

SAAO Forum - 09/03/2013

OPP Lab 3

Treatment:

1. Using MFR treat areas of dysfunction **INDIRECTLY** and reassess
2. Using MFR treat areas of dysfunction **DIRECTLY** and reassess
3. Using FPR treat areas of dysfunction **INDIRECTLY** and reassess

Myofascial Release

1. Palpate **long muscles** for increased tone and tenderness
 - a. Erector spinae, calf, quad, biceps, hamstrings, etc
2. Shorten the muscle by using compressive forces with both hands along the axis of the muscle
3. When the muscle is shortened, motion test the myofascia back and forth for the direction of ease
4. Maintain compression in the direction of ease for **INDIRECT** or direction of barrier for **DIRECT**
5. Hold for a few seconds or until the muscle releases
6. Reassess muscle tone and tenderness

Facilitated Positional ReleaseTM FPR

- FPR is a technique used to normalize hypertonic voluntary muscles.
- Developed by Stanley Schiowitz, DO
- Why? Vertebral joint motion restriction is caused and/or maintained by hypertonic muscles
- **Not for joint SD** (theory is that treating the muscle will help the joint go back in place)
- FPR is an **indirect technique**
- FPR provides immediate relief from muscle spasm (3-5 seconds) and immediate restoration of joint function

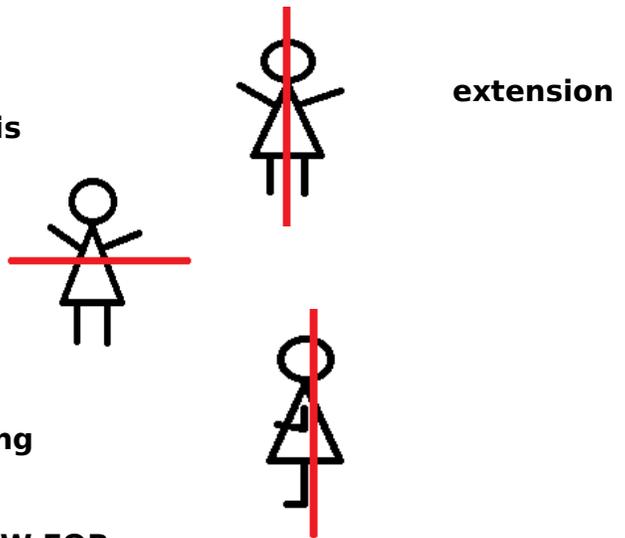
How is FPR applied?

1. Muscle/muscle fibers must be **at rest**
2. Place body part into **neutral** position
3. **Compression** applied to shorten muscle/muscle fibers
4. Place area into **EASE of motion (indirect)** and **hold for 3-5 seconds.**
5. Return body part to **neutral**
6. **Reassess**

OPP Lab 4

GROSS MOTION

- Planes (think of Dr. Evans in the cutout)
 - **Sagittal Plane**
 - Motion in the plane is **flexion &**
 - You pivot around a **horizontal axis**
 - **Horizontal Plane** (AKA transverse)
 - Motion in the plane is **rotation**
 - You pivot around a **vertical axis**
 - **Coronal Plane** (AKA frontal)
 - Motion in the plane is **side bending**
 - You pivot around an **AP axis**



Review Axes and Planes of Gross Motion = KNOW FOR QUIZZES/EXAMS

Rotation - occurs around a **vertical axis** in a **horizontal plane**

Sidebending - occurs around an **AP axis** in a **coronal plane**

Flexion and extension - occurs around a **horizontal axis** in a **sagittal plane**

FRYETTE'S PRINCIPLES

- Principle I** - Neutral Mechanics - When the spine is in neutral and sidebending is introduced, the vertebrae rotate toward the convexity. This involves sidebending and rotation in **opposite** directions. Vertebral bodies of the group curve as a whole rotate into the produced convexity.
- Principle II** - Non-neutral Mechanics - When flexion or extension is sufficient to localize force to a single segment, the vertebra rotates into the concavity. This involves sidebending and rotation to the **same side**.
- Principle III** - Motion in one plane will modify movement of that segment in ALL other planes of motion. For example:
 - Physician at head of the table, place hands underneath the patient's occiput, and rotate head right and left while watching where the nose goes, should go to the shoulder
 - Flex neck up 45 degrees and repeat rotating right and left (**should rotate less**)
 - Overall: moving in one plane will affect other planes

