Entitlement Eligibility Guideline

Plantar Fasciitis

Date reviewed: 22 January 2025

Date created: February 2005

ICD-11 **code:** FB40.1

VAC medical code: 01328 Plantar fasciitis

Definition

Plantar fasciitis is a common cause of heel pain characterized by pain in the plantar heel with tenderness at the medial calcaneal tubercle and symptoms that are most noticeable with weight-bearing first thing in the morning or after a period of rest. The pain is often described as sharp, progressive pain and can radiate across the arch into the forefoot in severe cases.

For the purposes of this entitlement eligibility guideline (EEG), equivalent diagnoses to plantar fasciitis include:

- enthesopathy of the plantar fascia
- plantar fasciosis
- heel spur syndrome.

Diagnostic standard

A diagnosis from a qualified physician, nurse practitioner, or physician assistant (within their scope of practice) is required.

Plantar fasciitis is a clinical diagnosis made using history and physical examination with the following features:

- plantar heel pain most noticeable with initial steps after a period of inactivity, but also worse following prolonged weight bearing
- heel pain precipitated by a recent increase in weight bearing activity
- pain with palpation of the proximal insertion of the plantar fascia
- positive windlass test
- negative tarsal tunnel test
- limited active and passive talocrural joint dorsiflexion range of movement
- abnormal foot posture score

- high body mass index (BMI) in non-athletic individuals.

Imaging studies are usually not indicated for individuals that meet clinical examination criteria for plantar fasciitis until they fail conservative interventions. Refractory heel pain requires further diagnostic assessment, which may include some of the following studies:

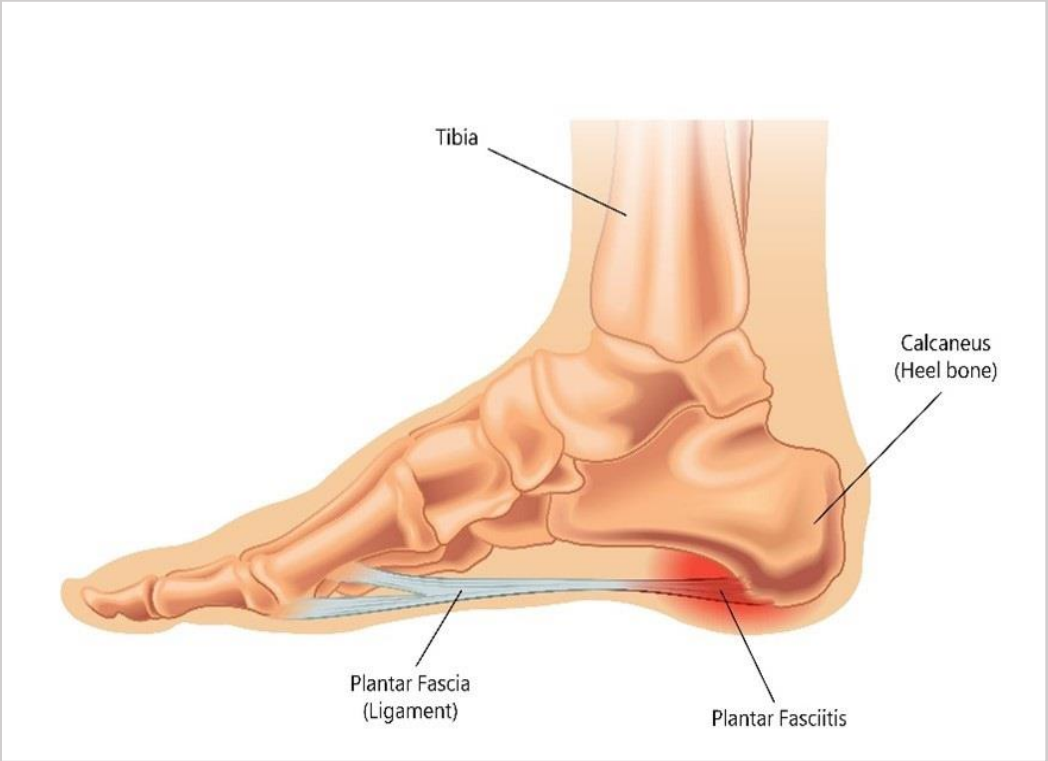
- x-rays to look for bony lesions
- magnetic resonance imaging (MRI) to rule out soft tissue or bony lesions
- electromyography (EMG) for tarsal tunnel syndrome
- bone scans for stress fracture or bone infection
- computed tomography (CT) to evaluate for subtalar arthritis, calcaneal cyst, and stress fractures
- ankle-brachial index and pulse volume recording to evaluate for peripheral arterial disease.

Note: For Veterans Affairs Canada (VAC) purposes, relevant imaging may be provided, but is not required.

