PANORAMA

Orthopedics & Spine Center

MANUAL FOR TOTAL KNEE ARTHROPLASTY

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INTRODUCTION AND PHILOSOPHY

You have been diagnosed with end stage arthritis or a failed previous joint replacement. While this problem has seriously affected the quality of your life, there is a cure. You have decided to proceed with a first time or revision knee replacement.

This manual is designed to prepare you for Total Knee Replacement Surgery and contains information on all aspects of your upcoming care, including preadmission, admission, surgery, rehabilitation, and follow-up care. If something is done to you that contradicts this manual, please question it. If something could be done better, please bring it to the attention of any member of the Total Joint Team. We ask that you read this manual in its entirety.

It is the philosophy of the Total Joint Team to focus on all aspects of care so as to increase your satisfaction; not only with the surgery itself, but also with the process you go through before and after surgery. The main indication for total joint replacement is pain. Pain relief is achievable in more than 95% of patients in nationwide groups of patients and in our own patients. We will try any other method before surgery, to relieve your pain if it is at all possible. However, if there is bone on bone contact or evidence of loosening of a previous implant, surgery is indicated. A successful replacement will provide a stable limb that, although not like a normal joint, will provide good to excellent function in more than 95% of patients. Other reasons for surgery exist and, if applicable, will be discussed with you.

Arthritis simply means loss of cartilage within a joint. Cartilage is the soft covering over the bone ends forming the joint. When this covering is lost, the joint becomes painful, stiff and function is lost. There are three types of arthritis that are treated with total joint replacement:

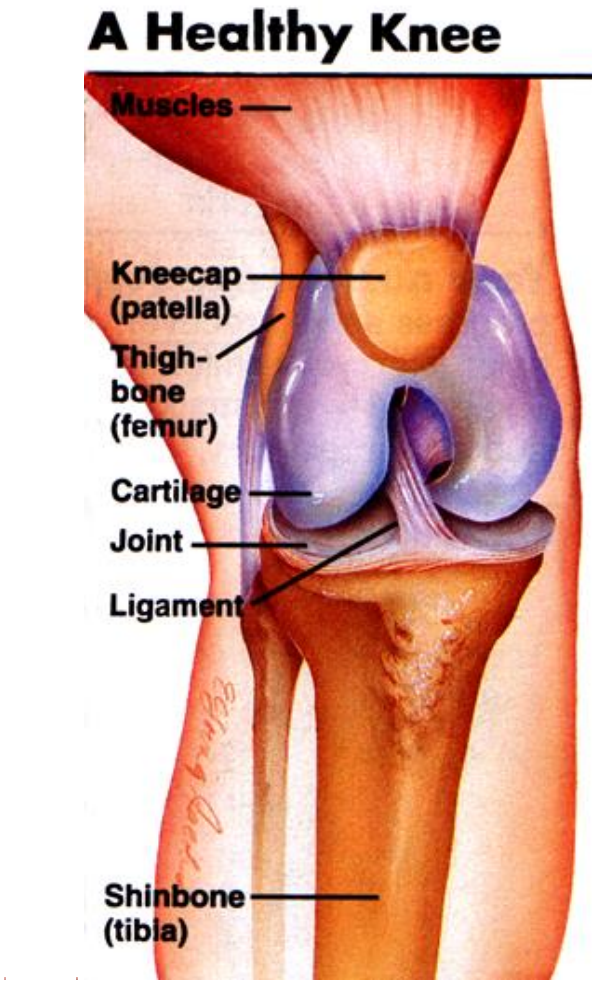
Osteoarthritis, or degenerative arthritis is the most common type of arthritis and is caused by a wearing away of cartilage. Osteoarthritis is seen to run in families. It is also seen in people that have abnormal joints either from development or previous surgery, and those that have overused joints throughout their lives.

Rheumatoid arthritis is also known as “crippling arthritis” and can also be hereditary. This disease process is thought to be a rejection of the body’s own tissues (autoimmune disease). Medication can control this disease but when the cartilage within the joint is destroyed, total joint replacement is the only option.

Post-traumatic arthritis is the third major type of arthritis often treated with total joint replacement. This problem is caused by an injury to the joint (such as with falls or car accidents), which destroys cartilage, bone or both.

Total joint replacement has been in widespread use since the early 1970s for total hip replacement and the late 1970s for total knee replacement. The technology has progressed rapidly and long term results of many groups of patients, including our own, show cemented total knees to last about 15 years in more than 80% of patients. Cemented replacements have been the standard. The surgeons at Panorama Orthopedics & Spine Center work closely with the manufacturers of total joint implants and will keep you aware of new technology as it pertains to your situation.

In a total joint replacement, bony surfaces of the joint are prepared to allow application of metal and plastic devices to substitute for the destroyed cartilage and/or bone. The ligaments and tendons are, for the most part, preserved so that function of the joint is not compromised. At times, ligament reconstruction is a necessary part of the total knee replacement.



TOTAL JOINT TEAM

This guide will serve as a valuable resource in helping you understand what is involved with this type of surgery, explaining your rehabilitation and answering any questions that you may have. Keep this manual with you as a source of important information and guidelines, both at home and at the hospital. If you need additional information not covered in this guide, the personnel at Panorama Orthopedics & Spine Center will be happy to provide it for you. We use a team approach to joint replacement and rehabilitation. As a result, you will meet a variety of healthcare providers as you progress from surgery to recovery. The following is a summary of the people you will meet over the course of your knee replacement process:

Joint Replacement Surgeons

- Perform surgery and direct your care
- Visit you on daily rounds in the hospital
- Evaluate you on follow-up appointments at the Panorama Orthopedics & Spine Center Office

Primary Care Physician or Internist

- Assesses your medical status preoperatively
- Identifies potential problems related to your general medical condition
- May visit you on daily rounds in the hospital
- Manages the medical aspect of your care while in the hospital

Anesthesiologist

- Will call or meet with you prior to surgery
- Will discuss with you and determine which type of anesthesia is most appropriate

Physician Assistants

- Visit you on daily rounds in the hospital.
- Help with discharge plan

Surgery Scheduling Coordinator

- Review insurance and obtain approval as necessary
- Remind you to schedule a pre-operative medical workup by the primary care doctor, or a designated medical doctor
- Schedule a pre-operative visit to the hospital and/or provide hospital information.
- Advise you to schedule pre-operative education at the hospital.
- Schedule surgery at appropriate facility

Medical Assistant

- Will answer questions regarding your surgery
- Will assist with prescription refills following surgery
- Answers questions related to your surgery

