

The Institute for Enhanced Performance

State of the art techniques and information that immediately and significantly improve our performance on all levels.

by Louis A. Gross BSEE

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20 years successful experience

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Hello ! My name is Lou Gross, and I'm an expert in what is called Structural Integration. If you're having tightness, pain or some other physical limitation, I'd like to talk with you. My Structural Integration has *significantly* improved many people's performance and removed their restrictions at the same time. Long lasting results usually happened very quickly and then got better.

**Lou makes my body work the way it's supposed to work!
Mike Powell, World Record Holder, Long Jump
(regular client in 1992 before gaining his 2nd Olympic Silver Medal)**

If you have pain, tension, or stiffness, you're probably experiencing what we call accumulated shortness in the soft connective tissue of your body. This is a putty-like substance that surrounds and goes through all our muscles. For everyone, this material "bunches up" little by little over the years. Eventually we notice it as greater and greater tightness or more and more pain that now doesn't go away, even with stretching. **This *side effect* of our physical activity is not a muscle or nerve injury, so massage, guided relaxation and even muscle relaxants don't take it away. And it *never* shows up on x-rays, MRI's nor most other medical or chiropractic tests!**

So maybe Structural Integration, that properly re-lengthens this tissue, could help you.

If you're interested, allow me to give you a free body analysis, to describe what I see in your structure that's causing you problems, and give you a free mini session and some stretching tips. I can do analysis by phone and from photos as well as in person.

I'll also explain how our body structures are put together, and what goes wrong for all of us, information that you've probably never heard before. By using this information, you can probably improve your condition and level of performance, right away, as many other people have.

PART 1

**HOW STRUCTURAL INTEGRATION
SIGNIFICANTLY INCREASES PERFORMANCE.....
WHILE SIMULTANEOUSLY DECREASING PAIN
AND LESSENING CHANCE OF INJURY**

**A UNIQUE, COMPLEMENTARY
AND WELL ESTABLISHED TREATMENT, AND
SIGNIFICANTLY IMPROVED PERFORMANCE
CHARACTERISTICS.....
WHY, & HOW, THEY CAN BE CREATED
WITH THIS TECHNIQUE.**

PART 2

**THE UNIQUE "SYSTEMS" CONCEPT OF THIS
METHOD AND THE FAR REACHING
TRANSFORMATIONAL BENEFITS IT CREATES.....
PLUS, HOW IT'S VASTLY DIFFERENT FROM MASSAGE**

PART 1 HOW STRUCTURAL INTEGRATION SIGNIFICANTLY INCREASES PERFORMANCE..... WHILE SIMULTANEOUSLY DECREASING PAIN AND LESSENING CHANCE OF INJURY

**A UNIQUE, COMPLEMENTARY
AND WELL ESTABLISHED TREATMENT**

Structural Integration is a highly specialized system of body analysis and body structure improvement that was developed over 40 years ago by an American physiologist-biochemist who also practiced yoga and studied methods of treatment around the world.

Consistent results have been reproduced from person to person over four decades because the system is so well worked out and is based on provable, scientific facts about the human body.

Some of the principles of how your body works that are used in this system are different from those used in massage, acupressure, physical therapy and chiropractic. Yet, getting the improvements from this system has been shown to enable other practices to do more for our bodies.

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Over 10,000 practitioners have been school trained, world wide, including some medical doctors and chiropractors. A number of books and articles have been published describing both the technical factors of the treatment and the life changing benefits people have received. A number of Olympic and professional athletes have testified to its benefits, as have many business executives,

entertainers and others in all walks of life. There are training schools in both the US and overseas.

This is a supportive and complementary treatment, especially to chiropractic and massage, and makes bodies respond better to many kinds of metabolic treatments as well as structural ones.

**SIGNIFICANTLY IMPROVED PERFORMANCE
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People whose bodies have been Structurally Integrated have also found it empowers all kinds of athletic training, including martial arts.

And that's really what it's designed for; it significantly improves our body's abilities because it removes a lot of the limitations that keep us from performing up to our potential.

It just so happens that these limitations, mainly shortness and tightness, are also the ones that cause pain and increase the chance of injury.

Structural Integration removes (or greatly lessens) even chronic shortness, tightness and misalignments. And then flexibility, muscle power, and neuro-muscular control all get better. We would expect this to be the case. The body's nerve and muscle system can do more of what we want it to do when a lot less is holding it back and distorting its movements.

