OMT Without a Treatment Table

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Disclosures

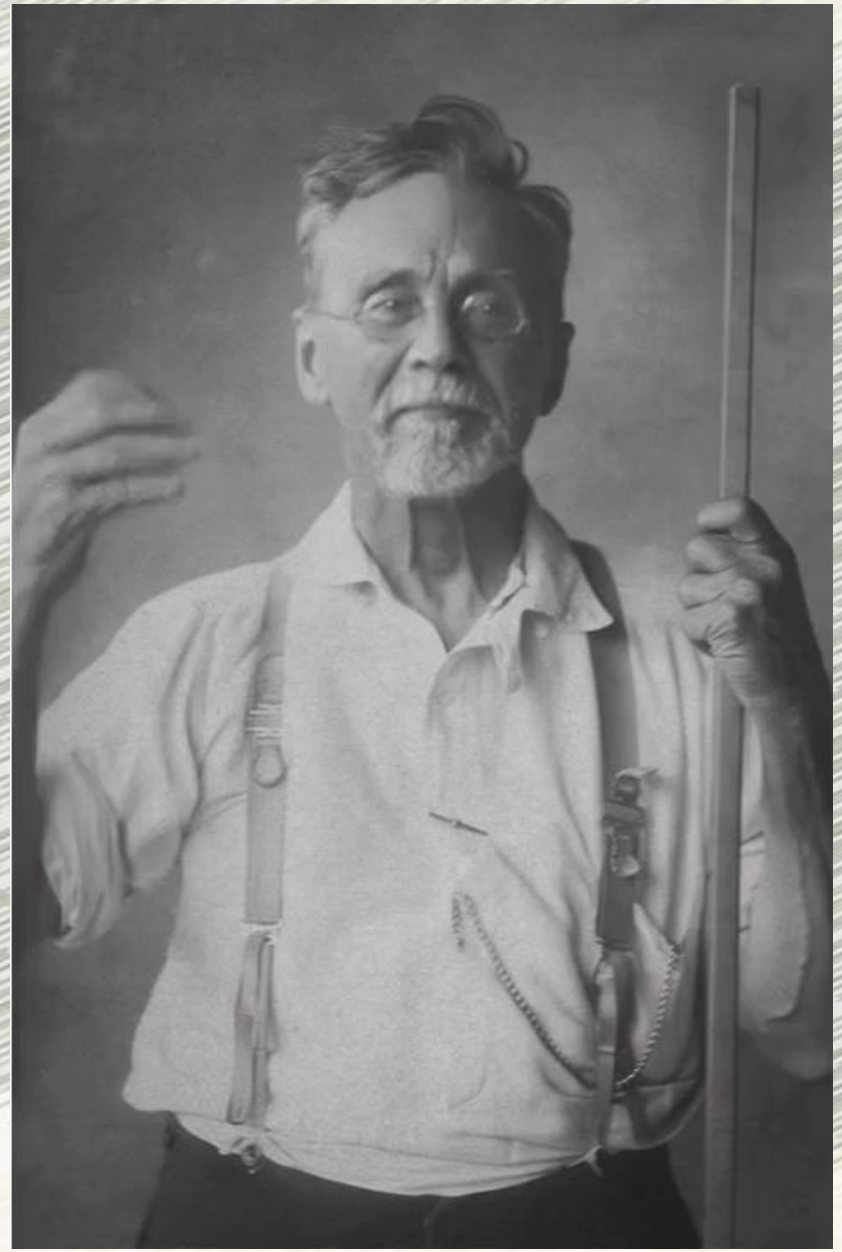
- **Dr. Danto is the Associate Dean of Osteopathic Integration at D'Youville University – College of Osteopathic Medicine, *proposed*.**
- **Dr. Danto has no disclosures to report concerning any conflict of interest with this presentation.**

Objectives

By the end of this activity, participants will be able to:

1. Identify clinical scenarios where OMT can be applied without a treatment table.
2. Demonstrate at least three OMT techniques that can be performed in a seated or standing position.
3. Modify traditional OMT approaches to accommodate patient and environmental limitations.
4. Integrate non-table-based OMT into their clinical decision-making and workflow.

“…begin with the brain or head because…to give such diseases as belong to that division of the body. Then the neck, chest, abdomen and pelvis. Thus we have five divisions in regular order, beginning with the head and finishing with the sacrum.”



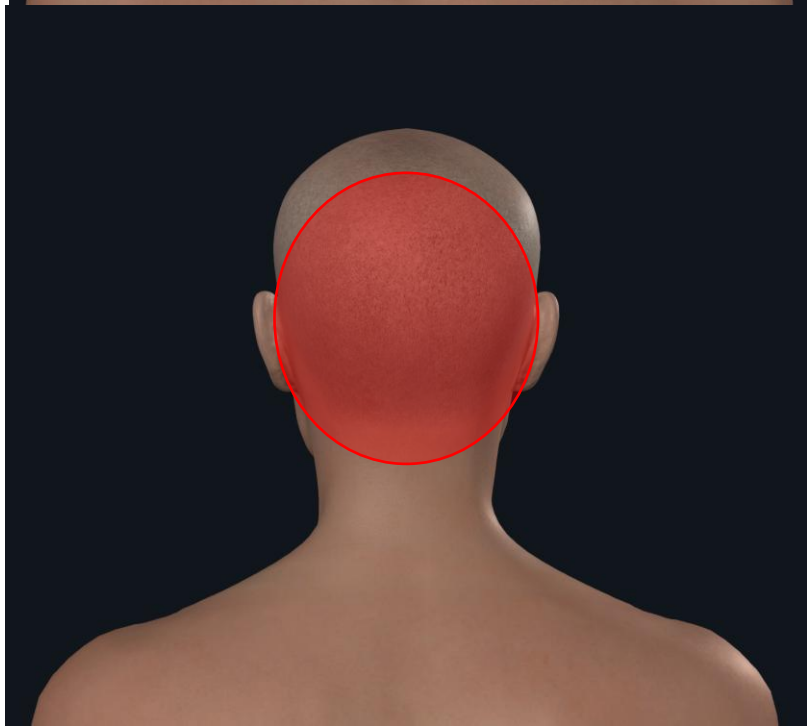
-Andrew Taylor Still, DO. Philosophy of Osteopathy (p. 32).

29-yo female presents with complaints headaches and cough.

- **Location:** bilateral base of skull and upper neck, forehead
- **Onset:** started about 2-months ago after moving from the east coast to Michigan for a new job
- **Provocation:** worse as the day progresses, certain neck movements
- **Palliation:** NSAIDs, Flonase, and rest

29-yo female presents with complaints headaches and cough.

- **Quality:** achy, stabbing
- **Radiation:** may start at the front or the back and then seems to eventually involve both
- **Severity:** 8/10 at worst and is beginning to affect her ability to work
- **Time:** last for hours and is occurring >4X/week



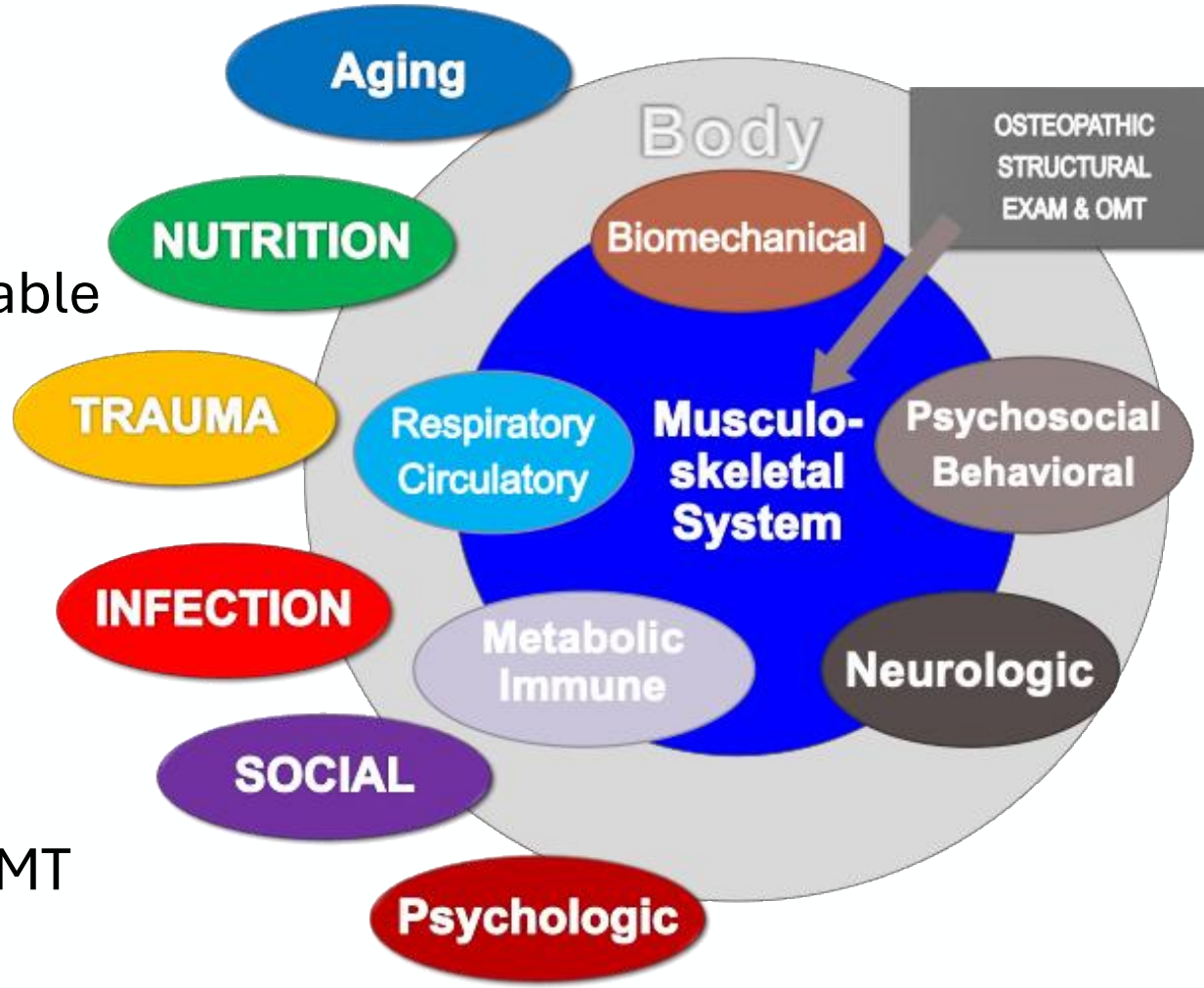
29-yo female presents with complaints headaches and cough.

Assessment

- Chronic tension-type headache, not intractable (G44.229)
- Allergic rhinitis due to pollen (J30.1)
- Somatic Dysfunction H, C, T

Plan

- **Biomechanical:** OMT
- **Behavioral:** Stress mgmt.; lifestyle mods
- **Metabolic:** allergy & inflammatory meds; OMT diminish allostatic load
- **Resp/Circ:** continue nasal steroids & add nasal hygiene; OMT improve lymphatic flow
- **Neurologic:** NSAIDs; OMT addressing nerves



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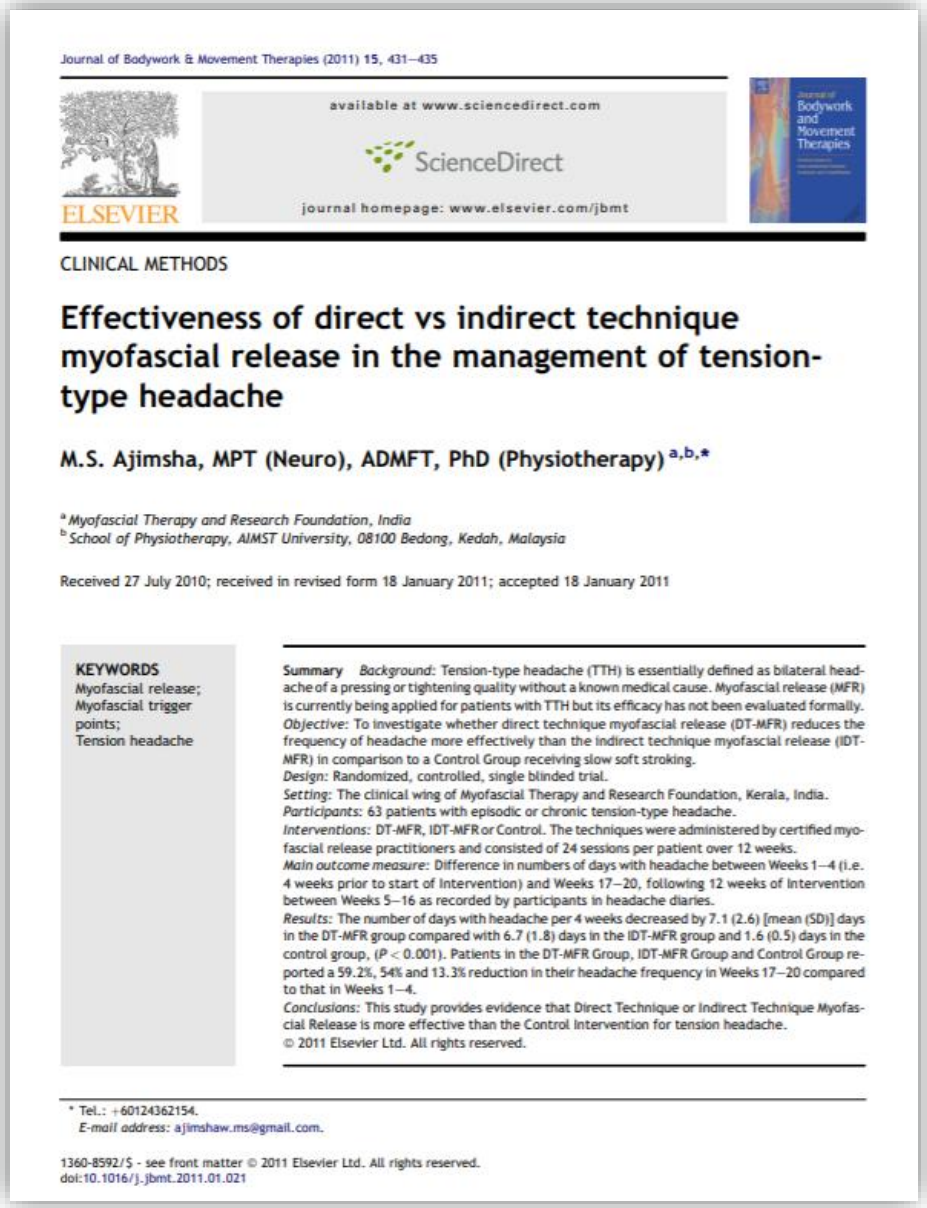
Effectiveness of direct vs indirect technique myofascial release in the management of tension-type headache

- Design: Randomized, controlled, single blinded trial.
- Participants: 63 patients with episodic or chronic tension-type headache.
- Interventions: DT-MFR, IDT-MFR or Control.
  - Tx consisted of 24 sessions per patient over 12 weeks.



Journal of Bodywork & Movement Therapies (2011) 15, 431–435

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CLINICAL METHODS

Effectiveness of direct vs indirect technique myofascial release in the management of tension-type headache

M.S. Ajimsha, MPT (Neuro), ADMFT, PhD (Physiotherapy) [a,b,*]

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Received 27 July 2010; received in revised form 18 January 2011; accepted 18 January 2011

KEYWORDS
Myofascial release;
Myofascial trigger points;
Tension headache

Summary *Background:* Tension-type headache (TTH) is essentially defined as bilateral headache of a pressing or tightening quality without a known medical cause. Myofascial release (MFR) is currently being applied for patients with TTH but its efficacy has not been evaluated formally. *Objective:* To investigate whether direct technique myofascial release (DT-MFR) reduces the frequency of headache more effectively than the indirect technique myofascial release (IDT-MFR) in comparison to a Control Group receiving slow soft stroking. *Design:* Randomized, controlled, single blinded trial. *Setting:* The clinical wing of Myofascial Therapy and Research Foundation, Kerala, India. *Participants:* 63 patients with episodic or chronic tension-type headache. *Interventions:* DT-MFR, IDT-MFR or Control. The techniques were administered by certified myofascial release practitioners and consisted of 24 sessions per patient over 12 weeks. *Main outcome measure:* Difference in numbers of days with headache between Weeks 1–4 (i.e. 4 weeks prior to start of Intervention) and Weeks 17–20, following 12 weeks of Intervention between Weeks 5–16 as recorded by participants in headache diaries. *Results:* The number of days with headache per 4 weeks decreased by 7.1 (2.6) [mean (SD)] days in the DT-MFR group compared with 6.7 (1.8) days in the IDT-MFR group and 1.6 (0.5) days in the control group, ($P < 0.001$). Patients in the DT-MFR Group, IDT-MFR Group and Control Group reported a 59.2%, 54% and 13.3% reduction in their headache frequency in Weeks 17–20 compared to that in Weeks 1–4. *Conclusions:* This study provides evidence that Direct Technique or Indirect Technique Myofascial Release is more effective than the Control Intervention for tension headache.

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Ajimsha MS. “Effectiveness of direct vs indirect technique myofascial release in the management of tension-type headache.” JBodyw Mov Ther. 2011 Oct;15(4):431-5

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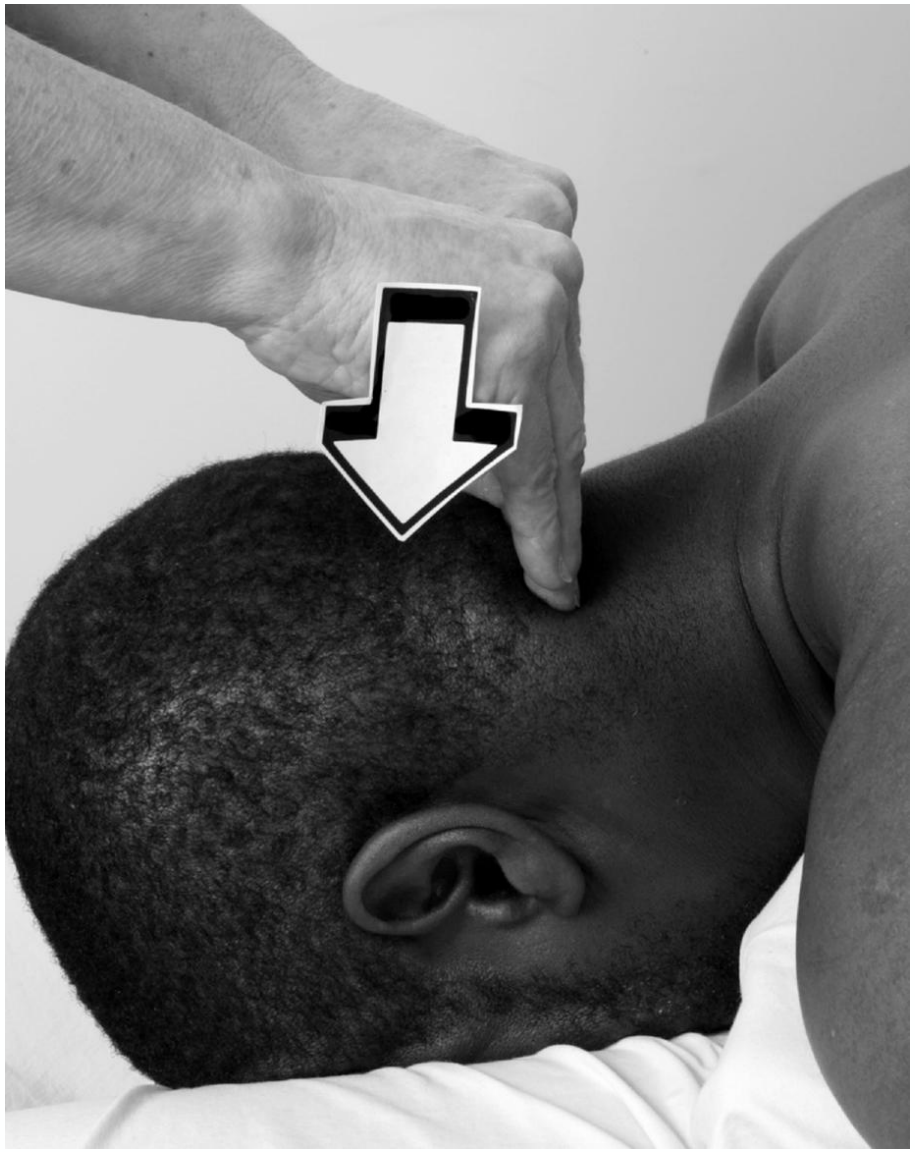
Direct Treatment MFR

‘Work directly on restricted fascia; practitioners use knuckles or elbow or other tools to slowly sink into the fascia, and the pressure applied is a few kilograms of force to contact the restricted fascia, apply tension, or stretch the fascia.



Manheim, Carol. “Prone Cranial Bsse Release”. The Myofascial Release Manual (p. 115). (Function). Kindle Edition.

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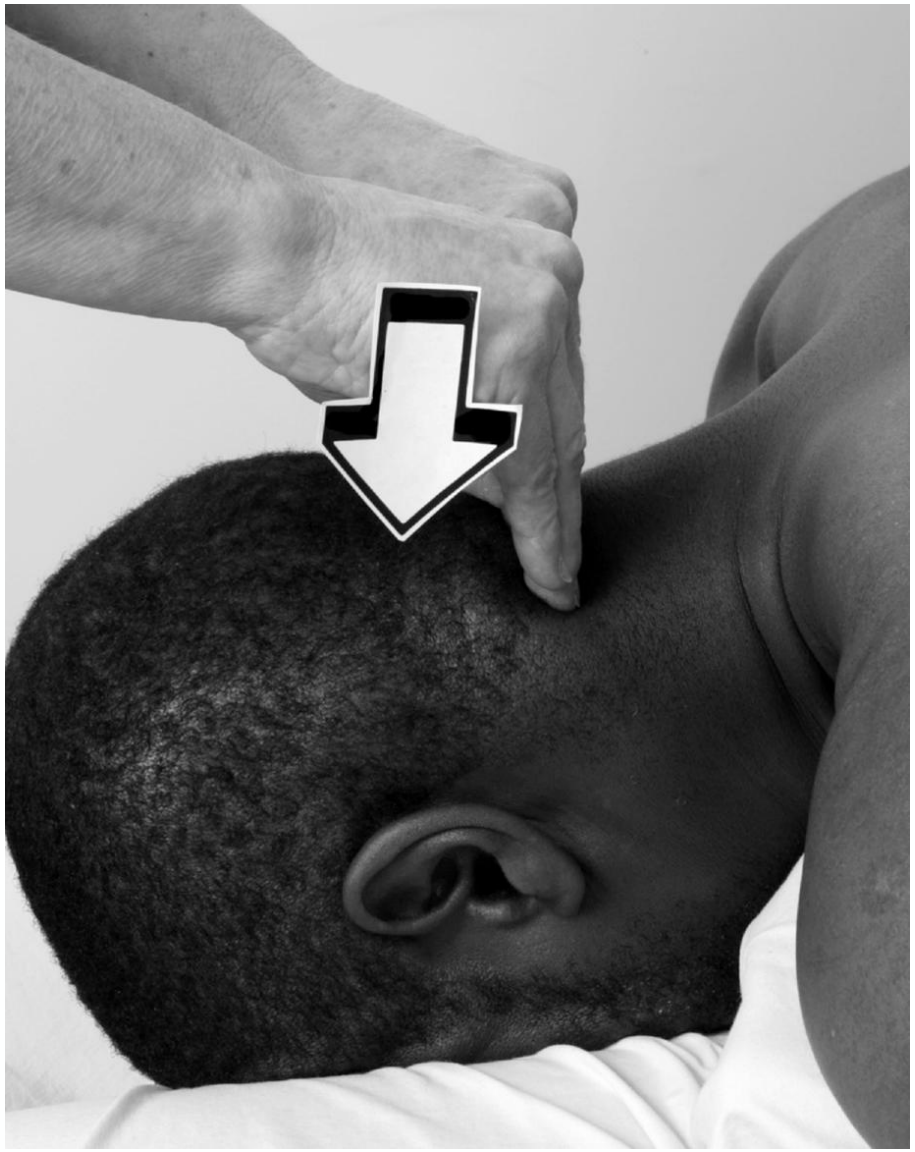
DT MFR

- *Upper Trapezius release*
- *Lateral/anterior cervical techniques.*
  - *Using soft fist to treat the fascia at the mastoid process.*
  - *Using the first three metacarpophalangeal joints to treat the submastoid and occipital soft tissue.*
- *Nuchal ligament.*
  - *deep small muscles of the posterior neck and the deep neck flexor muscles.*
- *Release of cranial base and suboccipital myofascia.*
  - *Occipital condyles decompression.*
- *Temporalis fascia.*
- *Epicranial aponeurosis*



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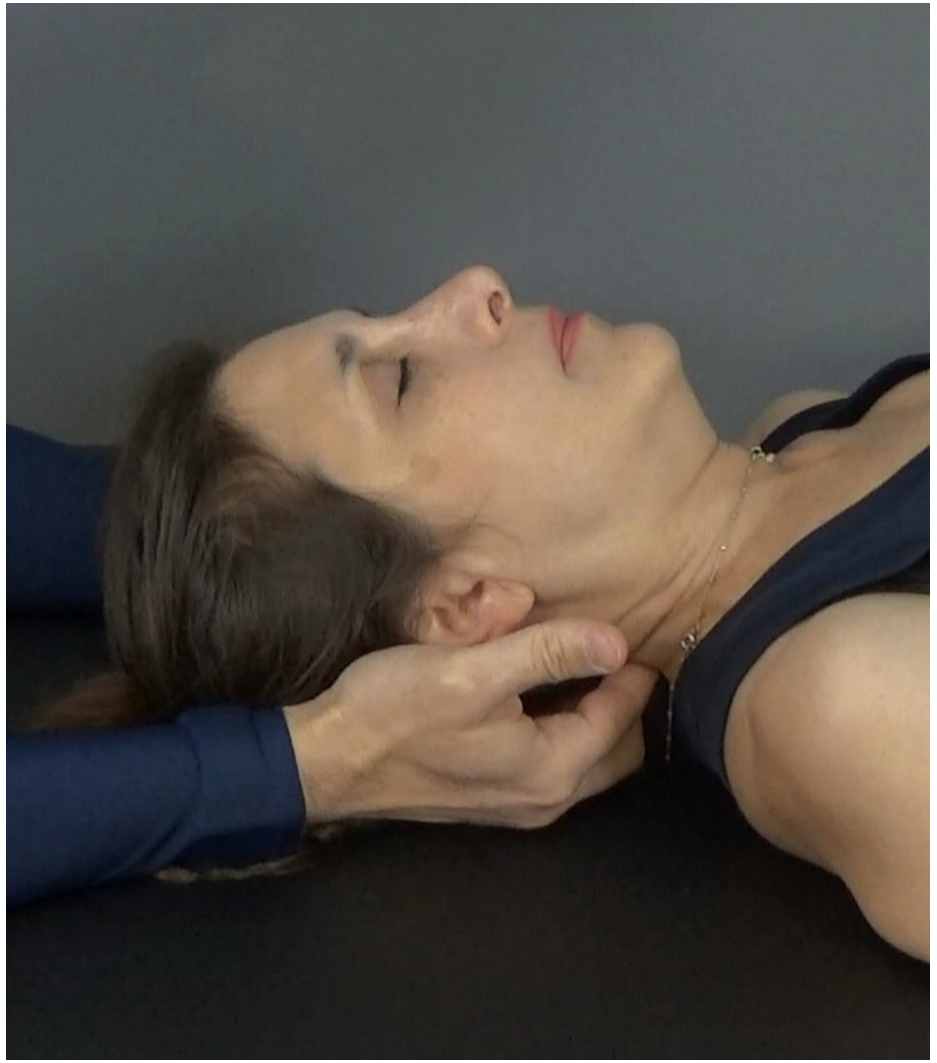
Indirect Treatment MFR

- *Gross stretch of the posterior cervical musculature*
- *Cranial base*
- *Hair pull (10 min).*
- *Ear pull (10 min).*
- *Stretch of face muscles (10 min).*
- *Gross stretch of the Sternocleidomastoid (10 min).*

Manheim, Carol. “Gross Stretch of the Sternocleidomastoid Release”. The Myofascial Release Manual (p. 117). (Function). Kindle Edition.

