



What Runners Need to Know About Plantar Fasciitis

Armeli Mobile Physical Therapy
and Performance

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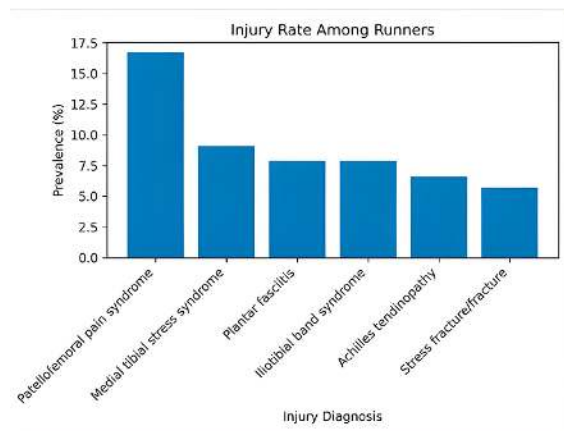


Runners, lace up your shoes and gear up for an enlightening journey through the landscape of plantar fasciitis! If you've ever felt the sting of that nagging heel pain, this guide is your new best friend. From the intricate anatomy behind plantar fasciitis to practical tips on prevention, treatment, and bouncing back, we're about to embark on a comprehensive exploration of this all-too-common runner's ailment.

This isn't just about tackling pain; it's about empowering you to maintain your stride, hit those personal bests, and enjoy the sheer freedom of running. So, let's dive headfirst into understanding plantar fasciitis. Who knows? By the end, you might even thank your feet for leading you here. Ready, set, let's heal those heels!

What Runners Need to Know About Plantar Fasciitis

Plantar fasciitis has an unwelcome habit of making itself at home in the running community. **Research** indicates that this pesky condition sneaks into the lives of about 4.5-20% of runners, securing a spot on the podium as the third most common running injury.



Before you start considering drastic measures, let's share a silver lining - only about 5-10% of cases need surgery. Now, for the not-so-great part: the healing process can feel like a marathon in itself, taking anywhere between **6-18 months**.

You're probably thinking, "Wait a minute, that's a lot of calendar pages!" And you're right. But here's the kicker: once you start actively addressing your plantar fasciitis, you can see improvements as early as three weeks in. Complete recovery, on the other hand, may take anywhere from 2 to 6 months, depending on the severity of your condition. It's a simple rule of thumb: the longer you've been dealing with it, the longer it takes to treat.

Read more: [How long will my plantar fasciitis last?](#)

But hey, don't sweat it! Because the best weapon against any injury is knowledge, and that's what this article aims to arm you with. We're going to explore what plantar fasciitis is, the role of the plantar fascia, how it ends up in the injury crosshairs, and most importantly, we'll delve into research-backed strategies for treatment.

Ready to dive in?

01

What is Plantar Fasciitis?

What Runners Need to Know About Plantar Fasciitis



What exactly is plantar fasciitis?" you may ask.

Let's borrow a definition from the good folks at the [Mayoclinic](#):

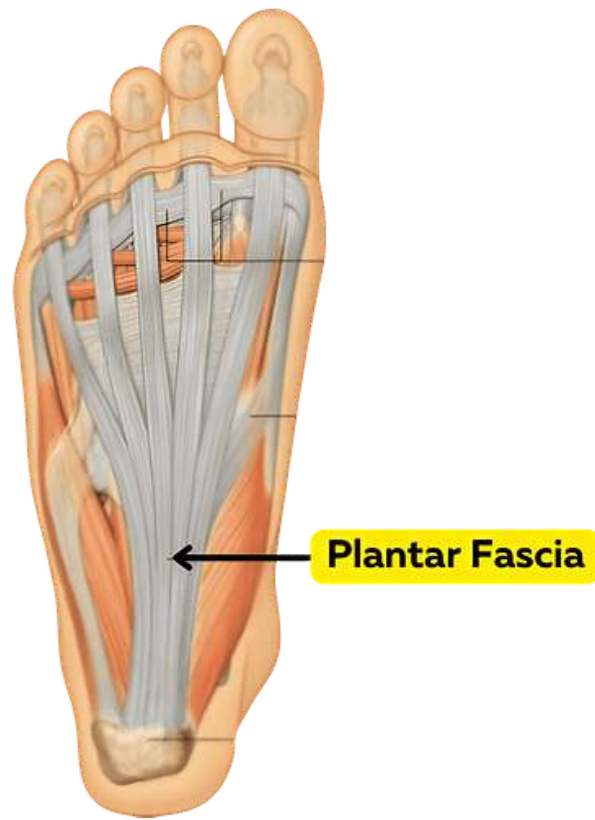
"Plantar fasciitis (PLAN-tur fas-e-I-tis) is among the most prevalent triggers of heel pain. It's characterized by the discomfort of a thick band of tissue that runs across the bottom of each foot, connecting the heel bone to the toes, known as the plantar fascia."

Now, that's a solid definition. But there's a wrinkle we need to iron out.

Contrary to what you might think, there **isn't actual inflammation** associated with plantar fasciitis. Think about it more as irritation. No wonder anti-inflammatories don't quite do the trick.

And to be clear, when they mention the "thick band of tissue," they're referring to the plantar fascia. You know, the key player in the condition's very name.





Anatomy of the Plantar Fascia

The plantar fascia is an important connective tissue structure located on the sole of the foot. Also known as plantar aponeurosis, the plantar fascia has key roles in providing support, attaching muscles, and stabilizing the arch of the foot.

Plantar Fascia Structure

Let's delve deeper into the anatomy of the plantar fascia. The plantar fascia is a sturdy fascial tissue band stretching across the sole of your foot, creating a robust connection between your heel and toes.

Don't confuse this fascial tissue with muscle, though—they have distinct properties. Muscle is contractile tissue that enables movement and force generation, while fascia is a fibrous connective tissue that provides support, protection, and structure to the body.

The plantar fascia is composed of three separate bands. The central band plays the starring role. You might come across some **claims** saying this central band is a direct continuation of the calves. However, the science on that isn't entirely settled.

Some studies indicate that in adults, the central band develops independently of the Achilles as a separate structure. This ambiguity doesn't diminish the fact that many research studies have connected tight calves to plantar fasciitis, citing the theoretical continuation of the plantar fascia from the gastrocnemius muscle as a potential reason.

Read more: [Calf tightness and plantar fasciitis](#)

The plantar fascia also serves as the anchor point for vital muscles like the abductor hallucis, flexor digitorum brevis, quadratus plantae, and the lumbricals. These muscles, often referred to as the "foot core," play a pivotal role in maintaining foot health.

Plantar Fascia Blood Supply

Another feature of the plantar fascia important to note is its poor blood supply, particularly where it attaches to your heel bone. This makes this area a region of susceptibility and is often where plantar fasciitis occurs. The lack of blood flow is a common theme in overuse injuries which, as we'll talk about later, is the leading cause of plantar fasciitis (overuse that is).

Other Characteristics of the Plantar Fascia

- Fascial tissue is not muscle. It can not contract, and it doesn't stretch well. Think of fascial tissue as a rope versus a muscle is like a rubber band.
- The plantar fascia can **change its composition** based on external demands, thickening to high stress and becoming thinner without use.
- **Studies** have shown the plantar fascia has nerve endings. The nerve endings are capable of sending pain signals to your brain. They are the reason plantar fasciitis hurts.

02

The Role of the Plantar Fascia



The most crucial aspect of understanding plantar fasciitis is to know how the plantar fascia functions for your body.

To do this you're going to have to get imaginative.

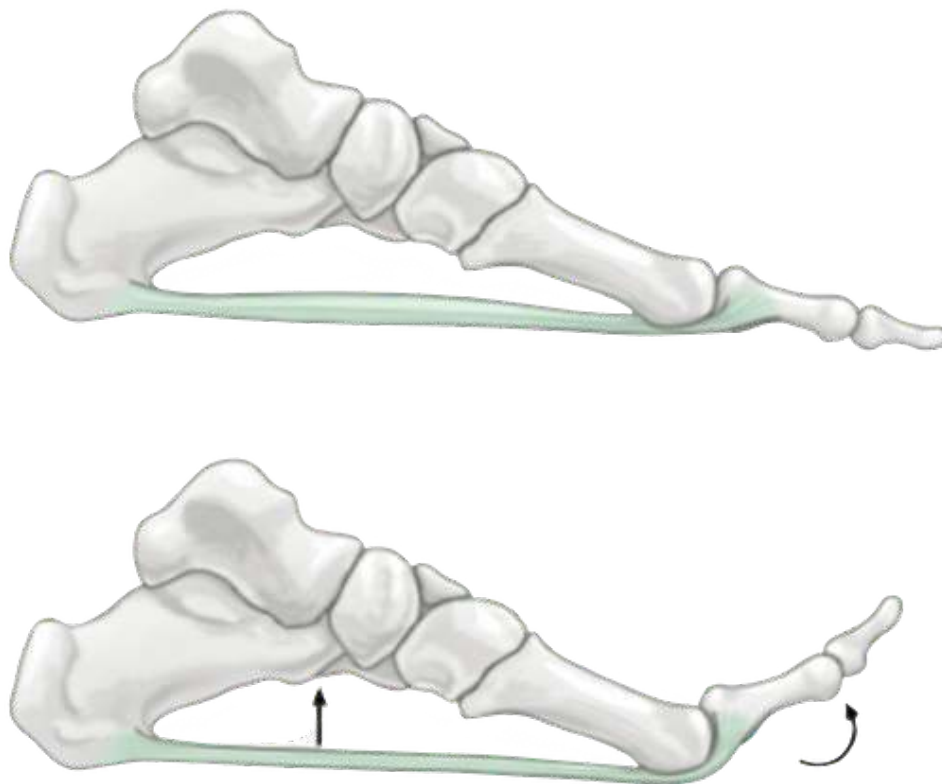
I want you to imagine your foot as a bridge. The plantar fascia is like a strong cable that runs along the underside of the bridge, from the heel (that's the calcaneus) to the front of your foot.

