

Management of knee osteoarthritis

Patient information leaflet



Physiotherapy Service

Management of knee osteoarthritis (OA)

Osteoarthritis (OA), sometimes known as degenerative joint disease is the most common type of arthritis.

OA mostly affects cartilage, the tissue that covers the ends of bones where two bones meet to form a joint. When joints move, the healthy cartilage allows the bones to smoothly glide over each other. The degenerative process of OA causes the cartilage to become thinner. Over time, the joint may lose its normal shape and small deposits of bone, called osteophytes, may grow on the edge of the joint. Inflammation may be a normal part of this degenerative process, which can increase knee pain. OA predominantly affects the hips, knees and hands and is a normal part of the ageing process. Our hair going grey is a visible sign of ageing; our joints also go grey! The following information is designed to help you understand the condition of OA, what causes it, ways to help manage the associated pain and to improve your daily function. It has not been designed to be read on its own - it should have been provided to you by your physiotherapist who will explain each section in greater detail and answer any further questions you may have.

The management of knee OA places a large emphasis on the benefits of exercise and this is reflected in the content of this information. You are encouraged to attend exercise classes or groups that your physiotherapist may recommend.

Presentation of osteoarthritis

OA usually comes on gradually. In the early stage of the disease your joints may ache after physical work or exercise. Later on, you may also have periods of time when the aches and pains from your joints are more, or less, severe. Or, the joint pain may become more persistent. There may be joint stiffness, particularly when you first wake up or when you have been in one position for a long time.

Daily tasks such as walking, going up and down stairs, moving from sit to stand or getting in/out of a bath may be limited by knee pain.

Risk factors

Risk factors for OA include:

- increasing age (>45 years)
- previous joint injury
- genetic factors (family history)

Different people will experience the symptoms of OA differently. You will have periods when your joints are relatively comfortable, and periods when they are less comfortable and the joint is more painful when walking and completing daily tasks. X-ray examination may show signs of joint degeneration. An x-ray, however does not tell us how this degeneration will affect you. Some people will show severe degeneration on x-ray though have minimal knee pain. Other people may show minimal signs of degeneration on x-ray though suffer from severe knee pain. NICE guidelines⁴ recommend that diagnosis of knee OA is made clinically, an x-ray is not always necessary.

Symptoms

The following may be symptoms that you have already experienced:

- pain
- joint stiffness - tends to be worse in the morning and eases over 1-2 hours
- swelling
- joints may become enlarged due to bony changes
- a decrease in mobility
- crepitus- cracking or creaking sounds upon movement of the joints
- ligaments may become lax

Ways to help manage OA of the knee

It is not all bad news! There are many ways that you can help to reduce the pain that you feel from your knee joints and to help improve your daily function. One of the most effective ways to do this is with exercise.

Exercise

Exercise is inexpensive and has few negative side effects. Exercise may sound the wrong thing to help your knee pain though it has been shown strengthening the muscle and maintaining joint movement results in reduced knee pain and improved function. General aerobic and leg muscle strengthening are both recommended in NICE guidelines⁴.

Walking, swimming, light gym activities, aqua-aerobics and tai-chi are a few types of exercise that can be beneficial.

Exercise should be enjoyable and you should want to keep practising. If an exercise feels unsafe or hurts a lot then don't do that exercise - choose something a little easier. It **does not** mean that all exercise is bad for you.

Weight Control

There is some evidence that a program of weight loss can achieve small improvements to pain and function in people with knee OA^{1,4}. Weight loss may:

- reduce stress on weight bearing joints
- limit further injury
- increase mobility

A healthy diet and regular exercise help to reduce weight. As well as helping with weight control, a healthy diet may help to reduce the effects of OA. Inflammation, and the associated pain, may be increased by saturated foods, some processed foods, some margarines and processed oils³. Monosaturated

fats may help to reduce the inflammatory effects of OA. Examples of monosaturated fats include olive oil, olive oil based margarines and blended vegetable oils.

Fish oils, such as those found in sardines, mackerel, herring, tuna and salmon may also help to reduce joint inflammation.

Medications

Paracetamol and anti-inflammatory medications (NSAIDs) are traditionally used for pain relief in knee OA. However, NICE Guidelines are currently undergoing a review of the most appropriate painkillers for use with knee OA. The use of these medications should always be discussed with your GP or pharmacist.

Food Supplements

Food supplements such as chondroitin and glucosamine sulphate are readily available from health food shops and supermarkets. You should always check the label to ensure they are safe for you to use however they are believed to have few side effects. Many people choose to take these supplements, but there is a lack of clinical evidence to support their use in the management of knee OA².

Aqua-Aerobics

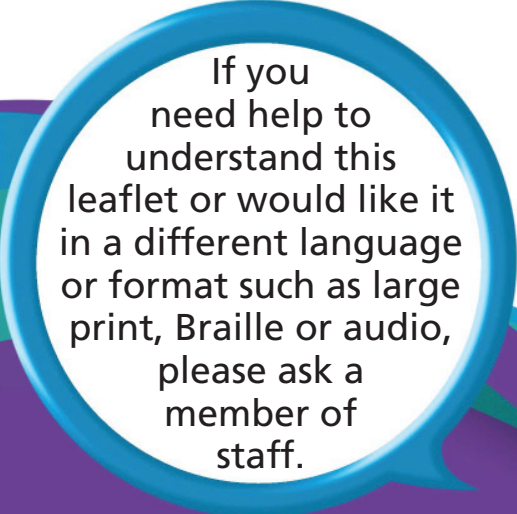
There is some evidence that water based exercise can provide moderate, short-term improvements in function and quality of life. However, your knee pain may remain the same.¹

Ultra-sound, TENS, acupuncture

The evidence to support the use of TENS, acupuncture or ultra-sound therapy for the management of knee OA^{1,4} is generally poor quality. There is therefore no evidence or uncertain evidence to support the use of these treatment techniques.

References

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