

3rd VENTRICLE AND ITS STRUCTURES

PRESENTED BY :AYESHA ASHFAQ ALI

BRAIN VENTRICLES

The ventricles are fluid filled cavities in the brain

They are **four** in number

- Two lateral ventricles
- Third ventricle
- Fourth ventricle

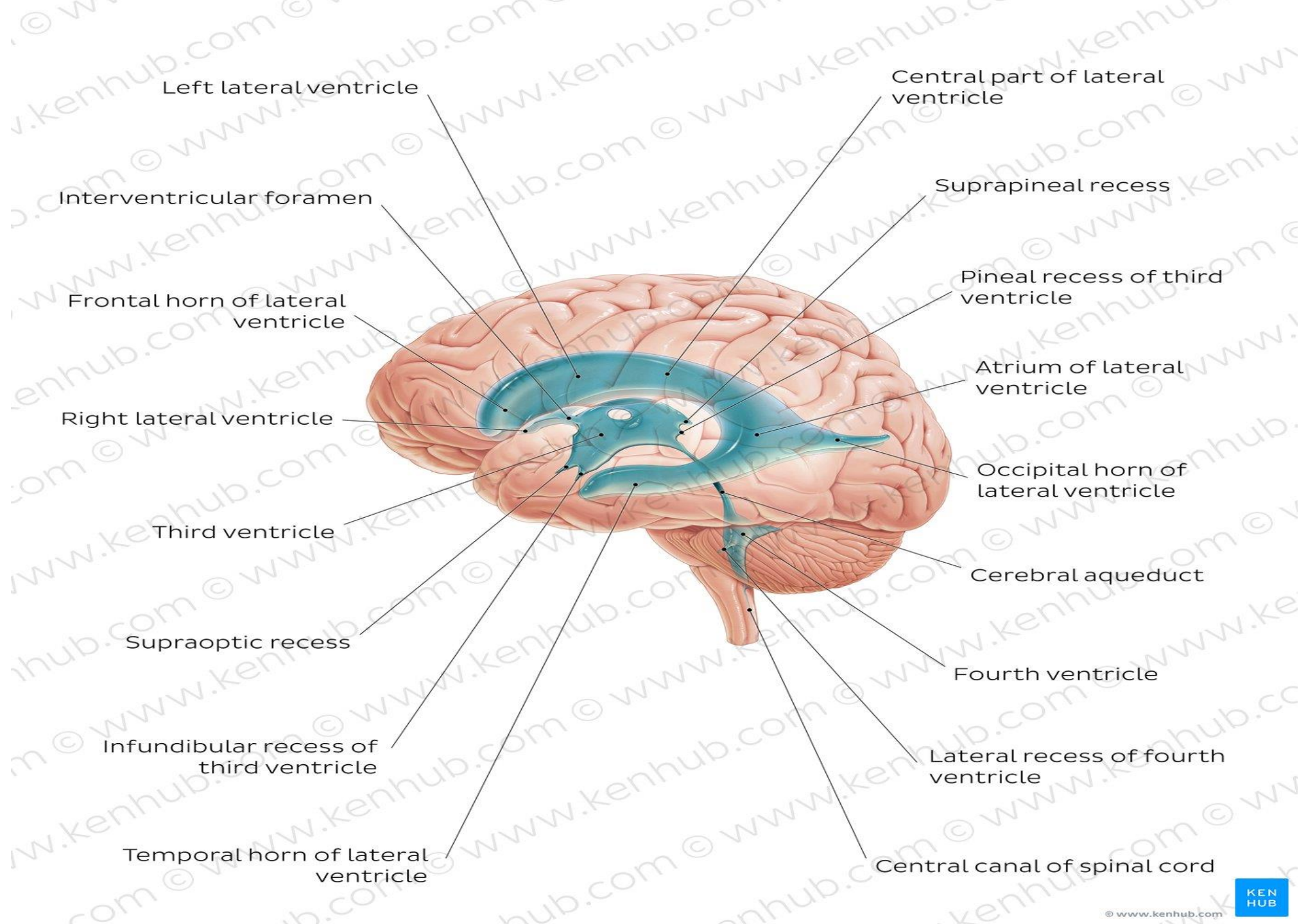
Lined by **ependymal cells**

Contain the **CSF**

Developed from the **cavity of neural tube**

3rd ventricle and its relation to other ventricles

- The third ventricle is a slit-like cavity located in the midline of the brain in the diencephalon between the 2 thalami and hypothalamus
- **Relation to other ventricles**
- **ANTEROSUPERIOR ASPECT:** connects to lateral ventricle through the interventricular foramina (of Monro)
- **POSTEROINFERIOR ASPECT:** connects to fourth ventricle through the cerebral aqueduct(of Sylvius)



