Anterior Cruciate Ligament Reconstruction (ACLR)

This section is for the patient to make notes if they so wish:

Name: _____

Who to contact and how: _____

Notes: _____

_____

_____

_____

Diana, Princess of Wales Hospital
Scartho Road
Grimsby
DN33 2BA

03033 306999

www.nlg.nhs.uk

Scunthorpe General Hospital
Cliff Gardens
Scunthorpe
DN15 7BH

03033 306999

www.nlg.nhs.uk

Goole & District Hospital
Woodland Avenue
Goole
DN14 6RX

03033 306999

www.nlg.nhs.uk

Anterior Cruciate Ligament Reconstruction (ACLR)

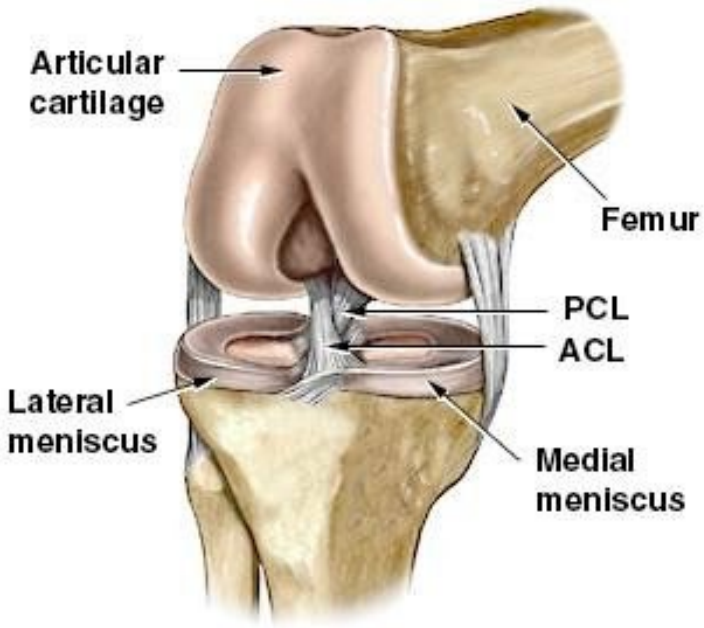
This booklet is designed to provide information and advice about your recovery and rehabilitation during the initial period after your anterior cruciate ligament reconstruction with the Northern Lincolnshire and Goole Foundation Trust.

A structured rehabilitation programme/protocol is vital for the reconstructed ACL to function properly long term. You will complete a graded protocol with gradual increases in intensity and type of exercise.

This booklet contains information on the following:

- Reasons for an ACLR and Surgery
- Duration of stay in hospital
- Post-Operative advice/assessment
- Pain Relief and Swelling Control
- Physiotherapy exercises
- Your Recovery
- Returning to Sport

Anatomy of the knee



The knee is the joint between the femur (thigh bone) and the tibia (shin bone) and includes the joint between the patella (knee cap) and the front of the femur. Ligaments around the knee help to stabilize the joint. These include the collateral ligaments on either side of the knee and the cruciate ligaments which pass through the knee. The anterior cruciate ligament (ACL) stops the tibia moving forward and provides rotational stability with hyperextension. The main muscle groups supporting the knee are the quadriceps at the front and the hamstrings at the back of the thigh. The calf muscle (gastrocnemius) provides additional support.

Reasons for an ACLR:

An ACL injury occurs when it is torn or stretched beyond normal range, usually as a result of a twisting type motion. Common patterns of movement include pivoting or reactive turning motions at high speed, extreme/excessive straightening/bending of the knee or a direct blow to the outside of the knee/lower leg. An ACL injury is commonly seen in contact and court sports such as football and netball. Not all people require an ACLR and this decision is made by you and your consultant based on the level of instability and impairment caused by the ACL tear.

Surgery:

The two most common types of reconstruction surgery are patella tendon and hamstring grafts.

- ACLR with a bone-patellar-tendon-bone graft – The middle third of the patellar tendon along with its bony attachment at each end is removed from the ACL deficient knee and then surgically fitted into the appropriate positions on the femur and tibia to mimic the original ACL
- ACLR with a hamstring graft – The tendons from the semitendinosis and gracilis tendons (within the hamstring group) are cut, stitched together and repositioned within the knee to mimic the original ACL

Duration of stay in hospital:

An ACLR is usually a day case procedure. You may require an overnight stay dependent on your recovery and the time of day your procedure was done. A physiotherapist will see you to give you advice and education on your recovery and exercises, provide you with any walking aids needed and show you the correct way to go up/down stairs if appropriate.