Control Intervention

- *Slow soft stroking with finger pads all over the head in the same areas as the application of Myofascial Release (in the other Groups) for the same duration (1 h per treatment session), twice a week for 12 weeks.*
- *After the completion of the study, patients in the Control arm were provided MFR therapy, as advised by the Ethics Committee.*



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Osteopathic Screening Examination for the patient with Tension Headache

OMT without a Treatment Table

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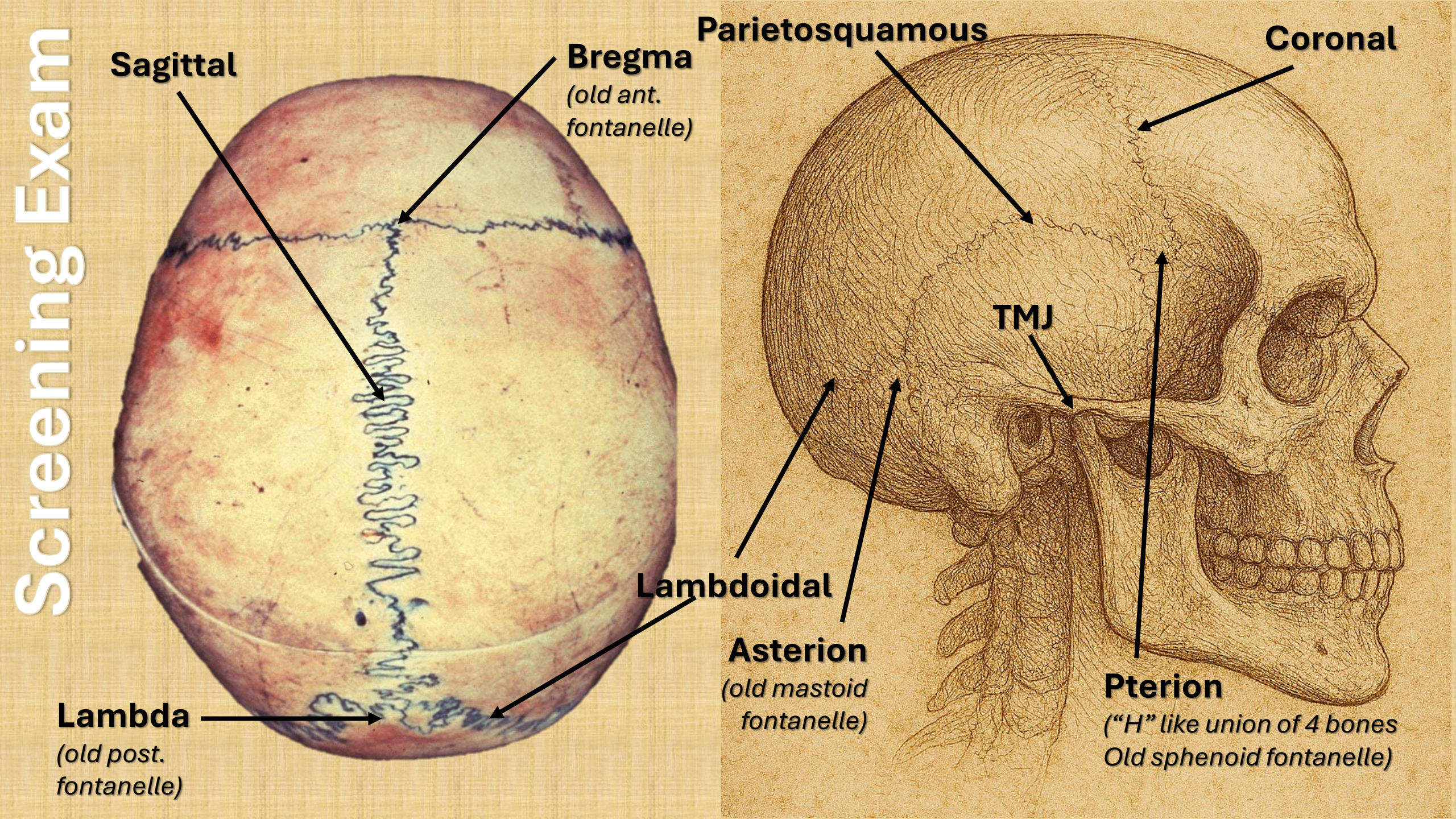
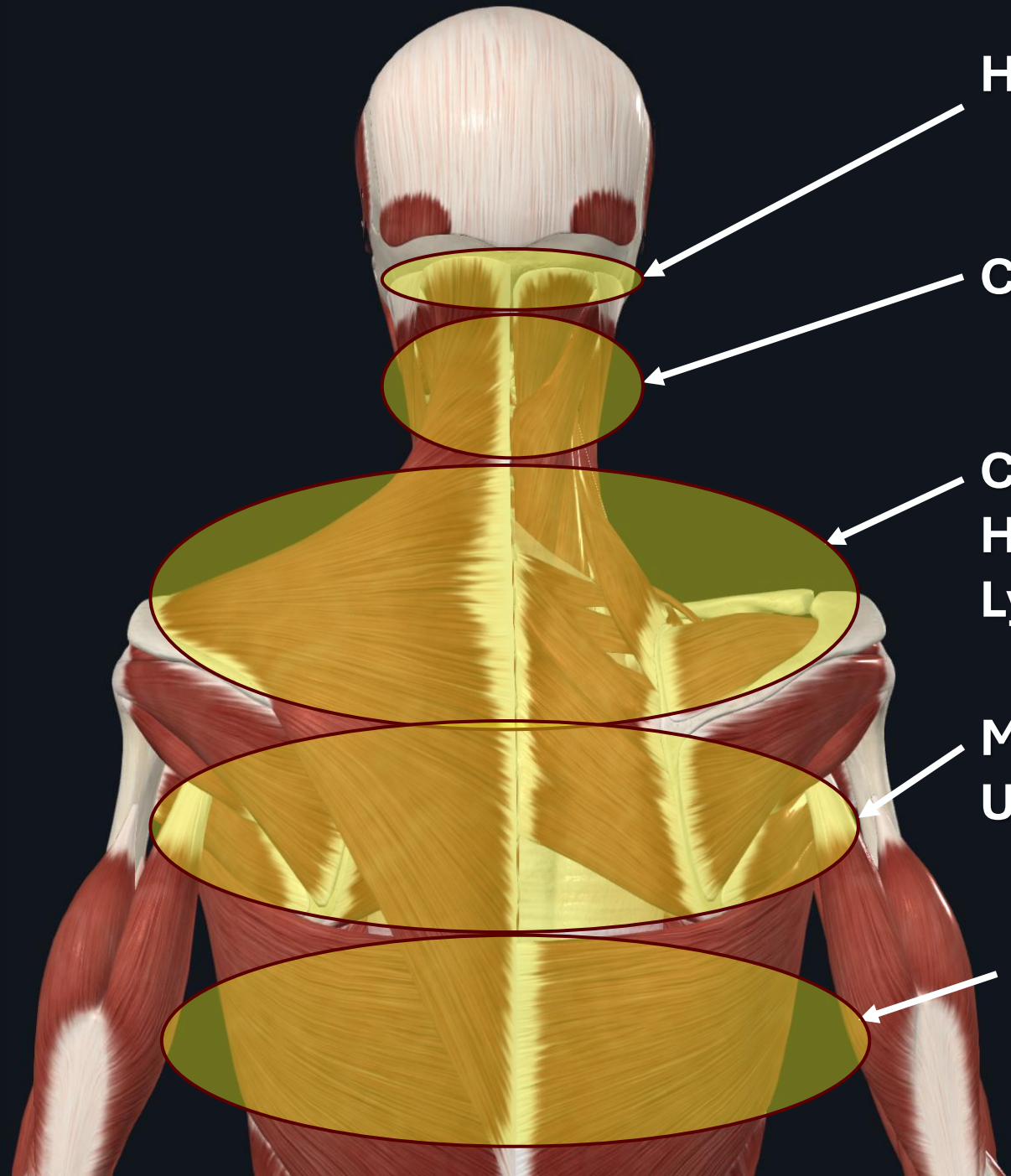
Screening Exam



Screening Exam

OSE in OPP



Head, Neck, & PNS Symptoms

Cervical, UE, & Diaphragm Symptoms

CTJ/Upper Back, Rib, & UE Symptoms
Head, Heart, Lungs, & UE SNS
Lymphatic Inlet

Mid-Back, Rib, & UE Symptoms
UE, Upper GI SNS

Rib, Lower Mid-Back to Lower Back Symptoms
Lower GI & Upper GU SNS

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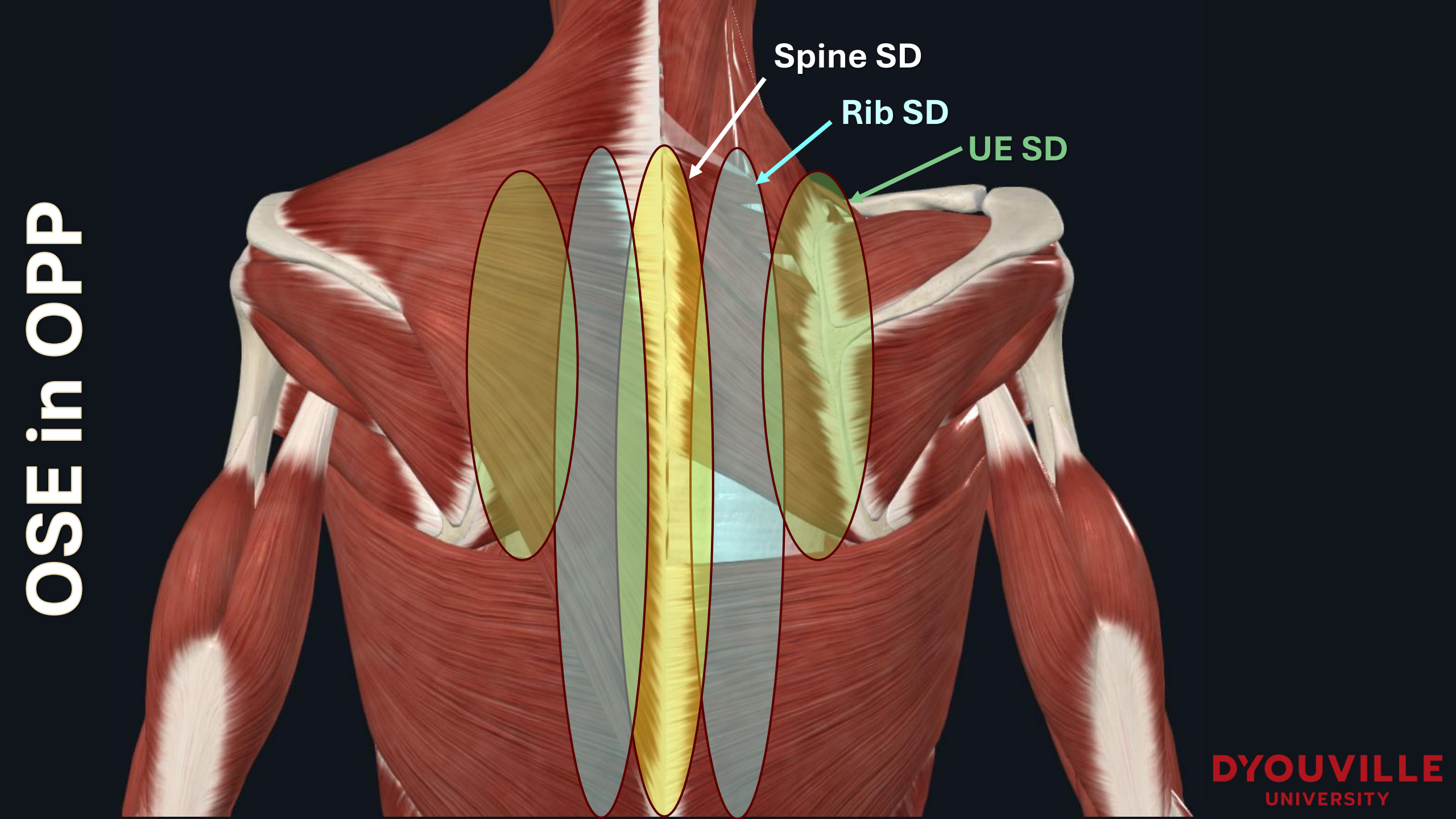
OSE in OPP



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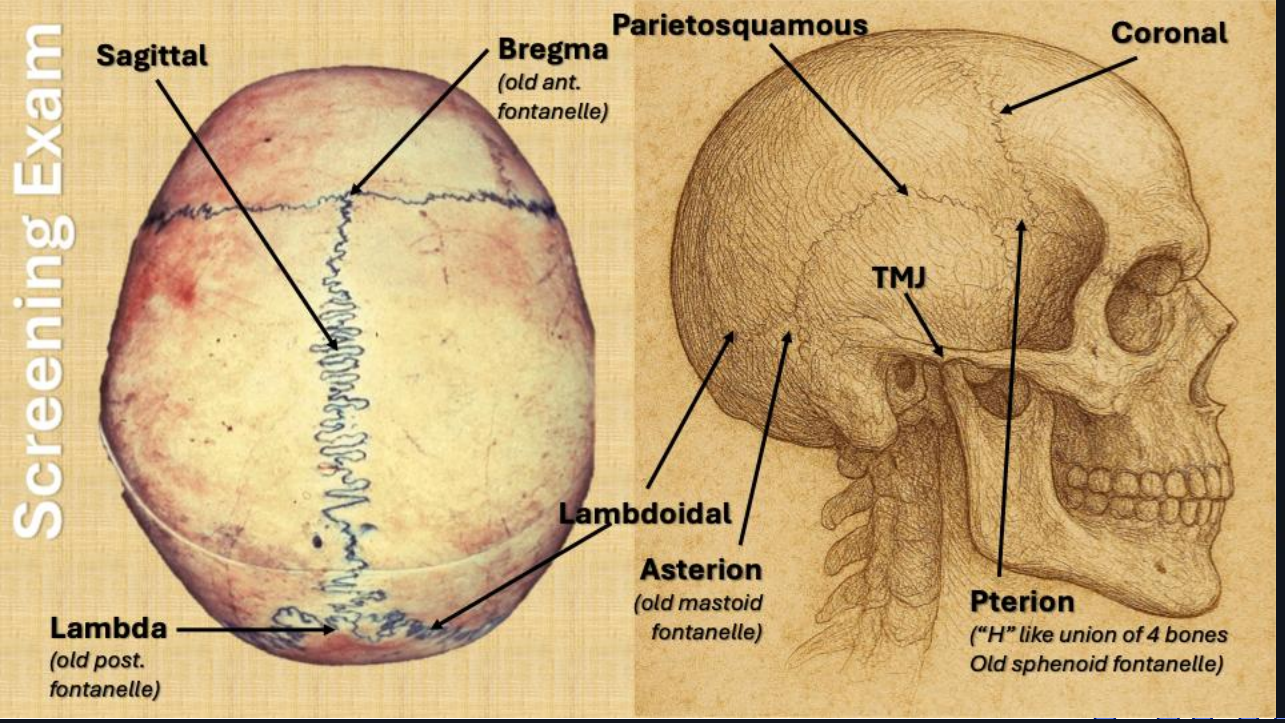

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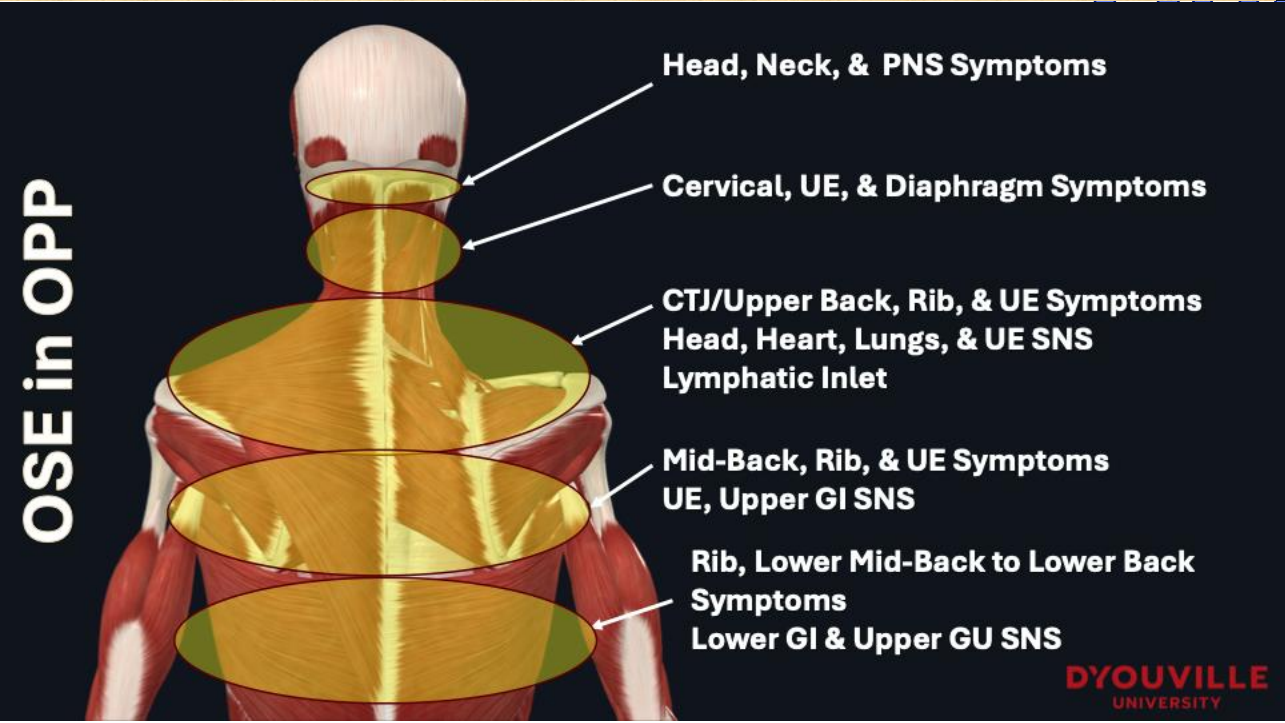

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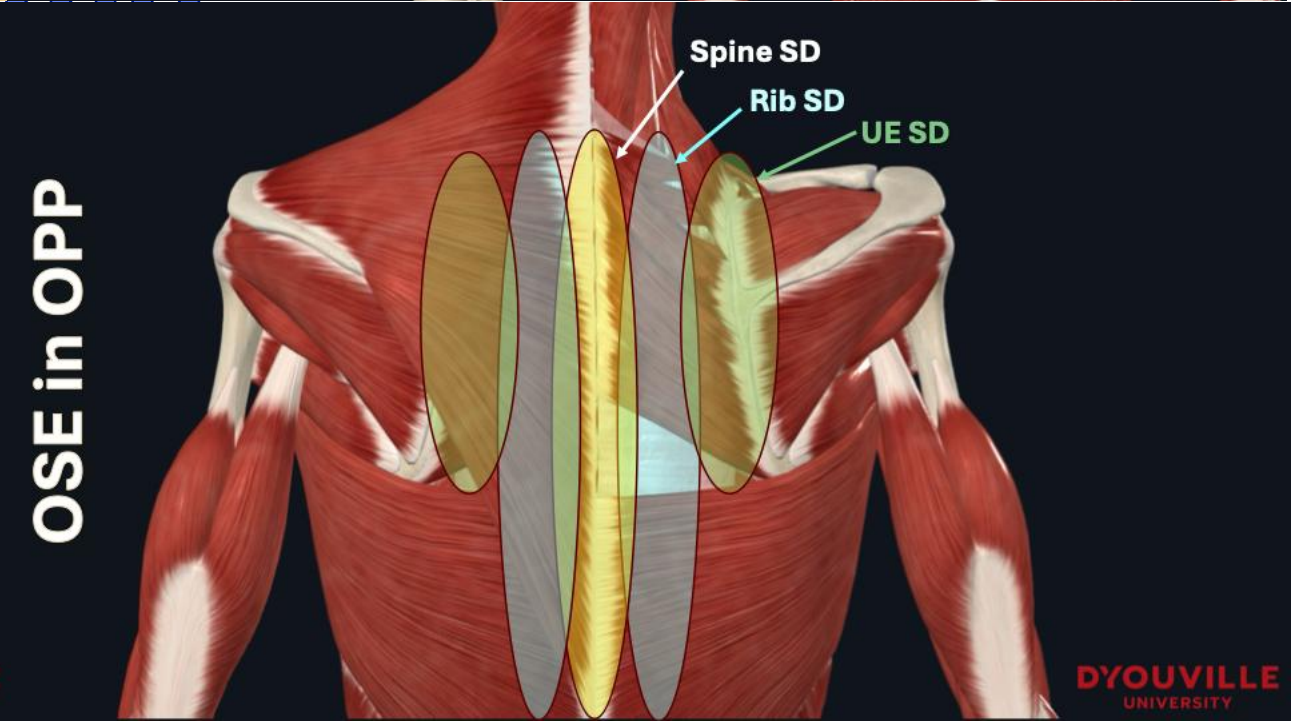

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OMT for Tension Head

OMT without a Treatment Table

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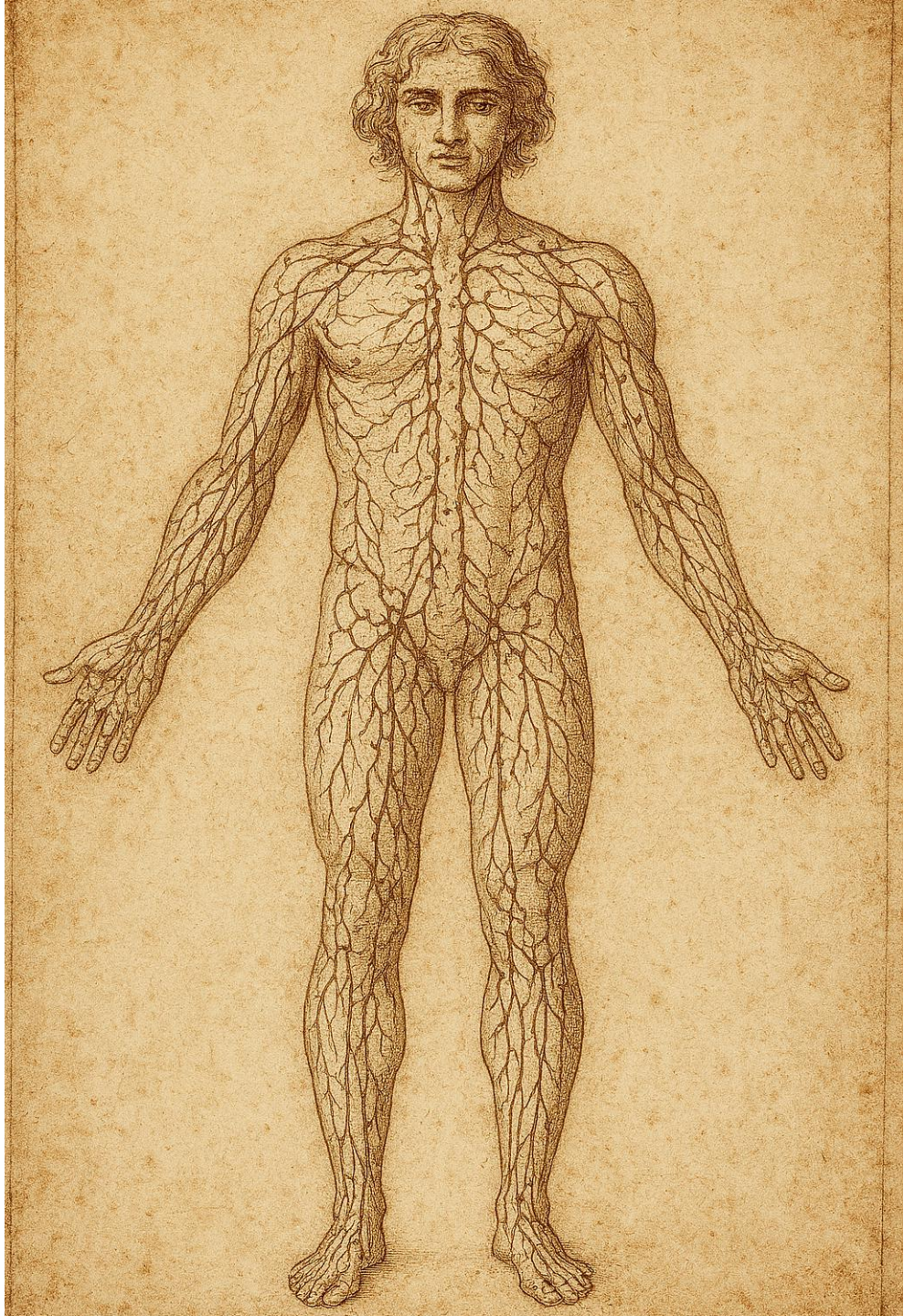
Fluids First!

