



**CNS**

**1. Bulb of posterior horn of lateral ventricle is formed of:**

- a- Tapetum
- b- Optic radiations
- c- Calcarine sulcus
- d- Forceps major
- e- Collateral sulcus

**2. The lateral ventricles are located in which part of the brain?**

- A) Cerebellum
- B) Diencephalon
- C) Cerebrum
- D) Brainstem

**3. How many lateral ventricles are present in the human brain?**

- A) One
- B) Two
- C) Three
- D) Four

**4. The lateral ventricles communicate with the third ventricle through:**

- A) Foramen of Magendie
- B) Cerebral aqueduct
- C) Interventricular foramen (Foramen of Monro)

D) Central canal

**5. The lateral ventricles are filled with:**

- A) Blood
- B) Lymph
- C) Cerebrospinal fluid (CSF)
- D) Plasma

**6. The lateral ventricles are lined by:**

- A) Ependymal cells
- B) Astrocytes
- C) Oligodendrocytes
- D) Microglia

**7. The lateral ventricle consists of how many parts?**

- A) 2
- B) 3
- C) 4
- D) 5

**8. The anterior horn of the lateral ventricle is located in which lobe?**

- A) Occipital lobe
- B) Parietal lobe

- C) Frontal lobe
- D) Temporal lobe

**9. The posterior horn of the lateral ventricle extends into which lobe?**

- A) Frontal lobe
- B) Temporal lobe
- C) Parietal lobe
- D) Occipital lobe

**10. The inferior horn of the lateral ventricle is located in which lobe?**

- A) Frontal lobe
- B) Occipital lobe
- C) Temporal lobe
- D) Parietal lobe

**11. The body of the lateral ventricle is mainly located in the:**

- A) Frontal lobe
- B) Occipital lobe
- C) Temporal lobe
- D) Parietal lobe

**12. Which structure mostly produces cerebrospinal fluid (CSF) in the lateral ventricles?**

- A) Pia mater
- B) Arachnoid villi
- C) Choroid plexus
- D) Ependymal cells

**13. CSF drains from the lateral ventricles into the third ventricle via:**

- A) Foramen of Monro
- B) Foramen of Magendie
- C) Foramen of Luschka
- D) Cerebral aqueduct

**14. The lateral ventricles contribute to CSF circulation, which ultimately drains into the:**

- A) Lymphatic system
- B) Spinal cord
- C) Subarachnoid space
- D) Sinus cavities

**15. The total volume of CSF in the human brain is approximately:**

- A) 30 mL
- B) 130 mL
- C) 300 mL

D) 1000 mL

**16. CSF is absorbed into the venous system via:**

- A) Choroid plexus
- B) Interventricular foramina
- C) Arachnoid granulations
- D) Central canal

Answer: C) Arachnoid granulations

**17. Enlargement of the lateral ventricles is often associated with:**

- A) Hydrocephalus
- B) Parkinson's disease
- C) Multiple sclerosis
- D) Epilepsy

**18. A blockage at the interventricular foramen can lead to: جديده**  
بس سهله

- A) Communicating hydrocephalus
- B) Non-communicating hydrocephalus
- C) Normal pressure hydrocephalus
- D) Increased cerebral perfusion

**19. Which structure forms the roof of the lateral ventricle?**

- A) Corpus callosum
- B) Thalamus
- C) Caudate nucleus
- D) Hippocampus

**20. The lateral ventricles are separated by:**

- A) Septum pellucidum
- B) Corpus callosum
- C) Fornix
- D) Internal capsule

**21. The trigone (atrium) of the lateral ventricle is found where?**

- A) Between anterior and inferior horns
- B) Between anterior and posterior horns
- C) Between body, occipital, and temporal horns
- D) Between the third and fourth ventricles

