ANATOMY & PHYSIOTHERAPY
Helping you care

19 December 2016

Musculoskeletal

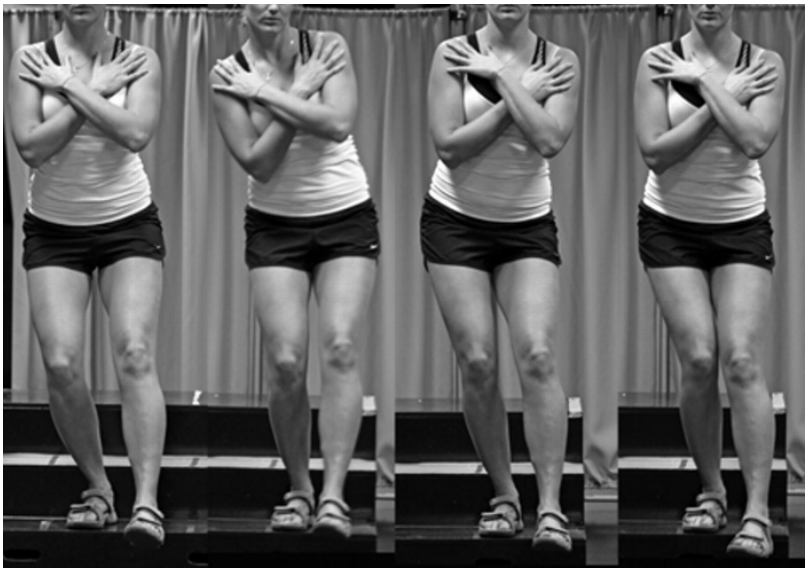
Examination of the patellofemoral joint

A step-by-step patellofemoral joint examination guide

Author : Henrike Greaves

Although PFP is the most common knee pain disorder and very prevalent in athletes, the examination, diagnosis and treatment remains challenging.

Thus, the authors developed a step-by-step guide of the examination of the patellofemoral joint, to ensure that all contributing factors will be identified and all potential causative factors will be addressed.



History: A key factor of any examination is the medical history. Appropriate questions will often lead to the situation that the patient describes what their diagnosis is. Therefore classical red and yellow flags should be asked, also information about the ADLs and sport activites are essential.

Physical examination: During the standing examination, the physiotherapist should look for alignment, deformities, swellings and scars in all three planes. Especially a valgus alignment can be assessed by using the Q-angle. Also the leg length should be measured and the foot posture should be assessed.

Dynamic movement assessment: The step down and the single leg squat task are useful tests to investigate the dynamic alignment. Also the gait needs a detailled investigation. To examine systemic hypermobility the Beighton index can be used.

Investigation in sitting and lying: The tibial tubercle sulcus angle can be used to investigate if the patella is completely captured within the femoral trochlea. The lumbar spine, sacro-iliac joint, hip, knee, proximal tibio-fibular joint, and ankle join as well as the patella tracking need to be examined (actively and passively). Strength towards especially hip flexion and rotation as well as the knee extension is important to test, as it is closely linked to PFP. Palpation is useful to identify a precise pain location. It is also useful to palpate for pain, temperature, effusion, oedema, tissue thickness, or unusual nodules. A neurological examination should be carried outs because many patients with knee problems exhibit balance deficits.

Patient reported outcomes: such as the KUJALA score are helpful to determine the amount of improvement in symptoms and function after the treatment.

Special tests:

- to test effusion vs oedema, bursitis, hematoma, etc. several tests can be performed, including milking tests, sweeping, and ballotment tests.
- the superficial and deep patellar retinacula is useful to identify IT band tightness.
- the patella glide can be assessed in supine lying. Tests such as the moving patellar apprehension test, the gravity subluxation test, Clarkes “patellar grind” test and tests to screen the knee ligaments are useful for a more specific diagnosis.