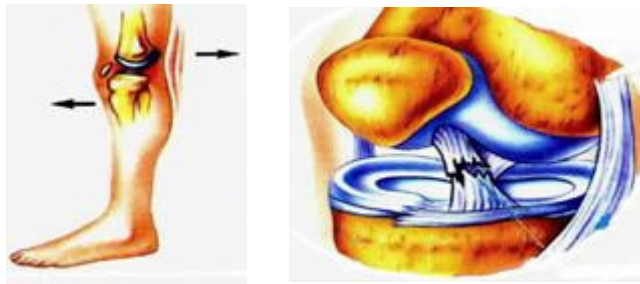


ACL Tears

Postoperative Instructions

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The Anterior Cruciate Ligament or ACL is a ligament that connects the femur (thighbone) to the tibia (shinbone). It is located in the center of the knee. The ACL provides stability and keeps the tibia from moving too far forward relative to the femur. Most ACL tears are the result of a twisting injury or a rapid forward translation of the tibia as shown below. After an ACL injury, the tibia shift forward with activity causes the knee to buckle more easily. This instability prevents most athletes from returning to sports, puts other structures in the knee at risk and, with higher levels of laxity, and even causes instability of activities of daily living. It is the instability and the risk of increased damage to the cartilage that prompts patients to seek repair of the knee.



Treatment: ACL Reconstruction



Surgery to reconstruct the ACL ligament can be done arthroscopically through small incisions and is done on an out-patient basis (avoiding a hospital stay and allowing the patient to recover in the comfort of their own home.) It requires placing a tendon graft obtained from your own patella tendon, hamstrings or

donor graft. There are advantages of each graft type and pending your particular situation your surgeon will pick the best graft for your knee. In the operating room, Dr. Reznik first examines the knee with the **KT1000 knee arthrometer**. This device measures the exact level of stability of both the normal and injured knees. The measurements help confirm the diagnosis and a sterile version used at the end of the procedure confirms the stability after the repair. Once the diagnosis is confirmed by the exam under anesthesia, the knee is then evaluated with the arthroscope. Dr. Reznik checks each compartment of the knee for other related problems like cartilage tears. These are repaired and then attention is turned back the ACL injury. The torn fragments are cleared from the knee. The ligament's natural position in the knee is identified and tunnels are then drilled into the tibia, and the femur. The graft is guided through the tunnels and anchored in place with dissolving pins and/or titanium screws. Once the graft is in place the small incisions are closed.

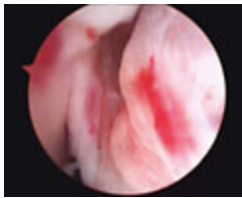


Figure 1 ACL tear

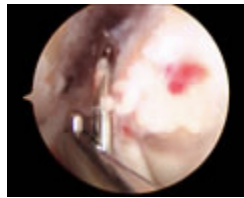


Figure 2 ACL guide

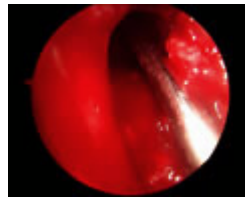


Figure 3 ACL Tunnel

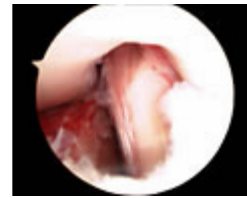


Figure 4 ACL graft in place

Post Surgery Instructions: When you wake up in the recovery room, your knee will be protected in a long leg knee immobilizer. Inside the immobilizer, the knee is wrapped with a cotton dressing and a special cooling pad. This is all wrapped in an Ace bandage. The cooling pad helps with swelling and relieves pain. The cooling pad connects to a cooler with ice water and a pump. It is yours to take home and simple to set up for use. The knee will have also been injected with a long and short acting local anesthetic for pain control so with the cooling pad, pain medications and the local anesthetic most patients are a little sore but not uncomfortable. Using the ice machine will help you remain comfortable and will also aid in reducing the swelling. You should follow this schedule:

Ice Machine Schedule:

Day 1 and 2: Use continuously (*including throughout the night*). Disconnect from the machine only to go to the bathroom.

Day 3 and 4: At least 2 hours on and 1/2 hour off. You may find that the combination of 3 hours on and 3 hours off also works well. Start physical therapy.

Day 5 and after: Use as needed for comfort and swelling.

****Change the ice and water when you are unable to maintain a temperature of 50-52 degrees**

Dressings: The first dressing change will be at your first therapy appointment, after that change you may shower. It is recommended to use an antibacterial soap. The small white “steri-strips” should not be removed. Keep them dry; they will be removed, as well as any stitches, at your first post-op visit with Dr. Reznik. Gently bend your knee a few times while in the shower. After your shower place a small bandage over the front kneecap incision and Band-Aids over the other two incisions. When replacing the ice machine pad do not place directly on skin as this can cause frostbite. Wrap in a cloth or place between Ace bandages.

ACL Recovery Plan

Diet: You may resume a regular diet when you return home. Start with tea or broth and advance slowly with crackers or toast, then a sandwich. If you become nauseated, return to clear liquids.

Lungs: After surgery you are encouraged to deep breath and cough frequently (at least 3-4 times per day). This will reduce mucous from building up in your lungs, and will reduce the risk of developing pneumonia.

