

## **What is Ankle Instability Surgery?**

Ankle instability surgery is performed to treat an unstable ankle and involves the repair or replacement of a torn or stretched ligament.

There are two types of ankle instability surgery:

- Anatomic repair: This surgery involves shortening and tightening the stretched ligament; and
- Non-anatomic repair: This surgery uses a tendon as a graft to replace the damaged ligament.

## **Disease Overview – Ankle Instability**

Ankle instability is a chronic condition characterized by a recurrent slipping of the outer side of the ankle. Instability is generally noticed during movement of the ankle joint but can also occur during standing as well.

Symptoms include the following:

- The ankle feels unstable
- The ankle turns repeatedly while walking on uneven surfaces or during a sporting activity.
- Pain, tenderness and swelling is present in the ankle joint.

Ankle Instability usually results from repeated ankle sprains. Inadequate healing of a sprained ligament or incomplete rehabilitation of the affected ligament can result in instability. Recurrent injury to the ligaments further weakens them and aggravates the instability which predisposes to the development of additional ankle problems.

## **Indications of Ankle Instability Surgery**

Surgery is recommended in patients with a high degree of ankle instability and in those who have failed to respond to non-surgical treatments.

- Anatomic repair is preferred in most cases of ankle instability.
- Non-anatomic repair is performed in obese patients requiring increased stability or when tightening of the stretched and scarred ligaments is not strong enough and needs to be reinforced with a tendon graft.

## **Ankle Instability Surgery Procedure**

Ankle instability surgery involves the repair or reconstruction of the injured ankle ligaments. Ankle-instability surgeries can be categorized into either anatomic repair or non-anatomic repair, also called reconstructive tenodesis.

## **Anatomic Repair**

Anatomic repair involves reconstruction of the stretched or torn ligaments. The surgery is performed under epidural anesthesia. Your surgeon makes an incision on the ankle to expose the damaged joint and ligaments. The joint capsule and ligaments are examined and the edges of the torn ligament are shortened and repaired with sutures. The ends may be overlapped and then sutured to strengthen the ligament. Your surgeon then covers the repaired ligament with the extensor retinaculum, a dense band of connective tissue, to reinforce the ligament further. Range of motion is evaluated; the incision is closed and a sterile bandage is applied.

## **Reconstructive Tenodesis**

**Reconstructive tenodesis** is a tendon transfer procedure that uses your own tendon or a cadaver tendon as a graft to replace the damaged tendon. The surgery is performed under epidural anesthesia. Your surgeon makes an incision on your ankle. Drill holes are created where the damaged ligament normally attaches to the lower end of the fibula (calf bone) on one side and the talus (anklebone) on the other end. Your surgeon then harvests the peroneus brevis muscle tendon, found on the outer edge of the small toe, and weaves it through the drill holes to form a ligament complex. Range of motion is evaluated; the incision is closed and a sterile bandage is applied.

## **Post-Operative Care following Ankle Instability Surgery**

After surgery, your foot will be immobilized with a cast or splint. You will be provided crutches to avoid bearing weight on the operated ankle. Your doctor will remove the splint and provide a removable boot to be worn for 2 to 4 weeks. Physical therapy will be initiated to strengthen your joint and improve range of motion. Complete recovery may take 10 to 12 weeks.

## **Advantages & Disadvantages of Ankle Instability Surgery**

The advantages of the anatomic repair include:

- Simple surgical procedure that makes use of your own anatomy to repair the damage
- Preserves complete joint mobility
- Rapid recovery
- Smaller incision
- Fewer complications

The disadvantage of the anatomic repair includes:

- Loosening of the ligaments, requiring additional repairs

The advantages of the nonanatomic repair include:

- Provides increased strength
- Can be used when host tissues are severely damaged
- Provides additional stability in obese patients

The disadvantages of the nonanatomic repair procedures include:

- Decreased rear foot motion

Does not preserve the peroneus brevis, an important structure for the ankle's dynamic stability

## **Risks and Complications of Ankle Instability Surgery**

As with all surgical procedures, ankle instability surgery may be associated with certain complications including:

- Injury to the superficial nerves
- Chronic pain
- Stiffness
- Need for second surgery (rare)