

# WHAT IS ANKLE ARTHROSCOPY?

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Ankle arthroscopy is a minimally invasive surgical procedure that orthopaedic surgeons use to treat problems in the ankle joint. Ankle arthroscopy uses a thin fiber-optic camera (arthroscope) that can magnify and transmit images of the ankle to a video screen. Ankle arthroscopies can reduce ankle pain and improve overall function.

Arthroscopy can be used to diagnose and treat different disorders of the ankle joint. The list of problems that can sometimes be treated with this technology is constantly evolving and includes:

**Ankle arthritis:** Ankle fusion is a treatment option for many patients with end-stage ankle arthritis. Ankle arthroscopy offers a minimally invasive way to perform ankle fusion. Results can be equal to or better than open techniques.

**Ankle fractures:** Ankle arthroscopy may be used along with open techniques of fracture repair. This can help to ensure normal alignment of bone and cartilage. It also may be used during ankle fracture repair to look for cartilage injuries inside the ankle.

**Ankle instability:** Ligaments of the ankle can become stretched out, which can lead to a feeling that the ankle "gives out." These ligaments can be tightened with surgery. Arthroscopic techniques may be an option for treating moderate instability.

**Anterior ankle impingement** (also referred to as athlete's ankle or footballer's ankle): Ankle impingement occurs when bone or soft tissue at the front of the ankle joint becomes inflamed. Symptoms include ankle pain and swelling. This can limit the ability to bend the ankle up. Walking uphill is often painful. Osteophytes (bone spurs) can be seen on X-ray. Arthroscopy can be used to shave away inflamed tissues and bone spurs.

**Arthrofibrosis:** Scar tissue can form within the ankle. This can lead to a painful and stiff joint, known as arthrofibrosis. Ankle arthroscopy can be used to identify the scar tissue and remove it.

**Infection:** Infection in the joint space cannot be treated with antibiotics alone. It often requires an urgent surgery to wash out the joint. This can be done with arthroscopy.



Arthroscopic view of the ankle showing anterolateral impingement

**Loose bodies:** Cartilage, bone, and scar tissue can become free floating in the joint and form what is referred to as loose bodies. Loose bodies can be painful and can cause problems such as clicking and catching. Locking of the ankle joint may occur. Ankle arthroscopy can be used to find and remove the loose bodies.

**Osteochondral defect (OCD):** These are areas of damaged cartilage and bone in the ankle joint. OCDs usually are caused by injuries to the ankle such as fractures and sprains. Common symptoms include ankle pain and swelling. Patients may complain of catching or clicking in the ankle. The diagnosis is made with a combination of a physical exam and imaging studies. Imaging may include X-rays, MRI, or CT scan. The treatment is based on the size, location, and stability of the OCD. The patient's symptoms and activities also are considered. Surgery often consists of scraping away the damaged cartilage and drilling small holes in the bone to promote healing. Bone grafting and cartilage transplant procedures also can be performed.

**Posterior ankle impingement:** This occurs when the soft tissue at the back of the ankle becomes inflamed. Pointing the foot down can be painful. This overuse syndrome occurs commonly in dancers. It can be associated with an extra bone called an os trigonum. The problem tissue can be removed with arthroscopy.

**Synovitis:** The soft tissue lining of the ankle joint (synovial tissue) can become inflamed. This causes pain and swelling. It can be caused by injury and overuse. Inflammatory arthritis (rheumatoid arthritis) and osteoarthritis also can cause synovitis. Ankle arthroscopy can be used to surgically remove inflamed tissue that does not respond to nonsurgical treatment.

**Unexplained ankle symptoms:** Occasionally patients develop symptoms that cannot be explained by other diagnostic techniques. Arthroscopy provides the opportunity to look directly into the joint. The surgeon can then identify problems that may be treated with surgery.

Elective arthroscopy is not appropriate for some patients. Patients with severe ankle arthritis may not benefit from arthroscopic surgery. Patients with active infections or other medical problems may not be appropriate surgical candidates.

## **Treatment**

Your foot and ankle orthopaedic surgeon will mark the operative leg prior to surgery. You will be transported to the operating room and given anesthesia. A tourniquet is commonly applied to the leg. The leg is thoroughly cleaned. The surgeon will sometimes use a device to stretch the ankle joint and make it easier to see inside.

At least two small incisions are made in the front and/or back of the ankle. These portals become the entry sites into the ankle for the arthroscopic camera and instruments. Sterile fluid flows into the joint to expand it and allow for better visualization. The camera and instruments can be exchanged between portals to perform the surgery. Both motorized shavers and hand operated instruments are used. After the surgery is complete, sutures are placed to close the portals. A sterile dressing is placed over the sutures. A splint or boot is often used.

## **Recovery**

You can expect some pain and swelling following surgery. The leg may need to be kept elevated. You may need to take oral pain medication for several days. You may be able to walk on the leg immediately, or you may need to wait several months before putting weight on the leg. This will depend on the type of surgery performed and the recommendations of your surgeon. If needed, sutures are

removed one to two weeks after surgery. Your surgeon will determine when activities such as range-of-motion and ankle exercises are allowed. Physical therapy may also be used.

### **Risks and Complications**

All surgeries come with possible complications, including the risks associated with anesthesia, infection, damage to nerves and blood vessels, and bleeding or blood clots.

Potential complications specific to ankle arthroscopy include injury to nerves and blood vessels around the ankle. Numbness or tingling at the top of the foot can occur approximately 10 percent of the time. This typically resolves over time.

### **When can I safely return to driving?**

You will likely be cleared for driving when you are able to bear weight without limitation and are no longer taking narcotic pain medication.

### **When can I expect to return to work and sports?**

You may be able to return work several days after surgery if you can safely complete your job duties. Most patients can expect to be out of work for at least 1-2 weeks. It is possible to return to high-level sports following ankle arthroscopy but expect at least 4-6 weeks of recovery before getting back to such activities.

### **Is ankle arthroscopy effective?**

70-90% of patients undergoing ankle arthroscopy for common problems achieve good or excellent results.