

PELVIC DYNAMICS AND THE SUBLUXATION OF THE SACRAL AXIS AT S3

The mechanics of idiopathic low back pain syndrome are described as a reversible biomechanical lesion of the sacroiliac joints. Treatment is by a precise manual correction. This is the only integrated scientific and critical analysis of the sacroiliac joint, its anatomy, structure, movement, function, kinesiology and biomechanics to include function during normal gait, the pathomechanics of the S3 subluxation and their ramifications, the evaluation and management of the problem, and the supportive research. It is the product of a personal investigation into the cause of idiopathic low back pain by the author in 38 years of clinical practice, and the analysis and treatment of over 8,000 cases. It is now available on a CD-ROM in a PowerPoint program with 633 slides after over nine years in development.

Over 150 illustrations serve to guide the viewer through the somewhat complex mechanics involved. This course describes many subtle details seldom addressed that are critical to the comprehension of the functional biomechanics and pathomechanics of the SIJs and the appropriate treatment of low back pain.

Anatomical details include:

- The relevance of the variations in the structural angulations of the joint surfaces.
- The function and loading sequence of the primary ligamentous support.
- The mechanics of balanced bracing, the interdependent force couples and the force-dependent axis of rotation.

Several different types of movement occur in the joint and include:

- Movement of the sacrum on the sacral axis. (Not a sacroiliac axis)
- How the asymmetric innominate movement positions the sacrum to flex laterally and establish a transient oblique axis of rotation, with little or no movement of one joint surface on the other.
- Sacral movement that occurs on the transient oblique axis and drives trunk rotation during normal gait.
- Movement of the innominates on the sacrum on an acetabular axis that occurs with the sudden pathological release of self-bracing and results in a subluxation at the S3 segment of the SIJ.
- Secondary movements of the innominates on the sacrum on a pathological axis of rotation following subluxation at the S3 segment.

A detailed analysis of normal gait describes:

- Accelerometer vectors, sacral oscillation and rhythmic sacrocranial vertebral oscillation.
- How the lower fibers of the gluteus maximus work with the piriformis to control sacral oscillation and function as prime movers of the sacroiliac joint.
- How the gluteus maximus, the hamstrings and the gastrocnemius muscles work together during gait to decrease impact loading on the contra lateral side.
- How rhythmic sacrocranial vertebral oscillation supports the function of the iliopsoas muscle and how the contra lateral multifidus and quadratus lumborum stabilize the spine to also support the function of the psoas muscle.

Conditions associated with pathology:

- The asymmetric pelvis, changes in apparent leg length and changes in gait.
- Rents in the joint capsule with leakage of synovia to nerve roots and into the body of the psoas.
- Strain of the short and long posterior sacroiliac ligaments.
- Separation of the origins of the gluteus maximus, the iliacus and the piriformis muscles.
- Positional inhibition of various muscles. Tendinitis of the biceps femoris.
- The functional hallux limitus.
- Pain in the ITB and into the lateral capsule of the knee with strain of the tibio-fibular ligaments.
- Stress of the pelvic diaphragm.
- Pain in the pubic symphysis with vertical shearing.
- Loosening of the iliolumbar ligaments causing instability of L4,5-S1 with increased shear and torsion shear to the disks.

Management includes non-manipulative manual corrective procedures, modalities, supports and invasive procedures. At least 75-85% of all patients with low back pain can be essentially free of pain within ten minutes with complete correction of this commonly overlooked dysfunction. The CD Dynamics Program also includes sections on the Disk, some Sports Applications, Biotensegrity, the Failure rate of commonly used testing and Measurement.

This CD-ROM also includes an 18" filmstrip demonstrating corrective exercises, an archive of articles by the author in full text as well as a printable home management program. It is for sale at \$499.00 (US funds only), check or money order or online through www.thelowback.com. Bulk student discounts are available.