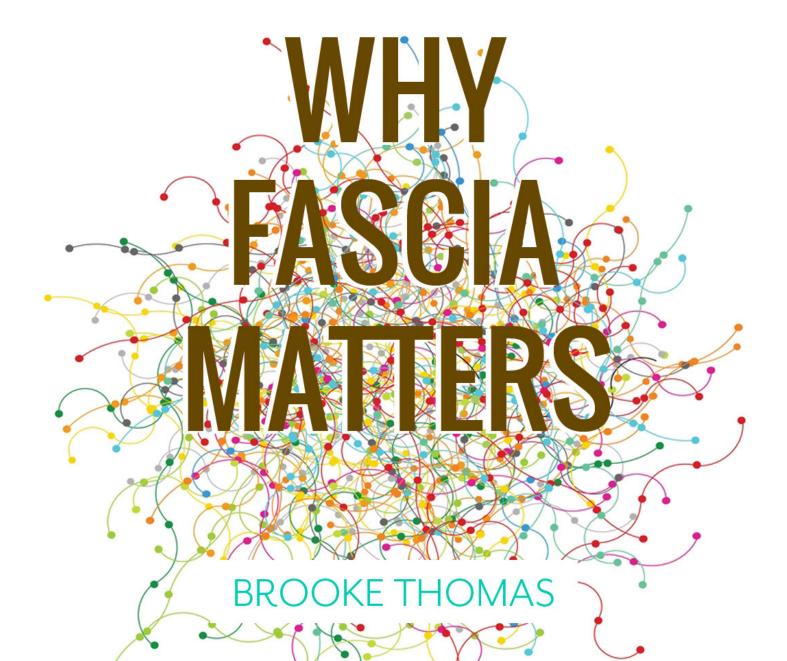
BODY GUIDE



LICENSING, SHARING, AND CONNECTING

This ebook is free and does not contain any affiliate links. It grew from a post that first appeared *here on Breaking Muscle*. I am grateful to Breaking Muscle for posting my work, but mostly I am grateful to them for creating a site where people can speak about athleticism in a such a thoughtful way.

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License. To view a copy of this license, visit <u>http://creativecommons.org/licenses/by-nc-nd/3.0/deed.en_US</u>.

That means you can share and utilize it as long as you don't edit it, give me credit as the author, and keep it free.

Created by Brooke Thomas for *Fascia Freedom Fighters* and *Liberated Body* <u>Guides</u>

Are you a body nerd or someone who is navigating how to live more happily in their body? Come hang out with us:



http://www.fasciafreedomfighters.com/blog/



https://www.facebook.com/fasciafreedomfighters



<u>https://twitter.com/brookethomas</u>

TABLE OF CONTENTS

Acknowledgements About this ebook

CHAPTERS:

- 1. Meet fascia
- 2. It's all connected
- 3. How we actually move
- 4. A masterpiece of tensegrity architecture
- 5. The domino effect
- 6. A fluid tensegrity system
- 7. Its springiness wants to help you out
- 8. Variation matters
- 9. The original information superhighway
- 10. Loving your fascia

In closing For practitioners and teachers References About the Author

ACKNOWLEDGEMENTS

I am neither a fascial researcher, nor am I a brilliant fascial mind. I just happen to be a fascia-nated (I swear I'm only going to do that, at maximum, twice) student of this tissue system.

That said, I owe an enormous debt of gratitude to the fascial researchers who are leading the charge into what I believe is the unfolding of a completely new way of understanding the human body. Without them, I am a ship without a sail.

In this book I have cited the research and work of: Katy Bowman, Thomas Findley, Robert Schleip, Frederick Grinnell, Jean Claude Guimberteau, Helene Langevin, Stephen Levin, Ross Pope, Guido Meert, Jere Mitchell, Robert Schmidt, Jaap C van der Wal, Erik Dalton, Thomas Myers, James Oschman, and Donald Ingber.

There are of course many others who are doing exceptional work in the field. Perhaps most notably Gil Hedley, who has managed to change what the verb "to dissect" means entirely.

I have also been fortunate to cross paths with a number of brilliant minds over nearly two decades now who have, each in their own way, awakened and continue to stoke my passion for this tissue system. In particular I am thankful to Joe Wheatley, Patrick Ellinwood, Jan Sultan, Michael Salveson, Jonathan FitzGordon, Jill Miller, and Sue Hitzmann.

And while she was gone before I had a chance to study with her directly, the work of Dr. Ida P. Rolf continues to shape my life profoundly.

I humbly and gratefully bow to all of you.

ABOUT THIS EBOOK

This should by no means be considered the last word on fascia, or any kind of exhaustive work on the subject. This is for a couple of reasons:

First, fascial research is a very new field and as such new information is coming to light all the time. So this book is more like a glimpse of "reporting from the front lines", rather than a set-in-stone definitive text.

