

The Best Corrections of Your Career

An Introduction To Correcting The Sagittal Curves

By

Mark R. Payne DC

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From the Author

Dear Colleagues and Friends,

Thanks for your interest in our products and methods. This report is about delivering a high level of structural corrective care over and above what the majority of the profession is currently doing. During your reading of this report, I would encourage you to put aside any prejudices you might have about the idea of “corrective” chiropractic and how it might be done. In this report I’ll show you how chiropractors of all techniques, educational backgrounds, and philosophies of practice can vastly improve their care outcomes and why structural corrections are so vital to the long term needs of the patients you serve.



Mark R. Payne DC
President

This “Intro” report will give you an overview of just how simple it is to begin making large scale corrections to the global alignment of the spine...the overall way your patients carry themselves. *(Please note that I said “simple”, not “easy”, because there is definitely some work involved here.)* In this brief report, I’ll show the fundamentals of creating real, observable and verifiable structural change in a way that is both doable and affordable for all chiropractors. But before I can do that, I will need to give you some background material and some key concepts that may challenge and expand the framework within which you view your current approach to patient care. Some of what I’ll cover here will feature products which we manufacture and sell here at Matlin. And while I certainly hope to earn your business, the concepts discussed here will apply regardless of whether you ever choose to buy anything from us. I hope you find this information helpful in better serving your patients.

Mark R. Payne DC
President

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The Best Corrections of Your Career

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Has this ever happened to you?

It's eight o'clock in the morning and the office is quiet before patients start to arrive. You came in early to read the X-Rays you took yesterday on one of your favorite patients. You stare at the view box and feel sick to your stomach. The patient has faithfully adhered to your recommended program of care and placed his complete confidence in your capabilities. He kept his appointments, referred others for care and even paid cash on every visit. (okay...maybe that last one was a stretch but you get the idea here.)

He'll be here in a few hours expecting to see results. At his initial report of findings, you showed him how his spine was misaligned, the cervical lordosis was reduced and the joints were starting to degenerate. You explained why it was necessary to restore the curve to help stop the onslaught of progressive spinal degeneration. He understood, asked all the right questions and never hesitated when you made your recommendations.

*There's just one little problem. **No Change.** In fact, the post care X-Ray looks pretty much just like the pre care film. He's been getting adjusted like you recommended but his spine hasn't changed enough to matter. Oh sure, he feels better. He's been feeling better since the second week of care, but this was supposed to be about something more than just symptomatic relief wasn't it. Remember what you told him about correcting the cause not just treating the symptoms?*



Pre-24 Degrees

So how did this happen? You did everything by the book, just like you were taught in school. Or maybe you did everything just like your technique guru taught you at the seminar. The R.O.M is improved. The legs are balanced. Intersegmental motion is better on palpation. The musculature is more relaxed. *(Feel free to substitute whatever testing you actually use in your practice)* You probably even threw in some spinal exercise for good measure. But none of that really matters. The plain fact is that you sold the patient on a program of corrective care over and above mere pain relief, but now you haven't delivered on your end of the deal. Worse yet, this isn't the first time is it Doc?



Post- 25 Degrees

So how does that make you feel? Well, I can tell you Doc, it made me feel like crap. In order to not look so bad, I found myself doing little song and dance routines in the progress report. Usually it would go something like, "I got the subluxation, but the X-rays didn't change" or "We restored the motion to the segment so this must just be normal for you". I'm sure some patients bought my excuses, but often I could see confusion, doubt and disappointment in their eyes. Regardless, I can tell you from bitter experience that nothing good happens when you fail to deliver on your promises. Nothing.

If you've ever felt frustrated by your inability to consistently deliver real, measurable, spinal corrections then the first thing you should know is that you are not alone. The difficulty of actually correcting spinal structural imbalance, particularly when it involves the sagittal curves of the spine, is one of the most common clinical experiences. Most chiropractors figure this out pretty quickly after entering practice and will often respond in one of the following ways:

1. They just stop taking post care radiographs which have the nasty habit of showing the same structural problems the patient started out with. Besides, x-rays are bad anyway right? *(More to follow on this.)*
2. They simply swallow the flawed logic of the motion paradigm that structure doesn't matter as long as the segments "move" properly. *(More on this later as well.)*
3. Finally, many doctors become so disillusioned and jaded when their adjustments fail to correct the spine that they just give up. They resign themselves to the idea that nothing matters as long as the patient feels better.



That's me in 1982. I was 27 years old. My practice was very busy, but my corrective care outcomes were awful. I absolutely hated not being able to consistently deliver the corrections my patients needed.

Most older doctors reading this report can identify with some or all of the above. Trust me, I mentally retreated to all of these positions at one time or another during the early years of my Today, many younger practitioners have been so thoroughly steeped in the concepts of motion based palpation/adjusting and function based rehab outcomes that they scarcely even consider the concept of structure based spinal care or have an awareness that corrective care is a real possibility. If you are a younger practitioner and this sounds even a bit familiar, please stick with me here.

During the early years of my practice, I was fortunate to get involved with some very bright people who were intent on understanding what it takes to analyze and correct spinal structure. As I learned more I was privileged to be one of a small group of doctors who helped teach that particular technique across the country. For well over a decade, I helped teach technique seminars to what must have been thousands of doctors until my personal life eventually precluded me from continuing to travel and teach. I even helped co author a couple of peer reviewed papers on related subjects. Along the way, I had a few ideas for devices and methods to help

me correct spines in my own practice, things I couldn't buy elsewhere. Eventually, some of my colleagues saw my products and liked them. Before you knew it, I was in business. That was around 1987. In 1988, I incorporated the business and since then I've been making simple, effective, affordable corrective care products. My products have been copied by so many other manufacturers that I've lost count.

Doc, if that sounds like bragging, please forgive me. I just want you to know I've been doing this for a long time now and I'm not some fly by night guy with a website. I've worked my buns off trying to bring you honest products and effective strategies that will do the job of correcting your patients...and I mean REALLY do the job because let's face it, as a profession we need to up our game. After nearly four decades in chiropractic, I just find it sad that we have so many doctors, most with eight or more years of professional education, who still have no clue as to why they are unable to correct spines or even why it might be good to do so. And so, while our pointy headed academics continue to teach hopelessly outdated techniques and theories in our colleges and the seminar gurus complicate things so they can sell you on a dozen weekends just so you can say you're "certified", I have taken a different approach...simplicity.

I just happen to think doctors need some real help in separating the wheat from the chaff regarding corrective care. When you are out there struggling to keep your practice afloat and support your family, a dozen weekends away from home at seminars might not be very high on your priority list. Maybe you don't want to change your technique (something I will NEVER ask you to do) and maybe you could care less whether or not you have the guru's official okeydokey. If you are like most of my clients, you just need the nuts and bolts of how to get started with stuff that works. That's why I set out to write "**The Best Corrections of Your Career.**" To quote that old James Taylor song (*showing my age now*), "That's why I'm here."

Look, This has been a forty year learning process for me. Along the way I had a lot of help from a lot of very bright people. What I want to do for you is streamline the learning curve. As we move forward I want to promise you a few things:

1. The material we'll cover isn't "technical" in nature.
2. The information can be used by doctors of all techniques.
3. These tools and methods will add to your existing procedures, not replace them.
4. It's not an "all or none" deal. You can pick and choose those methods you feel will integrate well with your practice.
5. And finally, this is NOT going to end up being a hype for a bunch of over priced, high tech equipment or seminars. I promise.

Now let's get started...

Five Key Concepts For Better Structural Care Outcomes

Key Concept # 1: “Normal” IS Necessary.

There are any number of authorities who would argue “There’s no such thing as normal structure” or “Normal is different for everyone.” Others teach that it doesn’t matter what the patient’s structure is like, as long as the spine moves or functions well. Many doctors, don’t really give it more than a passing thought anyway. They rarely think of spinal alignment beyond the segmental level and basically just adjust away using their technique of choice. Many doctors do very little in the way of objective structural analysis and even less in the way of objectively determining whether or not the spinal structure has improved under their care. Which is fine, IF structure doesn’t matter and all we do is adjust segmentally for symptomatic relief. But I’m trying to impress the value of looking at the larger picture here.

