



## OA Knee

Osteoarthritis of the knee most commonly occurs in an individual that has experienced trauma, infection or injury directly to the joint area. Within the knee, protective cartilage prevents erosion of the articular surfaces of the bones; this cartilage can repair as it has a blood supply however the blood supply is limited & this reparation process can take an extensive period of time. Arthritis in the joint causes the cartilage to deteriorate much more rapidly than it can renew. The articular surface reduces & the joint space narrows. Although this process is not necessarily painful, there are certain complications & progressions which become painful. The early changes, such as the reduction in joint space can be seen on X-ray.



As the cartilage thins further in some areas more than others, the bones react by becoming thicker & grow outwards, growing what are known as 'spurs'. Fluid within the knee, called synovial fluid, which normally nourishes the cartilage & permits smooth movements of the articular surfaces, also reacts by becoming thickened which is identified by a pressure within the knee & also contributes to extra swelling.

The formation of spurs creates clicking & locking & commonly a 'giving way' which is usually painful & gradually a joint deformity develops preventing ease of movement in the majority of weight bearing activities. Arthritis of the knee is one of the five most common leading causes of disability amongst the elderly; in fact, the risk of disability from arthritis of the knee is as great as that from cardiovascular disease.

There are several predisposing factors regarding the risk of osteoarthritis development, including weight, age & trauma as these interfere with the pressure put through the knee & also interferes with the reparation process. Generically, those with a family history of arthritis are more likely to develop the condition too. Repetitive strain injuries can be linked, but mostly in those who occupationally spend an increased volume of time squatting or kneeling, walking excessive distances or lifting excessive weights. In addition, those who work on assembly lines, carpet or floor layers, dancers, miners & dock workers have shown higher prevalence. Physically, poor posture, bone alignment, aerobic fitness & muscle weakness are predisposing factors & it has also recently been investigated that the lack of vitamins C & D could contribute to osteoarthritis development.

As arthritis cannot be cured, only managed, long term treatment is concentrated on pain management, which will vary in accordance with the individual & the stage of the condition. Physiotherapy includes educating the individual with regard weight loss, strengthening exercises to the knee & general exercise. It is vital that exercise remains low impact therefore the active promotion of cycling, swimming, rowing & walking are the most appropriate routine calisthenics. Maintaining a reduction in the volume of swelling within the knee through continual general movement & mobility also assists in keeping pain levels low.