

Department of Physiotherapy

POST-OPERATIVE TOTAL KNEE REPLACEMENT

Your Journey of Rehabilitation after Knee Surgery

It is important for you to take an active role in your recovery process after surgery. Your physiotherapist will teach you exercises to help return strength, movement and function to your new knee.

You can help your recovery by:

1. Managing the pain and swelling
2. Doing your exercises regularly
3. Moving around and gradually going back to your daily activities

Timeline of Recovery

Day of Operation

Discharge (1-4 days)

- Able walk with or without a walking aid
- Able to climb steps safely

2-3 Weeks

- Outpatient Physiotherapy
- Personalised Exercise Programme

2 Months

Return to mobility level before operation or even better

3-6 Months

Achieved goals of rehabilitation



Note: The timeline illustrated here should be used as a guideline only. The recovery process may differ for individuals according to their medical condition.

PART ONE: INPATIENT JOURNEY

Post-Surgery

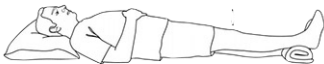
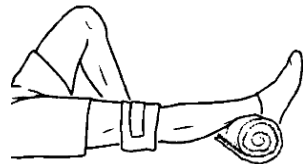
After your surgery, you will be encouraged to get up and move as soon as possible (on the day of surgery OR day 1 post-surgery), as allowed by your surgeon. Research has shown that moving early reduces post-operative complications and enhances your recovery. This minimises stiffness and pain, and reduces the formation of scar tissue over your knee.

It is normal to experience pain, discomfort and swelling in your knee after the surgery. You can manage it by doing the following:



Take your pain medication. If you feel that it is not sufficient, discuss this with your doctor.

Ice your knee for 20min each time, 3 to 5 times a day.



Elevate your leg by placing a pillow under the ankle and **NOT** the knee where possible.



Although it is normal to have pain and swelling after the operation, if you experience **severe pain, numbness, discolouration or new bleeding**, do inform your nurse or doctor immediately.

Deep Breathing Exercise

To reduce the risk of chest complications.

Take a deep breath in through your nose and feel your lower chest expand outwards. Hold for 3 seconds and blow out slowly.

Repeat this 10 times every hour.



Ankle Pumps

To maintain circulation in your legs.




Point your toes up towards your face and then point downwards to the edge of bed.

Repeat this 10 times every hour.



On Discharge

Besides being able to walk safely with or without a walking aid, you should be able to achieve the following on discharge.

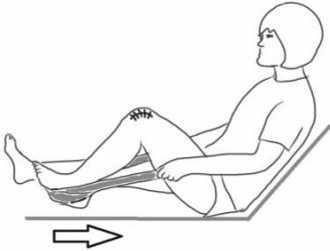
 <p>Knee fully straight and able to bend to 90°.</p>	 <p>Be able to perform a straight leg raise.</p>	<p>20 metres</p> <p>Be able to walk 20 metres with an aid.</p>	 <p>Be able to climb stairs.</p>
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Note: The goals illustrated here should be used as a guideline only. The recovery process may differ for individuals according to their medical condition.

KNEE EXERCISES

Your physiotherapist will guide you on the following exercises designed to improve range and strength of your knee. It is important to perform these exercises daily to help you return to your daily activities as soon as possible.

A. KNEE BENDS



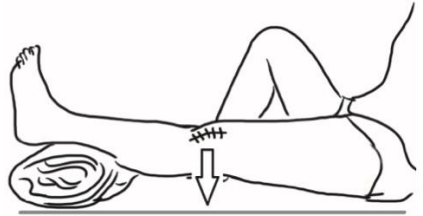
Aim: Reduce stiffness in the knee.

1. Loop a towel under your foot
2. Using the towel for assistance, bend the knee by sliding your heel towards your buttock as much as you can

Hold for **10 seconds** then straighten it.

Repeat **10 times**.

B. STATIC QUADS



Aim: To straighten the knee and strengthen the thigh muscles.

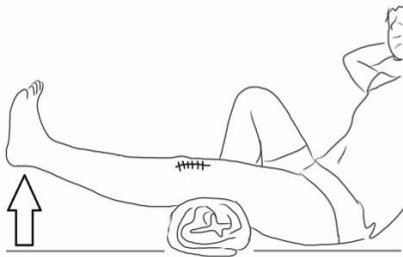
1. Roll a towel underneath your ankle
2. Straighten your knee by tightening your thigh muscles as much as possible

Hold for **10 seconds** then relax.

