



# Physiotherapy Information following Anterior Cruciate Ligament (ACL) Reconstruction

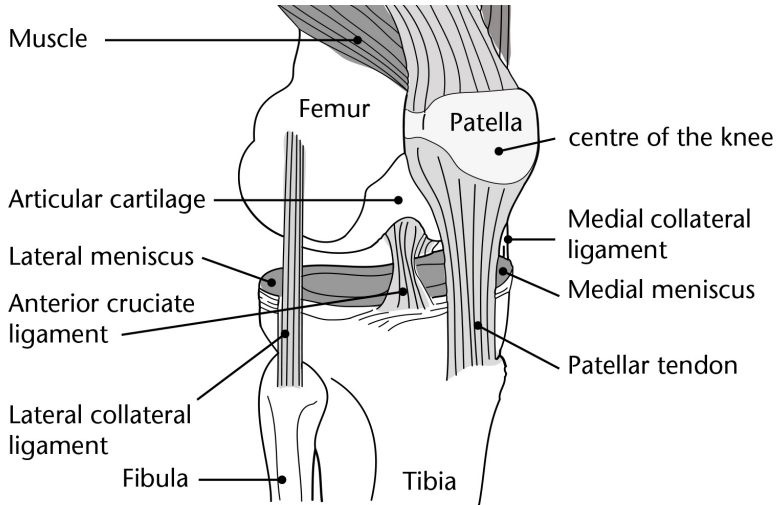
Information for patients  
Physiotherapy

## **Contacting your care team**

Please contact your Physiotherapist, G.P, orthopaedic department or attend your nearest Minor Injuries clinic if you have any issues regarding your knee.

# WHAT IS AN ACL? (ANTERIOR CRUCIATE LIGAMENT)

The following diagram shows the main structures in a healthy (right) knee.



Right knee in bent position viewed from the front

The ACL joins the back of the femur (thighbone) to the front of the tibia (shinbone). It helps to stabilise the knee. You can damage it by a twisting movement or a movement where your body continues to move forwards but your foot stays put e.g. dodging, pivoting or landing from a jump. The main goals of ACL surgery and rehabilitation are to restore knee stability and to allow your return to work and sport.

## SURGERY

Reconstruction of an ACL involves replacing the torn ligament usually with part of the hamstring (from behind the knee) or sometimes part of the patellar tendon (in front of the knee).

The surgeon drills tunnels through the bone.

Your new ACL is brought through these tunnels, and then secured.

As healing occurs, the bone tunnels fill in to secure the tendon.

## REHABILITATION

The rehabilitation is just as important as the surgery itself. You need commitment and effort to make the most of your rehabilitation.

To make sure your progress is safe, and to protect your graft, your physiotherapist(s) will follow a specially designed programme based on up to date information.

## WHY DO I NEED PHYSIOTHERAPY AFTER MY SURGERY?

- ❖ To protect the healing graft
- ❖ To minimise swelling
- ❖ To regain full range of movement
- ❖ To restore normal walking
- ❖ To strengthen muscles
- ❖ To allow safe return to sporting activities

## YOUR PHYSIOTHERAPY CARE

### Immediately after surgery

You will return from theatre with a padded crepe bandage from your calf to your thigh. Your nursing team will give you advice about future dressings.

You may have had a nerve block (an injection into a nerve to reduce pain after your surgery) or local anaesthetic put into your knee. These often cause numbness and a feeling that you are unable to move your leg. This is normal and usually improves within a few hours.

The medical and nursing staff will offer painkillers and we strongly advise you to take these regularly to minimise discomfort and swelling, and to allow you to start your early rehabilitation exercises.

The nursing staff will tell you about the removing of your stitches and your clinic appointment.

# GOING HOME FROM HOSPITAL

## Getting Up and About

We will give you elbow crutches to help you to walk until you have better control of your leg muscles.

We will show you how to use them properly to walk and when on stairs.

It is really important that you take good care of your wound and pain control. It is also important to keep down any swelling.

