

This lab involves the exercise entitled “*Gross Anatomy of the Brain and Cranial Nerves*”. Complete the Review Sheet for the exercise and take the related quiz. There is also a video of the dissection of a sheep brain.

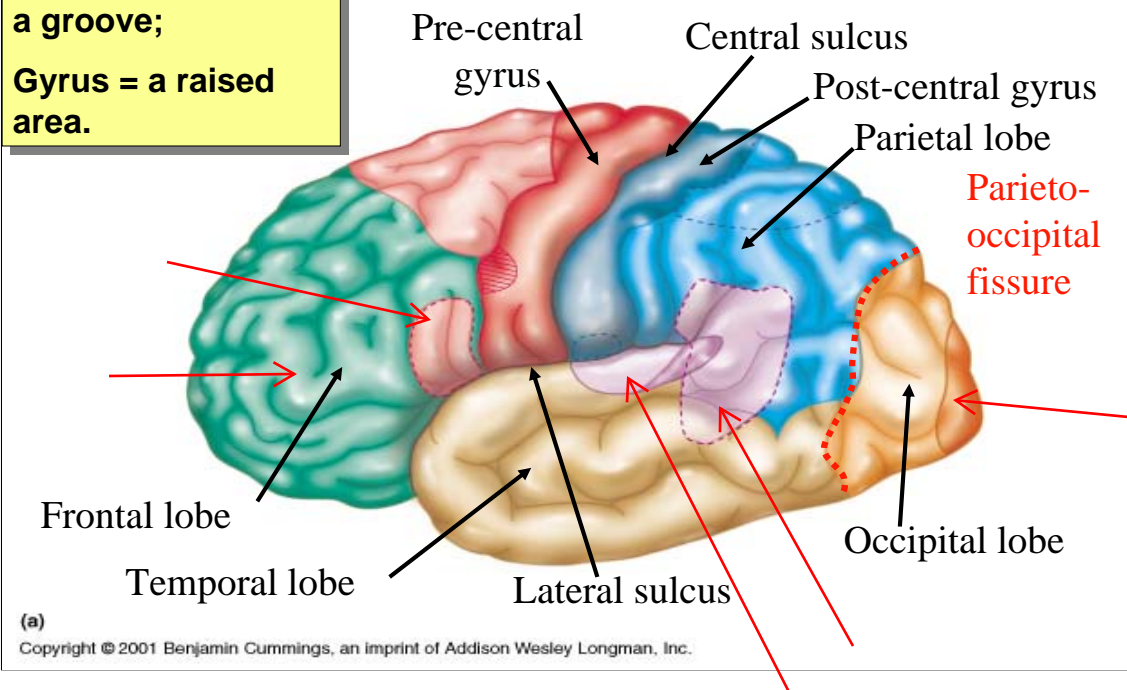
Click on the sound icon for the audio file (mp3 format) for each slide.

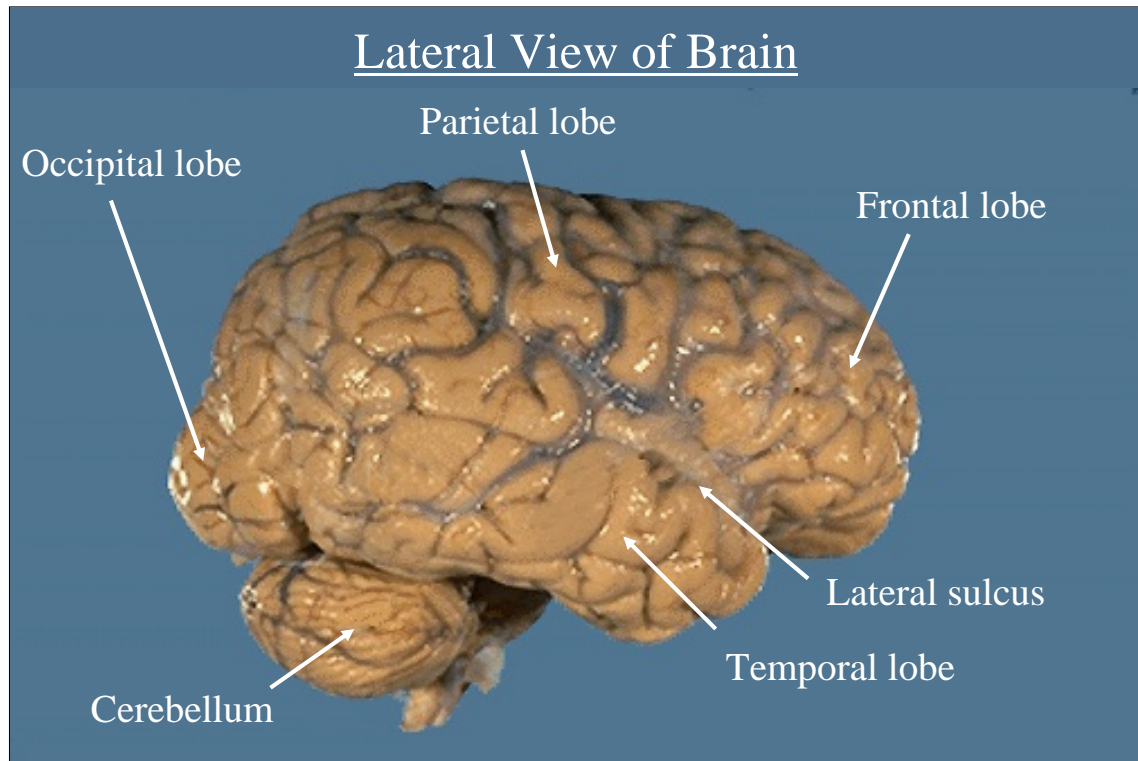
There is also a link to a downloadable mp4 video which can be played on an iPod.

