

Optimism Abounds for Arthritis Sufferers

Hip Replacement Surgery Can Add Stability to Your Step

By Timothy J. Panek, MD

Groin and/or thigh pain when walking, getting up from a chair, or even when sleeping could be signs of osteoarthritis of the hip. When the pain and stiffness in your hip keep you from engaging in daily activities, you may qualify as a candidate for total hip replacement.

With the advances in orthopaedic surgery over the last decade, this is not as scary as it sounds. In fact, more than 180,000 people in the United States undergo hip replacement surgery each year to diminish pain and stiffness and regain full mobility.

The most frequent source of debilitating hip pain is arthritis. In particular, osteoarthritis occurs primarily in people 60 years of age and older. In osteoarthritis, the layers of cartilage and synovial fluid become damaged and wear away, allowing the underlying bones to grind against each other. Hip replacement surgery is most commonly recommended when the severe, chronic pain associated with osteoarthritis is not controllable through the use of various medications or physical therapy.

Conservative Treatment

Before recommending total hip replacement, physicians usually try other forms of treatment, such as activity modification to reduce stress to the joint and/or a regular exercise program that includes stretching, swimming, or cycling to strengthen the muscles in the hip joint.

Another option is to treat the inflammation in the hip with nonsteroidal anti-inflammatory drugs (NSAIDs). Common NSAIDs include aspirin, ibuprofen, and the COX-2 inhibitors, which block an enzyme known to cause an inflammatory response. Nutritional supplements such as glucosamine are also often helpful.

If NSAIDs do not relieve pain, physicians may prescribe a corticosteroid, such as prednisone or cortisone. These drugs reduce joint inflammation and are frequently used to treat rheumatic diseases such as rheumatoid arthritis. However, their use is closely monitored, as they can cause further damage to the bones in the joint. Some people experience side effects such as increased appetite, weight gain, and a lower resistance to infections.

Diagnosing Degenerative Hip Joints

Hip replacement is usually considered only after conservative approaches have failed. The diagnosis of a degenerative hip joint starts with a complete history and physical examination by a physician.



Improved technology has made stronger, longer-lasting artificial joints that are feasible for more active and younger patients.

X-rays are taken to determine the extent of the damage and the cause of the degenerative process. A magnetic resonance imaging (MRI) scan and blood tests are sometimes needed to rule out other causes. Once a recommendation for hip replacement is made, it is important for patients to do their homework by investigating the issues, asking questions, and, most importantly, getting answers.

Hip replacement was once an option primarily for less active adults 60 years of age and older, but improved technology has made stronger,

longer-lasting artificial joints that are feasible for more active and younger patients. Younger patients and those who are more active should understand, however, that they might need another surgery to replace worn-out artificial hip joints after 15 or 20 years.

Implant Durability

Each patient should discuss with his or her physician two important questions: “What hip is right for me?” and “What approach will the surgeon use?” There are a variety of implant designs and materials. I consider the patient’s anatomy and physical demands when selecting the appropriate implant. I integrate all the advances in orthopaedic technology to help customize the implant for the patient.

The key outcome is durability, which is dependent on the components used (materials, type, and preparation of the surfaces, as well as the design of the components), the technique, and the quality of fixation. It is also dependent on the patient’s activity level and the biological tissue reactivity, which varies.

Cementless, press-fit implants are made of titanium and allow the patient’s bone to grow in and biologically “lock” the implant into place. In general, these devices are larger and longer than those used with cement, but they are proportional to the size of the individual bone. Complete pain relief after surgery is not as predictable with cementless implants as it is with cemented stems. Candidates for these devices are generally younger and more active than candidates for cemented application.

With the cemented implant, a steel ball on a stem is inserted into the bone to replace the femoral side of the joint, and a high-density, plastic socket replaces the acetabular side. Both of these components are secured to the bone with a self-curing, acrylic polymer (bone cement). On the plus side, cemented implants provide consistent pain relief due to immediate fixation and rapid recovery. However, the loosening rate of cemented acetabular components increases with time, leading to implant failure after 10 or 15 years.

Implant Materials

Another issue that needs consideration is the type of implant material to use. Metal-on-plastic bearing surfaces have been used since the 1960s. Scientific advances in the plastic have improved these tried-and-true bearing

surfaces, making them much less likely to wear, which is the ultimate cause of total joint failure.

A newer bearing-surface material, metal-on-metal, offers extremely low wear rates, which increases the joint’s longevity. Ceramic surfaces also offer low wear rates, but concern about implant fracture, squeaking implants, and potential difficulties if revision surgery is needed are all ongoing, unsolved issues.



A newer bearing-surface material, metal-on-metal, offers extremely low wear rates, which increases the joint’s longevity.

The most commonly used bearing-surface combinations in joint replacement today are metal or ceramic against ultra-high-molecular-weight polyethylene. These combinations have functioned well for most patients.

Surgical Approaches and Results

The final issue to consider from the surgeon’s perspective is incision size. The traditional 8-inch to 10-inch incision offers the advantage of excellent visualization, which allows for precise implant placement with reproducible and safe results for the patient. The drawback is a potentially more painful and prolonged recovery.

The smaller, 3-inch to 6-inch minimal incision potentially offers less pain, shorter hospital stays, less muscle injury, and a quicker return to function. The possible downside is longer surgery time and more difficulty placing the implants in the optimal position. My

approach is to make the smallest incision possible, while preserving the option to expand the incision if my exposure is compromising accurate and safe placement of the replacement components.

After surgery, patients can expect pain relief and vastly improved function. Patients are generally advised to avoid certain activities such as jogging and high-impact sports. Usually, patients do not spend more than two to three days in the hospital after hip replacement surgery. Full recovery from the surgery takes approximately three to six months, depending on the type of surgery, the patient’s overall health, and the success of rehabilitation.

Despite the large number of hip replacement operations performed each year in the United States, less than 10% require additional surgery. The most common problem that sometimes happens soon after hip replacement surgery is hip dislocation, which requires relocation and occasionally even reoperation.

The most common complication that appears later is an inflammatory reaction to tiny particles that gradually wear off the artificial joint surfaces and are absorbed by the surrounding tissues. To treat this complication, the physician may use anti-inflammatory medications or recommend revision surgery (replacement of the artificial joint). Less common complications of hip replacement surgery include infection, blood clots, and heterotopic bone formation (bone growth beyond the normal edges of bone).

While this may seem like a lot to absorb, keep in mind that hip replacement surgery is the most successful surgery when comparing preoperative and postoperative function and quality of life. **OE**



Timothy J. Panek, MD, joined St. Croix Orthopaedics in 2001. He graduated from the University of Minnesota Medical School in 1996 and completed his orthopaedic surgery residency at the University of Minnesota in 2001. Dr. Panek is board certified in orthopaedic surgery and is a member of the American Academy of Orthopaedic Surgeons. He has a special interest in arthroscopy, joint replacement, and sports medicine. He provides care to local sports teams, including the St. Paul Saints and Mahtomedi High School.