

# Medical ORLANDO News

Your Primary Source for Professional Healthcare News

## Anterior Approach Total Hip Replacement Surgery

By: ERIC G. BONENBERGER, MD

Total hip arthroplasty provides excellent pain relief and improves mobility. People who suffer from several types of joint conditions are often excellent candidates for hip replacement surgery. Osteoarthritis, avascular necrosis, rheumatoid arthritis, post-traumatic arthritis, and hip dysplasia are commonly treated with total hip replacement surgery.

The hip joint is a “ball and socket” joint. Both sides of the joint are replaced, hence the term “total hip replacement.” The surgery involves replacing the femoral head (ball) with an artificial ball, which is connected to a femoral stem. The femoral stem is potted within the upper part of the femur. The acetabulum is the “socket” side of the joint. The acetabulum is machined into a uniform hemispherical cup. A metal hemispherical shell is implanted into the prepared bone. The surgeon then couples the two parts of the joint together. After a layered closure, the surgery is complete.

Though all total hip replacements are performed in this basic manner, the surgical approach to the hip plays a major role on post-operative rehabilitation. Traditionally, several different types of approaches have been utilized. The two most common types are the posterior approach and the lateral approach. In both of these procedures, the patient is positioned on his or her side, with the side to be operated on, up. In the posterior approach, an incision is made over the posterolateral aspect of the hip. Muscle and tendon units, called the short external rotators, are detached from the posterior aspect of the hip capsule. The capsule is entered and the procedure is performed. The capsule and overlying short external rotators are typically reattached to the proximal femur after joint implantation.

The lateral approach requires detachment of part of the abductor muscles from the anterior aspect of the proximal femur. These must be reattached upon completion. In both cases, these soft tissue structures must heal to

the proximal femur. This can take several weeks or months. During this time, post-operative body positioning can lead to stress at the repair site. If the repair fails, the prosthetic hip joint can become unstable or dislocate. To protect against this, a set of key rules are taught to the patient after surgery. These guidelines, called antidislocation precautions, prevent patients from stressing their soft tissue repair sites by teaching allowable hip and trunk positions. For example, hip flexion coupled with hip internal rotation can stress a posterior soft tissue repair. Therefore, posterior precautions recommend against deep hip flexion and hip internal rotation post-operatively.

The anterior approach to the hip may improve the speed of recovery following total hip replacement. The incision is made on the anterior surface of the upper thigh. The surgeon then separates hip muscles along natural tissue planes. Detachment of muscles or tendons is usually not required. Therefore, post-operative precautions are usually much more relaxed or not implemented at all. For this reason, this approach is also called “tissue sparing.” In many cases, smaller incisions (minimally invasive incisions) can be used. The patient is positioned supine on a special table. This table, called the Hana table, holds the patient’s feet and ankles in padded boots. Hinged bars attached to the boots can be angled and rotated to aid in surgical exposure. In some cases, the procedure is performed on a standard operating room table. Factors such as patient body habitus and surgeon training impact which table is used.

All of this typically leads to a quicker return to the patient’s desired activities, such as ambulation without assistive devices, driving, and certain sporting activities. The disadvantage of the anterior approach total hip replacement



is the added technical difficulty and learning curve. For example, patients with a high body mass index or severe deformity may not be candidates for this procedure. Also, no hip replacement surgery is free of complications. As is true with traditional hip replacement surgery, dislocation, limb length inequality, periprosthetic fractures and other complications can occur.

In summary, traditional total hip replacement surgery yields excellent results for the treatment of painful hip conditions. Anterior approach total hip replacement may be beneficial because the post-operatively recovery is usually more rapid.

*Eric G. Bonenberger, MD, attended North Carolina State University where he earned his B.S. in Zoology. He earned his MD degree from the State University of New York at Buffalo and completed his Internship in General Surgery at Fairview Medical Center in Cleveland, Ohio.*

*Dr. Bonenberger completed his Orthopaedic Surgery residency and Adult Joint Reconstruction fellowship at the Boston University Medical Center*

*Dr. Bonenberger specializes in Joint Replacement, Knee, Hip and Shoulder Surgery, Sports Medicine and Arthroscopy at Orlando Orthopaedic Center, a group of 15 fellowship-trained orthopaedic surgeons and physicians with 5 locations throughout Central Florida.*