Achilles Tendon

Orthopaedics
Information for Patients

University Hospitals of Leicester
NHS Trust
Caring at its best
Achilles Tendons

What is the Achilles Tendon?
The Achilles tendon (or heel cord) is the thick strap that can be felt running down the back of the calf into the heel. The tendon is made up of many bundles of fibres of a strong material called collagen. It is attached to, and worked by, the large muscles that make up the calf (gastrocnemius and soleus). When the Achilles tendon pulls on the heel it makes us go up on tiptoes, or pushes us forwards when walking or running. If this tendon is not working it is difficult to walk and the ankle feels weak.

How does it get injured?
Most Achilles tendon problems occur in middle-aged athletes and are due to overuse injuries. In a few cases, other medical conditions contribute to the weakening of the tendon. A high-arched or low-arched foot may increase the stresses on the Achilles tendon.

As we get older the tendon becomes less flexible and less able to absorb the repeated stresses of running. Eventually small "degenerative" tears develop in the fibres of the tendon. The body tries to repair these tears. Sometimes the repair process is successful. However, the blood supply of the lower part of the tendon is not very strong and the combination of this and the continued stresses of running, means that the tendon may not completely heal. Instead, the tendon and its lining becomes painful and swollen, and the tendon may feel weak. The combination of degenerative and repair processes in the tendon is called tendonosis.
Sometimes the tendon becomes weakened by the degenerative process to the extent that it tears completely.
How would I know if I had an Achilles tendon problem?

If you had a complete tear, you would probably feel a sudden pain in your heel or calf. Some people say this feels as though they had been kicked in the back of the heel. Usually the heel becomes painful, swollen and bruised and it becomes difficult to walk.

Tendonosis develops more gradually. The Achilles tendon and the heel become painful and a swelling may develop in or around the tendon. At first, the problem is present mainly when running or playing sport, but later it may become increasingly difficult to walk because of the painful tendon.

Can I treat it myself?

Achilles tendonosis can be treated like any other athletic injury or overuse problem when it first develops. You may need to reduce the frequency of your sports for a while. When you do run or play, warm up for longer and do plenty of Achilles stretches. A change to a softer running surface and well padded running shoes may help. A ¼ inch raise on your shoe will reduce the stresses on the tendon (remember to raise the other side too to keep yourself balanced). When the pain and swelling is bad it will usually be helped by applying an ice pack (a small bag of frozen peas is ideal). For the pain try simple pain-killers such as Paracetamol. Anti-inflammatory medicines may reduce the inflammation in the tendon, but check with your doctor or pharmacist before taking these as they can have side-effects in some people.

There is no self-help solution to a complete tear of the Achilles tendon.
When should I get professional advice?
If you think the tendon has torn completely you should go to your local Accident and Emergency department as you will need immediate treatment.

If a painful tendon does not improve with the treatment recommended above you should consider consulting your GP or physiotherapist.

How will my doctor or physiotherapist know what's wrong?
Your doctor will examine you, paying particular attention to the tendon itself and looking for anything else that may be contributing to the problem.

Usually treatment can be started without further tests. However if your doctor thinks the tendon problem is due to another problem further tests may be done, such as blood tests for diabetes. If there is a possibility that the tendon is torn a scan of the tendon may be arranged. Often an ultrasound scan will give enough information but an MRI scan is more useful in some cases. An X-ray of your heel is sometimes useful.

What can be done about it?
A physiotherapy programme aimed at reducing the inflammation in and around the tendon is recommended initially. Once the inflammation is improving the physiotherapist will start exercises to strengthen and stretch the Achilles tendon. If you have a foot shape that increases the stresses on your Achilles tendon a moulded insole in your shoe may help.
Will I need an operation for my tendinosis?

Most people will improve with physiotherapy. A few continue to have trouble and in this case an operation may be considered.

If an operation is being considered your GP will arrange for you to see an orthopaedic foot and ankle surgeon. The surgeon will examine you and may want you to have further treatment before making a decision about an operation.

The surgeon may want you to have a scan before any surgery to show whether there is a problem in the tendon which can be corrected by surgery.

If there is tenosynovitis but the tendon itself is reasonably healthy stripping out the inflamed tendon lining often gives good results.

If the problem is tendonosis surgery involves removing the degenerate tendon and repairing the remaining tendon. If the degenerate area is localised this can give quite good results. However, often the degeneration involves quite a lot of the tendon and removing it all may leave quite a large gap in the tendon which may need a major operation to repair. A big repair usually needs healthy tendon borrowed from somewhere else, either higher up the Achilles tendon or from another tendon.

As with any operation, there are always potential complications associated with this sort of surgery. The risk of complications is very low, but can include:

- Scarring and stiffness
- The repaired Achilles tendon may not be very strong
Treatment and Complications

- Infection
- Damage to nerves or blood vessels or tendons
- Risk of blood clots in the leg or lungs (DVT or PE)
- Wound problems: the blood supply to the heel area is not very strong and the wound may be very slow to heal.
- Risk of an anaesthetic

For these reasons surgery for Achilles tendonosis is only advised when the tendon problem is disabling and extensive non-surgical treatment has been tried.

What about an operation for a complete Achilles tendon rupture?

Most complete tendon ruptures will heal if protected in a plaster or a special Vacoped boot for 6-8 weeks. Here in Leicester we use the Vacoped boot with very successful results. After Vacoped treatment there may be a higher risk of another rupture (about 15% as against 5% after surgical repair) and the tendon may be weaker than after surgical repair. Nevertheless many people get a good result after Vacoped treatment and, obviously, avoid the risks of surgery. This may be the best treatment for less physically active people.

Surgery may be recommended for those who expect to play a lot of sport again. The greater strength and quicker recovery after tendon repair may be more useful for committed athletes. Your surgeon will discuss the options with you to help you decide what is best for you.
Vacoped Boot
The boot provides options for various degrees of ankle flexion

Operation
Skin incision and repair of the tendon with sutures.

Will I have to give up running?
Usually not. You may need to reduce your distance for a while to allow your tendon to heal. Some people who have surgery will not get enough tendon strength or flexibility to allow them to return to running or sport.
If you have any questions, write them down here to remind you what to ask when you speak to your nurse/consultant.

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Today’s research is tomorrow’s care

We all benefit from research. Leicester’s Hospitals is a research active Trust so you may find that research is happening when you visit the hospital or your clinic.

If you are interested in finding out how you can become involved in a clinical trial or to find out more about taking part in research, please speak to your clinician or GP.

If you would like this information in another language or format, please contact the service equality manager on 0116 250 2959

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 مع مدير الخدمة للمساواة في 0116 250 2959.

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 如果您想用另一种语言或格式来显示本资讯，请致电 0116 250 2959

联系"服务平等化经理" (Service Equality Manager)。

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 Ak by ste chceli dostat tuto informáciu v inom jazyku, alebo formáte, kontaktujte prosím manažéra rovnosti služieb na tel. číslo 0116 250 2959.

 Haddaad rabto warqadan oo turjuman oo ku duuban cajalad ama qoraal ah fadlan la xiriir, Maamulaha Adeegga Sinaanta 0116 250 2959.

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