

Introduction to OMM for MDs and DOs

- May 20, 2024 – May 23, 2024 Kirksville, MO
- NCOPPE & KCOM



ATSU

National Center for Osteopathic
Principles and Practice Education

Muscle Energy Technique: Innominates & Pubes

Chelsey Stull, DO

Copyright © 2024, A.T. Still University/Kirksville College of Osteopathic Medicine.
This presentation is intended for ATSU/KCOM use only. No part of this presentation
may be distributed, reproduced or uploaded/posted on any Internet web sites
without the expressed written consent from the author or ATSU/KCOM OMM
Department Chairperson.

Chelsey Stull, DO



Chelsey Stull, ,Do, is an assistant professor for osteopathic principles and practice integration at A.T. Still University—Kirkville College of Osteopathic Medicine (ATSU-KCOM). Dr. Stull earned her doctor of osteopathic medicine degree in 2017 from Iowa's Des Moines University College of Osteopathic Medicine and completed an osteopathic manipulative medicine fellowship during medical school. Dr. Stull is board certified in Family Medicine and Neuromusculoskeletal Medicine by the American Board of Osteopathic Family Physicians. She completed her Family Medicine residency in Olympia Fields, Illinois, from 2017-20. She continued with specialized training in osteopathic neuromuscular medicine at ATSU-KCOM and Northeast Regional Medical Center in Kirkville, Missouri, during 2021. She also practices medical acupuncture, completing her medical acupuncture training in 2020 from Helms Medical Institute in Berkeley, California.

Speaker Disclosure Statements

The speaker(s) disclose that s/he has no relevant financial relationships with any organization producing, marketing, reselling, or distributing healthcare goods or services consumed by, or used on, patients relative to the content of this presentation.

Planning Committee Disclosure Statement

- The Continuing Education Steering Committee (CESC), Osteopathic Principles and Practice (OPP) Committee members, and planners/reviewers of this activity disclose that they have no relevant financial relationships with any organization producing, marking, reselling, or distributing health care goods or services consumed by, or used on, patients relative to the content of this presentation.
- The copyrighted materials available in this PowerPoint are for educational use only. Redistribution of copyrighted materials is not permitted.
- No discussion of off-label use and/or investigation used in this presentation.

