神经解剖学

2022年2月28日 15:26

中枢神经系统

Chapter 1 脑和脊髓的被膜与脑脊液

1.1 脊髓的被膜

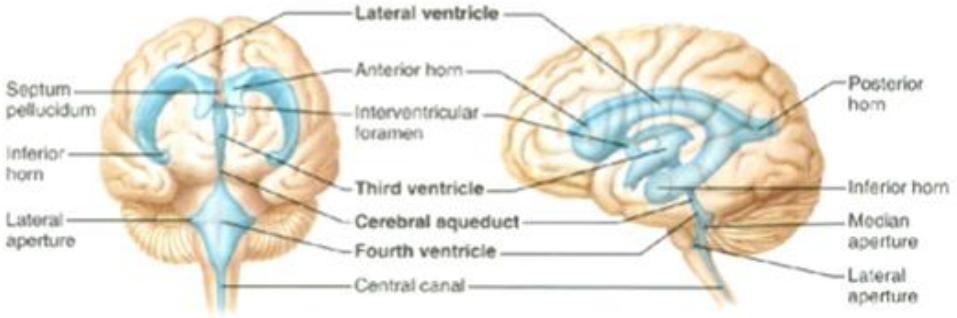
1.2 脑的被膜

1.3 脑室系统

Ventricular system

Ventricles

- Consist of four fluid-filled communicating cavities within the brain.
- Lined with ependymal and contain CSF.
- Contain choroid plexus, which produces CSF at a rate of 500 to 700 ml/day.
- Communicate with the subarachnoid space via three foramina in the fourth ventricle.



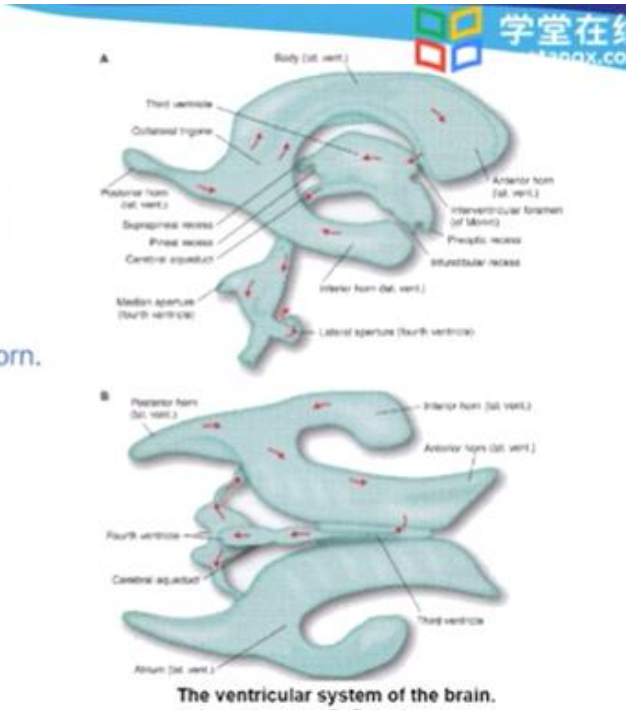
(a) Anterior view (b) Left lateral view

- 侧脑室

Ventricles

Lateral ventricles

- The two ventricles are located within the cerebral hemispheres.
- Communicate with the third ventricle through the interventricular foramina (of Monro).
- Contains choroid plexus in its body and inferior horn.
- Consist of five parts:
  1. Body
  2. Frontal (anterior) horn
  3. Temporal (inferior) horn
  4. Occipital (posterior) horn
  5. Trigone (atrium)



The ventricular system of the brain.
A. Lateral aspect. B. Dorsal aspect.

- 第三脑室 大脑水管

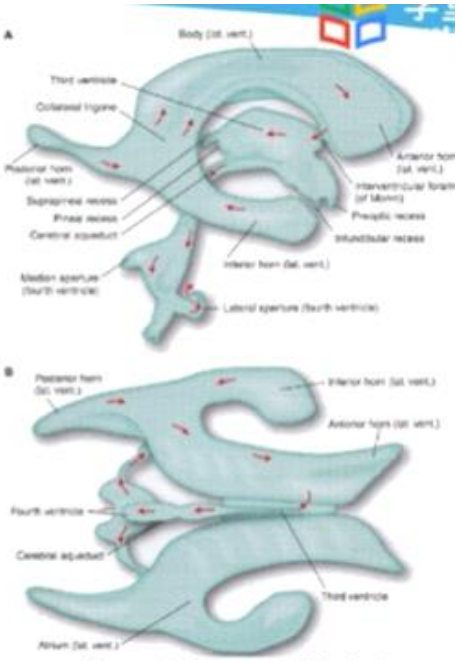
Ventricles

Third ventricle

- Located between the medial walls of the diencephalon.
- Communicates with the fourth ventricle through the cerebral aqueduct.
- Contains choroid plexus in its roof.

