Background of ACL injury

The ACL is a ligament in the knee which provides rotational stability and protects the cartilage from injury. When it tears, the patient usually hears a "pop", has to stop playing, and develops significant swelling. X-rays are negative, but the physical exam is almost always diagnostic. An MRI is generally performed to confirm the diagnosis. Options for treatment consists of bracing or surgery. Surgery is usually recommended for young athletes who wish to return to unrestricted activities.
ACL surgery

The surgery is an outpatient procedure taking approximately 1-1.5 hours under general anesthesia and begins arthroscopically to remove or repair any meniscal or cartilage damage. 2 small incisions are made for this on both sides of the kneecap. Next, reconstruction of the torn ligament is performed using a tendon graft. A small incision will be made in the front of the knee for this. Graft options include your patellar tendon, hamstring tendon or cadaver graft. We generally prefer using patellar tendon graft because we use a unique accelerated rehabilitation program that requires solid graft fixation. The central portion of your patellar tendon is taken for this. This has the ability to regenerate itself and could potentially be used in the future should repeat tear occur. Small "fixation buttons" are utilized to secure the graft and allow immediate movement of the knee, avoiding many of the complications of ACL surgery. These buttons are located under the skin and rarely require removal. After the surgery is complete, a drain is placed in your knee and the skin is closed using absorbable sutures. A bulky dressing is applied. A compression stocking is placed on your operative leg to control both swelling and help to prevent the development of blood clots. You are then taken to the recovery room and then subsequently discharged to home.
Although everyone is different, you should expect to be able to safely return to sports and unrestricted activity at the three-month mark. It may still take another couple months until you are confident in your knee.

If at any point any problems, concerns about your surgery or questions exist, call our office at 716-839-5858. We are available at any time of day should you need us. Good luck

Complications of ACL surgery

After a comprehensive review of ACL surgeries the most common and significant complications are listed as below. Other potential complications exist.

**Infection:** 1.4%. Antibiotics are given to avoid wound infection. Should infection occur, this may require a repeat operation which involves irrigation and debridement, meaning washing out the knee and removing scar tissue along with a course of antibiotics

**Rupture:** 1.5%. The risk of tearing the opposite knee ACL is much greater in women after ACL reconstruction

**Problems with motion:** We began rehabilitation the day of surgery to avoid problems with motion but every patient develops scar tissue and will need to work diligently on maintaining their range of motion after the operation. Outpatient physical therapy will begin the following week after surgery.

**Blood clots:** This is a very rare complication but can be serious. Early motion and anti-inflammatory medication is used to limit this complication. Symptoms of significant calf swelling, back sided knee pain or calf pain needs to be reported immediately to our office 716-839-5858 and then proceed to an Emergency room and they will perform a Doppler to determine if a clot is present.
**Arthritis:** Any knee surgery can result in arthritis although the purpose of ACL reconstruction is to protect the cartilage and avoid this. Nevertheless, arthritis is possible with meniscal tears or if the cartilage covering the bone is injured.

**Numbness:** This occurs over the outer side of the leg as the incision for the procedure cuts skin nerves supplying sensation to the outer portion of the knee and leg. Over time, possibly up to 1 year or more, the area of numbness reduces in size although it is likely there will always be some diminished sensation in this area. Few people complain of this problem.

**Anterior knee pain:** This usually lasts until the leg returns to its normal strength although potential problems exist such as patellar tendinitis and problems with kneeling.

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**Postoperative rehabilitation**

You will be given crutches at the time of discharge or these will be obtained before your surgery. You will use these for the first 2 weeks. You may put full weight on your operative leg although it is important to have stability with crutches to avoid potential injury from falling. Plan to spend the first week primarily on the couch or in bed. It is extremely important to elevate your leg above your heart for 6-8 hours per day. A Cryo/Cuff (cold water machine) should be used during this time to help with the swelling and control pain. You should not plan to attend school or work during the first week or possibly several weeks depending on your situation as it is imperative to limit postoperative swelling during your accelerated rehabilitation. You will have a small drain in your knee which should slide out or be pulled out when changing the dressings the following morning. Dry dressings should be placed daily over your incision and held in place by the compression stocking called thromboembolic stocking (TED). You may shower 3 days after your operation, but should not take a bath until incision is completely healed.

**Postoperative medications include:***

Lortab 7.5/500 mg every 4-6 hours as needed

Aleve (over-the-counter) 2 tablets every 12 hours with food for the first week. This helps to control pain and swelling and **should** be used unless a health issue exists preventing its use.
Postoperative exercise include:

Once you return home, **stage I** of a rehabilitation begins. You are expected to obtain full extension and at least 90 degrees (L shape bend) flexion during the first week at home.

The first set of exercises are designed to obtain full knee extension and **begins the day of surgery**

1. Have your knee fully extended with 1-2 pillows under your foot for 10 minutes every hour while awake
2. Isometric quad contractions during this time. This means trying to squeeze your thigh muscle
3. 10 straight leg raises with both the good leg and operative leg. This is done while your operative leg is on the pillow

The second set of exercises are designed to obtain knee flexion and maintaining quadriceps strength and **begins the next day after surgery**

1. Sitting on a chair or edge of bed and allowing the knee to flex to 90° 3 times per day
2. Short arc quad sets during each flexion as shown to you by Dr. Stube

**Final instructions** You should call our physical therapy department 716-833-8891 in Amherst or 716-508-8252 in Orchard Park to begin **stage II** of your therapy. You should begin outpatient physical therapy in our office one week from surgery. This is designed to further improve your motion and aggressive strengthening.