

Osteoarthritis of the knee

What is osteoarthritis?

Osteoarthritis is a disease which affects the joints in the body. The surface of the joint is damaged and the surrounding bone grows thicker. 'Osteo' means bone and 'arthritis' means joint inflammation.

When joints are swollen and damaged they can be painful. They can also be difficult to move.

How does osteoarthritis of the knee develop?

To understand how osteoarthritis develops you need to know how a normal joint works.

A joint is where two bones meet. Most of our joints are designed to allow the bones to move in certain directions. The knee is the largest joint in the body, and also one of the most complicated because it has many important jobs to do. It must be strong enough to take our weight and must lock into position so we can stand upright. But it has to act as a hinge, too, so we can walk. It must also withstand extreme stresses, twists and turns, such as when we run or play sports.

The knee joint is where the thigh bone and shin bone meet. The end of each bone is covered with cartilage which has a very smooth, slippery surface. The cartilage allows the ends of the bones to move against each other almost without friction.

What causes osteoarthritis of the knee?

Many factors seem to increase the risk of osteoarthritis developing in the knee joint. The risk does increase as we get older, but osteoarthritis of the knee joint is not a problem in all elderly people. It often runs in families. Genetic factors are very important. Genes may affect how well tissues repair.

Osteoarthritis of the knee is twice as common in women as in men. It mainly occurs in women who are over the age of 50, but there is no strong evidence that it is directly linked to the menopause.

It is also worse in people who are overweight.

How can I tell if I have osteoarthritis of the knee?

People with osteoarthritis of the knee joint usually complain that the knee is painful or aching. Your

knee joint may feel stiff at certain times, often in the mornings or after rest. Walking for a few minutes usually eases the stiffness. You may have pain all around the joint or just in one particular place, and the pain may be worse after a certain activity, such as using stairs. The pain is usually better when you rest. It is unusual to have pain in the knee joint which wakes you up at night, except in severe osteoarthritis.

You will probably find that your pain will vary. There may be good days and bad days, or even good and bad months, for no apparent reason. Changes in the weather may make a difference in some people. All joints have nerve endings which are sensitive to pressure. The nerve endings may respond to the drop in atmospheric pressure which occurs before it rains.

How can osteoarthritis of the knee be treated?

There are no cures for osteoarthritis but there are many treatments. Treatment can help to:

- relieve the discomfort and pain;
- reduce the stiffness; and
- reduce any further damage to the joint.

What can I do to help myself?

You can make a major difference to your osteoarthritis of the knee in two ways:

Lose weight (if overweight)

Many people with osteoarthritis of the knee are overweight. Studies have shown that people who lose weight have fewer knee problems in the future than those who do not. Being overweight is also bad for your general health and increases the risk of heart disease, strokes and diabetes. So you should eat a balanced, healthy diet and keep your weight as close as possible to the ideal for your height and age.

Regular exercise of your quadriceps (thigh muscle)

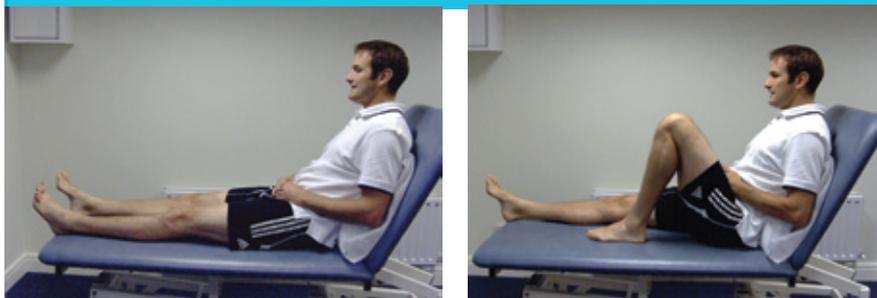
The quadriceps muscles at the front of the thigh become weaker in everyone with osteoarthritis of the knee, because the normal nerve supply to the muscles is reduced. To overcome this it is essential to exercise the quadriceps muscles as often as possible (see exercises on the next page).

It has been proved that strengthening these muscles not only improves your mobility but also reduces pain.



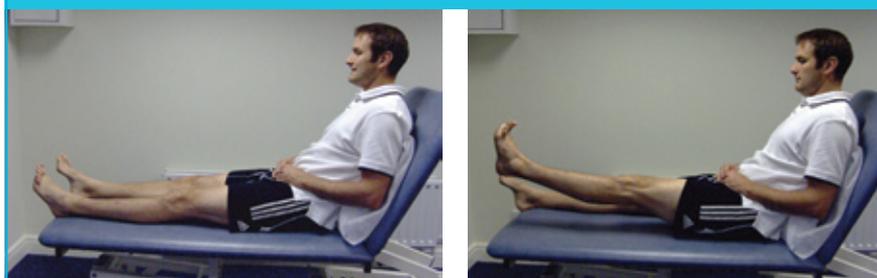
Exercises (these can also be carried out on the unaffected leg)

A Heel slides



- Sitting on your bed, slide your right or left heel up towards your bottom (using a towel to help pull it up if necessary).
- Hold for 10 seconds, then straighten leg pushing knee down into the bed. Hold for 10 seconds.
- Repeat 10 times. Perform 2-3 sets of exercise a day.

B Straight leg raise



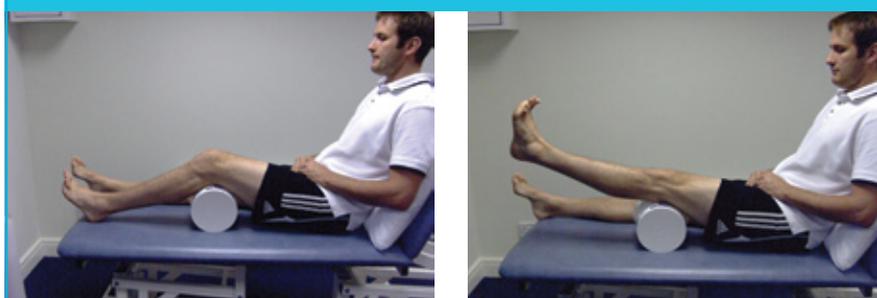
- Sitting on your bed, keep your right or left leg as straight as possible then lift your leg up approximately 15cm.
- Hold for 10 seconds.
- Repeat 10 times.
- Perform 2-3 sets of exercise a day.

C Through range quads



- Sit on a chair with a weight tied around your right or left ankle then straighten your knee.
- Hold for 10 seconds.
- Repeat 10 times.
- Perform 2-3 sets of exercise a day.

D Inner range quads



- Sit on your bed with a towel rolled up behind your right or left knee.
- Tighten your quads muscle then straighten your leg.
- Hold for 10 seconds.
- Repeat 10 times.
- Perform 2-3 sets of exercise a day.

Help us get it right

If you have any complaints, concerns, comments or compliments please let us know. We learn from all comments we receive and use the information to improve our services.

If you have a concern, please speak to a member of staff at your clinic or health centre. If you would rather talk to someone outside the service, you can contact PALS.

Patient Advice and Liaison Service (PALS)

PALS provides confidential non-medical advice about local NHS services. Call freephone 0800 0525 270, Monday to Friday 8.30am–4.30pm.

If the information above does not help, you may benefit from physiotherapy so ask your GP to refer you if they think it is appropriate.

We can make this information available in Braille, large print, audio or other languages.