

Lumbar Lordosis Versus the AS Ilium Fixation

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With regard to the lumbar lordosis, compression to the facet joints and posterior disc is created through lordosis. A lot of lordosis results in a lot of compression. The body counteracts this process by bringing up one or both ilia into the AS fixed position. In the beginning, it is a muscular fixation. As time progresses, it can evolve into the true articular fixation. The right side most often and readily achieves the articular fixation stage; with hyperlordosis, the left side may also achieve the status of a true articular fixation.

Emotional tension can play a big role in this process. Keep in mind that rotation of L-5 and L-4 (most commonly) do evoke the compensatory AS ilium fixation positions. Emotional tension causes increased compression of the lumbar facet joints and posterior disc fibers. This is a common concept. When muscles become tensed and contracted due to emotional tension or other causes, they shorten. As they shorten, they cause compression of the crossed or underlying joints. The body counteracts this tension and resulting facet and disc compression by causing one or both ilia to assume the AS fixed position.

Recall from my previous articles or descriptions (Kurnik J. *The Connection*, 1998) that correcting the AS ilium fixation is achieved through counternutation. This process is described in Kapandji's *Physiology of the Joints, Vol. 3*. The sacral base moves posteriorly and superiorly, while one or both ilia move oppositely, superiorly and anteriorly, with the PSIS as the point of reference.

There are three basic AS ilium fixation patterns. The bilateral AS ilium fixation is the most commonly encountered pattern for the hyperlordotic lumbar spine, especially with an overlay of emotional tension. The other important and common contributor to the AS ilium fixation patterns is the L-5 rotation pattern, followed less frequently by the L-4 rotation pattern. This rotation pattern is: L-5 spinous seeking the right; body rotation left; right TP seeking the anterior; left TP seeking the posterior. This can often be observed visually and with static palpation, but the most important determination is motion palpation. Motion palpation is a tissue tension challenge. It is most easily seen or discovered in the prone position, but the seated position also is revealing. I have previously labeled this as the seeking phenomenon, which is one of the body's basic mechanical patterns. In this case, it corresponds with the seeking patterns of the ilia, where the left ilium seeks the PI and the right ilium seeks the AS direction. Understanding the role of the iliolumbar ligaments is helpful in understanding the relationship between L-5, L-4 and the ilia.

In the case of L-5 or L-4 spinous right motion, instability or dangerous tissue stress is created at that level. One or both ilia assume the AS fixated position, bringing the sacral base backwards through the process of counternutation, correcting a less stressful and more stable sacral base position, and reducing extension (and lordosis) at that level.

With reference to practice management, the hyperlordotic lumbar spine presents with several considerations. If low back discomfort is present, one should evaluate the rotation patterns of L-5 and L-4 most cautiously, although other segmental problems may influence the situation. However, I am

speaking of the norm and most usual problems and considerations. Motion and visual analysis of the bilateral SI joints is also necessary. As previously stated, bilateral AS ilium fixation patterns with an L-5 spinous-seeking right rotation pattern usually will exist.

Adjusting the L-5 segment free rotation restoration by contacting L-5 on the left side during the thrust will force the ilium fixations. However, after repeated treatments the AS fixations may return, even after your treatments for L-5 rotation fixation dysfunctions. Also, you may begin encountering failure in your efforts to induce an L-5 adjustment. This is because the rotation dysfunction has been corrected. The body is reacting to the lordosis (possibly with emotional tension) by correcting the AS fixation patterns, bringing the sacral base backwards and reducing lumbosacral extension stress (counternutation). If low back pain is still present you can enlist other procedures, such as:

1. Flexion traction: You have been taught to administer traction by contacting the spinous process and tractioning in the cephalad direction. If this creates soreness to the patient, an often successful alternative is to contact the sacral base with one hand and traction inferiorly or caudally as the other hand depresses the traction table.
2. Knee-to-chest stretching exercises (by the patient).
3. Knee-to-chest stretching (by the doctor). The doctor simultaneously contacts the sacrum and tractions caudally and superiorly in an arc form.
4. Electrostim, massage, and ultrasound to compensating or overstressed gluteal and hip muscles. As previously described in other referenced articles, with the AS fixation, hip flexors and extensors can become over-stressed and symptomatic.

With traction of the L/S joint, you should notice an improvement in symptoms and in the movement of the ilia. If the bilateral AS fixation has endured long enough, treatment to L-5 may not be enough to solve the problems. If true articular AS fixations have occurred; then they have to be adjusted also. One must be flexible and understanding of the different patterns and principles involved. There is no single way to approach these problems. A common finding with the symptomatic hyperlordotic lumbar curve with bilateral AS fixations and L-5 rotation is as follows: An attempt to adjust L-5 is unsuccessful or the setup is uncomfortable to the doctor. This will often signal the need to abandon the L-5 correction and to directly adjust the right ilium as an AS fixation. Interestingly this will often bring a release to both fixated AS ilia. With a severe and long-standing problem, the left AS ilium may need to be corrected with a direct contact on the left ilium. Proceed with caution. Directly adjusting the left AS ilium can and often will exacerbate or create radicular signs. In adjusting the left AS ilium fixation, the left iliolumbar ligament pulls the left side of L-5 posteriorly, magnifying the seeking pattern. The seeking pattern of L-5 is to seek the posterior direction on the left, creating instability and the compensating AS fixation patterns. This is why I advocate caution in adjusting the left AS fixation. If it must be done, try to take a simultaneous L-5 and ilium contact so that L-5 is adjusted on the left side simultaneous with the ilium.

It may be the reaction of most readers of this article to question the validity of the "seeking patterns" to L-4, L-5 and the ilia as explained. You may gauge the accuracy of what was presented by testing for seeking and fixation patterns yourself. To do so means that you must entertain the following

procedures, which take little time when skilled performance is realized:

- visual analysis (prone and sitting);
- static palpation analysis (prone and sitting);
- motion challenging and analysis (prone, sitting, and standing).

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