

## Plantar Fasciosis Checklist

Please place a tick the following if relevant for your heel pain.  
You may want to circle anything you have not tried and would like more information on.

INTERVENTION	CHECK
<p><b>1. ACTIVITY MODIFICATION</b> <i>Are you optimising the load stimulus for the tissue to adapt appropriately?</i></p> <ul style="list-style-type: none"> <li>- <b>Step counter</b> (e.g. fitbit)- keeping steps under 5,000 in early stages</li> <li>- Temporarily STOP running or impact activities</li> <li>- Using a spin bike low resistance to supplement exercise</li> <li>- Any activity you know that flares pain:</li> </ul>	
<p><b>2. LIFESTYLE</b> <i>Are you optimising the internal environment for healing?</i></p> <p>Smoking cessation Dietary change and weight loss- Discuss options and barriers</p>	
<p><b>3. FOOTWEAR</b> <i>Have you found any footwear that is comfortable?</i></p> <p>Closed cushioned shoes at most times (avoid bare feet) including out of bed Podiatrist review for advice, tape and footwear review Soft inserts- silicone heel cups or arch supports (1) Trial of Strassberg sock (2)</p>	
<p><b>4. EXERCISES</b> <i>Are you providing stimulus for your plantar fascia to become stronger?</i></p> <ul style="list-style-type: none"> <li>- Stretches to the plantar fascia, calves and hamstrings and foot exercises</li> <li>- Calf raises with toe bent up (Windlass raises- see below) (3)</li> <li>- Adherence to exercises (second daily) for AT LEAST 8 weeks</li> </ul>	
<p><b>5. PHYSICAL MODALITIES</b> <i>Have you found any benefit from physical modalities to help you do exercises?</i></p> <p>Massage- Calf through to the big toe (4-6) Ice- icepack or ice in a bottle roller Acupuncture Laser (10,11) Shock wave ultrasound therapy (12-15)</p>	
<p><b>6. INJECTABLE TREATMENTS (adjuncts only)</b> <i>Have you tried any injectable treatments?</i></p> <ul style="list-style-type: none"> <li>- Cortisone injection</li> <li>- Platelet rich plasma (PRP) injection</li> </ul>	

## 7. SURGERY

As a last resort, have you been given any information about surgery?

IN GENERAL, THESE CUT THE PLANTAR FASCIA AND THEREFORE TAKE ITS FUNCTION AWAY, WHICH MAY LEAD TO PROBLEMS WITH MIDFOOT PAIN

Endoscopic plantar fascia release (minimally invasive)

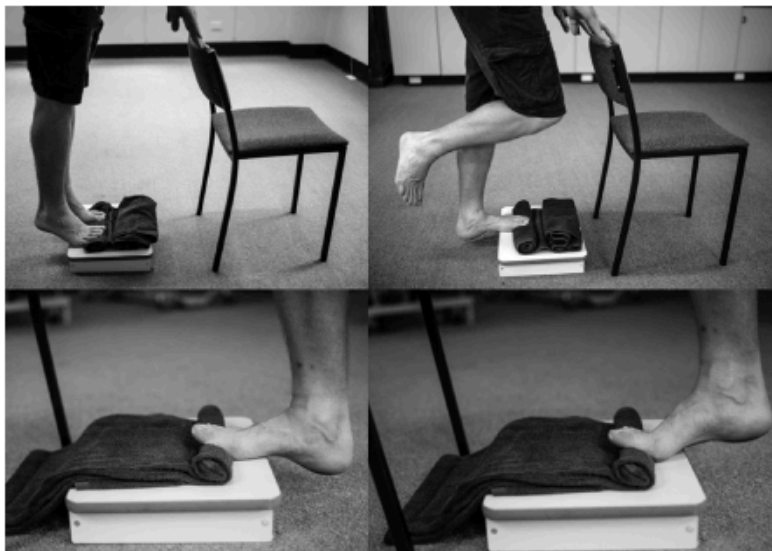
Needle cryotherapy

Radiofrequency ablation

### Evidence-Based Exercises for Plantar Fasciopathy

Please see the handout on tendinopathy for the principles of exercise and rehabilitation. Initially, you should have supervision to ensure you are doing these correctly.

A recent study by a Danish physio, Michael Rathleff (3) found that exercises that put load onto the plantar fascia are more effective than stretching for plantar fasciopathy. The exercises involve pulling the toe back whilst doing calf raises, which puts the plantar fascia under high amount of tension (Windlass calf raises). The following visual and written instructions are taken directly from this study protocol.