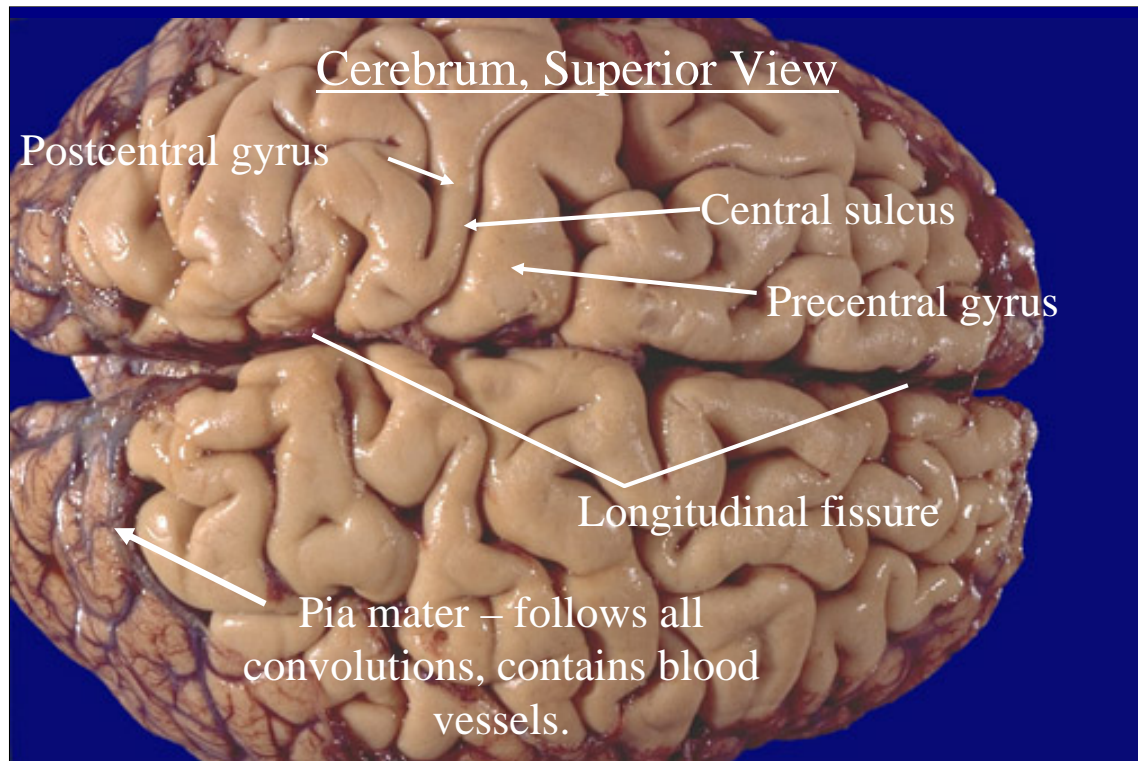


**Convolutions:**  
**Sulcus or fissure =**  
**a groove;**  
**Gyrus = a raised**  
**area.**

## The Cerebral Cortex

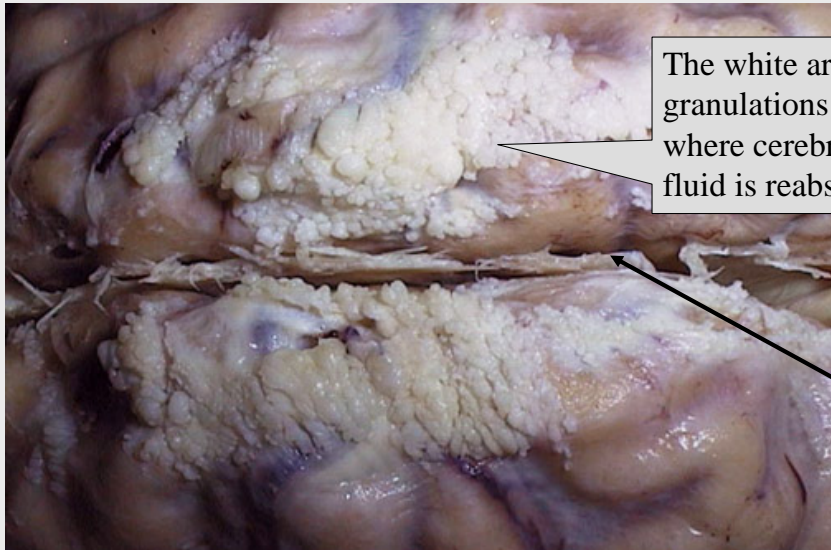








## Arachnoid Granulations

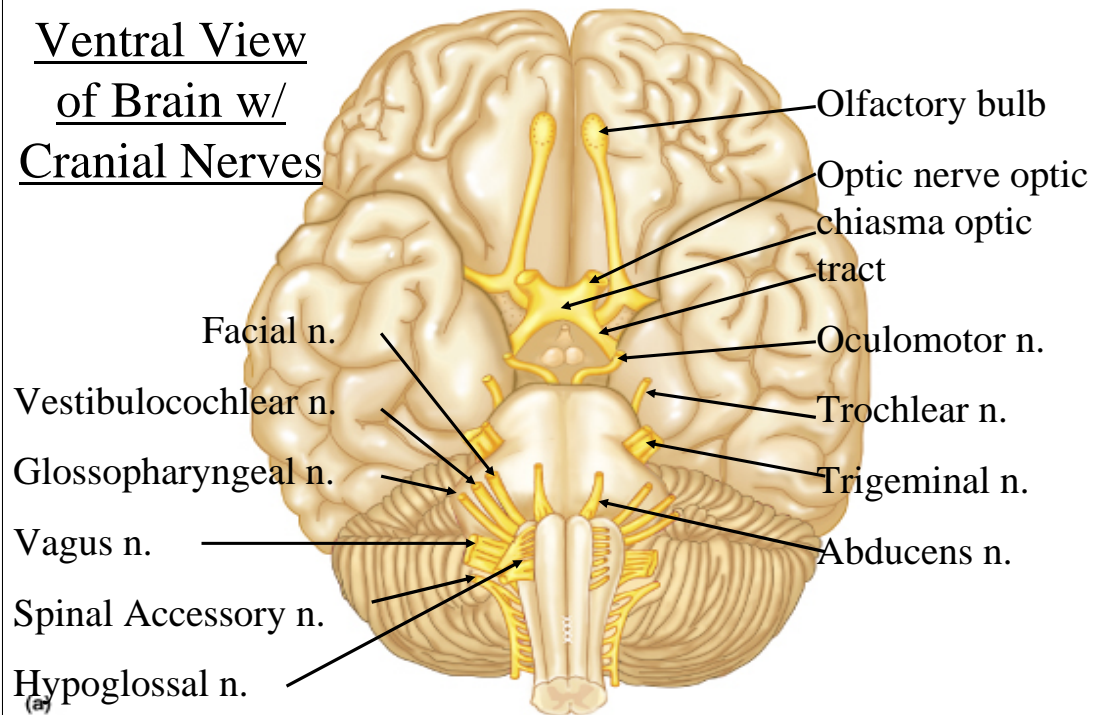


