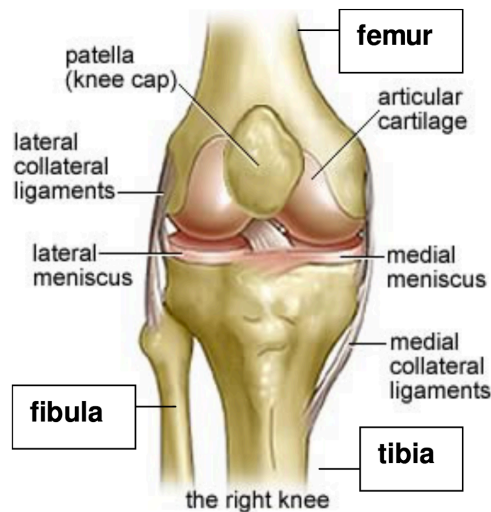


# Patient Information And Rehabilitation Guidelines Following Biopoly Surgery

This booklet aims to improve your understanding of Biopoly surgery and the rehabilitation afterwards.

## Anatomy

Osteoarthritis can affect any joint in the body but is more common in joints in the lower limb weight-bearing joints, eg hip and knee.

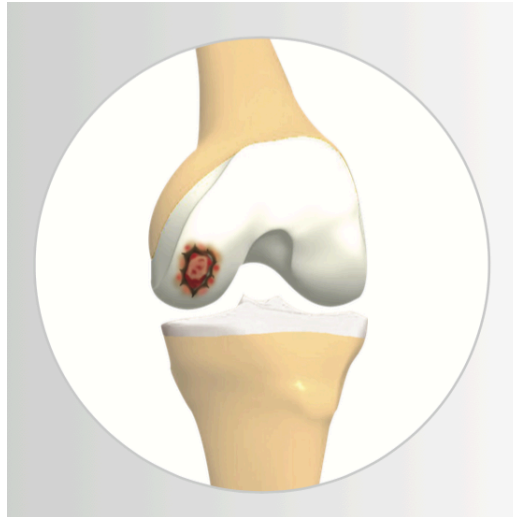


A joint is formed where two bones meet. The ends of the bones, which form the joint, are covered in articular cartilage.

This provides a smooth, slippery and low friction surface that also cushions the joint. Healthy cartilage absorbs stress and allows the bones to glide across each other smoothly.

One of the most common injuries to the knee are cartilage defects of the femoral condyle. These typically occur as a result of a traumatic event or an activity related injury.

A femoral condyle cartilage defect disrupts this surface which can lead to pain and loss of motion. If these defects are not treated they typically grow in size and depth due to the altered knee biomechanics until the pain is unmanageable.



## What is the Biopoly RS device?

**BioPoly RS** is an implant utilising an advanced biomaterial to resurface (RS) cartilage defects. The **BioPoly** material has interpenetrated hyaluronic acid (HA), a naturally occurring molecule found in the joint fluid. This gives the implant enhanced lubricity and a lower coefficient of friction compared to traditional orthopaedic implant materials.

Only the damaged portion of cartilage is replaced with an implant that interacts favorably with the surrounding tissues and the opposing cartilage surface. Since only a limited amount of joint disruption occurs during the surgery you can rapidly recover and return to activity.

## Who can have the Biopoly procedure?

Many patients for various reasons including age are not good candidates for biological treatments (or they have had a failed prior treatment).

Many patients have pain but due to age and/or activity are not ready for an invasive artificial joint replacement. These patients may benefit from Biopoly surgery.

During your consultation you will be informed whether Biopoly surgery is appropriate for you.

## The Procedure

The procedure is usually carried out under general anaesthetic. A small incision is made over your knee joint to expose the joint surfaces. The area of defect is then cleaned up and the Biopoly inserted. The link below is a video of the operation being carried out:

<https://www.youtube.com/watch?v=YAeTEJgsmNs>

## Complications

Complications do occur. Some are minor but others may require further surgery. It is important you understand this before undertaking surgery. Examples include:

| Complication   | Recorded in literature | Professor McNicholas' cases |
|--|------------------------|-----------------------------|
| Anaesthetic risks (discussed with your anaesthetist) | 0%                     | 0%                          |
| Deep Vein Thrombosis (clot in the calf)              | 0%                     | 0%                          |
| PE   | 0%                     | 0%                          |
| Infection  | 0%                     | 0%                          |
| Loose body   | 2%                     | 2%                          |
| Revision rate  | 2%                     | 0%                          |
| Anteromedial plica                                   | 2%                     | 2%                          |
| Implant failure                                      | 0%                     | 0%                          |

Any surgical intervention can theoretically result in mortality (death), it is extremely rare for this to happen for this procedure but recent legal rulings have mandated this be mentioned.

