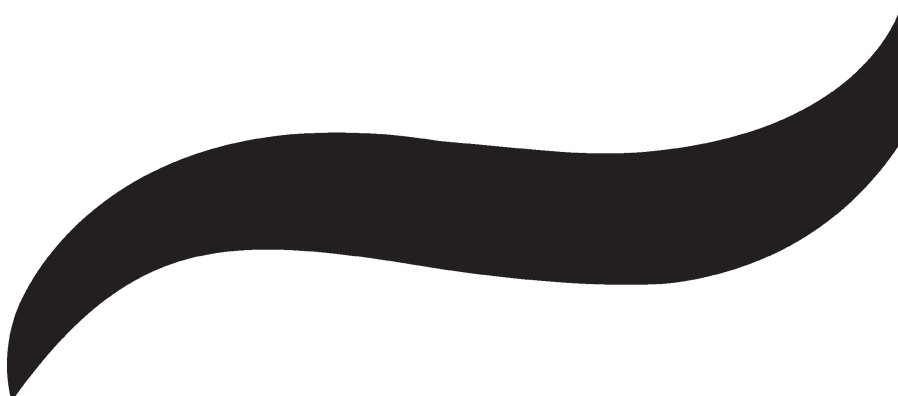




Knee Osteoarthritis

Information for patients
Physiotherapy



WHAT IS OSTEOARTHRITIS?

Osteoarthritis is a condition that affects some joints causing pain and stiffness. The knee is one of the most commonly affected joints.

When a joint develops osteoarthritis some of the cartilage covering the joint surfaces can gradually roughen and become thin. The bone underneath the cartilage then reacts by growing thicker and becoming broader, which can result in swelling and restricted joint movement.

These changes in and around the joint are partly the result of the inflammatory process and partly your body's attempt to repair the injured area. In many cases, the body can repair the injured area with time. However, in other cases the body repair doesn't work as well, leading to more pressure on other parts of the joint, which can gradually worsen over time.

Osteoarthritis is more common as people get older and in those who are overweight.

HOW COMMON IS OSTEOARTHRITIS?

Approximately 5% of people between 35 and 54 years of age have osteoarthritis. Many of these people have injured their joint earlier in life.

Approximately 30% of the population between 50 and 70 years of age have problems related to osteoarthritis and the percentage increases in older age groups

WHAT ARE THE SYMPTOMS OF KNEE OSTEOARTHRITIS?

- ❖ Pain
- ❖ Stiffness (especially in the first 20 minutes of the morning)
- ❖ Weakness of the thigh muscle
- ❖ Swelling
- ❖ Reduced function (for example walking long distances, getting out of chair, climbing stairs)

You will probably find that your symptoms change from day to day. This may depend on how busy or active you are. Sometimes there can be no obvious reason for changes in your pain. Symptoms of osteoarthritis are influenced by many factors unique to each person.

DIAGNOSIS

There is no one special test to diagnose osteoarthritis, so your GP/Physio will ask about your symptoms and examine your joints to help determine whether you have osteoarthritis.

Your GP/Physio may suspect osteoarthritis if:

- ❖ you are 45 years of age or older
- ❖ you have joint pain that gets worse the more you use your joints
- ❖ you have stiffness in your joints in the morning that lasts less than 30 minutes.

X-RAY

X-rays are a type of radiation used to create images of the body. The dose of radiation used for examining the knee is very low and as such knee x-rays don't pose a risk to health.

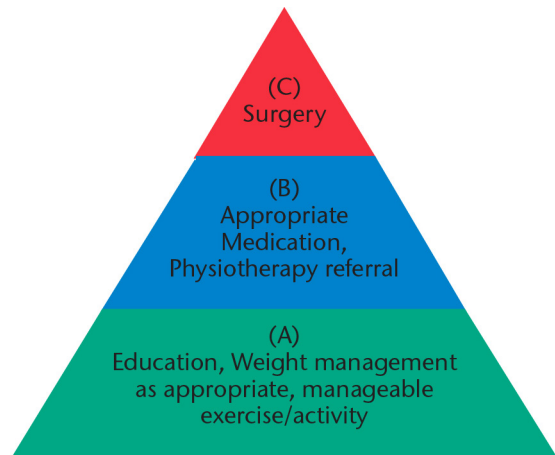
Often an x-ray is not needed to reach a diagnosis, but the pictures can be useful in excluding other causes of knee symptoms. They are also needed if surgery is being considered.

Narrowing of the knee joint as well as changes to the bones around the knee joint are particularly well shown by x-rays. Tendons, ligaments and joint cartilage cannot be directly seen.

WHAT CAN HELP WITH OSTEOARTHRITIS OF THE KNEE?

