# FIXING ACCUMULATED SHORTNESS

## How to Identify and Fix...
## One of The Major Causes of Inefficient Structural Performance & Chronic Structural Pain

**Probably much faster, and quite possibly much more satisfactorily, than with anything you've already tried !**

**by Lou Gross**
**School Certified Master Postural Integrator**
**20 years successful track record**
**2000 hrs specialized training,**
**over 17,000 hrs clinical experience**
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## OVERVIEW & SUMMARY OF SECTIONS

**This long, but easy-to-read booklet will explain why people get tighter and tenser over time, how they develop pains that just don't go away, and why many of the more well known therapies often do not fix these problems.**

**It explains that our bodies accumulate shortness in the "soft connective tissue *system*." And that *this* is what diminishes our physical abilities, at *any* level of achievement.**

**This information is well proven, and is based on the scientifically developed treatment called Structural Integration Bodywork.**

**I'm a trained electrical engineer and I've been correcting problems with equipment and people's bodies for over 30 years.** This very informative booklet is for lay people and health professionals alike.

**While this training is not a part of the medical curricula, a number of medical doctors, and chiropractors, have taken it.** Hundreds of thousands of people, including Olympic and Professional athletes, elderly people and accident victims have experienced significant improvements over the past 40 years by using this system. **I, myself, have successfully treated MD's, DC's, acupuncturists, nurses, psychotherapists and massage practitioners.**

***Section 1. Why You're Tight. Overview.*** **(Part 1) This kind of pain is a symptom of a systemic problem. A close analysis, to find out why, shows there are a lot of shortened muscles causing the problem. Besides creating pain, the shortness also decreases a person's physical performance and can limit his or her everyday capabilities. This shortness is located all over the body, even in areas where there is no pain. And usually, there's nothing that doctors can find "wrong" with the muscle. A correct analysis and correction of this systemic problem requires someone trained in this specialized field. This work is not a part of regular medical nor chiropractic practice, nor even of physical therapy, acupuncture and regular massage.**

***Section 2: What You're Made of and What Creates Shortness. Overview.*** **(Part 2 Part 3) Now for a closer look at your "soft" connective tissue system. This is what your body's made of. Once you know this, you'll easily understand why some of its qualities cause some things to go "wrong." And that (reversible) condition in the soft connective tissue causes you structural pain and tightness, even when your muscles and nerves seem to be operating OK. This section, and those after it, will give you some down to earth facts that will help you actually fix your problems. Terms like arthritis, fibromyalgia, protruding disks and pinched nerves are only labels for the end result of a body condition. And even though some medical doctors may say they have no cure, nor do they know why it happens, there are reasons. Trained Body professionals have been fixing these reasons for decades.**

***Section 3. How to Re-lengthen. Overview.*** **(Part 4) How to relengthen the accumulated shortness to make the pains go away and also make the body more flexible and deeply relaxed. We just use the right hands-on technique coupled with the knowledge of how to unravel a body's inter-connected shortness.**

***Section 4. Shortness Created Pains, parts 1 & 2. Overview.*** **(Part 5 Part 6) Now that you know about shortness and how we relengthen it, we can take some time to cover specifics. Here is an explanation of different kinds of structural pains and injuries, and how they are caused by soft connective tissue shortness. These are the well known problems that doctors give labels to, and offer surgery, pain killers, anti-inflammatories, and physical therapy to heal. While these treatments may help repair already damaged tissue, they probably won't correct the systemic shortness. Often, simply relengthening this shortness in enough areas will take away the pain and tension, and correct a pinched nerve condition. Re-lengthening will also help injured tissue to heal by removing the strain that caused the injury in the first place.**

# FIXING ACCUMULATED SHORTNESS -PART 1 - why you're tight

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***Section 1. Overview.*** **This kind of pain is a symptom of a systemic problem. A close analysis, to find out why, shows there are a lot of shortened muscles causing the problem. Besides creating pain, the shortness also decreases a person's physical performance and can limit his or her everyday capabilities. This shortness is located all over the body, even in areas where there is no pain. And usually, there's nothing that doctors can find "wrong" with the muscle. A correct analysis and correction of this systemic problem requires someone trained in this specialized field. This work is not a part of regular medical nor chiropractic practice, nor even of physical therapy, acupuncture and regular massage.**

Chronic structural pain affects many people. The most common problems are back pain, shoulder tightness, neck stiffness, sciatica, pinched nerves and carpal tunnel syndrome. **Modern western medicine's approach** to many of these conditions is allopathic, or symptom oriented. It **often considers the part in pain by itself, separate from the rest of the person's whole structure, and may even offer the attitude that if the pain is corrected, the person will be OK again.**

**This is not correct, at least in the majority of cases that are caused by tightness.**

Local correction "only" can, of course, often cure the pain caused by physical damage from a direct blow or laceration. And a reflex pain in an acupuncture point, caused by digestive stress on internal organs can often be corrected by healing the organs.

But i**n all my 17,000 hours clinical experience since 1982, I have yet to see a chronic structural pain caused by tightness to be coming only from that one muscle or one joint area's tightness.** At the very least, ongoing sore arm conditions in

massage therapists, surgeons, auto mechanics, carpenters and baseball players always includes tightness in ***all*** the muscles of that arm, and hand, and usually through the shoulders, chest and back, and then down into the other arm and hand as well. We also find shortness in the muscles even in the abdomen, pelvis and legs. They pull through the muscles' "interconnections" and that makes the arm muscles even tighter than if they were only tight on their own.

The more of this tightness that's re-lengthened, the better the arm in pain feels, and the longer it ***stays*** without pain. What's more, people can actually feel their bodies becoming more and more flexible, more deeply relaxed, more powerful and even more "alive." This same improvement can be felt during the re-lengthening of the many short muscles that are causing other pains as well.

In other words, **as the *whole* body structure is returned to a longer, or healthier condition, the pains of the unhealthy condition go away. (Or at least, in the case of damaged tissue, the damaged area feels looser and less stressed upon. So it can have a chance to heal** with good nutrition and perhaps some physical therapy).

**In all fairness to many doctors and other health professionals, an attempt to stretch the tightness is indeed part of the healing protocol. But what is often not seen, even by sincerely caring practitioners, is the *overall* nature of the problem, how much tissue is so significantly shortened all over the body, and to such a deep level down through layers of muscles.** In addition, the usual techniques of stretching, massage, physical therapy and even strengthening, haven't been able to cure the problems, at least not in the people who have finally found me. I venture to say, that if these methods were indeed highly successful, one would hope that all these chronic pains, and the "coping with chronic pain" support groups, would both disappear!

This booklet explains the condition of "tightness caused pain" from perhaps a different angle than you have heard about before, because we're going to de-mystify the underlying ***cause*** of all those pains that your doctor has given you labels for, pains he or she hasn't been able to fix. And while very explanatory, it's only an introduction to the significant, life long benefits people have received from this treatment.