- Hypertonicity of muscles diminishes myofascial extracellular fluid drainage.
- Diminished drainage results in fluid backup and greater TTA
- Increased TTA adds to the neurologic stimulation of the facilitated segment and makes somatic dysfunctions more symptomatic
- From both a fluid and neurologic model this maintains a self-perpetuating pathologic loop

Image created by Copilot AI in Leonardo da Vinci style 8/30/25



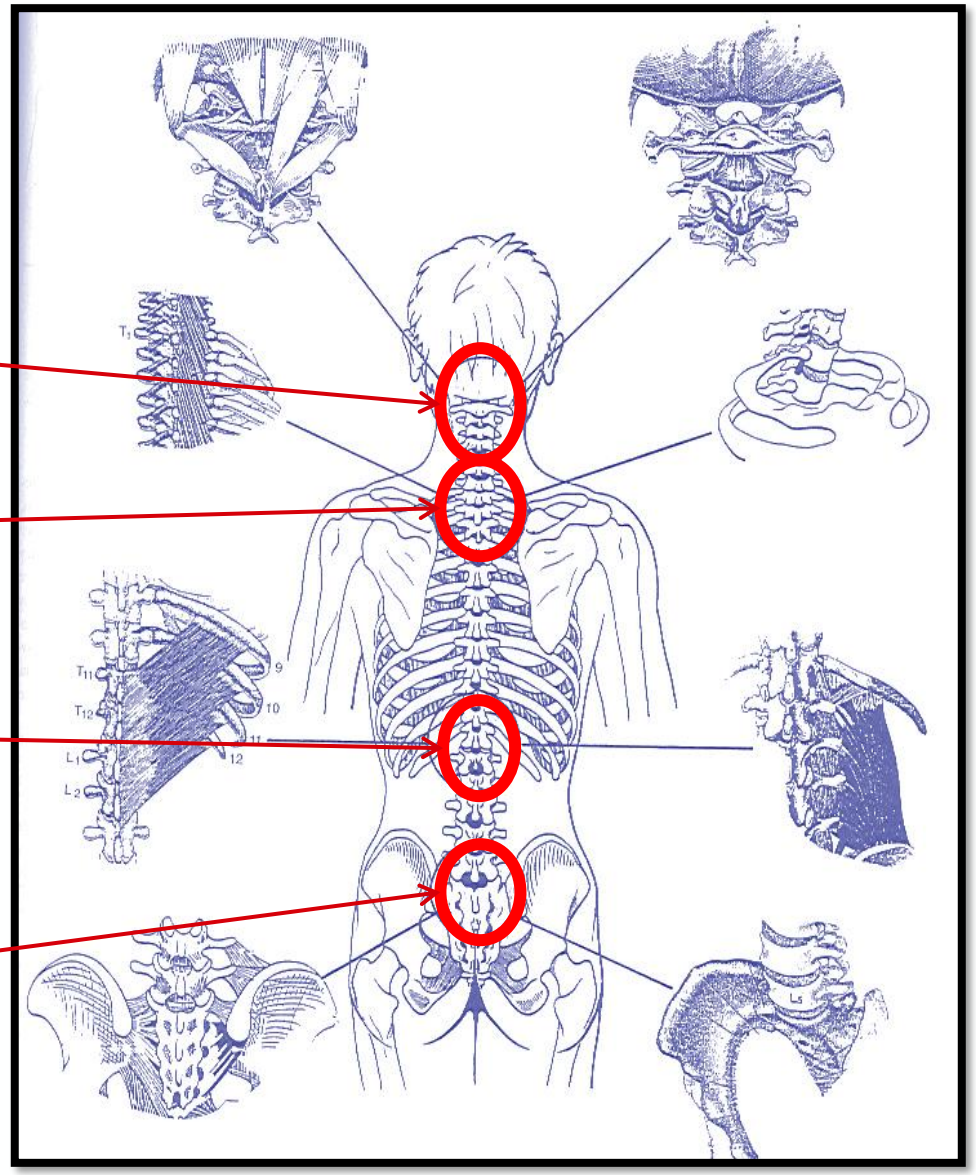
Transverse Restrictors & Junctional Areas

Tentorium Cerebelli

Thoracic Inlet

Thoracolumbar Diaphragm

Pelvic diaphragm



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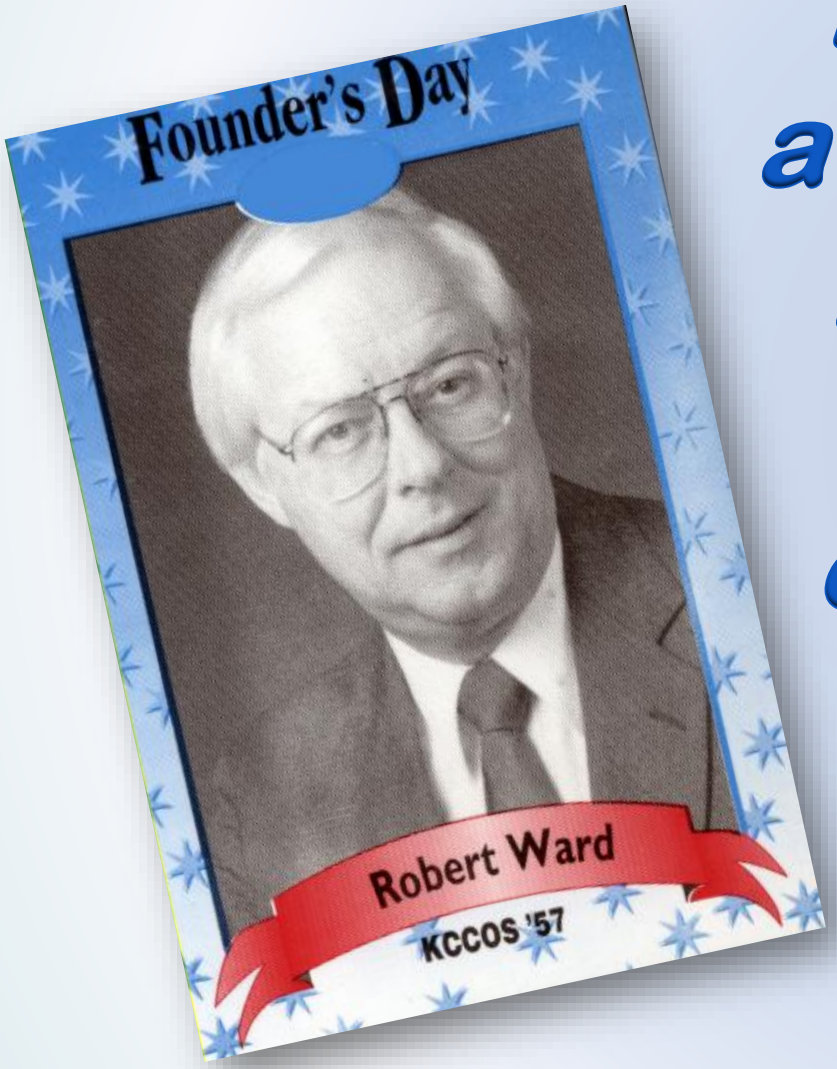
INR/MFR



"For every tightness, there is a three-dimensionally related looseness. Commonly, the looseness is in exactly the opposite direction from the tightness."

-Robert Ward, DO, FAAO

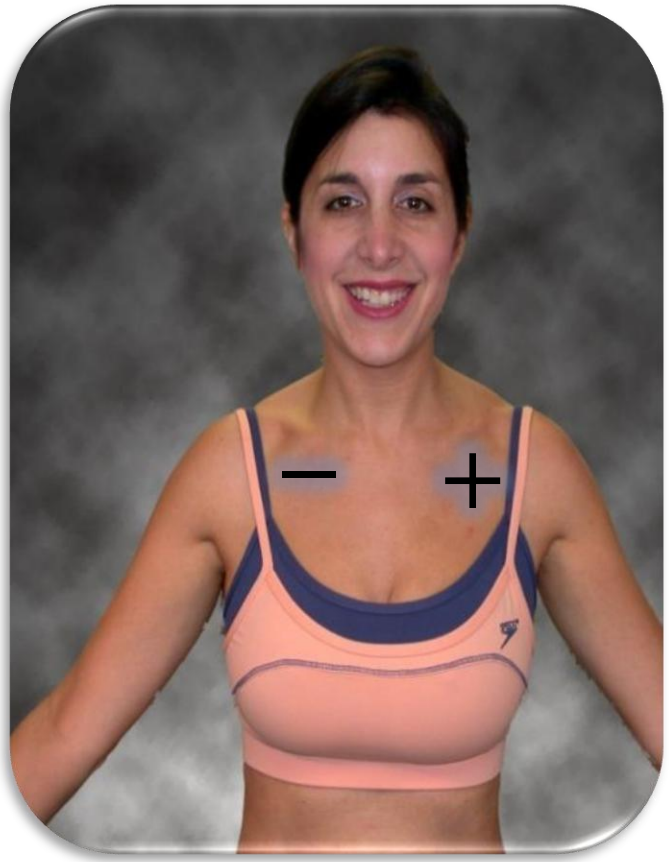
Ward, Robert. Foundations of Osteopathic Medicine - 2nd Edition. LWW. Baltimore, MD 2002

INR/MFR

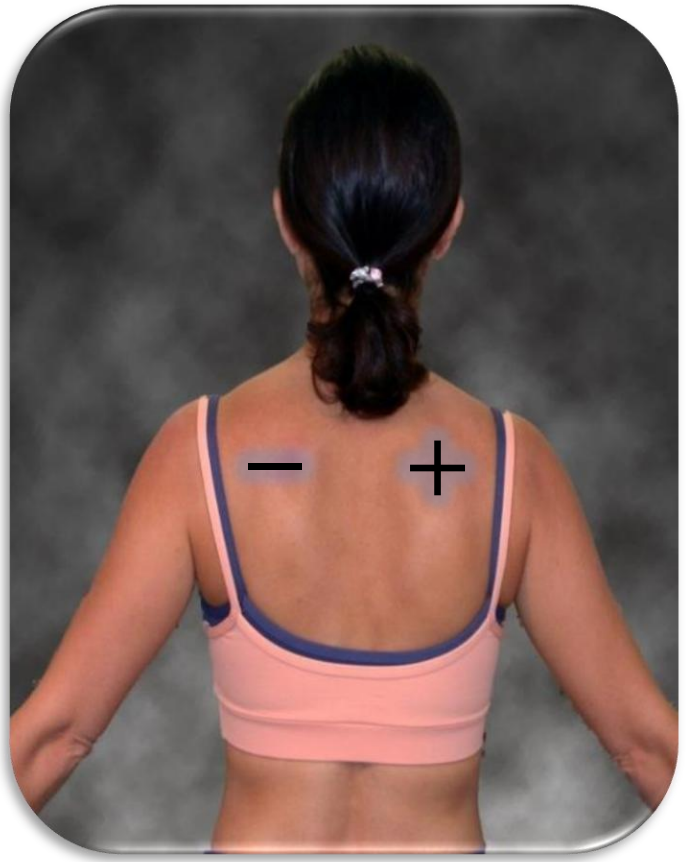
Sherrington's Law: When a muscle receives a nerve impulse to contract, its antagonists, receive, simultaneously, an impulse to relax.

INR/MFR: Tight-Loose Relationship

A



B



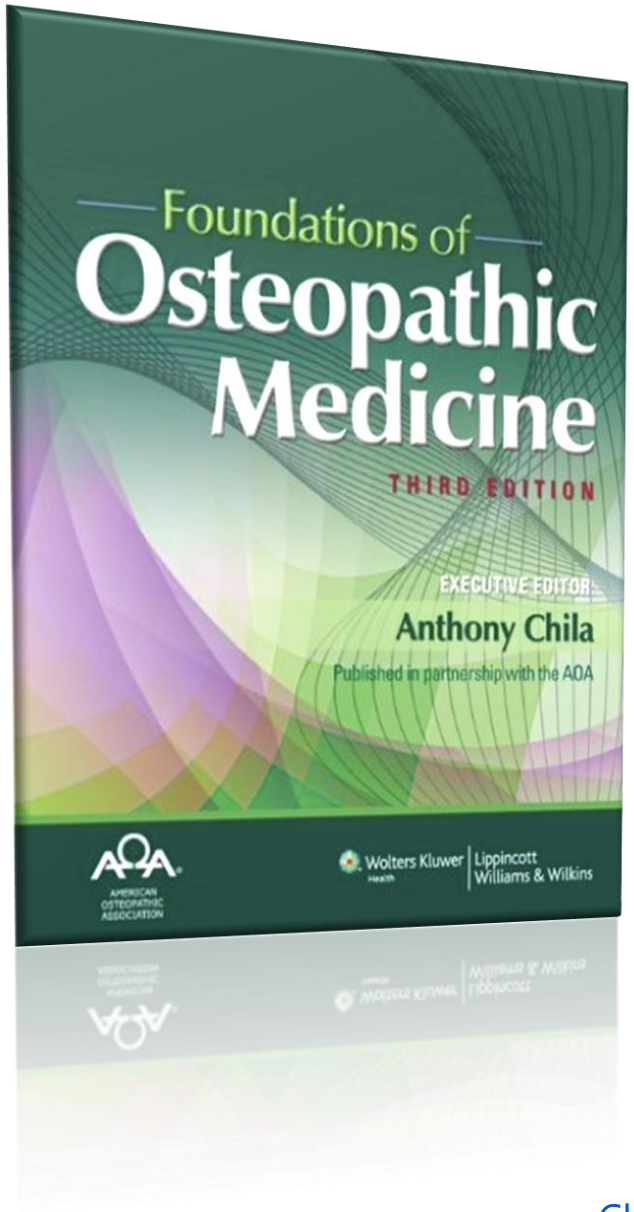
Key

+ = tight

- = loose

Danto, Jay B. *A Review of the Principles and Concepts of Integrated Neuromusculoskeletal Release and the Novel Application of a Segmental Anterior/Posterior Approach in the Thoracic, Lumbar and Sacral Regions* . JAOA. Vol 103: No 12 December 2003 583-596

MFR & INR Defined



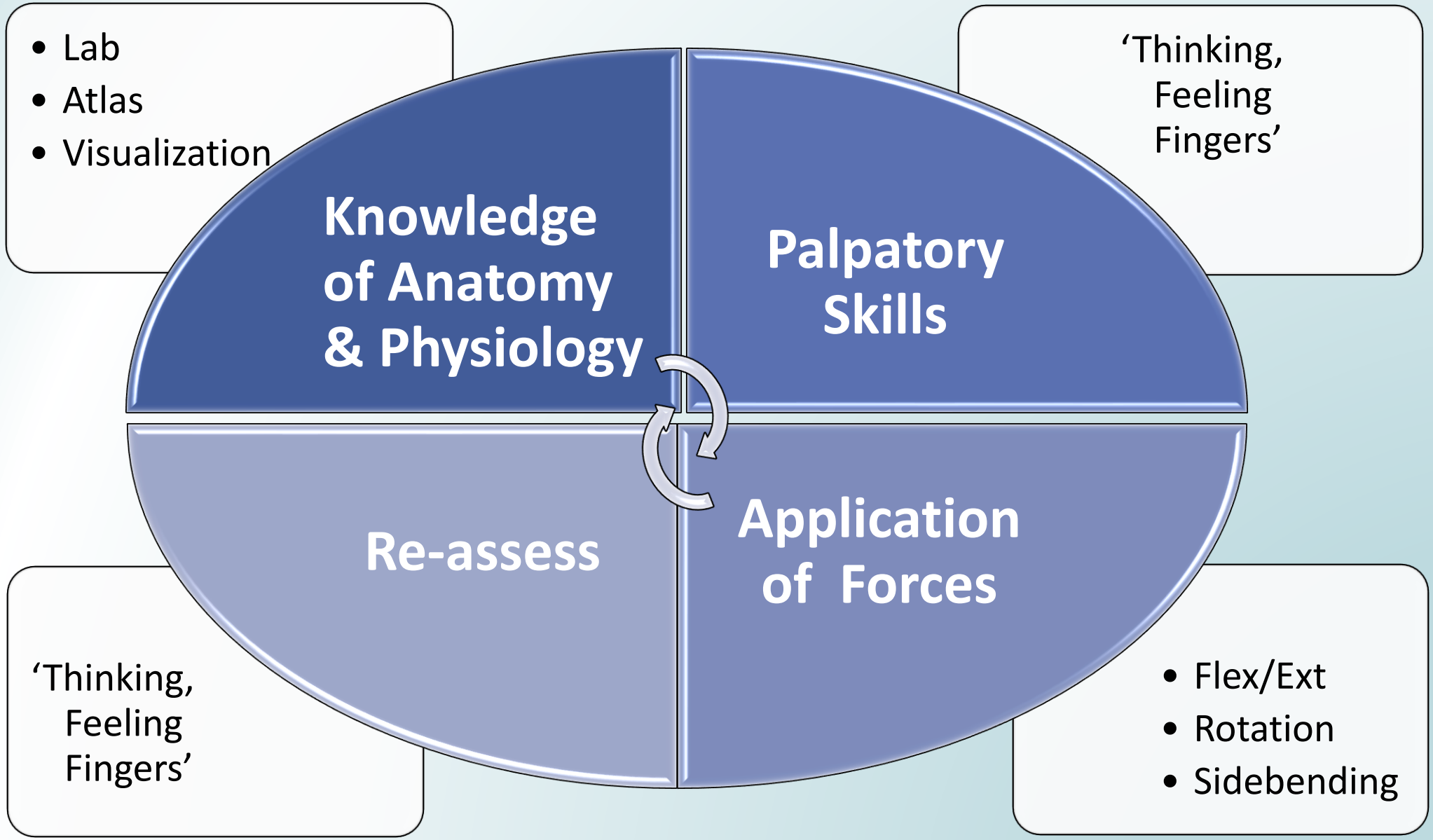
MFR

A system of diagnosis & treatment first described by A.T. Still and his early students, which engages continual palpatory feedback to achieve release of myofascial tissues

INR (Integrated Neuromusculoskeletal Release)

A treatment system in which combined procedures are designed to stretch & reflexively release patterned soft tissue & joint related restrictions

Chila, FOM3, 2010; p. 1097 – Glossary of Osteopathic Terminology (2009)



Application of MFR

Activating Forces

- **Inherent Forces:** using the body's PRM *(primary respiratory mechanism)*
- **Respiratory Cooperation:** Refers to a physician directed, patient performed, inhalation or exhalation or a holding of the breath to assist with the manipulative intervention.
- **Patient Cooperation:** the patient is asked to move in specific directions to aid in mobilizing specific areas of restriction

FOM3, p. 699

INR (Integrated Neuromusculoskeletal Release) & REMs (Release Enhancing Maneuvers)

REMs speed the treatment process:

- Breath holding
  - The goal is to alter both intrathoracic & intraabdominal pressure using costodiaphragmatic, shoulder girdle & lumbopelvic interactions
- Prone & supine simulated swimming & pendulum arm swing maneuvers as direct & indirect barriers are released.
- R/L cervical rotation
- Isometric limb & neck movements against the table, chair…
- Patient evoked movement from cranial nerves *(eye, tongue, jaw, oropharynx)*

Ward, FOM 2nd ed - 2003, p. 936

Release Enhancing Maneuvers (REMS)

Upper Body

Rotation Right

Rotation Left

Extension - ”TD”

Indications for MFR

- Somatic dysfunction
  - *Almost all soft tissue or joint restrictions*
- When HVLA or muscle energy is contraindicated
  - Consider *indirect* MFR
- When counterstrain may be difficult secondary to a patient's inability to relax.

