Understanding total joint replacement
At Northwell Health, our surgeons bring the most advanced orthopaedic procedures to the operating room every day, backed by the health system’s own extensive research studies. Dedicated to ongoing innovation, our orthopaedic research scientists and practitioners at Northwell Health are constantly shedding new light and offering hope for patients with chronic hip and knee pain.

Our joint replacement surgeons are also experts in minimally invasive techniques using the most advanced robotic technologies, including:

**Mako Robotic Arm**
A surgeon-interactive robotic arm technology that enables highly accurate hip and knee implant placement.

**Navio Robot-Assisted Surgical System**
An image-guided system with hand-held instrumentation to help surgeons deliver robotic precision during partial knee replacement surgery.
Total hip arthroplasty
A surgical treatment to replace damaged sections of the hip joint. During the procedure, the damaged joint is removed and replaced with a prosthetic socket implanted into your pelvic bone and a prosthetic ball attached to a stem that fits into your thighbone. Total hip arthroplasty is recommended for treating arthritic hip pain and loss of function when medicines and other treatments are not effective.

Posterior approach to hip replacement surgery
Traditional hip surgery uses a posterior approach, with the orthopaedic surgeon making an incision close to the buttocks to access the hip joint. This approach has a long record of success and a low complication rate.

Anterior approach to hip replacement surgery
An anterior approach means that the surgeon reaches the hip by going between two muscles, rather than by detaching and then reattaching a muscle. The advantages of this innovative, muscle-sparing approach to hip surgery are faster healing and improved mobility. The incision is also in the front which eliminates pain from sitting on the incision site. Keeping the muscles intact can also reduce the risk of dislocations.

Hip revision surgery
Prosthetic joints used in hip replacement surgery have a finite life span. The typical life of an artificial hip joint is approximately 10 to 15 years, depending on the daily use of the joint. When that time comes, revision surgery replaces worn-out components. The joint replacement surgeons at Northwell Health are well-trained in revision surgery and skilled in this complex procedure.

Robotic hip replacement surgery
Another advancement in hip replacement is robotic assisted technology, which helps the orthopaedic surgeon to precisely prepare and place the hip replacement components. The robot acts as an extension of the surgeon’s eyes and hands in a minimally invasive hip replacement surgery.

Hip replacement
Are you struggling with hip pain, caused by osteoarthritis, rheumatoid arthritis, post-traumatic arthritis, fracture, torn labrum or other condition of the hip joint? You’re not alone.

More than 285,000 people undergo total hip replacement each year. Northwell Health’s highly trained joint replacement surgeons perform advanced surgical hip replacement surgery procedures using the latest medical breakthroughs, including:
Knee replacement
When arthritis is limited to just one part of the knee, partial knee replacement may be an option. Also known as unicompartamental knee replacement, this surgical treatment replaces the damaged knee compartment with an implant while the healthy cartilage and bone in the rest of the knee is retained. The benefits of partial knee replacement include a smaller incision, less blood loss and faster recovery time.

Total knee replacement
During total knee replacement, the knee joint is resurfaced by removing the diseased bone and cartilage. These surfaces are replaced with a metal and plastic implant that can help alleviate the pain of arthritis while increasing mobility and function. Because there are subtle differences in the anatomy of men and women, knee implants are designed specifically to accommodate the different size of the bones between genders. This increases functionality and durability of the implant.

Custom fit knee replacement
This new approach to knee replacement uses custom-fit knee implants that are created using advanced 3D imaging to capture the true anatomy of the patient’s knee, which means a more optimal fit of the implant.

Knee revision surgery
Over time, a knee implant can begin to fail because of normal wear and tear. With decreased joint functionality and increasing pain symptoms, knee revision surgery may be necessary. During this surgery, the damaged components of the existing implant are removed and a new prosthesis is inserted.

Robotic partial knee replacement
Although total knee replacement is the most common knee replacement surgery, robotic partial knee replacement is an option for some patients. This minimally invasive procedure is performed through a limited incision using a robotic guidance system to remove and resurface only the arthritic part of the knee while preserving healthy portions of the knee joint.
What is total joint replacement?
Total joint replacement, also known as arthroplasty, is a surgical procedure to repair a joint damaged by arthritis or a severe injury. Artificial joints made of metals, ceramics or plastics are used to help your limbs move and function naturally. Knee and hip replacement are two of the most common joint replacement surgeries.

Why do people have joint replacements?
Joint replacement is done to decrease pain when it cannot be relieved by other treatments — making it easier to walk, exercise and enjoy other daily activities without soreness or discomfort.

Am I too old for total joint replacement surgery?
Age doesn’t matter as long as you are in good health and able to have surgery. Your primary care physician will be able to make sure that you’re fit to have the procedure.

What are the risks of having total joint replacement surgery?
All surgeries place you at risk for infection and blood clots. If you are a candidate for joint replacement surgery, your surgeon will talk to you about any possible risks.

What are the benefits of minimally invasive joint replacement?
Minimally invasive techniques use small incisions and specialized surgical instruments that are inserted through small openings. In some selective cases, a robotic surgical system enables the orthopaedic surgeon to operate effectively through these smaller incisions. The benefits of these innovations include:
– Less trauma to soft tissue
– Reduced pain and blood loss
– Quicker recovery
– Fewer complications, such as infection
– Smaller scars

If you are experiencing long-term hip or knee pain, you may be a candidate for joint replacement surgery. The following information may help you familiarize yourself with these surgeries should you ever need one.

Total joint replacement common questions:
Northwell Health (formerly North Shore-LIJ Health System) is New York State’s largest healthcare provider and private employer. With 21 hospitals and nearly 450 outpatient practices, we serve more than 1.8 million people annually in the metro New York area and beyond. Our 61,000 employees work to change health care for the better. We’re making breakthroughs in medicine at the Feinstein Institute for Medical Research. We’re training the next generation of medical professionals at the visionary Hofstra Northwell School of Medicine and the School of Graduate Nursing and Physician Assistant Studies. And we offer health insurance through CareConnect. For information on our services in more than 100 medical specialties, visit Northwell.edu.

For more information about our joint replacement program call (516) 321-7500 or visit northwell.edu/jointreplacement.