

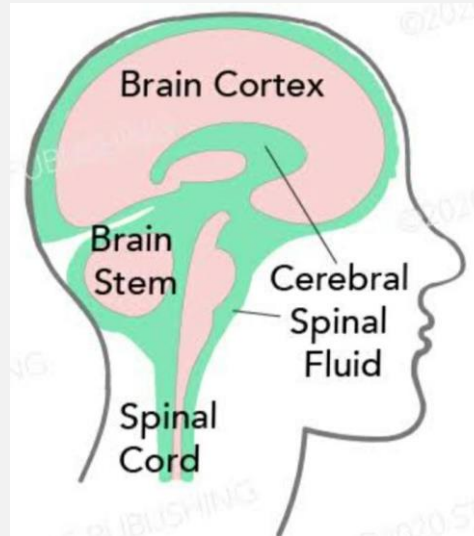
CEREBROSPINAL FLUID

Formation and Ventricle flow

By MALAIKA ALI

CSF

CSF is a clear, colorless ultrafiltrate of plasma that surrounds the brain and the spinal cord.



It is present in the sub archnoid space, the ventricles and the central canal

Volume
:80 to 150
ml

Productio
n rate: 0.5
ml/min

Pressure:6
0 to
150mm of
water

COMPOSITION & FUNCTIONS

- **COMPOSITION:**

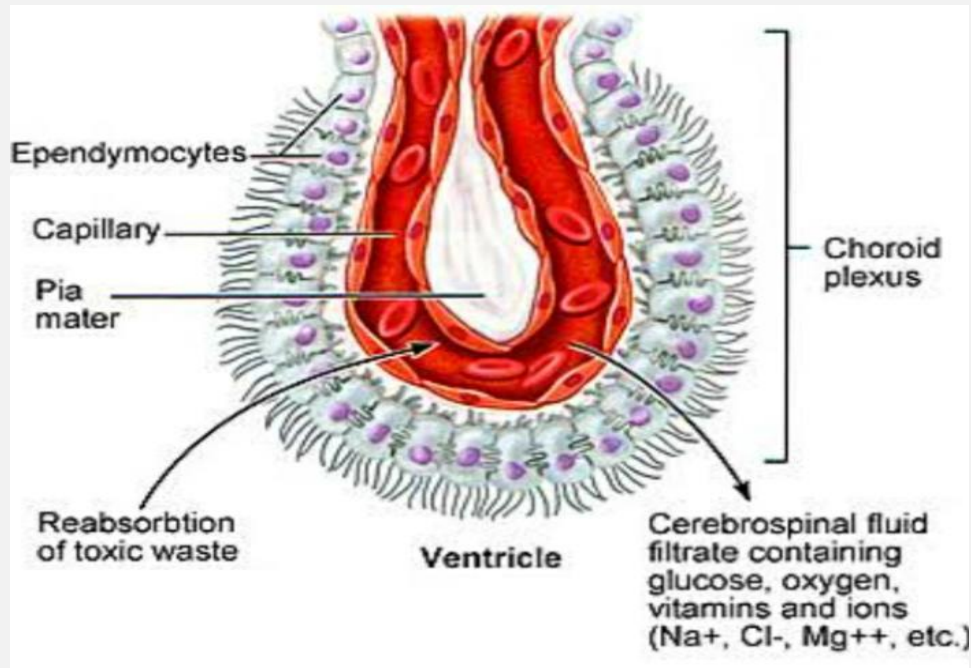
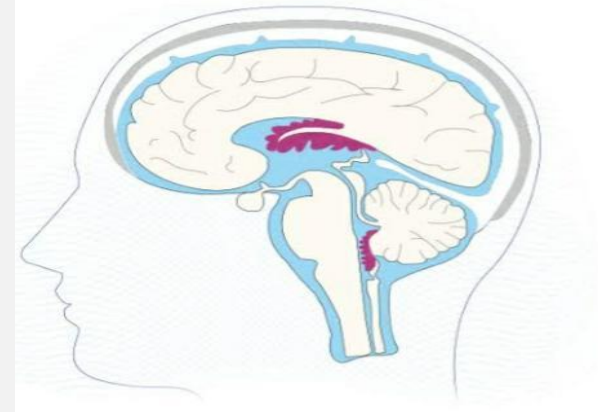
- Glucose
- Lactic acid
- Urea
- Proteins
- Lymphocytes
- Na^+ , K^+ , Mg^{++} , Ca^{++}
- Cl^- , HCO_3^-

