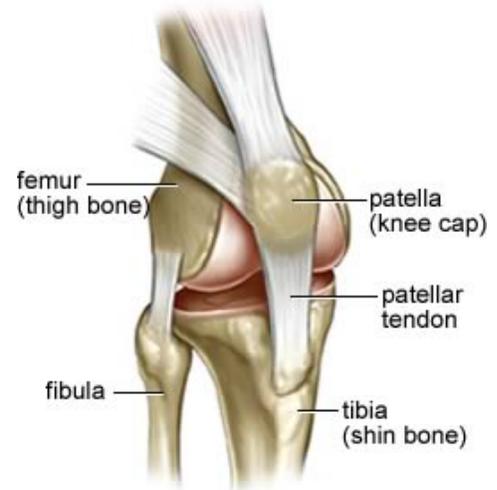


## Total Knee Replacement

### The Knee Joint

A total knee replacement, also called total knee arthroplasty, is a surgery performed to remove and replace your knee joint. The knee joint, comprised of the femur (thighbone) and the tibia (shinbone), may be damaged from medical conditions, injuries, or from repetitive motion. As a result, the knee is less able to cushion stress to the joint and pain with movement or swelling may occur. Because cartilage (a soft tissue that absorbs stress and allows the joint to glide smoothly) cannot fully repair itself, your orthopedic physician may recommend that knee replacement surgery be performed.



### The Procedure

Knee replacement surgery involves either replacing the entire joint (total knee arthroplasty), or repairing the damaged parts (partial knee arthroplasty). During the procedure, the damaged parts are removed and replaced with an implant(s) made of metal, ceramic, or plastic. The procedure is performed at a hospital in the operating room. Anesthesia will be administered so that either you sleep throughout the surgery (general anesthesia) or so that you are numb from the waist down (spinal block). An incision, or cut, will be made on the front side of the knee, and the damaged knee is replaced with prosthesis (artificial joint). The surfaces of the joint are cleaned and shaped to

accommodate the prosthesis. Next, the orthopedic surgeon takes great care to test the fit and alignment of the prosthesis during the procedure to ensure that the prosthesis is a good fit for the body. If the prosthesis fits correctly, the parts are secured to the thighbone, kneecap, and shinbone, and a new joint is formed.



## Preparing for Surgery

Before the surgical procedure, it is important to prepare your body as well as the home for the surgery and the post-operative period (time after surgery). The following is a list of things to do before your scheduled surgery.

1. Make an appointment to see your primary care practitioner (or see our Family Nurse Practitioner) for a pre-operative physical exam. This is done to ensure that you are in good health to have the surgery. An ECG (electrocardiogram) and laboratory work may be ordered. Any medical conditions that require better control prior to surgery will be discussed. Moreover, medications that need to be stopped prior to surgery will be discussed.
2. Make an appointment to see your dentist for an examination (if not done within 6 months). Germs in the mouth could enter the bloodstream and infect the new joint, delaying your recovery and healing. Therefore, any tooth or gum problems should be addressed prior to the procedure to decrease the risk of any complications. 
3. Consult your primary care doctor and stop any medications that could contribute to prolonged bleeding. Such medications include aspirin, ibuprofen, Aleve, warfarin (Coumadin), fish oil supplements, etc. Ideally, these medications should be discontinued 7 days prior to surgery.
4. Depending on when your surgery is scheduled, you may need to fast (nothing by mouth) prior to your surgery. It is recommended that you do not drink or eat anything at least 8 hours before surgery. This helps prevent any nausea or abdominal upset from the anesthesia and medications.
5. If you smoke cigarettes or tobacco products, you should stop. Nicotine can increase your chances of having surgical complications, and can delay healing. Many orthopedic surgeons require patients to stop using tobacco before surgery will even be considered. See your primary care provider for information on smoking cessation. 
6. If you are overweight, explore dietary changes and an exercise regimen that will assist you with weight loss and strengthening. Being overweight may cause you to have slower healing and recovery time. Exercises that are easy on the knee joint include low-impact exercises such as swimming and riding a stationary bike.
7. Arrange for someone to drive you home after surgery. Most patients are hospitalized for 2-3 days, and are unable to drive for about 2-3 weeks after surgery. If you are taking any narcotic pain medicine, you should not drive or operate any machinery as these medications may cloud your judgment.
8. Prepare your home for your recovery period. Start by reducing household hazards, such as throw rugs, electrical cords, and clutter that may cause you any injuries during your recovery. Also, if possible, move frequently used items to a main level in your home. This will help reduce the amount of reaching and stairs climbing you have to do. Also, having a friend or family member stay with you after surgery may be helpful with getting around the house, driving, and helping with your home exercises. Some patients require a limited stay at a rehabilitation facility during their recovery time.

