

THE BIG IDEAS

Anatomy Made Simple
Meet your amazing feet.

#1 Cause of Foot Issues
Meet your not-so-amazing shoes.

The #1 Tip
Go barefoot.

Rest
It's a double-edged sword.

Chronic Inflammation
Curing "itis"es via omegas.



Fix Your Feet

Build the Best Foundation for Healthy, Pain-Free Knees, Hips, and Spine

BY PHILIP MAFFETONE · THE LYONS PRESS © 2004 · 160 PAGES

“WHY ARE YOUR FEET IMPORTANT?”

The answer to this question is simple: One pair must last a lifetime.

This is a serious book for those serious about their feet. Many of the approaches discussed here can provide quick improvements of common foot problems. However, this is not a quick-fix book. It's important to understand how your feet work if you want to truly correct and prevent future problems.

The feet are subjected to more wear and tear than any other body part. Walk a mile and you generate more than sixty tons—that's over 120,000 pounds—of stress on each foot! Fortunately, our feet are actually made to handle such natural stress. It's only when we interfere with nature that problems arise. Almost all foot problems can be prevented, and those that do arise can most often be treated conservatively through self-care. This book addresses these issues.”

~ Phil Maffetone from *Fix Your Feet*

Let's talk about our feet! Our feet? YES! Our feet. :)

Although pretty much ignored, they're kinda important. In fact, they are, of course, literally (!) the foundation of our entire body. And, we only get one pair that needs to last our whole life so...

Get this: Over 25% of our bones are found in our feet. And, did you know that each foot endures over 100,000 (!!) pounds of pressure with every mile we walk? Yep.

And, know this: We evolved for millions (!) of years without shoes and our feet took care of business. Like many other fundamental aspects of our humanity (see: Nutrition, Movement, Sleep, etc.), it was only with the introduction of machines over the last couple hundred years following the Industrial Revolution that things radically changed. Specifically, everyone went from being barefoot or wearing moccasins or sandals to wearing big ol' overprotecting shoes.

Why should we care? Because a bunch of our biomechanical issues—from sore knees and hips and lower backs—can be traced back to sub-optimal feet. Enter: Fix Your Feet.

I read this book as part of my Phil Maffetone binge in which I read five of his books in a week. (Laughing. With joy.)

Maffetone talks about feet in most of his books but I wanted to go deep with this quick-reading little book to make sure I didn't miss anything and then use this Note as a quick way to share the most practical Ideas you can apply to your life TODAY. (Get the book [here](#).)

So, here we are. Let's jump in! (With both feet, of course. ;)

Oh, btw. At his peak, *Outside* magazine said triathlete Mark Allen was the fittest man on the planet. Maffetone was his coach. He says: “This book could put to rest many of the aches and pains that you thought were just normal.”

“Most shoes pose a great potential danger to the feet, much more than does the ground itself. Sports-type shoes, tight shoes, and high heels can be especially damaging due to the resulting alterations in foot function.”

~ Phil Maffetone

ANATOMY MADE SIMPLE

"Shoes are the cause of most foot problems."

~ Phil Maffetone

"There's nothing simple about the human foot. It's one of the most incredible and complex bio-engineered parts of our anatomy. It combines power and speed with delicate movement and balance, solid stability with acute sensitivity, and endurance to take us almost anywhere we want to go for more than one hundred years."

Those are the very first words of the book in Chapter 1: "Anatomy Made Simple" in which Maffetone walks us through the astonishing bioengineering feat that is our feet. :)

Let's look at some fun feet facts:

First, some quick math: The human body has 206 bones. Each foot has 26 bones. So, combined, the feet have 52 bones. That's an astonishing 25% of the bones in our entire body! (Bonus fun fact: We have 270 bones at birth; this decreases to 206 as some bones fuse together.)