## Pain

- ❖ Wound pain is normal, this will gradually lessen over the next few days. Use the painkillers supplied by the hospital regularly and take as advised by the ward staff.
- ❖ If pain or swelling increase contact, your physiotherapist, orthopaedic clinic or attend your local minor injuries clinic for advice.

## Wound Care

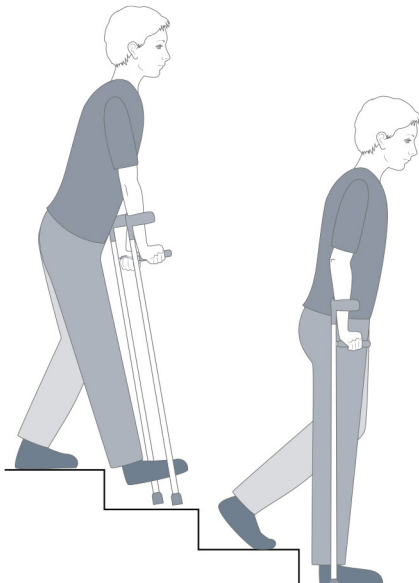
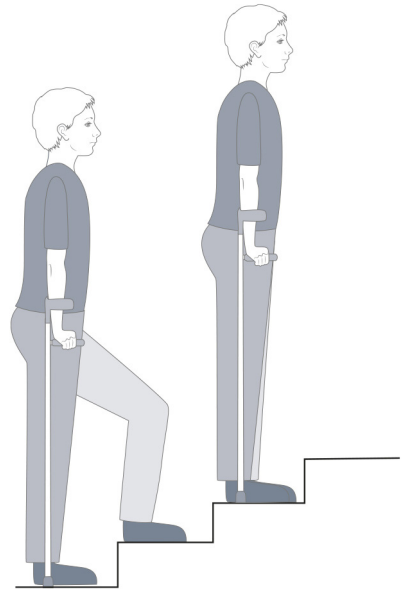
- ❖ Change the clear wound dressing. You may see dark blood stains – don't worry this is normal.
- ❖ If your wound becomes hot, red and weeps fluid, contact your physiotherapist, orthopaedic clinic or attend your local minor injuries clinic for advice.

## Swelling

- ❖ Swelling is normal immediately after surgery. Use a cold pack if your knee is hot and swollen. You can make a cold pack by wrapping a bag of frozen peas in a damp tea towel. Remove the tubigrip and apply the cold pack to your knee for not more than 15 minutes at a time. You may reapply it once your knee has returned to its normal temperature.
- ❖ Wear the tubigrip during the day but remove it at night to

## Going up stairs

1. Place unoperated leg up onto step
2. Place operated leg onto same step
3. Finally place crutch onto step



## Going down stairs

1. Place crutches down onto step
2. Place operated leg onto same step
3. Finally place unoperated leg onto same step

### **Remember –**

“up with the good, and down with the bad”

Always use your crutches to support the operated leg.

Always use the hand rail, if there is one, as well as one crutch.

## WHEN CAN I RETURN TO NORMAL ACTIVITIES?

Every individual is different and you should follow the advice of your physiotherapist(s) and consultant. The following is a rough guideline:

Walking without crutches	as advised by your physiotherapist
Work at a desk	approximately 2 - 4 weeks
Other jobs	depends on activity
Driving	approximately 4 - 6 weeks

## EXERCISE PROGRAMME

Your exercise programme should start from day one and has been carefully designed to allow you to progress safely.

### Exercise

- ❖ Rest your knee between sessions of exercise. When resting keep your leg up on a stool or settee.
- ❖ Walk only short distances for the first few days using your elbow crutches.
- ❖ Continue using your crutches as shown by the physiotherapist until we tell you otherwise.
- ❖ It is important that you can straighten your knee fully and you are walking without a limp before you stop using crutches.
- ❖ Finally, it is important to continue with the exercises as shown by your physiotherapist.

The early phase of your rehabilitation is below and your outpatient physiotherapy sessions should start a few days following surgery. Exercises Programme - initially your physiotherapist will assist you to move your knee.

Then they will teach you how to do exercise 1 - 6 safely (see Exercise Programme over page).