What's remarkable about this procedure is how much can be improved in a relatively short amount of time, and that tremendous improvements can be made that are often thought impossible by medical doctors and other kinds of health professionals who are unfamiliar with it.

Many improvements can actually be felt immediately in the session, and can often be used in training or competition right away. Increases in performance have gotten better and better as more of the body was improved. People noticed each new level of

improvement when they “tried it out,” and both short and long term changes were often greater than expected. (One novice marathon runner found he could pass people running uphill at the end of a race, and his recovery time was reduced from two weeks to two days.)

The reason results are so immediate is that this treatment works specifically on the body’s soft connective tissue system, a tissue in and around all the muscles that has been found to accumulate the shortness, or tightness that we feel in those muscles. As soon as **this** tissue system is lengthened, the muscle fibers, the actual muscle cells, can operate through much more of their available length.

Soft connective tissue is a putty-like fluid with gelatinous protein fibers in it. It surrounds and wraps up all the muscle fibers into a cohesive form so they all pull and stretch together. Whenever we move ourselves intensively, as in working out or when we receive blows or falls (or even get emotionally tense), **this putty gets shorter**; the protein fibers get pushed mechanically closer to each other in the fluid. (I call it “bunching up.”) Then everything inside the wrappings gets held in a shorter, more condensed form.

That includes the muscle fibers, which are little rods that contract when the nerves tell them to and release back to their full lengths when the nerves tell them to let go. Muscle fiber movement then, is obviously what makes you move around according to what you and your nerves tell the muscles to do. Only, when the soft connective tissue wrappings get bunched up, the muscle fibers are prevented from releasing back to their full lengths. And then the next movement gets distorted because there’s a restriction in the system fouling up what we want the muscle fibers to do.

Note that **the putty wrappings hold our muscle fibers partially contracted all the time, even when the nerve signals are turned off** and we take a hot bath to relax. The putty in our bodies **doesn’t** spread back out with rest, nor with muscle relaxant pills, any more than window putty does. The fibers in the fluid must be mechanically pushed or pulled back out. And since we’re accumulating shortness in the soft connective tissue system on a regular basis, its shortness gets worse and worse over the years.

This means the restriction on the movement of the muscle fibers also gets worse and worse over the years. The muscles can still stretch, but their “at rest” shape gets shorter and shorter, in line with the bunch-up of the soft connective tissue. And they feel tighter. We can also feel this as a loss of muscle power and agility. A six-inch long arm muscle keeps getting shorter, the arm muscles keep getting weaker, and eventually there can be pain in the wrist. Or, we

may think we're OK, but we start developing pains in the middle back or clicks and stiffness in the neck.

This accumulation is why some people think their tightness and pain is due to "old age;" it just takes a lot of years to make the putty that short. And it is a major reason old people are indeed very tight and have less mobility. What I want to keep emphasizing for you is that it almost always turns out that the shortness and tightness is all over the body, not just in the specific area of pain or stiffness.

And that's also why taking a few hours to lengthen this stuff is so beneficial. Not only do individual muscles get longer, but whole areas of the body with lots of muscles (like the arms and shoulders, or the legs and pelvis) work better. There's more dexterity, more flexibility, more power, more coordination and an awful lot less useless pulling from one area of the body to another. Structural Integration gets **tremendous** results because it rather quickly lengthens **so much** putty in all the **interconnected areas** of the body, as well as in the local areas where we feel the tightest.

Amazing as it may first seem, it doesn't take very long to correct shortness that's built up for a long time. There's only so much putty in a body; we're just a few feet long, a couple feet wide and maybe a foot thick. Spreading out the shortness is kind of like spreading dough while making bread. It took a long time to bunch it up to where it is now because it accumulated in a very slow way. Re-lengthening can be done much faster.

And it can be done in a comfortable manner. What makes some tissue manipulation techniques hurt is that they're banging into the actual muscle fiber contraction and there's often a lot of hardness there. There's also a lot of holding from other, interconnecting muscles. They actually prevent the muscle that's being worked on from letting go. If, instead, we get the actual "muscle action" to relax, and we lengthen some of the interconnecting muscles first, we can use a special manipulation to spread that soft connective tissue lengthwise, like moving a lot of thick butter. And that can usually be made to feel quite good.

