



## Planes of Orientation

### Ways to Look at the Brain

Psychology 372

Physiological Psychology

Steven E. Meier, Ph.D.

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### Neural Axis

- Is an imaginary line drawn through the spinal cord and the brain
- Anatomical directions are then based relative to the neural axis.

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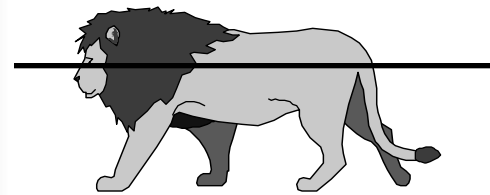
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### Cuts and Locations of Tissue Based on These Cuts

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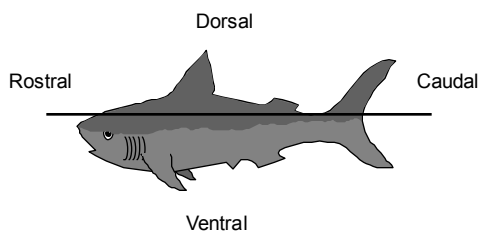
### Horizontal Cuts



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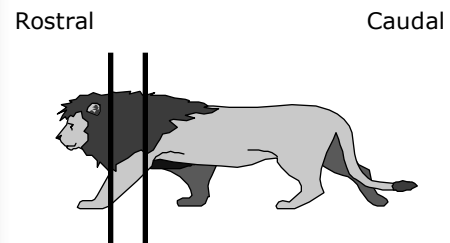
### Horizontal Cuts



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### Coronal Cuts (Frontal or Transverse Cuts)



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### Axial Organization in Animals

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- Rostral - means toward the nose
- Caudal - means toward the tail
- Dorsal - means toward the back
- Ventral - means toward the abdomen

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### Humans

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- The long axis flexes between the brainstem and diencephalon

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### Above the Flexure

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- Rostral means toward the nose
- Caudal means toward the back of the head
- Dorsal = Superior
  - means above, or toward top of the head
- Ventral = Inferior
  - Means below or toward the Jaw

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### In the Spinal Cord

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- Rostral means toward the neck and head
- Caudal means toward the coccyx bone
- Ventral means toward the abdomen
- Dorsal means toward the back

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### Sagittal Cuts

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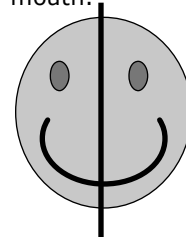
- Two types
  - Mid-Sagittal
  - Para-Sagittal

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### Mid-Sagittal

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Cut is through the center of the eyes, nose and mouth.

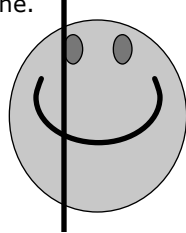


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### Para-Sagittal

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Cut is not through the center of the eyes, nose and mouth. Cut moves away from the midline.



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### Other Terms

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- Lateral - means to move away from the body midline
- Medial - means to move toward the body midline.
- Ipsilateral: means same side of brain
- Contralateral: means opposite side of brain

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