


# فیزیولوژی اعصاب و غدد، جلسه اول:

۱- هومئوستازی

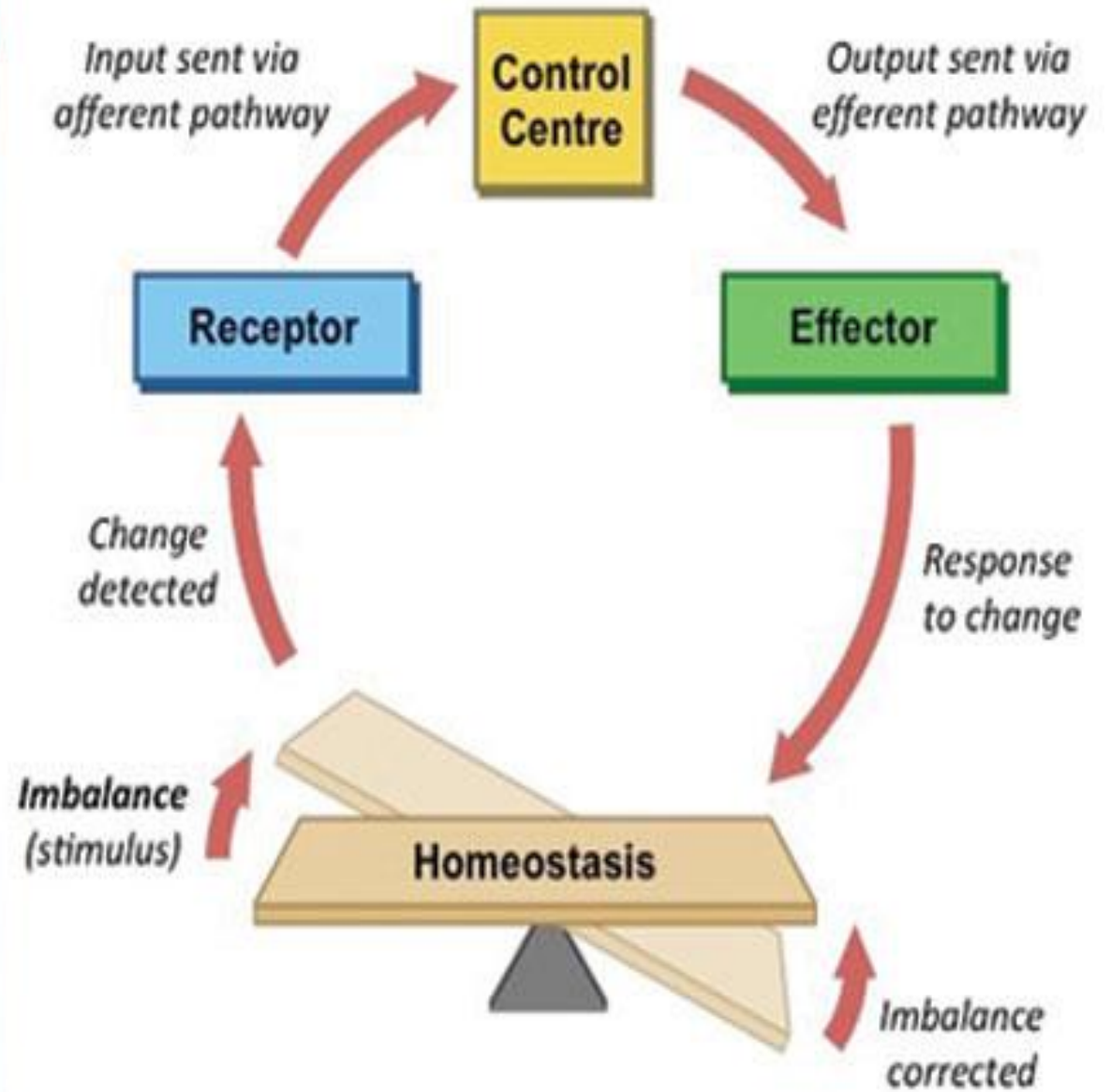
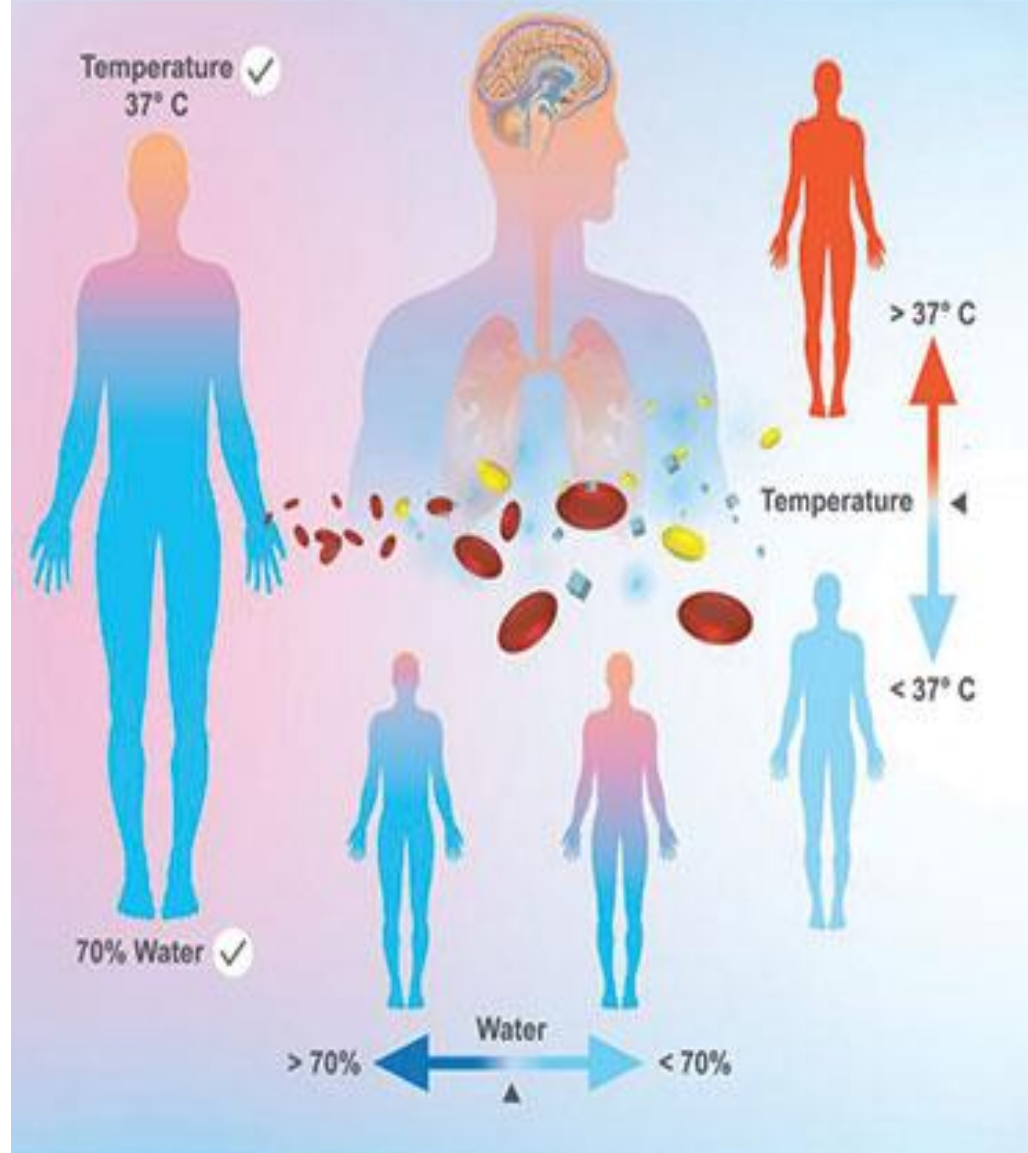
۲- تنظیم های عصبی و هورمونی

# Homeostasis



- **Defined as maintenance of a relatively stable internal environment**
  - Does not mean that composition, temperature, and other characteristics are absolutely unchanging
- Homeostasis is essential for survival and function of all cells
- Each cell contributes to maintenance of a relatively stable internal environment

# Homeostasis



# The interaction process.

To adapt our body to changing conditions

To connect and coordinate all our organs.

