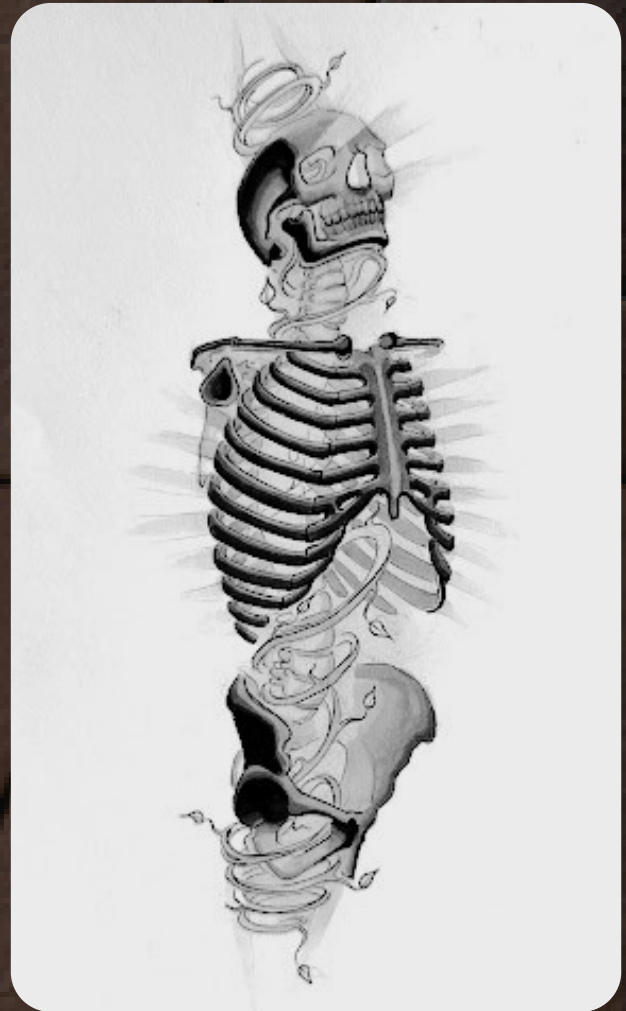




STOP TIGHTENING:

5 REPATTERNING PRINCIPALS THAT UNDO A LIFETIME OF BAD POSTURE

DISCLAIMER

This information is based on my perspective as a Chiropractic Physician and study of natural form via Bowspring. This is not medical advice of any kind and is intended to inspire curiosity in how you choose to posture yourself.

Your health is your responsibility, please act accordingly.



1 Having a Curve in Your Lumbar Spine or an
“Anterior Pelvic Tilt” is Not The Problem

2 Our Cultural Myth of a “Strong Core” is
Hurting Us & Why Your Glutes Matter More

3 Your Flared Ribs Aren’t Because Your Core
Isn’t Tight Enough (& Your Pelvic Floor Isn’t
Weak, Either!)

4 Pandemic of Painful Hands and Feet Are
Because of Our Fascial Imbalance

5 Opening Your Airway, Jaw and Tongue
Posture

*all quotes are from my Signature REPATTERN class



SECTION 1

Having a Curve in Your Lumbar
Spine or an “Anterior Pelvic Tilt”
is Not The Problem

POSTURE PROPANGDA

Your pain is a symptom of fascial tightness from years of closed posture that we're sold is 'healthy.'

The first memory of consciously trying to pattern myself into a flattened position was around 8 or 9 years old when my tall blonde beauty of a ballet instructor told us all to "suck in our gut." It seemed obviously correct, then. And when I was taught in yoga teacher training to pull the tailbone down, that seemed obviously correct, too. Despite the fact that it was impossibly hard to maintain & my back still hurt – I kept trying.

This cuing of tightening our core and tucking our bum is virtually ubiquitous at this point – reinforced in every fitness class I've ever been to, repeated daily on the internet, and the standard for healthcare professionals.

I believed it through 15 years of studying anatomy and movement, too (1). Until I found Bowspring. Inspired by watching nature, Bowspring principles relieved my low back pain, grew my bum and opened my life.

I bet you have early memories of well-meaning, delightful humans teaching you how to tuck, tighten, and pull yourself into the cultural shape someone, long ago, decided was best.

But what if these ideas are really posture propaganda – a game of telephone based off well meaning scientific generalizations and misunderstandings of what makes a healthy body?

Let me help you start to see the natural code of ailgnment that repatterns your fascia to open your posture, your pain and your life.



THE “NEUTRAL PELVIS” MYTH

To untangle the web of posture ideals that aren't serving you, let's start with the concept of a “neutral pelvis”.

There isn't actually definitive evidence that this position is healthier or more natural, in fact 75% of people naturally have what is considered an “anterior pelvic tilt.” And this position doesn't predict who has back pain or not (3,19).

The notion of a “neutral pelvis” came from the need to standardize observations and measurements of the pelvis (2).

They did this in the most obvious way – lining up the big boney bumps on the front of the pelvis in a flat plane (see page 8). This “neutral” position was never intended to imply how pelvises were healthiest, but created a reference point for the study of our bones.

Somehow over the course of time, popular culture, physicians and trainers alike have been sold another story altogether. This “neutral pelvis” became the gold standard for how we supposedly heal our pandemic of back pain.

“Not tucking is giving me comfort and freedom in my back.”



This is at odds with

- Research that tells us time and time again that “there is no such thing as good or bad pelvic position” (3).
- Babies are obviously curled into flexion in the womb. After birth they naturally unfurl and start to move with their pelvis often in an “anterior pelvic tilt” until they start mirroring us and close
- How many animals move (think all four legged creatures like horses, zebras, cats or even monkeys that have curves in their low back).

HEALING YOUR TIGHT BACK

Your anterior pelvic tilt isn't hurting you, the way you're doing it is.



There isn't any static alignment that in itself predicts whether you will have back pain or not (3). It is about how you are making the alignment or shapes that heals you or hurts you. This is confusing because the shapes can look incredibly similar!

You know if you've tried, but forcing yourself into their made up "neutral" position doesn't give you the sustainable pain relief, fascial suppleness, freedom and athleticism we all want.

The pelvic alignment that *does* allow for this health is actually the dreaded anterior pelvic tilt, but likely not in the way you've been doing it.

An unhealthy anterior pelvic tilt is made by tightening your low back muscles and therefore smashing your spine and the jelly discs between them, together. This version is why an anteriorly tipped pelvis has a bad reputation, like that one friend who ruins it for everyone...

A healthy anterior pelvic tilt is formed by pushing the top of your femurs (fancy word for thigh bone) backwards to untuck your bum.

While at the same time holding an expanded ribcage so the curve in your low back is supported long like a suspension bridge or a zebra's back (see photo, more to come on the ribcage piece in section 3).

This alignment actually allows your back muscles to soften in towards your spine. Have you ever wondered why you always need a back rub? Well, this is why. When you're in the "traditional neutral" pelvic position, your back muscles have to work overtime in a stretched out position and the bum can't help share the load. Your low back muscles aren't tight because they are stupid, they are responding to the position you hold them in.

THE CORRECT PELVIC TILT

How do we know an anterior pelvic tilt is correct? It is built into the shape of our bones.

There's an upside-down bowl (hip socket aka acetabulum) where your thighs fit into your pelvis. When you're in this an "anterior pelvic tilt" or what I'm suggesting should be considered a true neutral position, sure the big boney bumps on the front aren't lined up, but the bowl for your thigh bones is centered (7). This leads to more balanced loading of the hip joint.

