

1. Examine the frequency of pelvic obliquities in acute low back pain (ALBP) patients vs. normal (NLB).

## **RADIOLOGICAL ASSESSMENT OF THE SI JOINT IN LOW BACK PAIN PATIENTS**

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**Introduction:** Low back pain is a frequent occurrence and sacroiliac joint dysfunction may be an unsuspecting cause of low back pain. Prior research has examined the concept of pelvic loosening and sacroiliac joint hypermobility in response to trauma, postural habits, occupation, and/or inflammation. The purpose of this study was to investigate the frequency of pelvic obliquities in acute low back pain (ALBP) patients vs. those with no prior low back history of injury (NLB).

**Methodology:** 20 orthopedic patients (10 ALBP and 10 NLB) were randomly selected and utilized in this study. Each subject was examined by a physician, underwent radiological studies of their lumbar and pelvic region, and then received a physical therapy back/SIJ evaluation (Hesch Method). Data collected included examination of the lumbar and pelvic radiographs specifically alignment and height differences of the iliac crest-sacral ala (ISA), obturator foramina (OB), and symphysis pubis (SP). In addition, any bony sclerotic changes in the joint were recorded.

**Results:** Analysis of the data revealed that 70% of ALBP patients demonstrated ISA obliquities vs. 50% of NLB; 50% of ALBP vs. 20% of NLB demonstrated obturator foraminal height differences; and 30% of ALBP vs. 20% NLB patients demonstrated symphysis pubis height differences. In addition, 60% of ALBP patients demonstrated ISA and SP alignment changes on the same side whereas the NLB demonstrated the ISA-SP differences on opposite sides. Lastly, 80% of the ALBP group demonstrated sclerotic changes vs. 30% of the NLB group.

**Discussion:** The data indicates that ALBP patients have a higher frequency of pelvic loosening, SIJ hypermobility, and sclerotic changes than the normal population. Often the level of SIJ involvement goes unnoticed and therefore, untreated. Clinicians should consider pelvic-sacral mobility, stability, and involvement when encountering a low back pain patient.

**Future Studies** should investigate a larger population, compare physical findings vs. radiological findings, and examine SI Joint width discrepancies.