CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Achilles tendon rupture

What you're feeling

A ruptured Achilles tendon usually announces itself clearly. Most people describe a sudden snap or a feeling of being kicked or shot in the back of the leg, even though nothing actually hit them. It typically happens during sport or activity, when the calf muscle is working hard while the tendon is stretching. You may hear or feel a pop, followed by trouble pushing off that foot.

The pain sits low in the back of your leg, just above your heel. There is often a gap you can feel in the tendon where it has torn. Your ankle may feel weak when you try to point your toes downward, and you might find yourself using your toes to make up for the lost calf strength. Standing on tiptoes on that side becomes difficult or impossible.

Everyday movements that load the calf become hard. Pushing off to walk, climbing stairs, rising from a chair, and stepping up onto a kerb all rely on this tendon. Some people notice a dent or soft spot above the heel when they compare the two legs. The injured side often rests in a different position from the healthy one.

A small number of people have pain in that same spot before the rupture happens. If you had ongoing Achilles pain before the injury, mention it, as this can affect the tendon's condition at the tear site.

The tear usually happens in a specific spot about 5 to 6 cm above where the tendon attaches to the heel bone. This area has a poorer blood supply than the rest of the tendon, which is why it is the most common place to fail.

If the injury happened more than 4 to 6 weeks ago, it is considered a chronic rupture rather than an acute one. This matters because a missed diagnosis at the start can lead to this, and it changes the treatment options your surgeon will discuss with you.

What's actually happening

Your Achilles tendon is the strong cord you can feel at the back of your ankle. It is the largest and strongest tendon in your body, about 12 to 15 cm long. Think of it as a thick rope connecting your calf muscles to your heel bone. When those muscles tighten, the rope pulls and pushes you forward, lets you rise onto your toes, and gives you spring when you jump.

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The tear almost always happens in one particular spot, about 5 to 6 cm above the heel bone. This stretch of the tendon gets less blood than the rest of it, so it cannot repair itself as well as the areas around it. Over time, small wear-and-tear damage can build up there faster than the body can fix it. The tendon fibres in that zone gradually weaken. Then one hard push, like lunging for a ball or stepping off a kerb, loads the weakened rope beyond what it can hold, and it snaps.

When the tendon tears, the two ends pull apart. The calf muscle no longer has a firm connection to the heel, so pushing off becomes weak or impossible. That is the snap you felt, the gap you can feel above your heel, and the trouble standing on tiptoes described earlier.

Some people's tendons show wear in this zone before they rupture, and a few have warning pain there first. Tendons that have already torn often show signs of a repair process that could not keep up with the damage. Age matters too, as the blood supply to this part of the tendon tends to thin with the years, and the tendon fibres themselves become stiffer and less springy.

The good news is that this tendon has a strong track record of healing with the right treatment, whether that is surgery or careful rehabilitation without an operation. Your surgeon will talk you through both paths.

What we can do about it

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, matches the treatment to your specific injury. Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. At that visit we take a history, examine your leg, and arrange imaging only if it will change the plan. Most ruptures can be diagnosed in the room, and scans are not needed when the examination is clear. Imaging can help rule out other injuries or plan surgery if the diagnosis is delayed or unclear.

For a fresh rupture, there are two main paths, and both aim to get the tendon ends close together while it heals. One is an operation to stitch the tendon. The other is treatment without surgery, using a protective boot or cast and a structured physiotherapy programme. We will talk you through both, because the choice depends on your age, your activity, and the injury itself. Some people do well either way, and the evidence does not point to one clear winner for everyone. If surgery is chosen, early protected weight bearing in a boot is part of the plan afterwards.

Treatment without surgery has a long track record. With an accelerated rehabilitation programme, meaning earlier movement and loading than the old strict protocols, results can match surgery with fewer complications. Getting on your feet early is an accepted option within this approach. What we want to avoid is a rerupture, where the healing tendon tears again, and we will explain how the plan protects against that. One thing we do not use for a fresh rupture is PRP, an injection made from your own blood platelets, because it has not been shown to improve function or healing.

Surgery is considered when the risks of nonoperative treatment outweigh the benefits for you, for example a rupture in a young, active person who wants a stronger repair. Open repair lowers the chance of the tendon tearing again compared with no operation. The operation stitches the torn ends back together, sometimes with a supporting internal brace technique. If a rupture was missed and the ends have retracted far apart, other

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methods may be needed, and we will explain those separately. Every option carries trade-offs, and we make this decision together.

What to expect

Recovery from a ruptured Achilles tendon is a long process, and it helps to know that from the start. The time to recover full function is at least 12 months. Most people have not fully recovered 2 years after the injury, whether they had surgery or not, and only minor improvements happen between the 1- and 2-year marks. This does not mean you will be unable to do things for that long. It means the tendon keeps changing and improving slowly, and small differences can remain.

Some changes can last even longer. Deficits in calf muscle endurance and strength have been found 7 years after the injury. The healed tendon also has inferior elastic properties, meaning it is less springy than it was before, even after a long healing phase. The tendon can elongate, or stretch out of shape, for 6 months after surgical repair, and this happens whether you put weight on it early or late. Your body may also adapt without you noticing, shifting work to other muscles around the ankle and along the leg.

Both treatment paths can work well. With a structured rehabilitation programme, results can be similar with or without an operation. Surgery lowers the chance of the tendon tearing again compared with treatment without surgery, but it carries a higher chance of smaller problems, mainly wound troubles and infection. Getting your ankle moving early, with weight on the leg in a protected boot, improves early movement without stretching the healing tendon or changing the long-term result. Timing matters too: having an operation within 48 hours of the injury is linked with fewer adverse events than waiting past 72 hours.

If the injury is left alone or missed, the outlook is harder. The tendon ends can pull further apart, and chronic ruptures bring their own challenges. Even so, people treated late can still do well, with repair 14 to 30 days after injury achieving similar results at 1 year to repair within 14 days. Whatever path you take, expect steady progress measured in months, not weeks, and expect your calf to feel different from the other side for some time.

When to see someone

A ruptured Achilles tendon needs prompt attention, and the signs are usually clear. See your GP or ask for a specialist review if you felt a sudden snap or kick in the back of your leg, can feel a gap in the tendon above your heel, or cannot push off or stand on tiptoes on that side. Timing matters: having surgery within 48 hours of the injury is linked with fewer problems than waiting past 72 hours, so do not put off getting assessed. If some days have passed and the diagnosis is still unclear, a scan can help confirm what is going on. Go to an emergency department if the skin over the tendon becomes red, hot or leaking fluid, as infection near a healing tendon needs same-day care.

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