When you are tucked or in the "neutral pelvic position," that your PT or pilates instructor taught you was correct, the top of your thighs live more on the front of your hip bowl. This leads to excess wear and tear on the hip joint, the labrum (fancy word for the rubber-like seal of your hip joint), and the feeling of pinching when squatting or bending the hip. **This explains why over 70% of hips needing replacements are because the front of the joint is worn out (5)!**

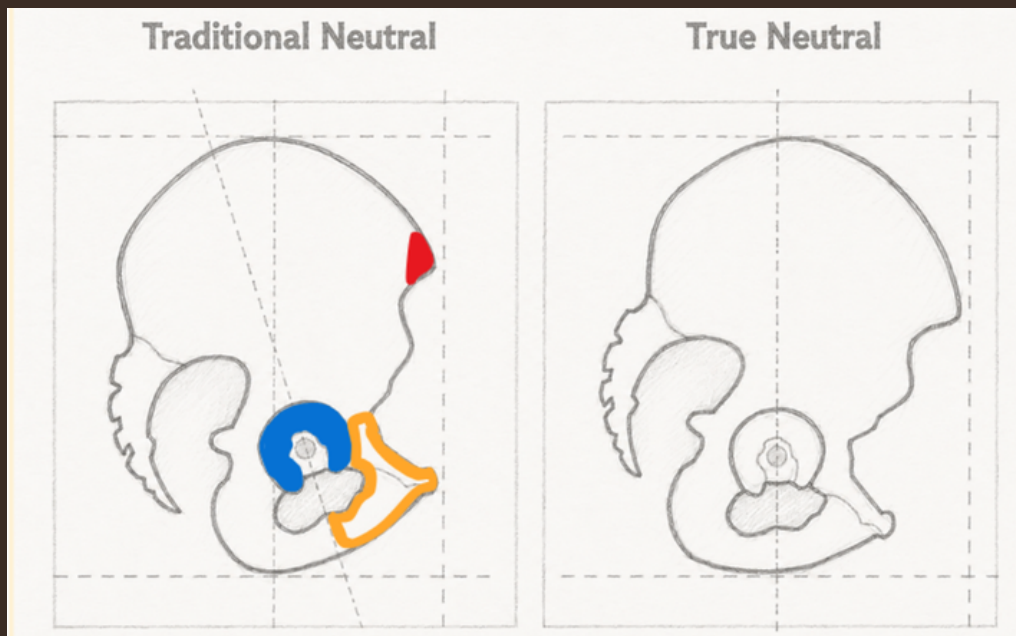


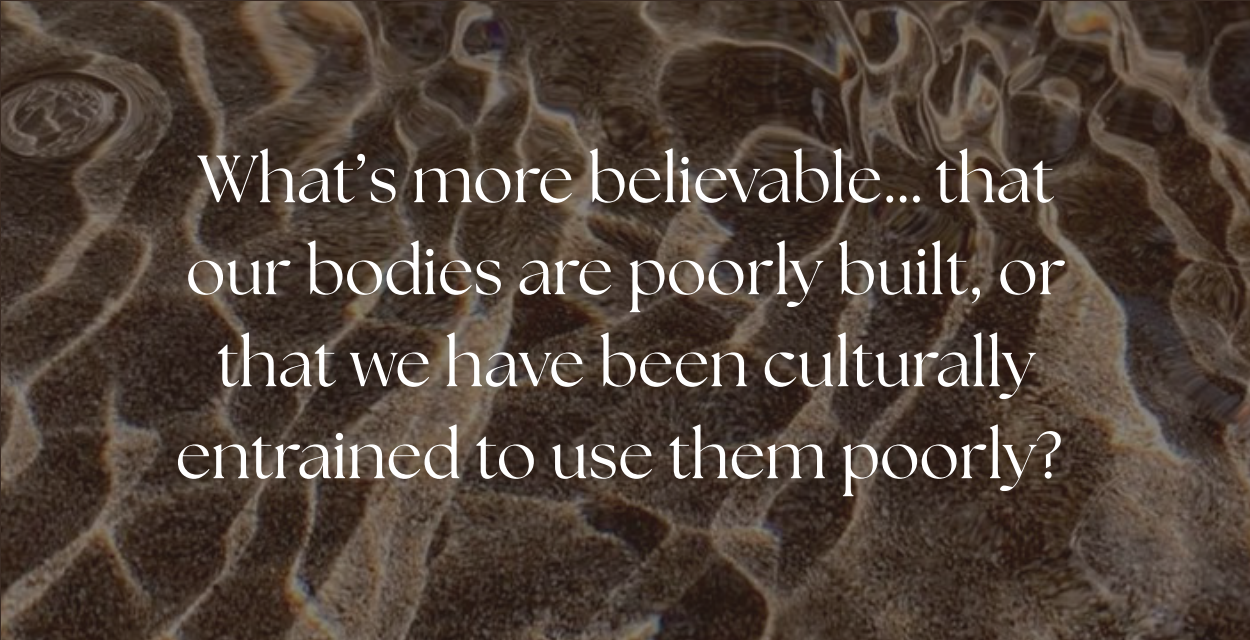
Photo: On the left the big boney bumps are ASIS (red) and pubic bone (yellow) in straight vertical line in the traditionally neutral position of pelvis with the bowl for the hip bone, acetabulum (blue), tilted forward thus bearing more weight on the front versus, on the right, what should be considered true neutral because the acetabulum is centered around where the femur head sits (femur not shown) (4).

YOUR SPINE IS CURVED

Our last anatomical hint that your anterior pelvic tilt isn't why your back hurts, and isn't inherently bad for you at all, actually, is that your spine itself is wedge shaped into a curve. This means your pelvis needs to be rocked forward into an anterior pelvic tilt (untucked bum) if you want healthy, even load on the spine and discs between them.

This is important because although discs are healable (even if they show damage on an MRI, that doesn't mean you'll have pain forever), if we overload them, it can lead to dreaded nerve issues like sciatica, pinched nerves, disc herniations and DJD (degenerative disc disease that almost every older person has but doctors will scare you with).

Now, I'm not advocating that you flop into a deep anterior pelvic tilt that causes a sharp curve at your low back. You do this for one second and you'll feel the pain of why we were taught this was bad. Instead, I want you to be curious about what it feels like to connect to the backwards movement of the top of your thigh bones like your a peacock or a cat lifting your tail (yes, this goes against cultural patterns of modest posturing and will increase your sexual pleasure). You can practice [here](#). If you feel low back pain, you aren't doing it correctly.



What's more believable... that
our bodies are poorly built, or
that we have been culturally
entrained to use them poorly?

**Open posture = long curves = more spring =
healthier fascia = less tight = less emotionally
reactive**

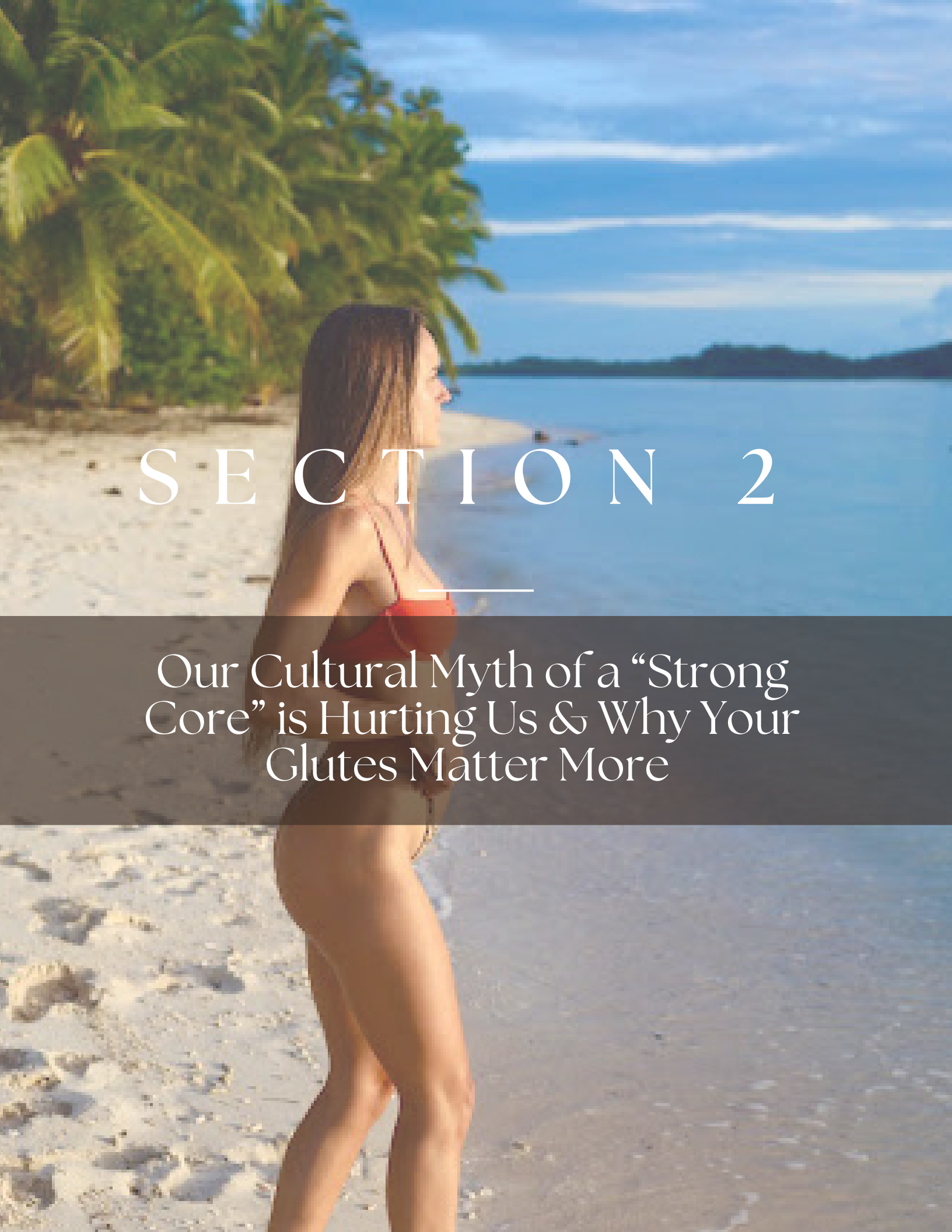


Photos:

Left: Showing open posture principals with a curvey low back and neck leading to open belly and throat, hip bones back and true neutral head position (more details to come). No, your knees don't always need to be that bent – it's a spectrum.
Versus closed posture bum tucked, belly tight, chest & throat closed, and gaze through top of eye sockets.