**I recommend you read** one or more of **my other articles and booklets.** They're easy to understand and give you a fuller picture of what can be done.

**They really explain** 1.) how we develop systemic shortness, 2.) how that significantly limits our performance, and 3.) how you can

have a much better performing body that feels a lot better and looks a lot nicer, too.

**Chronic structural pain due to tightness is an indication that the soft connective tissue system all over the body is significantly bunched up, or shortened, and the pain is felt where the most amount of excessive pull or misalignment becomes focused.**

**The cause of this systemic bunching up is that the person has been using his or her body in an increasingly inefficient way. That is, as the shortness has accumulated more and more, the way the person's body functions overall has become less and less effective, and less and less efficient.** The person can't do the things he or she used to be able to do because his or her body structure has gone further and further away from its biologically designed shape. It has been operating below its potential, even before any pain has been felt or damage has occurred. And this inefficient muscle and joint behavior has usually gone on for some time before things became so short or misaligned that pain occurred.

**To jump ahead in my explanation for a moment, the lengths of the bones and "muscle fiber" part of the muscles always seem to be right for each other, to provide the person with maximum flexibility without pain. Even the nerve operation is OK,** (except for when the shortness causes them to get pinched in between some bones). **It is the shortened "soft connective tissue" element of our muscles that creates the problem**. This improper shortness is what "distorts" the relationship between the lengths of the muscles and the lengths of the bones; it makes the muscle parts shorter than they're supposed to be. **This shortness and distortion decreases the person's performance level in many areas of life, not just the physical.** And the limitations are usually in direct proportion to how short the ***system*** has become.

Since we use our muscles to express ourselves, emotional and enthusiastic mental expression is limited. The muscles don't go as far, and they don't move together as well. The behavior can even become somewhat negative; some people are overly tense and outwardly aggressive, others are withdrawn and held back. The body's biological energy flow is also decreased, the metabolic blood and lymphatic flow goes through compressed vessels, and even one's mental awareness and the ability to receive and process a lot of information gets reduced.

**Systemic shortness, and compression, in the soft connective tissue reduces and limits our ability to function on**

**all levels, in the physical, professional and interpersonal world.** This has been proven thousands of times over the past four decades by both personal and observational experience, and clinically measuring. Significant improvements occur when a lot of the shortness and compression are removed.

Let's look at it another way as well. In light of what I said about more and more tightening up, **chronic structural pain is therefore an indication that the particular part of the person's body has not been properly addressed**. Repeated usage of the body in a particular way, without sufficient regard for erasing the accumulation of shortness, usually results in problems: First there's greater and greater inefficiency, often felt as tightness. Then there's the pain and/or injury. And then the person may add even more tightness to accomplish his or her efforts, even "through" the pain.

Don't you think this is a shame? Not only does my heart go out to the elderly people who push themselves this way because they know of no other choice, but as a trained electrical engineer, I think it's an inefficient waste when an athlete has to stop competing or a professional's high quality work suffers. In all three of these kinds of conditions, **I have used the understanding explained in this booklet to rapidly restore** the **people to a much happier state: no pain, and a lot more flexibility, relaxation and "aliveness."**

**I wrote this booklet to point out this *systemic* condition. And I've described how it causes the pains many of us get, including ones that many health professionals think are incurable. Then I explain how they *are* curable**, how they can be greatly diminished and even fixed, relatively quickly and easily, and for a reasonable cost.

Perhaps you, or people you know, have sought help from medical doctors. In that case, the doctor may have focused on nerve problems, or pinched nerve conditions, or said you have inflammation. You may have been told you have arthritis, or fibromyalgia. But if many of these suspected problems have not shown up on tests, the patient is often at a loss about what to do. And even when they do show up on the tests, the suggested treatments might range from intrusive surgery, that may not fix the problem, to anti-inflammatories and rest, that also may not cure the problem.

**We should understand that a medical doctor's training does not include the specialized field of detecting and correcting the shortness in the soft connective tissue system.** While doctors do know that soft connective tissue exists, and even that it can tear, the established western medical model does not address

the body's soft connective tissue ***system*** **as the structural component that it is**. So it cannot fix the problems ***caused*** by ***its systemic*** shortness.

**X-rays and MRI's do not directly show that the soft connective tissue system is bunched up, that is, it's shortened from how long it is designed to be.** They ***will*** show where a nerve's being pinched between two vertebrae, and that's a ***result*** of shortened soft connective tissue. But the doctors who administer and read the tests don't look for a lowered level of performance in either a person's structural ability or metabolic functioning caused by this kind of shortness alone. Yet when I treated Olympic team athletes, they all noticed significant improvements in both areas; **performance** and recovery time went up at the same time that the pains and tightness diminished and then went away.

**Correcting shortened soft connective tissue *systemically* is a specialized field.** Fewer than 15,000 people have been trained to do this work, worldwide, in over 30 years. Yet there are over 15,000 massage therapists in the state of Florida alone, and almost 100,000 medical doctors in California.

**Further, most other, "alternative" health professionals do not address this problem of systemically short soft connective tissue.** Chiropractors, acupuncturists, foot reflexologists, and most massage and physical therapists are not formally trained to detect and correct ***systemically*** short soft connective tissue. And most are also unaware that many of the problems they are locally concerned with are being caused, at least in part, by that systemic shortness, often coming from ***other*** tight muscles in the body.

Many of these practitioners will, indeed, release some chronic tightness due to muscle tension, misaligned vertebrae, pinched nerves and physiological problems of the organs. But if your pain and lowered level of performance is indeed also caused by shortness in the soft connective tissue system, and this is not corrected, then even their best treatments cannot fully clear your condition.

I**n a lot of cases, the systemic shortness also doesn't even allow their work to have much effect.** Muscles are held short, and tight, by this component, not by the nerves and muscle fibers. And hot packs, massage and exercise cannot lengthen them fully for many people. Yet, by performing the specialized manipulations to spread the soft connective tissue back out toward its full length, the muscles, and joints all get a lot better. In fact, I have consistently found for almost 20 years, that people's bodies respond much better to **almost all** other forms of treatment **after** the shape and length of their soft connective tissue ***system*** has been improved.

**A number of medical doctors, chiropractors and massage therapists have been clients of mine.** They came in suffering from some kind of chronic pain or lowered level of performance caused by this systemic kind of shortness. **In all the cases I remember, when the treatment re-lengthened and better organized their soft connective tissue systems, their structures worked, felt and looked better.** It usually took away their pain and always improved their physical and mental performance, in their jobs, and in their personal and athletic lives as well.