Each foot also has 33 joints (which is where two bones come together), over 100 ligaments (which connect bones to other bones) and more than 30 muscles and tendons (which connect muscles to bones). And, other than our spine, our feet also have the most nerve activity of any other region in the body. (Maffetone tells us this "foot sense" is super important, and lost when we wear most types of shoes. More on that in a moment.)

Plus, did you know that it's normal (and natural) for our shoe sizes to increase two or more sizes over the course of our adult lives? Yep. They're not "growing" per se but when not constrained by restrictive shoes, *"the foot still gets larger with age. This is not true growth but a spreading of the foot due to metabolic changes in the body."*

Then we have the fact, as we've already discussed, each foot endures over 120,000 (!!) pounds of pressure for EVERY (!!!) mile we walk. <- That's a lot of pressure over the 100 year lifespan, eh? And, again, guess what: Nature designed our feet to PERFECTLY manage all that WITHOUT shoes. For MILLIONS (!!!) of years. So, take a moment, look down at your feet and marvel in their bioengineering splendor! Then let's learn more about what might be getting in the way...

SHOES!

"The best shoes are those with little or no support, such as moccasins, sandals, flat sneakers, and shoes with thin and hard rather than soft soles. The worst shoes may be tight, high-heeled dress shoes and sports shoes with a thick sole that are also often filled with 'special' materials, including air, and those that are extremely cushioned."

~ Phil Maffetone

"A number of factors can disrupt a person's normal gait. ...

The most common factor that changes a normal gait to an abnormal one is wearing shoes. Most shoes, including the sports type such as the popular running shoes, change the gait by causing the stride length to be abnormally longer. This results in an abnormal heel strike—hitting the ground further back on the heel. This is especially a problem when jogging or running because it places more shock through the foot and into the knee and occurs despite the shoe cushioning or other shoe designs. Barefoot movement of any type does not cause the same stress. ...

In all, our feet were made for walking, running, hopping, jumping, and all other natural movements. When we interfere with our natural movements, such as when we wear shoes, problems can arise. Apart from sandals and moccasins, humans evolved barefoot—for millions of years our feet were free. Suddenly, in only the past few hundred years, shoes of many types have restricted our feet, disturbed our gait, and caused untold problems to our feet, triggering other problems throughout the body they support."

Millions of years of evolution. No shoes.

Then, a couple thousand years ago (give or take) Assyrians started wearing sandals. The Egyptians followed—rocking sandals made of palm leaves and papyrus. Head to cooler climates and throw some deerskin or other soft leather and you've got a moccasin.

The basic idea with those first pieces of footwear? Simple function. They protected the wearer

"The majority of people in the Western world probably wear shoes that are too small."

~ Phil Maffetone

from rocks, etc. Then these basic "shoes" became more "costume" than functional tool. And, that's when we started disrupting nature's epic bioengineering feat known as our feet.

Although kinda weird to think about, when we throw shoes on our feet that do anything more than protect the bottoms from rocks and scrapes (like those simple sandals and moccasins), we're messing around with perfection.

As it turns out, Maffetone tells us that all the artificial support in sports shoes actually weaken the very feet we're trying to help out. Enter: Injuries that are pretty much totally preventable.

And, when we have artificial cushioning, we mess with our gait. Specifically, we tend to overstride which tends to make us have an abnormal heel strike. Which tends to lead to all the injuries we don't want.

Now, I never really thought about this until I read these books. (And, Katy Bowman's [Don't Just Sit There](#).) Thankfully, I have a super curious and equally committed Optimizing Wife who's made sure our family is rocking the appropriate footwear.

Quick aside into the Johnson family footwear department: Aside from a brief stint wearing some rain boots for awhile, (almost-six-year-old) Emerson has always worn moccasins or Vivobarefoot shoes. Eleanor (eighteen-months old now!) has only ever had her (pink!) moccasins. Alexandra and I both wear Vivobarefoot. ([Here's what I wear on the Trail](#). [Here's what Alexandra wears](#).)