Left lateral ventricle

Interventricular foramen

Frontal horn of lateral ventricle

Right lateral ventricle

Third ventricle

Supraoptic recess

Infundibular recess of third ventricle

Temporal horn of lateral ventricle

Central part of lateral ventricle

Suprapineal recess

Pineal recess of third ventricle

Atrium of lateral ventricle

Occipital horn of lateral ventricle

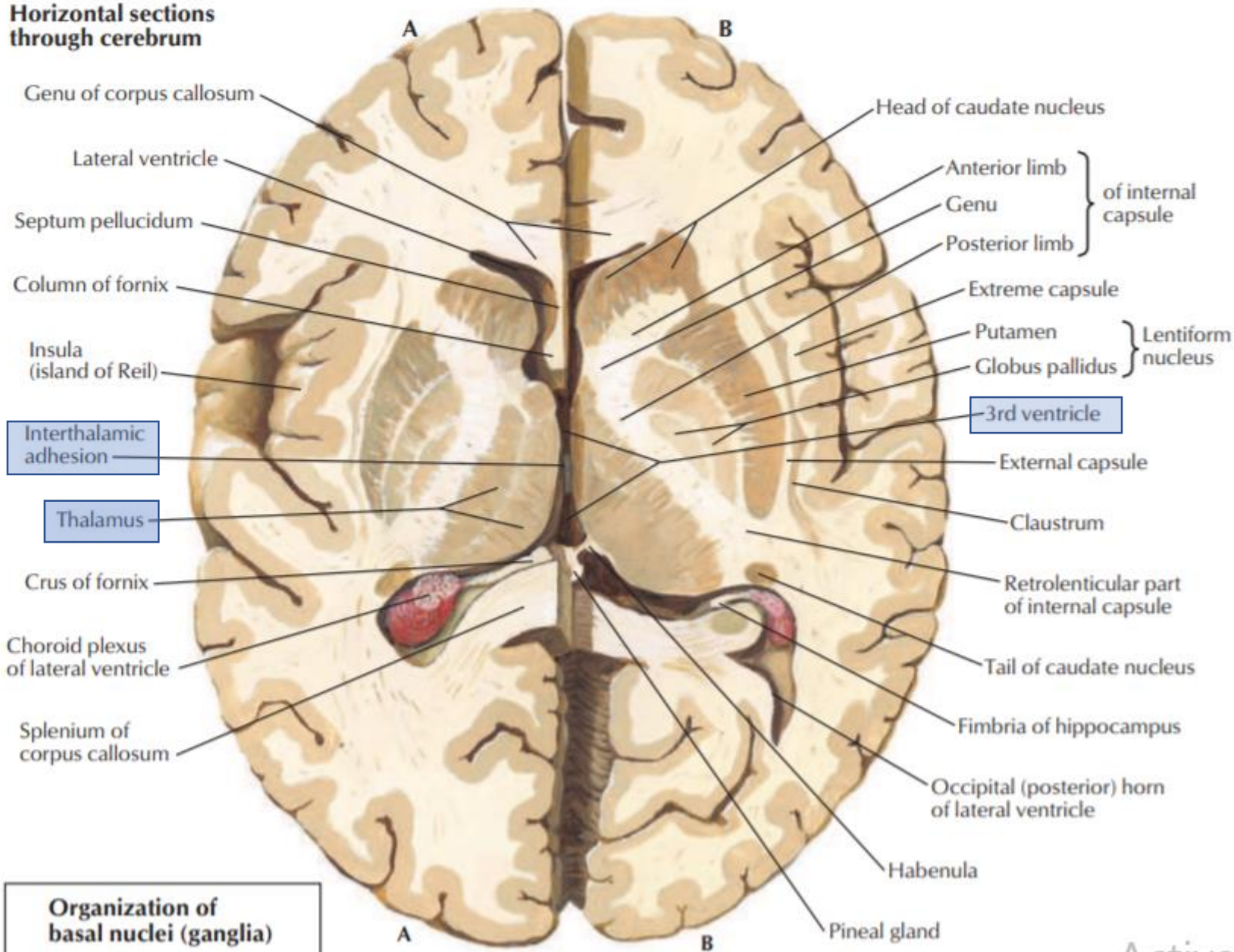
Cerebral aqueduct

Fourth ventricle

Lateral recess of fourth ventricle

Central canal of spinal cord

Horizontal sections through cerebrum



Organization of basal nuclei (ganglia)

Structures related to 3rd ventricle (RECESSES)

The third ventricle has 5 main recesses that protrude into surrounding structures:

1. Infundibular Recess: Located on the floor of the third ventricle below the optic chiasm, the infundibular recess protrudes inferiorly into the infundibulum (pituitary stalk) that connects the pituitary gland to the hypothalamus.

2. Supraoptic Recess: Located on the lower anterior aspect of the third ventricle above the optic chiasm (and infundibular recess) and below the lamina terminalis.

