What is a Uni-Compartmental Knee Replacement?

Your knee joint is made up of the ends of the thigh bone (femur) and shin bone (tibia), which normally glide over each other smoothly because they are covered by smooth articular cartilage. The joint is held in place by ligaments and covered at the front by the patella (kneecap).

A normal knee usually glides smoothly because articular cartilage covers the ends of the bones that form the knee joints. Osteoarthritis causes damage to the cartilage, progressively wearing it away.

The ends of the bones become rough like pieces of sandpaper. The damaged cartilage can cause the joint to "stick" or lock. Your knee may become painful, stiff and lose range of motion.

Post Operative X-Ray of a Uni -compartmental knee replacement

If you have osteoarthritis of the knee you may be having conservative treatment to alleviate your symptoms.

These treatments may include, but are not limited to, medications cortisone injections, strengthening exercises, and weight loss.

If these treatments are not adequate, and you as a patient are not satisfied, then surgical procedures may be considered.

A uni-compartmental knee replacement involves removing only the most damaged areas of cartilage and replacing only those surfaces.

Uni-Compartmental Knee Replacement may be considered if you

1. Have early stage arthritis confined to one part of the knee
2. Lead a relatively sedentary lifestyle
3. Are older than 55 years
4. Are not obese
5. Have an intact Anterior Cruciate Ligament (ACL)
6. Have no significant inflammation
7. Do not have damage to the other compartments, calcification of cartilage or dislocation

What are the benefits?

1. Smaller Incision- A total knee replacement involves a large incision over the front of the knee.
2. Uni- Compartmental knee replacement has a much smaller incision and the amount of bone dissection and bone removal is much smaller.
3. Less Blood Loss- A blood transfusion is infrequently needed, and patients do not need to consider giving blood preoperatively.
4. Shorter Recovery period- Both the time in hospital and the time of recovery are less.

When would I not be considered for this type of surgery
1. You are suffering from arthritis that is too advanced for you to benefit from uni-compartmental knee replacement surgery.
2. Most patients consider surgery to be a ‘last-resort’ which means by the time surgery is necessary; their arthritis is too advanced to consider this minimally invasive procedure.
3. If a patient is a poor candidate for this type of surgery the failure rate can be high, and the conversion to total knee replacement surgery may be more difficult.

The Operation

You will have a general anaesthetic, or occasionally for medical reasons, a regional (spinal anaesthetic) and sedation. The operation will take between 1 and 2 hours.

A tourniquet (a tight band) is placed around the thigh prior to the operation. This is inflated with gas throughout the procedure and helps to minimize blood loss. The tourniquet rarely causes a problem but you may have a “tight” feeling around the top of your thigh up to two days after the operation.

A cut, usually over the front of your knee is made.

The diseased bone is removed and an implant (prosthesis) is put in its place.

The new parts are fitted over the bones, and tested to make sure they fit and the joint works well.

Once the new parts are fitted and working the wound will be closed using stitches or clips, then cover it with a large dressing.

You may need a blood transfusion due to blood loss during the operation.

After the operation

Immediately after the operation you will be transferred to the recovery room where you will remain until Professor Haddad and the anaesthetist are satisfied that you have recovered sufficiently before you are transferred back to the ward. You will have:

1. A drip, (a fine tube) inserted into a vein in your arm that supplies fluids or blood.
2. A bulky dressing around the knee and a drain to remove any fluid build up around the knee.
3. One or two drains (small tubes) may be used to drain away fluids and reduce swelling around the operation site. These are usually removed after 24 hours.

Pain relief

Good pain relief is important and some people need more pain relief than others.

It is much easier to relieve pain if it is dealt with before it gets bad.

Pain relief can be increased, given more often, or given in different combinations.

Please ask help from the nurses on the ward if you are in any discomfort.

Rehabilitation Programme

A physiotherapist will visit you on the day after your surgery and begin teaching you how to use your new knee. You may be fitted with a continuous passive motion (CPM) machine that will slowly and smoothly straighten and bend your knee.

General home advice
You can expect some pain but not the same sort of pain as you had before the operation. The time it lasts will vary from a few days, to several weeks; everyone is different. It is important to take your painkillers as advised. Swelling and bruising may take up to 6-8 weeks to disappear; for some it can last up to 6 months. The clips or stitches and paper strips (steri-strips) closing your wound, will normally be removed 7 - 10 days after the operation, in the ward or by the nurse at your review appointment with Professor Haddad in the clinic. This appointment will have been booked prior to your operation. After your stitches and steri-strips have been removed you can have a shower or bath once we have shown you how to use it safely. Until then your wound will need to stay covered with a waterproof dressing. When in bed, take care not to remain in one position for too long to prevent your heels, ankles or back getting sore; change your position every one to two hours. Try to gradually increase your activity each day by walking as well as continuing your exercises. You must not drive or resume any sporting or gardening activities until you have seen Professor Haddad and he has cleared you to do so.

Possible Complications

This is a very successful operation, but there are some risks associated with any type of surgery. These include **Anaesthetic** - Modern anaesthetics are generally very safe. The anaesthetist will explain any particular risks to you. **Infection** - There is a small risk of infection of the joint following the operation but you will be given antibiotics to help prevent this. If after you get home you notice fever, increased pain, swelling and redness around the wound, please phone contact our office. **Deep vein thrombosis (a blood clot in a leg vein)** - You may have anti-coagulant medication and support stockings to help prevent it. A symptom of this may be an acute pain in your calf. Please contact us urgently. **Loosening** - Your new knee may become loose with time or eventually wear out and need to be replaced. Please talk to Professor Haddad before your operation if you have concerns about possible risks. We hope the information provided has been of benefit to you. For further information please contact us on 0207 935 6083.  

*All patients will need a full blood count on day 1 and again days 4 and 7 if still in Hospital for thrombocytopenia although the incidents of HIT with low dose prophylaxis seems to be much lower than initially feared.*