Practice Brain Quiz

For review

#5 Which cerebral hemisphere is this?

Name the layer

Name of fold

(a)

6

7

(b)

10

8

9

(c)

1

2

3

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Answers to Quiz
1) Pia mater
2) Longitudinal Fissure
3) Gyri
4) Cerebellum
5) Left cerebral hemisphere
6) Pons
7) 4th ventricle
8) Optic chiasma
9) Medulla oblongata
10) Lateral Ventricles
Protection of the Brain

- Bone (skull)
- Membranes (meninges)
- Watery cushion (cerebrospinal fluid)
- Blood-brain barrier

Meninges - Layers of the Brain

- Dura mater
- Arachnoid
- Pia mater

Dura Mater

- Strongest meninx
- Two layers of fibrous connective tissue (around the brain) separate to form dural sinuses

Arachnoid Mater

- Middle layer with weblike extensions
- Separated from the dura mater by the subdural space
- Subarachnoid space contains CSF and blood vessels
- Arachnoid villi protrude into the superior sagittal sinus and permit CSF reabsorption

Pia Mater

Layer of delicate vascularized connective tissue that clings tightly to the brain
Figure 12.24
Skin of scalp
Periosteum
Bone of skull
Periosteal mater
Arachnoid mater
Pia mater
Arachnoid villus
Blood vessel
Falk cerebri (in longitudinal fissure only)

Figure 12.25
Cerebrospinal Fluid (CSF)
Functions:
> Gives buoyancy to the CNS organs
> Protects the CNS from blows and other trauma
> Nourishes the brain and carries chemical signals

Figure 12.26
Ependymal cells
Capillary
Connective tissue of pia mater
Wastes and unnecessary solutes absorbed
Cavity of ventricle
CSF forms as a filtrate containing glucose, oxygen, vitamins, and ions
Section of choroid plexus

Choroid Plexuses
- Produce CSF at a constant rate
- Hang from the roof of each ventricle
- Clusters of capillaries enclosed by pia mater and a layer of ependymal cells
- Ependymal cells use ion pumps to control the composition of the CSF and help cleanse CSF by removing wastes