- **FUNCTIONS:**

- Nourishment
- Metabolites removal
- Cushions against trauma
- Reservoir for skull contents
- Provides Buoyancy
- Homeostasis
- Apparent loss of brain weight
- Pathway for pineal secretions

FORMATION

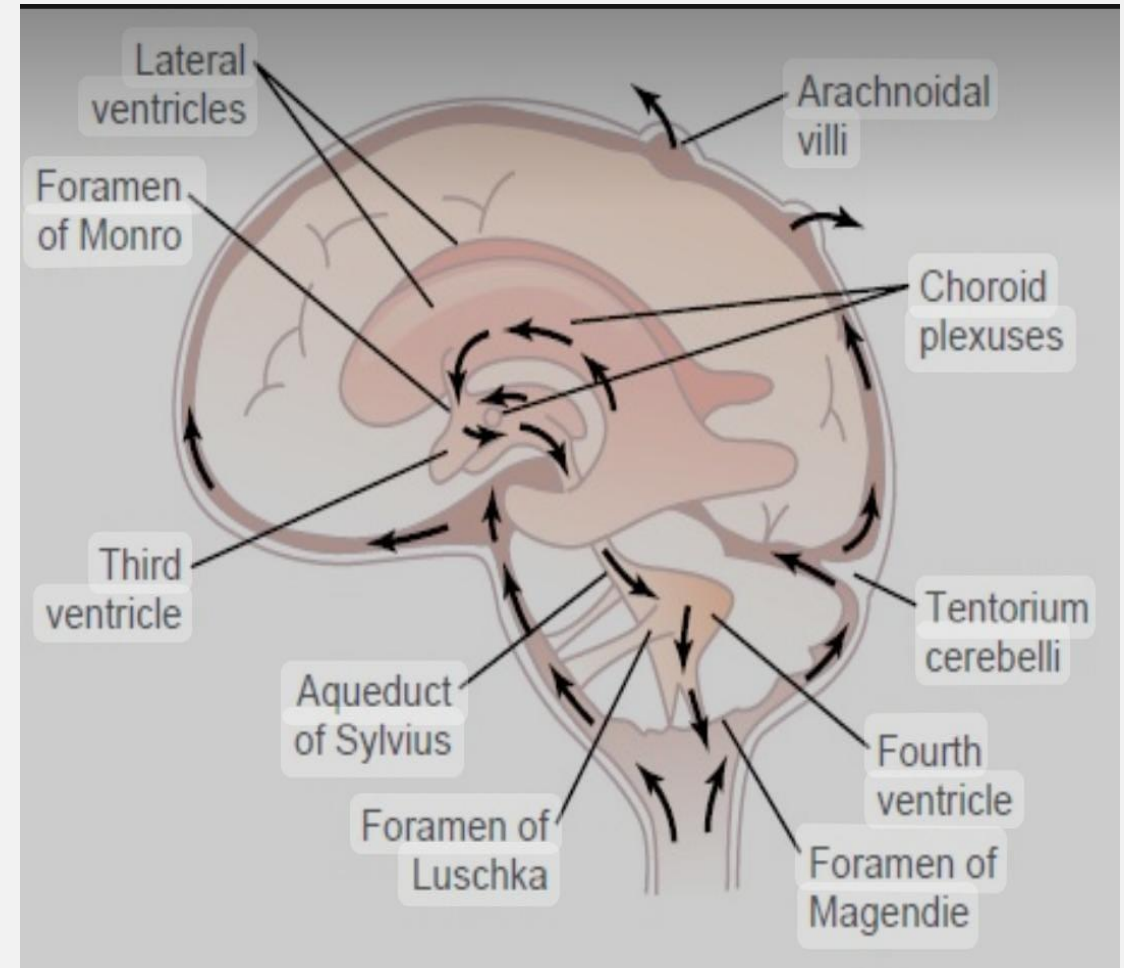
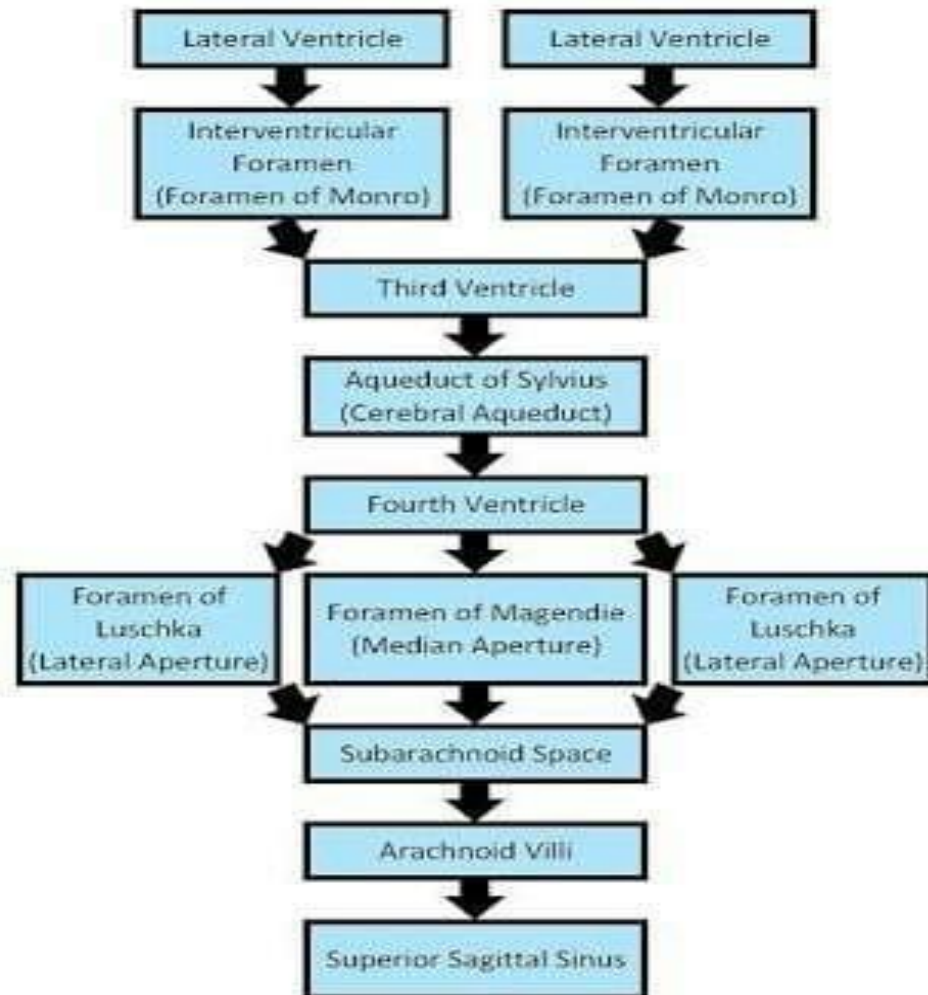
- **CHOROID PLEXUS**
 - **EPENDYMAL CELLS**
 - **PERIVASCULAR SPACE**

