

# Myofascial Release

## Definition of Fascia

- Slightly mobile sheath of connective tissue, similar to a blanket over the skin
- Affects and is affected by somatic and visceral structures of body and supports all soft tissues
- Affects balance and neurological factors
- Characteristics:
  - It has limited blood supply and, therefore, is slow to heal
  - It surrounds every muscle, bone, nerve, blood vessel and organ of the body all the way down to the cellular level
  - It demonstrates good tensile strength and is able to withstand multidirectional stresses

## Components of fascia (Jell-O with fruit)

- Connective Tissue
  - Loose irregular (facial sheaths)
  - Contains: collagen, elastin and reticulin
- Ground substance
  - Medium in which connective tissue lies
  - Provides lubrication for connective tissues gliding
  - Prevents adhesions by: maintaining distance between tissue fibers

## Types of fascia

- **Superficial:** directly below the dermis
- **Deep:** surrounds muscle, bone, nerves, blood vessels, and organs
- **Deepest:** within dura of cranial system

## Roles

- Supports and stabilizes → promoting postural balance
- Acts as a shock absorber
- Assists with circulation
- Provides fat storage in superficial tissues
- Aids with passage of infectious and inflammatory processes
- Assists with functioning of osseous structures, nerves, blood vessels, and organs

## Myofascial Dysfunction

- Defined by Barnes as: “malfunction of the fascial system due to trauma, posture, or inflammation that causes a binding down of fascia resulting in abnormal pressures on nerves, muscle, bones or organs which in turn create pain or malfunction throughout the body.”

## Myofascial Syndromes

- Fibromyalgia
  - Doesn't exhibit systemic features
  - 11 of 18 standardized tender points
  - Disturbed sleep and fatigue
  - Soft tissue work? (Usually not the main focus of treatment)
- Myofascial pain syndrome
  - Pain is in certain region not isolated to one structure
  - Identifiable trigger points, typically neck, shoulders and upper back
  - Soft tissue work? (Good for this)
- Mechanical dysfunction
  - Linked to a specific cause (repetitive strain, reflex sympathetic dystrophy)
  - CPT is a main problem (following repair surgery)
    - Soft tissue work? (Beneficial for this category)

## **Myofascial manipulation**

- Sometimes called soft tissue mobilization
- “Forceful passive movement of musculofascial elements through restrictive direction”
- Progress from superficial to deep
- Get feedback from tissues, not pt verbally: feel tissue release under your hands (“creep”)

## **Three theories of myofascial release**

- **Autonomic approaches**
  - Mobilizing skin and superficial fascia stimulates afferent nerve pathways
  - Sensory approach
- **Mechanical approaches**
  - Make a histological change
  - Stretching muscle or tissue rolling
- **Movement Approaches**
  - Correct poor postural habits and retrain new ones
  - Patient more active in this approach

## **Indications for MFR**

- Correct postural and alignment dysfunctions
- Release of muscle spasm, contracture or tension
- Stretch fibrous tissue
- Release adhesions
- Restore muscle balance
- Increase blood flow
- Relieve pain

## Contraindications

- Malignancy
- Aneurysm
- Acute RA
- Cellulites
- Fever
- Systemic or localized infection
- Osteomyelitis
- Obstructive edema
- Open wounds
- Around sutures and healing fractures
- Presence of anticoagulant therapy
- Skin hypersensitivity
- Osteoporosis
- Hematoma
- Down's syndrome 2° neck instability

## Tissue assessment

- Posture
  - Symmetry
  - Altered muscle imbalances (tight vs weak)

<i>Tight</i>	<i>Weak</i>
<b>Vastus lateralis</b>	<b>VMO</b>
<b>Piriformis</b>	<b>Gluteus medius</b>
<b>Iliopsoas</b>	<b>Gluteus maximus</b>
<b>Low back</b>	<b>Abdominals</b>

- AROM
  - Look regionally, then segmental
  - Look at willingness to move

## **Tissue assessment**

- **Assessment of superficial connective tissue mobility**
  - Traction skin in all directions superficially. Why?  
May be ok in one plane and tight in another
  - Look at quality of movement, not quantity (How hard is it for you to move the tissues?)
- **Vasomotor response**
  - Releasing a restriction in one area may cause a vasomotor response in another region indicating other restricted areas. Signs of a vasomotor response include:
    - Pulling sensation
    - Tingling in body
    - Feelings of heat or cold
    - Pain

## **Treatment Approaches**

- **Treat regions around localized involvement**
  - Myofascial tightness may develop around the area of involvement due to
    - Patient compensating for the problem
    - Altered mechanics of movement/posture
- **Joint mobilization**
  - Releasing myofascial tissue may require less force for joint manipulation
  - Do most problematic tissue first and then less problematic one
- **Joint and myofascial elongation**
  - Once extensibility increased, elongation and stretching may be easier
- **Neuromuscular re-education**
- **Postural instruction**
  - Won't be able to attain new postures if can't move fully into them

## **References**

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