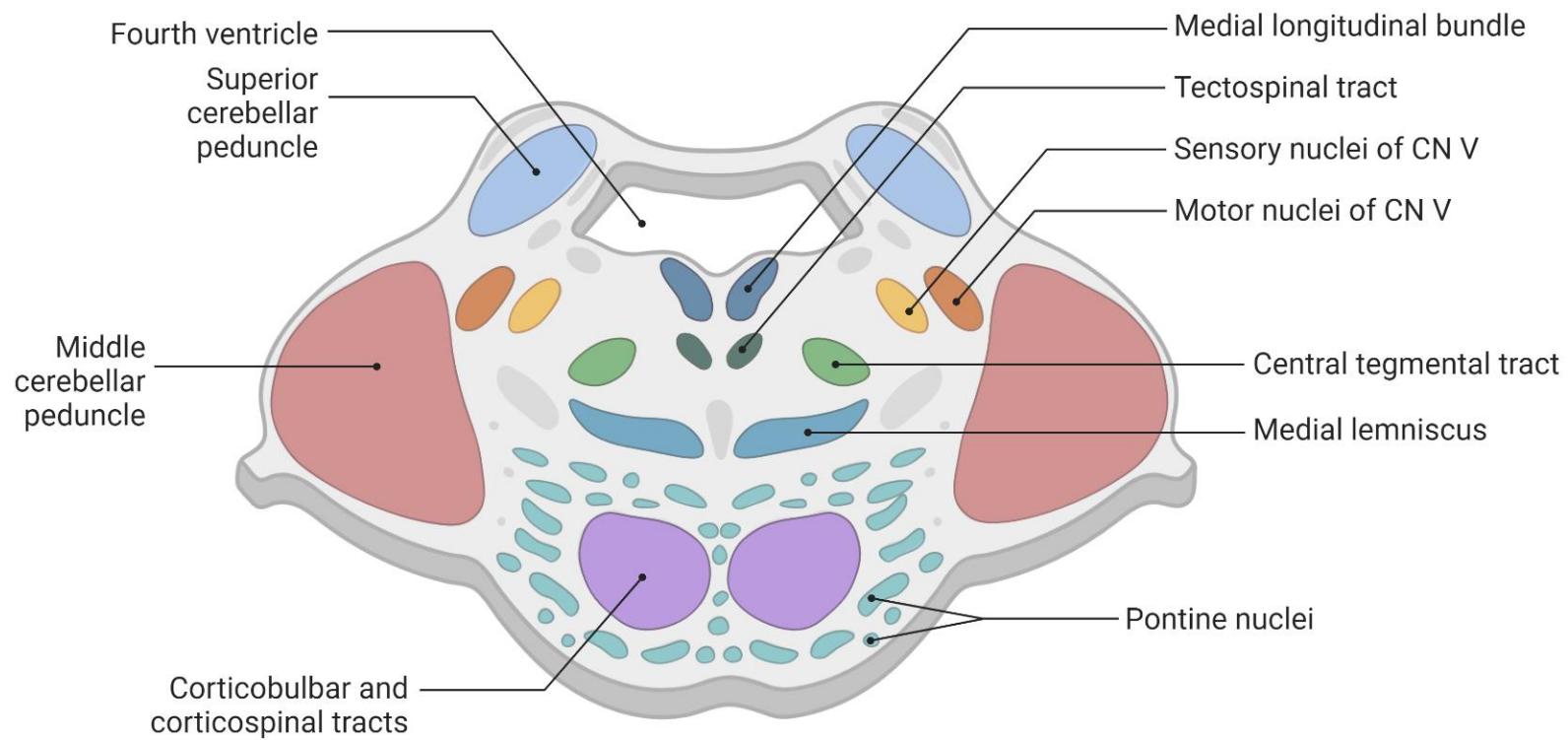


# Brainstem Cross-Section

## Pons



## Upper mesencephalon

### Extrapyramidal nuclei



**Cerebral peduncles**  
(with corticospinal tract)

Substantia nigra

Oculo-  
motor  
nerves

## MOTOR

Frontopontine  
fibers  
(corticoponto-  
cerebellar pathway)

Corticospinal &  
-bulbar tracts  
(pyramid system)

Temporo-  
pontine fibers  
(corticoponto-  
cerebellar pathway)



### Cranial nerves

- Medial longitudinal fasciculus
- Oculomotor nucleus (n. III)
- Edinger-Westphal nucleus (n. III)
- Mesencephalic trigeminal nucleus (n. V)

Superior colliculi: visual reflexes

## SENSORY

Medial Lemniscus  
(fine touch, vibration, proprioception)

Trigeminal Lemniscus  
(sensory innervation face)

Spinal Lemniscus  
(crude touch, temperature, pain)

## Lower mesencephalon

### Extrapyramidal nuclei



**Cerebral peduncles**  
(with corticospinal tract)

Substantia nigra

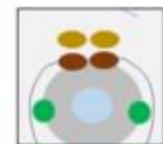
(Decussation of  
the superior  
cerebellar  
peduncles)

## MOTOR

Frontopontine  
fibers  
(corticoponto-  
cerebellar pathway)

Corticospinal &  
-bulbar tracts  
(pyramid system)

Temporo-  
pontine fibers  
(corticoponto-  
cerebellar pathway)



- Medial longitudinal fasciculus
- Trochlear nucleus
- Mesencephalic trigeminal nucleus

Inferior colliculi: auditory reflexes

## SENSORY

Medial Lemniscus

Trigeminal Lemniscus

Spinal Lemniscus

Lateral Lemniscus  
(auditory pathway)

# Substantia Nigra

- Divided into
  - Superficial - pars reticulata
  - Deep - pars compacta

