

PATIENT EDUCATION

The Evolution of Total Hip Replacement Surgery

A Q & A with Dr. Joseph Assini, Orthopedic Surgeon.



Hip replacement surgeries are not all created equal. Like the many thousands of people who undergo hip replacement surgery each year (300,000 in the U.S.), there are a multitude of different surgical technologies and techniques that can be tailored to each patient's needs. One of the ways each hip surgery is different is through the surgeon's approach to the hip joint. Joseph Assini, MD, orthopedic surgeon specializing in the anterior approach, helps us understand these different approaches and their pros and cons.

Q: Dr. Assini, what are the most common surgical techniques for total hip replacements?

A: The posterior approach is the most traditional technique and the most common. The surgeon makes an 8–10 inch incision at the back of the hip and cuts through the posterior muscles to reach the hip joint.

A more advanced technique is the direct anterior approach. This has been available for the past 15–20 years and is increasing in usage throughout the U.S. An approximate 4-inch incision is made at the front of the hip, along the front of the upper thigh. Then the muscles are pushed aside to access the hip joint. With this approach, the surgeon can reach the hip joint without cutting any muscles.

The latest and most innovative approach is the anterior percutaneously assisted total hip approach. This is an evolution and improvement over the direct anterior approach.

Q: What are the benefits to the posterior approach, as it seems to be invasive and has a larger incision?

A: Even though you do have to cut through muscle to reach the hip joint, the posterior technique is tried and true. It provides the best view of the hip joint, which could eliminate potential complications.

Q: Which type of patient would benefit from the posterior approach?

A: Patients that benefit most from this approach are those with difficult anatomy such as hip dysplasia, those who have had previous hip surgery, and some larger patients.

Q: The anterior approach has a smaller incision, so is there a faster recovery time?

A: The anterior approach offers significant benefits for patients and surgeons. It has been shown to offer a quicker recovery and less pain in the first 12 weeks after surgery. Anterior based approaches are preferred for patients who wish to undergo a rapid recovery total joint, which means mobilization immediately following surgery and possible discharge the same day of surgery.

Q: What type of patient benefits from the anterior approach?

A: Typically, over 95 percent of my cases are done through an anterior approach. I think that all patients benefit from the less invasive nature of the anterior incision. Additionally, anterior based approaches allow me to use intra-operative imaging (x-ray) to ensure the implants are placed in an ideal spot. Component placement is key to a satisfactory outcome in total hip replacement.

Q: Approximately how many patients undergo surgery with the anterior approach?

A: In my practice, essentially all patients will be candidates. There are very few situations where I would move to a posterior based approach.

Q: What is the anterior percutaneously assisted total hip approach and how is it different from the direct anterior approach?

A: The anterior percutaneously assisted total hip approach is an improvement over direct anterior total hip replacement because it uses a cannula (think of a barrel of a ballpoint pen) to aid in the preparation and replacement of the hip socket. This allows the surgeon to use a smaller incision placed in a location that will minimize chance of nerve injury. In traditional anterior hips, up to 15 percent of patients are left with some thigh numbness due to intra-operative nerve injury. The cannula also aids in positioning the cup within the socket which is very important to minimize complications such as dislocation post-operatively. Finally, we perform the procedure through a “bikini” type incision which is very small and placed within the skinfold of the hip. This improves the cosmetic appearance of the scar and allows for quicker healing minimizing risk of infection.

Q: Where is this approach being performed?

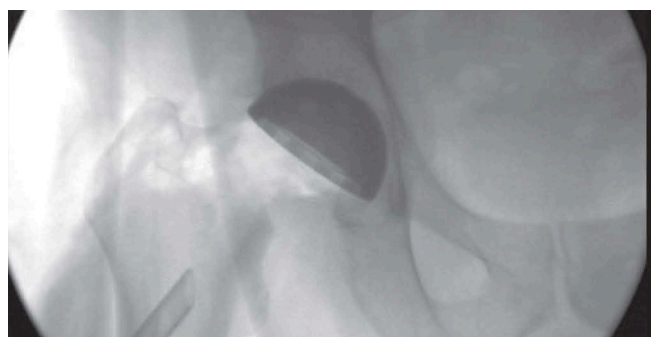
A: The Anterior Percutaneously assisted total hip approach is currently being performed in only five centers in the USA and Canada. I have assisted in developing this technique and I also instruct other surgeons in how to adopt it. As we move to more rapid recovery joint replacement procedures, minimally invasive approaches and reliably placed implants will become increasingly important. The anterior percutaneously assisted total hip is an important step forward to help patients return to pain free mobility and an improved quality of life.

Q: What type of patient would benefit from the anterior percutaneously assisted total hip approach?

A: In my opinion, almost any patient can benefit from the anterior percutaneously assisted total hip. All five of us who have worked to develop this technique believe strongly that many patients will see improved outcomes. The best thing about the anterior percutaneously assisted total hip is that it still offers all the benefits of the direct anterior approach, without increased risks, and with even quicker recovery times.



Patient with anterior percutaneously assisted total hip incision just 10 days after total hip replacement surgery.



X-ray image showing how the canula is used to place cup in ideal position for anterior percutaneously assisted total hip incisions.