

Why Strong Feet Are Vital For Runners



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Though our feet seem small in comparison to the rest of our body, they play a vital role for runners. Like the rest of our body, they have muscles, tendons and ligaments that need strengthening (more than 100 of them, actually).

While it can be argued that strong feet are important for everyone, they are especially vital for runners to help with everything from [properly aligned running form](#) to an [efficient stride](#). Whether you mean to or not, you may be doing a few things that are actually weakening your foot muscles. Here's what you need to know about keeping them strong so they can properly support your entire body.

THE MECHANICS OF THE FOOT

Of course the feet control where we walk or run, but they can also have an effect on our knees, hips and lower back. In the same vein, parts of our legs actually help control muscles in our feet. According to Dr. Lisa M. Schoene, ATC, FACFAS, a triple board certified Sports Medicine Podiatrist and athletic trainer practicing at [Gurnee Podiatry & Sports Medicine Association](#), there are 19 internal muscles and 13 external muscles that move the foot and toes.

"The internal muscles move the toes and help to keep all the toes flat while walking and balancing," she notes. "The external muscles originate below the knee and enter the foot to move the foot up-and-down, in and out, and [help] to lift the heel. In the leg, other than the gastrocnemius and soleus muscles, there are five 'secondary' heel lifters. These are very important for running gait and are the posterior tibialis muscle, flexor digitorum longus, flexor hallucis longus, Peroneus brevis and Peroneus longus. These muscles help propel the foot forward and stabilize side to side as well."

In addition to those muscles directly affecting the feet, there are other sets of muscles located in the lower leg that turn into tendons around the ankle and attach into the foot, according to [Dr. Jackie Sutera](#), a [Vionic Innovation Lab Member](#). She shares that these are the [Achilles tendon](#) and calf muscle in the back part of the leg, [fascia on the bottom of the foot](#), anterior tibial muscle on the front of the leg and the peroneals and posterior tibial tendon on the sides of the leg.

"Running is a high-impact activity, that being said, there is some extra care runners need to provide to their feet," adds Sutera. "You need all of these structures to function optimally when running or else [injury, inflammation and pathology](#) can occur."

HOW TO KEEP FEET STRONG AND HEALTHY

A big mistake runners make when it comes to foot health is [wearing the wrong shoes](#). According to [Dr. Howard E. Friedman](#), a podiatrist in Suffern, New York, board certified by the American Board of Foot and Ankle Surgery, it's important to [wear the right shoe](#); runners shouldn't wear more shoe than they need. What does this mean? Simply put, if you don't need heavily cushioned shoes, you shouldn't wear them.

[“Recent published research](#) suggests that wearing structured shoes over time can weaken these intrinsic muscles (located entirely within the foot),” Friedman adds. “Although the foot is supported by the shoe, the muscles themselves are weakened since they don't have to work so hard in a very supportive shoe.”

Friedman — who is currently training for a half-marathon — also [notes a study](#) that found spending time walking around barefoot eventually increases the size of foot muscles. In addition to making sure your running shoes are comfortable without being too supportive, when not running, you should spend time in unstructured shoes, sandals or go barefoot.

“Someone who usually wears supportive shoes should ease into wearing less structured shoes slowly increasing the amount of time they spend in them until they feel their feet are comfortable,” Friedman adds. “Over time, runners can slowly transition to a less structured, lighter weight shoe. A lighter weight shoe saves energy during running and the foot muscles will continue to get stronger. A big caution, however, for anyone who tries this and develops foot pain: Check in with a foot health professional.”

If you had your shoes professionally fit, another thing to consider may be that your shoes just need replacing. You should replace your shoes every 300–500 miles, but [doing regular checks](#) to make sure they aren't wearing early can be beneficial.

If you still find you are dealing with alignment issues such as bunions or hammertoes or can't seem to escape recurring injuries, Schoene suggests seeing a sports medicine podiatrist to inquire about orthotics. These custom inserts can realign the foot and lower leg, and fit easily into your shoes.

"Typically when the internal foot muscles are weak, hammertoe and bunion deformities are much more inevitable, due to de-stabilization of the toes," she notes. "If the foot is [overpronated](#) it allows the pull of the muscles to get off kilter, which drives the hammertoes and bunions, as well. The toes become destabilized by not gripping the ground properly, affecting balance, too. If the external lower extremity muscles are weak, changes in heel strike and, most importantly, push-off will occur. This can affect efficiency, speed and propulsion and can also create compensations further up the chain at the knee, hip or lower back."