## INTERACTION PROCESS

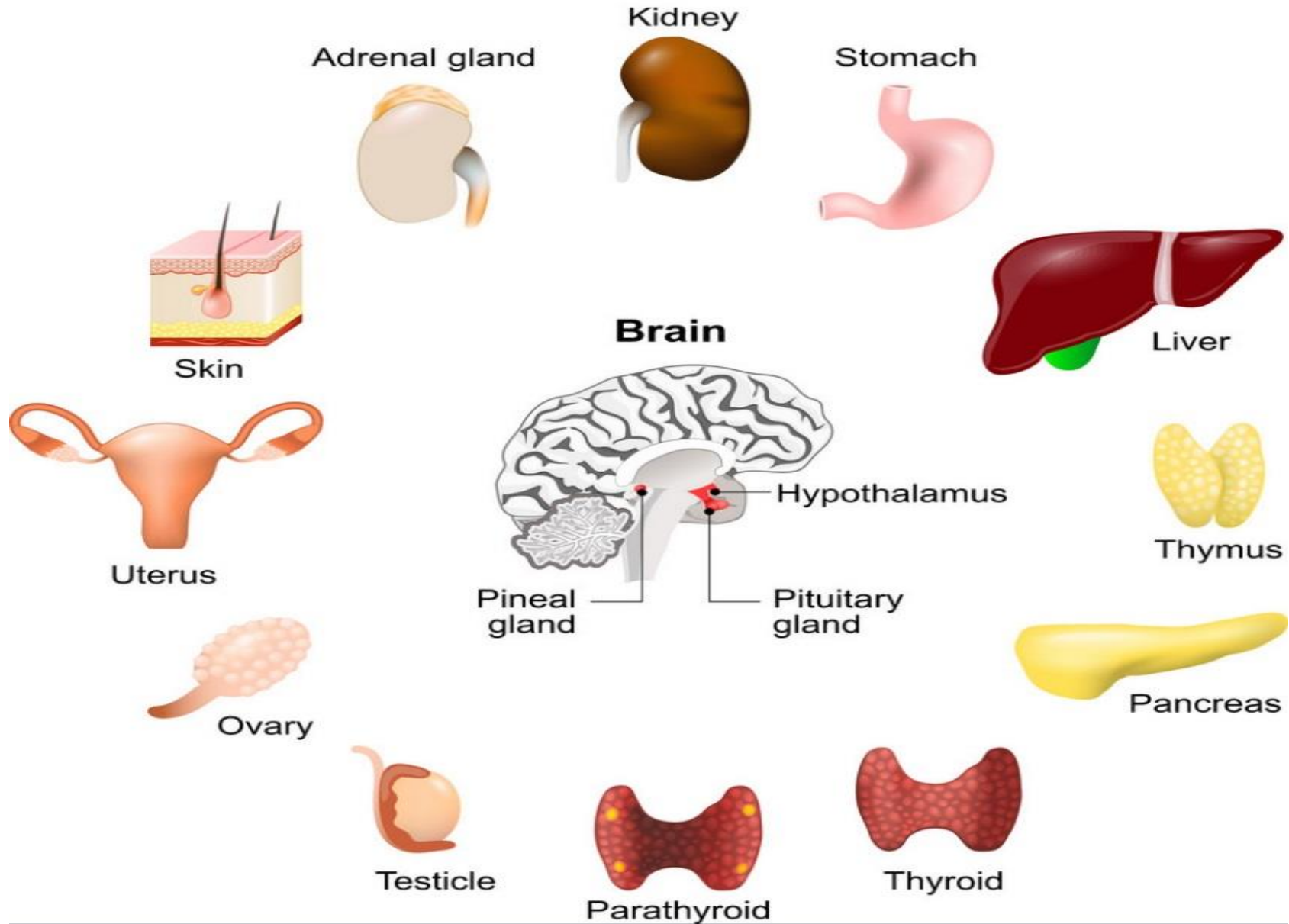
### Nervous system

- Nervous tissue
- Quick and short-lasting responses
- Communication via nervous impulses through nerves.

### Endocrine system

- Endocrine glands.
- Slow and long-lasting response (homeostasis).
- Communication via hormones through the blood.

# ENDOCRINE SYSTEM





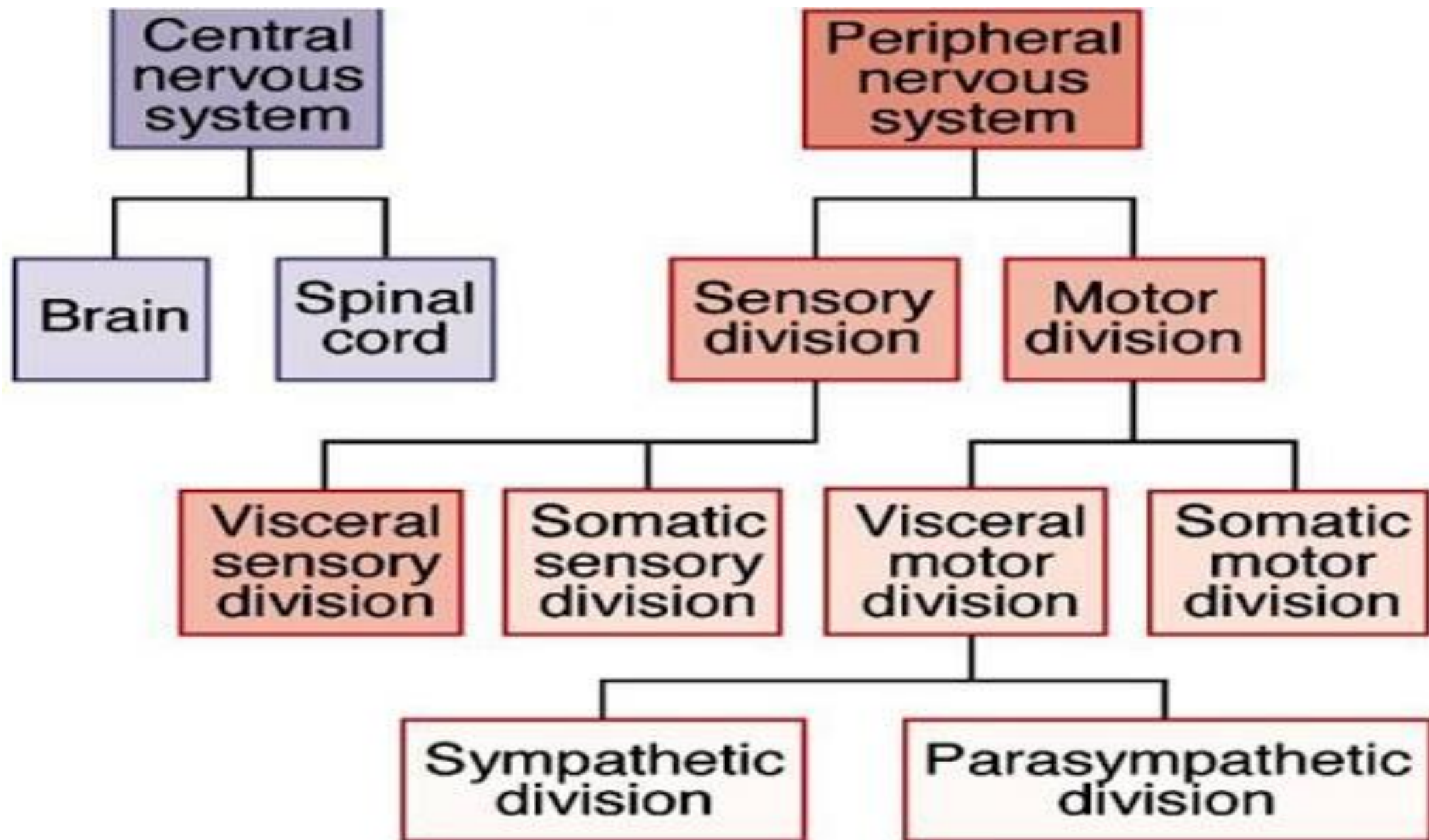
## فیزیولوژی اعصاب و غدد، جلسه دوم:

۱- دستگاه های عصبی مرکزی و محیطی

۲- بخش های دستگاه عصبی

۳- سطوح دستگاه عصبی مرکزی

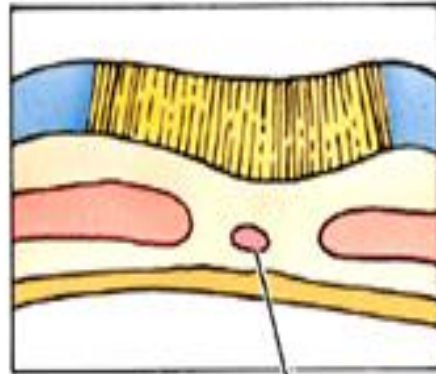
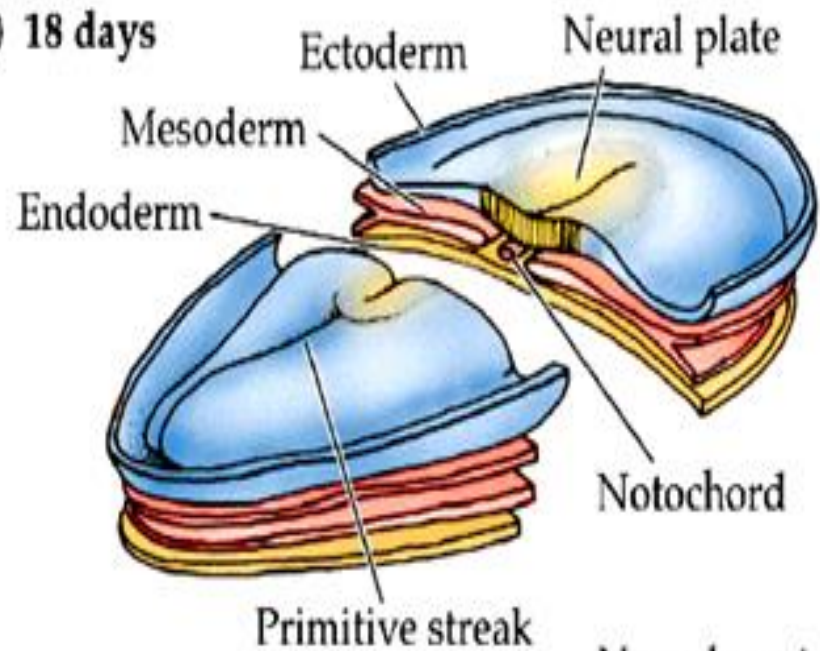
۴- تکوین جنینی دستگاه عصبی مرکزی



