

# ACHILLES TENDON REPAIR



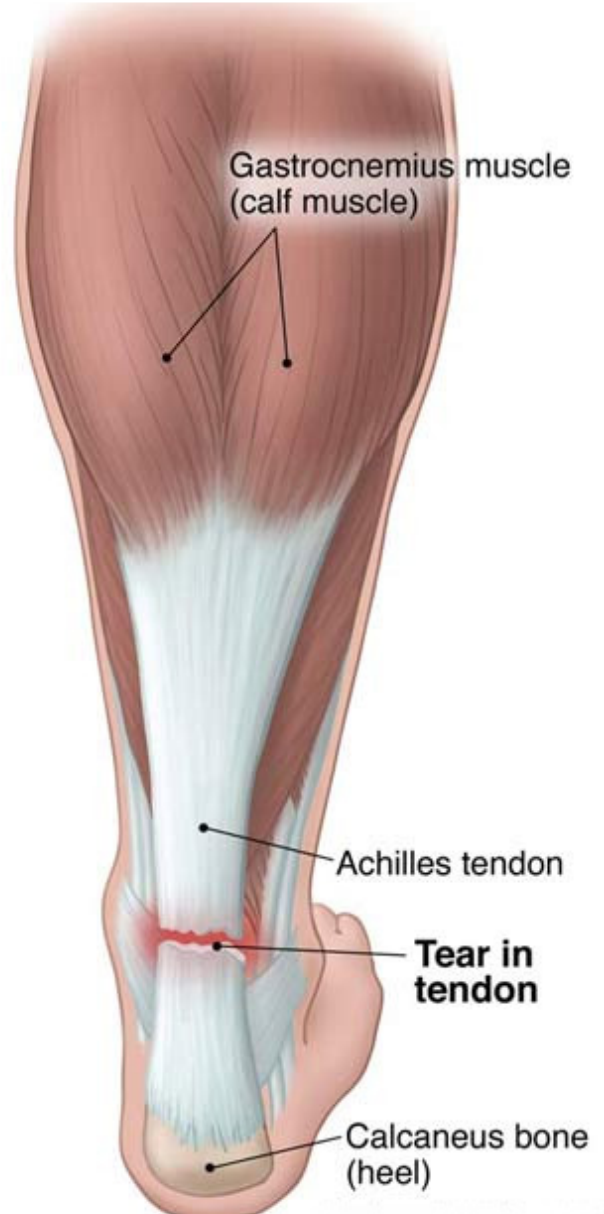
## ACHILLES TENDON INJURY

The Achilles tendon is the strongest tendon in the human body and connects the posterior calf muscles to the foot's heel.

Despite its strength, overuse and overstretching can lead to Achilles rupture, which involves sharp pain and an inability to walk. Typical signs of an Achilles rupture include a popping sound as the incident occurs, swelling around the heel and difficulty or inability to push off the injured leg.

Achilles ruptures will often result from sporting injuries where high stresses are involved; however, they may also result from heavy falls or stepping on irregular surfaces. **44-83%** of Achilles ruptures occur during sports activities.

Males are more likely to experience an Achilles rupture than females. The typical age bracket for tendon rupture is **30-40-year-olds**.



# CONSERVATIVE, NON-SURGICAL APPROACH

Non-operative treatment involves treatment in a boot or cast and is typically accompanied by physiotherapy. Maintenance of the foot in plantar-flexion appears to be sufficient in allowing the healing of the ruptured tendon.

One issue of the conservative approach is the high rate of re-rupture, in with an incidence of **10-12%**. With surgery, this rate is lowered to less than **3%**.

For a non-surgical approach, immobilization is required for up to **12 weeks**. Patients are allowed to weight bear after 4 weeks and should be expected a return to exercise with more intensity from **12 to 24 weeks**. Other non-surgical methods include anti-inflammatory medications, rest, ice and heel stretching.

