



QUESTION | It is my understanding that Achilles tendon ruptures in Australia have traditionally been treated surgically, but Achilles tendon ruptures in Canada have traditionally been treated non-surgically. Why the difference? What is the evidence?

ANSWER | Since the randomised controlled trial by Willets et al. (2010) we have noted a declining rate of acute Achilles tendon surgery in Australia.

Achilles tendon rupture is traditionally thought of as the injury of the “weekend warrior” being rare in the seasoned athlete. The patient, usually a male of 40 years of age, does need some form of treatment or function will be poor and strength will not return.

Surgical Treatment:

Surgical treatment is done as a day surgical procedure and the operation is not “pretty”. The surgery involves re-approximating the ends of what look like two “hairy mops” together (see image below):



Following the surgery (open repair), I suggest:

- Elevation and non-weight bearing are essential to prevent wound complications for approximately 2 weeks.

- I then allow the patient to weight-bear in a removable boot firstly in plantarflexion, gradually returning to neutral at 6 weeks at which time the boot can be discontinued.
- Patients can walk/cycle/swim and drive at 6 weeks.
- Patients can run at between 6 and 9 months.

Non-Operative Treatment:

The early non-operative protocol of 8 weeks in plaster in full plantarflexion has been modified by numerous authors to include earlier protected range of motion and earlier protected weight-bearing.

The protocol of Prof Bruce Twaddle from Auckland (a proponent of non-surgical treatment) involves:

- 4 weeks of non-weight bearing,
- then 2 weeks of touch weight-bearing in a boot then a final 2 weeks in a boot.
- Gentle movement is commenced at 2 weeks.

What is agreed on is that surgical treatment is faster in terms of recovery but carries the risks of surgery including wound infection.

What is less agreed upon is the risk of re-rupture and rapidity of return to strength and vigorous activity.

In Willets study there was no significant difference in rates of re-rupture.

Another review by Wilkins et al (2012) of 7 Level 1 randomised controlled trials stated that open operative treatment carried a significantly lower risk of re-rupture.

A similar meta analysis by Ochen et al. (2019) of 29 studies (10 randomised trials and 19 observational studies) suggested once again a lower re-rupture with surgical treatment but that early functional treatment and early weight-bearing lessened the difference.

What would I do if I ruptured my Achilles tendon?

I would have surgery by an experienced foot and ankle surgeon. At the recent Australian Orthopaedic Foot and Ankle Meeting in 2018 the question was put to all the surgeons in the room and the majority agreed that they would have surgical treatment. They believed it resulted in less down time, a stronger tendon sooner and a lower rate of re-rupture.

A wound infection however would “spoil the party”!

Dr John Negrine

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