



Bòrd SSN nan Eilean Siar
NHS Western Isles

Physiotherapy Department

Knee Osteoarthritis



An Information Guide for Patients and Carers

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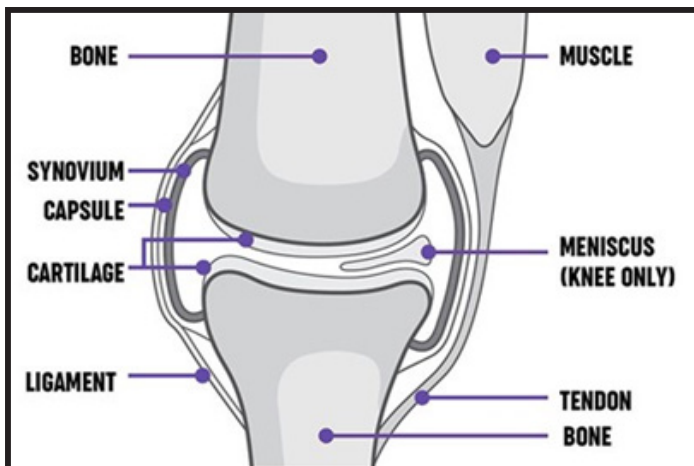
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What is osteoarthritis?

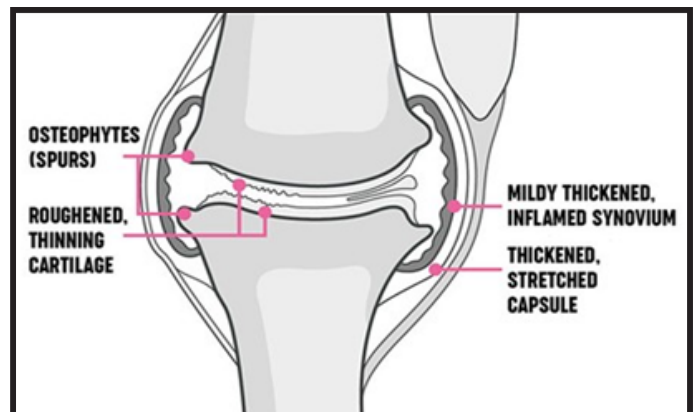
This booklet is designed to give you some useful information following your diagnosis of knee osteoarthritis.

Osteoarthritis is a very common condition which can affect any joint causing pain, and stiffness. It's most likely to affect the joints that bear most of our weight, such as the knees, as they have to take extreme stresses, twists and turns, therefore osteoarthritis of the knee is very common.

A normal knee joint



A knee joint with mild osteoarthritis



In a healthy joint, a coating of smooth and slippery tissue, called cartilage, covers the surface of the bones and helps the bones to move freely against each other. When a joint develops osteoarthritis, the bones lose their smooth surfaces and they become rougher and the cartilage thins. The repair process of the cartilage is not sufficient as we age.

Almost all of us will develop osteoarthritis in some of our joints as we get older, though we may not even be aware of it. Often the joint will continue to work normally and without any pain or stiffness.

However, there may come a point when the repair processes don't always work so well and changes to the joint structure can sometimes cause you to experience symptoms such as pain, swelling or difficulty in moving your knee normally.

Extra bone may form at the edge of the joint. These bony growths are called osteophytes and can sometimes restrict movement or rub against other tissues.

Contributing factors to osteoarthritis

Factors that may contribute in the development of osteoarthritis include:

- Age:** Osteoarthritis becomes more common with increasing age. By the age of 65 at least half of people will have some osteoarthritis in some joints.
- Gender:** Osteoarthritis is more common in women than men.
- Obesity:** Mechanically, obesity increases the pressure on joints that carry the load of the body. Fat also releases many molecules that can cause an increase in inflammation which can affect the joints.
- Genetic factors:** The genes we inherit can affect the development of osteoarthritis if your parents, brothers or sisters have it.
- Other:** Normal activity and exercise don't cause osteoarthritis, but very hard, repetitive activity or physically demanding jobs can increase your risk.

