



Coronal Sections of the Brain (Lateral Ventricle)

By:

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Intended Learning Outcomes (ILOs)

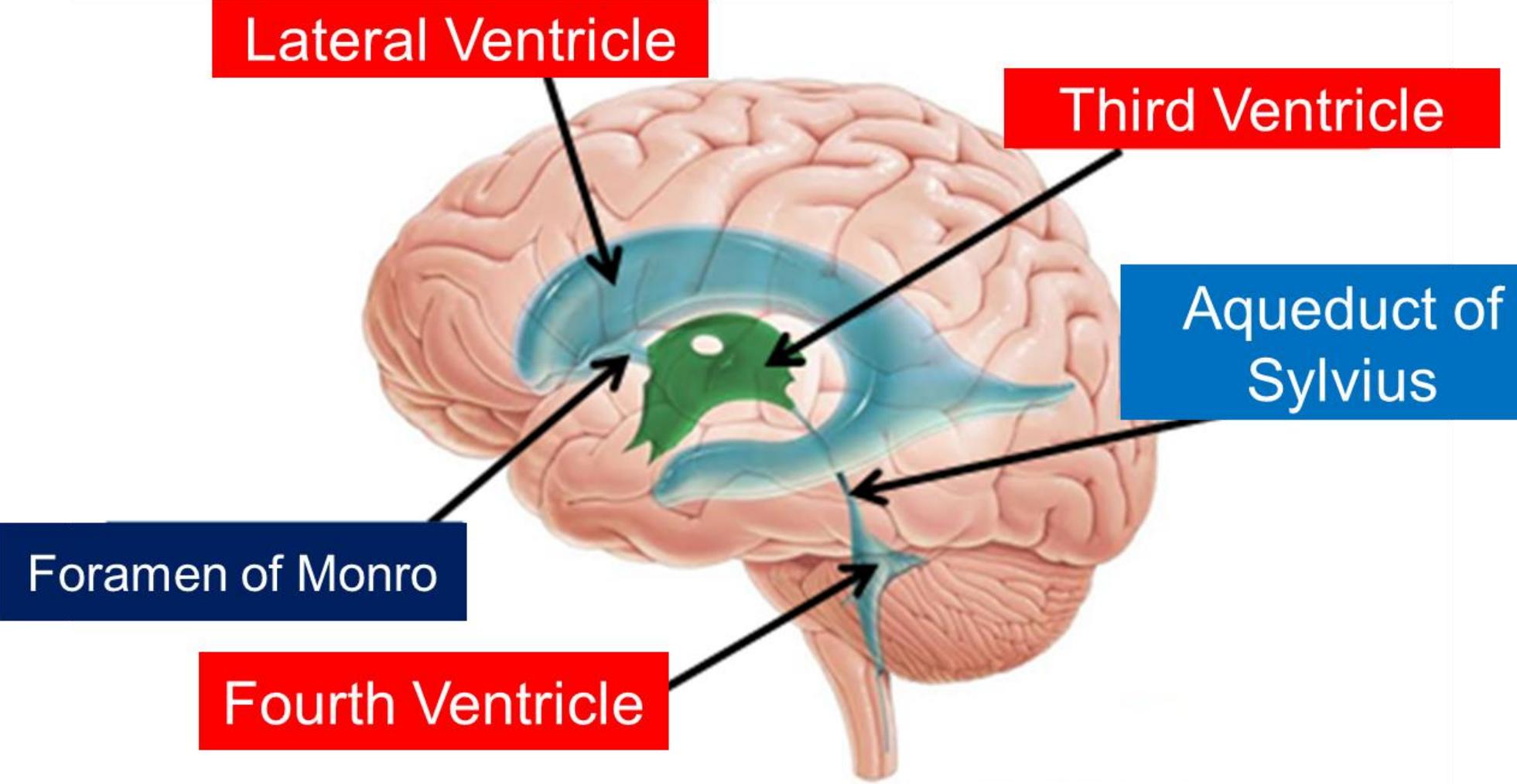
- 1. Identify the parts of the lateral ventricle.**
- 2. Recognize the relations of each part of the lateral ventricle.**
- 3. Identify the structures seen on coronal sections of the brain at the level of the rostrum, mamillary bodies and splenium.**

Agenda

- 1. What are the parts of the lateral ventricle?**
- 2. What are the relations of each part of the lateral ventricle?**
- 3. What are the structures seen on coronal sections of the brain at the level of the rostrum, mamillary bodies and splenium?**



Ventricular System of the Brain



Lateral Ventricle

Parts:

1- Anterior (frontal) horn:

in the frontal lobe.

2- Body:

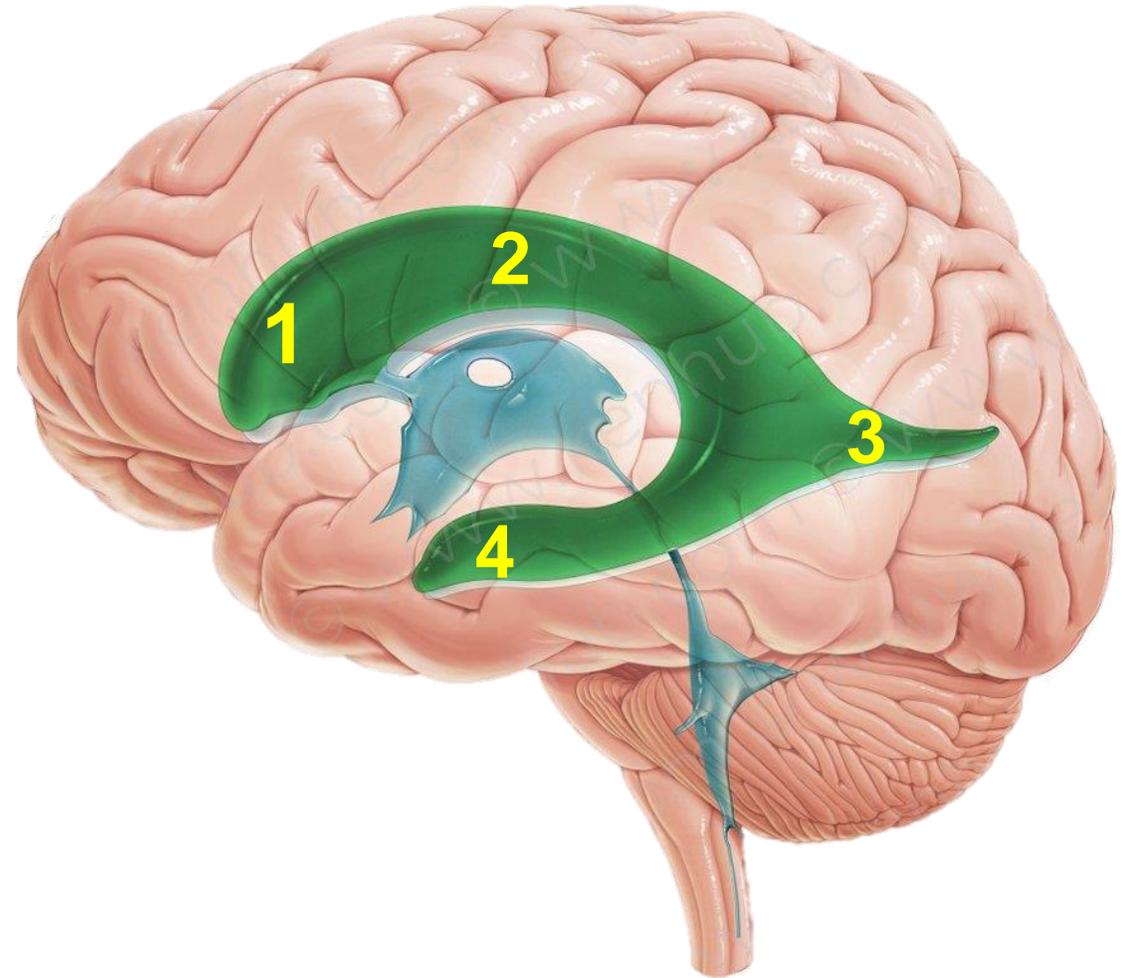
in the parietal lobe.

3- Posterior (occipital) horn:

in the occipital lobe.

