

Rehabilitation after knee replacement – exercises for the knee

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Knee replacement is quite different from hip replacement. Walking about and doing normal life is enough to rehabilitate a hip, but a knee needs a different approach. A knee replacement needs a steady, persistent approach to exercise, day after day.

To get the best out of your new knee, you need to work!

Exercising the main muscle groups around the knee is very important both before and after having a total knee replacement.

Exercise regularly, for instance for 10 minutes 6-8 times a day. Do not spend all of your time exercising or your knee may become inflamed, swollen and painful. It needs a mixture of rest and regular exercise, which will be to some extent uncomfortable. Taking your painkillers is important here as it will allow you to exercise and get your knee going.

What are you aiming for?

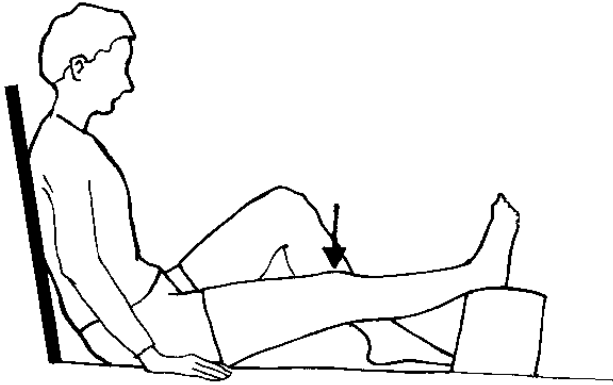
It is important to be exactly clear what you are trying to achieve, so you can tailor your exercises and rehabilitation towards this:

- **A straight knee**
OA knees are often stiff and lose some of their ability to straighten completely as the person holds them slightly bent for comfort. The knee is less stressed in a slightly bent position so we choose this when our knee hurts. If we keep this position up for long enough, the bend becomes permanent and the knee is stiff. The surgeon can correct some of this fixed position in the operation but there may be more work to do to get the knee completely straight after the operation.
- **A strong knee**
The main knee muscle on the front of the thigh keeps your knee stable when you put your weight on it. It pushes you up stairs and out of a chair and allows you to sit down in a controlled manner. Your muscle must be strong enough to fully straighten your knee under load, right to the end of the movement. This gives you good knee control for walking.
- **A good bend**
Your knee is designed to bend to at least 120 degrees and it is useful to have a good range of bending movement. Knees bend to 70 degrees in normal walking and 110 degrees is necessary to go up and down stairs normally. You can manage with much less bend but it is inconvenient.

These exercises are for the initial period immediately after the operation and many more exercises could be appropriate later.

The exercise for a straight knee

Passive knee stretches

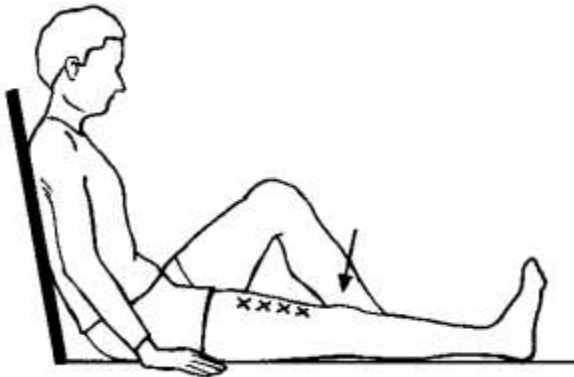


Sit or lie with your leg out in front of you. Put the heel up on a block or pillow so that the knee hangs in mid air. Let the knee stretch for a short time, building up to five minutes or so, or less if it is too painful. This exercise stretches out the tight structures behind the knee which are stopping it going completely straight.

Exercises for knee strength

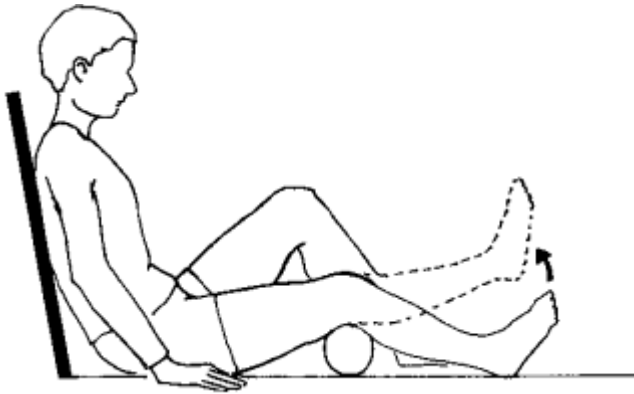
Static quadriceps exercise

This exercise can be done when others cannot, such as when you are out or visiting, standing or just after operation. It activates the large quadriceps muscles at the front of the thigh and helps the knee remain stable when it is close to being completely straight.