Cerebral aqueduct (of Sylvius)

- Lies in the midbrain.
- Connects the third and fourth ventricles.
- Blockage results in noncommunicating hydrocephalus 脑积水.



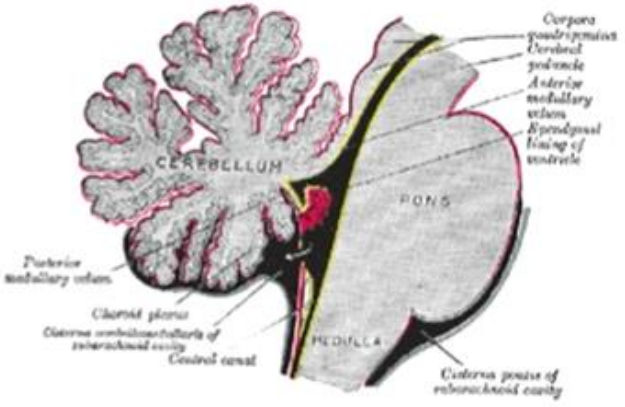
The ventricular system of the brain.
A. Lateral aspect. B. Dorsal aspect.

- 第四脑室

Ventricles

Fourth ventricle

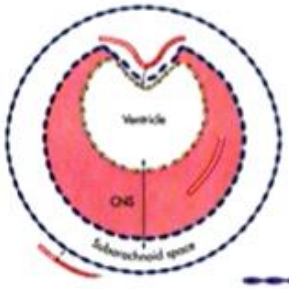
- Lies between the cerebellum and the brainstem.
- Contains choroid plexus in the caudal aspect of its roof.
- Communicates with the subarachnoid space through three outlet foramina: two lateral foramina (of Luschka) and one median foramen (of Magendie).

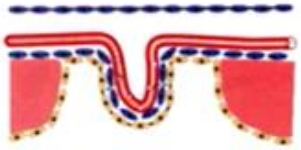


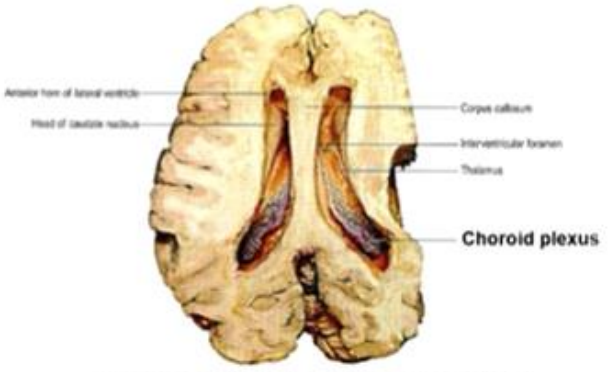
- 脉络丛

Choroid plexus 脉络丛

- Consists of infoldings of blood vessels of pia mater that are covered by modified ciliated ependymal cells.
- Projects into all four ventricles of the brain.
- Secretes cerebrospinal fluid (CSF) 脑脊液.







Superior aspect of a dissection of the cerebral hemispheres in which much of the corpus callosum has been removed to reveal the lumen of the lateral ventricles.