Now, what does this cable do?

Now, picture a bow that you would use to shoot an arrow. Do you know how the bow keeps its shape thanks to the string's tension? That's similar to what the plantar fascia does for your foot. It supports the arch of your foot, making sure it doesn't collapse under your weight.

On top of that, because of its attachment points and rigidity, the plantar fascia has a unique feature – it's called the windlass mechanism. Think of it like a fancy fishing reel. As you extend your toes (put weight through them while you are walking), the plantar fascia wraps tighter around the bones in your foot, raising your arch and turning your foot into a sturdy lever.

Windlass Mechanism



What Runners Need to Know About Plantar Fasciitis

Each time you take a step, whether walking or running, this windlass mechanism swings into action. As your heel lifts and your toes extend, your foot transforms from a flexible shock absorber to a solid lever, ready to push off and propel you forward.

But what happens when your foot is flat on the ground, like when you're just standing around? Well, your arch flattens a bit, which pulls and stretches the plantar fascia. This stretching helps your foot resist the force of your body weight and gives your toes extra pressure to grip the ground.

To give you an idea of how important this plantar fascia is, **one study** found it carries around 14% of the total load on your foot. Given peak loads range from 1.1 to 1.5 times body weight (BW) during walking, 2.5 to 3.0 times BW during running, and can exceed 4.0 times BW during jumping activities, 14% can be substantial.

And if you're still not convinced about the importance of the plantar fascia, consider this: **a case study** showed if a surgeon cuts your plantar fascia (don't worry, they only do this in particular cases), the arch of your foot can collapse, and your toes can curl up, a condition known as hammer toes. This really underlines how crucial the plantar fascia is in keeping your foot and toes stable.

So, there you have it, I've brought you through a bridge, bow and arrow, and fishing rod, but hopefully, you understand the uniqueness in the function of the plantar fascia.

03

How Does Plantar Fasciitis Develop in Runners?

With a firm understanding of the structure and function of the plantar fascia, it's simpler to grasp how plantar fasciitis can occur. As I just said, each running stride causes your feet to bear forces about two to three times your body weight. Your plantar fascia is instrumental in handling this load.

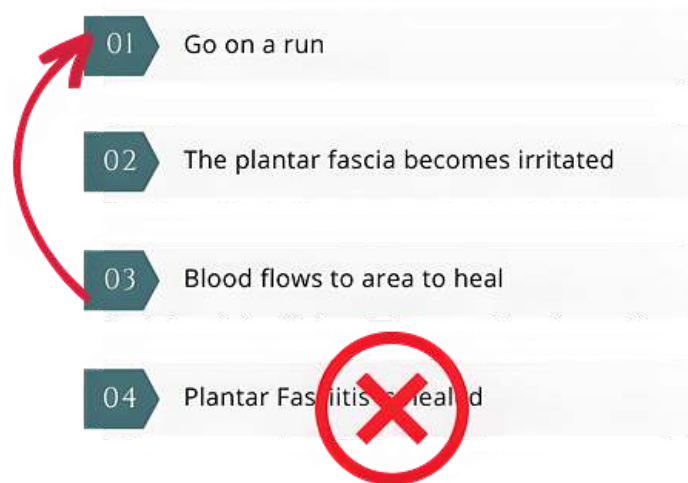
When your foot hits the ground, it flattens swiftly to absorb the impact, stretching the plantar fascia. However, the plantar fascia isn't exactly elastic. Remember our rope comparison? It's constructed for resilience, not flexibility. This limited give results in substantial tension at the heel bone.

So, your body weight triggers the plantar fascia to stretch, inducing tension at the heel. Ideally, a supple plantar fascia, sturdy foot muscles, and a robust heel bone can manage this tension during a run. But if any of these components fail, the tension may become overwhelming, leading to irritation at the heel, aka plantar fasciitis.

PROCESS OF PLANTAR FASCIITIS



PROCESS OF PLANTAR FASCIITIS



When this irritation starts your body kicks into the healing cycle. The inflamed plantar fascia sends signals that encourage blood flow to the area. This increase in blood flow brings nutrients to heel heal the plantar fascia and when give some time to operate your plantar fasciitis is healed.

However, like we talked about your plantar fascia doesn't have great blood supply. So this healing process takes a long time. In addition even if you take a break from running (good for your, a lot of runners don't until it is too late) you still stress your plantar fascia even while walking. It's like trying to bail water out of a boat that has a hole in it.

Over time, the area grows more irritated. The pain receptors in your plantar fascia detect this irritation, resulting in the sensation of pain. And there you have it - plantar fasciitis.

What Runners Need to Know About Plantar Fasciitis

If left untreated, the condition can intensify with continued running. It may begin as heel pain with your first steps in the morning, then progress to constant pain along the base of your foot, even during simple walking. The more intense and persistent the symptoms, the more severe the plantar fasciitis.

Read more [The Stages of Plantar Fasciitis](#)

04

Diagnosing and Symptoms of Plantar Fasciitis in Runners

Great, now that we've covered the ins and outs of the plantar fascia and how plantar fasciitis can develop in runners, it's time to pinpoint if that's the source of your pain. In the following sections, I'll provide a comprehensive guide, complete with additional resources, to help you decipher whether plantar fasciitis is the culprit behind your discomfort.

Typical Symptoms of Plantar Fasciitis in Runners

Let's break down some of the common symptoms of plantar fasciitis in runners:

- **Heel Pain:** This is a common sign. Most people will feel a constant dull, aching, or throbbing pain localized around the heel area.
- **Morning Trouble:** Have you noticed your foot hurting with those first steps out of bed in the morning or after you've been sitting around for a while? That's another classic sign of plantar fasciitis and affects most people with plantar fasciitis.
- **Activity Paradox:** Your pain might improve when you're active, like when you're halfway through a run. But watch out! After standing or walking for a long time, the pain can sneak back.
- **Tenderness:** You know that tender spot on the inside of your heel. That's the medial calcaneal tubercle. If it's tender when you press on it, that's another sign pointing toward plantar fasciitis.
- **Double Trouble:** While plantar fasciitis usually strikes one foot at a time, **up to 30% of people can have it in both feet.** Talk about bad luck, right?

Read more in depth about [symptoms of plantar fasciitis in runners.](#)

What are NOT Symptoms of Plantar Fasciitis in Runners

Let's go over some symptoms that typically aren't linked with plantar fasciitis. If you're experiencing any of these, it might be something else causing your foot pain:

- **Electric Shocking Pain:** If you're feeling burning, shooting, or shock-like pain, this might be more suggestive of nerve entrapment, like Baxter's neuropathy, rather than plantar fasciitis.
- **Achilles Pain:** Pain and swelling along the back of your heel? This could indicate **Achilles tendinopathy**, which is a different foot problem.
- **Constant Pain:** Plantar fasciitis pain typically eases with activity. If you're experiencing constant pain throughout the day that doesn't improve when you move around, it might not be plantar fasciitis.
- **The Back-and-Foot Combination:** If your heel pain is hanging out with low back pain and/or shooting leg pain, it could be caused by nerve root impingement, a condition that affects the spine.
- **The Morning Stiffness:** Experiencing bilateral heel pain with morning joint stiffness lasting more than 30 minutes? This could potentially point toward inflammatory arthritis.
- **Trauma:** Significant trauma to the heel is more likely to result in a fracture than plantar fasciitis.
- **Pain Party:** If you're dealing with heel pain alongside discomfort in multiple other joints, it's less likely to be isolated plantar fasciitis.
- **Pain Without Borders:** Pain all over the bottom of your foot, not just focused on the medial heel, is not the typical distribution for plantar fasciitis.



Factors That Contribute to Plantar Fasciitis in Runners

The below table below is a quick look at some factors that may contribute to runners getting plantar fasciitis. They are split up into three categories:

1. Anatomic Risk Factors: These are related to the physical structure and condition of your body.
2. Biomechanic Risk Factors: These have to do with how your body moves. Overpronation, for instance, is when your feet roll inward too much when you walk or run.
3. Environmental Risk Factors: These factors are related to your surroundings and lifestyle.

Risk Factors for Plantar Fasciitis

Anatomic	Biomechanical	Environmental
<ul style="list-style-type: none">• Obesity• Flat Feet• High-arched feet• Tight Achilles tendon	<ul style="list-style-type: none">• Overpronation• Limited ankle dorsiflexion (pulling foot up)• Weak foot core• Weak calves	<ul style="list-style-type: none">• Poor training regimine• Deconditioning• Walking or standing on hard surfaces• Standing• Walking barefoot

SELF CHECK OF PLANTAR FASCIITIS



How Plantar Fasciitis is Diagnosed

When you first visit your doctor, they'll listen to your symptoms and ask you some questions.

Key things they might ask about include:

- Symptom Localization: Is your pain and tenderness focused around the inner part of your heel? This is where the plantar fascia starts its journey across the bottom of your foot.
- Pain Timing: Does your pain seem to be the worst with your first steps in the morning or after you've been inactive for a while?
- Activity-Related Pain: Do you find your pain eases off when you start moving but then comes back with a vengeance if you're on your feet for too long?