The white arachnoid granulations are where cerebrospinal fluid is reabsorbed.

Falx cerebri



Ventral View  
of Brain w/  
Cranial Nerves



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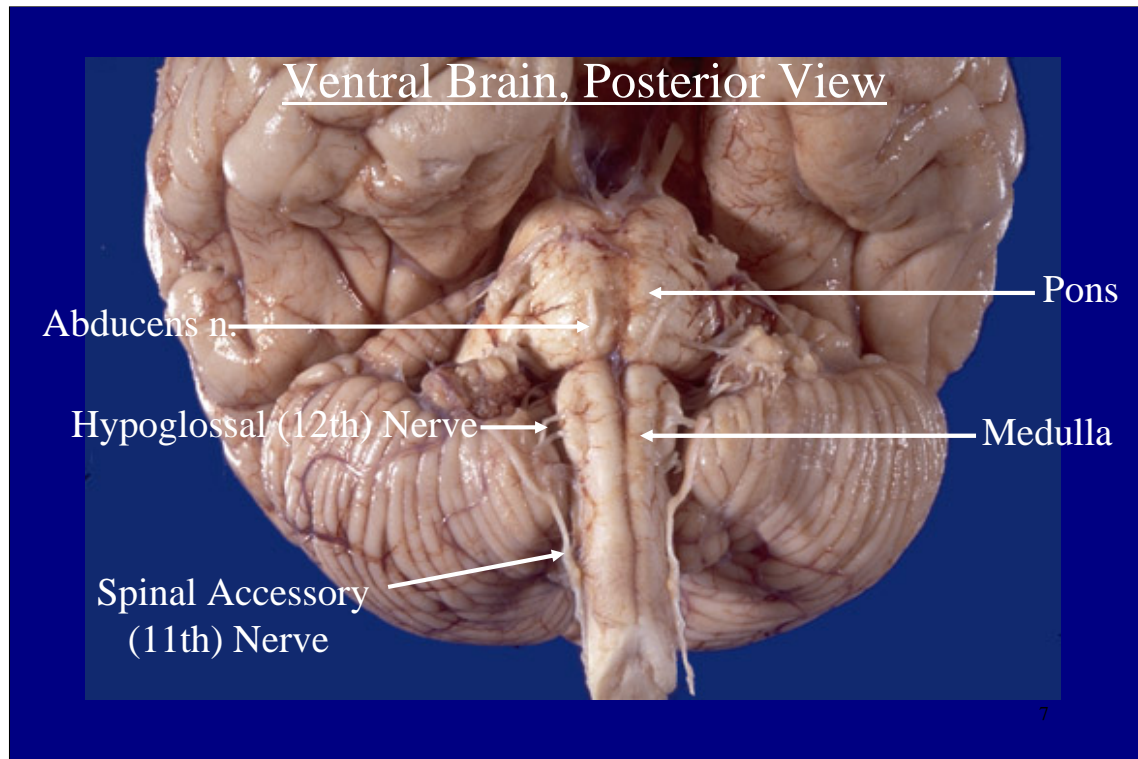
## The Cranial Nerves