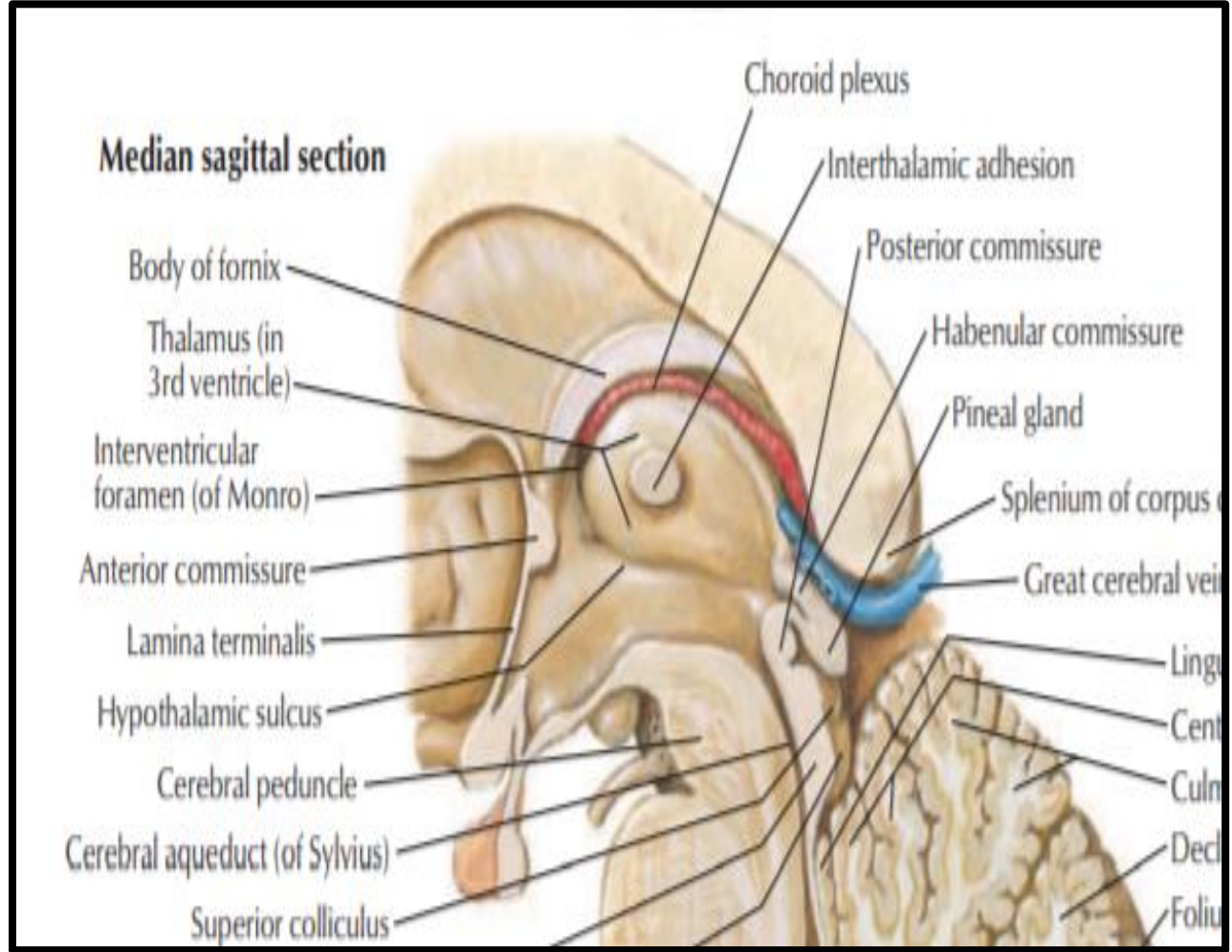
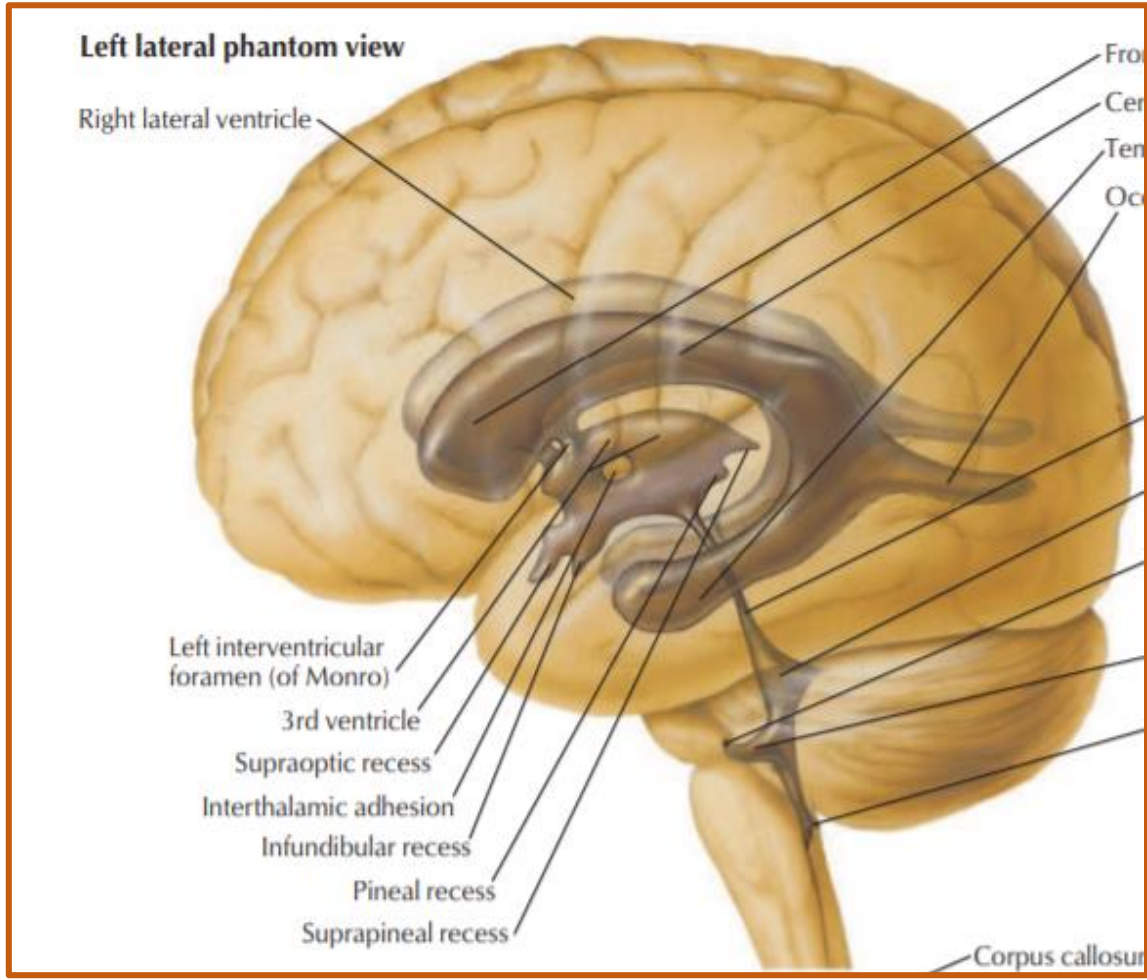
Structures related to 3rd ventricle (RECESSES)

