

Osteoarthritis (O.A.) and your Knee

What is Osteoarthritis?

Osteoarthritis is an inflammation of the cartilage in joints. This may develop over time to affect the underlying bone, sometimes causing it to thicken. It is a common condition.

What happens?

The knee joint is formed between the thigh bone (femur) and shin bone (tibia). The bone ends are covered with weight-bearing cartilage surrounded by a membrane and a capsule.

The membrane produces a thick fluid, which helps nourish the cartilage, and keep it slippery. The joint needs to be moved regular to help this fluid wash the joint surfaces, and keep them healthy.

Your knee is kept stable by powerful ligaments and by the strong muscles of the thigh. There are also two extra pieces of tissue inside the joint commonly known as cartilage that help to cushion the joint.

With Osteoarthritis in the knee, the weight-bearing cartilage becomes thinner, usually on the inside of the joint, often under the knee cap. It is usually patchy, and seldom over the whole joint. The surrounding bone reacts to the changes and the joint can become inflamed. These changes happen slowly.

Who can get O.A.?

Anyone can develop O.A. The larger weight-bearing joints are most commonly affected – hips and knees. It develops in previously healthy joints, normally in people who are overweight or who suffer from high blood pressure.

What are the symptoms?

- Pain, stiffness and restriction of movement in the knee, often worse first thing in the morning, but 'loosening up' after a half hour or so.
- Swelling and inflammation (localised heat).
- The knee tends to look a little larger than normal, due to the overgrowth of bone next to the damaged cartilage.
- Poor mobility – e.g. the loss of ability to climb stairs or walk any distance.
- Sometimes the knee seems to give way, because of weak muscles, or simply the loss of stability.
- You may notice some crackling or creaking within the joint.

What is the outlook (prognosis)?

The rate of increase varies greatly between patients, and also in individual patients at different times. Progression from mild to moderate O.A. to severe O.A. is uncommon, and only a few people need replacement surgery.

In many older people, O.a. is mild, doesn't become worse and does not make them any less able, than would be expected at their age.

What can I do to help myself?

- Exercise regularly to strengthen the muscles around the knee, and to maintain movement. There is a list of exercises later in this leaflet.
- Many people find a **regular** walk helpful, as it helps to give protection against ongoing disease and disability. Swimming can also help.
- Try to lose any excess weight, as this can add to the burden on the joints.
- Wearing flat soled shoes, (e.g. good quality trainers) or cushioned insoles can greatly reduce the impact of walking, and minimise jarring of the knee joints.
- Try to vary your activities and do not stay in any one position for longer than 30 minutes.
- Use a walking stick – held in the hand opposite the affected knee. This can help minimise the stress on the knees.
- To ease the symptoms try

Ice

Use 1kg pack of frozen peas, straight from the freezer. Wrap in a damp cloth, and apply to the knee for 10-15 minutes.

Warmth

Use a hot water bottle, or a pack heated in the microwave, wrapped in a towel. Apply to the knee for 20 minutes.

You can do both /either of these treatments 3 or 4 times daily if needed. The temperature should be pleasantly warm / cold, not burning.

The skin should remain pink not mauve. If you have diabetes, poor circulation or fragile skin, be careful not to burn yourself.

Will medication help?

There are different medicines which can help. Usually NSAID's such as Ibuprofen.

Will I need surgery?

Most people with an O.A. knee joint do not have it badly enough to need surgery. You may need replacement surgery, which has a high rate of success, but like all operations, carries some risk.

Exercises

Stretches



Lying on your back with your legs straight.

Bend your ankles up and push your knees down firmly against the bed as far as you can. Hold for 10 secs – relax.

Repeat 10 times.



Lying on your back with one leg bent.

Pull the toes up of your straight leg and push your knee into the bed. Lift the leg 10cm of the bed, keeping the knee straight. Hold approx 10 secs. – slowly relax.

Repeat 10 times.



Lying on your back.

Bend and straighten your leg AS FAR AS YOU CAN.

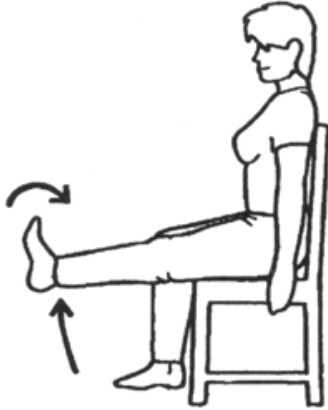
Repeat 20 times.



Sitting.

Bend your knee as much as possible, using your good leg to help push the bad leg back.

Repeat 10 times.



Sit on a chair.

Pull your toes up towards you and straighten your knee. Hold for 10 secs and then slowly relax your leg.

Repeat 10 times.



Sitting with your arms crossed.

Stand up and then sit down slowly on a chair. (This can be made easier and more difficult by changing the height of the chair. A lower chair is more difficult).

Repeat 10 times.



Stand in front of a 20 – 40 cm step.

Step up **10 times** with one leg and then repeat with the other leg leading.

Remember

- Exercises should not cause muscle strain or excessive fatigue, and should be increased slowly.
- Feeling a stretch or ache is good, as it shows the muscles are working.
- The exercises should be done gently, slowly and ideally little and often.
- To get the most benefit, keep doing the exercises.
- The exercises must not make you worse. If they do, check that you are doing them correctly. If it is still painful, reduce the number of repetitions, or stop for a day two.