4- Inferior (temporal) horn:

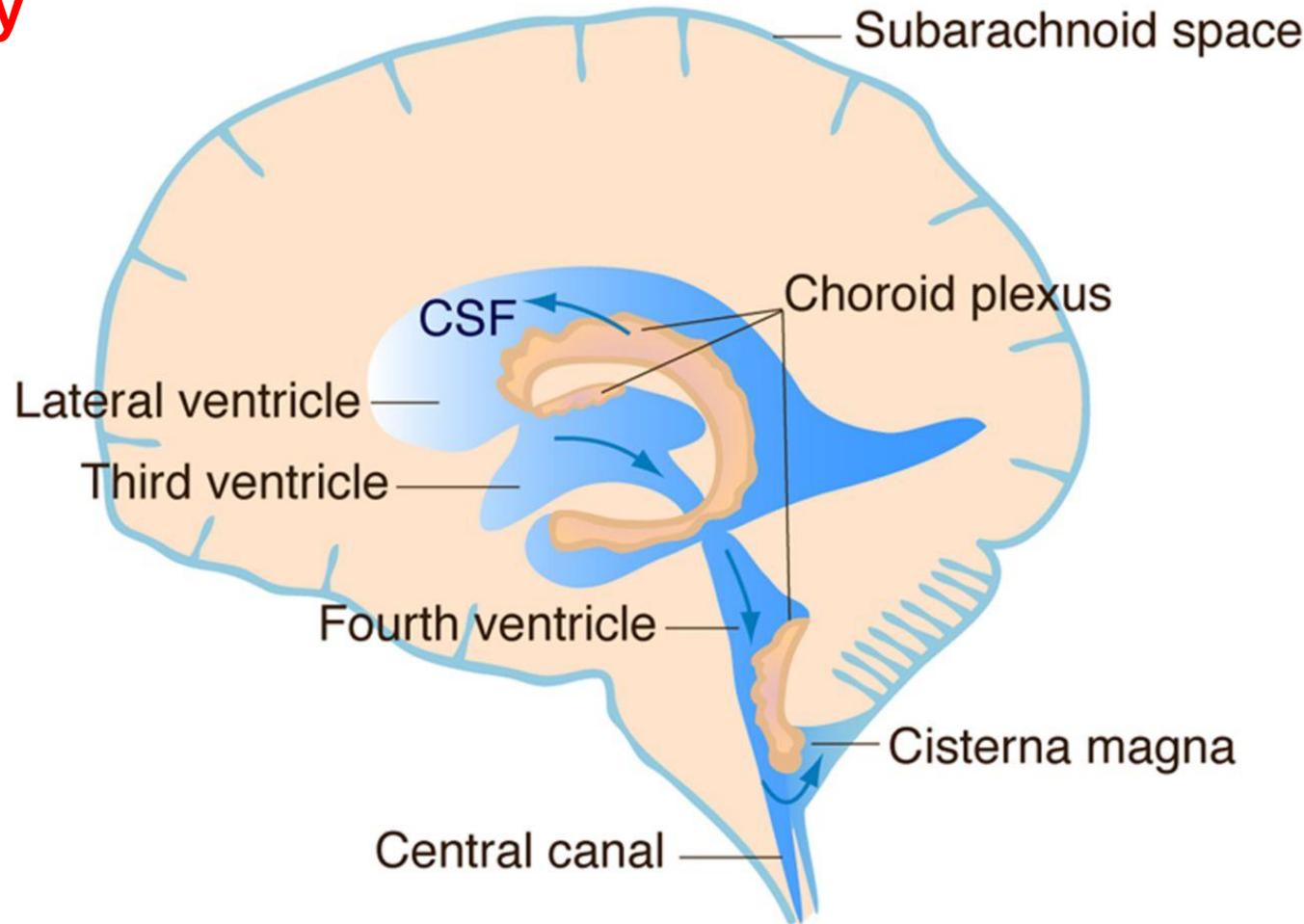
in the temporal lobe.



Choroid plexus

Choroid Plexus: site and arterial supply

- ❑ **Inferior horn of lateral ventricle** → Anterior choroidal branch (AchA) of internal carotid artery.
- ❑ **Body of lateral ventricle** → Posterior choroidal branch of posterior cerebral artery (PCA).
- ❑ **Third ventricle** → posterior choroidal branch of posterior cerebral artery (PCA).
- ❑ **Fourth ventricle** → Posterior Inferior Cerebellar Artery (PICA).



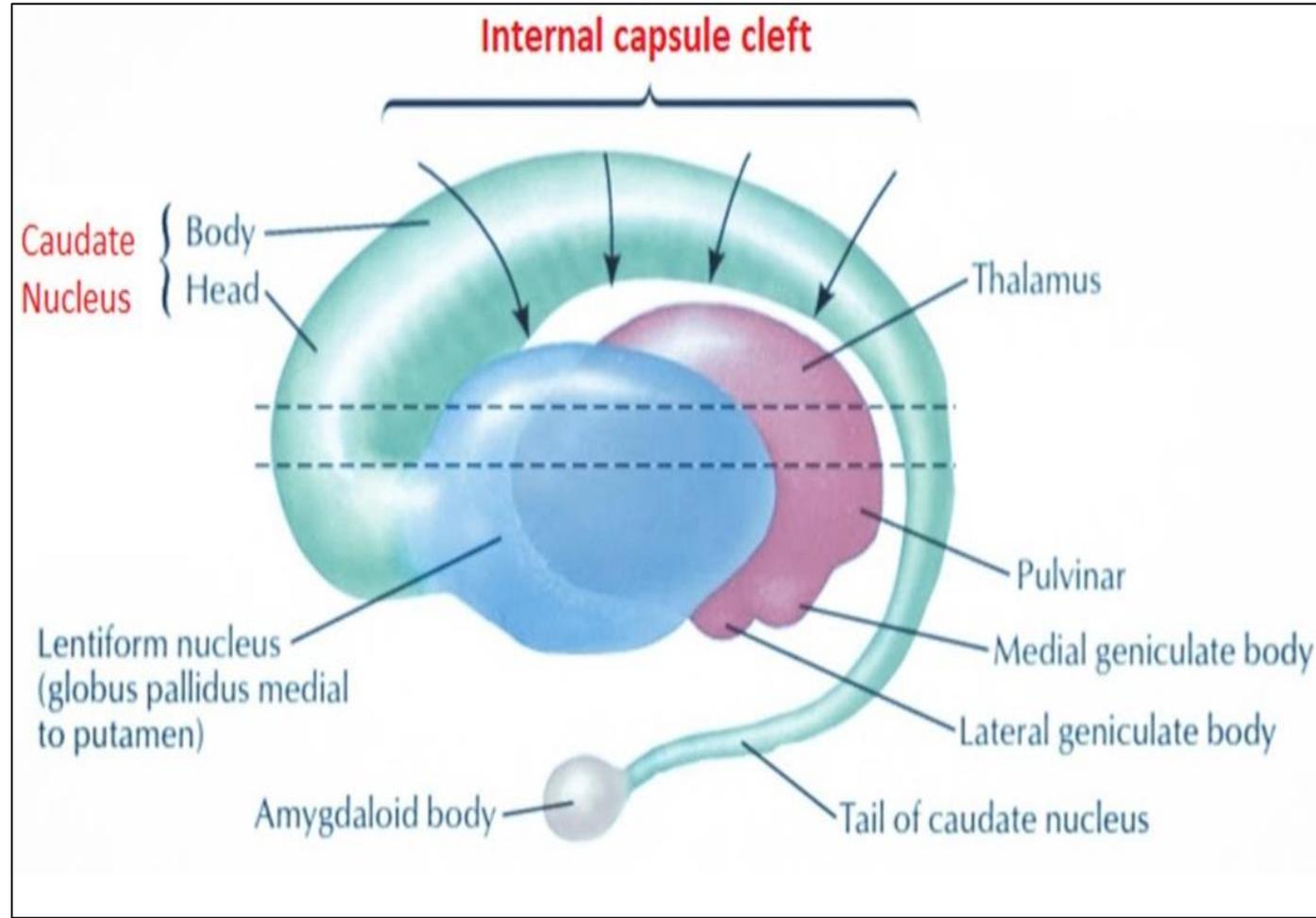
Basal Ganglia

They are composed of:

Corpus Striatum: formed of:

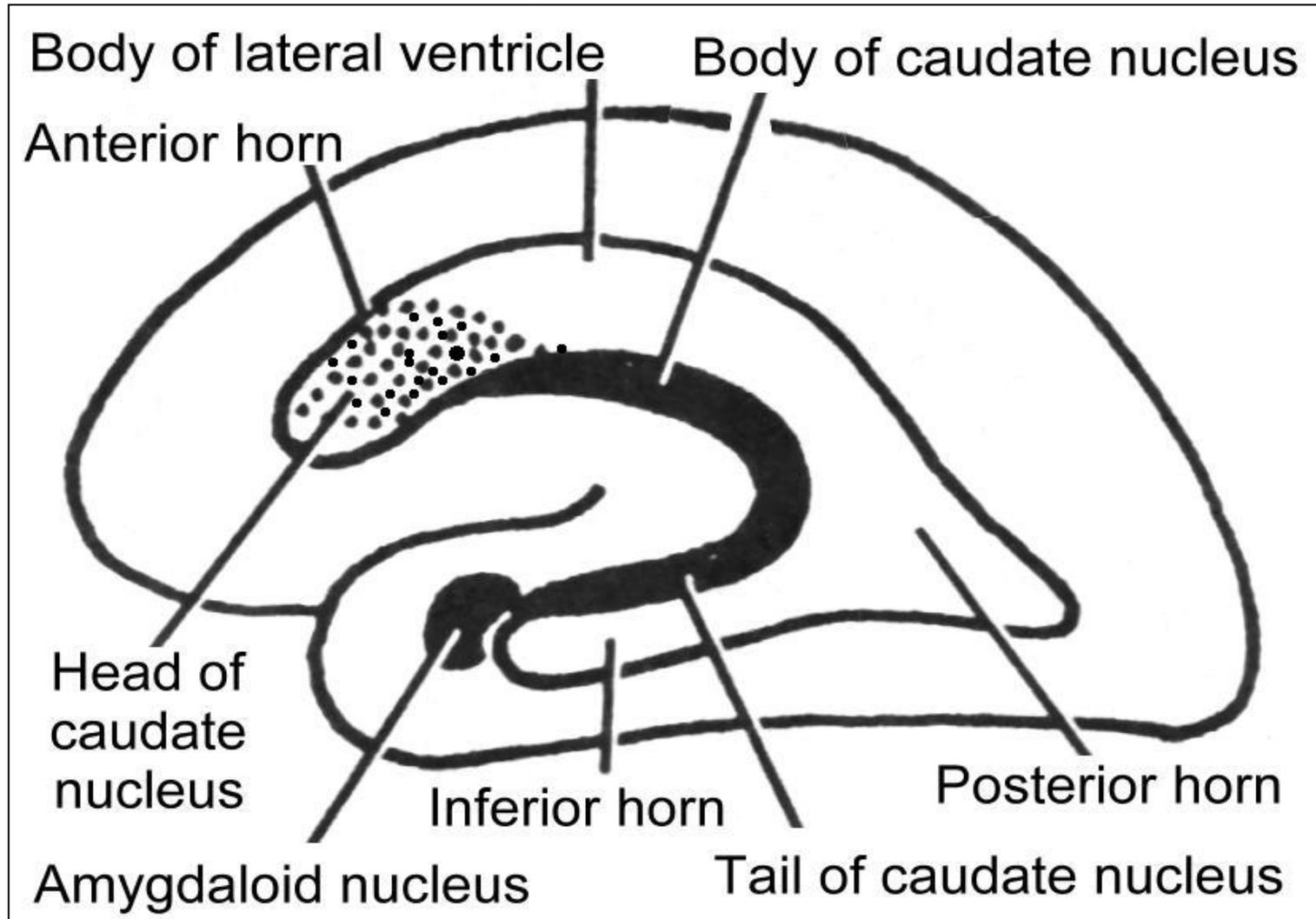
- Caudate nucleus: has
 - ❖ Head.
 - ❖ Body.
 - ❖ Tail.
- Lentiform nucleus: made up of
 - ❑ Globus pallidus (medially)
 - ❑ Putamen (laterally)

- **Amygdaloid nucleus**
- **Clastrum**



Relation of Basal Ganglia to Lateral ventricle

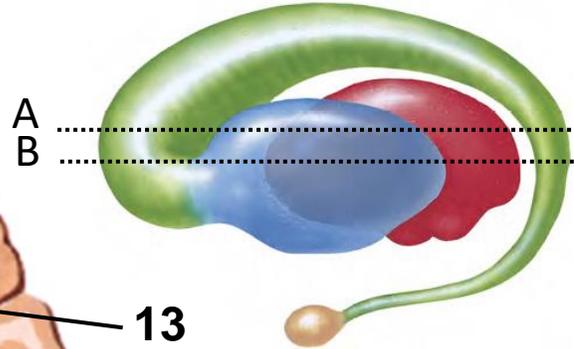
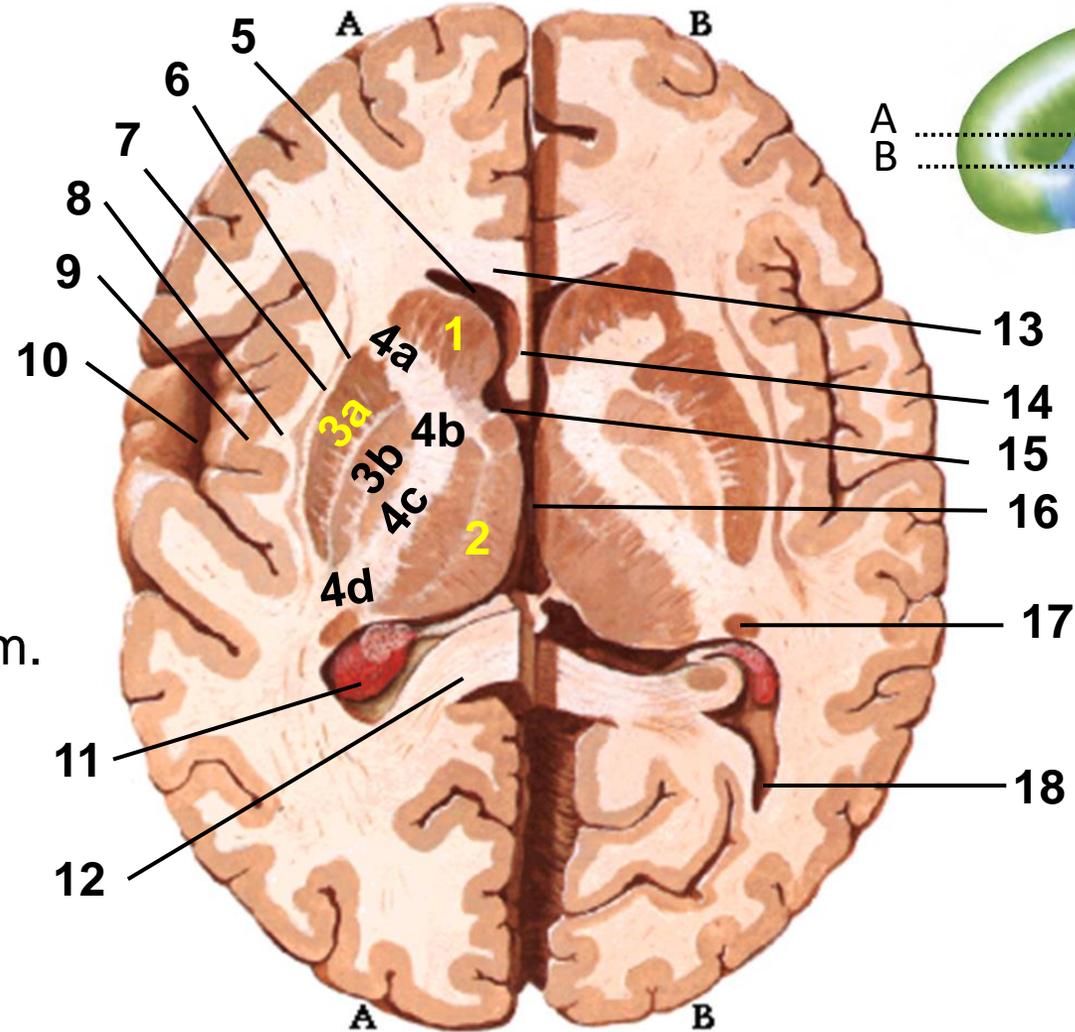
- ❑ Head of caudate → Lateral wall of anterior horn.
- ❑ Body of caudate → Floor of the body.
- ❑ Tail of caudate → Roof of inferior horn.
- ❑ Amygdaloid nucleus → Roof of inferior horn.