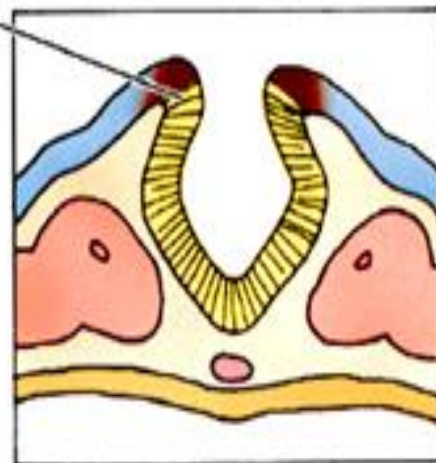
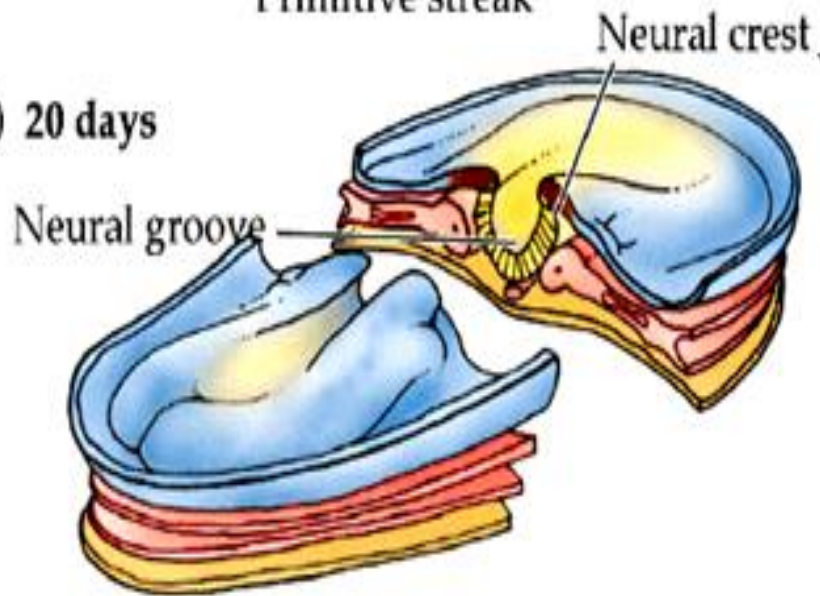




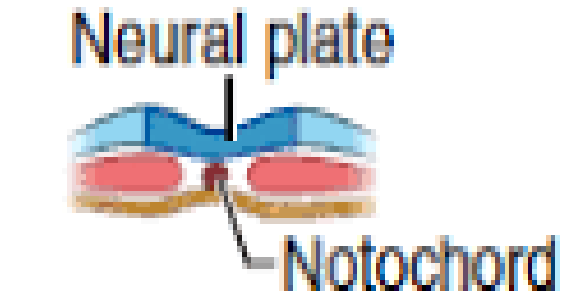
(a) 18 days



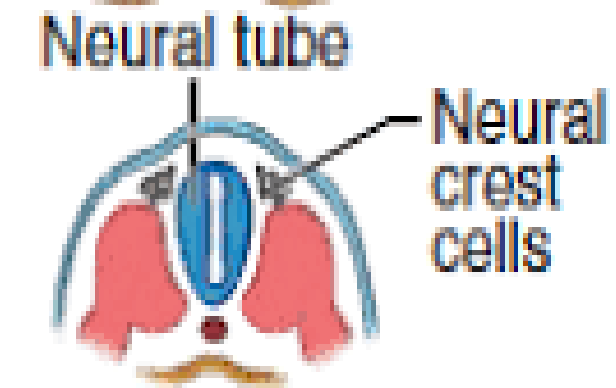
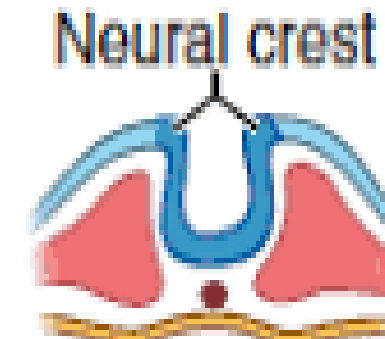
(b) 20 days