# FIXING ACCUMULATED SHORTNESS -PART 2 -what you're made of

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***Section 2: Overview.*** **Now for a closer look at your "soft" connective tissue system. This is what your body's made of. And once you know this, you'll easily understand why some of its qualities cause somethings to go "wrong." And that (reversible) condition in the soft connective tissue causes you structural pain and tightness, even when your muscles and nerves seem to be operating OK. This section, and those after it, will give you some down to earth facts that will help you actually fix your problems. Terms like arthritis, fibromyalgia, protruding disks and pinched nerves are only labels for the end result of a body condition. And even though some medical doctors may say they have no cure, nor do they know why it happens, there are reasons. Trained Body professionals have been fixing these reasons for decades.**

All of my explanations so far sound nice, you may say. Most everyone wants his or her pains to go away. But how does the treatment actually work. And for that matter, what ***is*** soft connective tissue, and how does it get short. Well, I'm glad you asked. **Bear with me now as we journey inside our muscles so we can see what they're made of, how they get short and cause us problems, and then how we can fix those problems.**

**If you looked at a muscle under a microscope you'd see it was made up of many long thin muscle fibers, like rods, and each fiber was made up of many little sections, or segments**, that looked, generally speaking, like little soda cans placed end to end. If you could see inside each segment of the rod, you'd notice tiny little protein fibers of two different kinds, and a tiny nerve fibril connecting to its outer shell.

**If you could detect what happens when the person wanted to move that muscle, you'd see that when the nerve signals to many muscle fiber segments activated, the muscle fibers contracted.** And the two different kinds of protein fibers "magnetically" got pulled toward each other, like opposite ends of a magnet. And that made the muscle fiber segments, and, of course, the whole muscle fiber rod, get shorter. It's like a lot of little accordions all folding up at the same time.

**When the person wants to relax the muscles, the nerve signals stop**. And then the segments' little protein fibers get "magnetically" pushed ***away*** from each other, like the same ends of a magnet. So the segments go back to the same length they were before. It's like electronic door locks. Clack, it's locked. Clack, it opens again.

And basically, that's how we move our muscles, "neuro-muscularly." The little segments contract and lengthen according to how we want to move our muscles. And what tells them to move are the signals we send down from the brain.

**The purpose of this booklet is to demystify pains and tightness, so *you* can have greater control over your life and how you feel.** Now that you understand how muscles move, I'll explain how they get stuck in tightness and pain, even when the doctor says your nerve signals are working OK, and there's no muscle damage.

**When we look into the muscle, we see that all the muscle fibers are arranged in bundles,** maybe 50 to 100 of them in a group. And within each bundle, the fibers aren't exactly touching each other. **They're surrounded by** a fluid with lots of other, very tiny protein fibers in it, called collagen and elastin. **Collagen and elastin fibers form a web that holds the much bigger and longer muscle fiber rods in a shape.** And that web can stretch when the muscles move, and then come back to the same shape when the movement stops.

Also inside this fluid are the blood and lymph capillaries that bring your muscle fibers the food and oxygen they need. And through this fluid, they also remove the waste products the fibers generate when they do their thing, when you move around. This fluid also contains fat cells and immune cells. And, of course, it's called soft connective tissue, or, more technically, fascia (fah-sha).

What wraps up the whole bundle, on its outside, is a wrapping of this same soft connective tissue. It looks something like a cornhusk. It's an envelope, or a sack. Then, wrapping everything up,

is a bigger, thicker sack. It goes around the whole muscle. Now it ***looks*** like a muscle, instead of a pile of loose muscle fibers and capillaries.

What enables this blob of muscle fibers and soft connective tissue to operate your bones and joints is pretty obvious when you see it. At the ends of the lengths of the muscle fibers themselves, this ***soft*** connective tissue all comes together as tougher, thinner lengths of ***hard*** connective tissue, which we call tendons. Tendons, of course, attach the muscle body to the nearby bones.

When the whole muscle contracts, it does so by shortening all the muscle fibers. And that pulls the fascia and tendons too, and the whole network between the bones gets shorter. It pulls the bones toward each other and that's how you and I bend an elbow or flex an ankle, or even bend over and then stand up again.

**Basically speaking, what we feel as tightness is a shortness in the soft connective tissue that doesn't re-lengthen when the nerve signals stop.** And we feel pain when it's ***so*** short that the nerve sensors in the muscles get "tripped." ***This*** shortness is caused by the "bunching up" of the soft connective tissue element, not by anything wrong with the muscle fiber or nerve elements. The soft connective tissue gets condensed, like silly putty.

**What makes re-lengthening it a trained skill, is that it gets short all over the body. And we need a special hands-on technique to move it combined with special knowledge about what we call "inter-connectedness," so that the muscle "system" will release.**

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**Now. doctors and other kinds of health professionals usually approach soft connective tissue from a different point of view than the unique Bodyworkers who correct this *systemic* tightness. It isn't that they ignore the stuff; it's just that they aren't trained about how it bunches up and how to relengthen it. That's the simple difference.**

Basic anatomy classes for everyone describe it the same way. Soft connective tissue, called fascia (fah-sha) is used by nature as the wrappings in each muscle, to hold it all together, and in a bigger wrapping over our whole bodies, to hold everything together, just as I described. And fascia also contains what is called interstitial (inter-sti-shal) fluid, which is the basic fluid that's in the bloodstream, only it's also between the capillaries and the muscle fibers. This fluid is the metabolic avenue, or boulevard, for food and oxygen to get into the cells, for waste to get disposed of out of the cells, and for many

immune system activities to dispose of germs and other toxic materials.

**So here we have a substance that holds everything together structurally and is also involved at the very cellular level of our nutrition and waste removal,** a process sometimes call ***cell*** respiration. Our cells breathe. They breathe in the oxygen and foods we take in with our lungs and stomach, and they release what our elimination organs, skin and lungs can take out. From our point of view right now, you should know that how well your cells breathe depends a lot on the "quality" of your fascia.

When you have a lot of waste stuck in the interstitial fluid, you can have an achy feeling or actual pain, either after you ran a 10K Race, after you've been eating junk food for a few days, or at the site of a chronic injury. As soon as you squish out the old fluid with all that junk in it, with a massage, or with intensive yoga, your body stops aching, your headache may go away and you'll probably have more energy and feel better emotionally. You'll also have a few nice long urinations, as the stuff flushes out of your body. This is, in fact, one part of the treatment that is recommended to remove chronic pains.

Experts in the structural field have also found that when the soft connective tissue, or fascia, gets compressed or bunched up, the fluid isn't as good a conduit for nutrients and waste removal. It gets hard and compressed. It's not as big nor as “flowing” a pathway. These experts also found that a properly lengthened soft connective tissue system keeps the muscles in a good "tone," not too tight and not too loose. That un-hardens the tissue itself and removes the compression on the fluid channels. This automatically keeps a healthy blood and lymph flow going through the tissues. And there will be less pain on a regular basis. So, when the structure is properly organized, it makes the metabolism work better, too.