What Runners Need to Know About Plantar Fasciitis

Next, your doctor will examine your foot. They'll be looking for a few specific things:

- **Spot Check:** They'll press on the inner part of your heel to see if it's tender.
- **Flexibility Test:** They might check to see if your ankle has restricted upward movement (dorsiflexion), especially when your knee is straight. If so, it could mean that your gastrocnemius muscle (one of the big muscles in your calf) is tight. This is known as a positive Silverskiold test.
- **Risk Factor Review:** They'll also look for anatomical and biomechanical risk factors like flat feet, high arches, or a difference in leg length.

Imaging is not routinely required to make the initial diagnosis of plantar fasciitis in uncomplicated cases. Imaging is more useful in the following situations:

- **Atypical presentations:** If your symptoms or exam findings are not classic for plantar fasciitis, imaging can help rule out other causes of heel pain like stress fractures, nerve entrapment, or inflammatory arthritis.
- **Refractory cases:** If your heel pain persists despite 6-12 months of conservative treatment like stretching, orthotics, etc., imaging is warranted to confirm the plantar fasciitis diagnosis and evaluate for other underlying causes.
- **Pre-operative planning:** Imaging, especially MRI, may be obtained prior to surgical interventions like plantar fascia release to evaluate the integrity of the plantar fascia and surrounding structures.
- **Guiding minimally invasive treatments:** Imaging modalities like diagnostic ultrasound allow accurate needle placement and guidance for injections like corticosteroids or platelet-rich plasma.

What Runners Need to Know About Plantar Fasciitis

Getting your foot checked out by your doctor is important. But I get it, waits to see someone are long, co-pays are rising, and if you can figure it out yourself, why not?

The main things you need to be looking for:

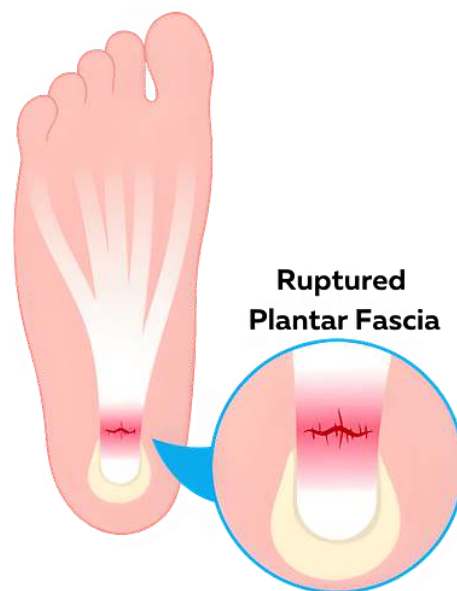
- Pain in the heel or bottom of your foot while taking your first steps in the morning or after prolonged sitting
- Pain with the Windlass Test (see picture for explanation)
- Pain when you press on the middle part of your heel



Red Flags of Plantar Fasciitis

Plantar fasciitis typically doesn't come with any alarming "red flags." It's often a manageable condition that can be treated effectively with strategies like rest, physical therapy, and pain management.

However, there's one potential scenario that every runner should be aware of. Imagine you're out on your usual run. You're feeling good, your pace is steady, and you're in the zone. Suddenly, as you push off to run faster or change direction quickly to avoid a sidewalk curb, you feel a sharp, "pop-like" sensation and intense pain in your foot. This could signify a more serious issue: a plantar fascia rupture.



The plantar fascia is solid - after all, it supports you with every step you take. But if it's subjected to a very high force, like during a sudden acceleration or an abrupt change in direction, it could potentially rupture.

What Runners Need to Know About Plantar Fasciitis

Plantar fascia ruptures have been associated with those suffering from plantar fasciitis in addition to athletic activities, making runners no exception. If you experience this sudden, severe pain, it's critical to stop running immediately and seek medical attention. A plantar fascia rupture is a significant injury that requires prompt medical intervention to promote healing and prevent long-term complications.

So while plantar fasciitis isn't usually a cause for major concern, a potential rupture of the plantar fascia is a "red flag" that requires immediate attention.

05

**Plantar Fasciitis Impact on Running:
An Unseen Roadblock for Runners**

What Runners Need to Know About Plantar Fasciitis

As a runner, you often pride yourself in your ability to overcome obstacles. You push through fatigue, you conquer hills, and you endure the elements. But what happens when the obstacle isn't something you can see on your running route? What if it's in your own body? Welcome to the world of plantar fasciitis.

I'll delve into how plantar fasciitis can physically affect your running performance and routine. We'll also explore the psychological impacts plantar fasciitis can have, showing that plantar fasciitis isn't just a physical roadblock - it's a mental one, too.



How Does Plantar Fasciitis Affect Your Running Performance and Routine?

- **Speed and Endurance:** First off, the pain and discomfort that come with plantar fasciitis can take a toll on your speed and endurance. When every step sends a jolt of pain through your foot, maintaining your usual pace or covering your typical distance is difficult.
- **Biomechanics:** Pain has a sneaky way of throwing your body off balance. To avoid discomfort, you might find yourself altering your stride or running technique. While this might offer temporary relief, these changes can lead to inefficiencies in your running form and might even set the stage for other injuries.
- **Training Volume Takes a Hit:** When dealing with plantar fasciitis, your training volume or intensity often needs to be reduced to give your foot a chance to heal. While necessary, this reduction can lead to a decrease in overall fitness and running performance.
- **Focus Falters:** Running requires a certain level of focus and mental toughness. But when you're constantly battling foot pain, your attention can quickly shift from your running form or pace to the discomfort, affecting your overall performance.
- **Recovery Time:** In more severe cases, plantar fasciitis may require you to take a break from running to allow for proper healing. This interruption in your training routine can result in a loss of fitness and conditioning, making it challenging to regain your previous performance levels once you're ready to return. Cross-training can be an excellent way to maintain your cardiovascular and muscular endurance while taking a break from running.

How Does Plantar Fasciitis Psychologically Impact Runners

As any runner can attest, plantar fasciitis is more than just a physical injury. It can infiltrate every aspect of your life, impacting not just your physical performance but also your psychological well-being. Let's take a closer look at how this common running injury can impact your mental state:

- **Frustration:** One of the first emotional responses to plantar fasciitis is often frustration. You're in pain, your running schedule is disrupted, and your hard-earned progress feels like it's slipping away. This can be incredibly disheartening if you're training for a specific goal, like a race or a new personal record.
- **Stress and Anxiety Take Center Stage:** Plantar fasciitis brings with it a cloud of uncertainty. When will the pain subside? When can you get back to running pain-free? This constant worry can lead to heightened stress levels and even anxiety, further impacting your overall quality of life.
- **Mood Swings and Irritability:** Living with pain from plantar fasciitis can affect your mood. You might find yourself more irritable or even experiencing periods of depression. If running is your primary stress relief or source of joy, being unable to participate can negatively impact your overall mood and well-being.
- **A Blow to Your Runner's Identity:** For many, running is more than just a hobby – it's a part of their identity. So when an injury like plantar fasciitis strikes, it can shake your sense of self. This impact on your self-identity can be one of the most complex psychological aspects to cope with.
- **Motivation on the Decline:** When you're dealing with ongoing pain and your routine is disrupted, it's common to experience a loss of motivation. This lack of drive can extend beyond running, affecting other areas of your life.



FIX YOUR PLANTAR FASCIITIS GET THE EXERCISE PROGRAM

**Start Your Journey
to Recovery**



- **Fear of Re-injury:** Even once you've physically recovered from plantar fasciitis, the fear of re-injury can linger. This fear can hold you back from getting back to your usual running routine, adding another layer of psychological distress.

Remember, it's normal to experience these psychological impacts when dealing with plantar fasciitis. Techniques like cognitive-behavioral therapy, mindfulness, and stress management can be beneficial.

At the end of the day, remember that recovery is not just about healing physically but also about addressing the psychological impacts of the injury. After all, running is as much a mental game as a physical one.

06

When it is Time to Take a Break From Running



One of the most common questions I get from runners with plantar fasciitis is, **“Will my plantar fasciitis get better if I keep running?”**.

I know, as runners, we have that innate urge to keep going, no matter what. We tell ourselves, "No pain, no gain," right? But here's the thing with plantar fasciitis: sometimes, you've just got to know when to hit pause.



Here are some signs it may be time to take a break from running:

- One clear sign it's time to stop running is when your plantar fasciitis pain starts to affect your everyday life. You know what I mean: you can't walk properly, you're limping, you can't stand for long periods, you're constantly sitting down to give your arch relief. When it gets to this point, your body is literally screaming at you to stop, and it's time to listen.
- If you've tried to decrease the volume of your training, but the pain still persists, that's another sign. It's like trying to drive a car with a flat tire. You can try to go slower, but it's not going to fix the problem. You need to stop and address the issue head-on.
- And if you've been battling symptoms for over a month with no improvement, it's time to take a break from running. Think about it: if your car's engine light was flashing for a whole month, would you keep driving it? Probably not.

In these situations, it's crucial to stop running and focus on recovery. It might feel frustrating to be sidelined, but remember that recovery is also a part of training. Consider it an opportunity to work on other aspects of your fitness and return stronger.

So listen to your body, my friend. Sometimes, stopping is just another step on the road to recovery. I promise you, those running shoes will be waiting for you when you're ready to lace them up again.