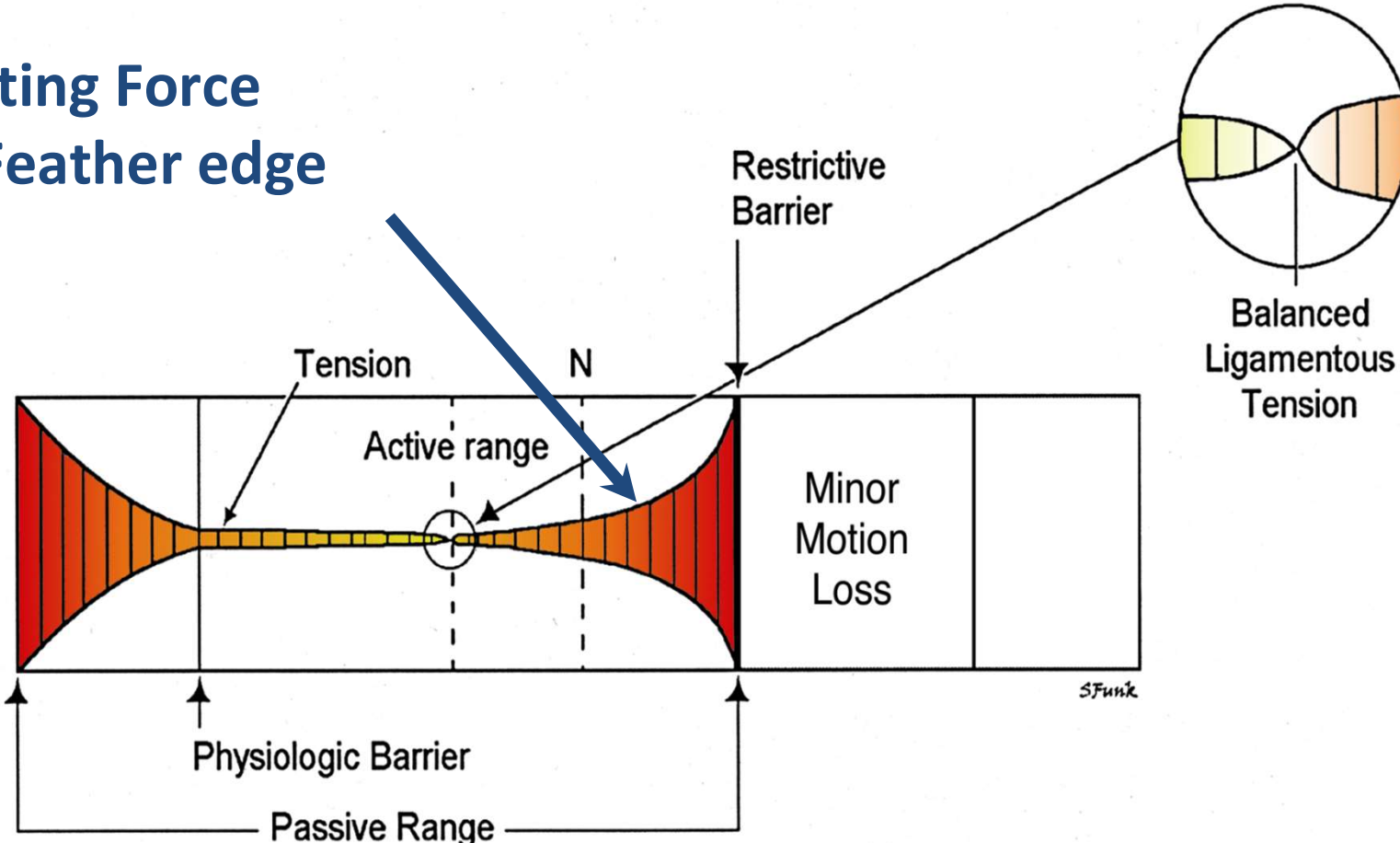
Goals

- Identify, describe and define Muscle Energy Technique OMT.
- Demonstrate the ability to position the patient in a manner that is safe, comfortable, and maintains dignity while diagnosing and treating somatic dysfunction of the innominates and pubes using Muscle Energy Technique OMT.
- Demonstrate efficient physician ergonomics while diagnosing and treating somatic dysfunction of the innominates and pubes using Muscle Energy Technique OMT.

Muscle Energy Technique

- A direct treatment method in which the patient's muscles:
 - are employed upon request
 - precisely controlled position in a specific direction
 - against a distinctly executed physician counterforce
- First described in 1948 by Fred Mitchell, Sr, DO.

Feather edge



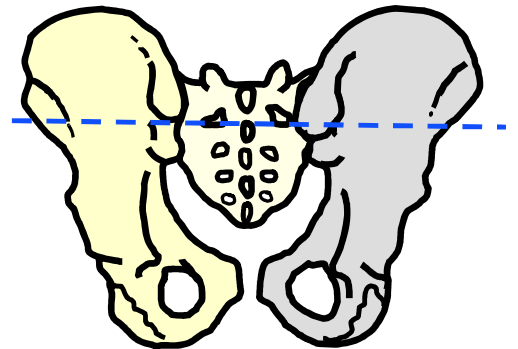
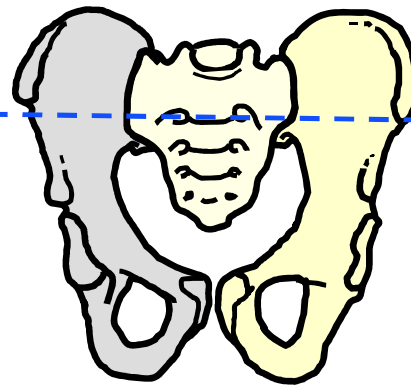
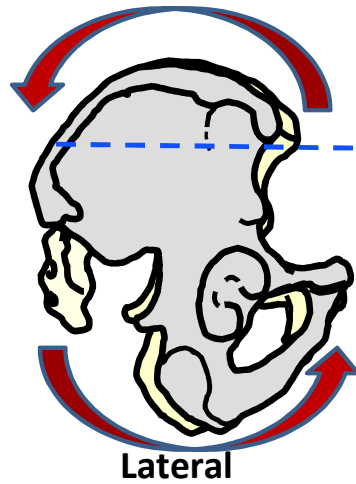
Isometric Muscle Energy

1. Pt contracts hamstring away from restrictive barrier
2. After muscle relaxes physician lengthens muscle to new restrictive barrier
3. Repeat until adequate response



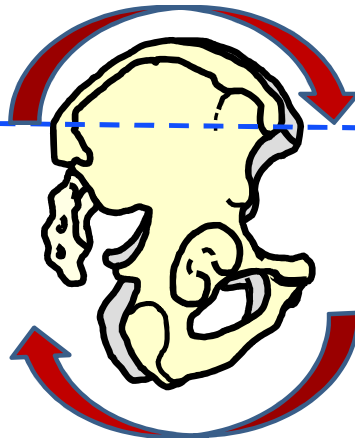
Posteriorly Rotated Right Innominate

Right PSIS posterior
Right ASIS superior
Right PSIS inferior

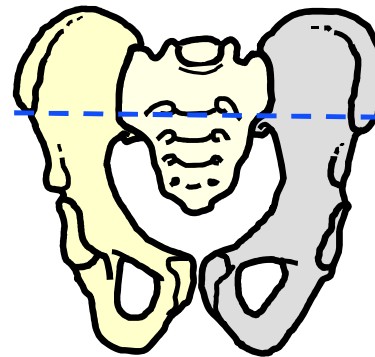


Anteriorly Rotated Left Innominate

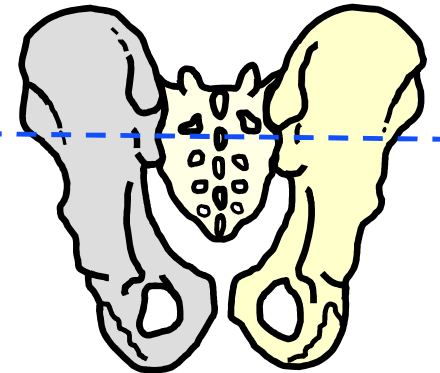
Left ASIS anterior
Left ASIS inferior
Left PSIS superior