## **EXERCISE PROGRAMME**

Continue with exercises 1 - 6 until your first physiotherapy outpatient appointment.

- ❖ Static quadriceps
- ❖ Knee bending
- ❖ Straight Leg Raise
- ❖ Terminal extension
- ❖ Prone Stretch
- ❖ Calf Stretch

If you have not received a physiotherapy appointment 7 days after your surgery please contact 0141 347 8909 for an appointment.

## **ONGOING PHYSIOTHERAPY**

Rehabilitation is extremely important and will take up to a year. Your physiotherapist will guide your progression.

# WEEK 1 - 2 AFTER YOUR SURGERY

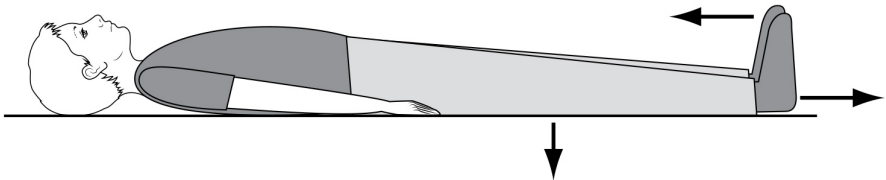
You will see the physiotherapist after your surgery. They will teach you the following exercises.

You may feel some discomfort with some of the exercises. If you have any concerns discuss these with your physiotherapist.

## 1. STATIC QUADRICEPS

**Static quadriceps** (thigh muscle).

**Position** - lying down or Sitting.



**Action** - tighten the thigh muscle, pull your foot towards you and push your knee down into the bed or settee.

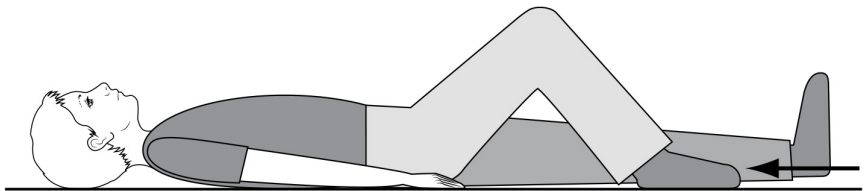
**Hold** for 5 seconds then relax

**Repeat** 10 times every 1-2 hours

## 2. KNEE BENDING

**Knee bending**

**Position** - lying down.

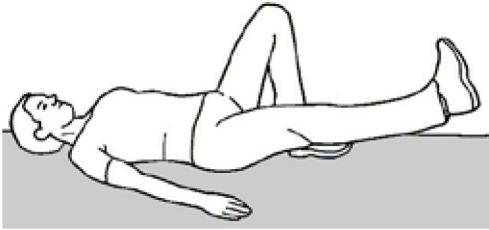


**Action** - Slowly slide your heel up towards your bottom. Stop at the point of pain and hold for 5 seconds then straighten again.

**Repeat** 10 times every 1-2 hours



### 3. STRAIGHT LEG RAISE



Straight leg Raise

You Must keep your knee Straight and locked out.

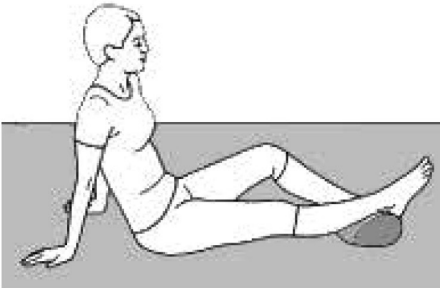
Position - lying down

Action - Tighten the thigh muscle and keep your knee straight, slowly raise your leg off the bed. Do not lift the leg higher than 10-15cm (4-6inches) from bed.

Hold for 5 seconds.