07

When to See a Doctor About Plantar Fasciitis



When you're dealing with persistent arch pain, it can sometimes be tough to know when it's time to seek professional help. But knowing when to consult a doctor for plantar fasciitis can make all the difference in your recovery.

Let's talk about some of the key symptoms that signal it's time to book that appointment.

- **Immediate Onset of Pain or Bruising on the Arch of the Foot:** This could be a sign of a more severe condition, the plantar fascia rupture we talked about earlier. This condition often results in severe, immediate pain and sometimes noticeable bruising on the foot. It's typically more painful than traditional plantar fasciitis. If you suspect a rupture, you should see a healthcare professional immediately to prevent further damage and to start an appropriate treatment plan.
- **Lack of Improvement with Home Treatments:** If you've been diligently following the various treatment methods mentioned in this guide for a month—be it strength exercises, stretching, massage, wearing appropriate footwear, and so on—but you're not experiencing any relief, it's time to check in with your doctor. Remember, while these methods are effective for many, every individual is unique, and what works for one may not work for another. So, if your self-treatments aren't hitting the mark, it's crucial to seek professional guidance.
- **Worsening Symptoms:** If your plantar fasciitis symptoms are getting worse rather than better, don't ignore them. An increase in pain, or difficulty in walking indicates that your condition may worsen, and it's time to consult a healthcare professional.

What Runners Need to Know About Plantar Fasciitis

- **Interference with Daily Activities:** If your foot pain is severe enough to interfere with your daily activities—like walking, working, or even standing—you should not delay seeing a doctor. Plantar fasciitis should not severely impact your quality of life, and immediate medical attention is necessary if it does.

Remember, while plantar fasciitis is a common ailment, especially among runners, it's crucial not to take your symptoms lightly. Listen to your body, and don't hesitate to seek help when you need it. Your feet carry you every day; it's essential to take good care of them!

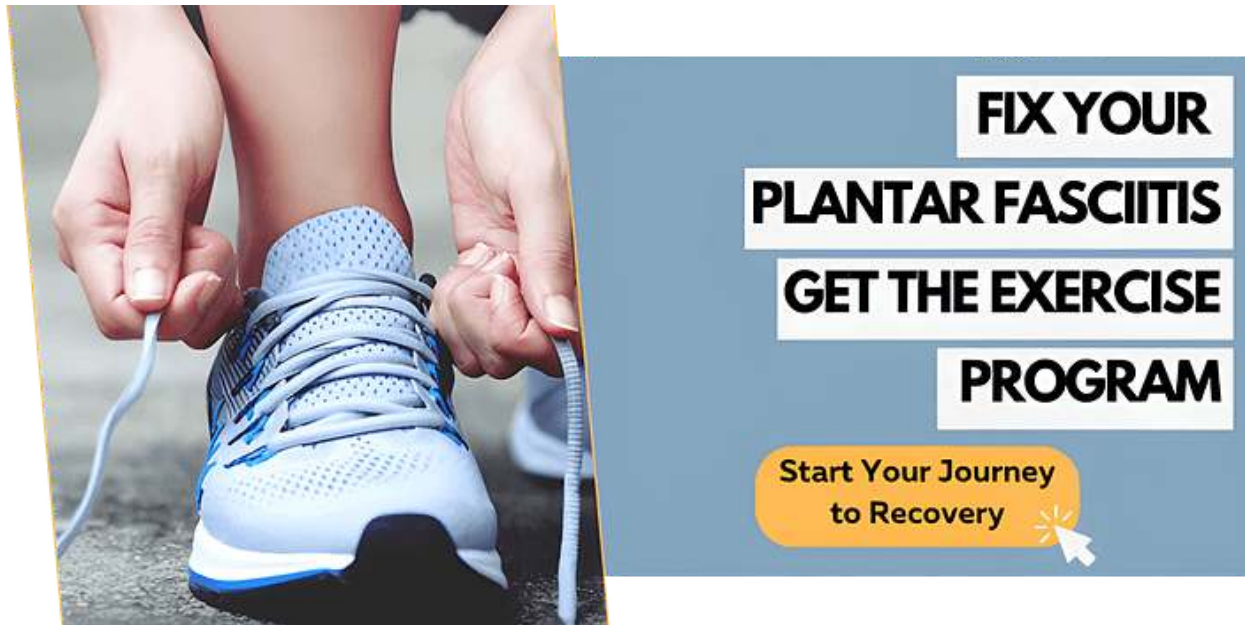
08

Treating Plantar Fasciitis for Runners

What Runners Need to Know About Plantar Fasciitis

Alright, now that we've dug deep into understanding what plantar fasciitis is, the risk factors that make you more susceptible to this condition, how it typically manifests in runners, and the red flags that signal it's time to consult a doctor, let's get to the heart of the matter - the part you've been eagerly awaiting.

It's time to explore how to effectively treat your plantar fasciitis.



Tools for Plantar Fasciitis in Runners

While there's no magic wand for plantar fasciitis in runners, there are a host of tools that can make a significant difference in managing your symptoms and supporting your recovery.

From heel pads and compression socks to night splints and innovative taping methods. You'll discover when and how to use each one and what benefits they offer. We'll explore each tool's role in providing immediate relief, and when combined with an [exercise program](#) to fix the root cause, you can say goodbye to plantar fasciitis for good!

Heel pads

Heel pads are a tool that can provide immediate relief from your plantar fasciitis. They work to alleviate pressure on the sensitive heel. [Research](#) has shown heel pads can offer runners some short-term, immediate relief from plantar fasciitis. However, the long-term effects are lacking.

Think of heel pads as a band aide. Heel pads will help your plantar fasciitis pain but won't fix the problem. Think about it, if you have plantar fasciitis from weak or inactive glutes, inserting a heel pad will not make your glutes stronger.

I do like heel pads as an aide to help you treat your plantar fasciitis. They help you get out of pain quickly, allowing you to tolerate more activity. When you can do more, you can better work on weaknesses and actively recover faster.



Taping

Despite being an old-school method, **taping for plantar fasciitis** has strong **scientific** backing. Taping your arch can significantly alleviate the symptoms of plantar fasciitis by reducing overpronation and, therefore, the tension on the plantar fascia during running.

Different types of tapes, such as athletic tape, Leuko tape, and KT tape, offer varying degrees of tensile strength, flexibility, and comfort. The choice of tape depends on personal preference and the specific needs of the runner.

Taping is most effective when applied before running or cross-training, providing support to the arch and reducing stress on the plantar fascia. However, taping before sleeping, though common, is not as effective due to the static tightening of the muscle during sleep.

Two effective taping techniques with KT Tape are the plantar fascia assist and the supination assist methods, which aim to support the plantar fascia and alleviate pressure from it. Leukotape, firmer than KT Tape, is commonly used for the low-dye method, providing more rigid support.



Foot Orthosis

Either over-the-counter or custom-fabricated foot orthotics can work to support the foot's arch and cushion the heel. Foot orthotics have been **proven** to reduce pain and improve function, particularly for those who respond to tapping.

I want to add custom foot orthotics are expensive. If you do not have custom orthotics, don't feel like you have to go out and buy a pair. The orthotics you get from the shelf are as effective as custom-made ones, according to this **paper**.

Factors you will want to consider are the rigidity of the orthotic, your arch height, the heel cup design, and the length of the orthotic.

Night Splints

Wearing night splints has **proven** to be an effective method for treating your plantar fasciitis, especially for those with pain during their first steps in the morning.

Here's why:

You've probably never noticed, but most everyone sleeps with their toes pointing downward. For runners suffering from plantar fasciitis, this can be a problem because it tightens the plantar fascia. When you wake up and take your first steps, your plantar fascia is stretched out, causing pain.

The hardest thing about night splints is they are uncomfortable to wear. They make what's called posterior and anterior night splints. Anterior night splints have been **shown** to be more comfortable, with fewer reports of sleep disturbance.

If treating your plantar fasciitis sounds like it could work for you, check out my guide on **night splints for plantar fasciitis**. I will talk you through how to choose a pair.



Compression Socks

Arch-supporting compression socks are a specific type of sock that provides additional support specifically to the arch of the foot.

These socks are great for runners with plantar fasciitis. They are designed with additional support in the arch area. This can help lift the arch, reducing the strain on the plantar fascia and providing relief from the pain of plantar fasciitis.

Many people find that wearing arch-supporting compression socks can help alleviate some of the pain associated with plantar fasciitis. This relief is likely due to the combination of improved circulation, reduced swelling, and additional arch support.

While arch-supporting compression socks can be a useful tool in managing plantar fasciitis symptoms, they're typically used as part of a broader treatment plan. Like all the tools, they are best used in combination with other forms of treatments, in particular, a **program designed for treating plantar fasciitis in runners.**





Massage For Plantar Fasciitis in Runners

Massage is one of my favorite ways to provide immediate relief for plantar fasciitis. Massage can help reduce pain, improve flexibility, and promote healing. They are great to use in the morning before you take your first steps or before or after a workout. Here are some of the tools that can be used:

Graston Tools

Graston Technique is a form of instrument-assisted soft tissue mobilization that uses specially designed stainless steel instruments to help detect and treat areas of the body showing soft tissue fibrosis or chronic irritation. These tools can help break down scar tissue and fascial restrictions in the plantar fascia, promoting better mobility and reducing pain.