# SURGICAL APPROACH

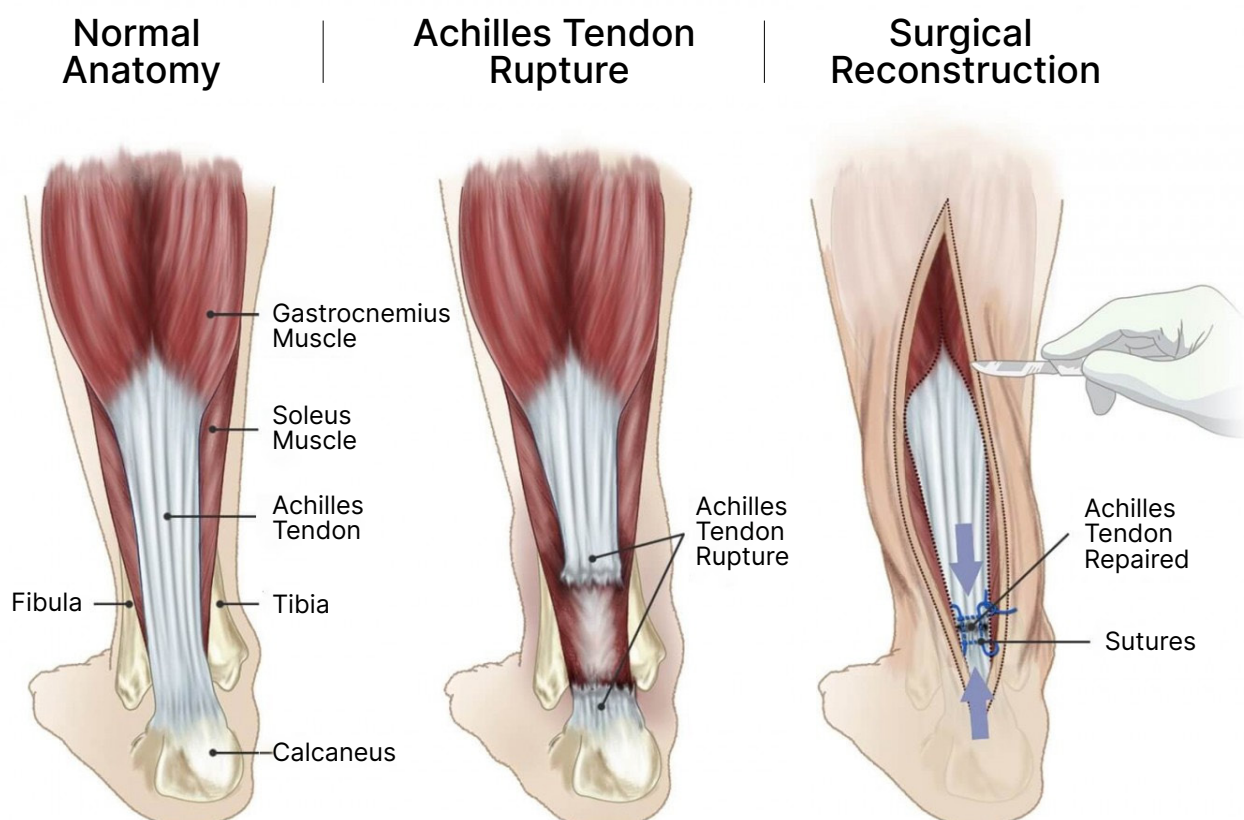
Studies have shown that blood supply to the tendon is lowest in the middle of the structure, and given that most ruptures occur at this point, a tendon healing response is quite limited.

Furthermore, patients operated on soon after an injury has seen rapid structural degeneration of the surrounding tendon tissue. It is, therefore, necessary for timely surgical intervention to repair the tendon.

The surgical approach to tendon repair Dr Slater uses is minimally invasive. All approaches either use end-to-end suturing or tendon grafts, depending on the nature of the injury. A suturing method using a heel anchor is shown on the right. The novel heel anchoring method provides a strong truss structure to enable ankle flexion. Percutaneous and keyhole repair involves multiple small incisions, with stitching guided by ultrasound imaging.

Open surgery is far more invasive however is required if the injury is left untreated for more than two weeks. Open surgery procedures create a thicker tendon, however, at aesthetic cost and a heightened risk of complication. It is important to discuss different options with your surgeon.

## Achilles Tendon Reconstruction



# AFTER THE SURGERY



After the operation, the patient is immobilised in an air boot for **8 -10 weeks**. This is to prevent over-use and strain on the healing tendon.

It is advised that the patient remains non-weight bearing during the first week after surgery. After this period, Dr. Slater will change the dressing and advise when partial and full weight bearing can commence. Crutches or walkers will need to be organized prior to surgery. Pain and swelling should be expected following surgery.

The leg may need to be kept elevated, and oral medication may be administered. Patients will typically be checked-up on **1 week, 4 weeks, 6 weeks and 12 weeks post-operatively**.

## CONSERVATIVE, NON-SURGICAL APPROACH

Complications following surgery include wound infection and a delayed healing response. Re-rupture of the tendon may also occur. Tendon repair is usually a successful surgery; however, it is important to note that leg strength may not be the same as it was prior to the operation. Physiotherapy will help increase strength.



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