Horizontal section of the Brain

1. Head of Caudate.
2. Thalamus.
3. Lentiform nucleus.
- 3a. Putamen.
- 3b. Globus Pallidus.
4. Internal capsule:
- 4a. Anterior limb.
- 4b. Genu.
- 4c. Lenticulothalamic part of posterior limb.
- 4d. Retrolenticular part of posterior limb.
5. Anterior horn of lateral ventricle.
6. External capsule.
7. Claustrum

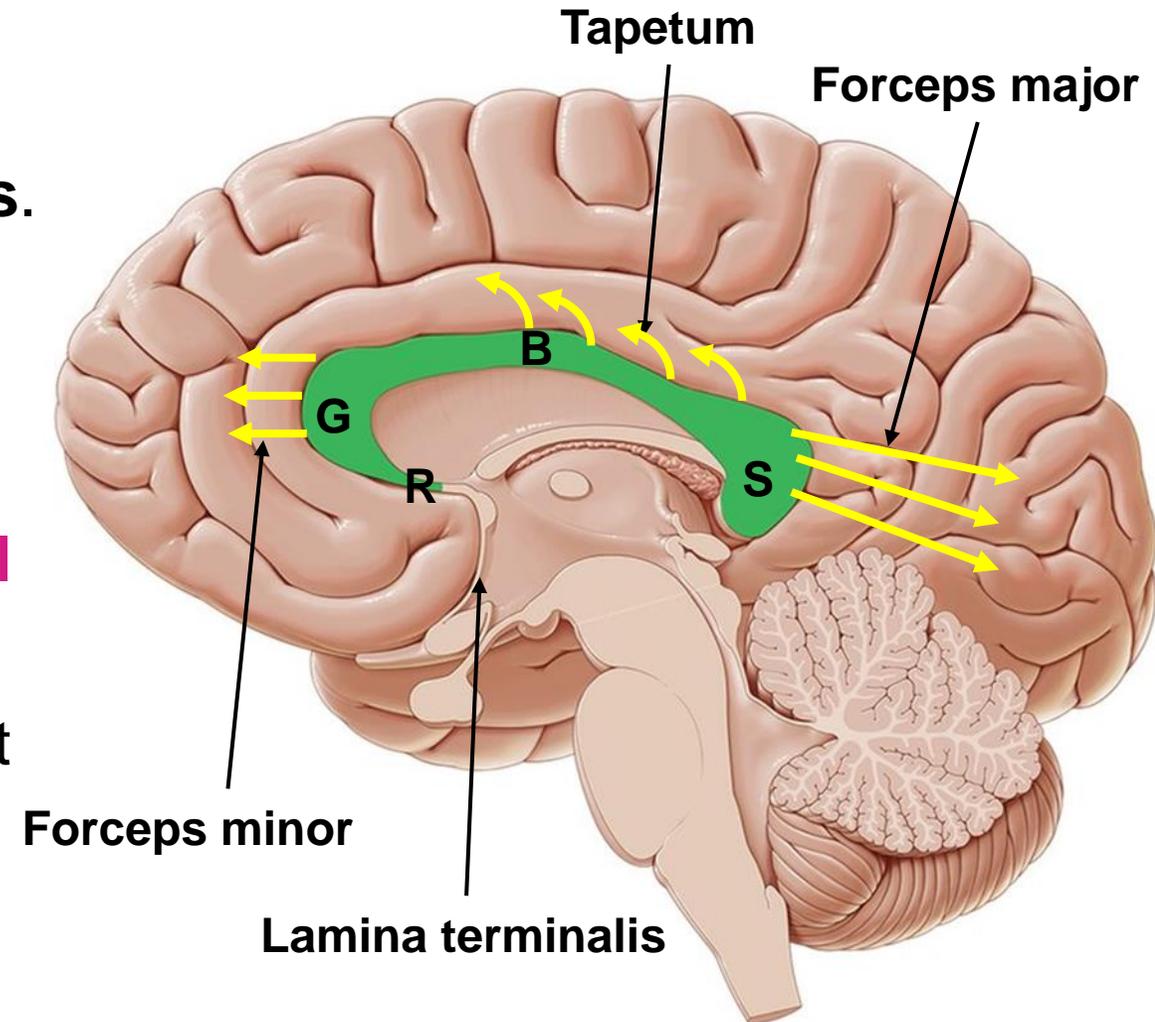
8. Extreme capsule.
9. Insula.
10. Lateral sulcus.
11. Choroid plexus of inferior horn.
12. Splenium of corpus callosum.
13. Genu of corpus callosum.
14. Septum pellucidum.
15. Interventricular foramen of Monro.
16. Third ventricle.
17. Tail of caudate.
18. Posterior horn of lateral ventricle.



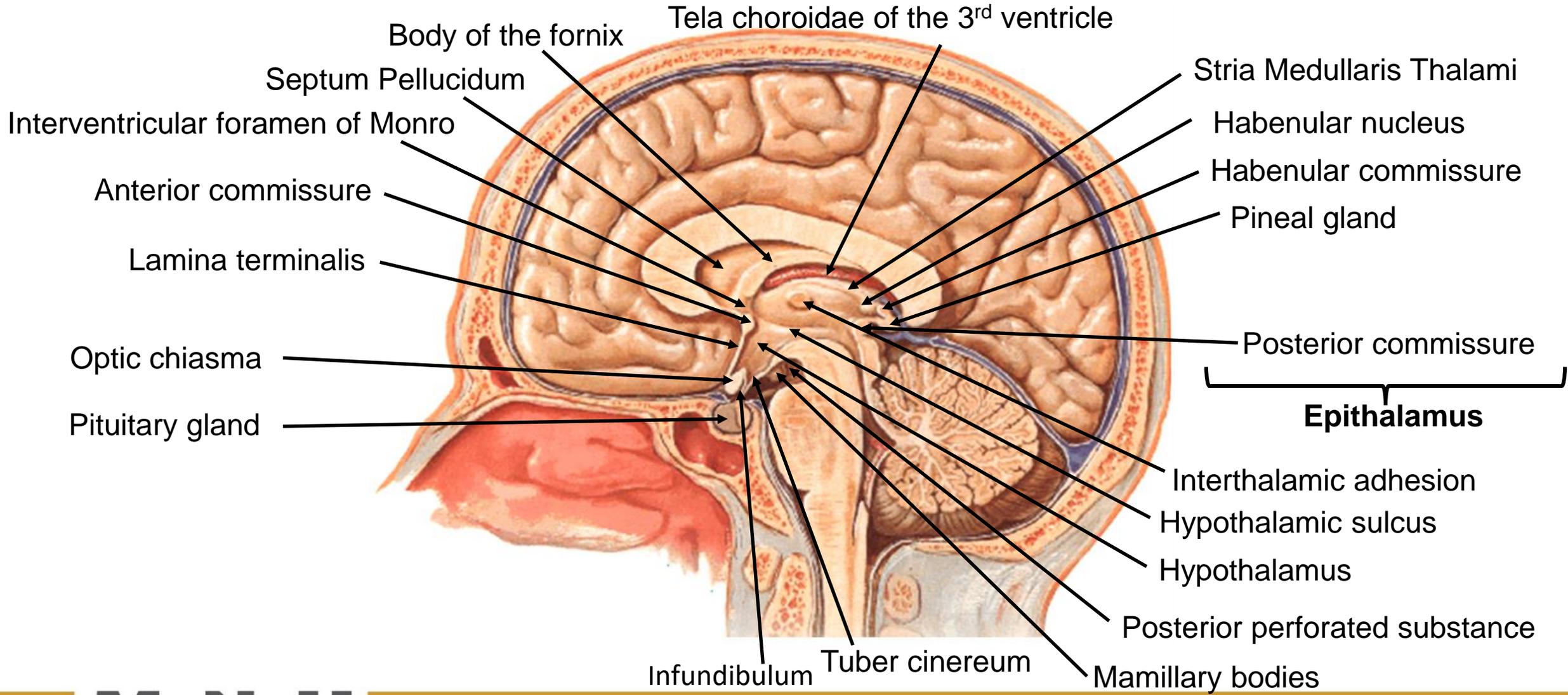
Commissural Fibers: Corpus Callosum

Parts:

1. **Rostrum**: continuous with **lamina terminalis**.
2. **Genu**: fibers form **forceps minor** that connect the two **frontal** lobes.
3. **Body**: form a radiation of posterior fibers called **tapetum** connecting the two **temporal** lobes.
4. **Splenium**: its fibers form **forceps major** that connect the two **occipital** lobes.

