

Pyramidal system			Extrapyramidal tracts
	Corticospinal	Corticobulbar	
Origin	<ol style="list-style-type: none"> primary motor area (area 4) → 40% premotor area (area 6) → 40% general sensory area (area 3, 1 & 2) → 20% 	<ol style="list-style-type: none"> Lower one-third of the primary motor area. Adjacent premotor area and sensory area. 	
Course	<ul style="list-style-type: none"> ✓ Corona radiata of the medullary center. ✓ Posterior limb of internal capsule ✓ Midbrain: in the middle three-fifths of the crus cerebri. ✓ Basis pontis of pons. ✓ Pyramid of the medulla. ✓ In lower medulla → motor decussation (85%) 	<ul style="list-style-type: none"> ✓ Corona radiata of the medullary center. ✓ Genu of the internal capsule. ✓ Crus cerebri of the midbrain with the corticospinal fibers. ✓ Basis pontis of the pons. ✓ Pyramid of the medulla. 	<ol style="list-style-type: none"> Facilitate the <u>flexor</u> muscle tone: <ul style="list-style-type: none"> ✓ Rubrospinal ✓ Tectospinal ✓ Medial vestibulospinal (sulcomarginal) ✓ Medullary reticulospinal (lateral)
Termination	opposite side → 95% same side → 5%	cranial nerve motor nuclei of the two sides mainly on the opposite side except : lower part of the facial nucleus → opposite side only.	<ol style="list-style-type: none"> Facilitate the <u>extensor</u> muscle tone: <ul style="list-style-type: none"> ✓ Lateral vestibulospinal ✓ Pontine (medial) reticulospinal
Lesion	<ol style="list-style-type: none"> Above decussation → contralateral hemiplegia Below decussation → ipsilateral paralysis. 	<ol style="list-style-type: none"> weakness of the muscles supplied by the cranial nerves. UMN paralysis of the lower part of the contralateral facial nucleus 	

Upper Motor Neuron Lesion (UMNL)	Vs	Lower Motor Neuron Lesion (LMNL)
Spastic	Paralysis	Flaccid
Increased (hypertonia)	Tone	Decreased (hypotonia)
No disuse atrophy	Atrophy	Severe disuse atrophy
Increased	Deep Tendon Reflex	Absent
Positive Babinski Sign	Pathological Reflex	Absent
Absent	Superficial Reflex	Present
Absent	Fasciculation	Present