So, before we go any further, I want to make the case that “normal” is absolutely necessary. It’s true for both the frontal plane postures as well as the sagittal plane. But for the purposes of this report, and because Matlin is primarily focused on helping with the normal lordotic curves, I will confine my comments to the lateral curves. That said, consider the following:

A. We can’t know what’s “abnormal” unless we first define “normal”.¹²

Chiropractic has a very unique approach to the relationship between structure and function. Chiropractic has always been firmly rooted in the paradigm that abnormal structure results in abnormal function and it is that approach which has traditionally separated us from the other professions. (*That separation of philosophies is now fading as other professions move to take over the delivery of care for structural imbalances, but that is a story for another time.*) For over 100 years, our history has revolved around the concept that when things are structurally “out of alignment” the body begins to malfunction in some way. This structural approach is what is what has made us unique.

Most of the mainstay techniques you were taught in chiropractic college were primarily “structure based” in terms of their treatment approach. Here’s what I mean. Most of our more traditional chiropractic techniques have attempted to locate perceived misalignments of individual vertebrae and their adjacent structures and then adjust the misbehaving segments back toward a more normal or optimum structural alignment with their next door neighbors. Examples of such widely taught techniques include Gonstead, Diversified, Thompson, Grostic, Palmer HIO, and numerous others.

Back when the chiropractic universe revolved around the simplistic idea of lin-

ing up individual bones, we just looked at everything with only the single level problems in mind. Oftentimes we never gave too much thought about the larger picture. Unfortunately, global spinal misalignment is generally a much bigger issue than just a single bone a millimeter out of alignment. After all, why worry about single segment a degree or two out of alignment, when the entire neck has lost its lordosis and the head is being carried three inches forward of normal! It seems absurd but that's just the kind of nonsense chiropractors have been laboring against for years.

We can all agree for instance that it is undesirable for the neck to lose all of its lordosis. I think it's fair to say most of us would consider a straight neck to be abnormal, at least I hope so. So, the next conclusion is that if there's such a thing as AB-NORMAL spinal alignment, there must by logical inference, be such a thing as "NORMAL". Unfortunately, very few chiropractic technique systems have any sort of well defined parameters of what constitutes normal spinal structure. Early in my career, it bothered the logical side of me, that while almost all chiropractors seemed to agree that the spine should be straight in the frontal view, we had essentially no agreement as to how much curve was normal in the lateral view. How much lordosis was enough? How much was too much? We needed some sort of model to determine when our patients needed help.

If you happen to be a devotee of one particular technique system which already has a well defined, precise model of what constitutes normal spinal structure that's fine. Or you can also assign some reasonable "range" of values to help you define normal. I'll even share some of the values I think are reasonable. But, you simply must have firm idea of what is normal...otherwise how will you be able to determine a reasonable outcome. Once you have that, it's a simple matter of performing an accurate analysis and incorporating some simple rehab to get the job done. I'll cover all that in a later section.

If this is all still new to you, don't despair. I'll share some values I've gleaned from the scientific literature so you can at least have a starting point. Eventually, as have a good idea of what a healthy spine should look like. Regardless of what values you choose to represent "normal" just realize that the first step in being able to recognize abnormal structure is to have some a firm concept of what constitutes normal. It's nothing more than plain old common sense.

B. Normal function (motion) is not possible within the context of abnormal structure. ⁵

The introduction of the new "motion paradigm" during the seventies and eighties dramatically changed the way chiropractors viewed the subluxation concept. Old school chiropractic had centered around the idea of restoring normal "juxtaposition" of adjacent vertebrae. With the popularization of the new paradigm, many chiropractors became convinced it was only necessary to mobilize the joints to restore normal motion/function and there was no need to address spinal alignment at all. Motion palpation methods were based around training doctors to palpate the most intricate coupling motions of the spine and restore them via proper manipulation of the joints. Once the proper coupling motions were restored, the doctor had done his job. The "motion paradigm" was vigorously promoted by an articulate and extremely well published movement within the chiropractic trade press. Within a few years the idea had taken hold and the idea of restoring spinal alignment began to

fall out of favor.

Unfortunately, new research would soon surface showing not only were the small coupling movements of the spine much too subtle and complex to accurately diagnose via palpation but they were also influenced greatly by the postural architecture of the spine itself. Needless to say, the proponents of motion palpation methods were not nearly so vocal in making their public aware of the new research and by this time it didn't matter much anyway. The entire profession had already swallowed the "motion paradigm" hook, line, and sinker. Let me be clear, I'm not making this point to disparage motion palpation at all. Despite some deficiencies, it remains a powerful tool to help doctors decide if, when and how they wish to administer a chiropractic thrust. I just want to make the point that structure (posture) and function (joint motion) are joined at the hip. If you cut your teeth on motion palpation methods it doesn't mean you have to throw the baby out with the bathwater. It does mean that you may want to expand your thinking to include an understanding of spinal structure as the platform within which all spinal motion occurs.

C. The Big Lie: "Normal is different for everyone."

There is a near fanatical insistence by some in our profession that there's no such thing as a "normal" spine or that "normal" is somehow totally different for every patient. The argument is that individual variations in anatomy make it impossible to know EXACTLY what structure is optimum for each patient. And while it's true we can't determine EXACTLY what is "optimum" for every individual, that certainly doesn't mean we still can't have some fairly precise values for what a normal or healthy spine should generally look like. Of course it would be silly to assume that every single person on planet earth simply must have a perfect cervical lordosis of say...42 degrees, but that doesn't mean it's okay for them to have zero degrees of curve does it? As with most things, the truth lies somewhere in the middle. In fact, we already have pretty good evidence as to what constitutes healthy spinal curves.²⁴



PRE- 13 Degrees

Here's an example. Would you really expect these two spines to move the same since each will begin every single motion from a different starting point? BTW, this is an actual pre and post film on a patient from our clinic. Pretty nice change eh? **No...every patient you treat won't respond this well** but I can promise you that our methods (combined with some hard work on the part of you and your patients) will improve your average corrections by 200-300% over what you're producing using adjustments alone. And yes, there is research to back that up.



Post- 44 Degrees

D. Inter/Intra Examiner Agreement.

Most chiropractors combine a smattering of techniques and methods we have acquired throughout our career. We naturally tend to use those methods we have found to “work” by virtue of our accumulated experience. Likewise, most of us have an informally acquired impression of what is “normal” and what is “abnormal”. And since most doctors tend to only look at X rays, if they even bother to take them at all, as opposed to actually measuring the films, they can only get some sort of subjective, qualitative impression of the patient’s structure. On the front end of care, most doctors fail to **objectively** compare their patient’s structure to a fairly concrete model of “normal” using reliable methods of measurement. And once care is finished, even fewer doctors will take an objective measurement of their results in terms of structural correction. It’s no wonder then that chiropractors tend to have fairly low levels of inter and intra examiner agreement.

I’m certainly not advocating that we all have to practice alike, but it’s probably a good thing if two or more doctors can at least look at a film and agree as to whether or not the spine is normal! There’s a simple cure for this particular type of clinical inconsistency. We just need some reasonably well defined parameters of what constitutes “normal” structure, and learn how to apply valid, reliable, methods of analysis. And because I’m a nice guy, I am going to share with you some valid and reliable ways to mark and analyze your X Rays. The methods I’ll show you are valid, accurate, and have a high measure of intra and inter examiner reliability. But before we get there, let’s move on to discuss the next key concept you must understand if you want to really make the best corrections of your career...

Key Concept # 2: Poor posture IS subluxation.

Geez...I’ll get hate mail for sure over this one, but before you crank out a nasty letter, hear me out! The subluxation concept and definition has changed dramatically as the profession has matured. The very term and its use within the profession is at the heart of a huge number of intra professional issues...much more than I can go into here. ²⁵ I think its fair to say that most of us older guys were educated with an antiquated model of subluxation as a single segment out of place “with the vertebrae above or below” and creating nerve interference. Younger doctors were exposed to a model of subluxation which revolved around joint dysfunction but still tended to have a focus on a single motor unit. So without implying anything detrimental to proponents of either of the above theories, I would like to make the case that regardless of which side of the fence you are on, **abnormal posture also meets all of the requirements to be properly considered as vertebral subluxation.** It does so by virtue of the fact that postural imbalances can be shown to cause all of the various components we have come to associate with the vertebral subluxation complex (VSC). Consider the following:

Bone Pathology

Living bone constantly changes its orientation and growth in response to abnormal mechanical forces. (Wolff's Law) Now, let's think about what happens mechanically when the cervical lordosis is lost. Decreased cervical lordosis frequently causes the head to project forward and the patient assumes a "gooseneck" posture. The result...abnormal forward weight bearing on the anterior vertebral bodies and discs. Anterior weight bearing causes sclerosis of the vertebral body margins and bone spur formation (remodeling).