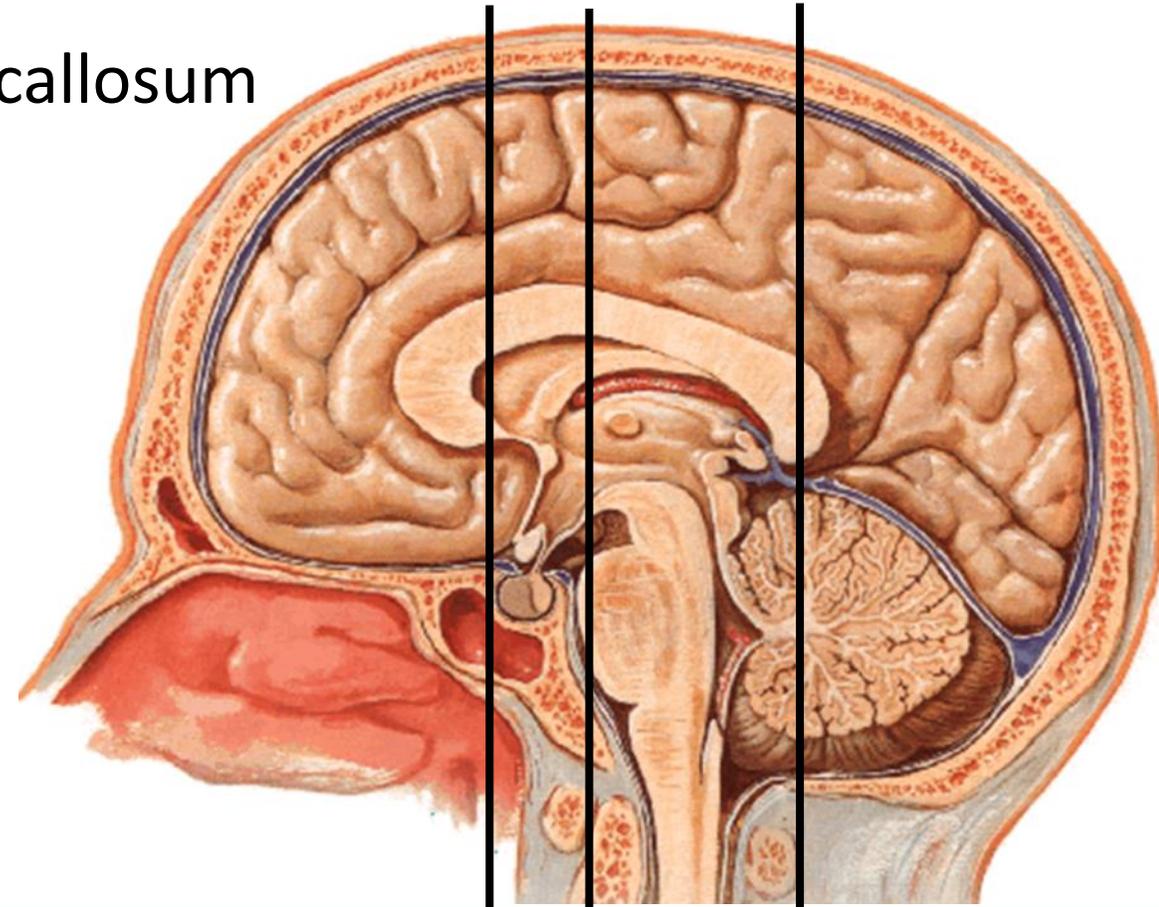
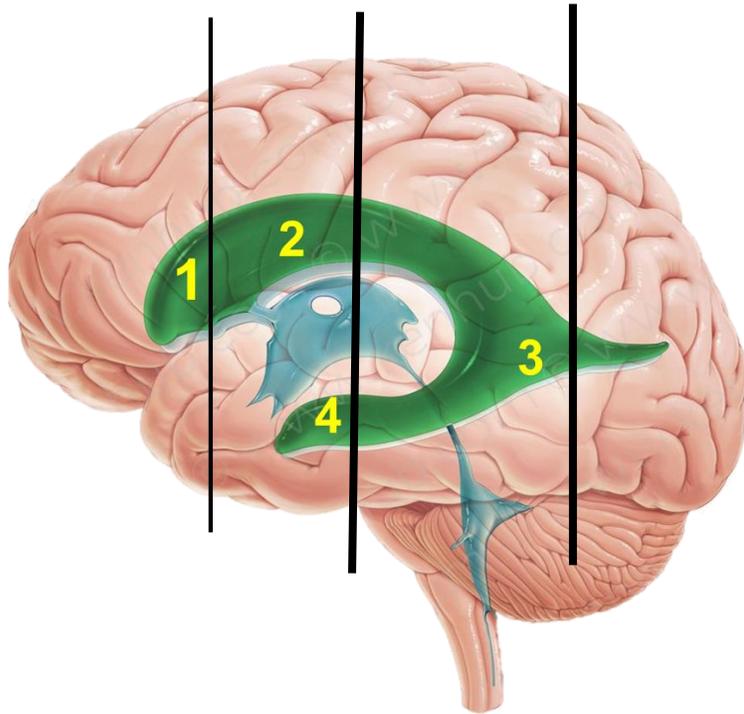


Sagittal section of the Brain

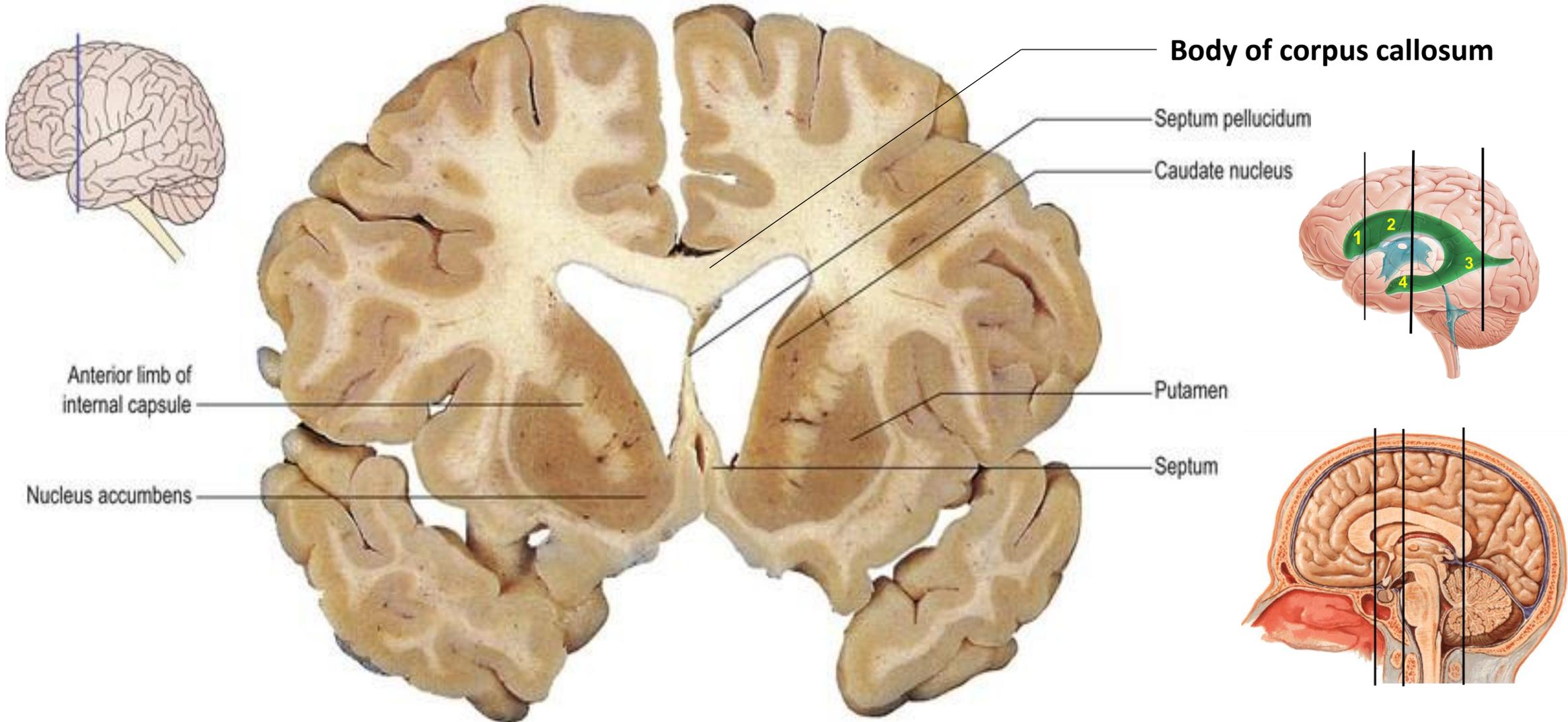


Coronal sections of the Brain

1. At the Rostrum of the Corpus Callosum
2. At the level of the mamillary bodies
3. At the level of the splenium of the corpus callosum



Coronal section at the level of Rostrum



Central part of the Lateral Ventricle

Lies in the parietal lobe

- **Roof:**

1- Corpus callosum (Body).

