Plantar fasciopathy exercise protocol

How to perform the exercise – Rathleff et al. (2015)

This exercise protocol is based on the study by Rathleff et al. (2015), in which high-load strength training gave significantly better results than stretching in patients with plantar fasciopathy. The exercise combines loading of the Achilles tendon with activation of the windlass mechanism through dorsiflexion of the toe joints.

What you need

- A step or raised surface from which the heel can lower freely
- A rolled-up towel or T-shirt
- A handrail or support for balance
- A backpack with books (to increase the load from week 3)

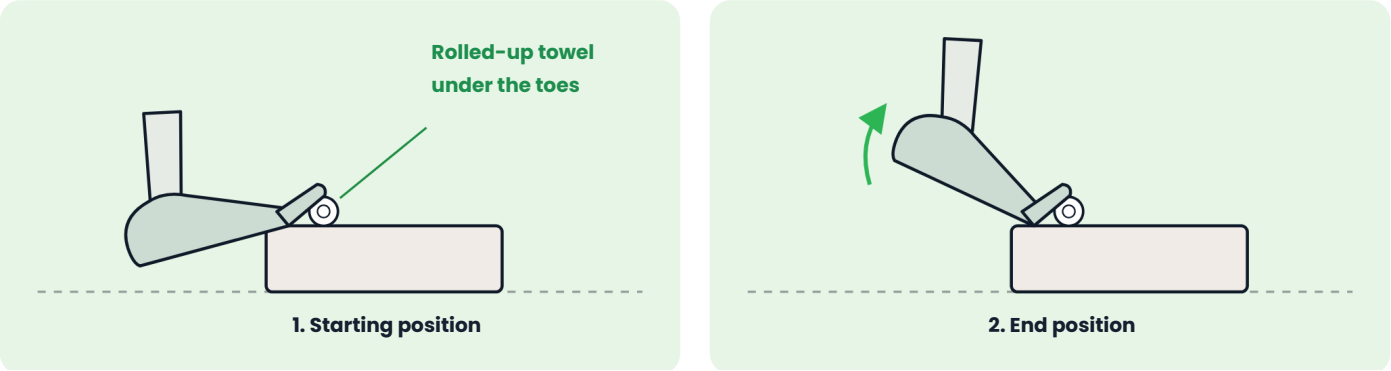
Preparation – Roll up a towel and place it on the first step so that it lies firmly and cannot slide away. The towel makes sure the toe joints are bent upwards as far as possible during the exercise, so that the plantar fascia is optimally loaded through the windlass mechanism.

Starting position – Stand with your forefoot on the step, with your toes resting on the towel and your heel hanging freely over the edge. Hold the handrail for balance, but do not lean on it. If instructed to do the exercise on both legs, place both feet in the same way.

Movement – Slowly rise onto your toes in three seconds through the full range of motion. Hold the top position for two seconds. Then lower the heel in a controlled way in three seconds, as far as comfortably possible. This is one repetition of eight seconds in total.

Sets and rest – Perform the prescribed number of repetitions and sets (see the weekly schedule on page 2). Take enough rest between sets. Do the exercise every other day — this gives the tissue time to recover and become stronger.

Increasing the load – Start without extra weight. As soon as the prescribed number of repetitions goes smoothly, increase the load by wearing a backpack with books. Add weight gradually and write down the weight used in each session to keep track of your progress.



1: heel lowers in a controlled way below the edge of the step · 2: fully up on the toes, hold for 2 seconds
Schematic illustration of the exercise: FA Education, after Rathleff MS et al. Scand J Med Sci Sports. 2015;25:e292–e300.

Please note

Mild muscle soreness in the calf after the exercise is normal. Does the heel pain increase sharply during or immediately after the exercise? Then reduce the load or switch to doing the exercise on both legs, and discuss this with your physiotherapist.

Weekly schedule – weeks 1 to 12

Progressive loading according to Rathleff et al. (2015)

Cadence per repetition (applies to all weeks)

3 sec · Up	2 sec · Hold	3 sec · Down	= 8 sec per repetition

Week	Frequency	Sets	Reps (RM)	Load	Point of attention
1	Every other day	3	12 RM	Body weight – no backpack	Start week – focus on technique and cadence
2	Every other day	3	12 RM	Body weight – no backpack	Same as week 1
3	Every other day	4	10 RM	Backpack – load at own discretion	Step up: 4 sets – add backpack
4	Every other day	4	10 RM	Backpack – load at own discretion	
5	Every other day	5	8 RM	Backpack – load at own discretion	Step up to 5 sets of 8 repetitions
6	Every other day	5	8 RM	Backpack – load at own discretion	
7	Every other day	5	8 RM	Backpack – load at own discretion	
8	Every other day	5	8 RM	Backpack – load at own discretion	
9	Every other day	5	8 RM	Backpack – load at own discretion	
10	Every other day	5	8 RM	Backpack – load at own discretion	
11	Every other day	5	8 RM	Backpack – load at own discretion	
12	Every other day	5	8 RM	Backpack – load at own discretion	End of training protocol – evaluate with your physiotherapist

Phase 1 (weeks 1–2)

3 sets × 12 RM

Getting used to the exercise. Focus on correct technique and cadence.

Phase 2 (weeks 3–4)

4 sets × 10 RM

First loading step with a backpack. Progression at own discretion.

Phase 3 (weeks 5–12)

5 sets × 8 RM

Maximum loading phase. Increase the load weekly as appropriate.

Progression rule

Increase the load (backpack weight) as soon as you can perform the prescribed number of repetitions with the correct cadence (3-2-3) and without the heel pain rising above 4/10. Write down the weight used in each session for your own overview.