**I have had a number of Olympic and other serious athletes tell me that their recovery time from strenuous effort was much shorter and much more comfortable than before, even without getting a recovery massage.** A 50-year-old chiropractor told me he was no longer wiped out from his squash and handball workouts. See, more goodies go in and more baddies go out, even during the workouts.

# FIXING ACCUMULATED SHORTNESS -PART 3 - what creates shortness

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**This fact about how a better functioning structure improves metabolism is not very well known.** I have been to **many fine alternative health professionals** during the past 30 years. They know that softer and more pliable muscles are better than harder ones. But many of them **don't know that the systemic form of *the fascial system* influences how the muscles will be, health wise, all over the body. And they don't know that fascia can be manipulated, to get longer**. Structural Integration Bodyworkers are these specialists who can both ***remove*** chronic tightness all over the body to begin with, and also ***create*** an ongoing muscle tone that continues to be less tight day after day.

**Standard massage therapy that people learn in schools does not teach this systemic re-lengthening either.** My massage therapist friends say they got a few hours of orientation about this, and about other additional methods. And many of them have learned additional techniques in depth. But **the methods that thousands and thousands of massage therapists are originally trained and certified in, are not *designed* to re-lengthen large amounts of soft connective tissue in a *systemically* oriented, *inter-connected* way.**

**That's because massage is designed to do something else.** It primarily addresses this structural-metabolic relationship from the "other" direction, by improving the metabolic condition. It pushes waste products out of the fluid and back into the bloodstream so that the muscle can relax. This is a healthy thing to have done regularly. As I said just above, the removal of waste products in the interstitial fluid often removes the pain created from intense physical exercise, or just a lot of daily work. And when the interstitial areas and blood vessels are "cleared," new blood can flow in with its nutrients, and the tissues can heal from injury.

**(The Structural Integration treatment to spread and lengthen the fascia will also create some of the benefits of a**

**deep, very thorough massage. It removes built up waste products in the tissues, including areas deep down where regular massage rarely reaches. And the spreading manipulations open bigger, cleaner channels. So the next time we get a massage, *it* will do a lot more.)**

**Medical doctors seem to relate to soft connective tissue as a metabolic medium and as wrappings, too.** Orthopedic surgeons not only do surgery through the muscles but often have massage therapists on their staff.

**But what both the surgeon and most massage practitioners *miss* about the soft connective tissue is the *shape* part**. They know that a massage makes people feel better, even somewhat looser, and performance is increased. But their approach does not fix the chronic pain for good in many cases. They're predominantly looking at loosening from the point of view of the nerve signals and muscle fibers. But increased relaxation and fluid flow through the muscle does **not** change the shape of the soft connective tissue very much at all. So many problems due to shortness don't go away.

That's why **it takes a special treatment**. For almost 40 years, people in the Structural Integration field have seen that **the improvement in the connective tissue shape by the *systemic* manipulations, adds a *tremendous* increase in length. And that *greatly* increases levels of performance that last for many weeks, months and even years.** The shortness in most people's bodies has built up for decades. Once it's removed in hours, it'll then usually take months and years to get that bad again. And because the system is organized better, it won't tighten up as much, anywhere near as quickly. Plus, deep massage and stretching can now re-lengthen it quite a lot.

**Without changing the systemic shape of a person's body, many pains and tightnesses that *were* relieved with the massage reappear a few hours to a couple of days after.** This is not the fault of the massage practitioner. Massage does indeed improve people's performance by creating ***some*** amount of systemic relaxation in the whole muscle system. The nerve signals that were telling them to contract are turned off and it gets the wastes out of the body.

But that **relaxation is often short lived because the *even greater* shortness of the fascial system pulls muscles all over the body tight again. Even vertebrae and other bones get pulled out of alignment. So we have many of the same**

**problems that were there before the massage.** Conditions such as bulging disks, pinched nerves and carpal tunnel syndrome are just symptoms of a shape that has a lot of shortness in it. We even say the body structure is anatomically "disorganized." (Yes, “poor baby,” as they say.)

(Most massage therapists like to learn new skills. One of my career goals is to train many massage therapists how to do the systemic lengthening, so they can incorporate at least some of it in their treatments. If you’re a massage therapist, or train or employ massage therapists, and you’re interested in adding this technique, I’d be more than happy to set something up with you.)

**Now, the sixty-four dollar question. How does the soft connective tissue system get bunched up?** As I described, the two kinds of material in the muscle are the muscle fibers and, in between all of them, the soft, fluidy, fibrous fascia. The fascia is a putty-like gelatinous substance.

**When we put a lot of muscular movement into running, skating, jumping, weight training, gardening, fixing cars, building houses and the like, our muscle fibers contract with a lot of force.** The intense muscle effort of leg motion, hand gripping and even pounding of the legs **pushes the collagen and elastin fibers closer and closer together. Both the fluidy fascia in between the muscle fiber rods and the wrappings around lots of the fibers all get short each time we do the intense muscle action. So, obviously, the fascia keeps getting pushed into a shorter and shorter shape.**

**Besides this shortness in our shapes, the fascial “bunch-up” in and around every muscle limits the muscles’ abilities as well.** The muscle fibers that are surrounded by these now shortened cornhusks are unable to re-lengthen because the husks aren’t as big anymore. So, each of the muscles has to stay partially contracted, even if the nerve signals to the muscle fibers have been turned off and we mentally ***want*** to relax. Besides feeling tight, we also can’t do as much because there’s less muscle operation available. In some people, it gets to be **a lot** less muscle operation.

**Tense emotional feelings over time will also bunch the fibers into a shorter form.** And when we fall, the outside force pushes our shape into some compressed, twisted and tilted position, which stays that way even after the pain of the bruise goes away. Even repetitive activity bunches up the fascia. Holding schoolbooks in one arm, a baby in the other, leaning over a desk for hours each week, and so forth, will do it.

**Fascial bunch-up, and relengthening, is "passive." It doesn't change shape with nerve activity the way muscle fibers do. So we can't wish it longer nor do emotional release work on it,** because here, too, it doesn't have the connections to our brains the way the neuro-muscular fiber system does. And the energy healing techniques of everybody ***I*** know, aren't powerful enough to push the collagen fibers into another position. **Muscle forces and blows to the body make it shorter, twisted, tilted, and compressed. The proper spreading or stretching techniques, which are also muscle forces, can make it longer and less compressed again.**

Therefore, the dynamic muscle fiber action that's connected to our nerves has no choice but to operate in the shorter, and somewhat twisted and compressed connective tissue form. While our nerves and muscles can still move us around, often quite a bit if you're a strong athlete, the body shape they **are** moving around in isn't as long, nor as aligned as it's supposed to be. And, as I say, that's why our performance decreases and people get pain even though the medical doctor or chiropractor explains that the neuro-muscular activity is working fine. ***That*** part is.