Disability Coordinator

- Processes FLMA, long term and short term disability paper work
- Written notifications for work restrictions or releases

Physical Therapist and Occupational Therapist

You will begin physical/occupational therapy in the hospital the day following your surgery. Depending on your progress, some patients may require additional inpatient therapy and will be discharged to a rehabilitation facility. Other patients may initially receive in-home therapy until they are ultimately ready to progress to outpatient physical therapy. The roles of these physical/occupational therapists are to:

- Instructs and assists you with your exercise and walking program
- Instructs you on safety precautions and "do's and don'ts"
- Evaluates your physical capabilities with adaptive equipment, instructs you in methods of handling day to day activities following joint replacement surgery
- Demonstrates temporary lifestyle changes that are needed
- Assesses your progress on a daily basis while in the hospital or rehabilitation facility and on a regular basis once you are home.
- Assists the physician in deciding whether you are safe to be discharged home or require further inpatient rehabilitation.

Your Responsibilities As A Member of the Total Joint Replacement Team

- Ask questions about anything you do not understand
- Let clinic and hospital staff know about any problems
- Do as much for yourself as permitted both before and after discharge from the hospital
- Participate in exercise program as outlined by your surgeon

PHONE NUMBERS AND ADDRESSES

Panorama Orthopedics & Spine Center
660 Golden Ridge Road, Suite 250
Golden, CO 80401-9522
303-233-1223: Office 800-258-5250: Toll free 303-233-8755: Fax

Panorama Orthopedics & Spine Center, North Office
8510 Bryant Street, Suite 120
Westminster, CO 80031
303-452-8001: Office 303-452-1167: Fax

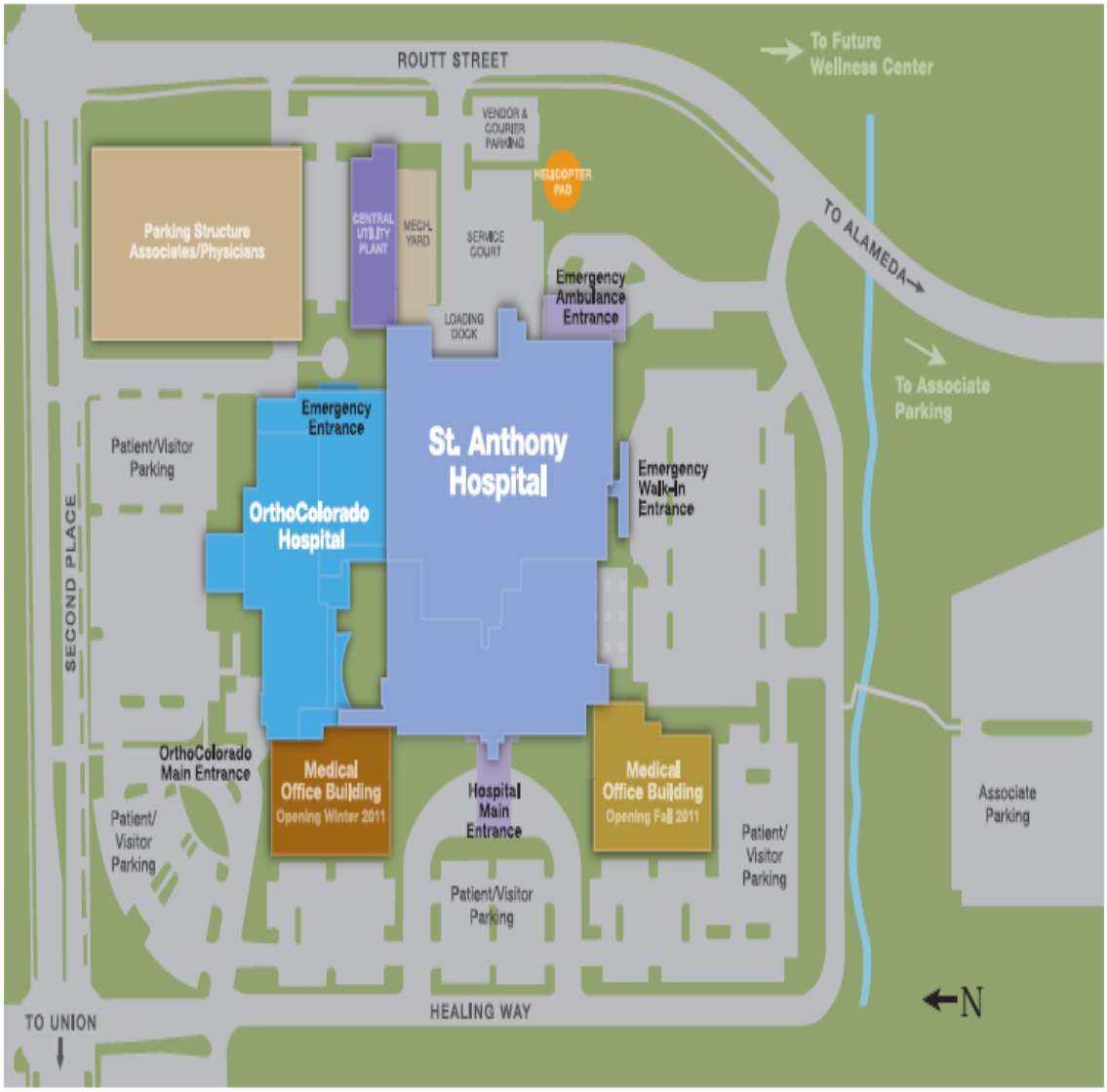
Panorama Orthopedics & Spine Center, South
7851 S. Elati St., Suite 103
Littleton, CO 80120
720-497-6170: Office 720-497-6171: Fax

Ortho Colorado Hospital
11650 West 2nd Place
Lakewood, Colorado 80228
720-321-5000 Main Number

Saint Anthony Hospital Central
11600 W. 2nd Place
Lakewood, CO 80228
720-321-0000

St. Anthony Medical Campus

OrthoColorado Hospital open June 2010 **St. Anthony Hospital** opening June 20, 2011



OrthoColorado Hospital
11650 W. 2nd Place
Lakewood, Colorado 80228

St. Anthony Hospital
11600 W. 2nd Place
Lakewood, Colorado 80228

St. Anthony Hospital
Centura Health.

