

Mr David Gordon MB ChB, MRCS, MD, FRCS (Tr & Orth)

Consultant Orthopaedic Surgeon

www.davidgordonortho.com



Spire Harpenden Hospital



Spire Bushey Hospital



Private Practice Personal Assistant: Helen Sellars

T/F: 01582-622-219

E: helen@davidgordonortho.com

NHS Secretary: Jacqueline Andrews

T: 01582-497-066

Plantar Fasciitis - A Patient Guide

What is it?

Inflammation of the plantar fascia (a fibrous sheet of tissue on the sole of the foot).

What causes it?

Repetitive or increase in stress on the plantar fascia. This may occur for a number of reasons:

- Spending a long time on your feet
- Increase in weight
- Tight Achilles tendon or calf muscles
- Recent increase in activity such as running
- Shoes with a limited cushion on the sole
- High arch or flat feet
- Rheumatological condition e.g. rheumatoid arthritis or ankylosing spondylitis
- NOT a heel spur. This may be incidental or formed because of the plantar fasciitis

What are the symptoms?

Pain on the sole of the foot, usually on the inside (medial aspect) of the heel but can be felt in the mid part of the sole. Pain is worse during the first steps after sleeping or periods of rest. The pain is often burning or sharp and can be constant throughout the day, normally relieved by rest.

Who are affected?

Classically, middle aged females who may not be at their ideal weight, but any adult may be affected, especially if they have one of the factors mentioned above.

How is it treated?

The first stage is to wear well cushioned footwear like trainers. A shock absorbing gel heel cup insole is also helpful. Anti inflammatory tablets (e.g. ibuprofen, naproxen, diclofenac) and activity modification may work. Plantar fascia (and calf) stretches are recommended (see below). Wearing splints at night to keep the plantar fascia stretched can help early morning symptoms. Steroid injections may also be used. With these measures, symptoms may still last up to 18 months. Extracorporeal Shock Wave Therapy aims to reduce this length of time significantly.

Plantar Fasciitis - A Patient Guide

Extracorporeal Shock Wave Therapy (ESWT)

This is a non-invasive (does not breach the skin) treatment in which a device is used to pass inaudible, high-energy sound waves (shockwaves) through the skin, to the origin of the plantar fascia at the heel. The exact way ESWT works is not fully understood, but the shockwaves may produce minor tissue damage. The body then produces a healing response and it is this that may lead to resolution of pain. ESWT is safe, although some minor side effects occasionally can be experienced, such as skin reddening, bruising or soreness. Some debate remains regarding ESWT's effectiveness in treating plantar fasciitis but at least 4 randomised controlled trials have shown it is effective. Three separate treatments spaced approximately a week apart are normally required, each lasting about 5-10 minutes. Significant resolution of pain takes up to 2 months after completing treatment. Mr Gordon uses the Swiss DolorClast machine (by EMS), a state of the art device. ESWT is not normally available on the NHS. For private medical insurance purposes the treatment (CCSD) code is **3 sessions of T5780**.

Surgical treatment

As a last resort, when the above treatments have not worked, the plantar fascia can be released with an operation. The small nerves around the heel are also freed from any constriction. This is performed as a day case procedure.

Physiotherapy Stretches

Plantar Fascia Stretches - Seated

1. Cross your leg over by placing the affected foot on your other knee
2. Use the hand on the affected side to pull the toes up as far as they will go toward the shin
3. Feel the tight band (like a guitar string) on the sole of the foot with your other hand
4. Hold the stretch for 10 seconds. Perform 10 times
5. Repeat 3 times a day
6. The first set should be performed before the first step in the morning
7. Also perform prior to standing after seated for long periods



Plantar Fascia Stretches – Standing

1. Standing with ball of foot on a stair, reach for the bottom step with heel until a stretch is felt through the arch of the foot
2. Hold for 30 seconds
3. Relax
4. Repeat 5 times
5. Do 6 sessions per day



Plantar Fasciitis - A Patient Guide

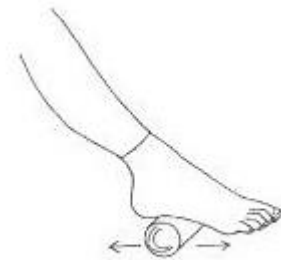
Calf Stretches - Standing

1. Facing a wall, put your hands against the wall at about eye level
2. Keep the injured leg back, the uninjured leg forward and the heel of your injured leg on the floor
3. Turn your injured foot slightly inward (as if you were pigeon-toed) as you slowly
4. lean into the wall until you feel a stretch in the back of your calf
5. Hold for 30 to 60 seconds
6. Repeat 3 times



Frozen Can Roll

1. Place your favourite drinks can in the freezer
2. Once frozen, take it out of the freezer
3. Roll your bare injured foot back and forth from your heel to your mid-arch over the can
4. Repeat for 5 minutes
5. This exercise is particularly helpful if done first thing in the morning



Frozen can roll

Reference List

Digiovanni, B. F., et al. "Plantar fascia-specific stretching exercise improves outcomes in patients with chronic plantar fasciitis. A prospective clinical trial with two-year follow-up." *J.Bone Joint Surg.Am.* 88.8 (2006): 1775-81.

Gerdesmeyer, L., et al. "Radial extracorporeal shock wave therapy is safe and effective in the treatment of chronic recalcitrant plantar fasciitis: results of a confirmatory randomized placebo-controlled multicenter study." *Am.J.Sports Med.* 36.11 (2008): 2100-09.

Malay, D. S., et al. "Extracorporeal shockwave therapy versus placebo for the treatment of chronic proximal plantar fasciitis: results of a randomized, placebo-controlled, double-blinded, multicenter intervention trial." *J.Foot Ankle Surg.* 45.4 (2006): 196-210.

Ogden, J. A. "Extracorporeal shock wave therapy for plantar fasciitis: randomised controlled multicentre trial." *Br.J.Sports Med.* 38.4 (2004): 382.

Wang, C. J., et al. "Long-term results of extracorporeal shockwave treatment for plantar fasciitis." *Am.J.Sports Med.* 34.4 (2006): 592-96.

Plantar Fasciitis - A Patient Guide



Plantar Fasciitis Night Splints



Silicone Gel Heel Cups