

Osteoarthritis

What is Osteoarthritis?

Osteoarthritis (OA) is the commonest form of arthritis; it is a degenerative condition and is often referred to as “wear and tear” arthritis. It may be completely asymptomatic and found incidentally on an x-ray or it may cause significant symptoms in affected patients. The main symptoms are joint pain, stiffness and limited mobility in the affected joints. This can lead to other problems such as muscle weakness and difficulties with balance. Usually it occurs in a middle aged or older person and affects one or a few joints; occasionally it may affect many joints in the same person and this is referred to as generalised osteoarthritis.

Pain and stiffness in the affected joint or joints can lead to impairment of joint function. Pain related to osteoarthritis is usually made worse on using the joint and gets better with rest; stiffness after being immobile for a period of time gets better with movement and is usually less than half an hour in duration. There may be some swelling of the affected joints and deformity of the joint may occur if there is significant damage to the joint. The joint may also become unstable in some instances and it may feel like it is ‘giving way’ at times; this is particularly true for knee osteoarthritis.

Common joints affected are the knees, hips, finger joints, the base of the thumb, the big toe and the joints of the spine in the neck and lower back.

What causes Osteoarthritis?

As mentioned above, osteoarthritis is thought to be a degenerative condition related to use of the joint over time with a wearing down of the cartilage layer that covers the bone of the joint; this is known as primary osteoarthritis. If a joint has been previously damaged by an injury or another form of arthritis (such as Rheumatoid Arthritis or gout) this is known as secondary osteoarthritis. Certain professions that repeatedly have to squat or kneel during their work (like carpet layers) or where there is prolonged standing, heavy lifting or significant amounts of walking every day (such as farm workers and construction workers) carry a higher risk of knee and hip osteoarthritis respectively. Sportsmen that play contact sports and long-distance runners may also have a higher chance of developing OA. Some underlying medical conditions also predispose to OA (such as haemochromatosis and calcium crystal deposition disease or ‘pseudogout’). Being overweight increases the risk of developing OA in both weight bearing and non-weight bearing joints. Osteoarthritis may run in families (especially OA of the hands) and is more common in women.

Osteoarthritis is a chronic condition but may not necessarily progress over time.

How is Osteoarthritis diagnosed?

Osteoarthritis is usually diagnosed by a doctor taking a good history and an examination of your joints; if the diagnosis based on that is not clear, you are relatively young, there are atypical symptoms or if there are alternative diagnoses that need to be considered your doctor may send you for an X-ray and/or an ultrasound and may do some blood tests. However, it is usually not necessary to perform any special investigations and results of x-rays/ ultrasounds often correlate poorly with symptoms. In other words, it is possible to have significant changes on an x-ray with relatively few symptoms and vice versa.

How is Osteoarthritis treated?

Interventions for OA are mainly aimed at reducing pain and improving function of the affected joints as well as treating any associated conditions that may accompany OA symptoms such as problems sleeping, mood and social problems. There are unfortunately currently no approved medications that can modify the course of the disease. Treatment is separated into drug therapies and non-drug therapies. Surgery is considered if the below measures fail to adequately alleviate symptoms. Non-drug therapies are the mainstay of treatment and ideally should be tried by all patients with medications for pain being added if necessary.

Non-drug treatments include:

Exercise: a combination of strengthening and aerobic exercise individualized to each patient is important for rehabilitation and maintenance of muscle strength, balance and joint range of motion and function. Improving the strength of the muscles surrounding the affected joint/s (especially for knee and hip OA) also improves pain symptoms.

Weight loss for overweight patients is beneficial for both weight bearing joints (such as the hips and knees) as well as non-weight bearing joints such as the hands. A 10% reduction in weight may give up to a 50% improvement in pain symptoms. Walking aids/ knee braces may be beneficial for knee joints that are not in correct alignment or unstable; hand splints may provide symptomatic relief for OA at the base of the thumb.

Medications available to treat OA are best used only when symptoms are present; no medications to date have been shown to be able to slow the progression of OA so using them on a permanent basis will not change the course of the disease. Depending on how severe the symptoms are options range from topical anti-inflammatories (like Voltaren gel, Transact patches), oral Paracetamol and anti-inflammatories (Like Ibuprofen, Naproxen, Celecoxib) and sometimes medications used for nerve pain like Duloxetine may be tried if response to the above is poor or if you are unable to take anti-inflammatories. Stronger painkillers like opioids (codeine, Tramadol, morphine) can be used in the short term for severe or disabling symptoms where other treatments are not working well or cannot be used for some reason. All medications have potential side effects and their use must be tailored to each patient and risks versus benefits weighed up against the severity of symptoms. Long-term use of anti-inflammatories and opioids (and even Paracetamol) is not a good idea due to their significant side effect profile, particularly in older people. Always make sure you stick to the dosage given to you by your doctor and avoid taking alcohol while you are taking other medication.

