

Education Division Mission Statement

The Education Division at HSS is committed to being the source for outstanding initiatives in education, training, research and information for local, national and international communities to prevent and treat musculoskeletal conditions.

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Programs Promoting
Musculoskeletal Health

Total Hip Replacement: A Gold Standard of Treatment for Painful Arthritis

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Of all of the medical interventions that are performed in major medical centers, total hip replacement has the most predictable outcome as measured by pain relief, improved function, and the highest degree of impact on improving quality of life.

The hip joint is a model ball and socket joint. The ball represents the upper end of the femur (thigh) bone. The socket (acetabulum) is a rounded cup-like structure formed by the fusion of the three bones of the pelvis. Both the ball and the socket are covered with a soft tissue coating called articular cartilage, which protects the hip joint and, in the presence of a small amount of lubricating fluid called synovial fluid, allows motion to occur without pain. Providing additional support around the hip joint is the acetabular labrum, a ring of cartilage that surrounds the cup of the joint and helps improve the suction seal.



Why Hip Joints Break Down

There are many conditions that can lead to loss of cartilage or damage of the articular cartilage in the hip joint. Abnormal development of the shape of either the head of the femur, acetabulum, or both can lead to a mismatched ball and socket. As a result, the joint can become prone to early degeneration and wear of its

articular cartilage. The hip joint can also be damaged as the result of an inflammatory rheumatic disease, such as rheumatoid arthritis or lupus, in which a biological process leads to the destruction of the natural articular cartilage of the joint.

In addition, degenerative arthritis and arthritis that develops as the result of trauma can lead to pain and reduction in motion, and eventually result in a significant loss of function. By resurfacing the joint or replacing the joint with an artificial implant, you can eliminate the pain, remove the factors that can restrict motion, and improve function overall. Regardless of the cause of damage to the hip joint, however, the primary indications for hip replacement surgery are pain and disability.

What is Involved in Hip Replacement Surgery?

When possible, the Hospital's surgeons use "less invasive" approaches to surgery. Hip replacement involves removing the damaged joint and replacing it with an artificial ball and socket. The implant can be fixed in place using bone cement or a porous in-growth prosthesis. The surgeon will discuss which type of fixation is indicated and why.

A variety of implant materials are available for hip replacement. These include:

- highly polished metallic femoral head coupled with a medical grade plastic for the socket component
- ceramic femoral head with either a medical grade plastic or ceramic socket
- combination of highly polished metal femoral head against a polished metallic acetabular shell

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Trading Places: My Experience as a Patient

Kathryn McCusker Skelly, RN, MPA

Although I have been a nurse for more than 30 years, on November 3, 2009, I would not be a part of the team providing high quality patient care. I would not be conducting pre-op teaching, doing post-op monitoring, or offering pain management. On that particular day, I would be on the receiving end of these services. I was now going to be the patient!

The journey that led me to the total replacement of my left knee joint was a long and insidiously painful one. It probably began when I was six years old and fractured my leg and injured my knee. I vividly recall screaming as the doctor aspirated my knee with a syringe, which at the time seemed enormous. Years later, I remember being aware of my throbbing knee after a long day of skiing. As a bedside nurse, the same pain would return after a particularly grueling shift. The pain continued to escalate, and in 2006 I had arthroscopic surgery on my left

pain. As a nurse I knew that pain, especially when chronic, wears people down. As a chronic sufferer myself, I learned firsthand that my knee was not the sole recipient of misery. The pain affected every aspect of my life. As the pain prevented me from sleeping through the night; I always felt on edge and began having daily headaches. Long walks through the woods with my faithful companion, Petey the poodle, had always reduced my stress and elevated my mood, but my knee would no longer allow me this pleasure. Driving my son to hockey camp in Massachusetts was agony. I hadn't driven more than 30 minutes when the stabbing pain made me stop the car so I could walk to reduce the pain to a tolerable level.

