

Massage Therapy for Tired Feet (and Plantar Fasciitis!)

Perfect Spot No. 10, in the arch muscles of the foot

Paul Ingraham • Oct 25, 2012 • 6m read



Trigger points (TrPs), or muscle “knots,” are a common cause of stubborn & strange aches & pains, and yet they are under-diagnosed. The 14 Perfect Spots ([jump to list below](#)) are trigger points that are common & yet fairly easy to self-treat with massage — the most satisfying & useful places to apply pressure to muscle. For tough cases, see the [advanced trigger point therapy guide](#).

Pain Location

in the bottom of the foot

Problems

plantar fasciitis

Related Muscles

arch muscles

“Big Red Books” Reference: Volume 2, Chapters 26 & 27

see [chart of all spots](#) below

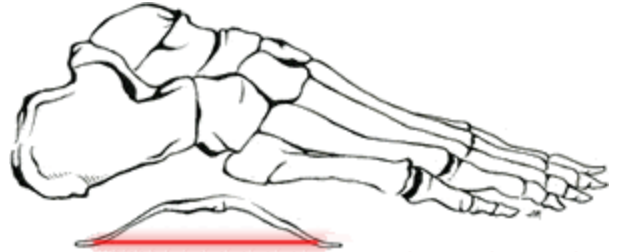
If you have plantar fasciitis, you may prefer to start with [this detailed tutorial](#).

The tenth of the Perfect Spots is one of the most popular of the lot, and right under your feet — literally. It lies in the center of the arch muscles of the foot. It’s perfect, but it’s not a secret: this is one of the Perfect Spots that everyone knows about. No massage is complete without a foot massage!

Why is the arch of the foot a Perfect Spot for a massage?

It isn't difficult to understand why the arch muscles of the foot would harbour a Perfect Spot for massage. They are, after all, the hardest working muscles in the human body (out of 700 or so). Our feet absorb an incredible amount of punishment, yet usually feel no worse than just stiff and tired. Repetitive strain injury here is common, but not nearly as common as you might expect.

The arch of the foot is a fascinating structure. The arch is like a bow without an arrow, and its curved shape is created by a “string” of muscles and elastic connective tissues. Every time you take a step, your weight pushes down on the arch. It doesn't collapse because of an artful combination of bone shape, springy ligaments, long “stirrup” tendons from leg muscles ... and the arch muscles. The arch muscles of the foot itself don't actually “kick in” until you reach quite heavy loads: about 181 kilograms. ¹ Although that sounds like quite a lot, loading may spike that high in an average person with every step. We don't have muscles there for nothing, of course! (The biggest arch supporter is probably the tibialis posterior, deep in the calf. ² And the tibialis anterior is another one — and it also has a perfect spot for massage, no. 3). Still, the forces on all of these structures are relentless and often very large — no wonder they get exhausted!



When these support mechanisms fail, the connective tissue in the arch may start to degenerate and fray — a kind of tendinitis ³ called plantar fasciitis. However, many people just develop really significant muscle knots in the arch, and in other arch supporting muscles.

There is another reason why this spot is significant. The skin of the feet has a disproportionate number of nerve endings, like the face and the hands, yet the feet are generally abused or at least neglected. Therefore the sensations of foot massage seem particularly rich and diverse in contrast to the usual stomp, stomp, stomp of their daily stimulus.

How do you find muscle knots in the arch of the foot?

Not only is this probably the most perfect of all Perfect Spots, but it is also perfectly easy to find: it is exactly in the center of the bottom of the foot, halfway between the heel and the ball, and halfway between the inside and outside edges (perhaps slightly closer to the inside).

The arch muscles generally feel best when pressed on an angle, for example towards the outside of the foot. But this is a minor point: any angle will do!

What does massaging the arch of the foot feel like?

You will know it when you feel it! Having massaged thousands of people and thousands of feet, I can tell you without hesitation that the center of the arch muscles is a popular, “feel good” spot. It usually produces a clear, sweet ache with mild to moderate thumb pressure only.

Note that despite its popularity, Perfect Spot No. 10 usually does not cause any *referred sensation* — that’s the satisfying, spreading ache that is often associated with other significant trigger points. Don’t take the lack of referred sensation to mean that what you’re doing isn’t working!

