Uni Knee or Partial Knee Replacement

**Oxford**

**History:**
The partial or uni knee replacement has been performed over 30 years. It was more frequently used in the 70’s and 80’s because of the unpredictable results of a complete knee implant. Instrumentation was not as advanced in either type of procedure. In the 80’s and early 90’s several companies presented with functional unicompartmental designs.

One of the longer lasting knee concepts was a mobile bearing, which included a plastic spacer or bearing which moved front and back in a groove in the metal base. This was the New Jersey hemi knee.

Now the Oxford uni knee (figure 1) has taken this a step further and the plastic bearing moves about freely on a metal base, with improved instrumentation to insure less likelihood of dislocation of the plastic.

![Figure 1. Oxford uni knee](image)

**Indications:**
The arthritic involvement of the knee must on the inner or medial side. The symptoms of pain must for the most part be concentrated in that same area. The bone quality must be good to excellent, and there are certainly size and weight restrictions which can overpower a smaller surface area of the implant. The older individual with health considerations may be an indication for a uni knee as long as the symptoms are confined to the inner aspect of the joint.

Clinical exam, stress x-rays, and occasionally MRI are necessary to insure the indication for a partial knee replacement.

**Advantages:**
The partial knee replacement preserves the kneecap or patella and the outer aspect of the joint. The incision is much smaller and recovery is quite rapid. Generally an overnight stay in the hospital is necessary and therapy recovery is rapid.

**Contraindications:**
Absence of the cruciate ligament or significant arthritis in the patellofemoral or lateral joint would rule out this procedure. The kneecap will not be improved, but in many cases this does not involve enough disability to recommend an entire joint replacement.

**Complications:**
There has been and will always continue to be the potential for early or late failure with a partial knee replacement. Excessive weight or strenuous activity can cause loosening and
failure. While the “Oxford Group” has reported good to excellent results in the majority of patients in Europe, there are still guidelines to consider.

With failure of a hemi knee it can easily be converted to a conventional total knee replacement.

**Operative Procedure:**
The incision is just to the inner side of the kneecap and joint line. It is generally about 2” in length except in larger individuals. With precision instrumentation a small amount of bone on the inner aspect of the femur and the tibia (figure 2) is removed balancing the mobile bearing in full extension and flexion is paramount to success. Although this is a more limited type of procedure, the time of the operation is generally the same as that of a complete knee replacement.

![Implanted Oxford uni knee](image)

**Conclusion:**
Uni or partial knee replacement has been used for over 30 years. Multiple design concepts have evolved and now the Oxford knee has an apparent improved success rate. Functional outcome may be no different than other types, but longevity could be the most important addition to the success with patients. Certainly removing less bone in some individuals is “burning fewer bridges”, and still leaves the option of a complete knee replacement at a hopefully later date. It must still be understood that a small percentage of patients are strict indications for this procedure. With new uncemented total knee replacement giving potential lifelong success and attachment to the bone, I do not want to overplay limited procedures. Decision making must involve both the physician and the patient.