Middle: Me with a low back curve. I'm working on refining back rib expansion (that's always been a problem area for me) which would make the curve even more gradual.
But I have zero pain and feel strong like an animal here.

Right: Showing how low back bones and discs are wedge shaped to fit together in a curve. This is generally more curvy in women than men. But the same principles apply to all bodies.



SECTION 2

Our Cultural Myth of a “Strong Core” is Hurting Us & Why Your Glutes Matter More

THE “STRONG CORE” MYTH

Where did the myth start?

The oldest mention of pulling the belly back is in yoga as bandhas. This was never meant to be how to hold ourselves to heal or prevent back pain, it was used to purportedly move energy.



Photo: A long core is a healthy core. Allows for healthy digestion, spinal curves, pelvic floor pressure regulation and nervous system regulation.

Tightening your core as a way to strengthen and protect yourself started much later with pilates and body building culture. The idea was that there are “deep” core muscles like our transverse abdominis (TrA) that will protect us when contracted short in a specific way (hint there’s no right way to shorten your core).

This thinking was incorrectly reinforced by a study in the late 90’s that showed low back pain patients had changes in their core engagement, especially in the (TrA).

But the study didn’t show how to prevent low back pain, it was observing unconscious changes in a small group of low back pain patients! The author has since formally stated this paper doesn’t show that isolated TrA activation or core tightening is helpful or healthy – nevertheless the game of telephone was reinforced and hasn’t been stopped (9).

We’ve since seen that people without low back pain aren’t actually activating the TrA more, nor better, and actually the concept of isolating it at all, is a “reductionist fantasy” (9).

There’s actually no clear evidence that weak core muscles lead to back pain or that tensing the trunk muscles provides any protection against back pain at all (9).

YOUR TRUE CORE

In order to understand how you do want to use your core, we need to expand our definition of your “core” – it’s really your entire torso.

Your core is just one small part of the pressure system of your torso – from the top of the ribcage at the base of your neck (yes, the ribs go all the way up there) to our pelvic floor (which is simply the inside of your hips, the bottom of your belly, and the tissue all around your emptying holes).

Think of your entire core as a big balloon. If you dent the balloon, what happens? The balloon expands more somewhere else. This is because the volume of air inside the balloon doesn’t change, it just moves location (8). So, if we suck the front of the balloon in, like we are taught to do when “engaging” our core, that volume has to go somewhere else.

This volume often ends up excessively loading the low back, the pelvic floor or areas with structural weakness, like a hernia. I’ve seen it over and over again in my patients that at the level of pain at their back, the belly is sucked back on the front side at that same level. This leads a loop of dysfunction where the tight core is preventing healthy spinal motion. This concept also applies to why so many women with c section scar tightness have low back pain!

If instead when you tighten the core your body uses the pelvic floor to bear this extra load, this results in symptoms like peeing yourself or prolapse. It is easy to see why in these cases, it seems like tightening the pelvic floor with kegels would help. But what if instead, we just reduced the extra load on the pelvic floor in the first place?



Photo: You can sign up to purchase this shirt I made, [here](#).

“I’m postpartum and pregnant with my third and Dr Lily’s class has been giving me so much relief and freedom in my body.”

LET YOUR BELLY SOFTEN

So, now that we know sucking the core back isn't actually preventing back pain and may be causing our pelvic floor dysfunction, let's talk about the other reasons why it is actually hurting us.

You'll start to notice how often you are holding your belly back. Well your organs are under there! The pressure of you tightening your core backwards, can slow and disregulate your digestion.

“In awe that so many years of bloating can simply have been something with my breathing/ core mechanics.”

Trust me, I know how insanely weird relaxing the belly feels as it goes against deep cultural conditioning that our thinness is related to our value.

But your healing is right on the other side of that feeling and you have to decide what's more important to you. Ironically, will move more toward ideal, thin-waisted-beauty with time, because beauty really is reflection of your health and alignment. But first, you have to let go (feel free to suck back for photos!)

Feel what happens when you tighten your core back – your pelvis reactively rocks into a posterior pelvic tilt which is just a fancy way of saying your tailbone and bum tuck under you.

So everytime you tighten your core, your tail tucks, and you move towards the traditional "neutral" pelvic position. Which as we've talked about, leads to more wear & tear on your hip joints and your spine.

But beyond the shape of our bones, "neutral" posture is harder on us because the glutes often go to sleep or can only engage downwards here. That means the butt cheeks can only squeeze together and down to engage. **And we end up being a literal tight ass if we can use the glutes at all.**

This is the opposite of what is possible when you soften your belly and untuck your pelvis which allows for your glutes to engage up toward the low back. This creates a bubble but that becomes the strongest spring in the body.

When you let the pelvis rock into this dreaded anterior pelvic tilt by shifting the top of your thighs back, you can feel your glutes in daily activities like walking or squatting without ever having to squeeze them together.

PELVIC FLOOR OPENING

This pelvic alignment also opens the dimensions of your pelvic bones by spreading the bottom, aka your sitz bones, apart.

You want this for your body for three reasons. 1) it offloads the dense deep structures (ligaments) holding the pelvis and spine together. This is why it is key to healing all types of low back pain (some fancy diagnostic names for this pain being SIJ pain, SI sprain, sacroiliitis, coccydynia, pubis dysfunction or pelvic tendinopathy).

And once you're out of pain, 2) this alignment or motion of opening the pelvic floor by untucking your bum is how you use your pelvic floor like a trampoline for movement. This is helpful if you want to be athletic at jumping and squatting, hence why you'll never see a basketball player, sprinter, high jumper, gymnast, and so on, with a tucked pelvis and small butt (10).

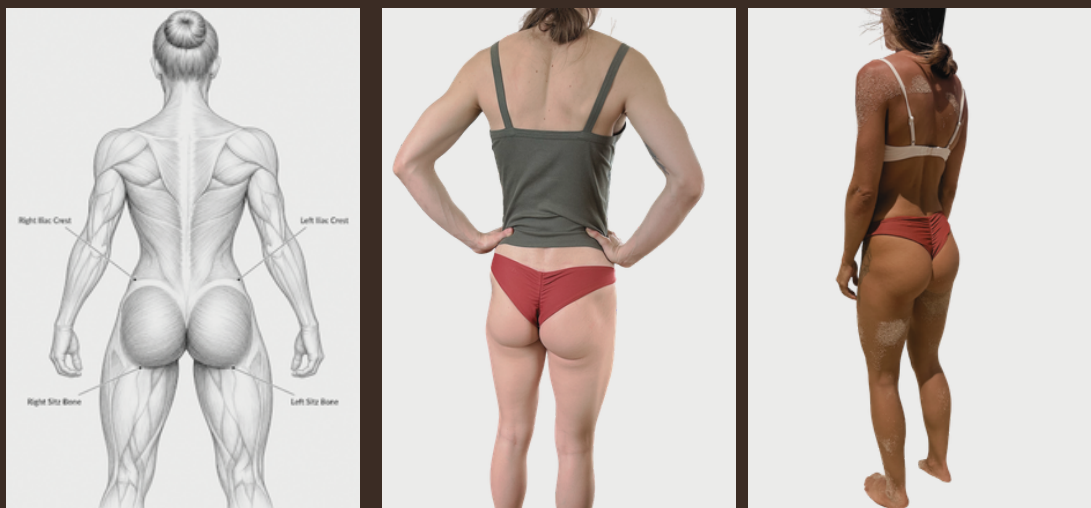
Maybe even more importantly for the future of humanity, 3) this alignment also makes your **pelvic floor wider which is vital if you want to birth a baby out of your body** (11). This is why more and more midwives are guiding their clients away from activities like pilates where the pelvic positioning, core and pelvic floor tightening cues can make birthing a baby more challenging.

