

## Osteoarthritis of the Knee.

### What is Osteoarthritis:

Osteoarthritis affects the joints of the body.

It occurs when the cartilage of a joint becomes damaged and thin.

It is common in the knee as it is a weight bearing joint.

Cartilage is a shiny material that line the joint surfaces. Its job is to protect the joint and ensure that the joint moves smoothly.

When the cartilage becomes thin, this exposes the bone underneath and produces pain. This may also produce some swelling at the joint.

The underlying bone tries to repair the damage by thickening and the joint may change shape.

The muscles around the joint may become stiff and weaken due to the pain and swelling.

### What can I do to help myself?

Reduce the strain on the joint:

- **Weight** – The knee is a weight-bearing joint, therefore if you are over weight this will increase the load on your knee joints. Therefore keeping to your ideal weight is important to reduce this load.
- **Walking aid** – a walking aid such as stick may help to reduce the load on your knee joints.
- **Pace yourself** – think about how you can protect your joints. Spread the tasks that will put pressure on your joints throughout the day and give yourself regular breaks. It may take longer to complete a task but it may feel more comfortable. If possible avoid completely any unnecessary tasks that will place maximum load on your joints.

### Exercise:

- It is important that you keep your knee joints flexible and your knee muscles strong.
- **Movement exercises** – Keeping your knee joint moving is essential for keeping your cartilage healthy. The movement of the knee moves synovial fluid around your joint and this fluid provides essential nutrients to the cartilage in your knee.

### Exercise 1- Range of movement exercise



Lie on your back, or sit with your legs stretched out in front of you.

Bend your knee as far as you can, then straighten it again.

Repeat 10 times.

- **Strengthening exercises** – The quadriceps and hamstring muscles (muscles at the front and back of your thigh) are important in providing strength to your knee joints. Strengthening these muscles helps to protect and stabilise the knee joint.

### Exercise 2 – Static Quadriceps



Either lie on your back or sit with your legs stretched out in front of you, pull your foot up towards you and tighten your thigh muscles, pushing the back of the knee down towards the bed.

Hold for 5 seconds.

Repeat 10 times.

### Exercise 3 – Straight Leg Raise

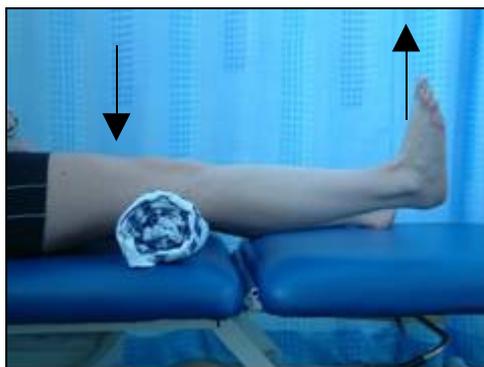


Lie on your back. Pull your foot up towards you, tighten your thigh muscle and lift your leg off the bed about 20 cm/8inches. Make sure you keep your thigh muscle tight and your knee straight.

Hold for 5 seconds then slowly lower your leg.

Repeat 5 times.

#### Exercise 4 – Inner Range Quadriceps



Lie on your back, place a rolled towel under the knee to be exercised.

Pull the foot up towards you and lift the heel off the bed, keeping the back of the knee on the towel.

Hold for 5 seconds.

Repeat 5 times.

#### Exercise 5 – Hamstring curls



Standing, holding on to a support.

Bend your knee lifting your foot off the floor.

Hold for 5 seconds.

Repeat 5 times.

If you have any problems or are unsure of your exercises you should return to see your GP.

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