In hundreds of bodies, I've been able to remove years and decades of built up shortness in a matter of hours. And a number of people have even fallen asleep while I do it. Many other practitioners can do the same thing.

Now, in addition to lengthening, these manipulations also improve the body's metabolic function. The soft connective tissue inside the muscle is also the conduit, or avenue, for blood and tissue fluid flow. Making it less compressed has been found to remove the

pressure on these spaces, and on the blood and lymph capillaries in there as well. So they all become wider channels for nutrients to go in and waste products to come out. Therefore, muscle nourishment and waste removal work better, even in the midst of intense activity. There's a bigger, faster flow.

A result of these lengthening and metabolic improvements is called a better "economy of effort." We can do the same things with less effort, and use up less energy in the process.

Athletes like this. Everyone else should, too. People say they are more powerful, moving around feels a lot easier, and they don't get tired as soon.

Structural Integration also works on the torso. It not only makes it more flexible and upright, but it also increases the volume of air that can be inhaled into the lungs. Lung capacity remains the same, but even Olympic athletes noticed big improvements in the amount of air they could breathe in. The bunch up in their structural muscles was limiting them from using their full lung capacity. Obviously, when any of us can breathe deeper and easier, all the cells in our bodies get more oxygen in and more carbon dioxide out.

Because of these three factors, better muscle movement, better muscle metabolism and greater overall breathing, a number of my athlete clients said they had greater endurance and shorter recovery time.

As I inferred, **the benefits accumulate.** Since each part of the body's soft connective tissue system is attached to all the other parts of the body, lengthening any one area releases pulls and constraints on all the other areas.

In each treatment we work with a particular set of muscles, but their interconnections affect many other muscles as well. So every session adds another level of improvement over the entire body. Even the Olympic athletes and college coaches I worked with noticed changes in areas distant from what I was releasing at the time. In fact, they felt improvements that they didn't even know could happen because they hadn't yet experienced this kind of very thorough "interconnected" lengthening.

From my own experience, and my work with a number of yoga teachers, these improvements definitely make yoga practice better, too. For me, and those I've treated, the lengthening made it easier to get into positions (even ones we couldn't get into before). Balance got better and muscles had more power. Stretching also went farther and people felt more "give" in the bodies of the muscles. They also felt more of their body length could stretch into each position. And they could pull farther with less or no pain.

Mind-body concentration got stronger; they could put more

focus into the muscles they were stretching and pulling with. This also meant there was less chance of injuring a muscle, tendon or joint by pulling too hard. Many people increased their ability to feel where the tightness was most “stuck.” Even internal physiological benefits seemed like they did more.

PART 2

THE UNIQUE “SYSTEMS” CONCEPT OF THIS METHOD AND THE FAR REACHING TRANSFORMATIONAL BENEFITS IT CREATES.....

PLUS, HOW IT’S VASTLY DIFFERENT FROM MASSAGE

How can this treatment, or “body processing” do all this? Well, first of all it’s *not* a massage, not even a “deep tissue massage.”

Massage does not, and is not designed to, lengthen *massive* amounts of soft connective tissue and *realign* and *integrate* people’s *entire* structural operation.

Structural Integration does indeed move lots of waste material out of the tissue. And it creates long lasting deep relaxation. But its primary focus is different. Structural Integration purposely changes the shape of the body!

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A massage is primarily designed to move waste fluids and stagnant material out of the muscles and encourage fresh, **nourishing blood into them**. It also stimulates nerves and growth hormones, removes pain from workouts and does a lot of other very healthy things, including stimulate acupressure and reflex points which help our inner organs as well as make our muscles relax. And it can induce a **lot** of relaxation. Some massage strokes can even make parts of the muscle less bound up and a little longer.

This treatment is different. As I just said above, people do feel a lot of the same kinds of benefits that their massage does. But by changing the shape of the body, with Structural Integration we are also changing the way the different muscles work together; they actually work in a more coordinated way.

This is how our nervous system is already "wired up." When the muscle, bone and fascial system is re-organized the way it's designed, the nervous system will be able to operate our structure in its optimum way.

People can actually see the changes in their shapes in a mirror, they can feel the different way they're standing and moving and they can also notice the changes from session to session in Polaroid photos. Many feel their chronic pains get smaller and smaller and then disappear!

