

How did I get here?



How do I get out?

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HOW DID I GET HERE? HOW DO I GET OUT?

Sometimes a major trauma causes symptoms: a rock climbing fall, a car accident, a skiing incident. But often I hear, "I didn't do anything different!" So how do pain and symptoms happen if there isn't a direct blow? Why are they still occurring if the time for trauma to heal has passed? Are my symptoms due to Aging? Obesity? Arthritis? Why do so many younger, healthy-weight, exercising people have pain, too? If the cause of pain is arthritis-related, all seniors would eventually require joint replacements or spinal fusions. But they don't.

Biomechanics is how the mechanism of our muscles and bones (pulleys and levers) work synchronistically for ease and efficiency. We are born with thick interspinal discs and strong, resilient tendons and cartilage. And these tissues rejuvenate when used with healthy biomechanics also known as Functional Movement.

There are several reasons why our biomechanics get altered and our movement fades from functional, efficient coordination between muscles and bones to faulty, dysfunctional, destructive compensations. After years or only months of these compensations, our tissues start to break down.

And, it often happens without our even knowing it!

We've all had the experience of "guarding" when we injure ourselves. Our sensing brain automatically shuts down the area to allow the structures to heal without more insulting impact. Ideally, our brain would release the "No Go Zone" restriction when it gets the signal all is well, but the injured area stays locked in "Shut Down", majorly throwing off our biomechanics. Many of us know our shoulder, knee or low back just isn't the same after that early sporting incident or a car accident.

We are often in a hurry to get back to our normal routine. Our brain allows this by keeping the joint protected as we push through. It works . . . for a while. But our guarded biomechanics soon begin to wreak havoc on joints above and below. The injured joint itself, being held so tightly as we vault through our daily lives, stops getting nutrition, oxygen and waste removal due to tightened muscles cutting off blood flow. This stalls the end phases of healing and soon sets up a cycle of re-injury. Our soft tissues are remarkably resilient and can sometimes take many years of abnormal forces before they begin to be symptomatic, but with repeated insult, our "margin of pain-free error" is used up, and just one more sheer to the tissues via an innocent little bend or reach stresses the tissue into a symptomatic state

When my next-door-neighbor's child was five, he broke his leg skiing.

Casted, he was unable to bend his knee. When the cast came off, he continued to walk with his knee stiff. Mom, Dad, the physical therapist and many friends would encourage Jimmy to bend his knee with walking. And Jimmy would comply, for a few steps, but the habituation of walking with a straight knee had sunk in deeply. But one day, he needed to run very fast to catch a ball before it rolled out of his driveway into the street. The first few steps he peg-legged along, and suddenly, his brain remembered that bending the knee would produce more speed. He changed his movement, not on outside command, but to meet an inner goal. He "re-educated" himself in that split second. His desire, and higher-level functional movement, facilitated it.

REPETITIVE STRESS

Have you ever noticed an arced mark on a carpet where a door swings opened and closed? The off-kilter door is scraping the carpet each time it is used. This is comparable to the stress on soft tissues caused by misuse of a joint. The marred carpet can be replaced, and the new carpet will show no wear pattern for a time. But the cause of the problem has not been addressed and so the same result will ensue. After many orthopedic surgeries, symptoms may subside, but in time, similar or even new symptoms in the same or general area as before return.

From birth, it takes a human about five years of exploration to find the myriad of ways to optimally use his/her body. Depending on standing position, any load, the speed at which one moves, and the environmental restrictions; the nervous system filters, and prioritizes which muscles should be recruited first, second and third, etc within fractions of a second. Our nervous system is so magnificently created that it finds the optimal motor patterning for each movement we made. (No one taught you how to crawl, walk or throw.)

Let's take reaching for example. A child will reach overhead not just by extending her arm by her ear, but also by fanning her ribs on the reaching-side, allowing the same-side hip to drop, and shifting her weight from both legs onto the reaching side leg. This pattern spreads the work of the movement over multiple joints. Repetitive reaching with the work centered only at the shoulder joint, without any use of the ribs or weight-bearing — as we often see as people age — even in their late teens — breaks down soft tissue. Although we think the "problem" is with our shoulder (rotator cuff strain, tear or impingement, biceps tendonitis), it is the fault of the many other joints being held and not participating in the movement. There are many reasons why, with age, we replace our originally discovered pristine motor patterns with less-optimal and counter-productive movement patterns called compensations.

CHAPTER
03

EMOTIONAL HOLDING

Compensations can creep in due to emotional trauma. Blushing is a good example of an emotional event causing physiological symptoms. Feeling embarrassed causes blood to rush into vessels in the face. The vessels dilate and the cheeks take on a red hue.

on a red hue. This is due to your autonomic nervous system (ANS), a division of your central nervous system. Your central nervous system is divided into two systems. One is the autonomic nervous system, which sounds a lot like "automatic"; the other is the somatic nervous system. The somatic system is the one you consciously control. When you ask your elbow to bend to bring a fork to your mouth to eat, you are using your somatic nervous system. The autonomic nervous systems is driven by beliefs about the safety of our environment.

The only way we can manifest our true goals and desires is through the use of our body. If we want more relationships, we have to "show up" physically to meet people. If we want more connection with the earth, we at least walk outside. Our true goals and desires come from deep within, but it is our body that manifests them. Sometimes we are in conflict about what we want. This conflict can show up in the body as contraction. We want to reach out and participate, but we are unsure of letting ourselves be seen and potentially judged. Often we have our foot on the gas and the brakes at the same time when trying to move towards a goal. This unconscious constriction halts the free flow of movement through our body. Once again, joints that should be participating are held off-line and other joints take too much of the workload, eventually breaking down.

