

# Learn How to Manage Trigger Points

## What is a Trigger Point (TrP)?

- A trigger point is a hyperirritable spot located in a taut band of skeletal muscle. They may form following a sudden trauma or may develop on a more gradual basis.

➤

Active Trigger Points	Latent Trigger Points
<ul style="list-style-type: none"><li>• Starts with some impact to the muscle, such as injury.</li></ul>	<ul style="list-style-type: none"><li>• Can develop gradually without being active first; often times, you don't even know they are there.</li></ul>
<ul style="list-style-type: none"><li>• Typically caused by poor posture, poor body mechanics, repetitive use, nerve root irritation.</li></ul>	<ul style="list-style-type: none"><li>• Present in most people, and can be easily converted to active trigger points.</li></ul>
<ul style="list-style-type: none"><li>• Will refer pain or other sensations, leading to decreased range of motion</li></ul>	<ul style="list-style-type: none"><li>• No pain will be present, however, may have decreased range of motion and weakness</li></ul>

## Characteristics of a Trigger Point:

- Tenderness, knots, and tight bands in the muscle
  - When pressed, trigger points are very tender.
- Weakness, muscle fatigue, joint stiffness
  - The presence of trigger points can lead to weakness and loss of coordination.
- Referred pain
  - Pain may be travel to different parts of the body than where the trigger point is located.

## Helpful I-pad Applications

- Trigger Points by Real Bodywork - \$2.99 (Provides info on common trigger points, referral patterns, recommendations on management)
- Trigger Point Charts – Free (Provides muscle specific trigger points and referral patterns)

## Gadgets for working trigger points:

- **TheraCane**, info available at <http://www.theracane.com/>. The TheraCane is \$39.95; the site includes a complete manual of how to get at almost every TrP. You cannot order from them by phone, but can contact OTPT at 1- 888- 819- 0121.
- **Pressure Pointer** at <http://www.mypressureproducts.com/> or 1-888-729-3053. The Pressure Pointer is \$54, but the web site also has excellent information about different trigger points under their Pain Reference Chart
- **Reflexball** is a knobby ball you can lie on or roll into. At <http://www.bodytrends.com/> or 1-800-549-1667. Balls start at \$7.99. Also available at [www.optp.com](http://www.optp.com) ((888) 819-0121)

# Face/Head Trigger Points

## Masseter Muscles

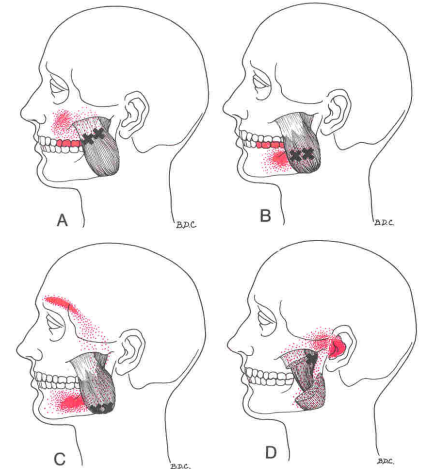
- This muscle clenches the teeth.
- Pain located: over eyebrow, deep in the ear, over cheek and jaws. The masseter can cause tension-type headaches.

### ❖ Aggravating factors:

- Clenching or grinding the teeth, or teeth not meeting properly
- Chewing: constant gum chewing, forceful biting, chewing pens or instrument mouthpieces
- Forward head posture
- Mouth breathing (as with sinus congestion)
- Emotional tension
- Overstretch during dental procedure; excessive jaw mobility

### ❖ Prevention

- Correct forward head posture
- Correct mouth position, with tongue on roof of mouth, teeth slightly apart
- Avoid excessive chewing, clenching teeth, using a mouth guard to prevent grinding teeth at night
- Correct dental problems that prevent proper closing of teeth
- Decrease muscle tension due to stress



## **Recommended trigger point release technique:**

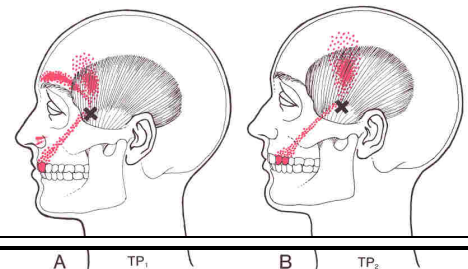
1. Using the hand opposite to the side you are working on, insert your thumb inside your mouth but outside your gums and relax your jaw.
2. With your index and middle fingers, press on the outside of your cheek between your fingers and your thumb.
3. Work all the way from the bottom of the jaw to your cheek bone and up towards your ear.

