

Osteoarthritis of the Knee

Osteoarthritis can affect any joint in the body but is more common in joints in the lower limb weight-bearing joints, e.g. hip and knee.

Anatomy

A joint is formed where two bones meet. The ends of the bones, which form the joint, are covered in articular cartilage. This provides a smooth, slippery and low friction surface that also cushions the joint. Healthy cartilage absorbs stress and allows the bones to glide across each other smoothly.



Osteoarthritis

The word arthritis means joint inflammation. Also known as 'degeneration' or 'wear and tear' arthritis, osteoarthritis is the most

common type of arthritis and develops over a long period of time.

It affects the articular cartilage, which can start to wear away. Pieces of cartilage may become loose and float inside the joint, causing further irritation.

Risk Factors

No-one knows for sure what causes osteoarthritis but some risk factors include:

- Previous knee injury, e.g. meniscal cartilage tear or ligament injury.
- Family history of osteoarthritis.
- Being overweight.
- Increasing age.
- Alignment; e.g. 'bow legs' or 'knocked knees'.

Symptoms

Some or all of the following:

- **Pain** – on weight bearing activities, and pain that disturbs the sleep.
- **Stiffness** – especially in the morning and after prolonged rest. Limited knee bend or straightening.
- Reduced function – **difficulty with everyday activities**, e.g. reduced walking distance, difficulty with stairs.
- **Swelling** – around the knee joint; especially after activity.

Treatment

There is no cure for osteoarthritis and it is not possible to reverse the changes that have occurred. Treatment aims to reduce the symptoms and help you to adapt your lifestyle and to control the symptoms better.

Non-surgical options include:

- Regular **pain medication**; painkillers, anti-inflammatories and topical gels or creams.
- **Exercises** to maintain joint movement and muscle strength (see over).
- **Walking aids** to reduce stress on the joint.
- **Physiotherapy** may help to improve range of motion, swelling and muscle strength.
- **Weight loss** – being overweight places more stress on your joints and other forms of treatment may not have any lasting benefit until sufficient weight is lost.
- Shoe inserts that help to cushion the joints or shoes that have thick soft soles that act as a shock absorber.
- Modification of activities to reduce pain, e.g. using chair arms to get up from the chair and using banisters on stairs to reduce the load on the knees.
- Heat – this may be effective in relieving pain from the joint, but should not be applied if the joint is warm or grossly swollen. Heat can be applied either by a hot bath, hot water bottle or heat lamp.

Exercise

Muscles weaken around the knee due to the pain and reduction in function that osteoarthritis can cause.

Non-weight bearing exercises can also be tried as these put minimal stress on the knee joint, e.g. swimming and cycling.

You may experience more discomfort on commencing these exercises, however, this is perfectly normal and does not mean you should stop.

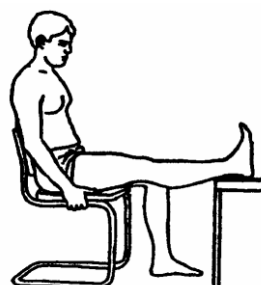
If your symptoms remain worse for more than 2 hours after completing the exercises then you should decrease the number of repetitions of each exercise accordingly.

You may find that **little and often** is easier than one or two longer sessions. The following are exercises designed to maintain and improve your knee range of movement, muscle strength and relieve pain. They should be performed at least once a day.



Sitting on the bed, place a sock on your foot. Place a slippery board/tray under your foot and a band around it. Bend your knee as far as

possible. Gently pull the band to bend a little more. Hold 5 seconds. Repeat 10 times.



Sit on a chair with the heel of your operated leg on a stool. Allow your knee to straighten as much as possible for 10 seconds. Repeat 10 times. You can gently

press down on your knee with your hands to stretch a little further.

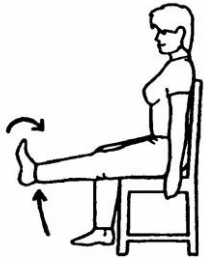


Lying on your back or sitting with legs straight. Pull

your toes up towards you and push your knee down firmly against the bed. Hold 5 seconds. Repeat 10 times.



Lying on your back. Lift your leg 6 inches, keeping your knee straight. Hold 5 seconds. Repeat 10 times.



Sit on a chair. Pull your toes towards you, tighten your thigh muscle and straighten your knee. You can add a small weight over the ankle to make the muscle.

Further information on the management of osteoarthritis can be found here:

NICE guidelines:

<https://www.nice.org.uk/guidance/cg177>

Arthritis Research UK:

<https://www.versusarthritis.org/about-arthritis/conditions/osteoarthritis-of-the-knee/>

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If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

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