



## Knee exam

### To begin:

#### WIPE

- Wash hands
- Introduce self
- Identify patient
- Permission – gain consent for the exam
- Position – laying flat on a couch
- Pain – ask if the patient is in pain
- Privacy – ensure curtains/doors are closed
- Exposure – access to both knees, with joints above and below the knee visible

### General inspection and active observation

Patient:

Look for	Example of why
General appearance	See if the patient is alert, orientated, in pain, generally appearing well or unwell
Body habitus	Large body habitus may contribute to joint pain; weight loss may be associated with systemic treatments of inflammatory arthritis
Muscle bulk	Increased bulk may be associated with exercise and/or anabolic steroids Decreased bulk may be associated with deconditioning
Limbs and gait	Obvious limb differences, changes in gait
Rashes, nail changes, joint swelling on hands	Peripheral signs can help identify specific arthritis. e.g. psoriatic plaques and onycholysis in psoriatic arthritis



Around the bed:

<b>Look for</b>	<b>Examples of why</b>
Mobility & independence aids	Crutches, wheelchair, walking sticks, jar openers, grab sticks
Treatments/medications	Plaster casts, braces, supports, compression bandaging; ice/heat packs, analgesia, other medications
Paraphernalia	Cigarettes (increase risk of some joint problems)
Observation chart	Note the patient's current status and NEWS score. If there are no up-to-date observations consider taking a full set of observations.

## Look

Gait

- Ask the patient to walk (if able), looking for: limping, reduced range of movement, asymmetry etc.

Examine the following:

- Standing (if able): looking from the front, sides and back
- Laying on a couch

<b>Examine</b>	<b>Assessing for/associated with</b>
Deformity	Evidence of fractures, scars, bony deformities, open wounds etc.
Erythema and swelling	Associated with joint inflammation
Skin	Rashes, nodules or other abnormalities
Surrounding tissue	Muscle wasting, overdevelopment – compare bilaterally
Positioning	Looking for fixed flexion/hyperextension, or varus/valgus deviation
Weightbearing	Check for reduced or no weightbearing on the affected leg



## Feel

Compare the affected with unaffected leg

<b>Examine</b>	<b>How</b>	<b>Assessing for/associated with</b>
Temperature	Use the back of your hand to compare the temperature of the skin over the knee.	Associated with inflammation and/or infection
Deformity/muscle wasting		Any obvious bony deformity or wasting of muscle bulk
Joint lines	Palpate the medial and lateral joint lines to localise tenderness	Pain may suggest injury of the collateral ligaments, meniscus
Patella	Palpate the medial and lateral patella, stabilising the other side	Pain may suggest trauma, arthritis
Patella tap	Using your off hand, slide down across the anterior thigh to the patella (emptying the suprapatellar pouch). Using your other hand, press on the patella	In a moderate effusion, you may feel 'tapping' and/or a fluid against your off hand
Bulge/ripple test	Using your off hand, slide down across the anterior thigh to the patella (emptying the suprapatellar pouch). Empty the medial knee compartment by sliding upwards across the medial knee. Then empty the lateral compartment by firmly pressing against the lateral knee.	In a small effusion, you may see a bulge/ripple over the medial knee.



## Move

Examine	How	Assessing for/associated with
Active movement: Flexion/extension	Ask the patient to draw their knee to their chest, then extend back to the couch	Observe range of movement Observe signs of pain/discomfort Compare each side
Passive movement: Flexion/extension	Taking the patient's leg, repeat the above movement. Feel for crepitus above the patella.	Checking if movements are limited by pain or if there is a physical limitation e.g. due to joint pathology
	Assess for hyperextension by lifting both legs by the feet. Stabilise the thigh to prevent hip flexion.	Hyperextension is concerning if >10° from neutral

## Special tests

Examine	How	Assessing for/associated with
Collateral ligaments	With the knee extended, try to abduct and adduct the knee joint.	Significant movements suggests collateral ligament injury
Anterior drawer sign	Flex the patient's knee to 90° and secure the patient's foot. Check for posterior sag. With thumbs over the tibial tuberosity, pull the tibia forwards.	Significant movement suggests anterior cruciate ligament injury
Posterior drawer sign	In the same position, push the tibia backwards.	Significant movement suggests posterior cruciate ligament injury

## To finish

- Ensure the patient is dressed and comfortable
- Wash hands