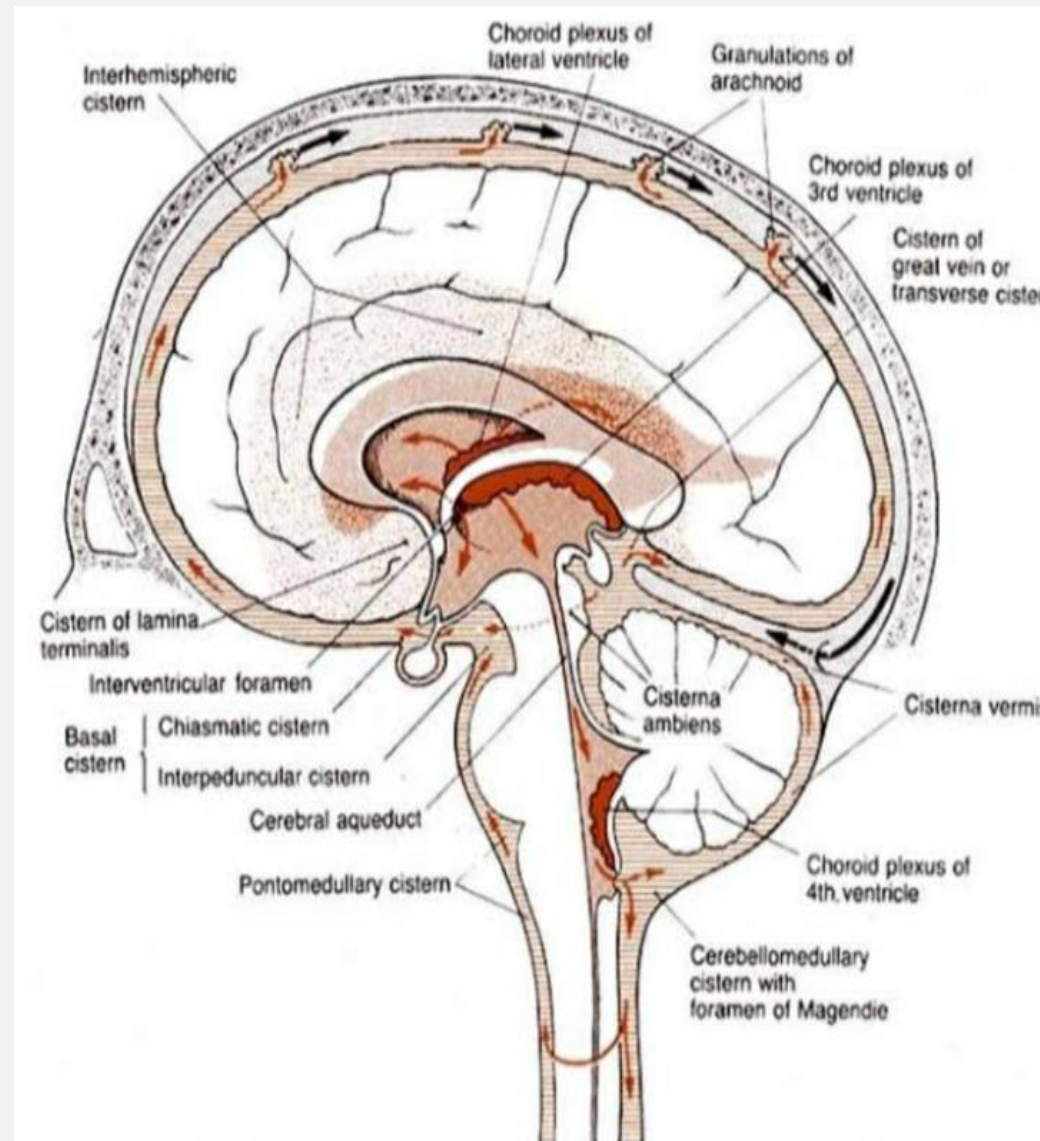