So when you view films (see right) with anterior spurring, sclerosis, you are frequently seeing the long term degenerative effects of abnormal spinal structure. Of course, here we are talking about the lateral view, but the same type of abnormal loading forces can be seen on A-P views as well if the frontal plane postures have been compromised. This isn't some new age theory. It's basic bone physiology, much of which has been known for well over a century. It's high time we as a profession started taking responsibility for what it means to our patient's long term health.



Histopathology

Let's continue on with our example of a patient who has lost the normal cervical lordosis. A recent study in the Journal of Clinical Biomechanics showed the kyphotic portion of the cervical spine (Levels C5/6, 6/7, and C7/T1 in the picture above) to be receiving compression loads 6-10 times as large as those transmitted when the spine was in lordosis¹ Under these loads, the disc is unable to efficiently imbibe nutrition and begins to gradually dehydrate and break down. Left uncorrected, the degeneration process will inevitably continue unless the normal curve and proper weight bearing (balance) have been restored. This is just one example of histopathology which you see every day in your office. Like Schwarzenegger's "Terminator" character, it can't be reasoned with. It has no pity. And it won't ever, ever, stop.

The short version of why your patients absolutely, positively, MUST regain some semblance of healthy posture is this. Gravity just doesn't care if you balanced the leg check, the patient feels better, or the segment feels like it's moving more freely. Gravity doesn't know one thing about Innate Intelligence and certainly doesn't give a tinker's dime about what your technique guru said. If you don't do something to restore the normal structure of your patient, the end game has already been decided. The only way to cheat fate is to correct the true cause... abnormal structure.

Neuropathophysiology

Once we get past the destructive effects of faulty posture on the column itself, there are other problems to be reckoned with. Famed neurosurgeon, Alf Brieg's studies clearly show that even modest decreases in the normal lordosis will generate tensile mechanical forces to the spinal cord, meninges and nerve roots as well. Tensile stretching of nerve roots tends to result in hyper excitability (facilitation). In the CNS, tensile stretching has been shown to be a causative factor in producing long term scarring) within the cord and meninges and mechanical irritation as well as chaffing and scarring at the nerve root level (root sleeve fibrosis). #

Hmmm ...Spinal misalignment resulting in nerve system dysfunction and pathology eh??? This is starting to sound a lot more like old time chiropractic I studied in school, only now we're just looking at the larger picture. It isn't any more complicated than that. Can there be other ways it happens? Sure! But when you see patients who stand crooked or slumped or off balance...you are looking right at the subluxation itself. Subluxation doesn't cause poor posture. Poor posture is subluxation. Period. The only difference is that instead of the outdated single segment concepts, postural imbalance creates entire groups of vertebrae which are chronically forced to work and support the patient in abnormal alignment. Poor posture is entire groups of vertebrae out of place. It is GLOBAL subluxation of the spine as an integrated unit. And it's an extremely common phenomenon you see every day.

Kinesiopathology

I want to revisit this motion paradigm just briefly because I know that many, if not most of you, use motion palpation to help determine how and where to adjust the spine. I think that's a good thing. My previous partner in practice was highly trained in motion palpation methods and working with him was a great pleasure. Studies by Panjabi have shown conclusively that **spinal posture plays a primary role in determining the coupling pattern motions of vertebrae.** ^{5,6} The presence or absence of the lordosis for example, will dramatically alter the coupling patterns in very profound ways. The degree to which the patient's sagittal curve status will effect the coupled motions you feel as you palpate is almost impossible to overstate. Coupling motions are an extremely complex and intricate function of vertebral movement.

Consider for just a moment what we have learned from Panjabi's work. **For EVERY spinal motion, the involved vertebrae must translate simultaneously along three mutually perpendicular axes of motion AND rotate around all three axes simultaneously.** That's pretty profound stuff, so if you just read that sentence over casually, please take a moment to re-read it once more and consider what that actually means. Seriously...humor me and read that sentence once more and give it a little more thought. Go on. I'll wait.

Simply stated, if for example your patient laterally flexes their neck, every vertebrae within the cervical spine must individually translate along the X,Y , and Z axes

AND rotate around all three axes at the same time. And according to its position within the curve each vertebrae must do all of these motions to a different degree than its neighboring segment. That's a LOT of different motions going on.

Suffice to say that these "coupling" motions are extremely complex to even understand mechanically...much less palpate accurately. And all of these small, intricate, complex motions are completely dependent upon the resting (starting) posture of the patient. That's bad enough if you are trying to palpate every tiny movement of every vertebra but it's actually even much worse than that! Panjabi's work showed us that **the relationship between structure and function is so integral that a change in the sagittal curve status may cause a complete reversal of normal coupling motions during any given movement!** That's right, the relationship between posture and function is so profound that the person with a kyphotic neck may have one or more segments where the normal coupled motion patterns are completely reversed.

I realize this isn't exactly how it was taught when you were learning to palpate in college and thinking only in terms of single segment joint dysfunction; but make no mistake, postural imbalance is a key factor in the creation of "kinesiopathology". Panjabi's work is important because it shows us clearly how all of these coupled movements are dependent upon the overall structural context within which they occur. The upshot is this. It is absolutely impossible for the spinal vertebrae to have both normal range and quality of motion if attempting to move within the context of abnormal structure. So, even if your focus is on restoring and maintaining normal motion/function, it's important to concern yourself with the underlying structure. Without normal structure, normal motion isn't possible. Even if you free up the segment temporarily, the abnormal motion will always reoccur.

Myopathology

As if all of that isn't enough, abnormal postures, particularly forward weight bearing postures have been directly linked to increased muscular effort and strain. Calliet postulated that a one-inch forward translation of the head causes a ten-fold increase in muscular effort to hold the head erect.⁷ That probably a bit simplistic but such chronic postural strains are well recognized as a common source of myofascial trigger points (TPs) and related pain syndromes. This is a classic case of abnormal function, in this case muscular dysfunction (Myopathology), being driven by the increased demands associated with abnormal structure.

The fatigue and muscular dysfunction associated with postural imbalance often make it nearly impossible for some patients to regain normal alignment without some rehabilitation work. In a later report, I'll discuss how to effectively address the muscular problems associated with postural imbalances using simple, effective, treatment and rehabilitation procedures. For now, just realize that muscle and movement impairment disorders are the natural sequelae of sub optimal spinal structure.

Let's sum this one up. Abnormal posture IS subluxation. Abnormal posture cre-

ates all of the various components associated with the vertebral subluxation complex. That doesn't detract from or nullify the concept of having subluxation/dysfunction at the level of the single motor unit, it enhances and expands the rather incomplete subluxation models we have been dealing with for a long time. Consequently, it is vital for your patients to achieve some semblance of normal spinal structure IF you want to help prevent things like the early onset of disc degeneration, spur formation, pathological stress forces on the CNS, irritation of spinal nerve roots, chronic muscular strain, and abnormal spinal motion. Once you get the concept that poor posture is subluxation firmly in mind you are ready for the third key concept for making the best corrections of your career.

Key Concept # 3: Adjustments alone CAN'T fix it.

In my early days, I adjusted patients primarily with Pettibon and Pierce-Stillwagon techniques. Both methods were extremely oriented toward correcting spinal structure and purported great corrective care outcomes.^{8,10} I took a boatload of seminars and worked my tail off trying to do the methods as I had been taught, but I still failed to significantly correct nearly every patient who came through the door. *(Oh sure, I had the very rare case who would really straighten up structurally using adjustments alone but everybody gets a few of those. Please resist the urge to send me your "hero" films!)*

Later on, I would talk to other doctors experiencing the very same frustrations. I talked to Gonstead doctors, Thompson doctors, upper cervical guys...you name it. All these techniques were doing a great job of helping the patients, but the doctors were almost universally frustrated with their lack of corrections whenever they dared to take a post treatment X Ray. I would visit other colleagues offices and most of the time, you could lay the post-care film over the top of the pre-care films and see they were essentially identical. Oh, maybe there was a degree or two of difference but nothing that really mattered. It was plain to me that basically all doctors were experiencing similar problems regardless of what technique they were using.

I started to suspect that maybe all these famous technique gurus were just showing us their very best cases. Maybe the guru's "AVERAGE" correction wasn't nearly as good as the ones they showcased in their seminars. As it turned out, within a few years, a number of research articles demonstrated what I was already suspecting.^{26,27} Namely, it really doesn't make much difference what technique you use, because most adjusting methods do very little to actually correct the structure of the spine anyway. There, I said it! Now the dirty little secret is out.

