



Knee Pain

What is it?

There are commonly two types of injuries which can cause knee pain:

- i. Acute injuries eg. Ligament tears, Cartilage tears.
- ii. Overuse injuries.

As podiatrists, we generally deal with the overuse type injuries.

How do they occur?

Various factors can cause overuse injuries to the knee, including poor footwear, inappropriate training programs and inadequate training surfaces (eg. bitumen or soft sand).

Another major cause is abnormal alignment of the foot and lower leg.

- Flat Feet - with flat, or excessively pronated feet, the result is excessive internal rotation of the lower leg at the same time that the upper leg is rotating in the opposite direction due to forces produced during walking. The knee is the area that therefore must absorb these twisting forces, and thus injuries can occur. Also, pronated feet result in a valgus, or 'knock-knee' position, which results in various muscles exerting their pull in incorrect directions.
- High-arched feet - high arched, or excessively supinated feet, do not allow the shock absorption needed during walking. The knee must therefore take too much force to absorb this shock, and this is when overuse injuries can occur.

Some Common Problems:

Patellofemoral syndrome - with pronated feet the knees move into the 'knock-kneed' position. This causes the knee cap tendon to pull in the wrong direction. The knee cap thus runs over areas of the knee joint that it is not supposed to, and eventually this will result in injury and pain. The pain is often felt with bent-knee activity, like squatting and walking upstairs.

Iliotibial band syndrome - A band of thick tissue which runs down the outside of the thigh, and which crosses the outer side of the knee joint, is the iliotibial band. With excessive pronation, this band shortens over time and is therefore subject to pain and injury. Pain is felt on the outer edge of the knee joint.

Osgood Schlatter's disease - this commonly affects teenagers, and is an inflammation of the growth plate of the tibia (lower leg bone), which is situated just below the kneecap.

Treatment:

- i. Orthoses - these allow the foot, leg and knee to function in the correct position, and therefore forces are distributed correctly throughout the leg.
 - ii. Exercises - strengthening and stretching of muscles around the knee.
 - iii. Anti-inflammatory medication, rest, ice, compression.
 - iv. Physiotherapy
 - v. Taping of the knee
- Wearing appropriate footwear.