Diagnosis and symptoms

Symptoms

Symptoms of knee osteoarthritis can include:

- pain and stiffness in the knee
- swelling and inflammation
- the knee joint may look bigger and more knobbly than usual
- there may be restriction in the movement of the knee joint and you may hear grating or crackling sounds as you move it
- sometimes the muscles around the joint may look thin or wasted
- the joint may give way at times because your muscles have weakened or because the joint structure has become less stable
- if you have severe osteoarthritis, you may find some of your daily activities more difficult; such as stairs, kneeling or walking long distances
- more severe osteoarthritis can also make it difficult to sleep.

You may experience some or all of these symptoms and your symptoms may vary for no apparent reason with bad spells from anything from a few weeks to months and then better periods.

Diagnosis

The diagnosis of osteoarthritis is usually based on assessment of the following symptoms including:

- how and when they started
- how they've developed
- how they affect your life
- any factors that make them better or worse as well as physical signs for examination of the knee.

X-rays will show degenerative changes in most people over the age of 40. Your symptoms will be the deciding factors in diagnosing osteoarthritis.

Your doctor may refer you to specialist help if needed to manage your osteoarthritis. This might be for physiotherapy or occupational therapy, which can help if you're having difficulty with everyday activities.

If your arthritis becomes severe and is causing long-term problems, your GP may refer you to an orthopaedic surgeon

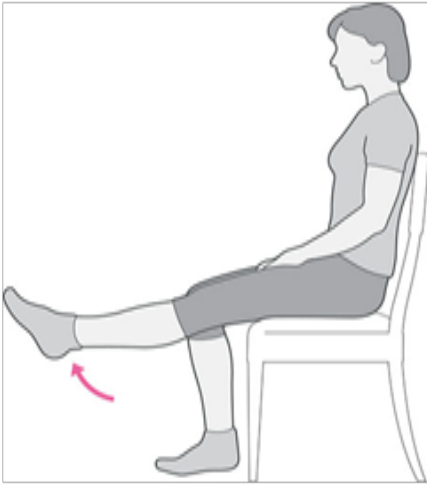
Flare up of symptoms

If you are experiencing a flare up of your symptoms:

- keep your knee moving so it doesn't stiffen up
- use ice or heat packs to help to manage your pain as well as taking regular pain relief
- gentle exercises to keep the thigh muscles working, to help prevent the muscles from weakening.

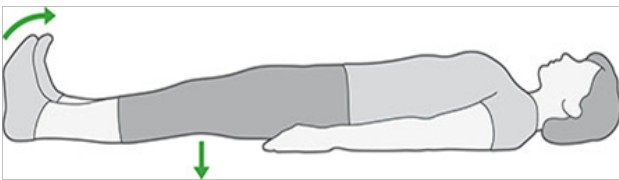
Gentle thigh exercises for flare ups

1. Knee Flexion/Extension



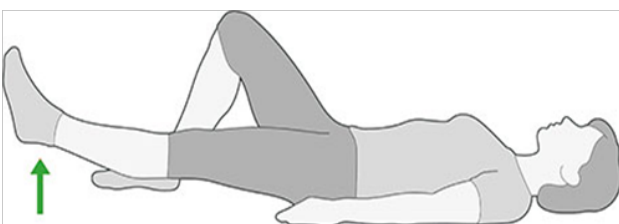
- Sit on a chair with your feet on the floor
- Bend your knee back as much as possible then straighten it out.
- Repeat 10 times.

2. Static Quads



- Lie flat on a bed or on the floor, keeping your legs straight.
- Pull your toes towards you, while pressing your knee towards the floor or bed.
- Hold for 5 seconds and relax.
- Repeat 5 times.

3. Straight Leg Raise



- Lie flat on a bed or on the floor.
- Bend one leg at the knee. Hold your other leg straight and lift your foot just off the floor or bed.
- Hold for a slow count of 5, and then lower.
- Repeat 5 times with each leg.

Repeat exercises 2-3 times a day. Gradually build up the exercises. As you are able, either hold the exercise for longer or increase the number of repetitions.

During a flare up, if you are struggling with gentle walking you could try walking in the swimming pool, or some gentle cycling on an exercise bike.

Living with osteoarthritis

How will osteoarthritis affect me?

Osteoarthritis affects different people in different ways. For most people, osteoarthritis doesn't continue to get steadily worse over time.

For some people, the condition reaches a peak a few years after the symptoms start and then remains the same or may even improve. Others may find they have several phases of moderate joint pain with improvements in between.