DIRECTIONS TO THE HOSPITAL:

OrthoColorado Hospital
St. Anthony Medical Campus
11650 West 2nd Place
Lakewood, CO 80228

OrthoColorado Hospital is located in Lakewood just off Union at 2nd Place. From West 6th Avenue, take the Simms/Union Exit and go south on Union Boulevard. Turn left at the stoplight at 2nd Place and follow the signs to self park or valet parking.

TOTAL KNEE REPLACEMENT

The goals of total knee replacement (also called total knee arthroplasty) are to provide relief of pain and discomfort, improve function and enhance joint stability.

The knee joint is essentially a hinge joint. Many people with joint disease suffer pain in the knee and severely restricted range of motion. These problems force many people to walk with a limp.

Using a combination of metal and plastic, your surgeon will create a new joint which will glide smoothly.

During the past three decades, many advances in knee arthroplasty have been made and several types of prostheses are available for use. The metals used are either a chrome cobalt alloy or a titanium alloy. The plastic used is a high-density plastic polymer called polyethylene.

The type of prosthesis used for surgery is determined by the surgeon and is based on a number of factors, including bone quality, height, weight, and age. The surgeon will discuss the type of prosthesis with you prior to surgery.

Risks of Surgery

A total joint replacement is major surgery. Complications are rare but we feel you should be aware of these in order to make an informed decision about your surgery. Potential complications are outlined below.

Infection

Infection occurs in less than 1% of all total joint replacements but if it does, it can be devastating. This can take the form of a superficial wound infection requiring antibiotics and/or operative exploration and cleansing, or a deep infection down to the implant which might require implant removal, wheelchair use, prolonged intravenous antibiotics and a period of two months until another implant can be placed. On very rare occasions, the joint cannot be redone. You are given antibiotics before, during and after your surgery to minimize the risk of infection.

Your surgeon generally will not use external stitches or staples. He will seal the incision with glue, "Super-glue for surgeons". The glue will become dry and eventually will wear off. It is water-proof so you may shower approximately 3 days after surgery. **DO NOT** put any ointments, oils, lotions or cream on your incision for **AT LEAST** 4 weeks after surgery. Call the office if you experience any of the following:

- ***Bright red, "angry" appearance on skin or around surgical site.***
- ***Any type of drainage (bloody, green or yellowish fluid from the incision).***
- ***Increase swelling that is not responsive to rest, ice and elevation***
- **A GOOD RULE OF THUMB IS, WHEN IN DOUBT, CALL (303) 233-1223 AND ASK FOR TRIAGE!**

Infection is also possible, throughout your life, many years after total joint replacement. This is thought to occur by bacteria from a distant site traveling to the implant. Bladder or kidney infections are the most common source of delayed infections **but dental abscesses**, infected ingrown toe nails, other foot surgery or bacterial sinus infections can all pose a threat. If these infections occur, they should be treated immediately and our office notified. Also, simple teeth cleaning can cause bacteria from the mouth to get into the blood stream. This poses a threat to the implant and antibiotics should be taken for this minor procedure as well as all dental appointments. Please refrain from having **dental work done two weeks prior to surgery** and for **six weeks after surgery** and notify your dentist that you will be having a total joint replacement. Your surgeon or dentist should put you on preventive antibiotics for all dental appointments. This precaution should be observed for the rest of your life.

Please notify us if you experience any signs of infection in the operative joint even if it is many years following your surgery.

Blood Clots

Blood clots can form in the veins of your calf or thigh. Clots can break away and travel to and lodge in your lungs (pulmonary embolism). A pulmonary embolism can be life threatening. Care is taken to minimize the risk of blood clots with a blood-thinning agent, Xarelto. The thinness of the blood will be monitored. The main risk with Xarelto is excessive thinning of the blood, causing bleeding. Your surgeon will prescribe Xarelto 10mg once a day for 12 days. Early activity has been shown to be the best way to minimize the risk of blood clots.

- ***If you experience an increase in swelling in the leg, ankle or foot that does not respond to rest and elevation.***
- ***If there is tenderness, swelling or redness of the calf or inner thigh.***
- ***If you develop chest pain, shortness of breath or coughing up blood.***
- ***You should seek immediate medical treatment in the nearest emergency room. Many people develop blood clots without any sign of a problem.***
- **A GOOD RULE OF THUMB IS, WHEN IN DOUBT, CALL (303) 233-1223 AND ASK FOR TRIAGE OR, IF AFTER HOURS, GO TO THE NEAREST EMERGENCY ROOM.**

Pain

The total joint replacement is most often done for pain relief. However, we cannot guarantee that the procedure will relieve all of your pain.

Your surgeon will prescribe pain medication while you are in the hospital and will write prescriptions for pain medication when you are discharged. Always take your pain medications with food. Narcotic pain medication may cause constipation, nausea, dizziness, sweats, interruptive sleep patterns, and other side effects. If you noticed an adverse reaction to our pain medication, please notify our pharmacy tech at (720) 497-6662. Or, if after hours, call our main number to speak with our on call physician assistant.

It is very important to drink plenty of fluids following surgery and we also recommend taking a stool softener daily to help prevent constipation. Keep a laxative such as Milk of Magnesia (or your choice) available as needed. If you develop severe constipation or do not have a bowel movement for 72 hours following discharge, please notify your primary care physician.

Anesthesia Complications

There are risks associated with all anesthetic types. These risks will be discussed with you by your anesthesiologist, and will include heart attack and stroke. A spinal anesthetic will be used if at all possible. The spinal numbs your from the waist down, and you will not feel pain. Medicine is injected into a small catheter and the nerve roots are numbed. The spinal does require a needle stick, but this area is well numbed prior to the stick. You will be given sedation through your IV during surgery, unless you decline, so you are not aware of the actual surgery. There is less risk of stroke or heart attack during surgery when a spinal is used rather than general anesthetic. There is also less risk of blood clots and less surgical blood loss. Not all patients are candidates for spinal anesthetic. These reasons, if applicable, will be discussed with you by your anesthesiologist.

Bone Fracture

During surgery, your bone can crack with the insertion of the implant. This would be addressed at the time of surgery with screws or wires and should not affect your recovery.

Blood Loss

Since total joint replacement is a major operation, excessive blood loss can occur during and after surgery. Your surgeon will order a "Type & Cross match" lab test to ensure bank blood will be available should your condition require transfusion. Blood from the blood bank is screened well and we feel it is safe. All appropriate blood loss sparing techniques will be used during your surgery.

