

WHO SAID GOING DOWNHILL WAS EASY?

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More than midway through the hiking season, some of you might be experiencing some knee pain/discomfort. The most commonly seen condition of non-traumatic knee pain in a physiotherapy clinic is patello-femoral pain syndrome (PFPS). The main complaint is pain on the inside part or just below the knee cap that gets worse with going downhill/down stairs and also after sitting for a prolonged period of time with a bent knee.

With PFPS, the main problem is the knee cap (patella) is not tracking in its groove (femoral groove) with knee bending and straightening. The knee moves about 135° in a plane that more or less falls in line with the second toe. Any variations on the bending will cause maltracking and put unnecessary forces at the knee. The most common variation is for the knee joint to be dragged inwards of the second toe when bending. There are many causes to maltracking:

- Too much foot pronation (over flattening of the main foot arch)
- Anomalies from birth e.g. bowing of the lower leg, mismatch between size of the knee cap and its corresponding groove
- Weak gluteal (buttock) muscles
- Weak inner quadriceps muscles
- Tight calf muscles
- Tight iliotibial band (IT band)
- Poor standing balance
- Decreased coordination of the leg as a whole
- Lower back (lumbar) and sacroiliac joint problems
- Stiff hip
- Previous knee injuries (old ligament tears) or surgeries

Basically, the knee is designed to move and has strong muscle groups on its front (quadriceps) and back (hamstrings), but lacks stability on the inside and outside where it is only protected by ligaments. Due to its high mobility and therefore high vulnerability, the knee mechanism is greatly influenced by what is happening below (ground, foot, lower leg) and above (hip, sacroiliac joint, lower back).

If you are suffering from what might be PFPS or other non-traumatic knee problems, a careful examination of the above mentioned body parts should be done to find the true cause of the problem. Most of the causes of PFPS are treatable within the clinic and any combination of the following methods would be used:

- Stretching and strengthening exercises to restore any muscle imbalance
- Core stability exercises
- Balance exercises
- Modalities like ultrasound, acupuncture/IMS, interferential current
- Muscle release
- Taping techniques or suggestion on how to use certain neoprene sleeves as a brace
- Footwear modifications or suggestion of orthotics

As for anything, early intervention is necessary for you to keep enjoying your season in the outdoors without needing to stop your activities.

Happy hiking!