Lateral



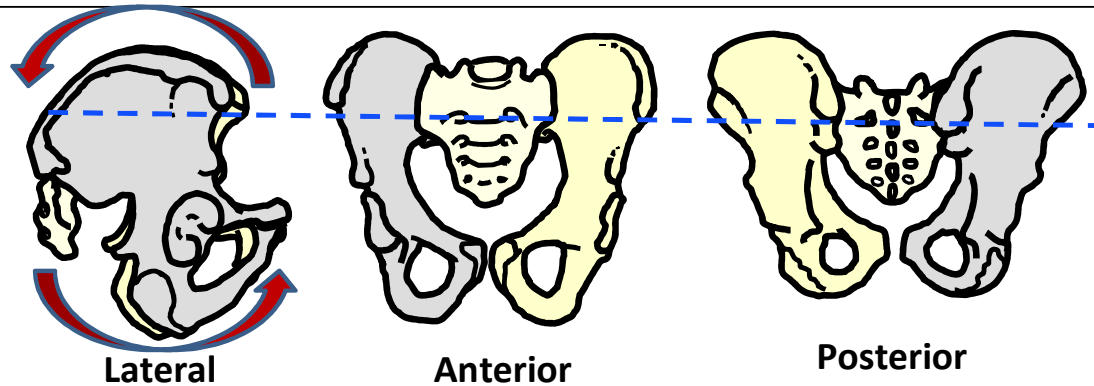
Anterior



Posterior

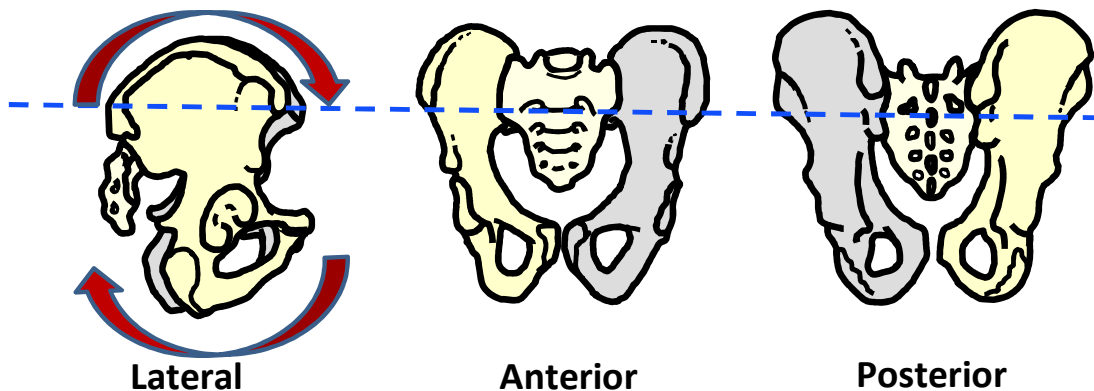
Posteriorly Rotated Right Innominate

Right PSIS posterior
Right ASIS superior
Right PSIS inferior



Anteriorly Rotated Left Innominate

Left ASIS anterior
Left ASIS inferior
Left PSIS superior



Supine--direct method—ME (isometric)

Diagnosis: Innominate Anterior

1. Patient is supine and the physician stands on the side of the dysfunction
2. Patient's lower extremity on the side of the dysfunction is flexed at the knee and hip to bring the knee over the patient's abdomen
3. Physician holds the flexed knee in that position with his/her shoulder against the leg while cupping the anterior superior iliac spine with the cephalad hand. The fingers of the other hand grasp the posterior aspect of the ischial tuberosity
4. Tension is increased at all contact points and the innominate is rotated posteriorly to the restrictive barrier
5. Patient is instructed, "Push your knee against my chest" while the physician offers isometric counterforce
6. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the sacroiliac joint (typically 3-5 seconds)
7. Patient is instructed to gently cease the directive force and the physician simultaneously ceases his/her counterforce
8. The physician waits for the tissues to relax completely (about 2 seconds) and then flexes the hip and rotates the innominate posteriorly to the new restrictive barrier
9. Steps 5-8 are repeated until the best motion is obtained (average is 3 times)
10. Recheck



Note: (Refers to **Supine--direct method—ME (isometric)**)

This procedure is nearly identical to the procedure for treating an inferior pubic shear. For an inferior innominate shear, the leg is adducted to gap the sacroiliac joint. For a inferior symphyseal shear the hip and leg are abducted to gap the pubic symphysis.