The final reason why **you do not need to ever suck your core back** (in case you weren't already convinced), is that it prevents you from being able to breathe with your diaphragm. This means you're going to be breathing with the muscles of your shoulders and neck, instead. Which, hint, is why they are always tight and feel like poop. So, this is how a change in the way you hold your belly can change symptoms upstream like neck pain or jaw tightness.



Photo: Left tucked bum = smaller pelvic floor. Right untucked bum = open pelvic floor.

WE LIKE BIG BUMS FOR A HEALTH REASON



Photos:

Left: Showing bubble butt engagement where the glutes engage upwards all the way to the rim of the pelvis (iliac crests) not down toward the sitz bones.

Middle: My glutes before Bowspring when regularly squatting, deadlift and hip thrusting heavy weight in the gym.

Right: My bum after learning to engage the glutes up and loading them intensely in that position.

“When I walk I can feel my butt and hamstrings engaging. Before Dr. Lily’s REPATTERN class I had literally been unable to engage my butt intentionally and trying to do so caused me dreadful backpain, despite all the pilates, yoga and other things I tried.”

HOW TO USE YOUR CORE

All of our muscles are stronger when they are lengthening. Sounds confusing at first, but think about how much easier it is to set something down than pick it up (12).

So, if we truly want the strongest core possible, we need to be able to make it longer, so that it has the range and capacity to act like a spring.

We do this first by softening the core, then by pulling our ribcage and pelvis away from each other like we are growing taller. **And like a Chinese Finger Trap expanding, our waist and low back gets thinner, more tapered and stronger.** But remember, we want the belly and pubic bone to lengthen down and the bum to come upwards with this motion, too!

Interestingly, this looks very similar to sucking the core back. I think this is the root of how the core myth of sucking back started – from mimicking people who naturally made themselves longer without realizing they were actually doing something very different.

Once again highlighting the vital fact that a body that appears to be in the same position as another body may be making that shape very differently.

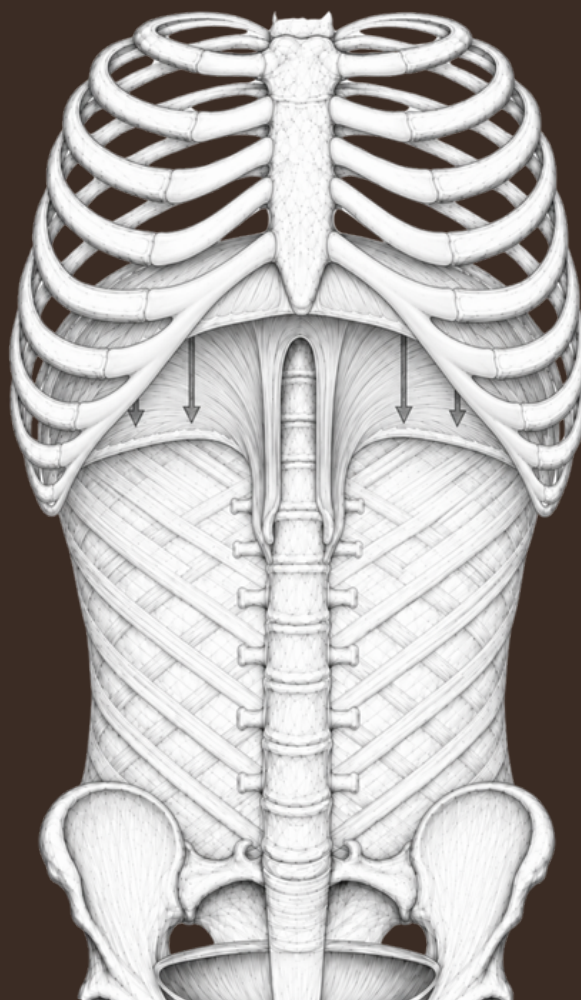


Photo: Entire core system from top of ribs to pelvic floor. Waist tapers with elongation or ribcage away from pelvis, not sucking belly backwards. The diaphragm is in its descending position here to show that it can move freely to breathe you NOT a hypopressive position where it is being sucked upwards to expand the ribcage.

ELONGATE YOURSELF

Elongation and traction is naturally relieving. This is why inversion tables where you can flip yourself upside down, or those contraptions to pull your neck longer, or hanging, or even chiropractic adjustments are so relieving.

But instead of relying on tools, gadgets and doctors to do this for you, these principals allow you to do this to yourself all day long (once you build the fascial memory for the position which takes time). self traction or elongating your core in this way, has the added benefit of offloading your spine and discs, making a long and healthy low back curve, getting physically taller, getting a smaller waist, offloading your pelvic floor, breathing easier and putting less pressure on your digestive and reproductive organs.

It really is a life enhancing deal to not suck your core back, anymore!



A woman with long blonde hair, wearing a dark brown bikini top and bottom, is walking towards the camera on a sandy beach. She is holding a light-colored towel over her shoulders. The background features a dense line of palm trees under a clear blue sky. The water is shallow and blue.

SECTION 3

Your Flared Ribs Aren't
Because Your Core Isn't Tight
Enough (& Your Pelvic Floor
Isn't Weak, Either!)

YOUR RIBCAGE IS EXPANDABLE

The story I hear usually goes something like this – a well meaning instructor or influencer helps you to realize there is something off with your ribs. You're like "yes, they've always had this weird shape!" You're stoked to feel seen! They proceed to teach you what makes sense on the surface – tighten the core to pull those ribs down.

But what if the ribs were never meant to be down in the first place?

If this is you, and you've tried to tighten your core to reverse your flared ribs, my guess is one of two things has happened. One, you were successful in diminishing the appearance of your flared ribs and now have back pain or you pee yourself when you jump, laugh, cough or sneeze (even with a full bladder this is a sign there's too much load on your pelvic floor) or two, you failed to tighten your core enough, your ribs still look flared and you feel like a failure.

Let me open your mind... and your ribs. And these principals apply to anyone with a ribcage that's looking to heal their core and back with or without flared ribs. Hint, that's you!

Your ribcage is not the static structure we think it is. There are 98 separate joints that make up your ribcage (12).

Visualize this with me, your whole ribcage is movable with the ability to expand and contract like a telescope, or a jelly fish, or an octopus, or our balloon from section 2. And when one part of the balloon is pulled wider and open, the other parts have to contract in response.



FLARED RIBS, DR & DAMAGED PELVIC FLOORS

What's really happening in flared ribs is that the back of your ribcage is collapsed, meaning the ribs are sitting close together and the fascia is stiff and tight. This is the contraction of the back of our balloon, and in response the front ribs are forced open and look flared.

But if we simply close the front ribs, can you visualize how now we compressed the front AND the back of the balloon?

That results in the same extra pelvic floor loading as sucking your core back. And now you think you need kegels.



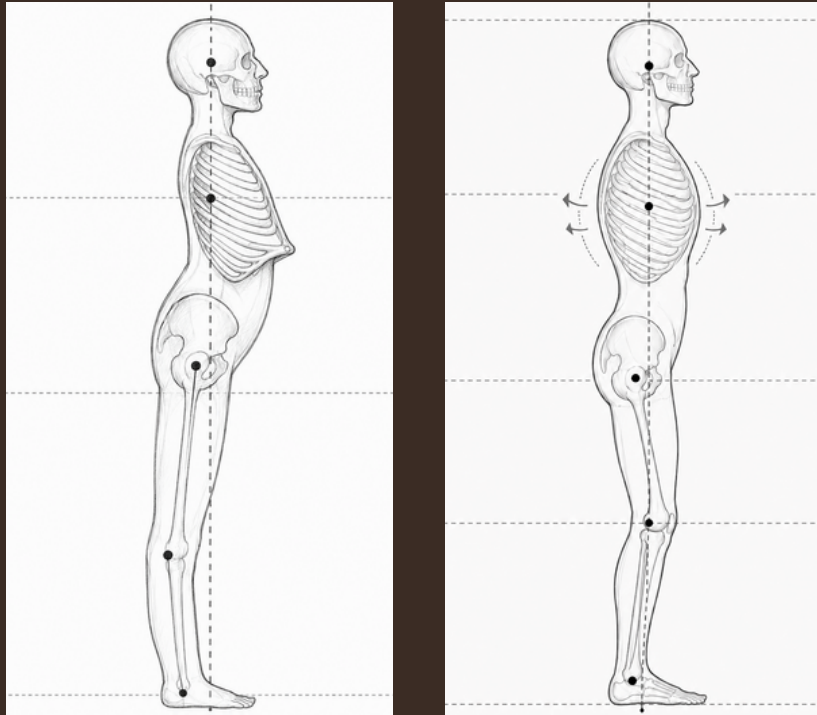
This excessive downward compression or “knitting” of your front ribs down makes you literally shorter, compresses your spine, can cause or increase hernias and prevent diastasis recti (DR) from closing.

