Anatomy 9535.

MENINGES; CEREBROSPINAL FLUID
Production, circulation, absorption, and hydrocephalus

MENINGES
★ DURA MATER, ARACHNOID and PIA MATER. "MATER" is usually omitted.
★ DURAL REFLECTIONS make compartments in cranial cavity.
★ DURAL VENOUS SINUSES.
  Superior sagittal; Straight; Transverse

CEREBROSPINAL FLUID
★ PRODUCTION IN VENTRICLES Choroid plexuses
★ CIRCULATION Ventricle Subarachnoid space
★ ABSORPTION INTO BLOOD Arachnoid granulations
DURAL REFLECTIONS AND DURAL VENOUS SINUSES

Superior sagittal sinus
Falx cerebri
Straight sinus
Cavernous sinus (left)
Left half of tentorium cerebelli

Kiernan JA. "Barr's The Human Nervous System," 8th ed. Copyright 2006, Lippincott Williams & Wilkins, Philadelphia
CIRCULATION OF CEREBROSPINAL FLUID.

- Cisterna magna
- Interventricular foramen (CSF flows from lateral to third ventricle)
- SPINAL DURA
- Cerebral aqueduct
- Cisterna ambiens (surrounds midbrain)
- TENTORIUM CEREBELLI
- 4th ventricle
- Median aperture
- Subarachnoid space
- CRANIAL DURA
- Third ventricle

Arrow points to tuft of choroid plexus protruding from lateral aperture

Metal stick inserted into lateral aperture of 4th ventricle
ARACHNOID GRANULATIONS

Longitudinal (interhemispheric) fissure. The arachnoid has not been stripped from the cerebral cortex.

HYDROCEPHALUS

Too much CSF in (and sometimes also around) the brain

INTERNAL

Due to obstruction of flow through the ventricular system.

- e.g. Stenosis of cerebral aqueduct.
- Tumour in cerebellum.

COMMUNICATING

Due to obstruction of flow through subarachnoid space, or to blockage of arachnoid granulations.

- e.g. Bacterial meningitis, or subarachnoid haemorrhage.

T1 weighted NMRIs

Internal Hydrocephalus

<— Normal