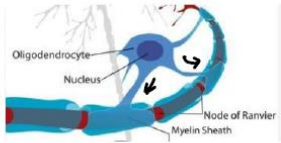




* SALTATORY CONDUCTION

Myelin in **C**entral nervous system is formed by: Oligodendrocyte

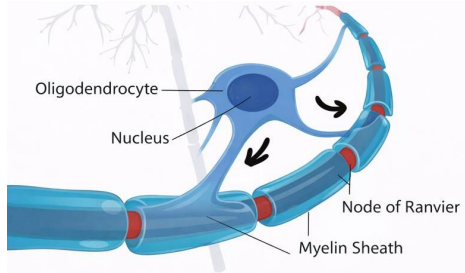


Myelin in **P**eripheral nerves is formed by: Schwann cells



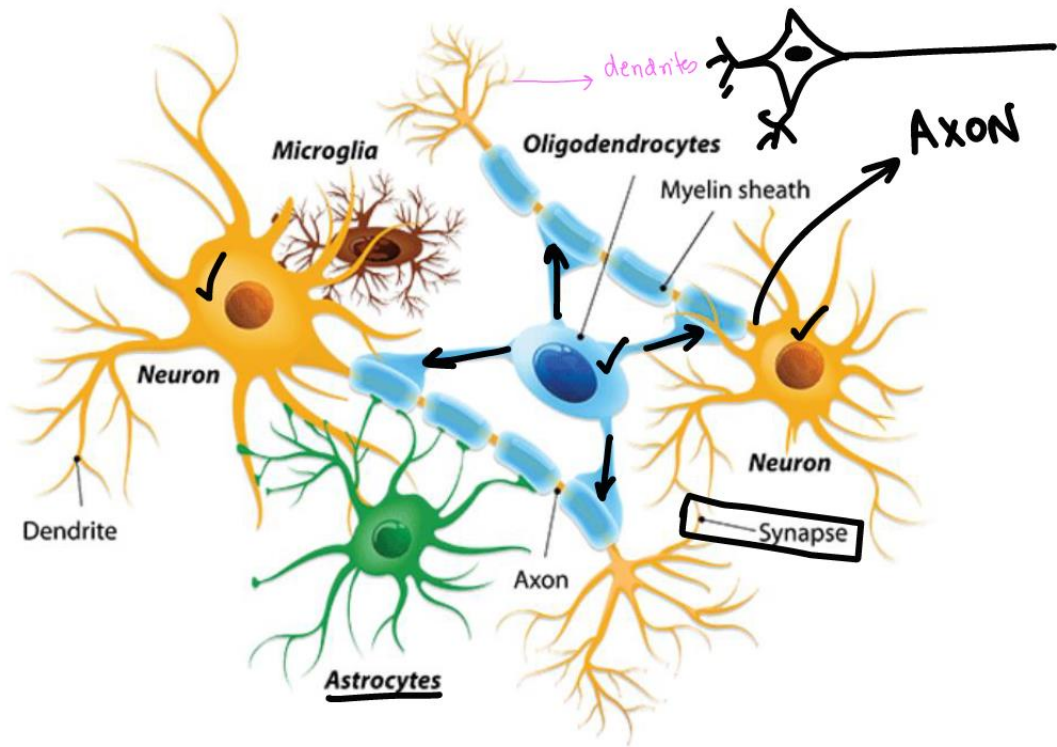


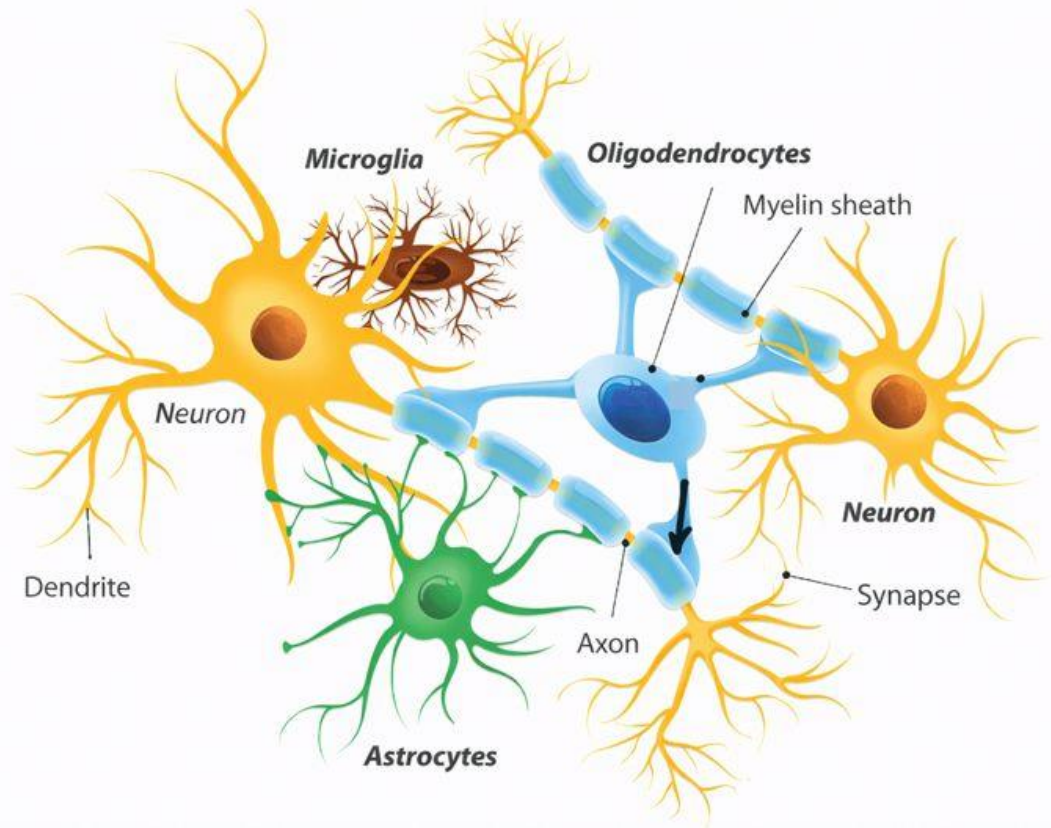