Prone--direct method—ME (isometric)

Diagnosis: Innominate Posterior

1. Patient is prone and the physician stands on the side opposite the dysfunction
2. Physician extends his/her cephalad arm and places the hypothenar eminence on the iliac crest and the PSIS
3. Physician's other hand reaches across the patient and under the distal femur just above the knee and extends the hip to move the innominate anteriorly to the restrictive barrier
4. Patient is instructed, "Pull your knee down, toward the table" while the physician offers isometric counterforce
5. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the sacroiliac joint (typically 3-5 seconds)
6. Patient is instructed to gently cease the directive force and the physician simultaneously ceases his/her counterforce
7. Physician waits for the tissues to relax completely (about 2 seconds) and then extends the extremity to the new restrictive barrier
8. Steps 4-7 are repeated until the best motion is obtained (average is 3 times)
9. Recheck



Supine--direct method—ME (isometric)

Diagnosis: Innominate Posterior

1. Patient is supine and the physician stands on the side of the dysfunction
2. Patient is positioned at the edge of the table close enough to permit the ischial tuberosity to be clear of the edge. The leg is allowed to hang freely. If necessary, the physician's foot is placed under the patient's foot to prevent it from touching the floor. The patient may need to grasp the table for stability
3. Physician reaches across the patient with the cephalad hand to cup the patient's opposite ASIS to stabilize him/her and places the other hand on the thigh of the dysfunctional extremity just above patient's knee
4. Tension is applied to the thigh, rotating the innominate anteriorly to the restrictive barrier
5. Patient is instructed, "Pull your knee up, toward the ceiling" while the physician offers isometric counterforce
6. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the sacroiliac joint (typically 3-5 seconds)
7. Patient is instructed to gently cease the directive force and the physician simultaneously ceases his/her counterforce
8. The physician waits for the tissues to relax completely (about 2 seconds) and then extends the extremity to the new restrictive barrier
9. Steps 5-8 are repeated until the best motion is obtained (average is 3 times)
10. Recheck

Note:

Carefully stabilize the patient so when muscle energy is used the patient does not roll off the table. This procedure is nearly identical to the procedure for treating a superior left symphyseal shear (left symphysis superior). However, for the innominate posterior the physician keeps the supine patient's leg close to the table to aid in gapping the sacroiliac joint and for the superior pubic shear technique the physician stands between the patient's leg and the table thus encouraging the pubic symphysis to gap.



Supine--direct method—ME



Dx: Right Ant. Innom.
Tx: Rotate Innom. Post.
iKM: 389



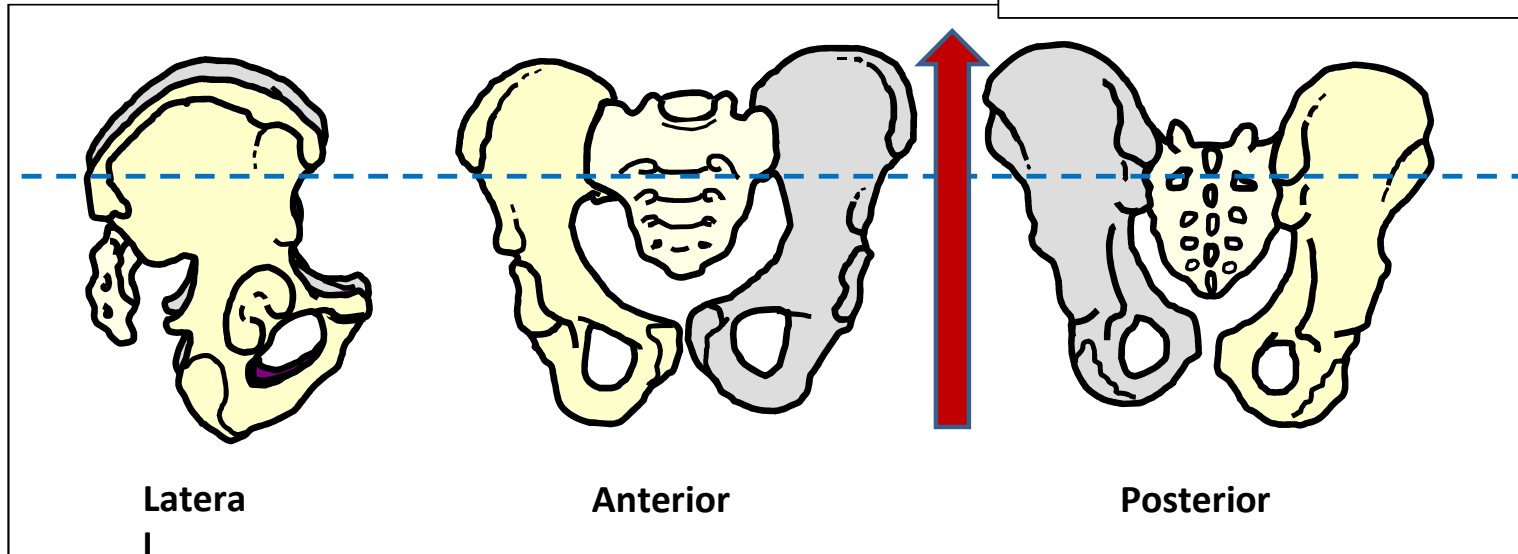
Dx: Left Post. Innom
Tx: Rotate Innom. Ant.
iKM: 382

