

# TRIGGER POINT & MYOFASCIAL THERAPY

## TRIGGER POINTS

- } Defined (Travell & Simons):  
*Hyper-irritable spot in a skeletal muscle with a palpable nodule or taunt and Painful, refers pain*
- } Found anywhere in muscle belly
- } Dysfunctional motor endplates

## DIFFERENCES BETWEEN

### TRIGGER POINT

- } Found in muscle belly -dysfunctional endplate
- } Used to treat myofascial pain
- } Inactivate trigger point – eliminate nociception activity in muscle
- } Palpable taunt band, nodule, limited ROM, referred pain, local twitch response
- } Follow-up with myofascial stretch and correct muscle & joint mechanics

### ACUPUNCTURE

- } Skin areas along specific meridians
- } Used to treat visceral and systemic dysfunction
- } Pain relief thru release of endorphins
- } Selection of point pre-determined by meridian charts
- } Follow-up based on additional needling or pressure treatments

## PATHOLOGY OF Trg Pnt's

- } Muscle fiber injury
  - } Over-stretched                      Over-shortened                      Over-loaded
  - } Causes:
    - } Repetitive Movements
    - } High Velocity movements
    - } Stress positions
  - } Excess release of calcium with excessive hyper-contraction of fiber
  - } Resultant hypoxia

## CLASSIFICATION OF Trg Pnt's

- } **ACTIVE**
  - } Pain without digital compression
  - } Local twitch
  - } Referred pain with and without ischemic pressure
- } **LATENT**
  - } Silent
  - } Refers pain only with ischemic pressure
- } **SATELLITE**
  - } Develops in same muscle or synergistic muscle
  - } Usually resolves when main trigger point resolved
- } **CENTRAL**
  - } Located near center of muscle fiber
  - } Associated with dysfunctional endplate
- } **ATTACHMENT**
  - } Located at muscle – tendon junction

## **Clinical Symptoms**

- } Micro-trauma
  - } Repetitive Movements
  - } High Velocity movements
  - } Stress positions
  - } Pain, burning , tenderness in muscle
  - } Referred pain pattern
  - } Excessive sweating, goose bumps
  - } Dizziness
  - } Lack balance
  - } Edema
  - } Cellulite
  - } Dermatomal hair loss
  - } Sleep disturbed

## **Physical Findings**

- } Taut Band – feels rope like
- } Tender and painful small nodules
- } Exquisite Pain right over Trg Pnt
- } Patient pain recognition – stimulating Trg Pnt produces symptoms pt is familiar with
- } Local Twitch Response – pincer snapping palpation of Trg Pnt
- } Limited ROM
- } Muscle Weakness
- } Positive Stretch Sign - pain of mechanical or neural origin in joint with myofascial stretch

## **TREATMENT**

### **Modalities to the affected muscle**

- } Hot packs – general superficial heat, relaxation
- } Phonophoresis – deliver drug to reduce inflammation
- } Iontophoresis - deliver drug to reduce inflammation
- } Electrical Stim – muscle spasm contraction techniques; IFC
- } Low - Level Laser Therapy – reduces skin resistance, increases microcirculation, increases O<sup>2</sup> to cells

### **Trigger Point Therapy**

- } Progressive Pressure Technique
  - } Manual technique
  - } Flat palpation or Pincer palpation
  - } Fingers, thumb, knuckles, elbow
  - } Instrumentation
  - } Patient in relaxed position
  - } Progressive pressure – 30 seconds up to 2 minutes

### **Myofascial Stretching**

- } Only stretching small area of muscle
- } Place muscle at stretch tension - NOT over-stretched
- } Static - progressive stretch
- } 30 seconds – 3 to 4 trials
- } Deep breathing techniques
- } May utilize Vapocoolant spray

## **TREATMENT**

### **} Muscle strengthening**

} MUST restore at least 70% of normal ROM and joint mobility before initiating strength exercises

} Isometric > Isotonic > Isokinetic > Concentric > Eccentric

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### **} Proprioceptive Training**

} Closed chain activities (stability > mobility)

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### **} Home program**

## **CONTRAINDICATIONS**

} Malignancy

} Open Wounds

} Severe atherosclerosis

} Aneurysm

} Subdural hematoma

} Anticoagulant Therapy

} Advanced osteoporosis

## **REFERENCES**

Kostopoulos D & Rizopoulos K. *The Manual of Trigger Point and Myofascial Therapy*. SLACK, Thorofare, NJ., 2001: 3-67.