Second, this ebook came to be because I wrote a blog post on Breaking Muscle: <u>The Top 5 Ways Fascia Matters to Athletes</u> and as I sent it in for publication I wondered if anyone else would care about a long-ish article on a tissue system that has until recently been considered a lowly packing material.

I was surprised (and delighted!) to discover that I am far from the only one who is excited about the wonderful world of fascia. I had many teachers and practitioners of all stripes getting in touch to ask if they could print out the article to use it as a teaching aid with their students/clients/patients. This gave me the idea to adapt and expand upon the article in this handy free ebook format so that people could easily do just that.

So while this ebook is more in depth than the original article, it is adapted from that and is very much in the vein of a blog post- short, sweet, and informal. This is more like an incredibly brief primer on fascia that is intended for a wide audience, rather than *the book* on fascia. As such, yes, there will be parts of the fascia conversation that are missing from this ebook. If you want *the book*, in my opinion you would do well to grab a copy of *Fascia: The Tensional Network of the Human Body* by Schleip, Findley, Chaitow, and Huijing.



Lastly, this ebook is free and available for download under a Creative Commons license (for more information on how it is licensed see the licensing page that precedes this). I wrote it to make some basics of fascial information easily available so that teachers and practitioners- and just plain old interested laypeople- can use this information and spread it as easily as possible. So please feel free to download it, share it, print it out, use it as a micro-textbook, or what have you. Let's liberate some bodies and minds!



You may be noticing that the word "fascia" is a hot topic right now in many body related fields, so before we get to why fascia matters, here is a brief primer about why it's getting so much attention these days.

Many have thought of fascia as a glorified body stocking- a seamless piece of tissue that Saran Wraps you just underneath the skin. While this is true of the superficial fascia, it's important to understand that it is a richly multidimensional tissue that forms your internal soft tissue architecture.

In fact, fascia has been defined as *all* of the soft fibrous connective tissues that permeate the human body (Findley and Schleip 2007)¹. These tissues come in a wide range of densities on a broad spectrum from cotton candy to a leather strap.

From the superficial ("body stocking") fascia, it dives deep and forms the pods (called fascicles) that actually create your musculature like a honeycomb from the inside out. Imagine what it looks like when you bite into a wedge of orange and then look at those individually wrapped pods of juice- we're like that too! It also connects muscle to bone (tendons are considered a part of the fascial system), and bone to bone (ligaments are also considered a part of the fascial system), slings your organ structures, cushions your vertebrae (yep, your discs are considered a part of this system too), and wraps your bones.

So imagine for a moment that you could remove every part of you that is not fascia. You would have a perfect 3D model of *exactly* what you look like. Not just in recognizable ways like your posture or facial features, but also the position of your liver, and the zig zig your clavicle takes from that break you



had as a kid, how your colon wraps, etc. To say it's everywhere is far from overstating things.

In fact, it turns out that its everywhere-ness is one of the reasons it was overlooked for so long. Until recently it was basically viewed as the packing peanuts of soft tissue. Therefore, in dissections for study and for research, most of it was cleanly scraped away and thrown in a bucket so that the cadavers could be tidily made to resemble the anatomical texts people were studying from. Poor, misunderstood, and underrated fascia. Sigh.

Fortunately research is catching up to what turns out to be a remarkably communicative sensory and proprioceptive tissue. And what fascia researchers are discovering is pretty amazing not just for fascia nerds like me, but for anyone who wants to put their body to good, healthy use. So without further ado, here is some of the newly emerging information about fascia and how it matters to everyone who lives in a body.

¹⁾ There is plenty of debate in the fascia research community about how to define the boundaries of this tissue system, which, when you consider that its function is to connect things, makes perfect sense. For the purposes of this ebook, I will be using Findley and Schleip's definition which was proposed as a basis for the first Fascia Research Congress.

2

IT'S ALL CONNECTED

Let's say, for example, that you are in your kitchen and your leg is in your bedroom. This is an example of *not being connected*. You may also notice that it's an example of a potential plotline for *Dexter*. Something has gone horribly wrong in this scenario.

Ok, ok so we were not dropped on our heads as children and we get it that our parts aren't detachable. But the problem comes when we think of them as *attachable*. Because of the way we all learn and study anatomy- whether the extent of your studying was singing "the hip bone's connected to the thigh bone" song in preschool, or something more extensive- we tend to conceive of human bodies as "attached" by magical soft tissue versions of tape.

In anatomy-speak we describe all muscles as having an origin and an insertion. So for example, the gastrocnemius muscle (our most superficial calf muscle) originates on the lateral and medial condyles of the femur, and inserts on the calcaneus, via the achilles tendon. This way of describing the location of the gastrocnemius makes it sound like it is taped or stapled to be "attached" at its origin and insertion points- like it's this separate thing that gets stuck onto other separate things.

