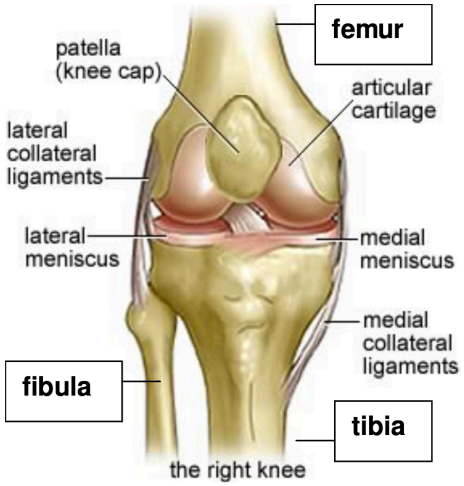
Patient Information And Rehabilitation Guidelines For Osteochondritis Dissecans (OCD)

This booklet provides information on osteochondritis dissecans disease (OCD) including the rehabilitation process.

What is Osteochondritis Dissecans (OCD)?



This is a rare condition affecting the knee - estimated at 15-30 cases per 100,000 people. It occurs most often in adolescents and young athletes.

The end of the bones, where a joint is formed, is covered with articular cartilage. This provides a smooth slippery surface that allows the joint to move smoothly.

The problem occurs when the bone underlying the articular cartilage is injured and the blood flow reduced. Being on a weight-bearing surface, the damaged area is under constant stress and does not get time to heal. If left untreated the damaged area may lead to arthritis later in life.

Initially, the pain is often a mild aching, but this gradually worsens over time. Moving the knee can become painful and it may be swollen. The pain may eventually stop you putting full weight through the knee when walking.

As the condition worsens, the area of damaged bone may become detached and form a ‘loose body’. The loose body can float around the inside of the knee joint and may cause the knee to give way or lock.

X-rays and MRI scans are used to diagnose the problem and guide treatment.

Non-surgical treatment

This can take 10-18 months and requires you to stop doing everything that causes pain in your knee (typically sports and often all weight-bearing activity).

It may mean you use crutches for a while when your knee is sore. As pain settles then you can place more weight through the leg.

Regular scans may be required to check how well the knee is healing and to see if surgery is needed.

If the lesion becomes partially or totally detached, or the knee fails to settle after 18 months, then surgery is required.

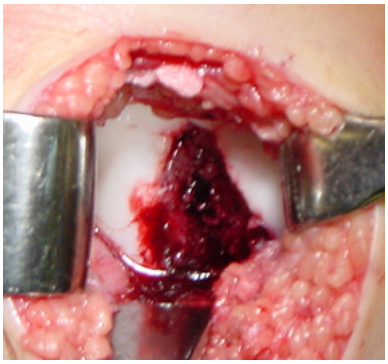
The Procedure

The procedure is usually carried out under general anaesthetic with additional local anaesthetic techniques too.

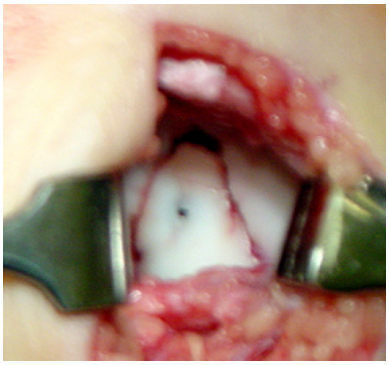
It is possible to perform a 'keyhole' operation (arthroscopy), which looks inside your knee joint using a special camera, a moving picture xray camera might also be used. If the lesion feels stable when probed arthroscopically, then retrograde drilling, from outside the joint can be used to encourage it to heal in place.

If the lump moves when probed, reattachment of the fragment using metal pins or screws to hold the fragment in place is needed. The procedure can be carried out arthroscopically in approximately 50% of patients; the others need an open procedure (involving a wound approximately 10 cm long on the front of the knee) which is closed with staples.

If the fragment does not fit perfectly into place anymore or is too badly damaged to save, then it may need to be removed. The resulting hole in the cartilage can be treated with a cartilage resurfacing technique.



OCD lesion (prepared)



OCD lesion fixed

Benefits

The following should be improved following your operation, but remember this will not happen immediately. **It can take 2-6 weeks for the knee to become less swollen.**

- Reduction of pain
- Reduction of swelling
- Your knee should stop giving way or locking
- Improved function (able to return to work and / or sport)

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
Risk of further surgery	1 in 15 chance
Stiff knee requiring further surgery to regain movement	1 in 15 chance
Portal infection	1 in 100 chance
Septic arthritis (infection in joint)	1 in 500 chance
Complex regional pain syndrome (an abnormal pain reaction to surgery)	1 in 100 chance
Deep vein thrombosis (clot in the calf)	3 in 100 chance
Pulmonary embolism (clot in the lung)	Very rare but potentially life threatening

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.