Left Superior Innominate Shear

Left Iliac Crest superior

Left ASIS superior

Left PSIS superior



Supine--direct method—HVLA tug



Dx: Left Superior Innominate Shear

Tx: Pull the Innominate Inferior

iKM: 393

Supine--direct method—HVLA tug

Diagnosis: Left Superior Innominate Shear

1. Patient is supine and the physician stands at the foot of the table
2. Physician places a pressure pad (wallet or small rolled towel) just inferior to the left inferolateral angle to restrict the inferior movement of the sacrum
3. Physician grasps the left leg just above the ankle with both hands, abducts the leg slightly and internally rotates the hip to gap the sacroiliac joint
4. Patient is instructed, "Take a very deep breath and hold it." This respiratory force encourages the sacral base to move posteriorly
5. A high velocity, low amplitude tug is applied to the leg to gap the sacroiliac joint and glide the innominate inferiorly
6. Recheck



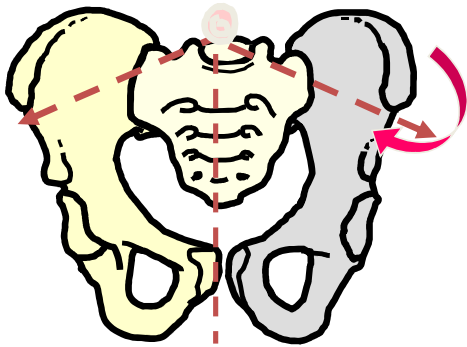
Supine--direct method—HVLA tug

- Assistant
- one hand pushes superiorly on the inferolateral angle of the sacrum
- other hand pushes inferiorly on the superior margin of the iliac crest

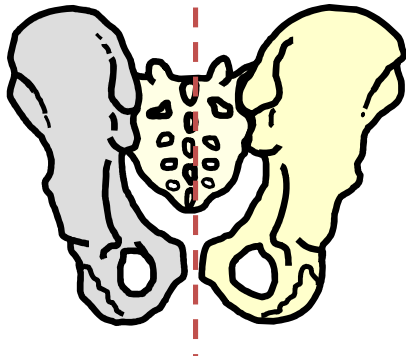


Left Inflare

Left ASIS medial

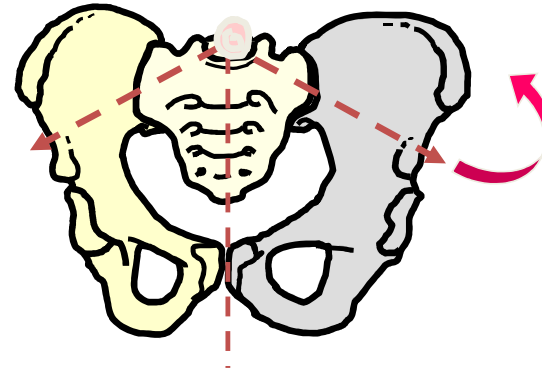


Left Ischial Tuberosity lateral

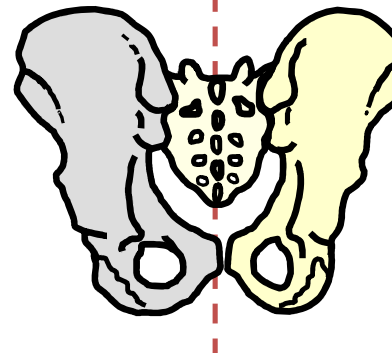


Left Outflare

Left ASIS lateral



Left Ischial Tuberosity medial



Supine--direct method—ME (isometric)

Diagnosis: Right Innominate Inflare

1. Patient is supine and the physician stands on the side of the dysfunction
2. Patient's hip and knee on the dysfunctional side are partially flexed and the foot is placed on the table close to the buttocks
3. Physician grasps the patient's knee with one hand and cups the opposite ASIS with the other hand
4. Physician moves the knee laterally, abducting the thigh to the innominate's restrictive barrier
5. Patient is instructed, "Move your knee toward the middle of the table" while the physician offers isometric counterforce
6. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the sacroiliac joint (typically 3-5 seconds)
7. Patient is instructed to gently cease the directive force and the physician simultaneously ceases his/her counterforce
8. Physician waits for the tissues to relax completely (about 2 seconds) and then abducts the thigh to the new restrictive barrier
9. Steps 5-8 are repeated until the best motion is obtained (average is 3 times)
10. Recheck



Supine--direct method—ME (isometric)

Diagnosis: Right Innominate Outflare

1. Patient is supine and the physician stands at the side of the table
2. Patient's hip and knee are partially flexed and the foot is placed on the table close to the buttocks
3. Physician grasps the patient's knee with one hand and hooks the fingers of the other hand over the medial margin of the right PSIS
4. Physician moves the knee medially adducting the thigh to the innominate's restrictive barrier
5. Patient is instructed, "Move your knee outward" while the physician offers isometric counterforce
6. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the lumbosacral junction (typically 3-5 seconds)
7. Patient is instructed to gently cease the directive force and the physician simultaneously ceases his/her counterforce
8. Physician waits for the tissues to relax completely (about 2 seconds) and then adducts the thigh to the new restrictive barrier
9. Steps 5-8 are repeated until the best motion is obtained (average is 3 times)
10. Recheck



