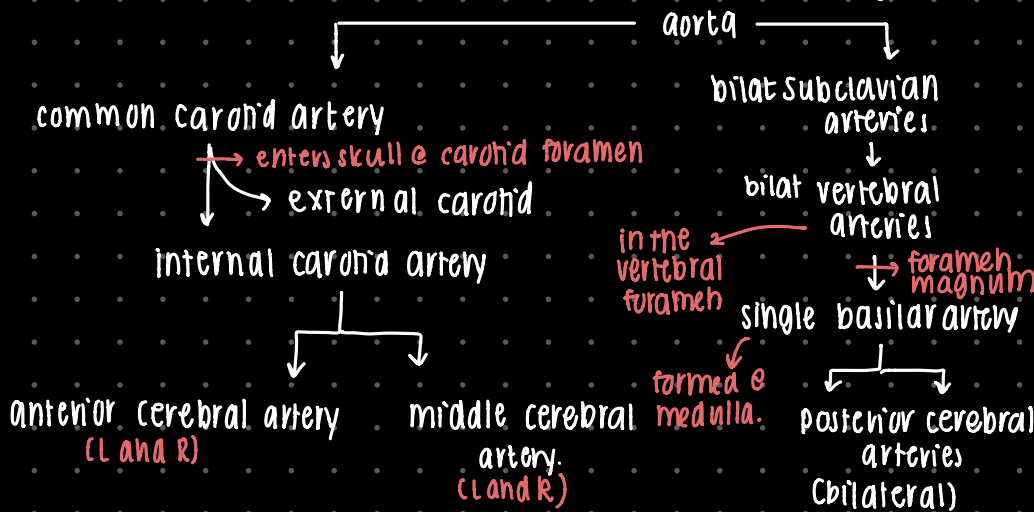


# vascular supply

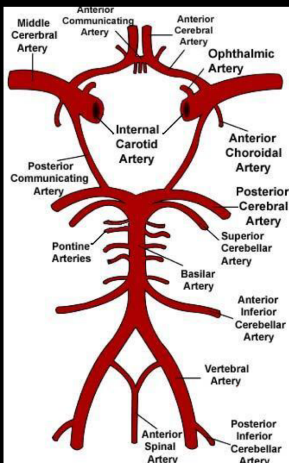
## anatomy



In the brain:

- ACA run medially → towards the interhemispheric fissure
- MCA branches laterally toward the Sylvian fissure

→ the basilar artery runs along the ventral pons, until midbrain.  
splits @ the rostral pons into PCA.



### Circle of Willis

comprised of the : ACA + anterior cerebral communicating  
MCA  
internal carotid  
PCA + posterior cerebral communicating

The Pcomm = connect the MCA / PCA.  
The Acomm = connect the 2 ACA.

The arteries & veins run in the subarachnoid space in the skull.

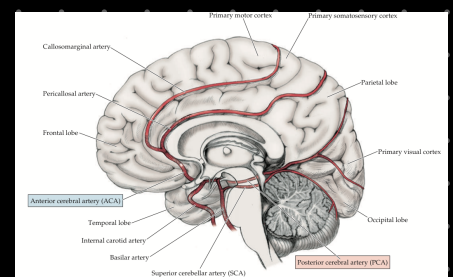
- the large sinus = many veins / arteries drain into here.

## physiology

### Anterior cerebral Artery

- supplies the: medial surface of anterior parietal, frontal lobe.

strip of superior / medial ant. parietal, frontal.



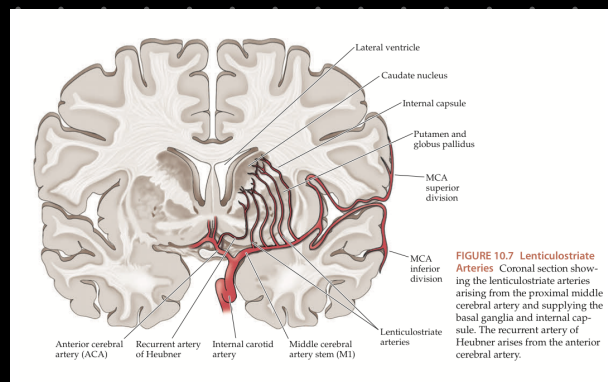
## Posterior cerebral Artery

- from the vertebral arteries.
- supplies the: medial surface of occipital lobe.  
inferior surface of temporal lobe.

• deep post. artery will supply the thalamus.

## Medial cerebral Artery

- 3 main branches of the MCA:
  - superior, inferior, deep branches.
- the superior branch: the anterior parietal lobe  
lateral frontal lobe
- the inferior branch: posterior parietal.  
antero-lateral temporal
- the deep branch: body of caudate  
lentiform nucleus  
some internal capsule:



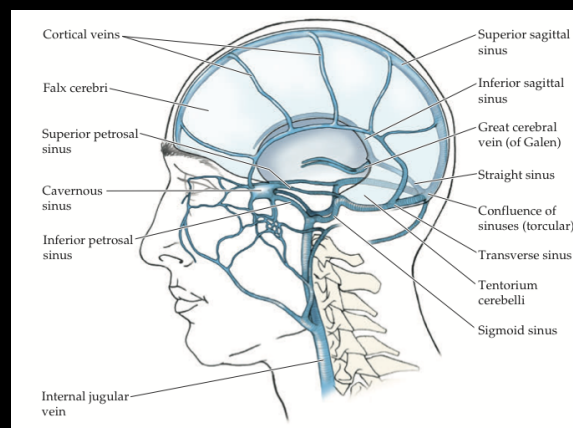
## veins

• main veins of the brain:

- ① superior sagittal sinus
  - drainage of blood
  - located @ the sagittal surface; within falx cerebri (under the perosteal layer).
- ② inferior sagittal sinus
  - inferior to sup. sagittal.

→ the superior/inferior sagittal sinuses are able to drain into the transverse sinus (@ the tentorium cerebelli).

All veins drain out of head via jugular vein.



venous blood from head → heart =  
drained into the sinus via the  
bridging veins of the arachnoid mater.

↓  
they protrude from the arachnoid mater  
and into subarachnoid space.

## vascular injury

- 3 main types of vascular injuries:
  - ① Thrombus → blood clot
  - ② Embolism → dislodged blood/material that clogged the vessel.
  - ③ Hemorrhage → rupture of aneurysm.
    - ↳ weakening of vascular wall; can cause swelling of the wall.