

## LOWER LIMB EXAMINATION

### Sensory Examination

1. Light touch → ask patient to close his eyes and gently touch areas innervated by L2, L3, L4, L5, S1 using a cotton
2. Superficial pain → ask patient to close his eyes and gently tap areas innervated by L2, L3, L4, L5, S1 using neurotip
3. Vibration → use your tuning fork (while vibrating) and ask the patient if he feels the vibration and then stop the vibration and ask him if he still feels it vibrating (on the most distal part of his toes)
4. Temperature → use your tuning fork to assess if patient feels temperature or not (cold).
5. Proprioception →
  - Move the patient's big toe while patient's eyes are closed and demonstrate what you mean by "up" and "down"
  - Ask patient to close his eyes and then ask him where you're moving his big toe
6. Point localization → touch the patient's legs at different areas while he's closing his eyes and ask him which side did you touch (also touch his toes and ask him which toe did you touch)
7. Sensory inattention → touch both sides and ask him which side did you touch

## Motor Examination

1. Inspection (SWIFTD)
  - Scars/ symmetry
  - Wasting
  - Involuntary movement or myoclonic jerks
  - Fasciculation
  - Tremor
  - Deformity
2. Gait and stance
  - Ask patient to cross his arms around his chest and assess if he can get up of the bed without difficulty (proximal muscle weakness)
  - Assess gait by asking patient to walk across the room and observe symmetry, speed, balance
  - Ask patient to walk one foot in front of the other and observe symmetry, speed, balance
  - Ask patient to walk on his tip toes to check for plantar muscle power
  - Ask patient to walk on his heels to check for dorsiflexion power
  - Perform Romberg's test (ask patient to close his eyes while standing and notice any imbalance)
3. Palpation
  - Bulk
  - Tenderness
4. Tone
  - Passively move the patient's hips in a rotational movement
  - Passively flex and extend the patient's knees
  - Leg roll (roll patient's legs horizontally)
  - Leg lift (hold patient's knees up and release them)
  - Knee clonus (press on the patella of the patient and notice and clonus)
  - Ankle clonus
5. Power
  - Hip flexion (L1, L2) and extension (L5, S1)
  - Hip adduction (L2, L3) and abduction (L4, L5)
  - Knee flexion (S1) and extension (L3, L4)
  - Ankle dorsiflexion (L4), plantar flexion (S1, S2)
  - Ankle inversion (L4), eversion (L5, S1)
  - Big toe extension (L5)
6. Reflexes
  - Knee jerk (L3, L4)
  - Ankle jerk (L5, S1)
  - Plantar reflex (S1, S2) (UMN: extension of the big toe)
7. Coordination
  - Heel to shin test (look for dysmetria, dyssynergia past pointing or intention tremor)