Again, it's kinda funny how so many of our "oops" moves as a culture came over the last couple/few hundred years. God bless the Industrial Revolution for all the amazing things it's made possible. And... We'd be wise to think about what life was like right before that Big Bang.

Quick Highlights:

Nutrition-wise: Pre-Industrial Revolution, junk food didn't really exist. Sugar was incredibly rare and the ultra-machine-processed flour as we know it today didn't exist. Vegetable oils also didn't exist. Those omega-6 bombs only came into existence in the last 100+ years.

Wind back the clock by eliminating sugar + flour + veggie oils and you're 80% there on your Optimizing journey. (Seriously.)

Movement-wise: Pre-Industrial Revolution, we moved a lot more. Obviously. Walking was pretty cool and horses were our fastest means of transportation. And, although chairs were invented almost 5,000 years ago, they weren't really used much until the 1600's and we didn't start living in our chairs (at work, in the car, on the couch, etc.) until VERY recently.

Wind back the clock by walking more and finding opportunities to move throughout the day to avoid being active and sedentary!

Sleep-wise: Thomas Edison didn't kick off the light-bulb revolution until 1879. It's hard to believe that candles (and their equivalents) lit up our night-time world until so recently. We may take that ubiquitous melatonin-disrupting blue light for granted, but that's crazy new.

Rewind to the pre-Edison days and our great-great-grandparents were averaging closer to 10 hours of sleep per night. Hitting our 7 to 8 hours is a wise idea. I could go on, but I think you get the point. Technology is awesome. Except when it isn't. :)

P.S. Here's another way to think about it: *"For millions of years, the human foot has been either bare or covered with very simple footwear to protect the bottoms of the feet. Sandals were the common covering in warmer climates, with moccasins used in colder climates for added warmth. These sparse foot coverings were and are adequate to protect the bottom of the foot from sharp rocks and rough terrain. Foot problems due to being barefoot consisted of the occasional laceration or deep thorn. Today, simple sandals and moccasins are still the most common footwear worldwide."*

With the advent of today's modern shoes came a whole array of foot problems complete with companies that made therapeutic devices and professionals to treat such conditions. Many companies and individuals have benefited, as the shoe industry and these products and services connected with the epidemic of foot problems are big business. Larger shoe companies such as Nike generate annual revenues of more than \$10 billion, with those of smaller companies like Reebok around \$3 billion."

Laughing as I type but... Shoes are a pretty epic big business. Maffetone wrote this book in 2003. Update 15 years later: Nike's revenue is now 3 times bigger at over \$34 billion. (Wow.)

All of which leads us to the #1 way to Optimize our feet...

GO BAREFOOT

"When was the very first time the human foot was injured by a shoe? Probably the first time it was worn. Nothing is more stable, supportive, shock protective, and efficient than bare feet."

~ Phil Maffetone

"If you really want to be free, be barefoot. Not only are your feet made for walking, they're made for doing it barefoot. As a bonus, for those with foot problems, it's also the best and quickest way to rehabilitate your feet.

Without the restriction of shoes, your foot muscles can ultimately return to their natural state of optimal function. In some people, this could take time. For example, if you're used to wearing high-heeled shoes or thick-soled sports shoes most of the time, being barefoot will be a big transition. But once you experience the freedom of being bare, you'll wonder how you got by without it."

Want to solve your foot issues? Simple. Go barefoot. Seriously. This, Maffetone tells us, is THE fastest way to rehabilitate our feet.

Short story: As we've discussed, we THINK shoes are both necessary and helpful. But, quite simply, they're neither necessary NOR helpful.

All that *unnecessary* protection (beyond the moccasin/sandal love) messes with our gait (overstriding + heel striking = ouchy!) *while* weakening all the muscles that **should** be working like they've been designed to work for millions of years.

Plus, shoes distribute our weight in a weird way—which leads to even more issues. The most extreme example? High-heeled shoes. All of our weight basically gets squozen (technical term!) into a VERY small area (while our posture gets all wacky with an unnatural, elevated heel).

