

Information Sheet

Open Hip Impingement Surgery

**Mr. Mark Norton
Mr Darren Fern
Mr Gavin Bartlett**

Consultant Orthopaedic Surgeons

**PLEASE READ THIS SHEET COMPLETELY BEFORE AGREEING TO SIGN THE CONSENT FORM
FOR MORE INFORMATION VISIT WWW.ORTHOPAEDICSOLUTIONS.CO.UK**

What is Hip Impingement ?

An abnormal shape of the ball and socket of the hip joint causes the ball (femoral head) of the hip joint to grind against the rim of the hip socket (acetabulum).

This has been given the name Femoroacetabular Impingement and is abbreviated as FAI.

The impingement usually causes repeated minor damage to the cartilage lining the hip joint and to the seal (labrum) around the edge of the hip socket (acetabulum).

This results in tears of the labrum (which can be painful) as well as cartilage damage and early hip arthritis. A single sudden injury can cause similar damage more rapidly.

FAI can be seen in people with very flexible hip joints (laxity) even when the hip is a normal shape and this is a common problem in teenage girls.

It can be associated with low back pain. It is possible for both hips to have FAI.



Severe cartilage damage seen within a hip socket.

What is Hip Impingement Surgery?

It is a reshaping and repairing of the natural hip joint based on an understanding of the mechanical causes of hip pain and osteoarthritis of the hip joint.

It was first performed in Cornwall in March 2003 and is now performed on over 100 patients per year in Cornwall.

Surgery is only possible in the very earliest stages of hip osteoarthritis, before there is any obvious wear of the hip visible on X-ray.

It relies on the surgeon having an in depth understanding of the mechanical factors causing hip osteoarthritis and often needs detailed pre-operative scans.



Why has it taken so long to get my diagnosis?

Because only minor damage occurs with each impingement, it may take many years for the damage to become bad enough to cause pain. It can take a while to be recognised by the patient and often longer still before they find someone who understands how to treat this condition.

FAI as an identifiable condition is very new. Most GPs have not heard of it. Some physiotherapists and general orthopaedic surgeons are unaware of FAI. Specialist hip surgeons and some sports physicians have a better understanding of this condition.

What are the benefits of hip impingement surgery over conventional hip replacement?

The pain in the hip may be able to be surgically treated by reshaping the abnormally shaped hip to prevent hip impingement and possibly further deterioration of the hip joint. This may delay or avoid the need for later hip replacement surgery.

What is the abnormality causing the problem?

The ball of your hip joint may be positioned incorrectly at the top of your thigh bone, or your hip socket may be incorrectly orientated resulting in the front of the thigh bone hitting against the front of the hip socket.

This initially causes damage to the seal of the hip joint (labrum) and later causes damage the lining cartilage of the hip socket. This damage to the socket is the most common cause of osteoarthritis.

Surgery is aimed at removing the areas of bone that are causing the impingement

thereby removing the ongoing damage to the cartilage lining of the hip joint.

The recent improved understanding of the mechanical causes of hip arthritis make this a logical procedure for young people with abnormal hip shape and hip pain as it may delay progressive damage to hip joint surfaces.

Why might you need hip impingement surgery?

You will normally be suffering from pain in the groin and low back during or after various activities. This will often be worse when flexing the hip to its limit and may be initiated and exacerbated by kicking or running sports. Many female patients report groin pain during sexual intercourse with the hip flexed.

What are the results of hip open impingement surgery?

The long-term results are not known. Recent studies of small numbers of patients indicate that approximately 90% of patients experience a good or excellent result at 2.5 years after surgery.

Our own results are available for review at www.orthopaedicsolutions.co.uk.

The National Institute of Clinical Excellence has given guidance on this procedure and a further information sheet from NICE is included as per their guidance.

MY NOTES TO DISCUSS AT THE HOSPITAL 	



What benefit will hip preservation be to you?

The operation usually relieves most of the pain in your hip in time, but you may continue to experience some mild discomfort and tightness afterwards especially in the front of your hip. This usually settles down after about 6 months.

The operation usually improves stiffness in the hip joint, although movements do not usually return to 'normal'. The aim of surgery is to treat your hip pain and attempt to delay or avoid the progression of osteoarthritis in the hip joint and to treat pain.