When our abs pull apart with DR, it is common practice to tighten the core more. Instead of pulling the ab separation together like we want, this actually keeps it apart! Imagine a rubber band wrapped around your waist but torn at the front. If you keep tightening the band the tension pulls the tear apart, not together. Remember, your babies are born with DR and they do zero core tightening to heal.

It's important to note here that another big reason women think they need kegels is because of damage in child birth. But our bodies were made to expand to birth babies. If we weren't so tight and tucked to begin with, the tissues wouldn't be as likely to get as damaged or torn.

And even after they do, you'll be amazed how much more effective releasing the areas that were tight in the first place is for your healing, as compared to over tightening the areas that got stretched.

OPEN POSTURE



Photos:

Left: An exaggeration of flared rib mechanics from compressed back ribs. You can also see how a tucked tail and hips sucked forward leads to more pressure on the front of the hip joints and hyperextended knees (3).

Right: Ribs are expanding evenly in all directions (especially sideways not shown here), which can relieve flared ribs in minutes. Also shown, the tops of the femurs are pulled back so knees don't hyperextend and ankles can bend deeper. Creates a spring-like feeling.

These principals apply to ribs that are in any shape – expand them evenly to make a natural, seed shape and watch your fascia transform.

“I had a pelvis tuck and my ribs were compressed. Repatterning my whole body is making a huge difference to the relaxation of my shoulders & my pelvic floor symptoms.”

HOW TO EXPAND & BREATHE

I was a pro at tightening myself.

I thought that's what my hypermobile body needed after years of yoga. Building more muscle through traditional strength training helped me, but at a certain point I realized I was strengthening myself into my compensations! I was building bigger muscles in areas I actually wanted to be softer like my traps, neck and pelvic floor.

Along with the bum up, long belly alignment we've already discussed, an expanded ribcage is another key foundational detail that transforms exercises from adding to compensations versus healing them.

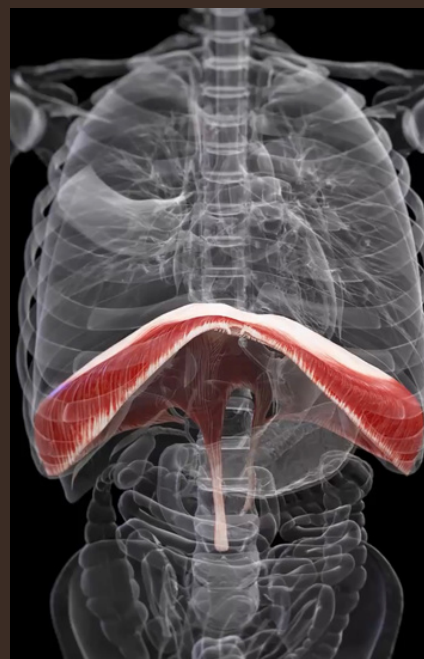
When first learning to expand your ribs, it's easy to think it can only be done with your breath, which is fine at first. But we actually have muscles in between each rib, the intercostals, that can lengthen to telescope your 98-jointed-ribcage open in all directions. You want to expand wide and back first, which feels like the opposite of open posture. Think of expanding angel wings on your back.

Using your intercostal muscles to expand allows you to stay open AND breathe with your diaphragm (any stabilization or core advice based on timing your inhale or exhale makes no sense because you have to breathe while stabilizing for functional activities like moving a couch).

This is different than sucking your diaphragm up to accomplish spreading the ribs (aka a hypopressive). This is why I advise people away from hypopressives because it isn't functionally helpful.

Your diaphragm is a muscular upside down bowl inside of you. When you inhale it moves down and is like a loaded spring (still using your lungs, just the lower sections). This should expand your belly, sides, low back and pelvic floor.

Then on the exhale, the loaded spring releases and moves back upwards. If you breathe slowly enough that the hair in your nostrils doesn't move, this will feel like you are on God's ventilator.



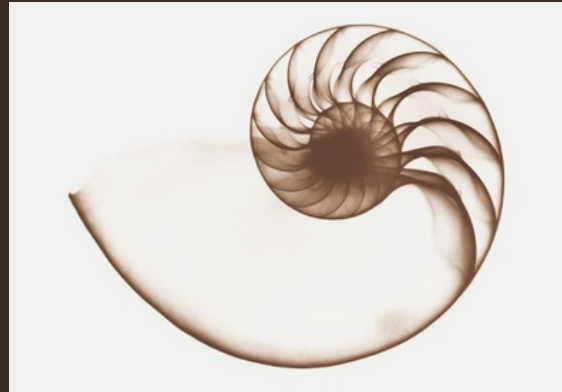
BREATH & YOUR NERVOUS SYSTEM

In order to feel this, **you have to let go of the other breathing cues we thought were right.**

Some of the big ones that need to be repatterned are:

- Loud breathing. No, Yogic ujjayi breathing where you are making a sound tightens your throat muscles.
- Long breaths. No, the breath is deep in your body but NOT long, 2-3 counts only. Long, exaggerated breaths actually starve your brain of oxygen, increase anxiety and change the pH of your blood, which is cool for an hallucinogenic out of body experience like Whimhoff. But is not how you should be breathing all the time.
- Thinking of it as belly breathing. No, that will just expand your belly with your brain not your breath. You want to think of it as expanding 360 degrees around your waist and into your bum hole.

To practice, watch this [video](#).



Using your diaphragm like a spring to breathe you are truly a foundation of healing the fascia. It offloads your neck muscles from having to breathe you 20,000 times per day. It's movement improves digestion. It allows you to be strong and breathe simultaneously. It also down regulates your nervous system via the vagus nerve that weaves through it.

But even more broadly, when your fascia is supple from correct breathing and alignment, the little communication molecules of your body can flow better. Think of how flow slows through a compressed straw. When the fascia is always tight, your flow slows and it often leads you to feel more anxiety, insecurity or anger.

“Wow - I was not expecting repatterning to cause a shift in energy, as if I was returning to a calm baseline I hadn't felt in years.”

YOUR BODY IS AN INSTRUMENT

Let's dig in deeper to how this ribcage expansion and diaphragmatic breathing can transform your shoulders and neck.

Imagine a guitar string tensioned to pull it the perfect distance away from the neck of the guitar, so that when strummed, it creates a vibration at frequency that we hear as beautiful.

The expansion of your ribcage allows for a similar relationship with your shoulder and neck muscles. When your ribcage collapses, it makes the shoulder structures on the outside act like a tight guitar string pulling too far away from the neck of the guitar (the ribcage in our metaphor).



This means the string makes the wrong sound or in the case of your muscles, no matter how much you rub them, they never stay soft and supple. The muscle isn't the problem, it is the relationship of the muscle to the ribs underneath that causes the unending tightness.

Your muscles being tight because of underlying misalignment applies to the body as a whole. Just like how an anterior pelvic tilt made correctly relieves your back tension. When your muscles, fascia and bones are in the correct relationship to each other, not only will you feel supple without aggressive bodywork but things can flow better.

No, I don't mean this in a woo woo way. I mean the flow of blood, lymph, and the electrical current created by the movement of minerals in your fascia and nerves improves – and you can feel it. Similar to how the perfect flow of frequency coming out of a well tensioned guitar string feels right.

As someone who struggled with chronically tight traps, neck muscles and TMJ issues (don't worry we will get there, too) this is a life changing experience. You don't need to abuse your strings or muscles with aggressive release work. Instead learn how to balance them so your body becomes the beautiful instrument it was designed to be.

CLOTHING & CHANGES

So, now that you understand how important your expansion is, you'll start to feel how the compressive clothing we often choose is shaping us into tighter, closed versions of ourselves (no, compression doesn't actually help lymph flow, it just dams it). This is why I created LILY HOÖG, my clothing brand. We make biological couture activewear designed to actually fit your body with seams to help you stay in open posture with natural fibers. Join the waitlist or order [here](#).