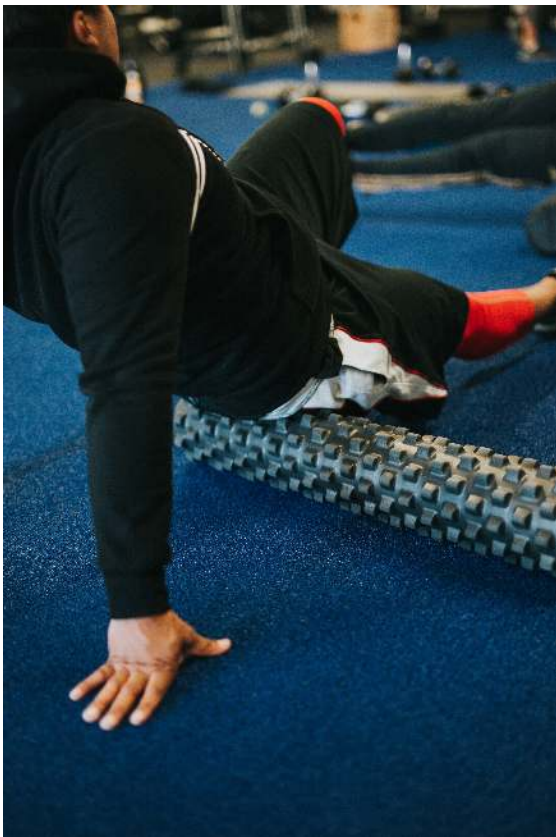
Foot Rollers

Foot rollers are simple but effective tools for plantar fasciitis for runners. The best part is they are easy to use. Simply set it on the floor and roll your arch overtop. Foot rollers can provide a deep tissue massage to the arch of your foot, helping to stretch the plantar fascia, improve blood circulation, and alleviate pain. And I can't forget the popular **frozen water bottle arch massage**.



Massage Balls

Similar to foot rollers, massage balls can provide targeted relief to the plantar fascia. Massage balls come in different textures and densities to help you get your desired massage. They can be used to apply pressure to specific points on the foot, helping to relieve tension and improve circulation. A simple **golf ball massage under your arch** can do the trick for many.



Foam Rollers

Foam rollers, especially those with a vibrating feature, can be used to massage tight calves. If you remember, we talked about how tightness in the calves can lead to plantar fasciitis in runners. Using a **foam roller on your calves** can help alleviate this tension, improve flexibility, and reduce strain on the plantar fascia.



Massage Guns

Massage guns are handheld devices that deliver percussive or vibration therapy, which can increase blood flow, reduce muscle stiffness, and alleviate pain. When used on the calf and the bottom of the foot, **massage guns can help alleviate symptoms of plantar fasciitis in runners.**

Self-Massage with Hands

Last but not least, the traditional **plantar fascia massage** with your hands. Using your hands to massage your feet can also provide relief to your plantar fascia for runners. This can be done by applying pressure with your thumbs to different parts of the foot, stretching the plantar fascia, and improving blood flow.

Lifestyle Changes for Plantar Fasciitis in Runners

Here, we're going to delve into the lifestyle modifications that can help manage your condition. These changes aren't just about treating the symptoms - they're about addressing the root causes of plantar fasciitis and helping you run pain-free once again.

From tweaking your training routine and incorporating strength and stretching routines, to managing your weight and choosing the right footwear, each lifestyle adjustment plays a crucial role in your recovery journey.



Training Routine

Adjusting your running routine can be an effective way to manage and treat plantar fasciitis. Here are some key strategies you can consider:

- **Reduce Your Mileage:** First and foremost, consider reducing the total distance you run each week. This will help to decrease the load on your plantar fascia, giving it time to heal.
- **Avoid Hard Surfaces:** Whenever possible, try to run on softer surfaces like grass or dirt trails instead of concrete or asphalt. These softer surfaces can lessen the impact on your feet, reducing the strain on your plantar fascia.
- **Modify Your Pace:** Consider slowing down your running pace. Running at a slower pace can decrease the forces that your feet need to absorb with each stride, which can reduce strain on your plantar fascia.
- **Cross-Training:** Incorporate low-impact cross-training activities into your routine, such as swimming, **lifting weights**, **using an elliptical**, or **cycling**. These activities can help maintain your cardiovascular fitness while reducing stress on your plantar fascia.
- **Warm-Up and Cool-Down:** Start each run with a gentle warm-up and finish with a cool-down period. This should include stretching exercises for your feet and calves, as tight muscles can contribute to plantar fasciitis.
- **Incorporate Rest Days:** Include rest days in your running routine. These breaks give your body time to recover and heal, essential for managing plantar fasciitis. On rest days, I recommend incorporating some sort of short **strengthening program** (P.S. click the link for the one I have designed for runners like you).

Taking Time to Stretch and Strengthen

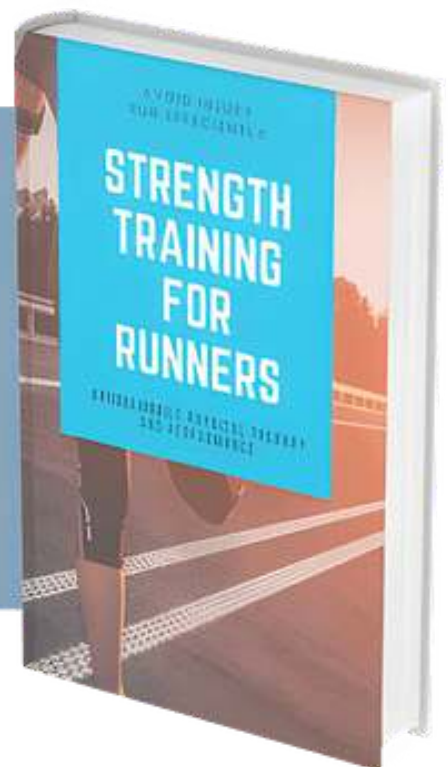
In a study by Rathleff et al., 48 patients with plantar fasciitis were divided into two groups: one followed a basic exercise program, and the other performed progressive strength exercises.

By the 3-month mark, the strength training group had significantly improved their Foot Function score and reported less pain with their first steps in the morning.

In a nutshell, this study indicates that progressive strength training can lead to short-term improvements in plantar fasciitis symptoms. More research is needed for long-term impacts, but strength training could be a worthwhile addition to your recovery routine.

**Strength Training
For Runners Program**

**Get Your Program
Today**



What Runners Need to Know About Plantar Fasciitis

Stretching also plays a pivotal role in managing plantar fasciitis, especially for runners. Here's why:

- **Targeted Relief:** When you stretch, mainly when you target the plantar fascia, you're directly addressing the inflamed area. This helps relieve tension, reduce inflammation, and promote healing in the affected area. I've also mentioned how stretching the calves can help with plantar fasciitis.
- **Flexibility Boost:** Regular stretching increases flexibility, which can help alleviate the strain on your plantar fascia. With improved flexibility, your foot can better handle the stresses of running.
- **Pain Reduction:** Stretching can also help manage the pain associated with plantar fasciitis. By increasing blood flow and promoting healing, regular targeted stretches can reduce pain levels over time.
- **Prevention:** Regularly stretching your plantar fascia and calf muscles can help prevent plantar fasciitis from recurring. It can improve your foot and ankle flexibility and strength, making you less susceptible to this injury.



Managing Weight

Maintaining a healthy weight can play a crucial role in managing and preventing plantar fasciitis. When you run, the impact forces on your feet are approximately 2.5 to 2.8 times your body weight, according to [research](#). That's a substantial amount of pressure exerted on the plantar fascia, the band of tissue that supports your arch.

When you're carrying extra weight, these impact forces are magnified. The plantar fascia has to absorb the greater forces resulting from the increased body weight with each step. Over time, this excessive force can lead to microtears and inflammation in the fascia, causing the pain and discomfort characteristic of plantar fasciitis.

The structure of your feet can also be affected by excessive weight. Increased body weight can lead to the arches of your feet collapsing over time due to the continuous pressure exerted on them. As the arches collapse, the plantar fascia is stretched further, increasing the strain on it. This additional tension can exacerbate the pain and inflammation, making plantar fasciitis symptoms worse.

In essence, maintaining a healthy weight can reduce the force exerted on the plantar fascia, helping to preserve the natural structure of your feet and alleviate the symptoms of plantar fasciitis. It's a critical aspect of managing this common and often stubborn condition. Remember, weight management should be approached healthily and sustainably, focusing on balanced nutrition and regular physical activity.



Shoe Health

Do you know how a good, comfortable pair of running shoes can feel like an extension of your feet? Well, when those shoes start wearing out, they lose their ability to support and protect your feet. That's when plantar fasciitis can start to appear.

Your running shoes are designed to guide your foot through the proper motion as you run. But when the cushioning and support fade, your foot might start landing differently.

This new landing can stress parts of your foot that aren't used to the forces of running, like your plantar fascia. Your plantar fascia, which isn't used to this additional stress, can become irritated and painful. Hello, plantar fasciitis!

So when should you ditch your old shoes for a new pair? A general rule of thumb is every 300 to 500 miles. But remember, this is just a guideline. A lot depends on your running style, body weight, and the surfaces you run on.

If you're seeing excessive wear on the soles, or if the shoes feel less supportive or comfortable, it might be time for a new pair. Also, listen to your body. If you start feeling new aches and pains, your shoes might be the culprit.