Supine--direct method—ME

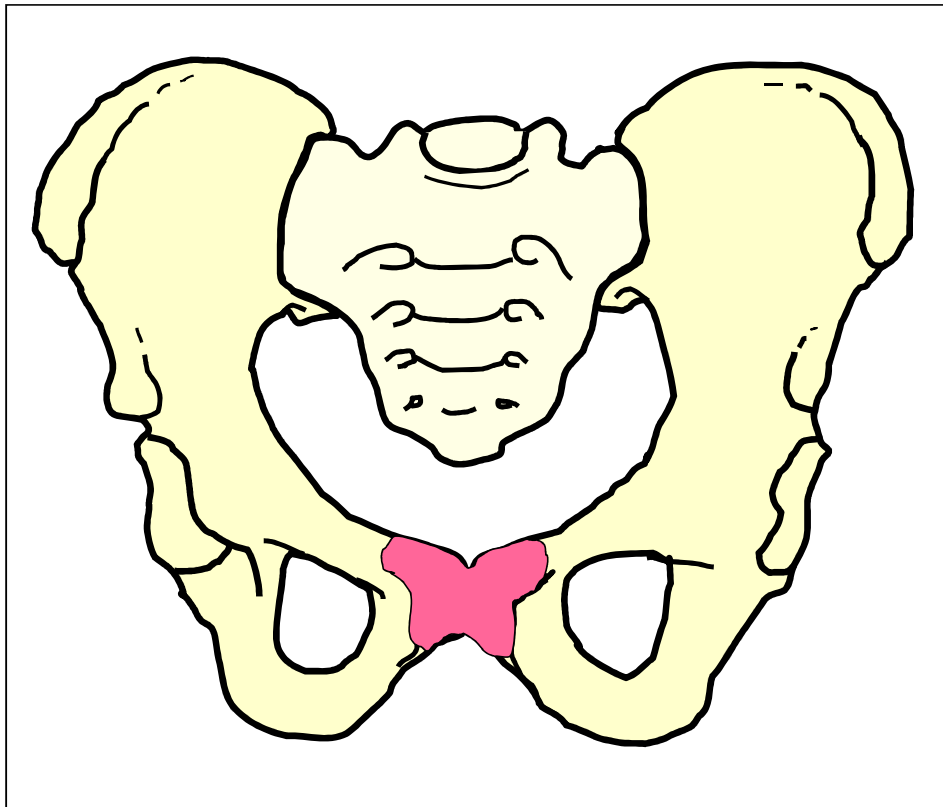


Dx: Right Innom. Outflare
Tx: Inflare the Innominate
iKM: 397



Dx: Right Innom. Inflare
Tx: Outflare the Innominate
iKM: 395

Pubic Compressions



**Bilateral pubic
tenderness**

**May be reflexive
evidence of L5
dysfunction
(anterior L5
tenderpoint)**

Supine--direct method—ME (isometric)

Diagnosis: Compression of the Pubic Symphysis

1. Patient is supine with the hips and knees flexed 10" to 12" apart and the feet are flat on the table. The physician stands at the side of the table near the patient's hips
2. Physician grasps both knees, holds them together and instructs the patient, "Try to pull your knees apart." The physician offers isometric counterforce. This prepares the adductors and the pubic symphysis
3. Patient is instructed to gently cease his/her directive force and the physician simultaneously ceases his/her counterforce
4. Steps 2-3 are repeated
5. Physician places the heel of one hand on the medial side of the knee opposite him/her. The palm of the other hand is placed on the medial aspect of the other knee with the thumb abducted, grasping the other forearm
6. Physician spreads the knees 10" to 12" apart and adjusts the forearm grasp to brace the knees
7. Patient is instructed, "Try to pull your knees together." The physician holds the knees apart offering isometric counterforce
8. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the pubic symphysis (typically 3-5 seconds)
9. Patient is instructed to gently cease his/her directive force and the physician simultaneously ceases his/her counterforce
10. Physician waits for the tissues to relax completely (about 2 seconds) and then moves the feet and the knees a few inches farther apart
11. Steps 7-10 are repeated until symphysis releases (average is 3 times)
12. Recheck