# Neural development

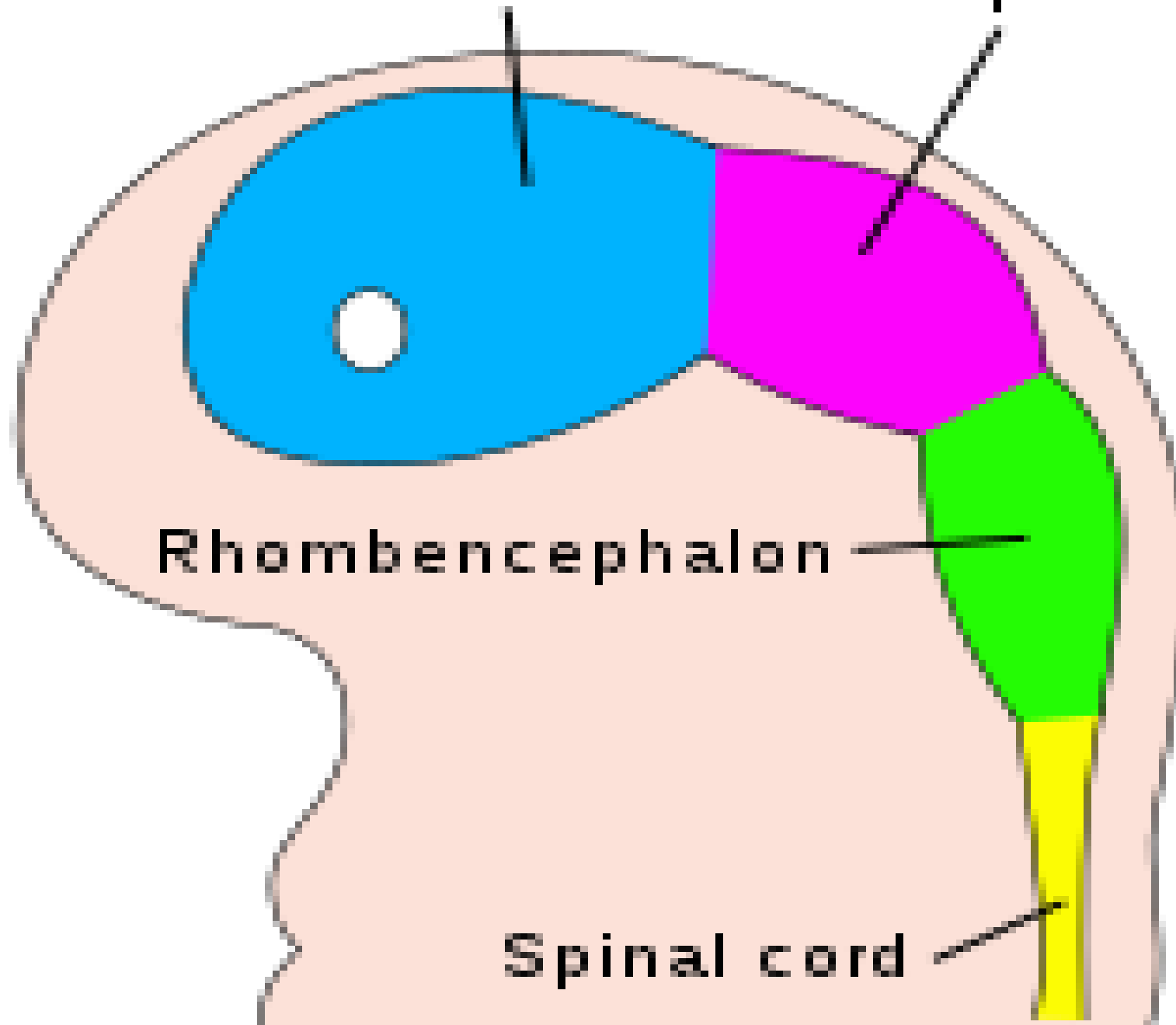


Day 18



Day 21

Prosencephalon Mesencephalon



Rhombencephalon

Spinal cord

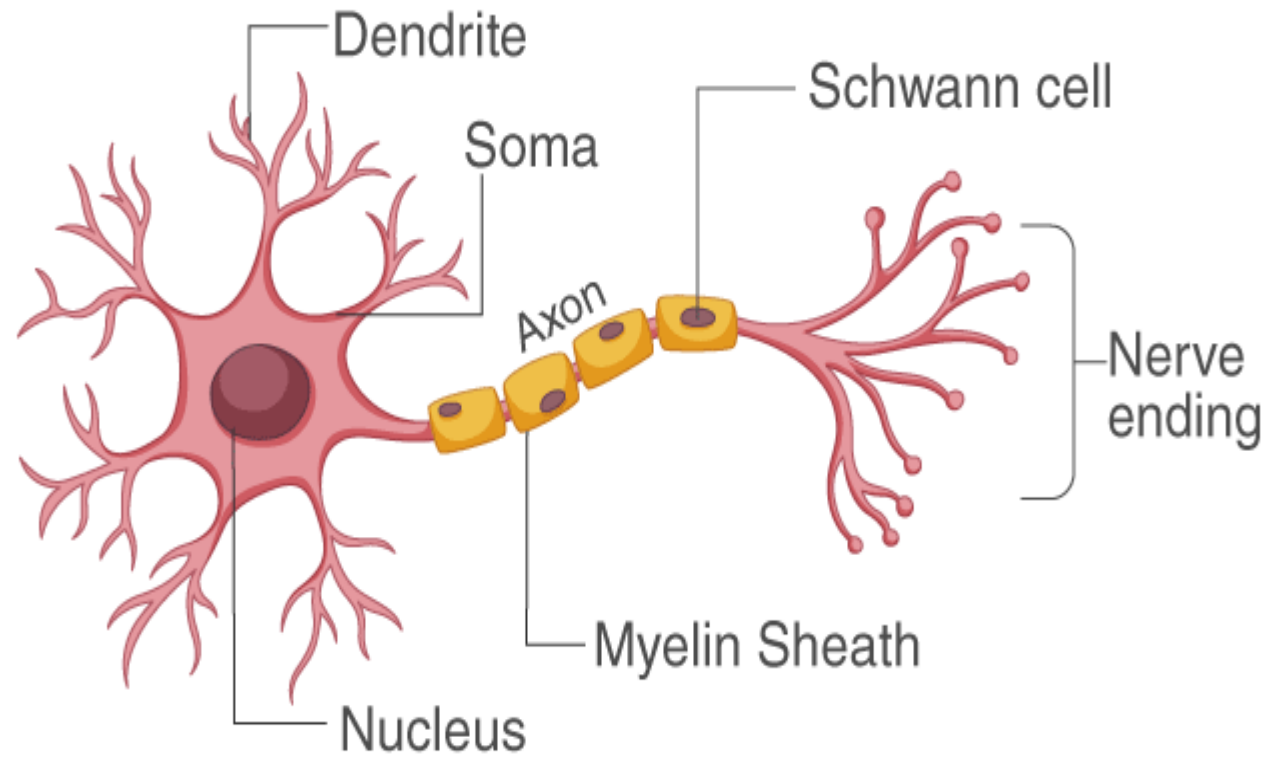
# فیزیولوژی اعصاب و غدد، جلسه سوم:

۱- نرون

۲- مواد سفید و خاکستری بافت عصبی

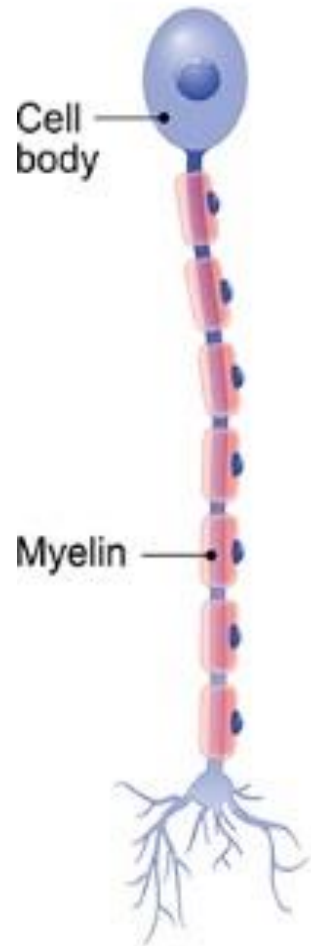
۳- بافت نوروگلی

## STRUCTURE OF NEURON





**Unipolar**



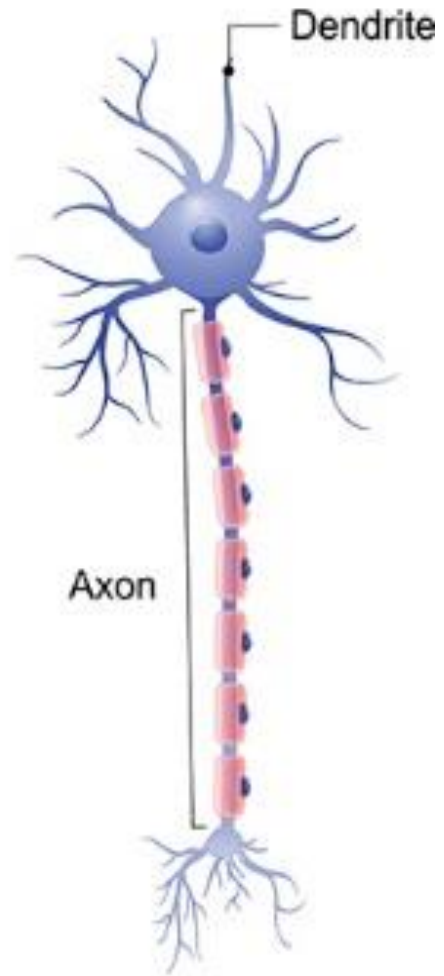
**Bipolar**

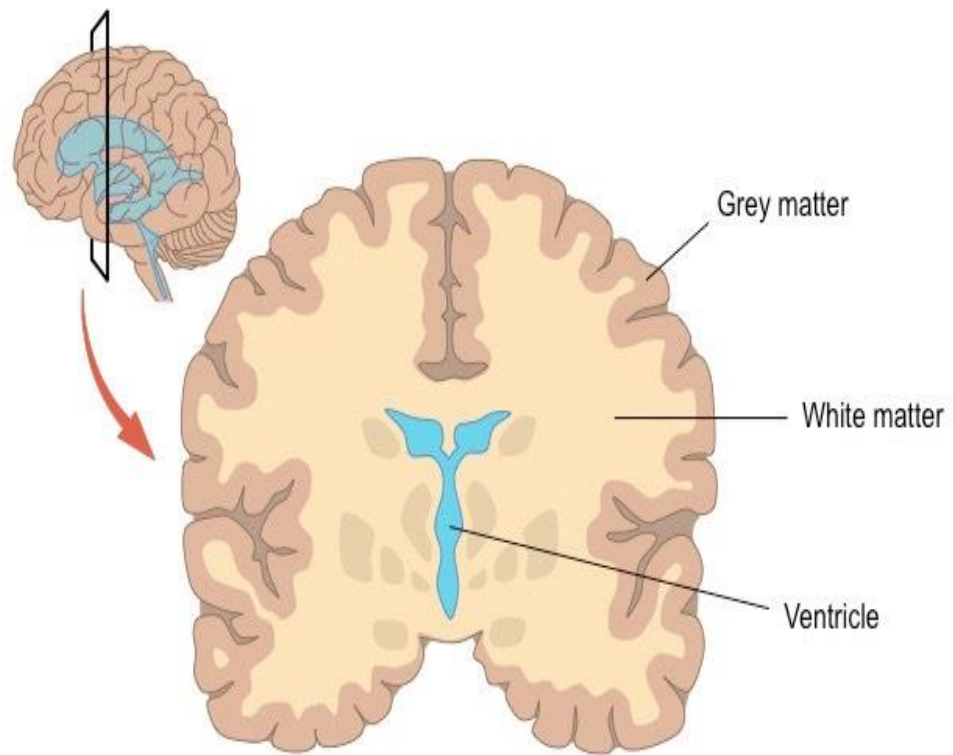
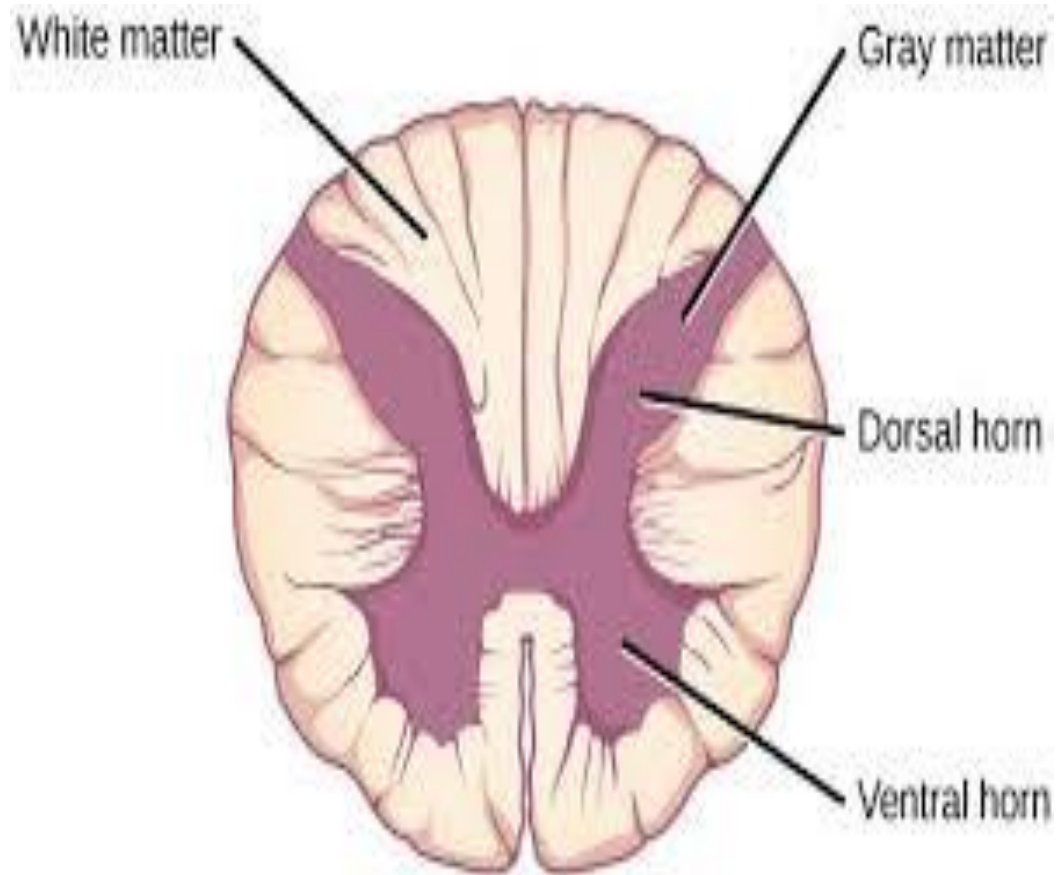


