

Extraparapyramidal tracts

	<u>1-Rubrospinal tracts</u>	<u>Vestibulospinal tracts:-</u>	<u>Tectospinal tracts:-</u>	<u>Reticulospinal Tract</u>	<u>5-Olivospinal Tract</u>
	INHIBITORY	EXCITATORY		EXCITATORY or INHIBITORY	
Origin	Red nucleus which is connected by fibers with cerebral cortex & helps in cerebellar processing	-from vestibular nucleus. Fibers originate in vestibular nuclei in pons(which receive inputs from inner ear Vestibular Apparatus and cerebellum)	superior(VISUAL)& inferior colliculi (AUDITORY)of midbrain	The reticular formation makes up a central core of the brainstem. It contains many different neuronal groups. -Pontine and medullary nuclei projects to the anterior horn of the spinal cord via <u>Reticulospinal Tract</u>	It arises from inferior olivary N of the medulla & is found only in the cervical region of the spinal cord (supply neck muscles)
Function	Its motor function is inhibitory to Distal limb motoneurons & control skilled movements	1- Controls Postural & righting reflexes. 2-Excitatory to ipsilateral spinal motor neurons-that supply axial & postural muscles 3- Control eye movements.	Mediate/facilitate turning of the head in response to visual or Auditory stimuli	influence motor functions as voluntary & reflex movement & excitatory or inhibitory to muscle tone).	unknown function
Termination		-Axons descend in the ipsilateral ventral white column of spinal cord	Contralateral cervical		

The lateral vestibulospinal

- Cells of origin : Lateral Vestibular Nucleus
- Axons descend in the ipsilateral ventral white column of spinal cord .
- This tract mediates excitatory influences upon extensor motor neurones to maintain posture

• The medial vestibulospinal tract :

- Cells of origin : Medial Vestibular Nucleus
- As its axons descend ipsilaterally in the ventral white column of spinal cord , they form part of the Medial Longitudinal Fasciculus fibers that link vestibular nuclei to nuclei supplying the extraocular muscles for coordination of head and eye movements

Pontine (Medial) Reticulospinal Tract:

- Cells of origin: Pontine Reticular Formation
- Axons descend in ventral white column of spinal cord
- Axons terminate in ipsilateral spinal motoneurons
- Pontine Reticulospinal Tract increases Gamma efferent activity ,(increases muscle tone)

(1) Medullary (Lateral) Reticulospinal Tract:

- Cells of origin: Medullary Reticular Formation
- Axons descend in ventral white column of spinal cord on both sides
- Axons terminate in ipsilateral & contralateral ventral horn cells of spinal cord
- Medullary Reticulospinal Tract, inhibits Gamma efferent activity (decreases muscle tone)