The Neurological Examination

- The neurological exam is divided into four main sensory, motor, reflexes and coordination.

- before starting you must:-
  - wash your hands and introduce yourself
  - gain Patient consent and explain each test clearly.
  - ensure the patient's Privacy and dignity are maintained throughout.

* the motor examination:-

Inspection → Palpation → tone → Power

- **Inspection and palpation:-**

- Inspection (SWIFT): look for Scars, Wasting, Involuntary movements, Fasciculations and Tremor.
  - always check for asymmetry between limbs.

- Palpation :- assess muscle bulk and check for tenderness in joints or muscles.

- Tone :-

- ask the Patient to "go floppy" and move their joints passively (shoulder, elbow, wrist for upper limbs hip, knee, ankle for lower)

- Spasticity :- Increased tone that is velocity-dependent (worse with fast movement) and direction-dependent.

- Rigidity :- constant resistance that is independent of velocity or direction, often seen in Parkinson's disease.

- Ankle clonus :- tested by briskly dorsiflexing the foot repeated "beats" indicate an upper motor neuron lesion.

- **Power:-** is graded using the MRC scale from 0 (no contraction) to 5 (normal resistance).

  - UL :- Shoulder, elbow, wrist, fingers and thumb.
  - LL :- hip, knee and ankle

* Reflexes and Coordination

- **Deep tendon reflexes :-** reflexes are tested using a tendon hammer on the tendon, not the muscle.

  - UL :- biceps (C5, C6), supinator (C5, C6), triceps (C7)
  - LL :- knee (L3, L4), Ankle (S1)

- **Plantar reflex:** A positive Babinski sign (dorsiflexion of the big toe) indicates a UMN lesion.

- **Coordination :-**

  - UL :- Finger-to-nose test and rapid alternating movements. Inability to perform these (dysmetria or intention tremor) suggests Cerebellar disease.

  LL :- Heel-to-shin test

Distinguishing UMN and LMN lesions

Feature	UMN lesion	LMN lesion
Inspection	Usually norma (except disuse wasting)	musle wasting and fasciculation
Tone	Increase with clonus	Normal or decrease
Weakness	Affects extensors (arms) / flexors (legs)	Focal (nerve root / Peripheral nerve)
Reflexes	increased (hyperreflexia)	decreased or absent
Plantar	extensor (Babinski sgin)	flexor (normal)