For Knee Osteoarthritis the majority of people do not require surgery and simple basic treatment is recommended:

- (A) GREEN: The majority of people find the advice, exercise and weight management as appropriate help
- (B) BLUE: A large number of people find the advice, physiotherapy and medicines help.
- (C) RED: A very small number of people will need an operation.



There is no cure for knee osteoarthritis however there are many strategies that can be tried to manage and help your symptoms.

- 1) Footwear - The use of good footwear may help with lowering pressure on the knee joint which can help reduce pain. High heels or wedge typed footwear should be avoided.
- 2) Positioning - Avoid sitting in low chairs as this can be more difficult to stand up from. Placing a pillow or cushion in-between your legs in side sleeping can help reduce pressure on your knees.
- 3) Walking aids- there are many different walking aids available which can help a person's walking. A physiotherapy assessment will help to provide the correct walking aid for you, for example a walking stick or crutch can help ease knee pain when walking. This means you might be able to walk for longer.

PHYSIOTHERAPY EXERCISES

Regular physiotherapy exercises can help keep joints moving. Exercise can also help build-up the muscles which support your joints and improve your balance.

In the pages below are some exercise varying from easy in the early stage to hard in the later stage. Completing these exercises most days is encouraged in order to give the joint a chance to adjust. You should feel improvements in pain and your ability to move after 8-12 weeks of doing a progressive exercise programme.

Additional physiotherapy intervention may be required but these exercises are a good starting point. Not all exercises may suit everyone, therefore it is important to begin with the easiest and progress as able.

It is okay to feel discomfort during activity and exercise especially if you are starting something new. Your body will get stronger and it is not harmful to your knee.

Physiotherapy Exercises - Early



Lie on your back for example on your bed with your legs straight, push your knee downwards in to the bed contracting your

thigh muscle, this should make the muscle at the front of your thigh tight.

Hold for between 5 and 45 seconds and then relax.

Repeat this 5- 10 times, 1-3 times a day



Lie on your back, for example on your bed with your legs straight in front of you gently slide the heel of the affected leg towards

your bottom bending your knee and hip.

Repeat this 5-10 times, 1-3 times a day

Physiotherapy Exercises - Middle



Lie on your back with your knees and feet hip width apart. Rock your pelvis towards you to prevent your lower back from arching.

Squeeze your bottom muscles and push through your heels to lift your hips up off the ground. Pause when your hips are in line with your knees. Slowly control the lowering of your hips to the ground.

Perform every second day. Start by doing 3 sets of 5 and continue to progress your reps and sets to keep the exercise challenging.



Stand with feet slightly wider than shoulder width apart with your hands on a supportive surface. Stick your bottom out and allow your knees to bend, lowering yourself by a small amount. Push your weight through your heels and

squeeze your buttock and thigh muscles and return to the starting position.

Repeat this 5-15 times, 2-3 times every second day. You can increase the difficulty of your exercise by reducing hand support.



Stand holding on to a stable surface for example a chair or worktop, lift one leg gently off the floor, you can bend the knee behind if required and stand on one leg keeping your balance.

Begin with 10 seconds and increase the time as able. This may be increased up to 3 times a day as pain allows



Stand in front of a step. Place one foot firmly on the step. Push down through your foot straightening your knee and bring the opposite foot onto the step to stand up straight. Step your foot back off the step onto the floor and bring your other foot back down beside it.

Ensure that your toes and knees point forward throughout the exercise.

Repeat this exercise 5-15 times and then swap legs. Perform this exercise 2-3 times every second day. If you feel you need support, please hold onto a stable surface. You can make this exercise harder by stepping onto a higher step or by holding some light weights in your hands such as a tin of beans or across your chest.



Stand with feet hip width apart. Take a step backward with one leg.

Lower your back knee towards the floor. While lowering yourself don't let your front knee come over your toes.

Push down through the foot of your front leg to return to the starting position. Use hand support if needed. Ensure that your toes and knees point forward throughout the exercise. Keep your body upright and looking forwards, avoid looking at your feet.

Repeat this 5-15 times, up to 3 times a day.

To make this exercise more challenging you can reduce hand support.

GENERAL PHYSICAL ACTIVITY

Many people with Osteoarthritis are worried about exercise as they are afraid that this will cause further damage to their joints. However, joints are designed to move and inactivity can cause stiffness and weakness. Exercise will also have a positive effect on general fitness. This is best done in liaison with your physiotherapist or GP.



Exercise is safe and has the following benefits for people with Osteoarthritis.

- ❖ Eases stiffness and promotes flexibility
- ❖ Improves and maintains muscle strength
- ❖ Helps general fitness, controls weight, easing pressure on joints
- ❖ Release of ‘feel good’ endorphins, the body’s natural painkillers
- ❖ Reduces symptoms of anxiety and depression.

