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Patient information

Advice to patients undergoing anterior cruciate ligament (ALC) reconstruction surgery

Introduction

This leaflet is designed to provide advice and information about your surgery and the subsequent rehabilitation.

You will be seen by a physiotherapist on the ward after your operation and as an outpatient for your rehabilitation.

Your orthopaedic consultant will review you at regular intervals. If you have any concerns, please speak to your physiotherapist or contact your consultant via the hospital.

Anterior cruciate ligaments

Anatomy

The anterior cruciate ligament (ACL) originates from the back of the femur (thigh bone) and passes downwards and forwards to insert on the top of the tibia (shin bone). The ACL is a broad, thick band and is approximately the size of your little finger.

Function of the ACL

The ACL is crucial for guiding the tibia in a normal path along the surface of the femur. It stops excessive forward sliding of the tibia in relation to the femur. It also helps control outward rotation of the femur on the tibia. The ACL helps provide balance. It is therefore essential for joint stability.

Putting you first

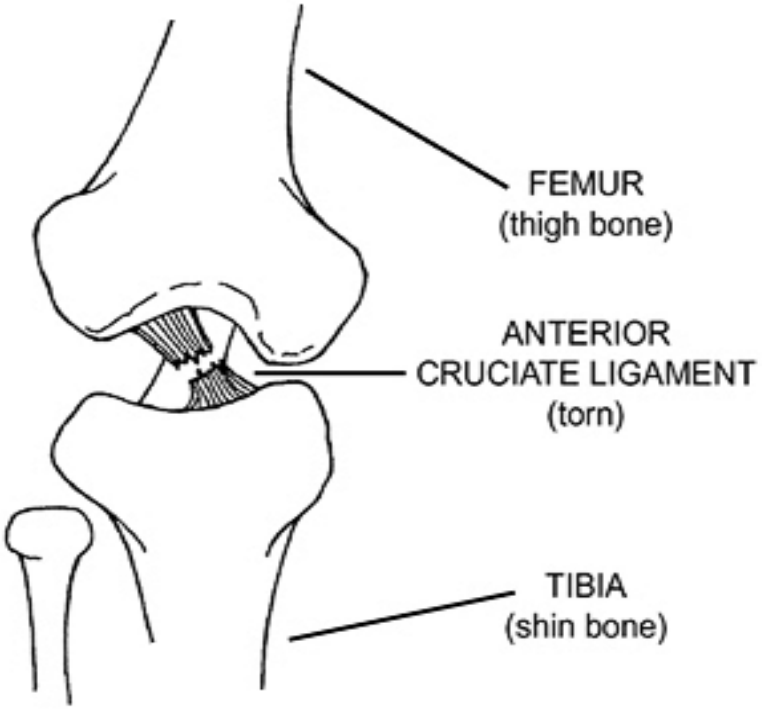
Mechanisms of injury

Tears of the ACL occur most commonly when the knee is subjected to rotational stresses in slight flexion (bend). You may get associated damage to the medial meniscus (cartilage on the inside of your knee) and the MCL (medial collateral ligament - the ligament that runs down the inside of your knee joint).

Other mechanisms of injury are forced hyperextension (over-straightening of the knee) and forced hyperflexion (excessive bending of the knee).

As the ACL is situated within the joint capsule, rupture of the ACL produces bleeding into the knee. This is the reason you get a swollen knee after a rupture - the swelling represents the blood in the knee joint.

It is worth bearing in mind that not everyone with a ruptured ACL requires surgery. Although, with a ruptured ACL the knee is technically unstable, some people are able to strengthen and train their muscles sufficiently so as to suffer no problems whatsoever. It depends very much on the individual and the lifestyle they lead.



Pre-operative physiotherapy

You will be seen a few weeks before your operation in the pre-operative assessment clinic. This is to ensure that you still need the operation and are fit enough to have it performed.

You will see a physiotherapist in the clinic who will explain the rehabilitation protocol to you. You will also begin some basic exercises to strengthen the muscles in your legs.

These exercises are contained within this leaflet.

What happens in the operation?

The reconstruction will occur using either two of the hamstrings tendons taken from behind the knee, or part of the patellar tendon at the front of the knee.

During the operation, the remnants of the torn ACL are removed and the rest of the knee inspected for further damage. The reconstructed ligament, called a 'graft' is fastened to the knee using a system of screws and pins by keyhole surgery (arthroscopy).

You will have a dressing around your knee when you wake up from the operation. It is not routine to use a brace to support the knee after an ACL reconstruction at this hospital. A brace gives a false sense of security to the knee and may make the muscles lazy. The best brace a patient can get is a good balance of the muscles around the knee.

What physiotherapy will I need?

After this type of surgery, rehabilitation is extremely important. You will start physiotherapy on the ward after the operation and continue with your rehabilitation as an outpatient.

Brief guidelines on the key stages are detailed later in the booklet. The most important thing to remember is that your progress in the rehabilitation is largely dependent on how much effort you put in. You must be motivated to undergo the rehabilitation in order to get the best out of your ACL reconstruction.

Following the operation

You will start to mobilise the day after the operation with the physiotherapists on the ward. You will be taught to walk with crutches and you will be able to put as much weight through your leg as is comfortable. If you need to manage stairs at home, you will practice these with the physiotherapists. Discharge from the hospital is almost always possible the day after the surgery.

Some patients will have a ‘nerve block’ as part of their anaesthetic. This numbs the knee for a few hours after the surgery to provide pain relief. You must not get up by yourself or try and walk by yourself as your knee muscles will also be numb and may cause your knee to give way and you to fall.

