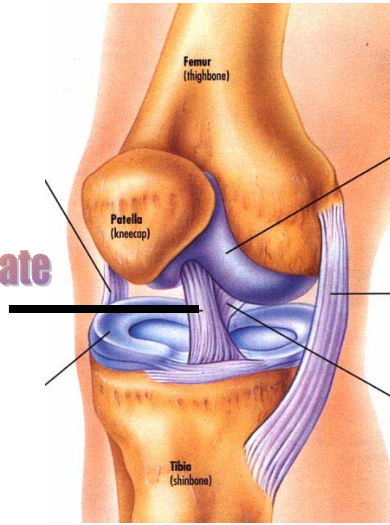


**Anterior Cruciate
Ligament**



ACL Reconstruction
Post-operative

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Indianapolis, Indiana

The Patient's Guidebook for Knee Surgery

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Section 1

What to Expect at Home

Physical Therapy Exercises

Although the surgery itself is an important step in restoring your knee function, physical therapy is equally important to ensure a good result from the surgery. **A poor understanding of how to perform the exercises correctly, or a lack of motivation and consistency on your part to perform the exercises, can seriously jeopardize the final outcome of your surgery.** Therefore it is important to read this material carefully and perform all the exercises prescribed every day unless Dr. Sallay or your physical therapist have advised you differently.

****Note- all exercises are done during waking hours only***

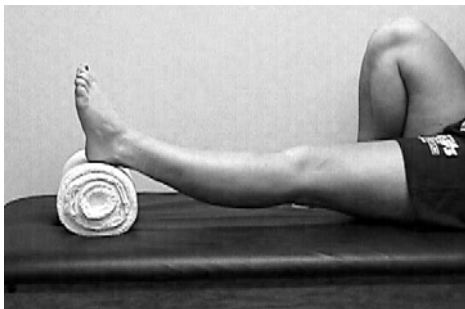


Figure 1: Heel prop exercise

Heel prop/Quad set - heel prop ten minutes six times a day while performing 10 quad sets holding contraction 5 sec. during the time period: This exercise is designed to maintain full hyperextension (straightening) of your knee while minimizing strength loss in the quadriceps musculature. Patients who lose the ability to fully straighten their knee after surgery often suffer from chronic pain in the front of their knee. Performing this exercise soon after your surgery allows you to easily maintain the ability to straighten your knee and contract your quadriceps muscle. Prop your leg off of the bed using a rolled blanket or towel while you



Figure 2: Quadriceps set: flex your thigh muscle as if you are pulling your knee cap toward

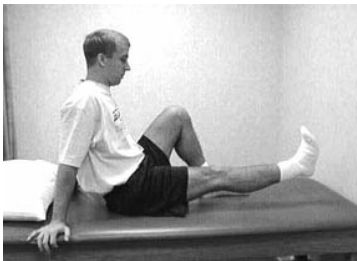


Figure 3: Straight leg raise



Figure 4: Towel Stretch



Figure 5: Active Heel

are lying down (figure 1). It is important that your knee doesn't touch the bed so that it can fully straighten. Also your knee cap should be pointing straight up, this ensures that your knee can achieve the most extended position. Keeping your knee straight, flex or "set" the quadriceps muscles (figure 2). You may find it difficult at first to get the muscle to work. With diligence and practice you'll get the hang of it.

Straight leg raise– ten repetitions every hour after heel prop (Do uninjured side first): This exercise also helps strengthen your leg. To perform this exercise straighten knee and concentrate on locking it in that position. Now pick your foot up about 12 inches off the bed and hold it there for a count of five seconds (figure 3). The first week after surgery you may find it difficult to keep your knee perfectly straight, this will improve with time.

Towel Stretch - ten repetitions, hold 5 seconds. Do every hour post heel prop. This exercise will help you regain the extension (straightening) in your knee. Hold the towel with one hand, hold your thigh down with the other. Pull in an upward direction until a stretch is felt in the back of your knee (figure 4).

Active Heel Height - ten repetitions, hold 5 sec. Do following post towel stretch. This exercise will help activate your quadriceps muscle in an extended position. Tighten your thigh muscle and try to pop your heel up off of the floor or table (figure 5).

CPM flexion exercise – perform six times a day:

Gradually increase the flexion angle of your knee to 110° by pushing the pause button on the CPM machine. Once you have attained 110° push the stop button and stretch for 10 minutes. Lay flat while performing this exercise.

Goals: By the time you return to Dr. Sallay’s office one week after surgery you should:

- have full straightening of your knee equal to your opposite side.
- complete active heel height
- be able to easily lift your leg with minimal bend in your knee
- be able to bend your knee to at least 110 degrees or more (heel equal to opposite knee)
- have minimal swelling in your knee

Sample Exercise Schedule

	8am	9am	10am	11am	12am	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10p m
Heel Props	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Quad Sets	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Leg Raises	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CPM flexion	✓			✓			✓			✓			✓		
Towel Stretch	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

CPM (continuous passive motion) machine

The CPM machine gently and slowly helps to bend your knee back and forth. **The CPM machine is not a substitute for your physical therapy exercises.** The

main purpose of the machine is to make your knee feel better by minimizing the stiff feeling your knee can get if you keep it in one position. You can use the machine between your exercises. Start the machine at -5° to 30° and increase the flexion setting each day as tolerated. Turn the CPM down to 30° at the lowest speed to sleep at night. You will only need the CPM machine for the first week; bring it back to the office at your first appointment after surgery.