Again, Structural Integration sessions are not a "series" of deep massages. It is a *single process* that re-lengthens the accumulated shortness in the various areas of the body, in a well worked out step by step manner. It's just done in a series of visits to allow the body to better incorporate the changes created in each area. Each time we make one part of the body a step better, the whole body will rearrange even more parts of its structure for the better, too, and just in the course of our moving around.

This re-lengthening is a rather big "housecleaning." As I mentioned, it erases years, and even decades of build-up. Shortness accumulates both in the surface muscles and in the ones deep down that position the bones with relation to one another. All of this shortness distorts the bones' proper positions and makes the body operate in an "un-organized" manner. So besides creating looseness, this process creates more "organization" in the way our muscle, bone and joint system works. And that's why the bodies **work** so much better. People feel it. And they even **look** more organized. The arrangement of our parts is made better and that better arrangement works better. **Others** even say we look better.

The Structural Integration process also removes the "gluing" that has developed and binds one muscle body to another. So besides making the tissue longer, we have to restore the independent movement of each muscle so the whole system can move us around as articulately as our nervous systems already know how to do. This, too, brings the body's abilities up, closer to its full neuro-muscular potential, a potential that was hidden under the shortness and gluing of the soft connective tissue system. Since most people accumulate lots of tightness and distortions in the course of their lives, we are actually restoring what would have developed if this "side effect" of muscle activity hadn't built up.

The step by step procedure improves the functioning of one muscle group and body part after another. And then we interconnect them so that the whole body's bone and muscle alignment, and its integrated operation are significantly improved.

Alignment of the structural system means all the bones, joints and muscles are where they're supposed to be and integration means they all work together in a more coordinated and "congruent" way.

All the parts of the body can then deliver more power and articulation to each movement, whether it's with the arms, or legs or a bend in the back or neck. And the movement is easier and the person feels lighter.

Proper structural alignment also turns out to make posture better. People stand up straighter without having to make the effort to hold themselves up. One way to explain this is that we simply made the short muscle areas longer and the body's innate design took over; we're *supposed* to stand up straight, and easily. It's like we've made a damaged building straight again, more like the way it looks in the architect's plans.

In Structural Integration, we also point out that a properly aligned muscle system is then working in harmony with gravity instead of having to pull against it. This gives us another economy of effort. Gravity is a very big force that's always with us, and it's always pulling downward. When one part of the body is short, another part has to tense up or we fall over to the short side. And that uses up energy and can make us sore. When we make all the tissues longer, no part has to always tense up against another.

But unaligned bodies have their bones and muscles arranged at angles to the downward force of gravity. (This is what their soft connective tissue shapes have grown into.) Different areas of these bodies zigzag instead of balance one on top of the other. So the body has to use a lot of muscular effort to hold that arrangement in place while gravity is pulling straight down on each of the parts.

Many people actually feel tired because of this; they have to use up a lot of energy and tense their back and neck muscles just to stand up. They're trying to lift up their chest, neck and head against what they feel is pulling them down. But the short tissue in the front of their bodies doesn't really *spread* longer that way. It's just temporarily *pulled* longer, like a rubber band, and it'll return the person to a slumped position when he or she stops remembering to keep tensing.

So to keep it going, the body has to make the soft connective tissue in the back and neck short and hard; and that makes the tensing "automatic." Then the person no longer has to think about it. When this condition gets really tight, it becomes a major cause of chronic back and neck problems. Yet, even without feeling much discomfort, big, strong athletes are wasting energy and tightening muscles that could otherwise be used for performance.

An aligned body acts differently. Because of all the muscular length we've restored, the centers of gravity of each of its big sections (like legs, thighs, pelvis, abdomen, chest and head) are now arranged one on top of the other. The different parts are not zigzagging to each side and we don't have to use our own muscular effort to hold them in a balanced stack. Instead, the weight of the body from the head down to the feet simply goes straight down through the bones and joints, just like it shows in the architect's plans. Gravity isn't being "fought." The person's muscles have only to use just enough force to keep that erectness in balance. All the rest of the muscles' potential is available for performance, for power and a much wider range of movements than before.

Muscles like this have what is called better ongoing muscle tone. Tone means how tight or flaccid a muscle is. Most everyone, even fat, flaccidly looking people have tight muscles. Theirs are in there just like the rest of us, located under the outside layers of what we first see. When our structures are zigzagged, muscles all over the body get bunched up into shortness. And our physical efforts just add more tightness. These muscles are hyper-toned. And the flaccid, out of shape ones are hypo-toned.