Choosing the Right Shoe



When you're dealing with plantar fasciitis, picking out the right running shoes becomes more than just a matter of style or brand. It's about finding a shoe to support your feet and help alleviate your symptoms. Here's what you should look for:

Cushioning

Think of this as your shoe's built-in shock absorber. Good cushioning can help reduce the impact forces that your feet have to deal with, which can decrease inflammation in your plantar fascia. It's like giving your feet a soft, fluffy pillow to land on with each step.

Forefoot Rocker

This feature might sound like a fancy music genre, but it's a design element that can help take the pressure off your plantar fascia. It's an upward curve in the sole underneath your toes, and it can help reduce the strain on your plantar fascia as you run.

Firm Heel Counter

The heel counter is like the sturdy backrest for your heel. A firm one can provide the support and stability your heel needs, reducing the risk of developing a heel spur—an unwelcome guest often associated with plantar fasciitis.

Strategic Design for Your Foot Type

Not all feet are created equal. Some of us have flat feet, others have high arches, and we all have different running styles. The right shoe will cater to your unique foot type and running style, helping to keep your foot in a neutral position and reducing excessive strain on your plantar fascia.

Stiff Insole

While flexibility is often a good thing, when it comes to the insoles of your running shoes, stiffness is king. A stiff insole can help stabilize your foot and relieve pressure on your plantar fascia, which can be a game-changer when managing plantar fasciitis.

High Heel-to-Toe Drop

This term refers to the difference in thickness between the heel and forefoot of your shoe. A higher drop—typically between 7 to 12 millimeters—can help reduce stress on your plantar fascia during your runs.





Toe Box

The toe box is the front part of the shoe where your toes hang out. Ever noticed how some shoes squeeze your toes together while others give them room to breathe? That's all about the width of the shoe box.

A wider shoe box allows your toes to spread naturally as you run. This natural toe splay not only makes for a more comfortable running experience but it also distributes your weight more evenly across the foot. This can help reduce the load on your plantar fascia, offering it some much-needed relief.



Remember, the right running shoes are a key part of your defense against plantar fasciitis. Take the time to find a pair that checks all these boxes, and your feet will thank you. Happy shoe shopping, and even happier running!



Plantar Fasciitis Treatment Myths

With so much information available, it's easy to encounter misconceptions about plantar fasciitis treatment. Let's address and debunk some common myths:

1. **One-Size-Fits-All Treatment:** Just as every runner is unique, so is every case of plantar fasciitis. It's a misconception that a single type of treatment will work for everyone. In reality, a combination of treatments - such as training modification, stretching, strengthening, massage, orthotics, and footwear modification - is often necessary to effectively manage this condition. It's crucial to tailor the treatment to the individual's specific needs and circumstances.
2. **Rest Is a Cure-All:** While rest can help alleviate immediate pain, it's not a cure-all solution. Resting alone doesn't address the underlying cause of plantar fasciitis. Without active treatment to improve foot mechanics, flexibility, and strength, the pain will likely return once you start running again. So, while rest is an important part of recovery, it should be combined with other proactive treatments for a lasting solution.
3. **The "Magic" Quick Fix:** Plantar fasciitis is an injury that takes time to heal. Despite what some miracle cures may promise, there's no secret treatment that can cure plantar fasciitis in a week. In fact, **research** shows us around 90% of people who actively treat their plantar fasciitis see improvement within six months. So, patience and consistency in your treatment regimen are key.

Treatment Roadmap For Plantar Fasciitis



A Roadmap to Plantar Fasciitis Treatments: From Early to Late Stage

Just like **plantar fasciitis progresses in stages**, so do the treatment plans. Let's break down the typical journey of plantar fasciitis treatments into three stages: early (non-invasive), mid (pseudo-invasive), and late (surgical).

Early or Non-Invasive Plantar Fasciitis Treatments

The early stage of plantar fasciitis treatment usually lasts about 4-6 weeks and is all about reducing pain and inflammation. Here are the main components:

- Rest and Activity Modification: Taking a break from activities that worsen symptoms allows the inflammation to settle.
- Ice: Applying ice to the heel can help control pain and reduce inflammation.
- Quick Lifestyle Changes: For runners, this means decreasing mileage or getting a new pair of shoes.
- At home exercises: Perform exercises at home, including strengthening of hips, foot core, and stretching of the gastrocs and plantar fascia
- Arch Support: Heel cups or foot orthotics can decrease strain on the plantar fascia, offering relief.
- Night Splints: These devices hold the ankle in a dorsiflexed position overnight, preventing the plantar fascia from tightening.

If symptoms improve during this phase, these treatments may be continued over the long term.

Middle or Pseudo-Invasive Plantar Fasciitis Treatments

If symptoms persist after 6-8 weeks of early-stage treatment, more advanced options might be considered. This phase typically lasts for 2-3 months. Here's what it might include:

- **Walking Boot:** A **walking boot** can take pressure off the plantar fascia allowing it to heal. The reason it is not an early intervention is it causes stiffness in the joints and atrophy of the muscles.
- **Corticosteroid Injections:** While **corticosteroid injections** can provide short-term pain relief for plantar fasciitis, they carry risks like weakening the plantar fascia. A weakened plantar fascia has an increased chance of rupturing.
- **Shockwave Therapy:** **Extracorporeal Shockwave Therapy (ESWT) for plantar fasciitis** is a non-invasive mid-stage treatment. It involves delivering sound waves to the affected area, stimulating the body's natural healing processes, and promoting recovery.
- **PRP injection:** A **PRP injection procedure for plantar fasciitis** involves injecting a concentrated solution, derived from your own blood and rich in healing-promoting platelets, into the plantar fascia. This stimulates the body's natural healing process, aiming to reduce inflammation and pain. The downside of PRP injections is they are usually costly and not covered by insurance.

Surgical or Late Stage Plantar Fasciitis Treatments

If conservative treatment fails after approximately 6 months, **surgical interventions for your plantar fasciitis** may be discussed. Patients often try non-surgical options for 9-12 months before considering surgery. Here are some surgical options:

- **Plantar Fascia Release:** The **plantar fascia release or plantar fasciotomy** procedure aims to relieve tension on the plantar fascia by partially or entirely cutting it. The surgery has three approaches: open, endoscopic, and percutaneous. The open approach provides a better view for the surgeon but has a longer recovery time. Despite improvements after the surgery, there are concerns about changing foot mechanics and losing the windlass effect, a function essential to foot operation.
- **Gastrocnemius Recession:** The **gastroc recession surgery** is designed to lengthen the calf muscle, reducing tension on the plantar fascia. Tight calf muscles can increase tension in the Achilles tendon and limit ankle movement, putting more stress on the plantar fascia. There are multiple approaches to gastrocnemius recession, each involving a different type of cut. Studies show promising results, but more research is needed to establish this as a standard treatment for chronic plantar fasciitis.
- **Radiofrequency Microtenotomy (RFM):** RFM is a non-invasive therapy for plantar fasciitis. It involves inserting a tiny probe through the skin to deliver radio waves to the affected tendon, warming the soft tissue and promoting healing. This treatment has shown positive results with minimal complications in several non-randomized studies.

The progression through these stages isn't fixed. It can vary based on the severity of symptoms, how you respond to treatments, and the recommendations of your healthcare provider. It's crucial to closely monitor symptoms and communicate with your provider to ensure the appropriate staging of treatments. Remember, patience and persistence are key in overcoming plantar fasciitis.

09

Exercises for Plantar Fasciitis

What Runners Need to Know About Plantar Fasciitis



Exercise is a crucial part of the recovery process. In this section, we're going to highlight targeted exercises that can help alleviate your plantar fasciitis symptoms and set you on the path to recovery.

You might be surprised to learn that not all of these exercises are focused solely on the foot. Your body is an interconnected system, and sometimes, the key to solving a problem in one area (like your foot) lies in strengthening another (like your hips). That's why we're going to start by exploring some hip-strengthening exercises that can have profound effects on managing plantar fasciitis.

Hip Strengthening for Plantar Fasciitis

When it comes to plantar fasciitis, your hips play a starring role. They're the unsung heroes in maintaining the stability of your knees and feet.

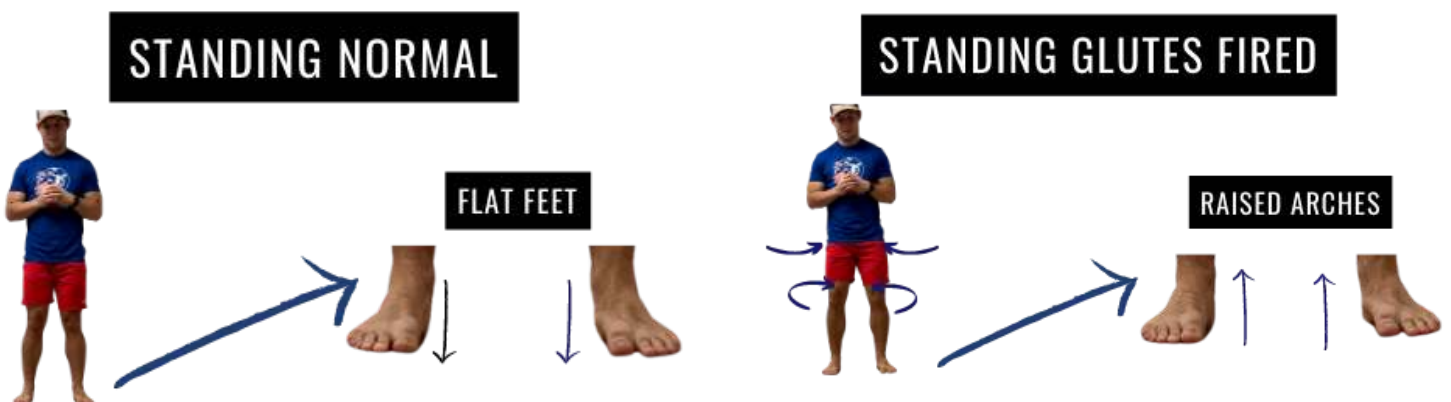
Strengthening these key players can provide unexpected but essential support for managing plantar fasciitis.