All massage feels better when someone else does it, but this is especially true of foot massage. Although it is easy to massage your own foot (and highly recommended if you have no other choice), receiving a foot massage is one of life’s truly delicious experiences, the apple pie à la mode of touch.

What about reflexology?

Some believe that there is yet another reason why foot massage feels so good: there may be neurological and/or energetic connections between each part of the sole of the foot and every other region and system of the body. This is called reflexology. Reflexologists claim that foot massage can have a therapeutic effect on any part of the human body.

This claim is extraordinary, and “extraordinary claims require extraordinary evidence” (*Carl Sagan, Broca’s Brain, 1972*). I have certainly never seen nor heard of such evidence, although (to quote another old chestnut of skepticism) “absence of evidence is not evidence of absence.” The phenomenon may exist, whether there is clear evidence for it or not. However, it is most likely that the profound sensations of foot massage simply gave someone the idea that foot massage was unusually important.

I have no trouble with the general idea of therapeutically significant connections between body parts, or even with the particular idea that massaging the foot could affect organs and systems. That is plausible.

I doubt, however, that the average colourful reflexology “map” is 100% accurate — at least, not compared to the average textbook anatomy diagram. If the connections exist at all, they are probably subtle, and there is probably significant natural variation between individuals. Only a study of a large number of carefully compared observations by several extremely skilled and knowledgeable practitioners could hope to confirm that stimulating a certain tiny spot on the foot has a therapeutic effect on a certain organ — and even then it wouldn’t necessarily be true of every person.

My own personal experience with reflexology is that it feels as good as any other foot massage, but no better, and has no apparent additional therapeutic effect. Still, a foot massage is always a pleasant experience in and of itself.

EBM-First.com has a nice [reading list about reflexology](#).

About Paul Ingraham



Headshot
of Paul
Ingraham

I am a science writer in Vancouver, Canada. I was a Registered Massage Therapist for a decade and the assistant editor of ScienceBasedMedicine.org for several years. I've had many injuries as a runner and ultimate player, and I've been a [chronic pain patient myself](#) since 2015. [Full bio](#). See you on [Facebook](#) or [Twitter](#), or subscribe:

Appendix A: Is trigger point therapy too good to be true?

Trigger point therapy isn't too good to be true: it's just ordinary good. It can probably relieve some pain cheaply and safely in many cases. Good bang for buck, and little risk. In the world of pain treatments, that's a good mix.

But pain is difficult and complex, no treatment is perfect, and there is [legitimate controversy about the science of trigger points](#). Their nature remains somewhat puzzling, and the classic image of a tightly "contracted patch" of muscle tissue may well be wrong. What we do know is that people hurt, and it can often be helped.

The Perfect Spots are based on a decade of my own clinical experience as a massage therapist, and years of extensive science journalism on the topic. Want to know more? This is the tip of the iceberg. I've written [a whole book about it](#) ...

Appendix B: Quick Reference Guide to the Perfect Spots

This index is also available [on its own page](#).

1 For headache, neck pain

Under the back of the skull must be the single most pleasing and popular target for massage in the human body. No other patch of muscle gets such rave reviews. It has everything: deeply relaxing and satisfying sensations, and a dramatic therapeutic relevance to one of the most common of all human pains, the common tension headache. And no wonder: without these muscles, your head would fall off. They feel just as important as they are. (Click/tap heading to read more.)

for pain: almost anywhere in the head, face and neck, but especially the side of the head, behind the ear, the temples and forehead

muscle(s): suboccipital muscles (recti capitis posteriores major and minor, obliqui inferior and superior)

2 For low back pain

This Perfect Spot lives in the “thoracolumbar corner,” a nook between your lowest rib and your spine — right where the stability of the rib cage and thoracic vertebrae gives way to the relative instability of the lumbar spine. It consists of trigger points in the upper-central corner of the quadratus (square) lumborum muscle and in the thick column of muscle that braces the spine, the erector spinae. (Click/tap heading to read more.)