On Old Olympus Towering Top A Finn And  
German Viewed Some Hops.

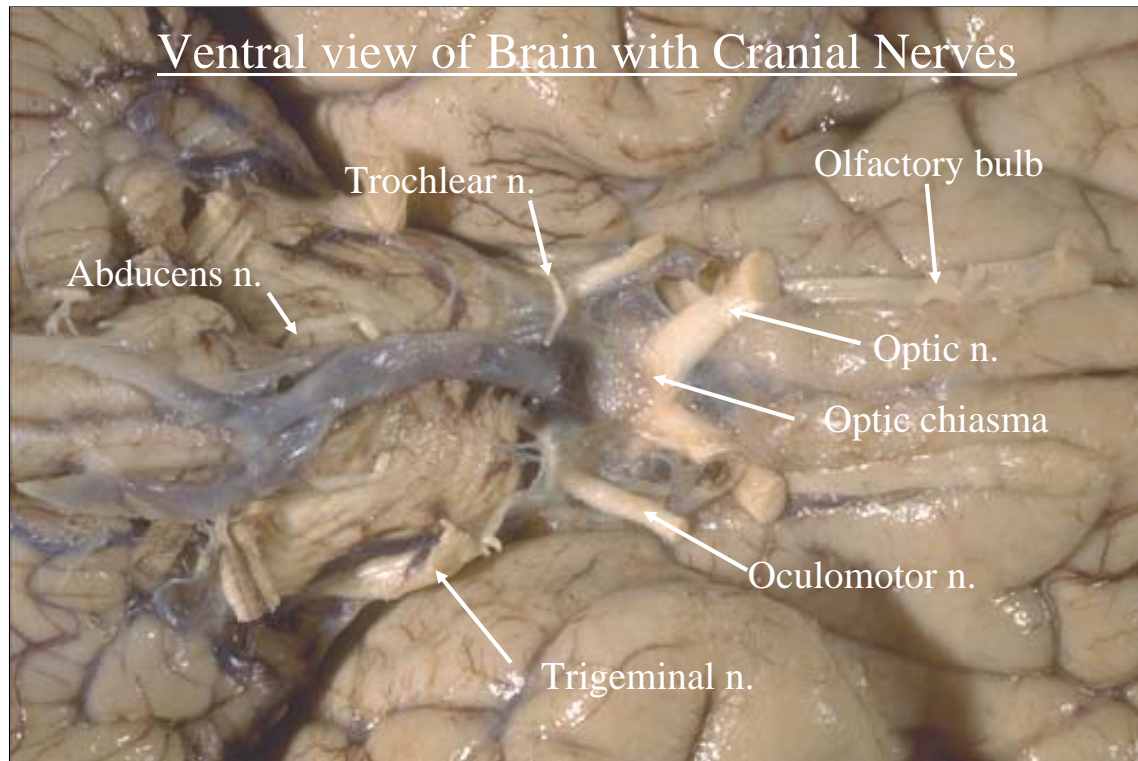
I Olfactory	VI Abducens	XI Spinal Accessory
II Optic	VII Facial	
III Oculomotor	VIII Acoustic	XII Hypoglossal
IV Trochlear	IX Glossopharyngeal	a.k.a. vestibulocochlear and statoacoustic
V Trigeminal	X Vagus	

This rhyme gives you the first letters of the twelve cranial nerves in order. There are other rhymes that work, take your pick. You must learn the names, numbers (always use Roman numerals), and functions. There is no need to learn a rhyme for whether they are motor or sensory. Knowing their functions will tell you if they are motor or sensory. And the fact is that, while some are sensory only, all of the motor nerves have sensory proprioceptive fibers, despite the rhyme and the table in Marieb.