After the operation

You will wake up in the recovery area of the theatre.

You may have 2 or 3 small wounds, which will be covered with a small dressing or a 10cm long wound on the front of your knee. You will have a compressive wool and crepe bandage on your knee. It is normal for your knee to be a little sore and swollen for the first 48 hours.

You will need elbow crutches.

You will also probably be allowed to go home on the day of your operation and you will be given some painkillers on discharge from hospital. It is important that someone will be with you overnight after the operation; otherwise you will have to stay in hospital overnight.

You will be referred to Physiotherapy.

Putting weight through your leg is not allowed until 6 weeks after surgery, and can be gradually increased as long as the knee is comfortable.

For the first few days rest as much as possible with your leg elevated and move feet and ankles up and down to help your circulation.

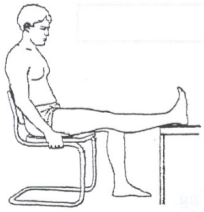
No impact activities or sports are permitted until the x-rays show healing. This can take 3-9 months. You will have an x-ray at each visit to clinic to assess the healing.

A second operation will be needed to remove the metal pins or screws. The removal of the fixation material is done by keyhole surgery, if possible. If not, an open procedure may be used. It is usually a day case operation. It can take 10-14 days for the wounds to heal and then a return to all desired activities is allowed. Most patients return to sports 6-12 months after their second operation.

Exercises

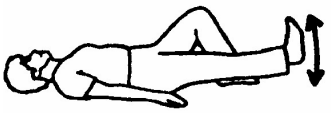
The following (non-weight bearing) exercises should be started immediately and continued at home. These should be performed 4 times each day.

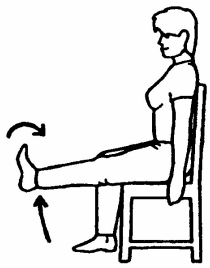
1. Sitting on the bed, place a sock on your foot. Place a slippery board/tray under your foot and a band around it. Bend your knee as far as possible. Gently pull the band to bend a little more. Hold 5 seconds. Repeat 10 times.



2. Sit on a chair with the heel of your operated leg on a stool. Allow your knee to straighten as much as possible for 10 seconds. Repeat 10 times. You can gently press down on your knee with your hands to stretch a little further.

3. Lying on your back. Lift your leg 6 inches, keeping your knee straight. Hold 5 seconds. Repeat 10 times.





4. Sit on a chair. Pull your toes towards you, tighten your thigh muscle and straighten your knee. You can add a small weight over the ankle to make the muscle stronger.

If at any times your knee becomes acutely painful, you can take pain-killing tablets and it may be worth using ice to reduce your symptoms.

To do this, make sure the ice is in a sealed bag, and then wrapped in a damp towel. Alternatively a bag of frozen peas wrapped in a damp towel may be used. Apply the ice for no longer than 10 minutes at any one time. You can use ice every hour if necessary.

You will be seen around 2 weeks after the operation, as an outpatient, by your consultant's orthopaedic team. Staples/stitches will be removed now (if you have them).

General Advice

Crutch walking: Crutches will be required for the first 6 weeks. You must avoid putting weight through your operated leg.

Stairs: Keep both crutches or stick in one hand, hold the banister with your other hand.

Showering: You may shower provided that you keep the affected area water tight, i.e. with a plastic bag or cling film around your leg and sealed. If the dressing becomes wet or soiled, please replace it with a clean dry one.

Return to driving: Return to driving can vary considerably from person to person. Most people are able to drive 6-8 weeks after surgery. However, it is advisable that the following are achieved before trying to drive:

- You should be walking without crutches with a minimal limp
- You should be able to safely perform an emergency stop
- You should feel confident that you are in full control of your car.

If you drive an automatic car and your left knee was operated on you can drive once the wounds have healed.

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

Return to work: For desk jobs this could be 14 days depending on pain, swelling and mode of transport. For many jobs it may take 6-8 weeks as you will not be allowed to place weight through your operated leg for 6 weeks.

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

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.

For further information, please see :
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4630227/

Written by:	Ms A Hatcher, Orthopaedic Physiotherapist Specialist Mr P Ellison, Orthopaedic Physiotherapist Specialist Mr Richard Norris, Orthopaedic Physiotherapist Specialist Professor MJ McNicholas, Consultant Orthopaedic Surgeon Miss F Rashid, Orthopaedic Registrar
Edited by:	MJ McNicholas
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