Medications and Pain Management

You will be given a prescription for pain and anti-inflammatory medications. You should stop on your way home to fill your prescription so that you don't have to rush out to get them when you are already in pain. Please let us know if you have any allergies or side effects to any pain medications or anti-inflammatory medications (ie: ibuprofen, motrin, aspirin). Stay ahead of your pain. Take the medicine regularly for the first 48 hours after surgery, then slowly wean yourself off of the pain medicine and substitute with an over-the-counter medication. Make sure to take your medicines with food.

Narcotic pain relievers (ie: Vicodin, Lortab, Darvocet) alter your perception of pain. These medications can make you feel sleepy therefore you should not drink alcohol, drive, or operate machinery while taking them. Narcotic pain relievers can cause nausea, particularly if taken without food. Additionally some patients will notice constipation. To minimize this be sure to drink plenty of fluids, especially fruit juices. Anti-inflammatory medications will help with swelling, stiffness, and pain. These medications can cause stomach upset and rarely, ulcers. They too should be taken with food. If stomach irritation

occurs Pepcid AC can be taken in conjunction with the medication. If stomach irritation persists or if you notice blood in your stools, immediately discontinue the medication and call our office.

Cryotherapy

Cryotherapy (cold therapy) is just as important in your pain management as the medications. The cold helps to decrease inflammation and therefore swelling and pain in the knee. You should apply the CryoCuff (figure 5) to your knee at all times except when you are up walking, doing your exercises, or showering. You should keep the CryoCuff on even when you are in the CPM machine, however, you may need to loosen the bottom straps when you begin to get to the higher degrees of flexion. Apply the CryoCuff at night before you go to bed. You do **not** have to recharge it at night. Simply leave it in place and recharge it in the morning.

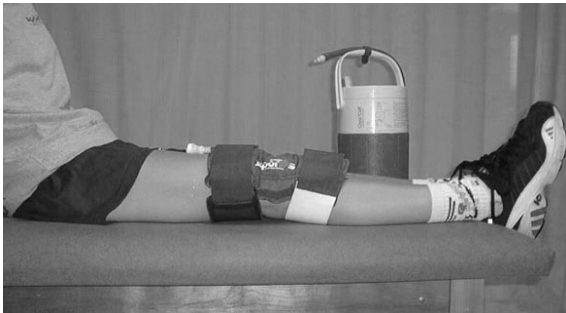


Figure 5. CryoCuff

Activity

One of the most important goals after your surgery is to limit swelling in your knee. Although the cryocuff helps to minimize swelling, your activity, being up on your feet, has the most impact on swelling. For the first week after surgery you should minimize the amount of time you are on your feet. **You should only get up to go to the bathroom or to shower.** At all other times you should be laying down with your leg propped up in the CPM

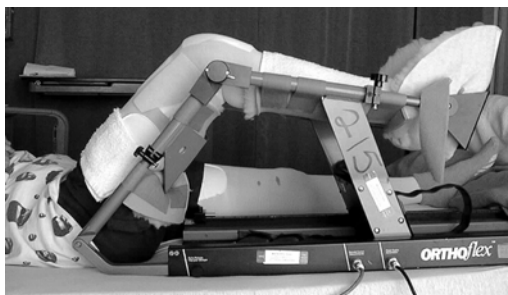


Figure 6. CPM Machine

machine or performing your exercises. Our experience has shown that those patients who are on their feet too much experience more swelling and then struggle more with rehab.

Crutches

You will be provided with crutches to use at home you should use the crutches the first week after surgery. You **may** put as much weight on the operated leg as is comfortable.

Wound Care

In surgery we apply a sterile dressing sealed with a plastic protective covering. You do **not** need to change the dressing. Leave the dressing on until you return for your first visit after surgery. You **may** shower with this type of dressing, however, you **may not** submerge your knee in a bath tub or a hot tub. If your dressing should accidentally come off or become soaked call our office.

Driving

You should **not** drive for at least one week after surgery. If you had surgery on your right knee it may take up to 2 weeks to drive comfortably.

Exercise

You may begin upper body exercises (free weights, weight machines) two weeks after surgery. You should not resume any lower body exercise (except physical therapy) until you have consulted with Dr. Sallay.

Sexual Activity

You may resume sexual activity as soon as you are comfortable. Avoid direct pressure on your wound (ie kneeling).

Common Problems

Pain

Some degree of pain is anticipated with any surgery. Once you have begun to experience the pain, treat it promptly and stay ahead of it by regularly taking your pain medicine. A common mistake is to wait too long between doses because the pain level seems reasonable. Then the medicine wears off abruptly and you are in significant discomfort. After you take your medicine it takes 20 to 30 minutes to take effect. The medicine works much better to prevent the pain rather than treating the pain once it has occurred. Take it regularly for the first 48-72 hours. Remember some pain is normal! However, your pain should diminish day to day. If you notice worsening pain after several days call the office.

