

# **How to Recognize Plantar Fasciitis Symptoms**

Four Methods: Recognizing Plantar Fasciitis Symptoms

Understanding the Causes of Plantar Fasciitis

Getting a Diagnosis

**Treating Plantar Fasciitis** 

Plantar fasciitis is a common heel inflammatory disorder that arises from the inflammation of ligaments called plantar fascia. These ligaments run along the sole of the foot and then connect to the heel bone. They help to maintain normal foot movement, support the arch of the foot, and give flexibility to the heel joint. If you think you have plantar fasciitis, it is important to know what symptoms to look for and how the condition comes about.

## Method 1

# **Recognizing Plantar Fasciitis Symptoms**

Look for pain and stiffness in the plantar fascia ligaments. The main symptom of plantar fasciitis is the pain that arise from the inflammation of the plantar fascia ligaments, pain is known to be located at the bottom of the foot down the heel with about four centimeters from it in the direction to your toes.

- The site of pain is said to be tender while physical examination with signs of heel stiffness, pain and heel stiffness come from the inflammation process happening from the continuous irritation and stress exerted on the ligaments that can cause tiny tears in them.
- Tearing can lead to fluids escaping from the soft tissues nearby and out of the small capillaries to form heel
  swelling and localized edema in a degree according to the severity of your ligaments' injury, this can cause the
  pain to be felt at the bottom of the heel with a degree of motion limitation, that can cause patients to limp in
  severe cases.

**2** Consider whether the pain is severe, and gets worse following specific movements. Pain is prescribed to be severe and in his strongest conditions in the early morning when the feet first touch the floor, other known times of strongest pain attacks are when standing for prolonged times, sitting or lying down too long then standing or moving, climbing up stairs or walking tiptoes, these all are because of heel stiffness then trying to move the foot, that can bring all the pain when moving the plantar fascia ligaments.

- Climbing stairs cause sudden sole stretch while moving your both feet on the stairs, which can trigger the
  severe pain at the irritated and weak ligaments, while sleeping the hours of night; the plantar fascia ligaments
  become more short and get stiffed for a long time, when the patient wake up and take his first step out of bed,
  pain is said to jump to the extreme when he raise his heel off the floor.
- This move cause a sudden stretch that force the plantar fascia ligaments to expand strongly after being shorted
  all the night, the over stretch or trying to lengthening the ligaments stimulate all the pain right under the heel,
  making it so painful to walk at the early morning.
- That explains too why the pain seem to decrease after making few steps around as the ligaments start to get a degree of flexibility allowing the pain intensity to decrease a little bit, this pain is also felt after a long time of sitting on the working desk or standing through the daytime.

Think about whether the pain becomes duller throughout the day. Pain can return dull or decrease in its intensity during the day or after performing light activities for short times, the reason for this is that the joint undergoes a degree of suppression in its stiffness degree as a result of both muscles and ligaments acquire looseness and flexibility with daily moves.

- However; pain degree can be increased to the maximum right after finishing any kind of physical activities or long walking as a result of the high strong inflammation that is formed right after stopping.
- Patients describe their pain to be very severe after the activities or in the other previous examples that were
  mentioned previously like prolonged standing, sitting, climbing stairs or in the early morning; to be as a burning
  or stabbing sensation, while it can be dull or mild during performing the activities themselves.

