

Knee Osteoarthritis



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This information leaflet has been produced by Senior Physiotherapists working at Queen Victoria Hospital NHS Foundation Trust.

Osteoarthritis (OA) is a painful inflammatory condition affecting the joints of the body. It causes changes to the cartilage on the surface of the joints which normally acts as a shock absorber for the joint and its smooth, slippery surface which allows freedom of movement. When someone has OA their cartilage becomes thinner and its surface becomes roughened. The bone underneath becomes thicker and can grow out at the side of the joints. Extra fluid may form making the joint swell slightly and the capsule and ligaments may thicken and get stretched. In most cases the changes are fairly mild, although occasionally they may be more severe. In the worst cases OA may alter the shape of the joint.

Symptoms

These may include:

- Dull, aching joint pain
- Pain worsened with activity, relieved with rest
- Stiffness of the knee joint, often for a short time in the morning
- Loss of range of motion in the knee joint
- Enlargement/swelling of the affected joints
- Joint crepitus (crackling sound on movement)
- Altered appearance of the limb
- Muscle weakness or giving way

The symptoms are often variable with episodic spells of a few weeks or months. Damp weather may worsen joint pain in some sufferers.

Causes

Age: OA is more common in people over the age of 40, although it may develop in younger people.

Joint wear: wear and tear is the most common cause of OA, often exacerbated by being overweight. However, a major injury or joint surgery may increase the chance of joint wear, resulting in OA.

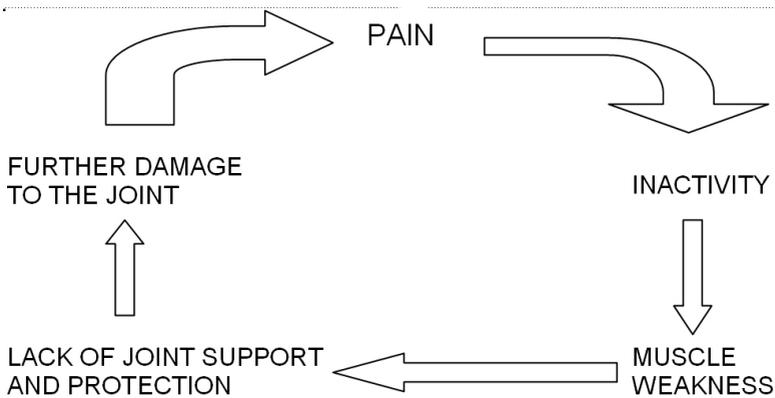
Heredity: rarely, some forms of OA may run in families.

Deconditioning: decreased strength and control of the muscles around a joint may leave it less supported and may make it prone to wear and tear.

Management of OA

Drug treatment: several drugs can help you deal with the symptoms of OA. These include painkillers (such as paracetamol) and anti-inflammatories (such as ibuprofen). You should seek guidance from your pharmacist or GP when considering using anti-inflammatories, especially if there is a risk of stomach problems. There is much debate on the use of dietary supplements (e.g. glucosamine and chondroitin tablets, fish oils etc). Although some people report beneficial effects from these treatments, they have yet to be satisfactorily proven in clinical trials. Unfortunately, no medicine available at this time has been shown to provide a cure for osteoarthritis.

Exercise: helps strengthen and recondition the muscles around the joint and may help to protect it. A routine of simple strengthening and stretching exercises can be of great help in reducing the pain associated with osteoarthritis, improving mobility and maintaining a higher activity level. The exercise is of great importance in breaking the vicious cycle caused by inactivity which is a result of pain, and to prevent the further damage to the joint.



Physiotherapy can be beneficial by providing more specific exercises, advice and local treatment when stiffness, weakness and pain persist in the knee joint.

Exercises in water (Hydrotherapy) may be prescribed to relieve pain and improve movement and muscle strength. Some people find swimming a particularly good way of exercising and keeping fit, as it is a non-impact activity and causes little pain.

Ice or heat: either of these may help the pain. Use ice if the knee is hot and swollen and heat if it is painful and stiff. Be sure you do not use either if you have poor circulation or if there is any other medical reason for avoiding one or the other. Do not make the heat too great or leave it on for more than 20 minutes at a time. Ice should also be used for short periods (15-20 min). Hot/cold packs are available and can be purchased from pharmacies. Make sure that you read the instructions well before using them or ask for advice from your physiotherapist in order to prevent skin injuries or burns.

Surgery and joint replacement may be an option in cases where severe pain has developed in spite of the above treatment.

Useful hints:

- You can reduce the stress on painful joints by maintaining a healthy body weight.
- Avoid activities which cause prolonged, severe pain afterwards. However, it is important to stay fit and active and to keep the joint moving fully.
- Joints do not wear out with overuse. In general it is much better to use them than not to. However, you will need to strike a balance between too much activity and too much rest.
- For most people with OA the best advice is little and often. For example do housework or gardening in short spells interrupted by short rests. Avoid sitting in one place for too long; get up and stretch the joints from time to time.
- Try using a hiking-pole/walking stick to take the weight off the joint when walking, ideally using the opposite hand. Also try cushioned shoes (e.g. trainers) to act as a shock absorber for the knee.
- Remember: OA do not always get worse. Most people carry on a normal life by following this advice. If you do have an increase in overall pain, stop.

And finally:

Please find attached a number of suggested exercises. They should be worked through at least once a day. Although there may be some discomfort during the exercises, they should not cause an increase in overall pain.

If you have any queries regarding this information or the exercises mentioned, please contact.

Physiotherapy Department: Tel: 01342 414004.

Personal Exercise Program



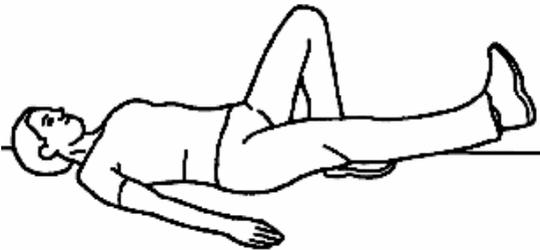
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Lie on your back, or sit up with your legs straight.

Bend your ankle, squeeze your thigh muscle and push your knee down firmly against the bed.

Hold 5 secs. – relax.

Repeat 10 times.



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Lie on your back, or sit up with one leg straight and the other leg bent.

Exercise your straight leg by pulling the toes up, straightening the knee and lifting the leg 20cm off the bed.

Hold 5 secs. – slowly relax.

Repeat 10 times.

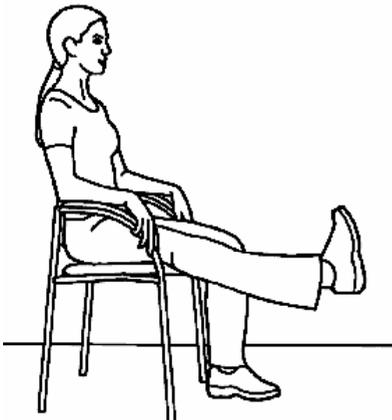


Lie face down with your hips straight and knees together.

Bend your knee as far as possible keeping the hip straight. Hold it for 5 secs. – relax.

Repeat 10 times.

Please note – this exercise can be made more challenging by performing it in a standing position whilst holding onto a support.



Sit on a chair.

Pull your toes up, tighten your thigh muscle and straighten your knee.

Hold 5 secs. – relax.

Repeat 10 times.



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