1.4 脑脊液

1.5 脑屏障

Chapter 2 脑和脊髓的血管

2.1 脊髓的血管

2.2 脑的动脉

2.3 脑的静脉

Chapter 3 脊髓

3.1 脊髓的外形

3.2 脊髓的灰质

3.3 脊髓的白质-上行纤维束

3.4 脊髓的白质-下行纤维束

3.5 脊髓反射

3.6 脊髓的损伤

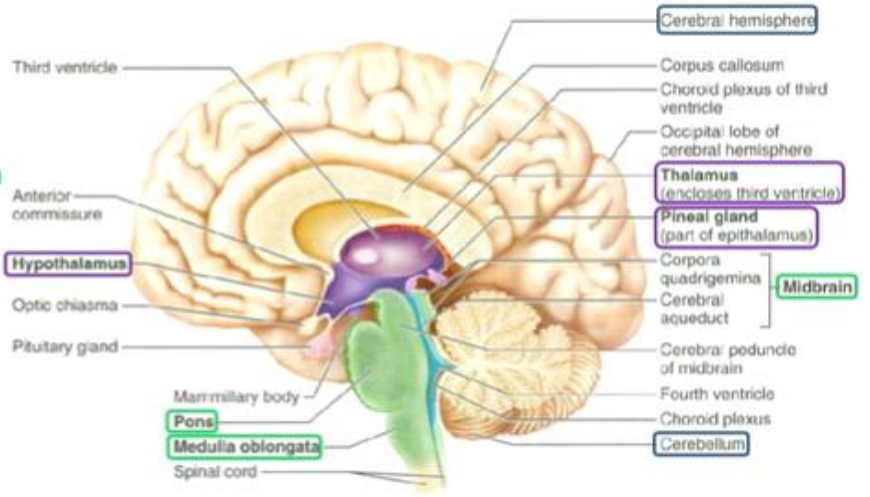
Chapter 4 脑干

4.1 脑干的外形

Brain 脑

Telencephalon 端脑
Diencephalon 间脑
Cerebellum 小脑
Midbrain 中脑
Pons 脑桥
Medulla oblongata 延髓