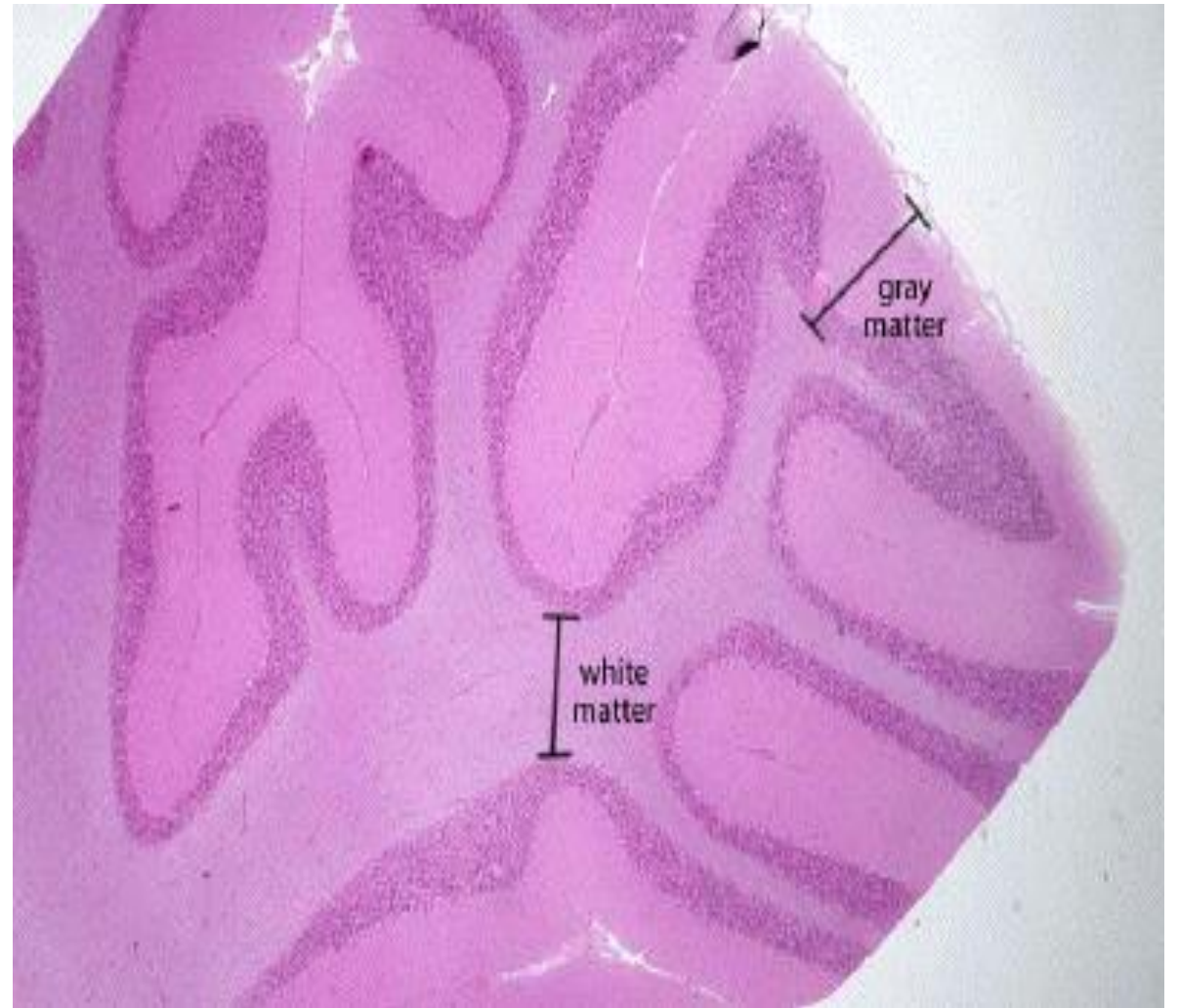
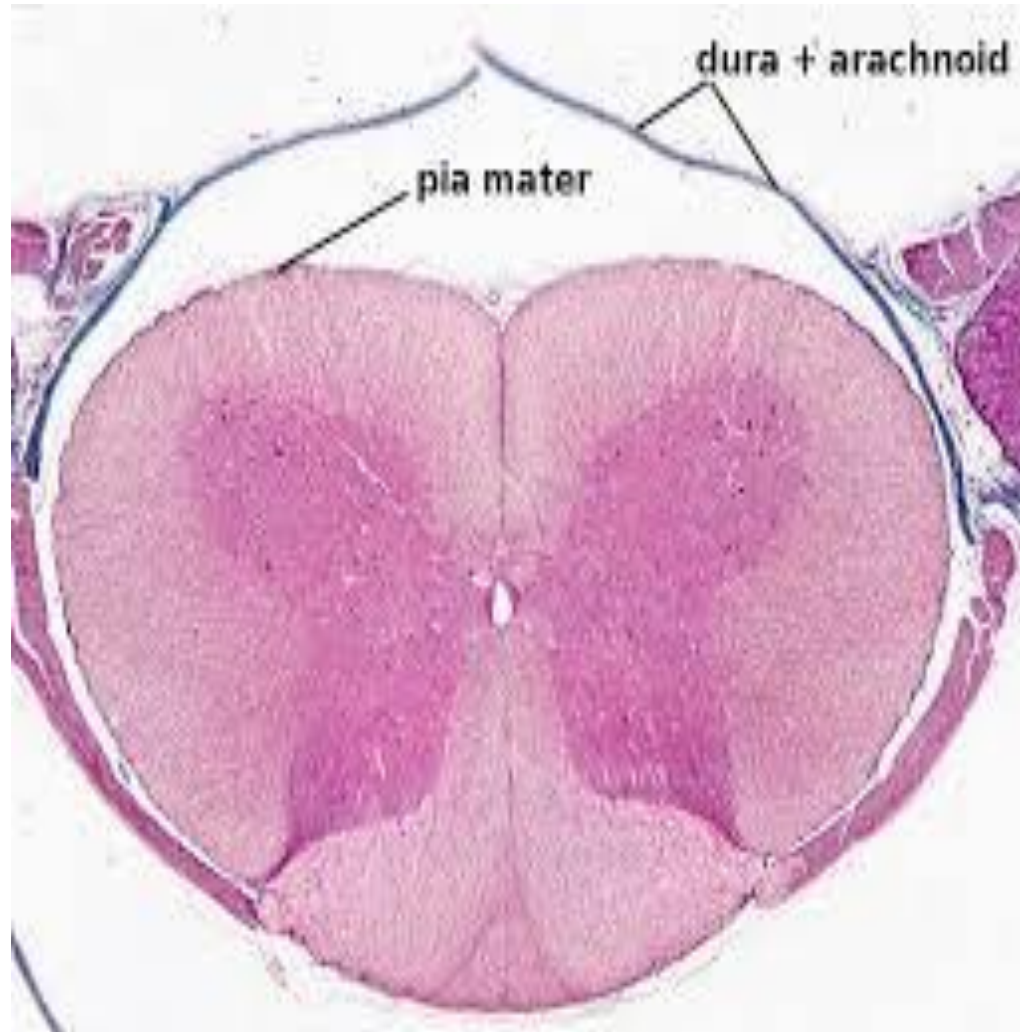
**Pseudounipolar**