Supine--direct method—ME



Preparatory Phase



Direct Method Phase

Dx: Bilateral Pubic Compression

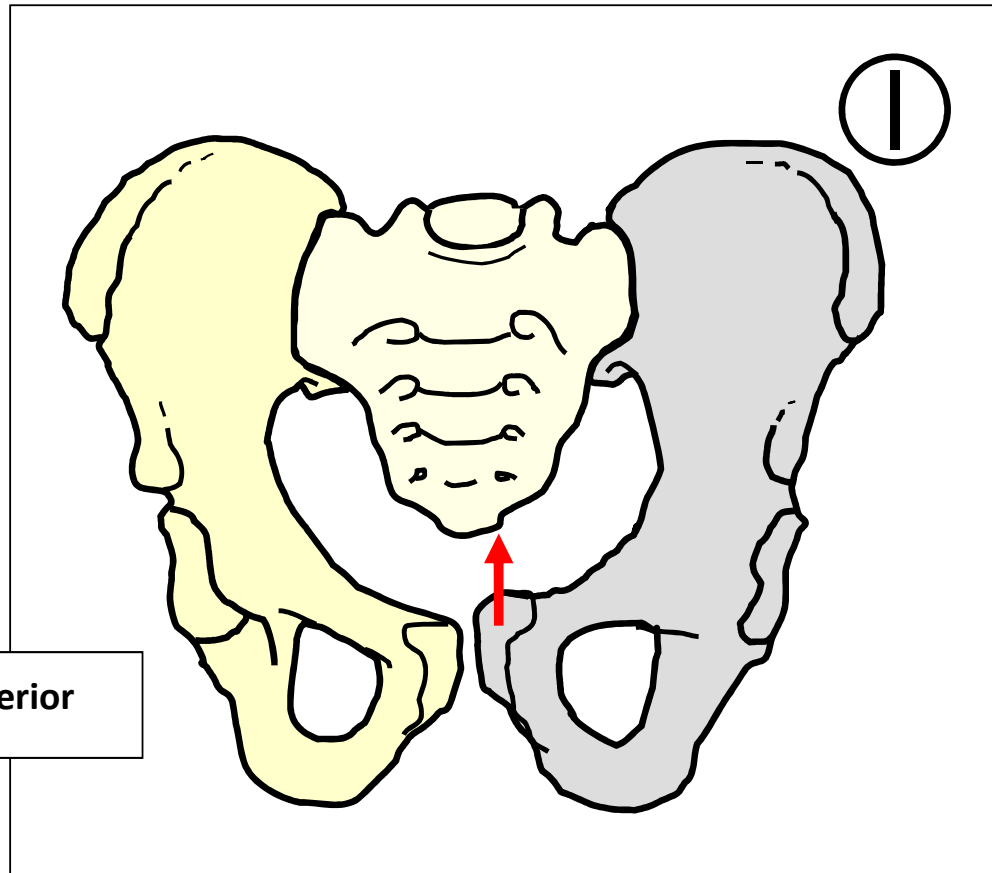
Tx: Decompress the Pubes using the hip adductors

iKM: 406

Left Superior Pubic Shear

① Left
lateralization

Left pube superior



Supine--direct method—ME (isometric)

Diagnosis: Superior Pubic Shear

1. Patient is supine with the dysfunctional side near the edge of the table and the physician stands on the side of the dysfunction
2. Physician stabilizes the opposite ASIS and instructs the patient to move to the edge of the table until his/her ischial tuberosity is over the edge. The patient may feel the need to "hold on" to the table with one or both hands for stability
3. Physician's other hand is placed on the knee of the dysfunctional extremity, abducts it to gap the symphysis and extends the thigh. This rotates the innominate anteriorly and carries the pubic symphysis inferiorly to the restrictive barrier
4. Patient is instructed, "Lift your knee toward the ceiling" while the physician offers isometric counterforce
5. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the pubic symphysis (typically 3-5 seconds)
6. Patient is instructed to gently cease his/her directive force and the physician simultaneously ceases his/her counterforce
7. Physician waits for the tissues to relax completely (about 2 seconds) and then extends the thigh further to the new restrictive barrier
8. Steps 4-7 are repeated until the best motion is obtained (average is 3 times)
9. Patient's extremity is placed back on the table
10. Recheck



Supine--direct method—ME (isometric)

Diagnosis: Inferior Pubic Shear

1. Patient is supine and the physician stands on the side of the dysfunction
2. Patient's dysfunctional lower extremity is flexed at the knee and hip and the thigh is abducted to gap the symphysis
3. Physician places the patient's knee against his/her chest, cups the cephalad hand over the ASIS on the side of the patient's dysfunction and grasps the patient's ischial tuberosity with his/her other hand
4. Physician's contacts with the ischial tuberosity, the ASIS and the chest are used to rotate the innominate posteriorly which carries the pubic ramus superiorly to the restrictive barrier
5. Patient is instructed, "Push your knee toward the end of the table, against my chest" while the physician offers isometric counterforce
6. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the pubic symphysis (typically 3-5 seconds)
7. Patient is instructed to gently cease his/her directive force and the physician simultaneously ceases his/her counterforce
8. Physician waits for the tissues to relax completely (about 2 seconds) and then moves the innominate posteriorly to the new restrictive barrier. This carries the pubic ramus superiorly
9. Steps 5-8 are repeated until the best motion is obtained (average is 3 times)
10. Recheck