With each passing day, pain became a more controlling force in my life. Members of my family were compassionate, but let's face it; it's not fun living with someone whose pain dictates her moods. I needed so much ibuprofen to control the pain that my stomach ached. I felt so sorry for myself that I comforted myself with food to ease both physical and emotional pain. The loss of my ability to exercise, coupled with the addition of comfort food, equaled weight gain—leading to even more knee pain.

A Surgical Solution

With the support of my husband and children, I mustered up the courage to seek a surgical cure. As a healthcare professional, I am well aware of the importance of selecting an experienced doctor.

My orthopedic surgeon at HSS came highly recommended, and based on this and his excellent track record, I made a de-



▲ Kathryn Skelly walking post-surgery in Tallman State Park in Piermont, New York

cision to see him. During my initial consultation, he examined me, assessed my films, discussed my medical history and presented my options. A total knee replacement was the only approach that would allow me to regain the quality of life that I so desperately missed. With the visual aid of a skeleton model, my surgeon explained the surgical procedure, the risks and all aspects of the lengthy post-operative phase.

This Time, A Patient

The day of surgery also went smoothly. I registered, was directed to the pre-op area, and given a hospital gown. I was then interviewed by the nurse, anesthesiologist and surgeon. My skin was prepped; the knee that would be operated on was identified (numerous times); and an intravenous (IV) line was started—all done efficiently and courteously. I was told that I would be brought in for surgery in 10 minutes, which gave my husband and I time to reassure one another.

Over the years I had wheeled many pa-

While others were delighting in “60 being the new 50;” my 55 felt more like the old 85. I had constant, non-relenting knee pain.

knee. The doctor said I had severe arthritis. He removed most of the damaged cartilage in my knee joint and recommended that I not walk rigorously for exercise as the removal of some of the cartilage could create bone-on-bone friction. I experienced improvement for about a year, but then the pain gradually returned. It would come and go until one day it became a constant, albeit an unwelcome companion.

The Consequences of Chronic Pain

While others were delighting in “60 being the new 50;” my 55 felt more like the old 85. I had constant, non-relenting knee

The Role of the Rheumatologist

Linda A. Russell, MD

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tients to the OR. It was a surreal experience being the passenger instead of the driver. In the OR, the anesthesiologist told me he was putting medication in my IV. Being a nurse, I asked him which medication. I was asleep before I heard the answer and awoke in the recovery room.

The recovery room nurse was at my bedside when I woke up, which I found reassuring. I was surprised that I felt no pain and then I realized that my whole leg was numb. My surgeon and a patient educator had both explained that I would have a nerve block for the surgery and for pain control, but upon awakening I hadn't remembered. I was grateful my recovery room nurse was there to reorient me. I also knew that I would have a drain in my knee to prevent blood from pooling. I had cared for hundreds of patients with drains over the years, but somehow seeing my own blood filling up the container was a bit unnerving.

My husband was allowed to see me in the recovery room for short intervals. Looking back, I should have prepared him for the appearance not only of the recovery room, but also of his wife as a post-op patient. I had worked in the recovery room so it didn't occur to me that the sights and sounds of monitors, IV pumps, and ventilators, among other apparatus, could be an unsettling experience. After the fact, he shared with me that seeing me so vulnerable and pale really took its toll on him. My surgeon had explained that blood loss was expected during surgery, so I had donated blood for an autologous transfusion, if it became necessary. But I hadn't prepared my husband for how pale I would look. (An autologous blood donation enables you to donate your blood weeks prior to the surgery so you can be transfused with your own blood if a blood transfusion is needed during surgery.)*

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Many patients with musculoskeletal pain will contact a rheumatologist, who can diagnose the cause of the pain and manage it nonsurgically. Often the cause of the pain is arthritis.

Arthritis refers to a process affecting a joint that is often associated with pain and damage to the joint. The cartilage within the joint can be worn down. The medical community still has not developed satisfactory techniques to "regrow" cartilage; it is therefore important to try to prevent further damage from occurring.

In order to best care for a patient, the rheumatologist will first assess if the patient has osteoarthritis or a type of inflammatory arthritis. This is achieved by taking a history, performing a physical exam, through blood tests or X-rays and, at times, by analyzing fluid from an involved joint.

