

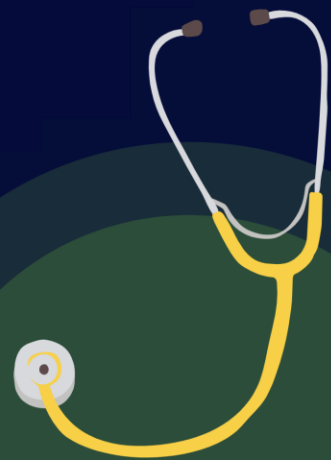


Imperial College London
Surgical Society
Junior Anatomy Series

CPA SUMMARY GUIDE

Musculoskeletal Examination

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Summary of significance of findings

Position and Exposure		
Look		Likely indication
Scars	Down the middle	Knee replacement surgery
	Other	Other surgery Trauma to joint (eg fall)
Muscle atrophy	Due to disuse	Arthritis (patient has antalgic gait)
	Due to Lower Motor Neuron Injury	May be peripheral neuropathy or other lesion
Knee Deformity	Genu Valgum	Usually genetic
	Genu Varum	Osteomalacia
Feel		Likely Indication
Warm knee joint		Septic arthritis Flare up of osteoarthritis or rheumatoid arthritis
Pain during palpation		Meniscal damage
Swelling in Popliteal Fossa		Baker's Cyst
Effusion present	Small or Large	Arthritis Damage to internal structure eg meniscus



Summary of Significant Findings

Move		Likely indication
Pain during Flexion and Extension	Active	Damage to meniscus or fracture
	Passive	Damage to meniscus or fracture
Reduced Range of Motion		Arthritis
Inability to straight leg raise		Damage to knee extensors
Unilateral hyperextension	(more than 10 degrees)	Damage to internal structures
Bilateral hyperextension	(more than 10 degrees)	Damage to internal structures
Bilateral hyperextension	(less than 10 degrees)	<i>Normal</i>
Special Tests		Likely Indication
Posterior Sag Sign		Posterior Cruciate Ligament Tear
Anterior Draw >1.5 cm	(in absence of posterior sag sign)	Anterior Cruciate Ligament Rupture
Anterior Draw >1.5cm	(in presence of posterior sag sign)	<i>Clinically Inconclusive</i>
Open Medial Joint Line		Medial Collateral Ligament Laxity/Rupture
Open Lateral Joint Line		Lateral Collateral Ligament Laxity/Rupture



Interpreting Radiology of the Knee

X-rays

- Will tell you about **bones** and their integrity
- Looking at bone **outlines** will allow you to pick up fractures. If it's discontinuous, it's a fracture.
- Will allow you to see **joint spaces**, which are reduced in osteoarthritis



MRIs

- Will allow you to see **soft tissues**
- Are typically sagittal, but may be coronal sections
- Normal menisci will appear black
- Bone appears grey



In general

- **Locating the fibula** will allow you to deduce which knee is being imaged
- In a Coronal Section, the **lateral side of the tibia is thinner**
- The ACL and PCL are named according to their **attachment to the tibia bone** rather than the femur



Common Clinical Presentations

Osteoarthritis

- Reduced Range of Motion
- Pain worse on movement, better on rest
- History of Trauma
- Middle to old age
- X-ray shows LOSS (loss of joint space, osteophytes, subchondral sclerosis, subchondral cysts)
- Possible muscle atrophy due to antalgic gait
- In flare up, may detect warm temperature

Septic arthritis

- Warm temperature
- Effusion
- Tenderness
- Reduced Range of Motion

Rheumatoid arthritis

- Female
- Pain better with movement
- May have other features such as ulnar deviation of hands
- History of autoimmune disease



Common Clinical Presentations

Torn ACL

- Positive Anterior Draw (without posterior sag)
- Pain on passive and active flexion and extension
- Plays sports such as rugby or football



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- ✓ Want to see more of something?
- ✓ What are we doing well?
- ✓ Finding anything confusing?



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