**The length of the soft connective tissue is *the* determining factor in how the body is shaped!** In fact, we call the fascia the "Organ of Structure." The muscle fibers move us around from activity to activity all the time. But i**t's the length and shape of the putty like fascial element, that actually holds the bones and muscles into their "at rest" shape.**

**This is why many chiropractic treatments do not correct ongoing back problems. The chiropractor pushes the bones back to where they should be. But when the person gets up and moves around for a day or two, the short fascia in the legs, pelvis and abdomen secretly pulls those bones and vertebrae back to the body shape that was there before the adjustment.** And this shortness in the legs, abdomen and pelvis almost never hurts. So you often won't know it's part of the problem unless some Structural Integrator shows you what the shortness is doing.

Chiropractic manipulations make me feel great. But they won't stay unless my whole body fascial network is long enough. All my muscles have to be the right length to balance the length of my bones and the curvature of my spine. My muscle fibers are indeed the right length; my genes have seen to that. But my activities over the years have bunched up my fluidy fascia, and that makes the muscle partly folded up, like a half-opened spyglass. Only when I get the right manipulations and do adequate stretching to pull the fascia back to its full length, do I get this balance. And when that happens, the

chiropractor gets all my vertebrae to go in, without pain, and they stay much longer, (until my neuro-muscular activities pull them out temporarily).

**So please note that if you have a shortened and misaligned body structure, the positions of your bones and joints are improper for who you are biologically designed to be**, whether you're a fit athlete with back problems or a couch potato with chronic shoulder tension. And these misaligned bone positions can cause pinched nerves, bulging disks, bone spurs, and repetitively tight muscles.

A lot of people try acupuncture to fix tightness because acupuncturists advertise that they can do it. Now, I also love to get acupuncture. Acupuncture is a part of Traditional Chinese Medicine, a system many hundreds of years old. Flowing up and down our bodies are many energy flows that relate to the functioning of our internal organs. When we're ill, these flows are not operating properly and the TCM doctor can prescribe herbs and place tiny needles at particular junctions in these flows that will work to correct the body's imbalance and weakness.

When a TCM doctor tries to correct structural tightness, she or he will put needles into the bellies of muscles and into their tendons. This will help release the physical tightness caused by nerve and muscular activity, and it will also release tension in the muscles along an organ energy flow. That is, when the organs are stressed, the energy flow that goes through the flesh of the body's arms, legs, head and torso, is either weak or excessive. And that will definitely make some muscles tight and some weak. It can also cause pain in particular spots, right on certain acupuncture points.

But **acupuncture does not spread fascia.** So any muscular or energy release will allow the muscle fibers to release only as far as the bunched-up fascia sacks will allow. This is why many people who have tried acupuncture for chronic pains have not gotten a fix. After the fascial envelopes have been lengthened, then acupuncture to correct internal organ problems can also make further improvements to the person's structural muscles.

# FIXING ACCUMULATED SHORTNESS -PART 4 - how to re-lengthen

**by Lou Gross, School Certified Master Postural Integrator, 20 years successful experience**
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***Section 3. Overview.*** **How to relengthen the accumulated shortness to make the pains go away and also make the body more flexible and deeply relaxed. We just use the right hands-on technique coupled with the knowledge of how to unravel a body's inter-connected shortness.**

As I've been inferring, we **can spread back out the systemic shortness** that's been accumulating, actually since we were children. The right hands-on manipulations **can relengthen** and decompress it. As long as the metabolism and brain function are working normally so that the fascia will spread, the technique works.

**The fascia is a " plastic" medium. It's a fluid with gelatinous fibers and a bunch of other little things floating in it. So when we press on it the right way, these fibers and other little things can be moved through the fluid.** That's a simplified way of understanding it. It can be spread back out just like it got bunched up. And the muscle fibers and blood vessels will go along for the ride.

**The relengthening also takes a lot less time than it took to bunch up**. As I said, years of accumulated shortness can be re-lengthened in a matter of hours. Let me explain how we do the two kinds of necessary things.

**First, we learn a hands-on technique to grab and spread it.** And there are a few of them. Some techniques can be pleasurable and deeply relaxing. Even if it's more intense, where there's a lot of hardness, it can be made to feel like a relief instead of a pain. It also helps a lot to learn a ***stretching*** technique that can spread the fascia. But it can't be just a joint loosening or warming up kind of stretch, because it has to be able to pull the collagen fibers through the fluid so the muscles get into a longer shape. We should then feel like we're standing up straighter with less effort, and the arms, legs and even the neck are considerably looser and longer. We should also feel

lighter. I teach this. It's fun, and it feels great! The method can be applied to both yoga and other kinds of stretching programs.

**Second, and this is not taught in massage schools nor in physical therapy classes, we have to do the manipulations in a particular muscle order.** The body is actually an interconnected system of muscles and bones that unravels its tightnesses best when we do part a first, before part b, and before parts c, d and e. This procedure, and how to tailor it to each person, is an integral part of the training and experience of Structural Integration practitioners.

**Loosening tightness in accord with this interlocking allows us to clear the *system* of its shortness.** And all the different muscles are parts of this system. So we need to know which muscles affect which other ones. And it's pretty logical when it's pointed out.

**If, however, we just try to loosen the neck, shoulders or lower back, without first lengthening the chest, abdomen, legs, pelvis, and head, we fight a battle against muscles that st**ay tight and don't let go, even with very hard massage strokes.

Massage therapists are trained to "massage" specific local tissues, and also to do an overall body massage. The purpose, as I said, is to try to heal tissue, and loosen things up, but not to make everything much, much longer by working the inter-connections. So massage therapists will naturally try to loosen local tight muscles by applying their massage strokes on those muscles. Sometimes, they will dig deep and hard in an attempt to force a muscle to let go.

In general, I love to get massages. But in my experience, this deep, localized forcing does not work for most difficult chronic pains and tightnesses, and it can cause the client unnecessary irritation. I have proven time and again that the muscle is holding tight because it is either being held tight by other muscles' short fascia, or it is holding tight to balance other shortnesses. It is a c or d in the order of unraveling. Once I've lengthened the a and b muscles, the c and d muscles spread much easier, and the person's form **stays** looser.

**It initially requires specialized training to understand the concept and principles of interconnected structure. But when you actually *do* the loosening *that* way, it makes so much sense, even to people who don't know that much about anatomy.** And the results are ***so*** much quicker and more effective. Some of my clients called it magic**,** and one world record holder athlete called me a miracle worker. But, it's just "school taught architecture."

Yet I do have thousands of hours experience that have taught me a lot. So let me share some tips with, say, massage therapists, yoga teachers and anyone who likes to stretch.