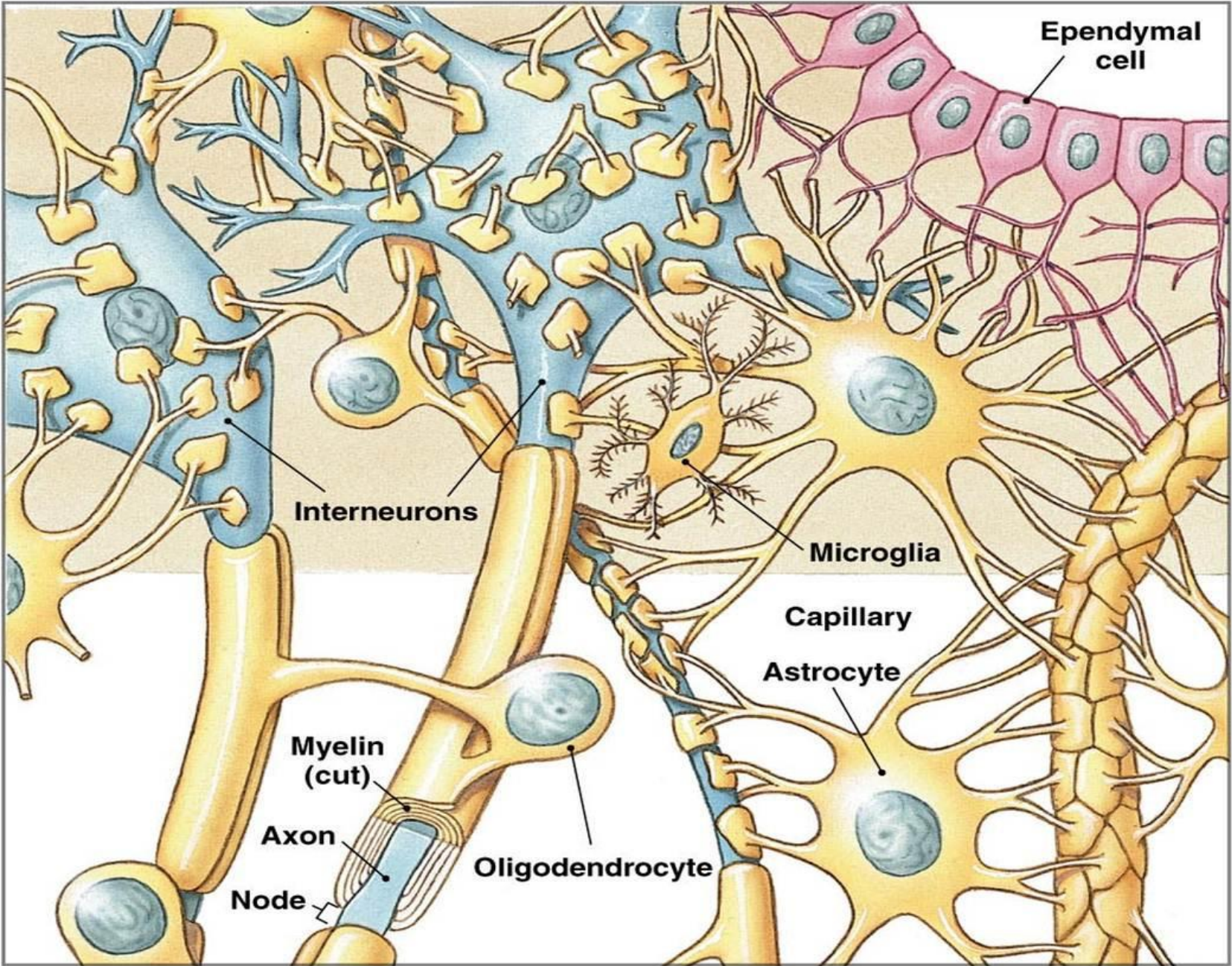
**Multipolar**





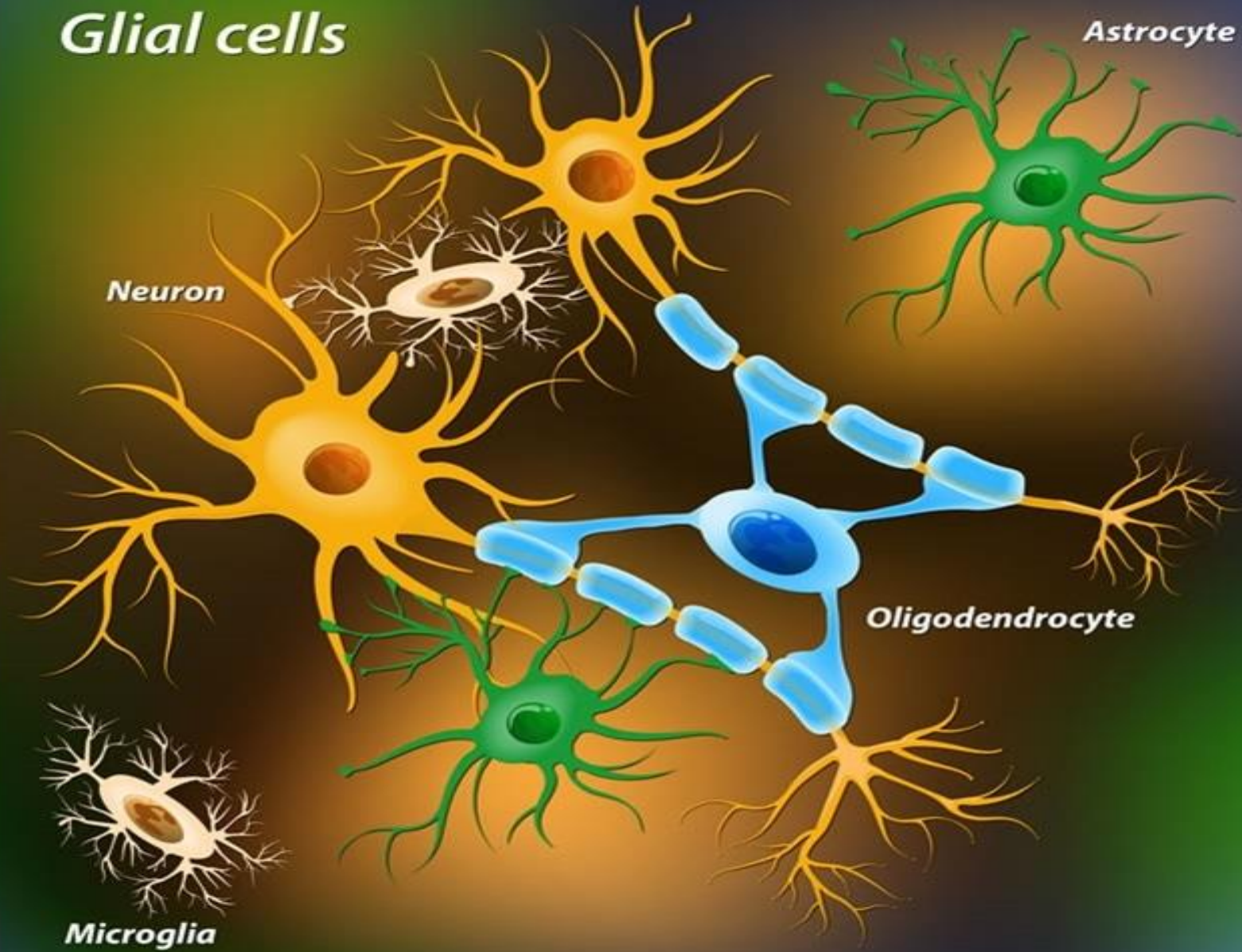








# Glial cells

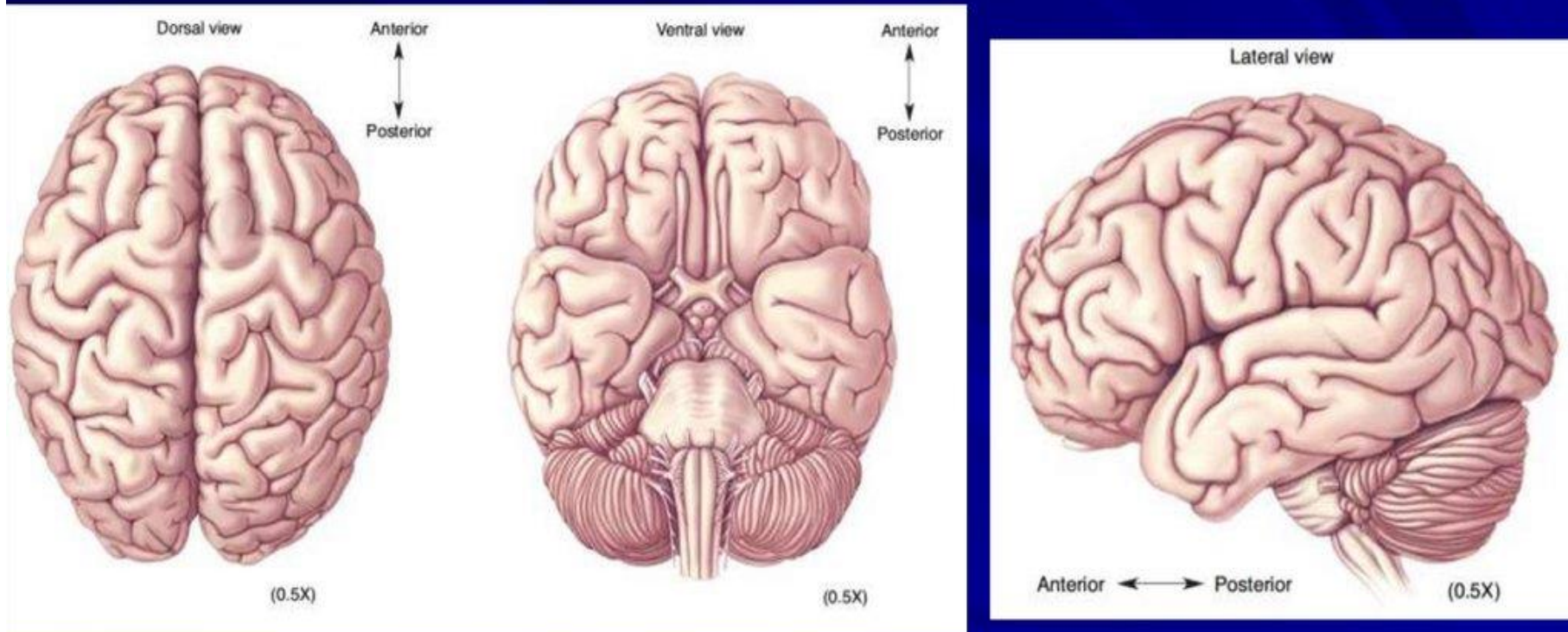


فیزیولوژی اعصاب و غدد، جلسہ چہارم:

تشریح فیزیولوژیکی مغز (قسمت اول)

