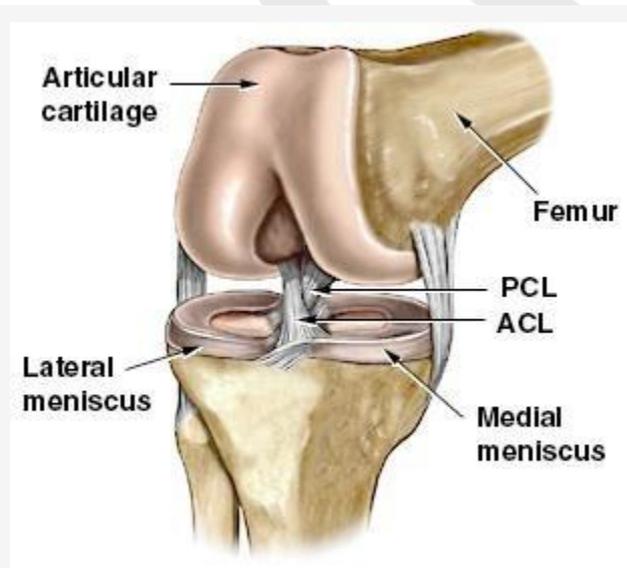




## Anterior Cruciate Ligament Reconstruction

### What is an ACL reconstruction?

Your knee joint is stabilised by four major ligaments. There are two collateral ligaments (medial and lateral) on the sides of the joint, and two cruciate ligaments (anterior and posterior) in the centre of the joint.



The Anterior Cruciate Ligament (ACL) attaches to the front of the tibia (shin bone) and passes upwards and backwards to attach to the femur (thigh bone).

This ligament controls the amount of forward movement of the tibia on the femur.

The ACL has two functions:

1. To provide stability in the knee.
2. To send information to the brain about the position of the knee, so that you feel steady. This is called proprioception.

Injury to the ACL usually occurs during twisting when the foot is on the ground. Common symptoms after this injury include the knee 'giving way' and pain and swelling especially while walking on uneven ground. Strengthening the muscles around your knee can improve knee control. However, surgery is indicated when the knee remains unstable.



# Dr. Aditya Khemka

Consultant Orthopedic Surgeon  
Hip, Knee & Osseointegration

## What are the risks of surgery?

As with any surgery there are risks, which you will have been informed of by your consultant prior to your operation. These risks include:

- Swelling
- Nerve damage
- Blood clots
- Infection – a serious but rare complication
- Ongoing knee pain
- Persistent instability and/or re-rupture of the ACL (0.5 -2 %)
- Joint stiffness
- Soreness and pain where the graft is taken from
- Weakness of muscles

## What should I expect following my surgery?

Following your surgery, elastic stockings (TED) will be put on your lower legs to reduce the risk of a blood clot developing while you are not as active. These usually remain in place for 2 weeks, unless you have been advised otherwise. You may also be given injections to thin your blood, for the same reason.

Most patients are able to go home on the day of the operation. However some may need to stay overnight.

In the first week following your surgery the aims are to:

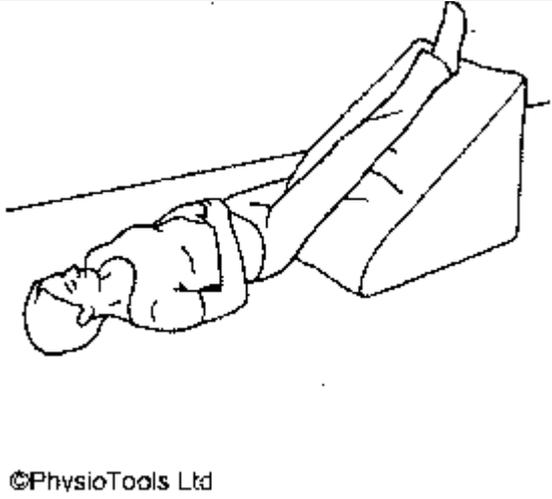
### 1. Control swelling

It is very likely that your knee will be swollen following surgery.



# Dr. Aditya Khemka

Consultant Orthopedic Surgeon  
Hip, Knee & Osseointegration



To help reduce the swelling you should elevate your leg as illustrated and whenever you are seated.

Applying ice packs to the knee, for 20 to 30 minutes every two hours whilst your leg is elevated can also help prevent swelling. However it is important to ensure that:

1. the ice pack is wrapped in a damp towel to prevent an ice burn.
2. you only use an ice pack on areas that have normal skin sensation i.e. where you can feel hot and cold.
3. you do not apply an ice pack over an undressed open wound.
4. you do not apply an ice pack to an area that has poor circulation. you check the skin every five minutes during application and discontinue its use if: the area becomes white, blue or blotchy, painful, numb or tingles

## 2. Walk normally

Providing you are well enough, you will be taught to walk with crutches by a physiotherapist a few hours after your operation. Use the crutches to help you walk normally, put as much weight through your operated leg as is comfortable and try not to limp. You will not usually require a knee brace.

