

Achilles tendon tears



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Achilles tendon tears are a common injury in middle-aged men. They usually occur in sporting activities which require running or jumping or can occur when pushing an object. This article reviews Achilles tendon tears and discusses treatment options.



Acute Achilles tendon tears usually occur in middle-aged men during athletic activities. Most ruptures occur when pushing off with the foot while the knee is

straight. The most common sporting activities that it occurs in are basketball, running and tennis. Tears can also occur with everyday activities such as hiking, pushing an object or stepping into a hole.

When a tear occurs a person will note a sharp pain or a pop in the back part of his ankle. Frequently, he feels as if he has been shot. If one is participating in a sporting activity he will frequently fall. One will also note significant weakness when walking and will feel like he has no strength and will not be able to walk upstairs.

On physical exam of an Achilles tendon tear the findings include a palpable defect at the area of the tear. When compared with a normal ankle in which the Achilles tendon is a palpable cord, the affected tendon has a loss of contour. One test that is

diagnostic for tear is to have one lay on his stomach on the examination table and bend both knees to 90°. With inspection, the physician will note the position of the feet, the ankle without a tear will be pointed slightly towards the ceiling, while the ankle with a tear will be more at a 90 degree angle. If the calf is



Achilles tear between arrows

squeezed the foot will not move up and down in the ankle with a tear while the opposite side the foot will move up and down ([video link](#)). This test is usually diagnostic for an Achilles tendon rupture.

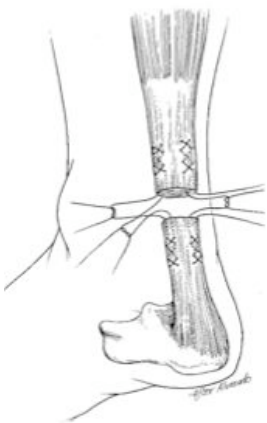
Radiographs of the ankle are usually taken and are frequently normal. Occasionally, an area of calcification may be seen. Usually, an MRI is not obtained as the diagnosis can be made with very good accuracy based on the history and physical. If the diagnosis is in doubt then an MRI can be very helpful.

Most Achilles' tendon ruptures occur in the watershed area of the tendon. Approximately 2-6 cm proximal to its insertion on the heel bone the tendon has an area of decreased blood supply in this area is prone to degenerative changes. Most frequently a person with a rupture will not have tenderness in that area prior to the injury.

Treatment options

The treatment options for an Achilles' tendon rupture include surgical and nonsurgical management. Nonsurgical management involves placing the foot and ankle in a cast with the foot pointed down. The cast is usually kept on for approximately one month. At that time, the cast is removed and the ankle over a period of two weeks is gradually brought up to 90°. Then a walking cast or boot can be used for another month. At 10-12 weeks following the initiation of treatment physical therapy can be started.

Surgical management involves making an incision over the inner aspect of the tendon. The tear is identified and the two ends of the tendon are freshened up. A large stitch or suture is



Surgical repair

placed between the two ends and the two ends are then sewn together. The incision is then closed and a partial cast is placed with the foot pointed down. This splint (partial cast) is removed in 14 days. The sutures are then removed and the patient is shown stretches to gradually bring the foot and ankle to a 90° angle. Once this is accomplished a removable boot can be placed in the patient can start weight-bearing.

The advantages of nonsurgical management are cost, less time off work and the fact that a surgical procedure is not performed. There are some disadvantages. The risk of re-rupture is approximately 8%. Another disadvantage is the fact that there is a longer period of non-weight-bearing. Patients may also note slightly less strength as well as a decreased ability to get back to the same level of athletic activity.

The advantages of operative management is a lower risk of re-rupture (1%). Patients will also note slightly greater strength and a greater ability to return to athletic activities. Disadvantages include a risk of infection, the incision not healing, as well as the risks of anesthesia.

I base my treatment on a patient's expectations and goals. If one is more sedentary, then it is not unreasonable to consider nonoperative management. In a patient who is involved in sporting activities and is very active, I

usually recommend surgical management because of the lower risk of re-rupture as well as probability of improved strength.

Follow-up

Following a period of a immobilization with surgical or nonsurgical management and once the brace and cast are removed, physical therapy is started. Physical therapy involves working on range of motion and stretching as well as strengthening. They also work on proprioception (balance).

It takes approximately 5-6 months for the tendon to reach full strength and it may take longer for one to get their strength back. Once strength is back to 80-90% , full activities may be resumed.

If you have questions about other ankle injuries or sports related topics, please visit my website www.davidostermd.com