## After Surgery

After your surgery is completed, you will be taken to the hospital recovery room. There the nurses will monitor your blood pressure, heart rhythm, breathing, and help manage any pain you are experiencing. A bandage or dressing will cover your knee to keep the incision clean. A TED stocking (white, elastic stocking) will also be on your leg to decrease the amount of swelling in the knee and leg. Stockings may also be placed on your legs that intermittently squeeze your legs to prevent blood clots from developing. Ice will also be applied to your knee to decrease the swelling and help manage pain.



After the anesthesia wears off and you are more awake and alert, you will be taken to your hospital room. There your leg may be placed in a CPM, or a continuous passive motion machine, to start mobilizing your new knee joint. The nursing staff and physical therapy team will work with you to start walking and moving after surgery. It is important for you not to get out of bed without assistance for the first time after



surgery to prevent a fall or injury. The physical therapist will work with you during your hospital stay (usually 2-3 days) to develop an activity plan that works well for you and gets you moving on your new joint. It is important to start moving after surgery to prevent limited flexion and extension of the joint.

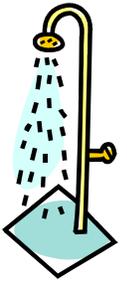
While in the hospital, and after you return home, you will be prescribed a medication called Coumadin, or warfarin. This medication is given to prevent blood clots from forming after surgery. A blood test (INR) will be taken periodically to monitor your blood and determine if it is too “thick” or “thin” and will guide your medication dosing. Your orthopedic surgeon will determine your Coumadin dosage based on these blood levels.

## Returning Home

After you are discharged from the hospital, you will need to continue with physical therapy, either self-directed or with a physical therapist, to promote flexibility and mobility in your new knee joint. The hospital will arrange for an appointment with your orthopedic surgeon approximately 10-14 days after surgery. At that time, your physician will evaluate your surgical incision, progress in physical therapy, knee flexion and extension, and your pain level.

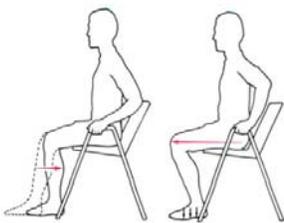
## Wound Care

Dressings are to be kept clean and dry, however, a small amount of drainage or bleeding may occur after surgery. If this happens, the dressing should be changed daily. You may shower 3 days after surgery, and can get the incision wet. Showers should be brief (five minutes or so), and the wound patted dry with a clean towel. Staples or stitches are usually removed 10-14 days after surgery. If purulent (thick, white, or greenish drainage) drainage is coming from the wound, or if the wound is much reddened at the edges, you should contact your orthopedic surgeon.



## Weight Bearing

Unless the physical therapist instructed you otherwise, you can put as much weight on your knee as feels comfortable. Depending on your age, strength, and coordination, most people use a walker, crutches, or can walk without support 2-3 weeks after surgery.

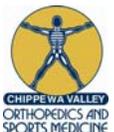


## Outpatient Physical Therapy

The most important goal of physical therapy is to achieve flexion and extension, or getting the knee all the way straight and bent far enough back. The next goal is to restore normal gait (walking pattern). A common error is to sit up too much, walk too much, and have the knee swell too much. This alters flexion and extension, which is the main goal of physical therapy. A good measure of progress is bending 90 degrees, a right angle, by 2 weeks.

## Swelling

Swelling to some degree is common after a joint replacement. To reduce swelling, elevation is very helpful. Lying down, with your “toes above your nose” at least 30 minutes of every two hours is a good initial recommendation. You may need more or less time elevating your leg. The white stockings are also designed to reduce swelling. Excessive swelling can be a sign of a blood clot, a possibly very serious complication. Patients frequently call to ask if their swelling is too much, and this is impossible to tell over the phone. If you feel you are excessively swollen, it is best investigated by exam in the office or ER, and may require an ultrasound.