Ideally you should aim to do 30 minutes of exercise, five times per week. This may be difficult at first so you could start with three or four 10 minute sessions. It is important to start gently and gradually increase the length of time you’re exercising. Different types of exercise could include walking, swimming, cycling, yoga, Tai Chi or Pilates. Your GP or physiotherapist can guide you on the type and level of exercise which is right for you.

WHAT DO I DO IF MY SYMPTOMS FLARE UP?

Flare ups of pain are common. This is when your pain suddenly becomes very bad for a time. Some people have a lot flare ups of pain so it is important to know how best to manage these flare ups. In most cases a pain flare-up will settle within 6 weeks.

TOP TIPS

- ❖ You will likely find it helpful to rest a bit more but it is still important to keep active. This will help to avoid becoming stiff and your muscles becoming weak.
- ❖ If you aim to get a balance between rest and activity it should help your pain to settle down. You may be sore at first, however, start slowly and gradually increase the amount you do.
- ❖ Reduce movements or tasks that make your symptoms worse. This can help especially in the early days.
- ❖ Finding positions or movements that reduce your pain can be

WEIGHT MANAGEMENT

A good indicator of whether you need to lose weight is your body mass index (BMI). You can check this here:

<https://www.nhs.uk/live-well/healthy-weight/bmi-calculator/>



TOP TIPS

If your BMI states you are overweight or obese it is likely that losing weight will reduce your symptoms. Carrying extra fat also increases your risk of heart disease, stroke, type 2 diabetes, and some cancers. Reducing your portion sizes and eating a balanced diet can be helpful in reducing weight. Click on this link for NHS informs online free 12-week weight management programme to get you started right away.

<https://www.nhsinform.scot/healthy-living/12-week-weight-management-programme#Week1>

If you need a little more help and feel that you would benefit from working with others in group sessions NHS Lanarkshire's Weigh to Go programme will help you become more active, eat well and lead a healthier lifestyle. Follow this link for Weight-to-go groups in North and South Lanarkshire:

<https://www.nhslanarkshire.scot.nhs.uk/weigh-to-go/>

ANALGESIA

- ❖ Analgesia also known as pain relief can be an important part in helping you manage your symptoms and allow you to stay active.
- ❖ Taking the right kind of pain relief regularly allows you to move more normally and continue your usual activities without causing any damage. Pain relief won't always stop your pain completely. For this reason we use the term pain relief (A 30-50% reduction in pain would be a good success).
- ❖ Pain relievers/ anti-inflammatory medications can be used as advised by your GP or Pharmacist. If you feel the ones you usually take are not helping your pain or you have any side effects from your medicines, please speak to your GP or pharmacist.

CORTICOSTEROID INJECTION

Steroid injection is a medicine that is injected into the joints. This is known as intra-articular injection.

Steroid injections can be effective but should be used with other treatments. There is also some evidence that steroid injections may be either completely ineffective or effective for just a relatively short period of time (2-3 months). The side-effects from steroid injections are uncommon. However, the injected area may be sore for the first few days after the injection.

Steroid injections alone are not the best way to manage the long term symptoms you have from knee osteoarthritis. You can discuss this further with your doctor or physiotherapist.

SMOKING

Smoking can affect how your body recovers from musculoskeletal problems. If you smoke then the good news is that by stopping smoking it can improve your health in many different ways. Giving up smoking is not something you have to do on your own. You're twice as likely to stop smoking successfully if you get the right support from the NHS. There is a free NHS stop smoking service available in Lanarkshire to help you succeed: **<https://www.nhslanarkshire.scot.nhs.uk/services/quit-your-way/>**

CHRONIC PAIN

Some people will have pain which persists beyond the expected time frame for their condition. For further information on this and how best to manage it please visit **<https://www.nhslanarkshire.scot.nhs.uk/services/chronic-pain/>**

Pain association Scotland is a national charity that delivers professionally led self-management pain education in the community. For more information please click on the following link: **<https://painassociation.co.uk/>**

OSTEOARTHRITIS CHECKLIST

- ❖ Set some goals important to you
- ❖ Gradually start exercise and continue to increase
- ❖ Try reducing your portion size and eating healthier foods if you need to lose weight
- ❖ Discuss pain relief with your GP or pharmacist if you feel this is needed

WHEN TO SPEAK TO A HEALTH PROFESSIONAL?

If your symptoms continue to persist or get worse after considering this advice, it may be appropriate to speak your GP or Physiotherapist for further advice and management on your condition.

If your symptoms continue to worsen or do not show signs of improvement after a period of 6-12 weeks of following the advice above, a self-referral to physiotherapy can be made on our website:

<https://www.nhslanarkshire.scot.nhs.uk/services/physiotherapy-msk/> or via your GP.



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