

You Asked: What's the Best Way to Treat Plantar Fasciitis?

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Often described as a throbbing pain that strikes the meat of the heel and radiates outward, plantar fasciitis is one of the most common foot conditions in the U.S. Roughly 2 million Americans suffer from it, and it can last anywhere from a few weeks to several months at a stretch. In some cases, it can even be a chronic ailment.



The plantar fascia is a fan-shaped band of connective tissue that runs along the underside of the foot, spanning the arch and attaching at the heel and between the bones of the toes. Plantar fasciitis results when that connective tissue is somehow injured or inflamed—a common occurrence among those who engage in “repetitive impact activities” like running, says Dr. Joan Williams, a foot and ankle surgeon at the University of California Los Angeles Medical Center.

“People will start to notice some soreness in the heel after a run, but they tough it out and run through it,” she explains. That’s bad. “Inflammation and swelling and irritation of the plantar fascia cause the pain,” she says, and all of them tend to get worse if a person keeps training.

Running can also cause microscopic tears in the plantar fascia. If those tears aren’t given enough time to heal, they can become painful, says Dr. James Gladstone, an associate professor of orthopedics at the Icahn School of Medicine at Mount Sinai.

Gladstone says the foot's connective tissues and muscles are in a constant state of breakdown and regeneration—processes that are usually in equilibrium. “But if you're over-training, your body isn't able to maintain the build-up part, and so you start breaking down and getting all these overuse injuries like plantar fasciitis,” he says. A sedentary lifestyle, old age and obesity are also risk factors for the condition, which turns up in 7% of adults 65 and older.



It's important to note that—much like the terms “headache” or “indigestion”—plantar fasciitis refers to a symptom that can stem from a variety of different underlying causes. While overuse injuries and stress fractures to the bones of the heel can produce heel pain, so can an overly tight Achilles tendon, says Dr. Casey Humbyrd, an assistant professor of orthopaedic surgery and chief of the Foot and Ankle Division at Johns Hopkins Medicine. “In flat-footed individuals, loss of arch support can also be a contributing factor,” she adds.

Because the specific causes of heel pain can be tricky to diagnose, doctors usually start out plantar fasciitis patients on a range of conservative treatments designed to manage the pain and induce healing.

First and foremost, athletes who are experiencing heel pain need to rest. “I tell patients to stop running for 4 to 6 weeks,” Williams says. “It can be hard to get runners to stop, but continuing to run can make the issue worse.”

Along with rest, Williams recommends stretches that target the calf, Achilles, and plantar fascia—like pulling the toes back toward the shin. Especially first thing in the morning or after long periods of sitting or lying down—times when foot muscles and connective tissues tighten up—stretching can help limit plantar fasciitis pain, she says.

Arch-supporting heel inserts can also help by taking some pressure off the plantar fascia and the Achilles, though too-high inserts can actually add tension and make things worse, Gladstone says. Rolling a ball along the sole of the foot can also help stretch the plantar fascia and keep the foot's arch limber.

In severe plantar fasciitis cases or those that haven't responded to earlier treatments, anti-inflammatory injections may help. Surgery is also sometimes (though rarely) warranted to remove a bone deformity or to loosen inflexible muscles.

But a growing number of doctors are employing focused, extracorporeal shockwave therapy (ESWT) or related sound wave treatments to help initiate repair and regrowth of the damaged fascia. "Both bombard the area and cause microtrauma to stimulate the healing response," says Dr. Amol Saxena, sports medicine editor of the journal *International Advances in Foot & Ankle Surgery* and a podiatrist specializing in sports medicine at the Palo Alto Medical Foundation.

The plantar fascia is an area of the foot that doesn't get much blood flow, and so the body's ability to heal degenerative injuries—the kind that result from years of pounding pavement—is often limited, Saxena says. Shockwave and sound wave therapies pull blood to the plantar fascia, which facilitates the body's built-in repair processes. "These [treatments] have the highest level of evidence for anything we do for plantar fasciitis," Saxena says, citing some of his own research on the procedures.

Patients who undergo these wave therapies typically require three treatment sessions spaced a week apart, and sometimes a follow-up treatment six weeks to three months down the road, he says. The treatments cause some short-term pain—shockwave more so than sound wave—and insurance doesn't cover them in most cases. (Saxena says the treatments, in total, can cost anywhere from \$400 to a couple thousand.) It also takes about three months for the tissue "remodeling" to be complete and for symptoms to subside. "But shock wave is the closest thing we have to a miracle cure," he says.