

Department of
PHYSIOTHERAPY

Physiotherapy Management After Total Knee Replacement (Part 1: Inpatient)



A. Education During Hospital Stay



- a. Most patients stay in the hospital for approximately 3-5 days then go home directly
 - How fast you recover depends on how correctly and regularly you do the exercises, as instructed by your physiotherapist.

- b. In addition to the exercises taught, your knee will also be put on a continuous passive motion (CPM) machine (Fig. 1.0), which moves the knee to improve your knee range of motion
 - This is NOT a substitute for your rehabilitation exercises

- c. You are advised to raise your operated leg on a towel roll at rest and keep it straight. Do NOT place towel roll below the knee to ensure good alignment when lying/sitting up in bed (Fig. 2.0)

- d. You are advised to perform the rehabilitation exercises taught by your physiotherapist via the exercise booklet and/or exercise videos seen in the IPAD/TV throughout your hospital stay.

- e. Upon discharge, you should be able to do these safely and independently by yourself:
 - Getting in and out of bed
 - Walking with an appropriate walking aid
 - Climbing the stairs (if required)
 - Performing rehabilitation exercises



(Fig 1.0)



(Fig 2.0)

B. Rehabilitation Exercises

Rehabilitation exercises can help facilitate recovery and may potentially reduce complications. Therefore, it is important to start early. While doing the exercises, it is normal to feel mild discomfort, stretching or pulling pain initially. Your wound and implant will not be affected if you follow your physiotherapist's instructions.

1. Deep Breathing



- Breathe in through your nose, while raising your arms
- Breathe out slowly through your mouth, while lowering your arms
- Repeat 10 times every 2 waking hours

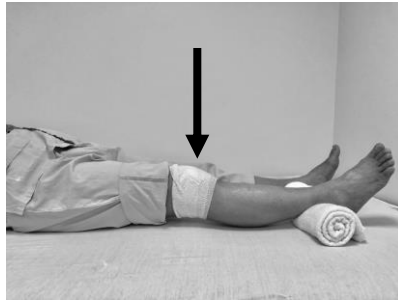
2. Ankle Pump



- Move your ankle up by pointing your toes towards your knee
- Move your ankle down by pointing your toes away from your knee
- Repeat **10-20 times, every waking hour**

B. Rehabilitation Exercises

3. Static Quads



- Place a rolled-up towel under the heel of your operated leg
- Tighten the muscles above your operated knee to straighten the knee
- Hold for _____ **seconds** then relax
- Repeat _____ **repetitions, 3 times a day**

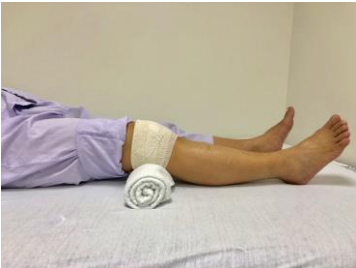
4. Knee Bending



- Slide the heel of your operated leg towards your buttocks
- You may use a towel to bend your knee further
- Hold for _____ **seconds**, and relax
- Repeat _____ **repetitions, 3 times a day**

B. Rehabilitation Exercises

5. Knee Straightening in Bed



- Place a rolled-up towel under your operated knee
- Tighten muscles above your knee by straightening your knee and lift up your heel
- Hold for _____ seconds and relax
- Repeat _____ repetitions, 3 times a day

6. Straight Leg Raise



- Straighten your operated leg and lift it up till your heel is away from the bed
- Hold for _____ seconds
- Lower the leg slowly
- Repeat _____ repetitions, 3 times a day

C. Seated Exercise

1. Seated Knee Straightening in chair



- Straighten your operated knee as shown
- Hold for ____ seconds then relax
- Repeat ____ repetitions, 3 times a day
- Use your un-operated leg to help if needed

2. Seated Self Knee Bending



- Place your un-operated leg in front of your operated leg
- Use your un-operated leg to gently push your operated leg
- Hold for ____ seconds then relax
- Repeat ____ repetitions, 3 times a day