- 1: It is important that you complete the exercises the physiotherapist instructed you in. If you complete the exercises it is more likely that your heel pain will decrease.
- 2: You should not begin to run before your heel has been pain free for four weeks and you can walk 10 kilometres without pain during the walk, or the morning after.
- 3: If you need to wear dress shoes it is important that you use the gel heel insert.
- 4: It is important that you continue to do your exercises even though your heel pain has gone away. This will help decrease the risk that the heel pain return.
- 5: It is acceptable that you feel a slight pain when performing the exercises, but it is important that you tell us if the pain suddenly gets worse after the exercises or during the next 24 hours.
- 6: Remember to perform the exercises as you have been instructed in. Please refer to your training leaflet if you have questions on how to perform it.
- 7: It is important that you decrease or avoid activities that will cause your heel pain to flair up. When you want to start up with these activities again you should be careful and slowly progress. Please refer to advice number two which can be used to help you determine when you are ready to e.g. run again.

1. Pfeffer G, Bacchetti P, Deland J, Lewis A, Anderson R, Davis W, et al. Comparison of custom and prefabricated orthoses in the initial treatment of proximal plantar fasciitis. *Foot Ankle Int.* 1999 Apr;20(4):214–21.
2. Probe RA, Baca M, Adams R, Preece C. Night splint treatment for plantar fasciitis. A prospective randomized study. *Clin Orthop.* 1999 Nov;(368):190–5.
3. Rathleff MS, Mølgaard CM, Fredberg U, Kaalund S, Andersen KB, Jensen TT, et al. High-load strength training improves outcome in patients with plantar fasciitis: A randomized controlled trial with 12-month follow-up. *Scand J Med Sci Sports.* 2015 Jun;25(3):e292–300.
4. Ajimsha MS, Binsu D, Chithra S. Effectiveness of myofascial release in the management of plantar heel pain: a randomized controlled trial. *Foot Edinb Scotl.* 2014 Jun;24(2):66–71.
5. Renan-Ordine R, Alburquerque-Sendín F, de Souza DPR, Cleland JA, Fernández-de-Las-Peñas C. Effectiveness of myofascial trigger point manual therapy combined with a self-stretching protocol for the management of plantar heel pain: a randomized controlled trial. *J Orthop Sports Phys Ther.* 2011 Feb;41(2):43–50.
6. Saban B, Deutscher D, Ziv T. Deep massage to posterior calf muscles in combination with neural mobilization exercises as a treatment for heel pain: a pilot randomized clinical trial. *Man Ther.* 2014 Apr;19(2):102–8.
7. Donley BG, Moore T, Sferra J, Gozdanovic J, Smith R. The efficacy of oral nonsteroidal anti-inflammatory medication (NSAID) in the treatment of plantar fasciitis: a randomized, prospective, placebo-controlled study. *Foot Ankle Int.* 2007 Jan;28(1):20–3.
8. Roos E, Engström M, Söderberg B. Foot orthoses for the treatment of plantar fasciitis. *Foot Ankle Int.* 2006 Aug;27(8):606–11.
9. Gutekunst DJ, Hastings MK, Bohnert KL, Strube MJ, Sinacore DR. Removable cast walker boots yield greater forefoot off-loading than total contact casts. *Clin Biomech Bristol Avon.* 2011 Jul;26(6):649–54.
10. Kiritsi O, Tsitas K, Malliaropoulos N, Mikroulis G. Ultrasonographic evaluation of plantar fasciitis after low-level laser therapy: results of a double-blind, randomized, placebo-controlled trial. *Lasers Med Sci.* 2010 Mar;25(2):275–81.
11. Basford JR, Malanga GA, Krause DA, Harmsen WS. A randomized controlled evaluation of low-intensity laser therapy: plantar fasciitis. *Arch Phys Med Rehabil.* 1998 Mar;79(3):249–54.
12. Buchbinder R, Ptasznik R, Gordon J, Buchanan J, Prabakaran V, Forbes A. Ultrasound-guided extracorporeal shock wave therapy for plantar fasciitis: a randomized controlled trial. *JAMA.* 2002 Sep 18;288(11):1364–72.

13. Porter MD, Shadbolt B. Intralesional corticosteroid injection versus extracorporeal shock wave therapy for plantar fasciopathy. *Clin J Sport Med Off J Can Acad Sport Med.* 2005 May;15(3):119–24.
14. Aqil A, Siddiqui MRS, Solan M, Redfern DJ, Gulati V, Cobb JP. Extracorporeal Shock Wave Therapy Is Effective In Treating Chronic Plantar Fasciitis: A Meta-analysis of RCTs. *Clin Orthop.* 2013 Nov;471(11):3645–52.
15. Gollwitzer H, Saxena A, DiDomenico LA, Galli L, Bouché RT, Caminear DS, et al. Clinically relevant effectiveness of focused extracorporeal shock wave therapy in the treatment of chronic plantar fasciitis: a randomized, controlled multicenter study. *J Bone Joint Surg Am.* 2015 May 6;97(9):701–8.