Knee Examination

Patient Standing

- Look at walking aids, wear on shoes, orthotics
- **With the patient facing you**
  - Alignment (Varus/Valgus/Normal?)
  - Obvious effusion/swelling
  - Scars
  - Quadriceps bulk
- **Looking at the side**
  - Ask patient to push knees back. Can they fully extend? is there hyperextension?
  - Scars?
- **With the patient facing away**
  - Popliteal creases: are they level?
  - Popliteal masses (e.g. Baker's Cyst)
  - Calf bulk
  - Hind foot alignment
- Ask patient to walk to other side of room and back to test gait
  - Antalgic gait: shortened stance phase due to pain when weight bearing
  - Others: Ataxic gait, Trendelenburg gait, Drop foot

Patient Sitting On Edge of Bed

- Place fingers on the sides of the patella, and ask the patient to extend and flex their knee, feeling for crepitus
- Ask patient to extend their leg again, and test for quadriceps power
- Lag: Difference between active and passive movement due to muscle weakness or lengthening

Lying on Bed

- **Flat with knees in full extension**
  - Patella tap: only useful for large effusions
  - Patella swipe test: More sensitive for smaller effusion
  - Try grasping the patella, will be slippery if there is synovitis
  - Ask patient to bend their knees as far as possible, and note what angle they can get to
- **Knees to 90°**
  - Check for posterior subluxation of the tibia (PCL damage). There should be a step off of between 5-10 mm between the femur and tibia.
  - Palpate the collateral ligaments, bony prominences, etc.
  - Sit on foot to stabilise the leg
  - Posterior draw: PCL
  - Anterior draw: ACL (chronic ACL particularly)
  - McMurray's test: flex and extend knee in external and internal rotation (meniscal damage)
- **Knees to 30°**
  - ligamentous tests: collaterals act more purely at this angle with less support from muscle
  - Lachman test: More sensitive test for acute injury of the ACL

Further Testing

- Screen joints above and below
- Peripheral pulses
- X-Ray of the joint
  - OA: Loss of Joint Space, Osteophytes, Sclerosis, Subchondral cysts.

Patella Tests

- At 0°: check patella glide -> should move further lateral than medial
- At 30°: place lateral force on the patella, and ask if patient is concerned it will dislocate if it their leg is straightened

Tips

- Always compare to the other side
- Generalised ligamentous laxity can mimic tendon rupture if only one side is tested, whereas testing both will reveal that that degree of movement is normal for the patient