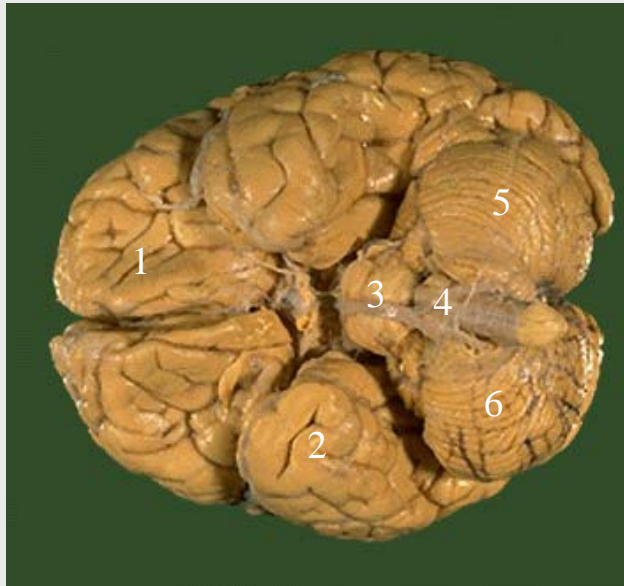








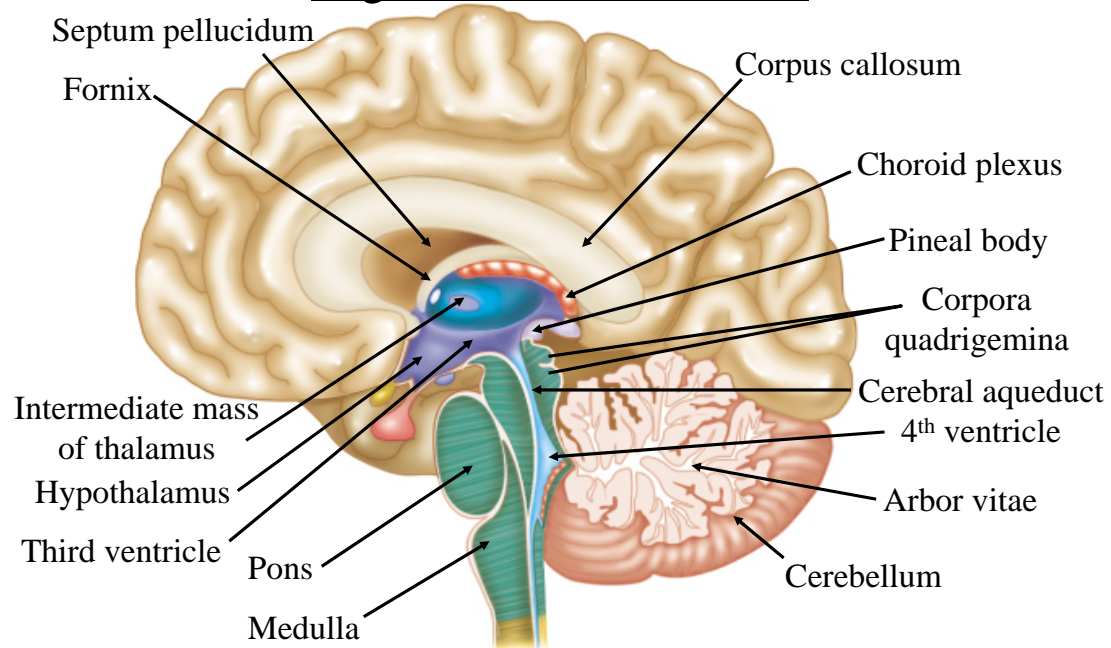
## Brain, Ventral View



- 1) Inferior Frontal Lobe,
- 2) Temporal Lobe,
- 3) Pons,
- 4) Medulla Oblongata,
- 5) Left Cerebellar Hemisphere,
- 6) Right Cerebellar Hemisphere



