

The Oxford® Partial Knee Replacement

If knee pain is changing your lifestyle, then you need to know this: The new concept in joint replacement surgery is to only replace the worn out portion of the arthritic joint. A large number of people with osteoarthritis of the knee have worn out only one of the three compartments in the knee. If this is the case, a partial or unicompartmental replacement may be the solution. The Oxford® Partial Knee Replacement is an implant that has proven long term results ranging from 95 to 84% at 15 years and beyond in several reports while a recent report showed 85% survival at 10 years.¹⁻⁵ At the very least the Oxford® may make a total knee replacement avoidable or at least may delay a more invasive total knee procedure justifying the relative temporary application.

To be qualified to implant an Oxford, the United States Food and Drug Administration requires an orthopedic surgeon to undergo special training. This training is required because the implantation technique for this procedure is very precise and the operation must be done correctly. I have attended one of these first training courses and am therefore qualified to implant an Oxford. I am also a consultant to other implant companies charged with design and research as well as education and training. The training and instrumentation of the Oxford replacement is the most sophisticated with which I have been involved. It is important to remember that much of the success of any implant is based on the expertise of the surgeon. It is comforting to know that this company and the FDA take seriously the continued success of this implant surgery.

The Oxford® Partial Knee Replacement prosthesis allows for better range of motion of the knee due to several reasons. First it provides for replication of the function by a novel floating bearing surface which allows for more normal motion of the human knee. Secondly with the Oxford partial knee replacement, only a portion of the knee is replaced. In performing an Oxford, the anterior cruciate and posterior cruciate ligaments are always preserved. In performing a total knee replacement, the anterior cruciate ligament is always removed; sometimes the posterior cruciate ligament is removed as well. As such, this prosthesis may be applicable to individuals who were previously considered too young to undergo a total knee replacement.

The x-ray in the middle photograph below represents bone on bone osteoarthritis. This occurs due to degeneration or "wear and tear" of the articular cartilage, and degeneration or surgical removal of the meniscus. Once this situation develops, the individual usually has severe pain. The x-ray photograph on the right demonstrates the appearance after an Oxford has been placed. One can see that the bone on bone rubbing condition has replaced by the Oxford with its meniscus replacement bearing (the white horizontal line between the metal). The model in the left photograph portrays how the implant actually sits between the bones and cruciate ligaments (white ropes in the middle of the knee) and the medial collateral ligament (white rope one the right side of the knee).



The Oxford® Unicompartmental Knee System offers these potential advantages:

- At 15 years following surgery, 95 to 84% of implants are still functioning well.
- Better range of motion than traditional total knee
- Only a portion of the knee is replaced, making this procedure applicable to a younger population
- Minimally invasive - a small incision is utilized
- Less pain due to a less invasive operation
- Outpatient, or one or two nights in hospital
- Quicker recovery - discontinue crutches as fast as one desires
- Revisable to total knee replacement without excessive damage to the remaining knee joint

No other partial knee replacement has the proven success rate and longevity of Oxford. Until the advent of the Oxford, most orthopedists in the United States did not do partial knee replacement because of the high failure rate of these earlier implants. Many orthopedists today still do not recommend partial knee replacement for their patients because they are not familiar with Oxford or qualified to do it. If your orthopedist tells you "partial knee replacement does not work", you might consider seeking another opinion to be certain that your orthopedist has the most updated information on implant developments. If your orthopedist tells you a different brand of partial knee replacement has the same success rate of Oxford, ask him or her to show you the scientific paper or data supporting his opinion. This is the true measure by which we as orthopedist judge success of joint replacements.



Oxford® Knee
Incision

Total Knee
Incision

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- 2 Khanna g., Levy B., Oxford Unicompartmental Knee Replacement: Literature Review. Orthopedics May 2007 Vol 30 No 5
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- 4 Weale A.E., Murray D.W., Crawford R., Psychoyios V., Bonomo A., Howell G., O'Connor J., Goodfellow J.W. Does arthritis progress in the retained compartments after 'Oxford' medial unicompartmental arthroplasty? JBJS Vol 81-B No.5 September 1999.
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