Repeat \_\_\_\_\_ times \_\_\_\_\_day

### 4. TERMINAL EXTENSION



Terminal extension

Position - lying down with your heel on a rolled towel

Or

In a sitting position with your leg unsupported on a stool

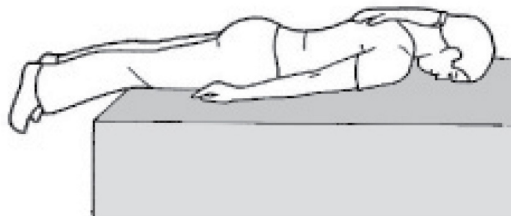
Action - Allow the weight of your leg to straighten your knee, tighten the thigh muscle, pull your foot towards you and press your knee down.

Hold for 5 seconds then relax

Repeat 10 times every 1-2 hours

Or - Rest in this positions for 10 minutes every 1-2 hours

## 5. PRONE STRETCH



### Prone Knee Stretch

Position - Lying on your front with knees over the bed edge

Action - Tighten the thigh muscle and keep your knee straight, slowly raise your leg off the bed. Do not lift the leg higher than 10-15cm (4-6inches) from bed.

Hold for 5 seconds.

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

## 6. CALF STRETCH



### Calf Stretch

Position - lying or sitting.

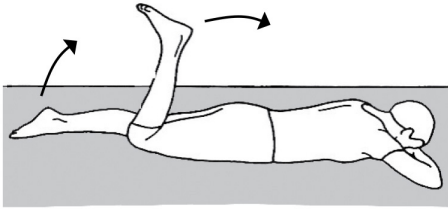
Action - Use a towel or belt around your foot, to pull your foot gently towards you to stretch your calf.

Perform 10 times, holding stretch for 20-30 seconds.  
Repeat every 1-2 hours

# WEEK 3 - 6 AFTER YOUR SURGERY

Only start the following exercises when your physiotherapist tells you it is OK to do so.

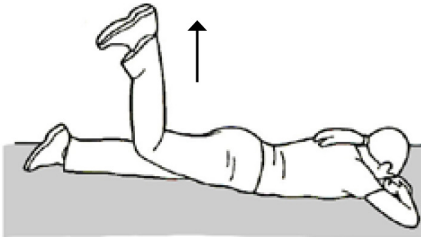
## 7. KNEE FLEXION AND HIP EXTENSION



Knee Flexion

Position - Lie face down.

Action - Tuck your good leg bend your operated leg to help bend your knee to 90 degrees.



Hip extension

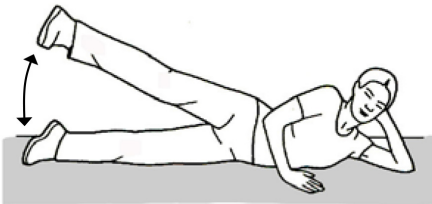
If you can bend knee freely to 90 degrees, extend your hip by lifting your thigh off the bed.

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

Return to starting position.

## 8. HIP ABDUCTION



Hip Abduction

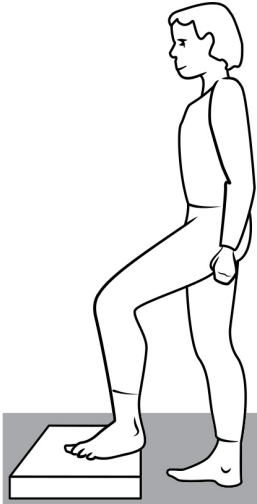
Position - Lie on your side with your back against a wall.

Action - Keeping the heel in contact with the wall, slowly raise your leg.

Return to starting point.

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

## 9. STEP UP AND DOWN



Step up and Down  
Operated leg on step

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

## 10. SINGLE LEG BALANCE



Single Leg Balance  
Position - Standing on one leg.

Action - Practise standing on  
your operated leg.

Try to increase the time to match  
your good leg

Hold for \_\_\_\_\_ Seconds

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

## 11. CALF STRETCH



### Calf stretch

Position – Stand by a chair or wall for support.

Action - Step back with one leg and stretch the calf by pushing the front knee forward.

Make sure your feet are pointing forwards and your heels stay in contact with the floor.