Contraindications of MFR

Absolute:

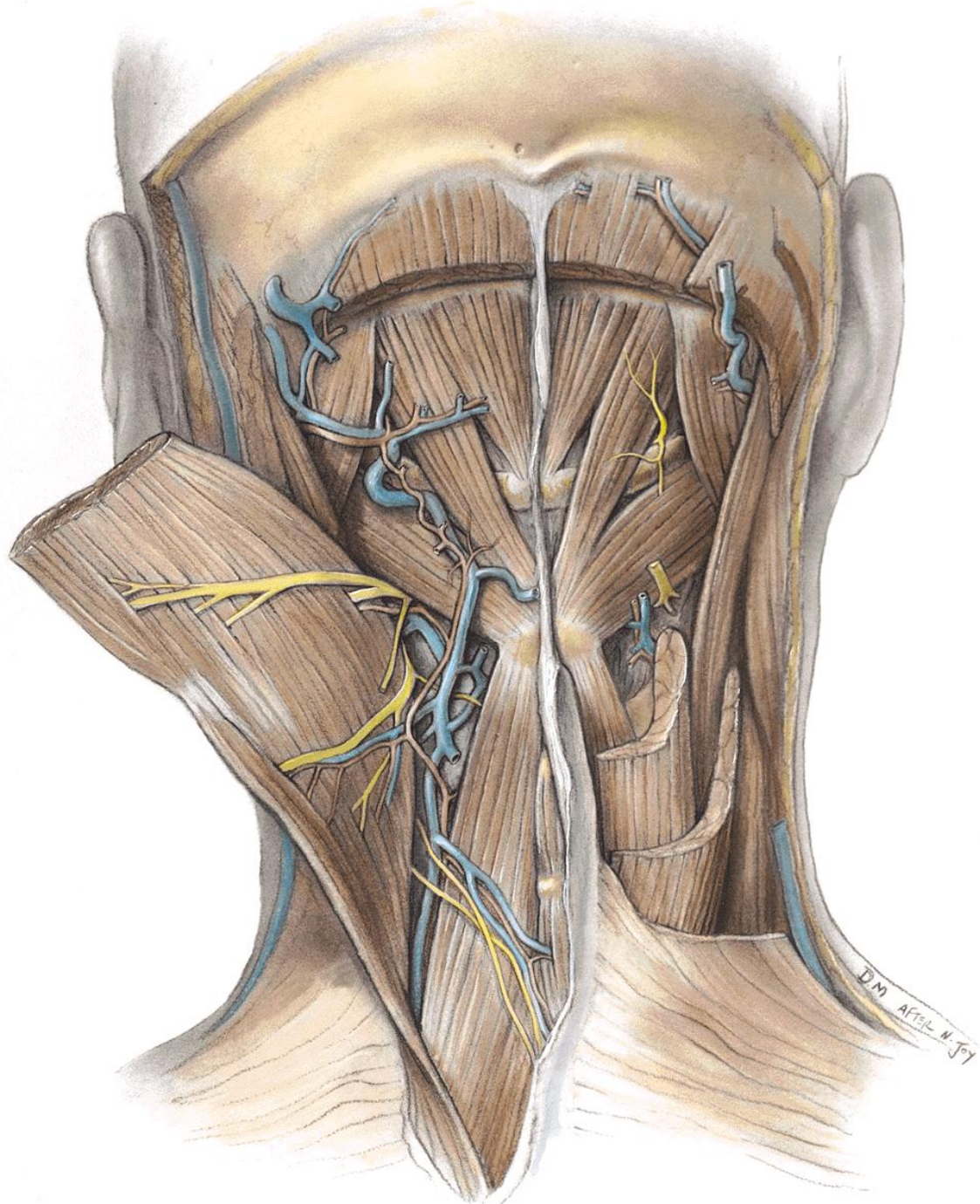
- Lack of Patient Consent
- Absence of Somatic Dysfunction

Relative:

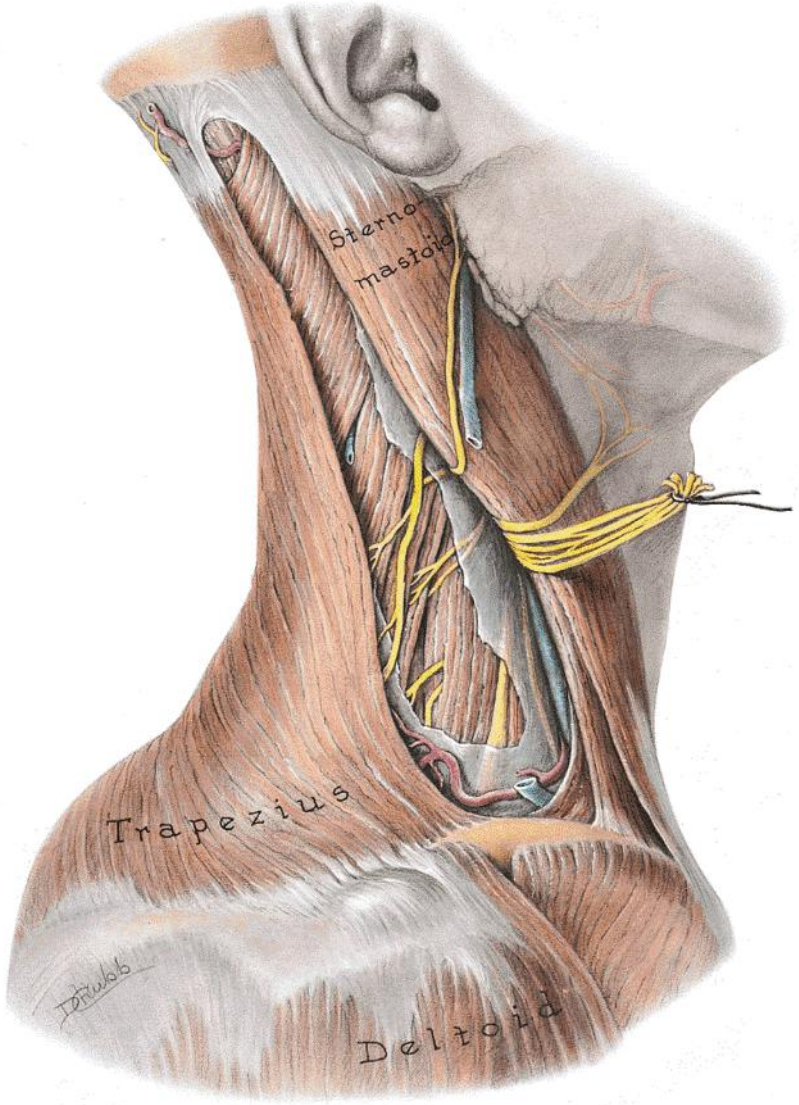
- Infection of soft tissue or bone
- Fracture, Avulsion or dislocation
- Metastatic disease
- Soft tissue injuries: Thermal, Hematoma or Open wounds
- Post-op patient with wound dehiscence
- Rheumatologic condition involving instability of cervical spine
- DVT or Anticoagulation therapy

MFR Treatment Endpoint

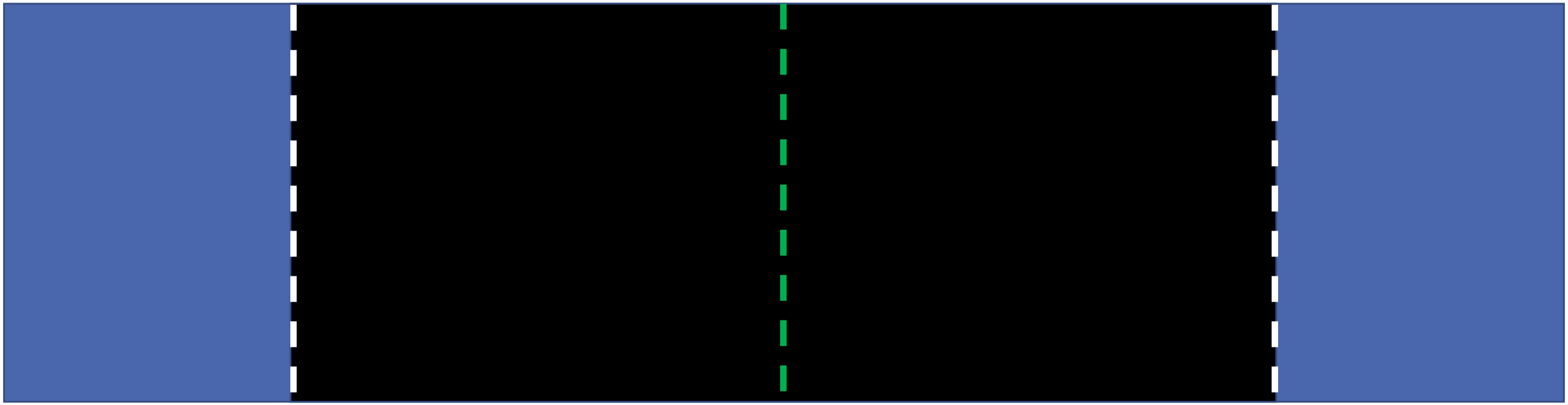
- A three-dimensional release is often palpated as:
  - Warmth
  - Softening
  - Increased compliance/ROM
- The continuous application of activating forces no longer produce change
- When finished, recheck of the tissue demonstrates symmetry



Thoracic Inlet



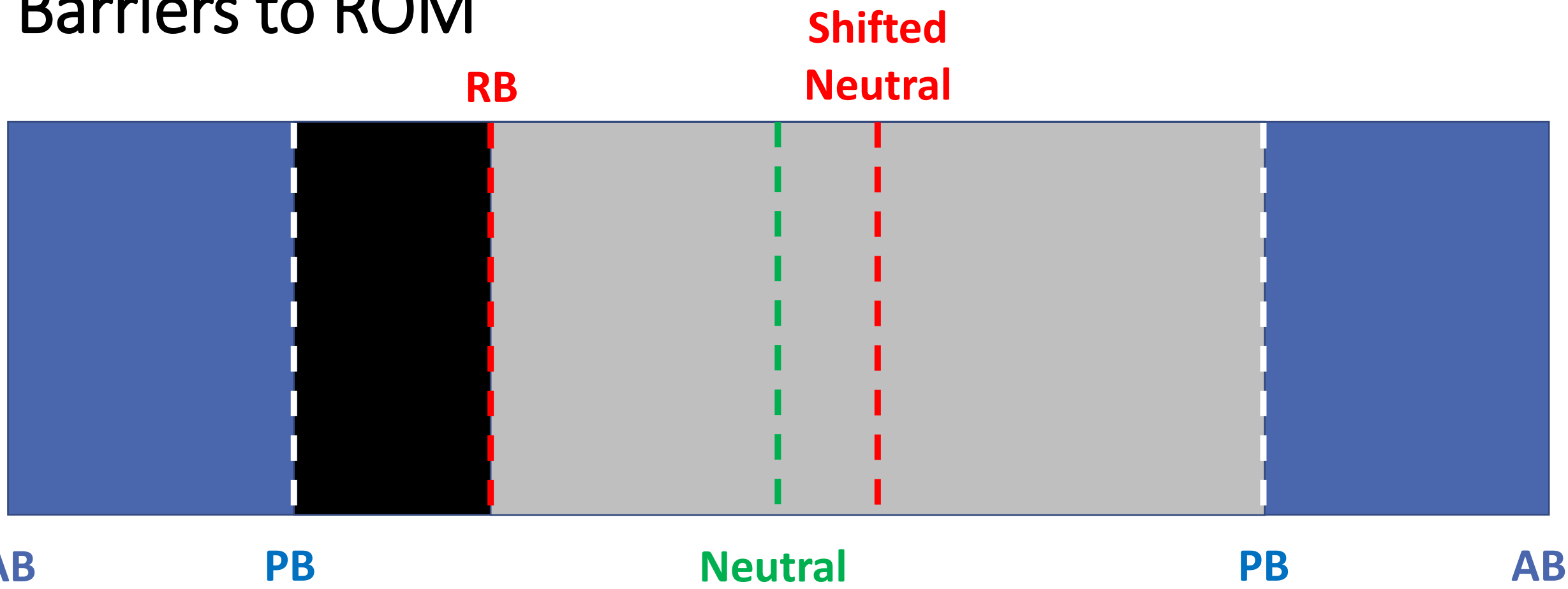
Barriers to ROM



AB – Anatomic Barrier

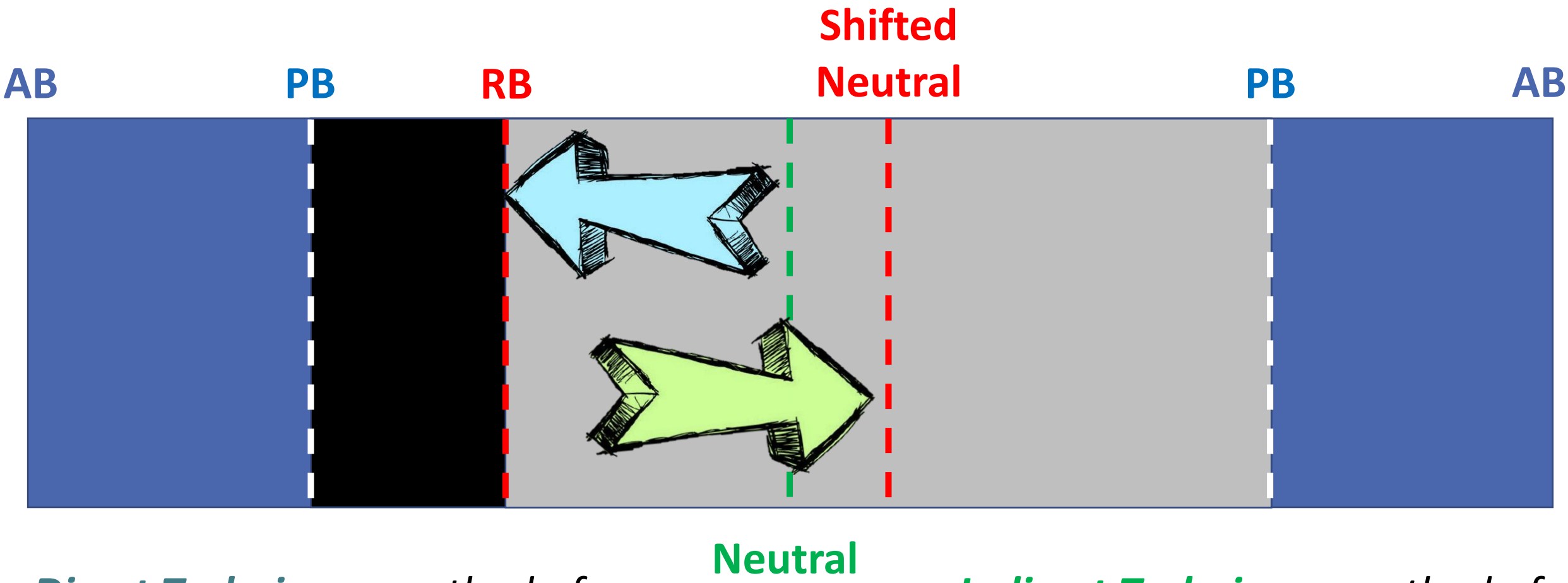
PB – Physiologic Barrier

Barriers to ROM



AB – Anatomic Barrier **RB** – Restrictive Barrier

PB – Physiologic Barrier

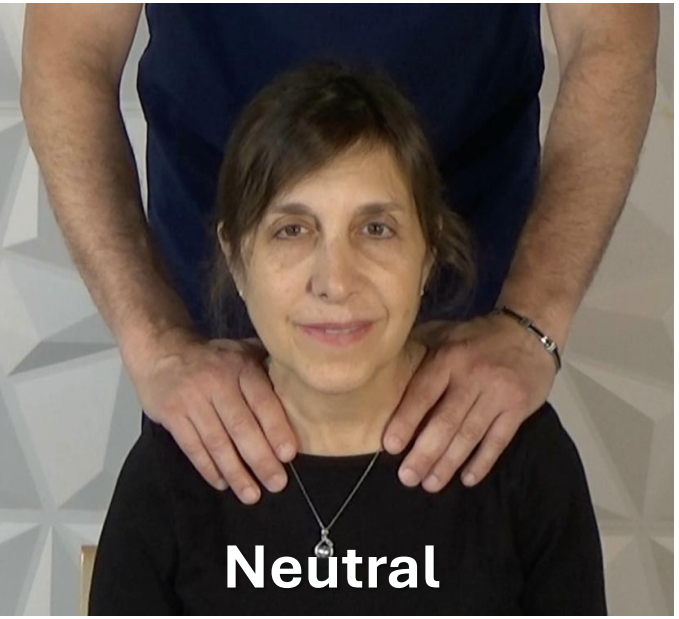


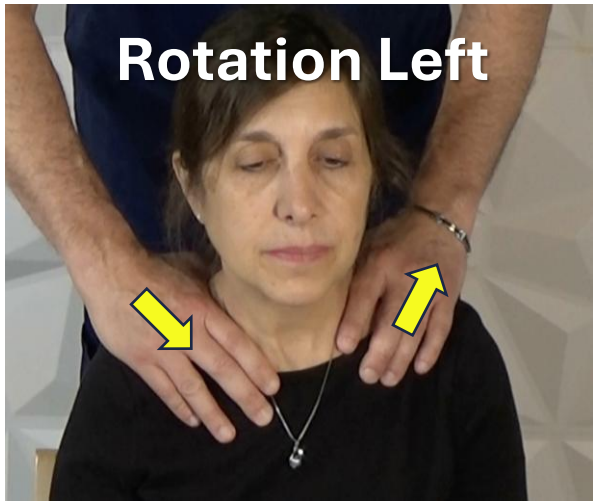
Direct Techniques *method of action engage the restrictive barrier directly.*

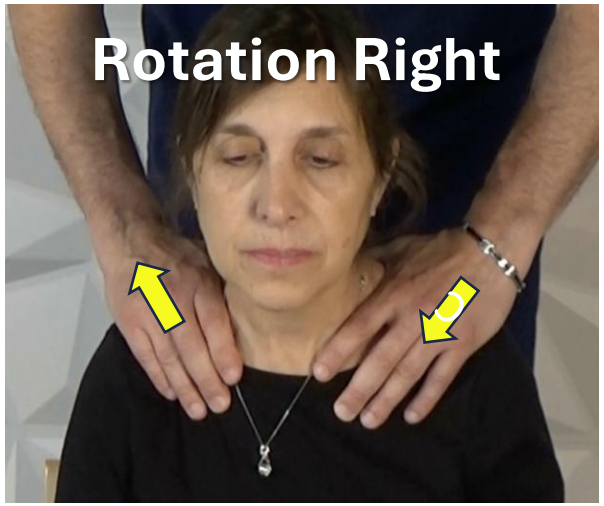
Indirect Techniques *method of action involve positioning away from the restrictive barrier.*

Myofascial Cervicothoracic Diagnosis

Physician's thumb pads rest posteriorly to the superior trapezii, finger pads are anterior and inferior to the clavicles and palms melt into the tissues of the CTJ

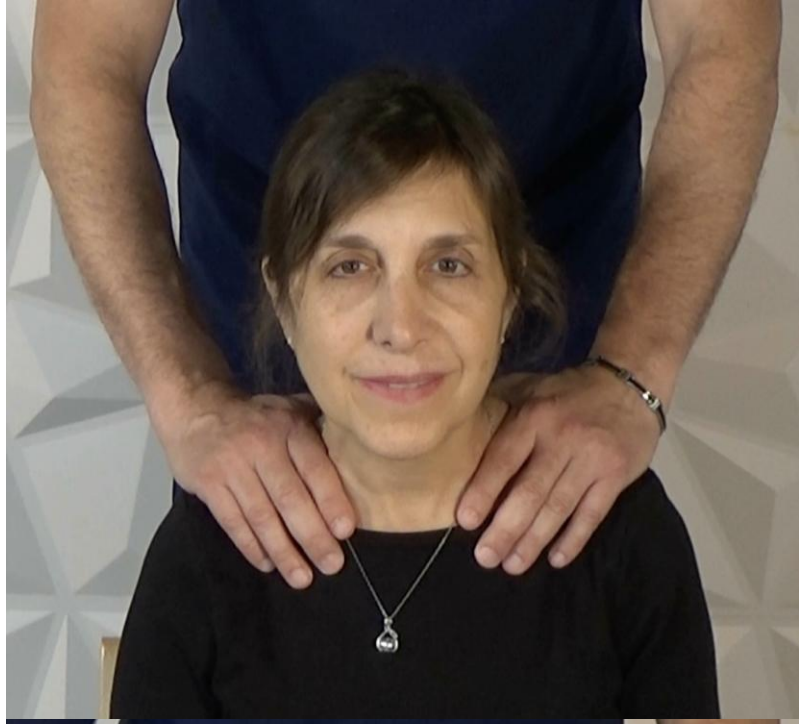






Cervicothoracic MFR

1. Physician's thumb pads rest posteriorly to the superior trapezii, finger pads are anterior and inferior to the clavicles and palms melt into the tissues of the CTJ
2. Engage the RB or tissue balance point in 3 planes
   - ✓ ***Right/Left rotation***
   - ✓ ***Right/Left sidebending***
   - ✓ ***Anterior/Posterior translation (flexion/extension)***
3. The force is applied in a very gentle to moderate manner.
4. REMs (Release Enhancing Maneuvers) applied:
   1. Deep breathing or breath holding
   2. Reaching arms right/left/over the head
   3. Turning head right/left
5. The physician reassesses TART.