- **Medial wall:**

2- Septum pellucidum

- **Lateral wall:**

narrow area at the meeting of roof & floor.

- **Floor:**

3- Body of the caudate nucleus .

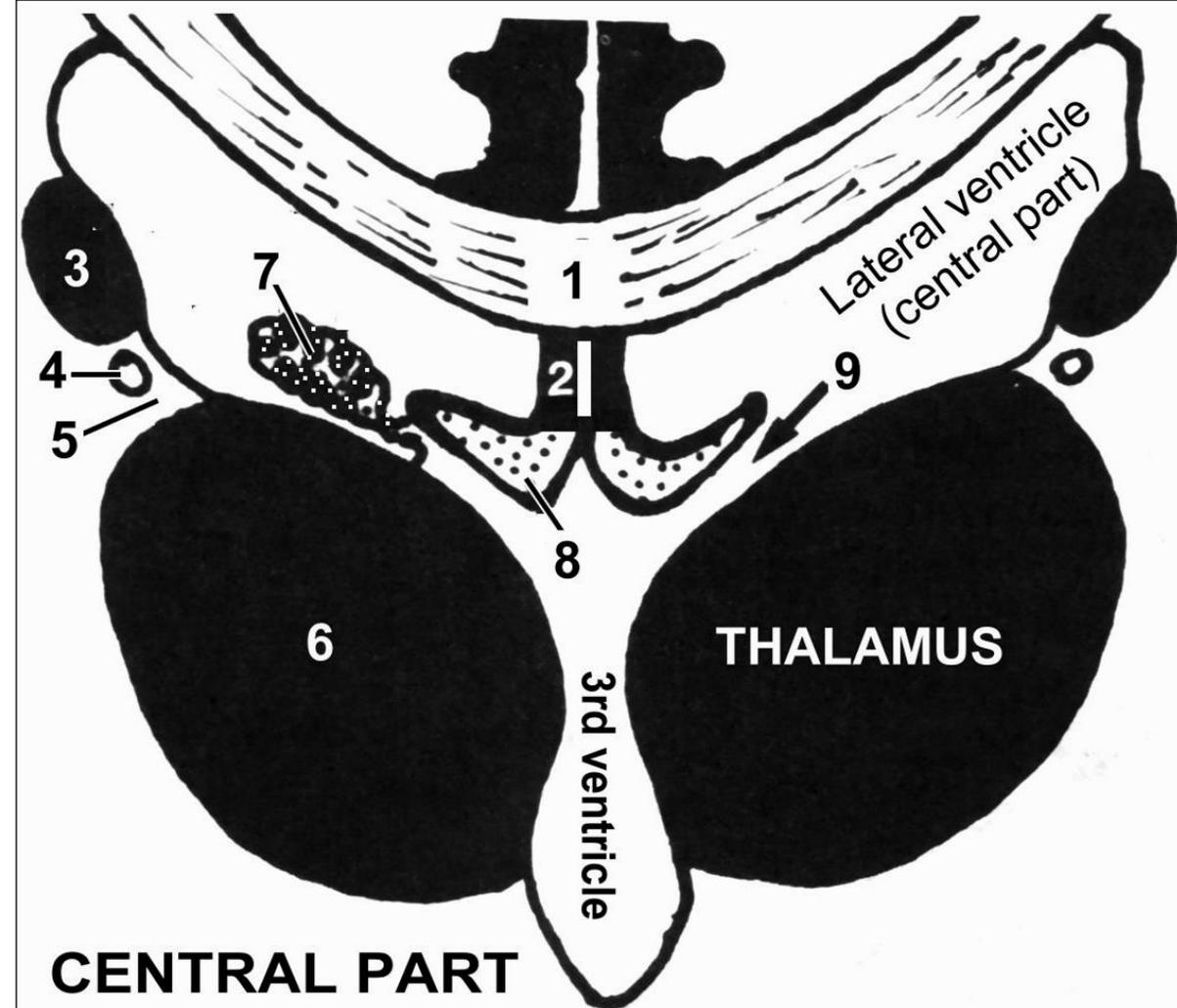
4- Thalamo-striate vein

5- Stria terminalis

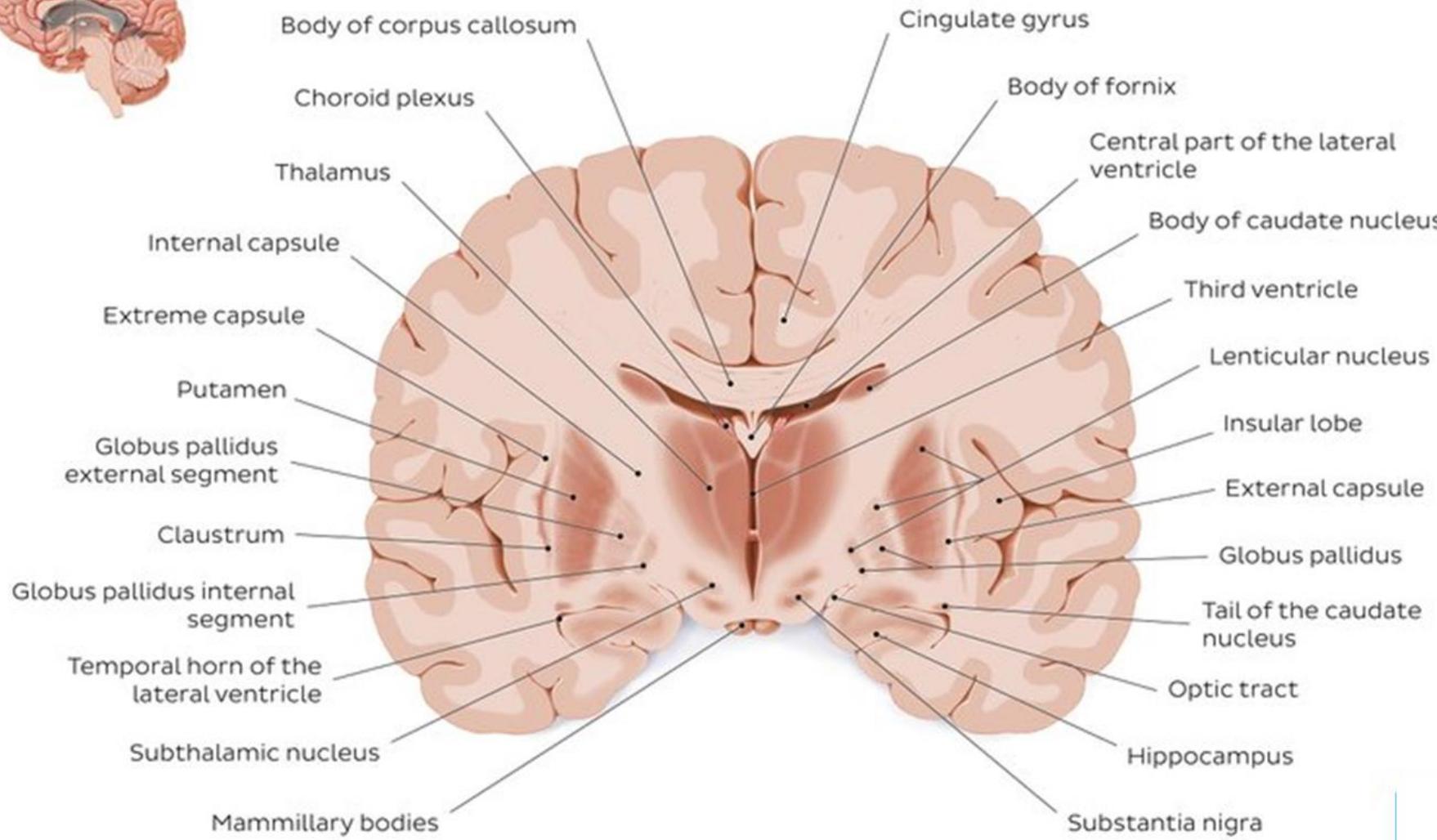
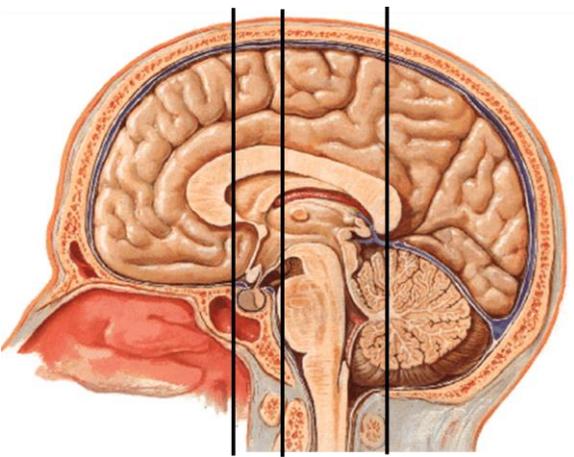
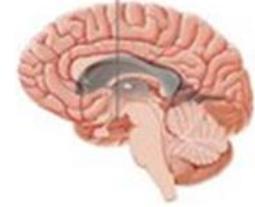
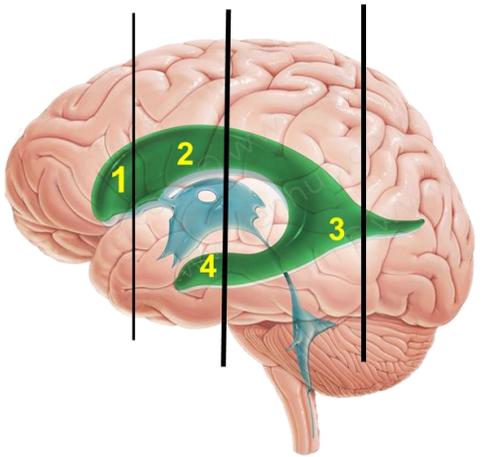
6- Thalamus