The degree of damage to a joint isn't very helpful in predicting how much pain you'll have. Some people have a lot of pain and mobility problems from a small amount of damage, while others have a lot of damage to the joint but few or no symptoms

What you can do to help yourself?

Although there's no cure for osteoarthritis, there are many things you can do to manage your symptoms and allow you to get on with your life.

Reduce stress on your knee joints

- If you're overweight, then losing even a small amount of weight can make a big difference to your symptoms
- Wear low heeled shoes, avoid high heels as they alter the angle of your knees and put more strain on them. Wear footwear with cushioned soles or insoles like trainers. Thicker soled shoes act more like shock absorbers
- Pace your activities – avoid doing too much in one day especially physical jobs
- Keep joints moving – avoid being in one position for too long to prevent your knee becoming stiff
- Use a walking stick to off load the weight going through your knee.

Exercise

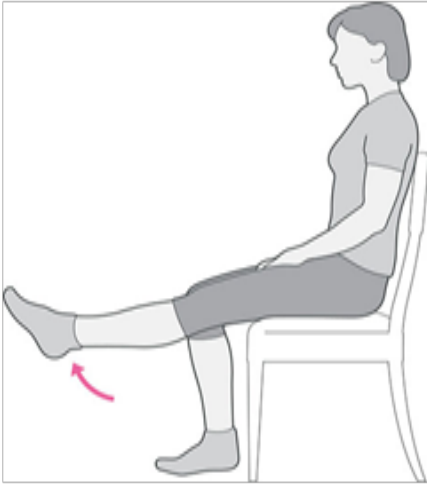
Many people worry that exercising will increase their pain and cause further joint damage. However, while resting painful joints may make them feel more comfortable at first, too much rest can increase stiffness. It is important to find the right balance between rest and exercise.

Range of movement exercises

The following exercises involve taking joints through a range of movement which should feel comfortable, with the aim to smoothly and gently ease them just a little bit further.

Range of movement exercises

1. Knee Flexion/Extension



- Sit on a chair with your feet on the floor. Bend your knee back as much as possible then straighten it out.
- Repeat 10 times.

Your thigh muscles (quadriceps) can weaken as a result of osteoarthritis. Weak muscles put more pressure through your knee joint. These exercises are performed against some form of resistance to strengthen the muscles that move and support your joints.

2. Inner Range Quads (sitting)



- Sit well back in a chair, with your back straight, shoulders back and head level.
- Straighten and raise one leg. Hold for a slow count to 5, then slowly lower your leg.
- Repeat this at least 10 times for each leg.

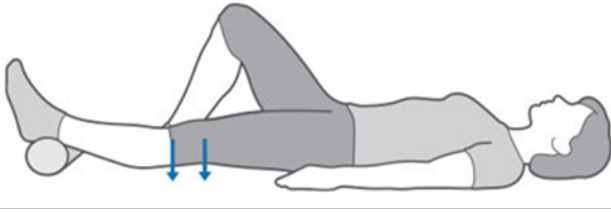
As the exercise becomes easier, try it with light ankle weights and pull your toes towards you, so you feel a stretch at the back of your lower leg.

3. Straight-leg Raise



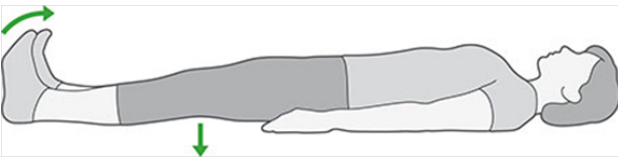
- Lie flat on a bed or on the floor.
- Bend one leg at the knee. Hold your other leg straight and lift your foot just off the floor or bed. Hold for a slow count of 5, then lower.
- Repeat 10 times with each leg every morning and evening.