Current Treatment Options for Osteoarthritis

The most common type of arthritis is osteoarthritis. In this type of arthritis, cartilage within a joint thins over time, and can result in pain and disability. This often occurs due to wear and tear over the years. Prior trauma to a joint can hasten the development of arthritis. There may be a genetic basis for osteoarthritis, and family members may have already had total hip or knee replacements.

Oral medications In treating osteoarthritis nonsurgically, rheumatologists may prescribe over-the-counter medications such as acetaminophen, or prescription medications, such as anti-inflammatory medications or narcotic analgesics. Determining which medication to prescribe will be based on the patient's other medical conditions and any medications he or she is already taking. It is important to remember that in osteoarthritis, medications help control pain, but do not slow the progression of the arthritis.

Injections In addition to oral medications, physicians can prescribe injections of

corticosteroids or a hyaluronic acid preparation into the joint cavity (intra-articular). While these injections can help reduce pain, they do not slow the progression of osteoarthritis.

Intra-articular corticosteroids can reduce pain for weeks to months and will help most people to some extent. These injections tend to be more effective in patients with milder arthritis. In general, physicians will administer no more than three injections per year and no more frequently than every

A rheumatologist is able to decide what type of arthritis a patient has by taking a history, performing a physical exam, through blood tests or X-rays and, at times, by analyzing fluid from an involved joint.

three months. Side effects are minimal, but may include transient elevated glucose levels in patients with diabetes.

Many hyaluronic products are currently available. These are a viscous or gummy-like substance that may add "lubrication" to the joint and reduce pain in 30 to 40 percent of patients with knee osteoarthritis. Again, these products tend to be more effective in patients with milder arthritis. They are generally administered as weekly injections for a period of three weeks. Hylan GF 20 is now available as a one-time injection. Hyaluronic acid preparations tend to be fairly safe.

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Total Knee Replacement: What Patients Can Expect

Jack Davis, MSN, RN, ONC | Manager, Patient Education Programs

Total knee replacement (TKR) is a highly successful surgery that provides pain relief and allows patients to return to a higher level of functional activities. Although degenerative or wear and tear arthritis can often be managed with medications, physical therapy and modifications of activity, the decision for TKR usually follows progression of the disease despite the conservative treatment modalities. Symptoms of advanced arthritis include pain, swelling and limited motion that impacts the ability to enjoy quality of life activities. According to the American Academy of Orthopaedic Surgeons, 581,000 TKR surgeries are performed annually in the United States.

Understanding the Knee Joint

The knee joint is a structure composed of three bones: the femur (thigh bone), the tibia (shin bone) and the patella (knee cap). The bones are covered with smooth cartilage surfaces that allows for smooth motion and acts like a shock absorber during weight-bearing activity. The bones of the knee joint are connected by strong ligaments that provide stability and powerful muscles that control motion. In a healthy knee, all of these structures work together to allow the knee to flex (bend) and extend (straighten) the lower leg smoothly.

Arthritis is a disease that affects the surface of the joint (cartilage), wearing down so it no longer moves smoothly and loses the ability to act like a cushion. Damaged cartilage causes a roughened surface and may lead to bones rubbing directly together, causing persistent pain, clicking, a catching sensation, and limited range-of-motion.

Total Knee Replacement

Total knee replacement is a surgical option for many patients with advanced arthritis. The damaged and worn-out surfaces on the ends of the femur, tibia and the underside of the patella are resurfaced and replaced with an artificial joint or prosthesis, and the new smooth joint surface is affixed to the bones. There are many types of joint implants used in knee replacement surgery. Some implant components are made of a metal such as cobalt, chrome or ceramic (zirconium) alloys. Other implant parts are made of a

strong and very smooth plastic called polyethylene. The surgeon will explain the benefits of each option to the patient and choose the most appropriate one to meet individual needs.

One of the most important factors to recovery is active patient involvement. Total knee replacement surgery is a major procedure requiring planning and commitment by the patient to participate in the care plan and the rehabilitation process. It is important for the patient to communicate with the health-care team about their medical history before the surgery and to ask questions and clarify issues during every phase – from the decision to have surgery through the preoperative evaluation, recovery and rehabilitation.

