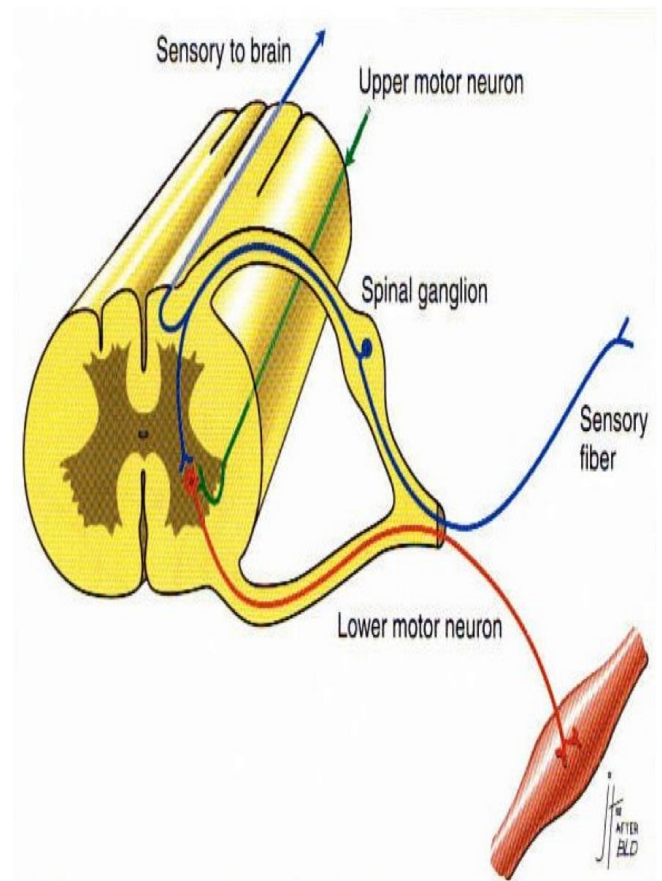
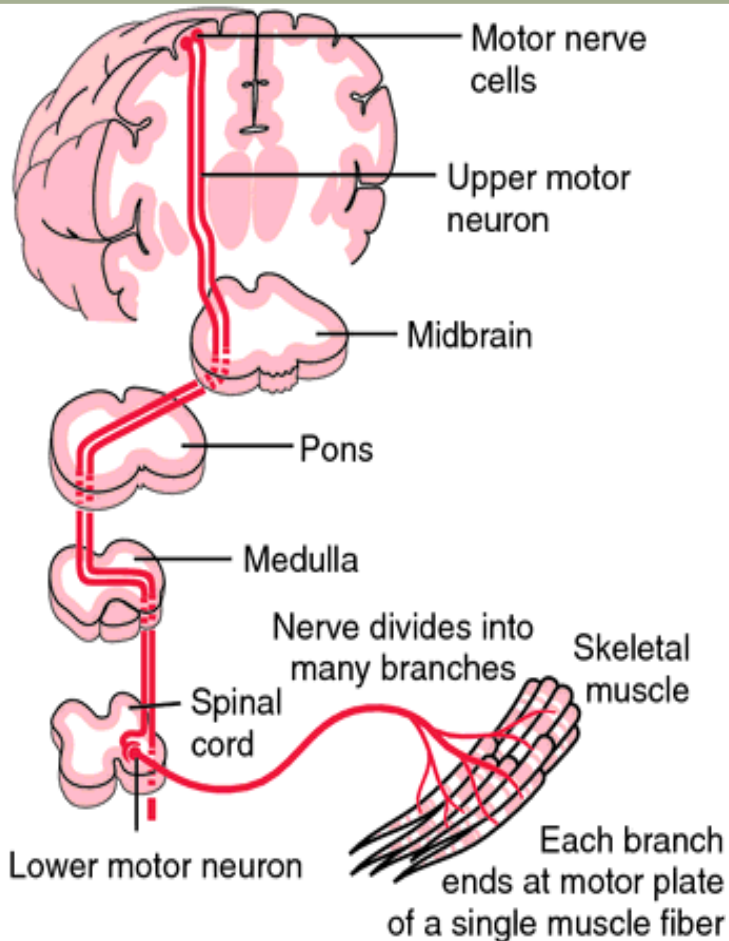


