

Physiotherapy advice after anterior cruciate ligament (ACL) reconstruction (hamstring graft)

Although the physiotherapy team and hospital staff will help you with your rehabilitation, it is important that you aid your recovery by:

1. Managing your pain and swelling
2. Doing your exercises regularly
3. Following the advice provided in this booklet.

After the operation

Will I be in pain?

You may experience some pain and discomfort following your surgery. You will be prescribed pain killers and it is important you take these regularly as prescribed by the doctor looking after you.

Will I have swelling?

Yes, it is normal to have swelling following surgery. However, excessive swelling will slow your recovery. Therefore, it is important that you do the following to reduce the amount of swelling in your knee:

1. Rest regularly - do not walk or stand for long periods. However complete rest is not advised either. Therefore, aim for short periods of activity.
2. Reduce swelling and aid pain relief by regularly icing your knee – wrap a bag of frozen peas or ice pack in a damp cloth and apply it to your knee for 10-15 minutes only. This can be repeated every one to two hours.
3. Keep your leg elevated when resting but **do not** rest a pillow under the knee as this discourages full extension of the knee, which is essential for recovery.
4. Keep your compression bandage on for the first 48 hours as this will help to reduce swelling.

Will I have a knee brace?

Most patients have a brace initially following the operation. Unless specified, this is removed 2 weeks after surgery

After discharge from hospital

Will I need to do any specific activities before my first physiotherapy session?

Yes. The positions and exercises provided are extremely important as they are designed to help you regain your full range of movement and strengthen the muscles around your knee. It is important that you achieve these two things following your operation as soon as possible as this helps to protect your new ACL graft.

Positions

When lying – place a rolled up towel under the ankle of your operated leg for up to 20 minutes allowing the knee to extend/straighten.

When sitting – place the foot of the operated leg onto a chair/footstool in front of you allowing the knee to extend/straighten.

When standing – actively work on pushing the knee backwards to extend/straighten it.

Note: these positions may be uncomfortable and difficult at first, which is normal, but this will improve with time.

Exercises (Week 1)

These exercises are designed to give you a head start on your rehabilitation before your first physiotherapy appointment. **It is important that you start the exercises immediately and do them at least three to four times a day.**

1. **Static quads** – Sit or lie with your leg straight and then contract/tighten your quads (front thigh muscles) as hard as you can by pushing your knee downwards. Hold for 5 seconds and then relax. Repeat 10 times.



2. **Heel prop with static quads** – Lie with your heel elevated with your knee unsupported, so that it gradually becomes straight. Then repeat the above exercise. Repeat 10 times.



- 3. Heel slides** – Lie with your leg straight and then gradually and comfortably bend your knee by sliding your heel towards your buttock. This may be uncomfortable at first due to swelling, which is normal. However do not force the movement. Hold for 10 seconds and then straighten your knee out again. Repeat 10 times.



- 4. Calf stretch** - making sure your feet are facing forwards. Take your operated leg out behind you with your knee straight and your heel down. Lean in towards the wall so that you can feel the stretch at the back of your calf. Hold for 20 seconds. Repeat 5 times.



- 5. Knee cap mobilisations** – Sit with your leg straight and slowly move your knee cap from side to side and up and down. Hold for 5 seconds in each direction. Repeat 3-4 times a day.



Hopefully by the second week you should have started your physiotherapy. However, if this is not the case, you can still continue to follow the instructions on the next page.

Exercises (Week 2)

By the second week after your operation, your pain and swelling is generally reduced and your ability to walk should have improved. You should be less reliant on your crutches to move around. Also, you may notice that your knee is moving easier and the muscle control has improved – you should be able to contract your thigh muscle the same as your opposite leg.

If this is the case, the following exercises can be commenced alongside the previous exercises.

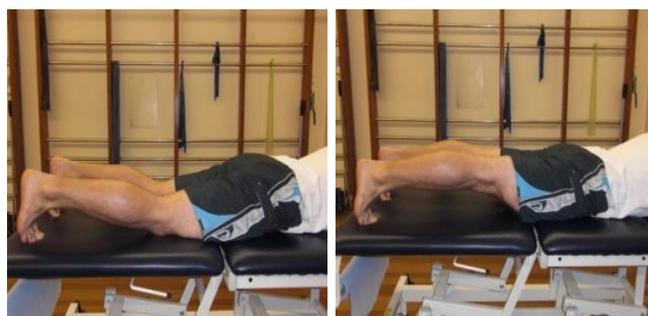
1. **Wall squats** – Stand with your back against the wall and your feet shoulder width apart and about 40cm away from the wall. Slowly slide down the wall as range and pain allows. Do not push into pain or joint restriction. Hold for 5 seconds. Repeat 10 times.



2. **Single leg balance** – stand holding onto the back of a chair. Then try to balance on your operated leg taking your hands off the back of the chair if able. Time how long you can stand unaided.



3. **Prone knee extensions** – lie on your front as demonstrated in the picture below. Then try and lift your knees away from the floor by contracting your thigh muscles. Hold for 5 seconds. Repeat 10 times.



4. **Prone knee bend and straightening** – lie on your front as demonstrated in the picture below ensuring your feet are off the edge of the bed. Then slowly bend your knee as far as you can without causing increased pain and then straighten your leg back down. Repeat 10 times.



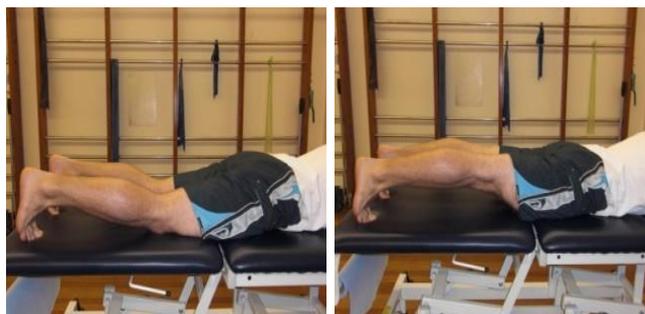
5. **Straight leg raise** – Start by contracting your quadriceps just like the static quad exercise. Then lift your leg off the ground as shown in the picture below. Repeat 10 times.



6. **Wall heel slides** – Lie with your feet up on the wall. Then cross your non-operated leg over your operated leg and then let the weight of your leg and gravity bend your knee. Hold for 20 seconds and then straighten)



7. **Bridge** – lie on your back with your feet as close to your bottom as possible. Then squeeze your bottom muscles and lift your bottom off the floor. Hold 10 seconds. Repeat 10 times.



When can I drive again?

Driving is not advised until you can walk unaided and put full weight through your operated leg. This may be up to six weeks after your operation. You will need to notify your insurance company before driving after your surgery as they may refuse to meet a claim if they feel you have driven too soon.

What to watch out for

Watch out for your knee becoming:

- More swollen or redder/hotter than normal, or if the wound looks more inflamed than usual
- New numbness, tingling, discolouration in your foot which lasts for more than 24 hours
- Temperature above 37°C
- Oozing wound
- Persistent calf pain or swelling.
- In cases of meniscus repair, NWB for 2 weeks followed by PWB for 2 weeks. Avoid flexion beyond 90 degrees for first 4 weeks.