Total knee replacement surgery takes approximately 1.5 hours and most patients remain in the hospital for three or four days. The health-care team provides care that is focused on maximizing outcomes and preventing complications. Patients should expect the team to take measures that reduce the risk of infection and the formation of blood clots while manag-

ing pain effectively. This enables the patient to perform exercises necessary for recovery and resume activities of daily living.

Preventing infections Infection rates are kept very low through a combination of factors including: a comprehensive pre-operative medical evaluation, timely use of antibiotics and antimicrobial scrubs, special surgical space suits, a sterile laminar flow operative environment, persistent hand washing, adequate nutrition and strict wound observation and care. Long-term treatment with antibiotics prior to dental and urological procedures continues for at least two years after total knee replacement surgery.

Preventing blood clots Measures that are typically used to prevent blood clot formation or deep vein thrombosis (DVT) include the use of regional anesthesia, mechanical compression devices, blood thin-

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Total Hip Replacement, continued from page 1

Each of these implant components has advantages and disadvantages. The optimal implant for each patient will be discussed with the surgeon.

What to Expect at HSS

Before surgery All patients who are candidates for total hip replacement undergo a rigorous pre-operative medical evaluation. This includes a review of current medical conditions and an in-depth physical examination. Evaluations of dental, gynecological, and urological health are often included to determine a patient's general well-being prior to having surgery.

In years past, patients routinely donated blood (autologous blood donations) prior to their surgery in case a blood transfusion became necessary. Research by HSS physicians has demonstrated that most patients with hemoglobin levels greater than 13gms/dl generally do not need to donate blood. Patients should discuss blood donation with their physician.

In addition, all patients are advised to attend an education class where information about preparing for surgery, the hospital stay and discharge plans are presented and discussed.

Day of surgery On the day of surgery, patients will go to the pre-operative holding area. Here, their medical history is reviewed, a physical examination is performed, and the type of anesthesia to be used during surgery is discussed. Regional anesthesia (spinal/epidural with sedations) is generally the preferred approach.

After surgery The majority of patients will be allowed to put full weight on their leg soon after surgery. Antibiotics are given in the immediate post-operative period, and patients are monitored closely to reduce the risk of blood clots. While in the Hospital, patients will be visited by a physical therapist who will help them begin some degree of independent walking. Criteria for discharge include the ability to get into and out of bed, go up and down stairs, and walk in a safe and relatively comfortable manner. The

usual length of stay in the Hospital is between two and three days, and the majority of patients are able to go directly home with arrangements for home physical therapy.

At home Once at home, patients usually follow a two-week course of physical therapy. After approximately three to four weeks, most patients are walking independently with occasional use of an ambulatory aid such as a cane. During this time, patients are also recuperating from the effects of undergoing major surgery, including fatigue and loss of appetite. In general, patients whose jobs involve sedentary activities can return to work within three to four weeks. Patients who perform manual labor often require two to three months for recovery. Recovery can be expedited with outpatient rehabilitation, which will continue to improve a patient's strength and overall mobility.

How Durable are Hip Implants?

Just as your natural hip can wear out, a total hip replacement can also wear out and ultimately fail. Factors that may promote wear and potential loosening of a total hip replacement include performing a high level of repetitive impact activities, excessive weight, or a problem with the alignment of the implant components. With improvements in newer bearing materials, many patients are resum-

By resurfacing the joint or replacing the joint with an artificial implant, you can eliminate the pain, remove the factors that prevent and restrict motion, and improve function overall

ing much greater activity levels than have been possible in the past. However, the long-term consequences of high impact activities, such as running, singles tennis and other court sports are not known.

Lower impact activities such as cycling, swimming, doubles tennis, golf and recreational skiing do not appear to be associated with premature failure of hip replacements. Only through longer term follow-up will we be able to determine what role impact activities play in the durability and life expectancy of modern day hip replacements.

