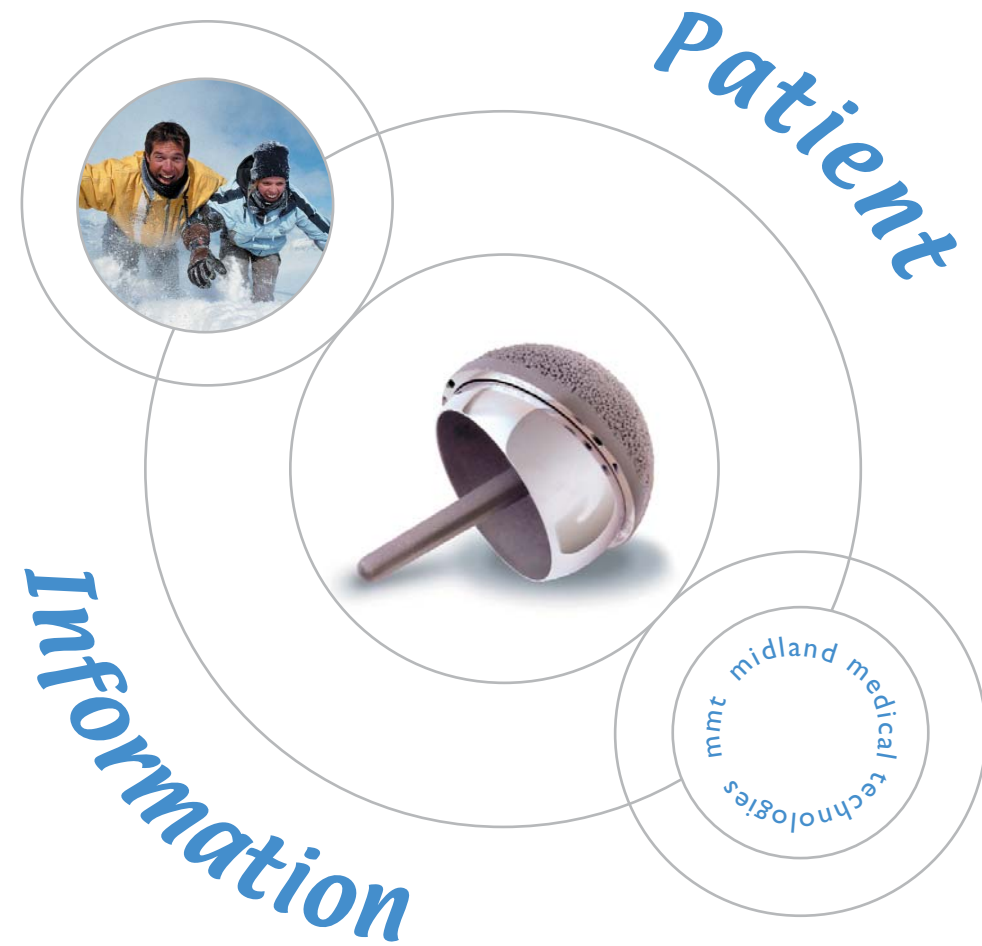


Birmingham Hip Resurfacing® (BHR) CE 0120



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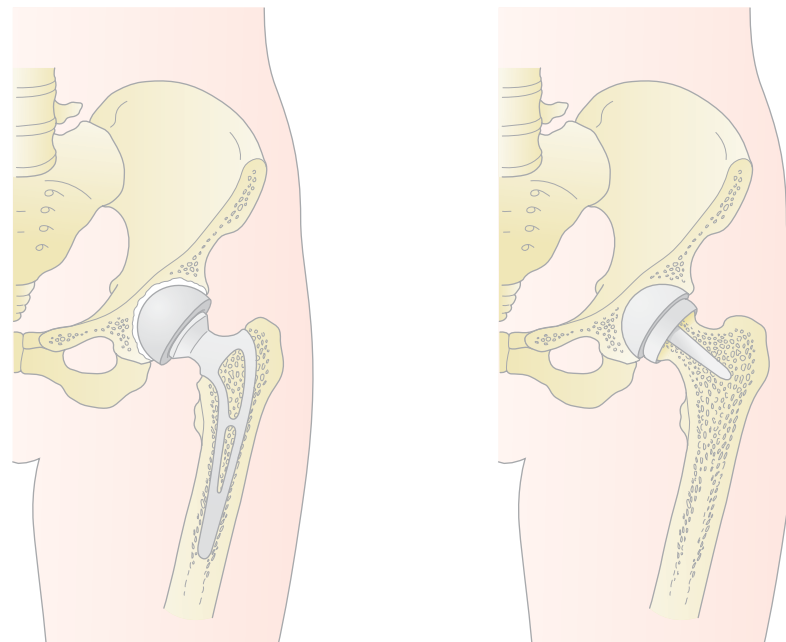


What is Hip Resurfacing?