One simple way to strengthen your feet daily and give your shoes and/or orthotics a solid base to support is by doing a [few short exercises](#) at home. The good news? Some can be done while sitting in front of your desk at work or even while standing in line at the grocery store. Doing these three simple moves and rotating them throughout the day as you have extra time is a simple way to take extra care of your feet.

Calf Raises: Stand up straight with your feet flat on the ground. Slowly lift your heel off the ground and extend until you are balancing on your toes. Hold, then lower your heel back to the ground and repeat. "These are often used in physical therapy and are very important to keep your calves strong," Sutera notes. "It also helps your Achilles tendon strength and recovery."

Toe Grip: Pick up an object with your toes, hold for 10 seconds, release and repeat. "This works the smaller muscles of the feet and toes, which are ankle stabilizers," Sutera shares.

Alphabet Draw: Draw the letters of the alphabet in the air with your big toe, moving only your ankle. "This works all of the major muscle groups of your leg and most people need a break midway, even though this sounds easy," Sutera quips.

Remember the swell and tackle accordingly

As much as swollen feet are normal if you're a runner covering any serious distance, it's important to know why and how to tackle the swelling effectively - feet that look like Violet Beauregard are less than a day-to-day ideal.

According to the *Int J Gen Med* [journal](#), swelling is partly due to your increased fluid intake - experts advise that you should be intaking water whilst running to avoid the [symptoms of dehydration](#). The NHS website says swelling can occur after any sport, and is sometimes a response to injury (see your GP if your swelling persists or becomes abruptly more painful).

Jamie Ray, Another_Run lead instructor at Another_Space, recommends icing your feet or bathing in cool water after a long run. "This will stop your feet from swelling and overheating too much and prevent permanent damage." he says.

Don't wear any old socks

If you think special running footwear needn't extend past your trainers, think again.

"Did you know that ill-fitting, wet or cotton socks are actually the main cause of blisters when running, not your trainers?" says podiatrist and Puressential advisor Jake Heath from Kenton Heath Clinic. Time to invest. "I advise using acrylic brands and going for lightweight, breathable styles." *WH* loves Stance or Drymax socks – just be sure to shop for a pair that fit your feet – they should feel snug but leave your feet room to breathe.

Oh, and make sure you've tried them on *with* your running shoes before any long-distance run.

Cut your toenails regularly

Black toenails are about as unattractive, and yet so many runners get them. In a *J Sports Med* **study**, two researchers found the cause to simply be the repeated impact of your toenail hitting the front of the shoe. Whilst you can't avoid black toenails altogether, you can make your life a whole lot easier by simply keeping on top of your footsie grooming. Yep, adidas run captain Olivia Ross-Hurst says trimming your toenails on the reg can play a big part in preventing toenail loss. "The shorter the nail, the less likely they are to be damaged," she says.

Know how to beat blisters in double time

Blisters can be a runner's biggest concern – get them sufficiently bad and they can throw your training schedule right royally off course.

But, interestingly, the speed at which you treat your blisters can be a big factor in their recovery time, according to Heath.

Regularly find yourself in the dress it / leave it to get some fresh air debate? "Always dress the blister with a protective dressing," Heath recommends. "This creates a controlled environment to help the blister heal, protects the skin from bacteria and helps relieve pain."

Only a few days to go until the big day and still got blistered feet? Try this Heath-approved trick 3-4 days prior to the race: rub your feet with surgical spirit every day to help toughen the skin. This works as an added blister prevention - just make sure you've got something to hold on to as it will likely hurt a little. No pain, no gain.

Pamper, pamper, pamper

Whilst remember to strength train, foam roll and keep the long runs ticking over whilst marathon training can feel like a lot to deal with,

we're about to add a few more items to your 'to-do' list that are not only essential foot care for runners but also a great relaxation technique, too.

Arundel maintains that a good post-run foot pamper can ward off runner's feet horror stories. After your mileage, he advises washing and drying your feet thoroughly to avoid any fungal infections and using a soothing moisturizer to prevent cracked and dry areas. Muscle soothing balms and salts such as Epsom bath salts, can also help the muscles in your feet and body to unwind. Stick a face mask on whilst you're at it and you're in for a *proper* treat.