You see Doc, correcting these large scale, postural subluxations isn't about adjusting technique. Never was. In fact, I'm reasonably sure that your technique is just fine. Most chiropractors are doing a lot of good for their patients but the ugly truth about chiropractic adjusting is that there's almost NO EVIDENCE to suggest that our adjustments do much to actually correct spinal structure. Your adjustments may do a million other things to benefit your patients. You may heal everything from male pattern baldness to webbed feet. And you may very well be the very best chiropractor to ever come down the pike. But our profession has a real problem Doc.

Because no matter how good any of us think we are, there's little to no evidence to show we can actually change spines effectively with adjustments alone. Fortunately, you don't just have to take my word on this subject. In fact, you won't even need to read those dry old papers, the proof is hidden in your very own X Ray files. With that in mind, I challenge you to take a very simple test...

The Benchmark Challenge

I want you to do a simple exercise that I did in my practice back in the early eighties. Be forewarned, you almost certainly will not like the results. I want you to take an honest look at the results you are producing in your practice by comparing the pre and post care films on 25 or so of your patients. Don't cherry pick them...just pull the files at random on a couple dozen or so patients who have been with you for a while. To make it easy, let's only look at the lateral cervical films. For now, just measure the C2-C7 Jackson's Angles (*posterior tangents of C2 and C7 posterior bodies, then measure the acute angle of intersection*) and then average them. This will give you a good measure of the corrections you are currently producing and a "Benchmark" against which you can measure your future outcomes. Go on...take whatever time you need to do this simple exercise. After all, no one will ever know the results but you! Go on....I'll wait.....

Fair warning. If this is the first time you've ever taken a hard look at your own results, you will most likely get your confidence shaken a little bit. See, most doctors will never take the time to actually do this exercise. They just assume they must be making real corrections because their patients pretty much always feel better. So...If you actually completed the challenge, measured and averaged your corrections on about 25-30 patients, then congratulations! You just had the courage to take a square look at something most doctors never have the nerve to face objectively. Now you know what your results are. Now, you at least know what your "batting average" is !

So I'm going to go out on a limb and predict that your average correction of the cervical lordosis is probably only around four degrees or so...maybe worse. Was I pretty close?? (*Disappointing isn't it?*) Nope...I'm not psychic but as it turns out, most doctors get pretty similar rates of correction regardless of how they adjust. Actually, there have already been a number of studies on this very subject. One study of Gonstead technique by Plaughter showed no improvement in the cervical curve. Ouch. Another study by Leach looked at diversified technique combined with the use of a cervical pillow. The result... a disappointing 4 degrees of improvement. Still another study of the Pierce technique (using C5 drop table adjusting) by Wallace netted an average improvement of around 3.5 degrees when you looked closely at the figures. Even CBP Technique, which focuses much of it's seminar content on postural adjusting methods, has never been demonstrated any appreciable degree of curve correction using adjustments alone.

So here's one more giant concept you need to get your brain around...**It's not about your adjusting technique.** That's a bummer. But the upside is that once we really understand adjustments alone don't correct spines very well, it becomes possible for us to start looking for real solutions. After all, you can't solve a problem until you first acknowledge that you have one.

If you took the Benchmark challenge and your corrections are everything you hoped for, if every patient looks great on the post X rays, then congratulations. You can stop reading right now and please call me to share what you are doing. But if you were less than happy about your results then cheer up partner! I'll show you how to dramatically improve your batting average but first we need to talk about the real reason your adjustments are striking out. You need to understand the simple principles of physics which are sabotaging your corrective care efforts. Because once you really understand WHY your adjustments fail to correct the spine, it's going to be a heck of a lot easier to figure out effective solutions in your day to day practice.

Posture is a complex phenomenon which is the end result of a number of different factors. Proper posture requires normal muscle strength, proper length and flexibility of adjacent soft tissues, coordination of movement, proper interpretation of mechanoreceptor input, normal anatomy, and any number of other factors too numerous to go into here. Right now, I want to talk about just one thing, the single most important factor which directly limits the ability of your adjustments to correct spinal structure...the paraspinal soft tissues.

Physics 101

Want to know why it's so difficult to correct spinal structure using adjusting procedures alone? Well, the answer is painfully obvious to professionals in other fields like university biophysics and biomechanical engineering who are engaged in studying the more technical aspects of the human machine. Once I became aware of and applied a few simple principles of physics, I was able to start making better corrections almost immediately. You can do the same thing. A long time ago, some very bright folks shared these principles with me, and now I want to pass them on to you. Here's a quick review of a few things we all learned in our pre-chiropractic education. Apparently someone just forgot to tell us in chiropractic college how to actually apply these basic physical principles to correcting the human spine.

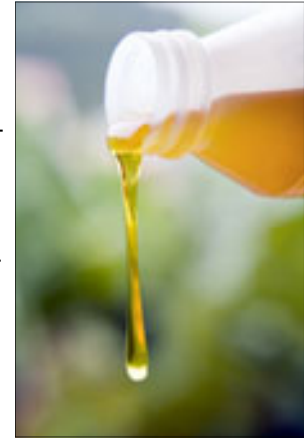
All Matter Possesses One or More of These Properties

1. **Elasticity:** Simply the tendency of any material to rebound to its original shape after being deformed. Perfectly elastic materials respond instantly to any application of force and return instantly to their original configuration as quickly as the force is removed. Think of a rubber band. You pull on it and it instantly deforms. Once you remove tension it snaps right back to it's original shape. Many materials in the body are quite elastic in nature. For instance, yellow ligaments such as the Ligamentum Flavum attain their charac-



teristic color due to a high content of “Elastin” and as expected, exhibit a high degree of “elastic “ behavior.

2. **Viscosity:** Describes the nature of some materials to deform slowly over time. The key word here is TIME. Viscous materials respond slowly to the application of force but will continuously deform as long as force is applied. Think of thick, gooey fluids like honey. When you pour honey onto your plate and it spreads slowly, very slowly, out over the plate’s surface. The time required for the spreading effect, depends to a degree upon a number of factors such as the thickness of the liquid, the temperature, or the surface of the plate. But one thing is an absolute. For any given set of variables you want to introduce, it will still take some period of TIME for the liquid to spread itself out completely.



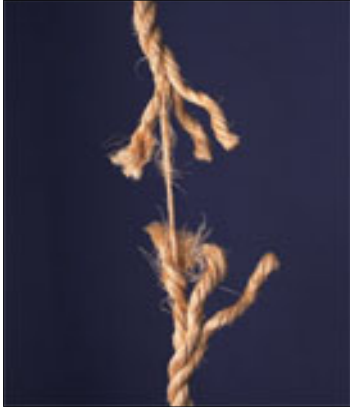
Purely viscous substances don’t possess elastic rebound so that any deformation that occurs is permanent. In the case of our honey, once it has spread itself out, there is NO tendency for it to want to jump back into the shape of the original puddle you poured. Yes, I know this is obvious. But if you understand the pure and classic nature of these properties then you will better understand how to actually apply that knowledge to spinal correction. This is important because in general, tissues with high water content, tend to exhibit some degree of viscous behavior.

3. **Plasticity:** Plastic materials do not yield to deforming forces until a certain threshold is reached. However, once this “yielding” point is reached, the material will continue to deform at a constant rate as long as force is applied. Removal of force, or a reduction of force below the yielding point, results in an immediate cessation of deformation, but whatever deformation has occurred is permanent.



An example is seen when you press squeeze a piece of modeling clay in your hand. our thumb into a block of modeling clay. It takes a certain amount of pressure to begin to deform the clay. However, once it begins to mold in your grip, if you keep applying a constant pressure, the clay continues to mold and deform So you can see with a plastic material, just as with a viscous substance there is also a TIME factor (there’s that “TIME” word again) required for deformation to take place. Whenever you do release your grip on the clay, the resulting shape is also permanent meaning there is no tendency for a purely plastic material to rebound to it’s original shape.

4. **Strength** is simply a description of the concept that any material has a breaking or failure point. It makes no difference whether the material is the rubber band



stretched beyond its limits, a viscous drop of honey slowly falling away from the container, or a simple piece of “spaghetti” made out of modeling clay which slowly

stretches and breaks under its own weight. (*I was literally doing this one with my granddaughter last night!*) There is a point at which further force will destroy the continuity of the material. In other words, strength is defined as the point at which material failure occurs and the continuity of the object is destroyed.