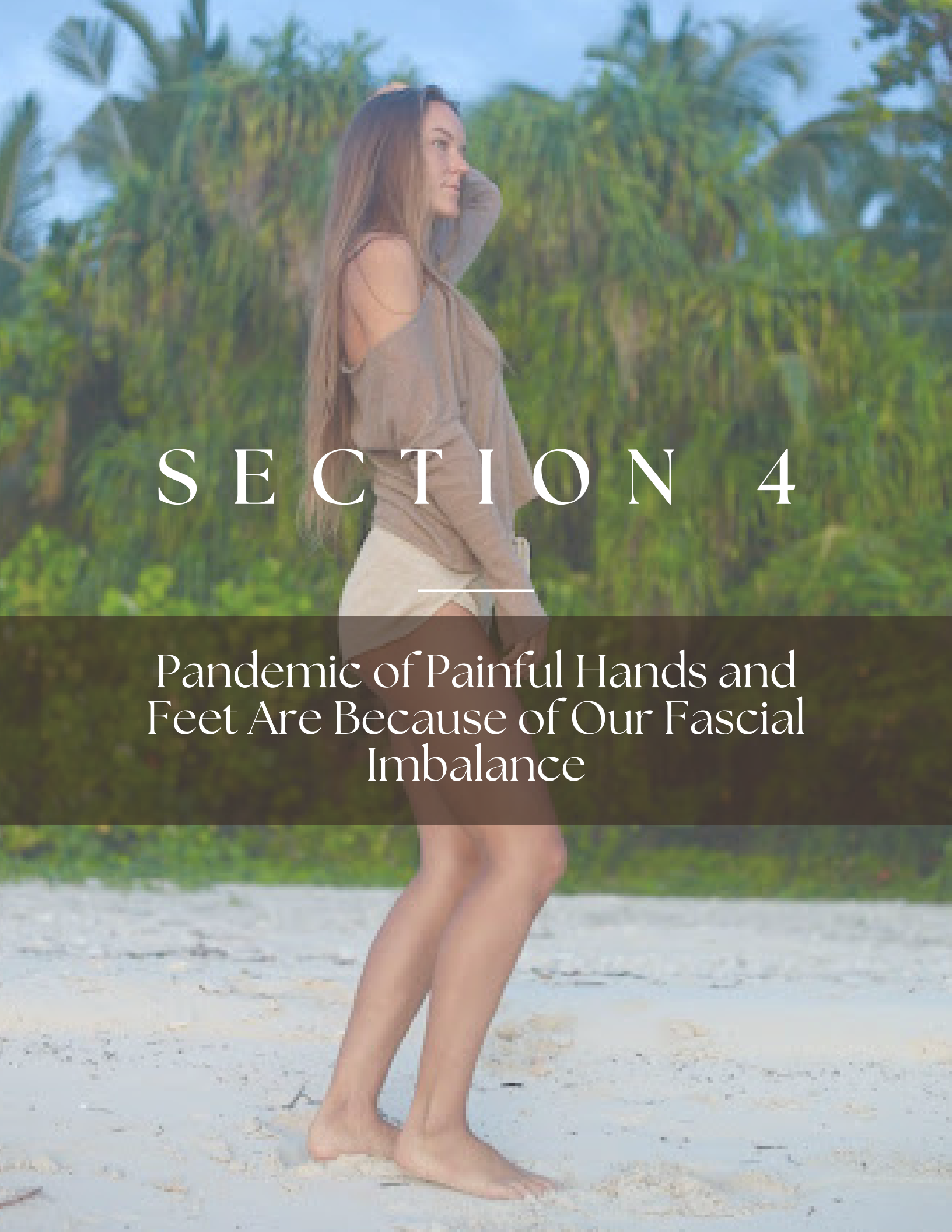
Also, notice how often your clothes pull your bum down. I pull my bum flesh up under my pants many times a day. Our clothes won't open us all by themselves, but they have the power to reinforce us closed and stiff, or open and vibrant.



Photos: Changes in my posture
after 6 months of
REPATTERNing my fascia.

Notice:

- lifted, rounded bum
- less back tightness
- more integrated collarbones
- higher shoulders
- more balanced facial structure
- happier face

A woman with long brown hair, wearing a grey off-the-shoulder top and light-colored shorts, stands barefoot on a sandy beach. She is looking off to the side. The background is filled with lush green palm trees under a clear blue sky.

SECTION 4

Pandemic of Painful Hands and
Feet Are Because of Our Fascial
Imbalance

FASCIAL FABRIC IMBLANCE

The image of my grandma's hands, gnarled, pointy, and achy still haunts my mind. Hands I adored, but hands I am sure I don't want to inherit. We often assume that our fate is failing joints that make the last decades of our lives miserable. And for many of us, it will be. **Almost 50% of Americans over 65 are diagnosed with hand arthritis, an issue that accounts for more than 55% of the prescribed opioids (13).**

Our joints will start to wear down eventually of course, but if we used them in a more balanced way, they'd last longer than what is our cultural norm. The hands and the feet set this health for all our joints because this is where the tension of our fascial fabric starts.



Photos:

Top: Fascial imbalance in hand causing visible tendons, sharp angles and faster joint wear.

Bottom: Fascial balance where the joints create smooth curves, there's well developed muscle at the base palm and tendons on the top of the hand aren't visible. Can sustain a lifetime of work without early arthritis.



DISTORTION INTO YOUR SHOULDERS

Aged, achey hands may seem like a inevitability or genetic misfortune but really it is a fascial imbalance issue.

The top of the hand is extremely tight, and this pulls the palm side of the hand further apart. This makes it extremely hard, if not impossible, to use the muscles on the palm side of the hand, which leads to further compensation and tightness on the top. Now instead of the muscles, fascia and joints working together, the joints are yanked out of alignment and take the brunt of the load.

Making us think debilitating arthritis at 65 is normal.

And if it isn't the joints that are hurting, as it often isn't at first, this imbalance leads to most of the younger person's hand issues, too. Think things like carpal tunnel syndrome, trigger finger, hypermobility and general hand pain. Injuries can be simply accidents, but often happen because the imbalance set us up for the possibility.

Even when these issues are massaged, released or have surgery done, it often doesn't truly heal because we didn't change the fundamental way we move.

But this is far from the full story because the hand imbalance causes a distortion of the fascial fabric into the elbow, shoulder and neck, too.

Think about the classic modern posture of our people – tight, rounded and collapsed in the front while being pulled long and weak on the backside (aka upper crossed syndrome). It is the same pattern, tight top of hand, expanded up into the shoulder creating tight chest and throat and a weak palm of hand expanded up into a weak back of shoulder.

Learn to start to repattern this by contracting your base palms with 'taco hand' and shaping the fascia of your hand [here](#).



YOUR FOOT FASCIA

If we move down to your feet, the same principles apply.

1 in 3 adults over 65 live with foot and ankle pain (14). We've all had a day ruined by achey feet, but our feet are geniusly designed to handle constant loading – if we use them in the correct alignment and fascial tension! Do I sound like a broken record yet?

The tops of our feet are tight, as shown by the tendons sticking up, visible like our guitar string tightened too far and pulling away from the guitar's neck. And thus the bottom of the feet are pulled long and weak.

We often have never been taught about the 20 muscles on the underside of our feet that were made to be used (15). If we don't realize they are there, how could we possibly use them? Because we don't use the muscles on our soles, we are left with foot distortions like the toes resting in sharp, gnarled angles like bunions, big toe nails that are highest at the tip, curling up like an elf's shoe, and excessively rolled onto either the inside or outsides of our feet.

It is no wonder we are plagued with all kinds of foot pain. But especially plantar fasciitis where the fascia on the bottom of the foot gets irritated and torn without help from the muscles on your soles.



“My feet felt very rigid at first and everything has softened. My bunions which were pretty nasty looking are changing from having a point to softer and more round. I am feeling way more grounded.”

SUPPLE, STRONG FEET

And no, our foot problems are not simply because of our modern shoe designs, although they definitely do not help the situation, but barefoot shoes alone will not save us. You have to learn how to use your feet differently no matter what kind of shoes you're wearing.

This has freed me, and now I get to wear fun, heeled shoes again without fear of foot pain!

This is why I don't recommend rolling the bottom of your feet with a ball. As this is a bandaaid that sure can help circulation, but is molding the fascia longer where it is already too long! We need the bottom of the feet to come back together, and live more under the bottom of the feet!

What we actually need is to load the big toe knuckle and the pinky toe knuckle evenly and repattern the top of the foot longer. Which is just painful and awkward to try to do with a ball (ask me how I know). But it can be done like I show [in this video](#).

We engage the muscles on the bottom of the foot (aka taco foot) at the same time as we do fascial release, so the body feels supported enough to actually change shape as we are giving it a new, healthier pattern. It's like saying "thanks sweetie, but try this" to our tissues.

This concept is vital to understand for the entire body – your fascia is a genius and won't soften if there isn't another stabilization strategy in place. Instead of stretching or massaging harder, ask what engagement is this region lacking, instead.

The principle of your fascia is if it's tight on one side, it is weak and long on the other side. Create more balance and the pain disappears and suppleness returns.



"I had right foot pain for 8 months and 2 weeks after practicing repatterning the foot and moving my hips back as often as possible, the pain is totally gone!!"