What will the surgery involve?

This is major surgery and the exact nature of the surgery will depend on the nature of the cause of your hip problem.

In basic terms, the procedure involves taking the ball of the hip out of the socket and removing the areas of bone from the ball and the socket which are catching against each other when your hip bends.

It is necessary to cut a part of the hip bone (the greater trochanter) to safely access the hip joint without damaging the blood vessels to the hip. This part of the bone is re-attached at the end of the operation with 2 to 3 large screws. This bone takes about 2 months to heal back in place. During this period it is essential that you do not walk on your leg and you will need to use crutches to assist you for this time period.

It is usually necessary to trim the rim of the hip socket back and to stitch the soft seal of the hip socket back to the rim of the socket. We use small titanium anchors fitted into the bone to hold the stitches.

How should you prepare for your operation?

It is important that you are as fit as possible before your surgery to attempt to avoid complications.

If you are found to have a problem that can be improved prior to your surgery, your surgery will be postponed until the problem has been improved as far as possible.

Smoking

If you smoke, please try and stop well beforehand.

Obesity

This surgery is not recommended for people found to be obese on body mass index scoring. Obese patients are highly unlikely to be suffering from bony hip impingement as this occurs in the soft tissues first thereby protecting the hip from this phenomenon.

Dental Hygiene Infection of the hip joint can occur if bacteria enter your bloodstream. Any infected or loose teeth should be dealt with well before your surgery. If you are unsure whether your teeth require attention prior to your surgery, you should see your dentist.

Preparing Your Skin Your skin should not have any infections or irritations before surgery. If either is present, contact your GP to discuss ways to improve your skin before your surgery.

Social Planning Although you will be able to walk with crutches soon after surgery, you will need some help for several weeks with such tasks as shopping, bathing, and laundry.

If you live alone, your occupational therapist will help you make advance arrangements to have someone assist you at your home. Only in exceptional circumstances will a short stay in a rehabilitation hospital be arranged during your recovery after surgery.

If you have developed any changes in your health since being seen in the outpatient clinic, please contact my secretary for advice on what to do.



Before your surgery you will be asked to attend the hospital for a pre-operative assessment.

What is the preassessment?

This is a clinic run by highly trained nurses who check that you are as fit as possible for your surgery. This check is usually performed 2 to 3 weeks before your surgery in case any further tests or treatment are required prior to your operation. If any problems are found at the preassessment, your surgery may need to be postponed until these problems can be corrected.

The preassessment includes:

Medical Evaluation If you are known to have, or are found to have any severe medical disorders, you may need to have a complete review by your specialist before your surgery. This is sometimes needed to assess whether your medical condition can be improved prior to your surgery.

Tests Several tests, such as blood samples, an ECG (heart trace), X-rays and a urine sample will be performed.

Medication review Tell the assessment nurse about the medications you are taking. If you are taking blood thinning medication (Warfarin or Aspirin) or anti-inflammatory tablets you should discuss when to stop taking this medication with the assessment nurse.

Pregnancy test

Females of child bearing age should have a pregnancy test prior to surgery to ensure that they are not pregnant.

What will happen in hospital?

You will be admitted to hospital on the day of your operation. The anaesthetist will evaluate you before your surgery.

The most common types of anaesthetics for this surgery are *spinal or epidural anaesthetics* (which numb your body from the waist down) or *general anaesthetic* (which puts you to sleep). Commonly a combination of these will be used. The anaesthetist will discuss these options with you and explain which type of anaesthetic is best for you.

You will be seen by your surgeon before your surgery to ensure that your hip is marked with an arrow and to discuss any last minute questions you may have. If your hip has improved while you have been waiting for your surgery, please be sure to let your surgeon know.

You will be asked by your ward nurses to take a shower with a special antiseptic soap to try to reduce the risk of infection. If the arrow on your skin is washed off, please inform your nurse to ensure it is remarked.

You will be transported to the operating suite on a theatre trolley where further safety checks will be carried out. You will then be taken to the anaesthetic room where you will be prepared for your surgery.

The operation usually takes about two hours to remove impingement problems but it may take up to 3 hours if it is necessary to re-orientate the hip bones by breaking and resetting them.