Myelin in central nervous system is formed by: Oligodendrocyte



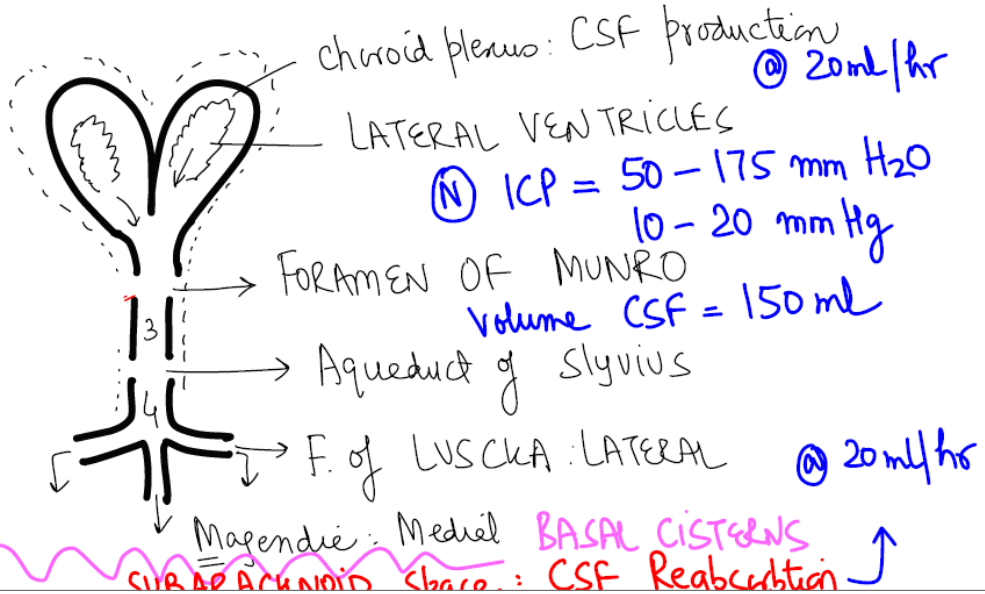
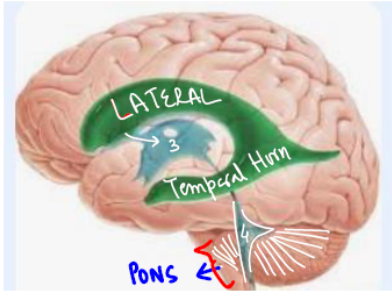
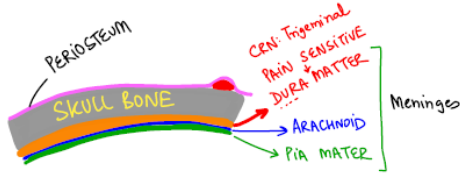
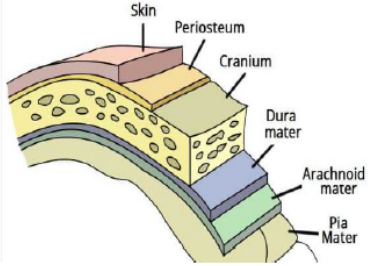
Myelin in peripheral nerves is formed by: Schwann cells



