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2 Simei Street 3 Singapore 529889
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Physiotherapy advice after knee surgery



**Changi
General Hospital**
SingHealth

Information is valid as of September 2021 and subject to revision without prior notice.

All information provided within this publication is intended for general information and is provided on the understanding that no surgical and medical advice or recommendation is being rendered. Please do not disregard the professional advice of your doctor.

This brochure contains information about your rehabilitation following knee surgery. If you have any questions regarding any of the information, please consult your healthcare professional.



The information and exercises provided in this booklet serve as a guide only. Your physiotherapist will advise you which of the following exercises are applicable to you.

Information you need to know

Weight bearing status refers to the amount of body weight you are allowed to place through your affected leg. Your doctor has advised the following weight bearing status for you:

☐ Full weight bearing (FWB)

You are allowed to put your **full body weight (as tolerated)** through the affected leg.

☐ Partial weight bearing (PWB)

You are allowed to put up to **50%** of your body weight through the affected leg.

☐ Toe-touch weight bearing (TTWB)

You can put your toes on the floor for balance and support, but very little weight goes through the affected leg (**less than 10% of body weight**). You will need to use your arms to push through the walking aid to assist with walking.

☐ Non-weight bearing (NWB)

You are **not** allowed to put any body weight through your affected leg (i.e. no contact with the ground). You will need to use your arms to push through the walking aid to assist with walking.

Knee brace

If you have been asked to wear a knee brace, your physiotherapist will assist you to set it to the range allowed by your surgeon, either:

☐ 0 degrees (i.e. locked in a straight position) or

☐ 0-90 degrees flexion / bend or

☐ Full range of movement

☐ Others: _____



When wearing the brace, the dial on the brace should sit at either side of your knee as shown in the picture.

You must also ensure that the straps are tightly fastened to prevent the brace from slipping, when you are walking.

Pain management

It is normal to feel pain after a knee surgery. Therefore, it is very important **that you take your pain medications regularly** so that you can walk and exercise more comfortably.



Swelling management

Swelling may develop after knee surgery. It is very important to manage the swelling in the acute stage so that you can regain your muscle strength and knee range faster. Swelling can be controlled using the P.R.I.C.E method.

P

Protect your knee by keeping in mind your weight bearing status and any post-op movement restrictions.

R

Rest after conducting in activities involving your lower limbs.

I

Ice your knee (by placing cold application - cryocuff, game ready or ice pack) for 20-30 minutes every 1-2 hours. This will help to control the pain and swelling in your knee.

To make your own ice pack, wrap a bag of ice in a moist towel and add extra layers of dry towel around it before applying to your knee, to protect your wound dressing.



Warning: If you feel severe pain, burning, numbness in the area, remove the ice bag immediately to prevent ice burn.

C

Compression: You may be issued with a compression bandage to wear during the day for as long as the swelling still persists.

E

Elevation: While sleeping or resting, keep your leg elevated by resting it on a pillow or chair.

Knee exercise programme

☐ Ankle pumps

This exercise optimises blood circulation in the legs.

Move your ankles by pointing your toes up and down or making circular movements as much as you can.

Frequency:

Do 20 times every hour.



Strengthening and flexibility exercises



Regaining normal knee range and muscle strength requires diligence on your part to do the exercises prescribed by your physiotherapist. If the exercises are performed only occasionally, you will receive little or no benefit.



Your physiotherapist will teach you the following exercises to improve your knee range, muscle strength and flexibility. Start these exercises only when advised by your physiotherapist.

Start slowly. You may feel a stretch, pull, or slight pain when performing some of these exercises. However, if you feel extreme or persistent pain, STOP immediately and inform your physiotherapist at your next review.

- ☐ If you have been prescribed with a brace, ensure it is worn when doing the exercises (unless otherwise instructed).

Perform the prescribed exercises **at least 2-3 times a day**.

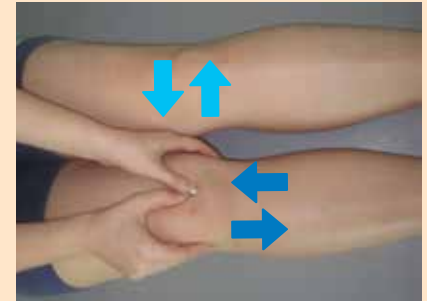
☐ Patella mobilisation

Position:

Sit on the bed with your legs straight and relaxed.