# Anatomy of the human brain

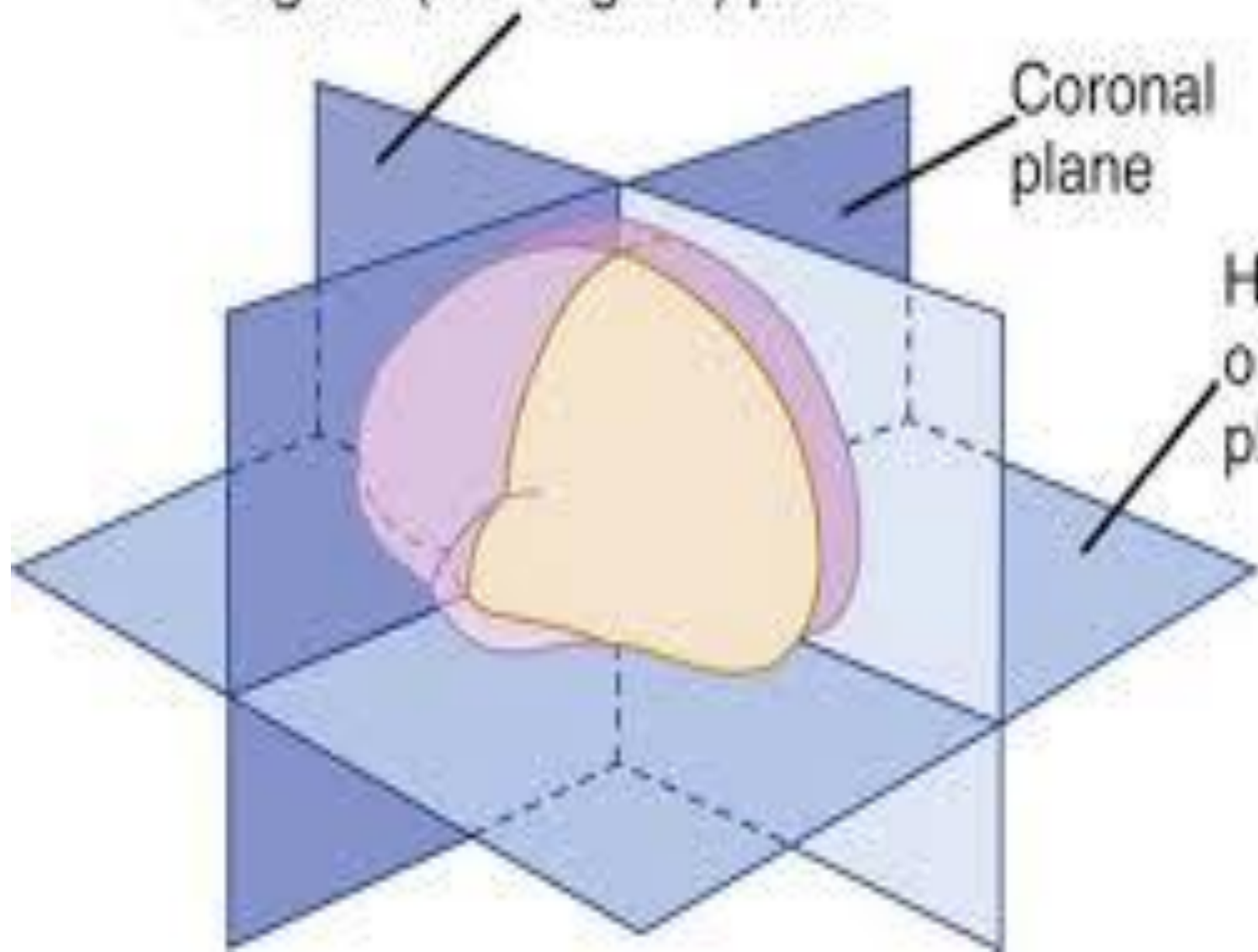
- Surface anatomy of the brain



Sagittal (midsagittal) plane

Coronal plane

Horizontal,  
or axial,  
plane





**Cerebrum**

**Parietal  
Lobe**

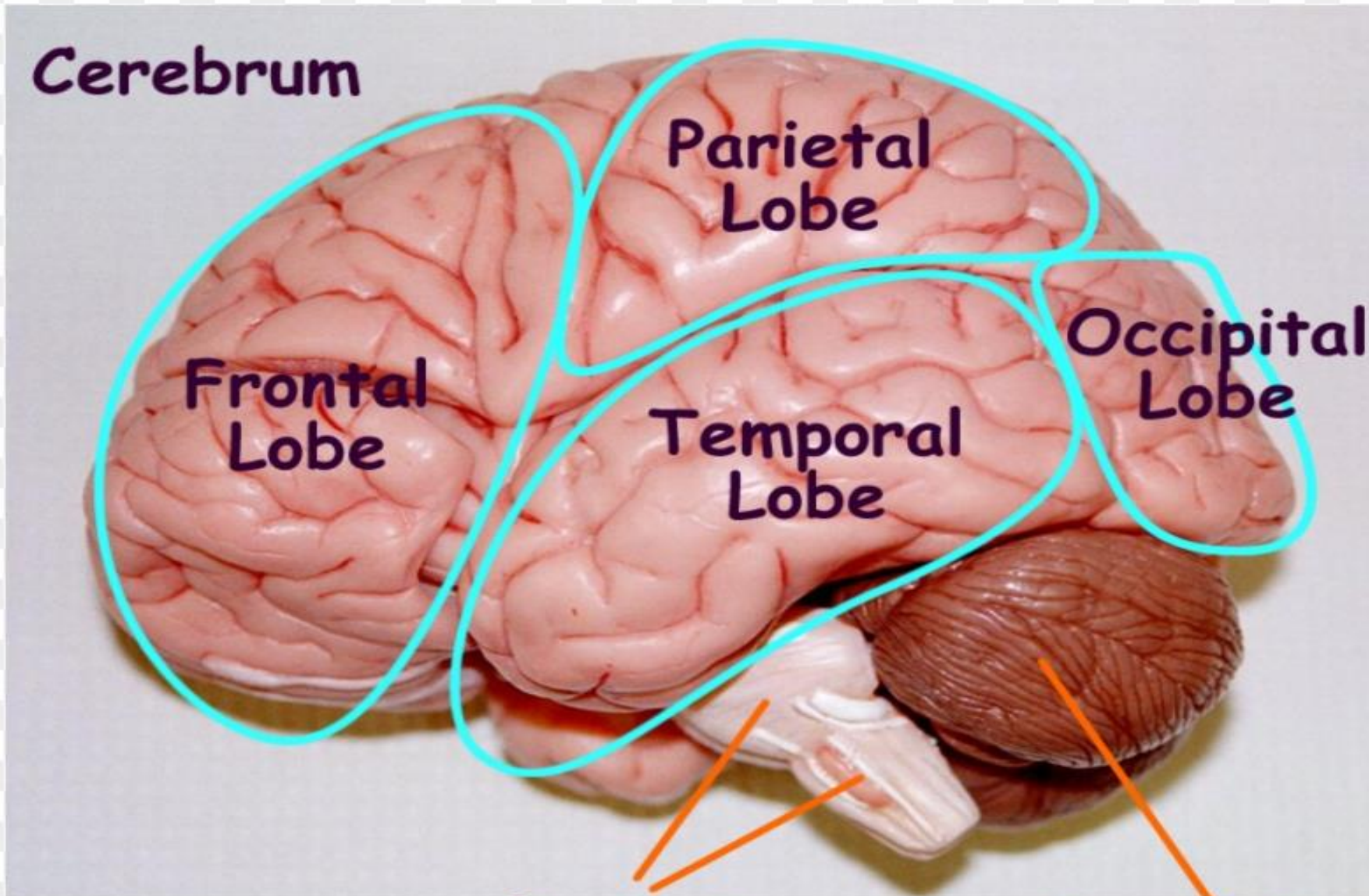
