Ten Steps to Effective Myofascial Release

Objectives

- At the completion of this workshop the physician should be able to:
  - Explain the similarities and differences between myofascial release, facilitated positional release, and ligamentous articular strain techniques
  - Safely apply myofascial release techniques for somatic dysfunctions of the spine, ribs, and extremities
Step 1: Know the Variations

- Facilitated positional release (Schiowitz/NYITCOM)
- Ligamentous articular strain (Lippincott/Spence)
  - Balanced ligamentous tension
- Myofascial release (ECOP)

Facilitated Positional Release (FPR)

- A system of indirect myofascial release treatment. The component region of the body is placed into a neutral position, diminishing tissue and joint tension in all planes, and an activating force (compression or torsion) is added. (Glossary of Osteopathic Terminology 2011)
- Developed by Stanley Schiowitz, DO and published in An Osteopathic Approach to Diagnosis and Treatment

(book cover by permission of purchase)
Principles of FPR

1. Identify tension related to restricted motion
2. Place the joint or region in its easy neutral position (reduce spinal curve with pillow or position)
3. Add compression or torsion to facilitate tissue laxity
4. Hold the position of laxity for 5 seconds and then slowly return to neutral
5. If needed, oscillate the joint or region to complete treatment
6. Retest for tension or motion

Lumbar soft tissue FPR positions in easy neutral with a pillow and adds compression by lifting the contralateral leg

Ligamentous Articular Strain (LAS)

- A manipulative technique in which the goal of treatment is to balance the tension in opposing ligaments where there is abnormal tension present. (Glossary of Osteopathic Terminology 2011)
- First described by Rebecca and Howard Lippincott, DO and published in Ligamentous Articular Strain
- Similar to balanced ligamentous tension
Principles of LAS

1. Identify ligament or myofascial tension
2. Slowly move the part of the body into its position of laxity for all planes (disengagement)
3. Press into or apply traction to the tense area to engage the tissues (exaggeration)
4. Maintain the position of laxity using balanced pressure and follow any tissue release until completed or inherent motion is palpated
5. Retest for tension

Interosseous membrane LAS disengages by flexing the wrist and elbow and exaggerates by compressing the tight membrane (image from The Pocket Manual of OMT 2nd Edition, LWW 2011)

Myofascial Release Technique (MFR)

- System of diagnosis and treatment first described by Andrew Taylor Still and his early students, which engages continual palpatory feedback to achieve release of myofascial tissues
  - Indirect MFR - dysfunctional tissues are guided along the path of least resistance until free movement is achieved
  - Direct MFR - a restrictive abvier is engaged for the myofascial tissues; the tissue is loaded with a constant force until tissue release occurs

Indirect myofascial release for forefoot eversion restriction (image from The Pocket Manual of OMT 2nd Edition, LWW 2011)
Step 2: Make the Diagnosis

- Passive motion testing
  - Joint motion
    - Planes of movement
    - Joint glide (free play)
  - Soft tissue triplanar motion
    - Flexion-extension
    - Sidebending (lateral flexion)
    - Rotation

Hip motion testing
(Image from The Pocket Manual of OMT 2nd Edition, LWW 2011)

The Barrier Concept

- Neutral (N)
- Physiological barrier (P)
- Anatomical barrier (A)
- Restrictive barrier (R)
  - Position through which DIRECT TECHNIQUES move
- Position of Laxity (L)
  - Shifted neutral
  - Position at which INDIRECT TECHNIQUES start

Lumbar vertebra superior view
(from Wikimedia.org)
Hip Myofascial Release

1. Move joint to restrictive barrier
2. Apply gentle constant force into the restriction
3. Maintain force and follow tissue give until it stops
4. Retest motion

Direct MFR for restricted right hip internal rotation

Step 3: Know the Contraindications

- Absolute
  - Absence of joint restriction
  - Patient preference
- Direct MFR
  - Acute fracture
  - Acute sprain/dislocation
  - Symptoms worse at barrier
  - Apprehension/guarding
  - Technique specific
- Indirect MFR
  - Technique specific

Lumbosacral compression-decompression is contraindicated when the patient can’t lay prone
(Pocket Manual of OMT 2nd Ed., LWW 2011)
Lumbosacral compression-decompression

1. Test fascial flexion and extension
   - Identify directions of laxity and restriction
2. Move into position of flexion-extension laxity
3. Follow tissue release until complete
4. Retest flexion and extension and retreat with direct MFR if needed

Step 4: Choose indirect or direct MFR

**Indirect**
- Acute injuries
- Severe pain
- Patient apprehension
- Autonomic normalization

**Direct**
- Chronic tension
- Rehabilitation from injuries
- Stretch trial before home exercise
  - RX
- Patient preference
Mechanisms of Indirect MFR

- Reduced tension by unloading muscle spindle
  (http://neuromech.blogspot.com/)
- Decreased nociception by reduced muscle tension
  (http://www.changepain-emodules.com/)

Mechanism of direct MFR

- Tissue creep - tendon or ligament elongation with stretch

http://www.umich.edu/
Step 5: Select an activating force

- Compression
- Traction
- Torsion
- Inhibition
- Respiration
- Vibration

Interosseous membrane MFR uses torsion with compression
(image from The Pocket Manual of OMT 2nd Edition, LWW 2011)

Activating forces with MFR

Rib indirect MFR uses respiration
Rib direct MFR uses traction

(images from The Pocket Manual of OMT 2nd Edition, LWW 2011)
Step 6: Apply Indirect MFR

