

Thoracic, Lumbar, Sacroiliac and Hip Joint Relationships

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Mechanical and functional examination of the spine and sacroiliac joints can be approached in the following ways:

1. static palpation
2. motion palpation
3. visual analysis
4. x-rays
5. instrumentation
6. other methods

I use the first four methods on the list, with most emphasis on the first three methods of analysis.

If the patient presents with low back and/or hip complaints, I follow these procedures:

1. standing ranges of motion;
2. deep tendon reflex testing, if motion/sensory signs are present;
3. dermatome testing if motor/sensory signs are present;
4. seated motion, static, and visual examination of the SI joints and spine;
5. prone motion, static, and visual examination of the SI joints and spine;
6. hip joint examination if hip complaints are present.

In the examination of the lumbar spine in the seated position, it is often difficult to test the mid-to-upper lumbar spine. Often, it may appear to be normal or hypermobile in movement, especially in extension. If, however, the patient is examined prone, the mid-to-upper lumbar and lower thoracic regions take on a different appearance. Unsuspectingly, mid-to-upper lumbar and lower thoracic problems may emerge.

Exerting posterior to anterior pressure at consecutive segments from L-5 to T-12 most often reveals a hypomobile (fixation) region. The usual levels of fixation are L-2, L-1, and T-12. Among these, L-1/L-2 is most often hypomobile in the posterior to anterior direction. It is often coupled with rotation spinous right and a right lateral flexion hypomobile dysfunction. Again, this fixation region is easy to miss with the patient seated, because of the overall give of the lumbar spine.

The effect of the upper lumbar or lower thoracic extension fixation (in possible combination with other thoracic extension fixations) is increased L-5/S-1 stress. This is caused by reactive compensatory increased extension; a spinous right rotation pattern may also be palpable. If you miss the upper lumbar problem, you could easily be led to believe that this was solely an L-5/S-1 problem. The reaction to the L-5/S-1 stress can be a unilateral or bilateral AS fixation, involving counter-nutation and lumbosacral stabilization. Attempts to adjust L-5 or either ilium may be met with no success, or mild joint releases and relief of symptoms. If, however, the upper lumbar extension fixation is released; then the L-5/S-1 fixation and both AS ilium fixations may spontaneously clear.

There may be one or two other thoracic extension (with coupled rotation and lateral bending disorders) fixations contributing similarly and simultaneously to the L-5 and sacroiliac disorders. In other cases, adjusting the upper lumbar and thoracic dysfunctions will partially clear the L-5 and SI joint fixations, and an L-5 correction (due to a secondary L-5 fixation) will be required to release completely the remaining SI joint AS dysfunction. The L-5 correction may involve an adjustment and/or flexion traction.

There is a relationship of the upper lumbar or lower thoracic dysfunction to hip joint problems. It may be neurological or secondary to overstress from the loss of sacroiliac motion. With the AS fixation the hip joint is the only source of locomotion during hip flexion. With normal SI joint function, there is coordinated hip and SI motion during hip flexion. With the loss of ilium motion in the PI direction, there is increased wear and tear in the hip joint proper, because it is the only joint being used in that area during hip flexion. This process also may lead to gluteal, quadricep, hamstring, groin, and knee disorders.

Correction of the upper lumbar disorder can be accomplished according to the technique utilized. Keep in mind that an L-5 dysfunction with a probable LP listing may be present, as well as the upper lumbar problem. It is easiest and most successful to vary the techniques for correction of each level.

To attempt a side-posture correction at L-1 and L-5 is more difficult than doing an incline adjustment at L-1 and a side posture at L-5. I use a specially constructed incline table (similar to the Pettibon style) to do most lower thoracic and upper lumbar adjustments. It is usually an easier and more effective way to adjust the extension restrictions at the lower thoracic and upper lumbar. Supine corrections may be used, but this is more difficult than seated incline adjusting. Prone adjusting at these levels is met usually with patient resistance and anxiety. In the seated incline style, you may also slightly flex the region to be adjusted, especially if inflamed, in order to slightly disengage the facet joints and make an easier correction.

Try monitoring the SI joints yourself with static and motion palpation, pre- and postadjusting to

upper lumbar and/or lower thoracic fixations. You may be surprised to see improvement in SI joint functioning with your upper lumbar and lower thoracic corrections.

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