SACROILIAC JOINT DYSFUNCTION WITH PEOPLE DIAGNOSED WITH EDS

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OBJECTIVES

- ANATOMY AND FUNCTION OF SIJ
- DYSFUNCTIONS OF SIJ
- TREATMENT OF DYSFUNCTIONS
- WHY TREAT THESE DYSFUNCTIONS

WHAT IS THE SACROILIAC JOINT?

Two Joints Between the Sacrum and the Two Innominate Bones
What Does it do?

**Longitudinal Function:**
1. Transmit forces from vertebral column to lower limbs
2. Boney features add strength & stability to lock sacrum into pelvic ring

**Anti-torsion Function:**
1. Accommodate twisting forces from the lower limbs
2. Ligaments allow movement & absorb forces

MUSCLES OF THE SIJ
- No Muscles attach to Sacrum and ilium
- No muscles are designated to move the SIJ only passive motion

**Important Muscles**

**PIRIFORMIS** - only muscle originating from anterior sacrum

**MULTIFIDI** - direct attachment to posterior sacrum

LIGAMENTS PROVIDE STABILITY TO THIS JOINT

- ANTERIOR SI LIGAMENT
- SHORT AND LONG POSTERIOR SI LIGAMENTS
- INTEROSSEUS LIGAMENT
- SACROTUBEROUS LIGAMENT
- SACROSPINOUS LIGAMENT
SACROILIAC DYSFUNCTIONS

TWENTY DIFFERENT DYSFUNCTIONS OF THE SACROILIAC JOINT

WE WILL DISCUSS ONLY THREE DYSFUNCTIONS TODAY
- UPSLIP
- SACRUM ROTATED ANTERIOR (FORWARD)
- INNOMINATE BONE ROTATED ANTERIOR

UPSLIP

UPWARD TRANSLATION OF ONE INNOMINATE BONE

Interosseus SI Ligament

ONE OF THE STONGEST LIGAMENTS IN THE BODY
- RESIST JOINT SEPARATION AND TRANSLATION
- COMPLETELY FILLS SPACE BETWEEN SACRAL CREST AND ILIAC TUBEROSITY
HOW DO I GET AN UPSLIP?

- FALLING
- PLAYING ON UNEVEN GROUND
- RUNNING/WALKING ON ONE SIDE OF THE ROAD
- TRUE LEG LENGTH DISCREPANCY
- SCOLIOSIS
- HOLE IN THE LEG

HOW DO I FEEL WITH AN UPSLIP?

- LOSS OF BALANCE WITH SITTING AND WALKING
- PAIN IN BACK ON SIDE OF THE UPSLIP FROM A MUSCLE CALLED QUADRATUS LUMBOUM WHICH IS IN SPASM
- ONE LEG LONGER THAN OTHER

HOW DO YOU FIX IT?

DO NOT PULL THE LEG
DO PUSH THE ILIAC CREST DOWN
WHY FIX IT?

OPPOSITE SIDE OF UPSLIP
- LEG LONGER
- HIP HIKING GAIT
- TROCHANTERIC BURSITIS
- PLANTAR FASCIITIS
- MEDIAL COLLATERAL SPRAIN OF KNEE

SAME SIDE AS UPSLIP
- LEG SHORTER
- TROCHANTERIC BURSITIS
- LATERAL ANKLE SPRAINS
- LATERAL COLLATERAL SPRAIN
- ITB SYNDROME

ANTERIOR ROTATION

ROTATION OF THE INNOMINATE BONE FORWARD

Short & Long Posterior SI Ligaments

Short:
- Run obliquely medial to lateral
- Connect sacrum to ilium

Long:
- Attach PSIS to sacrum
- Restrict anterior ilial rotation

Figure 11.5 A sketch of the short and long posterior sacroiliac ligaments
HOW DO YOU GET IT?

- Usually on same side of upslip to counteract leg length discrepancy
- Cutting to same direction
- Twisting to same direction

HOW DO YOU FEEL?

- Same side leg longer than other side
- Decreased balance walking
- Tight hamstrings

The normal muscle energy for this technique is OK
WHY FIX IT?
SAME SIDE AS ANTERIOR INNOMINATE
-LEG LONGER
-HIP HIKING GAIT
-TROCHANTERIC BURSITIS
-PLANTAR FASCIITIS
-MEDIAL COLLATERAL SPRAIN OF KNEE

OPPOSITE SIDE AS ANTERIOR INNOMIATE
-LEG SHORTER
-TROCHANTERIC BURSITIS
-LATERAL ANKLE SPRAIN
-LATERAL COLLATERAL SPRAIN OF KNEE
-ITB SYNDROME

ANTERIOR ROTATED SACRUM
LEFT ON LEFT SACRAL TORSION
-RIGHT SIDE OF SACRAL BASE MOVES FORWARD AND GETS STUCK
-RIGHT PIRIFORMIS IS TIGHT
RIGHT ON RIGHT SACRAL TORSION
-LEFT SIDE OF SACRAL BASE MOVES FORWARD AND GETS STUCK
-LEFT PIRIFORMIS MUSCLE IS TIGHT

Anterior (ventral) SI ligament
Weakest & thinnest
Reported as a source of pain in SI hypermobility (Cuppett 2001)
**Sacropinous Ligament**
- Thin & triangular
- Counteracts sacral rotation

**Sacrotuberous Ligament**
- Receives some fibers from piriformis
- Glut max fibers also attach
- In some humans, biceps femoris may attach

**HOW DO YOU GET IT?**
- Compensation from upslip
- Twisting to same side
- Sitting for a prolonged time
HOW DO I FEEL

- BUTTOCKS IS TIGHT
- PAIN SACROILIAC JOINT
- SACROSPINOUS AND SACROTUBEROUS LIGAMENTS MAY BE PAINFUL

HOW DO I TREAT MY SACRUM?

- PT LAYS ON STOMACH
- PLACE THENAR EMMINANE OF EACH THUMB ON THE ILA OF EACH SACRUM
- PRESS ILA ANTERIOR AND SLIGHTLY SUPERIOR WHILE PT WIGGLES HIPS SIDE TO SIDE

WHY FIX IT?

LOL
- RIGHT PIRIFORMIS IS TIGHT
- RIGHT TROCHANTERIC BURSITIS
- RIGHT SCIATICA

ROR
- LEFT PIRIFORMIS IS TIGHT
- LEFT TROCHANTERIC BURSITIS
- LEFT SCIATICA
ONCE WE DIAGNOSIS AND FIX THE SIJ THEN WHAT

- PATIENT EDUCATION
- CORE AND TOTAL BODY STRENGTHENING
- INSTRUCTION OF SELF CORRECTIONS AT HOME

HOW DO I FIND A MEDICAL PROFESSIONAL

- NEED TO BE ABLE TO PERFORM MUSCLE ENERGY TECHNIQUES
- UNDERSTANDS EDS OR WILLING TO RESEARCH IT
- WILLING TO WORK WITH YOU AND GIVE YOU THE TIME YOU NEED ONE ON ONE
- WILLING TO TEACH FAMILY HOW TO HELP YOU

IF YOU ARE NOT WILLING TO PUSH YOURSELF TOO FAR THEN YOU WILL NEVER KNOW HOW FAR YOU CAN GO