## Temporalis Muscles

- This muscle also clenches the teeth.
- Pain located: over the temple, over eyebrow, behind ear.
- The temporalis can cause tension-type headaches on one or both sides of the head.

### ❖ Aggravating factors

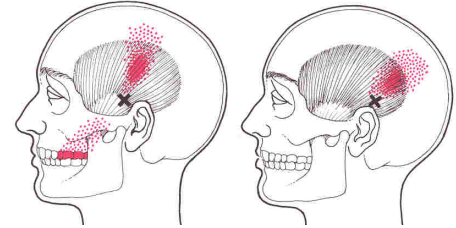
- Long periods of holding jaw in one position, either open or closed, as during dental work



- Clenching jaw (bruxism), grinding teeth at night, chewing gum, biting instrument mouthpieces, or temporomandibular problems
- Muscle tension from stress
- Exposure to cold draft when muscle fatigued
- Posture with head forward
- Trigger points in other muscles, such as sternocleidomastoid or upper trapezius
- Neck traction using a chin strap

❖ **Prevention**

- Same as for masseter muscle, above



**Recommended Technique:**

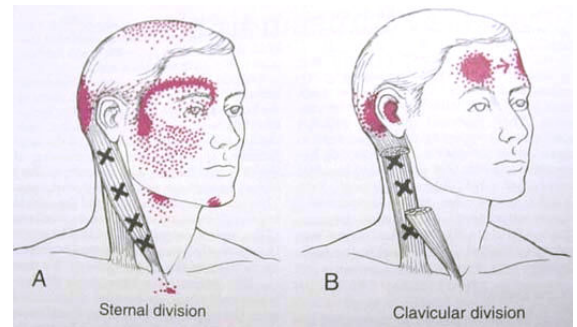
1. Use your finger tips to apply pressure to areas above temple and the ear.
2. While pressing against the tender points, slowly open and close your jaw.

## Neck/Upper Back Trigger Points

### Sternocleidomastoid

Function:

1. When using only one side, rotates head and tilts head upward
2. When both sides used together, brings the head and neck down in front



❖ **Causes**

- Overhead activities
- Looking up for long periods of time
- Poor neck postures such as forward head posture
- Traumatic injuries that have caused whiplash, a fall on the head, etc.
- Improper breathing
- Chronic cough or infection
- Injury or deformity that restricts upper body movement

❖ **Management**

- Avoid overhead work and prolonged periods of looking up
- Practice good posture and body mechanics
- Seek proper breathing techniques (ex. diaphragmatic breathing)
- Prevent excessive infection
- Seek specialist if body asymmetries exist

## Trapezius

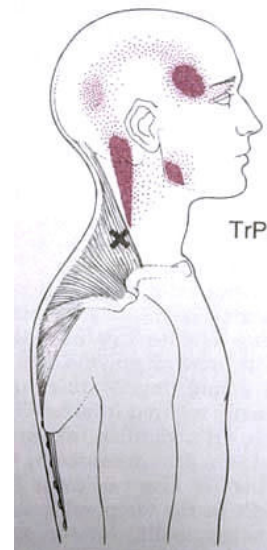
Function: Moves the shoulder girdle and shoulder blade in various directions.

### ❖ Causes:

- Poor posture and ergonomics
- Clothing or anything that places constricting pressure on the muscle (ex. backpack, purse, etc.)
- Certain sports with sudden one-sided movements
- Structural abnormalities such as asymmetrical leg length, pelvis height, etc.)
- Fatigue
- Traumatic injuries such as whiplash, fall to the head.