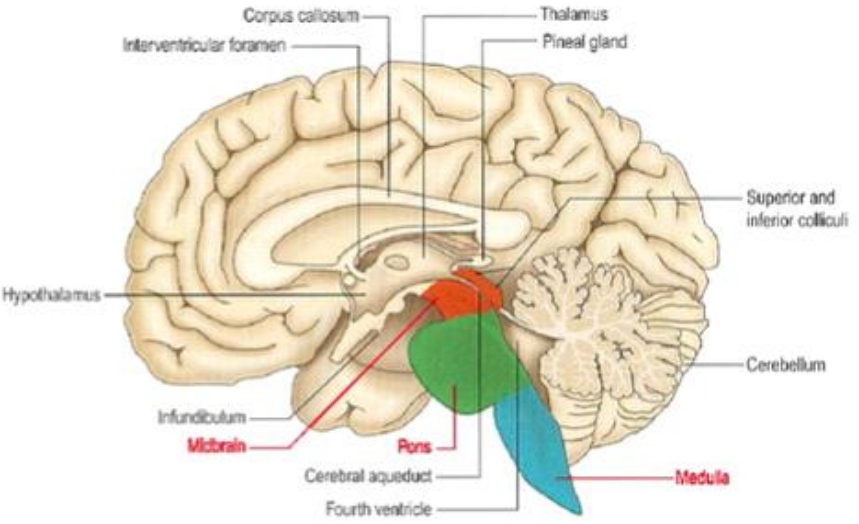
Brainstem 脑干



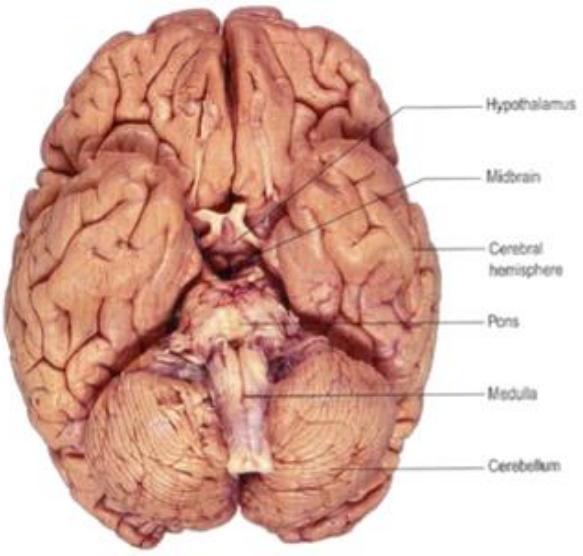
学堂在线

Brainstem 脑干

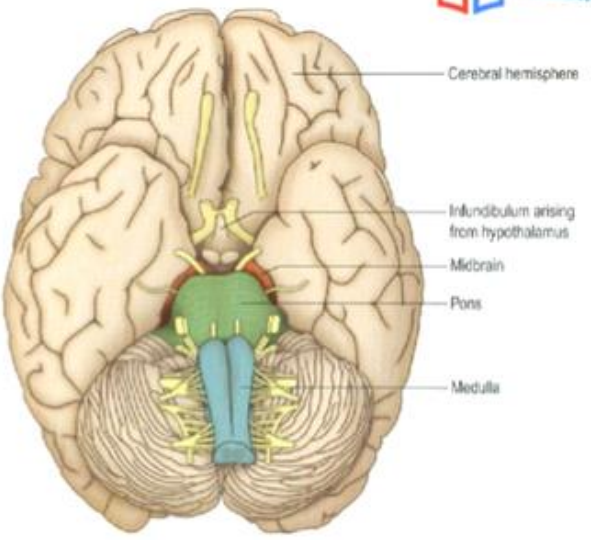
Midbrain 中脑
Pons 脑桥
Medulla oblongata 延髓



Principal subdivisions and some important landmarks in the mature brain. Median sagittal section.

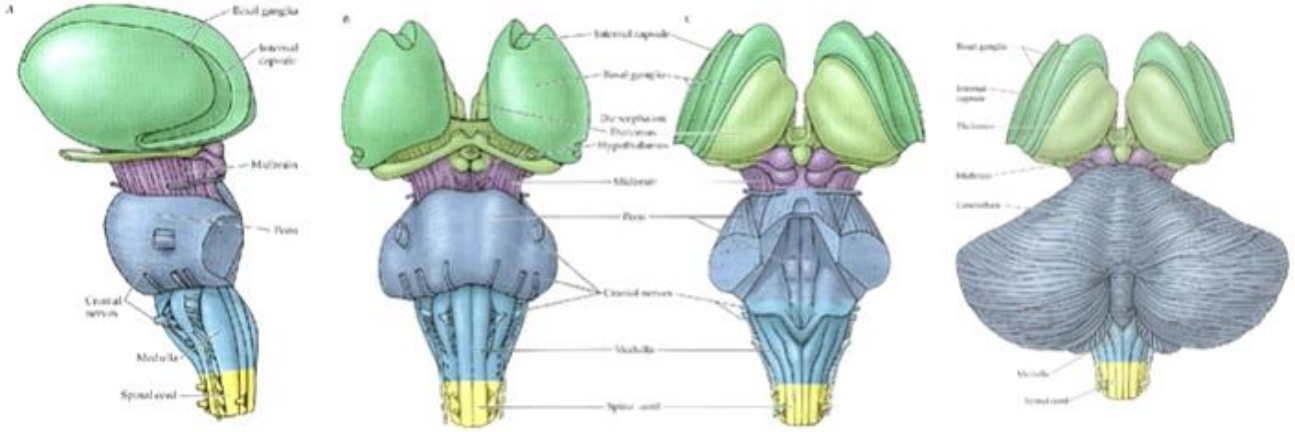


Photographs of the brain. Ventral aspect.



Principal subdivisions and some important landmarks in the mature brain.
Ventral aspect. Cranial nerves are indicated in yellow.

Brain stem

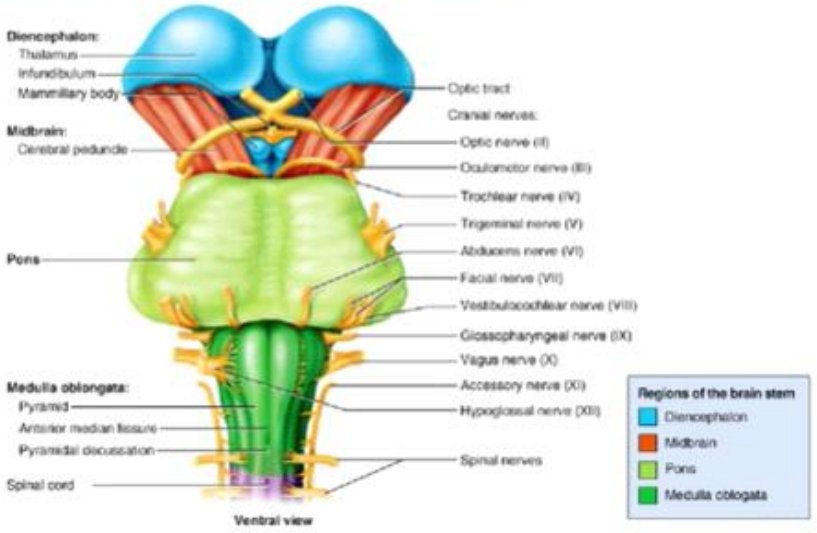


Lateral (A), ventral (B), and dorsal (C) surface of the brain stem. The thalamus and basal ganglia are also shown. The different divisions of the brain are shaded in different colors.

