CONDITION

Achilles tendon problems

Learn about Achilles tendinopathy, tendon tears, and rupture, including symptoms, diagnosis, treatment, recovery, and signs that need urgent care.

WHAT IT IS
Achilles tendon overuse injury, tear or rupture

BODY SYSTEM
Muscles, bones and joints

MAIN SYMPTOMS
Pain, stiffness, swelling, reduced push-off strength

WHAT CAUSES IT
Repeated strain or sudden powerful movement

HOW IT IS DIAGNOSED
Clinical examination, calf-squeeze test, ultrasound or MRI

MAIN TREATMENT
Progressive rehabilitation, sometimes immobilization or surgery

CAN IT BE CURED?
Sometimes - symptoms may persist or recur

IS IT AN EMERGENCY?
Sometimes - cold, pale, blue or numb foot

LONG-TERM OUTLOOK
Recovery is often gradual, with possible persistent pain or weakness

Overview

The Achilles tendon is the strong band of tissue connecting the calf muscles to the heel bone. It helps lift the heel when you walk, run, climb stairs, or stand on your toes. Although it is built to handle large forces, repeated strain or a sudden powerful movement can injure it.

"Achilles tendon problems" describes several related conditions. Achilles tendinopathy is ongoing pain and reduced function caused by changes within the tendon. It may affect the middle part of the tendon or the area where the tendon attaches to the heel. The older term tendinitis suggests inflammation, but long-lasting symptoms often involve tendon wear and disorganization rather than inflammation alone.

A partial tear damages some tendon fibers. A complete rupture means the tendon has torn all the way through. Rupture often happens suddenly and can make it difficult to push off the foot

or walk normally.

These problems matter because the Achilles tendon is essential for movement and balance. Early assessment can help identify a rupture, guide safe rehabilitation, and reduce long-term weakness. Most tendinopathy is managed without surgery, but improvement usually requires gradual, consistent rehabilitation rather than complete rest.

Symptoms

Achilles tendinopathy usually develops gradually. Pain may be felt a few inches above the heel or directly where the tendon meets the heel bone. The tendon can feel stiff when first getting out of bed or after sitting for a long time. Stiffness may ease after a few minutes of movement and return during or after activity.

Other possible symptoms include:

A rupture usually feels different. Some people notice a sudden snap or pop, sometimes described as feeling as though they were kicked in the back of the ankle. Pain may be sharp at first, although it can later become less intense. Walking may still be possible, but pushing off the injured foot or standing on tiptoe is often difficult.

Arrange prompt medical assessment if you develop a sudden pop, new weakness, a visible gap in the tendon, or difficulty pushing off the foot. These symptoms may indicate a partial or complete tear.

Seek emergency care after an injury if the foot becomes cold, pale, blue, or numb; if there is a major open wound or uncontrolled bleeding; or if severe swelling or deformity suggests another serious injury. During treatment in a boot or cast, chest pain, coughing up blood, sudden shortness of breath, or fainting also requires emergency care because these can be signs of a blood clot traveling to the lungs.

- Tenderness or thickening along the tendon
- Pain when walking uphill, running, jumping, or rising onto the toes
- Reduced ankle strength or endurance
- Swelling around the tendon
- A rubbing or grating feeling during ankle movement
- Irritation from shoes at the back of the heel

Causes and risk factors

Achilles tendinopathy usually results from a mismatch between the load placed on the tendon and its ability to recover. A sudden increase in running distance, speed, hills, jumping, or sports participation can overload the tendon. Symptoms can also develop after returning to activity following a break.

Training is not the only cause. Tendon tissue changes with age and may become less able to tolerate sudden forces. Limited ankle movement, reduced calf strength, previous lower-limb injury, and some foot or movement patterns may contribute. Shoes that press on the back of the heel can aggravate pain where the tendon attaches to the bone.

Health factors associated with tendon problems include obesity, diabetes, high cholesterol, and some inflammatory conditions. These associations do not mean that everyone with one of these conditions will develop an Achilles problem.

Certain medicines can affect tendon health. Fluoroquinolone antibiotics, such as ciprofloxacin and levofloxacin, carry warnings about tendinitis and tendon rupture. Risk may be higher in older adults, people taking corticosteroid medicines, and people with kidney, heart, or lung transplants. Anyone who develops tendon pain while taking a fluoroquinolone should contact the prescribing clinician promptly rather than changing treatment without guidance.

A rupture often occurs when the calf contracts forcefully while the ankle is stretched. Examples include pushing off for a sprint, landing from a jump, or suddenly changing direction. A tendon that was previously painful or weakened may be more vulnerable, but some ruptures occur without warning symptoms.

Diagnosis

A clinician usually begins by asking when the symptoms started, where the pain is located, and whether there was a sudden injury. They may ask about sports, work demands, recent changes in activity, health conditions, and medicine use.

The examination may include checking for swelling, tenderness, thickening, or a gap in the tendon. The clinician may watch how you walk and assess ankle movement, calf strength, and the ability to rise onto the toes.

