

THE RYU HURVITZ ORTHOPAEDIC CLINIC

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R.H.O.C. TOTAL KNEE REPLACEMENT INFORMATION

Total knee replacement is an orthopaedic operation in which worn out knee surfaces are replaced by bio-compatible, sophisticated metal and plastic components. The components, also known as implants or prosthesis, are the end product of sophisticated and technologically advanced biomaterial manufacturing. By replacing worn out bone surfaces on the femur and tibia, excellent pain relief can be achieved and motion restored.

The knee is a complicated joint which is weight bearing and subject to stress through several planes of motion. The knee joint is comprised of femur (thigh bone) and the tibia (shin bone) and the patella (kneecap). In the normal knee, these 3 structures are coated with a smooth, glistening material called articular cartilage. The cartilage serves to minimize friction and permit a gliding motion without pain. When the coating on the bone or cartilage is damaged, the joint surfaces begin to rub, causing friction and pain. Several common entities can result in loss of the cartilage, namely, osteoarthritis, which is the "wear and tear" phenomenon as joints wear out over time with prolonged use, rheumatoid arthritis, which is an inflammatory condition in which the joint lining of the knee prematurely destroys the joint surface, and trauma, which can interrupt the bone surfaces, leading to irregularities and arthritis change.

The primary indication for total knee replacement is pain, for whatever reason, which is unrelieved with conservative measures that usually consist of weight loss, anti-inflammatory medications, activity modification and occasionally the use of a walking aide, such as a crutch or cane. If these measures are unsuccessful and the pain unrelenting, a total knee replacement is often the best alternative. During this procedure, the irregular painful surfaces of the knee joint are resurfaced with specialized metal and plastic implants that restore smooth, pain-free motion and weight bearing.

When a total knee replacement is performed, the postoperative rehabilitation is arduous, but the end result of a painless stable hip makes it all worthwhile. The following outlines the preoperative program.

TOTAL KNEE REPLACEMENT (continued)

Preoperatively, you will be seen by your medical doctor for a preoperative history and physical examination. This will identify any general health concerns that may need to be addressed during the preoperative phase. This should be timed one to two weeks prior to your surgery date, and you may anticipate a preoperative chest x-ray, EKG and appropriate laboratory testing.

Since there is a risk of blood loss that may require a transfusion following surgery, many patients will choose to donate their own blood that may be transfused back to you postoperatively in an autologous blood program. Your physician will help you arrange for this. You can expect to begin donating your own blood approximately three to four weeks prior to your scheduled surgery date since it will take several weeks for your blood count to recover. During that time, it is helpful to use an iron supplement, such as Slow FE, which is used once a day. (A stool softener or laxative, such as Peri-Colace, can also be used to counter the side effects of the iron supplement.) Other options with regard to potential transfusion requirements are for directed donation from a friend or family member, or to consider the use of the general blood bank pool.

Prior to surgery, you will be seen by the anesthesiologist to help answer questions regarding the anesthetic. Options include general, spinal and/or epidural anesthesia. Additionally, a consultation with the physical therapist can be arranged.

Immediately following surgery, your knee will be placed in a CPM (continuous passive motion) machine, which assists in maintaining motion and accelerating the rehabilitation process. You will also begin weight bearing on the first postoperative day, utilizing crutches or a walker, placing full weight on the operated knee. Your hospital stay will range from 2-3 days and your progress will be monitored on a daily basis. The primary concerns following total knee replacement surgery are avoidance of infection, pain relief and initiation of a safe rehabilitation program to include independent ambulation and range of motion

Following surgery, when you are all ready to leave the hospital, most patients will go home having made arrangements for help during the convalescence, which lasts approximately six to eight weeks. For those with a slower rehabilitation or multiple medical problems leading to a slower recovery, other arrangements are possible. Those patients requiring prolonged recovery time may include their rehabilitation at a skilled nursing facility. The decisions regarding home care or an extended hospital stay will be determined by the patient, your physician, the physical therapist and the medical/social service works, who are well versed in these issues.

TOTAL KNEE REPLACEMENT (continued)

When you are discharged from the hospital to home, there are several important points to remember. In order to protect your total knee replacement, please use your walker or crutches as instructed and stay within the guidelines specified by your physician and physical therapist. If you are negotiating stairs, step first with the non-operated leg, followed by the crutches.

When descending stairs, place the crutches first, and then step down with the operated leg, followed by the non-operated leg. If there is any question, the safest option is to sit on the stairs, allowing the operated leg to dangle, and to rely on the non-operated leg to assist in negotiating the stairs up or down. Please perform the exercise program that you were instructed in 3 or 4 times a day for 15-20 minutes.

To begin with, keeping your knee straight is more difficult and later in rehabilitation; achieving full flexion is the focus. When you are lying in bed, placing a pillow under your foot, with your knee unsupported, is helpful to maintaining extension. A knee immobilizer will be used for the first few weeks when ambulating, until satisfactory muscle control is achieved.

A total knee replacement can be an excellent and long-lasting solution for arthritis of the knee joint. There are, however, some restrictions following total knee replacement that must be adhered to on a permanent basis in order to preserve the longevity of the hip replacement and avoid loosening of the implants. Impact activities, such as jogging, running, racquetball or skiing may be dangerous activities to resume. Swimming, cycling, walking as well as golf, are activities that are safe and well tolerated.