This is a type of hip replacement which replaces the two surfaces of the hip joint. In a conventional type of hip replacement the head of the femur (the ball) is removed, and replaced with a stem which extends down into the shaft of the femoral bone, with a new small ball on the top of this. A replacement socket is also put into the pelvis, usually plastic (polyethylene) or ceramic, which is either cemented into the bone or mounted within a metal shell which is wedged into the bone.

With hip resurfacing, the head of the femur is retained. It is shaped to accept an anatomically sized metal sphere, the majority of the top of the femur is therefore retained and there is no large stem to go down the central part of the femur. The surface of the acetabulum (the socket) is also replaced with a metal implant, which is wedged directly into the bone.

The resurfacing components are made of 'as-cast' cobalt chrome which is finely machined to produce a very high quality surface with a low friction finish, and hence low wear. The Birmingham Hip Resurfacing® (BHR) has the largest independently verified clinical history of any resurfacing device available today.



Total Hip Replacement

Hip Resurfacing

The main points of the guidance state that;

- Hip resurfacing is considered as an option for people with advanced hip disease who would otherwise receive and are likely to outlive a conventional primary total hip replacement.
- Hip resurfacing arthroplasty should only be performed by a Surgeon who is trained specifically in the technique
- The informed consent of the patient should include information about the safety and reliability of the device and the likely outcome of revision surgery in comparison to conventional total hip replacement.

Additionally, due to the need to gather clinical effectiveness and cost data on the use of this technology, details of all patients should be submitted for inclusion in the UK national joint register.

The full NICE 'Final Appraisal Determination on metal on metal hip arthroplasty' is available on the NICE website at www.nice.org.uk

And Finally...

Although metal on metal resurfacing is relatively new it holds out great promise for the younger more active high demand patient as it permits a return to normal activity.

The modern generation of resurfacing implants stem from the concept of Mr. Derek McMinn. Over a period of some years he honed the design of metal on metal resurfacing into the Birmingham Hip Resurfacing®, leaving behind the deficiencies of the earlier developmental designs. Today the only device endorsed by Mr. McMinn is the Birmingham Hip Resurfacing® from Midland Medical Technologies Ltd.

Contact Information:

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By the fourth week if you feel comfortable and confident in walking and general mobilisation, driving may be commenced. However, please note that in order to comply with insurance regulations, you must be able to safely perform an emergency stop, otherwise your insurance will not be valid!!

Sexual relations can resume at around four to six weeks, however, you should take care to avoid extreme movements of the hip until around three months. Generally the last stick can be discarded at around five to six weeks but this depends on how confident you feel.

The following guidelines may be helpful;

- Take regular walks when able
- Continue the exercises the physiotherapist has shown you
- Lie flat on your back for an hour every day to encourage the stretching of your hip muscles and ligaments
- Ensure that you rest after walking to enable the soft tissues to recover
- If you swim this is encouraged after six weeks (even breast stroke)

Up to 3 months

- No heavy lifting, no squatting or twisting
- Avoid extreme movements of the new hip
- Do not cross your legs
- Avoid lifting your knee higher than the level of your hip

Generally at three months you should expect to be back at work and mobilising normally. Some patients may notice a noise from their new hip however this is normal and should disappear within a few months.

You should not attempt sporting activities (including Golf) other than swimming until given the all clear by your Surgeon.

NICE Guidelines

In April 2002, the National Institute for Clinical Excellence, the government body which reviews and gives judgement on all products associated with the medical and pharmaceutical industries, issued guidance that recommended the selective use of metal on metal hip resurfacing.

Why use Hip Resurfacing?

For young people needing a hip replacement there is a high chance that a traditional hip replacement will wear out during their lifetime and need to be replaced again - a second replacement (revision) is much more difficult and consequently may last a shorter time than the original replacement. A hip resurfacing should far outlast a conventional device. However if it ever needed replacing it is much easier as there is not already a component in the central cavity of the femur, or any cement holding it in place.