It is convenient to think of ourselves as mechanical systems that get made by attaching parts, but we are not machines, we are *living organisms*. There is no point at which a human being gets assembled. We develop. A pregnant woman does not need to set time aside to remember to attach the fetus's lungs. Because the fetus develops as a *unified* organism.

Back to the gastrocnemius description; Rather than talking about its attachment points, a more clear and true to human anatomy description would be that the gastrocnemius *becomes* the achilles tendon (by weaving more densely until muscle becomes tendon) which then *becomes* the calcaneus/ heel bone (by weaving more densely until tendon becomes bone). No muscle attaches to the skeleton anywhere in the body. It only transitions into the bone via fascia.

I am not just trying to belabor anatomy semantics. This is important because it gives us a handier understanding of how you just plain can't have something happen to one "part" of your body and not have it affect every other "part" of your body, albeit in varying degrees of intensity. In other words, "there are no local problems." (Oschman 2012)

Often in the fascia geek worlds we'll use the example of wearing a tightly knit sweater. If you tug on one end of that sweater, you see the tug travel long distance to other ends of the sweater. Or to put it in clearer (and, in my opinion, mind-blowing) terms, "the fascia is the one system that connects to every aspect of human physiology." (Langevin 2006) I feel like shouting that from the rooftops! That's pretty remarkable! This system tithes in to literally everything that makes us human at both the macro and micro levels.



HOW WE ACTUALLY MOVE

Just as there are no local problems, there are also no local movements. We are taught to view individual muscles as the things the move our skeleton. And while they clearly participate in that, a large portion of that tensional force is transmitted via fascial sheets, which, because they are our connectors, affect not only the local joint, but also regions farther away. It is less like a simplistic lever or pulley than it is like a complex network of sheets and bags (as what covers our organs) that transition into one another and orchestrate globally to create a body movement.

Or consider that muscles, which are presented as tangible and discreet things in anatomy textbooks, are not really a "whole". As in, the central nervous system does not activate a muscle as one whole thing. "The functional units of the motor system are the so called *motor units* of which we have several million in our body. Much like a school of fish that have learned to swim together, depending on the quality of the sensory feedback, these millions of motor units can be individually regulated." (Schleip 2003)

I love Robert Schleip's way of seeing the motor units of a muscle as a school of fish! It helps us to see things on a more nuanced scale. Your triceps, for example, are not really such a set-in-stone solid thing. They are more like this school of fish that has decided to "swim" in a way that creates triceps-ish movements in that location. But if you've looked at enough human bodies it becomes clear that it really isn't "a tricep, is a tricep, is a tricep". Sure your triceps are not going to flex your knee (unless Dr. Frankenstein got ahold of you), but on a more refined level we understand that *how* we move- i.e. which motor units are firing- is as important as *what* we move.



To put it another way, our central nervous system views us as having *one* system-wide "muscle" which has different actions depending on what motor units are firing. Sure we've managed to catalog those actions as resulting from around 640 discrete structures, but they just plain old aren't as distinct as we tend to describe them. If you've dissected a human cadaver you know that it takes a scalpel to ferret out the separations between things. You don't just remove the skin and see everything laid out in a shiny red muscle topography of individual structures.



A MASTERPIECE OF TENSEGRITY ARCHITECTURE

Speaking of "no local problems" and "no local movements", let's talk tensegrity. The term "tensegrity" was created by Buckminster Fuller in the 1960's as a way to refer to "tensional integrity", and in his case he was talking about it as it relates to an engineering principle in architecture. You may be familiar with his work with geodesic domes and his *geodesic dome home*. The short version is that these structures utilize distributed tension to create structures that are both lighter and stronger. If you want another good visual of this distributed tension, the *Kurilpa Bridge* in Brisbane, Australia is the world's largest tensegrity bridge (and as a tensegrity nerd I think it's stunning).

But this engineering principle applies to life as well! Donald Ingber applied a theory of tensegrity to molecular biology (as one example, the cell's cytoskeleton is a tensegrity model) (Ingber 1998), and Dr. Stephen Levin_ coined the term "biotensegrity" to apply this to biology and in particular to the musculoskeletal and fascial networks that we're talking about here. It's gobsmacking, but it appears that from the molecular level on up, our body is a miracle of tensegrity architecture. We are composed of millions of geodesic structures (specifically icosahedral geodesics- Levin 1981).

Phew. Ok, why do we care?

Well it (again) totally changes our framework from parts to whole. In tensegrity- in this case in regards to the human body- structures are stable and functional not because of the strength of individual pieces, but because of the way the entire structure balances and distributes mechanical stresses. Tension is continuously transmitted through *the whole* structure simultaneously. Which means that an increase in tension to one piece of the structure will result in an increase in tension to other parts of the structure- even parts that are seemingly "far"² away.

