

Osteoarthritis

Osteoarthritis (OA) is a common form of arthritis which increases in prevalence with age. It is reported that by 2030 the number of people over 60 years old will grow from 20% to 33% globally, and therefore the number of people living with disabling OA will also increase. It can greatly affect the individual's ability to carry out activities of daily living, as well as recreational and sporting activities. Reducing participation in daily activities negatively affects quality of life, leading to more sedentary lifestyle choices and reducing exercise tolerance. Many of our patients present with signs and symptoms of OA that may vary in severity, but are nevertheless limiting function and causing pain. They may have also had further investigations confirming OA changes, as well as specialist opinions, however many are not appropriate for surgical intervention and are continuing to manage their symptoms conservatively.

OA is a chronic disease characterised by complex, multifactorial joint degeneration, including loss of articular cartilage, progressive biomechanical joint changes, joint capsule contracture, loss of periarticular flexibility and increased intracapsular pressures. If we use hip OA as an example, we can think of it as a disease of the whole joint complex as well as the surrounding musculature, resulting in structural and functional failure of the joint. Often muscle imbalances around the hip will result in abnormal loading of the hip joint, contributing to further cartilage destruction. This example is the same for most spinal and peripheral joints. OA of the lower extremities can also affect joint proprioception, which can result in impaired balance strategies and higher risk of falls.

Physiotherapy interventions for the treatment of OA follow the *International Classification of Functioning, Disability and Health* proposed by the World Health Organisation. It aims to identify and address the variable structural and functional impairments that accompany the pathology, rather than addressing the underlying pathology itself. This is ultimately to improve body structure and physical function, as well as improving overall participation. Physiotherapy intervention is a multi-modal approach which can consist of:

- **Joint and soft-tissue mobilisation techniques**
- **Acupuncture**
- **Retraining optimal muscle control – stability and strength**
- **Stretching techniques**
- **Retraining joint position sense (proprioception)**
- **Education and advice on graduated increases of daily activities**
- **Land-based and/or water based exercise programmes**

It is also important to mention that a recent prognostic study by Wright et al. (2011) found that “the strongest single predictor of success with physiotherapy (for the treatment of hip OA) was symptom duration of less than 1 year”. This indicates the importance of intervention early in the disease process rather than waiting until OA has reached more advanced stages where treatment becomes much more multi-factorial.

Some great links for our patients wishing to find more information on OA is to both the Physiotherapy New Zealand website www.physiotherapy.org.nz; or to the Arthritis NZ website www.arthritis.org.nz .

References:

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A Case Study

John is a 57 year old male with a 3 month history of right sided groin pain. He is a senior accountant and keen tennis player and golfer. This pain started after a game of tennis. John was able to manage the pain with paracetamol for the first 3 weeks, however noticed that the pain was becoming worse with weekly games of golf and tennis, particularly when he had to twist or pivot on a fixated right foot. It was also starting to affect his capacity to get out of bed in the morning, to get in and out of the drivers seat of his car, and he found it very painful and stiff to try and put his socks on! John tried to persevere, however the pain eventually started to wake him at night. At its worst his pain was an 8/10.

John presented to his G.P who prescribed him some NSAID's and referred him for both an x-ray and for physiotherapy. The x-ray confirmed that John had some early OA changes in his right hip joint. John presented for physiotherapy with the aforementioned limitations in function as well as limited right hip flexion, and external and internal rotation, all of which reproduced his pain. John also had poor single leg alignment on the right, indicating some underlying biomechanical issues which were contributing to his pain.

Treatment consisted of joint- and soft-tissue mobilisation, acupuncture, and correction of muscle imbalances around John's hip and lumbopelvic region. John also sought a podiatry opinion and had some orthotics made to improve his lower limb alignment. John received 10 treatment sessions over 12 weeks. He made steady progress and was able to return to both tennis and golf. He reports occasional stiffness in his hip which he can self-remedy with his home-based exercises. John also feels better prepared with strategies to manage any 'flare-up' of his symptoms should they occur.