

CHECKLIST FOR KNEE EXAMINATION – UNDERGRADUATE GUIDE

Ones in BLACK must do or comment on, Ones in BLUE must comment on only if present or applicable to patient. Content in blue should be in back of your mind so say when you are practising but not during exam unless seen on the patient in the exam.

FOLLOW THIS CHECKLIST IN PUBLISHED ORDER (USUALLY 5 MIN STATION IN 3rd YEAR)

Stage 1 – Pre Exam Checklist	
1. Alcohol Gel and bare below elbows	
2. Introduction – “Shake hands/ hello my name is.....”	
3. Consent – “Will it be okay if I examine your knees?”	
4. Positioning – patient should be standing initially	
5. Exposure – both knee joints should be exposed so ideally wearing shorts. Ideally the joints above and below should also be exposed.	
Stage 2 – General inspection	
NB: POSITION YOURSELF TO THE RIGHT SIDE IF NOT ALREADY DONE SO AS ALL EXAMINATION SHOULD BE PERFORMED FROM THE RIGHT SIDE OF PATIENT	
1. Take a step back and comment on if patient appears comfortable or not	
2. Comment on surroundings <ul style="list-style-type: none"> • Walking aids, wheelchair, shoe raises • Or say “there are no other obvious clues around the bed / in the surroundings” 	
3. Ask the patient to stand up and walk - Assess patient walking – any antalgic gait?	
4. Can ask patient to squat: keep heels and feet on ground	
Stage 3 - Closer inspection	
1. From the front (anterior) with legs together, look for: <ul style="list-style-type: none"> • Scars • Erthyema • Swelling • Quadriceps muscle wasting • Fixed flexion deformity • Sinuses • Alignment: valgus/ varus deformities <p>Now inspect from the side of the patient i.e. lateral aspect. You can ask patient to turn instead of moving round them</p>	
2. From behind (posterior), look for: <ul style="list-style-type: none"> • Scars 	

<ul style="list-style-type: none"> • Popliteal swellings e.g. Baker’s cysts and popliteal aneurysms 	
3. Now ask patient to lie on examination couch	
4. Inspect for <ul style="list-style-type: none"> • Effusion – in particular look for a horseshoe swelling in the suprapatellar pouch • Scars: arthroscopic scars can be on either side of the patellar tendon, anteromedially and anterolaterally 	
Stage 4 – Feel	
1. Ask patient if they have any pain	
2. Temperature: assess with the back of your hand	
3. Offer to do leg circumference: measure the leg about 15cm above the tibial tuberosity (unlikely to be asked to do in 3 rd year OSCE) <ul style="list-style-type: none"> • This is to assess for quadriceps muscle wasting • Ask patient to push heels down onto couch and feel quadriceps muscle bulk 	
4. Comment on any fixed flexion deformity, varus / valgus if noticed at this stage	
5. Effusion: <ul style="list-style-type: none"> • Small effusions – “cross fluctuation”/ bulge sign. • Moderate effusion – “patellar tap test”, empty the suprapatellar pouch with one hand and use other to press on patella against femur 	
6. Palpate for local tenderness with knee bent to 45° <ul style="list-style-type: none"> • Medial tibial condyle, medial joint line, medial femoral condyle, medial collateral ligament • Tibial tuberosity • Popliteal fossa • Lateral femoral condyle, lateral joint line, lateral tibial condyle. Lateral collateral ligament • Head of fibula • Feel over patella Keep looking at patients face for tenderness	
Stage 5 – Move (check active then passive movement)	
1. Range of movement (ROM) <ul style="list-style-type: none"> - Active <ul style="list-style-type: none"> • Ask patient to “bend knee and bring heel to bottom” • Ask to do other side as well compare range of flexion 	

<p>bilaterally (look at length between heel and bottom as a rough measure of ROM Normal 0-150°)</p> <ul style="list-style-type: none"> • Ask to relax and stretch legs back out <p>- Passive</p> <ul style="list-style-type: none"> • Now tell the patient you will be moving their leg • Try and flex knee whilst feeling over patella for crepitus • See if you can get slightly more range of flexion • Feel over patella as you passively extend leg • Repeat this on the other leg 	
<p>2. Straight leg raise: this checks for extensor lag</p> <ul style="list-style-type: none"> • Lift the patients leg up from their toes • Extensor lag: inability to keep leg straight i.e. they will bend the knee 	
<p>3. Hold both legs by ankles and lift legs off couch to check for hyperextension</p>	
Stage 6 – Special tests	
<p>1. Cruciate ligaments (this is done with knee flexed to 45 - 90 °)</p> <ul style="list-style-type: none"> • Posterior cruciate: heels together, look from side of knee and check for posterior sag/ step back of tibia <ul style="list-style-type: none"> ➤ This may give a false positive anterior draw sign • Draw test <ul style="list-style-type: none"> ➤ Place both hands around upper tibia with thumbs over tibial tuberosity and index fingers under hamstrings (ensure these muscles are relaxed) ➤ Stabilise lower tibia with forearm/ sit to trap foot ➤ Anterior cruciate i.e. anterior draw: gently pull upper tibia forward ➤ Posterior cruciate i.e. posterior draw: push upper tibia back, ➤ Normally there is a small degree of movement 	
<p>2. Collateral ligaments: valgus/ varus stress</p> <ul style="list-style-type: none"> • Flex knee to 15° and alternately stress the joint line on each side 	
<p>3. Lachman's test: looks for ACL injury</p> <ul style="list-style-type: none"> • Flex knee to 15-30° • Hold lower end of thigh in one hand and upper part of tibia in the other • Push lower thigh in one direction and tibia in opposite • Now reverse directions 	
<p>4. Meniscus: McMurray's test</p> <ul style="list-style-type: none"> • Medial meniscus: <ul style="list-style-type: none"> ➤ Flex and externally rotate knee, then slowly straighten leg to stress the medical meniscus 	

<ul style="list-style-type: none"> ➤ Flex and internally rotate knee, then slowly straighten leg • Check for click and focal tenderness 	
<p>5. Lateral Patellar apprehension test:</p> <ul style="list-style-type: none"> • With leg in extension, apply pressure against medial border of patella and then slowly flex the knee • Positive: if patient suddenly contracts quadriceps to stop patella subluxing 	
Stage 7 - TO FINISH OFF	
<p>Turn to the examiner and say: “To complete my examination I would like to:”</p> <ul style="list-style-type: none"> • Assess the neurovascular status of the lower limbs • Examine the joint above and below i.e. the spine/ hip/ ankle 	
Stage 8 - COMPLETION	
<ul style="list-style-type: none"> • Thank the patient • Offer to help get dressed and cover up • USE ALCOHOL GEL AGAIN AT THE END 	
Stage 9 - PRESENT FINDINGS	
END OF EXAMINATION	