

A More Complete Chiropractic Model

By Marc Heller, DC

What if our chiropractic model is incomplete? As a profession, we are good at finding and releasing joint restrictions. Many of us are good at finding and releasing soft-tissue restrictions, whether we call them trigger points or use [Nimmo](#), [Active Release](#) or [Graston Technique](#). But what if the main pain generators are joints or structures that have too much "give"? Do we know how to identify the site and direction of excessive "give"? This critical concept is not part of the dominant paradigm of our profession. Yes, we talk about hypermobility vs. hypomobility, but I don't think we practice as if we know the importance of this concept.

This is the fourth and final article in [this rehab series](#).¹⁻³ My goal has been to give you a view of newer concepts, research and, hopefully, tools to start accessing and using these new models. Now let's look at the big picture on rehab concepts as I understand them.

I know that what we do helps lots of patients. I know that when we release joint and myofascial restrictions, we are taking the load off the areas of increased give. However, it may be more effective to identify the area and direction of the increased give and then design a treatment plan to correct this. This involves rehab. It usually takes low-load rehab to increase awareness and recruitment of the muscles that are involved in controlling the give in a specific area.

Perhaps the key question to ask is this: Can the patient safely and smoothly control the motion of their spine? If they can control spinal motion, they are less likely to have a spinal problem and more likely to get over one quickly.

First, a limited bit of history as I understand it. [Janda noted that certain muscles tended to become weak or inhibited and others became short or tight](#). This concept was brought to chiropractors in the U.S. through the Herculean efforts of [Craig Liebensen](#). Others have outlined a model for which types of muscles become inhibited and exactly how that inhibition plays out. The Australian research shows that when the patient has pain, the local stabilizers (such as the transverse abdominals and multifidi) have a timing delay.

Shirley Sahrmann has added to the model, looking at poor motor control as the key concept.⁴ In her overview, she states that ["repeated movements and sustained postures eventually cause a joint to develop a susceptibility to movement in a specific anatomical direction."](#) She identifies her various syndromes based on the joint's directional susceptibility to movement. Her model looks at the painful area in relation to the muscular imbalances that surround it. She states that the key factor that is causing the ongoing pain is movement patterns, so the patient has to learn to change the movement patterns to create real change. Thus, her primary therapy is home exercise therapy.

This model does not name conditions based on pathology. It does name them based on the joints involved, but instead of lumbar strain, or sacroiliac subluxation or dysfunction, the diagnosis describes the aberrant movement pattern. An example would be Sahrman's lumbar rotation with flexion syndrome. She defines the primary dysfunction as "a segment of the lumbar spine [that] moves more easily in the direction of rotation-flexion than other segments of the lumbar spine, the thoracic spine, or the hips." I know that from my chiropractic training, I would tend to look first at the restricted segments, rather than what segment is moving too much.

Comerford, et al., have attempted to further develop a similar model. [They divide muscular function into local stabilizers, global stabilizers and global mobilizers.](#)⁵ They also talk about low-load and high-load training, and how different muscle fibers are affected by these challenges.

The focus of these models is on functional instability. Functional instability does not require extensive pathology, degenerated joints or lax ligaments. All of these can contribute, but all that is required is aberrant-stability muscle function around the joint. One of the big take-home lessons from recent research is this: Any pain will create inhibition of the stabilizer muscles, whether the vastus medialis at the knee or the various low back stabilizers. If a joint is functionally unstable or if there is too much give at a particular joint, how often will adjusting and releasing soft tissue solve the problem? I would predict that we could be more effective if we could identify the joint that is hypermobile when loaded in a particular direction and then train the patient to control that area.

Part of that control will involve freeing adjacent hypomobile joints. Part of that control will be downtraining overactive global mobility muscles, partially through soft-tissue release. The missing link for consistent results in chronic pain may be identifying the site and direction of the aberrant give. When you know where and in what direction the excessive give exists, you know what muscles are not firing appropriately, and you can train them. I am reminded of when I was first exposed to [George Goodheart and the early AK concepts](#). Dr. Goodheart said that it's not the tight muscles, it's the weak muscles. This model has a different way of assessing and correcting weakness and inhibition, but a similar conclusion.

I'll give a couple of classic examples. One is the patient who bends forward and hurts their lumbar spine. This is failure of control of lumbar flexion. The whole core is not working properly. Specifically, the stabilizer components of the lumbar extensors (the multifidi and spinalis) are not working effectively. Teaching the patient to control this motion is one of the most powerful ways to influence this chronic pattern. Don't forget to look at the rotational component as well. This training strategy will both help control pain and reduce recurrence.

Here is another example that is less understood. The close-packed, stable position of the SI joint is a relatively posterior tilt of ilium on the sacrum. This is form closure, and the

joint itself is more stable. An ilium that is rotated forward, an anterior superior ilium, is inherently less stable.

What happens when the patient overfires their erector spinae (global mobilizers), rather than using their more medial spinalis and multifidi (local and global stabilizers)? The erector spinae attach to the ilium. When they activate, they create an anterior tilt of the ilium on the sacrum, thus moving the SI toward instability. If the patient can be trained to use their more medial, deep stabilizers, what happens? The spinalis and multifidi don't attach to the ilium, but attach to the sacrum. These muscles pull the spine into lordosis and thus tip the sacral base forward (nutation). This nutation of the sacrum on the ilium creates the opposite effect that the erector spinae do. As the sacral base goes forward, it helps lock the SI joint. (The sacral base going forward, while the ilium is still, functionally creates a posterior tilt of the ilium)

How many of us see patients who, no matter how well we adjust their SI and no matter how many times we block them, return with the SI "out" again? These patients need basic lumbar and pelvic stabilization by learning to use their key muscles more efficiently.

I always try to make these articles practical. For this one, let me finish with a simple tip. Teach your patients to find neutral in their lumbar spine (and the whole spine, actually). It's simple and can be taught in multiple positions, including standing, supine, sitting and quadruped. Ask the patient to fully flex and then fully extend their lumbar spine, while paying attention. Then ask them to find the neutral position. Neutral is not just a theoretical construct. It's a comfortable place between the end ranges. Many patients are stuck at the extremes. Examples include the patient who stands in extension, resting on their ligaments and the patient who sits flexed, in a slump posture. Once the patient has found neutral, have them start any exercise they are doing in this position. First find neutral, then do the low back exercise. It's deceptively simple.

The purpose of this article and [this whole series](#) is to get you to look at your chronic pain patients with a new eye.¹⁻³ Don't look just at restricted joints and tight muscles, but assess for where excessive and aberrant movement is occurring. Then teach the patient how to use their own musculature to control this motion and motivate them to do this accurately and efficiently. If you can do this, you will empower more patients and help some of your toughest cases.

References

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