The fascia is the essential structure that suspends, honeycomb-like, our structure from the inside out and, if you recall from chapter 2 when we talked about how it's all connected, fascia is the one system that tethers into every other aspect of our physiology (Langevin 2006). Which means that balanced fascia makes for a healthier and happier structure/body, whereas unbalanced fascia sends us into the domino effect of a compensatory pattern, which we will discuss in more detail in the next chapter.

If you are a visual person, take a look at pictures of the Kurilipa Bridge which I linked to above. This bridge is a functional bridge because *all* of its support cables are doing their appropriate jobs. If one of those support cables gets too short or too long, er, you probably don't want to drive over that bridge. Its structure has been majorly compromised. The same goes for our bodies, while we don't "drive over them" we sure do "drive" them around plenty via our every day moment-to-moment movements, and moving through a compromised tensegrity structure creates its fair share of wear and tear.

As Dr. Rolf used to say, "Balance is strength." Indeed.

²⁾ I had to put "far" in quotes because we have to realize how silly it is that we think of our head as "far" from our feet (or any other distance between two body parts) and therefore that it would be strange for those two parts to impact one another because of their distance. At most we are talking about a matter of feet here. We're not exactly packing on the mileage to get from point A to point B.



THE DOMINO EFFECT

Once we start to get a handle on tensegrity, we begin to better understand the domino effect- otherwise known as the dreaded compensatory pattern.

Many of you have experienced the domino effect without having had a name for it. First, your neck gets injured in a minor whiplash in that teeny tiny car accident that you had when you were sixteen years old. But you're sixteen years old, so no biggie. You ignore it and it gets better, or at least is better enough for it to become a part of the background white noise of your physical existence.

But once you enter college suddenly you have this nagging shoulder pain with all the extra typing and sitting you're doing. As the years go by you start to think of yourself as the "tight shouldered" person, and sometimes you have a pinching pain when you lift your arm. You also notice that when you drive it requires more effort to turn your head all the way to one side when you're backing up or changing lanes. Again, not that big a deal. More white noise.

More years go by and you are now not only a "tight shouldered person", but you also suffer from occasional low back spasms and have developed plantar fasciitis, which you assume must be because you're a runner and everyone says running is bad for you... it never occurs to you that the thing that started the dominoes falling may have been the car accident at age 16 because it feels like a million years ago (even when we're only talking about a span of 10 or 20 years). So how could it be contributing to your current plantar fasciitis, low back pain, and shoulder issues!?



This is just one quick sketch of one type of domino effect out of infinite possibilities³, but you get the idea. The thing that this person is experiencing is actually the long slow drain of an unaddressed compensatory pattern on a body, but in our culture we call it, "just getting old."

So what to do? Ultimately you are going to have to address things holistically. Ugh, another overused and misunderstood word! I don't mean that you should burn incense and listen to whale songs while you get your (in keeping with the above example) plantar fasciitis worked on.

I mean that you need to work with a practitioner or teacher who has the ability to view your body as a whole, and is not going to just work on your current problem locally. You will need someone who can do the detective work necessary to facilitate a full body unraveling of your compensatory pattern; because a compensatory pattern, but its very nature, is always going to be global. Which means you will be well served by working with a savvy manual or movement therapist⁴. The varieties of which are many, but I will give a short guide on what that means and how to find one at the end of the ebook.

³⁾ And there is evidence to support that many compensatory patterns begin somewhere from birth to 2 years of age, so there is not always a concrete event, like a car accident, that we can point to. And even if there is, the concrete event is usually just a new stressor added to an already-in-progress compensatory pattern. <u>http://erikdalton.com/article_pdfs/articleCCPThesis.pdf</u> (Pope 2003)

⁴⁾ I often think that the diverse professional fields that make up the manual and movement therapies do not get their proper due as the things that help people out of pain, keep people out of pain, and rehabilitate people's bodies because in our culture we just plain don't understand holism. The cultural blind spot on that often translates to these fields getting relegated to the margins- even with their extraordinary results. It's a rant for another day, but I wanted to make a footnote about it. So I did.



A **FLUID** TENSEGRITY SYSTEM

Let's hop back to the architecture of our fascia again. Not only does our fascia have this suspended tensegrity architecture thing, but it also has this liquid quality too.

While it's difficult for us to understand how a support structure could be a fluid structure- because we're not exactly making hi-rise buildings out of Jell-O- it's true. Juicy fascia is happy fascia.

The best analogy I can give is of a sponge. When a sponge dries out it becomes brittle and hard. It can easily be broken with only a little force because of how crispy it is. However, when a sponge is wet and well hydrated it gets springy and resilient. You can crush it into a little ball and it bounces back. You can wring it and twist it, but it is very difficult to break.