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- Consider other possible causes of pain. Patients can experience plantar fasciitis in one foot, or in both to be unilateral or bilateral, and pain to be decreased when resting, note that if you experience pain at nights, that is not from plantar fasciitis, other differential diagnosis medical conditions could be like arthritis (Inflammation of different body joints, in this case heel joint) or tarsal tunnel syndrome (Pressure on the tibial nerve running through the ankle, that can cause symptoms similar to the plantar fasciitis).
  - These could be more likely causes, the later can affect the tibial nerve functions to give numbness, tenderness, and weakness of the muscles and tendons, but these symptoms would be felt at the whole foot area, and in the toes too, not only under the heel like in plantar fasciitis.
  - Another condition is also called Calcaneal stress fracture that affects mainly the calcaneus bone at the heel, pain of this medical condition would be only restricted to the calcaneus area and to be tender on both its sides, and at the back of it too.
  - Achilles tendinitis is the inflammation of the tendon located at the back and above the heel, and so making its
    pain to be located mainly at these points, pain and tenderness can be radiated under the heel too that would be
    correlated with plantar fasciitis pain, doctor correct diagnosis is required to evaluate your medical condition and
    to follow a therapy plan that best suits your medical case.[1][2]

#### Method 2

## **Understanding the Causes of Plantar Fasciitis**

Consider whether your ligaments have been exposed to repeated stress. Being an inflammatory disorder; the plantar fascia ligaments can be inflamed when are exposed to continuous or severe stress, stress can cause minor injury to result in a kind of inflammation that make light pain to be felt under the heel, but repeated stress and continued shocks on the ligaments can actually make them weaker that can be irritated, persistent irritation would increase the risk of straining the ligaments and can easily cause tiny tearing to them, considered as a common heel problem; many people can get plantar fasciitis, if you are one of the people who have to stand for prolonged times on your feet, you may have higher risks than others.

- 2 Know that the disorder is more common in older people and athletes. The disease is more common in middle aged populations in the range between 40 to 60 years but somehow younger people can also experience it like with athletes, who are at higher risks of making sudden wrong moves.
  - Foot twist or wrong landing that can hurt their plantar fascia ligaments in a way or another, in addition; runners
    can have this disorder in great chances especially if they run on rigid surfaces like asphalt.
  - These rigid surfaces create greater resistance power that come up to the runner's feet, and can easily
    absorbed by their ligaments, muscles or tendons to be hurt badly if safety precautions weren't followed
    correctly.
- Think about whether you are an overpronator. Another condition that can help in developing plantar fasciitis could be like foot over pronation; a condition describes when the person's foot roll inward in an unnatural way that can lead to lose of the normal arch of the foot.
  - Overpronated persons will depend more on their big toe and the second to push their foot off the ground in a
    trail to stabilize their body, that would make big stress on and irritation of their muscles and ligaments, including
    the Achilles tendon and as in this case; the plantar fascia.
- 4 Understand that obesity can contribute to plantar fasciitis. Obesity can also be a reason in developing plantar fasciitis disorder, over weighted persons are at risk to have it when their extra body weight is always loaded on the feet, that can cause continuous pressure and stress on the plantar fascia ligaments with every foot and heel joint move.
- **5** Know that wearing the wrong shoes can lead to plantar fasciitis. The incorrect choice of your shoes can play a role in putting you at risks of developing the disease or not, shoes that don't give the required support and protection to your feet, heel and ligaments can easily stress and irritate the plantar ligaments leading to plantar fasciitis.

## Method 3

## **Getting a Diagnosis**

**Provide your doctor with your medical history.** When visiting your doctor; he will first need to know some

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- information on your life style, job nature and if you perform any kind of sports, tough types of sports that may involve strong or stressful sudden moves can over stretch the plantar ligaments leading to their irritation.
  - In addition to any history of previous injuries that may affect your feet, your medical profile and any chronic medical condition or medicines that you may have or take would be discussed too, before carrying physical examination.
- **2** Allow the doctor to perform a physical examination. While physical examination; doctor will search for any signs of heel swelling, tenderness point under the heel, pain and inflammation that can be manifested while gentle foot moving.
  - When asking the patient to take few steps, the doctor will also ask the patient to describe his pain onsets, when
    does he feel it usually and its severity, having strong pain first at the morning, when climbing stairs and after
    strong activities are positive signs of plantar fasciitis.
  - He may ask the patient to make some flexes to his affected foot, pain can also arise while doctor exerts a kind of pressure with his fingers on the weakened plantar fascia ligaments.
- Go for an x-ray or MRI. The doctor may ask the patient to perform X-rays or MRI (Magnetic Resonance Imaging) on his affected foot, these imaging tests are not for confirming the diagnosis, but they can exclude other optional medical cases that can trigger similar kinds of symptoms like bone fractures. [3]