NEUROLOGY

WEAKNESS PATTERNS

First determine if the lesion affects upper or lower motor neurones:

	Upper Motor Neurone	Lower Motor Neurone
Tone	↑ 'Spastic'	↓ 'Flaccid'
Weakness	'Pyramidal' pattern i.e. weakness of upper limb extensors, lower limb flexors	Focal pattern i.e. only muscles innervated by damaged neurones are affected
Coordination	Reduced	
Reflexes	Increased	Reduced/ Absent
Babinski	Positive	Negative
Others	Pronator drift Clasp knife response (to removal of force)	Muscle wasting Fasciculations Fibrillations
Causes	Stroke/ traumatic brain injury Motor Neurone Disease Multiple Sclerosis Cerebral Palsy	Myasthenia gravis Motor Neurone Disease



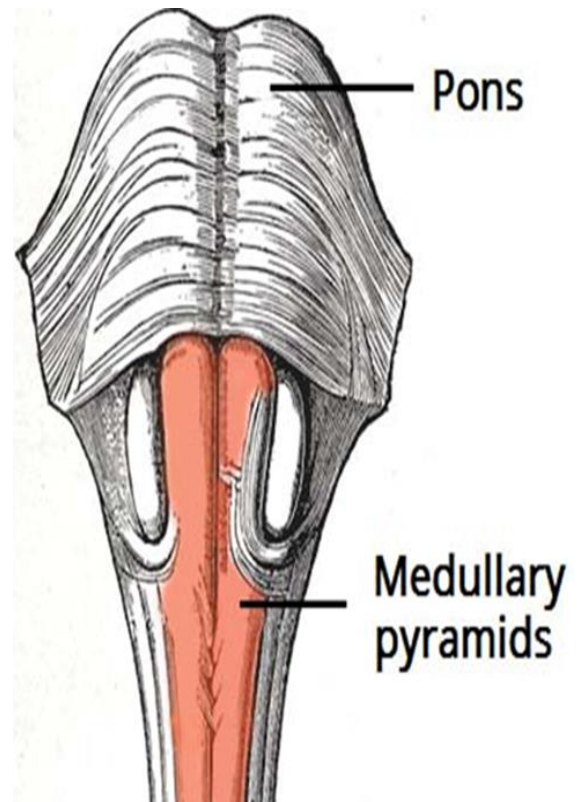
What do we mean by extrapyramidal?

Extrapyramidal symptoms

- Symptoms affecting tracts other than corticospinal and corticobulbar
- Extrapyramidal tracts don't travel through the medullary pyramids
- The system regulates posture and muscle tone so pathology usually leads to movement disorders
- Most common cause is typical antipsychotics affecting Dopamine (D2) receptors e.g. haloperidol
- Treatment is anticholinergics e.g. procyclidine

Extrapyramidal conditions:

- Acute dystonic reactions → muscle spasms e.g. neck, jaw, back.
- Akathisia- feeling of internal restlessness
- Drug induced Parkinsonism- tremor, rigidity etc.
- Tardive dyskinesia- involuntary muscle movements of lower face and extremities, often permanent



What's the difference between a Bulbar and Pseudobulbar palsy?

	Bulbar	Pseudobulbar
Pathophysiology	LMN lesion CN V, VII, IX- XII	Disease of corticobulbar tracts UMN lesion CN IX- XII
Symptoms	Difficulty chewing Dysphagia/ choking/ nasal regurgitation Dysarthria Dysphonia	Difficulty chewing Dysphagia/ choking Dysarthria Dysphonia
Signs	Rasping speech (unilateral) Nasal speech (bilateral) Atrophic tongue/ fasciculations Drooling Absent jaw & gag reflex Normal emotions LMN lesions of limbs	Slow, indistinct speech Stiff, spastic tongue Emotions labile Brisk jaw reflex (Gag can be ↑↓↔) UMN lesion of limbs
Causes	Botulism Medullary infarction MND/ ALS Lyme disease Guillain- Barre Poliomyelitis Acute intermittent porphyria Myasthenia Gravis	Bilateral CVA of internal capsule Parkinson's MND/ ALS High brainstem tumours Demyelinating conditions e.g. MS Progressive supranuclear palsy