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# Osteoarthritis

## • What is Osteoarthritis?

*Osteoarthritis (OA)* affects one or more joints of the body, causing breakdown of joint tissue resulting in inflammation, pain and stiffness. It is most common in the knees, hips, feet and spine. Finger and toe joints can also be involved, particularly the base of the thumb and big toe.

OA primarily involves the progressive destruction of cartilage within a joint. Cartilage is material that covers bone ends at points of contact with other bones (joints). This cartilage protects bone ends against weightbearing stresses by providing shock absorption, and its slippery surface allows for smooth joint movements. OA is not limited to cartilage degeneration however. It has also been known to affect muscle, underlying bone (spurs), ligaments and joint capsules



A Typical Osteoarthritic Knee

There is no cure for OA, however early detection and treatment can help relieve the symptoms or prevent the formation of serious joint problems.

## • What are the symptoms?

- Persistent joint pain
- Joint pain aggravated by particular movements
- Inflammation, indicated by joint swelling, stiffness, redness, and warmth
- Joint deformity such as nodules, swelling, angular changes as cartilage erodes
- Loss of normal range of movement within a joint

• Crepitus – a grating sound that occurs during movement of a joint, which may be a result of cartilage degeneration causing 'bone on bone' contact.



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#### • What causes it?

OA involves chemical changes in cartilage that break it down faster than it can be produced. The exact cause of this is unknown. Genetics is one cause, however in some cases, it may develop as a result of another condition, such as:

- Excess body weight increases strain on joints, particularly knees, hips and feet
- Major joint injury or several minor injuries to the one joint
- Certain activities or sports that place repetitive stress on a joint
- Muscle weakness that may reduce shock absorbing capabilities of a joint
- Daily activity in a joint that is not aligned normally, or is too mobile
- Joint infection that may alter the chemical makeup of cartilage

## • Who gets it?

Although most common in people over the age of 60, OA can affect all age groups It is more commonly seen in women. Athletes involved in sports that place high demands on their joints may also experience symptoms earlier on in life.

## • How is it treated?

OA can't be cured, only treated. Treatment aims to reduce pain, stiffness and joint stress, allow for greater movement, and slow the progression of OA. Common treatments include:

- Weight loss reduces joint stress and pain. Eat less, exercise more!
- *Exercise* improves joint flexibility and strengthens muscles supporting your joints. Try low-impact exercises such as swimming and cycling.
- Stretches use joints to full range of movement, reduces stiffness, improves flexibility.
- Heat may help to relax muscles surrounding sore joints
- Ice may help to reduce swelling, and numb the area for pain relief.
- *Medication* anti-inflammatory gels (Voltaren), Nurofen, cortisone injections. Glucosamine (with chondroitin) is also widely used. Check with your doctor!
- Surgery in severe cases, joint replacement, fusion or arthroscopy may be required.

## • Orthotic Treatments

The aim of orthotic treatment is to reduce joint stress. This may involve the correction of any alignment abnormalities present in the joint, immobilisation of a joint that is painful to move, or the reducing weight on a joint.



Foot Orthotics



Knee Brace