

## About ACL Staged Revision Reconstruction

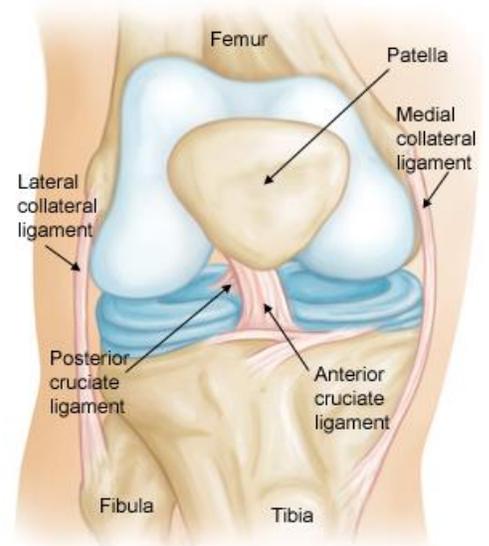
### What needs to be done if a previous ACL graft becomes torn?

Anterior Cruciate Ligament (ACL) tears do well after surgical reconstruction in 90% of cases. In about 10% of patients, the new ACL graft can become torn just like the natural ACL did. If this happens, a revision, or second time, reconstructive surgery needs to be performed.

In some cases the previous tunnels in the bone can be used for a new graft. If the tunnels have widened or their position or the location needs to be changed, the new reconstruction needs to be performed in stages with two separate surgeries.

The first surgery is to remove the previous screws and scar tissue, and fill in the tunnels in the bone with bone graft from the tissue bank (from a donor). After the bone graft has healed, usually in 4 months, the second surgery is performed to place a new graft and new hardware.

This healing process does take some time, at least a year, but can lead to good results to restore stability to the knee.



### Preparing for surgery

We'll have you stop certain medications before surgery, such as aspirin or anti-inflammatory medications (Ibuprofen, Naprosyn, Advil, Motrin, Celebrex, etc.) one week before surgery since they can cause bleeding. Depending on your age and medical history, we may have you see your regular physician and undergo some blood tests and an EKG before surgery.

### What you can expect on the day of surgery

The surgery is performed in an outpatient setting, which means you can go home the same day. We'll have you arrive at the outpatient surgery center about one hour and a half before your surgery. The nurses will register you, shave and prep the surgery area, and place an IV and start the preventative antibiotics.

Arthroscopic Revision ACL reconstructions are done under general anesthesia, which means you will be completely asleep and then wake up comfortably after the procedure is completed. The anesthesia doctor will also talk to you before surgery to review your medical history and answer any questions. Most patients also have an additional nerve block, to help keep the knee numb and comfortable for about 12-18 hours after surgery.

After surgery is over, you'll remain at the surgery center for about an hour to wake up from anesthesia. A friend or family member will have to drive you home to be safe, and someone should plan to be with you for at least the first 24 hours.

### When you get home from surgery

We'll give you a sheet of specific postoperative instructions about what to do right after surgery, with information about pain medications and such. You will come back to our office the day after surgery, and we'll quickly remove a small drain from the knee, that keeps the knee from becoming too swollen right after surgery. You will be in a knee brace to keep the knee straight. You'll be using to crutches in order to not put weight on the leg to allow the bone grafts to heal.

We like patients to relax at home for at least several days, using crutches for support. You'll be able to get up a bit and go to the kitchen or bathroom, but it's wise to rest and elevate the knee to decrease your swelling and pain.

### **Recovery and Physical Therapy**

You will come back to see us in the office one week after surgery. At that visit we'll make sure your incisions are healing well and remove your stitches. Your next visit will be 4 weeks after surgery. We'll take x-rays to check the healing of the bone grafts, and we'll unlock the brace and allow weight bearing without the crutches. We'll usually have you come back and see us once a month for about two to three more months to make sure you're healing well.

Starting after the first month, you will start supervised physical therapy, two times a week for about an hour. The PT will continue for 8-12 weeks after surgery. After making good progress in PT, you'll be able to do the exercises on your own.

After the 4 month mark when the bone graft is usually healed, you'll undergo the second stage of the revision, which is to place a new graft and new screws. The treatment after that is just like starting from scratch after a primary ACL reconstruction. This takes 6-12 to completely heal before you return to sports.

### **Getting back to work and sports after ACL reconstruction**

In order to be able to return to sports and fitness, you'll need to take an active role in your rehabilitation to have good strength, endurance, flexibility and balance. The new ACL graft takes six months to a year to heal, so that is the earliest we allow patients to return to sports after the stage 2 of the revision. This may take longer in certain patients, depending on other factors such as other injuries (meniscus, cartilage, patella) or some early knee degeneration. After the second surgery, we do recommend you be fitted for an ACL functional brace, to wear for sports for the 1<sup>st</sup> year you are back to playing.

Getting back to work depends on the demands of your job. Sitting up for desk work can usually be started around a few days after surgery, especially if you can elevate the knee and use an ice pack at your desk. When you are in the knee brace for the first four weeks after surgery, it will be difficult to drive or commute safely and you may need to get a ride to work or school. Before you can return to heavy work or standing all day long, it may be four to six weeks. Similar to sports, you cannot return to high-demand physical work, especially on irregular ground, climbing, etc., until the six month mark.

In order to start driving, you'll need to be off of the narcotic pain medications, and you have to be able to control a car safely. For travel after surgery, it's good to wait at least four weeks after surgery before a long plane flight or car trip, in order to decrease the chance of blood clots after sitting in one place for a prolonged time.

### **Long-term prognosis after ACL reconstruction**

Modern ACL reconstruction techniques have about a 90% success rate, with about one in ten patients tearing the new ACL graft like they injured their natural one. Results after revision reconstruction are around 80% of return to high level sports; they are not the same as primary reconstruction. Even after surgery restores the stability of the knee, not all patients return to high level cutting and pivoting sports. In all research on ACL injuries, there is a higher incidence of knee degeneration and arthritis because of the damage the ACL injuries causes the knee, especially if meniscus cartilages are damaged.

### **Possible risks and complications**

All surgery has risks of bleeding, infection, damage to nerves and arteries, stiffness, blood clots, further degeneration, and persistent knee pain. These complications are uncommon after ACL reconstruction, usually less than 5 percent of all patients. Most patients have some numbness around the tibial incision due to one of the small nerves in that area, that usually improves over time. There is a risk of disease transmission with the use of donated tissue, such as HIV/AIDS and hepatitis, but the risk is small.

A significant concern after ACL surgery is to regain full flexibility, and about 1-2% of patients have difficulty tolerating the physical therapy and require a second operation to break up the scar tissue.

The risk of severe complications from general anesthesia, such as death, heart attack or stroke, are very low, especially for patients with good general health.

### **Questions?**

If you have any questions, be sure to call us at 925-600-7020.