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It is not two disorders or two diseases or two disciplines. It's not an internal medicine on one side and a psychology and psychiatry on another side. It's an integrated physiology that is not only regulating health, growth and restoration, but it's an integrated physiology that fosters and supports social interaction to create safety for the individual. . . . safety is the critical feature here. If our nervous system detects safety, then it's no longer defensive. When it's no longer defensive, then those circuits support health, growth and restoration.

— Stephen Porges, PhD

HOW BELIEFS DRIVE OUR BIOMECHANICS

We mentioned our central nervous system is made up of the autonomic nervous system (ANS) and the somatic nervous system. Our ANS is further broken down into two subcategories. One is called the sympathetic nervous system and the other is called the parasympathetic nervous system (running parallel to the sympathetic). (See FREE RESOURCE Neuroplasticity video.) Each system determines certain physiological reactions.

Central Nervous System (CNS)

Autonomic Nervous System (ANS)

Somatic Nervous System

Autonomic Nervous System (ANS)

Sympathetic Nervous System (SNS)
(Flight/Fight/Freeze)

Parasympathetic Nervous System (PNS)
(Rest/Digest/Heal)

The sympathetic system is often called "flight, fight or freeze," and the parasympathetic system could be called "rest, digest and heal." Healing takes place in the parasympathetic state. Under the influence of the parasympathetic nervous system, without the demand to attend to threat, we drop into a body-repairing mode.

The sympathetic nervous system's job is to keep us safe. In the same way when you are sympathetic to a friend's condition, understanding it and wanting to help in any way, your sympathetic nervous system is sympathetic to the environment, always on the alert for what needs to be done to help you keep safe.

Sometimes threats are just perceived. If you got bitten by a dog when you were young, your system might register every dog as threatening, not just the one that bit you years ago. Other times, threats are based on past conditions that are no longer true. The exaggerated response to a dropped glass from a PTSD victim is an example. Threats can also be emotional in nature, not just physical. If we believe our alcoholic parent is going to enter the door in a daily afternoon rage, we might physically brace ourselves and mobilize into peace making for the sake of our siblings. Losing a parent's love, a job or status can also pose a threat. Our nervous system reads all these threats the same way as it does a physical threat.

Whenever we feel threatened, and are on alert, we stiffen and have unconscious reflexes. I watched a news anchor wince towards a fetal position while she was reporting each time a bomb went off behind her despite being several miles away from the action. She was in no real danger, but still her body responded without her conscious control.

The LA Times article describes how the brain processes physical and emotional pain in the same place. [Click Here for the article.](#)

As a young child you experienced real or perceived threats that still show up in your body. Sometimes threats never really resolve but are simply pushed down. They still run your biomechanics as you unconsciously use up your margin of error. Even if you come from a loving home, no one escapes the confusion of growing up. To a greater or lesser degree we are all engaged in this kind of unconscious captivity. As holding patterns are released with novel movement explorations, often times the emotional pattern is also upgraded leading to easier relationships — professionally and personally. Resistance is lessened in our physical and emotional bodies.

CHAPTER
05

WHEN YOU FEEL IT, YOU CAN HEAL IT.

Drugs blunt pain. Fused or replaced joints often cause greater demand for movement above or below them and dysfunctional patterns remain. No matter how skilled the surgeon or how innovative the hardware, if the same stress factors that contributed to the original problem remain unchanged, eventual breakdown ensues. Multiple hip replacements are not uncommon.

We discussed how our ways of thinking (beliefs) and doing (movement patterns) influence our pain. We can change the way we “think” and “do” with Awareness. (See FREE RESOURCE: Neuroplasticity video.) We don't know what we don't know, but by paying attention, on purpose, in the moment, without judgment (called Mindfulness), we can bring our unconscious habits to the surface and address them in the present time. So any perceived threats from the past can be recognized and defused. Any real threats can be dealt with using your current mental and emotional maturity rather than in your unconscious child-like way.

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Habit determines behavior more than choice or will power.

—Lansing Greshem

Research shows that we learn new ways of being by exploring novel, surprising important information. In CFR we do this through somatic explorations or body movement lessons. By revisiting fundamental movement sequences, your brain has a chance to re-educate itself to your optimal, original patterning — patterning before trauma and compensations. Old ways of being — habits — and their pathways, weaken and the new pathways grow stronger as your brain “rewires”. This is called somatic education. (“Soma” means “body” in Greek.)

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Until you know what you do, you have no choice to do otherwise.

—Moshe Feldenkrias

Just like Mental Intelligence and Emotional Intelligence, Body Intelligence or Somatic Intelligence is key to our life experience. We need mental agility to navigate our techie world, so it is easy to forget the wisdom our body has to offer. Many of us have “felt” things just aren't right, picked up the phone to check on a loved one, finding him/her in need. Felt-sense is an innate skill that we can develop with Mindfulness and exploration. It's not just for people who are intuitive. It is your personal gift that you can use to balance your nervous system so you stay out of extreme modes of agitation or depression. Dropping in and tracking our body gives us an opportunity to pause and collect our mental and emotional selves to come up with problem-solving options. And besides that, it feels aesthetically pleasing to move with ease!

Proper work load distribution can be relearned using neuroplasticity. The brain can choose new patterns of movement through exposure to novel information in a curious setting. CFR sets the container for learning from self-observed kinesthetic sensation arising from non-habitual movements.