**I repeatedly find that bunched up arms, *including* the ones that don't hurt, *always* figure in shoulder and neck tightness.** And if the shoulders are already loosened, arm loosening directly loosens the muscles between the shoulder blades. When I finish my procedure, my clients also feel these things in their own bodies. If I've also lengthened the back, they can even feel the effects of the arm loosening in their abdomens and lower backs.

Everybody gets bunched up in the muscles of the head and face. When I get to the cheeks and around the eyes, energy starts flowing again in more of the acupuncture meridian flows, and people feel energy going to their feet.

**Chronic, *very* tight necks are caused by shortness in many areas of the body.** Overall, a full and deep Structural Integration is really the most effective and long lasting thing to do. For most people, the legs are usually bunched up, as are the chest and abdomen. But the jaw and head muscles also figure in. Every muscle there eventually connects to the neck vertebrae.

**Lower back problems always include shortness in the thigh, pelvis and abdominal muscles.** I restored an athlete to practice with just one hour of intelligent re-lengthening in these areas. He'd been in pain and couldn't train for a week. Even pains halfway up the back ***always*** stem from shortness in the front of the torso and legs. The person has to pull the back tight to stand up against the pull of gravity. Make the front longer with proper inter-connected lengthening and the back does not have to tense to compensate.

**If we know how the body is supposed to look, and know where the shortnesses are that are causing the pain elsewhere, we can simply spread the fascia to make all the parts longer and more aligned with each other. If we spread fascia *systemically*, and spread deeply enough through all parts of the body, we can correct many kinds of chronic pains that other methods cannot fix.** And we can do it repeatedly because we know what needs to be done, and we can both feel, and see, how we're doing as we go along at each stage of the process.

**If you'd like to know more about exactly what happens with interconnections, you can read parts of my book on fixing back pain and/or parts of the book on how to make your body work better and do more for you.** As I mentioned much earlier, there is also an informative, shorter booklet, describing "The Physical Benefits of Structural Integration Bodywork."

# FIXING ACCUMULATED SHORTNESS -PART 5 - shortness created pains #1

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***Section 4. Overview.*** **Now that you know about shortness and how we relengthen it, we can take some time to cover specifics. Here is an explanation of different kinds of structural pains and injuries, and how they are caused by soft connective tissue shortness. These are the well known problems that doctors give labels to, and offer surgery, pain killers, anti-inflammatories, and physical therapy to heal. While these treatments may help repair already damaged tissue, they probably won't correct the systemic shortness. Often, simply relengthening this shortness in enough areas will take away the pain and tension, and correct a pinched nerve condition. Relengthening will also help injured tissue to heal by removing the strain that caused the injury in the first place.**

**The first kind of pain, I call just plain tightness. The muscle is so tight that waste products can't get out fast enough.** The excessive bunch up has made the avenues for waste elimination too narrow, and they're also too narrow to bring in the full amount of fresh clean blood. Probably, the tightness is also generating lots more waste products than a muscle would when it's able to relax. Lots of us get these kinds of pains. Maybe we call them soreness.

**Massage can help**. **So can even a local application of deep connective tissue lengthening.** This will make the muscle longer for a while and simultaneously clean out lots of old waste that's causing pain. After the connective tissue improvement, regular deep massages can do more to clean out the recent accumulations because they can go deeper into the muscles and all the avenues are a little wider.

You can do massage on the sore part fairly often. But you have to be knowledgeable about this kind of localized "connective tissue lengthening." You want to make sure the pain doesn't keep repeating, or even get worse. Lots of people have wanted me to treat only the parts that are sore. But that doesn't fix their overall condition that keeps putting these muscles in tightness. Repeated softening of just the sore area can actually make the pains worse the next time they occur.

If the pain is in the mid to upper back, and the neck and shoulders, chances are that a side view will show the overall misalignment. The person's back will be leaning backwards from the waste, while the legs, are leaning forward. And the head is jutting forward.. (Try looking in a mirror, standing sideways.)

What we point out in Structural Integration is that the thighs are also pretty tight and the chest and abdomen are probably shortened up, too. So ***these*** parts, on the ***front*** of the body are pulling the head, neck and shoulders down, toward the front of the feet. In order to stand up straight again, the person's body has to keep tightening the back, shoulders and neck. These muscles pull the front of the body back up, but they have to tighten up to do it. Then the soft connective tissue grows into that shape and it's there all the time. This is an extremely common condition. Tens of millions of people have it.

Routine connective tissue lengthening where it hurts can help, for a while. But when the tissue there gets really soft and the rest of the body remains short and hard, you could get more pain, and more often. The big bad guys keep pulling. But the good guys just keep getting softer and easier to pull on.

What I try to do is give some relief, and then educate the client. I want him or her to think "systemically," and let me do more and more of the whole body realignment in each "fix-up" session. And I'll also explain how to actually lengthen those front muscles with a ***special*** kind of stretching. **That** will improve the back, shoulders and neck condition on a long-term basis. And the person won't be retightening those areas every day.

**The second kind of pain happens when the tightness has gotten so short that the muscle's little pain nerve sensors get tripped.** You can think of these as little micro-switches that get turned on when the muscle is so short in one place that it's pulling too tightly in another. To be more accurate though, this usually happens when a whole area of the body is too bunched up. **Lots** of muscles are too tight.

I treated a college baseball catcher. He'd been coming for physical therapy for a week because the triceps muscle in his upper throwing arm was hurting. The daily physical therapy of heat, cold and electrical stimulation was aimed at healing what was thought to be damaged muscle tissue.

At first, I just wanted to give him a quick back loosening, as a treat of sorts. But I found his long back muscles were so hard and tight that they wouldn't lengthen nor loosen. I realized his whole upper body was very tight. We did a 90-minute treatment, including the arms. I started in the proper sequence, lengthening a and b, the chest and abdomen, then c and d, the sides and arms, and some e and f, the neck and head. By this time, his arm pain had disappeared. **Then**, I did g and h, his back and shoulders. And they gave way as easily as warm butter. A week later, he was still receiving electrical stimulation for tissue healing reasons. But he was **also still pain free** in his arm.

**A third kind of pain occurs in a tendon.** You know, a tendon is the harder, thinner extension of the fascia that connects the muscle body to the bones. When the muscle body fascia has gotten very bunched up, it also gets hard, and it's also probably stuck to the nearby muscles. Further, it's almost always held tight by other tight muscles in its interconnected network.

Now, your body, when it's healthy, expects the muscle fascia and muscle fibers to stretch when you make strong movements, or even not-so-strong, repetitive movements. And your muscle and tendon length was designed by your genes to be the right length. When it's not bunched up, it ***is*** the right length to balance the length of your bones and move you around without pain.