Once we understand that we're like that on the inside, keeping our fascia hydrated takes on more importance. Our mobility, integrity, and resilience are determined in large part by how well hydrated our fascia is.

In fact, what we call "stretching a muscle" is actually the fibers of the connective tissue (collagen) gliding along one another on the mucous-y proteins called glycosaminoglycans (GAGs for short) which, depending on their chemistry, can glue layers together when water is absent, or allow them to skate and slide on one another when hydrated. (Grinnell 2008 and Guimberteau 2005) This is one of the reasons that most injuries are fascial. If



we get "dried out" we are more brittle and are at much greater risk for erosion, a tear, or a rupture.

So drink more water right?

Well, yes and no. Staying hydrated via drinking continues to be important, but if you have dehydrated fascia it's more like you have these little kinks in your "hoses" (the microvacuoles, which allow all of the subtle movements of the body [Guimberteau 2005]), and so all that water you drink can't actually reach the dehydrated tissue and gets urinated away, never having reached the crispy tissue.

To be able to get the fluid to all of your important nooks and crannies you need to first *get better irrigated* (Meert 2006). And to do that, you've got to get work on your soft tissue to untangle those glue-y bits.

7

ITS SPRINGINESS WANTS TO HELP YOU OUT

What do you get when juiciness, connectedness, and tensegrity harmonize? Springiness! When your tissue retains (or regains) its natural spring, the rebound effect of the fascia allows you to use less muscle power, and therefore fatigue less rapidly. Want to jump higher, run faster, and throw farther? You'll need to pay attention to nourishing the suppleness of your fascia to revel in its elastic qualities.

For example, when you run with healthy fascia the force you transmit into the ground gets returned to you through the whole tensional network of the fascia. It's like you have a little built in trampoline action going on.

However, walking, running, or just plain old day-to-day regular movements with dehydrated and compromised fascial health create an increased impact on your joints and other soft tissues. You can even hear this in people's footfalls. If you're hitting the ground with a loud thud each time you take a step, you have likely lost some of the literal "spring in your step".

Alternatively, a fascial network that can take advantage of its trampoline-like rebound effect creates quieter movement. (This is not my suggestion to you to start tip-toeing through your house! The sound of your footfalls is more an indicator of a more global issue than something you can suppress by quieting your steps.)

And of course you don't have to look at the gait patterns of too many elderly people to see that the disappearance of the spring is causing them plenty of grief.



Or consider the much more basic and overlooked quality of springiness that we take for granted every day- that you can pull your skin away from its underlayers and it will spring back (Guimberteau 2005). This of course comes into play with aging as well, as we notice the "spring" start to diminish. As <u>Thomas Myers says</u>, ⁵ "Aging can really be considered a process of drying out." So if you want to skip the Botox, there is even more inspiration to keep your fascial web healthy!

Trust me when I tell you that my colleagues in the fascial fields all look remarkably younger than they are. They have discovered the long sought after fountain of youth- because it can be located *inside* of you by means of well hydrated fascia, rather than outside of you in some magical place.

5) This is a great video of Tom Myers talking about fascia and the aging process from Wellcast Academy: <u>http://www.youtube.com/watch?v=wL1ZVarr1R8_</u>



VARIATION MATTERS

Viscoelasticity is the combination of two words: viscous (like dripping, gooey honey), and elastic (like a rubber band which snaps back to its shape). Because human tissues have both viscous and elastic qualities, they are described as viscoelastic. When something is viscoelastic, it means that it experiences time dependent strain. We will sometimes use the word "creep" to describe the the slow deformation of tissue under constant stress. (Dalton 2011)

As in, we become the shapes and movements we make most of the time. So if you sit in a chair all day while sitting on your sacrum (i.e. in a version of a c-curved spine) it's not surprising that the viscoelastic quality of your intervertebral discs often leads to a disc herniation at L5-S1. That's an example of creep. So yes, disc herniations are just as creep-y as they sound.

"Creep" is one version of how we respond to loads⁶. For another example, if you decide to only do bicep curls with very heavy weights every day, you will eventually have wildly out of proportion biceps muscles compared to the rest of your body. This is because your body responded to that load that you chose to put on it.

On the opposite extreme, if you have a cast on your leg for a period of months and that leg cannot move or fully bear weight, when you get the cast off you notice that it is a withered, tiny version of your other leg which was able to participate in normal movement and load bearing during the time you wore the cast⁷.



All that is to say, *how* we move, and *how frequently* we move, and *in what range of variation* we move makes a big difference in how we experience our bodies in the present tense, and also how we age.