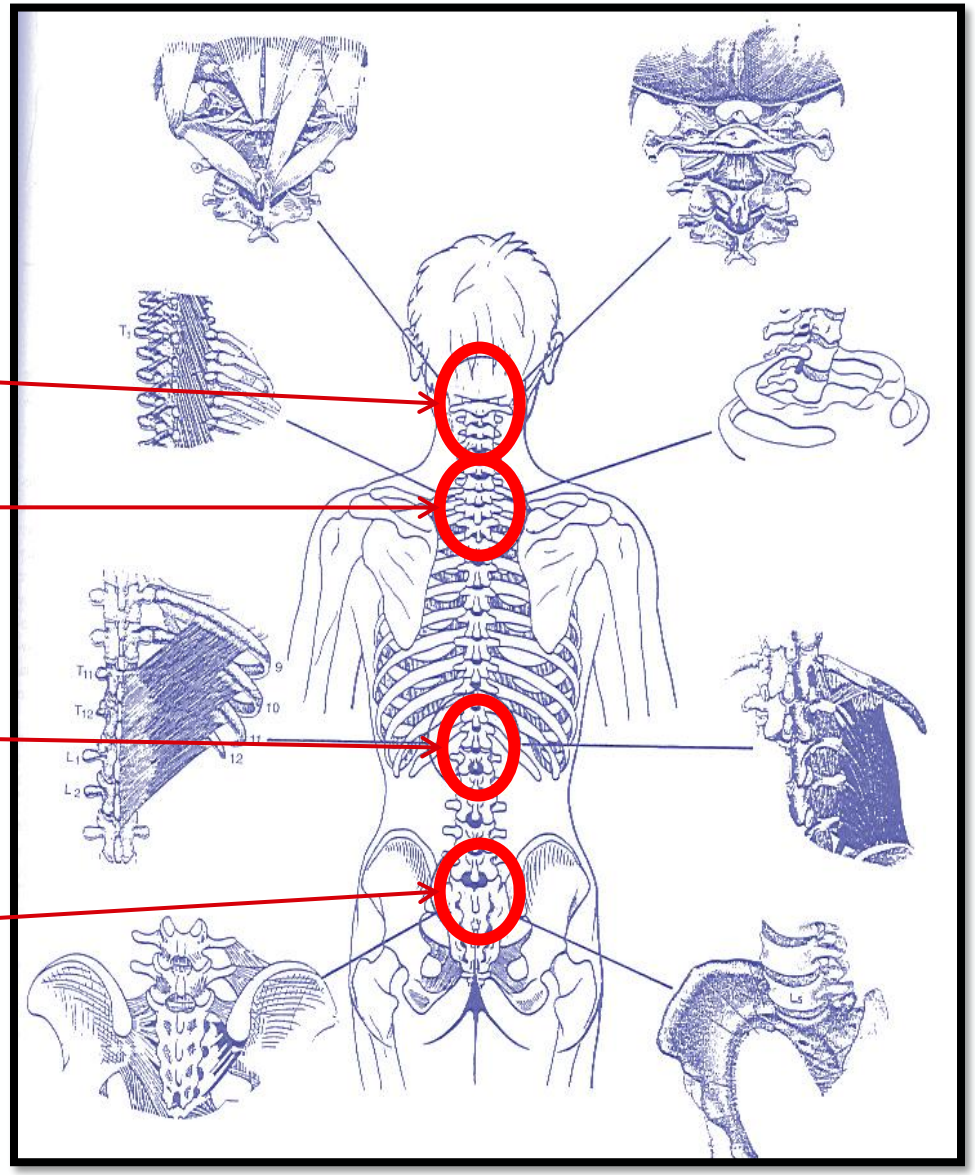
Transition zones of the spine

OA, C1, C2

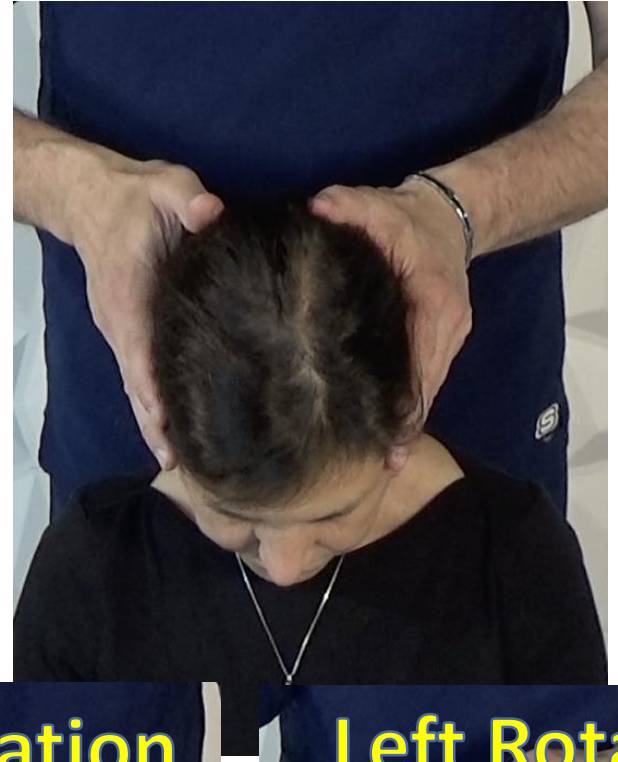
C7, T1

T12,
L1

L5, Sacrum

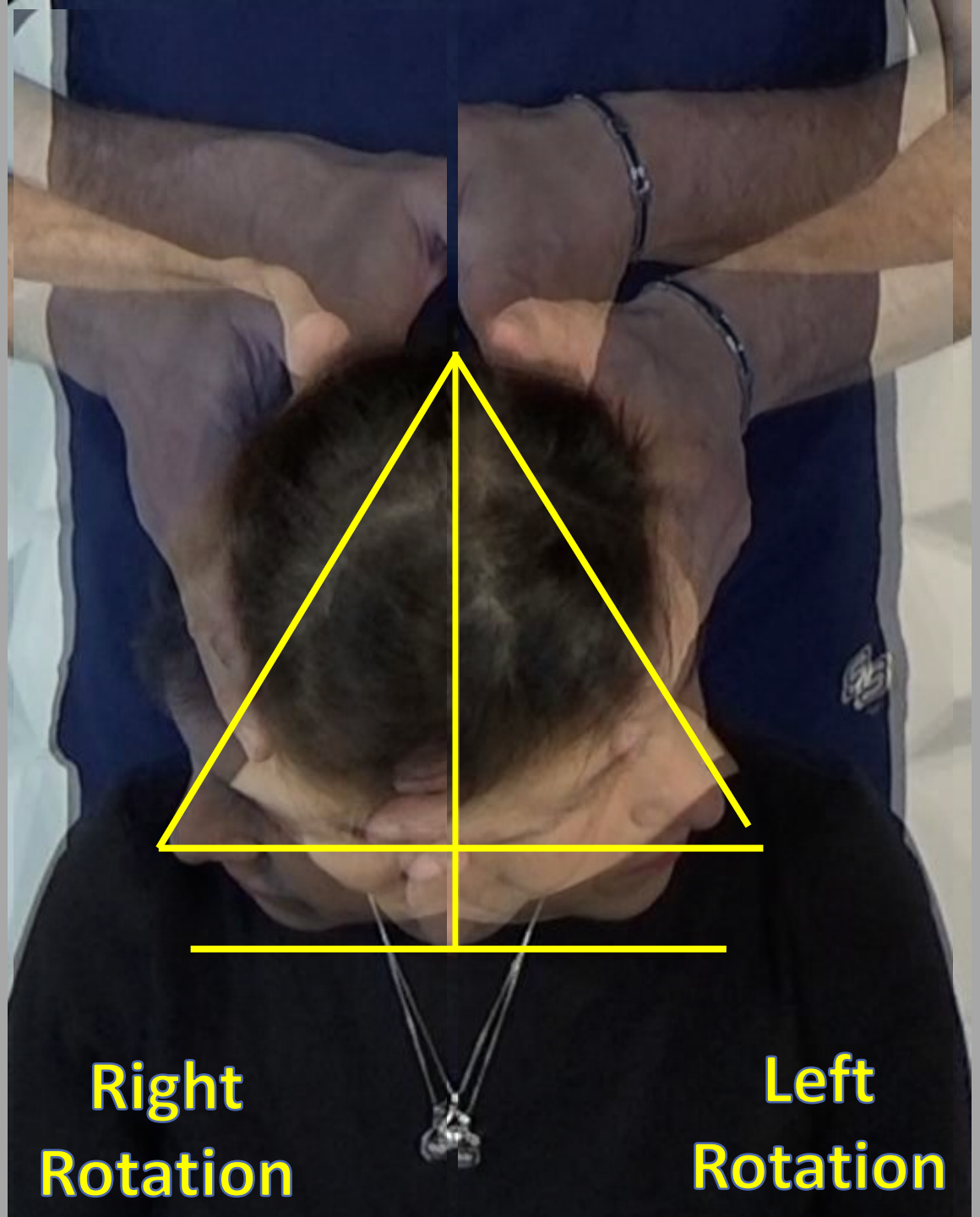


AA Biomechanical Evaluation – Palpatory/Visual

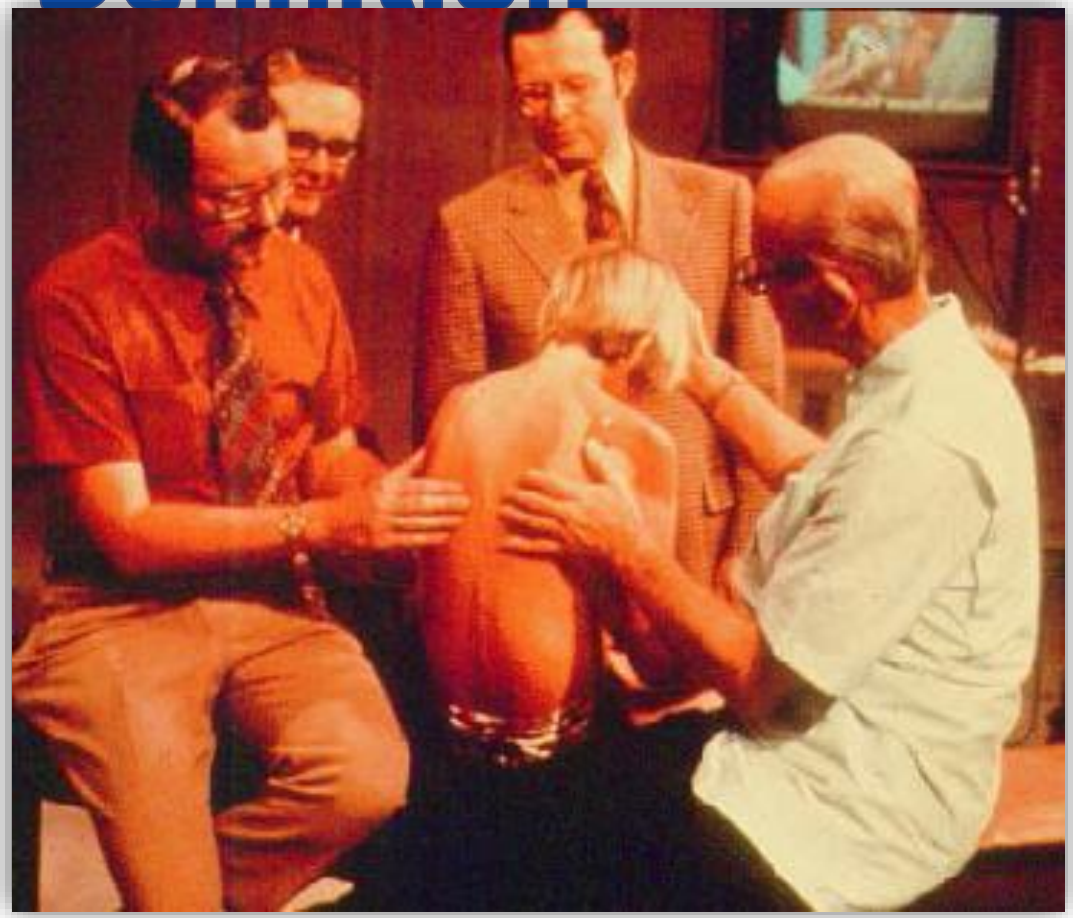


- **Flex** the patient's head maximally to lockout the vertebrae below
- **Monitor** the suboccipital area with your pads of your thumb and index finger *(Optional)*
- **Evaluate rotation** introduced using your other hand on the crown of the patient's head
  - Restricted motion is palpated by the monitoring fingers with TTA and observed visually
  - **Segmental definition**.

AA Biomechanical Evaluation – Palpatory/Visual



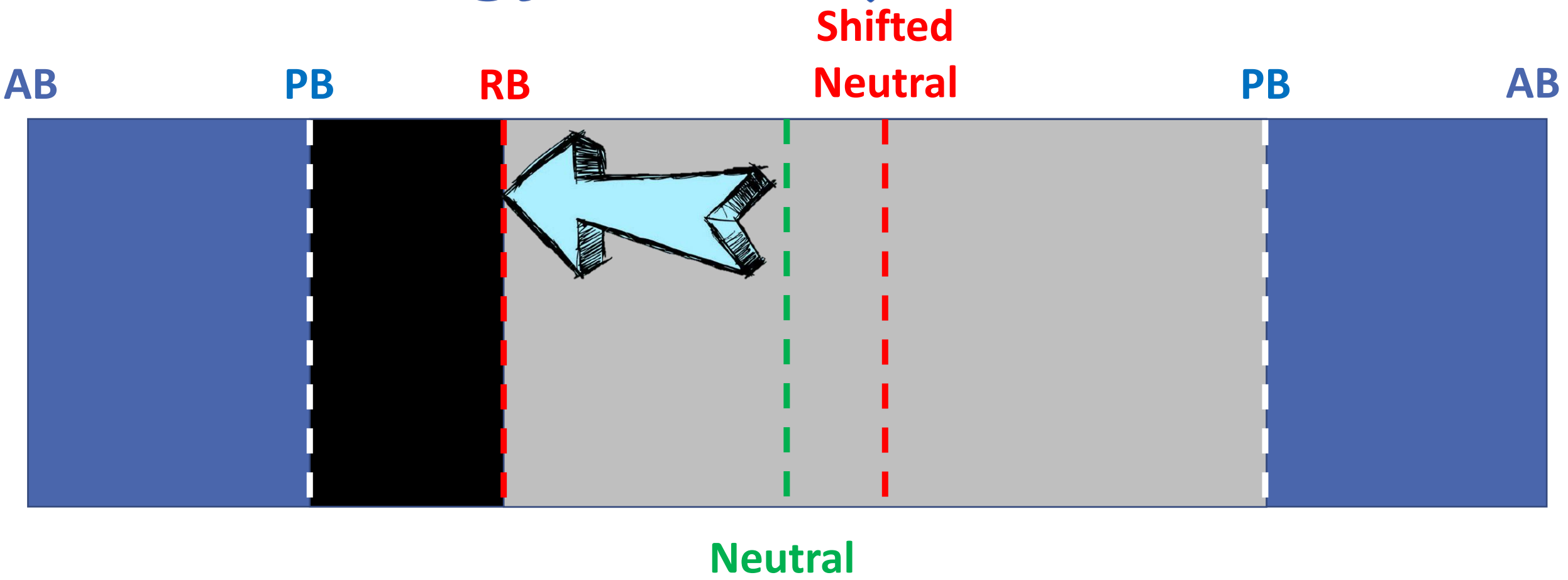
Muscle Energy Technique Definition



- Characterized as a specific, non-repetitive articulatory method that is indirect, then direct.
- Attributed to A.T. Still.
- A term coined by Richard Van Buskirk, DO, PhD.

Glossary of Osteopathic Terminology (2011)

Muscle Energy Technique

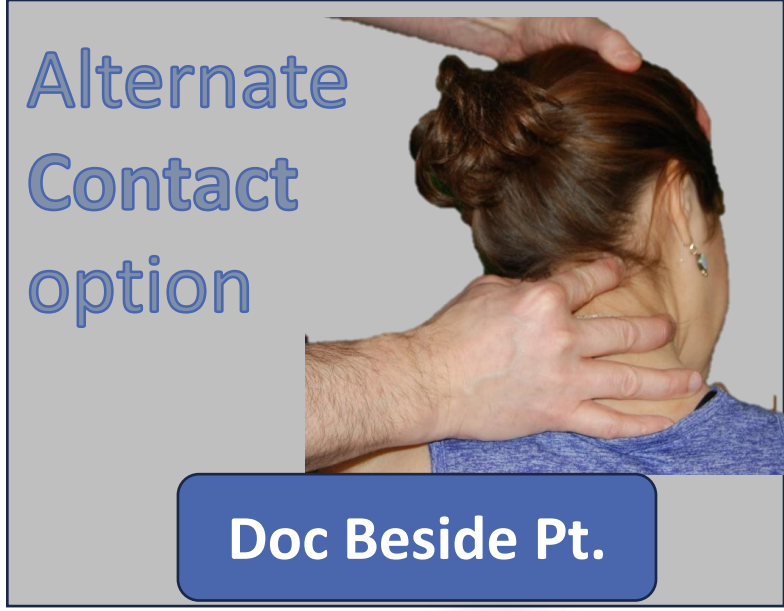


*Position the somatic dysfunction to engage the RB **Directly** & use patient directed muscle activation away from the RB.*

AA MET

- **Contacts:** hand placement as shown depending on physician position
- **Flex** the patient's head maximally to lockout the vertebrae below
- ***Monitor*** *the suboccipital area with your pads of your thumb and index finger (Optional)*
- **Engage the RB**
- **3-5 patient directed rotation force away from the RB**
- **Recheck** .

Doc Behind Pt.



Doc Beside Pt.

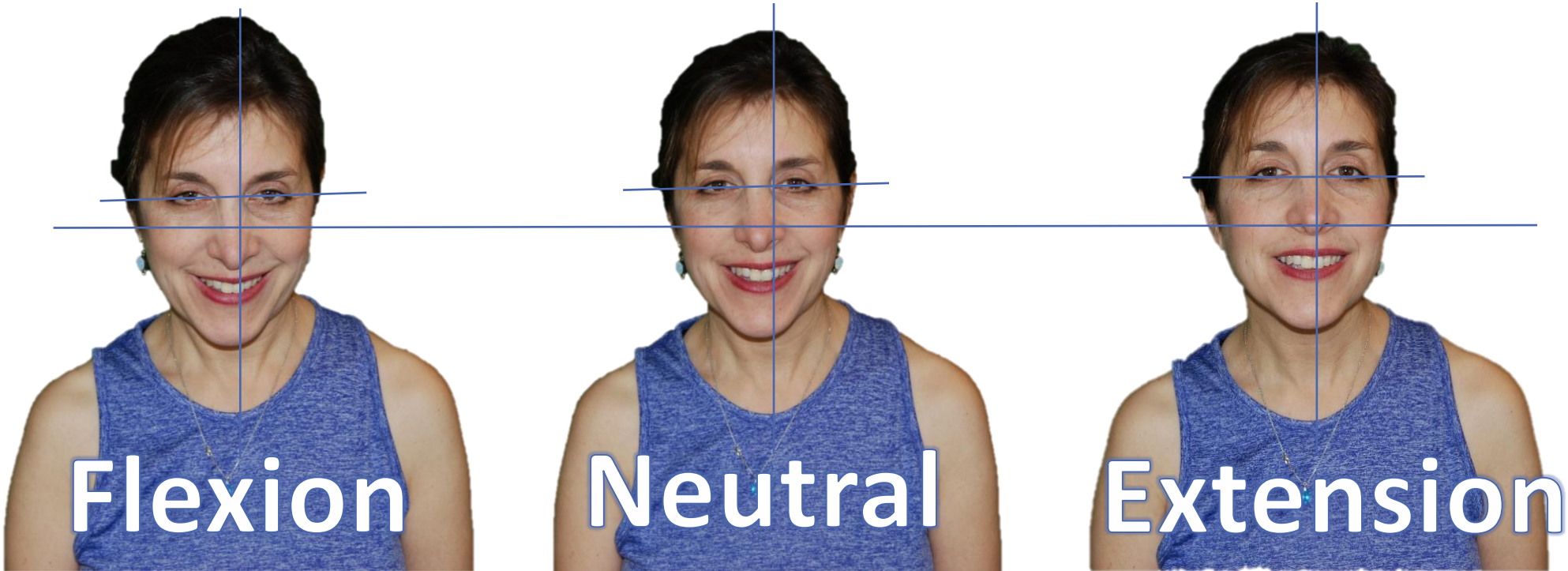
Starting at Rotation Right RB

3-5 reps

Finish Position

OA Biomechanical – Visual Diagnosis

- **Initial Assessment:** observe for symmetry of the patient regarding
  - **Rotation:** assessed by alignment of the chin & nose with the midline
  - **Sidebending:** assessed by noting the ear to shoulder distances; level of their eyes in relation to the horizon
  - Note: sidebending and rotation should be in opposite directions
- **Evaluate flexion & extension** response by asking the patient to first *nod* their head down and then up
- **Segmental definition** is defined by the direction of the nod that creates more symmetry of the ladnmarks..



Seated OA Functional Dx

Contacts: observe for symmetry of the patient regarding

- **Motor Contact:** hand on the top of the head
- **Monitoring Contact:** pincer placement in the suboccipital area with the pads of the thumb and the index finger.

Evaluate Rotation *(Right & Left)*

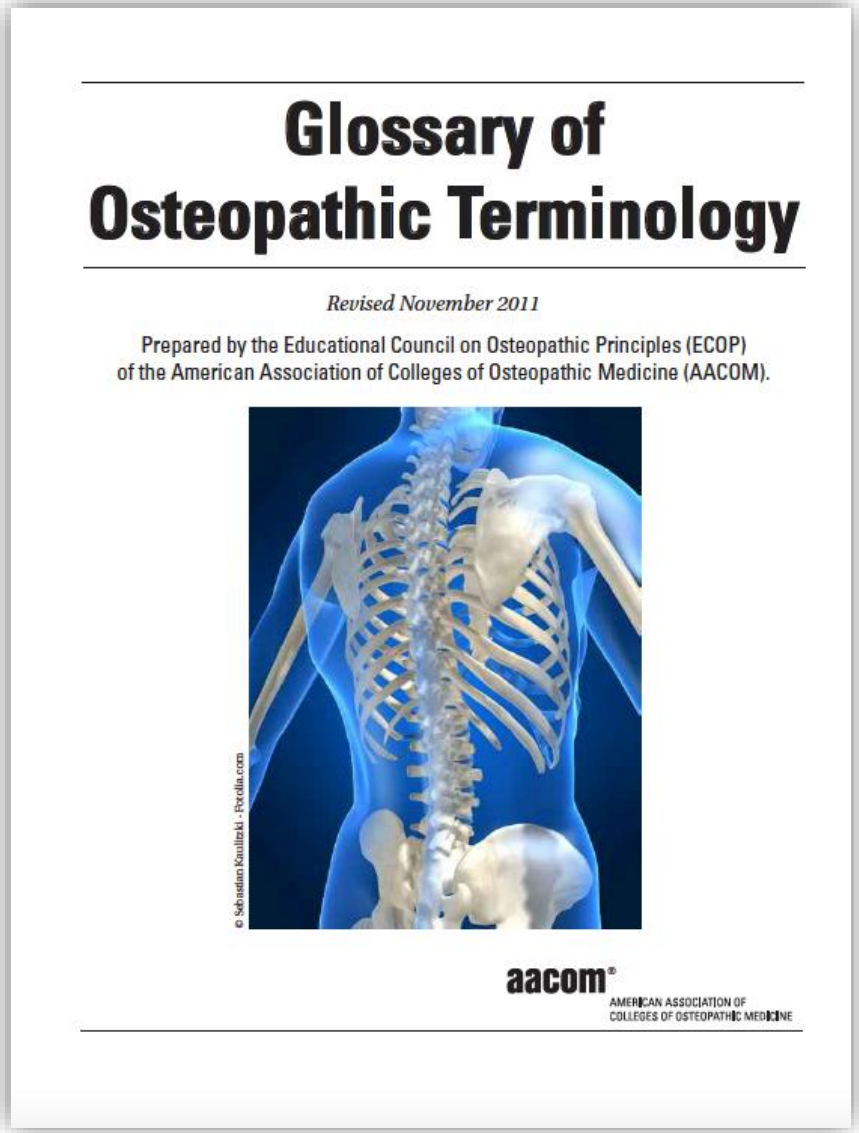
- ROM, quality, and end-feel
- Preferenced ROM by any of the above is noted.

Check Sidebending (Right & Left)

- ROM, quality, and end-feel
- Preferenced ROM by any of the above is noted.
- It helps to determine if you're testing the right joint & it should be opposite the rotation preference

Evaluate Sagittal Plane *(Flexion & Extension)*

- ROM, quality, and end-feel improvement in the sagittal plane determines the diagnosis
- You may confirm the SB and Rotation Dx in Flexion/Extension

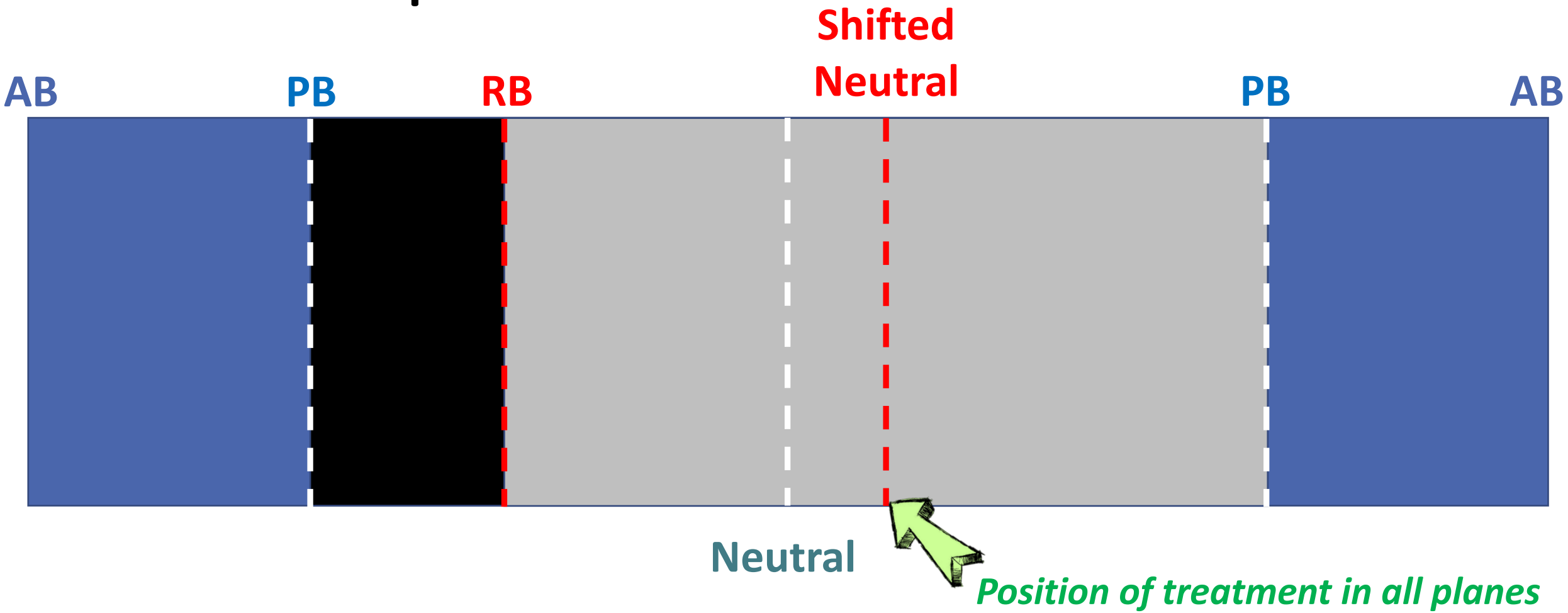


BLT Definition

According to Sutherland's model, all the joints in the body are balanced ligamentous articular mechanisms. *The ligaments provide proprioceptive information that guides the muscle response for positioning the joint, and the ligaments themselves guide the motion of the articular components.*

GOT 2011

BLT Technique



BLT Described by the Lippincott's

- "Osteopathic lesions are strains of the tissues of the body. When they involve joints it is the ligaments that are primarily affected so the term 'ligamentous articular strain' is the one preferred by Dr. Sutherland.
- The ligaments of a joint are normally on a balanced, reciprocal tension and seldom if ever are they completely relaxed throughout the normal range of movement… Since it is the ligaments that are primarily involved in the maintenance of the lesion it is they, not muscular leverage, that are used as the main agency for reduction….This is the point of balanced tension"

Lippincott. "Osteopathic Technique of Wm. G. Sutherland".1949 Year Book of the Academy of Applied Osteopathy

Seated OA BLT

Contacts: observe for symmetry of the patient regarding

- **Motor Contact:** hand on the top of the head
- **Monitoring Contact:** pincer placement in the suboccipital area with the pads of the thumb and the index finger.