for pain: anywhere in the low back, tailbone, lower buttock, abdomen, groin, side of the hip

muscle(s): quadratus lumborum, erector spinae

3 For shin splints

Perfect Spot No. 3 is in your shins — seemingly an unlikely place for muscle knots! But there is meat there, and if you’ve ever had shin splints then you know just how vulnerable that meat can be. Even if you’ve never suffered so painfully, your shins probably still suffer in silence — latent trigger points in the upper third of the shin that don’t cause symptoms, but are plenty sensitive if you press on them. (Click/tap heading to read more.)

for pain: in the shin, top of the foot, and the big toe

muscle(s): tibialis anterior

4 For thoracic outlet syndrome, throat pain and tightness, chest pain

Deep within the Anatomical Bermuda Triangle, a triangular region on the side of the neck, is the cantankerous scalene muscle group. Massage therapists have vanished while working in this mysterious area, never to be seen again. The region and its muscles are complex and peculiar, and many lesser-trained massage therapists have low confidence working with them. (Click/tap heading to read more.)

for pain: in the upper back (especially inner edge of the shoulder blade), neck, side of the face, upper chest, shoulder, arm, hand

muscle(s): scalenes (anterior, middle, posterior)

5 For carpal tunnel syndrome, tennis elbow

Just beyond your elbow, all the muscles on the back of your forearm converge into a single thick tendon, the common extensor tendon. At the point where the muscles converge, in the muscles that extend the wrist and fingers, lies one of the more inevitable trigger points in the body: Perfect Spot No. 5. It is constantly provoked both by computer usage today, and more often by the use of a pen in simpler times — and by the occasional tennis match, then and now, or maybe crocheting. (Click / tap heading to read more.)

for pain: in the elbow, arm, wrist, and hand

muscle(s): extensor muscles of the forearm, mobile wad (brachioradialis, extensor carpi radialis longus and brevis), extensor digitorum, extensor carpi ulnaris

6 For gluteal and hip pain, sciatica, bursitis, low back pain

When you have back pain, buttock pain, hip pain, or leg pain, much or even all of your trouble may well be caused by trigger points in the obscure gluteus medius and minimus muscles, a pair of pizza-slice shaped muscles a little forward of your hip pocket. Other muscles in the region are usually involved as well, such as the gluteus maximus, piriformis, and the lumbar paraspinal muscles. However, the gluteus medius and minimus are a bit special: their contribution to pain in this area is particularly significant, and yet people who have buttock and leg pain rarely suspect that much of it is coming from muscle knots so high and far out on the side of the hip. (Click / tap heading to read more.)

for pain: in the low back, hip, buttocks (especially immediately under the buttocks), side of the thigh, hamstrings

muscle(s): gluteus medius and minimus

7 For jaw pain, bruxism, headache

Your masseter muscle is your primary chewing muscle — not the only one, but the main one — and it covers the sides of the jaw just behind the cheeks. It's also the main muscle that clenches your jaw and grinds your teeth, unfortunately, and it's one of the most common locations for trigger points in the human body. It is probably an accomplice in most cases of bruxism (that's Latin for "grinding your teeth") and temporomandibular joint syndrome (jaw joint pain), plus other unexplained painful problems in the area. (Click / tap heading to read more.)

for pain: in the side of the face, jaw, teeth (rarely)

muscle(s): masseter

8 For runner's knee

A lot of quadriceps aching, stiffness and fatigue emanates from an epicentre of "knotted" muscle in the lower third of the thigh, in the *vastus lateralis*, a huge muscle — one of your biggest — that dominates the lateral part of the leg. Stretching it is effectively impossible, but massage is an option: although often shockingly sensitive, Perfect Spot No. 8 can also be quite *satisfying*. It

also often complicates or contributes to other problems in the area, especially runner's knee (iliotibial band syndrome). (Click/tap heading to read more.)

for pain: in the lower half of the thigh, knee

muscle(s): quadriceps (vastus lateralis, vastus intermedius, vastus medialis, rectus femoris)

9 For chest pain & tightness

The “pecs” are popular: of 700+ muscles, the *pectoralis major* is one of just a dozen or so that most people can name and point to. It also harbours one of the most commonly-encountered and significant trigger points in the human body, and can produce pain much like a heart attack in both quality and intensity. (Click/tap heading to read more.)