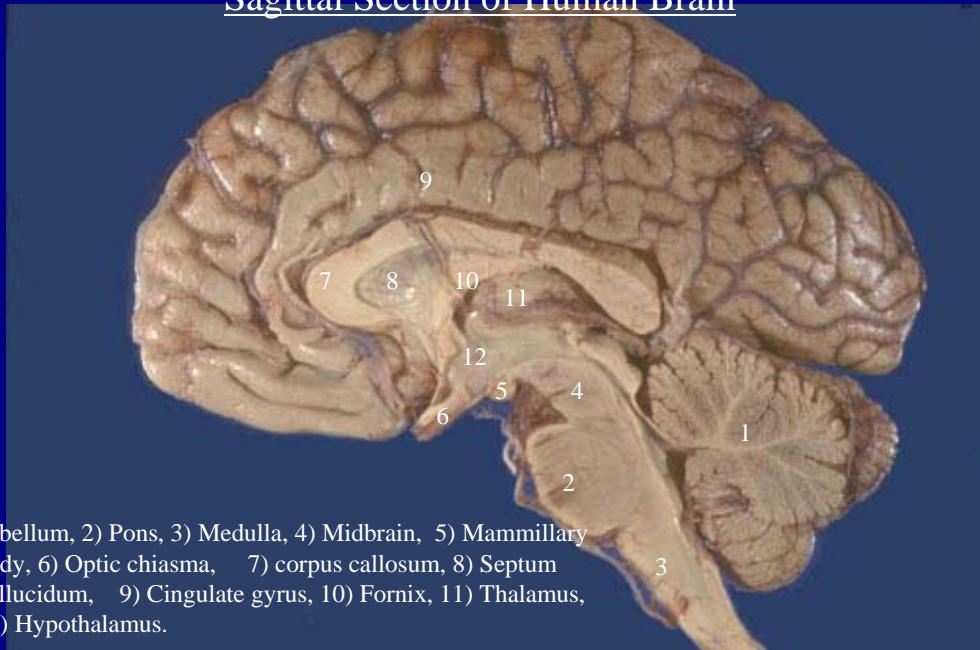
## Sagittal Section of Brain



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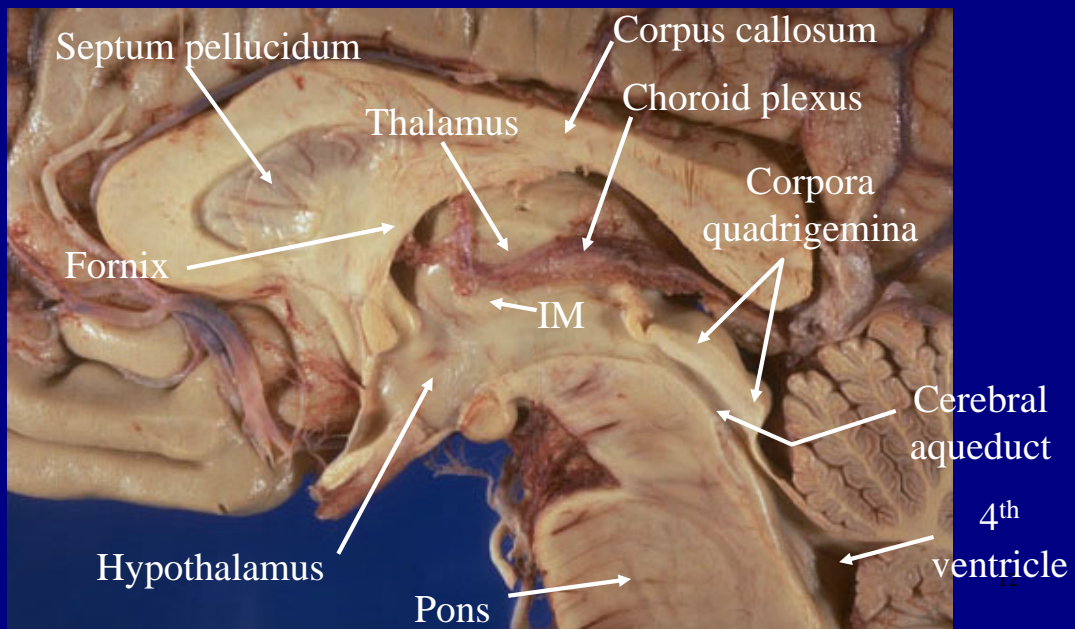
## Sagittal Section of Human Brain



- 1) Cerebellum, 2) Pons, 3) Medulla, 4) Midbrain, 5) Mammillary body, 6) Optic chiasma, 7) corpus callosum, 8) Septum pellucidum, 9) Cingulate gyrus, 10) Fornix, 11) Thalamus, 12) Hypothalamus.



## Sagittal Section of Midbrain and Diencephalon





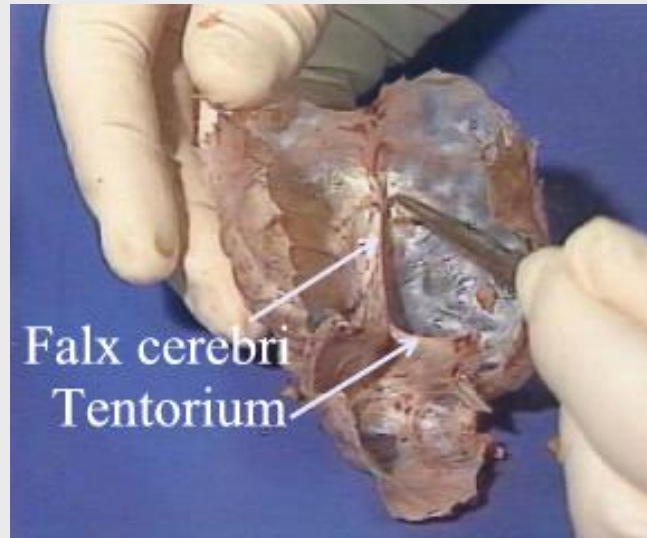
## Sheep Brain Dissection: Removal of the Dura Mater



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## Dura Mater from the Sheep Brain

