Thoracolumbar Junction Responsible for 40% of Low Back Pain

By Joseph D. Kurnik, DC

The thoracolumbar junction syndrome, also known as Maigne’s syndrome, has been thought to be responsible for up to 40 percent of common low back pain. This percentage is based upon R. Maigne’s personal statistical study of 500 cases. This may not represent a purely scientific study, but it is the observation of a respected practitioner. It is also a fairly awesome statement—when considered in relation to the emphasis chiropractors place upon lower lumbar and sacroiliac adjusting and segmental traction procedures.

I would consider the "40 percent" statement as being conservative. In my experience, I have seen the thoracolumbar region responsible or a contributor to well over half of sacroiliac dysfunction and/or common low back pain. As a result of these observations, I increasingly begin treatment of low back pain with thoracolumbar adjusting.

Volumes can be written and discussed concerning this subject. To keep matters brief, I would like to define the thoracolumbar region. Technically, it would be defined as the thoracolumbar junction. I have seen practitioners enlarge this to include T-10/11 throughout L-1/2, as we are dealing with an approximate region. The posterior rami of the T-12 and L-1 nerve roots innervate the superior gluteal regions and the inferior subcutaneous tissues. The anterior rami innervate the inferior abdomen and groin. A lateral cutaneous branch innervates the trochanteric region. Texts of anatomy, however, show many variations of innervation to these regions, which include roots from higher than T-12 and lower than L-1.

Aside from the subject of nerve roots, my most common finding of segmental fixations from T-10 through L-2 is the formation of bilateral or unilateral fixation of the sacroiliac joints. This can be evaluated and confirmed with seated and standing SI joint motion palpation. It is most common to find SI joint fixations released to some degree or completely with TLJ adjusting. This adjusting may partially or completely clear the subjective symptoms of discomfort. Other contributors to the low back complaints and SI joint dysfunction are:

- lower lumbar dysfunction/problems;
- mid and upper thoracic dysfunction/problems;
• cervical dysfunction/problems;
• extremities dysfunction/problems;
• the SI joints dysfunction/problems; and
• soft tissue reactions dysfunction/problems.

The simplest visual test of the results of treatment to any of these regions is to utilize seated and standing motion palpation analysis of the SI joints. Understanding the principles of nutation and counternutation in relation to stabilization of the lumbar spine would help in understanding all of these relationships.

In previous articles for *Dynamic Chiropractic* I have presented the processes of SI joint dysfunction, leading to soft tissue reactions, contributing to:

1. low back pain
2. gluteal complaints
3. groin complaints
4. hip complaints
5. ischial complaints
6. hamstring/quadricep complaints
7. knee complaints

The most common deficiency of all articles, tests, and seminars dealing with this subject is the treatment by adjusting to the thoracolumbar region. It is a difficult region to adjust. With low back and lower extremity complaints in the presence of SI joint dysfunction, I commonly initiate adjustive procedures by adjusting to the dysfunctions (fixations) at the thoracolumbar region. The method of locating the fixations is by utilizing seated and prone motion palpation. Prone motion analysis is the main key to locating these fixations.

The most successful and useful technique of adjusting for the TL region has been the incline adjustment. I can treat 80 percent or more of my patients most effectively with TL region adjusting by utilizing the incline bench. It solves the problem of tissue slack removal, rotational complaints, and painful prone adjusting in this region. It eliminates the problems with extension imbrication of the TL facet joints. The process involves utilization of a standard adjusting bench, where the caudal half elevates to 45-50. (The patient straddles the bench; buttocks against the incline; hands usually interclapsed behind the mid-to-lower neck; with elbows forward. The doctor flexes the torso forward mildly, places his or her fist or hand behind the
back, over or under the TL fixation; then pushes the flexed patient back to the incline section and pushes the patient in the anterior to posterior direction, with the vector force directed at the contact point in back. This creates a P to A force upon the selected segment or a fixated intersegmental space. This adjustment can be applied to higher thoracic levels, and I have even reached the L-4 level on some. In order to emphasize rotation, I slightly rotate the patient’s torso and position my fist slightly laterally to one side or other. I place a folded hand towel over my hand in order to soften the bony contact.

This adjustment works wonderfully with most patients, but other techniques also may need to be used instead. For example, people with too much flexibility or too little flexibility may not be suitable for this procedure.

It is exciting to use this type of adjustive procedure and pre-analysis and watch the results of mobilization to the TL region. If this procedure is used properly, you will see your treatment successes improve. It will decrease, also, your total or heavy reliance upon treating the low back and lower extremities exclusively with low back adjusting and traction. Very often, traction or specific low back adjusting may not be needed, or they must by supplemented with TL adjusting. This TL adjustive procedure also works very well in treating pregnant women who have TL or low back pain. As a classic ’70s TV commercial said, "Try it, you’ll like it!"

Joseph. Kurnik,DC

Torrance, CA

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**Dr. Joseph Kurnik** practices in Torrance, Calif. He is a former columnist and longtime contributor to *DC*; previous articles are available online at [www.dynamicchiropractic.com](http://www.dynamicchiropractic.com).