### ❖ Management

- Postural alterations
- Practice relaxation techniques
- Minimize direct pressure on the muscle
- Address fatigue problems



## Splenius Capitus and Splenius Cervicis

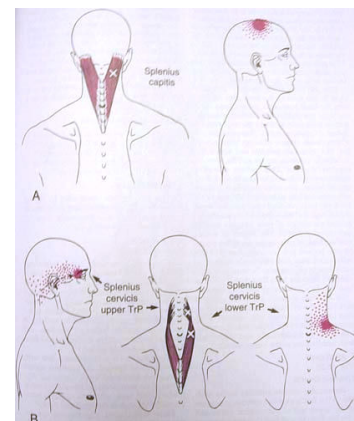
Function: Rotates the head and brings head back up from forward position; provide stabilization

### ❖ Causes:

- Poor posture
- Poor ergonomics during work
- Forward head posture
- Structural problems (ex. kyphosis)
- Exposure to cold temperatures while muscle is fatigued
- Traumatic injuries
- Sports activities that involve rotating of the head
- Restrictive clothing
- Depression

### ❖ Management

- Practice proper posture
  - Sit upright, with head held directly over trunk and back well supported
  - Invest in pillows or other objects that would facilitate proper spine alignment
- Postural retraining exercises
- Correct body asymmetries
- Avoid head rotating activities, modification of activities as necessary
- Be aware of restrictive clothing
- Seek counseling for depression if applicable.

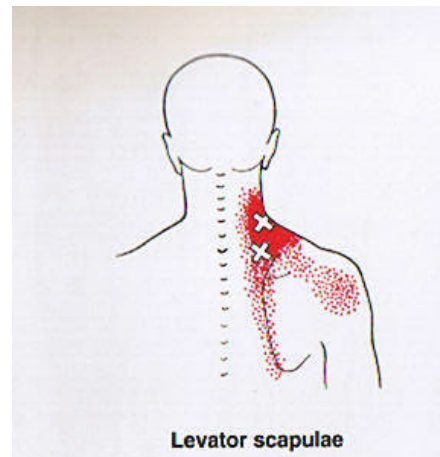


## Levator Scapula

Function: Shrugs shoulder and helps rotate head

### ❖ Management:

- Take breaks when working at computer; use armrests
- Face forward without head rotated
- Carry less weight
- Learn stress reduction techniques



## Scalenes

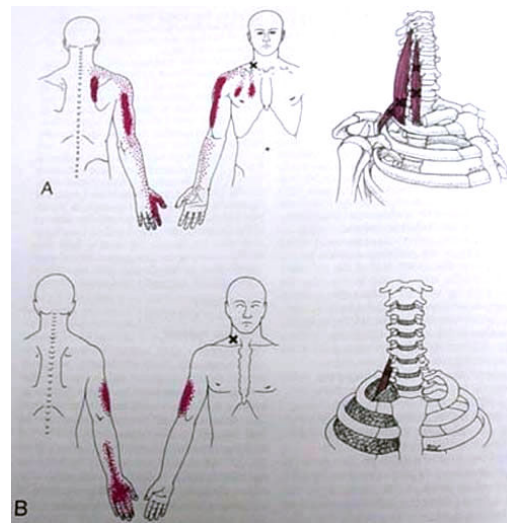
Function: Stabilizes the cervical spine and elevates the first and second ribs during inhalation

### ❖ Causes:

- Excessive pulling or lifting activities
- Breathing in against resistance
- Poor body mechanics when carrying large objects
- Traumatic injuries
- Trigger points in SCM and levator scapula
- Improper breath techniques
- Asymmetries of body structures (legs, pelvis, spine, ribs)

### ❖ Management:

- Avoid activities that require lifting and pulling heavy objects
- Prevent excessive turning of the head to one side
- Learn proper breathing techniques
- Address surround trigger points
- Seek specialist if structural asymmetries exist.



