

# Plantar Fasciitis (PF)



Exploring the what, why and how with STRIVE Sport & Exercise Medicine



## What is Plantar Fasciitis?

The plantar fascia is at the bottom of your foot. It extends from the base of the heel to the toes. The plantar fascia is made up of tissue called connective tissue. The purpose of the plantar fascia is to support the arch of the foot and protect structures behind it. It plays an important role for weight bearing activities such as walking or running. Plantar fasciitis (PF) is an overloading condition that results in small micro-tears in the fascia. This can become quite painful. Many people with PF complain of heel pain with the first few steps in the morning, tenderness over the heel, and decreased range of motion.



## Why did I get this?

PF typically develops through overloading of the fascia. Contributing factors include loss of ankle flexion, tightness in the calf muscles, flat feet or high arches, excessive flattening of the foot with movement, hallux valgus (your big toe pointing towards your other toes), improper shoe fit, and obesity. Training errors, such as increasing volume or intensity too rapidly, can also be a risk factor. All of these factors ultimately overload the plantar fascia which places it at greater risk of injury.



## How can I get better?

Improvements in your condition can come from a combination of lifestyle modifications and exercise. Lifestyle modifications can include weight loss. Avoid walking barefoot indoors and out. Many people have relief when wearing soft-soled shoes like Crocs. Alternatively, consider adding a gel pad under your heel inside your shoe. Exercise is also an important part of your recovery. It will help strengthen any muscles that may be weak and stretch tight muscles restricting movement. The goal of lifestyle modifications and exercises are to help give the plantar fascia more support, and create an environment that allows it to heal.

## 4 Exercises for you

### Exercise: Heel Raises With Toes Up Goal: Strength



1. Stand with your toes on a small towel roll so the toes are extended to about 45°.
2. Lift your heels off the floor to come onto your tiptoes.
3. Hold the top position for a few seconds then lower slowly. Lowering down should take 3-5 seconds.
4. To progress this exercises you can perform this on a raised ledge (stairs) as this will allow your heel to drop further down. Next, you can progress to performing it on one leg at a time.

**Parameters:** 3 sets of 10 repetitions. Perform once per day, every day.

Photo: All rights reserved. Physiotec

### Exercise: Toe Crunches Goal: Strength



1. Sit on a chair with the affected foot resting on a flat towel.
2. Slowly bunch up the towel by curling your toes
3. Reposition the towel and repeat.
4. If this is too easy, you can place small weights at the end of the towel to challenge yourself.

**Parameters:** 3 sets of 10 repetitions. Perform once per day, every day.

Photo: All rights reserved. Physiotec

### Exercise: Squat Goal: Strength



1. First develop a "tripod" stance. Create three points of contact with the ground: your heel, the base of the first toe, and the base of the 5th toe. To learn this, you can raise your toes off the ground. This helps cue you to raise your arch and maintain the tripod stance.
2. Now perform a squat. Use a chair or rail for support. Sit back as if you are going to sit in a chair. Maintain a tripod stance and avoid leaning forward. Keep your knees in line with your second toes.
3. Slowly return to the standing position.
4. To progress, relax your toes while maintaining the tripod stance and repeat. You can remove the chair as support as a further progression.

**Parameters:** 3 sets of 10 repetitions. Perform once per day, every day.

Photo: All rights reserved. Physiotec