## **Treating Plantar Fasciitis**

- Understand that treatment for plantar fasciitis takes time. Plantar fasciitis treatment depends mainly on suppressing and relieving the inflammation at the plantar fascia ligaments area, then to build up the soft tissues again after ensuring full recovery from inflammation.
  - Through some stretching exercises to regain flexibility and normal range of motion, the full treatment plan may
    take several months to ensure complete recovery from plantar fasciitis that can reach to nine months up to
    maximum two years.
  - To prevent other chronic conditions that may develop if ignoring or not adhering to the physiotherapist plan, like permanent heel pain that can influence the patient's walking way and his quality of life, this can be done by following the next points:
- **2** Rest your ankle to allow the ligaments to heal. Complete rest is required to allow natural healing time to occur, rest gives the soft tissues the opportunity to calm down and to get some comfort from stress and overload.
  - This is important to allow the inflammation to ease, forcing the ligaments or the weaken muscles to work can easily worsen the condition and delay the expected recovery time.
- 3 **Ice the inflamed areas of your foot.** Icing the affected heel area will make a great help in easing all the symptoms including the swelling resulted from the inflammation, and also the pain.
  - Ice effects come from its cooling effect that acts directly on the injured soft tissues with an astringent power,
    helping in reducing the amount of the escaped fluids to the nearby soft tissues, and so decreasing the degree
    of swelling, and suppressing much of the pain that would happen as a result of accumulated fluids pressing on
    the tiny nerve endings at the tissues around, causing the pain onsets to start.
  - Note that ice should never be applied directly on any part of your skin, it should be wrapped in a clean towel, then to be put on the affected heel, and on the upper portion of the affected foot too, ice should be applied for twenty minutes every two or three hours at the first three days, then to be applied only twice daily after, a physiotherapist would advise you to re apply ice after finishing your training program when recover or after finishing performing your sports.

Take medications to relieve any pain. The doctor will prescribe some analgesics to relieve your pain, like non steroidal anti inflammatory drugs (NSAIDs) that are known to be powerful analgesics, anti pyretic and anti inflammatory agents, their effects come mainly from their actions in body by preventing the formation of prostaglandins,

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the main chemicals released during the inflammation process.

