



# Knee Osteoarthritis Service User Information Leaflet

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Produced by Fife Musculoskeletal Physiotherapy Service

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#### What is Osteoarthritis?

Osteoarthritis is a very common condition which can affect any joint in the body. It's most likely to affect the joints that bear most of our weight, such as the knees and feet. Joints that we use a lot in everyday life, such as the joints of the hand, are also commonly affected.

In a healthy joint, a coating of tough but 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, part of the cartilage thins and the surface becomes rougher. This means the joint doesn't move as smoothly as it should.

When cartilage becomes worn or damaged, all the tissues within the joint become more active than normal as the body tries to repair the damage. The repair processes may change the structure of the joint, but will often allow the joint to work normally and without any pain and stiffness. 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.

However, the repair processes don't always work so well and changes to the joint structure can sometimes cause or contribute to symptoms such as pain, swelling or difficulty in moving the joint normally.

#### For example:

- 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. In some joints, especially the finger joints, these may be visible as firm, knobbly swellings.
- The lining of the joint capsule (called the synovium) may thicken and produce more fluid than normal, causing the joint to swell.
- Tissues that surround the joint and help to support it may stretch so that after a time the joint becomes less stable.

#### How it affects the knee

- Joint pain and stiffness / swelling within the joint.
- Muscle weakness of the thigh.
- Feeling of giving way on walking.

## How can osteoarthritis of the knee be treated?

- There is no cure for osteoarthritis. The condition can be successfully selfmanaged in a number of cases.
- Pain or anti-inflammatory medication can help relieve pain.
- Exercise can reduce stiffness, improve muscle strength and improve stability of the knee.

#### What can I do to help myself?

- Use heat (heat pad or wheat bag) or cold (bag of frozen peas) wrapped in a damp towel for up to 20 minutes twice a day.
- Maintaining a healthy weight can help.
- Continue medication prescribed by your doctor.
- Wear supportive footwear with cushioned soles.
- Avoid sitting in one position for long periods.

- Adapt activities which increase your pain or you find difficult.
- · Pace your activities throughout the day.
- Keep active such as walking, swimming and cycling are good forms of exercise.
- Strengthening muscle around your knee will help increase support around your knee.

These exercises can be done on a daily basis, however if your pain increase significantly contact a health care professional.

Exercises 1-4 can be performed either sitting or lying on a bed or couch.

## 1 Flexion / extension

Bend and straighten your leg.



Repeat 5-10 times.

## 2 Static quads

Have your legs out straight.



Bend your ankles and push your knees down firmly against the bed.

Hold 5 secs. Relax. Repeat 5-10 times

## 3 Inner range quads

Bend one leg and put your foot on the bed and put a cushion under the other knee.



Exercise your straight leg by pulling your foot and toes up, tightening your thigh muscle and straightening the knee (keep knee on the cushion). Hold approx 5 secs and slowly relax.

Repeat 5-10 times.

## 4 Straight leg raise

## Have one leg straight and the other leg bent. Exercise your straight leg by pulling the toes up, straightening the knee and lifting the leg 20 cm off the bed. Hold approx 5 secs and slowly relax.

Repeat 5-10 times with both legs.



#### 5 Knee extension

#### Sit on a chair.



Pull your toes up, tighten your thigh muscle and straighten your knee. Hold approx 5 secs and slowly relax your leg.

Repeat 5-10 times.

## For Further Advice:

www.nhsinform.scot/illnesses-and-conditions/muscle-bone-and-joints

Patient Info:

http://www.patient.co.uk/

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www.healthyworkinglives.com