Being on your feet with your knee below the level of your heart will cause your knee to swell. This swelling will reduce the movement at your knee and so slow your



# Dr. Aditya Khemka

Consultant Orthopedic Surgeon  
Hip, Knee & Osseointegration

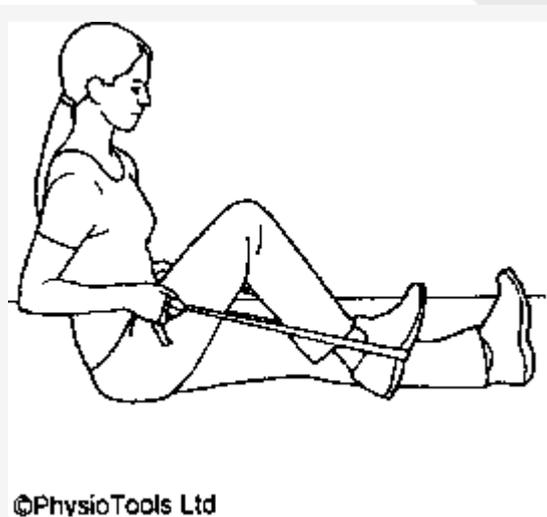
recovery delaying your rehabilitation. Therefore we recommend that for the first week following your surgery, you should elevate your leg at all times except when you are exercising or going to the bathroom.

### 3. Begin exercising

Although your knee will be painful and stiff, it is important that you begin exercises to regain your movement as soon as possible. If movement is not regained in the early stages, scar tissue will build up around the graft preventing the knee from fully straightening.

It is also very important that you perform only the exercises advised below. Overstressing the graft with inappropriate exercises will increase the risk of the surgery being unsuccessful.

The exercises below should be performed during the day *every 2 hours*, as soon as possible after your surgery.



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1. Sit down on your bed, stretch your legs straight out in front of you and place your foot on a slippery surface e.g. a tray.

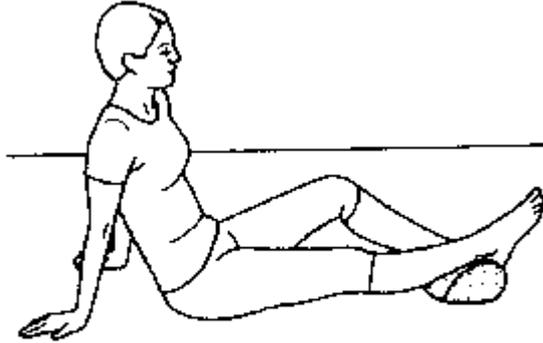
Wrap a scarf around your heel so that you can pull both ends with your hands to help as you bend your knee. Hold for a few seconds.

Then straighten the knee out and try to touch the back of the knee to the bed. Repeat the cycle 10 times.



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2. Place your ankle on a thick rolled up towel, so that your knee is as straight as possible.

Now tense your thigh muscle by pushing the back of the knee down towards the bed. Hold for 5 seconds and repeat 10 times.

3. Keep your ankle on the thick rolled up towel, lay down and allow your knee to sag to fully straight. Applying ice while resting in this position may make it feel more comfortable.

Hold this position for 10 seconds and repeat 5 times.



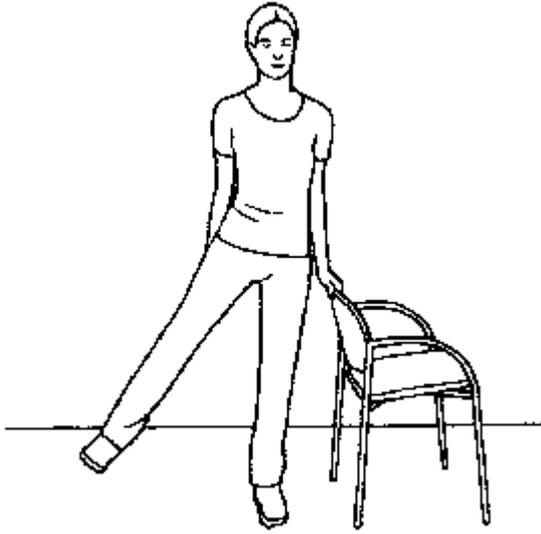
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4. Lie flat on your bed. Squeeze your buttocks together tightly. Hold for 10 seconds and repeat 10 times.