3. Anterior Recess (Vulva or Bulb of the Ventricle): Recess formed on the anterosuperior aspect of the third ventricle where the interventricular foramina enter the third ventricle laterally.

4. Pineal Recess: Located on the posterior aspect of the third ventricle and protrudes posteriorly into the stalk of the pineal gland.

5. Suprapineal Recess: Located on the upper posterior aspect of the third ventricle, protruding above the pineal recess/gland and below the choroid plexus/tela choroidea that make up the roof.

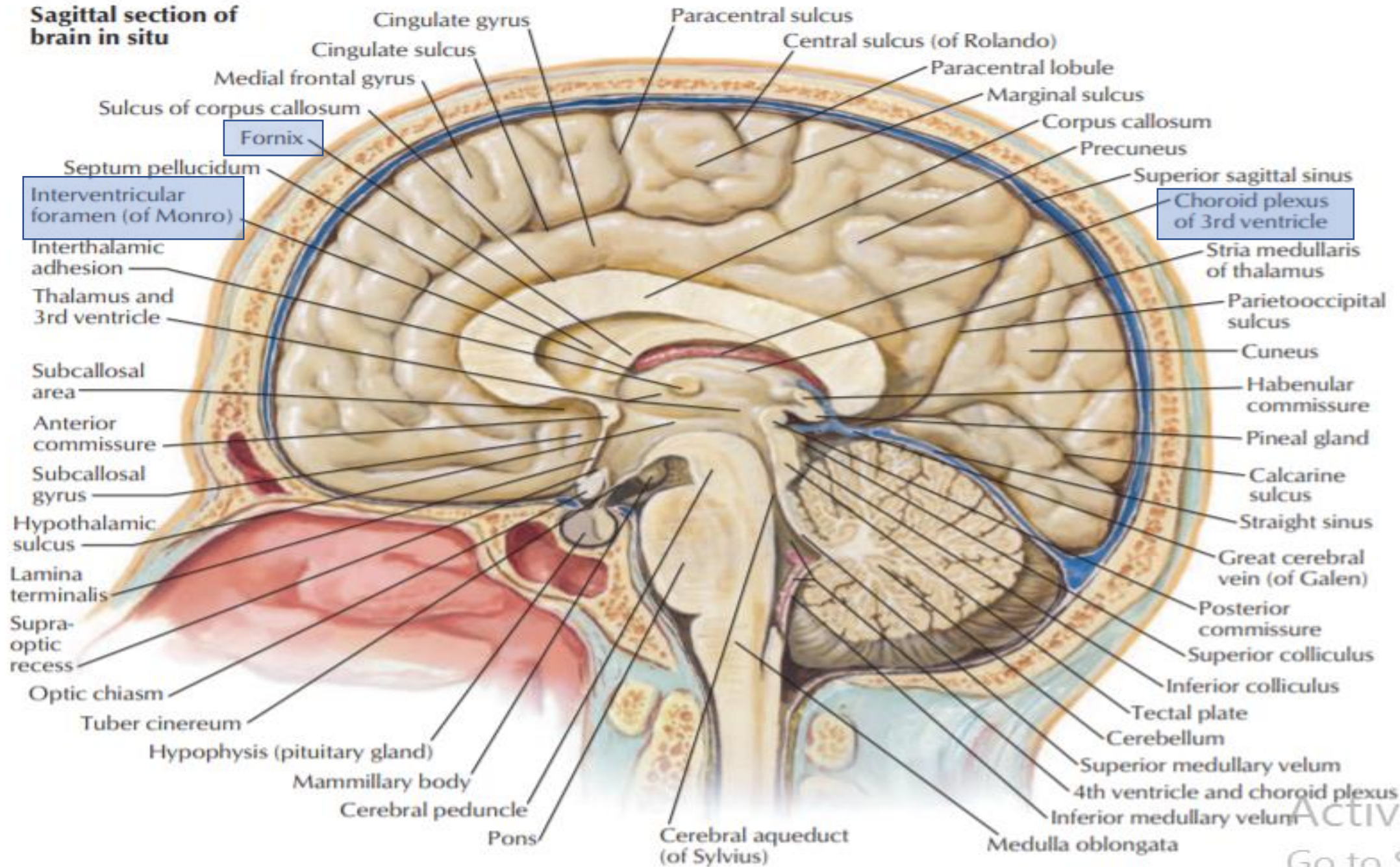
RECESSES



Structures related to 3rd ventricle (WALLS OF THE VENTRICLE)

- Roof: (Anterior to Posterior)
 1. (Interventricular Foramina) - Separates roof and anterior wall
 2. Fornix
 3. Choroid Plexus/Tela Choroidea
 4. Suprapineal Recess
- The choroid plexus is involved in CSF production

Sagittal section of brain in situ



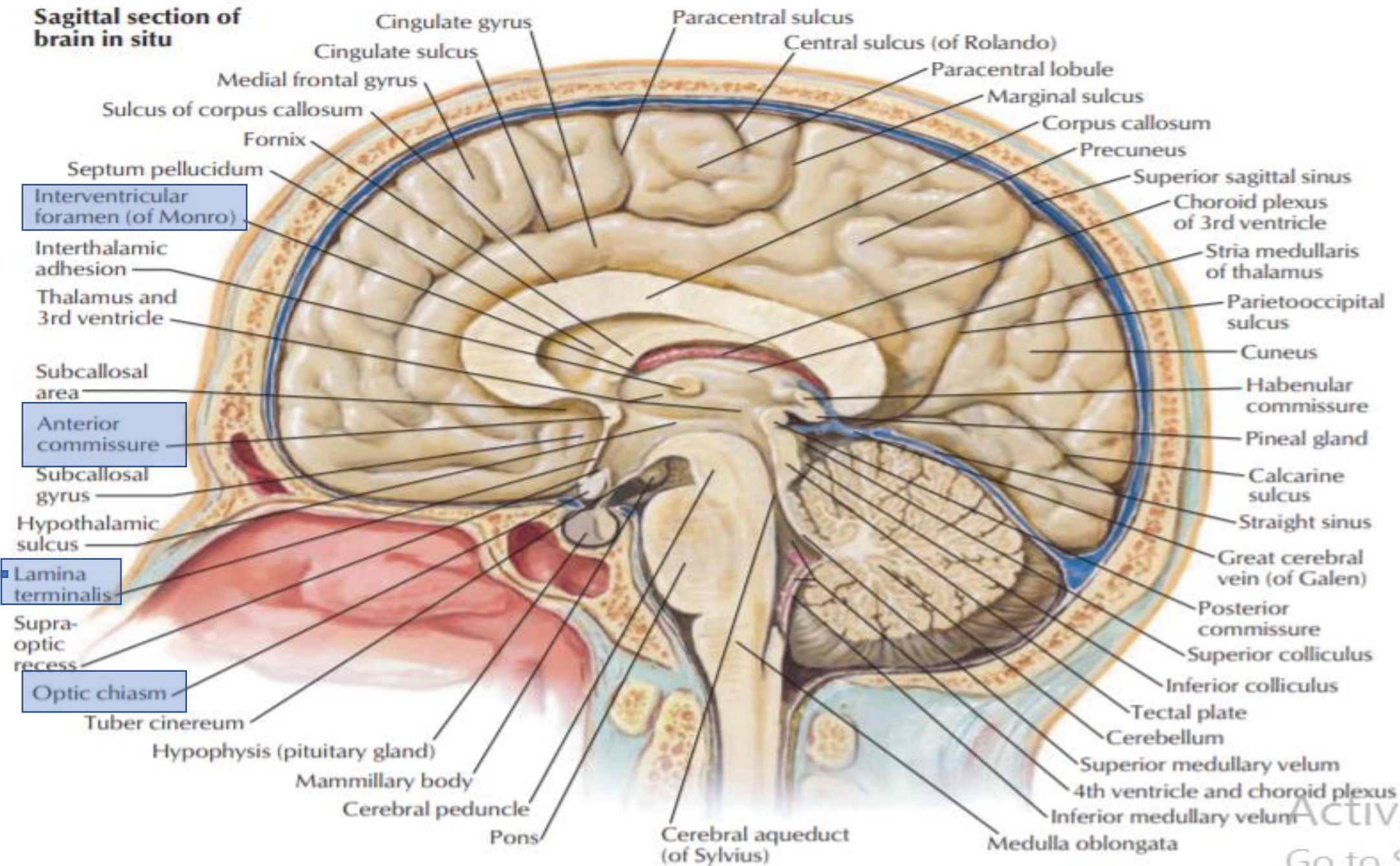
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Structures related to 3rd ventricle (WALLS OF THE VENTRICLE)