Anatomy and physiology

The plantar fascia is a strong fibrous band of tissue that extends from the plantar calcaneal tuberosity to the flexor tendon expansion in the forefoot (Figure 1: Plantar fasciitis). The plantar fascia comprises three segments originating from the hindfoot, providing essential arch support, and serving as a shock absorber. The windlass mechanism is a term used to describe the role of the plantar fascia in supporting the arch of the foot and refers to the concept that as the toes are dorsiflexed, the plantar fascia is stretched thereby accentuating the arch of the foot.

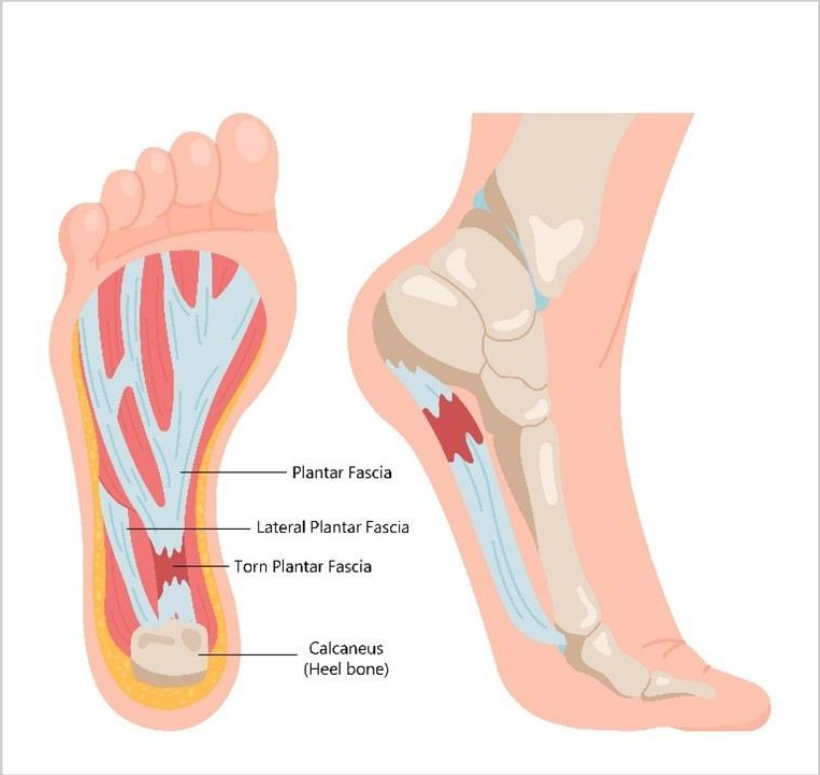
Figure 1: Plantar fasciitis



A side profile of the foot illustrates the tibia positioned above the ankle and the plantar fascia ligament stretching from the heel bone (calcaneus) to the ball of the foot. A highlighted area near the heel shows painful micro-tears in the plantar fascia, a common source of heel pain. Source: Veterans Affairs Canada (2024).

Plantar fasciitis is often an overuse injury primarily due to a repetitive strain causing micro-tears of the plantar fascia and can also occur due to trauma or other multifactorial causes (Figure 2: Torn plantar fascia). Calcaneal (heel) spurs are not uncommon findings in individuals with a history of plantar fasciitis and are not well correlated with plantar fasciitis symptoms. While heel spurs can occur with plantar fasciitis, they are not the cause.

Figure 2: Torn plantar fascia



The underside of a human foot shows the lateral plantar fascia extending from the heel bone (calcaneus) to the ball of the foot. A red-highlighted area near the heel indicates torn fascia and inflammation, characteristic of plantar fasciitis. A side profile view also displays the inflamed fascia zone near the heel. Source: Veterans Affairs Canada (2024).

There are numerous risk factors for developing plantar fasciitis which can be simplified into overuse or repetitive trauma risk factors (running, sporting activities, training), mechanical risk factors (improper footwear, pronated foot, externally rotated foot, pes cavus), degenerative risk factors (age, heel fat pad atrophy), and inflammation (rheumatoid arthritis, systemic lupus erythematosus, gout, and ankylosing spondylitis).

Clinical features

The most prominent clinical feature of plantar fasciitis is pain in the anteromedial aspect of the heel that is often insidious in onset and progressive. The pain is usually acute when the individual first steps out of bed or initiates movement after a period of inactivity (also referred to as “start-up” pain). The pain may worsen as the day

progresses, after periods of prolonged standing, and worsened when walking barefoot, on toes, or climbing stairs. Pain usually subsides with rest. Some people may experience burning, tingling, and a sharp pain in the heel. The discomfort can be anywhere on the sole of the foot.

On examination, pain is often localized to the anteromedial aspect of the heel on palpation. Mechanical changes in the foot such as pes planus (flat feet), pes cavus (high arches), tight Achilles tendon, or changes in the range of motion in the first ray of metatarsals, subtalar joint, or midtarsal joint may be noted.

