



# Post Total Knee Replacement Advice And Exercises



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The Department of Orthopaedic Surgery offers specialist medical and surgical treatments on musculoskeletal disorders, joint replacements, foot and ankle disorders, among other trauma injuries to patients. Our consultants and surgeons work closely with sports medicine physicians, physiotherapists, podiatrists and other healthcare professionals to help patients return to normal activities after surgery.



## Physiotherapy exercises before surgery

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Studies shows that knee replacement surgery patients who had participated in water and land based strength training, aerobic and flexibility exercises for 6 weeks prior to their surgeries reduced their odds of needing inpatient rehabilitation by up to 75%.

## Physiotherapy exercises after surgery

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Rehabilitation can start in 1-2 days if there are no complications. Your physiotherapist will assist you in rehabilitation sessions and your active participation will speed up your recovery. If you have a caregiver assisting in your post discharge care, we encourage the caregiver to be present during your therapy sessions.

The physiotherapist will teach you a set of exercises for you to do at home. The exercises are an important part of the recovery process.



## Physical Activity

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For optimal recovery, you should continue your home exercise programme as prescribed.

Walking is a good way to build up and maintain the strength. Avoid walking on uneven surfaces and slopes. You may gradually increase the walking distance, progressing to 30 minutes a day. You are encouraged to gradually return back to your normal daily activities but continue to use your walking aid until you are advised to stop or change by your physiotherapist.

# Breathing and Circulatory Exercises

## Resting Knee Position

When resting, it is important that you position your knee properly to avoid development of joint contractures and allow for maximum knee straightening.

- **Do not** place a pillow or towel under your operated knee.
- You are encouraged to place a towel roll at your ankle.
- Try to keep your toes pointing upwards towards the ceiling.



You may commence the following 2 exercises right after your surgery.

## 1. Deep Breathing Exercise

- Sit in an upright position; lift your arms up as high as you can while breathing in.
- Hold the position for 3 seconds, before breathing out slowly as you lower your arms.
- Do 10 repetitions, 3 sets a day.

## 2. Ankle Pumps Exercise

- Pull your toes up and point them down as far as you can.
- Do 10 repetitions, 3 sets a day.



# Bed exercises

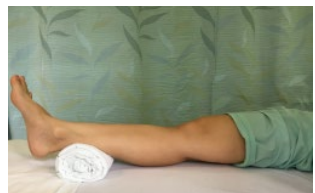
## 1. Heel Slides

- Sit upright in your bed with your back supported.
- With the assistance of the towel over your ankle, bend your operated leg as much as you can with your heel on the bed surface.
- Hold for 3 seconds before sliding your leg down slowly.
- Do 10 repetitions, 3 sets a day.



## 2. Static Quads

- Sit upright in your bed with your back supported. Place your operated leg straight on the bed with a pillow or towel under the ankle.
- Squeeze your thigh muscles and press your knee downwards onto the bed.
- Hold for 10 seconds before relaxing.
- Do 10 repetitions, 3 sets a day.



## 3. Inner Range Quadriceps

- Sit upright in your bed with your back supported.
- You may fold pillow into half and place it under your knee.
- Straighten the knee and hold for 10 seconds before slowly lowering.
- Do 10 repetitions, 3 sets a day.



#### 4. Straight Leg Raise

- Lie down on your back and keep your non-operated leg bent.
- Keep your operated leg straight with your toes pointing to the ceiling. Lift your operated leg.
- Hold the leg in mid-air for 10 seconds before slowly lowering it.
- Do 10 repetitions, 3 sets a day.

**TIP:** You may use a towel to assist you.



#### 5. Hip Abduction

- Sit upright in your bed with your back supported. Place your operated leg straight on the bed with a pillow or towel under the ankle.
- Squeeze your thigh muscles and press your knee downwards onto the bed.
- Hold for 10 seconds before relaxing.
- Do 10 repetitions, 3 sets a day.



# Seated Exercises

## 1. Knee Mobility Exercise (In sitting)

- While seated, bend your operated leg back as far as possible. At this point, use your non-operated leg to assist to bend further inwards. Hold for 5 seconds.
- Then, straighten your operated leg and lift it up as high as possible. Similarly, use your non-operated leg to assist you to straighten further. Hold the position for 5 seconds.
- Do 10 repetitions, 3 sets a day.



# Standing exercises

## 1. Marching-On-The-Spot

- Hold on to a stable surface.
- Transfer your weight to your non-operated leg and lift your operated leg off the ground.
- Hold the position for 1 second before putting down your leg.
- Then, repeat the same on your operated leg.
- Do 10 repetitions, 3 sets a day.



## 2. Heel Raises

- Hold on to a stable surface.
- Stand with your feet slightly apart.
- Push up onto your toes, raising your heels.
- Hold for 5 seconds before lowering your heels down.
- Do 10 repetitions, 3 sets a day.



## 3. Sit to Stand Exercise

- To stand up, place one hand on the walking aid, and the other hand on the arm rest (if any, otherwise you may place it on the seat).
- Lean forward slightly and stand up.
- To sit down, place one hand back to the walking aid, and the other back to the arm rest (if any, otherwise you may place it back onto the seat).
- Do 10 repetition, 3 times a day.

**REMINDER:** DO NOT pull onto the walking aid.

**TIP:** If sitting on a low chair, straighten your operated leg before sitting down or standing up.



#### 4. Walking

After the surgery, it is likely that you will require a walking aid. Your physiotherapist will assist you and adjust the walking aid to ensure that it is at a suitable height and safe for your use.

- Upon standing, place your hand(s) on the walking aid to stabilise yourself.
- To walk, place your walking aid forward, followed by your operated leg and then your non-operated leg.



#### 5. Climbing Stairs (after your therapist has ensured it is safe for you)

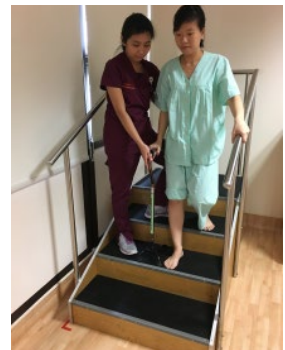
##### Going up

- Hold on to the railing.
- Step up with your non-operated leg first followed by the operated leg with the walking aid.
- Then, move your operated leg up to the same step.



##### Going down

- Hold on to the railing.
- Step down with operated leg with the walking aid.
- Move non-operated leg to the same step.





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