Blood Vessel Injury

There is a possibility of damage to a blood vessel during surgery. This disruption in circulation could result in poor or inadequate healing, damage to the tissue surrounding the hip, excessive bleeding during surgery or increased risk of blood clots. Your surgeon will take every precaution during surgery to maintain the integrity of the vascular system.

Nerve Damage

There are major nerves that cross all major joints. There is a small possibility that one of these nerves can be damaged during surgery or afterwards. If so, this would leave you with weakness or numbness of the lower leg and foot, possibly requiring a permanent brace. You will most likely experience numbness or "hypersensitivity" in the area around the incision. This will usually resolve itself in the first year after surgery; however, the scar itself will remain numb.

Natural Wear and Implant Failure

The implanted components of a total joint replacement are mechanical pieces and can wear out or break. Therefore, we recommended annual evaluation with X-rays following your joint replacement. We do **not** recommend high impact activities such as jogging for exercise and racquet sports following joint replacement.

Reaction to Materials

Total joint replacements are made of materials foreign to your body. These materials have been thoroughly tested but a small risk of allergic reaction exists. This risk is not high enough to warrant testing. If you are allergic to metals, let a member of the team know.

Also, there have been reported cases of cancer in association with total joints. This is not any more frequent than in the general population, and therefore, is thought not to be the cause of the tumor. Your surgeon may implant the following materials at his discretion: cobalt-chrome alloy, titanium metal/alloy, polyethylene plastic, stainless steel, hydroxyapatite (synthetic bone crystals), ceramics, bone cement, Zirconium and bone graft. Some of these materials may not have final approval by the Food and Drug Administration, but are under ongoing investigation.

PREPARATION FOR SURGERY

PRIOR TO ADMISSION

1. When you decide to have surgery, you will speak with one of our Surgery Schedulers. They will schedule your surgery date, time, preoperative testing and your time of arrival at the hospital. They will also schedule your first post-operative visit. This information will all be written out and mailed to you.

2. See your family doctor or internist for a history and physical examination. **If this is not done, your surgery will be cancelled.**

3. You should take any blood pressure and/or heart medication on the day of surgery at your usual time. You may take a small amount of water with this medication.

4. Practice the exercises listed in this book so you will be familiar with them immediately after surgery

5. Elevate the surgical leg as much as possible the first 2-3 weeks after surgery.

6. If you smoke, you should attempt to stop smoking. Your family doctor or internist can help you with this. If you cannot stop smoking permanently, if you can abstain for 24 hours before surgery, this is of benefit. It is essential not to smoke for at least 48 hours after surgery. All hospitals are non-smoking facilities.

7. Wear loose, casual clothing. Do not wear makeup or jewelry to surgery.

8. Get a good night's rest.

9. If you wear dentures, contact lenses or eyeglasses, you will be asked to remove them prior to your surgery.

10. Notify your surgeon if there is a change in your medical condition (cold, infection, fever, etc.) prior to your surgery. It may be necessary to reschedule your surgery.

11. Please bring your Insurance card and a photo ID with you to the hospital.

12. Do not schedule dental work 2 weeks before surgery and please wait 6 weeks after surgery before scheduling any dental appointments.

13. Notify your surgeon if you are having any minor medical procedures done within one month of your surgery.

If you are on an anticoagulant medication currently, we would recommend bridge therapy prior to, and after surgery if needed. This will likely be coordinated by your PCP and/or cardiologist. Typical protocol includes instructions to discontinue Aspirin and Coumadin 5 days prior to surgery, then begin Lovenox 40 mg one SUBQ every am; except morning of surgery. If Lovenox is taken the day of surgery, surgery will be rescheduled.

SURGICAL SITE INFECTIONS AND PRE-OPERATIVE SKIN PREPARATION:
WHAT YOU CAN DO:

Before surgery, your body needs to be thoroughly cleansed with a special soap. This is because all humans have bacteria and germs that live on their skin. These bacteria normally help us by digesting dead skin cells and other materials found on our bodies, clothing and furniture. When you have surgery, these bacteria can sometimes cause an infection. You will need to get a special soap to use for the 5 days leading up to surgery called Hibiclens (Chlorhexidine Gluconate solution 4.0%). This soap can be purchased over the counter from most pharmacies without a prescription. This must be used in placed of your normal soap for the 5 days leading up to surgery. **If you have questions after reading this information, please call 720-321-5030 to speak with a nurse.**

CAUTION: DO NOT USE HIBICLENS (CHLORHEXIDINE GLUCONATE 4.0%) ON YOUR HEAD OR FACE. AVOID CONTACT WITH YOUR EYES. (IF CONTACT OCCURS, FLUSH EYES THOROUGHLY WITH WATER). DO NOT USE IF YOU ARE ALLERGIC TO CHLORHEXIDINE GLUCONATE OR ANY INACTIVE INGREDIENTS IN THIS SOAP. AVOID USE IN THE GENITAL AREA AS IRRITATION MAY RESULT. USE YOUR REGULAR SOAP IN THAT AREA.

Special Instructions:

- **DO NOT SHAVE THE SURGICAL AREA FOR 5 DAYS BEFORE SURGERY!!**
- **Wash hair using normal shampoo and wash face with regular soap or cleanser.**
- **Use a fresh, clean washcloth and some Hibiclens soap and wash from your neck down. This is very important!**
- **Rinse your body thoroughly and use a fresh clean dry towel to dry your body.**
- **Do not use any lotions, powders or creams after shower.**
- **Repeat this for the 5 days leading up to surgery.**
- **On the day of surgery repeat above and avoid using any lotions, powders, creams, hair products, makeup or deodorant after that shower.**

MEDICATION CONSIDERATIONS PRIOR TO SURGERY

Do not take aspirin or arthritis medications one week before surgery. This includes Motrin, Naprosyn, Celebrex, or other arthritis type medication. Also, do not take Vitamin E, Glucosamine or MSM one week prior to surgery. The use of these medications interferes with blood clotting. Prednisone, however, should be continued. You may take Tylenol as needed for pain.