7- Choroid plexus in the choroid fissure

8- Body of the fornix



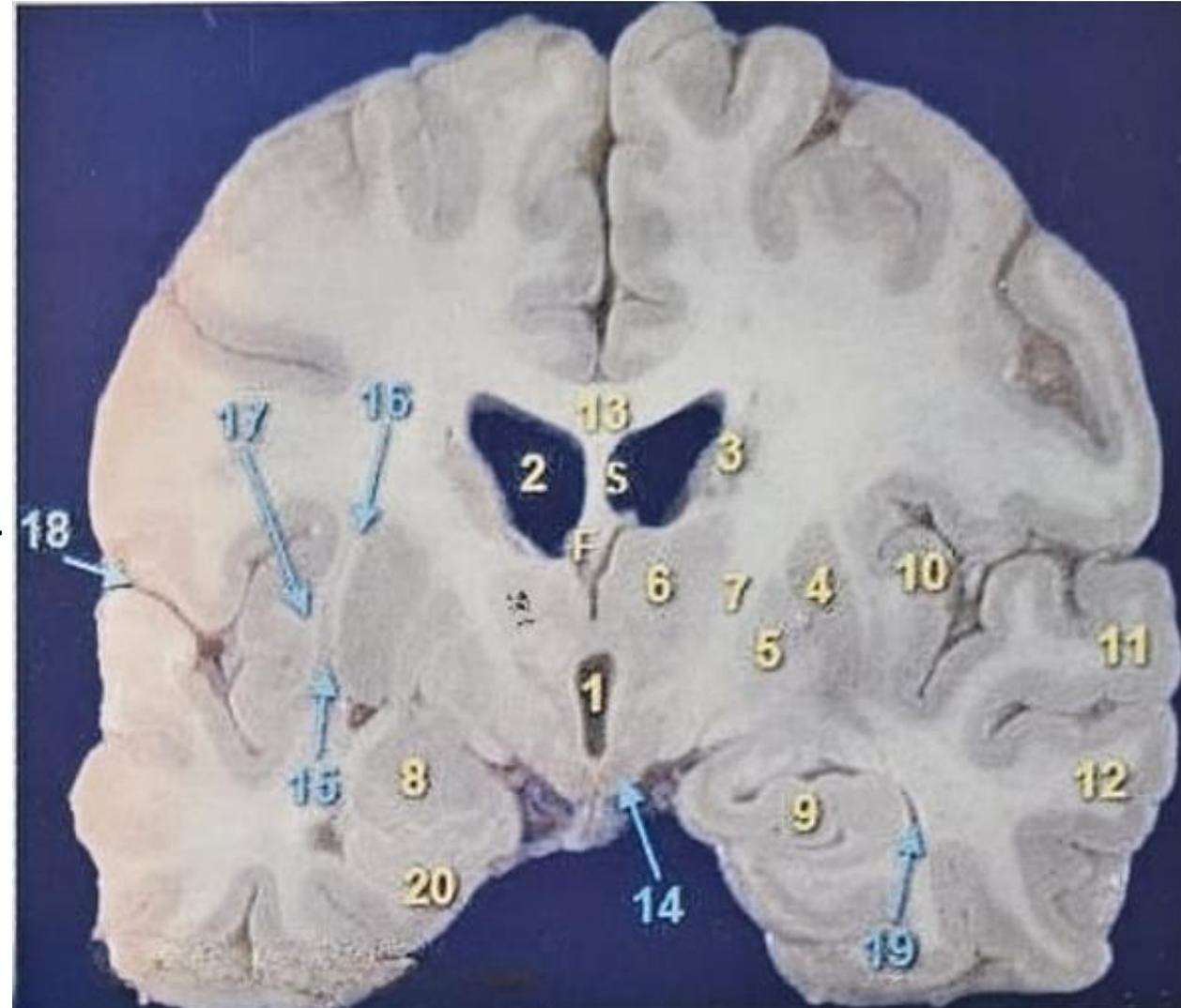
Coronal section at the level of mamillary bodies