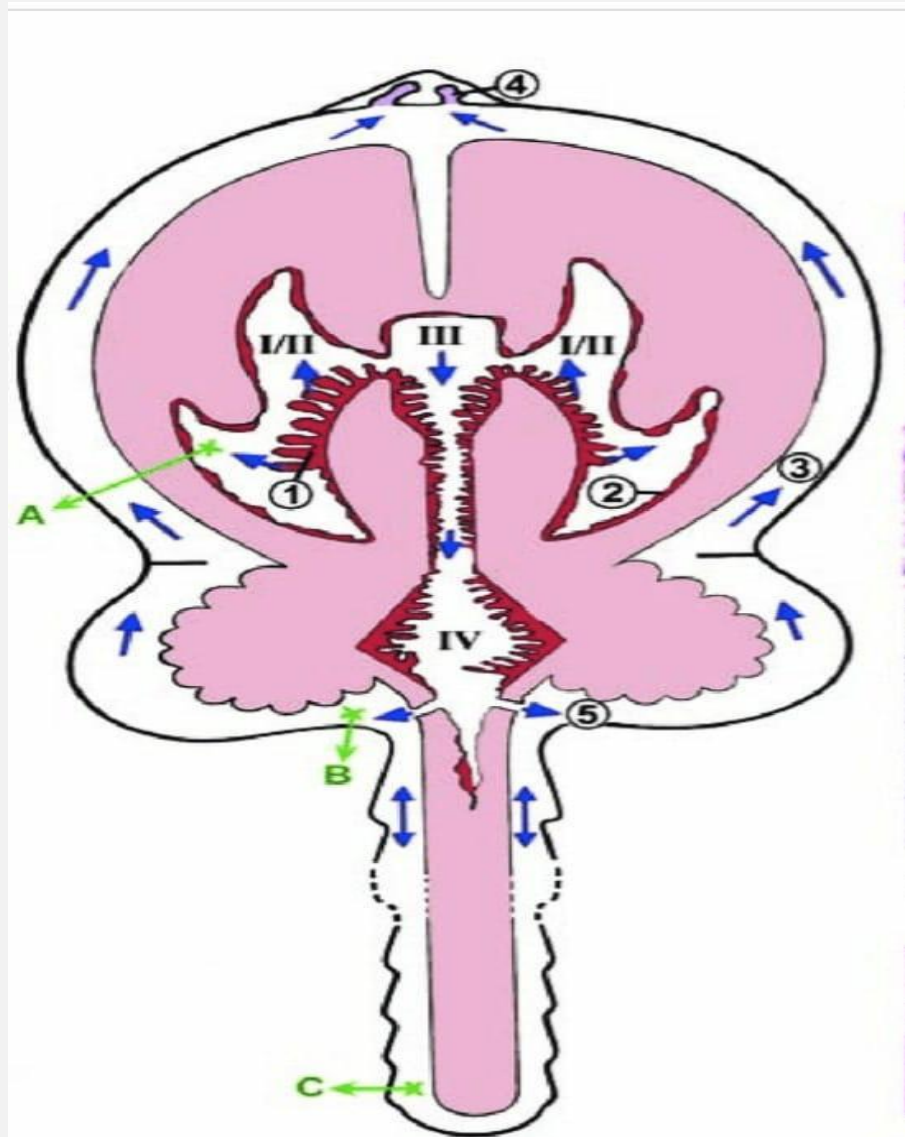


