

The Runner's Triad:

*Fixing the source
of running injuries*

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One of my favorite books is Born To Run, by Christopher McDougall. Maybe you've read it. It's a fun read with a great plot and some interesting ideas. It started a revolution too. In 2010, this book almost single-handedly popularized the minimalist and barefoot running movement.

People rushed to buy Vibram Five Fingers in the hopes that their running injuries would be miraculously cured – like Barefoot Ted, who was cured of his low back pain by running barefoot.

Shoe manufacturers eventually caught on to the movement, and now just about every major shoe company has a minimalist line of shoes to appeal to the growing demand among runners.

Some really great running methods became popular as runners raced to learn how to run happy and pain-free. Chi Running, the POSE Method, Good Form Running, Newton Running, and Barefoot Running have made a lot of headway in teaching a better way to run. And a lot of the success of these methods is due to good press by Born To Run and some people who rode the wave of enthusiasm behind this exciting new/old way to run.

Entre: the problem.

We still become injured.

In fact, injury rates among runners practicing minimalist running approaches are not much different than the general population of runners. Its actually getting hard to tell the difference in my city of Grand Rapids, Michigan who has taken the Good Form Running courses and who hasn't. Seems like most people in shoes are taking shorter strides, leaning forward from the ankle, landing on the midfoot, blah, blah, blah....

And I still see those people in my clinic.

But why? I thought minimalist shoes and minimalist running form were supposed to help us? Minimalist running did not cure IT-band syndrome any better than a thick, supportive shoe. And that Achilles tendonitis? Still there.

Don't get me wrong. I think people DO have a

better chance of not getting injured if they run with proper form and in minimalist footwear. But injuries still happen.

In just the past two weeks I've treated two of the best ultra runners in West Michigan. One is a minimalist purist who only wears these flimsy little moccasins with a 3 mm Vibram sole (Moc3 by Soft Star). He's such a minimalist running nerd that he ran a 50-mile trail ultra last summer in Moc3s with his jaw wired shut. Maybe you read about him in Runner's World or saw him on YouTube. Try to breath, hydrate, and suck gels like that for 12 hours!

But guess what. Even HE got injured.

My point? Regardless of having the best running form known to modern mankind, we are still

subject to injury.

But one of the most exciting days of my professional life was when I discovered why even the best runners get injured.

Regardless of speed, distance, size, training, and mental fortitude, there is one common feature that limits every runner and will eventually turn that runner into a statistic.

No. Not shoes. Not form. Not training approach.

Tight calves.

A tight soleus to be specific. This one muscle is like the center of the universe when it comes to running overuse injuries. Give me 100 runners with overuse injuries, and I'll find a dysfunctional

calf in about 90 of them.

The soleus has some really key mechanical roles for attenuating shock. And it has some critical functions in activating other muscles by way of stretch reflexes.

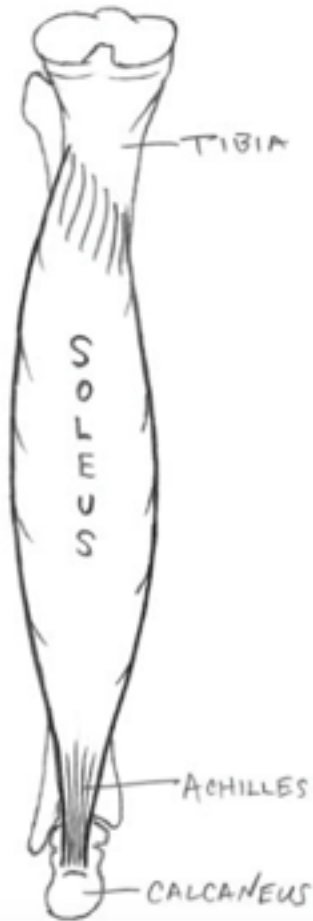
When the soleus gives out, lots can go wrong mechanically and neurologically. The result is what I call the Runner's Triad.

