

# Post-operative advice after Anterior Cruciate Ligament (ACL) Reconstruction

## Physiotherapy Patient Information

You have just had your Anterior Cruciate Ligament (ACL) reconstruction here at the RUH. In this leaflet you will find all the key information for you to begin your recovery. Your body starts healing straight away, following this advice you will optimise your early rehabilitation.

You may have had other procedures within the knee such as a meniscal repair, which could mean you have some different guidance around weight bearing or knee movement. You will receive individual guidance from the Surgical Team.

### Important things to know about ...

- **Pain**  
Your knee is likely to be very sore after the surgery, this is part of the normal healing process. This may continue over the next few weeks and may affect your sleep, movement and walking. The pain can result in weakness, muscle inhibition and unhelpful movement compensations so it is very important that you take your painkillers as advised to facilitate good movement. It can also be helpful to use an ice pack on the knee to help manage pain.
- **Swelling**  
Your knee is likely to be very swollen after the surgery; this is part of the normal healing process. This can persist over the next few weeks; this may impact your ability to regain the full movement of your knee and impact your muscle activation which can slow your recovery. It is important to reduce your swelling - elevating your leg above your heart can help to allow drainage.
- **Movement and exercise**  
Movement and exercise is essential to your recovery, in this leaflet are exercises designed to get your knee moving improving the amount of movement and improving your thigh muscle strength. With these you are looking to hit the sweet spot of activity, not too much or too little. Most commonly people do too little exercise and too much walking.
- **Crutches**  
You will need to use elbow crutches to allow you to walk normally for the first few days to weeks. When able to, you will wean off the crutches as you improve with time and exercise, you may have specific guidance from your surgeon based on the repair you have.

- **Anaesthetic**  
You may have had a general anaesthetic to undergo the surgery. This can take up to 24 hours to recover from.
- **Dressings**  
After the surgery you will have a large crepe bandage over your knee, this is removed around 72 hours post-surgery. You will have dressings on and these should be left in place for at least 10 days after your surgery. The wound can bleed or leak. This is normal, but if you feel this is more than normal then you should consider contacting your GP.
- **Driving**  
This varies with each individual depending on your progress, but it is approximately around 6 weeks post-surgery. To drive safely you must have regained good muscle control and movement in the operated leg, be able to walk without crutches and be able to complete an emergency stop. At your first hospital review you should ask the consultant when they 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.
- **Work**  
Ideally have at least 6 weeks off work, it maybe longer 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. Heavy manual workers or patients whose jobs require carrying, lifting or twisting may need to modify their activities at work initially, to avoid putting the healing graft under strain.
- **Follow up**  
You are usually followed up in hospital a few weeks after your operation for a review of your progress and wound. This will give you an opportunity to get more information about your operation and ask any questions you have. It may be worth making a note of any questions you want answered prior to your appointment.

You will be referred to physiotherapy in the next few weeks to continue the rehabilitation you are starting today.

### Your goals in the first few weeks (0 – 2 weeks) are

- Increase your knee movement, ideally a 0 degrees extension (straight knee) and at least 90 degrees flexion (knee bend)
- Restore the quadriceps muscle activation (wake up the thigh muscles)
- Normalise your walking using crutches and then begin to wean them slowly
- To have your pain and swelling well controlled

## Tips to optimise your rehabilitation



- Take regular pain relief as prescribed or over counter medications. Having your pain well controlled in these early stages is essential as it will make things more comfortable; making it easier to move, complete the exercises and sleep.
- Even though it's comfortable, **DO NOT** put a pillow under your knee for extended periods as it can impact your ability to get your knee straight.
- Manage the swelling - Things that can influence swelling positively are elevating the leg above the heart, ice and compression.
- Measure your swelling regularly as it can guide how active to be - use a tape measure to measure around your knee to give you a rough estimation. You are looking to see it reduce over time, so if your swelling increases it may be your knee telling you to reduce your activity.
- Don't rush off your crutches, use them to optimise your walking pattern, build up tolerance walking with them, and then aim to wean off them. You may drop down to one crutch which is used in the opposite hand, then down to no crutches. Coming off them too soon can aggravate the knee and reinforce unhelpful compensation patterns.
- Rest is important, getting the right balance of rest, being active and doing the exercises is key in these early stages.
- Aim to complete the exercises little and often, every day. They are designed to help you achieve the goals of this stage. Although we want a straight knee there is no need to push this in the early stage as it can be sore and add to the pain and swelling. Be patient the movement and muscle activation will come in time.

## Exercises

**Ankle Pumps** - To reduce risk of blood clots.

In lying or sitting, pull your ankles up towards you and point them away from you in a repeated motion, pumping them up and down. Aim to complete 10 pumps 4 – 5 x per day.





### **Knee straightening exercises**

Lie on your front on your bed or sofa, with your feet dangling off the bed, making sure your shins are only half off the bed. Hold this position for up to 10 minutes 3 - 4 x per day.



### **Knee bending exercises**

While lying down or sitting up with your legs out straight in front of you, slide your heel up the bed, bending your knee as far as comfortable. Then slide your heel down straightening your knee, then repeat. Aim - 10 Slides 4 – 5 x per day.



And / Or

While sitting in a chair with your legs out in front of you, slide your heel towards you bending your knee as far as comfortable. Then slide your heel back out straightening your knee, then repeat. Aim - 10 slides 4 – 5 x per day.





### Quadriceps muscle exercises

While lying down or sitting with your legs out in front of you, place a rolled up towel underneath your knee making a bend in your knee (**this is the only time to place a towel under the knee**)

**Inner range quads:** Tense your thigh muscles, straightening your knee and raising your heel off the bed. Aim - 10 squeezes and lift 4 – 5 x per day.



As you progress and it becomes easier to straighten your knee, you can repeat the exercise with a smaller towel.



**Static quads:** As you progress further, your goal is to have a straight knee with a good thigh muscle contraction, being able to hold for 10 seconds.



## Quadriceps muscle exercises continued ...

**Straight leg raise:** While lying or sitting with your legs out straight in front of you. Tense your thigh muscle straightening the knee, and then lift your whole leg up keeping it straight, then lower down in a controlled fashion. Aim - 10 lifts 4 – 5x per day.



## Potential complications to be aware of after the operation

- Bruising in the back of your thigh, inner thigh, calf or shin is quite normal. There is no need to treat the knee differently because of this.
- It is normal to notice an area of numbness over the front of the knee, this occurs because the nerve that supplies sensation to this area can be affected. This area may shrink in size over time but it is possible you will always have a small area of numbness or altered sensation.
- There is a small risk of having a blood clot in your leg post-surgery known as a deep vein thrombosis (DVT). To reduce the risk of a DVT you should avoid any long-distance travel which is anything 3 hours or longer up to 3 weeks post operatively and any long haul flights should be avoided up to 6 weeks post operatively. Keeping yourself mobile and doing the ankle pump exercise will help with this. However, it is very important that you attend A+E department if the calf muscle becomes painful and increasingly red, hot, swollen and shiny.
- 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.

## Useful Information:

You can find some videos to help you do your exercises at home here:

[www.ruh.nhs.uk/knee](http://www.ruh.nhs.uk/knee)



If you have any concerns, please contact the ward who cared for you at the RUH, contact the switchboard and ask for ..... Ward

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