4. Muscle Stretch



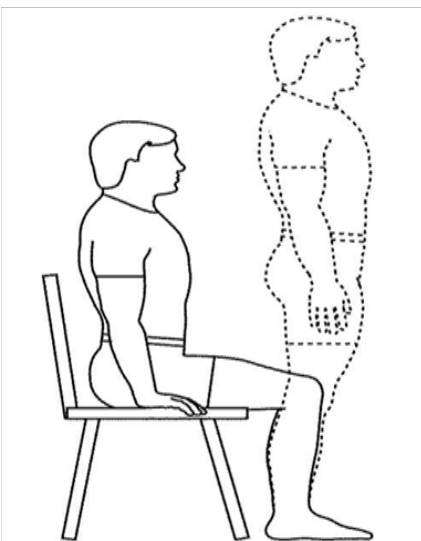
- Lie flat on a bed or on the floor.
- Place a rolled-up towel under the ankle of one leg and bend the other leg at the knee.
- Use the muscles of your straight leg to push the back of the knee towards the bed or the floor.
- Hold for a slow count of 5. Repeat at least five times with each leg.

5. Quad Exercise



- Lie flat on the floor or a bed, keeping your legs straight.
- Pull your toes towards you, while pressing your knee towards the floor or bed.
- Hold for five seconds and relax. Repeat five times.

6. Sit to Stand



- Sit with your arms crossed.
- Stand up and then sit down slowly on a chair. (Note. this can be made easier and more difficult by changing the height of the chair).

7. Step Ups



- Stand in front of a step.
- Step up 10 times with one leg leading and then repeat with the other leg leading. (20 times in total with both legs)

You shouldn't be afraid to use your joints. If pain makes it difficult to get started with exercise, you could try taking a painkiller.

Other forms of exercise

Physical activity that raises your heart rate and gets you breathing more heavily is also encouraged. This type of exercise burns off calories, so it can help if you need to lose a bit of weight. It can also improve your sleep and help to reduce pain.

Examples include:

- walking, cycling and swimming are all excellent forms of exercise for people with arthritis
- you could also try an exercise bike or cross-trainer
- walking laps in the shallow end of a swimming pool is also great for strengthening leg muscles.

The most important thing is to start gently and build up gradually.

Local sport/leisure centres also run a variety of exercises classes that may be suitable and enjoyable. This is also a good way to introduce yourself to exercise, especially if you have not done any for some time.

Other Treatments

Managing pain

Some people find they can get some pain relief from applying hot or cold packs to their knee. Try applying warmth to the painful joint – or if it's swollen, applying an ice pack may help.

If you are using ice, wrap some crushed ice in a damp towel and place it over your knee for 5-10 minutes. You can do this every 2-3 hours. Make sure you use a damp cloth between your skin and the ice to avoid ice burn.

Or, if you prefer, you could try a heat pack or hot water bottle. Again make sure it is not applied directly to your skin. Use an insulated cover to avoid burns. You can apply the heat for 10-15 minutes three to four times a day.

Useful aids and adaptations

There are aids and adaptations available to help you around the home, and some fairly simple changes can make a big difference and reduce the strain on your joints during your everyday activities

If you're not sure what's available, or how you might be able to reduce the strain on your joints, an occupational therapist will be able to advise you. You can self-refer to Occupational Therapy by emailing: wi.otwesternisles@nhs.scot

As osteoarthritis is a long-term condition, it's important you receive support to help you cope with any issues such as reduced mobility and exercise.

If you feel you need additional support, other than the exercises above, you can self-refer to Physiotherapy via our website www.wihb.scot.nhs.uk/physiotherapy (and click on 'Self Referral' link).

In a small number of cases, where the above treatments haven't helped or the damage to the joints is particularly severe, surgery may be carried out to repair, strengthen or replace a damaged joint.

Surgery

You won't necessarily need a knee replacement if you have osteoarthritis of your knee. Other measures should be trialled first, such as exercises at home, attending a specific knee rehab class and taking regular pain relief.

If your pain is manageable and you don't require much medication, or you are able to manage your symptoms effectively, then you should consider continuing with exercises and leaving surgery to a later date.

If you require surgery, it is important to strengthen your thigh muscles as much as possible, as this will aid your recovery post op.

It is worth noting that 1/5 of patients who have a knee replacement are not happy with the result.

Risks of surgery

As with any procedures, this carries some risks and complications.

Pain: Your knee will be sore after the operation. Pain should improve with time. You may experience pain as a result of complications listed below. Some knees can remain painful after the replacement.



Knee stiffness: Can occur after the operation, especially if the knee is stiff before hand. If you don't do your exercises your knee can become stiff. If the stiffness doesn't improve, you may require manipulation of the joint (under anaesthetic)


Bleeding: Some patients may occasionally need a blood transfusion or iron tablets. Occasionally the bleeding may form a blood clot or large bruise within the knee.

