

# Spine Examination

## Introduction

- **W**ash hands, **I**ntroduce self, ask **P**atient's name & DOB & what they like to be called, **E**xplain examination and get consent
- Expose to undergarments
- **General inspection:** patient e.g. age, mobility, trauma, risk factors; around bed e.g. mobility aids.

## Look

- **Gait:** walking aids, speed, phases of walking, stride length, arm swing
- **Inspect from behind:** posture, asymmetry, scoliosis; muscle wasting, scars, redness; soft tissue abnormalities (lipoma, hair growth (*spina bifida*), pigmentation, Café-au-lait spots (*neurofibromatosis*))
- **Inspect from side (stand against wall):** normal cervical lordosis, thoracic kyphosis, lumbar lordosis (*lost in spondylolithesis*)

## Feel

Check pain first.

- Temperature down spine
- **Spinous processes and over sacroiliac joints** for alignment and tenderness.
- **Paraspinal muscles** for tenderness and increased tone.
- Then lightly percuss lumbar spine with fist and note tenderness

## Move

- **Lateral flexion** "slide your hands down you leg"
- **Lumbar flexion (10-20°) and extension:** flexion "touch your toes" and extension "lean back as far as you can"
- **Cervical spine movements:** flexion/extension "touch chin to chest", rotation "look over shoulder", deviation "touch ear to shoulder"
- **Thoracic rotation** "rotate chest while sitting with arms crossed" + passively push
- **SPECIAL TESTS**
  - **Shober's test:** mark 10cm above dimples of venus and 5cm below, then re-measure in flexion (should be >5cm more)
  - **Chest circumference expansion** (7cm expansion normal) (<5cm expansion suggests ankylosing spondylitis)
  - **Femoral nerve stretch test:** with patient prone, passively flex knee and extend hip (anterior thigh pain = femoral nerve irritation due to L2-4 disc herniation)
  - **Straight leg raise** (sciatic nerve stretch test): lift a leg to full flexion or until significant leg pain, then depress it slightly and passively dorsiflex foot (leg pain radiating down below knee = sciatic nerve irritation due to L4-S1 disc herniation)
  - **Gaenslen's sacro-iliac stress test:** ask patient to flex one hip, then passively push that knee into the patient's chest and push other thigh into the bed (pain = sacroiliac joint pathology)

## Function

- (Gait: already seen)
- **Full lower limb neurological exam:** see [lower limb neurological exam](#)

## To complete

- "To complete my examination I would examine the joint above and joint below, and also do a full neurovascular exam distal to the joint – would you like me to do this now?"
- Summarise and suggest further investigations you would do after a full history