In the meantime, there is no doubt that total hip replacement is clearly a gold standard of treatment of painful arthritis about the hip and should be considered when pain and disability compromise quality of life.



FAQs for Total Joint Replacement

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Nutritional Needs

Candidates for total joint replacement should consider certain nutritional factors that may impact their surgical outcome. Following a well balanced diet is recommended before and after your surgery to ensure a healthy nutrition status.

What constitutes a balanced diet?

A balanced diet is rich in fresh fruit, vegetables, lean meats, whole grains and low fat dairy foods. Including a variety of these foods in your diet will prevent nutrition deficiencies prior to the operation. The serving sizes you should consume from each food group vary depending on age, gender and current exercise levels. The USDA's MyPyramid.gov is the best resource to help you determine the appropriate number of servings. Following the serving size recommendations for the food groups will help promote a healthy weight.

Does being overweight affect surgery?

If you are overweight, your surgeon may recommend weight loss prior to the surgery. Achieving the recommended weight loss will help minimize surgical complications such as infection and poor wound healing. In addition, a healthy weight will prolong the life of your joint replacement and will lead to greater mobility.

It is best to start a weight loss program that includes a healthy diet and exercise at least six months prior to the surgery. A consultation with a registered dietitian can help you achieve your weight loss goals before surgery.

What nutritional recommendations should I follow before and after surgery?

Before your surgery, it is also important to include iron-rich foods such as lean beef, poultry, spinach and dried beans. Iron is an

important mineral for building red blood cells and healing after surgery. Meeting your needs for iron is also important before surgery in order to prevent iron deficiency anemia.

After your joint replacement, it is recommended that you eat higher amounts of protein to promote wound healing and maintenance of lean body tissue. You should aim to eat a high protein food such as meat, poultry, fish, dried beans, nuts, dairy and soy products while you are recovering from the surgery. Fruits and vegetables are high in antioxidants and vitamins, such as vitamin C, will also promote wound healing. Aim to eat five or more servings of fruits and vegetables daily. Calcium is an important mineral for building new bone and maintaining existing bone strength. Three servings of low-fat milk, yogurt or cheese each day will help meet your requirements for calcium.

Pain Management

The Division of Pain Management at HSS is dedicated to minimizing discomfort and maximizing return of physical function. Prior

to surgery, you may request a pain control consultation via your surgeon. Pre-operative consultation may be helpful if you have had a prior poor experience with postoperative pain control, severe side effects from pain medications, or are currently seeing a pain medicine physician.

How much pain will I have following surgery?

There is a moderate amount of pain following hip replacement surgery. Knee replacement surgery results in more pain, and it is not unusual to have some pain for several weeks after you leave the hospital.

Although we work very hard to minimize pain after surgery, it is typical to have mild to moderate pain during your hospital stay. We will ask you throughout the day to rate your pain on a 0 to 10 scale with 0 being no pain and 10 being extreme pain. A score of about 3 is considered acceptable, and we will adjust your medications to try to achieve this level of comfort while minimizing side effects from pain medications.



What can I typically expect for post-operative pain management?

For postoperative pain, we use a combination of pain relieving drugs and techniques to block different mechanisms of pain and minimize specific side effects such as nausea and itching. Prior to surgery, patients receive anti-inflammatory drugs. During surgery, we block transmission of pain with spinal-epidural anesthesia and nerve blocks. After surgery, you will receive patient-controlled epidural analgesia combined with anti-inflammatory medications. The patient control feature allows you to self-administer additional medications to customize your pain control. Oral pain medicines can also be ordered for you, but only you can ask for them. Typically, you are switched completely to oral pain medicines on the first post-operative day for hip replacement or second post-operative day for knee replacement.

Who will take care of my pain?

Hospital for Special Surgery has three pain medicine sections. Most patients will be cared for by the Acute Pain Service. Patients who already have a pain medicine physician or have had long-term pain issues will be cared for by the Chronic Pain Service.

Once you are switched to oral analgesics, your surgeons will manage pain medications. If your surgeon is unable to optimally control pain, then our Recuperative Pain Service will aid with a consultation and will also review your pain medications prior to discharge.