Nausea

Nausea and vomiting can occur for several reasons. In the first 24 hours the anesthetic agents you received during surgery can make you nauseous. The anesthesiologist typically administers anti-nausea medications, however, patients can still become nauseated. If you experience nausea at home it may be related to one of your pain medicines. All of the narcotic medicines (ie– Lortab, Darvocet) can cause nausea particularly if you take them on an empty stomach. **Never take your pain medicine on an**

empty stomach. Once you become nauseated you may not be able to take your medicines and it may be necessary to take rectal suppository anti-nausea medicine.

Itching

Vicodin and Lortab can cause itching over the entire body. In most cases over-the-counter benadryl, 25mg tablets, every 4-6 hours will relieve the symptoms. If you still experience itching after 12-24 hours call the office.

Change in appetite/bowel habits

A temporary loss of appetite is observed in some patients. This is typically short lived and improves as you recover. Constipation is commonly associated with a decrease in your activity and your pain medications. The narcotics are especially constipating. You should drink more fluids than usual, especially fruit juices.

Stiffness

Most patients notice that their knee feels stiff after surgery, especially when they first get up in the morning. This is normal and should improve rapidly within the first several weeks after surgery.

Bruising/swelling

After two or three days you may notice significant bruising in your knee and many times into your calf and foot. This is normal. The blood from the time of

surgery slowly leaks out of the deep tissues and takes the path of least resistance under the skin. Because of gravity it ends up going down the leg. Swelling is also expected. Swelling in the knee, leg, and foot is typical. If your swelling becomes more severe decrease your time up walking and get in bed elevating your knee and foot above the level of your heart. The surgical stockings and the CryoCuff also help to minimize swelling.

Numbness and tingling

Many patients will experience numbness over the outer half of their knee next to the incision. This is normal. During surgery small sensory nerves in the skin are cut leaving a small patch of skin feeling numb. Numbness in the foot may be due to swelling or an over tightened CryoCuff. Try to control swelling (see above) and loosen the CryoCuff if you feel it may be too tight.

Section 3

When to Call the Doctor

If you experience any of the following problems, call our office:

Fever

A low grade fever below 100° F is common. A temperature above 101° F, especially if it persists after the first 48 hours after surgery should be

Pain

Pain is expected after surgery. Your pain can be aggravated if you fail to take your medicine as directed or if you are overactive with your knee after surgery. If your pain is steadily increasing over consecutive days despite all of the normal pain control measures (see ***section 1***) call our office.

Wound Problems

You should expect some minor bloody drainage to be visible on the dressing. The dressing acts as a wick, therefore, a small amount of blood can make moderate sized spot on the dressing. If your dressing becomes soaked with blood or if you notice any pus drainage call our office.

Section 4



Important Telephone Numbers and Office Hours

Methodist Sports Medicine Center office hours are from 8:00am to 5:00pm Monday through Friday and 8:00am to 10:00am Saturday. The clinic is closed for official holidays.

General clinic telephone number:

Indianapolis: 317-817-1200

Toll Free: 800-867-9250

FAX number: 317-817-1220

Answering Service: 924-8636 - After hours call the answering service and ask for Mike Hinkle or Dr. Sallay

Dr. Sallay's assistants:

Pam Sterrett (Secretary/Assistant): 317-817-1271

Mike Hinkle (Surgical Assistant) surgery, scheduling, post-operative questions, pre-certification: 317-817-1291

Patti Hunker (Clinical/Research Assistant): 317-817-1227

Physical Therapy: 317-817-1200 (North)

Clinic billing department: 317-817-1269

Methodist Hospital billing: 929-8661 or 800-552-6871

Return to Work/School and Sports

Follow-up visits

You will have an appointment to see Dr. Sallay 6-8 days after surgery. During this visit your dressing will be removed and your knee will be examined by Dr. Sallay. Following the exam you will see the therapist to review your exercise program and to add other exercises if appropriate. Most patients are taught a home exercise program which they can do on their own. You will then return for subsequent visits at 2 wks, 1 month, 2 months, 3-4 months, 6 months and 1 year after surgery. At each visit your knee will be re-examined and if necessary you will see the therapist to update your home exercise program.

You will periodically receive questionnaires in the mail for research purposes. ***Please make every effort to fill these out and return them to us promptly.*** This information will be used to improve our understanding and treatment of knee problems like yours. We appreciate your time and input in this most important process.

Work

You may return to work/school within one to two weeks if you have a sedentary job. If you have a job that requires manual work (factory, construction, etc) then you may return to light duty within 2

weeks. Return to full duty manual work will be based on your specific job and your progress in rehabilitation. The range is 2-4 months.

Sports

Your doctor and therapist will give you specific guidelines to return to sports. You can typically return to upper body weight training in 2 weeks. Lower body weight training will typically begin at 4-6 weeks. Return to all weight lifting and contact sports usually occurs approximately 3-4 months after surgery. Remember each patient moves through rehabilitation at his or her own pace. An individual may progress faster or slower than the average times listed above.