## Cold therapy



Cold therapy can help reduce pain and swelling. It should be used intermittently for 6-8 weeks after surgery, as long as you are having some swelling in the area of the surgery. It is recommended 4-6 times a day for 20- 30 minutes at a time. It should not cause pain and there should be some padding between your surgical site and the cooling device. Cooling devices can be commercial devices that pump cold water about your joint or even something as simple as a Ziploc bag with some ice in it. In any case, it should feel better with the cold applied and reduce your discomfort in the first week or two after surgery.

## Driving

To drive you must no longer be taking pain pills (that is narcotics; Tylenol and anti-inflammatory medications are allowed). Also, you must feel strong and alert. For most people this is between two and four weeks after surgery.

## Preventing Blood Clots

- The first line of defense is moving your ankles up and down. This action circulates the blood from your legs back to your heart, preventing a clot.
- Coumadin is a blood thinner that almost all patients will take after surgery, for a total of three weeks. Patients respond very differently to the same dose of Coumadin, and so the effects of the drug need to be monitored with a blood test call the Protime. Initially your Protime will be checked at a laboratory near you on Monday and Thursday mornings, and the results called to your doctor's office. Call Tuesday or Friday for your new Coumadin dose. To speed up the process, have the date of your surgery and your current dose of Coumadin. This way the staff does not need to pull your chart before a dosing recommendation can be made.
- Compressive Stockings: These can prevent blood from pooling in your leg if you can use them correctly. You don't need to sleep with them on. You put them on first thing in the morning before your leg can swell. They are recommended for the first three weeks after surgery. If they just keep curling up and binding in, then they are not working and should be discontinued.

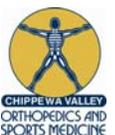
## Sleeping

Surgery can throw off your normal sleep wake cycle, leaving you staring at the wall at 3 AM. To reset your sleep wake cycle follow this program:

- No naps during the day
- Decrease your narcotic use
- Only one caffeinated beverage per day and it must be before 10AM
- No exercise or excitement after 6:00 pm
- Go to bed and get up at the same time every day no matter if you are sleepy or not
- Allow slightly less total time for sleep than you would normally.
- Develop a sleep routine, so that when certain activities are performed before bed (brushing your teeth, washing your face), your body knows it is time to sleep

## Dental Work (or other invasive procedures)

To the extent possible, it is best to avoid dental work or other invasive procedures for 3 months after a joint replacement. When undergoing an invasive procedure, we recommend antibiotics to prevent bacteria from getting in the blood stream and infecting the joint. This is a somewhat controversial recommendation and not all orthopedists agree. If you need a prescription before an invasive procedure, please call our office.



## **Narcotic Pain Medication**

You will likely need narcotic pain medication after you leave the hospital. These pills do nothing to your knee. They work in your brain so you don't care about the pain. They are addictive but needed to a certain extent. Try to wean down as tolerated. If you run out call the office during business hours and you can likely get a refill. In general, refills will not be made by the doctor on call after hours, so please plan ahead.

## **Phone Calls**

If you have questions or problems please call. Some questions can be answered over the phone, others cannot. You may need to be seen sooner than expected to check out your symptoms.

## **Worrisome Findings**

Occasionally patients experience troubles after surgery and need additional medical attention. Such conditions that require medical attention include the following:

- Fever of greater than 101 degrees F
- New or different colored drainage from your surgical incision
- Swelling, redness, and pain to touch in your leg
- Inability to stretch or bend your knee or participate in physical therapy as before
- Pain in your lower leg when you bend your foot upwards
- Chest pain or shortness of breath



*Seek medical attention immediately* if you develop sudden chest pain, shortness of breath, a rapid heartbeat, lightheadedness or dizziness, and if your leg appears warm, red, and is painful to the touch.

## **Questions or Concerns**

If you have any questions or concerns about your procedure or recovery, please feel free to contact us. Our goal is to provide excellent care, and get you back to your active lifestyle.

Eau Claire office: 715-832-1400

Chippewa Falls office: 715-723-8514