After surgery, you will be moved to the recovery room where you will remain for one to two hours while your recovery from the anaesthetic is monitored.



If you wish me to contact a relative or friend directly after your operation to let them know that all is well, ***please give a contact name and phone number to the nurse at the pre-assessment clinic***, and it will be passed on to me.

After you awaken fully, you will be taken back to your ward.

You will have a drip in your arm, drainage tubes from the hip wound and possibly a catheter from your bladder. Your own blood from the wound drainage tube will be returned to you if possible. This is to avoid the need for a blood transfusion if possible. These tubes will be removed over the next 2 days.

The day after your surgery, your physiotherapist will help you to get up and start walking with a frame. You will be told how to look after your hip and it is very important that this advice is followed, strictly during the first six weeks after surgery.

To avoid lung congestion after surgery, you will be asked to breathe deeply and cough frequently.

You will receive antibiotics during your operation to reduce the risk of infection, and injections after surgery to reduce the risk of a blood clot developing in your legs. You will be sent home with a course of Aspirin to take at home unless you suffer from asthma or stomach ulcer problems. These have been shown to reduce the risk of you developing a blood clot or thrombosis.

You will have blood tests to check that you don't need a blood transfusion and may be given iron and Vitamin C supplements to help restore your blood levels.

You will have an X-ray to ensure that the hip is correctly positioned.

Most people are ready to go home 3 to 5 days after their operation. You will have dissolvable stitches in your wound, which don't need to be removed.

DON'T get the wound wet until it is thoroughly sealed and dried.

How can you make your return home as safe as possible?

The occupational therapist will see you in the preassessment clinic and in the hospital to discuss what temporary adjustments can be made to make activities easier for you at home.

Arranging some items and home modifications will make your return home easier during your recovery, e.g.

- Securely fastened safety bars or handrails in your shower or bath,
- Secure handrails along all stairways,
- A stable chair for your early recovery with a firm seat cushion that allows your knees to remain lower than your hips. a firm back, and two arms,
- A raised toilet seat,
- A stable shower board or chair for bathing/showering,
- A long-handled sponge and shower hose,
- A sock aid, and a long-handled shoe horn for putting on and taking off shoes and socks without excessively bending your new hip,
- A helping hand that will allow you to grab objects without excessive bending of your hips,
- Removal of all loose carpets and electrical cords from the areas where you walk in your home.



What are the potential risks of the operation?		
<p>This it is a major operation with serious potential risks, particularly if you have other medical problems or are overweight.</p>		
The risk	What happens ?	What can be done about it?
<p>Blood clot in the legs (deep vein thrombosis (DVT) 20-50%</p>	<p>You may have foot pumps or elastic stockings for 6 weeks after surgery. to circulate the blood through your legs. You will be prescribed a blood thinning injection each day in hospital and Aspirin for 6 weeks following surgery. Despite these precautions, a blood clot may form in the veins of the legs after hip surgery. Warning signs of possible blood clots include: Pain in your calf and leg, unrelated to your incision. Tenderness and swelling of your thigh, calf, ankle or foot. Notify your doctor immediately if you develop any of these signs.</p>	<p>You should be referred to the DVT clinic for a scan on your leg to ensure there is no blood clot. If there is a clot, blood thinning drugs may be given for 3 - 6 months to prevent a pulmonary embolism.</p>
<p>Blood clot to the lungs (pulmonary embolism (PE) may cause sudden death in up to 2 in 1000 people.</p>	<p>A leg blood clot breaks away and lodges in the lung. Warning signs that a blood clot has travelled to your lung include: Shortness of breath and chest pain, particularly with deep breathing. Notify your doctor immediately if you develop any of these signs.</p>	<p>As above.</p>
<p>Infection of the hip (1%) Infection occurs in 1% of cases and may occur early after the operation or much later.</p>	<p>The most common causes of infection are simple wound infections. These cause redness and swelling within the first few weeks after surgery and need to be treated with antibiotics urgently. Infections may occur deep within the wound also. Warning signs of a possible deep infection are: Persistent fever, shaking chills or increasing redness, tenderness, or swelling of the hip wound. Drainage from the hip wound and increasing hip pain with both activity and rest are warning signs. Notify your doctor immediately if you develop any of these signs.</p>	<p>This is a major complication and may require multiple operations to eradicate the infection. This may cause complete destruction of the hip joint. If there is a suspicion that this may be occurring in your hip, please contact your consultants' secretary for an urgent appointment.</p>
<p>The trochanteric osteotomy fails to heal</p>	<p>To perform the operation and avoid damaging the blood supply to the ball of the femur it is necessary to cut a piece of bone and screw it together again. This piece of bone may fail to heal back into position especially if too much strain is put through the hip too early. This problem occurs in less than 1 in 100 people having hip impingement surgery.</p>	<p>Further surgery may be necessary to fix the bone back on again. This would involve going back on crutches until the bone is fully healed.</p>



