

Runner's Guide to the Psoas

This deep core muscle is key to good running form

By Jill Hudgins

As featured in the September 2011 issue of Running Times Magazine

When elite ultrarunner Mike Wolfe laced up for a tempo run in June 2009, his right hip flexor felt tender and sore. But nothing out of the ordinary for a runner who, in a weekend, can cover 75 miles and 20,000 feet of climbing, so he muscled through the tempo. Afterwards, however, he couldn't lift his leg. His hip had locked up, the pain excruciating. Wolfe's preparations for his debut at Western States 100 came to an abrupt halt.

He was diagnosed with a partial tear of the right psoas. The only cure for Wolfe's injury was the most dreaded word in the runner's lexicon: rest. He was sidelined from running for three months. But in June, Wolfe got a second chance at Western States, where he placed second in a deep field. Wolfe had finally put his psoas woes to rest.

PSO-WHAT?

The psoas is a rope-like muscle located deep in the belly, which runs obliquely from spine to the femur. The psoas is joined at the hip, literally, by the iliacus, which travels from hip to thigh. Together, the psoas and iliacus make up the iliopsoas--the body's most powerful hip flexor.

Why should runners care about a hard-to-find muscle with a funny name? Because the psoas enables you to run. Every time you lift your knee, the psoas contracts. When your leg swings back, the psoas lengthens. For a runner averaging 180 strides per minute, the left and right psoas each contract and lengthen more than 5,000 times during the course of an hour run. That's a lot of strain on a band of muscle that's only about as thick as your lower forearm.

The psoas also promotes good posture. Along with a coordinated team of core muscles--abs, obliques, lower back--the psoas helps stabilize your midsection and pelvis. Every time you stand, walk, or run, you're engaging the psoas. If the muscle is compromised, either by injury or tightness, your running inevitably suffers.

YOU MIGHT HAVE A PSOAS INJURY. . .

If you find yourself shuffling more than usual, feeling a twitch or hiccup in your stride, you might have a psoas injury. If you're experiencing pain running uphill, walking up stairs, or doing any other activity that requires knee lift, you might have a psoas injury. If you have hip, groin, or glute pain, you might have a psoas injury. If your lower back is aching ... well, you get the idea.

The psoas is tricky. Most runners don't walk into their physician's office and say, "Doc, my psoas is killing me." They complain of a cascade of other symptoms, from the lower back all the way down to the foot. Elite ultrarunner and physical therapist Nikki Kimball says, "It's a bit of a chicken-and-egg conundrum. Is the psoas tight because of another problem, or is some other problem causing the psoas to tighten?"

Either way, it's not enough to treat the psoas alone. Kimball says, "All issues of tightness, poor posture, weakness, and muscular imbalance need to be addressed for successful resolution of a psoas injury." Whether a strained psoas leads to low back pain or an achy back triggers an injury to the psoas, the symptoms should be treated in tandem.

Tracy Sher, a physical therapist from Orlando, Fla., admits that, when dissecting running injuries, you may never unravel the chicken and egg mystery. But even if you can't pin down which came

first in the causal injury chain, the psoas is a great place to start. By treating the psoas, Sher says, runners often find relief from pain in the low back, hip, hamstring, and groin.

YOU MIGHT HAVE A TIGHT PSOAS. . .

Try this: Lie on your back with both legs straight. Pull one knee towards your chest. If the other leg lifts off the floor, then your psoas is too tight. Now try the other side. Muscular imbalances are common, especially among runners, whose side-to-side discrepancies are reinforced through repetitive movement.

John Stiner, a massage therapist based in Durham, N.C., whose credentials include a 2008 stint with the Nike Oregon Project, has noticed an epidemic of psoas tightness among his running clients. The number one culprit, he says, is your chair.

Sitting for long periods puts the psoas in a perpetually shortened state. Muscle memory maintains this shortened state, even when you head out for a run.