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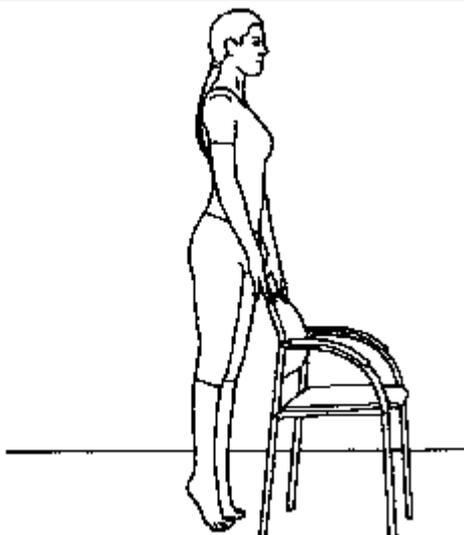
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5. Stand and hold onto something stable. Lift your operated leg out to the side and hold for 5 seconds.

Repeat 10 times.



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6. Stand and hold onto something stable, spread your weight equally over both feet. Push up onto your toes and hold for 5 seconds.

Repeat 10 times.

It is common for you to experience pain following your reconstruction, so ensure that your pain levels are adequately controlled by taking your medication regularly as prescribed. This will allow you to perform your exercises and walk as normally as possible.

## Rehabilitation after the first week

On discharge from hospital a physiotherapy out-patient appointment will be arranged for you, usually 7 to 10 days following your surgery.



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After your first physiotherapy appointment your physiotherapist will decide how often they would like to see you. This may be more often at the beginning when you need more support and advice, but less often as you become more active and confident with your exercises.

Attendance at your physiotherapy appointments is important to ensure that you are progressing through the protocol that was agreed by your consultant. The ACL rehabilitation protocol has strict guidelines concerning the introduction of specific exercises. Do not try any exercises that you have not been advised to do by your physiotherapist at any stage of your rehabilitation.

The physiotherapist's role is to guide you through what to do and what not to do, as well as to monitor your progress. Physiotherapy is vitally important to ensure a successful outcome following your ACL reconstruction; however the main responsibility lies with you. You need to be highly motivated and committed with your physiotherapy both during your physiotherapy sessions and at home.

You should inform your physiotherapist of each consultant appointment so that they can give you a progress report to take with you.

## **Frequently asked questions**

### **When do I remove my dressings?**

The large wool and crepe bandage should be removed 72 hours following your operation. The small dressings over each wound should be left in place until follow up clinic or 10 days post-surgery. A fresh dry dressing or plaster should be re-applied if there is still leakage from the wound.

### **Why do I have a large area of bruising at the back of my leg?**

Bruising in the back of your thigh, inner thigh, calf or shin is quite normal, especially if the hamstrings were used for your ligament graft. There is no need to treat the knee differently because of this. However, it is very important that you see your GP



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Consultant Orthopedic Surgeon  
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immediately if the calf muscle becomes painful and increasingly red, hot and swollen.

## **How will I know if my knee becomes infected?**

Infections following this type of surgery are not common. However, if you notice an increase in pain, warmth, redness or swelling that may be accompanied with flu like symptoms please seek advice from your GP.

## **Why do I not have any feeling over the top of my knee?**

Numbness occurs because the nerve that supplies sensation to this area of skin runs over the front of the knee, and during the surgery the surgeon must cut through this nerve in order to perform the operation.

As a result it is normal to notice an area of numbness around the knee but this area will shrink in size over time. It is possible you will always have a small area of numbness or altered sensation.

## **When can I start to drive again?**

This varies with each individual depending on their progress. In order to drive safely you must have regained good muscle control and movement in the operated leg and be able to walk without crutches.

At your first hospital review you should ask the consultant when he would be happy for you to begin driving. You should also contact your insurance company to notify them about your operation and to check the validity of your insurance.

## **When can I return to work?**

This will vary depending on your recovery post-surgery and the type of work that you do. At your first hospital review discuss your occupation with the consultant who will be able to advise you further.



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Heavy manual workers or patients whose jobs require carrying, lifting or twisting may need to initially modify their activities at work, to avoid putting the healing graft under strain.

## **When can I return to my chosen sport?**

Do not return to sporting activity without first discussing clearly with your physiotherapist and consultant. The Hull and East Yorkshire Hospitals NHS Trust's ACL protocol states that patients should not return to sporting activities until at least 9 months after surgery. Your consultant will advise you when they are happy for you to return sport.

To ensure you are ready to return to your chosen sport, your physiotherapist will introduce exercises that replicate specific movements that are required. As stated earlier, do not do any exercises that you have not been advised to do by your physiotherapist at any stage of your rehabilitation.