Factors that can influence or trigger the onset of pain are foot structure (pes cavus or pes planus), overpronation, an excessive inward roll and collapse of the medial arch of the foot, tightness or weakness of the gastrocnemius, soleus, or Achilles tendon, excess weight, occupation, poorly fitting shoes, and sudden increases in activity or excessive training. Plantar fasciitis can resolve spontaneously with 80% of cases resolving within one year.

Plantar fasciitis is the most common cause of heel pain. Up to 15% of foot injuries in the general population and 17% of foot injuries in the running population are attributed to plantar fasciitis. Adults of all ages are affected with peaks between 40 and 60 years of age. Adult females present twice as often as males, while in younger individuals males and females are affected equally. One third of individuals experience plantar fasciitis bilaterally. Amongst military service members, female sex, black ethnicity, non-commissioned rank, and service in the army have been identified as risk factors for plantar fasciitis.

Entitlement considerations

Section A: Causes and/or aggravation

For VAC entitlement purposes, the following factors are accepted to cause or aggravate the conditions included in the Definition section of this EEG, and may be considered along with the evidence to assist in establishing a relationship to service. The factors have been determined based on a review of up-to-date scientific and medical literature, as well as evidence-based medical best practices. Factors other than those listed may be considered, however consultation with a disability consultant or medical advisor is recommended.

The timelines cited below are for guidance purposes. Each case should be adjudicated on the evidence provided and its own merits.

Factors

1. Having experienced **trauma** to the plantar aspect of the affected foot prior to clinical onset or aggravation of plantar fasciitis. For trauma to cause or aggravate plantar fasciitis, the following should be evident:

- within seven days of the injury, development of tenderness, pain, swelling, discoloration, or altered mobility, or any other pertinent sign or symptom, should occur in the sole of the foot, and
- signs/symptoms should recur, either continuously or intermittently, from the time of the specific trauma to the time of diagnosis.

2. Having a **biomechanical abnormality of the foot** at the time of clinical onset or aggravation of plantar fasciitis. Biomechanical abnormality means an injury or disease that has resulted in overpronation or under-pronation, or decreased ankle or forefoot flexibility. Examples include but are not limited to pes planus, pes cavus, tight Achilles tendon resulting in inadequate dorsiflexion, weakness of the plantar flexor musculature, and chronic foot pronation.

3. Having a **systemic arthritis** prior to clinical onset or aggravation of plantar fasciitis, including but not limited to, the following:

    - ankylosing spondylitis
    - arthritis associated with inflammatory bowel disease
    - psoriatic arthritis
    - Reiter's syndrome
    - rheumatoid arthritis
    - depositional arthritis (including gout and pseudogout).

4. Having an **overuse injury** affecting the plantar aspect of the foot within two months of clinical onset or aggravation of plantar fasciitis. Overuse injuries involve the sole of the foot and are caused by an extraneous physical or mechanical force.

    Examples of overuse injuries include:

    - increasing frequency or intensity of running, jogging, or training
    - participating in marching or foot drills
    - undertaking activity involving repetitive or prolonged weight bearing
    - increasing the frequency, duration, or intensity of weight bearing activity.

5. Wearing **ill-fitting footwear with inadequate cushioning** during weight bearing exercise which involves the affected foot within seven days before the clinical onset or aggravation of plantar fasciitis.

6. Having **class 3/severe obesity** (defined as body mass index [BMI] of 40 or greater) at the time of clinical onset or aggravation of plantar fasciitis.

7. Inability to obtain **appropriate clinical management** of plantar fasciitis.

Section B: Medical conditions which are to be included in entitlement/assessment

Section B provides a list of diagnosed medical conditions which are considered for VAC purposes to be included in the entitlement and assessment of plantar fasciitis.

- Calcaneal (heel) spurs
- Flat foot
- Pes planus
- Chronic calcaneal bursitis
- Pes cavus
- Club foot
- Chronic foot strain/sprain

Section C: Common medical conditions which may result, in whole or in part, from plantar fasciitis and/or its treatment

No consequential medical conditions were identified at the time of the publication of this EEG. If the merits of the case and medical evidence indicate that a possible consequential relationship may exist, consultation with a disability consultant or medical advisor is recommended.

Links

Related VAC guidance and policy:

- Ankylosing Spondylitis – Entitlement Eligibility Guidelines
- Pes Planus - Entitlement Eligibility Guidelines
- Rheumatoid Arthritis – Entitlement Eligibility Guidelines
- Pain and Suffering Compensation – Policies
- Royal Canadian Mounted Police Disability Pension Claims – Policies
- Dual Entitlement – Disability Benefits – Policies
- Establishing the Existence of a Disability – Policies
- Disability Benefits in Respect of Peacetime Military Service – The Compensation Principle – Policies
- Disability Benefits in Respect of Wartime and Special Duty Service – The Insurance Principle – Policies
- Disability Resulting from a Non-Service Related Injury or Disease – Policies
- Consequential Disability – Policies
- Benefit of Doubt – Policies

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