DISTORTION TO YOUR HIPS

If we expand the fascial imbalance up the leg, **the tight top of foot leads to a tight front of leg, knees, hips, psoas (hip flexor) and belly.** Which is the bottom part of the reason of why hips commonly wear out and need replacing in the front of the joint.

Whereas the weak bottom of the foot leads to weak back of leg and glutes.

This explains the pattern of many common ailments, like Patello-Femoral Pain Syndrome (fancy long name for the front of your knee is tight and therefore the knee cap isn't tracking correctly) or hip impingements (fancy name for when the front of the hip is so tight it clamps down on the hip joint itself causing damage and pain). Impingement can also cause hip bone growth which is called FAI (femoral-acetabular impingement).

However, its not always diagnostic knee and hip issues that show up from this imbalance. It can affect any tissue up the leg, explaining other common complaints many of us find ourselves with such as tight hip flexor /psoas muscles, feeling like our quads fire more than our glutes, random knee aches, bunions, big toe pain or ankle sprains.



Photos:

My legs & feet.

I had right sided pelvic floor, hip, knee and ankle pain since I was about 14.

You can see the fascial evidence of this in the way my right big toe stays lifted and my ankle bows more out, making the foot come in, at rest.

But even here, where you can still see the imbalance, I rarely experience pain anymore since learning the code of alignment my body needed. And the evidence is getting less and less everyday with repatterning.

THE JONESES OF THE FITNESS INDUSTRY

Some people who never grow out of moving with tone in their soles and palms (as well as the other alignment principals discussed here like an untucked bum, long belly & expanded ribcage).

They often have

- Parents that move well so they didn't have innate mimicry patterns pulling them out of natural alignment.
- Were encouraged to crawl for as long as possible before walking (yes crawling is very important for fascial health as an adult).
- They weren't put in closed posture braces like carriers or floor bouncing holders or tight shoes early on.

These people are the athletes, fitness influencers and seemingly perfectly proportional people we all want to be – the Joneses of the fitness industry.

This is why some people can do any workout with great results and other people can't do any workout without creating more pain and tightness.

And honestly, I'm stoked for them – it's amazing and beautiful to watch. But thankfully, I am not one of these people.

Because when you naturally move with the correct alignment principals, you don't have any idea that other people need to be cued into them. Thankfully, I have struggled and learned how change deep movement patterns in myself so I can help you do the same.





SECTION 5

Opening Your Airway, Jaw and
Tongue Posture

AS ABOVE, SO BELOW

I was a teeth grinder for most of my life. After being hit by a car on my bike and subsequently rolling over it, the grinding escalated and I found myself mostly consuming smoothies and waking up with excruciating ear pain (that's where your TMJ is).

Not only did I spend thousands of dollars on TMJ treatment (TMD really, because TMJ is just the name for the joint itself, whereas the D stands for disorder), but I specialized in my doctorate program on how to help other people with jaw dysfunction.

I'm not exaggerating when I say none of it worked.

Years of intense massages inside my mouth and around my jaw, cranial release, spinal and jaw adjustments, different fancy mouth guards, nervous system care and all the right exercises provided only temporary relief. **None of the relief lasted because all these treatments, techniques and exercises were missing the key ingredient, the rest of my body!**

Think back to the balloon that is your entire core system from top of your ribcage to pelvic floor that we talked about before. In the same way that a tree can only grow as big as its root system supports, or a pyramid can only be as tall as its base, the head can only mirror what's happening in your entire core system below.



Photo:

Left: Me before repatterning with tight, big jaw muscles.

Right: Me last month (:

CLOSED POSTURE, CLOSED AIRWAY

To walk through this bodypart by bodypart, think back to how a collapsed ribcage and weak palms cause chronic fascial distortion and tightness into the front of the shoulders and neck muscles.

This tightness translates up into the front of your neck and throat.

This pattern not only compresses and flattens out the curve of your neck, but draws the chin downwards, making the jaw retract and compressing your airway.

This is why devices that bring your jaw forward can be used to treat airway disorders (16). But again, this treatment is missing why the jaw is back in the first place – it is because the front of the body is way too tight!

When your airway gets smaller, your body compensates in all sorts of ways, which makes sense since being able to breathe is really important for living.

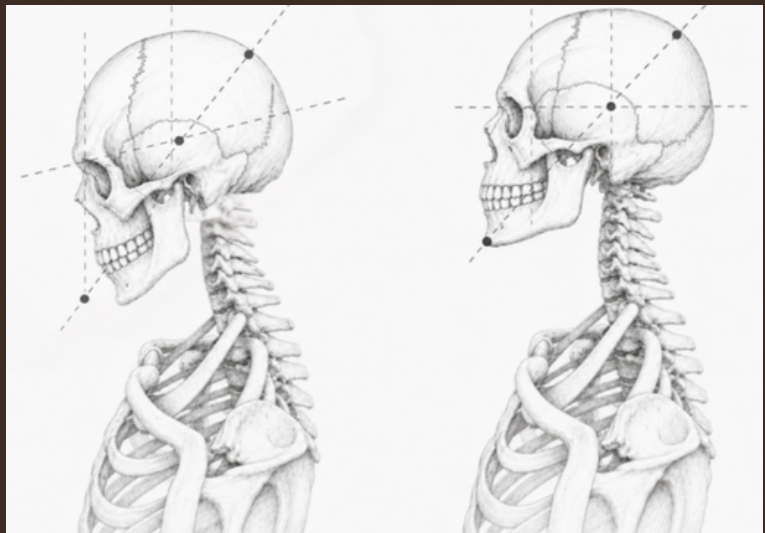
Maybe you're one of the 40-60% of adults who suffer from loud snoring – often a symptom of a tightened airway literally making a sound (16).

Maybe you (or your child) sleep with your mouth open and think you need mouth tape. I mean, if you like it, go for it, but that mouth tape is really a bandaid. Because unless your nose is clogged (which happens if you can't get your tongue to the roof of your mouth, more on that later) your mouth is opening because your airway is so tight it can't move enough air through your nose.

Photo:

Left: showing slightly exaggerated alignment of tight front of shoulders, neck and throat, pulling jaw down, making space for airway smaller and looking through the top of your eye sockets.

Right: Showing more curve in neck from balanced fascia which creates space for airway, jaw opening and looking through the center of the eye sockets.



BANDAIDS VERSUS ROOT CAUSE

SLEEP HEALING

Maybe you are one of the many people realizing you may have sleep apnea and think you need a CPAP to support your smaller airway. Well, the CPAP is a bandaid to keep your airway open for you.

Instead you could try repatterning your fascial system to support an open airway, like unbending and expanding a crumpled up straw.

This is not medical advice but a stimulus for curiosity about how we can truly heal ourselves. This doesn't apply to severe cases of sleep apnea where you're losing quality of life – I'd get the CPAP and repattern at the same time.

Bandaids aren't bad... unless we pretend that's what heals our cuts.

The overall fascial distortion where the whole front side of our bodies are shorter and tighter, makes understanding the pandemic of airway and sleep apnea issues easier, but it doesn't stop there.

A tight throat, with a lowered and tucked chin leads to tightening of the muscles around your jaw, too. Now every time you chew you're fighting an internal battle, the force of which can cause the disc in your TMJ to not move correctly, which is that clicking you hear and feel.

But again, instead of reaching for a bandaid, the real correction that softens your jaw is making the whole front body longer with the hips back, bum up, supported by an expansive ribcage and open throat. Then spending enough time there to change the resting pattern.

Let's zoom out for a moment. Because we've broken down general airway issues and why the jaw is tight but what about clenching your jaw at night? This can also be an airway issue, too, but with a different mechanism.

**“After REPATTERN
class I slept amazing
and woke up feeling
like I am in a new
body!”**

TONGUE POSTURE IS BODY POSTURE

To explain that connection, I first need you to understand your tongue posture better. So feel where your tongue is in your mouth. If it isn't gently pressing against the roof behind your front teeth, you may have been told your palate needs to be expanded or your tongue is too big for your mouth.

Move your thighs backwards so there's a curve in your low back and draw your ribcage off your pelvis. Your tongue fits better, doesn't it?

The fascia from your hips is connected into your tongue (news flash, all your fascia is actually connected).