But **when the body's parts are in balance with each other, the tone of the muscles is more "just right," like a properly tuned automobile engine.** Then we can quickly shorten or lengthen them to move as we wish. When we stop moving around, the momentary tightnesses can relax and we go back into our properly adjusted "idle" and with very little, if any, accumulated bunch up.

Athletic people at many levels told me they could now work out hard, or take long walks, and they no longer got the tightness and pain from it right away, as they did before. Even with a partial treatment, people have reported that the pains they'd had all the time, or that came on severely and stayed a long time, were somewhat less and went away sooner. Those who stretched said they could stop the pain even faster, and they could feel the increased looseness again.

What's happened is that the structure is so much more organized and freed up that if we move any of it into temporary tightness, the rest of it will try to pull it back into the better organization and looseness. Plus, the tissue is now more pliable; it stretches better, both as we move in general, and when we purposely do stretches.

When we were tight, with lots of "separate parts," this restoration ability didn't go on because the muscles and bones weren't arranged to do it. So when we walk, we have to contract the leg muscles back and forth in different areas. But everything helps everything else **move**, instead of getting compressed into each other.

Before, there was only that compression, into the sidewalk and internally into the muscles.

The bones and muscles in this kind of integrated structure are in a different *kind* of relationship to each other than they were before. Because of all the length that's been restored, they are now operating ***as one whole, mutually supporting system.***

Our bodies are, all the time, one whole unit. Every bone is connected to different muscles that are connected to other bones, and so forth. But when various parts are bunched up, the many parts of the unit can't work together as a system. They're either too tight to operate properly or they're pulling against many other short parts that are pulling back against them. Shortness makes the shape change, of course, but it also changes the internal relationship of the muscles and bones.

We develop shortnesses all over the body, so there are a lot of pulls that distort our shape, all the time. Our at rest maximum shape has a lot of parts in a lot of tightness that are always pulling against each other and the bones are pulled way out of position from a lot of different angles. Sometimes the bones rub on each other at the joints, they pinch nerves and bulge disks in the back, and even tendons get pulled on more than they're supposed to be, so they hurt. Always, the ability to move around, feel light, and perform well is diminished.

This we call a disorganized and misaligned structure.

What we do in Structural Integration is remove these misalignments and restore the organization by making the muscles long again and thereby putting the bones back into their proper relationships with their muscles. As we do this over the whole body, even distant parts like head and feet are brought into a better **internal** relationship of muscle and bone **position** and better muscle and bone **movement** when we want to lie down, sit up, stand or run around.

Bodies are designed to operate on a principle called ***tensegrity.*** This means that the tension of all the muscles holds all the bones in their proper shapes. And the solidity and length of the bones keeps the muscles in their particular locations. None of the bones actually touch each other, or rest on each other as they meet across joints, so they can move around to various angles when the muscles contract and lengthen. Note that the contracting and lengthening of the muscle fibers is what changes the tension on the bones.

And it's the length of the *soft connective tissue* in the muscle, that determines the *maximum* length for each individual muscle, and the maximum length of whole groups of muscles in each part of the body.

This putty-like tissue surrounds all the muscle fibers. When we're bunched up, the muscle fibers can't extend to their maximum length. So it turns out, that when the putty is finally made as long as the *maximum lengths* of our *muscle fibers*, the bones and muscles are back to their "designed" organization. And the body actually feels uplifted and operates in a "light" manner. At the same time, it still delivers the maximum amount of power and agility its muscle strengths can provide. The tensegrity design of the human body enables the combination of forces from the different ***balanced*** soft connective tissue muscle lengths to lift ***more*** weight and apply ***more*** power than we'd think it could, based on the size of the muscles.

Even the spine gets an uplift if the muscle-bone forces are in balance. And it's been discovered that our organs sit better inside our torsos when we're aligned and in tensegrity; the ligaments that hold them get a boost from the proper balance of structural forces. If we were a bunch of separate parts, our bodies wouldn't be able to do all these things. It's the architecture of the upright, 2-legged human body structure that makes them happen, the way the bones and muscles are arranged and interconnected.

This relationship of all the body parts is what Structural Integration aims to create for each person. The potential is there in our biology but the shortnesses we grew up with have kept it from happening. Remove the shortnesses properly, and tensegrity appears.