You will be able to gradually increase the amount of weight you put through your leg during walking. You should be fully weight-bearing without crutches between the second and third week after your operation. This will be guided by your physiotherapist as you should not walk without crutches until you have good muscle control around your knee.

You will start the exercises in this booklet to strengthen the muscles around the knee.

Swelling and ice

You may experience some swelling in your knee after the operation – this may be a sign that you have been overdoing it and need to rest the knee a bit more. If it persists, it can be dealt with by elevating your leg (so your foot is higher than your hip) and using ice.

To use an ice pack, place a bag of frozen peas in a damp pillowcase and apply to your knee for 20 minutes two or three times a day until the swelling subsides. Avoid using ice therapy if you have any skin problems, or altered sensation around the knee.

Exercise programme

In the initial recovery period, your circulation tends to slow down. Maintain good circulation by doing these exercises:

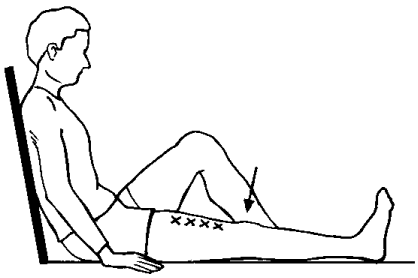
- Pull toes and feet towards you, and push away again. Repeat x 10.
- Tighten your buttock muscles, hold for 5 seconds then release. Repeat x 10.
- Take 3-4 deep breaths every hour until you are up and about on the ward.

Knee exercises

Continue with the following exercises three times a day until you have resumed your normal daily routine. If any of the exercises cause you concern, stop until you

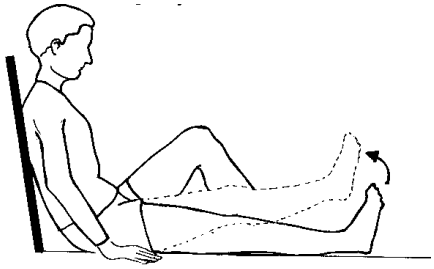
attend outpatient physiotherapy, or contact the West Suffolk Hospital physiotherapy department for advice.

- **Static quadriceps exercise**



Sit upright with your operated leg out in front of you. Bring your toes towards you and press your knee down into the bed by tightening your thigh muscles. Hold for 5 seconds. Repeat 10 times.

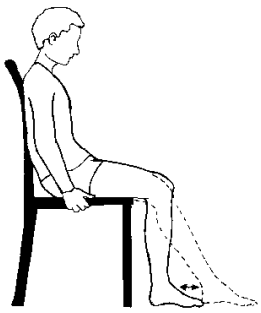
- **Straight leg raise**



Sit with your operated leg out in front of you, and your other knee bent. Tighten your thigh muscles and lift your leg 6 inches off the bed. Hold for 5 seconds and lower slowly to the bed. Repeat 10 times.

You should only do this exercise if the physiotherapist has told you to do so. It may put adverse pressure on your graft if you do it incorrectly.

- **Range of movement exercises**



Sit on a chair. Straighten your operated knee fully in front of you, then bend it to the chair again. Repeat 10 times.

Outpatient physiotherapy guidelines

You will attend physiotherapy as an outpatient after your operation at your nearest hospital or clinic. Your physiotherapist will have a copy of the West Suffolk Hospital ACL rehabilitation protocol.

Your therapist will provide guidance on exercises, walking practice, swelling etc. The exercises will aim to improve:

- Flexibility
- strengthening of leg muscles
- balance
- general cardiovascular fitness

You will be progressed through your rehabilitation by your physiotherapist. The protocol is designed to take you through your rehab in stages. Once you have achieved all the particular goals for one stage, you will progress on to the next. It is not defined by time constraints – you will progress as you are able, some patients might manage it sooner, others might take longer.

When you have good quadriceps strength, you will usually be advised to work independently at a gym, and attend physiotherapy for check-ups.

General guidelines

These are general guidelines and are dependent on achieving particular goals within your rehabilitation.

Driving

You will be able to drive when you can walk independently, putting full weight on your leg. This is usually at about 6 weeks after the surgery. You may be able to drive earlier if you have an automatic car and the operation was on your left knee.

You will need to notify your insurance company about the operation and discuss when you are able to return to driving.

Swimming

Swimming from about 6 weeks.

Sport

Non-contact sports from 7 months. Contact sports from 9 –12 months after consultation with the surgeon.

Return to work

Dependent on nature of occupation. This will be discussed at clinic appointments.

Advice

- Within the first 4-6 months avoid twisting or kneeling on your knee.
- The graft is at its weakest between 6 and 8 weeks following the operation. Take extra care with your activities and be extra vigilant, e.g. avoid slippery floors etc.
- The rehabilitation is essential. Please follow all the advice your physiotherapist or Consultant offers.
- You must attend your physiotherapy appointments as your physiotherapist will guide you through the stages of the rehabilitation process so you can get the most out of your reconstruction.
- Everyone recovers at different rates so don't compare yourself too much to others.
- If you have any concerns, discuss this with your physiotherapist.

Complications

Two uncommon complications are infection and thrombosis (blood clot). Symptoms are extreme pain and swelling in the knee or calf. In case of infection, most people have a fever and feel ill.

Contact the Accident and Emergency Department at the West Suffolk Hospital if you have any suspicion of these symptoms or complications.

Clinic appointments

Your surgeon will review you regularly in the Orthopaedic Clinic. Your physiotherapist will liaise with them regarding your progress.

Contact numbers

West Suffolk Hospital: 01284 713000

Physiotherapy Department: 01284 713300

You can contact your Consultant via the Hospital, if required.

If you would like any information regarding access to the West Suffolk Hospital and its facilities please visit the website for AccessAble (formerly DisabledGo)
https://www.accessable.co.uk

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