For more information, visit www.hss.edu/acutepain

Resuming Normal Activities

The goal of total joint replacement is to resume normal activities of daily living and activities that promote quality of life. However, following surgery, certain precautions must be taken and recommendations for return-



ing to an active lifestyle should be followed closely to promote the best outcomes.

Sleeping positions: When can I sleep on my operated side?

Initially following a joint replacement surgery, it is recommended that you sleep on the non-operated side. Sleeping on your operated side typically feels uncomfortable or even painful for the first four to six weeks. After a total hip replacement surgery, hip precautions must always be considered. If you like to sleep on your side, it is advised that you sleep on your non-operative side, using two pillows between your legs. Ensure the two pillows support the entire length of your leg, including your ankles. Even after the hip precautions have been lifted it is a good idea to continue utilizing pillows between the legs since they pro-

vide comfort and support. If you have had both hips replaced it is recommended that you sleep on your back. In general, sleeping on your stomach is not recommended, until hip precautions are lifted.

If you have had a knee replacement, you should allow your comfort and pain level determine what position is best for you. You do, however, want to make sure you avoid sleeping with any pillows or towels under the knee since this can hinder obtaining optimal knee extension range-of-motion.

When can I drive?

A popular question after a total hip or total knee replacement is “When can I drive?” Research has found that driving reaction time (the time it takes to go from the gas to the brake when a signal turns red) is impaired following total hip or knee replace-

ment. It is important to speak to your surgeon before returning to driving. There are multiple factors when considering when it is safe to drive.

■ **Are you taking pain medication?** Many types of pain medication prescribed after a total joint replacement have side effects that can impair your vision or cause drowsiness. This is especially important when considering operating a motor vehicle. Talk to your physician regarding side effects of the the pain medication you are taking.

■ **Total Knee Replacement** If you had a total knee replacement, you need to have adequate range of motion to sit normally in the drivers' seat and safely reach the gas and brake pedals.

■ **Total Hip Replacement** If you had a total hip replacement, you will be following hip precautions for at least 6 to 12 weeks. You will need to sit on two pillows, have the seat pushed all the way back for maximum leg room, and have the seat back partially reclined. This is not a safe position for driving. We do not recommend sitting in the back seat as the seat has no adjustability.

What types of activities/sports are appropriate after total joint replacement?

The goal of your total hip or knee replacement is to relieve pain and allow you to return to activities you need to do, as well as those you enjoy. Low-impact activities following your joint replacement are highly recommended. Activities that are high impact put extra stress on the new joint and can lead to wear.

Recommended	Not Recommended
Walking	Running/Jogging
Swimming	Basketball
Biking	Football
Golf	Softball

When can I return to sports activities?

Remember, you must have adequate strength, range of motion, balance, flexibility, and proprioception (perception of movement and spatial orientation) before returning to any sports activity. Any precautions, such as total hip precautions, must also be lifted before returning to sports. You should not expect to return to sports until at least three months after surgery. Always speak to your physical therapist and surgeon before returning to sports.



The Role of the Rheumatologist, continued from page 3

Weight control For patients with osteoarthritis in the hip, knee, ankle and/or foot, achieving an ideal weight will help control pain and slow the progression of the arthritic process. One pound of weight loss translates to a four pound weight load decrease on your knee joint. Additionally, it is best to avoid high-impact sports such as running, which may quicken the loss of cartilage.

Treating Inflammatory Arthritis

Inflammatory types of arthritis includes rheumatoid arthritis, psoriatic arthritis, systemic lupus erythematosus, and gout. With inflammatory arthritis, rheumatologists treat the underlying disease to reduce inflammation within the joint and slow damage to cartilage. The more quickly the diagnosis is made and proper treatment initiated, the less the overall damage will be.

Treatment for inflammatory arthritis involves disease modifying drugs or DMARDS. Examples include plaquenil, methotrexate and the newer biologic agents, such as tumor necrosis factor inhibitors. For the treatment of gout, medications such as colchicine, allopurinol or a new medication called febuxostat may be prescribed.