Don't need to think about that very hard to realize that that's *probably* not a good idea. Yet, we have a culture that puts wearing a "costume" ahead of function and voila, we do silly things.

btw: I'm reminded of the "imagined orders" conversation we had in *Sapiens* and *Homo Deus*. As Harari points out, when everyone does the same thing we tend to assume that those behaviors are "natural, inevitable and immutable" when they're not. Stuff like lawns. Vacations. High heels.

Alright. So, back to being barefoot. Obviously, most of us (even the most intense iconoclastic Optimizers among us!) aren't going to just throw our shoes into the trash and go barefoot for the rest of our lives. And, even if we **wanted** to do that, we'd still be wise to take the time to transition out of the sub-optimal set up into the optimal.

Super-simple first step: Take off your shoes when you're inside your house. You'll slowly wake your feet up and get those muscles and tendons and ligaments and joints working the way they were designed to work. (And, bonus perk: Your shoes carry stuff you don't want in your house so by taking them off you reduce that unnecessary toxic load AND you get to work out your feet!)

Then, if you feel so bold, go outside in your garden without shoes. Then, if you're like me, you may want to start gradually walking outside without shoes more. My new thing: I carry my shoes and socks for the first 5 minutes of my Trail workout. It's actually kinda CRAZY how quickly my feet have adapted to walking barefoot on the dirt/over rocks/etc.

"In a December 1997 issue of the British Journal of Sports Medicine, researchers Robbins and Waked state, 'Expensive athletic shoes are deceptively advertised to safeguard well through 'cushioning impact' yet account for 123% greater injury frequency than the cheapest ones.'"

~ Phil Maffetone

Couple other things I'm having fun doing to strengthen/balance my feet: Balancing on one foot while reading (and putting on my socks, drying my feet after the shower, etc.). And, I'm using a golf ball to massage the bottom of my foot more these days. Basic idea: Gently stand on a golf ball and move it around the bottom of your foot. Works magic.

So... One more time, know this: Maffetone offers a number of things to rehabilitate/strengthen our feet but he says that *"nothing is as effective overall as being barefoot."*

P.S. The other day Emerson and Eleanor and I were taking a little walk. All of us were barefoot. The nurse for our 94-year-old EPICALLY awesome (blind) neighbor (who rides her bike in the garage a couple times a day and is the sweetest woman ever; we Love 2.0 her) saw us and noticed we were all barefoot and said, "I'm too old to not wear shoes."

Now, I typically refrain from offering unsolicited advice these days, so I didn't say anything. But... I was tempted to start a chat about how we're *all* too old to *not* go barefoot!

Maffetone talks about the fact that this is especially important for the older among us. Independent living is contingent on being able to get around. And one of the most important variables to make sure we don't fall and hurt ourselves is making sure our FEET are strong and that we preserve our "foot sense." Easiest way to do that? Cruise around your house barefoot. (That's a pro tip for aging parents, btw!)

P.P.S. Fun story: I took a little 10-minute walking break in the middle of creating this Note. I dutifully put on my shoes and hit the bike trail. Then a teenager literally crossed my path. BAREFOOT. I took that as a wink/challenge from the Universe and proceeded to take my shoes off and walk the rest of the way barefoot. My feet thanked me. I thank that awesome kid.

REST: THE DOUBLE-EDGED SWORD!

"In allowing your body to fix itself, rest may be the key. One of the most powerful of therapies, rest can be a double-edged sword, if overused. The key with rest is knowing when and when not to use it.

Many active people often have trouble resting when they should. Rest is the best way for the body to recover. This recovery may be from a day at work, a long day of hiking, or some hard exercise. Recovery is essential for the body to build up the muscles, allowing them to get stronger or more functional. Without recovery there could be some form of injury that might not exhibit symptoms until the problem gets worse.