Since the components are made of very low wearing 'as-cast' cobalt chrome the rate of wear should be much lower than for the usual metal on plastic or ceramic bearing and the resurfacing can therefore potentially last much longer. The diameter of the ball used for a resurfacing is much greater, and carries as a consequence a lower risk of dislocation, (when after the operation the ball comes out of the socket, something which complicates around 1 to 2% of conventional total hip replacements). The range of movements in the resurfaced hip also tends to be greater due to this anatomical size bearing.

What are the results of Hip Resurfacing

The long term results of this procedure are not yet known as it has only been in clinical usage in its current form for 6 years, however, the results over this period have been very good and all at least as good as conventional hip replacement. The long term reliability of the implant will not be known until it has been in widespread usage for 15 to 20 years.

The historical metal on metal devices which share their metallurgical heritage with the Birmingham Hip Resurfacing® have been shown to last in excess of 30yrs. Only a small number have survived however, due to the inconsistencies in manufacturing at that time. With modern manufacturing and quality control techniques we have high expectations of the BHR.

What are the disadvantages Hip Resurfacing

The main disadvantage lies in not knowing the long term results. The results to date indicate that the success rate of hip resurfacing after the first 5-10 years is better than those of conventional total hip replacement. Although the operation for hip resurfacing is similar to a conventional total hip replacement, in some ways it is a more demanding surgical technique.

Some concerns have been raised about the release of metal ions into the body, however, to date no statistical correlation with long term systemic problems have been demonstrated, although work is still on going. It is worth noting that in the patients with historical metal on metal devices, some of which have been implanted for very long periods, no adverse reactions have been highlighted.

The usual risks associated with any hip replacement therefore apply - there is a very low risk of major complications due to infection or early loosening - these leading to the need for further surgery. There is a lower risk of leg lengths being different. There is also a very low risk of major medical complications such as thrombosis, heart attack or stroke. This is the same for any surgery requiring an anaesthetic.

Who is a Hip Resurfacing suitable for?

This operation is primarily intended for use in people who are in need of a hip replacement at a younger age. There are certain causes of arthritis of the hip which mean that this technique cannot be used - namely those which have resulted in extreme deformity of either the head of the femur or the acetabulum.

For people needing a replacement under the age of 55, regular consideration is given for this procedure. People aged between 55 and 65 who are very active and otherwise fit may also be suitable and this will be determined by their bone quality. The procedure may be considered for people over the age of 65, however, this would need to be discussed and a decision reached in a more interrogative way because a conventional type of hip replacement in somebody of this age group stands an extremely good chance of lasting them the rest of their lives.

Patients who need to have hip replacements under the age of 50 - 55, assuming they have normal life span, have a very high chance that the conventional hip replacement will wear out and need to be replaced during their lifetime - hence the resurfacing procedure offers potentially significant advantages in this group.

The operation

The Surgeon will start the operation with a technique to approach the hip joint. There are several different surgical approaches which can be used and an individual Surgeon will choose that which he finds suits his experience the best. There are subtle nuances in each of these approaches and these will result in slight variations

with the post operative regimes used in the recovery and rehabilitation from the surgery. This is normal and correct.

The bone preparation part of the operation is carried out using the specialist instruments supplied by Midland Medical Technologies Ltd. (MMT). The head of the femur is prepared to receive the resurfacing cap and the socket is shaped to accept the new resurfacing cup. Once this is accomplished the socket is inserted in a position to give stability to the hip and allow the bone to grow around it encouraging long term security, the resurfacing cap is then fixed into position using bone cement. Following a careful inspection of all components the Surgeon will then 'close' the surgical approach path and finally the skin with either sutures or metal staples as is normal practice. It is common to have a drainage tube exiting from just below the wound for a couple of days although in some cases it is not required.

Recovering from the operation

It is generally permitted to walk just about as soon as you feel able; many patients walk a few steps the day following surgery and this is acceptable permitting it is within the limits of your comfort.

In certain instances where the surgery has been more difficult, as is often the case with more advanced disease, the Surgeon will advise you when and how you should walk and any further rehabilitation measures. This may mean a period of several weeks on crutches to allow full healing.

It should be noted that the first 6 months post-operation are the most vulnerable period for the joint as it is during this period that the bone initially remodels to 'grip' the implant. During this period impact at the joint should be avoided.

Further progress

You will generally be discharged from hospital after five to seven days with one or two sticks and walking around the house for the next two weeks with these is normal. The second stick, if you have it, may be discarded when you feel confident with your balance and leg strength.

During the fourth week you may feel confident enough to walk without sticks while at home using the stick only when outside. You should try to walk half a mile a day at this point.