Hold for \_\_\_\_\_ Seconds

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

## 12. MINI SQUAT



### Mini squat

Position - Stand by a chair for balance if needed

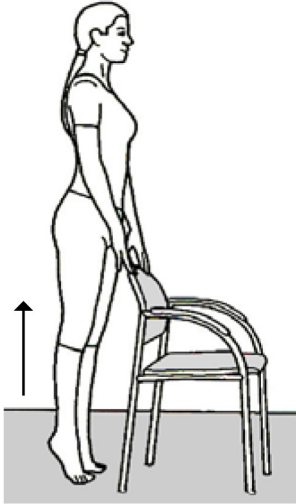
Action - Bend your knees and hips as if going to sit on a chair.

Do not bend the knees more than 50 degrees (halfway down).

Return to starting position.

Repeat \_\_\_\_\_ times \_\_\_\_\_ day

### 13. HEEL RAISE



Heel raise

Position - Stand by a chair for balance if needed.

Action - Slowly raise your heels up from floor, move up onto your toes.

Repeat \_\_\_\_\_ times \_\_\_\_\_ daily

To progress you can add a \_\_\_\_\_ hand weight

### 14. CARDIOVASCULAR



Cardiovascular exercise

Using a Static bike and cycle with low resistance.

Cycle for 10-15 minutes – before (as a warm-up) and following your exercises

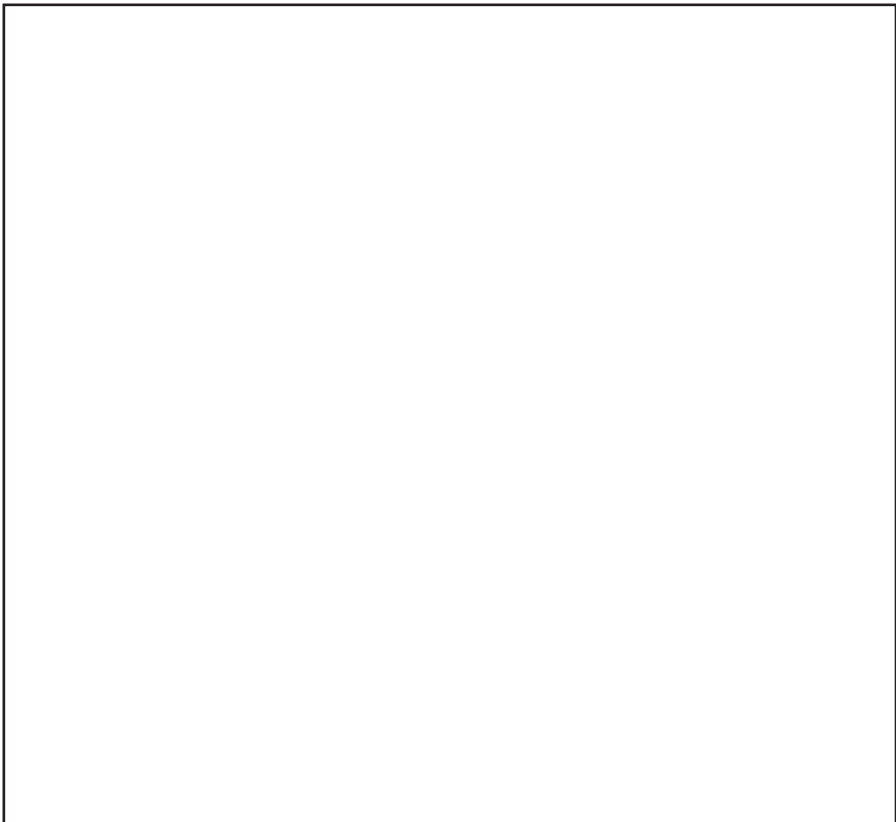
Your physiotherapist will give you guidance on all exercises.

## **BY THE END OF WEEK 4 WE WOULD EXPECT:**

- ❖ Full knee extension, including any over-straightening as equal to your opposite leg.
- ❖ Knee bend: Within 10 degrees of your opposite leg.
- ❖ Normal walking pattern with no elbow crutches.
- ❖ No increase in swelling with exercise or activity.
- ❖ Prone Stretch
- ❖ Calf Stretch

Staff use:

Please write or place a label with contact details in box as required.

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