

Look
Gait and Biomechanics
Move
Feel
Special tests
Neurological Vascular (if applicable)

Joint examination the knee

As with all joint examinations taking a full clinical history, mechanism of injury and paying close attention to the subjective information provided by the patient is paramount to guiding your clinical examination. Most clinicians apply and Hypo-deductive clinical reasoning model. Research has shown that this is based upon depth of knowledge and past experience, although this sometimes could lead to misdiagnosis by not fully testing your hypothesis.

Listen

Look

Move

Feel

Test (function and clinical)

Subjective examination

Mechanism of injury Previous similar injuries Medical history Level of activity Skill level Occupation

etc are all extremely relevant, as well as ascertaining what the athlete/patient has in their periodised training programme.

Practical joint examination

Observation

Gait cycle

General shape, swelling, deformities, muscle mass and atrophy, bruising, haematoma.

Lower limb alignment: Foot and ankle, knee, pelvis, hip, visual leg length discrepancy, shoe wear etc.

anterior / posterior kinetic chain control, pelvic stability, is tested in functional testing at the end of your examination, however you feel it necessary and the clinical history does not conclude this; i.e. an acute swollen knee this can be done during the observation phase.

Range of motion

Active range of motion: flexion/extension/internal rotation/external rotation.

Passive range of motion: flexion/extension/internal rotation/external rotation + overpressure can be added to all of these ranges to elicit clinical signs.

Terminal flexion / extension control

Closed packed to 10 degrees flexion + - rotation

Special tests

Patella effusion

sweep test

patella Test

Collateral ligaments

palpation

Medial collateral ligament: valgus stress test + palpation

lateral collateral ligament varus stress test + palpation

Meniscus

palpation

McMurray's test;

Medial external rotation/valgus stress into flexion

Lateral internal rotation/varus stress into flexion

Thassaly test (20degrees flexion fixed foot rotation)

Anterior cruciate ligament

Lachman's test

Anterior draw test

Pivot shift test

Posterior collateral ligament

SAG test/sign

posterior draw test

Patello-femoral joint

patella tracking test/sign

patella apprehension test

Clarke`s test/sign

iliotibial band

noble's test

Ober's test

Palpation

Joint margins

Land marks

Bursae

Ligaments

MM insertions / origins

Etc

Functional testing

Squat

Lunge

Hop etc

Sports specific testing

All relevant Movements patterns

Teresa L. Et al (2010) Clinical Evaluation of the Knee. NewEngland Journal of Medicine; 363:e5J

TR Madhusudhanet al (2008) Clinical examination, MRI and arthroscopy in meniscal and ligamentous knee Injuries – a prospective study. *Journal of Orthopaedic Surgery and Research* 2008, 3:19

Theofilos et al (2005) Diagnostic Accuracy of a New Clinical Test (the Thessaly Test) for Early Detection of Meniscal Tears *The Journal of Bone and Joint Surgery (American*). 2005;87:955-962.

Gerard A. Malanga, et al (2003) Physical examination of the knee: A review of the original test description and scientific validity of common orthopaedic tests. Archives of physical medicine and rehabilitation Volume 84, Issue 4, Pages 592-603.

Ostrowski JA. (2006). Accuracy of 3 diagnostic tests for anterior cruciate ligament tears Journal of athletic training Jan-Mar;41(1):120-1

For examples of a knee examinations follow the link;