On discharge from hospital, you will be referred to your local physiotherapy service. Your first appointment is usually two weeks after your surgery unless you are told otherwise. There will be a commitment to your physiotherapy programme and you will need to attend follow-up appointments. How long your follow-up continues will be set by goals between you and the physiotherapist and will vary from person to person. You will also be followed up by your consultant or a member of their team.

Post-Operative Advice/Assessment:

ACLR rehabilitation is often divided into phases. This has historically been based on time periods as listed below, but it is becoming more criteria led with progressions not done until you have achieved satisfactory progress in relationship to the healing of the ACLR.

Phase 1: (0-2 weeks) - This is the initial healing stage.

Goals to achieve:

1. To control pain and swelling.
2. To normalise walking pattern, before progressing off walking aids.
3. To gain 0-90 degrees of knee ROM (full extension to 90 degrees flexion).
4. To gain Quads control especially of 0-30 degrees.
5. To gain good Hamstrings contraction/control.
6. To maintain good patellar mobility.

Treatment Plan (linked to goals above):

1. Ice, elevation and ankle movements.
2. Use of crutches and weight shifting in standing. Start with 2 crutches, to 1 crutch, to 1 stick if needed, to unaided.
3. Knee bending exercises. Knee straightening/stretching exercises.
4. Muscle control exercises, leg raising exercises and weight shifting exercises.
5. Muscle control exercises, knee bending in standing and lying on tummy.
6. Knee cap glides.

Phase 2:

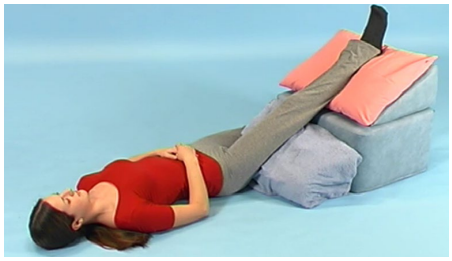
Generally 2-6 weeks after surgery. Movement of knee and muscle control should be improving. Walking should be back to normal during this stage and returning to driving and work may even be allowed depending on your progress and individual circumstances.

Phase 3 & Phase 4:

Stage 3 is generally 6-12 weeks after surgery and Stage 4 is generally after 12 weeks. The focus of these stages will be normalising knee movement and control as well as returning to normal activity. This will be individualised and guided by the physiotherapist and consultant working with you.

Pain Relief and Swelling Control:

You will be prescribed pain killers post-operatively. It is important you take the medication as instructed to manage the acute symptoms and allow you to do your exercise programme. You may need to speak to your GP or consultant if your pain is limiting your progress. Ice can be used on a regular basis to help control the swelling and pain around your knee. Please ensure there is a protective layer between your skin and the ice (e.g. a tea towel) to avoid ice burn. Remove the ice after 20 minutes. Sitting with your leg elevated above your heart will also help to reduce the swelling and doing ankle exercises and muscle contractions in this position will also help. You will be advised how long to continue using the ice and this may change to using heat later in your rehab if required.



Walking/Gait Pattern

Crutches will be given to you to, not because you cannot fully weight bear, but because you will lack full control and stability of your knee. If you have had associated procedures such as a meniscal repair, you may be required to limit the weight taken through your knee for a period of 6 weeks. Your physiotherapist will be able to explain this to you and teach you how to use the crutches safely and correctly.

Steps and stairs

Before discharge a member of the therapy team will show you how to go up and down the stairs, or a step if you are unlikely to be using stairs. The sequence is the same for both.

Walking up and down stairs

One step at a time – Stand close to the stairs and handrail. Hold handrail with one hand and crutches /sticks in the other hand.

Going Up

Step up with the un-operated leg

Going Down

Place crutch or stick down

Then bring up your operated leg — Then step down your operated leg

Finally bring up your crutches or sticks — Finally step down the un-operated leg

Your therapist may adjust this technique to suit your own needs.

Physiotherapy Exercises:

The following exercises should begin the same day as your procedure. Aim to do your exercises little and often to begin with e.g. 5 times a day and to a maximum of 10 repetitions.

Knee Bending Exercises

1a - Heel Slides

Sit on a chair with a towel under the foot of your operated leg. Slide the foot under the chair as far as you can. Move your knee forward keeping the sole of your foot in contact with the floor, then return to starting point.

1b - Knee bending in lying

Bend your knee as far as possible. Use your hands behind your knee or a towel around your foot as shown and gently pull up to stretch the bend a little further.

©Physiotools

Exercise 2- Isometric quadriceps

Lie on your back with one leg bent and the operated leg straight. Bend the ankle of the straight leg towards you and press the back of the knee against the bed tightening your front thigh muscles. Hold the tension for a 5 seconds and then relax.

