

fat pad impingement/irritation

what is fat pad impingement/irritation?

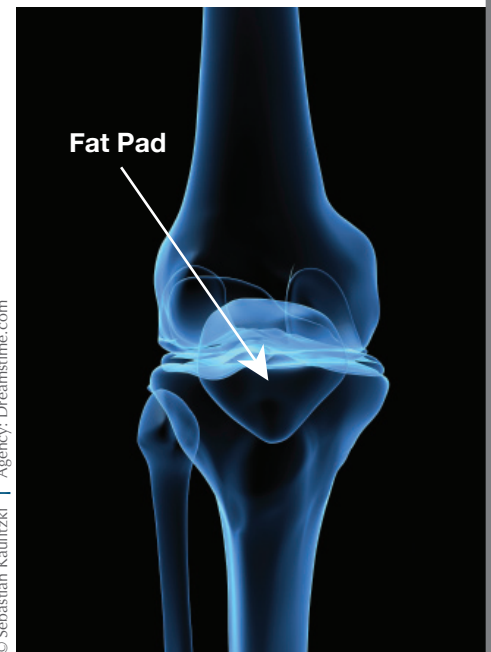
Fat pad impingement occurs when the fat pad becomes irritated and swollen from repetitive tissue pinching by the structures within the knee joint. The fat pad is situated deep within the patellar tendon and assists with providing a cushion to the front part of the knee as well as supplying blood and nutrients to the patellar tendon. If the fat pad is irritated/swollen it can become impinged into the knee joint causing extreme, exact pain.

who is at risk?

- Children/adolescents who participate in sports requiring repetitive squatting, jumping, running, stair stepping or excessive standing (i.e. volleyball, football, basketball, soccer, track, hockey, gymnastics, dance, etc.)
- Children/adolescents who have had a traumatic fall on the anterior (front) surface of the knee.

what are the symptoms?

- It can be described as specific to one area below the patella (knee cap).
- It can be described as sharp/stabbing/impingement pain in the area below the patella (knee cap).
- The child/adolescent will complain of pain/swelling with activity and immediately following the activity.
- The child/adolescent will complain of extreme pain with hyperextension, prolonged standing and stair climbing activities.
- The child/adolescent will often complain of “puffy” knees.
- The child/adolescent could have muscular tightness in the quadriceps/hamstrings (thigh) muscles, iliotibial band (outside of thigh) and gastrocnemius /soleus (calf) muscles.
- The child/adolescent could have limited range of motion because of pain in the knee.
- The child/adolescent will have little tolerance to bending the knee.
- The child/adolescent might limp when walking.
- The child/adolescent might present a weakness/imbalance in the muscles around the knee area.



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Front View of Knee

what are the treatment options?

Conservative/non-surgical treatment:

- Rest from aggravating activities or “relative” rest.
- Ice the area after activity and when painful for 10 to 20 minutes up to once a hour.
- Muscle stretching to improve flexibility.
 - Stretching should be done both before and after activity.
 - Concentrate on hamstring (back of thigh), quadriceps (front of thigh), iliotibial band (outside of thigh) and gastrocnemius/soleus (calf) stretching.
- If the condition does not improve, a referral to physical therapy to address pain, swelling, range of motion, flexibility, strength, gait, bracing and a return to sport training program will usually improve symptoms.

Surgical treatment:

- Arthroscopy to reduce the size of the fat pad and to remove scarring, may be useful in some patients.

what is the time frame for returning to activity/sport?

Most patients require 12 to 16 weeks of an exercise program. Depending on the severity of the pain this may be done while patients continue athletic activities.

what are the long-term side effects?

Slight modifications in lifestyle are typical. Avoiding excessive squatting and lunging activities coupled with a sustained program to maintain muscular strength is effective for the great majority of patients.