But here's the problem. A really bunched up muscle body shortens this piece, or length of tendon to muscle/fascia to tendon. So this somewhat elastic tissue between your two bones is shorter than it's supposed to be, by a large amount. When you move, the muscle body is supposed to lengthen. But the muscle body can't do it because it's too hard. So the tendons are forced to try. Imagine. Your muscles have gotten harder and tighter than your tendons. But the tendons aren't designed to stretch that much. So their little coil nerve sensors trip their micro-switches and tell your brain that they hurt. Actually, that's a good wake-up call, so you'll do something to loosen them. Because if you pull on the tendon much more, it'll tear, and you'll have a body part that hurts a lot more and doesn't work so well anymore.

This is what **tennis elbow** is all about. When you grasp the racquet firmly, with your arm outstretched, you're tightening all the

muscles of the arm and, little by little the fascia in the bellies of all those muscles gets shorter and shorter and shorter. And the arm muscles, shoulder muscles, chest muscles and back muscles all get hard. Eventually, the point of greatest stress begins to hurt, which is the tendon connected to your triceps muscle on the outside of the upper arm, where it goes to cross the elbow. Often times, the muscle itself hurts, too.

Standard physical therapy will apply cold, rest and so forth to try to heal that tendon tissue. But what is **also** needed is a relengthening of the fascia in the entire arm, hand, shoulder and upper torso network.

**Carpal Tunnel syndrome** is similar. Improving the ergonomics of the typist's position is now a common preventive measure. But once the pain hits and the tendons are irritated in their sheaths in the wrist, there's already been critical bunch-up and some tendon inflammation. The muscles that operate the fingers for typing are located in the forearms but they also interconnect to muscles throughout the torso. And a lot of times, the back is rolled forward because the chest and abdomen have gotten bunched up in the typing position. This pulls an upper back vertebra out of alignment, which, in turn, creates more arm muscle tightness, even when you're not typing. Trying to put the vertebrae back in at the chiropractor's is a good idea. Relengthening the fascia in the muscles that pulled it out of alignment in the first place will help it go in and stay in.

Yet, even when the arms are really well re-lengthened and the person has much better flexibility in the hands, wrists and arms, there's a lot of pain still left. Inflammation has occurred and perhaps some tissue damage.

The usual medical treatment for inflammation is often Tylenol or Advil and a brace on the wrist and forearm. But it often works better if we eat lots of tissue healing food. We need 5-10 times the amount of nutrients to heal as we do to simply maintain. Here the person needs a lot of minerals, B and C vitamins, and loads of anti-oxidants. Protein for rebuilding tissue helps, too. And topical herbal medicine treatment can help heal the inflammation and re-nourish the tissues at the same time. I, myself, healed an eight-month-old wrist sprain, once and for all, with loads of sea vegetables and two quarts of dark green leafy vegetable juice daily, for three weeks. This provided me with enormous amounts of calcium, magnesium, manganese (for joints) and dozens of other "synergistic" trace minerals, plus lots of vitamins and the fantastic healing agent and anti-inflammatory, chlorophyll.

**A tendon can tear when things get too tight**. This commonly occurs for football and track runners, and even for

basketball players. A very forceful stride pulls tremendously on a very shortened and hardened muscle on the back of the thighs, in the hamstring area. And it tears. While it takes some time for the tissue to heal, it can be helped to heal faster by lengthening the entire leg and pelvic structure very deeply and very thoroughly. Athletes have told me that it felt good and gave them a faster and more pleasurable recovery time from races. After there's been tissue healing, deep lengthening can be done right over the injured area. Athletes said that felt good, too, and they could feel these special manipulations were breaking up the old scar tissue.

When the whole network of muscles on the back of the legs gets tight, it'll pull on all the tendons. And the big Achilles tendon at the back of the ankle can tear. It can occur in even the best track and field runners and jumpers. The muscles on the back of the calves connect to the heal bones in the foot via this tendon. When the calf muscles get too short, the tendon can tear. But very importantly, I also want to point out that the calf muscles are interconnected with the big hamstring muscles on the backs of the thighs. And these get pretty tight themselves.

**Achilles tendon problems occur because the fascia in all the leg muscles, gets short, including the adductors on the front inside of the legs. And it *especially* occurs because the entire back of the legs has gotten very tight and hard. The hamstrings are a major player here.** Keep these and the other leg muscles lengthened with connective tissue spreading, and athletes can prevent injuries to these tendons, and other leg muscles and tendons as well

# FIXING ACCUMULATED SHORTNESS - PART 6 - shortness created pains #2

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**The fourth kind of structural problem occurs in the ligaments and other joint tissues**. Ligaments are tough pieces of connective tissue that connect bone to bone. They define the way the bones will move in that joint, like what your elbow or hip joint will do. When we get bunch up in the muscle bodies, the tendons that go across the joint will pull tightly on the other bones and the joint goes out of alignment. That puts stress on the ligaments. But to be honest, ligaments usually tear only when there's an accident that forcibly pulls the joint apart, like in a skiing accident or a football injury.

**Stress fractures are also caused by too much tension on supposedly tougher tissue**. **in this case, the bones. Stress fractures occur because the bunched up muscles are pulling on the bones at angles that the bones weren't supposed to handle.** Here, too, the shortness is causing the tendons to pull across the joints at a misaligned angle. And a crack can occur in the bone because of these forces. With some more running, and tightening, the **bone** "tears" instead of the muscle. Imagine that. The muscle became harder than the bone. And the bone got pulled apart because forces were applied to it at angles that weren't part of our design.

**Arthritis is also a bone and joint injury. Osteo-arthritis, ie "bone" arthritis, is very often caused by very bunched up muscles whose tendons go across that joint.** Then the bones rub against each other in that joint because they're just being pulled too tight toward each other. The bones either start to disintegrate or the body adds lots of excess calcium to protect the underlying “real bone” surfaces. When you re-lengthen these muscle bodies, and the others in their interconnected network, a lot of times, the pains go away because the rubbing stops.

**Bone spurs are a little different problem**, (when they're not in an arthritic joint). I knew a man who had a bone spur on the inside (or medial) part of his heel bone. Then I saw him walk. His leg fascia had bunched up so that the leg was always turned out

somewhat, all the way up into his pelvis. When he stepped forward with that leg, his foot landed on that inside corner of the heel bone, and not in the middle of the foot as his body was designed to do. His body, in its genetically designed wisdom, laid down a bump of excess calcium to protect the "real" bone from injury. While he had pain in his foot, the actual culprit was his misalign leg position, caused by the bunched up fascia in his leg muscles.

**Out-turned legs are very common**. **The Structural Integration series includes correction of this problem** in its step by step application. You can also just work this leg and some of the torso and often fix the problem. Most probably, either this man stood at an angle day after day in his work, or he fell and twisted the leg.