In short, the Runner's Triad presents like this:

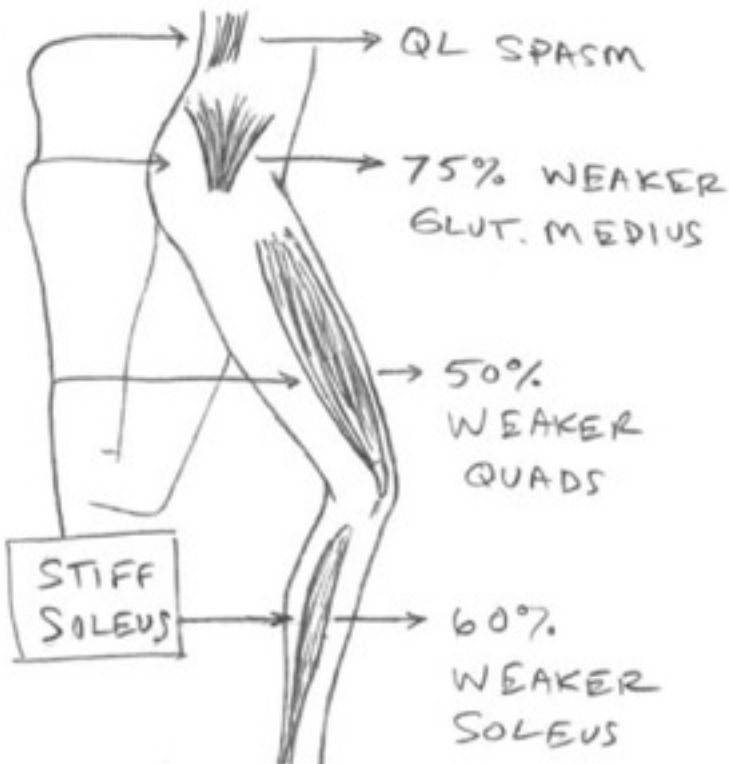
1. A stiff and overused soleus
2. Inhibited gluteal muscles
3. Pelvic asymmetry causing a leg length difference

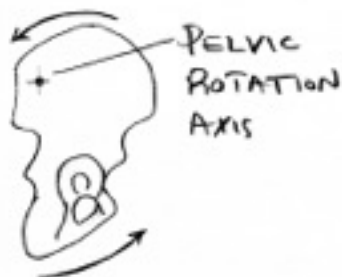
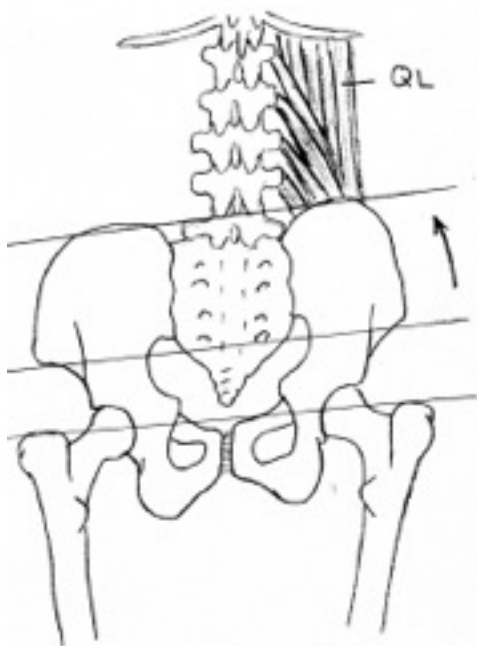
Here is the basic mechanism of the Runner's Triad.

1. The soleus is overloaded and becomes inflexible. It's a key muscle for shock absorption in runners. When the soleus stiffens, it loses up to 60% of its contractile strength due to neurological inhibition of its stretch reflexes (this has been published in 3 separate research papers).



2. The stiff soleus also causes significant reflexive inhibition of the major shock absorbing muscles. The soleus, the quadriceps, the gluteus medius, and the quadratus lumborum lose over half of their strength when the soleus is stiff! But it all reverses when the soleus is loosened with the right method. I'll show you in a few minutes.