俯侧面观

External features of the brainstem 脑干的外形

Ventral surface of the brainstem 脑干腹侧面

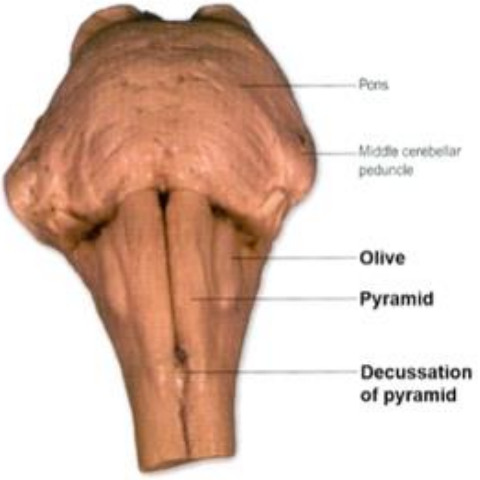


延髓

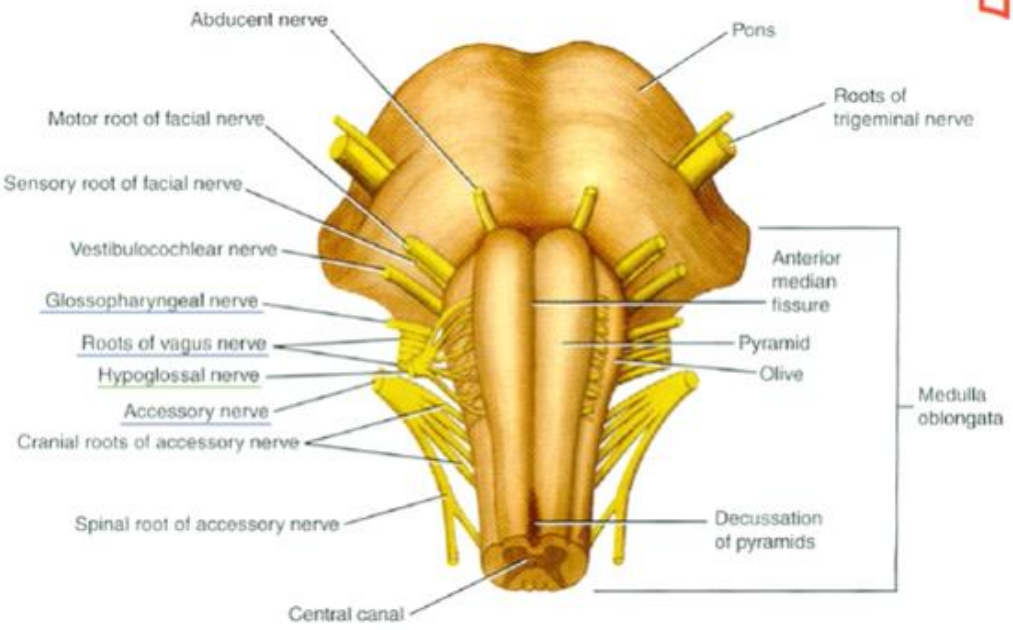
Medulla oblongata 延髓

Extends from the spinal cord (at the level of foramen magnum) to the inferior pontine sulcus.

- Pyramid 锥体
  - Pyramidal tract 锥体束
  - Decussation of pyramid 锥体交叉
- Olive 橄榄
  - Inferior olivary nucleus下橄榄核



Ventral aspect of the brain stem showing the decussation of the pyramids.



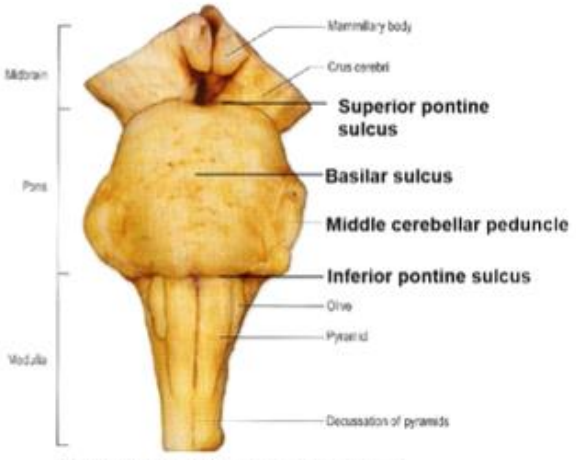
Medulla oblongata. Anterior view.