**22. Which condition results from excessive CSF accumulation due to impaired absorption?**

- A) Meningitis
- B) Hydrocephalus
- C) Stroke

D) Alzheimer's disease

**23. The medial wall of the lateral ventricle is formed by:**

A) Septum pellucidum

B) Thalamus

C) Corpus callosum

D) Fornix

**24. The lateral wall of the anterior horn of the lateral ventricle is related to:**

A) Fornix

B) Head of Caudate nucleus

C) Internal capsule

D) Thalamus

**25. The choroid plexus of the lateral ventricle is found in:**

A) Anterior horn

B) Body and inferior horn

C) Posterior horn

D) All parts of the lateral ventricle

**26. The anterior horn of the lateral ventricle is separated from its counterpart by:**

A) Corpus callosum

- B) Septum pellucidum
- C) Fornix
- D) Choroid plexus

**27. The genu of the corpus callosum is located \_\_\_\_ to the anterior horn of the lateral ventricle.**

- A) Posterior
- B) Inferior
- C) Anterior
- D) Lateral

**28. Which of the following is true as regards to the cerebrospinal fluid?**

- A. The main site of its formation is arachnoid villi and granulations.
- B. The main factor facilitates the CSF circulation is pulsations of the arteries in the subdural space
- C. The choroid plexus is the main source of the CSF (70%), Mostly in the lateral ventricle.
- D. The ependymal cells are the main source of the CSF (70%), Mostly in the third ventricle
- E. CSF is similar to blood plasma although it contains more albumin and glucose.

**29. Papilledema means**

- a. edema of the optic disc
- b. introducing a needle into the subarachnoid space

- c. abnormal increase in the volume of the CSF
- d. Inadequate drainage of the CSF

**30. commonest cause of hydrocephalus is**

- a. obstruction of aqueduct of Sylvius .
- b. obstruction of interventricular foramina.
- c. choroid plexus tumor
- d. thrombosis of the
- e. superior sagittal sinus.

1	D
2	C
3	B
4	C
5	C
6	A
7	C
8	C
9	D
10	C
11	D
12	C
13	A
14	C
15	B
16	C
17	A
18	B
19	A
20	A
21	C
22	B
23	A
24	B
25	B
26	B
27	C
28	C
29	A
30	A

**What are parts related to Floor of central part of lateral ventricle:**

from the lateral to the medial side:

- 1.Body of the caudate nucleus.
- 2.Thalamostriate vein.
- 3.Stria terminalis
- 4- thalamus
- 5.Choroid plexus in the choroid fissure.
- 6.Body of the fornix.

**What are parts related to Lateral wall of posterior horn of lateral ventricle from medial to lateral:**

- 1.Tapetum of the corpus callosum.
- 2.Optic radiation.
- 3.Inferior longitudinal fasciculus.

**What are two elevations in medial wall of posterior horn of lateral ventricle**

- 1.Bulb of the posterior horn: superior and produced by the forceps major.
- 2.Calcar avis: inferior and produced by the calcarine sulcus.

**What is the collateral trigone?**

A triangular area, that is found in the floor of the ventricle where the occipital and temporal horns diverge from the central part of the ventricle

## What is the arterial supply of choroid plexus of lateral ventricle

Anterior & posterior choroidal arteries

## Define CSF and mention sites of its formation

Definition:	it is the fluid that fills the ventricles of the brain and the subarachnoid space.
Formation:	formed by active secretion and by diffusion from 1.Choroid plexus: the main source of CSF (70%). Mostly in lateral ventricle. 2.Ependymal lining of the ventricles: add CSF to the ventricles. 3.Cells of the pia mater: add CSF to the subarachnoid space.

## What is the circulation of CSF

- 1.From the lateral ventricles to the third ventricle through the interventricular foramina of Monroe, then to the fourth ventricle through the aqueduct of Sylvius.
- 2.More CSF is added in each ventricle.
- 3.It leaves the fourth ventricle to the subarachnoid space through the median foramen of Magendie and the lateral foramina of Luschka.
- 4.A small amount flows to the central canal of the spinal cord.
- 5.The CSF flows in the subarachnoid space around the brain and the spinal cord.
- 6.The following factors facilitate the CSF circulation:
  - 1-Pulsations of the arteries in the subarachnoid space.
  - 2-Movements of the cilia of the ependymal cells.
  - 3-Positive and negative pressure created by continuous production and absorption.

## **What is the function of CSF**

- 1.Reduces the brain weight 60 folds (from 1400 gm to 25 gm).
- 2.Protects the brain and the spinal cord.
- 3.Substitutes the lymphatic system in the CNS and provides a drainage system
- 4.Maintains the chemical environment for the CNS through communication with the brain extracellular space.
- 5.Regulation of the intracranial pressure.

## **Mention Causes of hydrocephalus**

- 1.Obstruction to its circulation: It is the commonest cause. The commonest site of obstruction is the aqueduct of Sylvius . Other sites are interventricular foramina.
- 2.Overproduction of the CSF: by choroid plexus tumor (rare).
- 3.Inadequate drainage of the CSF: by thrombosis of the superior sagittal sinus.