NUTRITION PRIOR TO SURGERY

Your diet can influence how well your body is able to heal after surgery. The following are some recommendations to prepare your body for your upcoming surgery:

- Eat more fruits and vegetables. They are rich in vitamins and minerals that help your body heal.
- Limit red meat and increase lean protein including chicken, turkey, and seafood. Reducing saturated fats will help decrease the incidence of constipation post-operatively.
- Maintain a high-fiber diet including whole grain breads, cereals, rice, fruits and vegetables to help avoid constipation.
- Drink plenty of fluids, especially water, before and after surgery to prevent dehydration and constipation.
- Limit foods rich in Omega-3 fatty acids including fish, walnuts, and pumpkin seeds, as these have a blood-thinning effect which may hinder the healing-process.
- You may wish to take Probiotics, which are healthy bacteria that help to strengthen the immune system. Probiotics may be found in yogurt or in acidophilus or lactobacillus supplements available at vitamin retailers and natural grocery stores. **Note: Do not take Probiotics if you are taking antibiotics.**
- Do not be concerned if your appetite lessens following surgery, as this is very common. Be sure to drink plenty of fluids and try eating 6-8 small well-balanced meals throughout the day as tolerated.

POST-OPERATIVE MOOD CHANGES

The immobility, pain, and isolation that may occur after knee replacement surgery can lead to feelings of sadness, anxiety, and loss of control. Anticipating some of the negative feelings you may experience following surgery is the best way to be prepared. Our most successful patients plan ahead for this period of immobility. They may do so by arranging visits from family and friends, collecting books and DVDs to be read and watched, and engaging in new and familiar activities that are manageable within the limitations of a recent knee replacement. Be sure to maintain good nutrition and to ask for help if you feel overwhelmed by feelings of anxiety or depression following surgery.

HOSPITAL STAY

SURGERY

You will be greeted by a nurse in the surgery department. She will ask you several questions and then take you to the operating room where you will move to the operating room table. This table works extremely well during surgery but is not very comfortable. You will notice a flurry of activity around you. The anesthesiologist will speak with you and will initiate the anesthesia being used. You will be placed on monitors and the nurses will prepare you for surgery. Once the anesthetic has been given, a catheter will be placed into your bladder to drain your urine during surgery. This catheter will stay in place until the day after surgery so we are able to manage fluid intake and output. Every attempt will be made to do this in a way that respects privacy.

You will be positioned on your back for the Total Knee Replacement. When the surgery is complete, you will be transported to the Recovery Room, also known as the Post Anesthesia Care Unit.

RECOVERY ROOM

Once in the Recovery Room, you will be closely monitored by highly trained intensive care nurses. Your surgeon will notify your family of your condition. Your pain should be under control; if it is not, bring this to the attention of your nurse. X-rays may be taken if necessary. Blood output through your drain will be followed closely. Most likely, you will be breathing additional oxygen through a nasal tube. You will be in the Recovery Room for approximately one hour. Many patients require a longer stay but this is not necessarily a reason for concern.

You will be transported to the Orthopedic Unit when you are medically stable.

THE HOSPITAL ORTHOPEDIC NURSING UNIT

A team approach to Total Joint patients has been established and is headed by your Surgeon. You will be cared for by experienced orthopedic nurses, their aides, and physician assistants. Your care will follow a protocol designed to maximize your recovery.

Your post-operative schedule:

- Day of surgery – Rest, pain management. Once medically stable, your nurse will assist you to sit up at the edge of the bed. Depending upon your surgeon's orders, you may even begin standing and walking using a walker and your nurses assistance.

- Post-operative Day # 1 – IV lines, oxygen, Foley catheter, and wound drain will be removed as ordered by the physician. Lab work will be drawn on a daily basis. You will be assisted out of bed and into a chair. The Physical and occupational Therapists will begin working with you and progress to walking in the hallway. You will be allowed to put your **FULL** weight on the operated leg. You will be started on oral pain medications if tolerated. Blood may be given to you if necessary.

- Post-operative Day # 2 – Therapies will be advanced in order to prepare you to go home. Dressings will be changed. Those patients scheduled for transfer to a rehabilitation/skilled nursing facility will also be discharged on this day if their medical condition is stable.

When you are discharged home, you should be:

- Ambulating with the correct use of a walker or crutches.
- Able to get in and out of bed with minimal or no assistance.
- Bathing and dressing with minimal or no assistance.
- Using safe techniques in daily activities around the home.
- Climbing and descending stairs safely and correctly as necessary.
- Independent in a home exercise program or home therapies.
- Able to identify your medications, name the side effects, and know when to take them.
- Able to take care of your incision as directed.
- Be able to use home equipment safely and effectively.
- Know your follow-up appointment with your nurse practitioner or surgeon.

Post-Operative Visits to the Office

We will ask you to return to the office at routine times after your discharge from the hospital. You will be seen in our office one to three weeks from the time of surgery for an incision check.

All patients are seen in the clinic six to eight weeks post–op for incision check, examination and x-rays. Most restrictions are lifted at this time. Remember, home exercises should be continued for at least three months post-operatively.

Further follow-up visits will occur at three months or as determined by your surgeon.

We also ask that you see your Primary Care Doctor within one month from the date you were discharged. This visit will ensure that you are as physically fit as possible and allow you to maximize your recovery.

Should you have the need for more frequent follow-up visits, you may be asked to return at shorter intervals. Should you desire to schedule a visit for any reason whatsoever, you are always welcome to do so.

REHABILITATION OR EXTENDED CARE/SKILLED NURSING

Transfer to an Inpatient Rehabilitation Unit or Extended Care/Skilled Nursing Facility (SNF) will be done only for those patients needing additional closely monitored therapy at the time of discharge from the hospital. Therapy is a continuation of what you have read in this manual and learned in the hospital. Criteria for transfer to Rehabilitation or Extended Care depend on these factors:

1. Help at home, bed and bath on same level and activity level before surgery.
2. Your progress in the hospital after your surgery.
3. Your overall health.

Transfer to Rehab is only for those patients who exhibit a need and we feel it is a very positive step in the recovery process.

The Rehab unit is a place where people go for additional therapies for one to three weeks. Patients with many conditions are on this type of unit. Because the rehabilitation following major surgery takes longer the older you get, most of the patients on the rehab unit are older.

The Rehab unit is not a hospital but a care facility where the focus is on independence. This means that although there are nurses 24 hours per day, the nurse to patient ratio is different than in the hospital. Be assured that the nurses are all well qualified and will attend to all medical matters.

Therapies are done on an individual and group basis. The average length of stay is one week. Rehab is covered by Medicare and most major insurance groups. Insurance coverage will be verified by the Hospital Discharge Planner. Your insurance company will determine which Rehabilitation Unit will be utilized.

You will be getting dressed daily, so please bring several changes of clothes that you normally wear at home. Some exercises are done in a therapy gym, so slacks or sweats are helpful. Meals are served in a central dining room. You will be encouraged to bathe, dress and perform daily hygiene activities independently with the assistance of your therapists.