The risk	What happens ?	What can be done about it?
Progression of arthritis	The hip arthritis and pain may progress with time. In younger patients, we feel that it is very important to attempt to preserve the natural hip joint as long as possible. In some cases, the joint is already severely damaged by the time surgery is performed. In very young patients, we will reshape the hip and hope that the body will be able to heal the damage. Unfortunately in some cases the damage is too extensive for the body to heal and arthritis of the hip develops.	If the hip is severely damaged at the time of surgery, your surgeon may perform a hip resurfacing operation rather than just reshaping the hip. Further information on this procedure is available on the website. If your hip develops pain after the initial recovery, further scans may be necessary to investigate the problem. If arthritis occurs, a hip resurfacing or hip replacement may be necessary.
Avascular Necrosis	The blood supply to the ball of the hip may become lost causing the hip to collapse and become extremely painful. This is a theoretical risk but has not happened in over 300 cases performed so far in Cornwall.	Hip replacement surgery may be necessary.
Nerve injury	There is a very small risk of injury to the nerves surrounding the hip joint.	This damage may recover completely in time. If it does not, however, it may result in permanent pain and/or weakness in the leg.
Heterotopic ossification	Excess bone forms around the new hip causing it to stiffen. This is most common in men. A course of tablets may be prescribed to try to prevent it occurring.	If your hip becomes extremely stiff due to this problem, the excess bone may need to be cut out.
Bleeding into the wound	Excessive bleeding into the wound may occur especially when blood-thinning medication is prescribed. This may cause excessive swelling, bruising and leaking of the wound.	This may require a repeat operation to remove the excess blood.
Blockage of the bowel	The bowel may become paralysed causing pain, bloating, nausea and vomiting. This is far more common in older patients.	A drip is set up, no food is allowed and a tube is inserted into the stomach to rest the bowel until it recovers. Rarely, surgery on the bowel may be required.
Death	This is extremely rare after hip preservation surgery but may be caused by a blood clot to the lung, a heart attack, a stroke or more rare causes.	



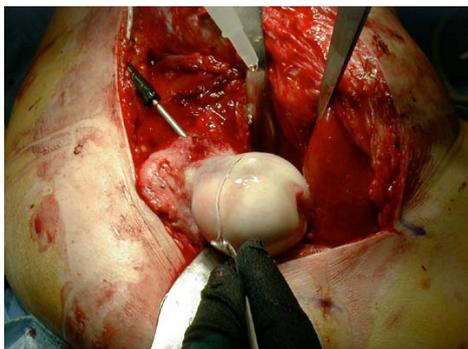
Until seen in the clinic after surgery please remember:

DO's:

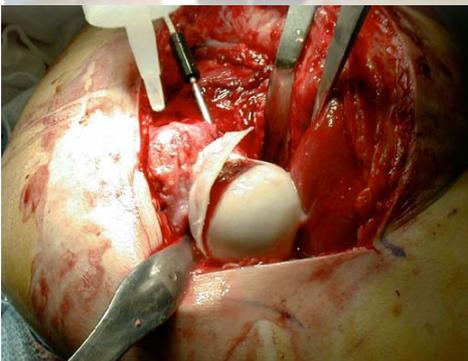
- DO** use your crutches when you walk at all times and put no more than 10 kg weight through you operated leg whilst walking.
- DO** regularly exercise your calf muscles to avoid formation of blood clots as instructed by the physiotherapists.
- DO** take special precautions to avoid falls and injuries.
- DO** perform the exercises that the physios have given you.