Technique:

Use your finger and thumb to hold your knee cap, gently glide your knee cap side to side then up and down.



Frequency:

Do 20 times.

☐ Knee extension

Position:

Sit with your legs straight in front of you and your heels propped onto a pillow.

Technique:

Push your knee down towards the bed to straighten it. Relax.



Frequency:

Do 20 times.

☐ Heel slides (active-assisted)



Position:

Lie on your back with both legs straight.

Technique:

Slowly slide your foot backwards until you feel a gentle stretch on your knee. Try to bend your knee further with each repetition. Relax.

Alternative: You can place a towel around your ankle or place both hands around your thighs and pull back.

Frequency:

Do 20 times.

☐ Seated knee flexion

Position:

Sit on a chair. Place your operated foot on a towel on the floor.

Technique:

Slowly slide your foot backwards and along the floor to bend your knee. Try to bend your knee further each time. Relax.

Frequency:

Do 20 times.



☐ Bridging

Position:

Lie on your back with both knees bent and feet resting on the bed at shoulder width apart.

Technique:

Squeeze your buttocks together and lift your hips up off the bed. Hold for up to 10 seconds or as able. Relax.

Frequency:

Do 20 times.



☐ Quadriceps set

Position:

Lie on your back with both legs straight.

Technique:

Tighten the muscle at the front of your thigh by pushing the back of your knee down towards the bed to straighten your leg. Hold for 10 seconds then relax.

Frequency:

Do 20 times.



☐ Inner range quadriceps

Position:

Sit up in bed with your operated leg over a rolled up towel or pillow as shown.

Technique:

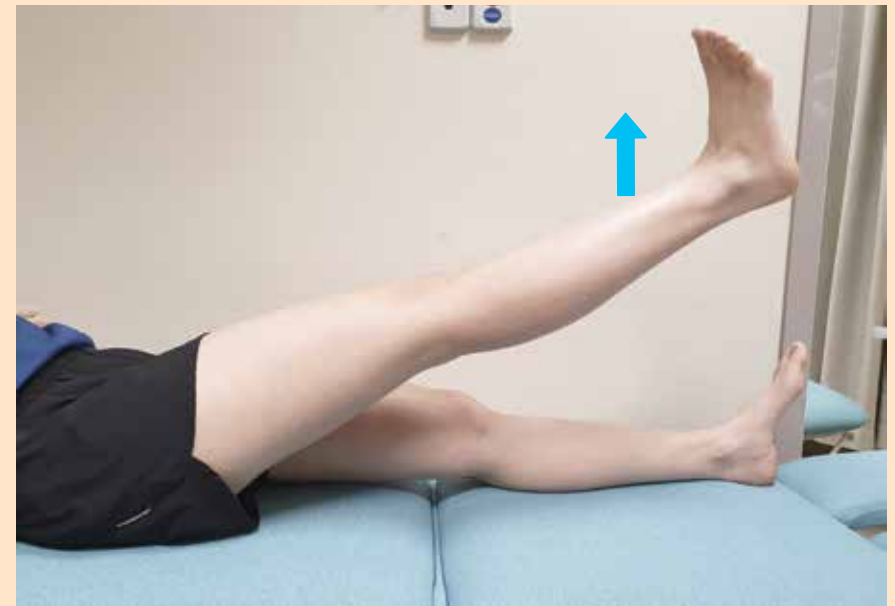
Push your knee down into the pillow and lift your heel off the bed. You should feel your thigh muscle tighten and your knee straighten. Hold for up to 10 seconds as able.

Frequency:

Do 20 times.



☐ Straight leg raise



Position:

Lie on your back with both legs straight.

Technique:

Tighten the muscle at the front of your knee. While keeping your knee straight, lift up your leg about 20 cm from the bed. Hold for 5 seconds then slowly lower down, while maintaining a straight knee.

Frequency:

Do 20 times.