

ADDUCTOR STRAINS

A fresh soft tissue perspective

The new sports special interest group has been working in conjunction with Sports Medicine Australia to broaden the awareness of the role of soft tissue therapy in sports medicine and Victorian based Soft Tissue Therapist Stuart Hinds presented a workshop title

“Soft tissue therapy treatment for restricted internal rotation of the hip in post acute adductor strains”

At the **2003 Australian Conference of Science and Medicine in Sport**, held at the National Convention Center, Canberra.

The purpose of the workshop presentation was to demonstrate the ability of soft tissue therapy to increase ROM and thus increase function through the flexibility component.

The presentation was based on the results found from preseason player screening protocols at the Geelong Football Club over the last 3 years, where Stuart is employed as a soft tissue therapist. The screenings are a series of 14 flexibility tests of the major muscle groups involved in locomotion for the AFL athlete (Musculoskeletal screening protocols for the possible risk factors in the lower extremities at the elite AFL level` Bennell, Gabbe, Orchard, Wajswelner, Finch, 98).

Bennell et al, screening protocols had highlighted the following as possible risk factors in groin injury:

1. Poor hip flexor flexibility.
2. Dorsiflexion ROM
3. Weight
4. Previous groin injury.

A combination of physiotherapy, soft tissue, strength and conditioning staff were involved in the testing. All senior list and rookie players were tested and results compiled on each individual player. The results were used as a tool to highlight regions of poor flexibility, which were then used as soft tissue objectives for the STT in the preseason.

The results were interesting in that the majority of players who presented with adductor/groin soreness, overload, hypertonicity were shown to have poor hip flexor flexibility and restricted ROM in internal rotation of the hip on the symptomatic side.

Successful soft tissue treatment to the restricted internal rotation ranges is varied as each individual player presents with different regions of restriction, such as hip flexors, anterior hip, external rotators, lateral hip or combinations of these regions.

Structural assessment was used to assess any osseous insight to the soft tissue restrictions.

Using MET pelvic/sacral assessment protocols, it was shown that iliosacral fixations are commonplace. Treatment to these 3 areas of dysfunction Internal rotation, hip flexor ROM and iliosacral dysfunction produced a more long term change with follow up treatment to other individual areas.

Strength /conditioning for the adductors consisted of hip abduction strength and peripelvic stability which is imperative to the adductor condition. Below are the possible risk factors in adductor strains based on the latest research:

- History of previous injury
- Lack of strength in hip abduction (**Tyler et al 2001**)
- Lack of preseason flexibility in hip adductors (**Ekstrand and Gillquest et al 1983**)

- **Hip Flexor treatment:**
- **Anterior Hip treatment:**
- **Lateral Hip treatment:**
- **External rotator treatment:**

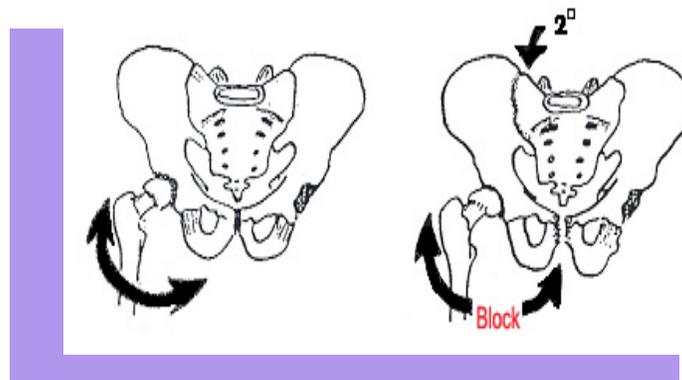
The following diagrams highlight the possible regions implicated in restricted Internal Rotation of the hip in both flexion and extension.

***Figure 1.**

Postulated mechanism of shearing stress on symphysis with limitation of rotation.

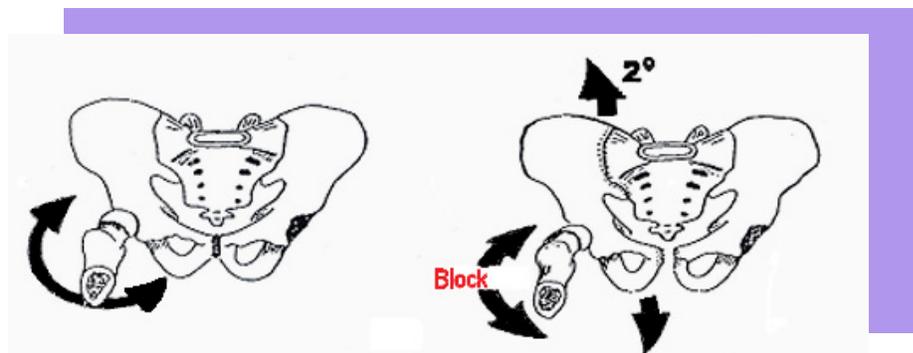
In Extension

Shear stress is applied superiorly to the Iliosacral region



In Flexion

Shear stress is applied inferiorly to the adductor muscle group.



Note from the author:

The presentation was attended by a range of disciplines within the sports medicine field such as; sports physician, exercise physiologists, physiotherapists, podiatrists, soft tissue therapists, sports trainers the participants interested in the physical dynamics and benefits of soft tissue therapy. Feedback I received from workshop presentation was positive and there was a strong interest for next year's conference, mainly from mostly from physiotherapists and soft tissue therapists.

*1)Diagrams taken from Williams GP 78` “ **LOSS OF HIP JOINT RANGE OF MOVEMENT IN TRAUMATIC OSTEITS PUBIS**”. The study implicated restricted internal rotation of the hip as a possible precursor to the condition due to sheer stresses placed across the innominate in flexion of the hip SEE FIGURE 1.

*2)‘ Measured hip joint range of motion loss and its role in the pathogenesis of the athletic groin injury osteitis pubis’ Verrell ET el which was presented at the conference, also earmarking internal rotation.