Anterior Cruciate Ligament (ACL) Surgery

Definition

Anterior cruciate ligament (ACL) repair is done to reconstruct the ACL in the knee after it is torn. Often, a graft made of tendon is used to reconstruct the torn ligament.

Anterior Cruciate Ligament Injury

Reasons for Procedure

ACL surgery is an elective procedure. This means that surgery is not always necessary; it may depend on your lifestyle and age.

Surgery may be recommended if you have:

- A complete tear of the ACL
- A high degree of joint instability
- Injury to the knee that affects more than 1 ligament
- A need to return to sports or other activities that require pivoting, turning, or sharp movements
- No improvement with rehabilitative therapy
**Possible Complications**

Problems from the procedure are rare, but all procedures have some risk. Your doctor will review potential problems, like:

- Infection
- Excess bleeding
- Blood clots
- Reaction to anesthesia
- The operation does not provide the desired improvement in function
- Instability of the knee
- Numbness or stiffness in the knee
- Kneecap pain after surgery

Before your procedure, talk to your doctor about ways to manage factors that may increase your risk of complications such as:

- Smoking
- Drinking
- Chronic disease such as diabetes or obesity

**What to Expect**

**Prior to Procedure**

Your doctor may do the following:

- Physical exam
- Blood tests
- Knee x-ray
- MRI scan to see the internal structure of the knee

Before surgery, you will need to:

- Arrange for help at home while you recover
- Talk to your doctor about any medications, herbs, or supplements you are taking
- Talk to your doctor about any allergies you have
- Ask your doctor about assisted devices you will need

You may need to stop taking some medications up to 1 week before the surgery. Talk to your doctor about any medications that may need to be stopped.

Do not eat or drink anything after midnight the day before your surgery, unless told otherwise by your doctor.

**Anesthesia**

Anesthesia will block pain and keep you comfortable during the procedure. Anesthesia methods include:
- **General anesthesia** is given through an IV. You will be asleep during the procedure.
- **Spinal anesthesia** is given through the spine. The doctor may give you a sedative to keep you relaxed and ease anxiety.

**Description of the Procedure**

IVs will be placed in your arm or hands for medications and fluids. The range of motion of your knee will be examined to confirm the ACL tear. Next, another tendon in your knee or hamstring will be located (called autograft) to reconstruct the torn ligament. Sometimes a donor graft (called allograft) is used. The graft tendon will be formed to the correct size.

1 or 2 small keyhole incisions will be made on the top of the knee. An arthroscope (or endoscope) and tiny tools will be inserted into the knee joint. The torn ACL is removed and other damage to the knee is trimmed or repaired. In order to reconstruct the tendon, holes will be drilled through bone structures in the thigh and shin. The new graft will be placed through these holes. Needles may be threaded through the holes to suture the new tendon into place. Other devices, such as screws, washers, or staples are also used to hold the graft in place.

Once the graft is securely in place, the knee’s range of motion will be tested. Other tests will be done as well. The skin will be closed with stitches. Bandages and/or a brace will be placed on the knee.

**How Long Will It Take?**

About 2 hours.

**How Much Will It Hurt?**

Anesthesia will block pain during the procedure. You will have pain after the procedure. Ask your doctor about medication to help manage pain.

**Average Hospital Stay**

This procedure is done in a hospital setting. You can usually go home the same day. If you have complications, you may need to stay longer.

**Post-procedure Care**

**At the Hospital**

After the procedure, the hospital staff may provide the following care:

- Monitor your vital signs as you recover from the anesthesia.
- Medication to manage pain.
- Antibiotics to prevent infection.
- Medication that prevents blood clots.
- Place ice packs on your knee.
- Show you how to use a continuous passive motion machine.
- Teach you how to use crutches or knee brace.
During your stay, the hospital staff will take steps to reduce your chance of infection such as:

- Washing their hands
- Wearing gloves or masks
- Keeping your incisions covered

There are also steps you can take to reduce your chances of infection such as:

- Washing your hands often and reminding visitors and healthcare providers to do the same
- Reminding your healthcare providers to wear gloves or masks
- Not allowing others to touch your incisions

**At Home**

When you return home, take these steps:

- Use crutches or knee brace for as long as the doctor recommends.
- Work with a physical therapist.
- Be sure to follow your doctor’s instructions.

**Call Your Doctor**

Contact your doctor if your recovery is not progressing as expected or you develop complications such as:

- Signs of infection, including fever and chills
- Redness, swelling, increasing pain, excessive bleeding, or any discharge from the incision site
- Swelling, pain, or heat in your calves
- Pain cannot be controlled with the medications you were given
- Nausea or vomiting
- Cough, shortness of breath, or chest pain
- Numbness in the knee area
- New or worsening symptoms

If you think you have an emergency, call for emergency medical services right away.

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