# Back, Hip and Lower Extremity Trigger Points

## Serratus Posterior Inferior

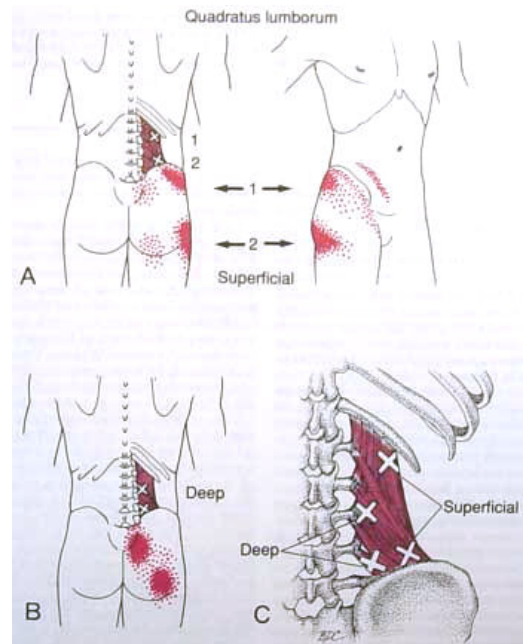
Function: Assists with trunk rotation and forward bending at the waist

### ❖ Causes

- Straining of the back during activities that involve lifting, twisting, reach overhead
- Improper ergonomics and body mechanics
- Improper breathing techniques or coughing
- One leg longer than the other

### ❖ Management

- Practice proper lifting techniques
  - Bend with your knees, not with your back
  - Hold objects close to body
- Learn proper breathing techniques (diaphragmatic breathing)
- Seek a specialist to address any structural abnormalities



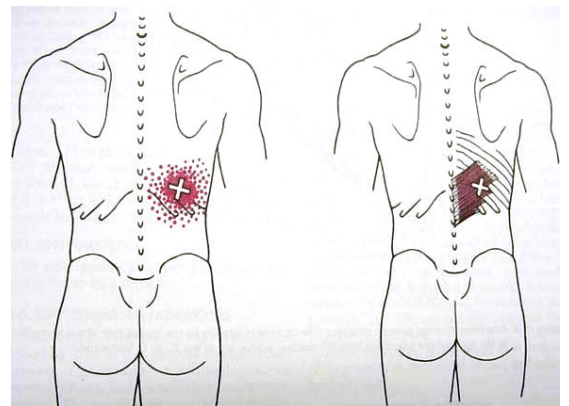
## Quadratus Lumborum

Function:

1. When only one side is used, it assists with stabilization and side-bending at the waist
2. When both sides are used, assists with assuming standing from the bending position, assists with forced breath exhalation

### ❖ Causes

- Awkward movements that involves trunk rotation (ex. lifting and object while turning simultaneously)
- Repetitive strains from frequent bending
- Sitting with malaligned pelvis
- Activities and positions that require excessive forward lean



## Iliopsoas

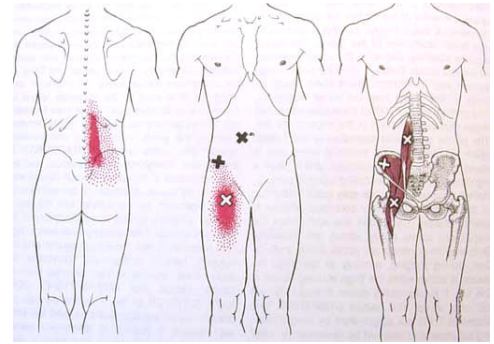
Function: flexes hip

### ❖ Causes:

- Walking long distances
- SI malalignment,
- Prolonged sitting
- Leg length difference

### ❖ Management:

- Correct leg length difference or flat foot;
- Correct imbalance of weak and tight low back and hip muscles
- Trigger point pressure and stretching



## Piriformis

Function: rotates hip

### ❖ Symptoms:

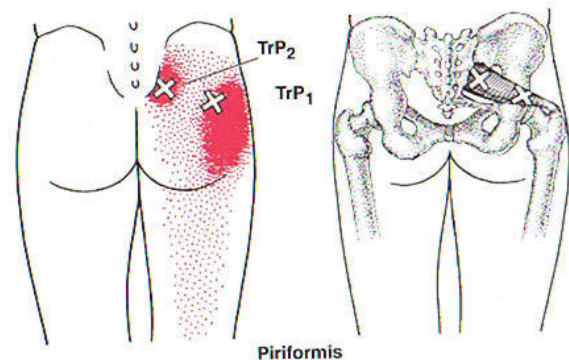
- Pain worse with sitting, standing, or standing from sitting
- SI dysfunction
- Possible numbness, weakness, or swelling in the involved leg
- Chronic pelvic infections