DVT: DVT (deep vein thrombosis) is a blood clot in a vein. The risk of developing a DVT is greater after any operation. Your surgeon may give you medication to try and limit the risk of DVTs forming. You will be asked to wear stockings on your legs.

Infection: The wound site may become red, hot and painful. There may also be a discharge of fluid or pus. It is usually treated with antibiotics. More serious infections can lead to sepsis.

Local groups and activities

Group	Activities offered	Contact
<p>Sandwickhill Studios Stornoway</p> 	<p>Offers over 50s classes to improve fitness, co-ordination, balance, muscle tone and overall wellbeing.</p> <p>Gentle Pilates</p> <p>Balanced Body - Gentle standing class using barre for balance to work on posture, strength, flexibility, balance and co-ordination</p> <p>Groovy Movers - A dance class for Over 50's</p> <p>Zumba Gold - Low impact version of Zumba - all the shimmying and shaking but at a slightly less intense pace. It's low impact so no jumping, and you can take all the moves at your own level. No need for co-ordination - everyone welcome.</p>	<p>Kirstie Anderson</p> <p>Sandwickhill Studios East Street Sandwick Isle of Lewis HS2 0AG</p> <p>Tel. 07715 499552</p> <p>Email: sandwickhillstudios@gmail.com</p> <p>Also view details on Facebook.</p>
<p>Move More</p> 	<p>Keep active, keep well! This class helps keep your heart and lungs healthy, improves balance and strengthens bones and muscles.</p> <p>Offers easy exercises that you can also do at home, good music, a bit of fun and a warm welcome. Move More Western Isles activities aim to have something for everyone (<i>depending on area</i>) including:</p> <ul style="list-style-type: none"> • Gentle Movement Classes • Supported Introduction to Gym Facilities • Easy Aqua • Mobility, Balance and Heart Health Classes • Group Walking • Gardening 	<p>Lewis & Harris</p> <p>Kirsty Wade Tel: (01851) 822 761 or 822800 Email: kirsty.wade@cne-siar.gov.uk</p> <p>Uists</p> <p>Kevin Morrison Tel: 07527 253323, Email: kevin.morrison@cne-siar.gov.uk</p> <p>Barra</p> <p>Lisanne Macinnes Tel: (01871) 810 129 Email: lisanne.macinnes@cne-siar.gov.uk</p>

Group	Activities offered	Contact
<p>Aquafit</p>	<p>A fun filled water based aerobic class combining muscular strength and endurance exercises.</p> <p>Great for anyone with joint or muscular problems. Suitable for all ages and levels of fitness.</p>	<p>Ionad Spòrs Leòdhais Stornoway Tel: 01851 822800 Email: isladminteam@cne-siar.gov.uk</p> <p>Isle of Harris Sports Centre Tarbert Tel: 01859 502970 Email: harrissport@gnes.net</p>
<p>Slainte Mhath Scheme</p> 	<p>The 'Slàinte Mhath' ('Good Health') initiative is a Council funded-scheme designed to encourage the use of Sports Centres from the Butt to Barra.</p>	<p>Stornoway: Ionad Spòrs Leòdhais Tel: 01851 822800 Email: isladminteam@cne-siar.gov.uk</p> <p>Shawbost: Shawbost Swimming Pool Tel: 01851 822879</p> <p>Lionel: Lionel Swimming Pool Tel: 01851 810208</p> <p>Tarbert: Isle of Harris Sports Centre Tel: 01859 502970 Email: harrissport@gnes.net</p> <p>Benbecula: Sgoil Lionacleit Sport Centre Tel: 01870 603693 Email: LionacleitSportsCentre@cne-siar.gov.uk</p> <p>Castlebay: Castlebay Sports Centre Tel: 01871 810129</p>

Further Information

If you require further information, please contact:

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We are listening - how did we do?

We welcome your feedback, as it helps us evaluate the services we provide. If you would like to tell us about your experience:

- speak to a member of staff
- visit our website: www.wihb.scot.nhs.uk/feedback or share your story at: www.careopinion.org.uk or 0800 122 31 35
- Tel. 01851 704704 (ext 2236) or 0797 770 8701 Monday-Friday 10am-4pm (answerphone available).

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