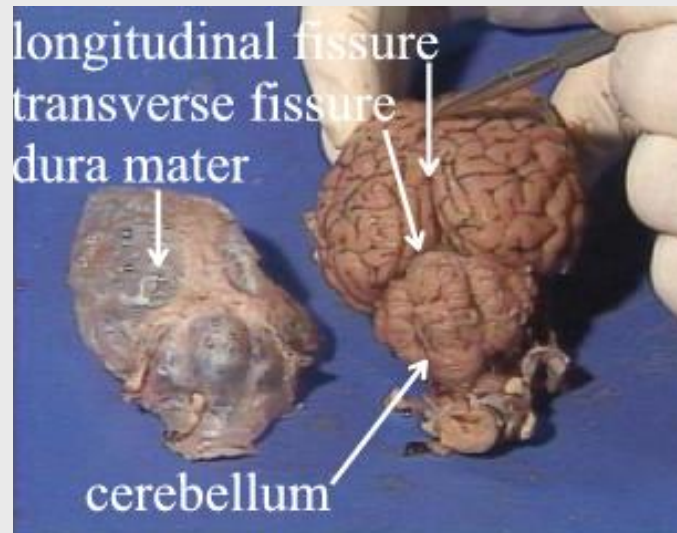


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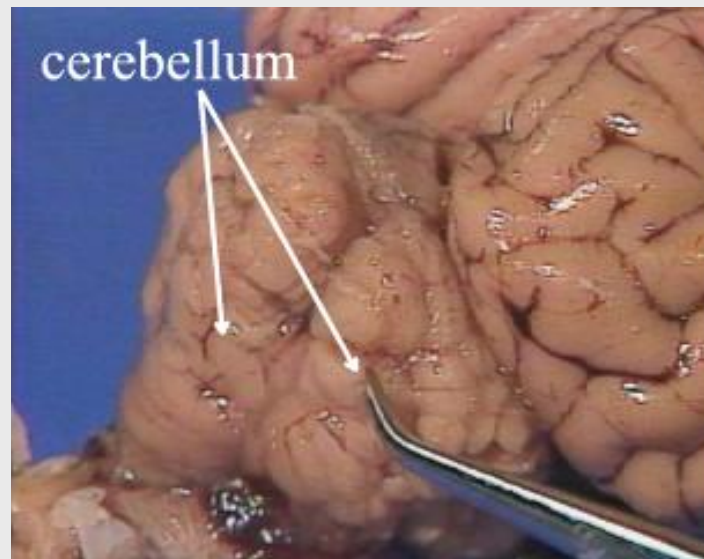
## Sheep Brain Dorsal View



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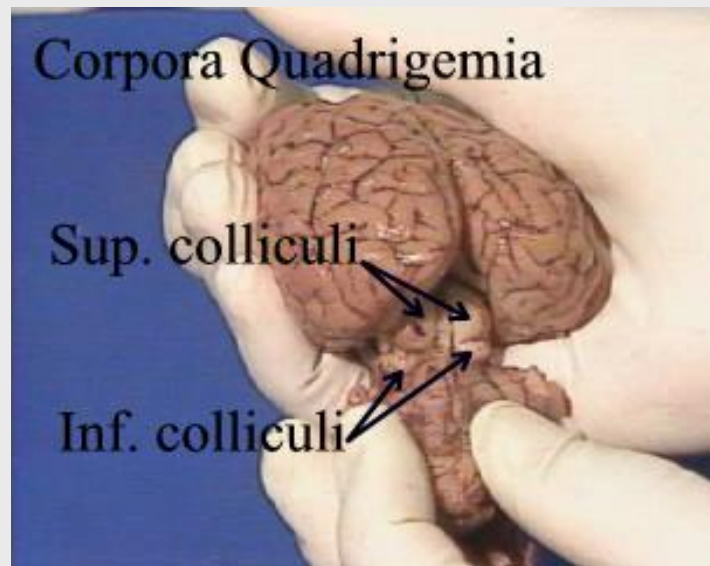
## Sheep Brain Cerebellum



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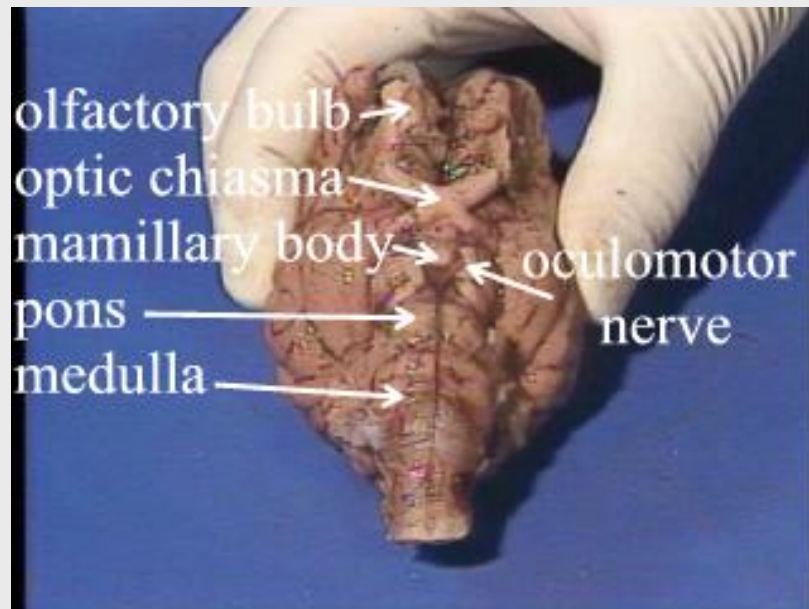
## Sheep Brain: The Corpora Quadrigemia



