

## **EVIDENCE OF PELVIC FLOOR MUSCLE DYSFUNCTION IN SUBJECTS WITH CHRONIC SACRO-ILIAC JOINT PAIN SYNDROME.**

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### **INTRODUCTION**

The stability of the sacro-iliac joint (SIJ) is provided by its boney configuration (form closure) and the local muscle forces acting on the ligaments and fascia to compress the joint (force closure). The muscles postulated to provide force closure are the deep abdominals, the gluteals, lumbar multifidus and the pelvic floor muscles. To date specific muscle dysfunction has only been reported in the transversus abdominus and lumbar multifidus muscles in Chronic Low Back Pain. The purpose of this study was to investigate the function of the pelvic floor muscles in subjects with chronic SIJ pain syndrome.

### **METHODS**

Subjects with chronic SIJ pain syndrome, that is, pain over the SIJ with joint line tenderness; positive pain provocation tests and positive active straight leg raise (ASLR) that was eased with pelvic compression, were matched with controls.

Real time ultrasound was employed to assess pelvic floor movement. The bladder neck was used as a reference point to assess movement of the pelvic floor during a pelvic floor contraction (PFC) and then in combination with ASLR with and without SIJ compression.

### **RESULTS**

Subjects with SIJ pain syndrome were significantly different in their activation of the pelvic floor muscles during PFC, and PFC with ASLR, in comparison to controls. Augmenting force closure, by applying manual compression through the ilia homogenized the groups.

### **CONCLUSION**

It is hypothesized that these findings represent dysfunction of PFM which may cause a deficit in the force closure mechanism of the SIJ in chronic SIJ pain syndrome patients. These findings have implications for the specific exercise rehabilitation of subjects with chronic SIJ pain syndrome.