Anterior Wall: (Superior to Inferior)

1. Interventricular Foramina: Separates anterior wall and roof
2. Anterior Commissure
3. Lamina Terminalis
4. Optic Chiasm

Sagittal section of brain in situ



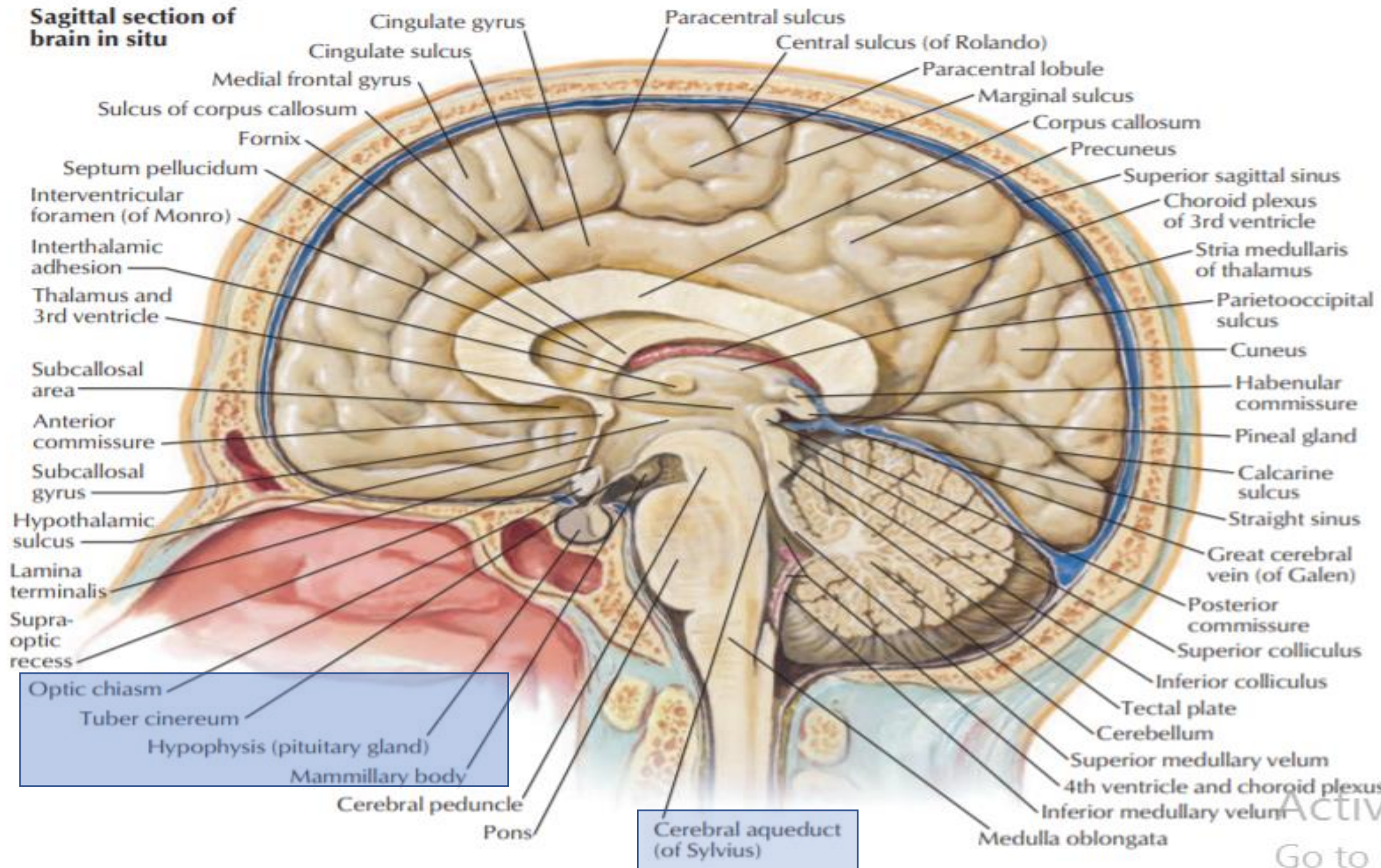
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Structures related to 3rd ventricle (WALLS OF THE VENTRICLE)

