

Considering Joint Replacement Surgery?

You've come to the right place!

Total Joint Arthroplasty or “Joint Replacement” surgery is not new. Though relatively commonplace today, total joint arthroplasty has a long and storied history, which has resulted in some significant refinement in modern day joint arthroplasty.



In 1891 at the 10th International Medical Conference, Thimistocles Gluck, a German surgeon, presented the results from an experiment where he used ivory to replace the femoral head of a human patient with deteriorated hip pain. This presentation was the first of its kind and it stimulated interest in joint replacement surgery. Over the next 50 years, the concept and process of joint replacement surgery were studied, and by the 1940s the first metal prosthesis was developed and tried. Over the next 50 years, joint replacement surgery grew in popularity as the prosthesis improved and the procedure was refined. Surgeons still experienced issues with prosthesis positioning, implant failure, loosening, and breakdown. Surgical complications like infection, which commonly occurred in as many as 10% of cases in the 1980's, blood loss, clotting issues, chronic pain and extended hospitalizations were common.

During the last 20 years, there have been some significant developments on all fronts of joint replacement care. In particular, we have seen improvement in pre-surgical planning, prosthetic design, surgical technique, infection and blood clot prevention, and pain management. We have adopted many of these changes at UOA in order to improve outcomes and provide a better patient experience with joint replacement surgery.

Pre-surgical planning

The use of improved pre-operative imaging has helped to improve pre-operative planning and matching of surgical implants. No longer is joint replacement a “one size fits all” procedure but is tailored to fit each patient. Pre-review of enhanced imaging can improve the implant's proper placement, improving stability of the joint and minimizing the incidence of dislocation. Utilization of pre-surgical and intra-operative antibiotics has helped decrease the incidence of infection to about 0.5% of all cases. A 20-fold improvement from the 1980's! Administration of blood thinners has helped to reduce the incidence of blood clots following the surgery. Pre-operative education has improved patient expectations and outcomes and prepares patients for early physical therapy. Utilization of

a patient pathway helps guide patients through the surgical process, answer common questions, and identify problems earlier, ultimately improving recovery.

Prosthetic design

There have been many design advancements in the actual prosthetic device over the years. Perhaps one of the most significant advancements in prosthetics has been made with the use of highly cross-linked polyethylene (a sophisticated plastic bearing) that allows the implant to last longer. Additionally, highly porous titanium materials have improved the bone-implant interface, where newer designs incorporate and promote bone ingrowth and biocompatibility. Cementless fixation for hips and emerging cementless technology for knees

has improved bone-implant stability and helps to reduce joint loosening. Ultimately, this helps to improve durability and longevity of the joint. Older prostheses were only expected to last 10 years. Today's hip and knee implant should last at least 25 years. Specialized surgical tools have been developed to improve prosthesis placement and facilitate the surgical technique. Since implants "last longer" total joint arthroplasty can be utilized for younger patients who no longer need to worry about their joint wearing out or failing.

Surgical Technique

Refinement of surgical approach and the use of minimally invasive techniques have helped to reduce associated blood loss and injury to adjacent muscles and soft tissues. A classic example of technique refinement is the anterior approach for hip replacement surgery where surgical entry is gained through a small 4-6" incision over the anterior hip splitting the anatomic soft tissue interval instead of cutting through muscles. Use of a physician driven robotic device or computerized navigation system helps to ensure precise component placement and improve accuracy of bone cuts. All of these techniques and advancements have also helped to decrease blood loss and surgical procedure times.

Thirty years ago, patients would spend 1-2 weeks in the hospital following surgery with many transitioning into intermediary care facilities before being able to safely return home. Today, prolonged hospitalization is no longer necessary and is extremely shortened for the vast majority of patients. Joint replacement surgery can also frequently be performed on an outpatient basis for qualified candidates. Extended visits to post-surgical rehabilitation facilities are a thing of the past as the overwhelming majority of patients are discharged directly to their homes for recovery.

Post-Surgical Care

Improvements in post-surgical wound dressings help to decrease the risk for infection. Pain management has been tremendously improved through the use of long acting opioid-sparing medications and the use of nerve blocks during surgery, which allow prolonged pain relief and encourages immediate weight bearing and early motion following surgery. Tracking patient



Dr. David Harwood in surgery

reported outcomes helps us to closely monitor the progress of our patients and be able to intervene sooner if needed. Enhanced physical therapy guidelines help to improve strength, stability and mobility in order to ensure a quicker return to activities of daily living.

Experience Really Does Matter!

Joint replacement surgery has come a long way from the first ivory hip implant presented by Gluck. In the past 50 years, our surgeons have gained extensive expertise in performing over 25,000 joint replacement surgeries.

- Each year, our specialists each perform hundreds of joint replacement surgeries utilizing pre-surgical planning, the most cutting edge prostheses, combined with the latest minimally invasive techniques, supplemented with some of the most progressive postoperative protocols and followed closely by tracking patient outcomes.
- Choosing a UOA physician for joint replacement surgery is the best option for patients dealing with chronic joint pain because we have adopted and incorporated the latest and greatest surgical techniques and rehabilitation protocols.

At UOA, outcomes and experiences really do matter.

Scan to learn more about



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