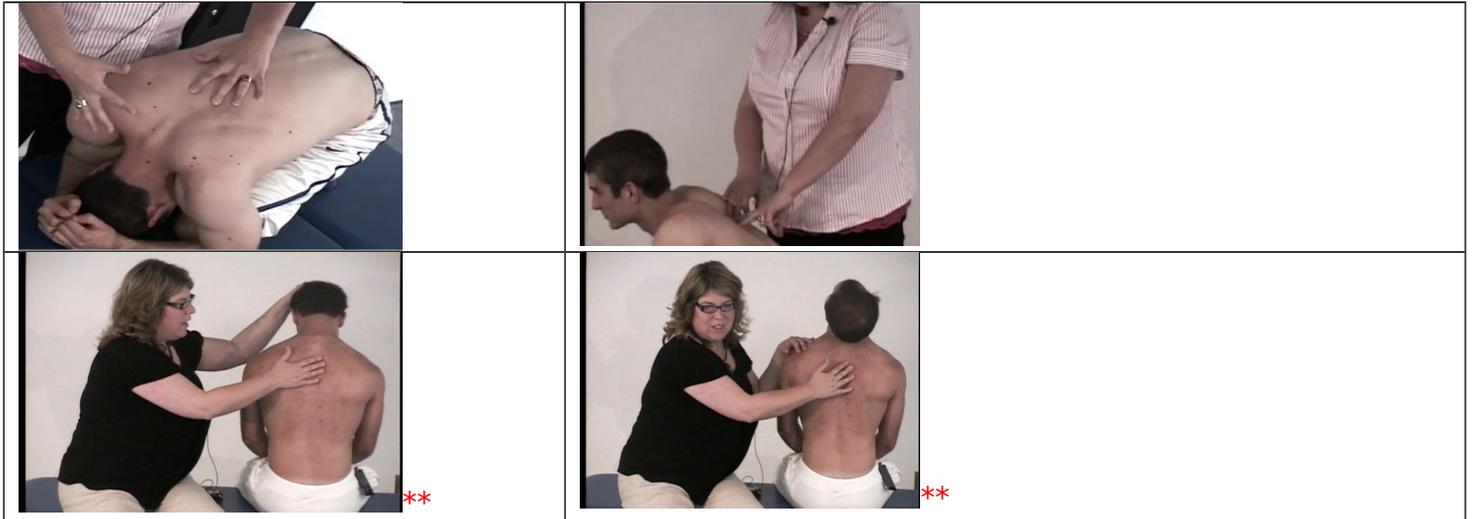
Thoracic and Lumbar Diagnosis

- Find a **Type I** dysfunction, name the level where it starts and where it ends, state its rotation and sidebending (**opposite**)
- Find a **Type II** dysfunction, state Flexion or Extension, sidebending and rotation **to same side** of a single segment
- Demonstrate Fryette's Third Principle

Important Points:

- Remember Fryette's Principles only apply to thoracic and lumbar vertebrae, not cervicals!
- When palpating the cervical spine you're on the lateral masses or articular pillars, NOT transverse processes
- Scoliosis is named for which side the **CONVEXITY** is on.

Type I Dysfunction	Type II Dysfunction
<p>Type I: When the spine is in neutral, rotation and sidebending will occur in OPPOSITE directions</p> <ul style="list-style-type: none"> - Rotation over multiple vertebra, due to long restrictors - Flexing/extending will not change the curve - You know it's a type I if there are several vertebra, it's neutral, and sidebending and rotation are in opposite directions <p>Evaluation - seated or prone</p> <ul style="list-style-type: none"> - Dominant eye over the patient - Palpate transverse processes (make sure you're lateral enough) for anything sticking out - Palpate where the curve begins and ends - Name the dysfunction by vertebral levels, direction of sidebending, and direction of rotation - eg: T1-T3, SB_R R_L  <p>***The direction of Rotation is determined by the direction in which the Anterior Aspect of the Body of the Vertebra moves***</p>	<p>Type II: Rotation and sidebending occur in the SAME direction and must also move in a third plane of motion (flexion or extension)</p> <ul style="list-style-type: none"> - Once you find a group curve, the top, bottom, and apex may have a type II dysfunction - Type II dysfunctions may also be found between multiple curves (compensation, eg: scoliosis) - Run hands down along transverse processes and palpate for a "speedbump" - principle II - sidebending and rotation will be in the same direction, once you feel a segment rotated to one side you can assume sidebending to the same side <p>Type II is caused by short restrictors, and in extreme motion eg: picking something up and turning to side</p> <ul style="list-style-type: none"> - Once you find a Type II somatic dysfunction, you need to know if it's flexed or extended, so place your fingerpads along the transverse processes and have the patient flex (into a ball, scared cat) and extend (watching TV) - The posterior transverse process should disappear under your fingerpads in flexion or extension, depending if it's the position it wants to go ⇒ you should feel it "blend in" - You can evaluate flexion and extension of the segment in an alternate seated position if it's difficult for the patient to lie down - Name your diagnosis in all three planes! Type II must go away in either flexion or extension, if it doesn't it must be part of the Type I group curve - eg: T4, F SB_R R_R - See Flexion/Extension Evaluation Below on next pg
Flexion *Anterior Approximation*	Extension *Anterior Separation*