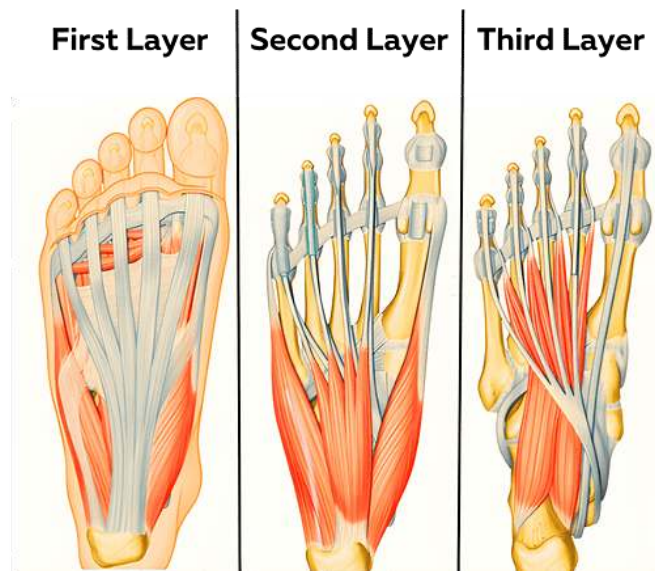
Here's the secret - your hip muscles, particularly the glutes, can help lift your arches and activate the intrinsic muscles of your feet. Don't believe me? Try this simple experiment.

Stand barefoot and note how high your arches lift off the ground. Now, engage your glute muscles. As you do this, you should notice your arches lift higher off the ground. The change might be more noticeable if you have flat feet but don't think you're off the hook if you have high arches. Strong and active glutes are important for all foot types.

If you're still skeptical...

In a [study by Lee and colleagues](#), a patient with plantar fasciitis underwent hip strengthening exercises for three months. They used pressure sensors to track the weight distribution of her foot and found that, over time, the pressure began to shift from the inside of her foot to the outside. This indicates that her intrinsic foot muscles were providing more support, reducing the demand on the plantar fascia.





Foot Intrinsic or Foot Core Strengthening for Plantar Fasciitis

When battling plantar fasciitis, we can't overlook the power of strengthening the foot's intrinsic muscles, also known as the foot core. These tiny but mighty muscles form part of the foot's arch and play a critical role in maintaining its shape and function.

A [study by Latey et al. in 2014](#) uncovered a link between weak intrinsic foot muscles and plantar fasciitis pain. This makes perfect sense when you consider how the foot operates. Too much flattening of the arch, which can happen when these muscles are weak or underused, can lead to excessive tension at the heel - a key contributor to plantar fasciitis pain.

So, how does strengthening these intrinsic foot muscles help?

Part of the answer is toe curls, and you can read more about [toe curls for plantar fasciitis](#) here.

Plantar Fascia Stretching and Calf Stretching for Plantar Fasciitis

Incorporating stretches that target **tight calves** and plantar fascia can be a game changer when managing plantar fasciitis. The reason? As we talked about earlier, these structures are anatomically connected - the Achilles tendon attaches to the back of the heel bone. In contrast, the plantar fascia connects the heel bone to the toes. So, working on both simultaneously can amplify the benefits.



Path of the Achilles

- 1 Starts behind the knee
- 2 Gastroc and Soleus combine to create Achilles
- 3 Attaches to the back of the heel
- 4 Wraps around the foot and continues as the plantar fascia

It is important to include the fact two muscles make up the Achilles tendon. The gastroc and the soleus. Therefore you need to stretch both. The soleus is stretched with the knee bent, while the gastroc is stretched with the heel straight.

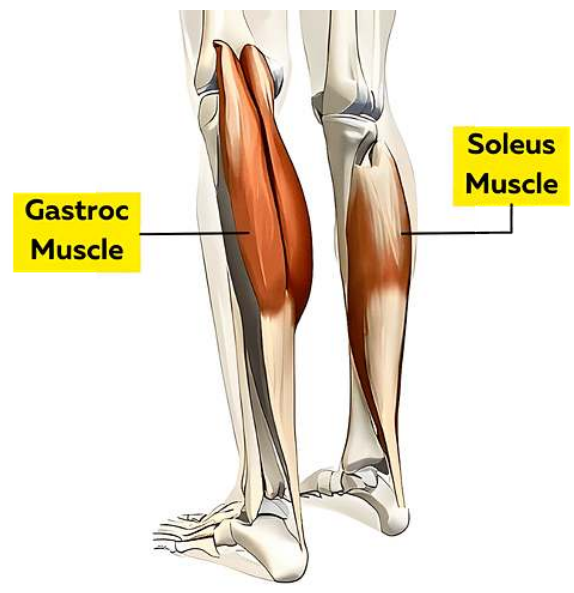
Here are some **soleus stretches for plantar fasciitis**.

Stretching your gastroc, soleus, and plantar fascia can help lengthen and loosen these tissues, reducing the tension contributing to plantar fasciitis. It increases flexibility and the range of motion and improves tissue tolerance to load. This means less strain on the plantar fascia during activities like walking and standing.

Even more fascinating is the hypoalgesic effect of stretching - it can help increase pressure pain thresholds in the heel area, leading to decreased pain. This, in turn, enables increased function of the foot and ankle, making walking and standing less painful.

Research has shown that stretching the Achilles tendon and plantar fascia together leads to more significant improvements in pain relief and function compared to just stretching the Achilles alone. And the good news? Even a relatively short duration of regular stretching (for example, five days per week for four weeks) can be beneficial.

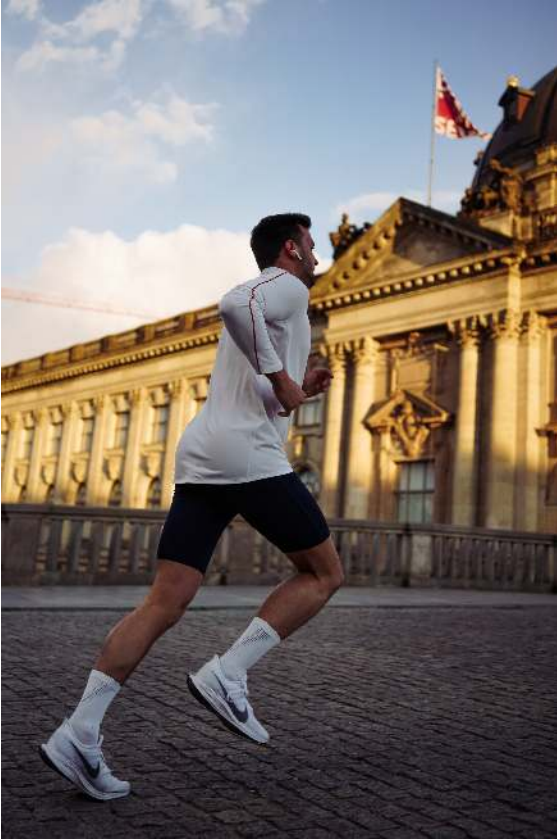
In essence, stretching helps address the biomechanical factors contributing to plantar fasciitis, reducing strain and tension in the tissues and enabling increased function. So, get stretching! Your Achilles tendon and plantar fascia will thank you.



10

Returning to Running After Recovery From Plantar Fasciitis

What Runners Need to Know About Plantar Fasciitis



Okay, let's assume you've taken a break from running, letting your plantar fascia heal while performing an exercise program addressing the root cause of your issue while also keeping your cardiovascular fitness in check with cross-training.

Your plantar fasciitis is starting to feel good. You're ready to start running again.

When you're ready to start running again, temper your expectations. It's natural to have a dip in your fitness level after an injury, but don't let that demotivate you. Start small, with goals like "Run for 30 minutes", then "Run for 45 minutes", and so on. Remember, you're in it for the long haul.



Here's your green light to start running again: when you can perform your daily activities without pain. But go slow, and I mean real slow. Even if you've been keeping up with cross-training, your body needs time to adapt to running again. So, take it easy.

What Runners Need to Know About Plantar Fasciitis

To ease back into running, start with brisk walking (around 3.5 mph) for about 30 minutes without any pain. Then, introduce some plyometric exercises like jumping and bounding. When you're comfortable with these, start with shorter runs at a slower pace than you're used to and gradually build up.

But above all, listen to your body. If you feel pain, stop and address the issue. Don't push through it. Pain is your body's way of telling you that something isn't right, just like the check engine light in your car. You wouldn't ignore that and keep driving, would you?

Remember, plantar fasciitis doesn't have to be the end of your running journey. With some patience, proper rehab, and a gradual return to running, you can lace up those shoes and hit the pavement again. And you might even come back stronger than before. How's that for a silver lining?

Read my detailed guide on [returning to running after plantar fasciitis](#).

Or grab the eBook, which lays explicitly out a return to running plan.



Return to Running

Pain Free

With Plantar Fasciitis

**Start Your Journey
to Recovery**



11

Prevention of Plantar Fasciitis



Okay, so now that you know how to treat your plantar fasciitis and get back into running, let's learn how to keep it at bay. From choosing the right running shoes, and perfecting your running technique, to incorporating strength training and even tweaking your diet.