for pain: anywhere in the chest, upper arm

muscle(s): pectoralis major

10 For plantar fasciitis

The tenth of the Perfect Spots is one of the most popular of the lot, and right under your feet — literally. It lies in the center of the arch muscles of the foot. This is one of the Perfect Spots that everyone knows about. No massage is complete without a foot massage! (Click/tap heading to read more.)

for pain: in the bottom of the foot

muscle(s): arch muscles

11 For upper back pain

This “spot” is too large to really be called a “spot” — it's more of an area. The thick columns of muscle beside the spine are often littered with muscle knots from top to bottom. Nevertheless, there is one section of the group where massage is particularly appreciated: from the thick muscle at the base of the neck, down through the region between the shoulder blades, tapering off around their lower tips. There is no doubt that this part of a back massage feels even better than the rest — even the low back, despite its own quite perfect spots, cannot compete. (Click/tap heading to read more.)

for pain: anywhere in the upper back, mainly between the shoulder blades

muscle(s): erector spinae muscle group

12 For low back and gluteal pain, sciatica

At the top of the buttocks lies a Perfect Spot for massage: a sneaky but trouble-making brute of a trigger point that commonly forms in the roots of the gluteus maximus muscle. It's *below* the lowest part of the low back, but it often *feels* like low back pain. This is the kind of spot that the Perfect Spots series is all about: not only does it tend to produce a profound, sweet ache

when massaged, but the extent of the pain that spreads out around it is almost always a *surprise*. It feels like a key to much more than expected. (Click / tap heading to read more.)

for pain: in the lower back, buttocks, hip, hamstrings

muscle(s): gluteus maximus

13 For low back pain, sciatica

Some of the Perfect Spots are perfect because they are “surprising” — it’s delightful to find a place to massage that feels highly relevant your pain in an unexpected location. Others are perfect because they are *exactly* where you expect them to be — and what a relief it is to be able to treat them. Perfect Spot No. 13 is perhaps the ultimate, the quintessential example of a trigger point that is usually “right where I thought the problem was”: in the “pit” of the low back, at the bottom of the thick columns of back muscle beside the spine. (Click / tap heading to read more.)

for pain: in the low back, buttocks, hamstrings

muscle(s): erector spinae muscle group at L5



14 For shoulder pain

I avoided adding Spot 14 to this series for many years, because it’s a bit tricky to find. But precision is not required: although there is one specific spot that’s especially good, nearly anywhere under the ridge of bone on the shoulder blade is worthwhile, and often a surprising key to pain and stiffness everywhere else in the shoulder, *especially* all the way around on the other side, facing forward. (Click / tap heading to read more.)

for pain: any part of the shoulder, and upper arm

muscle(s): infraspinatus, teres minor

Notes

1. Basmajian JV, Stecko G. The Role of Muscles in Arch Support of the Foot. J Bone Joint Surg Am. 1963 Sep;45:1184–90. [PubMed 14077983](#) 
2. Thordarson DB, Schmotzer H, Chon J, Peters J. Dynamic support of the human longitudinal arch: a biomechanical evaluation. Clin Orthop. 1995 Jul;316:165–72. [PubMed 7634700](#) 
3. “**Tendinitis**” versus “**tendonitis**”: Both spellings are acceptable these days, but the first is the more legitimate, while the second is just an old misspelling that has become acceptable only through popular use, which is a thing that happens in English. The word is based on the Latin “tendo” which has a genitive singular form of tendinis, and a combining form that is therefore tendin. (Source: Stedmans Electronic Medical Dictionary.)

“**Tendinitis**” vs “**tendinopathy**”: Both are acceptable labels for ticked off tendons. Tendinopathy (and tendinosis) are often used to avoid the implication of inflammation that is baked into the term tendinitis, because the condition involves no signs of gross, acute inflammation. However, recent research has shown that inflammation is actually there, it’s just not obvious. So tendinitis remains a fair label, and much more familiar to patients to boot.

Permalinks

<https://www.painscience.com/articles/spot-10-foot-arch.php>

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