Of course any therapeutic forces we apply within a clinical context should be well within the strength limits of our patients spinal structures (*Material failure is a very bad thing when we are talking about your patient's spines and might well get you acquainted with their attorney*). In terms of rehab, we will only be using very light, sustained forces so the property of strength will have little relevance to our clinical discussion of postural rehab. It does however, have a great deal of relevance when you see trauma patients with permanent ligamentous tearing. Such patients have experienced and will continue to suffer the real life consequences of a set of deforming forces (trauma) exceeding the strength limits of their spinal soft tissue.

As it turns out, all living tissues possess some combination of these material properties. That is to say that human tissues are more or less elastic, viscous and/or plastic in their behavior. Bone for example has a high index of strength and a low index of viscosity. Other tissues, like blood for example, are almost purely viscous in nature. Human ligaments, muscles, and tendons have all been studied in detail by scientists in other fields to determine their histological makeup and physical characteristics. Most of the spinal / paraspinal soft tissues we are concerned with have been found to be largely visco-elastic and/or visco-plastic in nature. These mechanical characteristics of human tissues are well known and dramatically affect how the spine reacts when we introduce our adjustments into the system. Yet, as a profession, we have remained largely in the dark as to what this information means to the treatment of our patients.

Now, let me show you how the physical laws of the real world conspire to sabotage your adjustments.

Evolution of a Failed Case

Take a moment to imagine a common scenario. Your patient has been involved in a sudden traumatic traffic accident. The spinal joints are displaced and sprained. The surrounding muscles are strained and injured. Movement is painful, particularly in those vectors which most stress the injured tissues. Everything is acutely inflamed. Local mechanoreceptors are screaming out scrambled messages to the brain. Proprioception is altered due to all the abnormal afferent input. The spine begins to compensate, first by adopting less painful methods of moving and standing. Just a little bit at first...so it doesn't hurt so bad. As a result the column begins to depart from a normal balanced upright posture into a more pain free position. Because of the traumatic insult to the spinal joints, normal proprioceptive responses are altered and the spine soon settles into the pain free, albeit abnormal posture. Over time, your patient becomes habituated to the new "pain avoidance" posture and the patient's brain gradually comes to accept the new, imbalanced posture and altered way of moving as something that feels "normal" to them.

Once this happens, the body no longer has any tendency to return to normal, upright posture because the brain no longer "knows" quite where "normal" is. Plus, the brain has learned that "it might hurt" to go there. Over the coming weeks and months, the body begins spending inordinately long periods of time in these misaligned, subluxated postures. Faulty patterns of movement become ever more firmly ingrained into the CNS. Finally, with the exception of any lingering pain, it becomes all but impossible for the patient to perceive anything is wrong. The only thing most of your chronically subluxated patients perceive is the pain resulting from the imbalance. The resting posture has come to feel "normal" to them and their "reality" can be a difficult thing to get past when educating as to the need for postural rehabilitation once their symptoms have calmed down.

Without treatment, time becomes a real enemy. Eventually muscles, ligaments and tendons tend to shorten and contract in areas where they are no longer called upon to extend to their normal length...generally the anterior structures in the neck. Increased tension in the tight anterior flexors begets inhibition in the large neck extensors. (Sherrington's Law of Reciprocal Inhibition) The now lengthened and inhibited extensor musculature becomes ever less effective at keep the skull centered over the top of the thorax. In time, the body "learns" new, but typically less efficient, ways to move. One common example occurs when deep neck flexors are injured and shortened, becoming functionally insufficient. Unable to call on the deep neck flexors, the body often resorts to using the SCM muscles whenever neck flexion and/or forward translation of the head is required. This over use of the SCM's begets even further forward translation of the head with the associated problems of even greater anterior weight bearing.

The forward carriage of the head now creates a longer lever arm supporting the weight of the skull. Remember, only an inch of forward translation will increase the work load of the extensors by nearly ten fold. The already inhibited extensors now become even more overworked. Chronic overuse leads to painful trigger points in the trapezius and levator scapula, one of the most common complaints of patients

entering our clinics. As increased anterior weight bearing forces more weight onto the discs, they begin to dehydrate and lose their ability to imbibe nutrients over time. Discs slowly but certainly begin to dehydrate and thin under the increased mechanical loads. With each minute amount of thinning, the neck becomes a little more kyphotic and the process accelerates. With enough time, Wolff's law dictates that the bone itself will begin to remodel. Calcium ions are drawn into the area. Bone spurs and spondylotic changes become apparent on x-ray after only a few years. As the posture worsens with time, the muscles and ligaments continue to tighten and shorten even more. Slowly and insidiously the process progresses into an ever dwindling spiral of degeneration. Until at some point, the patient has had enough and decides to seek help...

Enter the Chiropractor

And now into this complicated, collision of cause and effect, action and reaction, steps...you, the bright eyed, bushy-tailed, and hopelessly optimistic young doctor. With face freshly scrubbed and armed with only an adjustment to be delivered in a fraction of a second, you march off to war against the effects of time. Undeterred, you deliver your adjustment just like they taught you at the seminar. Your timing is perfect. Your technique is impeccable. The spine yields beneath your hands and the segment moves. There is a resounding click as the joint cavitates and you know, you just KNOW, you have done your job!

It's all so reassuring. It feels so real. But it's what you don't feel that is even more important. Because, **by the time your hand leaves the patient's spine, the elastic effects of surrounding soft tissues rebound the spine right back into its original position.** Remember, **only** the elastic components of soft tissue are able to respond to rapid loading forces like your adjustment. Unfortunately, because of their partially elastic nature, the surrounding tissues simply rebound back to their original shape when the deforming force (your hand) is removed. The more viscous and plastic tissue components of the tissues simply don't have time to respond at all the rapid on-off type force. Remember, the more viscous and plastic tissue components, the only tissues which can deform permanently, can only do so when force is applied over an extended period of time.

TIME. The very thing we most need to effect change in the chronically contracted soft tissues, is the one thing your rapid adjustments can't provide. As a profession, we've been thinking of time in the wrong way. For nearly a century, we thought that if we repeatedly adjusted the spine again and again, over a long enough period of time it would make a correction. Well, we were wrong. We don't need the patient to come back for a hundred adjustments because as it turns out, a hundred thousand wouldn't make a difference for these chronically adapted patients. What we really need are ways to apply sustained corrective forces over sufficient periods of time to change the soft tissues. In order to do that we are going to need some simple tools. Why? Because there is no way, either of us is going to



stand there, manually holding, and stretching the patient's spinal tissues for the 20-30 minutes required to passively stretch the soft tissues. Life is just way too short for that.

Now for the good news.

In the midst of all this bad news about how contracted visco/plastic soft tissues sabotage your adjustments there is one bit of VERY good news. The good news is that because of their tendency to permanently deform, any stretching we can create tends to last a long time. Once lengthened there will be very little tendency of tissues rebounding back into their contracted state. The very characteristics which work against our rapid loading adjustments are the same ones which will help to insure lasting change once we understand how to address the problem correctly.

So then, in order to work with the physical properties of the spinal tissues, we are going to need something over and above the adjustment to help us do a proper job. Just like we need adjusting tables, drop pieces, therapy equipment, X Ray machines or whatever. In the coming sections, I'll cover a variety of methods you can use to improve your structural care outcomes but it helps to simplify the process if you can remember that almost all of these tools and methods will revolve around just three fundamental concepts. Sure, you can spend a lot of time getting trained and certified in the latest techniques. But at the end of the day, **most everything you will need to do can be divided into just three fundamental areas of care:** 1. **STRETCH** chronically contracted soft tissues, 2. **STRENGTHEN** weakened, poorly functioning musculature using posture based exercise, and 3. **SUPPORT** as needed for the patient's posture in their work and home environments.

By now you should be "crystal" clear as to why your adjustments alone simply can't produce the corrections these chronically subluxated patients need. I need to cover just one more concept before I show you how the work of correcting postural imbalance is actually done. So let's quickly move onto the fourth Key Concept which we have already touched on briefly...

Key Concept # 4: You must have accurate, valid, repeatable methods of structural analysis.