Running Shoes to Prevent Plantar Fasciitis

Not only are running shoes important to help fix your plantar fasciitis they are also important in preventing it. Wearing shoes that provide ample support, fit correctly, and are tailored to your unique foot structure and running style can help maintain the health of your plantar fascia.

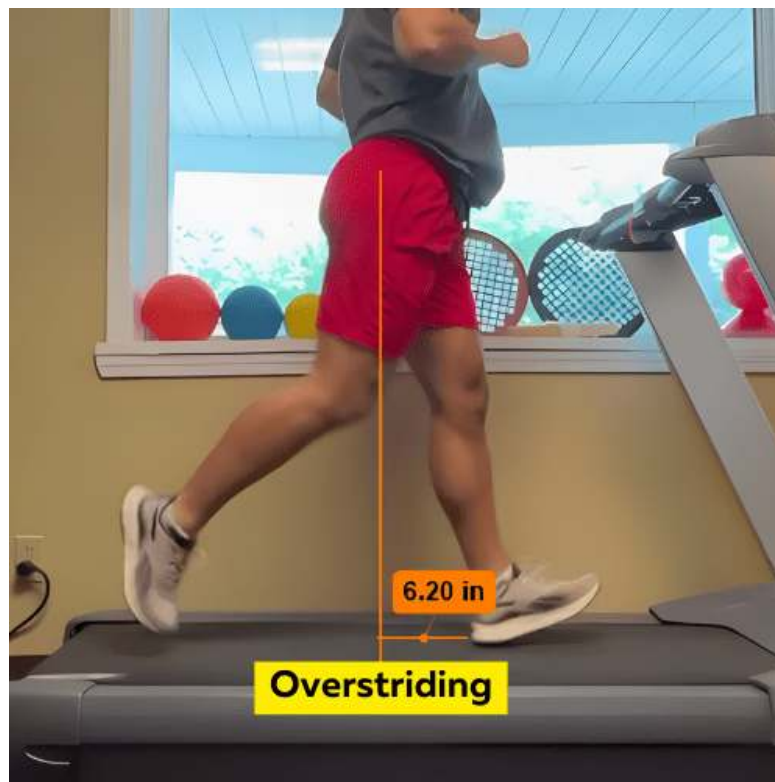
What Runners Need to Know About Plantar Fasciitis

Remember, your shoes should not just be about style or brand; they should be about function and fit. For prevention, the same features we discussed earlier for managing plantar fasciitis apply. Look for shoes with good cushioning, a firm heel counter, a design that suits your foot type, a stiff insole, and a high heel-to-toe drop.

Correct shoes can help distribute impact forces evenly across your foot, minimize unnecessary strain on your plantar fascia, and maintain proper foot alignment. All these factors can help keep the dreaded plantar fasciitis at bay.

Running Technique to Prevent Plantar Fasciitis

For our next preventative technique, let's talk about running form. It all comes down to vertical ground reaction force (vGRF). You might not have heard of it, but it plays a massive role in how running affects your body. It's the force exerted by the ground on your foot with each stride you take. In the world of running, you want to keep this impact wave as low as possible to avoid putting unnecessary stress on your joints and tissues, such as the plantar fascia.



What Runners Need to Know About Plantar Fasciitis

Inevitable common mistakes in running form can increase your vGRF. These include overstriding (where your foot lands well ahead of your body's center of gravity), a slow stride rate, and heel striking. These factors can increase the impact on your plantar fascia, leading to the pain and inflammation associated with plantar fasciitis.

So, how can we optimize running form to prevent plantar fasciitis? Here are some tips:

- **Transition to a Midfoot or Forefoot Strike:** Focus on making contact with the ground using your midfoot or forefoot rather than your heel. This reduces the force of impact and disperses it more evenly across the foot.
- **Shorten Stride Length:** Aim for shorter, quicker steps. Your foot should land directly under your body rather than out in front of it.
- **Increase Step Rate/Cadence:** Increasing your cadence can help decrease overstriding and reduce stress on the plantar fascia. There's a classic target of 180 steps per minute, but even a 10% increase can significantly decrease the stress on your joints.



What Runners Need to Know About Plantar Fasciitis

Remember to make these changes gradually and listen to your body. If something doesn't feel right, ease back and consider seeking advice from a physical therapist or running coach.

You can also try running drills such as A-skips and B-skips to help engrain proper running form. And don't forget about audio feedback! It's been shown to help runners improve their cadence. Search for your desired cadence on your preferred music provider (e.g., "175 bpm running") and step with the beat.

Read more about [running form tips and plantar fasciitis](#).



**Return to Running
Pain Free**

**Online Running Form
Assessment**

**Analyze My Form
Now!**

The image shows a smartphone screen displaying a runner on a treadmill. Red lines are drawn over the runner's body to highlight four specific areas of concern, each with a yellow callout box: 'Shoulder Sway' (pointing to the upper back/shoulder area), 'Hip Drop' (pointing to the right hip), 'Knee Bowing' (pointing to the right knee), and 'Heel Whip' (pointing to the right heel). To the right of the phone, the text 'Return to Running Pain Free' is displayed in white on a blue background. Below this, 'Online Running Form Assessment' is written in black on a white background. At the bottom right, there is an orange button with the text 'Analyze My Form Now!' and a white mouse cursor icon pointing at it.

Strength Training and Its Role in Preventing Plantar Fasciitis

If you reading fully through this guide, it shouldn't be a surprise to see strength training here. I'll keep stressing it, strength training can work wonders for runners, not only to improve performance but also to decrease the risk of injuries like plantar fasciitis.

Here's how:

- **Strengthens key muscles:** The right strength training exercises, particularly those targeting hip abductors, quadriceps, and foot supinators, can significantly improve muscle strength. Previous studies show that runners with weaker hip abductors and other leg muscles tend to be more prone to injuries. By strengthening these muscles, runners can gain better stability and joint control, essential for safe and efficient running.
- **Enhances neuromuscular control:** Balance and coordination exercises, such as side-steps and lunges, and single leg Romanian deadlifts challenge your neuromuscular system. This training can enhance your control and precision of movements, further decreasing the risk of injuries.
- **Promotes movement variability:** Adding strength training to your training regimen can increase your movement variability. Giving your body a variety of movements challenges the body in different ways. The more you expose it to different movements, the more resilient it can be. Diversifying movements and loading patterns can help protect against overuse injuries common in runners.





Diet to Reduce the Risk of Plantar Fasciitis

Running requires a lot of energy. Not only is energy required for the act of running but also for recovery after runs. So no surprise good nutrition plays a pivotal role in preventing injuries, including plantar fasciitis, in runners.

According to this [research](#), here's how you can use your diet to boost your body's ability to recover and fend off injuries:

What Runners Need to Know About Plantar Fasciitis

- Protein is your friend: Aim for 1.2-1.7g of protein per pound of your body weight per day to maintain and rebuild muscle during periods of reduced activity. You can get protein from lean meats, eggs, dairy, beans, nuts, and protein supplements.
- Don't forget about carbs: Keep your carbohydrate intake around 1.5-2.25g per pound of your body weight daily to maintain muscle glycogen stores. Carbohydrates also help prevent protein breakdown. Reach for whole grains, fruits, and starchy vegetables for your carb needs.
- Maintain your calorie intake: If you're losing weight due to reduced activity, make sure to up your calorie intake. Aim for 25-30 calories per kg of body weight. Prioritize nutrient-dense sources for these extra calories.
- Stay hydrated: Your fluid intake is going to vary immensely depending on where you live, your body's natural fluid absorption, what you eat, and what you do while you're not running. So instead of making a specific recommendation about how many glasses of water you should drink, it's easier to recommend you make sure to drink enough fluids so that your urine is light yellow. Dehydration can slow down your recovery.
- Consider a multivitamin: A multivitamin can help ensure you meet your micronutrient needs.
- Include anti-inflammatory nutrients in your diet: Omega-3 fats, vitamin D, and antioxidants like vitamins C and E may help regulate inflammation and aid injury recovery.
- Time your nutrients well: Eat protein-containing meals or snacks throughout the day to promote muscle protein synthesis. Consider having a protein source before bed.

Remember, proper nutrition can make a significant difference in healing and getting back to running sooner. Ensuring adequate intake of protein, carbs, calories, and hydration while avoiding nutritional deficiencies can be your game-changer in injury recovery and prevention.

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Conclusion



And there you have it - a comprehensive guide through the landscape of plantar fasciitis, from understanding its intricate biology to exploring practical prevention and treatment strategies. We've covered everything from self-massage techniques to proper running form, lifestyle changes, to targeted exercises.

While plantar fasciitis can feel like a frustrating enemy intent on ruining your runs, knowledge is power. Arm yourself with an arsenal of recovery tools and a healthy dose of patience, and you can put plantar fasciitis on its heels. As with every running journey, progress requires persistence. But take it step-by-step, mile-by-mile, and soon enough, you'll be back hitting the pavement pain-free.

Now lace up, lace tight, and take your newfound wisdom out for a spin. This is not the end of your running story, merely a challenging chapter along the route. And who knows, someday you may even look back on your plantar fasciitis as a blessing in disguise - a chance to learn more about your body's strengths and weaknesses, fine-tune your training approach, and emerge an even stronger, wiser runner.

So stay resilient, stay dedicated, and keep chasing the horizon. The open road awaits, my friend, and your next epic run is just around the corner!