### ❖ Causes:

- Catching oneself while falling, or twisting while lifting or rotating while weight on one leg
- SI malalignment,
- Prolonged driving or sitting
- Leg length difference
- Hip joint replacement
- Car accident.

### ❖ Management:

- Correct leg length difference or flat foot;
- Avoid strong twisting motions;
- Limit driving with involved foot on accelerator
- Avoid sitting on involved leg
- Trigger point pressure and stretching



# Shoulder, Upper Arm, and Elbow Trigger Points

## Supraspinatus

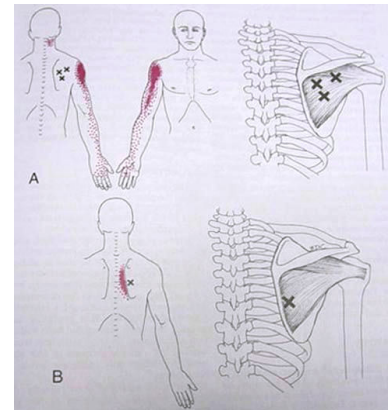
Function: Stabilizes the humerus and moves the arm away from the body

### ❖ Causes

- Carrying heavy objects with arm at your side
- Carrying objects above shoulder height

### ❖ Management

- Do not lift objects overhead on a continuous basis
- Decrease prevalence of carrying heavy objects



## Infraspinatus

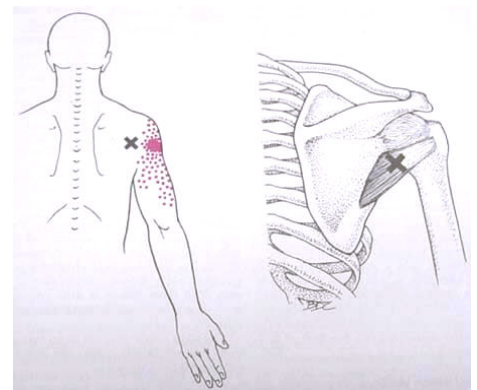
Functions: Stabilizes end of humerus and rotates upper arm

### ❖ Causes

- Activities that require arm to be held out in front of you.
- Pulling activities that requires you to reach behind.
- Overload on muscle when attempting to catch a fall.

### ❖ Management

- Increased awareness of body mechanics
- Decrease activities that requires arm to be held in front for extended periods of time.
- Application of heat over the muscle.



Teres Minor

## Teres Minor and Major

Functions: Stabilizes the humerus and helps move the upper arm

### ❖ Causes

- Sudden overload of the muscle, often during traumatic accident
- Activities that require holding arms out in front or above your for prolonged periods of time.
- Repetitively reaching behind

### ❖ Management

- Increase awareness of body mechanics
- Decrease the prevalence of activities that require arms to be out in front and above you.
- Heat application at night for 15-20 minutes



## Pectoralis Minor

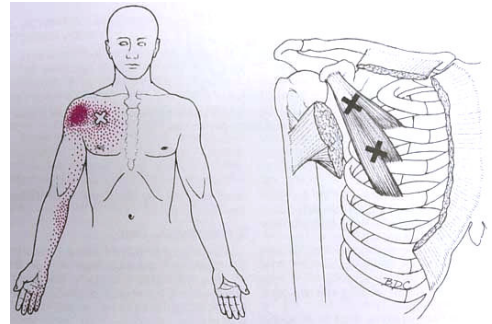
Function: Pulls the shoulder blade and should girdle down and forward, and assists in forced inhalation

### ❖ Causes

- Poor ergonomics and posture
- Compression the muscle with straps and clothing
- Weakness of trapezius muscle
- Trauma to the ribs or front of shoulder
- Coughing and improper breathing techniques