Hopefully, it's starting to make sense that: 1. Normal is necessary, 2. Poor Posture is Subluxation, and 3. Adjustments alone aren't going to cut it. Now the question becomes how can we accurately assess our patient's STRUCTURE (posture) so we know what needs to be done. We simply must have objective, dependable methods of analysis to accurately determine the state of the patient's postural health and what needs to be done. Only with valid, accurate, reliable methods of measurement and analysis can we objectively evaluate the results of our work. Without objective, reliable methods of analysis, we are reduced to guess work both in terms of determining our treatment and documenting our outcomes. I don't know about you but I think there is just way too much "guess work" in chiropractic already. Here's a quick

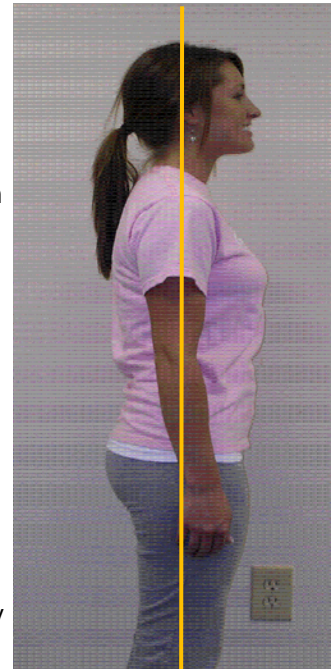
summary of how it's done using a simple proven approach. I'm not going to cover all of this here in the "Intro" report, but I have done so in two separate reports which are available for you.

Basically, we have two primary methods available at this time: 1. Visual postural analysis and 2. Radiographic measurements.

Visual Analysis of Posture

Visual postural analysis, even something as simple as a plumb line analysis can give us some objective, QUALITATIVE, information about the patient's standing posture. The visual posture analysis takes only a couple of minutes to perform gives us a ton of good information. The main downside to visual analysis is that it doesn't give us QUANTITATIVE information unless we add photogrammetric posture analysis using cameras and software. There are a number of such systems out there all with various pros and cons and I will leave it to the reader to investigate if interested. That said, we can still observe a lot about human posture, using just the naked eye.

Visual posture analysis is somewhat of a learned skill. I am happy to show you a simple, logical, approach to standing postural analysis which will serve you well as you begin to approach corrective care from a postural standpoint but it is beyond the scope of this "Intro" report. I've covered postural analysis of both the sagittal and frontal plane postures at length in other reports in the Best Corrections series, so for now I want to move forward to the most valid, accurate, and reliable method of analysis available at this time...



Radiographic Analysis

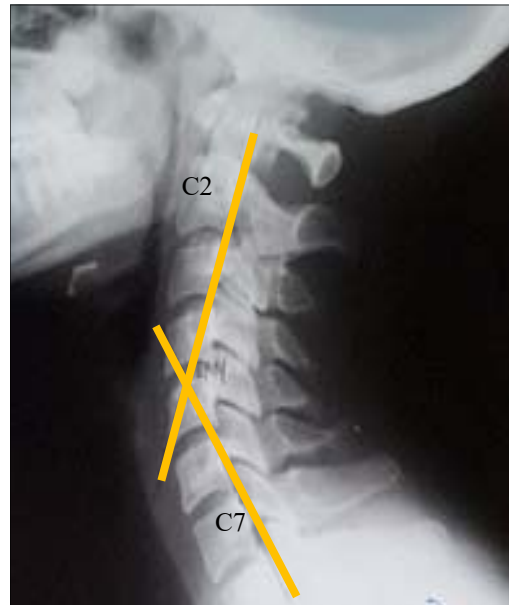
Proper measurement of the standing radiographs gives the doctor a very accurate and reliable assessment. **At this time, there is simply no other way to really accurately assess your patient's biomechanical status both qualitatively and quantitatively.** Numerous studies have shown radiographic analysis to be extremely accurate and capable of very high inter/intra examiner agreement.^{15,16} This is particularly true for the lateral views. (There are some problems associated with accurately measuring and interpreting the A-P images but even these are superior to any other method available at this time.)

Analysis of the lateral views is extremely easy to master. Armed with nothing more than a pencil, ruler and a cheap protractor you'll be able to perform an excel-

lent biomechanical analysis in just minutes. Just having that information alone will go a very long way toward helping you understand exactly where your patient is structurally speaking, and where they need to be. Best of all, as the patient's spine begins to correct you'll have permanent and objective validation of your clinical results.

I'm sure many of you are very familiar with the process of measuring the lateral curves using Jackson's angles and simple plumb line analysis. In its simplest form, Jackson's angles are typically measured between C2 and C7 but there are a number of neck configurations which require modification of the Dr. Jackson's original method and these are often areas where doctors could use a bit of clarification. I've covered a number of these problem areas in my **Report The Best Corrections of Your Career— *Marking the Lateral Radiographs***. I'll show you how exactly how to mark and measure for all types of neck configurations, give you sample films to practice on and help avoid some of the more common pitfalls.

To receive your copy just call us directly at 334-448-1210 and my staff will get it to you asap.



Key Concept # 5: You need the right tools for the job.

Whew...finally! I mentioned earlier that you would need a few new tools to do the job, so let's take a minute to talk about what actually works in terms of correcting spinal structure. In 1994, a study by Harrison et al in the *Journal of Manipulative and Physiological Therapeutics* began to shed new light on what might actually work in terms of correcting sagittal plane postures.²² The study looked at three treatment groups. Treatment Group 1 consisted of thirty-five patients treated using diversified manipulation and drop table adjusting in combination with a new type of cervical traction where the head was extended backward and compressed caudally.) Treatment Group 2 received identical treatment without extension traction. In addition Group 3 functioned as a control and received no treatment. Patients received extension compression traction and/or adjustments approximately five times weekly for 10-14 weeks.

At the end of the project 29 of 35 patients in the Treatment Group 1 (the traction AND adjustment group) had a lordotic curve compared to 11 of 35 prior to treatment. The average improvement in curve values was 13.2 degrees!²² That's about 300 percent better than most of the studies I mentioned earlier which used adjusting alone and tended to average around four degrees or so. Better yet,

the improvements were seen with all types of neck configurations, i.e. "S" shaped necks, Military necks, reversed curves, etc.

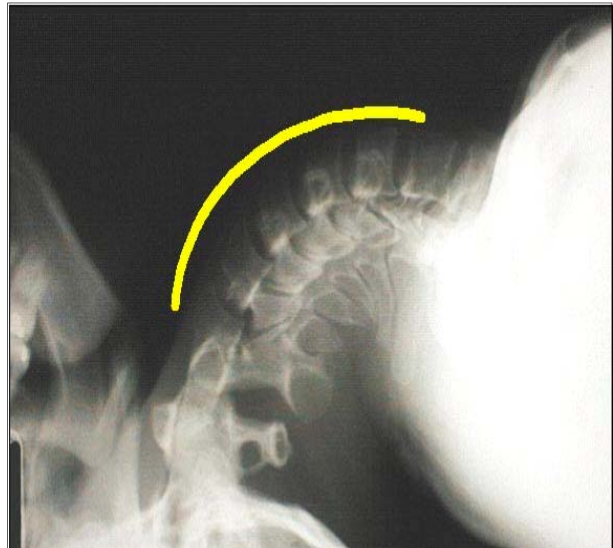
Incidentally, Group 2 (the adjustment only group), showed no significant improvement in lordosis. In terms of adjusting alone, Harrison's study reconfirmed what previous studies had shown. Adjusting alone yields poor corrective care outcomes. The only thing that made a difference with group one was the addition of extension traction to the treatment plan. Since then, a number of other studies have confirmed the benefits of extension traction in helping restore both the cervical and lumbar curves.

Imagine! For decades, chiropractors have been recommending long periods of "corrective" care consisting of an extended series of spinal adjustments and yielding very inconsistent results. Now... a hundred plus years into our profession, we are getting good evidence that there is a MUCH better way to correct spinal structure. Doc, your adjustments have a host of benefits for your patients. But it's important to realize that structural correction isn't one of them BEFORE you put a patient on a one year program of intensive adjustments! We now have multiple studies which have confirmed the results of the original study and show us clearly that what actually works is sustained stretching of paraspinal soft tissues using extension traction. #

Getting Started

As I've already mentioned, there are three areas of treatment that will give you the lion's share of results in terms of corrections: **1) Stretching** taut contracted soft tissues with Extension Traction, **2) Strengthening** weakened postural musculature, and **3) Supporting** better posture in the work and home environment. And I would certainly recommend you become familiar with the various treatment options in each of these three areas.

But if you're serious about getting started on your way to the best corrections of your career, NOTHING is going to get you there faster than implementing an effective program of extension traction. And **the absolute most clinically effective (and cost effective) way to do extension traction is to have the patient perform it at home.** Yes, rehab is important. Yes, the patient may need some sort of postural support.



Sustained tensile stretching of anterior soft tissues using extension traction. This is the underlying mechanism by which all methods of extension traction do their work.