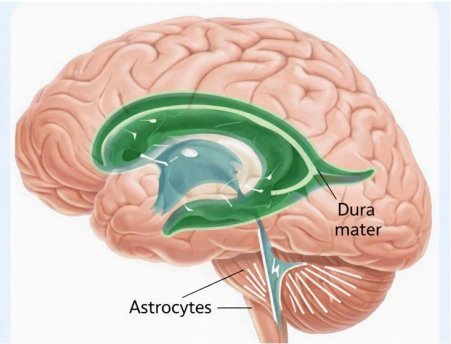
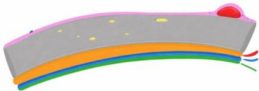
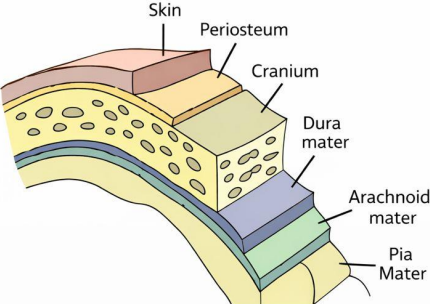




Ventricles of brain



Ventricles of brain



✓ Cerebral perfusion pressure

$$\frac{SBP + 2(DBP)}{3}$$

$$C.P.P = MAP - ICP$$

$$* 60-80 \text{ mm Hg} = 95 \text{ mm} - 20 \text{ mm}$$

✓ IOP = 10-21
mm Hg
glaucoma

C.P.P < 60: INFARCTION

CPP > 80: CEREBRAL OEDEMA

✓ Normal Intracranial pressure:

10-20 mm Hg

✓ Normal Jugular venous pressure:

5-8 cm H₂O

ICP ↑ = Head injury
meningitis

JVP ↑ = Rt CHF

Cerebral perfusion pressure

Normal intracranial pressure:

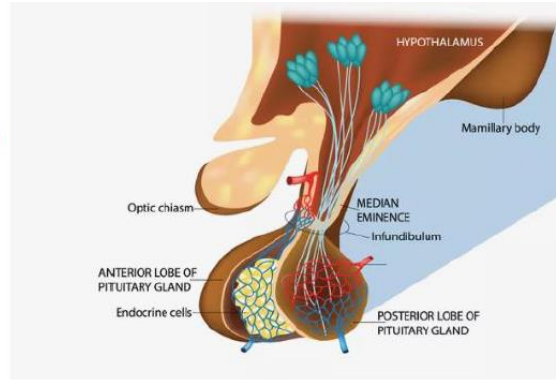
Normal jugular venous pressure

* Hypothalamus

1. Head Ganglion of autonomic nervous system

- Shivering ✓
- Sweating ✓
- Satiety ✓
- Hunger ✓

THIRST ✓



2. Produces hormones

1. OXYTOCIN → myoepithelial cells: milk ejection reflex of ducts in BREAST
2. VASOPRESSIN / ADH

3. Controls anterior and posterior pituitary release of hormones

TSH
LH/FSH
ACTH
GH

↓
PROLACTIN: ACINI of breast: MILK PRODUCTION
LACTOTROPH

→ Oxytocin
ADH

Hypothalamus

Head Ganglion of autonomic nervous system

Shivering

Sweating

Satiety

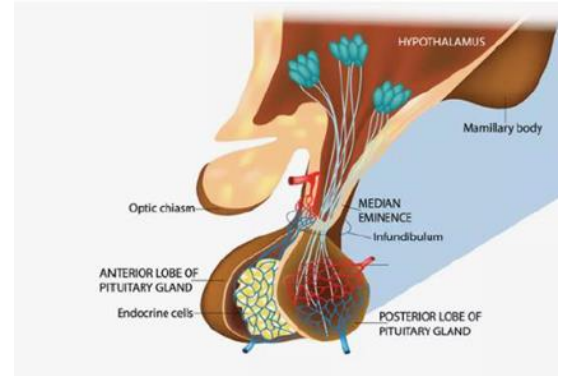
Hunger

Produces hormones

1.