Pain Control: Take pain medication as prescribed by Dr. Reznik. Please call our office with any questions regarding your medication. Ice as directed above. Elevate leg above heart level using 2-3 pillows. This will also decrease swelling.

Stop smoking: Smoking slows the healing process by interfering with the making of new DNA. Smoking also increases the risk of infection and pneumonia after surgery by slowing your body's white blood cells.

Deep Breathing: Be sure to regularly take a deep breath and blow it out. This helps to clear the lungs after anesthesia.

Immobilizer: You will wear this for 2 - 3 weeks (Remove only for showering and physical therapy) and then change into the custom knee ACL brace. This is to be worn even while sleeping.

Crutches: Use 2 crutches for 7-10 days putting light weight on the foot with each step. Increase the weight as tolerated. When you are able to bear weight comfortably, you may then advance to one crutch for the next few days and then to no crutch. Most patients can be full weight bearing after 2-3 weeks while wearing the ACL brace.

Call the Physician If:

***You develop excessive, prolonged nausea or vomiting**

***You develop a fever above 101.**

***You develop any type of rash.**

***You experience calf pain.**

Driving: Right knee patients and left knee patients with a standard transmission car cannot drive until off all pain meds and can fully weight bear without pain.

Return to Work: People with light work (desk work with no squatting, kneeling or lifting) can return to work within 2 weeks. The exception is for people who may have long commutes. By staying still with the leg down for long periods, **THEY ARE AT RISK FOR BLOOD CLOTS.** Patients with active office work or very light labor with variable tasks can sometimes go back by 6 weeks. Heavy work, lifting or unprotected

heights usually need at least 6 weeks and clearance from their physical therapist and will return with the ACL brace on.

Blood Clots: Those at higher risk of blood clots include those patients who have sedentary life styles, long car or train commutes, have a history of prior cancer, women on birth control pills, may be overweight or males over the age of 40. These patients should be taking an at least a baby aspirin per day (unless allergic or sensitive). Doing the exercises (ankle pumps below), using aspirin and at times compressive stockings will also reduce the risk of blood clots. Patients who have a history of clots in the past or three or more of the above risk factors should ask if they should be on a blood thinner post op for at least six weeks.

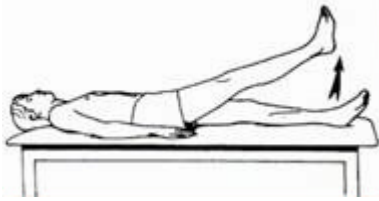
Post-Op Exercises

Vital to your recovery of good knee function is a graduated activity and exercise program to increase muscle strength and knee motion. Your physical therapy will begin 3-4 days after surgery. The physical therapist will guide you in your knee rehabilitation program. It is VERY important for you to start therapy when recommended. To avoid complications, post-operative follow up appointments with your physician are also required to monitor your progress.

You will begin simple exercises the day of surgery. They should be done every day for the first week post-op, to maintain blood flow in the surgical leg and help prevent blood clots. Formal physical therapy will begin between three to five days after surgery. The goal is for you to get to 90 degrees of flexion by the end of two week and 120 degrees by 6 weeks post op. Your therapist should not push you (and let me know if they do) to gain more than this since it may stretch the graft or prevent it from healing properly. More is not better at this time and may compromise your results.



- **Ankle Pumps:** Pump your ankle up and down (like pressing the gas pedal). Do this 10 times per hour while awake.



- **Straight Leg Raises:** Tighten your quads muscle (the front of your thigh), and raise your leg 8 to 12 inches off the bed. Do this 10 to 15 times, 4 or 5 times per day.

Your therapist will do your first dressing change.

Important Precautions with Ice Machine Use:

Follow schedule for use as directed in “post surgery instructions” above.

Always keep a thin gauze or cloth between the skin and the cooling pad. Do not allow the pad to contract the skin directly as this may cause frostbite.

After the first dressing change, inspect the skin regularly and notify our office staff if there are any sign of changes in skin appearance or increasing redness.

****Change the ice and water when you are unable to maintain a temperature of 50-52 degrees**

Additional Precautions for all patients:

Dental Work: ACL patients *CANNOT* have any routine DENTAL WORK for at least 3 months after their surgery (including cleaning), or they will risk infection of the graft. After 3 months, they may see the dentist but will need to take antibiotics before and after dental work. They should continue this for one year from the date of surgery. If an emergency dental procedure is needed, the dentist should be notified of the need to give protective “prophylactic” antibiotics before and after the procedure.

Airline Flights: All flying should wait at least 6 weeks after this procedure. Some short flights may be okay but then aspirin or other clotting protection is needed. If you do need to fly, you should get up and walk frequently to avoid blood clots. All patients planning to fly the first 6 months after surgery should be on aspirin (81mg per day) at least one week before and 6 weeks after a flight (unless allergic). Please check with Dr. Reznik or his nurse if you have any questions about flying or long trips.

Risk of Infection: Infection after surgery has been in the news recently. There is always a risk of infection. The risk of infection in regular open surgery is less than 1%. However,

the risk in arthroscopic surgery is less than 1 in 2000 (less than one twentieth of a percent). For this combined surgery the real risk is in between. In addition, Dr. Reznik routinely uses antibiotics during surgery and post-operatively to reduce this risk as well.

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