

PATIENT INFORMATION / ARTICLES & EDUCATION

Achilles Tendon Rupture

Diagnosis, Treatment and Rehabilitation

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What is an Achilles tendon rupture?

An Achilles tendon rupture is a partial or complete tear of the tendon linking the calf muscles to the heel bone. Tears commonly affect the midportion several centimetres above the heel. Sudden push-off, sprinting or a change of direction can trigger the injury.

Typical symptoms

Patients often describe sudden pain, a pop or the feeling of being kicked in the calf. Push-off strength is reduced and a single-leg heel raise may be impossible. A palpable gap may be present. Importantly, some people can still walk despite a complete rupture.

Diagnosis

Clinical assessment, including the Thompson/Simmonds calf-squeeze test, resting ankle tension and comparison with the opposite side, is central. Ultrasound can demonstrate the rupture and the proximity of the tendon ends in plantarflexion. MRI is not routinely necessary but may help in atypical or complex cases.

Immediate management

A suspected rupture warrants prompt assessment by an orthopaedic or trauma specialist. Until evaluated, the ankle should be protected in plantarflexion; forceful stretching and unprotected walking should be avoided. Weight-bearing instructions are individualised.

Functional non-operative treatment

Suitable acute ruptures can be treated without surgery using a dedicated boot or brace initially positioning the ankle in plantarflexion. Good results depend on appropriate tendon-end approximation, a structured functional rehabilitation programme and reliable follow-up. Ankle position and loading are progressed gradually.

Surgical repair

Open, minimally invasive and percutaneous techniques are available. The choice depends on the tear pattern, tendon quality, time since injury, individual functional demands and risk profile. Complex injuries, poor tendon approximation or re-rupture may require a tailored surgical strategy.

Surgery or non-operative treatment?

Both are established options. Surgery may lower re-rupture risk but introduces potential wound, infection and nerve complications. Modern functional non-operative protocols can also achieve good outcomes. Shared decision-making should balance these considerations for each patient.

Rehabilitation

A structured rehabilitation plan is essential. A boot or brace protects the healing tendon early, followed by controlled movement and progressively increased loading. Aggressive early dorsiflexion and stretching can compromise healing. Strength, coordination and sport-specific training are reintroduced step by step.

Recovery and return to sport

Recovery takes several months. Running and jumping sports require adequate strength, function and load tolerance. Full recovery may take twelve months or longer; returning to activity is guided by individual progress rather than time alone.

Risks and warning signs

Possible complications include re-rupture, tendon elongation and persistent weakness, as well as wound or nerve problems following surgery. Injury and temporary immobilisation increase thrombosis risk; prevention is individually assessed. Sudden breathlessness, chest pain or marked new calf swelling require urgent medical evaluation.

References

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