Engagement – Indirect

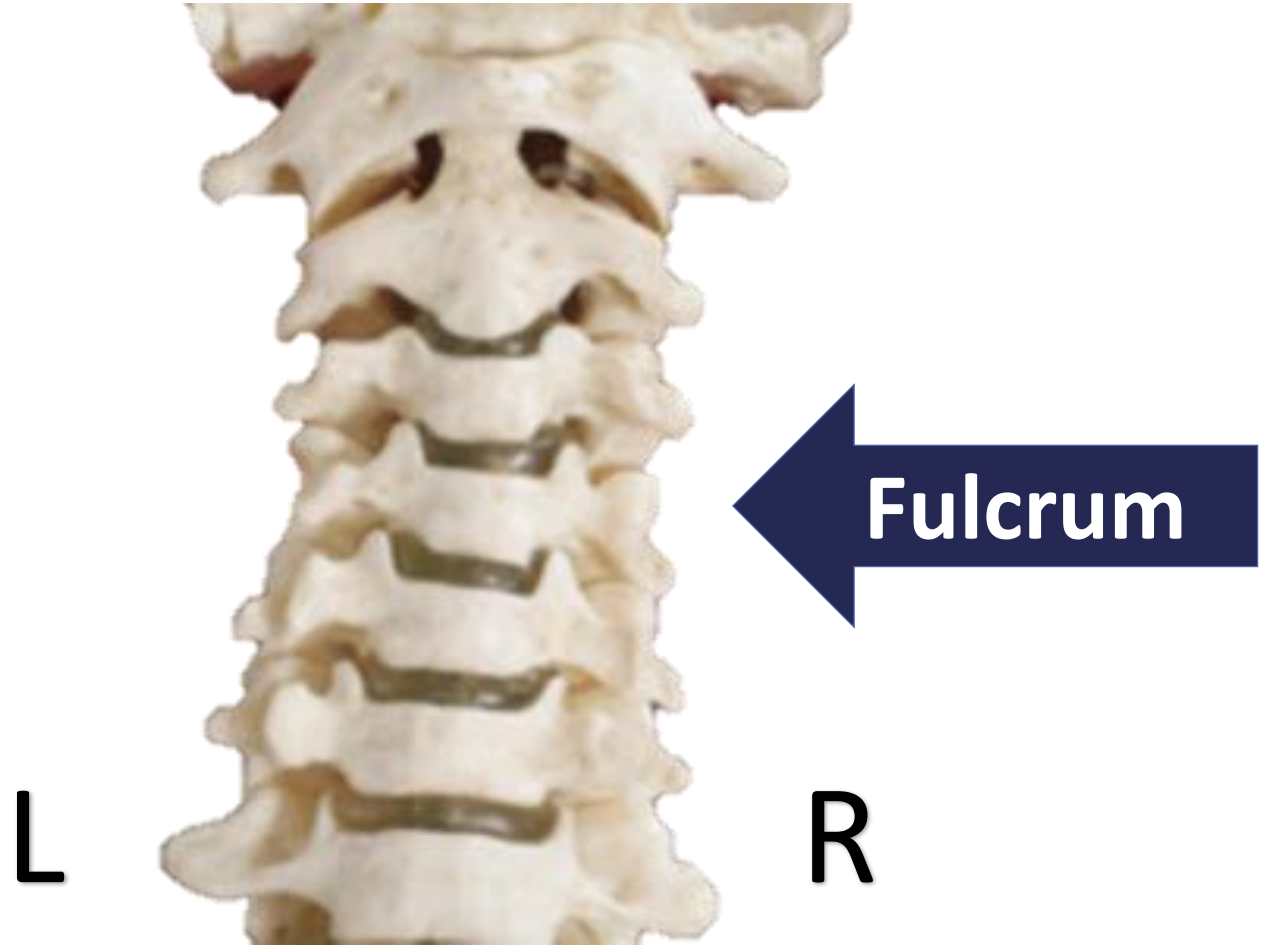
- Sagittal plane positioning first
- Then, SB and Rotation

Activating Force & REMs

- Hold breath in preference direction (Inh or Exh) until air hunger or tissue release is perceived by clinician

Return to Neutral & Re-evaluate

To cause right cervical sidebending a fulcrum force may be introduced on the right to translate the vertebral body toward the left



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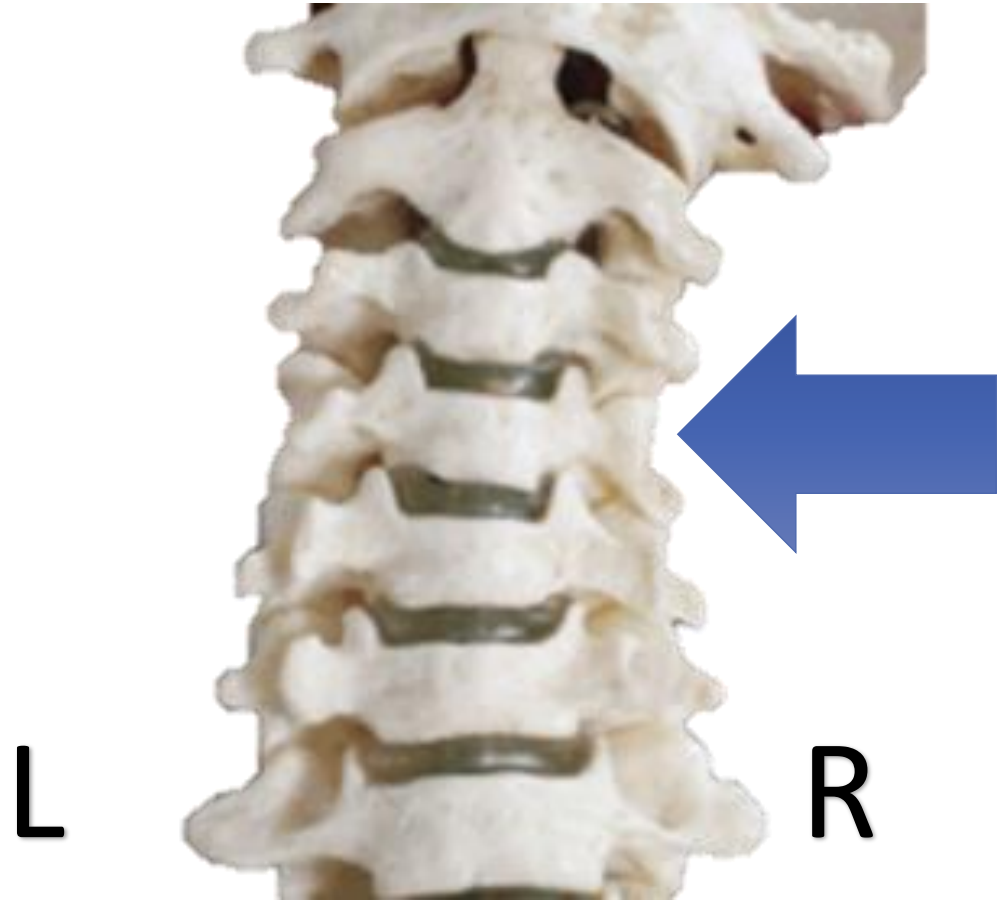


Principles of Seated Cervical Biomechanical Diagnosis

- **Monitor** the lateral aspect of the vertebral column with your ipsilateral index finger pad
  - **Your finger pad acts like a fulcrum**
- **Evaluate sidebending** introduced using your other hand on the crown of the patient's head
  - Restricted motion palpated by the monitoring finger with TTA and inability of the vertebra to increase their sidebending angular relationship indicates somatic dysfunction
- **Segmental definition** by response to SB in flexion and extension.

Neutral, setup

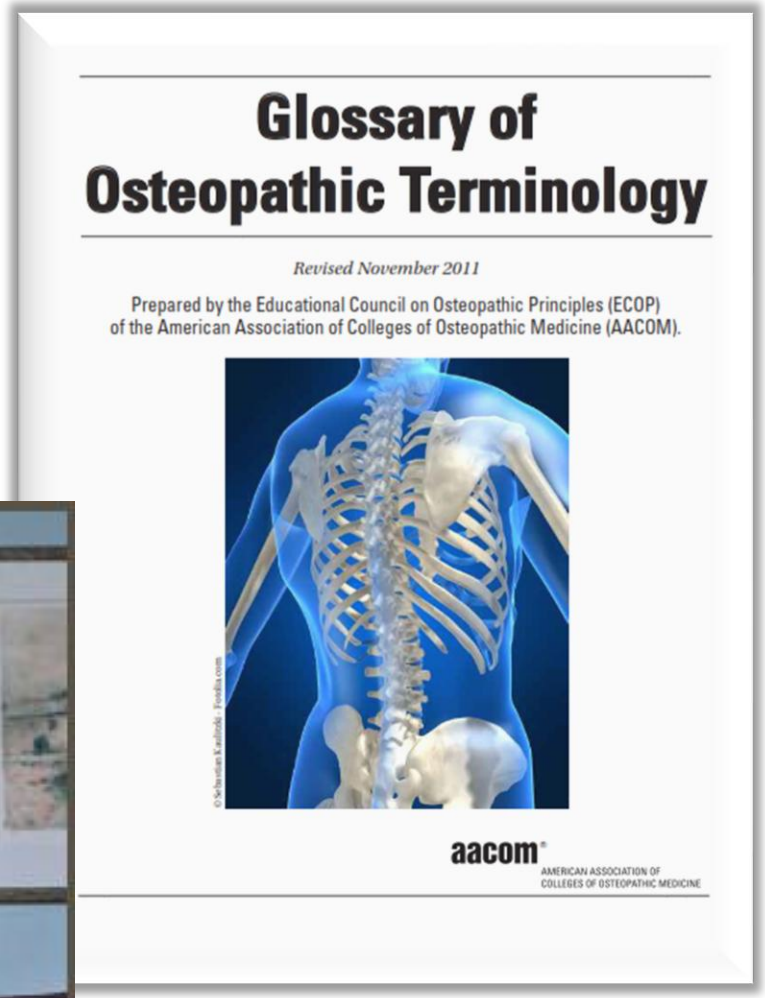
Sidebending

Neutral, setup

Flexion

Extension

Still Technique Definition



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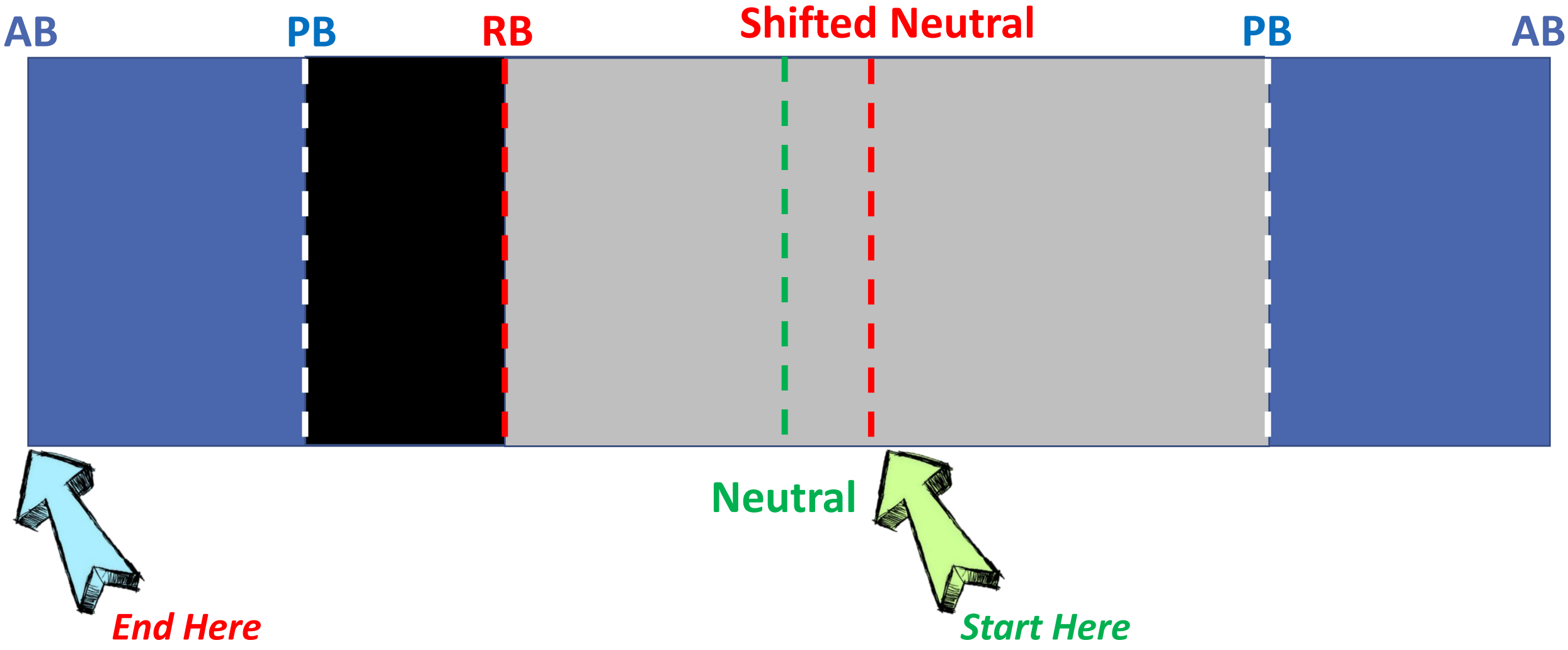
Still Technique



Seated Still Technique: OA Dx: OA ERLSR

- **Initial Positioning:** Extend to localize to OA, then add rotation left and sidebending right
  - *Monitor at OA joint…near occipital condyle*
- **Localizing Force:** compression to the segment through hand contact on cranium
- **Activating Force:** Move OA through restrictive barrier through cranial hand contact *(FRRSL)* while maintaining compression
- **Final Positioning:** attained anatomic barrier
- *Return to neutral & retest*

Seated Still Technique: Typical Cervicals
Dx: C2 FRSR

- **Initial Positioning:** Flex to localize to C2, then add rotation right and sidebending right until TTA dissipates
  - *Monitor at articular pillar (Z-joint)*
- **Localizing Force:** compression to the segment through hand contact on cranium
- **Activating Force:** Move C2 through restrictive barrier *(ERSL)* using cranial hand contact while maintaining compression
- **Final Positioning:** attained anatomic barrier *ERSL*
- *Return to neutral & retest*


Start (C2 FRSR)


End (C2 ERSL)

Seated MET Typicals – *Sidebending Focus*
Dx: C3 ERSR

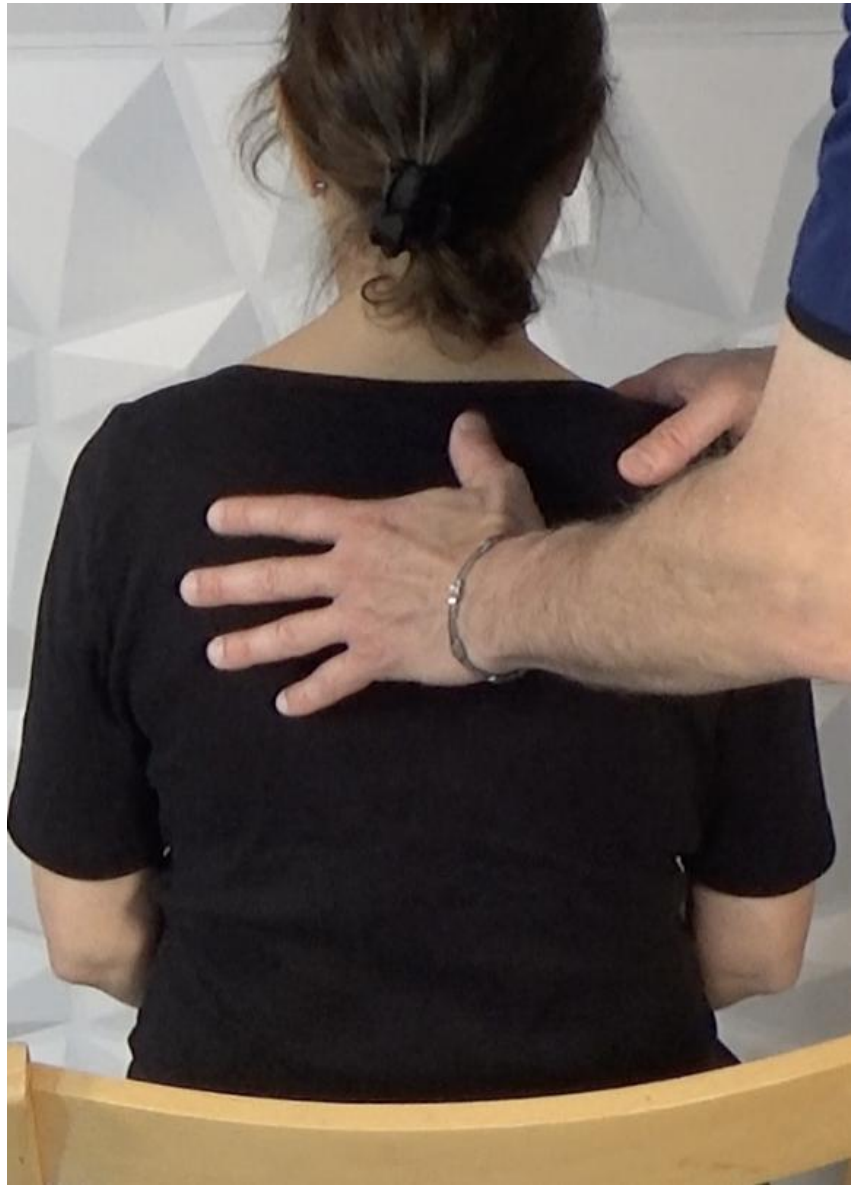
1. **Monitor** the posterior aspects of the articular column using the finger pads of your thumb and index just lateral to the SPs.
2. **Engage the RB** – ***flex*** *first, then add sidebending and rotation*
3. **Patient directed sidebending away from RB** – held until tissue texture release is palpated (usually 3-7 seconds!)
4. Wait, then **move to next RB** and repeat steps 1-3 until no more releases are palpated
5. Re-evaluate

Dx & Tx of the T-spine & L-spine

OMT without a Treatment Table

Passive AGR-ish Dx: Thoracic & Lumbar Spine

- **Ergonomics:** pt. seated with ***arms folded***; physician stands posterolateral to patient facing them
- **Motor Contact:** Physician's ipsilateral shoulder with distal hand
- **Motor/Motion Contact:** Physician's proximal thumb pad contacts patient's TP on ipsilateral side closest to physician (starting at T1 and eventually working down to SI area)
- **Motion test:** physician pulls the patient's shoulder posteriorly while using a counterforce at the monitoring thumb pad to assess vertebral rotation
- **Positive test:** resistance to rotation indicates the vertebra is rotated to the ipsilateral side
- **SD Definition:** reassess SD with flexion/extension
- **Confirmation:** assess response to sidebending



T1-6 Active Positional Testing

1. The patient is seated with the physician standing behind.
2. Place your thumbs on the posterior aspect of the patient's transverse processes.
3. **Assess Extension:** ask the patient to extend by looking at the ceiling. Assess symmetry (change in A/P positioning of TPs)
4. **Assess Flexion:** ask the patient to flex by looking down.

Neutral

Extension

Flexed Somatic Dysfunction: the posterior TP will become more posterior with extension and more symmetrical in flexion.
Extended Somatic Dysfunction: the posterior TP will become more posterior with flexion and more symmetrical in extension.
Neutral Somatic Dysfunction: the posterior TP will stay the same-ish in all 3 positions.

Flexion

T7-12 Active Positional Testing

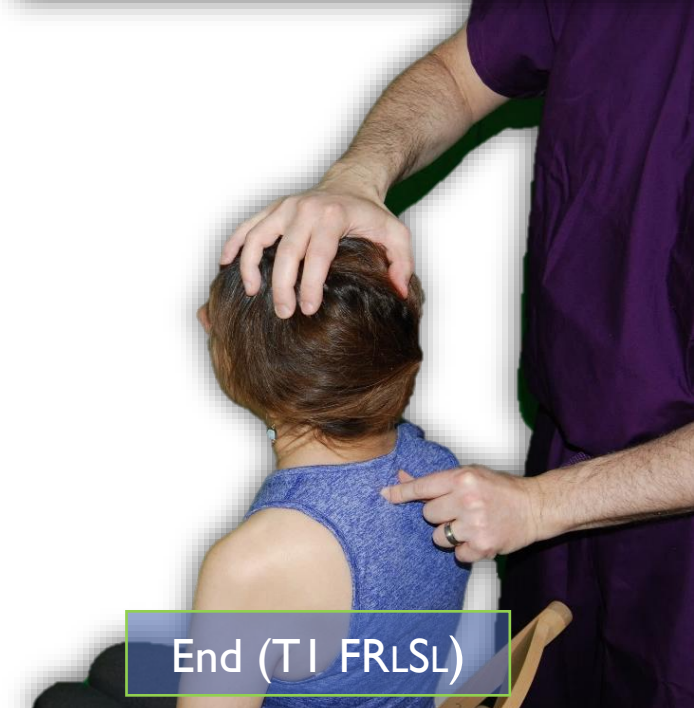


1. The patient sits on the table with the operator standing behind.
2. The operator palpates the posterior aspect of a pair of transverse processes at the segment under evaluation
3. The patient is asked to look up at the ceiling and arch the back by pushing the abdomen anteriorly as the operator follows the transverse processes into backward bending
4. The patient is asked to slump the back and forward bend the trunk as the operator follows the transverse processes into flexion
5. The operator evaluates the behavior of the transverse processes through the forward- and backward-bending arcs, making a diagnosis of a single-segment vertebral somatic dysfunction of the ERS or FRS type.

Greenman's Principles of Manual Medicine, 4th ed.

Still Technique: Upper Thoracics (T1-4), Seated
Dx: T2 FRSR

- **Initial Positioning:** Extend to localize to T2, then add rotation right and sidebending right
  - *Monitor at TP for tissue texture normalization*
- **Localizing Force:** compression to the segment through hand contact on cranium
- **Activating Force:** Move T2 through restrictive barrier *(ERSL)* through cranial hand contact while maintaining compression
- **Final Positioning:** attained anatomic barrier *(ERSL)*
- *Return to neutral & retest*



Still Technique: Lower Thoracics (T5-12)
Dx: T6 ERLSL

- **Initial Positioning:** Extend to localize to T6, then add rotation left and sidebending left
  - *Monitor at TP for tissue texture normalization*
- **Localizing Force:** compression through shoulders to the segment
- **Activating Force:** Move T6 through restrictive barrier through shoulder contact *(FRRSR)* while maintaining compression
- **Final Positioning:** attained anatomic barrier
- *Return to neutral & retest*


Start (T6 ERLSL)


End (T6 FRRSR)

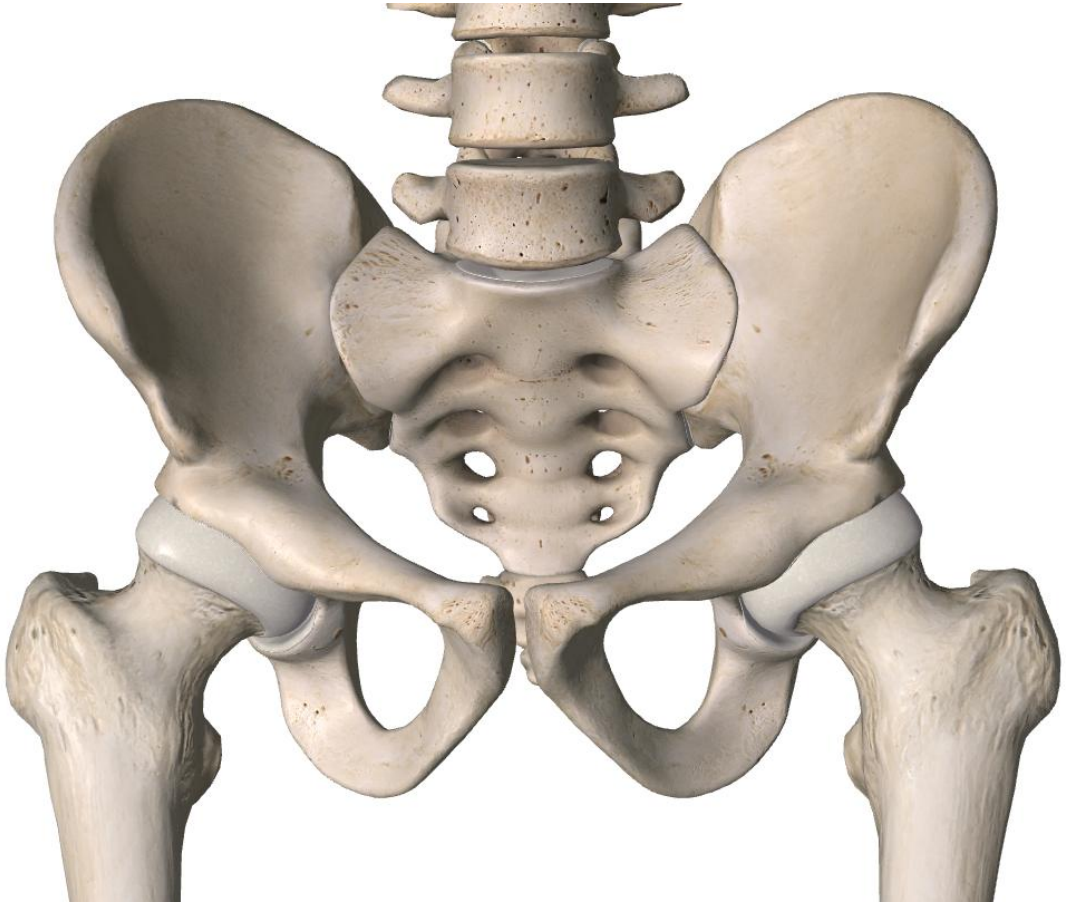
Lumbar & Pelvic INR, Standing

Dx: TLJ & LSJ myofascia FRrSr

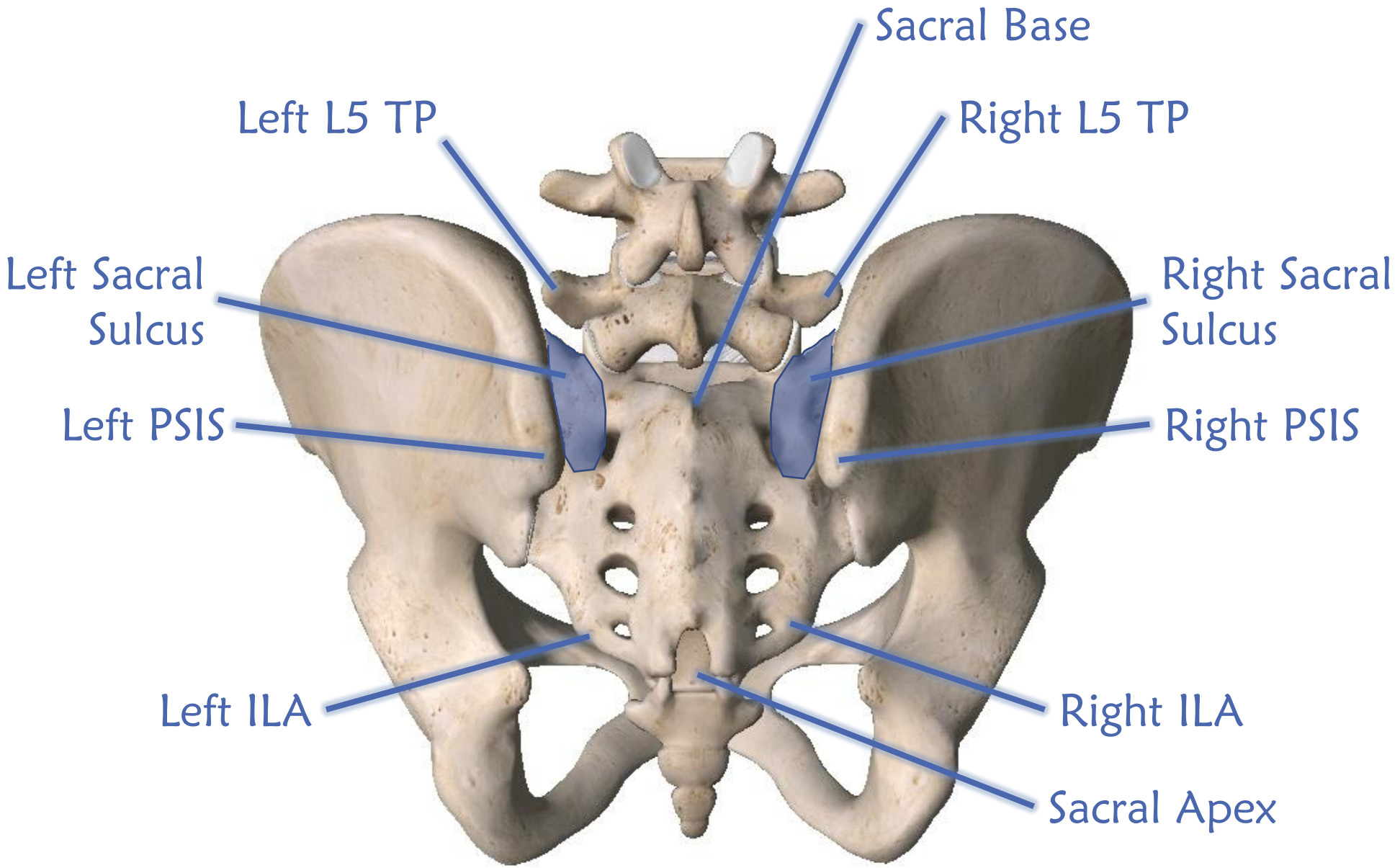
- Physician contacts PSIS's with thenar eminence and iliac crests with fingers *(cognizant of patient's myofascial attachments involving the abdominal obliques and lumbodorsal fascia)* **(A)**
- Engage fascia directly/indirectly with:
  - Superior/Inferior translation = F/E
  - Right/Left translation = L/R rotation
  - Clockwise/CCW = R/L sidebending
- REM's:
  - Overhead with/without sidebending **(B)**
  - Rotate arms right/left **(C)**
- Perform until no further release, re-evaluate.
- *May be used in treatment of Anterior/Posterior, Inflare/Outflare, Superior/Inferior Innominate SDs*