**The last kind of pain I want to mention is from pinched nerves, especially between two vertebrae. These most always occur in the lower back (causing leg pain and sciatica), in the neck, or in the very upper back (causing arm pain and/or numbness).** Lower back nerve pinching is, surprisingly, sometimes the easiest to fix of the three, although it probably takes 20-30 hours of treatment to get all the muscles involved to be spread out enough and properly re-positioned (so you look like people without pain again).

Your spinal column is a series of hard, bony round-like pieces, connected together in a column by round ligament pieces in between, called disks. The bones at the bottom, near your pelvis, are biggest, and in your neck are smallest. The spongy disks will compress a little when you bend and tilt, and the bones will shift position. There are lots of muscles that connect these bones to each other so that you can bend your spine in a lot of different directions.

Now, actually, the vertebrae are more like pear shaped. They have two circular areas, not one. One area is where the disks attach to. The other is hollow. This is where the motor and sensory nerves for your "moving around muscles" come down from your brain and get distributed out to all the muscles of your body. They get distributed out through notches in this part of the vertebral column. Each vertebra interlocks with the one above it so that the bony shell protecting the column of nerves remains intact. And each interlocking place on either side of each vertebra is the space where the nerves come through the notches.

The spinal & vertebral column also is not designed to be exactly straight. It has a backward curve at the bottom, in the lower back, and another backward curve in the neck. And in the chest area, where all the ribs are, it curves slightly forward. Moderate curves are normal and proper.

The lower back vertebrae are connected to the legs by a couple of big muscles inside the abdomen called psoas (so-as). As we grow up, and as we exercise, our leg muscles and abdominal muscles bunch up. And we also tend to stand and walk with these psoas muscles tight, something that started when we were toddlers. So our pelvises tilt down in front and we have to arch our backs to hold our torsos up. This causes back muscle tightness, and the vertebral curves get too arched as well.

This condition is why people get bulging or herniated disks and pinched nerves. When their abdominal, pelvic and leg muscles get very bunched up in the fascia, their legs lean forward and they have to arch backward with the lower back. This makes that vertebral curve a lot more curved. And it also pulls the vertebrae closer together than they're supposed to be.

The combination makes the disks get very compressed between the lower back vertebrae. They can eventually get pushed out and/or start to break up. When this happens, the nerves coming out of those slots where the two vertebrae meet, get pinched, or rubbed on. And we feel that pain in the area of the body the nerves would normally tell us about. So a leg nerve would hurt or go numb in the leg, even though it's getting rubbed in the lower back.

**Now, sciatica is this pain down one leg. Usually, people have one leg more bunched up than the other. Combine this one side shortness with an excessive front to back curve,** and the accumulation of all the muscle shortness causes the nerves on one side to get rubbed as they come out of those slots where the vertebrae interconnect. The vertebrae are being pulled away from their fully opened positions by extra tight muscles, that is, extra short fascia.

**You can fix this if you can get the legs and inner abdominal muscles lengthened, and the person does really good stretching daily.** I have seen this kind of disk and nerve problem corrected. I have done it. I have even shown people how to stretch their fascia and improve their own condition. I did it for a European Champion Shot Putter.

Another man did it while partially bedridden. Before he had any of my Bodywork he was somewhat crippled with a lower back that had gotten very tight and the bones and disks had bulged out of alignment. I "jump started" him with a few hours of Bodywork that enabled him to walk around again. Then he did my lying down connective tissue stretches and the odd bulge in his lower back went away. From the hands-on Bodywork, the jamming was significantly less and the tissue was softer, even into the legs. So he **could** then stretch.

It will also help if the person drinks a few quarts of water every day to re-hydrate the disks to keep them spongy & not crumbly, and to re-hydrate the deep muscles so they don't pull so hard. And if he eats a lot of kelp sea vegetable, to get more calcium and magnesium into his muscles, the pain will be less and the muscles will become more stretchable (and maybe even more relaxed).

Regular exercise helps if a person's condition allows it. In many cases, though, once the fascia has hardened in the pelvis and very tight legs, that condition really needs to be lengthened, and softened first, and right away. **Then** stretching can be possible, and chiropractic adjustments have a chance of staying in long enough for the person to take advantage of them, and get even more release from the stretching and further Bodywork manipulations.

**Pain, numbness or weakness in the arms due to pinched nerves is caused by a similar problem.** You might find that the person has a sharp notch between vertebrae just below the bottom of the neck. There's a very sharp angular distortion of the vertebral curves. You can feel it with your fingers. It happens where the neck vertebrae curve going in one direction meets the upper back curve going in the other direction

Yet even with coordinated chiropractic, this can be difficult to fix because there is so much deep bunch up in the muscles, including those in the chest, abdomen and legs. The bony parts of the rib cage are also compressed out of shape. The ***inner*** abdominals are also very short, and they pull the vertebrae and torso into a tilted forward position, down toward the floor in front of the person. That's why there's so much tightness in the back, trying to pull all this up again. The problem is, just a counter-pulling doesn't spread the collagen fibers through the fluid of the soft connective tissue, so it would get longer.

But don't get me wrong. A determined person can improve. Lots of my specialized stretching, which ***does*** spread the tissue to make it longer, will help. Along with intelligently applied Bodywork and vertebral realignment**,** this severe condition can be lessened. And in the process, the person will become a lot looser and freer all over the body.

**So you see, all of these problems stem from bunched up fascia. The whole system, or just a part of it, is short.** Even if you have damaged tissue, removing the pulls that hurt it in the first place will allow it a much easier time to heal. This is also how I healed my wrist. Lengthening the fascia in all the muscles of my arm cut the problem down 50%.

# CONCLUSION

**If you would like more information about how shortness causes pain and how relengthening the soft connective tissue system can correct the problem, feel free to contact me for more information. 1-888-299-5973,** louisryoshin@yahoo.com

I have a number of other articles and books, plus a lot of testimonials.

**Note that Structural Integration connective tissue manipulation is also a performance enhancing system.** Not only does correcting the shortness remove tightness and pain, it also increases a person's flexibility, relaxation, strength, balance, endurance and quickness of recovery time. People also get tired less, at the end of a day, or from a workout. Their leg stride and arm reach get longer. Their movements become more precise and much easier to control. And they stand up straighter with less effort.

**My books are great!** They're **loaded** with information. I also give a lot of information in the 22 page booklet, "The Physical Benefits of Structural Integration Bodywork." And my booklet on improving performance by realigning the fascial system is very helpful for athletes and coaches.

**There are also articles and booklets on how Structural Integration helps people psychologically and in their personal growth. It really helps a large amount.** And the materials explain how.

**I hope I can help you**, your friends and loved ones, and/or your clients and patients. **Everyone seems to be able to have their physical well being increased by this marvelous "human potential" body improvement.**