



Lower Limb Neurological Examination – Step-by-Step OSCE Guide ACP Academy Format (Refreshed Edition)

GETTING STARTED

1. Perform hand hygiene and don PPE if required.
2. Introduce yourself: “Hi, I’m Jamie, one of the advanced clinical practitioners.”
3. Confirm the patient’s full name and date of birth.
4. Explain the exam: “I’d like to assess the nerves in your legs today. This will involve testing strength, sensation and coordination.”
5. Gain verbal consent and offer a chaperone.
6. Ask the patient if they currently have any pain or recent injury.
7. Expose the legs and position the patient lying supine on the examination couch.

GENERAL INSPECTION

8. Look around the bed for walking aids, splints, or medication.
9. Observe the lower limbs for: muscle wasting, fasciculations, scars, deformities or involuntary movements.

GAIT (if appropriate)

10. Ask the patient to walk normally.
11. Then ask them to walk heel-to-toe (tandem gait).
12. Look for ataxia, high-stepping gait, or antalgic pattern.

ROMBERG'S TEST

13. Ask the patient to stand with feet together and arms by their side.
14. Then ask them to close their eyes.
15. A loss of balance suggests sensory ataxia (positive Romberg).

TONE

16. Perform a leg roll (externally rotate each leg at the hip).
17. Gently lift each leg at the knee and observe for spastic catch.
18. Briefly assess for ankle clonus (rapid dorsiflexion of the foot).

POWER (always compare sides)

19. Hip flexion (L1/L2) – resist lifting the thigh.
20. Hip extension (L5/S1/S2) – resist pushing thigh down.
21. Knee flexion (S1) – resist pulling lower leg.
22. Knee extension (L3/L4) – resist straightening the leg.
23. Ankle dorsiflexion (L4/L5) – resist lifting the foot up.
24. Ankle plantarflexion (S1/S2) – resist pushing foot down.
25. Big toe extension (L5) – resist upward movement of big toe.

REFLEXES

26. Knee jerk (L3/L4) – tap patellar tendon with tendon hammer.
27. Ankle jerk (S1) – tap Achilles tendon.
28. Plantar reflex (L5/S1) – stroke lateral sole. Watch for toe movement (normal = flexion).

SENSATION

29. Light touch – use cotton wool across dermatomes.
30. Pin-prick – compare both legs using neurotip.
31. Vibration – place tuning fork on big toe or medial malleolus.
32. Proprioception – move big toe up/down with eyes closed and ask patient to identify direction.

COORDINATION

33. Heel-to-shin test – ask patient to slide heel down the opposite shin with eyes open and closed.

TO COMPLETE THE EXAM

34. Thank the patient and let them know the exam is finished.

35. Offer help with redressing.

36. Perform hand hygiene.

37. Summarise your findings.

38. Suggest further assessments:

- Upper limb neuro exam
- Cerebellar or cranial nerve assessment
- Imaging (MRI spine/brain), bloods, or nerve conduction studies

A lower limb neurological exam helps you localise lesions and differentiate between upper and lower motor neuron pathology. Take your time – and practice makes confident.