## Pre-operative Assessment

An assessment of your fitness to undergo surgery including a detailed medical history, height, weight, blood pressure and pulse will be performed before surgery. Blood tests and a heart trace (ECG) may also be needed.

## The Day of the Operation

You are asked not to drink or eat anything for at least 6 hours before your operation.

You will be seen by your Anaesthetist and a member of the surgical team before your operation.

In the anaesthetic room, you will have a needle put into your arm and will be placed on an anaesthetic machine.

Surgery usually takes around 30-40 minutes.

You will wake-up in the theatre recovery room. On return to the ward you will have the following:

- Dressings – wool and crepe bandage on the knee and a brace to limit knee movement.
- Drips and drains – there may be small tubes in the back of your hand. You might also have a tube into your bladder (catheter).
- Analgesia – this may be oral medication or patient controlled analgesia (PCA), which looks similar to a drip.

You will usually be required to stay overnight.

## Discharge Instructions

The wound is to be kept dry until healed and the dressing is not to be disturbed unless soiled and a clean one applied.

Regular ice application (10-15mins every 1-2 hours).

You will be given pain relieving medications to take home with you, please take these as prescribed to prevent pain from building up to a level that is hard to control.

Remember your scar is highly susceptible to the sun, and use of a higher factor sun block is advised.

## General Advice

**Return to work** will depend greatly on the job that you do (desk-based jobs 2-4 weeks; manual jobs 6-12 weeks; jobs requiring ladders etc. 3-4 months).

**Return to driving** at 6 weeks for manual geared cars and automatic cars if it is the right leg that has been operated on. If it is the left leg that has been operated on, you may drive an automatic car once the wounds are healed at 2 weeks.

You should notify your insurance company of the procedure that has been undertaken to ensure that your cover is valid. For further information follow this web link: <https://www.gov.uk/driving-medical-conditions>

**Flying** is not permitted for 8 weeks following surgery due to a higher risk of developing a blood clot. For further information follow the web link below: <http://www.nhs.uk/chq/Pages/2615.aspx?C%20ategoryID=69>

## Long-term follow up

You will be seen at 2 weeks, 3, 6, 12 weeks and 3, 6, 9, 12 months, 2, 5, 10 years annually after that.

## Rehabilitation (Physiotherapy) Programme

Physiotherapy programme to follow.

## VTE (blood clots)

VTE is a collective term for two conditions:

- **DVT** (deep vein thrombosis) – this is a blood clot most commonly found in a deep vein that blocks the flow of blood.
- **PE** (pulmonary embolism) – a potential fatal complication where a blood clot breaks free and travels to the lungs.

Whilst you are less mobile, especially during the first few weeks following your procedure, the risk of VTE is higher because of your immobility.

Professor McNicholas may prescribe you a daily injection of Clexane to help thin your blood and these should last approximately 14 days. If this is needed, you will be shown how to inject this drug yourself.

## **Symptoms:**

- Swelling – you will have some swelling due to your surgery but if you have any concerns please call for advice
- Pain – any new pain we want to know about
- Calf tenderness
- Heat and redness compared with the other leg
- Shortness of breath
- Chest pain when breathing in

## **Things you can do to prevent VTE**

- Move around as much as possible. Be sensible though, short and regular movement is best
- Drink plenty of water to keep yourself hydrated
- We strongly advise you not to smoke – this will have been discussed in pre op but we can also refer you to our smoking cessation team within the Hospital.
- Move your ankle around as much as possible to keep your calf muscle pumping

**Small preventative measures can have a huge impact on your recovery.**

Written by:

Biopoly company  
Miss F Rashid, Orthopaedic Registrar  
Mr Richard Norris, Orthopaedic Physiotherapist Specialist  
Professor MJ McNicholas, Consultant Orthopaedic Surgeon

Date last reviewed:

April 2016