Too much rest can also be a problem. The most common example is inactivity: Some people rest all the time. Sometimes we use a minor problem as an excuse to rest, when in fact the reason for the minor problem may be inactivity itself."

Rest. It's a powerful way to heal thyself. Unless, of course, you're inactive. Then, well, all that rest might actually be the issue! (Hah.)

Proper recovery is a consistent theme of all of Maffetone's books (and our Notes on them!). We need to avoid overtraining. Remember: Training = Work + Rest. As with most things in life, there's an inverted U curve/virtuous mean: Too little of a good thing obviously isn't a good thing. AND... Too much of a good thing is no longer a good thing either.

Where do you tend to fall on the undertraining/overtraining side of things? How can you Optimize just a little more today?

btw: One of the main things that makes Maffetone's Method so powerful is his focus on building a strong aerobic system. This is super helpful for the feet as well. The more we build our aerobic systems up, the more mitochondria we create, the more blood flows (with oxygen!) to the spots that need it most... And, the more healing and health!

" Nothing influences the foot as much as shoes. Nothing does the foot as much potential harm as shoes. And nothing restores normal function as quickly as when shoes are removed."

~ Phil Maffetone

CHRONIC INFLAMMATION

"Chronic inflammation is an abnormal condition of long-term inflammation. It can cause or is associated with ill health and disease. ... Many foot problems are associated with chronic inflammation, from arthritis to plantar fasciitis to Achilles tendonitis. Any word ending in 'itis' refers to inflammation. Chronic inflammation is typically the first stage of many more serious conditions, not only in the feet but also throughout the body. These include ulcers, poor circulation, vascular disease, heart disease, and cancer.

Chronic inflammation can develop from biochemical imbalance from the wrong dietary fats, inadequate nutrient intake, and dietary factors that can block anti-inflammatory chemicals. Any of these common causes of chronic inflammation could seriously affect our feet. By balancing dietary fats, we can eliminate chronic inflammation."

"Chronic inflammation caused by an imbalance from the wrong dietary fats." <- That's another consistent theme in all of Maffetone's books.

So... Got sore feet (and/or an "itis")? Odds are you have systemic inflammation that needs some love. And, odds are that you—like nearly everyone in the modern world—have an imbalance of your omega-3 to omega-6 fatty acids intake. As we've discussed many times, we need both but they need to be balanced. Too much omega-6 can result in chronic inflammation. (Wondering if you have inflammation? Measure your C-reactive protein (or "CRP") with your next blood test!)

One of the quickest way to Optimize? Don't consume any more vegetable oils. No more soybean oil, safflower oil, canola oil, corn oil, etc. Note: That basically means eliminating all store-bought salad dressings and a lot of the food prepared in normal restaurants. Switch to olive oil and coconut oil and you'll make a nice little dent in any potential inflammation issues.

There ya go. That's a super quick look at this great little book.

Here's to Optimizing—from our feet to our foreheads and everything in between and beyond!

B

Brian Johnson,
Professional Optimizer

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[The Maffetone Method](#)

[The Big Book of Endurance Training and Racing](#)

1:59

[The Endurance Handbook](#)

[The Overfat Pandemic](#)

[Don't Just Sit There](#)

[Designed to Move](#)

About the Author of "Fix Your Feet"

PHILIP MAFFETONE



Dr. Philip Maffetone has been a private practitioner, health and athlete coach and consultant, published independent researcher, respected pioneer in the field of complementary sports medicine, and internationally recognized educator and author in the fields of nutrition, biofeedback, exercise physiology, and athletic training over the course of his forty-year career. Since 1977, he has used the term "overfat" and has recommended low-carbohydrate and healthy fat eating.

About the Author of This Note

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Brian Johnson loves helping people optimize their lives so they can actualize their potential as he studies, embodies and teaches the fundamentals of optimal living—integrating ancient wisdom + modern science + practical tools. Learn more and optimize your life at optimize.me.