

Sacroiliac and Hip-Joint Function in Relation to Spinal Traction or Manipulation

Joseph D. Kurnik, DC

Sacroiliac motion mainly involves movement of the ilia anteriorly and superiorly, and posteriorly and inferiorly. The process occurs during the processes of [nutations](#) and [counternutations](#) of the sacrum. Nutation is the motion of the sacral base anteriorly while the ilium moves posteriorly and inferiorly, with the PSIS as the point of reference during hip flexion. Counternutation is the motion of the sacral base posteriorly while the PSIS moves anteriorly and superiorly during forward flexion of the lumbar region during sitting or standing.

The process of counternutation, the sacral base moving posteriorly with the ilia moving anteriorly and superiorly, is associated with protection of the lower lumbar spine. The sacral base posterior motion has a decompression effect upon the lower lumbar facets and posterior disc fibers. It also opens the lateral and central canals, as it occurs during flexion traction or spinal decompression traction.

This being the case, adjusting of the sacroiliac joints for AS fixation can be undermining the body's natural defense mechanism. In cases of trauma or long-standing compensatory AS fixation following counternutation, it can be a necessary procedure. In cases of disc or facet pathology, or acute mechanical compression, the release of an SI joint AS (anterior-superior) ilium sacroiliac fixation by forceful adjustment will result in sacral nutation (sacral base anterior motion) and destabilization of the lower lumbar spine.

You must also consider the possibility of the AS ilium fixation as a compensatory process. This is especially true with complaints of lumbosacral discomfort, sciatica, [spinal stenosis](#) and DJD of the lumbar spine. Another important consideration is thoracic round-back syndrome, which increases lumbar and cervical lordosis.

Increased lordosis will result in increased lumbar and cervical extension and resultant posterior compression stress and stenosis, ultimately leading to more rapid DJD. The lumbar spine's answer is sacral counternutation with sacral base motion posteriorly and PSIS / ilium motion anterior and superiorly. Consider the consequences of breaking this fixation process with a forceful adjustment. It can and may be done, but with discretion and timing.

Experience and observation have shown that in the presence of an AS compensatory SI fixation, a forceful AS ilium adjustment may not change the fixation. That is, during motion palpation analysis and observation, the AS fixation pattern will not change even after a forceful or "non-forceful" manual or instrument adjustment because the lumbar pathology or stress is still present.

Other means may be used to release the AS ilium fixation compensation. This is especially true on the right side. The [AS ilium fixation](#), involving a posterior sacral base fixation with anterior ilium or ilia fixation(s), can be released by proper adjusting of the thoracic spine. This reference is to mechanical extension fixations primarily (can be involving rotation and lateral bending) of the thoracic spine. Rib fixations (blocked motion, hypomobility) also may cause AS ilium fixation, especially on the right side.

When you perform motion analysis and find AS fixation on one or both sides (if one side, the right side especially); and when you have properly released thoracic (or upper lumbar) fixations; and you may have adjusted the AS ilia; and the fixation persists upon motion analysis; then there is another consideration. The consideration is the reaction to lumbar compression stress. Recall that the reaction to compression stress is counternutation with AS ilium motion. With compression stress, the processes of adaptation must occur. If the thoracic liberation by adjustment did not result in AS fixation release and the direct AS adjustment did not result in AS fixation release; then it is necessary to consider another approach. That approach is decompression of the lumbar spine. The tools are:

- Flexion traction
- Lumbar contacts - traditional
- Sacral contacts - nontraditional. Sacral contact flexion traction is the use of leverage with the contact on the lower- to mid-sacral region (very effective)
- Decompression traction with the use of a spine pulley system

Any one of the above has resulted in the release of stubborn AS fixation patterns on one or both sides. Usually, the stubborn issue is the right side; in other words, the right AS ilium fixation is the side or problem of mechanical failure, ultimately released through decompression traction (flexion traction or pulley system). I mostly use a pulley system which is computerized, but flexion traction may be combined or work better in some cases. This is another complicated subject. Consider that, in the end, if you motion palpate the ilia during hip flexion standing, and there is posterior/inferior PSIS motion, then the protective mechanism is not in effect and you know that the right thing has been done.

How does this process (or processes) relate to [the hip joint](#)? Just consider the AS ilium fixation during hip flexion while standing. If the ilium does not rock backward (posteriorly / inferiorly) during hip flexion in the standing position, then increased stress is placed upon the hip joints proper (acetabulum-femoral junction). The hip joint has to assume compensatory increased motion when the ilium does not assume posterior / inferior motion due to an AS ilium fixation. In time, this will lead to excessive wear and tear in the acetabulum.

Without exception, the patients I see with acetabular degeneration also possess AS ilium fixations. Relief of acetabular stress will occur with the release of the AS ilium fixation. If excessive damage has been done in the acetabular cavity, surgery may be a necessity. However, in such cases, release of the AS fixation can bring relief.

Additionally, contributors to AS fixation on the left side can be upper cervical fixations (occiput/C1, C1/2, C2/3) on either left or right sides. Right-sided AS fixations may be related to right-sided occipital fixation complexes in some cases.

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