脑桥

Pons 脑桥

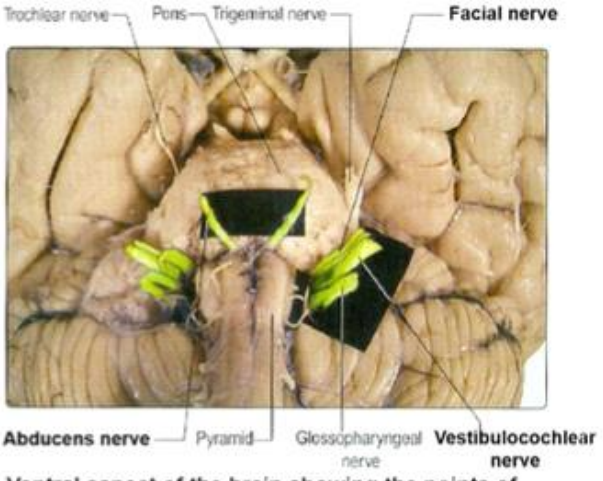
Extends from the inferior pontine sulcus to the superior pontine sulcus.

- Basilar part of pons 脑桥基底部:
  Basilar sulcus 基底沟
- Middle cerebellar peduncle 小脑中脚,
  or Brachium pontis 脑桥臂
- Inferior pontine sulcus 脑桥下沟,
  or Bulbopontine sulcus 延髓脑桥沟

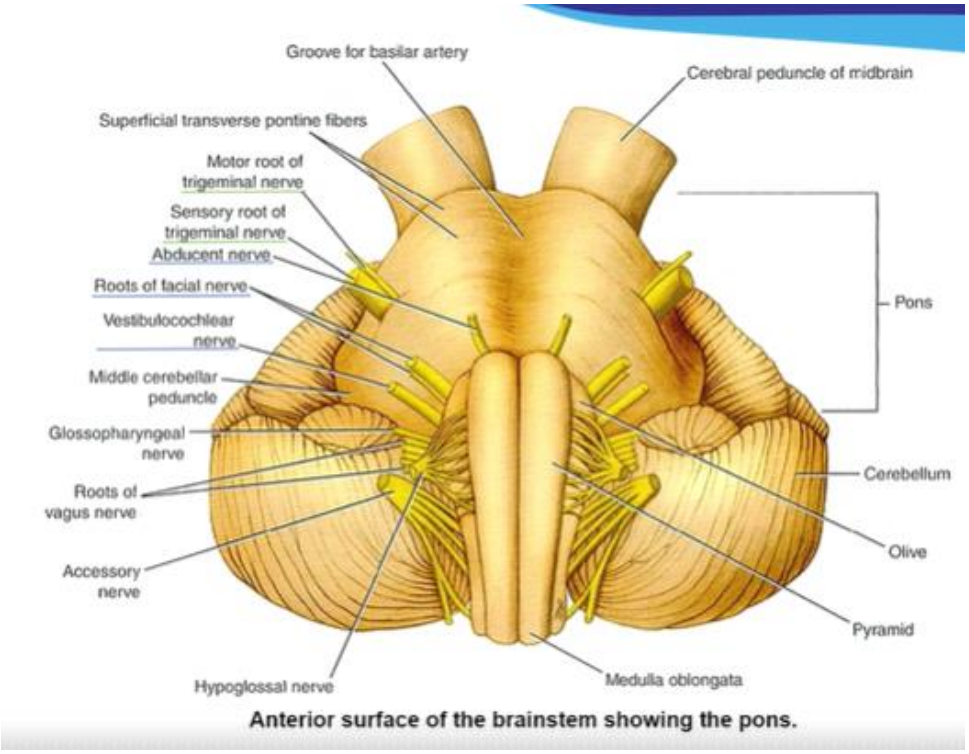


Ventral aspect of the brain stem.

- Rootlets of abducens (VI) 展神经 attach to the brainstem at the junction between the pons and the pyramid of the medulla.
- Rootlets of facial (VII) 面神经, vestibulocochlear nerve (VIII) 前庭蜗神经 attach to the brainstem at the junction of the medulla and pons, in the region know as cerebellopontine angle 小脑脑桥角 (Pontocerebellar trigone 脑桥小脑三角).



Ventral aspect of the brain showing the points of attachment of cranial nerves VI to IX.