Movement also gets the hydration that we talked about in part 6 out to the tissue as well, but that movement also needs to be varied. This means variation not just of the movements themselves, but also variation of tempo. Not only does moving constantly in the same ways and in the same planes put you at further risk for joint erosion (a là osteoarthritis), but you are also dehydrating the fascia in a particular pattern, thus setting you up for that brittle tissue that injuries love so much.

So fluid + loads = either healthy, juicy tissue, or brittle, dehydrated tissue. The outcome of that depends on the how, how much, and how varied parts of the movement equation.

6) P.S. We are always "loaded" because we live within the gravitational field. I talk a lot more about this here: <u>http://www.fasciafreedomfighters.com/why-astronauts-get-osteoporosis/</u>

⁷⁾ This is all referring to Wolff's law from 1892, "The form of the bone being given, the bone elements (collagen) place or displace themselves in the direction of the functional pressure and increase or decrease their mass to reflect the amount of functional pressure" Wolff's law talks specifically of bone, but it affects all of the soft tissues.



THE ORIGINAL INFORMATION SUPERHIGHWAY

Remember the Kurilpa Bridge from chapter 4 on tensegrity? Picture those tensegrity cables now as not just inert supports, but also as a super high speed internet cable which threads information through those supports. Yowza.

We'll talk about a few ways that this happens:

It turns out fascia is our richest, and our largest, sensory organ with ten times higher quantity of sensory nerve receptors⁸ than the muscles (Van der Wal 2009). In fact, it is possible that it may be equal or superior to the retina, which has thus far been considered the richest human sensory organ.(Mitchell and Schmidt 1977)

This makes your fascia a system of proprioception- i.e. of knowing where your body is in space, but also of graceful full body orchestration of movement. Pause and take a moment to think about what your life would be like if you couldn't locate and orient your body in space. You probably wouldn't be tons of fun at parties. You would more likely spend your life lying on the floor in a small room- but still in misery because the floor wouldn't feel like there was a "there" there. Super good times. So while we take it for granted, our ability to know where we are in space is pretty crucial to any kind of functional life. Put another way, fascia is "our most important perceptual organ." (Schleip 2003)

That perception- or input- creates a feedback loop to our cells (fibroblasts and osteoblasts) to adjust their activities in maintaining our tissues according to our movements and the loads we experience. Remember the example I gave in chapter 8 about the casted leg vs. the uncasted leg? One leg got input via loading and moving the tissue, while the other leg got no input. Every movement of the body generates electric fields (primarily attributed to the piezoelectric effect) and those fields spread through the tissues along your original information superhighway, providing the input that either leads to a normal, healthily maintained leg, or a wasting leg.

So... that's a pretty important communication feature courtesy of our largest sense organ!

⁸⁾ I'm talking specifically about mechanoreceptors.



LOVING YOUR FASCIA

So now what?

If your mind is at all like mine and you are new-ish to the wonderful world of fascia, reading a micro-book like this will lead to inevitable questions like, "Well what can I *do* to keep my fascia healthy?" and, "Am I being paranoid, or are my footsteps abnormally loud?" and, "Will I perish in a catastrophic tensegrity related mishap while out for my daily run!?" Fear not. This ebook is not at all intended to induce fear and suspicion of one's fascia.

But I get it that since it has been an overlooked tissue system that we don't exactly talk a ton about how to keep it healthy in our culture. Which, ahem, might explain the wildly out of control upwards trajectory of chronic pain, narcotics prescriptions, and joint replacements in our culture as well. (cough) Maybe just a little bit (cough).

The good news is that attending to your fascia isn't complex, so here's a short list (only 3 things!) of how to give it some love:

1) Move frequently: Please don't take this as yet another public service announcement to hit the gym after a day of sitting in your office chair. I have no problem with any affection you might have for your workout, but that's not what I'm talking about. Working out *intensely* for an hour at the end of a sedentary day is meaningless when we're talking about *frequency*. (Bowman 2013) Note the obnoxious italics: I used them because I want to be clear that intensity and frequency are totally different things. Working out really hard for a blip in your day does not magically erase sitting still all day. Yes, most of us



have work lives that are tied to screens, so you are going to need to get creative and take walks on your lunch break, spend portions of your day at a standing desk, and/or hold *walking meetings*. Find ways to get movement in, but get it in. Again, I'm not talking about getting your *workout* in. I'm talking about getting *movement* in. (The obnoxious italics return!)

2) Move in ways that humans are supposed to move: I like riding my bike. It's super fun. But humans have not been riding bikes since the early days of our species. We can argue about what makes us human all day long, but we know we're bipedal and we ambulate by walking (and occasionally running). Walk, skitter through the woods, jump from rock to rock, stand upright, lift stuff, carry stuff, and even occasionally hang from things and climb things. If you want to give your cells nourishing input, get back to being human. These are the loads (as talked about it in chapter 8) that we are designed to thrive with.