3. The stiff soleus causes a reflexive spasm of the quadratus lumborum (QL) in the lower back. This results in asymmetry of the pelvis causing a leg length difference of up to 2.5 cm.

Doctors of Physical Therapy, Chiropractic Medicine, and Osteopathic Medicine spend a lot of time trying to correct the symmetry of the pelvis to restore an even leg length. Usually that

correction involves manipulation of the spine and pelvis. And that works temporarily. But the asymmetry almost always returns.

Why?

Because the SOLEUS is the root of the problem. When the soleus stiffens from overuse, it causes a reflexive spasm in the QL.

And the QL spasm causes the pelvic asymmetry. And the only way to correct the asymmetry is to relax the QL.

And the only way to relax the QL is to release the tension in the SOLEUS.

Sound far-fetched? I get that. But it's the way the body is wired neurologically.

A stiff soleus causes a weak hip muscles and a leg length difference.

That's it.

That is the common thread in every single overuse running injury.

If there was no traumatic event like a fall or joint sprain, if there is no major joint problem like a meniscus tear or osteoarthritis, and if there is no bony fracture, the Runner's Triad is the underlying source of all running pain.

Period.

Over time, the Runner's Triad becomes a substrate upon which the most common overuse injuries are built. With a tight calf, a weak hip, and a leg

length difference, other muscles start to compensate.

In fact, there are 12 common compensations for the Runner's Triad that I see regularly. I call them the Dirty Dozen.

The Dirty Dozen running overuse injuries include things like plantar fasciitis, Achilles tendonitis, shin splints, calf strains, patellofemoral pain, IT band syndrome, hamstring strains, several types of hip pain, and low back pain.

Any of those feel too familiar to you?

Some of them certainly were familiar to me at one time (and still sometimes). But there is hope.

Because the Dirty Dozen can be avoided by fixing

the Runner's Triad before the symptoms appear. And the Dirty Dozen injuries can be treated by fixing the Triad first, then fixing the compensation.

How do you fix and prevent the Runner's Triad?

You ROLL your calves on something that digs deeply into the thick, dense soleus to release the tension in the muscle and fascia.

Treating the soleus REVERSES the Runner's Triad. Just a few minutes of rolling the soleus corrects the pelvic alignment and restores the reflexive strength of the hip.

But this is not a massage. This is a manipulation. Painful. Tedious. Agonizing. Nauseating. But if you want to run, you have to pay your dues. And the soleus roll is one of them.

FYI, stretches don't really work very well for loosening the soleus. The soleus only crosses the ankle joint. And the ankle range of motion prevents the soleus from stretching effectively. So rolling is really the best option.

I've searched for a long time to find the right tool for this purpose.

Foam is too soft, and foam rollers are too large in diameter to penetrate deeply. The Stick is too flimsy. The Tiger Tail doesn't generate enough pressure over the right spots.

Crazy thing... a wooden rolling pin or a steel water bottle are often my tools of choice for loosening the soleus! And they are great to get you going.

The other option (my personal favorite) is the MyoReflex Roller. The MyoReflex Roller digs deeply in the all the right places. I developed it a few years ago and tested on hundreds of people to get the right design.

But regardless of what tool you use, if you roll the right places deeply enough, for enough time, you have a great chance of getting the results you need.

The next few pages show you how to roll the soleus, so you can reverse the Runner's Triad and help prevent running injuries before they happen.

Soleus Rolling (use a rolling pin, steel water bottle or the MyoReflex Roller)

- With toes pointed in a relaxed position, place your calf on the roller just over the Achilles
- Lift your hips and roll from the heel upward about 2/3 up the calf.
- Roll the midline, inner side, and outer side
- When you find a painful area, spend more time there
- Use as much pressure as you can tolerate
- Continue 2-3 minutes



- To increase pressure, cross your other leg over the one you are rolling.
- Don't do this if you have a history of blood clots in your calf or an existing fracture in your lower leg. And, as always, consult your health care professional before trying this.