To perform: Have the knee straight, tense up the front muscles of the thigh as if you are trying to straighten the knee and lift the heel. Hold for a few seconds then relax. Try not to tense up the buttock muscles or to try too hard. Sometimes doing the exercise with both legs at the same time will give the affected knee the right idea. This is the exercise to do in the early time after your operation.

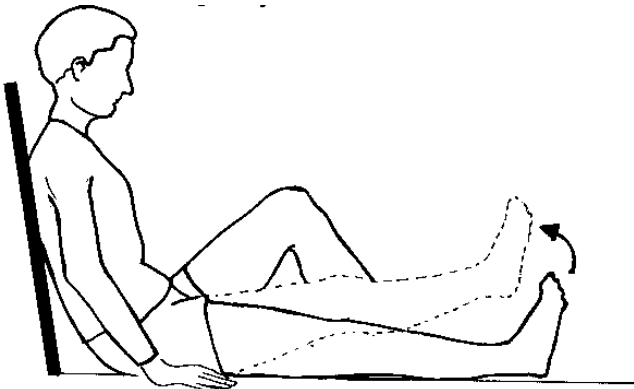
Inner range quadriceps



Sit with your knee bent over a rolled up towel, high enough to be able to lift the heel off the ground. Tighten up the knee muscles and lift your heel off the ground. Keep your knee firmly down on the roll. Hold for a few seconds, trying to get the heel as high as you can, relax and repeat. People with patellar (kneecap) problems may need to avoid this exercise if it causes pain.

I think this is by far the best exercise to do for the strength of your quadriceps, as when you do it, only the correct muscles can be working. If you find it difficult, increase the size of the roll. The bigger the roll the easier the exercise is, so start with a big roll and gradually reduce.

Straight leg raise



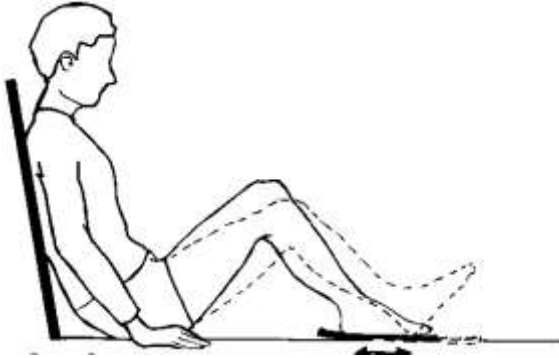
Sit or lie with the leg out straight. Tighten the thigh muscles, straighten the knee and lift the whole leg six inches (15cm) up off the bed or floor. Hold for three seconds then lower slowly.

DO NOT do this if you have a total hip replacement on the same side.

I must confess to not liking this exercise at all, as it stresses the hip muscles more than the quadriceps and is very difficult to do with the weight of the leg.

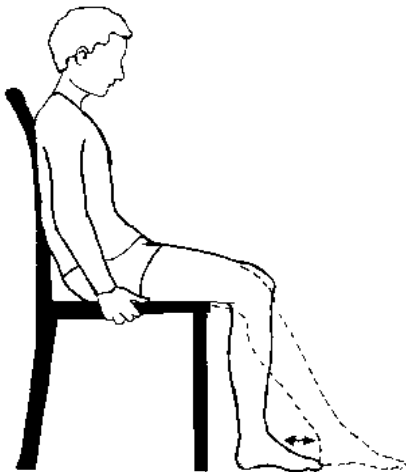
Exercises for knee bending

Knee bends on the bed



You can use a board for this exercise, and at home you can use a tray. Keep the heel down on the board and slide the foot towards you, bending the knee. Hold it at the full bend for three seconds then release.

Knee bends in the chair



Sit in a chair with your foot on the ground. Slide the foot firmly towards you and then release. Hold for three seconds each time in the fully bent position. Do not allow your hips to move, just the foot.

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considered as offering medical advice. If you feel you are ill or have a medical problem you must consult your doctor or physiotherapist.