Yes, you can do some traction in your office. **But let me make it CRYSTAL CLEAR... Home traction is where the real work gets done.**

- **Only home traction allows patients to traction for the 20-30 minute time frames necessary to get effective visco/plastic stretch into the soft tissues.** It simply isn't possible to traction for these longer time frames in the professional office without severely impacting your patient flow. (And trying to keep patients in your office for an extra 20-30 minutes every visit is an excellent way to get them discontinue care prematurely. Trust me on this one.)
- Only HOME traction **allows the patient to perform corrective traction on a daily basis as needed.** It simply isn't feasible or affordable to have patients in your office everyday for treatment they can easily do at home.
- Implementation requires very little training and time for doctor and staff. **What little time you spend showing patients how to properly use home extension traction, will be more than compensated by the sale of the unit, billable services, and improved care outcomes.**
- As with any home therapy, the participation of the patient is required and the benefits of active patient care are well documented. **Patients who participate in their own recovery tend to be much more dedicated, enthusiastic, and compliant.**

By investing the initial time to teach your patients how to help themselves (/ *usually recommend, working with patients at least three times in your office before sending them home with a unit*) you'll be giving them the tools to progress in a way no amount of passive, in-office care could ever accomplish. In doing so, you will begin the process of gradually transitioning from that chiropractor who simply "pops" their spine occasionally to a doctor who is also a coach, mentor and friend. You'll insure their continued participation by simply remembering to ask about their participation on EVERY visit and then re-coaching and re-motivating on a regular basis. Once patients have been working hard at their program for 12-14 weeks, I like to take a post care film (generally only once) to see how they are progressing. Any needed changes to the treatment plan can be discussed at that time. My personal experience has been similar to what was found in most of the traction studies. Most patients will gain about one degree of lordosis (cervical) per week of faithful traction.

In doing these things, you are communicating several things at once. Patients pick up on the fact that you are a results-oriented office that is willing to go the extra mile. They perceive that the true goal is better health, not just an endless series of expensive office visits to line your pockets. Most importantly, patients begin to realize that health is a continuing responsibility on their part. In the long run, most patients will respect you for helping to invest in them a sense of their own responsibility and for helping them learn how to stay better.

Here are two simple methods of Home Traction that will cover 99 percent of your patients...

The Original Dakota Traction™

The DAKOTA™ traction device provides a simple but effective “compression traction” force by means of a sturdy elastic “bungee” cord attached to a foam fulcrum that supports the patient. “Compression” traction means that force is applied by pressing the head backward and downward to provide a dynamic stretch to the anterior paraspinal tissues.

START GENTLY with just a few ounces of pressure for 2-3 minutes daily. Gradually increase TIME about a minute or two daily working gradually up to 20-30 minutes. Remember...TIME is the most important factor. Once the target time is achieved, traction force can be increased slightly by simply tightening the elastic cord about an inch. Force remains constant from session to session. No weights, no pumps, no hassles.



Dakota Traction is ideal as your “go to” method due to its simplicity and ease of use and will work well on all curve configurations. After nearly three decades it remains the main method used by most of our clients. There are no bells and whistles here. The procedure is simple enough for almost every patient. And with our **volume discounts** (call for details) Dakota Traction remains the best deal out there in the home compression traction market. Yes there are competing products and you will find that a lot of them look suspiciously like our original DAKOTA Traction™, but there’s not a better value anywhere. None.

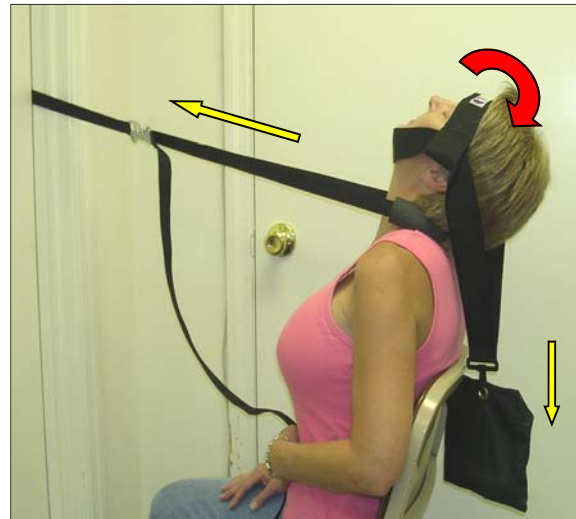
Occasionally you will run into patients who simply don’t tolerate the Dakota unit for one reason or another. This is true with all forms of extension traction, regardless of the manufacturer, and I cover some of the reasons for this in other publications. For now just realize that when this happens you simply need a backup method or two in your bag of tricks. Remember...no patient will stick with a treatment method which is extremely uncomfortable. **Comfort creates compliance.** So, whenever Dakota Traction isn’t well tolerated, my next choice is always...

Compression-Counter stressing Traction

(AKA- "Stynchula Traction")

General: Compression-Counter Stressing Traction (aka the "Stynchula Traction") is another method that has been in use for a very long time now.

This method requires two pieces of equipment: 1) a weighted head harness pulls the head down and backward and 2) a Counter-Stressing Strap is placed behind the neck and is attached into a door frame so as to pull forward into the lordosis. Used in seated position. **The forward pull of the CounterStressing Strap provides supports the neck and prevents overextension of painful facet joints which can be an issue for some patients.** Although slightly more cumbersome to use, Compression Counterstressing traction can provide a comfortable and proven effective alternative to the Dakota traction.



Counterstressing strap anchors into any door frame to pull forward and support the middle neck while weighted harness pulls head downward and back into full extension.

START GENTLY. I generally recommend starting with 2-3 lbs of weight (according to patient tolerance) in the traction harness. Weight is provided using rolled pennies. Three rolls equals approximately 1 lb. Start with 2-3 minutes of traction daily and gradually increase time a minute or two per day, as tolerated, until you reach 20-30 minutes. Remember...TIME is the most important factor. Once the target time is achieved, traction force can be increased slightly by simply adding another roll or two of pennies (again...always staying within the bounds of patient comfort) and continuing to strive toward the 20-30 minute time frame. Force remains constant from session to session.

This method is also good for patients who prefer to remain upright. The upright position also makes it the number one choice for doctors who wish to perform extension traction in their offices. Units are available in both take-home quality and a more durable PRO quality version for daily use in the professional office.

X-TRAC

(Lumbar Extension Traction)

General: Our X TRAC device provides an effective method of combining BOTH extension traction AND lumbar extension exercise to help restore the lumbar lordosis. The device can actually be used in either the seated or supine position, but most of our doctors now prefer the seated method. (see below.) It's just easier to do. This device can be attached into any door frame for home use or to the wall of your rehab suite for IN-Office traction.

Patient is seated while facing the wall/door. The padded strap is placed behind the lower back just above the crest of the hip bone or at the level where the lordosis is most greatly reduced. Once the strap is in place, the patient 1) bends forward and 2) brings the strap to tension by pulling gently on the free end of the webbing.



Once the strap is brought to tension, the patient contracts the lumbar extensors and returns to a full upright position causing the padded strap to pull forward into the lumbar lordosis. Traction force is created by the contraction of the patient's own musculature. Used in this manner the patient is both exercising the lumbar musculature and creating a traction effect. The padded strap is basically functioning as a fulcrum over which the lumbar spine is being extended. With this in mind it is possible for the doctor to more precisely direct force toward the lumbar segments which need it most.

NOTE: In this picture, the patient is sitting on a foam seat wedge. (Our Item # SW-15) which helps to tilt the entire pelvis forward dramatically increasing the lordosis. This is not necessarily mandatory that is the way I have done it for years and it has worked very well. Most of our clients using the X Trac are performing traction in conjunction with the seat wedge as well.

I generally instruct patients to perform 3 sets of 10 repetitions (according to their tolerance), holding each contraction fairly hard for 10 full seconds. Patients can rest a couple of minutes between sets. Once the active contractions are completed, patients should try to remain seated in a full upright position on the wedge until the time for the entire session is approaching 20 minutes. If the patient prefers to traction in the supine position (see right) there is no muscular activity involved and the process is entirely passive. Simply start with 2-3 minutes daily and gradually work up to 20-30 minutes according to the



Straight Talk

In the interest of full disclosure, I need to confess something you've probably already figured out anyway. I certainly don't have all the answers. But unlike the seminar gurus up on the stage, I freely admit it. Over the years, my "batting average" has improved tremendously. I am confident yours will too. Nevertheless you will encounter difficult cases. Chronic and severely degenerated cases, often older patients, will typically present some of your toughest challenges. In spite of what others may teach you, it is my opinion that for the most part these severely degenerated patients simply won't be able to achieve any meaningful degree of correction.