You may be offered a cortisone injection into the joint which does help alleviate symptoms in some patients however, there is a small risk of introducing infection into the joint with an injection and repeated injections into the same joint may damage the joint further so cortisone injections should ideally not be done more frequently than three to six monthly. Supplements like chondroitin and glucosamine available over the counter are expensive and have had differing outcomes in clinical trials so there is debate about whether there is any benefit to taking them however, if you do decide to try a supplement please discuss it first with your doctor to ensure it won't interact with other medications you are taking and that you are not allergic to any of the components (many of these supplements contain shellfish).

If all of the above is unsuccessful and symptoms are intolerable you may be referred to an orthopaedic surgeon for surgery. Surgical options may include realignment of a joint, fusion of a joint or a joint replacement. To undergo surgery a patient should be in their best physical condition prior to surgery and will need to commit to an exercise or physiotherapy program both before and after surgery.

How can you help control your symptoms with Osteoarthritis?

Maintain a healthy weight and do regular, low impact exercise such as walking, swimming, cycling, Tai-Chi or elliptical machinery. Consider seeing a Biokineticist or a Physiotherapist to help tailor your exercise regime to your abilities and ensure that the correct muscle groups are being strengthened.

Wear good quality shoes that support the arch of your feet and have sufficient cushioning on the sole and support around the ankles. A good quality running shoe especially for exercising is a good example of such a shoe. Avoid wearing high heels if you have OA in the big toe, knees, hips or back.

Consider seeing a podiatrist or using insoles for your shoes if you have flat feet, high arches in your feet or knee deformities – correcting the way you walk can go a long way to easing foot, knee, hip and lower back pain.

Use any assistive or supportive devices for walking that have been recommended to you by your doctor or allied health professional such as a physiotherapist or biokineticist.

Useful resources:

www.uptodate.com

rheuminfo.com

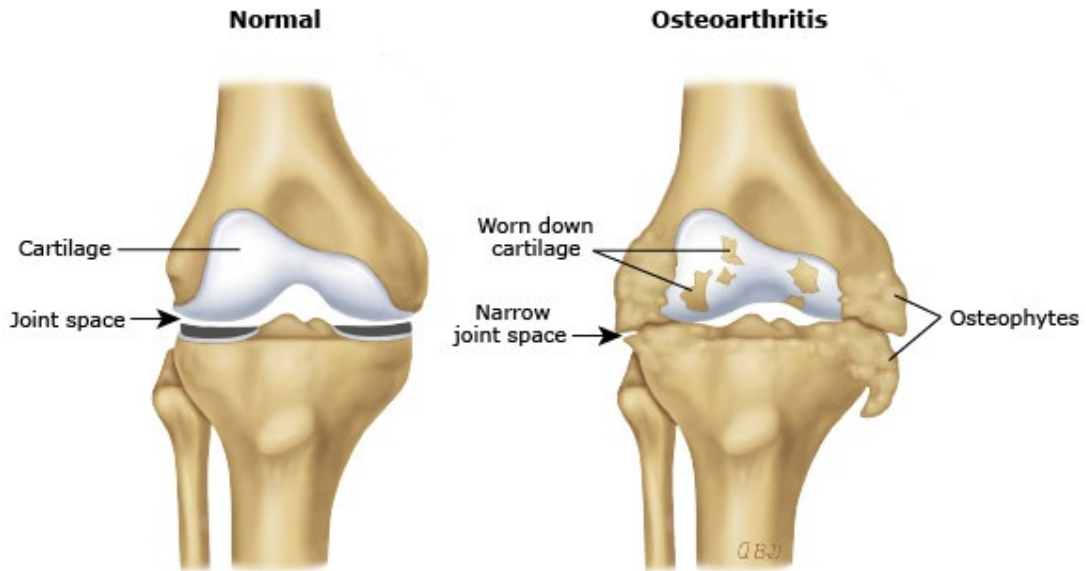


Image showing osteoarthritis affecting a knee joint