DON'Ts

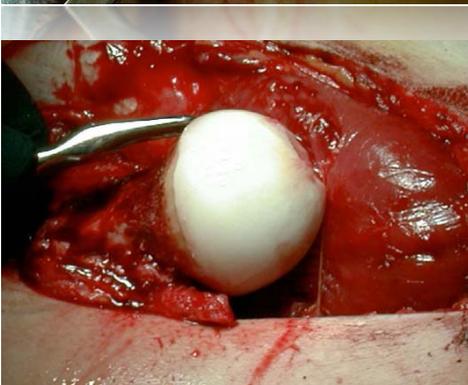
- DON'T** walk unaided on your operated leg until after your check x-ray shows that the bone is healed.
- DON'T** try to lift your leg sideways away from the other leg. This will pull strongly on the cut bone and may dislodge it.



AN IMPERFECTLY SHAPED FEMORAL HEAD PRIOR TO RESHAPING



RESHAPING THE FEMORAL HEAD TO REMOVE THE SECTION WHICH IS NOT ROUND



THE RESHAPED FEMORAL HEAD LEAVING ONLY ROUND SURFACE TO MOVE SMOOTHLY INTO THE SOCKET



NONARTHRITIC HIP SCORE

Christensen CP et al (CORR 406 pg. 75-83, 2003)

Please complete this questionnaire and return to Mr Norton's team prior to surgery.

Side hip: _____

Is this before surgery: Y N

Is this after surgery: Y N Time post surgery _____

INSTRUCTIONS: The following 5 questions concern the amount of pain you are currently experiencing in the hip that you are having evaluated today. For each situation, please circle the response that most accurately reflects the amount of pain experienced in the past 48 hours. Please circle one answer that best describes your situation.

QUESTION: How much pain do you have-

A. Walking on a flat surface?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

D. Sitting or lying?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

B. Going up or down stairs?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

E. Standing upright?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

C. At night while in bed?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme



INSTRUCTIONS: The following 4 questions concern the symptoms that you are currently experiencing in the hip that you are having evaluated today. For each situation, please circle the response that most accurately reflects the symptoms experienced in the past 48 hours. Please circle one answer that best describes your situation.

QUESTION: How much trouble do you have with-

A. Catching or locking of your hip?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

C. Stiffness in your hip?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

B. Your hip giving out on you?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

D. Decreased motion in your hip?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

INSTRUCTIONS: The following 5 questions concern your physical function. For each of the following activities, please circle the response that most accurately reflects the difficulty that you have experienced in the past 48 hours because of your hip pain. Please circle one answer that best describes your situation.

QUESTION: What degree of difficulty do you have with-

A. Descending stairs?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

- 2 = moderate
- 1 = severe
- 0 = extreme

B. Ascending stairs?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

D. Putting on socks/stockings?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

C. Rising from sitting?

- 4 = none
- 3 = mild

E. Rising from bed?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme



INSTRUCTIONS: The following 6 questions concern your ability to participate in certain types of activities. For each of the following activities, please circle the response that most accurately reflects the difficulty that you have experienced in the past month because of your hip pain. If you do not participate in a certain type of activity, please estimate how much trouble your hip would cause you if you had to perform that type of activity. Please circle one answer that best describes your situation.

QUESTION: How much trouble does your hip cause you when you participate in-

A. High demand sports involving sprinting or cutting (for example, football, basketball, tennis, and exercise aerobics)?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

B. Low demand sports (for example, golfing and bowling)?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

C. Jogging for exercise?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

D. Walking for exercise?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

E. Heavy household duties (for example, lifting firewood and moving furniture)?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

F. Light household duties (for example, cooking, dusting, vacuuming, and doing laundry)?

- 4 = none
- 3 = mild
- 2 = moderate
- 1 = severe
- 0 = extreme

INSTRUCTIONS: Please add the numbers associated with each of your 20 answers to arrive at the raw score, Multiply the raw score by 1.25 to obtain your hip score.

RAW SCORE = _____ X 1.25 = HIP SCORE _____



