Supplementary material to article by M. Vuorenmaa et al. "Efficacy of a 12-month, monitored home exercise programme compared with normal care commencing 2 months after total knee arthroplasty: a randomized controlled trial"

APPENDIX SI. Exercise programmes

Central Finland Health Care District
Department of Physical Medicine and Rehabilitation **EXERCISE PROGRAM I** 

## 2 - 3 months after operation

Perform each exercise two sets and 10 repetitions. Then increase the number of repetitions in every training session by 1 -2 up to a maximum of 20 repetitions and then increase the number of sets to three. Do exercises 3 times a week.

Take pain medication as needed about half an hour before training. Use cold treatment before and after training to prevent knee pain and swelling. During training put shoes on your feet. If you have problems on training please contact your physiotherapist.



Cycling 4 - 10 min with low resistance.

Position the saddle so that your knees are not fully extended.



Keep your hands on your chest.
Stand up and then slowly sit down on a chair. At the beginning the exercise can be made easier by putting a pillow on the chair. Do not let your knees turn in or out.





Stand in front of a 20 cm high step.
Step up first with the operated leg leading and then repeat with the other leg leading.
You can take support for example from a wall or from a table



Sit in a chair and put the tip of your shoe against the wall. Push the tip of your shoe against the wall, so that the knee extensor muscles tighten. Hold the tension for 5 seconds. Move the chair closer to the wall, the knee flexes more. Repeat and gradually move the chair a little closer to the wall.





Sit in a chair and press the heel against the chair leg, so that the knee flexor muscles tighten. Hold the tension for 5 seconds. Relax. Move slowly forward on the edge of the chair, so the knee flexes more. Repeat and gradually move toward on the edge of the chair.



Stand with your legs apart and feet parallel. Transfer your weight from one leg to the other.



Stand with your back against a wall and your feet about 20 cm from the wall.

Slowly slide down the wall until your hips and knees are at 45 degree angles. Return to starting position.



Stand near to a table, take support from the table. Rise onto your toes.



To make the exercise more difficult you can do it on one leg.

Central Finland Health Care District
Department of Physical Medicine and Rehabilitation **EXERCISE PROGRAM II** 

## 4-7 months after operation.

Perform each exercise 15 repetitions and 2 sets. Then add 1 - 2 repetitions in every training week up to 20 repetitions and 3 sets.

Always when you are able to do 20 repetitions and three sets add progressively 1 - 2 kg dumbbell weights in your hand and begin repetitions again from 15 and 2 sets.

Do exercises 3 times a week.





Sit with your hands against your chest.

Stand up and then slowly sit down on the chair. The exercise can be more difficult by changing the height of the chair. Do not let your knees turn in or out.





Stand in front of a 30 cm high step.

Step up with the operated leg leading and then repeat with the other leg leading.





Stand with your back against the wall and your feet about 20 cm from the wall. Slowly slide down the wall until your hips and knees are at 60 angels. Return to starting position.

Central Finland Health Care District
Department of Physical Medicine and Rehabilitation

## **EXERCISE PROGRAM III**

## 7 – 14 months after operation

Take in your hands dumbbells with which you can perform 15 repetitions and 2 sets.

Then add 1 - 2 repetitions in every training week up to 20 repetitions and 3 sets.

Always when you are able to do 20 repetitions and three sets add progressively 1 - 2 kg dumbbell weights in your hands and begin repetitions again from 15 and 2 sets. Do exercises 3 times a week.



Sit down and stand up



Stand up and then slowly sit down on a chair. The exercise can be made more difficult by changing the height of the chair (40 cm, 35 cm) or putting a book under your healthy leg so you have to take more weight on your operated leg. Do not let your knees turn in or out.



Stand in front of a 30 cm high step (or higher).

Step up with the operated leg leading and then repeat with the other leg leading.



Stand with your back against a wall and your feet about 20 cm from the wall.

Slowly slide down the wall until your hips and knees are at 80 - 90 angels. Return to starting position.