



CHIROPRACTIC TECHNIQUES

# More Solutions for TL Fixations & Nerve Irritation

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I thought I was finished with this series on the [thoracolumbar junction](#)<sup>1</sup> and its nerves, but then I discovered a few more significant solutions. Whenever we see a recurrent spinal fixation or an ongoing irritated peripheral nerve, what can we do / what can the patient do to help release it?

I always recognize that pain inhibits muscles and that the core muscles tend to shut down or misfire in the presence of lasting pain. Standard rehab models can help, but may be incomplete. Wake up the core. Teach the patient to mobilize their thoracic spine. Attend to the position of the diaphragm.

### Self-Mobilization Exercises for TL Fixations: Side-Bending

For the TL fixations, I suggest two specific self-mobilization exercises. These are variations on the McKenzie standing side-bend. As always, I like to have the patient do these *before* mobilization and/or manipulation, to enhance compliance and to motivate the patient.

First, find the tender points; ideally, find a provocation motion that reproduces the pain. Then have them do the exercise, and recheck your functional and tenderness indicators. If they have changed, point out the change to the patient: "You fixed yourself. Good job. Keep doing this frequently until the tenderness is gone; until you can move with ease."

The first exercise is applied to joints that resist extension and lateral bending; joints that are tender over the lateral side of the spinous process. In the TL, these tend to go from the mid thoracics down to L1. I've made a [YouTube video](#) of this exercise<sup>2</sup> and the handout is also available on my website. This side-bending exercise involves bending *toward* the side of restriction.



These fixations tend to correlate with the more lateral tender points just below the iliac crest, the T10-11 nerves, and the iliohypogastric nerves.

For the fixations that are a little lower, in the upper lumbar, the fixation pattern tends to be different. For these, you need to get inferior and push superior to find with palpation. These vertebrae, especially L2 and L3, are near the apex of the lumbar lordosis, and tend to resist flexion, lateral bending and rotation away.

The tender point for these is more medial; Maigne's original point just below the iliac crest, about 7-8 cm lateral to the midline, the superior cluneal nerve. As these need mobilization into flexion and lateral bending, I suggest a [different variation](#) on the side-bending exercise:<sup>3</sup> bending *away* from the side of pain and dysfunction.

#### A New Way to Relieve Nerve Pain

Can we figure out how to most effectively decrease irritation of the nerves? I have used Graston and fascial manipulation; I've used Barral-style subtle fascial and nerve mobilization work. Any way you can rub the surface, I have tried - without consistent results. I've tried dextrose cream and I've tried laser, with mixed results. Frustration!

Some of these patients responded dramatically to perineural injection therapy. In hindsight, after using the "yank away pain" (YAP) model, I wonder if the perineural injections have a mechanical, as well as a biochemical effect. Do these subcutaneous injections free up or float the nerves?

What if, instead of pushing on the nerves, we need to pull and then move? What if compression is just not the right direction? What if we need to lift the affected area of the skin, superficial fascia and nerves, and simultaneously glide the nerves?

YAP proposes that rather than using pressure over these painful points of nerve compression or tension, perhaps a more effective strategy would be to lift tissues and create space around the irritated nerves. Is this why the gentle neurosensory application of kinesiology tape works?

Drs. Phillip Snell and Justin Dean came up with the YAP model, which starts with the hypothesis that sensitized neurology drives motor behavior. We see this at the nerve root with a classic antalgic posture from patients with lumbar radiculopathy; and at the peripheral level in tightening hamstrings as the body seeks to reduce tension or compression on the sciatic nerve. At the superficial neurology scale, this can be seen in the [emerging literature](#) on so-called "tunnel syndromes" for larger cutaneous nerves like the superior cluneal nerves in low back pain.<sup>4</sup> We also see that the altered motor behavior can drive many of the joint fixations that interest chiropractors.

Let's explore addressing Maigne syndrome with the YAP model. Common offenders include the subcostal nerves, superior cluneal nerves, iliohypogastric nerves, lateral femoral cutaneous nerves and the ilioinguinal nerves. A review of the pathway of these nerves in the abdominal wall from T12-L2 to the groin is worthwhile.

With an apology to vegetarian readers, imagine bacon or pork belly for a moment and realize the human abdominal region is also layers of muscle (transversus abdominus, internal / external obliques, and rectus) separated by an adipose and fascial layer. In this space between the muscles, the above-mentioned neurology courses around the flank, traveling between two muscle layers and then abruptly changing course 90 degrees to move superficially to the next layer.

As the nerves continue to the skin of the flank and groin, each of these points-of-direction-change offers a potential mechanical interface dysfunction - a snag, if you will, in the nerves' ability to freely glide through those tissues.

Several theories are being investigated about how this interface dysfunction in small nerves might lead to sensitization of the nerve and resultant neuropathic pain. Drs. Snell and Dean's basic proposal; Stop pressing on the nerves. Instead, lift them and create space around the irritated nerves.

We can do this manually using fingers and hands or perhaps use a silicon massage cup to lift the involved areas. While that traction is maintained, the patient is encouraged to move the involved area to "floss" the nerves through the probable compression sites.

The theory is that improving the perfusion of the nerve and restoring axoplasmic flow is the mechanism for the quick pain relief seen when addressing the YAP points. Once the patient has pain-free movement, the door opens for rehab exercise without pain interfering with the motor pattern. A brief case study of how this process might work in an elite athlete can be found on this [open-source link](#).<sup>5</sup>

## References

1. Heller M. Articles published for his *Dynamic Chiropractic* column on the thoracolumbar (TL) junction. Visit <http://sosas.us/professional-resources/articles-2/> and click on "thoraco-lumbar junction."
2. Side-Bending Toward the Side of Stiffness. YouTube video.
3. Side-Bending Away to Release L2-3. YouTube video.
4. Snell P. "Newly Considered Tissue May Be Involved in Chronic Low Back Pain."
5. "Case Study: Management of a Chinese Olympic Weightlifting World Champion."