If rupture is suspected, the clinician may perform a calf-squeeze test, also called the Thompson test. While the person lies face down, the examiner squeezes the calf and watches for normal downward movement of the foot. An abnormal response can support a diagnosis of rupture, although the entire examination is important.

Imaging is not always needed for typical tendinopathy. Ultrasound can show tendon

thickening, disrupted fibers, and some tears. Magnetic resonance imaging, or MRI, provides more detailed pictures and may be used when the diagnosis is uncertain, symptoms do not improve as expected, or surgery is being considered. X-rays do not show the tendon well, but they may reveal bone changes near the heel or another cause of pain.

Other conditions can cause similar symptoms, including ankle arthritis, bursitis, nerve irritation, stress injury, or pain referred from elsewhere. A professional assessment helps separate these possibilities.

Treatment and management

Treatment depends on whether the problem is tendinopathy, a partial tear, or a complete rupture. Age, activity goals, overall health, symptom duration, and the exact location of the injury also matter.

For tendinopathy, the first step is usually to reduce activities that clearly worsen symptoms. This is relative rest , not necessarily complete inactivity. A temporary switch from running or jumping to lower-impact exercise may help maintain fitness while reducing tendon strain.

Rehabilitation exercises are central to treatment. A physical therapist or other qualified clinician may guide progressive calf strengthening. The exercises are gradually made harder so the tendon can rebuild its ability to handle load. Programs may include slow heel raises, resistance exercises, or other forms of progressive tendon loading.

Some discomfort during rehabilitation may be acceptable, but severe or steadily worsening pain can mean the load is too high. Exercise selection differs for pain in the middle of the tendon and pain at the heel attachment. For example, lowering the heel far below the level of a step may compress an irritated insertional tendon and is not suitable for everyone.

Supportive shoes or a short-term heel lift may reduce strain in some cases. Ice can provide temporary comfort after activity. Pain medicines, including nonsteroidal anti-inflammatory drugs like ibuprofen or naproxen , may help short-term pain but do not repair the tendon. These medicines can have stomach, kidney, heart, bleeding, or medication-interaction risks, so suitability should be discussed with a clinician or pharmacist.

A walking boot may be used for severe pain or some partial tears, but prolonged immobilization can weaken the calf and tendon. When a boot is needed, the treatment plan usually includes a staged return to movement and strengthening.

Shock-wave therapy is sometimes considered when a structured rehabilitation program has not provided enough improvement. Evidence varies by the location and type of tendinopathy. Platelet-rich plasma and other injections have also been studied, but results are inconsistent.

Corticosteroid injection into or around the Achilles tendon is approached cautiously because of concern about tendon weakening and rupture.

Surgery for tendinopathy may be considered when substantial symptoms continue despite a well-supervised course of nonsurgical care. Procedures differ depending on whether damaged tendon tissue, a bony prominence, or another problem is present. Recovery includes rehabilitation and may take months.

A suspected rupture should be assessed promptly. Both surgery and nonsurgical treatment can be appropriate for an acute rupture. Nonsurgical care commonly uses a cast or boot that holds the foot in a position that brings the torn ends closer together, followed by a structured rehabilitation program. Surgical repair reconnects the tendon but introduces risks such as infection, wound problems, nerve injury, and blood clots.

The choice between approaches is individualized. Early functional rehabilitation, including carefully timed movement and weight-bearing under clinical supervision, is an important part of many modern treatment plans.

Complications

Achilles tendinopathy can become persistent. Ongoing pain may reduce activity, calf strength, and confidence in the affected leg. Symptoms can return if activity increases faster than the tendon can tolerate.

A weakened tendon may tear, although most people with tendon pain do not go on to have a rupture. After a rupture, possible long-term effects include calf weakness, reduced push-off power, tendon lengthening, stiffness, and difficulty returning to previous sports or work.

Rupture can happen again after either surgical or nonsurgical care. Surgery also carries wound, infection, and nerve-injury risks. Immobilization and reduced movement increase the risk of a blood clot in the leg, called deep vein thrombosis. New one-sided calf swelling, warmth, or unexplained pain during recovery needs prompt medical advice.

Follow up

Routine follow-up is used to review pain, walking, strength, ankle movement, and progress with rehabilitation. A clinician or physical therapist can adjust exercises as the tendon's capacity improves.

Recovery from tendinopathy is often gradual. Day-to-day symptoms may vary, so trends over several weeks are more useful than a single good or bad day. Returning to running or sport

usually involves stepwise increases in load rather than an immediate return to full activity.

Contact your clinician sooner if pain or swelling is getting worse despite reducing activity, if a treatment device causes skin damage or numbness, or if you are unable to progress with rehabilitation. New sudden weakness, a pop, or loss of push-off strength needs urgent assessment for a tear.

After a rupture, keep scheduled appointments for boot or cast adjustments and rehabilitation. Do not change the ankle position, stop using prescribed support, or return to sport earlier than advised. These steps can affect how the tendon heals.

Sources

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