2.

Controls anterior and posterior pituitary release of hormones



Basal Ganglia

Near midbrain and diencephalon

Function: SMOOTH MOVEMENT

*
Damage to Substantia Nigra:



PARKINSON DISEASE

BRADYKINESIA

Must have CRITERIA III III

↓
Damage to Caudate nucleus



↓
CHOREA

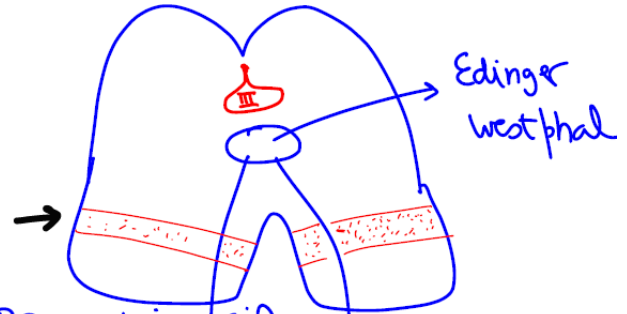
↳ Involuntary Movts

Damage to Globus pallidus and Putamen



ATHETOSIS
slow writhing movts: Hand

MID BRAIN



Basal Ganglia

Near midbrain and diencephalon

Function:

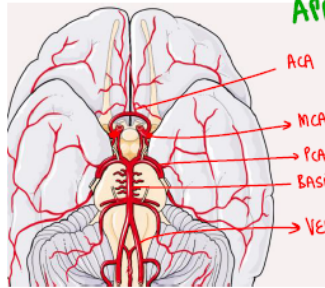
Damage to substantia nigra:



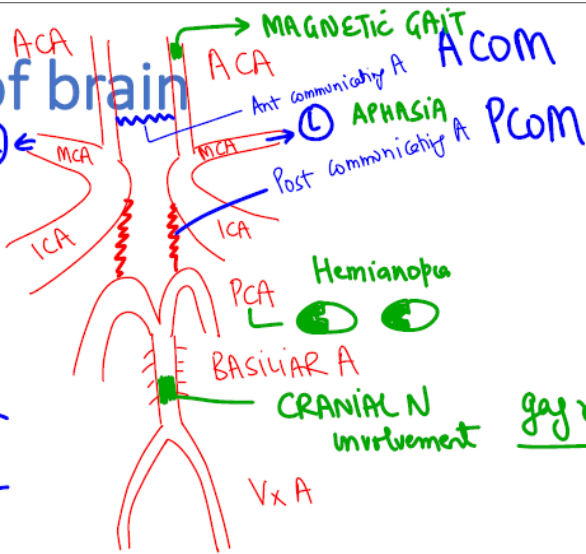
Damage to Caudate nucleus

Damage to Globus pallidus and putamen

Blood supply of brain



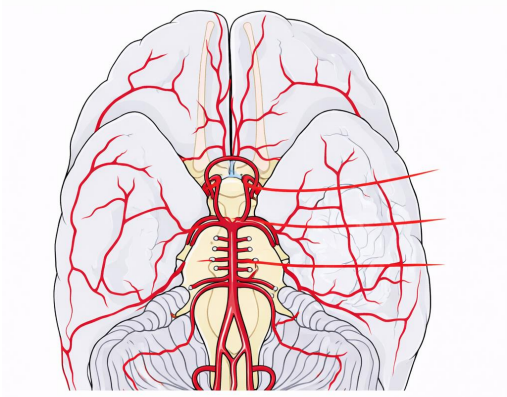
APRAXIA (R) ← MCA



gag reflex ⊖

not a : CIRCLE of willis
 contributes MCA

Blood supply of brain



Neurotransmitters in Neuropsychiatric disorders

Neurotransmitter	Disease
Low Acetylcholine	ALZHEIMER D
Low Dopamine	PARKINSON D
Excess Dopamine	HUNTINGTON CHOREA
Low Serotonin ✓	Depression and Anxiety * =
Low Nor-epinephrine ✓	Depression and ADHD =

Neurotransmitters in Neuropsychiatric disorders

Neurotransmitter	Disease
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Low Dopamine	
Excess Dopamine	
Excess Dopamine	
Low Serotonin	Depression and anxiety
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