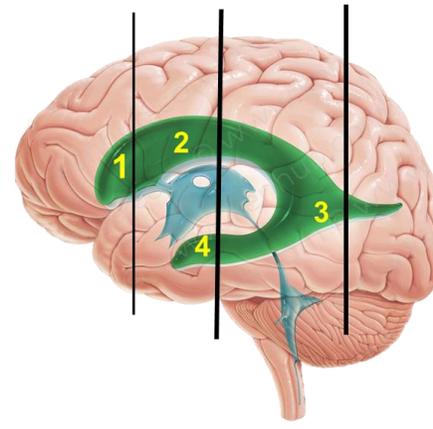
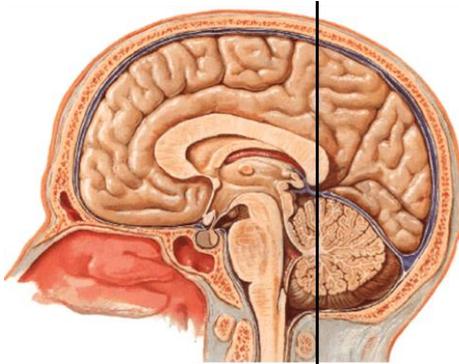
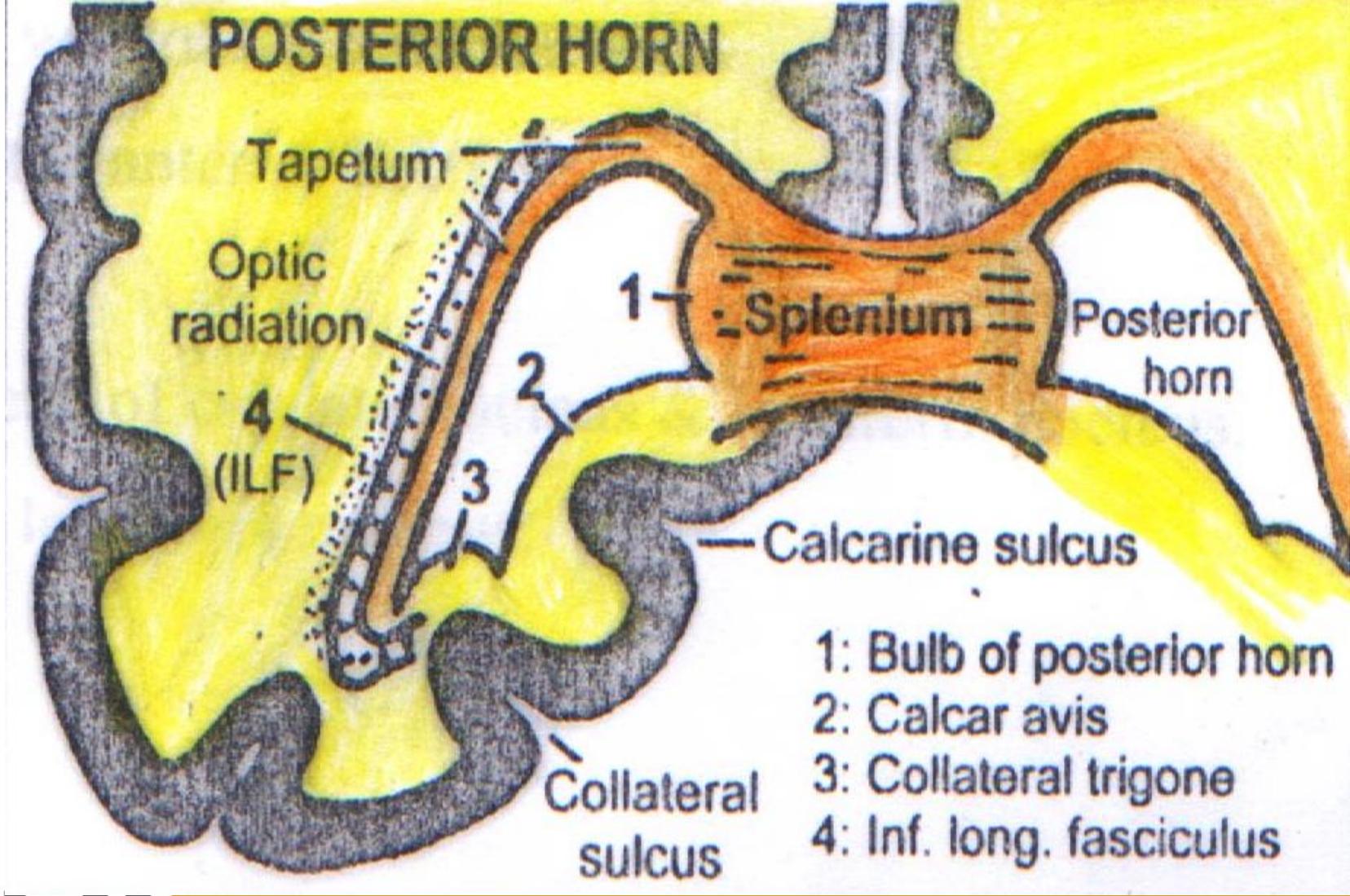
Coronal section at the level of mamillary bodies

- F: Body of the fornix
- S: Septum pellucidum
- 1: Third ventricle.
- 2: Central part of Lateral Ventricle.
- 3: Body of caudate nucleus.
- 4: Putamen.
- 5: Globus pallidus.
- 6: Thalamus.
- 7: Posterior limb of internal capsule.
- 8: Amygdaloid nucleus.
- 9: Hippocampus.
- 10: Insula.
- 11: Superior Temporal gyrus.

- 12: Middle temporal gyrus.
- 13: Corpus Callosum.
- 14: Mamillary body.
- 15: Claustrum.
- 16: External Capsule.
- 17: Extreme Capsule.
- 18: Lateral Sulcus.
- 19: Inferior horn of Lateral ventricle.
- 20: Parahippocampal gyrus.

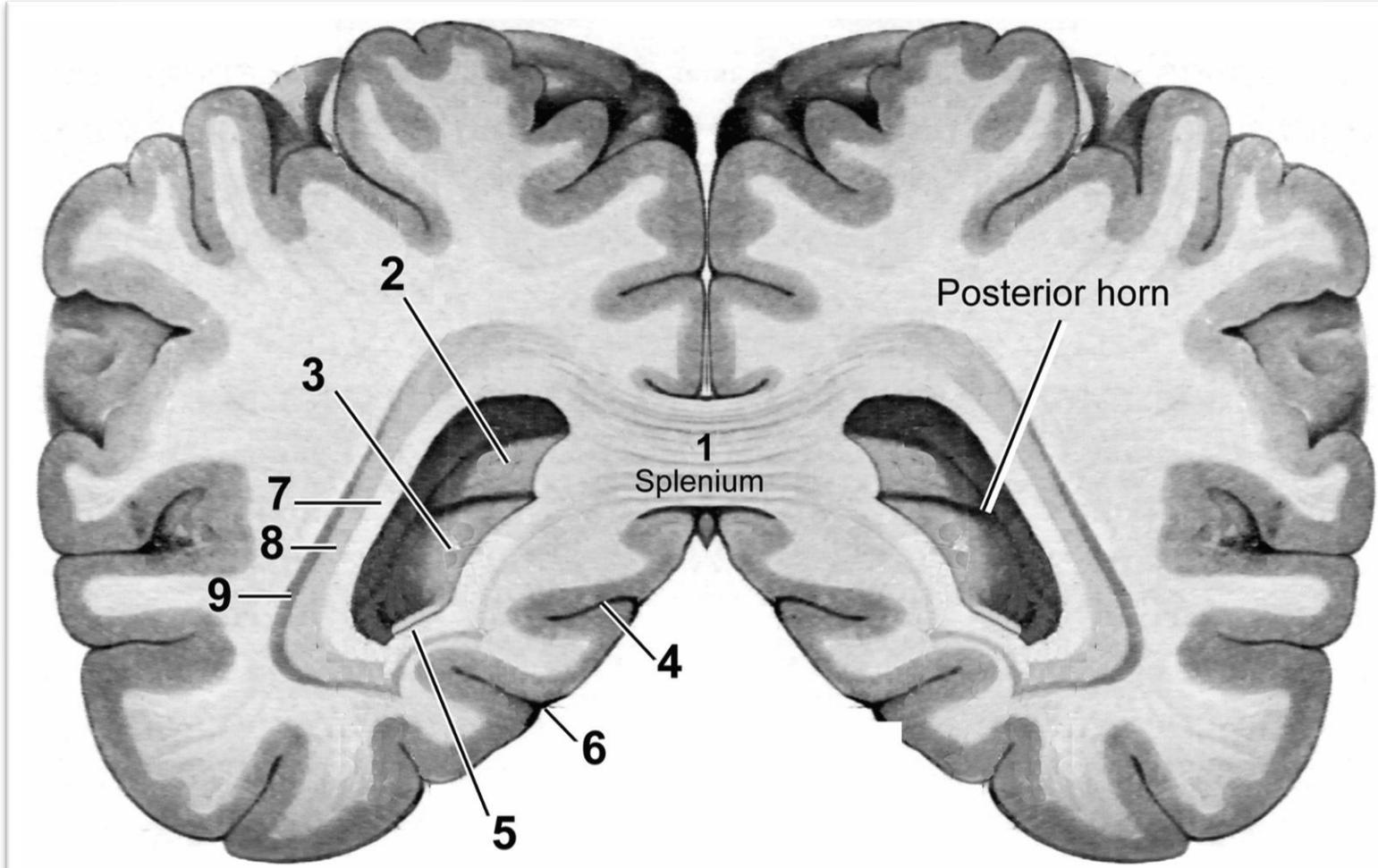


Coronal section at the level of Splenium



Coronal section at the level of Splenium

- 1-Splenium of the corpus callosum.
- 2-Bulb of posterior horn
- 3-Calcar avis
- 4-Calcarine sulcus.
- 5-Collateral trigone
- 6-Collateral sulcus.
- 7-Tapetum of corpus callosum
- 8-Optic radiation.
- 9- Inferior Longitudinal Fasciculus



CORONAL SECTION AT THE LEVEL OF THE SPLENIUM



THANK YOU

