

ACHILLES TENDON TEAR

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WHAT IS AN ACHILLES TENDON TEAR?

The Achilles tendon is a large tendon at the back of the lower leg and ankle that connects the calf muscles to the heel. It is the largest tendon in the body, and its strength allows us to push off with forces up to 10 times our body weight.

An Achilles tendon tear, or rupture, usually is a complete gap between the upper and lower portions of this tendon. It most often occurs 2-3 inches above the heel bone but can be directly at the attachment or higher in the leg.

Symptoms

A tear usually occurs during activities such as running and jumping, or trauma such as a slip and fall. Most patients report their first feeling was a "pop" or like they were struck in the back of the ankle, followed by some pain. There often is no pain in this area before the actual tear. After the tear, patients complain of weakness when pushing off of their foot during walking or when trying to stand on tiptoe. There may be a small bruise on the inside of the heel during the first few days.



Diagnosis

Your **foot and ankle orthopaedic surgeon** often performs an examination to make a diagnosis. You will lie in a facedown position with your ankles off the edge of the exam table. When the Achilles tendon is not torn, it is taut and the ankle lies in a toe down position of approximately 20 degrees. Squeezing the upper calf will cause the toes to point down even further.

If the tendon is torn, it does not have this tension and the ankle usually will hang at about a 90-degree angle. Squeezing the upper calf will cause weak or no movement. Your surgeon will lightly pinch the Achilles tendon 2-3 inches above the heel to determine if there is a gap. Special tests such as ultrasound, X-rays, and MRI scans typically are not helpful but can be in some instances.

Treatments

At first, the leg is placed at rest in a splint or special boot. It is important to see a foot and ankle orthopaedic surgeon soon after the injury so the best treatment can be started within a few days.

Both non-surgical and surgical treatments have been well studied but remain debated. In general, surgical treatment is thought to give greater strength and result in a lower risk of repeat tear. However, surgery has an increased risk of wound healing problems, nerve damage, and infection plus the usual risks associated with surgery. Blood clots are a concern with both types of treatment. Your foot and ankle orthopaedic surgeon will be the best person to guide you through the pros and cons and help you to select the best option.

Non-surgical Treatment

Non-surgical treatment starts with a period of rest in a brace for the injured leg. You will need to use crutches, a walker, or wheelchair in order to not **put weight on the leg**. Within the first few weeks you will start doing active motion. The brace will be adjusted over time as the Achilles tendon heals to allow increased movement. Gradually, you will be allowed to put weight on the leg and start specific strengthening exercises. The length of treatment may be different for each patient but usually takes about three months. It is often guided by a physical therapist along with the orthopaedic surgeon.

Surgical Treatment

In **this surgery**, your foot and ankle orthopaedic surgeon will place stitches into the tendon above and below the area of the tear and then pull the ends together. This is because the actual tear appears similar to two wet mops with multiple uneven strands that need to be brought together. The stitches can be applied through one or more incisions (viewing the tendon directly) or through multiple small incisions (placing the sutures through the tendon using a guide). The recovery after surgery is similar to the non-surgical treatment but can be slightly shorter.

Recovery

Since tendons do not have a great blood supply, healing is a slow process. Patients usually can start light jogging in 3-6 months with return to sports involving cutting and jumping in 6-9 months. Full return of strength and the feeling of being normal may take more than a year.

Is there anything I can do to prevent tearing the Achilles tendon?

Achilles tendon tears occur so rarely that there is no study that really answers this question well. A stretching program for the Achilles tendon makes sense but the benefit has not been well shown. That being said, there is no downside to stretching the tendon and it should be part of every athlete's warm up. Smoking should be avoided as the negative effects of cigarettes on tendon health have been well shown.

After an Achilles tendon tear, how likely am I to tear the other side?

About 6% of patients with an Achilles tendon tear will have the same injury in the other foot.

Is there anything I can do to make the tendon heal faster?

Starting range-of-motion exercises and putting weight on the injured leg early have shown better results than long periods of immobilization on crutches. However, it has to be balanced by the risk of pulling apart the

ends of the tendon if you stretch too much too early. Stopping smoking for at least a few months while the tendon heals also is likely to be of benefit.

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