Supine--direct method—ME



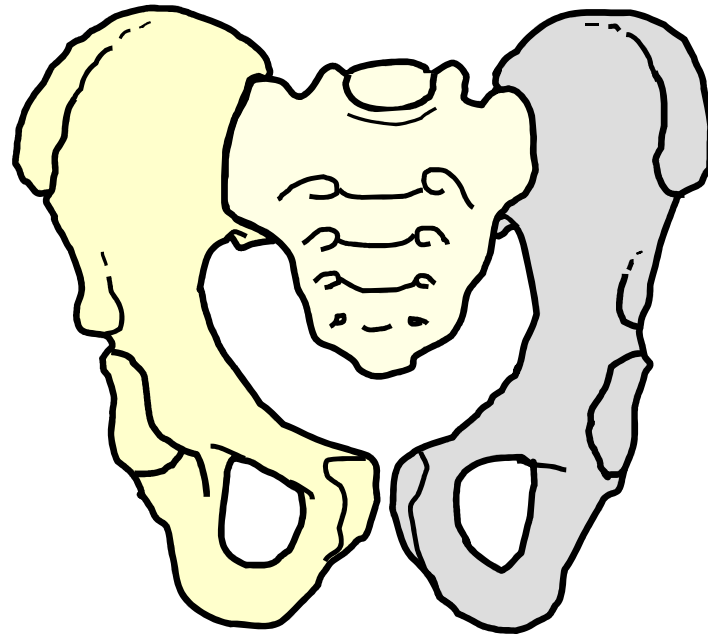
Dx: Left Inferior Pubic Shear
Tx: Posteriorly Rotate Innom.
While gapping the pubes
iKM: 403



Dx: Right Superior Pubic Shear
Tx: Anteriorly Rotate Innom. While
gapping the pubes
iKM: 400

Right Anterior Pubic Shear

- TTA
- Tenderness
- Right pubic ramus ant.
- (A/P step-off)
- Posterior springing restricted on right



Supine--direct method—ME (isometric)

Diagnosis: Right Posterior Pubic Shear

1. Patient is supine and the physician stands on the side of the dysfunction
2. Patient's hip and knee on the dysfunctional side are partially flexed and the foot is placed on the table close to the buttocks
3. Physician grasps the patient's knee with one hand and cups the opposite ASIS with the other hand
4. Physician moves the knee laterally, abducting the thigh to the pubes restrictive barrier
5. Patient is instructed, "Move your knee toward the middle of the table" while the physician offers isometric counterforce
6. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the pubic symphysis (typically 3-5 seconds)
7. Patient is instructed to gently cease the directive force and the physician simultaneously ceases his/her counterforce
8. Physician waits for the tissues to relax completely (about 2 seconds) and then abducts the thigh to the new restrictive barrier
9. Steps 5-8 are repeated until the best motion is obtained (average is 3 times)
10. Recheck



Supine--direct method—ME (isometric)

Diagnosis: Right Anterior Pubic Shear

1. Patient is supine and the physician stands at the side of the table
2. Patient's hip and knee are partially flexed and the foot is placed on the table close to the buttocks
3. Physician grasps the patient's knee with one hand and hooks the fingers of the other hand over the medial margin of the right PSIS
4. Physician moves the knee medially adducting the thigh to the pube's restrictive barrier
5. Patient is instructed, "Move your knee outward" while the physician offers isometric counterforce
6. Physician has the patient maintain the force long enough to sense that the patient's contractile force is localized at the pubic symphysis (typically 3-5 seconds)
7. Patient is instructed to gently cease the directive force and the physician simultaneously ceases his/her counterforce
8. Physician waits for the tissues to relax completely (about 2 seconds) and then adducts the thigh to the new restrictive barrier
9. Steps 5-8 are repeated until the best motion is obtained (average is 3 times)
10. Recheck



Supine--direct method—ME



Dx: Right Anterior Pubic Shear
Tx: Inflare the Innominate



Dx: Right Posterior Pubic Shear
Tx: Outflare the Innominate

Typical and Less Than Optimal Response of the Pubes to Innominate Dysfunctions

Innominate Dysfunction	Pubes Physiologic	Pubes non-physiologic (less than optimal)
Anterior Rotation	Inferior	Superior
Posterior Rotation	Superior	Inferior
Inflare	Posterior	Anterior
Outflare	Anterior	Posterior

Harmony only dwells where
obstructions do not exist.

-Andrew Taylor Still

References

- Chila, A.G. (ed.): Foundations for Osteopathic Medicine 3rd Edition, Lippincott Williams & Wilkins, Baltimore, MD, 2011. Chapters 41 & 46.
- Kimberly, P.; *Outline of Osteopathic Manipulative Procedures: Kimberly Manual, 2006 Edition* (updated 2008). Chapter 10.
- Kimberly, P.; *Outline of Osteopathic Manipulative Procedures: Kimberly Manual, 2006 Edition* (updated 2008) – Digital Edition 1.0, iBookn
<https://itunes.apple.com/us/book/kimberly-manual/id572992328?mt=11>
- Seffinger, M.A, A.G. (ed.): Foundations for Osteopathic Medicine 4th Edition, Wolters Kluwer, Philadelphia, PA, 2018. <http://meded.lwwhealthlibrary.com.p.atsu.edu/book.aspx?>
Foundations of Osteopathic Medicine, 4e. Chapters 28 & 34.
- Ward, R.C. (ed.): *Foundations for Osteopathic Medicine 2nd Edition*, Williams & Wilkins, Baltimore, MD, 2003. Chapters 52 & 57.