3) Work with a manual or movement therapist (or why not both!): I do occasionally get blank stares when I say "manual and movement therapist", so I will begin with a brief definition of what I'm talking about:

- A manual therapist is someone who manually- usually with their hands or elbows but occasionally with a tool- manipulates your body's tissues to "unkink the hoses", "unsnarl the sweater", and restore integrity, spring, and balance to the "cables of your tensegrity bridge", (pardon the quotation litter in that sentence- all of the quotations are analogies that I am referencing from earlier in the ebook).
- A movement therapist uses a system of awareness instruction and/or a fitness therapy system to reeducate your ability to accurately propriocept and understand how you operate in space so that you can function better via getting in tune with how you initiate and carry out your movements, know what proper biomechanics are, and come to see with more clarity (and resolve) your own body blind spots.

Both work towards the common goal of people more happily inhabiting their bodies. *Both* will restore health to your fascia and body-wide integrity to unravel your compensatory patterns, resolve pain, heal from injuries and surgeries, and- importantly- avoid aging into a downward spiral. Add to this the fact that there is often significant overlap between the two kinds of therapy groups I've listed here, and sometimes it seems strange to tease them apart. For that I am grateful that Thomas Myers took the bull by the horns and coined an umbrella term that we all fit under: Spatial Medicine. From Tom Myers:

"What are the elements in Spatial Medicine? One can parse this in different ways, but the basic elements are the bones, the connective tissues (of which bone and blood are both examples, but we refer here to the predominantly fibrous soft tissues that comprise the ligaments, tendons, and fasciae), the muscles, the nerves that run them, and the afferent nerves that keep the central nervous system informed about the condition of all these elements. If we change these elements, or the relationships among them, or the perception of their relationships, we are practicing Spatial Medicine."(Myets)

While it is beyond the scope⁹ of this ebook to have a list of the many modalities that fit under the manual and movement therapies (i.e. under the umbrella of Spatial Medicine), you will likely be able to find practitioners of a wide variety of modalities that fit under this header by looking at all the definitions above.

Need extra help in how to find someone to work with? As a general rule of thumb (who doesn't love general rules of thumb!) if you are seeking out a practitioner it is best to look for someone who is going to work with you as a whole. It's all connected remember? Attending to the whole¹⁰ is the only way to stop the boomerang effect of one's compensatory pattern. So while

it's normal and understandable that if you have a shoulder issue your practitioner would spend plenty of time there through your course of work, they should also be attending to the larger pattern of how to get that shoulder into a happier place long term. Which may also involve your neck, your pelvis, your spine, your feet, etc.

⁹⁾ I'm on it! I will have more of a list in the next Liberated Body Guide, How to Live Happily in a Human Body. Also, if you are a practitioner or teacher, please see how you can help by reading the note for you near the end of this ebook.

¹⁰⁾ I do not mean this in some literal OCD, black-and-white-thinking kind of way. As in, I am not trying to say that they need to exhaustively work on your whole body in every session, or that every body "part" gets exactly the same amount of time on a clock, etc.

IN CLOSING

Well folks, there you have it. Hopefully this has provided a compelling peek into some of fascia's miracles and mysteries. As fascial researchers and <u>The</u> <u>Fascia Research Congress</u> continue to do their excellent work, I'm sure there will be plenty more moments of awe to come.

If you are a blossoming body nerd, or are just someone who is sorting out how best to live in your body and you found this useful, please feel free to share it with anyone else you can think of who might be similarly inclined. I am on a mission to help end needless physical suffering through a clearer understanding of how to live in a body, and through letting people know about the profound work that is being done in the spatial medicine fields. So if you want to join me in that, I've got a few key places that you can head over to:

- *Fascia Freedom Fighters* (FFF) is my blog which is dedicated to liberating bodies from chronic pain, mobility issues, and subpar performance. This is a place for the layperson and the full blown body nerd to come together.
- <u>The Liberated Body Guides</u> is my (at the time of releasing this- forthcoming) series of short guides to help people to more happily inhabit their bodies. Topics will range from the broad (avoiding postpartum unpleasantness) to the specific (plantar fasciitis). They will also be available through Amazon and iBooks, so you can always search my name there.
- Lastly, if you want to connect with me and join the conversation you can do so by liking the *FFF Facebook page* (alliteration!), and/or following me on Twitter where I am *@brookethomas*.