You will be followed by a team of health care professionals at the rehab/skilled nursing:

- A medical physician is the leader of the team and will write all orders including, pain medication and discharge orders.
- Nurses
- Physical and Occupational Therapists
- Discharge Planner or Case Manager

Your surgeon and/or nurse practitioner will follow your progress during the postoperative clinical visits.

The goal of this team is to safely return you to your pre-surgery living situation. This implies a comfort level with activities of daily living. Your mobility skills are practiced and increased daily so that you will be able to take care of yourself.

Your discharge date is decided upon in conferences between nursing, therapists, social workers, you and your family. Any home therapists or equipment that might be required are arranged before discharge.

When discharged from the Rehab unit, you should be:

1. Independent in a home exercise program.
2. Independent in ambulation with the correct use of a walker, crutches or cane.
3. Able to get in and out of bed independently.
4. Independent in bathing and dressing, or with assistance from family.
5. Using safe techniques in daily activities around the home.
6. Climbing and descending stairs safely and correctly as necessary.
7. Getting in and out of a car correctly and safely.
8. Able to identify your medications, name the side effects and know when to take them.
9. Able to take care of your incision as directed.
10. Given necessary home equipment, and be able to use it effectively.
11. Know when to see your nurse practitioner or surgeon for your follow-up appointment.

PHYSICAL AND OCCUPATIONAL THERAPY KNEE REPLACEMENT

The following material on your Physical and Occupational Therapies has been proven to provide effective recovery for total joint patients.

All therapists you come in contact with should be familiar with the following protocol. You should also be familiar with the described therapies and refer to them frequently. If you feel an exercise or movement is being instructed incorrectly, please bring your concerns to the attention of the therapist, nursing staff or your surgeon. Nothing done to you should contradict this manual.

A Physical Therapist works mostly on exercises and walking.

An Occupational Therapist works mostly on activities of daily living assistance such as dressing and bathing.

Physical and Occupational Therapy

Physical and Occupational Therapies will begin the day following your total joint replacement surgery. Your therapists will teach you all necessary precautions to allow proper healing and functioning of your new joint. You will be taught exercises, transfer techniques (e.g. getting in and out of bed), walking with a walker or crutches, stair-climbing, and activities of daily living (e.g. dressing, bathing). This manual is provided to you so that you will know what to expect while in the hospital, and as a reminder for doing activities properly once you are home again. Your therapists will teach these activities as described in this manual.

Lying In Bed

Avoid putting a pillow or blanket under your knee. These can cause permanent limitation of your ability to straighten your leg. It is best to keep your knee straight with toes pointing upward while lying on your back.

Yes

No

Sitting

Avoid sitting on low chairs. Keep your operated leg elevated with the knee straight whenever possible.

Yes

Full Weight-Bearing
You will be allowed to bear as much weight as you can comfortably tolerate on the operated leg immediately following surgery (in a brace for the first day or until your block wears off).
You will need to use a walker, crutches or cane for balance for 4 weeks following surgery because of weakness in the operated leg.

Using a Walker
To stand up, slide to the edge of the chair keeping your operated knee straight and your foot on the floor. Stand up, pushing with your hands from the bed or chair and with the non-operated leg. Do not pull up on the walker, but stand first and then grasp the walker.

Correct

Wrong

Once you have your balance, place the walker forward first, take a short step with the operated leg, and then step slightly past the first foot with your strong leg, taking weight on your hands as needed.

Correct

Wrong

It is best to turn toward your non-operated leg whenever possible to minimize stress to the operated knee.

Using Crutches or a Cane

You may progress to using crutches while in the hospital or at Rehabilitation if you and your therapist feel you are ready. The therapist will instruct you on proper technique for using crutches.

You may progress to using a cane when your pain lessens and your strength has increased. The cane should be held in the hand next to your **non-operated leg**. The cane moves forward at the same time as the operated leg, then the non-operated leg steps forward. You should use the cane only to help with balance. You should not lean any weight on the cane.

Stair Climbing

With crutches, step up with the strong leg first, and then bring the crutches and the operated leg up together. Going down, place the crutches on the next step, step down with the operated leg, then bring the strong leg down last. You may use a rail in place of one crutch as instructed by your physical therapist.

Always Remember: Lead up with the good leg, lead down with the bad.

Toilet Transfer
If you have difficulty getting up and down from the toilet, your therapist may recommend a commode, toilet rails or a raised toilet seat to assist you. It is not recommended that you reach in front of you to hold on to a sink or other object to lower yourself down or to pull up because this may cause too much pressure on your operated knee and can be unsafe.

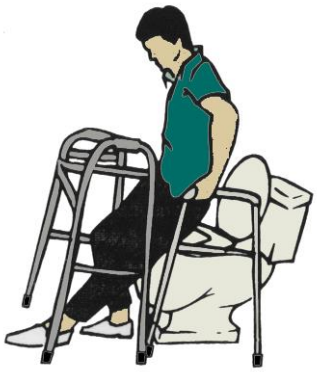
Using a commode or toilet rails:

1. Back up to the toilet until you feel the back of your legs touching it.

2. Slide your operated leg forward.

3. Then reach back with both hands to lower yourself down slowly. Be careful not to twist your operated leg as you go down.

4. Reverse the procedure to get up, being sure the operated leg is forward before you stand up and pushing off the arm rests.



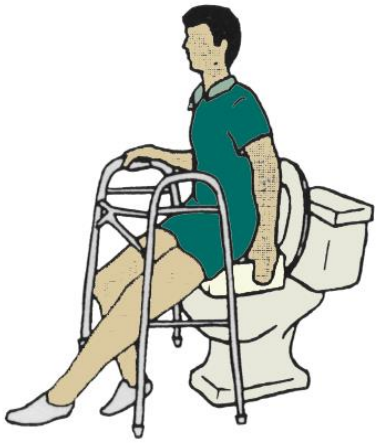
Using a raised toilet seat:

6. Back up to the toilet until you feel the back of your legs touching it.

7. Slide your operated leg forward.

8. With one hand on the walker, reach back with the other hand to the toilet seat to lower yourself slowly. Be careful not to twist your operated leg as you go down.