**Frontal  
Lobe**

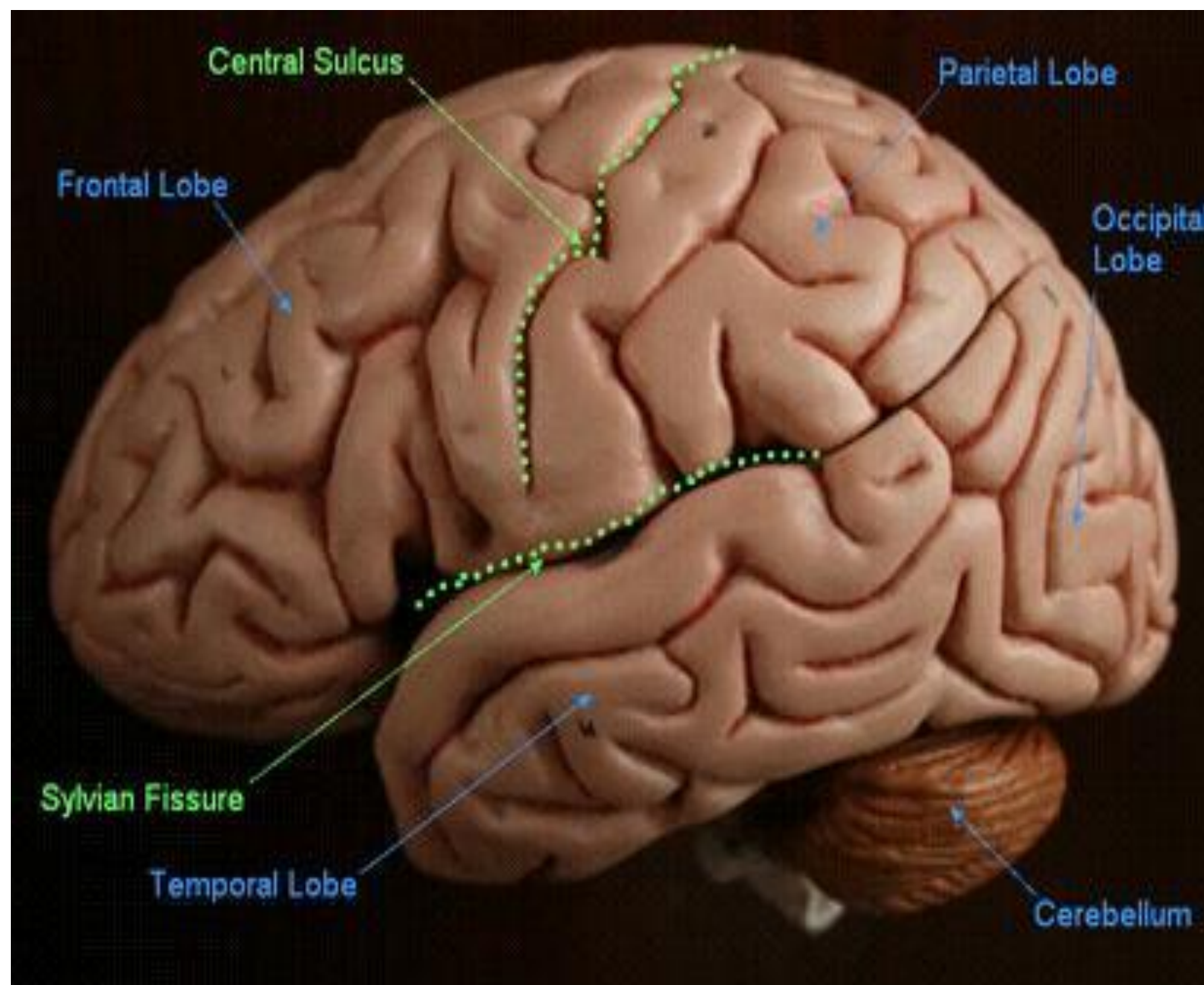
**Temporal  
Lobe**

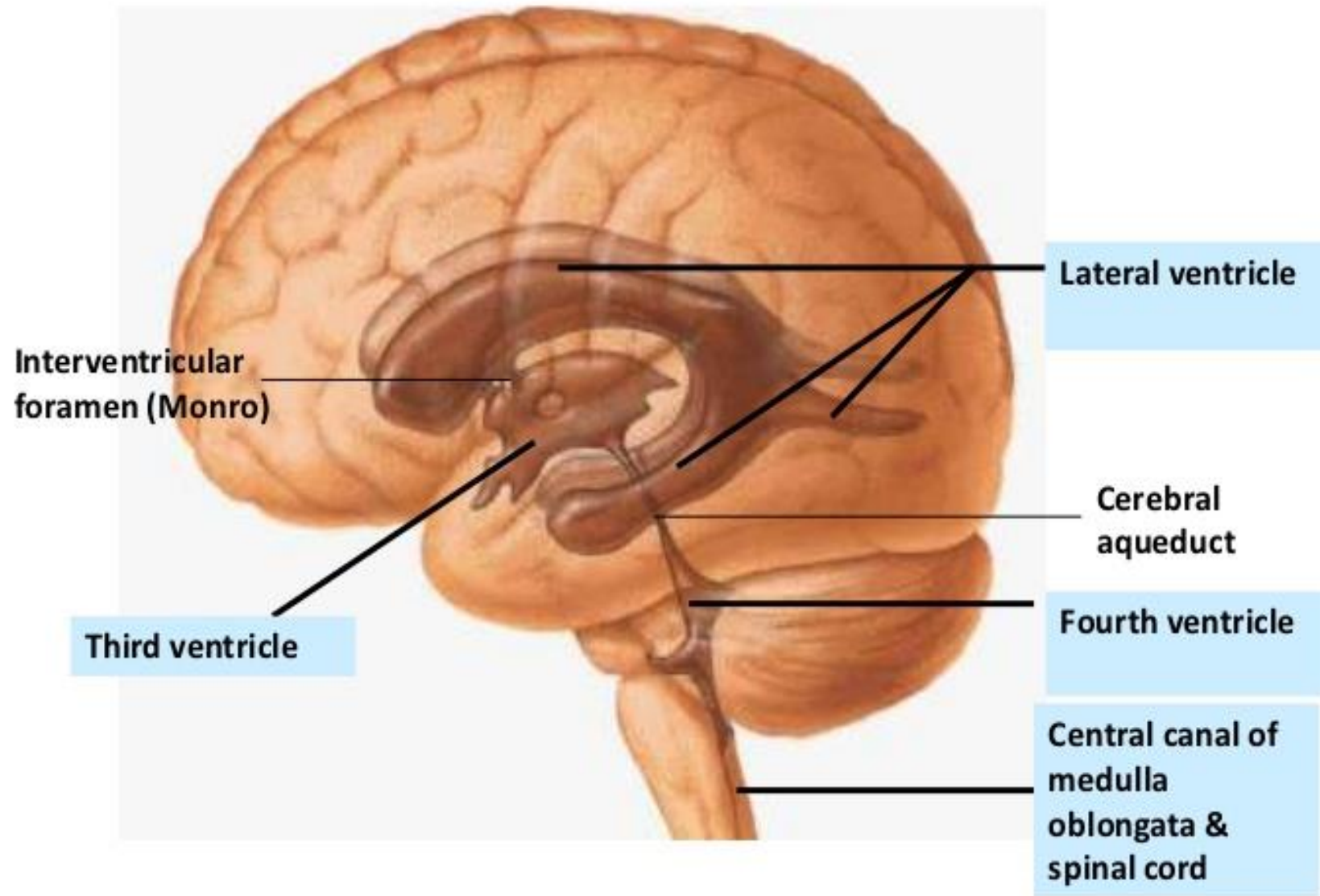
**Occipital  
Lobe**

**Brainstem**

**Cerebellum**







Lateral view to show the ventricular system of the CNS