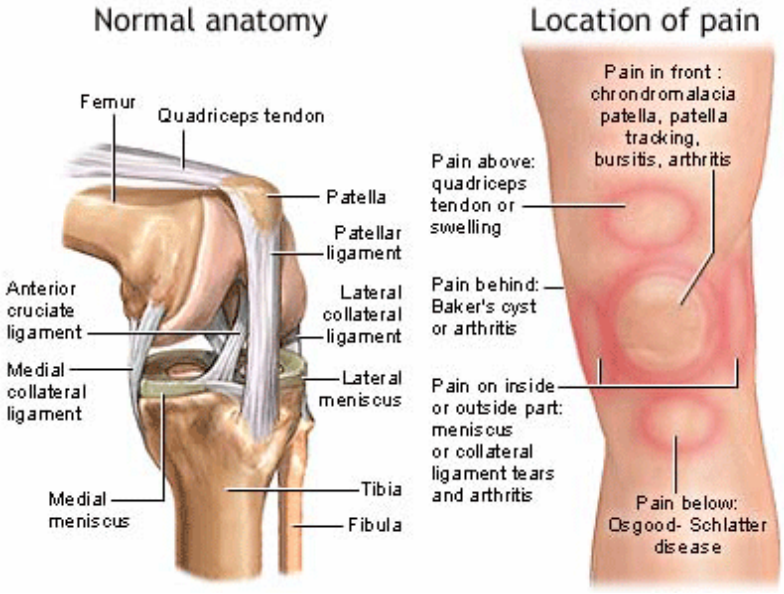
Physiotherapy Assessment and Management of Common Knee Injuries

1. About us:

- Physiotherapists who specialize in assessing and treating orthopaedic and sports injuries
- Goal: To provide quality centered care to maintain and optimize patients' physical function and wellness.

2. Common knee injuries:

- Meniscus tear
- MCL/LCL sprain • ACL rupture
- PFPS • Patellar dislocation
- Osteoarthritis



3. Physiotherapy Assessment[1]:

- <u>History:</u>
  - Mechanism of injury
  - Presence and timing of swelling/pain
  - Location /severity of pain
  - Degree of disability
  - Activity and participation limitations
  - Alleviating and aggravating factors
  - PMHx

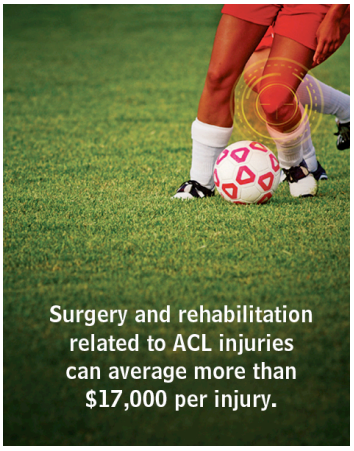
- <u>Objective</u>:
  - Observation: swelling, deformities, bruising and gait, ability to weight bear and function
  - Balance: static and dynamic, ability of hips and core to stabilize above
  - ROM, strength and functional tests for the lower extremity (low back, hip, knee and ankle)
  - Stability tests: knee ligaments, meniscus and patella
  - Imaging: helps determine what structures are torn/damaged if needed

History + Objective = Overall impression of injury

4. Physiotherapy Management:
Goal of treatment is based on stage of healing

Research:

- A combination of hip and knee strengthening is superior to knee strengthening alone in reducing symptoms in patients with Patello-Femoral Pain syndrome (PFPS, or anterior knee pain)[2]
- ACL injury is one of the most prevalent orthopedic injuries seen in sport. Incidence remains high between 14-19 [3] and is more prevalent in women than men.
- ACL injury up to 8 times more prevalent in girls than boys. Neuromuscular retraining has proven to help lessen this risk.[3,4]



How we are different:

We provide a detailed, one-on-one assessment for the lower extremity to identify the source of the patient's injury. This includes their ability to transfer loads from the hips and trunk, basically looks at whole body integration with the knee. We then develop an evidence-based treatment plan tailored for the patient's needs to help them manage their injury, prevent future injuries and optimize physical function.

References:

1. Brukner, P. & Khan, K. (2013). *Clinical sports medicine* (4th Ed). Australia: McGraw-Hill Australia Pty Ltd.
2. Nakagawa, T. H., Muniz, T. B., Baldon, R. M., Dias Maciel, M., de Menezes , R. B., & Serrão, F. V. (2008). The effect of additional strengthening of hip abductor and lateral rotator muscles in patellofemoral pain syndrome: a randomized controlled pilot study. *Clinical Rehabilitation, 22*(12).
3.Renstrom P, Ljungqvist A, Arendt E, et al. Non-contact ACL injuries in female athletes: an International Olympic Committee current concepts statement. *Br J Sports Med.* 2008;42(6):394-412.
4.Mandelbaum BR, Silvers HJ, Watanabe DS, et al. Effectiveness of a neuromuscular and proprioceptive training program in preventing anterior cruciate ligament injuries in female athletes: 2-year follow-up. *Am J Sports Med.* 2005;33(7):1003-1010.