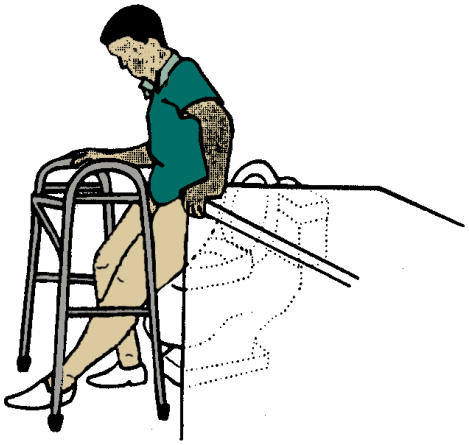
9. Reverse the procedure to get up; being sure the operated leg is forward and not twisting as you come to stand. Do not pull up with both hands on the walker.



Correct

Wrong

Using toilet only:
If your non-operated leg is strong, you may be able to push off the toilet seat or sink counter for support.



Correct

Bathing

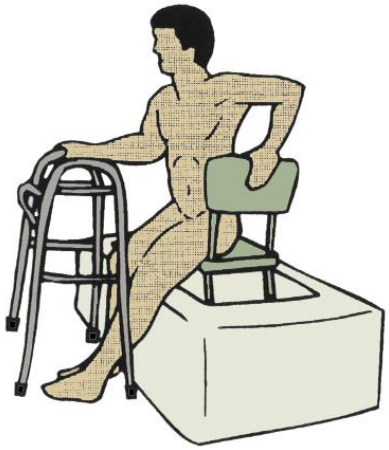
You may begin to shower when your physician gives permission. You will not have any stitches or staples in your incision. Your incision will be closed with Dermabond, "superglue" for surgeons. It is waterproof and provides a sterile seal over the incision. Please do not rub the incision with your washcloth or towel and do not put any lotion, cream or oil on the incision for at least 4 weeks after surgery.

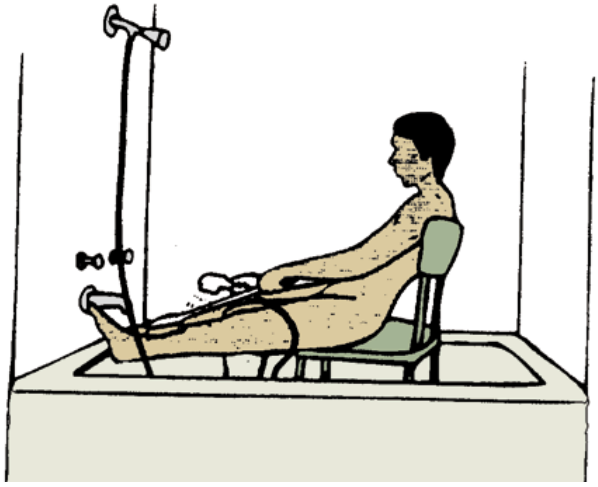
The following technique is recommended for **tub showers**.

- If a shower chair is recommended, back up to the seat at the side of the tub. Reach back with one hand on the back of the chair as you slide your operated leg forward. Avoid twisting your knee.

- Sit down and pivot your body into the tub. If necessary use your hands to lift your operated leg over the edge of the tub.

- Reverse the process to get out of the tub, making sure your operated knee is forward as you come to stand. Never try to stand up holding both hands on the walker. If you use crutches, your therapist may show you how to use your crutch in one hand to balance as you come to stand.

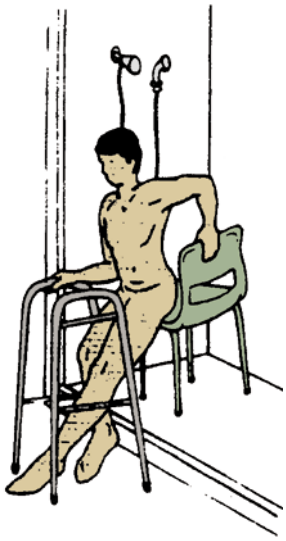




Shower Stall Transfers:

Your therapist will recommend the best technique for you.

- If a shower chair is recommended you may use the same technique as getting into a tub. Back up to the shower, reaching back with one hand to the back of the chair to sit down. Then pivot in.



- You may choose to stand in the shower. A long-handled sponge and a hand-held shower hose may be helpful.

- To step into the tub, you will need to be careful. A safety mat is recommended and you may use your walker or crutches to balance. You may also step in sideways, using your hands on the wall to balance.

Dressing

You will be encouraged to dress, using the range of motion you are gaining with Physical Therapy. However, at least initially, you may need to use adaptive equipment provided by your Occupational Therapist in order to reach your foot on your operated side. **Do not** stand to step in and out of pants or shoes.

If you need equipment to get dressed:

1. Using your reacher, grab the front waist band of your underwear or pants. Lower the pants with your reacher, slipping it over your operated leg first.

2. After both feet are in, slide the pants up, keeping your knees from twisting. Pull pants over feet and above your knees as high as possible.

3. Then stand up to pull your clothes up to your waist and fasten them. Be sure you are well balanced while standing.

4. When undressing, take the slacks and underwear off your waist while standing, and then sit down.

5. Remove pants from your non-operated leg first using the reacher.

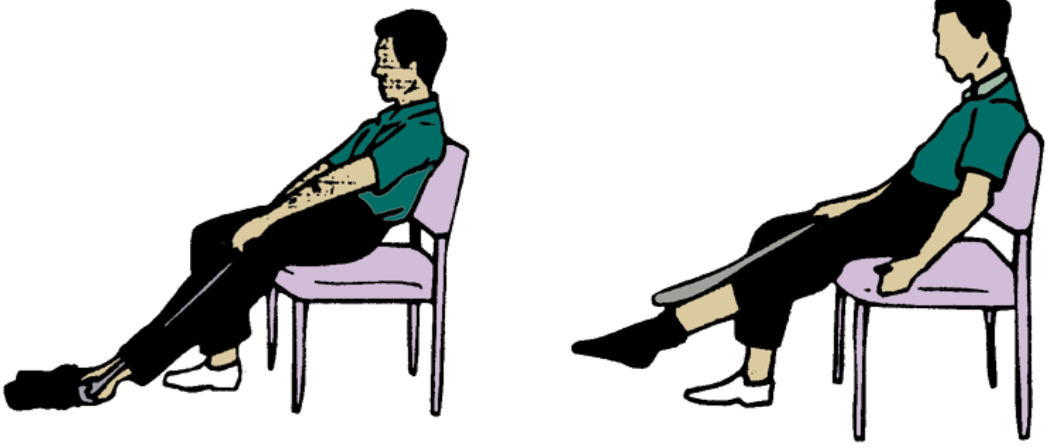
The following instructions are for socks and shoes:

1. Slide your sock over the sock aid as shown.

2. Grasp both straps and drop the sock aid in front of the operated foot. Slip your foot into the sock and pull until the sock is on. Once the sock is in place, drop the outside strap and pull the sock aid up toward you to remove it.