Dx & Tx of the Pelvis *(sacrum and innominate)*

OMT without a Treatment Table



Sacral Exam Landmarks



Seated Flexion Test

Thumbs placed below PSISs
& physician at eye level of PSISs

Positive Right means PSIS moves more superiorly on the right

Positive Test = one PSIS moves farther superiorly at the <u>end range of motion</u>

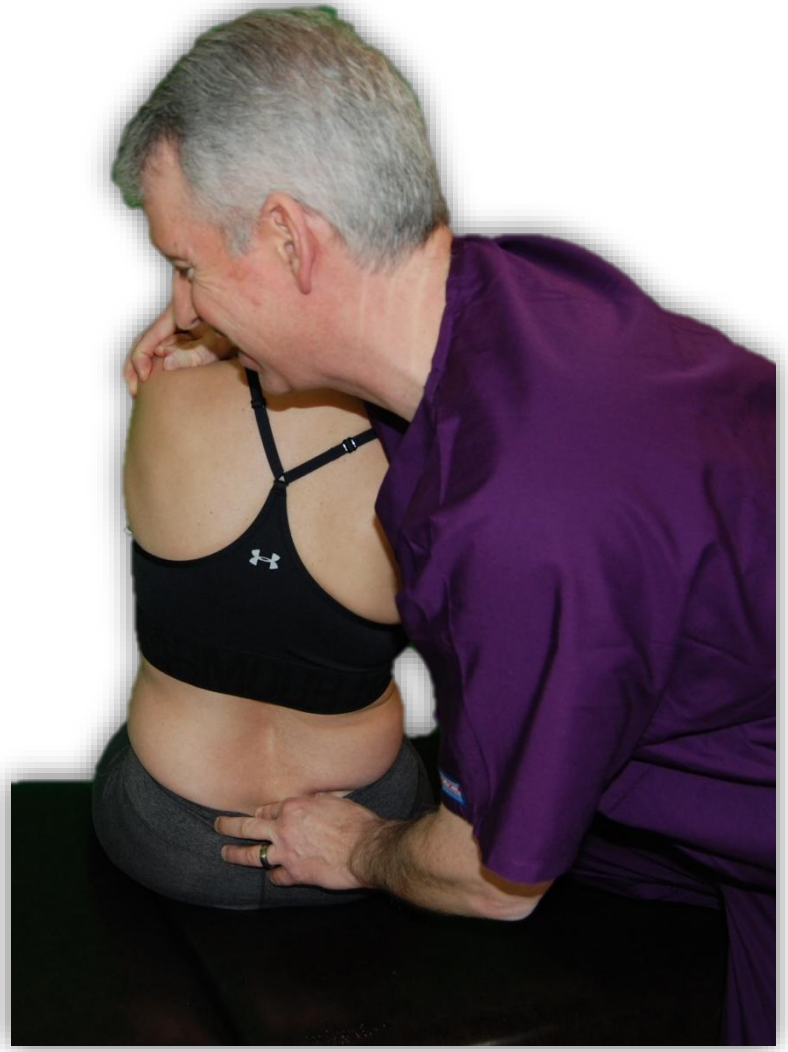
- *Usually the first side to move…too.*
- ***Axes** for torsions are opposite the positive side.*

BLT, seated
Dx: Right sacral torsion on a left axis

- Monitor the sacral sulci
- **Induce flexion from above** until the anterior sacral base is palpated as moving posterior to balance with the other side
- **Rotate the patient in the direction of the sacral rotation** through their upper body
- **Sidebending positioning** is based upon tissue texture response
- **Inhalation Activating Force:** held until air hunger
- Upon exhalation, recheck and repeat as needed until TART is significantly reduced

BLT, seated
Dx: Right sacral torsion on a Right axis

- Monitor the sacral sulci
- **Induce extension from above** until the posterior sacral base is palpated as moving anterior to balance with the other side
- **Rotate the patient in the direction of the sacral rotation** through their upper body
- **Sidebending positioning** is based upon tissue texture response
- **Exhalation Activating Force:** held until air hunger
- Upon inhalation, recheck and repeat as needed until TART is significantly reduced

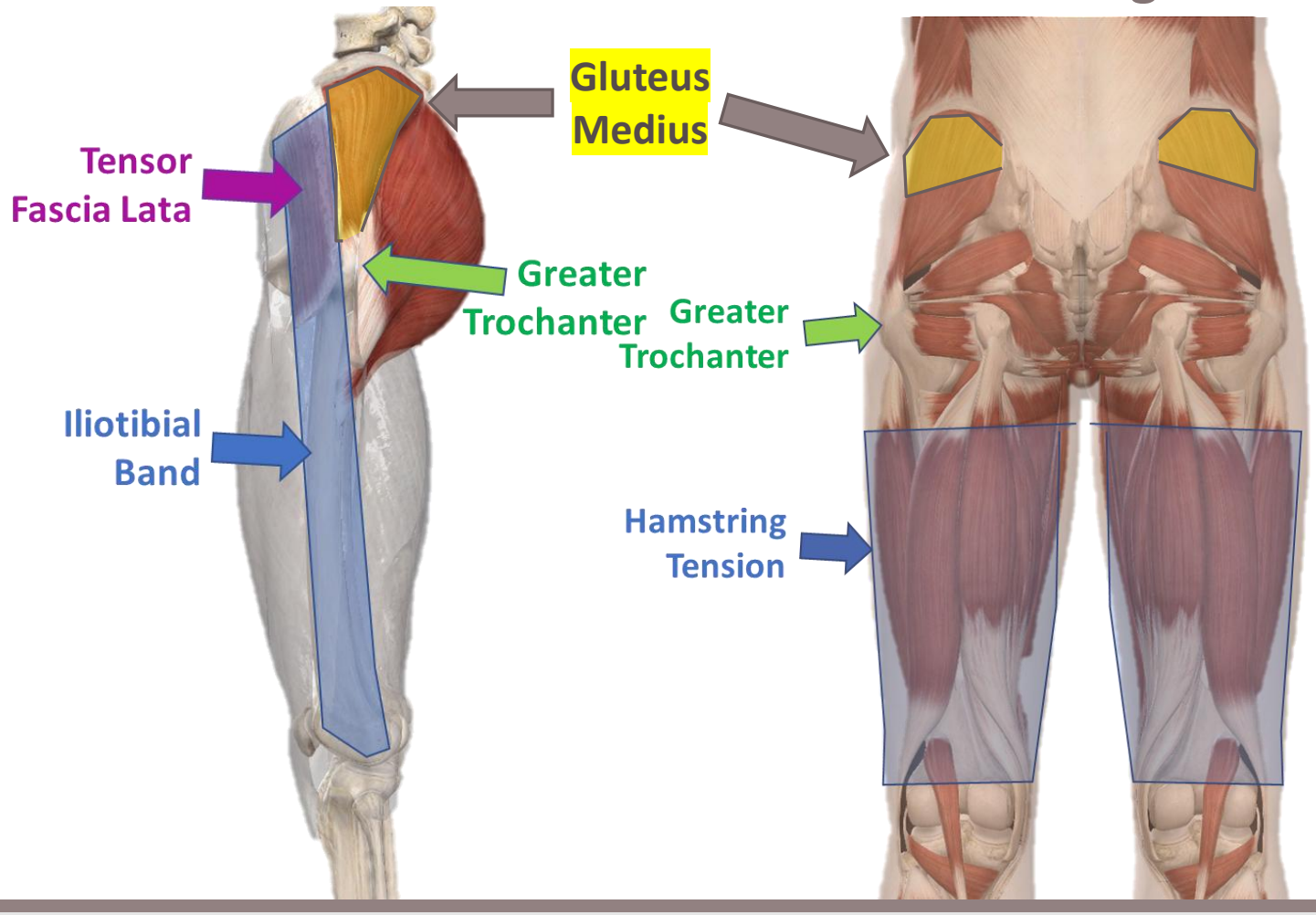


Dx & Tx of the Lower Extremity

OMT without a Treatment Table

LE Regional Scan: TAT of the thigh

- Quadriceps Muscles
- Greater trochanter
- Gluteus Medius, TFL & ITB
- Hamstrings



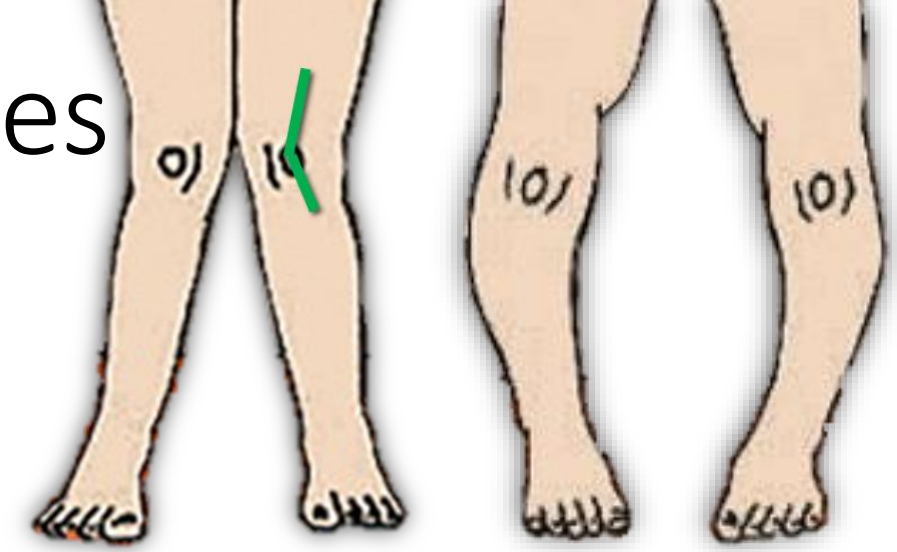
LE Regional Scan: TAT of the Knees

Alignment

- **Genu VaLgus** *(Knock knees)*
- **Genu Varus** *(Bowed-legged)*
- **Patellar Alignment**

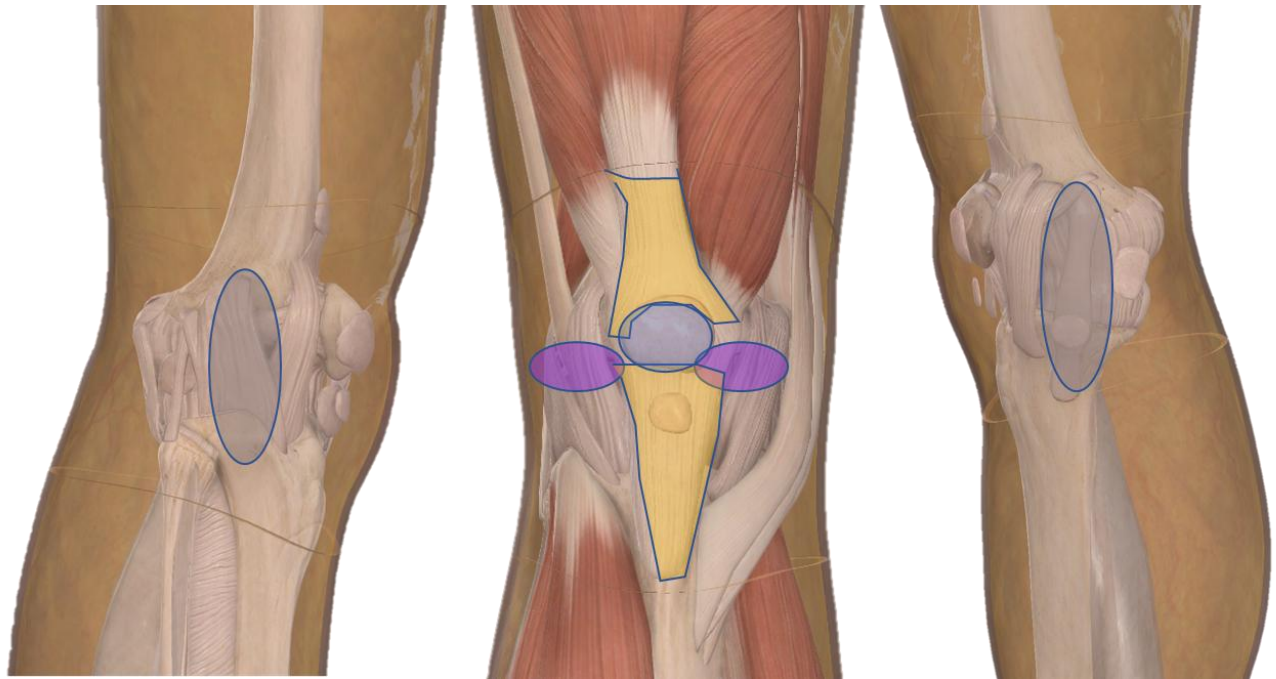
Palpatory Exam

- **Patella**
  - Quadriceps tendon
  - Patella tendon
- **Joint Line**
  - Tibial plateau *(medial & lateral)*
  - Medial Collateral Ligament
  - Lateral Collateral Ligament



Genu VaLgus Genu Varus

Lateral Anterior Medial



Anatomy Images from Complete Anatomy

LE Regional Scan: TAT of the posterior knee & lower leg

- Popliteal Fossa
- Gastroc-Soleus
- Anterior compartment
- Achilles Tendon

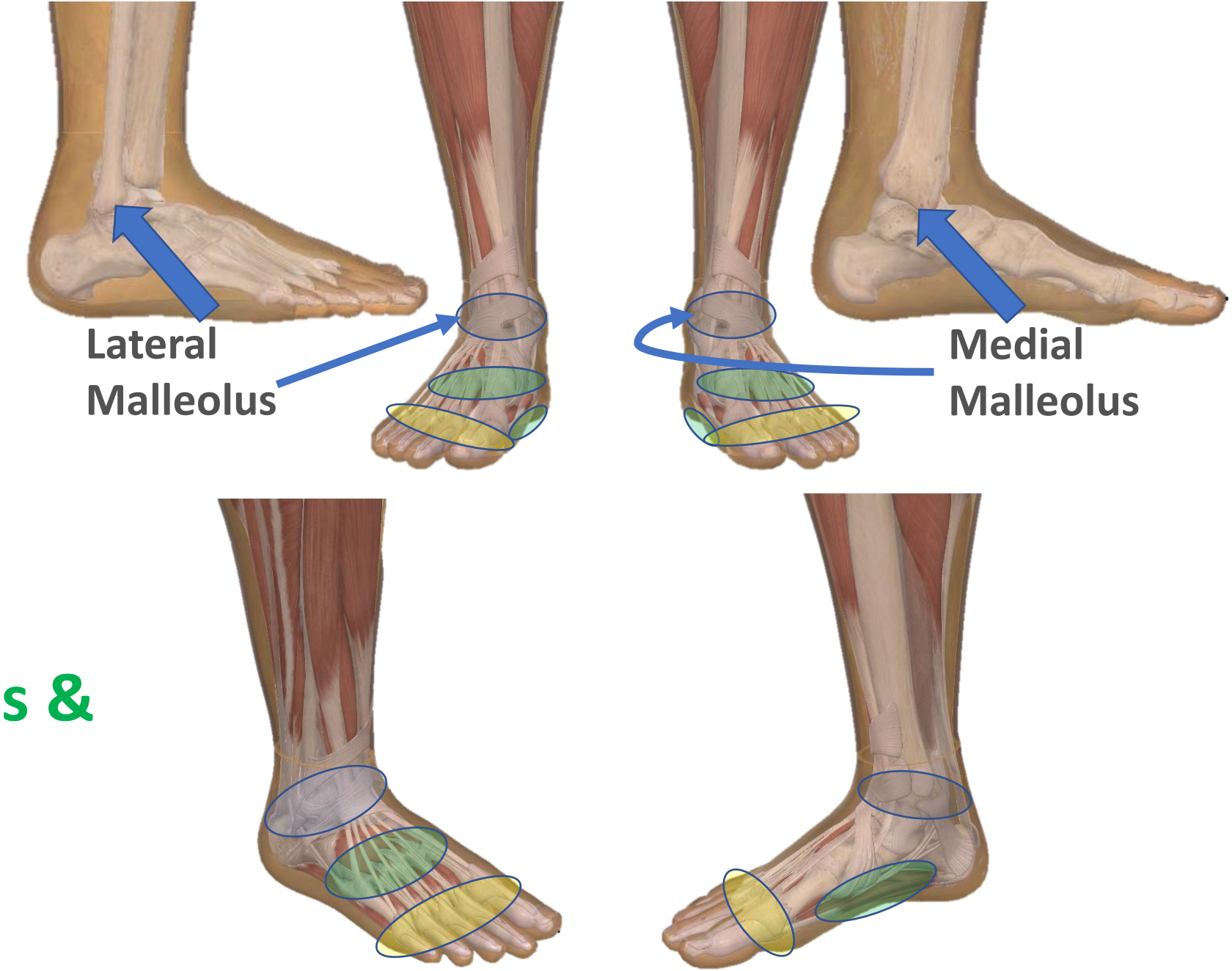
Anterior Screening OSE: Lower Extremities – Ankles & Feet TAT

Ankle joint line

- Lateral & Medial Malleolus

Posterior Tarsometarsal Joints & Foot Arch

MTP Joints



Anatomy Images from Complete Anatomy

Ankle Inversion dMFR, standing

Initial Positioning: The patient is standing.

Monitoring: The clinician's lateral hand monitors the fibular head. The clinician's other hand grasps the foot beneath the arch.

Barrier Relationship: The clinician engages the RB by directing the patient's foot into internal rotation and plantarflexion.

Activating Force: The patient is instructed to return to the neutral position against the clinician's unyielding counterforce.

Dx: left ankle inversion dysfunction

Tx Position: forefoot supinated, distal leg IR

Fibular head posterior ME, seated

Initial Positioning: The patient is seated with the dysfunctional leg dangling and the clinician faces the patient.

Monitoring: The clinician's lateral hand monitors the fibular head. The clinician's other hand grasps the foot beneath the arch.

Barrier Relationship: The clinician engages the RB by directing the patient's foot into external rotation and dorsiflexion.

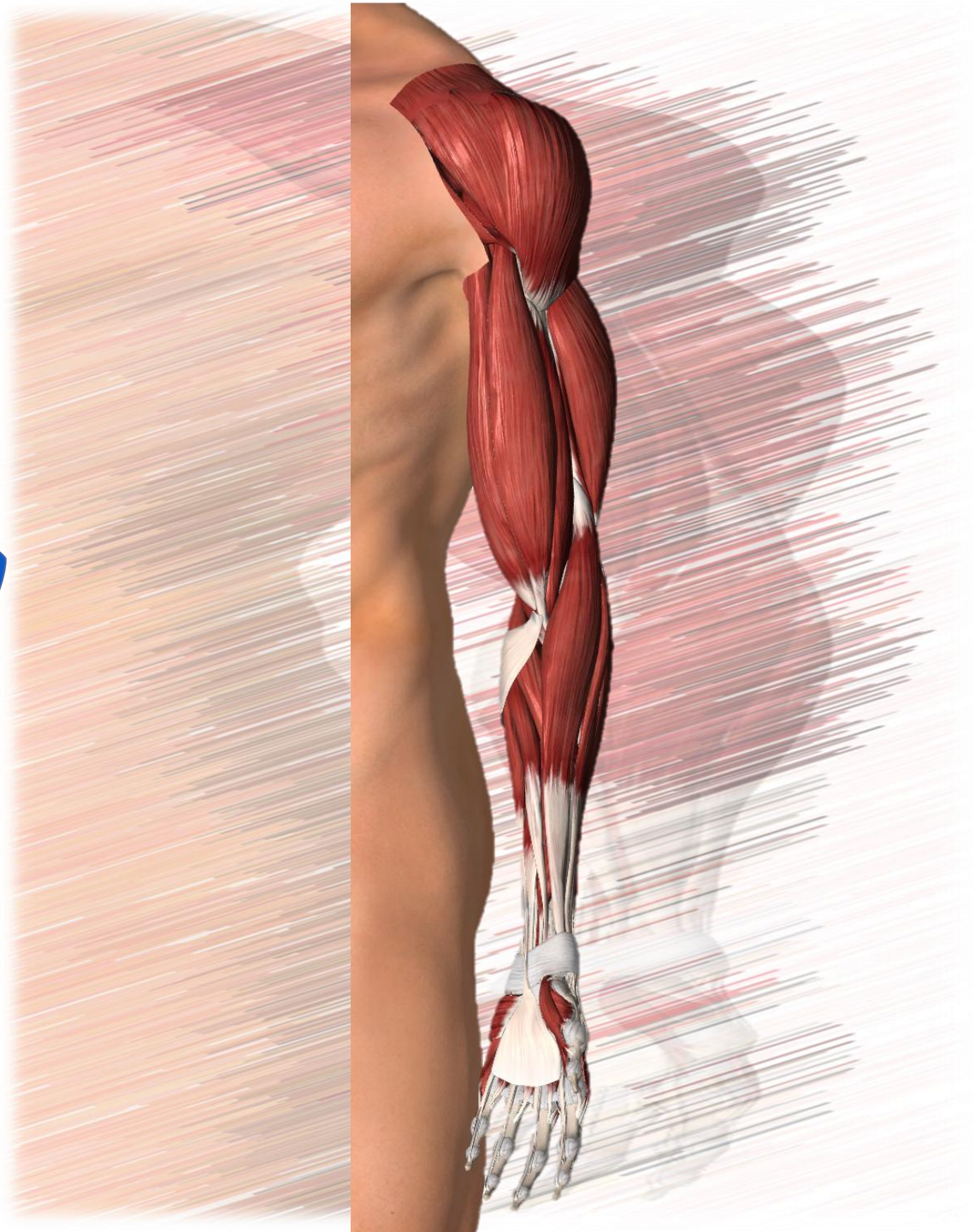
Activating Force: The patient is instructed to return to the neutral position against the clinician's unyielding counterforce.