A short psoas can cause several postural problems: lordosis (arched lower back), anterior pelvic tilt (pelvis tipping forward), and hunching. Running with any of these postural dysfunctions can lead to a myriad of other injuries and issues, including hip, groin and lower back pain. Our bodies simply aren't designed to sit all day, says Stiner.

But unless you're in a financial position to quit your day job and become a wandering nomad, you can't avoid the chair. What you can do is take a stand, early and often. Make it a habit to get up and stretch regularly. When you sit, pay attention to your posture. Don't let your lower back arch. Sit up tall, like your momma told you, and don't hunch.

Stiner also advises runners to avoid excessive core work.

"Doing too many sit-ups actually trains the psoas muscle to be short. And in running, you want the psoas to relax and extend. If it's too taut, then the psoas can't lengthen. Without that length, the psoas can't contract with as much force." Six-pack abs should come with a warning label: Runners beware--too many sit-ups may cause psoas tightness.

Core work should be thought of like vitamins, beneficial only in small doses. Popping too many Centrums can be hazardous to your health. Likewise, too many crunches can wreak havoc on your psoas.

LENGTH BEFORE STRENGTH

Whether you're returning from a psoas injury or dealing with chronic tightness, start back slowly. Avoid any activity that aggravates the psoas, like hill running, until the pain subsides. If the psoas feels stiff or tender to the touch, enlist muscle release massage. Once the psoas is released and relaxed, the real work begins--undoing all those hours of sitting, at your job, in your car, at home. Regular stretching is the best at-home antidote to a tight psoas. (See the psoas stretches listed below.)

Remember, though, that your psoas didn't get tight in one day, and it's not going to get un-tight in a day. As Stiner explains, "You're re-training the muscle, which takes time." So be patient. And gentle. Overstretching the psoas can trigger a myotatic reflex, in which the muscle, instead of stretching, contracts and shortens. Ease into the stretch without straining, aiming for a lengthened sensation.

Lengthening your psoas not only decreases your risk of injury, but also opens up your stride. Picture the long sweeping stride of Kenenisa Bekele. Now imagine your prototypical shuffler, skimming the sidewalk with each step. Whose psoas is shorter? More than likely, the shuffler's.

And whose is stronger? Without a doubt, Bekele's.

Lengthening the psoas can open up your stride. It can cure a litany of injuries, improve your running posture, and alleviate tightness and pain in the back, hip and groin. So don't settle for a so-so psoas. Sit less, stretch more and get ready to make great strides in your running.

Selected Psoas Stretches

1) THOMAS STRETCH

Sit tall at the end of a table, with your thighs halfway off . Pull one knee to your chest and lean back. Your lower back and sacrum should be flat on the table. If there's any rounding in your back, or tipping of your pelvis, then you're pulling the knee too far, so loosen your hold. The other leg should hang free off the table. Hold for 30 to 60 seconds for each side, and complete at least two or three repetitions.

NOTE: Physical therapists often use this stretch as a flexibility test for the hip flexor. To pass, the posterior thigh should touch the table, and the knee should passively flex at an angle of at least 80 degrees.

2) KNEELING LUNGE

Kneel on one knee, with the front leg forward at a 90-degree angle. With your pelvis tucked, lunge forward, easing into the stretch without straining. If your psoas is tight, your natural tendency may be to arch your lower back; make it a point to keep the back straight. Raise your arms overhead for an added abdomen stretch. To dynamically stretch the psoas, complete 20 reps on each side, holding the lunge for 2 to 3 seconds.

3) WARRIOR POSE

Step one foot 3 to 4 feet in front of you. Lunge forward until your front knee is at a right angle. (Readjust your foot position if necessary.) Turn your back foot out about 45 degrees. Keeping your back foot firmly planted, and your head, shoulders, hips and knees facing forward, raise your arms overhead. Relax your shoulders; don't let them inch up. Lift your rib cage away from your pelvis to really stretch the psoas. As in all yoga poses, breathe deeply and easily. Don't strain. Hold for 30 to 60 seconds.