- This is done by blocking the two enzymes responsible for their production named COX I and COX II, their effects can suppress the inflammation, irritation, swelling and pain stimulated at the affected foot, so that will help the patient to get over his painful times, and to achieve fast recovery, examples are as Voltaren (Declofenac salt) available as 25, 50, 75, and 100 mg tablets, effervescent sachets, injections, and topical applications, or Feldene (Piroxicam) available as 10 and 20 mg capsules, 10 and 20 mg dispersible tablets, injections and sublingual tablets.
- NSAIDs can be taken as doctor's orders or when ever needed, injections, sublingual tablets and effervescent
  sachets provide rapid relief from painful symptoms, topical gels as Voltaren gel can be applied on the upper or
  lower side of the foot, and around the heel to provide direct relief from pain and to get rid of inflammation.
- NSAIDs oral formulations should be taken on full stomach to prevent any gastric upset or nausea feeling, while
  they are contraindicated in any case of gastric or peptic ulcers, taking blood thinners as Warfarin or having any
  hepatic or renal disorder.
- **5 Get a corticosteroid injection to decrease pain, swelling and stiffness.** Corticosteroids can be injected directly at the pain point at the affected heel, this method can bring rapid relief of inflammation signs as injecting steroids directly into the injured ligaments will make their strong anti inflammatory properties to work, treating and masking all the irritation there, decreasing the swelling, pain and joint stiffness that would improve the patient movement. #\*Steroids can also be applied directly on the affected foot by the patient through using one of their topical creams like Elocon cream (Mometasone) to be applied two or three times daily at the site of pain.
- **6** Provide more support for your foot. Foot supporters like orthotics, foot insoles or heel cups are excellent in treating irritated, inflamed feet, in addition to many other various medical feet conditions like over pronation or abnormal foot arch.
  - For these different medical feet conditions; different kinds of these equipments are designed to match and suit every case to provide maximum support, by being extra cushions to absorb different shocks and tension instead of being transmitted to the patient's feet.
  - Orthotics are good solution to give complete support to the whole lower portion of the feet to provide comfort to
    the full area along the whole axis of the plantar fascia ligaments, and to support the normal foot arch during
    each step and with any physical activities being performed.
  - Insoles can be added as extra supportive cushions inside your current shoes as they act as shock absorbers, having the ability to distribute the pressure evenly that can come up from the ground with walking, jumping or running.
- Wear a splint at nighttime. Night splints are leg braces that their function is to keep the foot in a flexion pose, they can be applied during the nighttime to make stretching to the patient's calf muscle and foot arch.
  - This aids in lengthening the Achilles tendon and the plantar fascia ligaments at the same time, helping in reducing much of the strong morning pain attacks, heel stiffness and rigidity.
  - Splints are usually prescribed by doctors during the first weeks of injury, to be removed according to the
    patient's condition and his response to his treatment therapy, the doctor may need to re prescribe them again if
    the patient condition didn't show the expected improvement.
- **Follow** a special training program to strengthen your muscles. Special training program is needed to strengthen the lower leg muscles, to regain normal balance and to remove any pressure or unwanted load on the injured over stretched ligaments.
  - Exercises should be done at the morning after getting out of bed to decrease much of the heel stiffness and pain felt at this time, the exercises have to be repeated during the daytime too.
  - Exercises help also in stretching the Achilles tendon and plantar fascia ligaments helping to ease the plantar fasciitis, examples can be written as:
- **9 Do a toe stretching exercise.** The patient can perform this exercise while sitting on a chair, and extending his affected leg in front of him while keeping his heel touching the floor, now gently he can raise his foot up and with his hand he have to hold his big toe and pull it toward his leg, count to twenty, then release.

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- Repeat three times and switch to the other leg, then to do the whole exercise few times a day including the time
  after waking up, the exercise makes a full stretch to the plantar fascia ligaments, depending on the pulling
  power by the patient's hand while pulling his big toe.
- This would release the stress and irritation at the ligaments, helping in suppressing the heel stiffness felt at the morning, by loosen them and gaining some flexibility, by time this exercise would provide a degree of flexibility and strength to these ligaments.<sup>[4]</sup>

Perform a calf stretching exercise. The patient can perform this exercise while standing against a wall, depending on his both hand palms on the wall being in his shoulders line, and extending his affected leg behind him keeping his knee straight while his foot and heel on the floor, now slowly he can bend the front knee till he feels a stretch at his lower back leg, count to twenty, then release. #\*Repeat three times then switch to the other leg, and to do the whole exercise few times a day, this exercise depends on stretching the calf muscle, and the Achilles tendon that will create a free space for the heel joint to move freely without any stiffness, it is suitable to be done at the morning to relief morning stiffness, any stress or shortening in the tendon will directly affect the plantar fascia ligaments and the heel movements.

 Performing these stretching exercises will relieve the tension in these soft tissues, and will build up the required strength to provide a nice degree of flexibility, to be able to resist any sort of sudden pressure or shocks in the future.<sup>[5]</sup>

#### Warnings

 Paracetamol is not sufficient to provide complete relief from plantar fasciitis symptoms, as paracetamol has weak anti inflammatory properties than NSAIDs, which are much better to be used in this condition.

## **Sources and Citations**

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