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## Sheep Brain Ventral View



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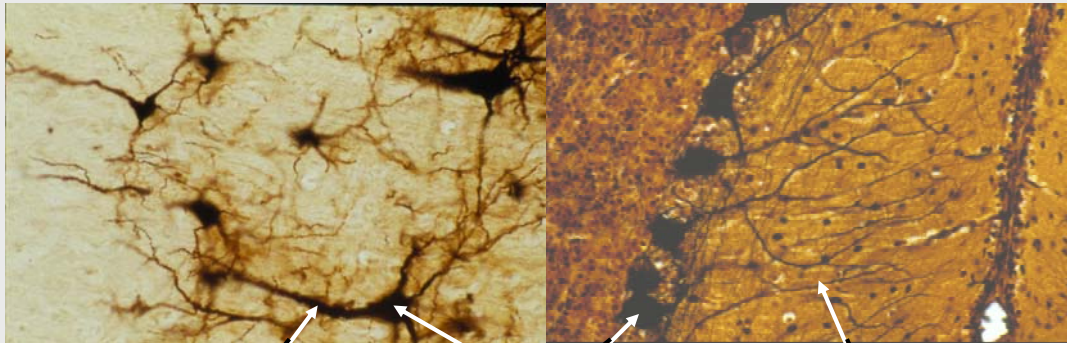
## Sheep Brain Sagittal Section



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## Cerebellar Purkinje Cells



Axon to cerebellar  
outflow

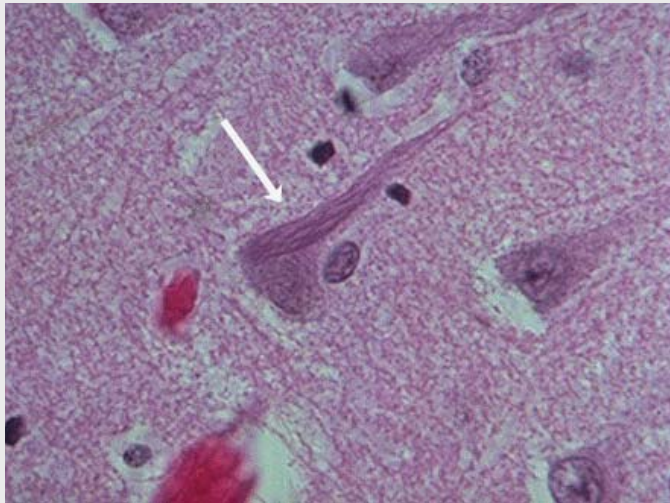
Interneuron cell  
bodies

Dendrites

Purkinje cells are the largest and most distinguishing cells of the cerebellum. They have numerous dendrites and an axon which is the beginning of cerebellar outflow.



## Alzheimer's Tangle

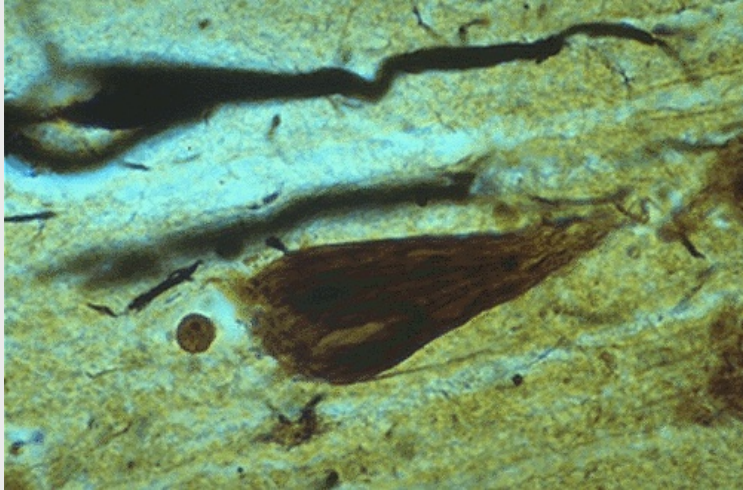


This is a neurofibrillary "tangle" of Alzheimer's disease. The tangle appears as long pink filaments in the cytoplasm. They are composed of cytoskeletal intermediate filaments.





## Alzheimer's Tangle, Silver Stain



The characteristic microscopic findings of Alzheimer's disease include "senile plaques" which are collections of degenerative presynaptic endings along with astrocytes and microglia. These plaques are best seen with a silver stain, as seen here in a case with many plaques of varying size.

## Lab Protocol for Spinal Nerves and Reflexes



- 1) Complete the Review Sheets for the exercise on the Gross Anatomy of the Brain and Cranial Nerves
- 2) Take the related quiz for the Brain and Cranial Nerves.
- 3) View the cadaver video showing dissection of the sheep brain.