Floor: (Anterior to Posterior)

1. Optic Chiasm: Separates floor and anterior wall
2. Infundibulum
3. Tuber Cinereum
4. Mammillary Bodies
5. Tegmentum of Midbrain
6. Cerebral Aqueduct
 - Cerebral aqueduct is lined by ependymal cells and lacks choroid plexus

Sagittal section of brain in situ



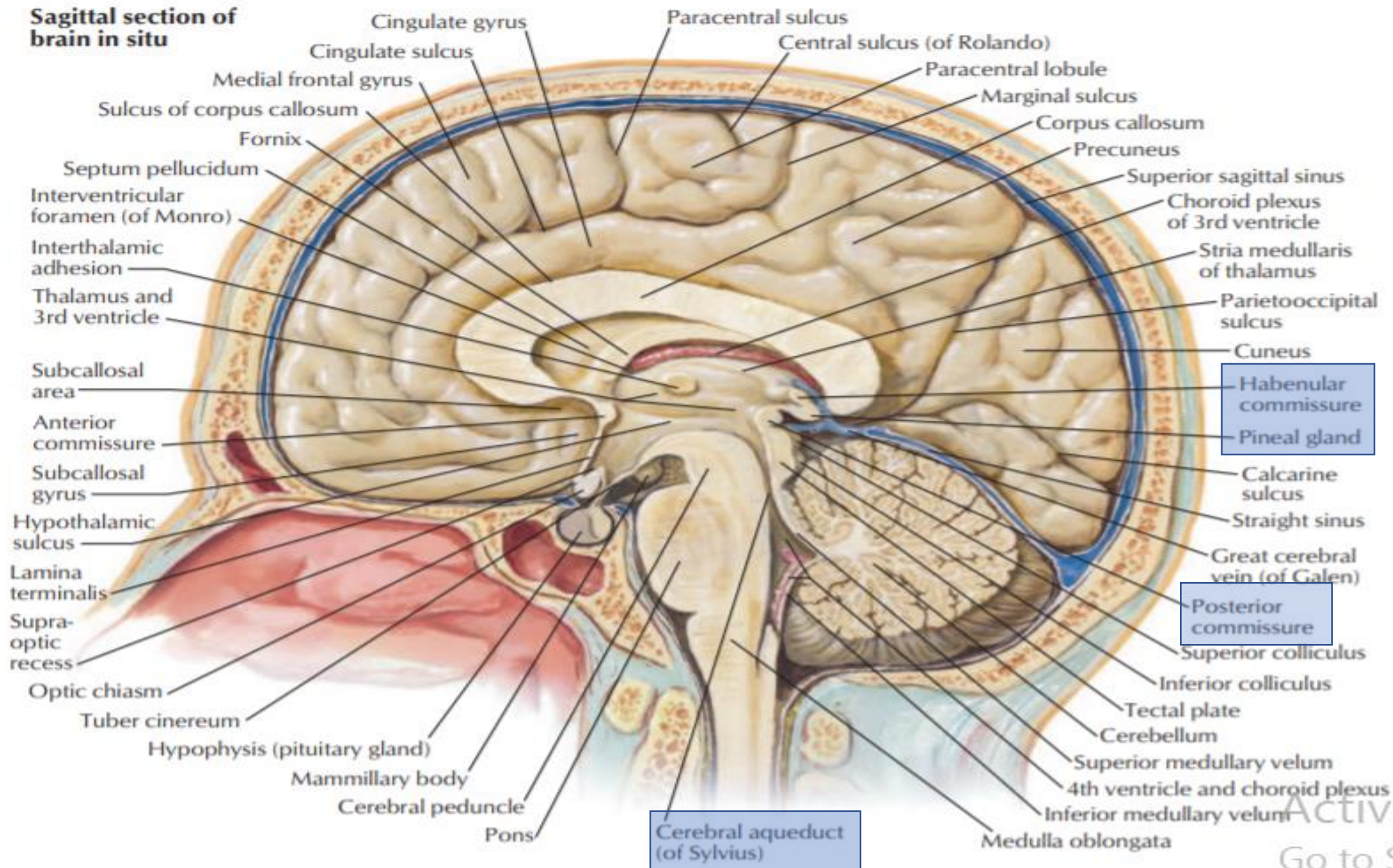
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Structures related to 3rd ventricle (WALLS OF THE VENTRICLE)