Placing a rolled towel under your ankle while doing this can also help you improve your knee extension (see exercise 5 – Seated Knee Extension)

©Physiotools

Exercise 3 – Isometric hamstrings

Lie on your back. Slightly bend your operated leg and place the heel of the leg against the bed.

Push the heel towards the floor as if trying to bend your knee further. No movement should occur, but the hamstring muscles on the back of the thigh should tense. Hold the tension for 5 seconds and then relax.

Exercise 4- Straight Leg Raise X 4

Lie on your back with your good knee bent, spine in neutral position. Tighten your front thigh muscles and lift the straight leg, hold for approximately five seconds and then lower the leg to the starting position in a controlled manner. As your quadriceps muscles get stronger, you will be able to hold your leg raised for longer. This may be an exercise to progress onto when you first start at physiotherapy.

Then roll on to your good side and raise your leg up sideways in the same controlled manner.

Then roll on to your stomach and raise your leg backwards in the same controlled manner.

Finally roll on to your operated side and raise your leg up inwards in the same controlled manner.

These exercises help you use your core and gluteal muscles while getting you to control the stability of your knee, which is the beginning of what we call proprioceptive control exercises.

Exercise 5- Seated Knee Extension

Sitting on a chair, with the leg to be exercised supported on a chair as shown. Let your leg straighten in this position. Hold for as long as you can tolerate – aiming for 30 seconds. Do not force the leg into extension.

Exercise 6- Weight Shift in Standing

Standing with support from a firm surface, start shifting your weight on to your operated leg as if you are trying to stand on one leg. Make sure you have good control around your knee as you gradually increase the weight going through the knee and reduce the weight going through your un-operated leg. Hold for up to 10 seconds before shifting the weight off your operated leg. Progress by increasing the weight until you can stand on your operated leg by itself and holding the length of time you are standing on it.

Your Recovery:

Your movement and function should continue to improve through each week of your recovery. Swelling is common for several months and you may also have a small area around your knee which has an altered feeling or sensation.

Generally you should be able to return to work two-eight weeks post-operation depending on the nature of your work. It is advisable to speak to your consultant regarding this.

Return to driving is generally not allowed until up to 6-8 weeks following your surgery. Your consultant or physiotherapist will be able to advise you regarding this.

Returning to Sport:

Based on current research, individuals who return too early to sports involving pivoting, cutting and have high demands on the knee have an increased risk of re-rupture or injury to the opposite ACL. These sports are best avoided for at least 9 months post surgery, but other sporting activities and sport skills can be started earlier than this. It is important you discuss this with your physiotherapist and consultant before attempting things which may be detrimental to your progress and full recovery.

Contact Us:

For more information about our service, please contact the relevant Physiotherapy Department:

Scunthorpe (03033) 302385. Our opening times are 7:45am-4:30pm Mon-Fri. We are located Cliff Gardens Entrance, Outpatients Department, Scunthorpe DN15 7BH

Goole (03033) 304274 Mon-Fri 9am-4pm

Diana, Princess of Wales Hospital in Grimsby (03033 304576)

Any Comments, Compliments, Concerns or Complaints

If you have any other concerns please talk to your nurse, therapist or doctor. Our Patient Advice and Liaison Service (PALS) is available on 03033 306518 (Grimsby, Scunthorpe and Goole). You can also contact nlg-tr.PALS@nhs.net

As a Trust we value equality of access to our information and services, therefore alternative formats are available on request at nlg-tr.interpreters@nhs.net

Alternative Languages

All of our leaflets are available to view in different languages via Browsealoud on our website at www.nlg.nhs.uk/patients/patient-leaflets/

Toate pliantele noastre sunt disponibile pentru a fi vizualizate în diferite limbi prin intermediul Browaloud pe site-ul nostru, la www.nlg.nhs.uk/patients/patient-leaflets/

Wszystkie nasze ulotki są dostępne do przeglądania w różnych językach za pośrednictwem Browsealoud na naszej stronie internetowej www.nlg.nhs.uk/patients/patient-leaflets/

Visus mūsų lankstinukus galite peržiūrėti įvairiomis kalbomis, naudodamiesi „Browsealoud“ mūsų svetainėje, adresu www.nlg.nhs.uk/patients/patient-leaflets/

Vse naše zloženke so na voljo za ogled v različnih jezikih prek Browaloud na našem spletnem mestu www.nlg.nhs.uk/patients/patient-leaflets/

Date of Issue: April, 2021

Review Period: April, 2024

Author: Exercise Instructor, Extended Therapy Team

IFP-1278 v1.0

SMOKEFREE