CHOROID PLEXUS is a network of blood vessels along with pia mater and ependyma in the ventricles, which actively secrete CSF.

CIRCULATION IN THE VENTRICLES

Circulation of Cerebrospinal Fluid (CSF)



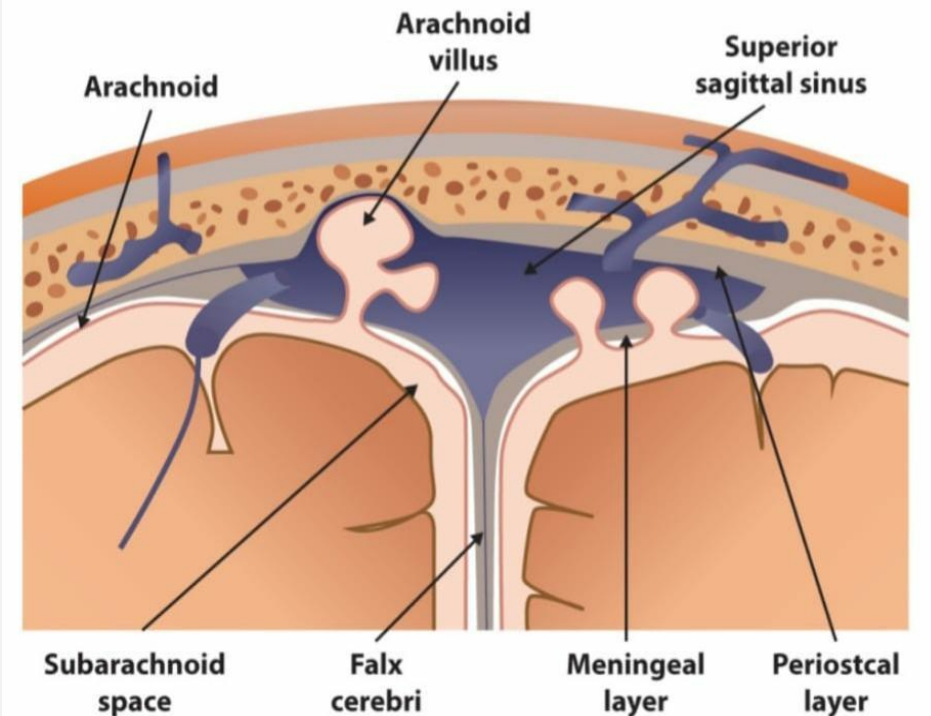


ABSORPTION

- **ARACHNOID GRANULATION**

- It is a diverticulum of sub arachnoid matter in the dural venous sinuses by piercing the dura mater.
- It is composed of arachnoid villi which are the sites of CSF absorption.
- Absorption occurs when CSF pressure exceeds the dural venous pressure
- Are One Way VALVES
- Controls the CSF pressure.

- CSF is produced from blood and is returned to the blood
- CSF passes from subarachnoid space to dural sinuses via arachnoid villi



THANK YOU