

Knee – Fat Pad Impingement

The infrapatellar fat pad (sometimes known as Hoffa's pad) is a soft tissue structure that lies beneath the patella (kneecap) separating it from the femoral condyle (end of the thigh bone). It is thought to assist lubrication of the joint.

Impingement occurs when the fat pad enlarges and becomes "impinged" between the tibia and the femur, or between the patella and femur.

It has a rich nerve supply and is a common (although often unrecognised) source of pain at the front of the knee.

Irritation or trauma of the fat pad can be caused by:

- Repeated or uncontrolled hyperextension of the knee
- Repeated or uncontrolled rotation of the knee
- Major ligament injury especially the anterior cruciate ligament,
- Injury to the patellar tendon
- Arthroscopic surgery
- Patellar maltracking – it is thought that impingement here occurs between the outside of the patella (knee-cap) and the outside of the lower femur

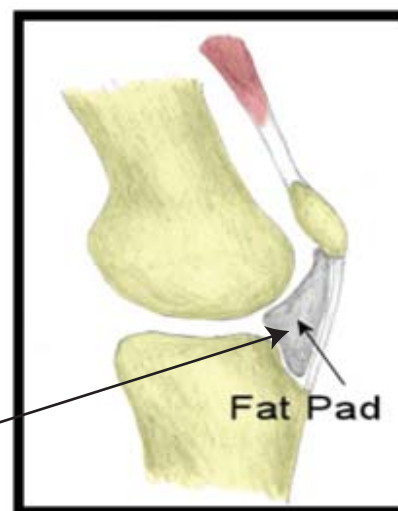


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Sites of possible impingement

Fat Pad shown from the front

Fat Pad shown from the side



Pain and Symptoms

These include:

- Local tenderness and puffiness in the area of the fat pad.
- Pain with hyperextension of the knee.
- Pain with running and jumping activities.



The enlarged fat pad is demonstrated here in an MRI

Treatment

- Activity modification to reduce repetitive stresses placed on the fat pad. In the athletic situation certain activities may be limited at training and a period away from competition may be required
- Management of patellar maltracking if present. This generally requires a biomechanical assessment and will include a graded strengthening program usually focusing on quadriceps and hip muscles
- Bracing or taping to limit hyper-extension if this is excessive
- Fat pad unloading tape – certain types of taping applied by a Physiotherapist can reduce symptoms temporarily
- Resistant cases may require the opinion of a Medical specialist