### ❖ Management

- Improve ergonomics and posture in the home and at work
- Avoid carrying backpacks or using other straps that places significant compression on the shoulder
- Manage trigger points and weakness of surrounding muscles.
- Learn proper breathing techniques



## Deltoid

Function: Moves the arms in a variety of ways

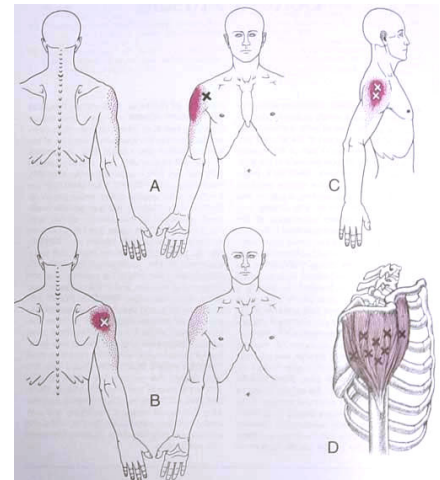
### ❖ Causes

- Jerky, repetitive movements of the arm
- Trauma to the shoulder region
- Holding an object above shoulder level for a prolonged time.

### Management

Avoid lifting objects above shoulder level

- Limit repetitive movements of the arm



## Biceps Brachii

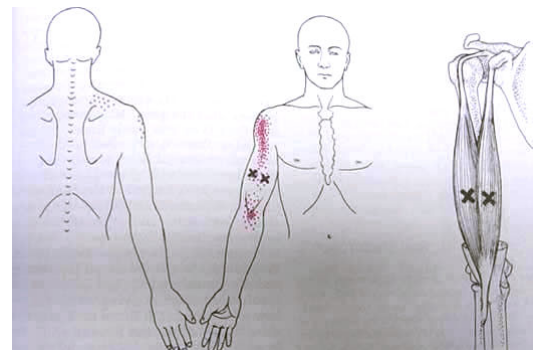
Function: flexes the shoulder and elbow; rotates the lower arm

### ❖ Causes

- Repetitive motion injuries
- Carrying heaving objects with palms facing upward
- Trying to catch yourself from a fall
- Trigger points of the infraspinatus

### ❖ Management

- Modification of aggravating activitie
- Carry items with palms face-down
- Manage trigger points of surrounding muscles



# Trigger Points in the Forearm and Hand

## Hand Extensors, Brachioradialis, and Finger Extensors

Function:

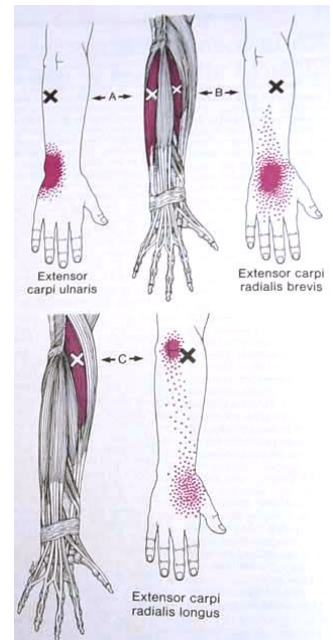
1. Hand extensors- extend the hand at the wrist and stabilize the wrist while the fingers are being used for grasping.
2. Finger extensors- extend the hand at the wrist and extend the fingers.
3. Brachioradialis- bends the elbow

### ❖ Causes

- Forcefully and repetitively gripping an object.
  - Ex. shaking a hand, turning a doorknob, writing, kayaking, playing the violin, etc.
- Trauma of the elbow joint
- Repetitive finger movements
  - Ex. playing the piano
- Referred pain from trigger points in shoulder.

### ❖ Management

- Avoid activities that requires twisting of the arm and grasping repeatedly
- Learn to alternate hands when performing aggravating activities.
- Manage trigger points that may be causing referred pain to the forearm.
- Use a wrist brace at night to prevent twisting of the forearm.