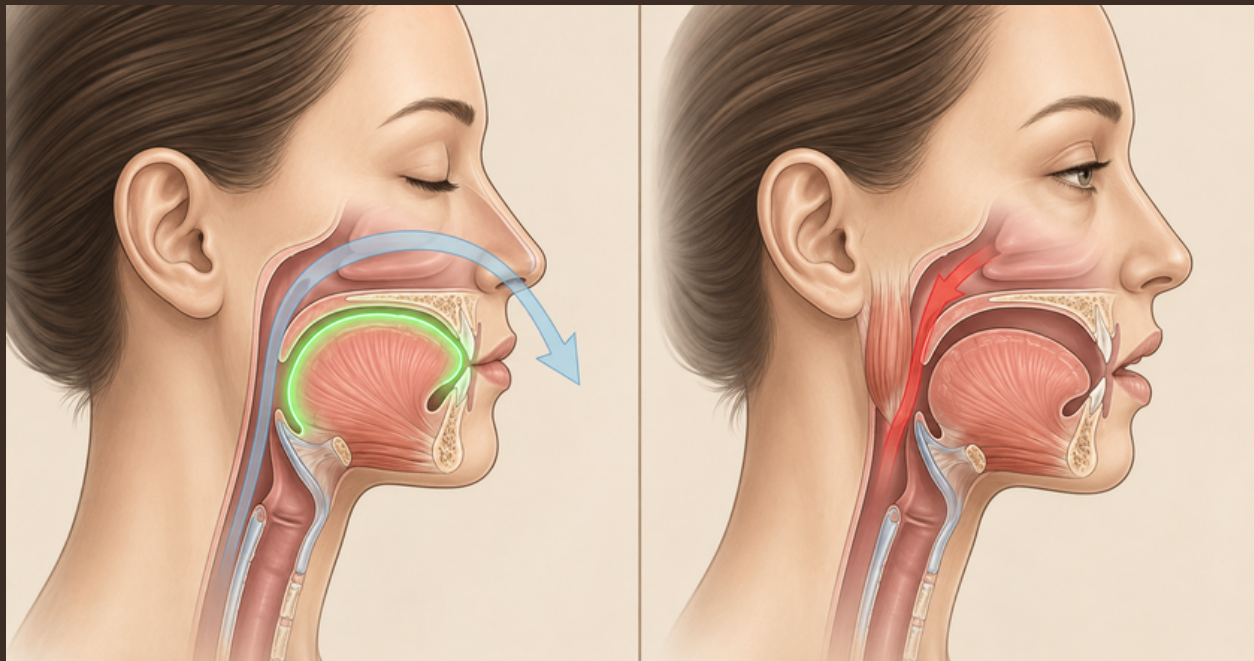
If your hips are sucked forward, your bum is tucked under, and the palms and soles are weak, the fascia on the entire front side of your body is shorter. **Your tongue feels longer and wider based on the fascial tension of the whole body.**

So when you've been closed, your tongue won't fit in your mouth. But this isn't purely a mouth or a tongue problem, it's a posture problem.

Photo:

Left: Tongue on the roof – airway open and easy to breathe through nose.

Right: Tongue resting down – airway smaller, harder to breathe through nose, tired looking face, and smaller jaw line.

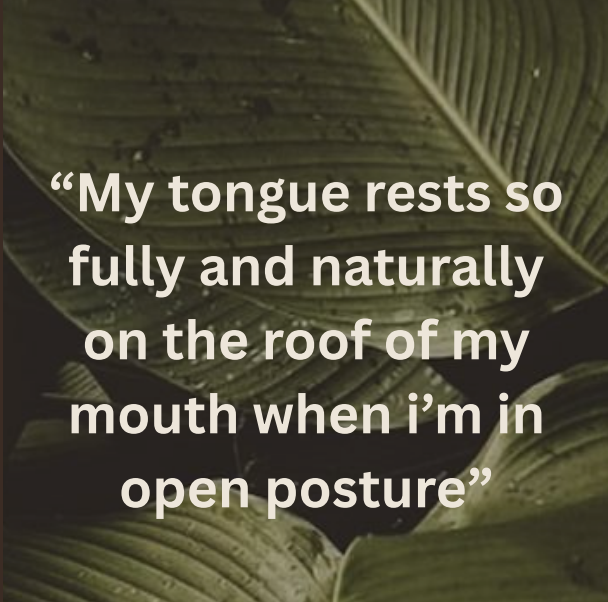


CLENCHING & CONNECTEDNESS

If your tongue doesn't fit in your mouth, it can't create the suction on the roof of your mouth that is the natural resting position which shapes your facial structure and relieves your jaw muscles. Without this upward pressure of your tongue, you probably can't breathe through your nose either because the position helps clear the nasal passage way.

If the tongue can't suction when you're sleeping, you're more likely to choke on your tongue in the back of your mouth. And this is where it can cause you to clench!

The body responds to this lack of air caused by your tongue choking you, by waking you up (another possible cause of sleep apnea) and/or clenching the jaw to stabilize the airway open (17).



“My tongue rests so fully and naturally on the roof of my mouth when i’m in open posture”

This was me. After about a year of dedicated repatterning and sleeping with my belly and throat long and tongue on the roof of my mouth, my clenching almost completely stopped (I'm still human and it happens every once in a while, especially after a rare glass of wine or a not as rare particularly stressful day).

The pressure of your tongue upwards on your palate not only at night, but throughout the day, shapes the palate, the teeth and also the bones of your face (18).

But you really don't want to fix your tongue position, your fascial structure or your airway issues by focusing your efforts directly to these areas. Palate expanders, jaw surgeries, techniques like myofunctional therapy, face sculpting, yoga or massage, mewing, thumb pulling or even botox can make temporary changes, but without changing what's happening below, it won't last. Or worse, if the changes are forced, it makes your body unbalanced in ways that are look off and don't feel good.

Now that you understand how your whole fascial system is connected, hopefully these isolated treatments seem meager in comparison to the power of how we choose to shape our entire fascial system day and night through our posture.

THE END

You and the entire world need this knowledge of the natural alignment and how to balance of our fascia, starting from the way we hold our pelvis and hips, to our ribcage, to our soles and palms and lastly, into our heads. Please help me share this life changing information by sending this to your friends and fam.

Instead we are often sold special physical therapy, or weight training, or yoga, or pilates, or myofunctional therapy, or this new program, or....

But the thing is, you can do any movement with the open, healing code of alignment you were made for, **or not**.

Exercises in themselves, will not heal you.

If you're willing to do the work, it is never too late to bring more balance into the fascial system to open your posture, your jaw and your life.

All my love,
Dr. Lily Baker, DC, CSCS, RYT-e

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guide you through how to REPATTERN
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open posture workouts with REVIVAL &
offer 1:1 virtual consultations at
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DR. LILY



Dr. Lily Baker (Hoog-Fry) is a board-certified Chiropractic Physician, Certified Strength & Conditioning Specialist and veteran yoga instructor. She is known for helping active individuals improve their lives through opening their posture and understanding their bodies.

After years of healing her own body, and helping thousands of patients with complex, full-body issues—she came to understand what truly works and what doesn't. Her clinical focus has included TMJ and jaw dysfunction, pelvic floor and hip imbalances, foot mechanics, fascial health and hypermobility.

Drawing from a background in physical and osteopathic medicine, nervous system healing, Bowspring, Chiropractic, 15 years of yoga instruction, and strength training, she integrates these disciplines into a cohesive, whole-body approach that changes lives.

CITATIONS

1. Although I specialized in studying the core in post doctorate work and learned a lot from DNS (Dynamic Neuromuscular Stabilization).
2. <https://www.cambridge.org/core/books/abs/human-evolutionary-biology/history-methods-and-general-applications-of-anthropometry-in-human-biology/E6D30FDE2A32CE646BDA5A9C05CFAC94>
3. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3175921/#CR2>
4. Many concepts and photos adapted from the mentorship of John Friend who has dedicated his life to helping us live open through Bowspring- thank you, John!
5. <https://pmc.ncbi.nlm.nih.gov/articles/PMC6494325/>
6. The anterior pelvic plane is determined by three reference points: the two anterosuperior iliac spines and the anterior surface of the pubic symphysis. In 1922, Robinson et al. [42] first described the anterior pelvic plane as the pelvic frontal plane <https://pmc.ncbi.nlm.nih.gov/articles/PMC2600979>
7. Scientists studying the forces of pelvis position now use incidence measurement which is based on the hip and sacrum position, not the older concept of "neutral" pelvis. <https://pmc.ncbi.nlm.nih.gov/articles/PMC3175921/#CR2>
8. Got this concept from Hayley Balenseifen @bravobodyandbow, thank you dear!
9. <https://www.sciencedirect.com/science/article/abs/pii/S136085920900093X?utm>
10. Got this concept from Desi Springer, co creator of Bowspring, thank you genius, in tune being!
11. <https://www.ncbi.nlm.nih.gov/books/NBK519068/>
12. <https://my.clevelandclinic.org/health/body/rib-cage>
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19. <https://www.sciencedirect.com/science/article/abs/pii/S1356689X11000816>