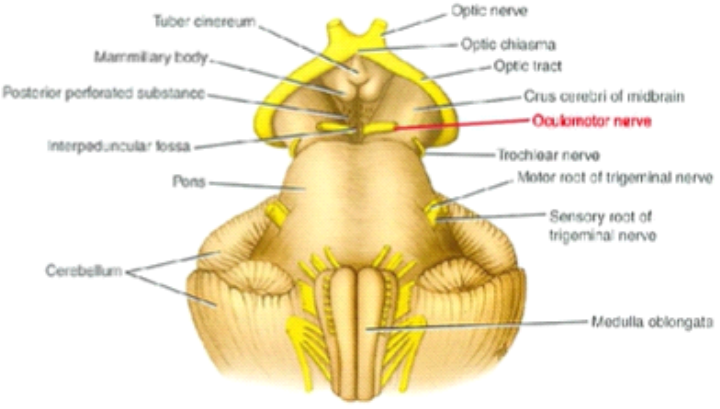
Anterior surface of the brainstem showing the pons.

中脑

Midbrain 中脑

Extends from the pons (superior medullary velum 上髓帆) to the diencephalion (posterior commissure 后连合).

- Cerebral peduncle (crus cerebri) 大脑脚
- Interpeduncular fossa 脚间窝
- Posterior perforated substance 后穿质



The midbrain. Anterior view.

背侧面

Dorsal surface of the brainstem 脑干背侧面

Dorsal aspect of the brain stem.

Medulla oblongata 延髓

Consists of a caudal ("closed") portion and a rostral ("open") portion.

- Gracile tubercle 薄束结节 and Cuneate tubercle 楔束结节
- Contain gracile nucleus 薄束核 and cuneate nucleus 楔束核
- Inferior cerebellar peduncle 小脑下脚, or Restiform body 绳状体

Medulla oblongata. Posterior view. Note that the roof of the fourth ventricle and the cerebellum have been removed.

Pons 脑桥

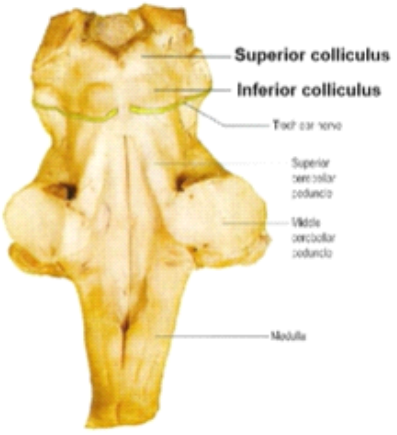
- Superior cerebellar peduncle 小脑上脚, or Brachium conjunctivum 结合臂
- Superior medullary velum 上（前）髓帆

Dorsal aspect of the brain stem.

Midbrain 中脑

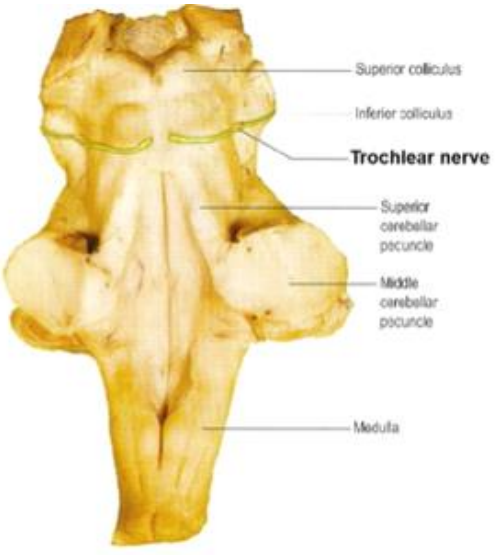
The dorsal aspect of the midbrain is marked by four paired elevations, the superior and inferior colliculi (corpora quadrigemina 四叠体), which are parts of the visual and auditory system, respectively.

- **Superior colliculus 上丘**
  - Contains the nucleus of the superior colliculus.
  - Projects to lateral geniculate body 外侧膝状体 via the brachium of the superior colliculus 上丘臂.
- **Inferior colliculus 下丘**
  - Contains the nucleus of the inferior colliculus .
  - Projects to medial geniculate body 内侧膝状体 via the brachium of the inferior colliculus 下丘臂.



Dorsal aspect of the brain stem, after removal of the cerebellum, showing the origin of the cranial nerve IV.

The trochlear nerve (IV) 滑车神经 emerges from the dorsal aspect of the brainstem (the only cranial nerve to do so), just caudal to the inferior colliculus.