D. Education Upon Discharge



- a. Do remember to perform the exercises regularly to ensure optimal outcome. Please log on to our website to watch the videos at home. Website: <https://vimeo.com/channels/ttshphysiotkr>

Password: ttshtr11



- b. Walking is an excellent exercise for muscle strengthening, improving motion and overall stability of the knee. Short walks with frequent rests are encouraged.
- c. Walking does not replace the rehabilitation exercise program which you were taught in the hospital. Continue doing your exercises that were prescribed by your physiotherapists.
- d. Take pain medications **30 minutes** before starting your exercise.
- e. Apply ice pack after exercises. It will help with inflammation and swelling.
- f. In the first 2 to 3 weeks after discharge, you need to attend outpatient physiotherapy sessions to continue the rehabilitation program. This will help you to return to normal functional status as soon as possible
- g. Your physiotherapist at the outpatient clinic will take note of your knee ranges and prescribe appropriate exercises to improve your knee ranges.
- h. Please remember to bring this brochure to your first outpatient physiotherapy appointment.

Application of Ice Packs

ICE

- a. Ice can help to relieve pain, swelling and inflammation of the knee
- b. Ice pack is placed over the knee for 15 to 20 minutes
- c. It is normal to first feel a little cold or painful over the knee followed by numbness
- d. Remove the ice pack immediately if you feel extreme cold, pain or burning sensation.
- e. Stop, if the burning sensation persist and consult your physiotherapist at the next appointment
- f. Apply ice pack 2-3 times a day for 1-2 weeks



Your Operated Knee Range of Motion

Upon Discharge

Knee bending: _____

Knee straightening: _____

Your signature:

1st Outpatient Appointment

Knee bending: _____

Knee straightening: _____

Your signature:

Return to Normal Daily Activities – Knee Ranges



Climbing stairs:
85° knee bending

Walking on
level ground:
0° knee
straightening

Cycling: 110°
knee bending






Sitting: 95° knee
bending

What are your goals?

E. Exercise Checklist (Upon Discharge)

*Kindly only perform exercises that have been ticked and advised by your Physiotherapist.


*Draw a TICK [✓] if you have done so.

DATE						
EXERCISE						
Knee Bending  <input type="checkbox"/>	am					
	pm					
	night					
Knee Straightening in Bed  <input type="checkbox"/>	am					
	pm					
	night					
Straight Leg Raise  <input type="checkbox"/>	am					
	pm					
	night					
Knee Straightening in Chair  <input type="checkbox"/>	am					
	pm					
	night					
Seated Self Knee Bend  <input type="checkbox"/>	am					
	pm					
	night					

E. Exercise Checklist (Upon Discharge)

*Kindly only perform exercises that have been ticked and advised by your physiotherapist.

*Draw a TICK [✓] if you have done so.

DATE						
EXERCISE						
Knee Bending  <input type="checkbox"/>	am					
	pm					
	night					
Knee Straightening in Bed  <input type="checkbox"/>	am					
	pm					
	night					
Straight Leg Raise  <input type="checkbox"/>	am					
	pm					
	night					
Knee Straightening in Chair  <input type="checkbox"/>	am					
	pm					
	night					
Seated Self Knee Bend  <input type="checkbox"/>	am					
	pm					
	night					

Contact:

6357 7000 (Central Hotline),
6889 4242 (Non-Subsidised Appointment)



Scan the QR Code with your smart phone to
access the information online or visit
<http://bit.ly/TTSHMedical-Services>.



© Tan Tock Seng Hospital, Singapore 2019. All rights reserved. All information correct as of May 2019. No part of this document may be reproduced, copied, reverse compiled, adapted, distributed, commercially exploited, displayed or stored in a database, retrieval system or transmitted in any form without prior permission of Tan Tock Seng Hospital. All information and material found in this document are for purposes of information only and are not meant to substitute any advice provided by your own physician or other medical professionals.