For all types of arthritis, the rheumatologist may recommend that a patient have an assessment by a physical therapist, who can advise an exercise regimen to maintain joint flexibility and strength. If surgery is indicated, rheumatologists work closely with orthopedic surgeons to provide the best plan for the patient. Following surgery, patients continue care under the rheumatologist, who will help manage overall musculoskeletal health and help them achieve an optimal quality of life.

Trading Places, continued from page 3

A few hours later, I was wheeled upstairs to my room by the nurse in charge of the recovery room. I voiced my appreciation for the superior care provided to me by my nurse. She laughed and said, 'few patients remember the recovery room nurses.' This nurse/patient certainly did.

I spent the remainder of my hospitalization on the seventh floor. My biggest fear was that I wouldn't have adequate pain control. In my experience as a nurse, I had been very distressed seeing some patients under

Being able to resume the activities that I love has rejuvenated me and brought joy back into my life.

medicated and others over medicated for pain. Without wanting to sound like Goldilocks, I take pride in telling you that my patients' pain management was 'just right,' and thankfully mine was too.

The nurses and nursing assistants, my ever vigilant surgeon and his team, physical therapists and discharge planners all went out of their way to make me comfortable and prepare me for the last leg of my journey, which would be rehab.

A New Perspective

My experience as a patient will no doubt be a positive influence on the care I provide for my patients and increase my insight as to the needs of their families. The quality of care I received at HSS was exceptional. Being able to resume the activities that I love has rejuvenated me and brought joy back into my life. Hospital for Special Surgery's gift to me....priceless!

**Patients should discuss the need for blood donation with their surgeon.*

The HSS Rehabilitation Department's online Activities of Daily Living (ADL) video series demonstrates the activities a patient needs to perform after a total hip replacement, including getting dressed, walking with a cane, stair climbing, and getting in and out of the car. Each video clip illustrates proper technique while maintaining total hip precautions following surgery, and can be found on the HSS website at www.hss.edu/adl.

Total Knee Replacement, continued from page 4

ning medications and a timely return to exercise and mobility.

Pain management Patients should expect to have some pain and discomfort following total knee replacement surgery. Effective management of pain may include a combination of interventions:

- medications – epidural infusions, nerve blocks, intravenous infusions, anti-inflammatory and other pain relieving agents
- cold therapy
- positioning and relaxation techniques

Managing pain will help patients tolerate the exercises designed to strengthen the muscles of the leg and regain knee motion, flexion and extension. Patients often begin to exercise soon after the anesthesia wears off and will progress activities during the first few days. Following discharge, adherence to a home exercise program is critical. Re-

covery and recuperation varies from patient to patient, but usually takes approximately four to six weeks. Most patients will require the use of a cane during this time. Patients should expect to have continued gradual improvement and reduced discomfort over 12 to 16 weeks. The full benefits of total knee replacement surgery are usually realized by the end of the first year, with patients returning to activities of daily living, walking, low-impact sports, stair climbing and transfers from sitting with little or no pain.

By maintaining a healthy, active lifestyle, monitoring for signs of infection anywhere on the body, avoiding high-impact activities and having routine annual follow-up examinations as recommended by the surgeon, patients can enjoy the benefits of total knee replacement for many years.

References: American Academy of Orthopaedic Surgeons (2009). Total knee replacement. Retrieved October 15, 2009 from www.orthoinfo.aaos.org

One of the most important factors in recovery from total knee replacement is active patient involvement. Total knee replacement surgery is a major procedure requiring planning and commitment by the patient to participate in the care plan and the rehabilitation process.

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Hospital for Special Surgery is an affiliate of NewYork-Presbyterian Healthcare System and Weill Cornell Medical College.



Hospital for Special Surgery is a participating organization of the Bone and Joint Decade.

The Education Division's Public and Patient Education Department provides information to the general public and patients through a variety of health education programs. Professionals provide practical information to help prevent or manage orthopedic and rheumatological conditions. Programs are held at the hospital as well as in the community. The department is dedicated to providing education today, so that everyone can have a healthier tomorrow.

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