**For the seated position, move head forward (flexion) and backward (extension) to evaluate segments T1-T4; lower thoracic and lumbar segments require greater gross motion of the spine. Always monitor at the segment when F/E.

Soft Tissue

- *Evaluate cervical, thoracic, and lumbar areas for TART somatic dysfunctions and document
- *Know which techniques are “parallel” and which are “perpendicular”
- *Use proper body mechanics, ie: move with the weight of your whole body, don’t just pull or push with your arms
- *Make sure you’re pressing deep enough to engage the musculature, try not to just stretch the skin

Cradling with Traction (Parallel Traction)

1. Patient supine, physician seated at head
2. Place fingers on paravertebral musculature, over the articular pillars of the cervical spine
3. Press ventrally/anteriorly to engage the soft tissues and pull cephalad for longitudinal stretch
4. work up and down the cervical spine
5. Reevaluate



Contralateral Traction (Perpendicular Stretch)

1. Patient supine, physician seated at head
2. Place cephalad hand on forehead and other hand on paravertebral musculature on opposite side from where your standing
3. Pull ventrally with bottom hand and use forehead hand to gently turn head in opposite direction
4. Make sure you use proper body mechanics and induce minimal extension
5. Reevaluate



Suboccipital Release

1. Patient supine, physician seated at head
2. Rest occiput in your hands, then place finger pads in upper cervical region and slide up until they hook underneath the occiput
3. Apply pressure anteriorly and cephalad and sustain pressure or use rhythmic motion for 30 seconds to a minute, or until you feel tissues release
4. Reevaluate



Forward Bending with Bilateral Fulcrum (Parallel Stretch)

1. Patient supine, physician seated at head
2. Cross arms under patient's head so their occiput is resting on your forearms
3. Stabilize your hands on their shoulders, then raise your whole body up slowly to gently flex their head anteriorly
4. Hold stretch in sustained manner or use rhythmic motion
5. Reevaluate



Bilateral Thumb Pressure (parallel stretch)

1. Patient prone, physician standing at head
2. Begin at T1, place thumbs/thenar eminences over paravertebral muscles
3. Press gently ventrally and caudad to stretch musculature
4. Continue down thoracic paraspinal muscles then repeat from bottom and moving up
5. Reevaluate



Prone Pressure (perpendicular stretch)

1. Patient prone, physician standing side
2. Place thenar eminences on paravertebral musculature on opposite side from you
3. Press ventrally and laterally
4. Continue applying pressure down and up thoracics, and repeat on other side
5. Reevaluate



Prone Pressure w/ Counter Pressure (parallel stretch)

1. Patient prone, physician standing side
2. Place hands in opposite directions along paravertebral musculature, have patient turn their head away from your cephalad pointed hand
3. Apply pressure ventrally, moving each hand in the direction fingers are pointing
4. Work up and down thoracic muscles
5. Reevaluate



Prone Pressure with Counter Leverage (Lumbar)

1. Patient prone, physician standing at side
2. Place one hand on lumbar paravertebral musculature, opposite from side your standing
3. Caudad hand reaches around front of hip to ASIS
4. Apply ventral and lateral force with cephalad hand while caudad hand gently lifts ASIS off the table
5. Repeat on the other side
6. Reevaluate



Exercise Prescription #1 - Cervicals

1. Sit on edge of the table, the side your stretching should be closest to the end of the table
2. Hold onto edge of table
3. Flex neck forward, then sidebend and rotate head away
4. Place other hand on top of your head then lean away from edge of table
5. Inhale and exhale deeply to increase stretch
6. Repeat on other side



Exercise Prescription #2 - Thoracics

1. Sit on edge of the table with feet apart touching the floor
2. Interlock hands in and straighten arms in front of you
3. Bend forward to stretch thoracic and scapular areas
4. Can also do this in the standing position



Exercise Prescription #3 - quadratus lumborum

1. Stand with feet slightly apart
2. Raise one arm and sidebend to opposite side
3. Hold stretch
4. Repeat on opposite side