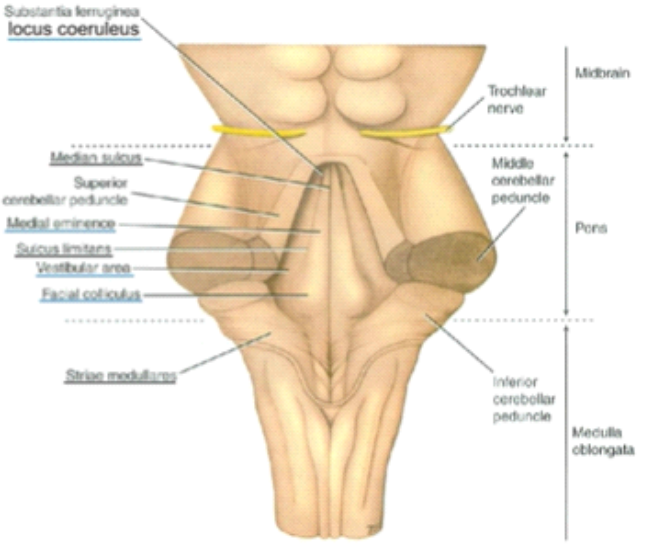


Dorsal aspect of the brain stem, after removal of the cerebellum, showing the origin of the cranial nerve IV.

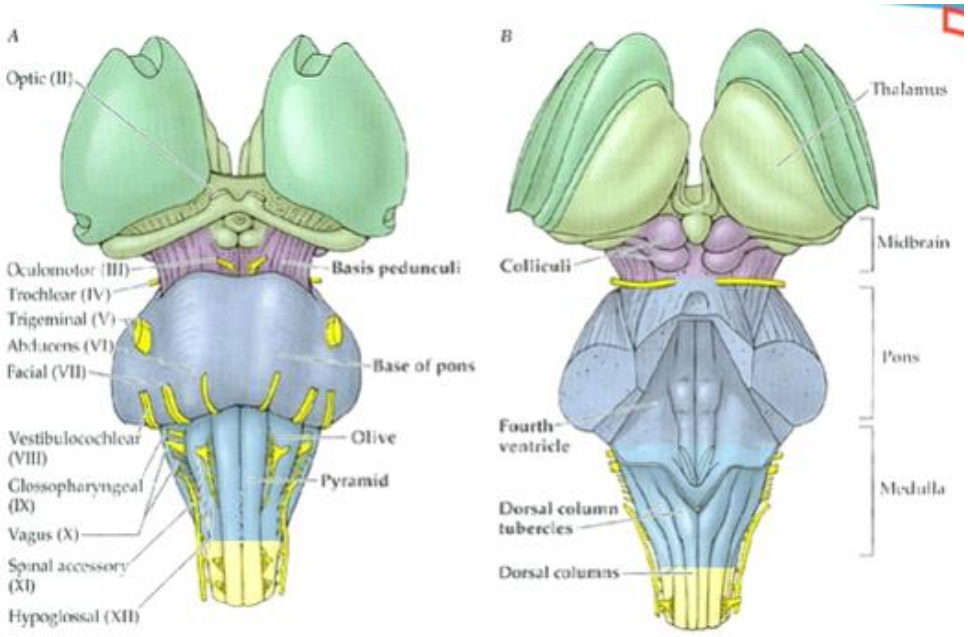
Rhomboid fossa 菱形窝

Forms the floor of the fourth ventricle 第四脑室底.

- Median sulcus 正中沟
- Sulcus limitans 界沟
- Vestibular area 前庭区
- Acoustic tubercle 听结节
- Medial eminence 内侧隆起
- Striae medullaris 髓纹
- Facial colliculus 面神经丘
- Hypoglossal triangle 舌下神经三角
- Vagal triangle 迷走神经三角
- Locus ceruleus 蓝斑



Posterior surface of the brainstem showing the pons. The cerebellum has been removed.



Ventral (A) and dorsal (B) surfaces of the brain stem, diencephalon, and telencephalon.

4.2 脑神经核-运动性

4.3 脑神经核-感觉性

4.4 中继核

4.5 脑干的白质-长的上行纤维束

4.6 脑干的白质-长的下行纤维束

4.7 脑干网状结构

4.8 脑干代表性水平切面

4.9 脑干的损伤

Chapter 5 小脑

5.1 小脑的外形