- **Principles of indirect MFR**
  1. Identify restricted tissue or joint movement for all possible planes of motion
  2. Slowly move the part of the body into its position of laxity for all planes
  3. Follow any tissue release until completed
  4. Retest motion, retreat with direct MFR if needed

Thoracic inlet myofascial release
(Pocket Manual of OMT 2nd Ed, LWW 2011)

Scapula indirect MFR

1. Identify directions of ease
   - Elevation-depression (flexion-extension)
   - Protraction-retraction (rotation)
   - Upward-downward rotation (sidebending)

2. Move into positions of laxity, follow release until completed

3. Retest and retreat with direct MFR if needed

Triplanar diagnosis
(Pocket Manual of OMT 2nd Ed, LWW 2011)
Step 7: Apply Direct MFR

1. Diagnose restricted glenohumeral abduction
2. Stabilize acromioclavicular joint and hold forearm just below elbow
3. Maintain internal rotation and apply steady force at abduction barrier until tissue give completed
4. Externally rotate and apply steady force at abduction barrier until tissue give completed
5. Maintain external rotation and apply steady force at adduction barrier until tissue give completed
6. Retest motion

Restricted glenohumeral abduction

Active abduction

Passive abduction

180°
Scapulohumeral rhythm 1:2

Restricted right glenohumeral abduction
(restriction may also be identified by resistance)
Scapulohumeral rhythm 1:2

- 1° scapula rotation for every 2° glenohumeral motion
- Decreased scapula rotation = scapulocostal restriction
- Increased scapula rotation = glenohumeral restriction

With 90° abduction there should be 30° scapula rotation

(Pocket Manual of OMT 2nd Ed, LWW 2011)

Glenohumeral direct MFR

- Sequential barriers:
  - Abduction with internal rotation
  - Abduction with external rotation
  - Adduction with external rotation

Abduction with external rotation

(Pocket Manual of OMT 2nd Ed, LWW 2011)
Step 8: Apply combined indirect-direct MFR

- Identify directions of laxity and restriction for all possible planes
- Slowly move into positions of laxity, apply and activating force if needed, and follow release until completed
- Slowly move into restrictions and apply steady force until tissue give is completed

Cervical segmental diagnosis and treatment
(Pocket Manual of OMT 2nd Ed, LWW 2011)

Cervical segmental diagnosis

- Test sidebending or rotation from C2-C7
  - SB and R occur to the same side for C2-C7
- Retest restricted segment in flexion and extension
- Diagnosing segmental somatic dysfunction
  - Directions of restriction: C3 restricted flexion, rotation and sidebending right
  - Positions of laxity: C3 extended, rotated and sidebent left

Hand placement for cervical segmental diagnosis and treatment
(Pocket Manual of OMT 2nd Ed, LWW 2011)
Step 9: Retest motion and retreat

- If improved:
  - Treat other related dysfunctions if needed
  - Prescribe home treatment
  - Formulate OMT follow-up plan

- If still restricted:
  - Retreat by adding another activating force
    - Isometric contraction and stretch (muscle energy)
    - Repetitive movement into barrier (articulatory)
    - Short quick movement into joint barrier (thrust)
  - Consider diagnostic testing

Range of motion should improve after effective segmental MFR

(Pocket Manual of OMT 2nd Ed, LWW 2011)

Retreating with other activating forces

Cervical muscle energy

Cervical articulatory

(Pocket Manual of OMT 2nd Ed, LWW 2011)
Step 10: Prescribe Home Treatment

- Positions of ease
  - Indirect MFR effective
  - Direct MFR contraindicated, intolerable, or ineffective
  - Hold 2-5 minutes
  - Repeat 2-4 times a day
- Myofascial stretches
  - Direct MFR effective
  - 10-20 seconds
  - 1-4 times a day

Position of ease for posterior cervical spasm and pain

Stretches for posterior cervical spasm and pain

Extensor stretch
- For restricted flexion

Levator stretch
- For restricted sidebending
Summary

- Myofascial release technique (MFR) is also called facilitated positional release, ligamentous articular strain, and balanced ligamentous tension.
- Accurate motion testing with diagnosis of restriction is essential for treatment selection and determination of response to treatment.
- Indirect MFR moves into the position of laxity and follows tissue release in all planes until completed.
  - Acute injuries, severe pain, patient apprehension, autonomic normalization.
- Direct MFR applies steady force into the restriction(s) until tissue give is completed.
  - Chronic tension, rehabilitation, stretch trial before exercise RX.
- Indirect followed by direct MFR is a powerful treatment sequence for relieving pain and restoring motion.

References

- DiGiovanna EL, Schiowitz S, Dowling DJ. *An Osteopathic Approach to Diagnosis and Treatment 3rd Ed.* Lippincott Williams & Wilkins, Philadelphia 2005.
Lab Techniques

(page numbers from The Pocket Manual of OMT 2nd Edition, Lippincott Williams & Wilkins 2011)

- Forefoot MFR (p.60)
- Interosseous MFR (p.54)
- Hip MFR (p.31)
- Lumbosacral compression-decompression (p.121)
- Thoracolumbar MFR (p.146)
- Rib indirect MFR (p.182)
- Rib direct MFR using shoulder (p.183)
- Scapula MFR (p.263)
- Glenohumeral MFR (p.265)
- Cervicothoracic MFR (p.147)
- Cervical segmental MFR (p.210)