



## Minimally Invasive Total Hip Replacement

Total Hip Replacement (THR) is the standard of care for disabling arthritis of the hip. It was introduced in the 1960's and has a proven long term success rate. Total Hip Replacement has seen an evolution of implants and techniques. Minimally invasive techniques have been developed to perform THR through a smaller incision without disrupting muscle or tendon. The original or "standard" technique for THR required cutting the short external rotator muscles and tendons of the hip to allow exposure of the bones. The muscle and tendons are then stitched together at the end of the procedure and require 4-6 weeks to heal; this necessitates protecting patient's weight bearing with a walker or crutches for 4-6 weeks. The new minimally invasive technique does not disrupt any muscle or tendons and so patients may walk immediately following surgery as muscle function remains intact. Most patients require a walker for several days for comfort, but by 1-2 weeks most do not require any assistive devices to walk.

I have been performing Minimally Invasive Surgery (MIS) Total Hip Replacement (TKR) since 2005 and have seen a significant decrease in the typical rehabilitation time for the majority of patients.

The MIS technique involves either the Anterior, Anterolateral, (or Mini-Posterior) approaches. A 2.5 to 3 inch incision is made along the front of the hip, as opposed to the standard approach, which requires an 8 to 12 inch incision along the buttock. The muscles are pushed aside to allow visualization of the bones. The end of the femur (femoral head) and the hip socket (acetabulum) are carefully shaped with instruments specially designed to fit through the small incision. A titanium metal implant is then inserted into the femur and secured with a "press fit". A titanium shell is also inserted into the hip socket with a similar "press-fit" technique. Finally a polyethylene, metal or ceramic liner is inserted into the acetabular shell; this liner acts as the new hip joint. Different liner choices exist to accommodate varying patient age and activity level.

The surgery typically takes about one hour. Afterwards, no special precautions or abduction pillows are required as the rate of hip dislocation is much lower than with the standard technique. In many cases patients are up and walking with a walker with the help of a therapist within three to four hours after surgery. Early mobilization is critical in preventing DVT, and the muscle sparing MIS technique allows for immediate ambulation.

With the MIS technique my patient's average stay in the hospital is 48 hours. The majority of patients can then be discharged home. A home health agency facilitates care with routine nursing, home aid,

and physical therapy for 2-4 weeks as needed. Afterwards, patients begin outpatient physical therapy. By about 3-6 weeks post-op the majority of patients can resume normal activities including gym and non-impact sports (tennis, golf, ECT.)

I have seen a significant reduction in the amount of rehab patients require with the MIS procedure. The majority of my patients are able to walk immediately and by 3-6 weeks are back to all activity. With the standard THR technique typical rehab times can be as much as 3-6 months.