Posterior Wall: (Superior to Inferior)

1. Suprapineal Recess: Separates posterior wall and roof
2. Habenular Commissure
3. Pineal Gland and Recess
4. Posterior Commissure
5. Cerebral Aqueduct

Sagittal section of brain in situ

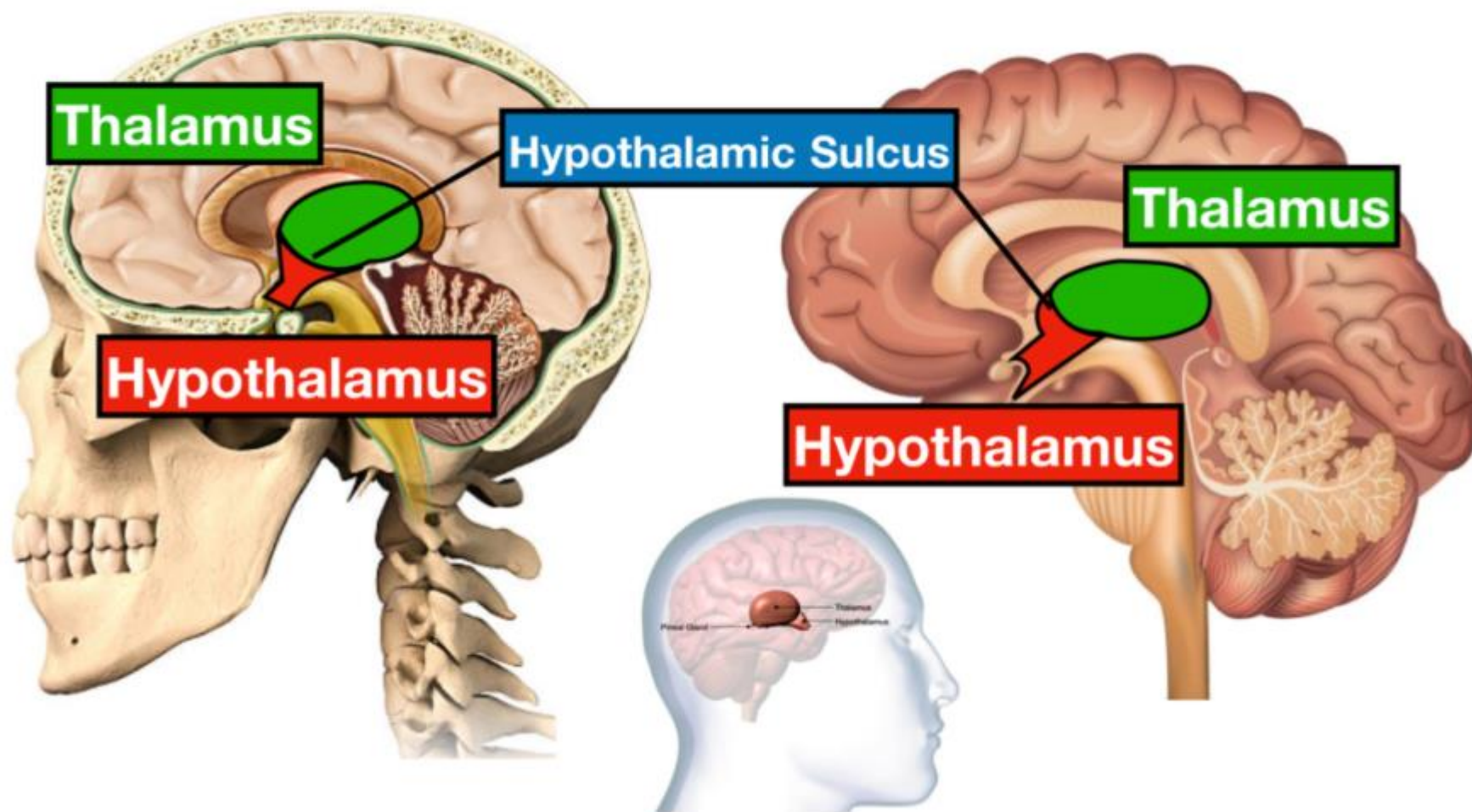


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Structures related to 3rd ventricle (WALLS OF THE VENTRICLE)

Lateral Walls: (Superior to Inferior)

1. Thalamus - Upper Part
2. Hypothalamus - Lower Part



REFERENCES

- SNELL NEUROANTOMY
- NETTER ATLAS
- KENHUB