3. You may use the sock aid for the non-operated leg as well.

4. To remove socks, use the hook on your shoehorn to push the sock off over your heel. Avoid twisting knee when using the shoehorn.



5. Wear slip-on shoes or use elastic shoelaces.

6. Use your long-handled shoehorn to put on or take off your shoes.

You are encouraged to dress yourself rather than have someone help you. **Dressing is good daily exercise for your knee.**

Car Transfer
It is usually best to sit in the front passenger seat. Your physician will let you know when it is alright for you to return to driving.

1. Always begin by having the seat as far back as it will go to allow plenty of leg room.

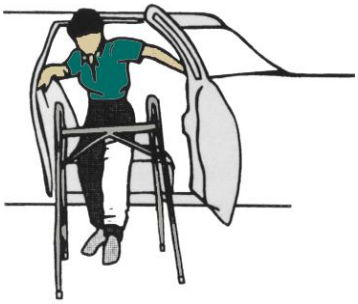
2. An extra cushion or pillow in the seat may make it easier to get in and out.

3. Back up to the seat.

4. Slide your operated leg forward as you reach back for the seat. Remember to keep your leg from twisting as you sit down.

5. Scoot back into the seat, pushing with your non-operated leg until you can clear your operated leg comfortably to pivot into the seat.

6. Reverse the process to get out, sliding your operated leg forward and scooting to the edge of the seat before standing. Use the back of the seat or the outside of the car to help you push up. You may also use one hand on your walker or crutches to assist you to come to stand.



Suggestions:

The following suggestions may help you at home or work to make it easier and safer.

1. Whenever possible, use a high stool when at a counter, but be careful not to twist your knee.

2. Minimize carrying objects which compromise the grip on your walker or crutches. Use big pockets; slide objects along counters (especially pots and pans); and store objects where you will use them.

3. Do not bend down to pick up objects from the floor. Use your reacher. Have someone bring objects up to a table or counter level for you so they will be easy to retrieve when needed.

4. Remove throw rugs to prevent tripping or slipping on them.

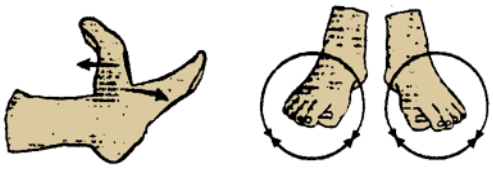
5. If you use a walker bag, be sure it is not too deep so it causes you to bend too far forward.

6. Have someone assist you to make clear open paths wherever you need to go. Rearranging furniture or temporarily storing unneeded items may make getting around much easier and safer.

Knee Replacement Exercises

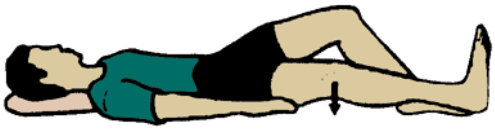
1. **Ankle Pumps**

   Actively pump your foot up and down. Next, move your ankle in circles. Do these frequently.



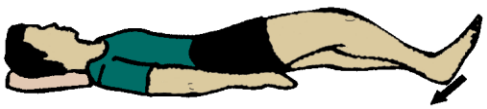
2. **Quad Sets**

   Tighten the muscle on the top of your thigh by pushing the back of your knee down into the bed. Hold for 5 seconds.



3. **Hamstring Sets**

   Bend your knee just slightly. Then dig your heel down into the bed, tightening the muscle on the back of your thigh. Hold for 5 seconds.

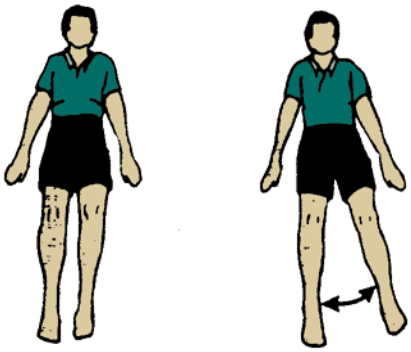


4. **Heel -Slides**

   Bend hip and knee by sliding heel toward buttocks. Lower slowly

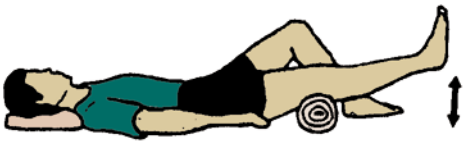
5. **Hip Abduction**

   Keep knee straight and toes pointing towards ceiling. Slide leg out to the side. Return to midline position.

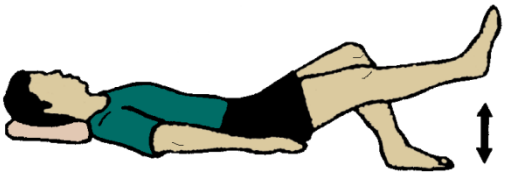


6. **Short Arc Quads**

   Place coffee can or towel roll under your knee. Raise heel off bed to straighten knee. Hold for 5 seconds.



6. Straight Leg Raises



Lie on your back with the opposite knee bent. Keep knee straight, raise leg off bed approximately 12 inches and hold for 5 seconds. Lower slowly. These may be difficult to do just after surgery: however, just trying this exercise will tighten muscles and be beneficial

7. Sitting Knee Flexion/Extension

Sit on a comfortable chair. Let gravity bend your knee as far as possible. Then actively straighten your knee as much as possible. Hold for 5 seconds, then lower foot slowly.

- Exercises 1-3 should be done every hour during the day, 5-10 repetitions each.
- Exercises 4-7 should be done twice a day, starting with 10 repetitions each. Gradually increase the number of repetitions as much as possible.
- Your therapist may modify this list when appropriate. It is recommended that daily exercises be done for at least 3 months. If any exercise causes lasting pain or swelling still present the next morning, contact our therapist or your surgeon.
- Home or outpatient therapies will be arranged as appropriate.

Conclusion

The entire Total Joint Team is committed to the successful outcome of your surgery. We feel that our system works very well. Your surgery and recovery should proceed without problem. We have prepared this manual and organized our team so that you, the patient, are an active participant. We ask that you maintain a positive mental outlook throughout the entire process, as studies have shown that optimistic patients have better outcomes.

Thank you for reviewing this manual. Please keep it available for your reference as you moving forward with the Total Knee Replacement process.

Notes