

## Osteoarthritis of the knee

### Incipient osteoarthritis

Exercises to maintain joint function

information  
**SHEETS**

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#### exercise 1 Strengthening the quadriceps

##### Why is this exercise useful?

- Strengthens the quadriceps muscles against their own resistance (self-resistance) and the hamstrings of the opposite leg.
- Improves the stability of the knee on an anteroposterior level and gives it better balance.

##### How do you do the exercise correctly?

- Sitting, thighs resting entirely on the chair.
- Place one ankle on top of the other.
- Raise the leg underneath and oppose it with the one placed above it.

**TIP**  
Work on the area closest to the extension for the bottom leg.



#### DURATION OF EXERCISES

**Stretching movements:** you can hold the position for several seconds (6-10), stopping if it becomes too painful.  
**Strengthening movements:** you can perform sets of five movements with a longer rest (about twice as long as the duration of the movement). We also recommend that you change position between exercises (from one foot to the other, for example) in order to relax the muscles that have just been working.

#### exercise 2 Strengthening the abductors and the adductors

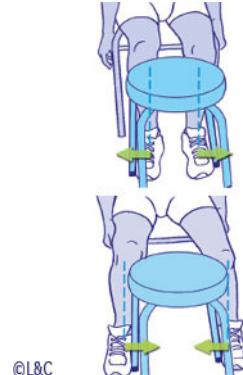
##### Why is this exercise useful?

- Strengthens the vastus lateralis and vastus medialis muscles (located inside and outside of the knee) which ensure the stability of the knee.

##### How do you do the exercise correctly?

- Sitting with a chair placed in front of you.
- Place your toes inside the legs of the chair and trying to push them outwards.
- Repeat the manoeuvre by placing your feet on the outside and pushing inwards.

**TIP**  
Be careful not to move your knees.



#### exercise 3 Stretching the quadriceps

##### Why is this exercise useful?

- Promotes stretching of the muscle at the front of the thigh.

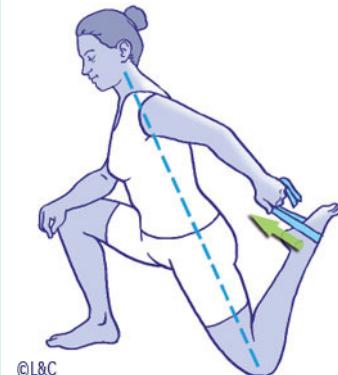
This "spares" the patella and prevents pain when going down stairs.

##### How do you do the exercise correctly?

- Kneeling on one knee, move your foot towards your buttocks using your hand to help you.

*Be careful not to bend over to grab your foot, it is preferable to use a strap.*

**TIP**  
Your upper body should remain straight.



#### exercise 4 Proprioception

##### Why is this exercise useful?

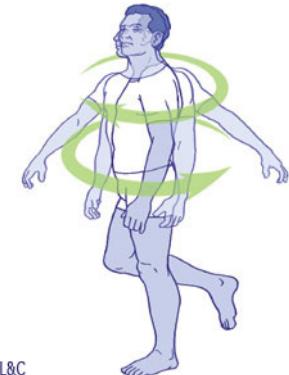
- Tones and strengthens the knee.

The knee is a pivotal hinge joint which means it always has to adapt to changes both of the ground as well as the positions of the body. A toned knee strengthens and helps to spare the other joints (ankles, hips).

##### How do you do the exercise correctly?

- Stand on one foot, leg extended, swing your arms in all directions.
- Do the same thing with your knee flexed (less than 30°).

*You can increase the difficulty by putting a cushion under your foot.*



#### SOME SIMPLE RULES TO FOLLOW DURING THESE EXERCISES

- Work at your own pace, calmly and steadily.
- Breathe during the exercises.
- Do not force it and follow the pause time.
- Gradually increase the number of sets.

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