FOR PRACTITIONERS AND TEACHERS

Are you a manual and/or movement therapist of some variety? Nice to kind of meet you fellow fascia-nated colleague! Just a few extra things for you:

- Pssst: you do amazing work. Our fields (of manual and movement therapy, or spatial medicine if you like) deserve to be recognized as the godsend that they are for so many people. I've dedicated my career to making that happen. So if you want to be a part of that benevolent revolution, do come hang out with me or reach out to me via Facebook, Twitter, or email as listed above. People shouldn't have to luck into finding our work when they are at the end of their rope. We should be the *visible* and *obvious* first choice for care.
- As I mentioned at the beginning, the whole point of Why Fascia Matters is for it to be shared. I created it when I had so many practitioners and teachers get in touch with me asking permission to use *the article* that this was expanded from as a teaching tool with students, clients, and patients. That said, you are free to distribute this in any way you would like without having to ask me permission (woo hoo!) All I ask is that you credit me as the author, that you don't chop it up or edit it, and you don't charge for it. It's supposed to be free. But other than that, it is totally fair game! Additionally, if you would like a download button for your website so that your clients and prospective clients can learn how amazing the work you do is, just email me with the subject line "download button" at *brooke@ fasciafreedomfighters.com* and I will get that to you.

- There are so many of us! And we do so many different things! I would like to compile a complete list of all the manual and movement therapies (the therapies themselves, not individual practices), so if you want to have the kind of work you practice included, please email me with the subject line "MMM" (for manual/movement/method), again to <u>brooke@</u> <u>fasciafreedomfighters.com</u>.
- Lastly, but very importantly, thank you for doing the work that you do. I've said it before but I'll say it again: the work you do matters and is having a tremendous impact on how people get to experience their time here on Earth. So thank you. It's a big deal!



REFERENCES

Bowman, K., 2013. In: <u>http://www.fasciafreedomfighters.com/katy-bowman-</u> interview/

Dalton, E., 2011. Asymmetrical hips and uneven legs: walking silly putty.

Findley, T.W., Schleip, R., 2007. Fascia research: basic science and implications for conventional and complementary health care. Elsevier Urban & Fischer, Munich.

Grinnell, F. 2008. Fibroblast mechanics in three-dimensional collagen matrices. *Trends in Cell Biology*, 12 (3), 191-93.

Guimberteau, J.C., 2005. The sliding mechanics of the subcutaneous structures in man: Illustration of a functional unit: the microvacuoles. *Studies of the Académie Nationale de Chirurgie*, 4 (4), 35-42.

Ingber, D.H., January 1998. The architecture of life. Scientific American.

Langevin, H., 2006. Connective tissue: A body-wide signaling network? *Med. Hypotheses* 66 (6), 1074-1077.

Levin, S.M., 1981. 34th Annual Conference Alliance for Engineering in Medicine and biology. The icosahedron as a biologic support system. Alliance for Engineering in Medicine and Biology, Bethesda, Houston, p. 404.

Meert, G.F., 2006. Das venöse und lymphatische system aus osteopathischer Sicht. Elsevier, Munich.

Mitchell, J.H., Schmidt, R.F., 1977. Cardiovascular reflex control by afferent fibers from skeletal muscle receptors. In: Shepherd, J.T. et al., (Eds.), Handbook of physiology, Section 2, Vol. III, Part 2, pp. 623-767.

Myers, T., Wellcast Academy, In: <u>http://www.youtube.com/</u> watch?v=wL1ZVarr1R8

Myers, T., Spatial medicine. Anatomy Trains, <u>http://oldsite.anatomytrains.com/</u> <u>explore/spatialmedicine/expanded</u>

Oschman, J.L, 2012. Fascia as a body-wide communication system In: *Fascia: The Tensional Network of the Human Body*, Schleip et al., Elsevier, Munich, p. 104.

Pope, R., 2003. The common compensatory pattern: Its origin and relationship to the postural model. American Academy of Osteopathy. 13 (4): 19-40.

Schleip, R., 2003. Fascial mechanoreceptors and their potential role in deep tissue manipulation. In: Fascial plasticity- a new neurobiological explanation. Journal of Bodywork and Movement Therapies 7 (1): 11-19 and 7 (2): 104-116.

Van der Wal, J., 2009. The architecture of the connective tissue in the musculoskeletal system: An often overlooked functional parameter as to proprioception in the locomotor apparatus. Elsevier, Munich.



ABOUT THE AUTHOR



Brooke Thomas has been in the manual and movement therapy fields professionally for more than thirteen years as a Rolfing[®] practitioner, and more recently as a Yoga Tune Up[®] teacher and Corrective Exercise Specialist. She is the founder of <u>Fascia</u> <u>Freedom Fighters</u> and <u>The Liberated</u> <u>Body Guides</u>.

This journey all started for her with a birth injury (cord strangulation), that caused her to grow up with a variety of physical and neurological challenges. In her early twenties she found the resources she needed to rehabilitate her body, and currently enjoys having a body that is capable of much more at age 39 than it was at age 9. Because of that experience, she is a wee bit of a zealot in spreading the word that people don't have to suffer in their bodies.

She can occasionally be found writing about herself in the third person.