

Osteoarthritis (OA) of the Knee

Most joints in the human body are covered in a layer of **articular cartilage**. The cartilage functions by assisting joint lubrication and shock absorption and provides a low friction surface for bones to move against each other. Osteoarthritis (more commonly termed osteoarthrosis) describes degeneration of the articular cartilage.

This is a condition that develops over quite a long period of time. It is more commonly associated with the older population but can occur in younger age groups for reasons stated below.

Causes

Knee osteoarthritis is a condition that will usually develop over a long period of time. Common predisposing factors are:

- Overweight (high Body Mass Index)
- Previous Injury, damage to cartilage or ligamentous instability
- Congenital or developmental deformities
- Certain occupations – for example high intensity manual labour
- Genetic factors
- Poor lower limb strength

Clinical Features of Knee Osteoarthritis

- Joint space narrowing on x-ray
- Pain
- Swelling
- Deformity
- It is typically progressive and worsens with advancing age
- It is usually made worse by high intensity activity (although some lower intensity activities seem to benefit symptoms)



x-ray showing narrowed medial compartment of the knee due to advanced OA

Diagnosis

A detailed history and skilled clinical examination are important. X-rays are sensitive to moderate to severe changes and MRI provides a large amount of detail. These investigations assist in grading the degree of the pathology, and assist in excluding other sources of pain.

Treatment

Physiotherapy should always be included in a knee osteoarthritis treatment program.

- **Activity Modification** – To help protect the knee and allow the knee to settle. Low impact activities like cycling and swimming will be best suited to help maintain and improve fitness levels
- **Strengthening** – A thorough graded (impact sparing) lower limb strengthening program will be developed by your physiotherapist to help improve your lower limb function.
- **Weight Loss** – Physiotherapists can assist with giving exercises that will assist with weight loss whilst keeping potentially damaging impact off the joint. Your Doctor can advise you regarding diet and other areas of weight management.

Prognosis

The pathology is not reversible but the symptoms will often improve with exercises. Often symptoms become manageable and an ongoing program is often necessary.

Surgical

Those more severe conditions which do not respond to Physiotherapy may require surgery and sometime require joint replacement.