## Finger Flexors and Pronator

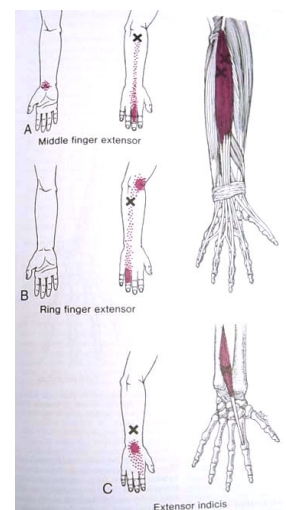
Function: Finger flexors grip & type; Pronator turns hand palm down as in typing

### ❖ Causes:

- Prolonged or forceful gripping
- Driving, especially in bad weather
- Prolonged typing/computer use, fingering an instrument (finger flexors) playing an instrument with palms turned away (e.g., piano, pronator)

### ❖ Management:

- Take breaks when working at computer, instrument
- Avoid excessive gripping
- Keep grip relaxed when driving, or playing an instrument
- Relax fingers fully when not in use
- Use devices, such as jar openers, to reduce strong gripping



## Adductor and Opponens Pollicis

Function:

1. Adductor pollicis- brings the thumb toward the index finger
2. Opponens pollicis- brings the thumb across the palm

### ❖ Common symptoms

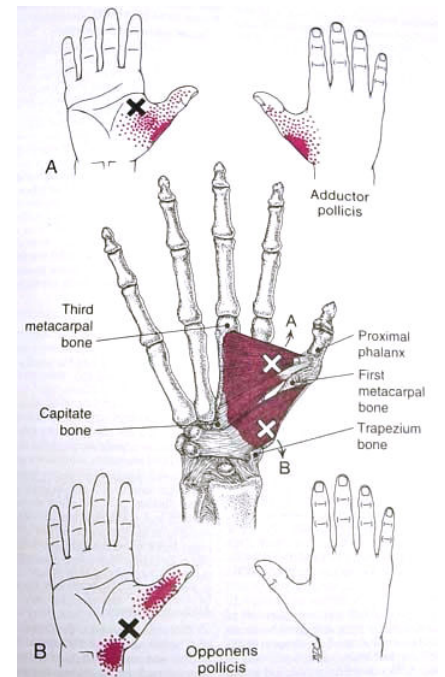
- Aching pain referred over the thumb, into the thumb and over the wrist
- Difficulty with fine motor movements that require the thumb to grasp
- “Trigger thumb” where the thumb locks in the closed position

### ❖ Causes

- Grasping things with thumb and fingers
- Residual pain from a fracture

### ❖ Management

- Avoid activities requiring grasping with the thumb
- Relax thumb fully when not in use
- Alternate hands, take rest breaks
- Use a thumb brace to support thumb in static positions



## Hand Interosseous Muscles and Abductor Digiti Minimi

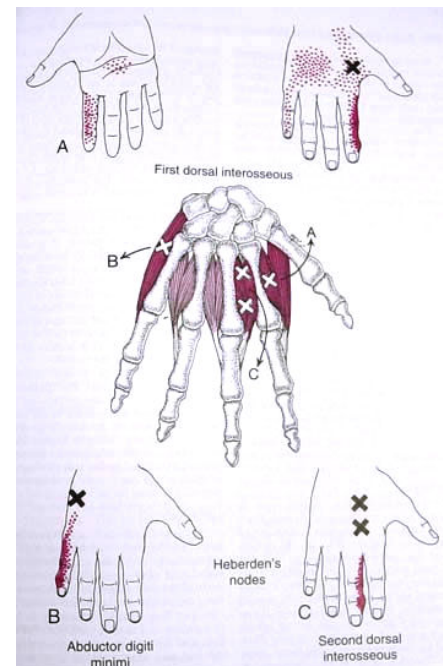
Function: Moves the fingers from side to side

### ❖ Causes

- Repetitive grasping activities with the fingers pinched together

### ❖ Management

- Grasps items lightly
- Take frequent breaks
- Limit amount of time of any given activity
- Alternate hands



All trigger point information is adopted from the following source:

Delaune, V. *Pain Relief with Trigger Point Self-Help*. California: Lotus Publishing; 2011.