State of the Art Hip Replacement
Minimally Invasive • Alternative Bearings

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Patient Information Series
In 2008, about 450,000 hip replacements were performed in the U.S.

For the vast majority of these patients, the operation is judged by the patient to be very successful: minimal to no hip pain, improved ability to stand and walk, and improved overall strength in the leg.

The exciting story of hip replacement is that as the technology has advanced, hip replacements have continually improved - becoming more durable, less likely to wear out, better range of motion, better stability and feeling closer to a normal hip. Recent advances now available by Dr. More are described in this handout.

What Is Hip Replacement Surgery?

- The normal hip joint, like all joints in the body, should have nice smooth cartilage surfaces on the ends of the bone at the joint. This cartilage allows the joint to move freely without significant friction.

- The smooth cartilage can become worn away over the years, exacerbated by injuries or other joint conditions. When the cartilage is worn down to "bone-on-bone", we call this osteoarthritis or osteoarthrosis.

- Hip replacement involves attaching a prosthetic metal surface to the worn out ends of the bone, and placing a polyethylene (plastic) component to act as the new "bearing surface" of the joint.
Minimally Invasive Hip Replacement

• Recent surgical techniques and instrumentation now allow hip replacement to be performed with a less invasive approach. This means:
  - smaller incisions.
  - much less trauma to the muscles and tendons around the hip.
  - decreased surgical exposure and dissection.
  - decreased operative time.

• Minimally invasive techniques generally result in:
  - less postoperative pain.
  - quicker mobility; decreased length of stay in the hospital.
  - overall faster recovery.
  - better chance of improved hip motion and level of function.

• Minimally invasive replacements are not “all or nothing” there is a continuum of how invasive the procedure needs to be based on patient size, and how severely the hip joint is affected from the arthrosis.

Alternative Bearing Surfaces

• The hip is a “ball and socket” joint. Traditionally, the replacement prostheses consist of a metal ball on a stem and a socket with a plastic (polyethylene) liner (see diagram).

• Unfortunately, the plastic liner often gradually wears out over time, and the patient may need a second operation to have the liner replaced, or sometimes the entire hip replacement needs to be removed and a new one implanted.

• For our younger hip replacement patients, a more durable ball and socket bearing surface is desirable. These newer bearings are now available and include:
  - metal head / metal liner
  - ceramic head / ceramic liner
  - ceramic head / high-strength cross-linked polyethylene

• These new bearing materials offer our younger patients a real chance that their hip replacement will not wear out in their lifetime, and no additional surgeries will be needed.

• An added benefit of the alternative bearings is a greatly decreased risk of dislocation (due to larger head size, which is much more stable).

• The newer bearing materials have some potential risks that you can discuss with Dr. More.
Recovering After Hip Replacement

• Surgery is typically performed using general anesthesia as well as sedation. Antiinflammatory, long-acting narcotics (Oxycontin), Tylenol, and anti-nausea pills are given just before surgery and continued around-the-clock after surgery to minimize pain and nausea.

• Physical therapy starts the day of surgery. You will be assisted in getting out of bed, taking some steps if possible, and learning exercises to be done in bed. You will also be taught “hip precautions” - certain positions to avoid to help prevent dislocation of the hip, a rare but potentially serious complication after hip replacement.

• Patients are generally in the hospital 3 days, then:
  - some patients transfer to a rehabilitation facility where you stay for 1 - 2 weeks and receive therapy twice a day
  or
  - some patients go directly home and receive home therapy which is usually scheduled three times per week.
  - whenever possible, you will make the transition to outpatient therapy.

• After the first postoperative visit with Dr. More, six weeks after surgery:
  - most patients start driving.
  - some patients continue outpatient physical therapy; some do just a home exercise program.
  - overall activity level gradually increases.
  - return to work or other activities depends on how you feel.

• Please note that after hip replacement, impact activities (e.g., running, jumping) are not recommended.