Repeat **10 times**.

- Do perform these exercises **3 times daily** with the operated leg.
- Apply **ICE** after each session

C. INNER RANGE QUADS

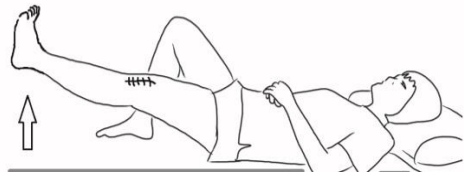


Aim: To strengthen the thigh muscles.

1. Place rolled towel under your knee
2. Lift your ankle off the bed by straightening your knee.

Hold for **10 seconds**, slowly lower your leg and relax.
Repeat **10 times**.

D. STRAIGHT LEG RAISE



Aim: To strengthen the thigh and knee muscles.

1. Bend your non-operated leg on the bed
2. Straighten your knee by tightening your thigh muscles and lift your leg about 20cm off the bed.

Hold for **10 seconds** then slowly lower your leg and rest.
Repeat **10 times**.

DO NOT MODIFY ANY OF THESE EXERCISES UNLESS INSTRUCTED BY YOUR PHYSIOTHERAPIST.

RETURNING HOME

On Discharge

Things that you need upon discharge:

1. Walking Aid
2. Reusable Ice Pack
3. Outpatient Physiotherapy Appointment



Do not rush to purchase a walking aid! Your physiotherapist will assess your walking ability and advise you accordingly.

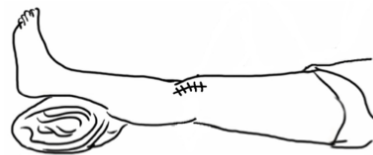
DO NOT...

- ✗ Squat or participate in vigorous activities
- ✗ Apply heat on your operated knee – it can worsen pain and swelling
- ✗ Perform deep massage for the leg
- ✗ Change the height of your walking aid without consulting your therapist



DO...

- ✓ REST – Allow your knee to heal! Don't overwork your knee!
- ✓ ICE – Apply ice on your knee for 20 minutes a day after your exercises
- ✓ ELEVATE – Place a pillow under your ankle when resting to reduce swelling and help straighten your knee!



PART TWO: GOING HOME & BEYOND

Outpatient Physiotherapy

We encourage you to attend your Outpatient Physiotherapy appointment upon returning home so that we will be able to assist with improving your knee range and strength, alongside with achieving your goals.

We will also monitor some outcome measures to help you keep track your recovery, and to understand what exercises you can do to return to your daily activity prior surgery. They include the following:



Knee Strength



Walking Speed



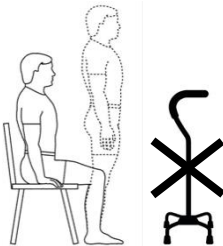
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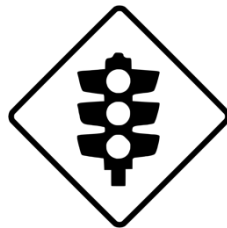
Left vs Right Leg
usage during sit to
stand

2 Months Post-Operation

You may use the following as a guide as per to what you should be able to do at 2 months after your operation. If you require guidance, do discuss with your doctor to get a referral to see the physiotherapist.



Stand up from a chair
without the use of an
assistive device.



Cross a traffic light in
time.



Return to basic
functional activities
before your operation.

FREQUENTLY ASKED QUESTIONS

Why should I come for my physiotherapy appointments?

Besides helping you return you to your normal activities, our physiotherapists are able to help you monitor and optimise your knee range, strength, and movement patterns through specific exercises to enhance the outcomes of your surgery.

Is walking sufficient to strengthen my knee?

No, walking is insufficient to strengthen your knee. Specific knee strengthening exercises are needed to improve your knee strength.

There is still swelling in my knee after the operation! Why?

Swelling in the knee or leg can be expected up to 3 months after your operation. This is normal and part of the recovery process. You may use ice packs and elevate your leg to manage it.

How long does it take for me to return to normal activities?

Your recovery is dependent on your progress. Generally, you should be able to return to basic activities of daily living such as walking outdoors and climbing stairs independently by 3 months, depending on your condition before the operation.

How long should I continue to exercise?

Exercises are beneficial for your health. We strongly encourage you to continue to exercise 2-3 times a week and lead an active lifestyle as a form of maintenance.