When you encounter these patients, you need to be straight up and tell them when you think it isn't possible to undo decades of damage. They'll appreciate your honesty and you'll sleep better at night. Please don't call me because you are trying to figure out what to say tomorrow morning in your progress report to the 87 year old patient with Phase IV degeneration who has been under intensive care for a year and hasn't made any improvement. *(Yes, I actually get those phone calls)* You should have known better. If you didn't, you do now.

Occasionally you'll also run into a patient who doesn't appear to be badly degenerated but still just won't correct. **Unresponsive cases are most often due to poor patient compliance but it's certainly not always the case.** I've seen cases where occupational factors were undoing our advances faster than we were able to make progress. I've seen cases where the patient was so inactive and deconditioned that all rehab efforts were to no avail. I have seen cases of poor posture complicated by extreme obesity which were impossible to correct. I've seen visual disturbances forcing the patient to orient the head into unnatural postures. And I've seen cases that just failed to correct for reasons unknown. There will always be oddball cases. But if you will work hard at the fundamentals; Stretch, Strengthen and Support, I think you'll find these unresponsive cases to be the exceptions, not the rule.

So let's put these negative few aside for a moment. Yes, they exist, but I'm much more concerned that you begin improving your outcomes with the thousands of more typical patients who come through your door. Many, if not most adults have significant postural imbalances...particularly with the cervical curve. These patients need real help in the way of structural correction or things will almost certainly get worse with time. If what I've covered in this report makes sense then hope you will go ahead and take a first step forward by implementing a good extension traction program. Take your time. And at the risk of being redundant, please **don't try to do everything at once.** Instead, take on one or two new tools or methods then allow yourself to get comfortable with them. Give yourself a little time to become competent with the new tool or strategy and then add another one. Keep learning and growing as you master the basics. I'm confident you'll soon be seeing the best corrections of your career.

I realize I've thrown a lot at you. and I want to thank you for your patience in

reading this far. My whole purpose here at Matlin is to try to keep things simple while still giving you the tools you can put to work immediately. Hopefully I haven't muddied up the waters too badly.

Before I close, I want to reassure you that incorporating a structural approach to chiropractic need not be so technical and difficult as many believe. These techniques have traditionally been taught in seminars with a lot of math and engineering language involved which tends to make a lot of doctors avoid them unnecessarily. This stuff isn't really hard or technical at all, but there is somewhat of a learning curve. That's why I encourage our new clients to take things one step at a time. We'll be here to help when you have questions. I am making a lot of information available in the Best Corrections of Your Career series of reports. Subjects like Posture Analysis, X-Ray Analysis, Rehab, etc. are available if you have an area where you could use a little help. They certainly aren't designed to be complete texts, but simply a way of sharing information. I hope you find them helpful.

Best regards,

Mark R. Payne DC
President- Matlin Mfg. Inc.

References And Suggested Reading

1. Harrison DE, Harrison DD, Janik TJ, Jones EW, Cailliet R, Normand M. Comparison of axial and flexural stresses in lordosis and three buckled modes in the cervical spine. *Clin Biomech* 2001;16:276-284.
2. Harrison DE, Cailliet R, Harrison DD, **Troyanovich SJ**, Harrison SO. A review of the biomechanics of the central nervous system—Part I: Spinal canal deformations resulting from changes in posture. *Journal of Manipulative and Physiological Therapeutics* 1999;22:227-234.
3. Harrison DE, Cailliet R, Harrison DD, **Troyanovich SJ**, Harrison SO. A review of the biomechanics of the central nervous system—Part II: Spinal cord strains from postural loads. *Journal of Manipulative and Physiological Therapeutics* 1999;22:322-332.
4. Harrison DE, Cailliet R, Harrison DD, **Troyanovich SJ**, Harrison SO. A review of the biomechanics of the central nervous system—Part III: Spinal cord stresses from postural loads and their neurologic effects. *Journal of Manipulative and Physiological Therapeutics* 1999;22:399-410.
5. Panjabi MM, Oda T, Crisco JJ III, Dvorak J, Grob D. Posture affects motion coupling patterns of the upper cervical spine. *J Orthop Res* 1993; 11:525-36.
6. Panjabi M, Yamamoto I, Oxland T Crisco JJ III. How does posture affect coupling in the lumbar spine? *Spine* 1989; 14: 10002-11.
7. Cailliet R. Neck and arm pain. Philadelphia, PA. FA Davis, Co. 1981.
8. Pettibon B. Pettibon spinal bio-mechanics. Tacoma, WA. Pettibon Biomechanics Institute, Inc. 1989.
9. Kapandji IA. The physiology of the joints, Volume III: The trunk and the vertebral column. Edinburgh, London, England. Churchill Livingstone. 1974.
10. Pierce V. Results.
11. Sweere J. Chiropractic Family Practice. Gaithersburg, Maryland. Aspen Publishers 1992.
12. Harrison DD, Janik TJ, **Troyanovich SJ**, Holland B. Comparisons of lordotic cervical spine curvatures to a theoretical ideal model of the static sagittal cervical spine. *Spine* 1996;21:667-675.
13. **Troyanovich SJ**, Cailliet R, Janik TJ, Harrison DD, Harrison DE. Radiographic mensuration characteristics of the sagittal lumbar spine from a normal population with a method to synthesize prior studies of lordosis. *Journal of Spinal Disorders* 1997;10:380-386.
14. Harrison DD, Cailliet R, Janik TJ, **Troyanovich SJ**, Holland B. Elliptical modeling of the sagittal lumbar lordosis and segmental rotation angles as a method to discriminate between normal and low back pain subjects. *Journal of Spinal Disorders* 1998;5:430-439.
15. Harrison DE, Harrison DD, **Troyanovich SJ**. Reliability of spinal displacement analysis on plain x-rays: a review of commonly accepted facts and fallacies with implications for chiropractic education and technique. *Journal of Manipulative and Physiological Therapeutics* 1998;21:252-266.
16. **Troyanovich SJ**, Harrison DD, Harrison DE. A review of the validity, reliability and clinical effectiveness of chiropractic methods employed to restore or rehabilitate cervical lordosis. *Chiropractic Technique* 1998;10:1-7.
17. **Troyanovich SJ**, Coleman RR. Origins of the use of mechanical traction for reduction of the chiropractic subluxation. *Chiropractic History*. 2004;24(2):1-10.
18. Pettibon BR, Loomis WP. Bio-mechanical research by Pettibon and associates: No. 7 in a series. *Today's Chiropractic* 1973;October-November.
19. Fisk M. Various types of extension traction. *Chiropractic Biophysics Newsletter*;July 1989:3.
20. Payne MR. A Suggested Clinical Protocol for the Use of Traction/Compression Methods in Chiropractic Biophysics. In: Harrison DD, ed. *Chiropractic: The Physics of Spinal Correction CBP Technique*. Donald D. Harrison 1986 (revised in 1994 and reprinted in 1998).
21. Coleman RR, Hagen JO, **Troyanovich SJ**, Plaugh G. Lateral cervical curve changes in patients receiving chiropractic care after a motor vehicle collision: A retrospective case series. *Journal of Manipulative and Physiological Therapeutics*. 2003;26:352-355.
22. Harrison DD, Jackson BL, **Troyanovich SJ**, Robertson GA, Barker W, DeGeorge D. The efficacy of cervical extension-compression traction combined with diversified manipulation and drop table adjustments in the rehabilitation of cervical lordosis: a pilot study. *Journal of Manipulative and Physiological Therapeutics* 1994;17:454-464.
23. Heyward V. Advanced fitness assessment & exercise prescription. Champaign, IL: Human Kinetics 1998.
24. Troyanovich SJ. Structural rehabilitation of the spine and posture: a practical approach. Huntington Beach, CA: MPA Media 2001.
25. Senzon SA. The Chiropractic Vertebral Subluxation Part 1: Introduction *J. Chir. Humanities*. 2019 April.
26. Leach RA J. *Manip. Physiol Ther.* 1983 Mar, 6(1). 17-23
27. A retrospective consecutive case analysis of pretreatment and comparative static radiological parameters following chiropractic adjustments. Plaugh G, Cremata EE, Phillips RB, J. *Manip. Phys. Ther.* 1990 Nov-Dec; 13(9): 498-506