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## TOTAL KNEE REPLACEMENT: RAPID RECOVERY TIME LINE AFTER MINIMALLY INVASIVE SURGERY

**Introduction:** The advances of minimally invasive surgical techniques along with those in pain management techniques have provided a recovery time line after total knee replacement surgery that is dramatically improved over the past experience.

**Surgical Technique:** With minimally invasive surgery there is less dissection and cutting of the muscles and ligaments of the knee. What the patient observes is that the skin incision is shorter, the quadriceps muscle function returns more quickly, range of motion is regained more rapidly, that the hospital stay is shorter, and that ambulatory aids (cane, walker or crutches) can be discarded sooner. The operation itself usually takes 90 minutes to complete.

**Pain Management:** With new pain management techniques the patient now is much more comfortable in the immediate postoperative period. These new techniques include nerve blocks that numb the leg for up to 24 hours or more. Both the femoral nerve (in the front of the hip) and the sciatic nerve (in the back of the hip) are blocked with a long acting local anesthetic. The patient typically is taken from pre op admission area to the holding room where the anesthesiologist will first sedate the patient to minimize any discomfort then block the femoral and sciatic nerves approximately 30 minutes prior to surgery.

Other important pain management techniques include the routine administration of both intravenous and oral pain suppressive agents, an icing device to minimize swelling, and "on call" narcotics that can be given either intramuscularly, intravenously or orally.

**In Hospital Physical Therapy:** Early efforts at mobilizing the patient are made on the day of surgery. Usually a Continuous Passive Motion machine (CPM machine) is applied to the operative leg to start early range of motion. Typically the patient is helped up to a chair that evening as well.

On the day after surgery, therapy starts in earnest. Full weight bearing is allowed from the start. Range of motion and strengthening exercises are started. Ambulation is encouraged. On the second day after surgery stair climbing is taught.

**Hospital Stay:** The hospital stay is generally two to three days (i.e. Monday surgery would equate to a Wednesday or Thursday discharge). Younger and physically fit patients may be discharged home on the second postop day. Older patients, those less fit, or those planning a discharge to a rehabilitation facility will typically stay three nights.

**Showering Postoperatively:** It is safe to get the wound wet on the 5<sup>th</sup> day postop if all drainage had ceased. If any drainage persists, the wound should be kept clean and dry with a sterile gauze dressing applied and changed as necessary till it completely stops.

**Physical Therapy after Hospital Discharge:** Three options are available for post hospital therapy.

1. Rehab facility transfer – Direct transfer from the hospital to a rehab facility is sometimes necessary. This option is most appropriate for older patients and for those who live alone. Insurance coverage for rehab stay varies and needs be investigated in advance. Duration of rehab stay can be as short a few days or as long as several weeks and depends on the speed of recovery and the amount of support each patient will have when returning home.
2. Home therapy – This is now the most commonly employed option. Most patients have insurance coverage for home therapy. The quality of home therapy is quite excellent. Duration varies, but is generally employed for two to three weeks.
3. Outpatient therapy - Outpatient therapy in a physical therapy department has the advantage of better equipment vs. what is available in home. More mobile patients often opt for outpatient care. Patients often migrate from home to outpatient therapy as they become more mobile.

**Time on Walker or Crutches:** Full weight bearing is generally allowed immediately after surgery. Most patients can wean off the walker or crutches as their muscle function, swelling and soreness allows. Many patients have moved to the use of a cane by 10 to 14 days postop.

**Time on a Cane:** Once off the walker or crutches, the use of a cane in the opposite hand is helpful (to prevent an excessive limp) for another week or two. Most physically fit patients are off all ambulatory aids including a cane by three weeks postop.

**Time Until Return to Driving:** Patients should not return to driving until cleared to do so postop. In part this is due to liability issues if an accident should occur. It is generally safe to return to driving 2 to 4 weeks after left knee surgery and 4 to 6 weeks after right knee surgery.

**Returning to Work:** Predicting a return to work date is difficult. Motivational issues play an important role. Great variability exists. In general, patients returning to a sedentary job tend to return to work six weeks postop and those with more physically demanding jobs tend to return at three to four months postop.

**Returning to Recreational Athletics:** Patients can begin to return to light recreational sports such as golf by four to six weeks postop. More strenuous sports such as tennis may require 12 to 16 weeks before a return is possible.