Dx: left fibular head posterior dysfunction

Tx Position: left fibular head anteriorly glided

Dx & Tx of the Upper Extremity

OMT without a Treatment Table



Steps of Still Technique OMT

Make a SD Diagnosis

Initial Positioning

(Dr. & Pt. ergonomics)

Monitoring

(Hand positioning in relation to landmarks)

Barrier Relationship

(Indirect engagement)

Activating Force

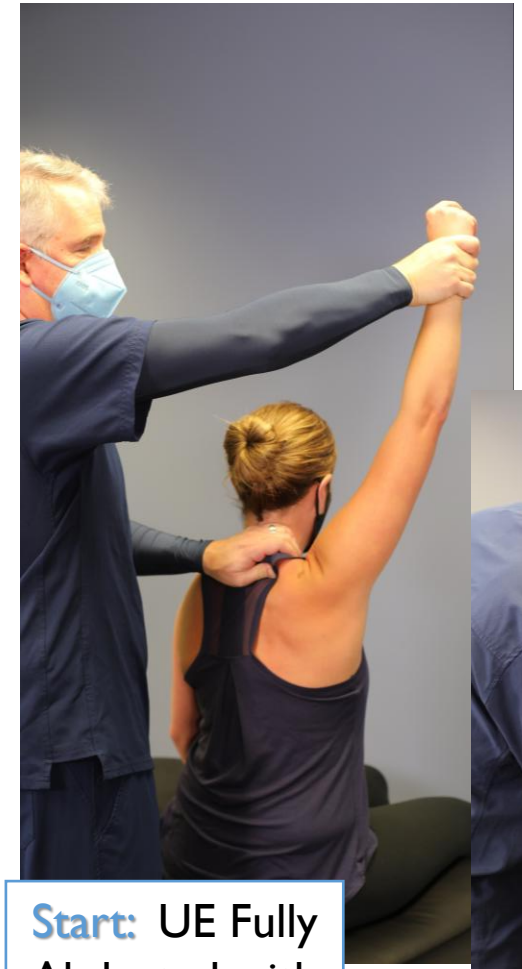
(Compression & Physician induced movement through RB)

Re-Assess

Timing (fluid motion) & Repetitions (1 time)

Trapezius Hypertonicity Still Technique, seated

1. **Ergonomics:** The physician stands behind the seated patient on the side of the SD.
2. **Monitoring:** The physician uses their medial hand to monitor the hypertonic superior trapezius muscle.
3. **Barrier Relationship:** The physician contacts the patient's upper extremity with their other hand grasping the patient's distal forearm and abducts and externally rotates the arm to approximate origin and insertion of the muscle and position it in shifted neutral.
4. **Activating Force:** Add traction through the forearm contact to isolate the tissues and then adduct and internally rotate the arm through the restrictive barrier.
5. **Timing:** Fluid.
6. **Reassess:** Return to neutral and reevaluate 2-4 TART.



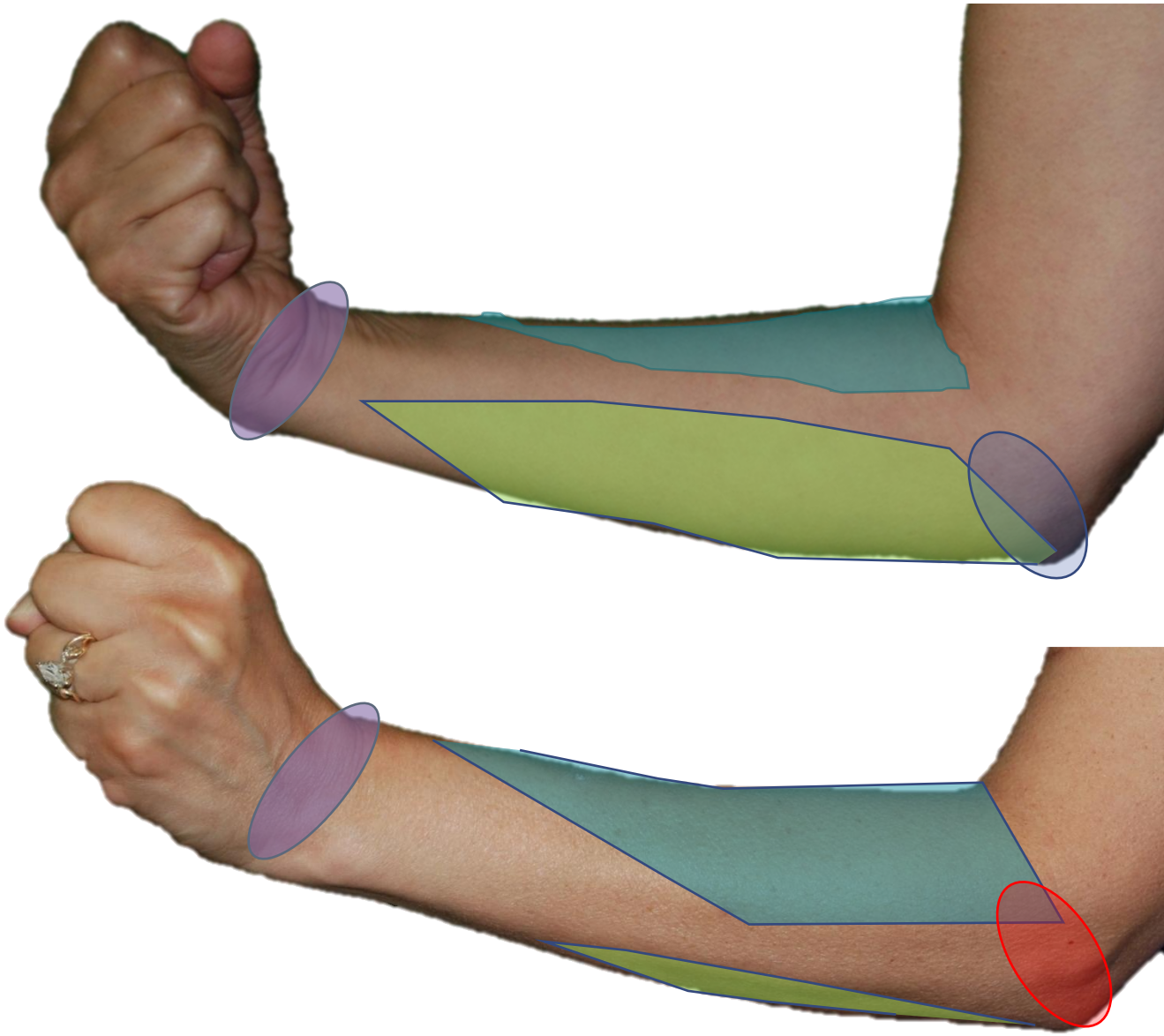
Start: UE Fully Abducted with traction & ER

Final: UE Adducted with traction & IR

Final2: Add cervical flexion toward contralateral knee

Elbow, Wrist, & Forearm TAT Exam

- **Elbow:** lateral joint line and lateral epicondyle (red); Medial joint line and medial epicondyle (blue)
- **Forearm** *(Extensor [teal] & Flexor [green] muscles)*
- **Wrist joint**: anterior, posterior (purple), lateral (anatomical snuff box) and medial



Elbow PROM Testing

Radioulnar Supination: 90°

Shoulders at neutral, Elbows flexed to 90 degrees; induce supination thru radius & ulna

Radioulnar Pronation: 90°

Shoulders at neutral, Elbows flexed to 90 degrees; induce pronation thru radius & ulna

Ulnohumeral Extension: 0 to -5°

Shoulder flexed to 90 degrees & test extension

Ulnohumeral ADduction: 5°

Shoulders at neutral, Elbows flexed to 30 degrees; induce lateral translation thru ulnar adduction & radiocarpal ABduction

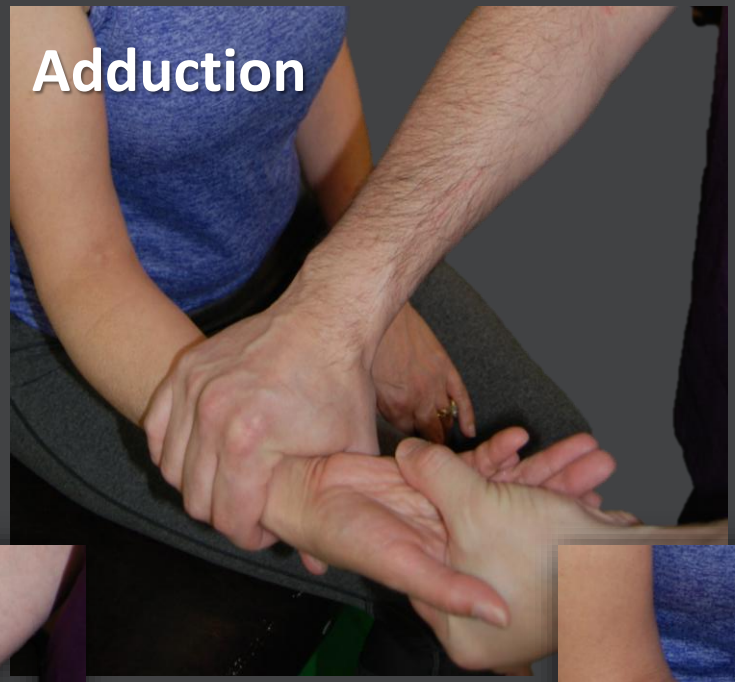
Ulnohumeral ABduction: 5°

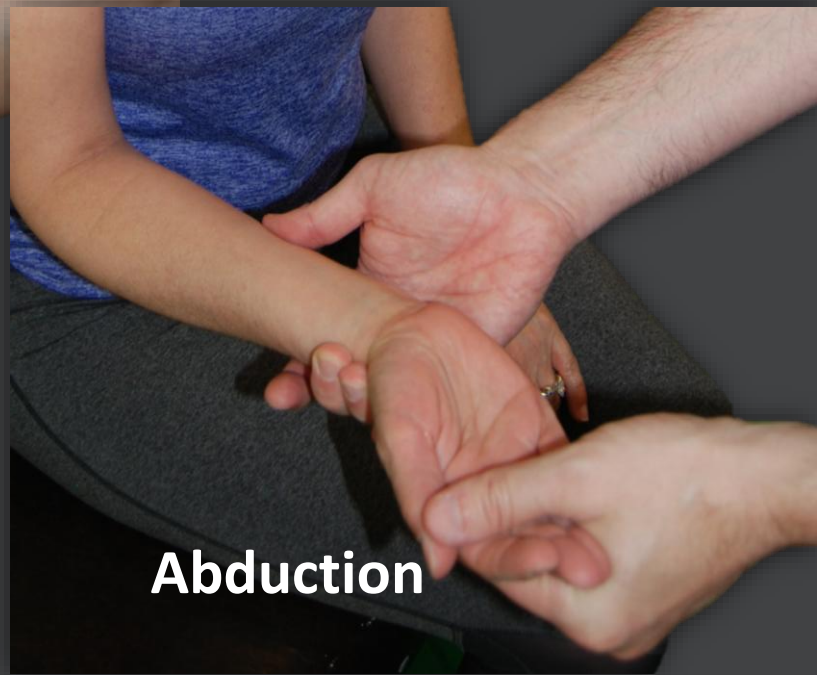
Shoulders at neutral, Elbows flexed to 30 degrees; induce lateral translation thru ulnar ABduction & radiocarpal ADduction

Ulnohumeral Flexion: 140-150°

Shoulder flexed to 90 degrees & test flexion

Wrist PROM Testing





Objective: Musculoskeletal: TAT of right wrist extensor muscles with hypertonicity, right posterior radiocarpal joint, and of the right lateral epicondyle; right radiocarpal extension SD, right radioulnar supinated SD, right ulnohumeral abducted SD, right elbow extended SD; left elbow flexed

Assessment: 1) Right elbow pain; 2) Right wrist pain; 3) Somatic dysfunction of upper extremity (bilateral).

SOAP Note Documentation Example

Steps of BLT OMT

Make a SD Diagnosis

Initial Positioning
(Dr. & Pt. ergonomics)

Monitoring
(Hand positioning in relation to landmarks)

Barrier Relationship
(Indirect engagement)

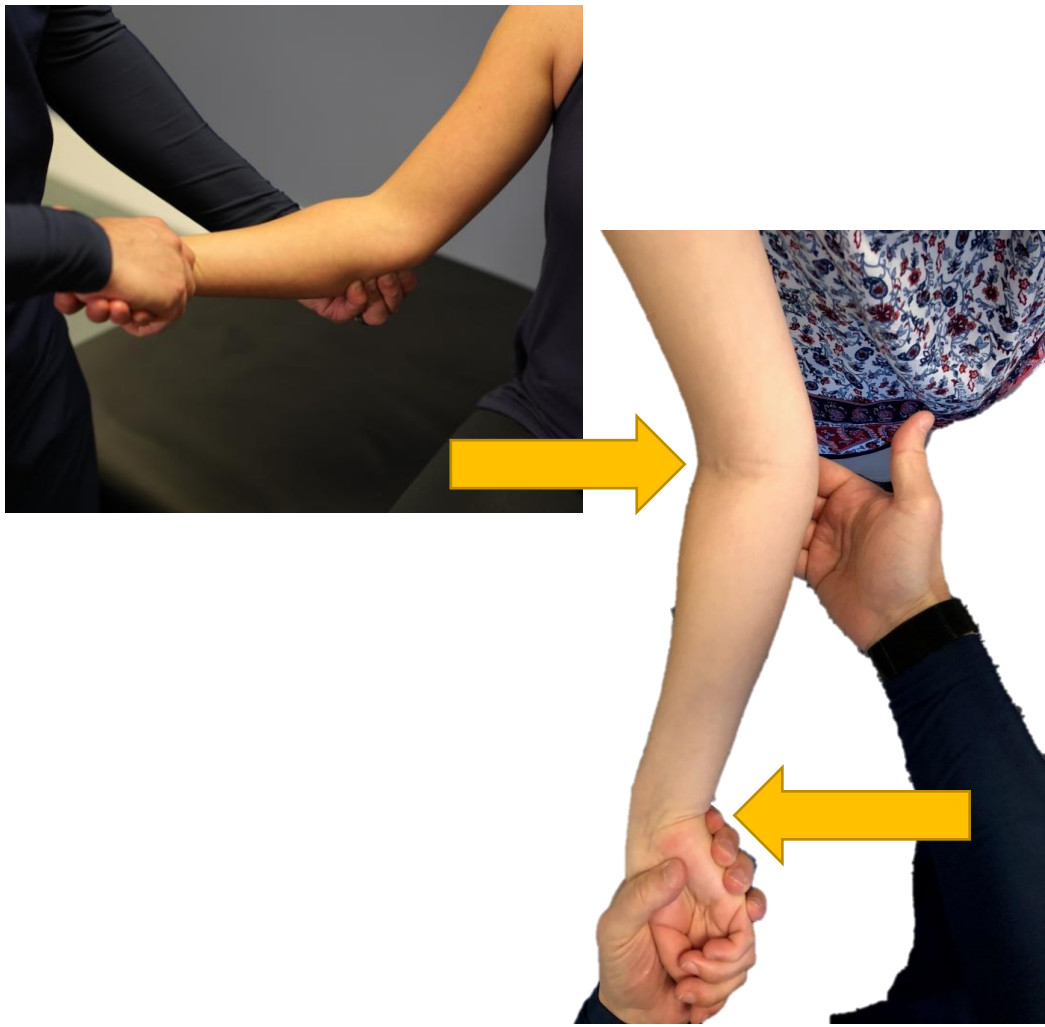
Activating Force
(Inherent, REM of respiratory breath holding)

Re-Assess

Timing (air hunger) & Repetitions (1-3 times)

Ulnohumeral Abducted (medial) SD, seated BLT

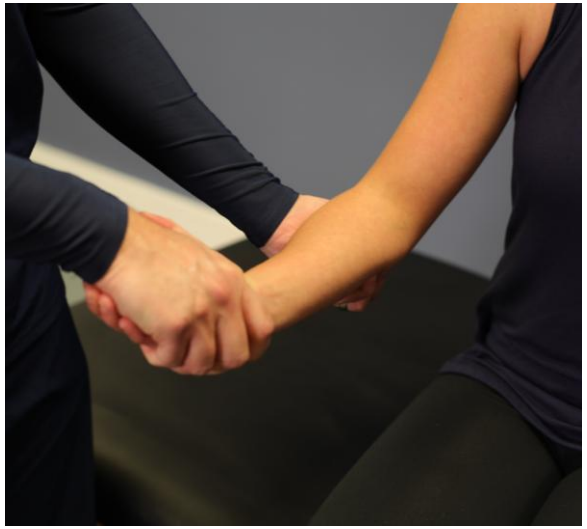
1. **Ergonomics:** The physician sits or stands facing the seated patient
2. **Monitoring:** The physician monitors the patient's ulnohumoral joint with their medial hand and uses their more lateral hand to grasp the patient's wrist.
3. **Barrier Relationship:** Flex the patient's elbow to ease, then add ulnohumeral abduction to ease through the wrist contact using the ulnohumeral contact as a fulcrum. BLT of the ulnohumeral jount may be enhance by adducting the wrist to ease, too.
4. **Activating Force:** Inherent with respiratory REM of holding breath to assist with ease.
5. **Timing:** Hold the combined position to air hunger.
6. **Reassess:** Return to neutral and reevaluate 2-4 TART.



Tx Position: Elbow ABducted to shifted neutral & Wrist Adducted to shifted neutral

Ulnohumeral Adducted (lateral) SD, seated BLT

1. **Ergonomics:** The physician sits or stands facing the seated patient
2. **Monitoring:** The physician monitors the patient's ulnohumoral joint with their medial hand and uses their more lateral hand to grasp the patient's wrist.
3. **Barrier Relationship:** Flex the patient's elbow to ease, then add ulnohumeral adduction to ease through the wrist contact using the ulnohumeral contact as a fulcrum. BLT of the ulnohumeral joint may be enhanced by abducting the wrist to ease, too.
4. **Activating Force:** Inherent with respiratory REM of holding breath to assist with ease.
5. **Timing:** Hold the combined position to air hunger.
6. **Reassess:** Return to neutral and reevaluate 2-4 TART.



Tx Position: Elbow ADducted to shifted neutral & Wrist ABducted to shifted neutral

Proximal radioulnar pronated (posterior) SD, seated BLT

1. **Ergonomics:** The physician sits or stands facing the seated patient
2. **Monitoring:** The physician monitors the patient's radioulnar joint with their lateral hand and uses their more medial hand to grasp the patient's wrist.
3. **Barrier Relationship:** Flex the patient's elbow to ease, then pronate the forearm to ease.
4. **Activating Force:** Inherent with respiratory REM of holding breath to assist with ease.
5. **Timing:** Hold the combined position to air hunger.
6. **Reassess:** Return to neutral and reevaluate 2-4 TART.

Tx Position: Pronated to shifted neutral

Proximal radioulnar supinated (anterior) SD, seated BLT

1. **Ergonomics:** The physician sits or stands facing the seated patient
2. **Monitoring:** The physician monitors the patient's radioulnar joint with their lateral hand and uses their more medial hand to grasp the patient's wrist.
3. **Barrier Relationship:** Flex the patient's elbow to ease, then supinate the forearm to ease.
4. **Activating Force:** Inherent with respiratory REM of holding breath to assist with ease.
5. **Timing:** Hold the combined position to air hunger.
6. **Reassess:** Return to neutral and reevaluate 2-4 TART.

Tx Position: Supinated to shifted neutral

M99.07 (upper extremity)

Wrist/Forearm MFR/INR, standing/seated/supine

Initial Positioning: The patient may be standing, seated or supine. The clinician stands beside the patient facing them in profile.

Monitoring: The clinician grasps the patient's distal forearm just proximal to the patient's wrist with their contralateral hand. With their other hand the clinician grasps the patient's hand so that the clinician's MCP joints are aligned. The clinician layer palpates into the tissues.

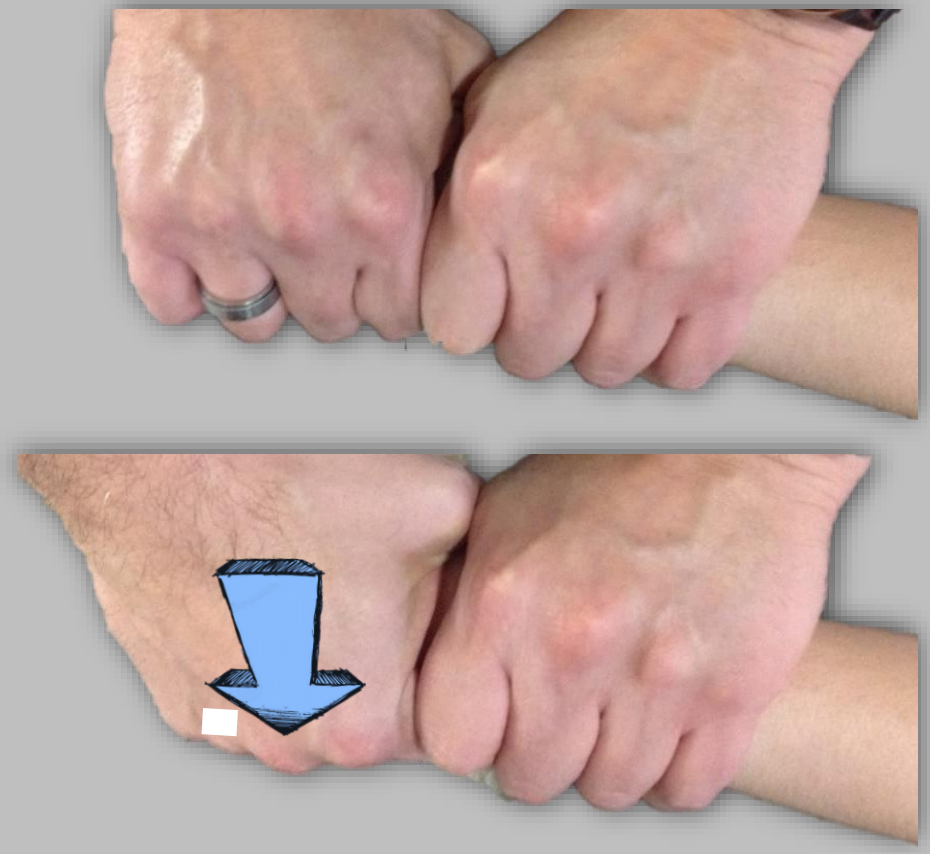
O: MSKTL: right wrist, flexed, adducted

Wrist MFR/INR, standing/seated/supine

Motion Barrier: Examine and Engage the fascia by supinating (as pictured) or pronating the hand using the distal contact and keeping the proximal contact relatively stable for direct or indirect engagement.

REMs:

- ✓ Deep respirations, Breath holding
- ✓ Flexing/Extending Fingers *("make a fist" or "spread out your fingers")*
- ✓ Any isolated or combination of active elbow (including supination & pronation) or wrist movement within the 3 planes of motion



O: MSKTL: right wrist, flexed, adducted

Steps of Still Technique OMT

Make a SD Diagnosis

Initial Positioning

(Dr. & Pt. ergonomics)

Monitoring

(Hand positioning in relation to landmarks)

Barrier Relationship

(Indirect engagement)

Activating Force

(Compression & Physician induced movement through RB)

Re-Assess

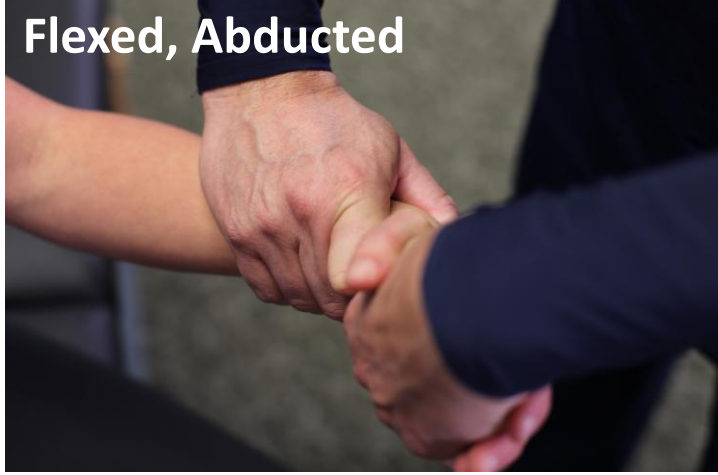
Timing (fluid motion) & Repetitions (1 time)

Radiocarpal SD Still Technique, Seated/Supine/Standing

Diagnosis: Flexed, Abducted Radiocarpal Joint

1. **Ergonomics:** The physician is facing the patient and ergonomically positioned relative to the them.
2. **Monitoring:** The physician holds the patient's hand in a handshake grasp and monitors the patient's wrist with a pincer grasp of the other hand.
3. **Barrier Relationship:** Position the radiocarpal joint in its shifted neutral position.
4. **Activating Force:** Add compression or traction through the hand contact and move the radiocarpal joint through neutral, the RB and the EB.
5. **Timing:** Fluid.
6. **Reassess:** Return to neutral and reevaluate 2-4 TART.

Start



Mid-position

Finish